

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

EARTHQUAKE DATA REPORT

MAY 1991

by

U.S. Geological Survey  
NATIONAL EARTHQUAKE INFORMATION CENTER<sup>1</sup>

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1991

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<sup>1</sup>USGS, Denver, Colorado



U. S. DEPARTMENT OF THE INTERIOR  
Geological Survey  
EARTHQUAKE DATA REPORT

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

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

The error bars of the computed hypocentral coordinates are 90% marginal confidence intervals incorporating 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  $\Delta$  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 ( $\mu m$ ) 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  $\eta$  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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- 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.
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MAY 01, 1991 00h 02m 32.29± 0.40s 44.012 N ± 3.1km 7.246 E ± 4.1km DEPTH = 10.0km (geophysicist) NORTHERN ITALY (545) ML 2.2 (LDG).				TIIY 1.0s 22.00nm 5.0mb 31.05 271 eP 26 25.80 1.5 Z 18s 0.97um 4.5msz N 15s 0.60um BTO 31.55 277 eP 26 29.00 0.3 N 15s 0.80um E 15s 0.30um eS 31 40.00 XAN 35.33 267 Pc 27 01.80 0.3 PMR 36.84 42 P 27 13.30 -0.4 1.2s 33.33nm 5.0mb FBA 37.50 37 P 27 18.80 -0.5 0.9s 18.75nm 4.9mb LZH 37.89 274 iPd 27 23.50 0.4 1.5s 56.00nm 5.1mb Z 20s 0.44um 4.3msz pP 27 32.00 29kmX sP 27 36.50 GTA 39.18 281 Pd 27 35.20 1.4 1.0s 20.00nm 4.8mb N 15s 0.70um PcP 29 43.40 S 33 35.50 CD2 40.69 267 P 27 46.50 0.2 GYA 41.31 259 P 27 52.00 0.5 INK 43.07 31 ePd 28 06.20 0.9 pP 28 18.50 45kmX WMO 45.46 293 P 28 26.40 1.4 Z 16s 0.30um 4.3mszX N 12s 0.30um pP 28 29.50 10km sP 28 34.00 P 29 05.00 1.6 LSA 50.30 274 P 29 05.00 1.6 CHG 51.68 258 eP 29 14.30 0.9 YKA 52.28 36 eP 29 16.70 -0.6 1.1s 6.40nm 4.5mb GUN 55.08 276 P 29 38.90 0.0 0.9s 75.00nm 5.7mb KKN 55.58 276 P 29 42.32 0.0 0.9s 62.00nm 5.7mb PKI 55.62 276 P 29 42.50 -0.3 DMN 55.81 276 P 29 44.24 0.2 PNT 56.27 52 eP 29 46.00 -0.8 NEW 58.23 52 P 30 00.00 -0.7 1.0s 25.00nm 5.2mb DAG 58.27 358 eP 29 59.90 -0.6 KEY 58.85 341 iP 30 04.00 -0.7 GAR 59.14 296 eP 30 06.80 -0.5 SES 60.29 47 ePd 30 14.50 -0.4 ORV 60.60 62 ePd 30 16.80 -0.3 TRO 60.71 343 eP 30 16.50 -1.0 SOD 60.74 339 iP 30 17.10 -0.6 CMB 62.20 63 ePd 30 28.20 0.1 LRM 62.25 52 eP 30 28.50 0.0 PRS 62.60 65 ePd 30 30.90 0.3 LLA 62.70 65 eP 30 30.90 -0.4 PRI 63.17 65 eP 30 34.70 0.2 FRI 63.26 64 ePd 30 35.00 0.1 TNP 64.15 61 P 30 40.80 -0.3 0.8s 15.74nm 5.2mb KAF 64.89 335 iP 30 44.10 -1.1 0.8s 13.40nm 5.2mb esP 30 45.10 CLC 65.32 63 eP 30 48.00 -0.5 DUG 65.51 57 P 30 49.90 0.1 BW06 65.77 53 P 30 50.50 -1.0 1.0s 21.67nm 5.3mb SBB 65.89 65 eP 30 52.00 -0.1 MWC 66.03 65 eP 30 44.00 -9.2X GSC 66.15 63 eP 30 54.00 0.2 OBN 66.61 326 iP 30 55.00 -1.3 1.0s *****nm 8.4mb X i 31 09.00 49kmX e 31 23.00 FRB 66.61 19 ePd 30 55.30 -0.9 NUR 66.65 335 iP 30 54.60 -1.9 0.5s 14.00nm 5.4mb QUE 66.70 290 eP 30 57.60 0.0 PEC 66.82 65 P 30 57.30 -0.8 WB2 66.95 199 iPc 30 58.90 0.1 1.2s 9.90nm 4.9mb WRA 66.95 199 P 30 59.00 0.1 1.2s 9.90nm 4.9mb HYB 66.96 272 eP 30 55.50 -3.7X PLM 67.35 65 eP 31 02.00 0.3 MAIO 67.59 299 eP 31 04.00 1.0 BAR 67.91 66 eP 31 05.00 0.1				PV09 68.79 56 P 31 10.20 -0.5 GLA 68.85 64 eP 31 11.00 0.2 UPP 69.18 338 iP 31 11.30 -1.0 NB2 69.74 341 P 31 14.60 -1.2 0.9s 17.50nm 5.2mb HFS 69.95 340 eP 31 16.10 -0.9 0.9s 24.80nm 5.3mb Z 17s 0.12um 4.2mszX e 31 20.10 13km e 31 31.30 LR 01 40.00 GLD 70.22 53 P 31 19.80 0.5 1.3s 29.89nm 5.3mb pP 31 36.50 61kmX GBA 70.33 270 Pc 31 19.30 -0.7 0.9s 8.10nm 4.9mb ASPA 70.64 199 iPd 31 23.10 1.4 1.0s 22.30nm 5.2mb i 31 37.90 53kmX i 31 47.00 ALQ 72.76 58 eP 31 34.70 0.1 1.0s 8.50nm 4.8mb SCH 74.87 23 eP 31 46.00 -0.2 KRA 76.80 331 eP 31 57.50 0.3 e 32 03.00 18km KSP 77.32 334 eP 32 00.00 -0.1 STK 77.34 190 eP 32 02.40 2.1 3.1s 1.20nm 3.4mb X SPC 77.43 330 eP 32 01.80 0.9 CLL 77.91 336 iPc 32 03.20 -0.1 1.6s 27.00nm 5.1mb BRG 78.02 335 eP 32 04.10 0.2 PRU 78.62 334 P 32 07.70 0.5 Z 18s 0.30um 4.7msz e 32 26.00 67kmX WTS 78.97 339 eP 32 09.50 0.4 0.8s 6.00nm 4.7mb SRO 79.27 331 iP 32 11.70 0.9 ZST 79.35 332 eP 32 11.80 0.5 KHC 79.67 334 iP 32 13.50 0.5 e 32 16.50 10km BBTK 79.85 317 eP 32 15.00 0.7 ENN 80.32 340 eP 32 17.00 0.6 0.8s 8.00nm 4.8mb MEM 80.44 339 P 32 17.70 0.7 KBA 81.56 333 e(P) 32 22.00 -1.2 KCT 81.58 320 eP 32 23.00 -0.2 PTJ 81.74 331 eP 32 24.10 0.0 CDF 82.13 338 eP 32 26.40 0.3 HAU 82.75 338 eP 32 29.30 0.1 Z 20s 0.25um 4.6msz BSF 82.79 338 eP 32 30.30 0.7 SKO 83.09 326 eP 32 31.20 0.2 VAY 83.18 325 eP 32 32.00 0.5 LOR 84.07 339 eP 32 36.30 0.3 0.8s 8.05nm 5.0mb Z 20s 0.15um 4.4msz OHR 84.07 326 eP 32 31.50 -4.6X LBF 84.31 339 eP 32 37.50 0.3 SSF 84.35 340 eP 32 37.80 0.4 1.0s 10.00nm 5.0mb AVF 84.64 340 eP 32 39.60 0.8 0.6s 4.50nm 4.9mb SMF 84.66 339 eP 32 39.70 0.8 0.8s 16.10nm 5.3mb LPL 84.94 337 eP 32 41.70 1.1 0.8s 8.05nm 5.0mb LPG 84.95 337 eP 32 42.00 1.2 0.8s 10.75nm 5.1mb BGF 84.98 340 eP 32 41.00 0.4 MAF 85.37 340 eP 32 42.80 0.3 0.8s 10.75nm 5.1mb TCF 85.39 340 eP 32 43.40 0.8 LSF 85.59 341 eP 32 43.40 -0.2 0.8s 10.75nm 5.1mb SBF 86.25 336 eP 32 47.20 0.2 FRF 86.76 336 eP 32 50.90 1.5 LRG 86.94 336 eP 32 50.90 0.7 PGF 86.99 334 eP 32 51.90 1.2 LMR 87.01 336 eP 32 51.30 0.7 1.0s 16.00nm 5.2mb SIV 139.23 56 PKP 39 23.60 -9.7X LNV 144.39 87 ePKP 39 40.00 -1.8X PEL 144.47 86 iPKPd 39 40.50 -1.6X 1.0s 40.00nm TACH 144.56 87 ePKP 39 40.50 -1.7X PCH 144.85 86 ePKP 39 42.00 -0.7X							
S.D. = 0.4 on 13 of 13 obs.															
MAY 01, 1991 00h 20m 04.74± 0.23s 45.126 N ± 5.4km 153.002 E ± 3.3km DEPTH = 13.8km ( 5 depth phases) 5.0mb ( 39 obs.) 4.4msz ( 8 obs.) KURIL ISLANDS REGION (222)				LSA 50.30 274 P 29 05.00 1.6 CHG 51.68 258 eP 29 14.30 0.9 YKA 52.28 36 eP 29 16.70 -0.6 1.1s 6.40nm 4.5mb GUN 55.08 276 P 29 38.90 0.0 0.9s 75.00nm 5.7mb KKN 55.58 276 P 29 42.32 0.0 0.9s 62.00nm 5.7mb PKI 55.62 276 P 29 42.50 -0.3 DMN 55.81 276 P 29 44.24 0.2 PNT 56.27 52 eP 29 46.00 -0.8 NEW 58.23 52 P 30 00.00 -0.7 1.0s 25.00nm 5.2mb DAG 58.27 358 eP 29 59.90 -0.6 KEY 58.85 341 iP 30 04.00 -0.7 GAR 59.14 296 eP 30 06.80 -0.5 SES 60.29 47 ePd 30 14.50 -0.4 ORV 60.60 62 ePd 30 16.80 -0.3 TRO 60.71 343 eP 30 16.50 -1.0 SOD 60.74 339 iP 30 17.10 -0.6 CMB 62.20 63 ePd 30 28.20 0.1 LRM 62.25 52 eP 30 28.50 0.0 PRS 62.60 65 ePd 30 30.90 0.3 LLA 62.70 65 eP 30 30.90 -0.4 PRI 63.17 65 eP 30 34.70 0.2 FRI 63.26 64 ePd 30 35.00 0.1 TNP 64.15 61 P 30 40.80 -0.3 0.8s 15.74nm 5.2mb KAF 64.89 335 iP 30 44.10 -1.1 0.8s 13.40nm 5.2mb esP 30 45.10 CLC 65.32 63 eP 30 48.00 -0.5 DUG 65.51 57 P 30 49.90 0.1 BW06 65.77 53 P 30 50.50 -1.0 1.0s 21.67nm 5.3mb SBB 65.89 65 eP 30 52.00 -0.1 MWC 66.03 65 eP 30 44.00 -9.2X GSC 66.15 63 eP 30 54.00 0.2 OBN 66.61 326 iP 30 55.00 -1.3 1.0s *****nm 8.4mb X i 31 09.00 49kmX e 31 23.00 FRB 66.61 19 ePd 30 55.30 -0.9 NUR 66.65 335 iP 30 54.60 -1.9 0.5s 14.00nm 5.4mb QUE 66.70 290 eP 30 57.60 0.0 PEC 66.82 65 P 30 57.30 -0.8 WB2 66.95 199 iPc 30 58.90 0.1 1.2s 9.90nm 4.9mb WRA 66.95 199 P 30 59.00 0.1 1.2s 9.90nm 4.9mb HYB 66.96 272 eP 30 55.50 -3.7X PLM 67.35 65 eP 31 02.00 0.3 MAIO 67.59 299 eP 31 04.00 1.0 BAR 67.91 66 eP 31 05.00 0.1				KUSJ 6.30 254 P 21 37.00 -2.5 eS 22 43.70 ASAJ 7.46 266 eP 21 56.80 1.1 HOOJ 7.55 252 eP 21 57.10 0.2 eS 23 18.60 MRRJ 9.04 257 eP 22 17.10 -0.6 eS 23 54.30 OFUJ 10.36 238 eP 22 32.60 -3.2X S 24 19.90 NIIJ 13.15 238 eP 23 11.80 -1.7 KAKJ 13.19 232 eP 23 21.90 7.9X S 25 26.50 CHJJ 13.97 234 eP 23 22.20 -2.1 S 25 45.10 MAT 14.09 238 (P) 23 24.00 -1.9 0.8s 16.42nm 4.8mb eS 26 06.00 MDJ 16.60 277 eP 23 56.60 -1.8 1.0s 96.00nm 4.9mb CN2 19.68 276 eP 24 36.00 -0.2 1.0s 20.00nm 4.4mb Z 18s 2.60um N 15s 0.80um E 15s 0.60um epP 24 43.00 27kmX eS 28 15.00 ADK 21.09 60 P 24 49.50 -1.2 1.1s 95.00nm 5.1mb SNY 21.55 272 eP 24 55.60 0.1 1.0s 17.00nm 4.4mb Z 18s 1.20um 4.3msz pP 25 00.80 19km sP 25 05.20 S 28 50.00 YAK 21.64 330 eP 24 53.50 -2.7 epP 25 19.00 128kmX ePP 25 32.00 ePPP 25 43.00 iS 28 47.00 eS 29 22.00 eSS 29 37.00 eSSS 30 06.00 BJI 27.43 272 eP 25 57.00 5.3X 1.0s 9.00nm 4.4mb SSE 28.48 252 eP 26 00.00 -1.3 Z 20s 0.50um 4.1msz E 13s 0.30um NJ2 29.48 256 Pc 26 11.00 0.7 Z 18s 0.40um 4.1msz HHC 30.37 277 Pc 26 19.50 1.2				KUSJ 6.30 254 P 21 37.00 -2.5 eS 22 43.70 ASAJ 7.46 266 eP 21 56.80 1.1 HOOJ 7.55 252 eP 21 57.10 0.2 eS 23 18.60 MRRJ 9.04 257 eP 22 17.10 -0.6 eS 23 54.30 OFUJ 10.36 238 eP 22 32.60 -3.2X S 24 19.90 NIIJ 13.15 238 eP 23 11.80 -1.7 KAKJ 13.19 232 eP 23 21.90 7.9X S 25 26.50 CHJJ 13.97 234 eP 23 22.20 -2.1 S 25 45.10 MAT 14.09 238 (P) 23 24.00 -1.9 0.8s 16.42nm 4.8mb eS 26 06.00 MDJ 16.60 277 eP 23 56.60 -1.8 1.0s 96.00nm 4.9mb CN2 19.68 276 eP 24 36.00 -0.2 1.0s 20.00nm 4.4mb Z 18s 2.60um N 15s 0.80um E 15s 0.60um epP 24 43.00 27kmX eS 28 15.00 ADK 21.09 60 P 24 49.50 -1.2 1.1s 95.00nm 5.1mb SNY 21.55 272 eP 24 55.60 0.1 1.0s 17.00nm 4.4mb Z 18s 1.20um 4.3msz pP 25 00.80 19km sP 25 05.20 S 28 50.00 YAK 21.64 330 eP 24 53.50 -2.7 epP 25 19.00 128kmX ePP 25 32.00 ePPP 25 43.00 iS 28 47.00 eS 29 22.00 eSS 29 37.00 eSSS 30 06.00 BJI 27.43 272 eP 25 57.00 5.3X 1.0s 9.00nm 4.4mb SSE 28.48 252 eP 26 00.00 -1.3 Z 20s 0.50um 4.1msz E 13s 0.30um NJ2 29.48 256 Pc 26 11.00 0.7 Z 18s 0.40um 4.1msz HHC 30.37 277 Pc 26 19.50 1.2			



01d 00h

NVL 148.12 203 ePKP 39 50.00 3.2X  
S.D. = 0.9 on 113 of 125 obs.

& MAY 01, 1991 00h 39m 55.24s  
60.087 N 152.847 W  
DEPTH = 115.9km  
SOUTHERN ALASKA ( 2 )  
<AEIC>.

RED 0.34 6 iPc 40 11.42 -0.8  
eS 40 24.30  
RSO 0.38 7 iPc 40 11.85 -0.7  
RS2 0.38 7 iPc 40 11.84 -0.7  
eS 40 25.29  
RDW 0.40 3 ePc 40 11.86 -0.8  
eS 40 25.56  
RDN 0.43 6 iPc 40 12.05 -0.7  
S 40 25.35  
NCT 0.48 355 ePc 40 12.21 -0.8  
eS 40 25.77  
DFR 0.51 9 iPc 40 12.31 -0.9  
RDT 0.54 24 iPc 40 12.49 -0.8  
eS 40 25.98  
PDB 0.74 247 iPd 40 13.84 -0.9  
eS 40 28.34  
HOM 0.74 125 eP 40 14.70 -0.1  
AUE 0.78 200 ePd 40 14.25 -0.8  
NNL 0.78 93 iPc 40 15.27 0.2  
AUH 0.79 203 ePd 40 14.46 -0.8  
AUI 0.81 202 ePd 40 14.39 -1.0  
eS 40 29.13  
CNPM 0.99 124 ePd 40 16.53 -0.6  
S 40 32.69  
NKA 1.03 50 eP 40 18.63 1.1  
BRLK 1.04 107 eP 40 16.82 -0.8  
eS 40 33.31  
CKL 1.14 12 iPc 40 18.17 -0.7  
eS 40 36.39  
SPU 1.17 19 iPc 40 18.21 -0.8  
MCNL 1.18 221 iPd 40 17.86 -1.3  
eS 40 35.21  
BGL 1.20 11 iPc 40 19.01 -0.5  
CDD 1.23 200 ePd 40 18.17 -1.5  
CRP 1.23 16 ePc 40 19.33 -0.5  
NCG 1.36 14 eP 40 20.61 -0.7  
SLKM 1.37 71 eP 40 20.13 -1.2  
SVW 1.71 308 iPc 40 24.10 -1.3  
SUA 1.72 36 eP 40 25.06 -0.6  
PMS 1.99 53 iPc 40 27.72 -1.2  
SKT 2.01 18 iPc 40 27.97 -1.1  
PWA 2.14 41 eP 40 29.23 -1.5  
PLRM 2.36 49 eP 40 31.56 -2.1  
PMR 2.36 49 ePd 40 34.30 0.7  
KNK 2.53 56 ePc 40 33.58 -2.3  
TOA 3.82 55 ePd 40 51.90 -1.3

34 obs. associated

? MAY 01, 1991 00h 55m 35.36 ± 3.41s  
44.360 N ± 18.7km 6.827 E ± 23.5km  
DEPTH = 10.0km (geophysicist)  
FRANCE (538)  
ML 1.3 (LDG).

PZZ 0.24 53 P 55 40.65 0.0  
S 55 43.63  
STV 0.38 108 P 55 43.22 0.1  
S 55 47.93  
ENR 0.45 107 P 55 44.35 -0.1  
S 55 50.14  
RRL 0.56 357 P 55 46.92 0.0  
S 55 53.88

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

MAY 01, 1991 00h 59m 50.10 ± 0.39s  
13.967 S ± 8.6km 170.671 E ± 7.8km  
DEPTH = 26.0km ( 5 depth phases )  
4.9mb ( 13 obs.) 5.0Msz ( 2 obs.)  
VANUATU ISLANDS REGION (185)  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 16S, 31C  
Centroid Location:  
Origin Time 00:59:51.7 2.1  
Lat 14.10S 0.19 Lon 170.49E 0.07  
Dep 20.9 8.5 Half-duration 1.9  
Moment Tensor: Scale 10<sup>17</sup> Nm  
Mrr=-0.19 0.07 Mtt= 0.28 0.12

Mff=-0.09 0.13 Mrt=-0.47 0.26  
Mrf=-0.56 0.31 Mtf= 1.17 0.08  
Principal Axes:  
T Vol= 1.58 Plg=22 Azm=138  
N -0.47 66 344  
P -1.12 10 232  
Best Double Couple: Mo=1.4\*10<sup>17</sup>  
NP1: Strike=277 Dip=67 Slip= 9  
NP2: 184 81 157

PVC 4.38 211 iPc 00 56.00 -0.7  
DZM 9.01 206 iPc 02 02.60 1.0  
HNR 11.43 292 P 02 34.00 -0.8  
SVO 11.66 293 eP 02 37.00 -1.0  
BRS 21.38 229 iPc 04 39.50 1.5  
i(pP) 04 47.00 27km  
i(pCP) 05 15.20  
iS 08 48.00  
PMG 23.46 279 ePd 05 06.50 7.9X  
RMQ 24.00 235 iPd 05 04.70 1.0  
0.9s 278.00nm 5.8mb  
i 05 11.80 25km  
e(P) 05 38.00 -0.6  
i 05 41.00 11kmX  
CMS 28.68 228 eP 05 48.00 0.8  
STK 32.02 231 eP 06 17.30 0.5  
0.7s 6.10nm 4.6mb  
i 06 24.20 24km  
eS 11 41.00  
WB2 35.19 255 iPc 06 42.10 -2.3  
0.8s 4.70nm 4.5mb  
i 07 25.40 203kmX  
e 08 05.70  
e 09 22.30  
WRA 35.20 255 P 06 42.00 -2.5  
0.9s 4.50nm 4.4mb  
i 06 49.90 -1.5  
1.0s 19.30nm 5.0mb  
Z 20s 2.20um 4.9Msz  
iPP 08 15.40  
MAT 58.84 330 (P) 09 50.00 1.1  
eS 17 52.00  
CN2 70.75 327 eP 11 06.00 0.0  
1.0s 10.00nm 4.9mb  
Z 22s 0.90um 5.0Msz  
ePP 11 16.00 32km  
BJI 73.79 319 eP 11 24.50 0.4  
2.0s 72.00nm 5.4mb  
TIY 74.98 316 Pc 11 31.40 0.2  
Z 40s 2.00um 5.1MszX  
E 11s 0.19um  
XAN 75.64 311 P 11 37.50 2.5  
HHC 77.18 318 eP 11 45.00 1.4  
BTO 78.06 317 eP 11 49.10 0.7  
LZH 80.28 311 eP 11 57.50 -3.2X  
1.6s 38.00nm 5.2mb  
Z 28s 0.89um 5.0MszX  
ORV 82.47 46 P 12 10.00 -1.8  
ISA 83.10 51 eP 12 15.00 -0.3  
SBB 83.23 52 eP 12 16.00 0.1  
PLM 83.48 53 eP 12 18.00 0.6  
CLC 83.82 51 eP 12 19.00 0.1  
GSC 84.23 52 eP 12 22.00 1.0  
GTA 84.55 313 eP 12 25.60 1.0  
1.6s 30.00nm 5.3mb  
pP 12 30.40 21km  
sP 12 36.40  
FBA 84.66 17 P 12 21.00 -1.4  
1.0s 12.00nm 5.1mb  
TNP 84.95 49 P 12 25.00 0.3  
1.0s 8.00nm 4.9mb  
GLA 84.97 54 eP 12 25.00 0.3  
PNT 87.77 38 eP 12 38.00 0.0  
DUG 88.90 48 P 12 44.00 0.2  
PV09 91.09 51 P 12 54.00 -0.3  
ALQ 92.16 55 eP 12 58.10 -1.1  
1.0s 4.25nm 4.8mb  
ANMO 92.17 55 P 12 58.10 -1.0  
WMO 94.56 314 eP 13 12.20 2.4  
YKA 95.37 27 eP 13 11.40 -1.6  
0.9s 1.60nm 4.5mb  
CDF 143.01 342 ePKP 19 24.50 1.1X  
HAU 143.65 342 ePKP 19 26.70 2.2X  
Z 23s 0.25um 4.9MszX  
LOR 145.02 344 ePKP 19 29.10 2.3X  
Z 23s 0.45um 5.2MszX  
LBF 145.25 344 ePKP 19 29.80 2.6X

1.1s 15.85nm  
SSF 145.30 345 ePKP 19 28.90 1.6X  
1.0s 13.00nm  
AVF 145.59 345 ePKP 19 29.50 1.7X  
1.1s 12.20nm  
LPL 145.74 340 ePKP 19 36.20 7.8X  
LPG 145.75 340 ePKP 19 36.30 7.8X  
BGF 145.94 345 ePKP 19 30.70 2.3X  
TCF 146.35 346 ePKP 19 30.40 1.3X  
LSF 146.54 346 ePKP 19 30.70 1.3X  
S.D. = 1.2 on 36 of 49 obs.

? MAY 01, 1991 01h 15m 46.11 ± 1.76s  
43.604 N ± 21.3km 45.556 E ± 67.6km  
DEPTH = 10.0km (geophysicist)  
3.8mb ( 3 obs.)  
EASTERN CAUCASUS (337)

TAB 5.56 174 eP 17 11.00 -0.1  
NUR 21.09 331 eP 20 31.00 -1.7  
KAF 21.72 335 eP 20 44.30 5.3X  
HFS 25.34 322 eP 21 15.20 0.9  
0.6s 4.30nm 4.3mb  
e 21 19.50  
SOD 25.89 343 eP 21 39.00 19.6X  
NB2 26.84 323 P 21 28.60 0.4  
0.8s 1.50nm 3.7mb  
KEV 27.87 346 eP 21 38.00 0.5  
YKA 73.06 351 eP 27 24.50 6.9X  
0.8s 0.20nm 3.3mb  
S.D. = 1.4 on 5 of 8 obs.

& MAY 01, 1991 01h 58m 13.91s  
61.590 N 146.324 W  
DEPTH = 34.3km  
SOUTHERN ALASKA ( 2 )  
<AEIC>. ML 2.5 (AEIC).

KLU 0.22 117 iPd 58 20.45 -0.5  
eS 58 25.82  
VLZ 0.46 180 iPd 58 22.80 -1.1  
eS 58 30.01  
TOA 0.52 8 iPc 58 24.70 -0.2  
SCM 0.54 297 iPc 58 24.11 -1.0  
eS 58 32.45  
VZW 0.54 192 iPd 58 23.99 -1.2  
eS 58 32.40  
TZL 0.63 43 iPc 58 25.46 -0.8  
GLI 0.80 208 iPd 58 27.89 -0.9  
S 58 39.04  
SML 0.98 284 iPc 58 30.34 -1.1  
eS 58 43.46  
SDG 1.01 21 iPc 58 30.64 -1.2  
eS 58 43.76  
KNK 1.04 261 iPc 58 31.95 -0.3  
S 58 45.85  
CVA 1.08 165 ePd 58 32.50 -0.3  
HIN 1.20 184 ePd 58 34.31 -0.3  
iS 58 51.87  
GLB 1.21 96 iPc 58 33.28 -1.5  
eS 58 48.48  
SGAM 1.22 153 iPc 58 34.32 -0.5  
eS 58 50.12  
GHO 1.25 280 ePc 58 34.44 -0.9  
eS 58 50.45  
PLRM 1.34 271 ePc 58 36.15 -0.4  
S 58 53.54  
PMR 1.34 271 ePc 58 36.60 0.0  
KNIM 1.42 210 ePc 58 37.59 -0.2  
PAX 1.44 16 ePc 58 36.91 -1.2  
iS 58 55.17  
RAGM 1.45 146 ePc 58 37.69 -0.5  
PMS 1.59 259 ePc 58 40.56 0.3  
eS 59 01.18  
HMT 1.61 140 eP 58 40.65 0.2  
PWA 1.70 274 ePc 58 41.71 0.0  
MTU 1.73 203 eP 58 41.67 -0.6  
CROM 1.76 117 eP 58 42.02 -0.7  
TGL 1.89 115 ePc 58 43.46 -1.1  
eS 59 07.59  
BALM 2.00 104 iPc 58 45.17 -0.9  
S 59 09.58  
CUT 2.03 295 iPc 58 46.77 0.3  
S 59 11.82  
WAX 2.04 123 ePc 58 45.41 -1.2  
HUR 2.08 313 eP 58 47.25 0.1  
SUA 2.12 269 eP 58 48.28 0.4



SEW	2.14	227	eP	58	47.57	-0.3
RND	2.17	328	eP	58	48.67	0.2
			S	59	14.81	
SLKM	2.18	242	eP	58	48.53	-0.1
DDM	2.22	5	eP	58	48.82	-0.3
DOT	2.32	26	eP	58	48.78	-1.8
MCK	2.47	332	eP	58	53.23	0.6
CTGM	2.49	102	eP	58	52.07	-1.0
SKT	2.50	281	ePc	58	52.78	-0.4
			eS	59	23.10	
WRG	2.62	125	eP	58	56.99	2.3
TRF	2.62	317	eP	58	55.31	0.4
SPU	2.79	264	eP	58	57.38	0.1
NCG	2.80	269	eP	58	57.46	0.0
CRP	2.82	266	eP	58	58.76	0.9
HDA	2.84	354	eP	58	57.48	-0.5
CKL	2.92	265	eP	58	58.60	-0.6
BGL	2.93	266	eP	58	59.66	0.3
RDT	3.13	254	eP	59	00.95	-1.1
CCB	3.14	348	eP	59	02.51	0.3
CNPM	3.19	232	eP	59	02.15	-0.8
DFR	3.25	255	eP	59	02.92	-0.9
NEA	3.25	339	eP	59	02.93	-0.8
RDS	3.35	347	eP	59	05.46	0.2
FBA	3.39	349	eP	59	07.10	1.4
GLM	3.44	352	eP	59	05.42	-1.1
MDM	3.49	347	eP	59	07.23	0.1
IMA	5.55	327	eP	59	36.80	0.4

57 abs. associated

MAY 01, 1991 03h 06m 50.26±0.54s  
 42.405 N ± 9.9km 43.784 E ± 6.7km  
 DEPTH = 10.0km (geophysicist)  
 4.5mb ( 7 obs.) 3.7msz ( 1 obs.)  
 WESTERN CAUCASUS (362)

TAB	4.75	155	eP	08	18.00	14.3X
KVT	5.94	260	ePn	08	21.40	1.0
KAS	7.55	265	eP	08	44.00	1.0
BBTK	8.71	257	eP	09	08.00	8.8X
MLR	13.22	290	iPc	10	07.00	6.3X
OBN	13.55	342	eP	10	05.00	0.3

N 12s 0.30um  
 E 12s 0.40um

			ePP	10	18.00	
			ePPP	10	27.00	
			eS	12	32.00	
			eSS	12	48.00	

MAIO	13.59	111	eP	10	06.00	0.4
SKO	16.56	276	eP	10	50.20	6.1X
OHR	17.19	273	eP	10	55.00	2.9X
SPC	17.72	301	eP	10	58.70	0.0

			e	42	13.70	
KRA	18.13	303	eP	11	04.00	0.4
			e	11	07.10	

ZST	19.59	296	eP	11	26.90	5.6X
			e	42	40.20	

PTJ	20.23	289	eP	11	28.70	0.5
GAR	20.37	91	P	11	29.20	-0.6
KSP	20.59	304	eP	11	34.00	2.2
RIY	21.34	288	iP	11	26.70	-12.8X
PRU	21.51	301	eP	11	45.60	4.4X
NUR	21.55	334	iP	11	39.60	-1.8
	0.7s				14.70nm	4.5mb

			i	11	46.40	
KHC	22.02	298	P	11	49.00	2.6X
			i	11	56.00	

BRG	22.05	303	eP	11	51.50	5.0X
			e	12	04.80	

KAF	22.31	338	eP	11	48.60	-0.4
	0.9s				33.70nm	4.8mb

CLL	22.71	304	eP	11	55.00	1.9
	1.4s				31.00nm	4.6mb

UPP	23.72	326	iP	12	12.30	9.5X
HFS	25.52	324	eP	12	20.50	0.3
	0.8s				19.60nm	4.8mb
	Z 18s				0.19um	3.7msz

			e	12	24.80	
			e	12	27.10	
			LR	22	10.00	

SOD	26.70	345	iP	12	28.30	-2.7
			i	12	45.80	

NB2	27.04	325	P	12	34.20	0.0
	0.7s				2.40nm	4.0mb
KEV	28.75	348	eP	12	44.00	-5.6X
WMO	31.81	72	eP	13	17.20	0.1

GTA	41.80	75	eP	14	42.00	0.4
	1.4s				10.00nm	4.4mb
TIY	51.46	71	eP	16	05.30	7.6X
CHG	51.96	99	eP	16	04.00	2.3
LKO	54.10	248	P	16	14.84	-2.7
TIC	55.82	245	P	16	29.10	-1.0
KIC	55.84	244	P	16	29.20	-1.0
LIC	56.13	244	P	16	31.40	-0.9
FRB	61.54	332	eP	17	09.00	-0.3
INK	69.60	359	eP	18	02.00	1.1
YKA	74.02	350	eP	18	26.80	-0.6

S.D. = 1.3 on 25 of 38 obs.

\* MAY 01, 1991 03h 38m 08.05±0.68s  
 41.977 N ± 18.2km 42.826 E ± 8.4km  
 DEPTH = 10.0km (geophysicist)  
 4.0mb ( 4 obs.)  
 TURKEY-USSR BORDER REGION (367)

TAB	4.74	144	eP	39	31.00	9.6X
MLR	12.70	292	eP	41	15.50	3.9X
OBN	13.76	345	eP	41	33.00	7.7X

Z 14s 0.60um  
 N 14s 0.60um

KSP	20.24	305	eP	41	36.00	5.5X
GAR	21.09	89	eP	42	53.50	-1.4
ATN	21.25	269	P	43	15.80	19.3X
KHC	21.60	299	P	43	07.00	7.0X
NUR	21.63	335	eP	42	56.00	-4.0X
MNO	21.90	269	P	43	04.80	1.6

			eSg	43	13.90	
MEU	22.01	266	P	43	15.20	11.0X
			eSn	43	33.70	

CLL	22.37	305	eP	43	13.00	5.5X
	1.7s				32.00nm	4.5mb

GIB	22.37	269	Pd	42	55.20	-12.6X
			eSg	42	57.50	

KAF	22.45	340	eP	43	08.30	0.1
USI	22.78	272	P	43	12.60	0.9
			eSn	43	28.50	

FAI	22.88	268	P	43	12.40	-0.3
			eSn	43	21.20	

CVT	23.40	269	Pc	43	15.60	-2.1
LVI	23.64	270	P	43	19.60	-0.4
			eSg	43	38.10	

HFS	25.46	325	eP	43	40.60	3.2X
	0.8s				5.30nm	4.3mb
	Z 16s				0.15um	3.6mszX

			e	43	48.80	
			e	43	51.00	
			LR	53	26.00	

LPG	26.16	290	eP	43	26.60	-17.8X
	1.2s				8.95nm	

NB2	26.98	326	P	43	51.80	0.3
	0.8s				1.20nm	3.6mb

GKN	36.62	99	P	45	21.00	4.5X
KKN	37.21	99	P	45	22.70	1.2
PKI	37.42	99	P	45	23.86	0.4
GUN	37.58	98	P	45	28.72	3.9X
YKA	74.31	349	eP	49	46.70	-0.2

S.D. = 1.2 on 11 of 25 obs.

MAY 01, 1991 04h 24m 41.25±1.12s  
 38.558 N ± 10.2km 13.403 E ± 7.3km  
 DEPTH = 10.0km (geophysicist)  
 SICILY (398)

USI	0.23	310	P	24	46.70	0.5
			eSg	24	50.60	

GIB	0.75	139	Pc	24	55.20	-0.8
			eSg	25	08.50	

ERC	0.83	231	P	24	56.90	-0.4
			eSg	25	08.80	

CVT	1.00	209	Pc	25	00.30	0.1
			eSn	25	15.70	

LVI	1.01	236	P	24	59.70	-0.7
			eSg	25	12.50	

MNO	1.19	121	P	25	04.20	0.5
			eSn	25	23.40	
FAI	1.30	170	P	25	07.40	2.1
MEU	1.89	140	P	25	12.60	-1.4

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

? MAY 01, 1991 04h 30m 39.41±3.91s  
 -41.505 N ± 54.0km 81.300 E ± 40.0km  
 DEPTH = 33.0km (normal)  
 4.4mb ( 4 obs.)

SOUTHERN XINJIANG, CHINA (321)

GAR	8.76	257	eP	32	46.60	-0.3
MLR	39.68	295	eP	38	12.00	1.9
NB2	45.47	320	P	38	56.20	-0.7
	0.8s				2.50nm	4.2mb

CLL	46.51	306	eP	39	05.00	-0.1
LPG	52.41	301	eP	39	51.20	0.2
	1.0s				8.00nm	4.6mb

AVF	54.03	304	eP	40	01.20	-1.3
	1.0s				8.00nm	4.7mb

YKA	75.56	8	eP	42	22.10	0.1
	0.8s				0.60nm	3.6mb

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

MAY 01, 1991 04h 32m 05.65±0.78s  
 6.610 S ± 3.8km 154.912 E ± 3.8km  
 DEPTH = 76.8 ± 7.1 km  
 5.3mb ( 27 obs.)

SOLOMON ISLANDS (193)

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 18S, 33C

Centroid Location:

Origin Time 04:32: 7.3 1.1

Lat 6.78S 0.11 Lon 154.87E 0.06

Dep 33.1 4.8 Half-duration 1.9

Moment Tensor: Scale 10\*\*17 Nm

Mrr=-1.22 0.06 Mtt=-0.55 0.12

Mff=-0.67 0.10 Mrt= 1.24 0.22

Mrf=-0.89 0.20 Mtf= 0.55 0.07

Principal Axes:

T Val= 1.98 Plg=63 Azm= 30

N -0.09 5 130

P -1.89 26 223

Best Double Couple: Mo=1.9\*10\*\*17

NP1: Strike=325 Dip=20 Slip= 106



01d 04h

NRW	38.73	156	eP	39	23.60	-0.3			0.7s	29.90nm	5.3mb	BMA	145.41	148	iPKPc	51	37.60	0.4			
CAW	38.77	155	eP	39	24.80	0.4	IMA	81.47	19	ePc	44	16.40	0.8			e	51	49.80			
SNZO	38.79	156	P	39	20.00	-4.5X			1.0s	20.30nm	5.0mb				e	51	57.70				
			PPP	41	12.00		TOA	81.93	24	ePc	44	19.50	1.5	IFR	147.45	328	iPKPd	51	42.00	1.6	
			S	45	16.00				0.9s	110.60nm	5.8mb				i	51	44.00				
			SSS	48	28.00		NDI	82.45	300	eP	44	21.50	0.2	TIO	150.60	328	iPKPc	51	51.00	5.7X	
PGZ	38.88	154	eP	39	24.00	-1.2	FBA	82.79	21	ePc	44	22.00	-0.3	SOB1	157.75	135	ePKP	51	56.40	1.0	
MTW	39.00	155	P	39	25.30	-0.9			0.8s	20.50nm	5.1mb				KIC	159.78	270	PKP	52	14.40	16.8X
MOW	39.11	156	eP	39	26.00	-1.2	BALM	83.02	26	P	44	23.70	0.0	LKO	160.48	280	PKP	52	10.60	12.2X	
LTZ	39.15	160	P	39	27.00	-0.5	SPA	83.43	180	iPc	44	26.40	0.5								
BLW	39.16	155	eP	39	26.90	-0.7			1.0s	45.00nm	5.4mb										
KHZ	39.29	158	P	39	27.30	-1.3				i	44	37.20									
BAG	40.95	304	ePc+	39	42.00	-0.8	BRW	83.99	14	eP	44	29.60	1.3								
	1.1s	151.90nm				5.7mb	MAW	84.72	203	iPc	44	33.20	1.2								
			eS	45	53.00				0.9s	16.00nm	5.0mb										
NANU	41.11	243	eP	39	53.00	9.2X	BRK	88.38	52	ePc	44	54.60	4.1X								
MAT	45.69	341	(P)	40	18.00	-2.7	BKS	88.40	52	eP	44	52.10	1.5								
			(S)	47	03.00					e	12	52.00									
OZH	47.26	313	iPc	40	33.40	0.2	GCC	88.45	53	ePc	44	54.00	3.1X	TAB	4.95	153	eP	15	05.00	13.3X	
	0.9s	37.00nm				5.3mb	MHC	88.78	52	ePc	44	53.40	0.8	KVT	5.70	258	ePn	15	02.20	0.0	
SSE	49.46	321	eP	40	50.00	-0.1	PRS	88.84	53	ePc	44	54.00	1.2	KAS	7.30	264	eP	15	24.50	-0.1	
Z	20s	0.55um				4.6Msz	LLA	89.22	53	ePc	44	55.60	1.0	BBTK	8.48	255	eP	15	00.00	-41.2X	
			epP	41	00.00	34kmX	ORV	89.24	50	ePc	44	54.60	0.0								
			eS	47	48.00		PRI	89.37	54	ePc	44	54.80	-0.6	EYL	10.14	263	eP	16	07.80	3.7X	
OIZ	51.19	301	eP	41	04.20	0.6	INK	89.39	21	eP	44	54.00	-0.7	HRT	10.44	265	eP	16	06.00	-2.1	
NJ2	51.57	320	Pc	41	07.00	0.9	CMB	89.87	52	ePc	44	57.90	0.3	YLV	10.72	264	eP	16	13.00	1.0	
Z	22s	0.40um				4.4Msz	FRI	90.25	53	ePc	44	59.80	0.5	CFR	11.36	289	eP	16	20.00	-0.6	
KGM	52.21	278	eP	41	12.00	0.7	ISA	91.07	54	eP	45	04.00	0.8	DST	11.55	260	eP	16	24.00	0.7	
WHN	53.61	316	eP	41	21.00	-0.3	PAS	91.12	56	eP	45	04.00	0.6	KCT	11.55	264	eP	16	18.00	-5.3X	
IPM	54.93	280	ePc	41	31.90	0.6	MWC	91.22	56	eP	45	05.00	0.9	VRI	12.46	291	ePc	16	35.00	-0.5	
	0.9s	72.90nm				5.7mb	SBB	91.47	55	eP	45	03.00	-2.1	MLR	12.94	289	eP	16	43.00	0.9	
			e	42	34.70		QUE	91.53	300	eP	45	06.60	1.0	OBN	13.38	343	eP	16	45.00	-2.5	
TIA	55.41	323	eP	41	33.00	-1.4	RVR	91.76	56	eP	45	07.00	0.7								
MDJ	55.85	338	eP	41	36.00	-1.5	CLC	91.79	54	eP	45	07.00	0.5	Z	12s	2.00um				4.9Msz	
	1.0s	27.00nm				5.2mb	PEC	91.92	56	P	45	07.00	-0.2	N	13s	2.00um					
SNG	55.87	283	eP	41	37.80	-0.2	PNT	92.01	41	eP	45	07.00	-0.2	E	10s	0.80um					
SNY	56.07	332	Pd	41	37.60	-1.4	PLM	92.11	57	eP	45	09.00	0.8								
CN2	56.81	335	Pc	41	42.40	-1.9	TNP	92.36	52	P	45	09.80	0.5								
	1.0s	20.00nm				5.2mb			0.8s	12.79nm	5.4mb										
Z	22s	0.90um				4.8Msz	GSC	92.38	55	eP	45	10.00	0.7								
			epP	41	51.00	28kmX	NEW	93.53	42	P	45	12.90	-1.3	CMP	13.55	288	ePc	17	02.00	12.0X	
GYA	57.16	307	P	41	47.40	0.2			1.0s	20.00nm	5.5mb		MAIO	13.87	111	eP	16	54.00	-0.3		
			pP	41	58.40	37kmX				pP	45	27.30	49kmX								
			S	49	38.00		GLA	93.78	57	eP	45	17.00	1.3	VAY	15.58	273	eP	17	22.70	6.2X	
LOE	57.70	295	eP	41	51.00	0.0	DUG	95.95	50	P	45	23.70	-2.0	SKO	16.30	276	eP	17	28.00	2.2	
BJI	58.56	326	eP	41	55.00	-1.6	YKA	96.04	28	eP	45	24.80	-0.5	BEO	16.78	286	eP	17	32.00	0.2	
	1.2s	16.00nm				5.0mb			1.1s	27.80nm	5.7mb		OHR	16.93	273	eP	17	32.00	-1.8		
NST	58.59	293	eP	41	58.70	1.5	EDM	96.29	37	eP	45	27.00	0.2	PSZ	17.42	296	eP	17	41.70	1.8	
TIY	59.24	321	Pd	42	00.80	-0.7	SXM	97.41	44	ePc	45	32.90	0.7	SPC	17.44	300	eP	17	38.90	-1.5	
Z	24s	1.00um				4.9MszX	SES	97.63	40	ePc	45	32.50	-0.4	KRA	17.86	303	eP	17	43.50	-1.8	
KMI	59.73	304	Pc	42	05.00	-0.3	BW06	98.51	48	P	45	35.00	-2.2								
			pP	42	15.00	33kmX				pP	45	48.50	45kmX	SRO	18.46	295	eP	17	57.60	4.9X	
			sP	42	22.00		PV09	98.73	52	P	45	39.80	1.4	ZST	19.31	296	eP	18	03.30	0.1	
KHT	59.74	291	iPc	42	05.70	0.5	ALQ	100.82	56	ePdiff	45	50.00	2.1X	PTJ	19.95	289	eP	18	09.70	-0.6	
BDT	60.10	294	eP	42	07.70	0.1			0.7s	0.86nm	4.5mb		KSP	20.32	304	eP	18	13.20	-0.8		
	0.8s	33.70nm				5.5mb	FRB	115.03	20	ePKP	50	39.00	0.0								
CHG	60.66	296	iPc	42	12.20	0.8	HFS	119.12	339	ePKP	50	43.30	-1.7	VBY	20.45	288	e(P)	18	14.30	-1.1	
	1.2s	173.83nm				6.1mb			0.4s	1.30nm			GAR	20.63	91	iP	18	17.60	0.0		
CD2	61.50	310	P	42	16.60	-0.4	NB2	119.31	341	PKP	50	46.90	-0.5	LJU	20.94	290	eP	18	21.00	0.4	
			pP	42	26.60	33kmX			0.5s	0.90nm			CEY	21.02	289	e(P)	18	22.00	0.6		
			eS	50	36.50		BUL	120.89	242	iPKPd	50	52.20	0.5	PRU	21.24	301	P	18	23.80	0.2	
HHC	61.74	324	P	42	18.00	-0.5			1.0s	32.50nm											
BTO	62.50	323	P	42	23.20	-0.3	KRI	121.12	246	iPKPd	50	40.00	-12.2X								
ADK	63.13	19	eP	42	27.80	0.4	SCH	121.51	27	ePKP	50	51.00	-0.7	NUR	21.34	334	iP	18	23.40	-1.1	
LZH	63.98	315	iPc	42	32.20	-1.3	KSP	124.13	330	ePKP	50	57.00	0.1								
	1.4s	74.00nm				5.4mb	BRG	125.27	331	e(PKP)	50	59.30	0.2	DUI	21.48	278	P	18	30.00	3.8X	
Z	30s	0.74um				4.7MszX	SKO	125.86	318	ePKP	51	00.10	-0.5	KHC	21.74	298	iP	18	29.00	0.3	
GTA	68.40	317	Pc	43	01.40	-0.2	MOX	126.53	332	ePKP	51	02.00	0.4								
	1.0s	30.00nm				5.2mb	KHC	126.56	329	iPKP	51	02.20	0.5	BRG	21.77	303	eP	18	29.50	0.6	
			pP	43	11.80	33kmX				e	51	14.00									
LSA	70.99	304	P	43	19.50	1.6								SDI	21.94	278	P	18	35.60	4.8X	
YAK	71.14	348	eP	43	16.60	-1.0	OHR	126.69	317	ePKP	50	56.50	-5.7X	KAF	22.12	338	eP	18	31.40	-0.8	
			i	43	28.00		LPB	131.64	119	PKP	51	12.00	-0.8	FVI	22.15	291	P	18	35.30	2.6	
			eS	52	42.00		ZOBO	131.73	119	PKP	51	13.00	-0.2	ARV	22.27	283	P	18	35.10	1.2	
ANM	76.89	16	ePc	43	51.70	0.9			1.1s	8.70nm			CLL	22.44	304	iP	18	36.50	0.9		
SVW	77.67	22	ePc	43	56.60	1.4				LR	34	20.00									
	1.0s	43.50nm				5.3mb	GIB	132.77	317	Pdiff	48	11.70	1.7	QUE	22.50	115	eP	18	40.10	3.6X	
WMO	78.49	317	P	44	00.00	-0.1				eSg	48	23.60		RSM	22.56	284	P	18	38.90	2.1	
	1.2s	40.00nm				5.2mb	USI	132.96	319	Pdiff	48	01.50	-9.1X	CTI	22.95	290	P	18	41.30	0.6	
Z	24s	0.40um				4.7MszX				eSg	48	07.10		CRE	22.96	284	P	18	45.70	4.8X	
			pP	44	11.80	39kmX	SIV	137.89	123	ePKP	51	11.00	-13.2X	SFI	22.99	284	P	18	43.00	2.0	
TTA	78.69	21	eP	44	01.60	0.7	PPD	141.65	139	ePKP	51	25.30	-5.5X	MOX	23.20	30					



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			ipP	24	55.30	114kmX				ePcP	27	07.00				ed	27	03.39					
			eScP	31	07.90					iPP	27	22.00				ePP	28	14.90					
MEMT	28.50	107	iPd	24	30.80	0.6				iPPP	27	41.00				e	28	21.52					
			epP	24	55.80	115kmX				eScP	30	35.00				e	28	50.76					
LTMT	28.84	110	iPd	24	34.00	0.6				ePcS	30	37.00				e	32	44.65					
			epP	24	59.30	116kmX				iS	32	06.00				eS	32	54.75					
ORV	29.19	128	iPd	24	35.60	-0.6				iPS	32	17.00				esS	33	37.79					
			ipP	25	00.10	111kmX				iPSP	33	36.00			FVM	43.88	95 eP	26	39.00	-1.2			
			i	25	19.10					eSS	35	01.00				1.0s	284.00nm		6.0mb				
			ePcP	28	11.00					iScS	35	24.00			ELF	43.98	82 P	26	40.90	0.0			
			eScP	31	09.80					iSSS	36	17.00			DLA	44.12	83 P	26	42.70	0.7			
BRK	30.41	130	iPd	24	47.70	0.8			GSC	34.69	125	ePd	25	25.41		LDN	44.16	82 P	26	42.20	-0.1		
			ipP	25	13.30	117kmX				e	25	31.53	21kmX		JNW	44.31	16 iP	26	42.50	-0.7			
			epPcP	28	14.40					ed	25	52.89			CLE	45.21	84 iP	26	49.70	-1.0			
			eScP	31	14.50					iS	30	49.90			OFUJ	45.75	272 eP	26	53.40	-1.6			
BKS	30.41	130	iPd	24	48.00	1.0				e	31	27.31			WVLY	45.80	80 eP	26	54.30	-1.1			
	0.9s	582.00nm			6.3mb				SBB	34.86	127	iPd	25	26.00	0.4	RSNY	46.02	75 e(P)	26	53.00	-4.0		
			ipP	25	13.70	117kmX			FRB	35.04	50 ePc	25	25.70	-1.0		0.8s	184.29nm		5.9mb				
			iSP	25	28.00					1.0s	958.00nm						eScP	32	13.00				
			iPP	25	46.00				PV09	35.05	113	iP	25	27.40	-0.1	MDJ	46.91	286 iPc	27	01.80	-2.3		
			iPPP	26	04.00						ePcP	28	27.50			4.0s	3710.00nm		6.5mb X				
			ePP	26	06.60						iScP	31	30.90			Z	32s	6.72um		5.4MszX			
			ePcP	27	45.50				MWC	35.19	128	iPd	25	39.00	10.5	N	12s	3.11um					
			ipPcP	28	14.30				PAS	35.21	128	ePd	25	29.42	0.9	E	10s	2.48um					
			iS	29	45.00						epPd	25	54.75	110kmX				pP	27	29.00	117kmX		
			e	30	50.00						ed	25	56.57					sP	27	43.00			
			eScP	31	14.30				RVR	35.64	127	iPd	25	32.00	-0.2			PP	28	53.80			
			eLQ	31	52.00				GOL	35.69	108	iPd	25	33.10	0.3			iS	33	44.00			
			esScP	32	08.30					1.0s	192.50nm							sS	34	33.00			
PCC	30.70	131	iLR	33	22.00						iPcP	27	57.60					ScS	36	44.00			
			ePd	24	49.90	0.4					i	28	27.90			CBM	46.99	69 iPd	27	03.00	-1.7		
			ipP	25	15.30	115kmX					iScP	31	33.00			YAMJ	47.24	272 eP	27	05.40	-1.4		
			epPcP	28	15.40						e	32	25.60			SCP	47.45	81 iPc	27	06.15	-2.2		
CMB	30.94	128	ePd	24	52.22	0.5			GLD	35.71	108	ePd	25	33.80	0.8			ic	27	08.30			
	1.5s	675.52nm			6.2mb					1.3s	666.67nm							epPd	27	32.14	111kmX		
			epPd	25	17.38	114kmX					e	25	58.70	107kmX				ed	27	34.13			
			ed	25	19.20						i	26	09.40					esP	27	43.89			
			iS	29	50.59						iPcP	28	28.40					ePcP	28	34.65			
			iScP	31	15.60						iScP	32	28.10					ePP	28	59.21			
MHC	31.10	130	iPd	24	54.00	0.8			CIS	35.79	129	eP	25	34.80				epPP	29	26.25			
			ipP	25	19.70	117kmX			PEC	35.81	127	iPd	25	33.70	0.1			iS	33	52.52			
			esP	25	40.80						epP	25	59.30	111kmX				esS	34	40.53			
ARN	31.13	130	eP	24	54.20	0.8					ePcP	28	28.60			HIA	47.53	297 iPc	27	07.06	-1.9		
GCC	31.26	131	eP	24	53.80	-0.6					e	31	32.20					ic	27	09.54	8kmX		
			epP	25	19.50	117kmX					eP	25	38.10	1.9				esPd	27	45.79			
BW06	31.35	109	iPd	24	55.00	-0.5			SCI	36.12	129	eP	25	39.00	0.2			ed	27	47.78			
SAO	31.69	130	ePd	24	58.10	-0.1			PLM	36.41	127	iPd	25	39.00	0.2			ePcP	28	33.43			
			epP	25	23.80	117kmX			CPE	36.74	128	eP	25	43.40	2.0			ePP	28	57.92			
			eScP	31	18.10				BAR	37.08	127	iPd	25	45.00	0.7			esPP	29	37.58			
LLA	32.00	130	iPd	25	02.00	1.1			IKP	37.32	126	eP	25	48.40	2.1			eS	33	54.81			
			ipP	25	27.40	115kmX			GLA	37.44	125	iPd	25	48.00	0.7								
			epPcP	28	19.30				DAG	37.89	16	iPd	25	48.80	-1.7								
			eScP	31	19.90					2.0s	4235.29nm					AKU	47.61	24 iPc	27	09.10	-0.1		
DUG	32.07	116	iPd	25	01.60	-0.1					5 iPc	25	55.90	0.3				i	27	35.60	113kmX		
			e	25	27.80	119kmX			KBS	38.49	5	iPc	25	55.90	0.3								
			ePcP	27	39.80				ANMO	39.19	113	ePd	26	03.25	1.1		TRO	48.00	5 iPd	27	10.34	-1.8	
			i	28	18.50					1.5s	548.61nm					KEV	48.05	1 iPc	27	08.92	-3.6		
			iScP	31	20.20						ed	26	30.73	121kmX									
TNP	32.10	123	iP	25	01.90	-0.1			ALQ	39.20	113	iPd-	26	03.00	0.8			ic	27	11.40			
	0.9s	128.91nm			5.7mb					1.7s	807.69nm							epPc	27	35.73	114kmX		
			ePcP	28	18.00					Z	18s	5.84um						ec	27	37.89			
			iScP	31	19.70							epP	26	28.00	108kmX			esPd	27	47.32			
			e	32	13.80							esP	26	41.00				ed	27	49.64			
PRS	32.10	130	iPd	25	02.70	0.9						e	27	39.00				ePcP	28	37.20			
			ipP	25	28.00	114kmX						ePcP	28	07.00				ePP	29	01.48			
			epPcP	28	19.50							epPcP	28	39.00				epPP	29	27.96			
			eScP	31	20.00							iScP	31	47.00				esPP	29	41.21			
FRI	32.11	128	iPd	25	02.50	0.7					esScP	32	39.00					iS	33	57.28			
			ipP	25	21.10	79kmX			OPA	41.01	189	P	26	17.00	0.1			i	34	27.91			
			ePcP	27	44.90				KUSJ	41.18	273	eP	26	15.30	-2.7			e	37	40.00			
			epPcP	28	18.30							eS	26	56.40			RSCP	48.08	92 eP	27	11.20	-2.1	
			eScP	31	20.00				ASAJ	41.35	275	eP	26	17.00	-2.4			REY	48.23	27 eP	27	10.80	-3.2
			esScP	32	13.40				HON	41.38	189	P	26	20.00	0.2			i	27	39.60	124kmX		
PRI	32.52	130	iPd	25	07.30	1.7			SCH	41.64	60	ePc	26	20.70	-1.1								
			ipP	25	33.00	116kmX				1.3s	1200.00nm												
			epPcP	28	17.60							pP	26	57.00	165kmX								
			eScP	31	18.60				HOOJ	42.39	273	eP	26	26.00	-2.0								
ISA	33.75	127	ePd	25	16.58	0.4			SAP	42.77	276	eP	26	29.00	-2.0								
			ed	25	43.89	123kmX			MEO	42.78	105	iPd	26	31.20	-0.1								
			iS	30	33.91				TUL	43.11	101	iPc	26	33.30	-0.6								
			ipP	25	18.00	0.2				1.2s	362.60nm												
CLC	33.94	126	eP	25	22.00	1.7				Z	19s	3.99um											
SYP	34.22	130	ePc	25	21.23	-0.3						e(S)	36	01.40									
SBC	34.39	130	epPd	25	48.21	121kmX						LR	39	57.20									
			ed	25	50.20				MRRJ	43.38	275	eP	26	33.80	-2.2								
			eS	30	46.09				CCM	43.45	95	ePc	26	35.91	-0.7								
YAK	34.60	305	iPc+	25	20.40	-2.6						ec	26	3									



01d 07h

			sP	28	00.00				ec	28	50.47			Z	12s	3.90um	5.8MszX					
			PP	29	18.00				esPd	28	58.58			N	12s	1.60um						
			S	34	17.00				ed	29	00.90			E	24s	0.90um						
			sS	35	05.00				ePP	30	32.05											
			ScS	36	58.00				epPP	31	03.09						29 24.00 122kmX					
			eSS	37	46.00				iPc	28	20.60	-3.4					29 42.00					
MAT	49.41	273	iPc	27	21.50	-2.0		UPP	57.70	7	ipP	28	49.20	119kmX			31 12.00					
	1.0s	295.00nm			6.1mb						iS	36	05.00				31 50.00					
			eS	34	20.00				eP*P*	58	32.00						iPPP 33 20.00					
CHJJ	49.45	272	P	27	22.30	-1.5		HHC	57.73	297	Pc	28	22.50	-2.1			iS 37 12.00					
MTMJ	49.57	273	P	27	23.60	-1.2			1.2s	690.00nm		6.5mb					iSP 37 46.00					
CBN	49.76	83	iPd	27	25.30	-0.8		Z	28s	10.40um		5.8MszX					iScS 38 40.00					
IIDJ	50.42	272	P	27	29.90	-1.3		E	10s	2.70um							iSS 41 28.00					
SOD	50.44	1	iP	27	28.40	-2.5					sP	28	58.00				iSSS 43 30.00					
			i	27	55.40	114kmX					PP	30	32.00		GTA	63.63	305	iPc	29	02.70	-1.9	
IRK	51.08	310	iP	27	34.00	-2.0					S	36	12.00			4.0s	4300.00nm		6.7mb X			
			e	27	50.50						sS	36	58.00		Z	28s	9.00um		5.8MszX			
			e	27	55.10			EDR	58.51	19	eP	28	26.40	-3.3				pP	29	28.00	101kmX	
			epP	28	04.60	131kmX		BTO	58.58	298	iPc	28	28.00	-2.6				sP	29	42.00		
			esP	28	12.80				4.0s	3300.00nm		6.7mb X						S	37	25.00		
			ePcP	28	34.80			N	13s	4.60um								ScS	38	33.00		
			e	28	47.50			E	13s	3.90um								SS	41	28.00		
			e	29	32.00						pP	28	57.00	120kmX		WIT	63.76	15	eP	29	03.50	-1.5
			ePP	30	05.00						sP	29	10.00					epP	29	31.50	114kmX	
MOR7	51.14	7	eP	27	33.26	-3.0					PP	30	42.00					esP	29	43.00		
TSRJ	51.27	274	P	27	35.90	-1.7					S	36	20.50		GCM	63.86	99	eP	29	06.20	0.2	
SNY	51.79	289	iPc	27	39.20	-2.2					sS	37	12.00		WMO	64.00	316	iPc	29	05.27	-1.6	
	3.5s	4600.00nm			6.8mb X						eSS	40	15.00			4.0s	4400.00nm		6.7mb X			
Z	20s	6.20um			5.6Msz			ELD	58.75	20	eP	28	28.10	-3.3		Z	28s	7.80um		5.7MszX		
E	12s	2.80um						EDU	58.79	20	eP	28	28.20	-3.5		N	10s	2.40um				
			pP	28	06.00	113kmX			0.7s	158.00nm		6.2mb			E	10s	2.10um					
			sP	28	17.00			EAB	58.92	21	eP	28	29.60	-3.0				ic	29	07.75	8kmX	
			PP	29	40.00			EBH	59.00	20	eP	28	29.80	-3.3				ed	29	45.49		
			iS	34	51.00				0.8s	243.00nm		6.3mb						ePP	31	26.40		
			sS	35	35.00			TIA	59.25	290	Pc	28	32.60	-2.5				e	31	59.51		
			ScS	37	18.00				2.4s	1600.00nm		6.7mb						eS	37	34.64		
NSS	52.70	9	eP	27	44.68	-3.2		Z	50s	9.60um		5.5MszX						isS	38	07.75		
SHK	53.63	276	iPc	27	53.50	-1.6		N	15s	2.90um								eP+	29	09.00	0.6	
	1.1s	430.38nm			6.3mb						pP	29	04.00	131kmX				epP	29	42.00	137kmX	
CGX	53.85	120	(P)	28	05.50	8.4					S	36	30.50					e	31	29.00		
RGS	54.08	10	iPc	27	54.50	-3.5					sS	37	17.50					e(PP)	31	52.00		
MOL	54.26	12	eP	27	56.44	-3.0		EDI	59.36	20	eP	28	32.20	-3.4				iS	38	18.00		
FRO	54.79	14	iP	28	00.56	-2.7		EAU	59.40	20	eP	28	33.00	-2.9				eSS	42	32.00		
FOO	54.96	13	iPc	28	01.81	-2.7		EBL	59.53	20	eP	28	33.50	-3.3		WTS	64.58	15	iPc	29	08.00	-2.3
DL2	55.03	288	Pc	28	03.00	-2.3			0.8s	174.00nm		6.2mb						e	29	36.00	113kmX	
	5.0s	4000.00nm			6.6mb X			EKA	59.93	20	P	28	36.00	-3.5				e	32	08.00		
Z	20s	2.50um			5.3Msz				1.2s	304.40nm		6.2mb						e	57	53.00		
N	18s	5.40um						ESK	59.94	20	iPc	28	36.70	-2.9				e	58	26.00		
E	18s	4.40um							1.0s	160.00nm		6.0mb										
			pP	28	30.00	112kmX		TIY	60.01	294	iPc	28	38.20	-2.1				iPc	29	08.00	-2.9	
			S	35	35.00				4.0s	2590.00nm		6.7mb X						pP	29	35.00	109kmX	
			sS	36	23.00			N	11s	3.50um								PP	31	30.80		
SUE	55.46	14	eP	28	05.20	-2.9					pP	29	05.50	116kmX				S	37	36.40		
HYA	55.51	13	eP	28	04.90	-3.5					sP	29	18.50					iPc	29	10.30	-1.5	
KAF	55.72	1	iP	28	06.60	-3.3					PP	30	54.50					iPc	29	11.29	-1.9	
	0.8s	263.30nm			6.3mb						S	36	40.00									
			esP	28	11.00						sS	37	30.00									
UNM	55.94	116	(P)	28	13.00	0.6					SS	40	40.00									
ASK	56.07	14	eP	28	09.00	-3.5		SCX	61.04	111	(P)	28	51.50	4.1				ic	29	13.78		
NB2	56.10	10	P	28	09.20	-3.6		COP	61.50	10	iPc	28	48.00	-2.1				pP	29	39.00	112kmX	
	0.9s	254.30nm			6.2mb				1.0s	556.00nm		6.5mb						sP	29	52.00		
BER	56.18	14	eP	28	10.20	-3.1					i	29	15.00	110kmX				ePP	31	38.66		
EGD	56.28	14	iP	28	11.20	-2.8					i	29	25.00					esPP	32	16.46		
BJI	56.47	293	ePc	28	12.87	-2.7		SSE	61.76	283	iPc	28	50.00	-2.1				ScP	33	32.00		
	4.0s	3770.00nm			6.7mb X				3.0s	1790.00nm		6.5mb						PcS	33	45.00		
			ec	28	15.52	9kmX			Z	22s	3.80um		5.5Msz					eS	37	46.18		
			ed	28	42.17				N	12s	1.10um							i	38	30.32		
			ed	28	54.09				E	12s	1.10um							ScS	38	48.00		
			eS	35	58.73						pP	29	20.00	123kmX				iPc	29	13.00	-2.1	
			esS	36	40.00						sP	29	32.00									
			eScS	37	48.50						PP	31	08.00									
HFS	57.18	9	eP	28	16.70	-3.7																



			esP	29	54.50		CDF	68.16	15	P	29	30.79	-2.4	STS	70.84	28	eP	29	47.60	-1.9
			e(P'P'	57	55.00		WLS	68.17	15	P	29	30.86	-2.4	CAF	70.86	20	eP	29	47.10	-2.5
			e(pRPK	58	22.00		VITF	68.19	16	P	29	30.99	-2.2	PTI	70.93	2	eP	29	41.50	-8.4
SNF	65.72	17	iPc	29	15.10	-2.5	OZH	68.20	282	iPc	29	30.00	-3.6	LPL	70.94	16	eP	29	48.80	-1.6
			e	29	43.60	115kmX	1.0s	93.00nm				5.6mb	LPO	70.95	20	eP	29	47.70	-2.4	
			P'P'	57	54.70			pP	30	00.00	121kmX		LPG	70.96	16	eP	29	49.20	-1.4	
MEM	65.85	16	iPc	29	15.80	-2.6		S	38	24.00				1.0s	281.25nm				6.0mb	
			e	29	43.70	112kmX		sS	39	14.00			CTI	70.98	12	Pc	29	47.30	-3.1	
			P'P'	57	54.20		ECH	68.34	15	P	29	31.86	-2.4	UZD	70.99	7	iPc	29	48.50	-1.8
			ec	58	25.00		HAU	68.45	16	eP	29	32.40	-2.5	ORO	70.99	15	P	29	43.40	-7.1
CLL	65.89	11	iPc	29	16.20	-2.5		1.0s	156.25nm			5.8mb	LSD	71.05	16	P	29	49.49	-1.6	
	1.1s	260.00nm			6.1mb		SPC	68.49	6	iPc	29	33.60	-1.7	PDA	71.06	43	iPc	29	50.00	-0.8
			ipP	29	43.80	111kmX		i	30	03.40	120kmX		VVI	71.12	12	P	29	48.10	-3.0	
			isP	29	57.00		BSF	68.67	16	P	29	33.94	-2.5	VOY	71.20	11	iPc	29	48.70	-3.1
			eS	37	53.00		MOF	68.70	15	P	29	33.94	-2.6		i	30	19.60	124kmX		
			P'P'	57	49.00		FEL	68.78	15	P	29	34.26	-2.8	LJU	71.25	10	iPc	29	45.20	-6.7
PJG	66.00	253	eP	29	16.20	-3.7	LOR	68.83	18	eP	29	34.60	-2.7		i	29	51.00	19kmX		
GUA	66.02	253	eP	29	15.80	-4.2		1.0s	281.25nm			6.1mb		e	30	19.90				
	0.6s	213.33nm			6.3mb		FUR	68.85	12	iPc	29	35.30	-2.0		e	33	08.80			
DOU	66.17	17	Pc+	29	17.80	-2.7	MFF	68.87	21	eP	29	35.10	-2.3		e	34	54.40			
	0.8s	158.30nm			6.0mb		SLE	68.94	14	iPc	29	35.40	-2.5		eS	38	59.60			
			e	31	48.00		SSF	68.99	18	eP	29	35.70	-2.5		e	39	32.80			
			S	38	29.00		BBS	69.12	15	P	29	36.58	-2.5		e	48	08.00			
			P'P'	57	50.90		LBF	69.13	18	eP	29	36.30	-2.8		e	53	22.00			
			e	58	15.20		LOMF	69.15	16	P	29	37.04	-2.2	SAL	71.30	13	Pc	29	49.60	-2.6
			e	58	22.30		VKA	69.18	9	iPc	29	36.90	-2.4	RSP	71.37	16	P	29	51.13	-1.6
BRG	66.40	10	iPc	29	19.40	-2.6		2.5s	410.00nm			5.8mb	BNI	71.39	16	Pc	29	51.60	-1.3	
	1.7s	340.00nm			6.0mb			ipP	30	07.60	124kmX		LRS	71.45	86	P	29	51.50	-2.0	
			ipP	29	49.90	124kmX		e	32	54.00			PTJ	71.50	9	iPc	29	50.60	-2.9	
			eS	37	59.00		ZLA	69.21	15	iP+	29	37.30	-2.3	EZAM	71.51	28	iPd	29	52.40	-1.1
			esS	38	39.00		KMR	69.21	10	iP+	29	38.00	-1.5	TRI	71.51	11	Pc	29	50.30	-3.1
			iP'P'	57	47.30			i	30	07.20	117kmX		KSH	71.52	323	iPc	29	53.00	-0.8	
			e	58	19.00		AVF	69.23	18	eP	29	37.00	-2.6		3.0s	2000.00nm			6.4mb	
MOX	66.42	12	iPc+	29	20.00	-2.2	ZST	69.30	8	iP	29	38.70	-1.3	E	13s	6.50um				
	1.1s	392.00nm			6.2mb			i	30	09.40	124kmX			S	38	51.00				
			ipP	29	48.00	113kmX		i	32	09.50			RRL	71.54	16	P	29	52.87	-1.1	
			eS	37	40.00			i	32	09.70			CEY	71.54	10	iPc	29	50.90	-2.8	
			eP'P'	57	49.00		BGF	69.38	19	eP	29	37.90	-2.7		e	30	21.00	120kmX		
TNS	66.51	14	iPc	29	20.70	-2.1	BHG	69.44	11	iPc	29	38.90	-2.0	ZAG	71.59	9	iPc	29	51.70	-2.2
			i	29	48.70	113kmX	SMF	69.44	18	eP	29	38.20	-2.8	MGP	71.59	86	P	29	50.00	-4.3
BST	66.54	23	P	29	20.98	-2.0	LSF	69.48	20	eP	29	38.50	-2.7	ERUA	71.61	27	iPc	29	52.60	-1.5
KSP	66.61	8	iPc	29	21.00	-2.3	CD2	69.49	297	iPc	29	39.20	-2.3	PPE	71.66	1	iPc	29	54.50	0.2
	0.9s	221.00nm			6.1mb			6.0s	3800.00nm			6.4mb X	MDB	71.68	3	iPd	29	53.00	-1.5	
			i	29	48.80	112kmX	Z	32s	5.00um			5.6MszX	CLLP	71.76	86	P	29	53.00	-2.3	
			i	30	00.00		E	13s	3.90um				VBY	71.84	10	iPc	29	53.00	-2.4	
			e	32	22.00			PcP	30	03.50			LPR	71.89	85	P	29	53.00	-3.2	
ANP	66.65	280	eP	29	24.00	-0.1		pP	30	05.00	101kmX		DEV	71.90	4	iPc	29	55.00	-0.7	
			eS	38	08.00			sP	30	23.00			RIY	71.93	10	iPc	29	53.20	-2.7	
FLN	66.72	20	eP	29	21.10	-2.9		S	38	35.00				i	30	23.40	120kmX			
	1.0s	218.75nm			6.0mb		TCF	69.55	19	eP	29	38.90	-2.7	SJG	71.93	86	eP	29	54.00	-2.4
Z	20s	6.00um			5.8Msz		MOTA	69.64	13	iPc	29	40.00	-2.4	TIM	71.98	5	iPc	29	54.00	-2.2
ABH	66.75	15	eP	29	21.61	-2.7		ipP	30	09.80	119kmX		PZZ	71.98	16	P	29	55.13	-1.3	
HOF	66.78	12	iPc	29	21.90	-2.6	MAF	69.67	19	eP	29	39.70	-2.7	VRI	72.00	1	ePc	29	54.50	-1.8
LDF	66.94	20	eP	29	22.50	-3.0	WATA	69.70	12	iPc	29	40.60	-2.1		ed	57	32.00			
GRR	67.02	21	eP	29	23.30	-2.6		0.9s	257.00nm			6.1mb	DOI	72.00	16	P	29	54.00	-2.5	
PRU	67.33	10	Pc	29	26.00	-1.9	PSZ	69.74	6	iP	29	40.80	-2.0	CPD	72.11	85	P	29	55.00	-2.4
	1.2s	168.30nm			5.8mb		SRO	69.76	7	iP	29	41.20	-1.6	BZS	72.11	5	eP	29	55.00	-2.0
	3.0s	3.00um			5.5Msz			ipP	30	09.50	115kmX		PCP	72.13	15	P	29	54.51	-2.7	
N	16s	2.70um						i	30	11.40	121kmX		GYA	72.16	293	iPc	29	56.00	-1.7	
E	16s	1.20um						pP	30	05.00				4.0s	2300.00nm			6.3mb X		
			pP	29	54.50	115kmX	WTTA	69.77	12	iPc	29	41.20	-2.0		5.10um			5.5MszX		
			esP	30	07.50			1.0s	430.00nm			6.2mb		N	18s	2.40um				
			PP	32	37.00			ipP	30	10.10	115kmX		E	18s	1.30um					
			PPP	33	42.00		SOTA	69.77	13	iPc	29	41.20	-1.9		pP	30	25.00	115kmX		
			PPP	34	21.00			1.0s	364.00nm			6.2mb		PP	32	40.00				
			S	38	12.00			ipP	30	10.20	116kmX		S	39	06.00					
			sS	38	56.00		LLS	69.88	14	iPc	29	42.10	-1.8		sS	39	56.00			
			PS	40	00.00		CEI	70.08	4	eP	29	45.00	0.2	GZH	72.17	286	iPc	29	56.30	-1.3
LPF	67.33	21	eP	29	25.50	-2.4	OGA	70.11	13	iPc	29	43.60	-1.6		1.0s	100.00nm			5.6mb	
RAC	67.49	7	eP	29	27.00	-1.8		1.0s	141.00nm			5.7mb	Z	52s	10.80um			5.7MszX		
			iPP	29	55.50		KBA	70.12	11	iPc	29	43.60	-1.7		pP	30	22.00	100kmX		
			eS	38	15.00			0.9s	477.00nm			6.3mb		S	39	12.00				
KRA	67.61	6	eP	29	27.00	-2.6			ipP	30	12.00	113kmX		sS	39	51.50				
	1.0s	818.00nm			6.6mb		BUD	70.13	7	eP	29	43.50	-1.6	CKI	72.21	15	Pc	29	54.90	-2.7
			i	29	32.50	18kmX	OSS	70.19	13	iPc	29	44.00	-1.7	ISSF	72.23	22	P	29	56.47	-1.4
GWf	67.65	15	P	29	27.54	-2.4	VDL	70.32	14	iPc	29	45.00	-1.5	BTH	72.24	22	Pd	29	55.20	-2.6
STU	68.03	14	iPc	29	29.90	-2.4	RJF	70.40	20	eP	29	43.90	-2.9		e	30	24.50			
	1.0s	100.00nm			5.7mb			2.0s	5.75um			5.8Msz		iPP	30	35.00	164kmX			
STR	68.05	15	P	29	30.55	-1.8			ipP	30	10.10	115kmX		i	30	50.00				
KHC	68.10	11	iPc	29	31.00	-1.8	EMS	70.42	16	iPc	29	45.40	-1.8		isP	31	05.00			
	1.2s	195.00nm			5.9mb		DIX	70.47	15	iPc	29	46.00	-1.6		ipPP	33	16.50			
Z	18s	2.40um			5.5Msz		FVI	70.55	11	Pc	29	45.10	-2.5		S	40	03.00			
N	20s	1.30um					MMK	70.57	15	iPc	29	46.80	-1.3	STV	72.27	16				



01d 07h

	LHE	72.37	22 P	29 57.00	-1.6			e	33 37.35		GBZT	77.08	359 iPc	30 23.20	-2.2
	FIN	72.41	15 P	29 55.44	-3.4			eS	39 38.68		THE	77.14	4 iPc	30 23.60	-2.1
	EPF	72.42	21 eP	29 56.00	-3.0			eSKS	40 12.62		-		i	40 02.80	
	TOUF	72.49	16 P	29 57.74	-1.8	PVY	75.05	7 iPc	30 11.95	-2.3	LCI	77.18	8 P	30 24.40	-1.6
	PTO	72.49	29 eP	29 57.80	-1.5	HCY	75.11	8 iPc	30 11.49	-2.9	FDF	77.19	83 eP	30 27.50	1.1
			e(S)	39 10.00		AZI	75.17	12 P	30 13.06	-1.7		0.8s	1.30nm		3.8mb X
	AUTN	72.53	16 P	29 57.93	-1.9		0.7s	131.60nm		5.8mb	GIBL	77.21	28 eP	30 25.00	-1.2
	SAOF	72.55	16 P	29 57.82	-1.9	AZI	75.17	12 P	30 10.00	-4.7	EPRU	77.23	27 iPc	30 25.30	-1.1
	CMP	72.57	3 iPc	29 59.00	-0.7	TIG	75.18	7 iPc	30 12.35	-2.4	LIJA	77.25	27 eP	30 25.00	-1.6
	MWIF	72.59	16 P	29 57.93	-2.1			e(S)	39 41.00		TPT	77.26	176 iP	30 26.40	-0.2
	MTUR	72.61	3 eP	30 00.00	-0.1	VTS	75.19	4 iPc	30 12.00	-3.1		1.2s	205.00nm		5.8mb
	MLS	72.62	21 P	29 57.78	-2.3	PGB	75.26	3 iPc	30 14.00	-1.4			iPP	30 54.60	110kmX
	AURF	72.62	16 P	29 58.19	-2.0	RMP	75.28	12 P	30 12.80	-2.6	ECOG	77.27	26 iPd	30 25.50	-1.2
	SBF	72.66	16 eP	29 58.00	-2.3	BDV	75.30	7 iPc	30 12.74	-2.8	PMO	77.27	177 iP	30 26.50	-0.1
	CALN	72.70	16 P	29 58.50	-2.2	RDP	75.33	12 P	30 13.40	-2.4		1.2s	150.00nm		5.7mb
	MME	72.72	13 P	29 59.10	-1.8	JMB	75.40	2 iPc	30 14.00	-2.0			iPP	30 54.80	110kmX
	REVf	72.77	16 P	29 59.10	-1.9	SDI	75.49	11 Pc	30 14.00	-2.7	OIZ	77.28	287 eP	30 24.50	-2.4
	BDI	72.83	13 P	29 59.50	-1.9	LSA	75.51	307 iP	30 17.00	-0.5		5.0s	2000.00nm		6.2mb X
	FRF	72.85	17 eP	29 59.20	-2.2		3.0s	1900.00nm		6.4mb			pP	30 55.00	120kmX
	BEQ	72.86	6 iP	29 59.20	-2.1	N	10s	0.60um					PP	33 19.00	
			i	30 30.00	123kmX	E	10s	0.70um					eS	40 07.00	
	LRG	72.92	17 eP	29 59.90	-1.8			pP	30 48.00	123kmX			sS	40 56.00	
		1.0s	187.50nm		5.8mb			S	39 45.00		AFC	77.30	26 iPc	30 25.80	-1.1
	LMR	73.06	17 eP	30 00.50	-2.1			sS	40 39.00		EYL	77.30	359 iP	30 25.00	-1.8
	SFI	73.11	13 Pc	30 01.30	-1.5	ECHE	75.53	23 eP	30 15.60	-1.3	YLV	77.30	359 iP	30 24.70	-2.1
	EGRA	73.12	22 iPc	30 01.90	-1.0	SEG	75.57	82 eP	30 12.00	-5.3	ORI	77.34	10 P	30 25.60	-1.3
	SRE	73.13	4 ePd	30 03.00	0.1	DUI	75.59	11 Pc	30 15.40	-1.9	KGT	77.42	1 iP	30 26.00	-1.3
	PGD	73.14	13 Pc	30 02.00	-1.2	SDA	75.60	7 iPc	30 14.70	-2.5	KZN	77.42	5 eP	30 25.10	-2.3
	RSM	73.16	12 Pc	30 01.40	-1.7	ULC	75.64	7 iPc	30 14.47	-3.0	ALJ	77.43	28 eP	30 27.50	-0.1
	FIR	73.19	13 iPc	30 02.00	-1.3	PLD	75.72	3 iPc	30 16.00	-1.9	RUV	77.47	176 iP	30 27.50	-0.2
			iS	39 18.00		SKO	75.74	5 iPc	30 16.20	-1.8		1.2s	195.00nm		5.8mb
	TLB	73.29	0 iPc	30 10.50	6.7		1.7s	620.00nm		6.1mb			iPP	30 55.80	110kmX
	CRE	73.41	13 Pc	30 02.60	-2.1			i	30 19.70	11kmX	TOV	77.51	93 iP	30 28.50	0.2
	BUC	73.44	2 ePc	30 04.00	-0.7			i	30 46.40		BNT	77.52	1 iP	30 26.70	-1.1
	GAR	73.45	327 iP	30 03.10	-2.0			i	33 06.00		VAH	77.52	176 iP	30 27.80	-0.2
			eSP	35 00.00				i	33 45.00			1.2s	220.00nm		5.8mb
			eS	39 16.00				i	35 18.00				iPP	30 56.10	110kmX
			eS	39 17.00				i	35 34.00		LSK	77.52	6 iPc	30 26.50	-1.5
			iScS	40 00.00				i	39 48.00		EDC	77.52	1 iP	30 26.50	-1.4
			eSS	43 41.00				i	40 39.00		GPA	77.57	359 iP	30 25.80	-2.4
	BUC1	73.51	2 eP	30 00.00	-5.1			i	41 03.00		KCT	77.62	0 iP	30 25.80	-2.7
	ETER	73.54	20 eP	30 03.60	-1.8			i	44 20.00		CNIL	77.62	28 eP	30 28.00	-0.5
	ARV	73.63	12 Pc	30 03.80	-2.1			i	45 20.00		MAL	77.63	27 iPc	30 27.50	-1.0
	UPA	73.73	102 iPc+	30 04.40	-2.4	DIM	75.80	2 iPc	30 17.00	-1.3			iPP	33 24.00	
		1.1s	291.14nm		6.0mb	PAG	75.81	83 eP	30 16.00	-2.8			iS	40 12.00	
	Z	20s	1.60um		5.3Msz	DEG	75.85	82 eP	30 16.00	-3.0			iPS	41 00.00	
			i	30 32.80	112kmX	RFI	75.91	11 P	30 17.70	-1.2	LIT	77.65	5 iPc	30 26.30	-2.3
			i	40 25.00			1.0s	984.00nm		6.6mb			e	30 55.80	116kmX
	GUD	73.91	25 iPc	30 05.90	-1.8	KKB	75.91	4 iPd	30 18.00	-1.0			e	31 25.80	
	EPLA	74.07	27 iPc	30 07.30	-1.2	PHP	75.98	6 iPc	30 16.50	-2.8	EJIF	77.67	28 iPc	30 28.30	-0.5
	ETOR	74.14	24 iPc	30 07.10	-1.9	ESEL	76.02	20 iPd	30 18.30	-1.3	EGUA	77.70	26 iPc	30 27.80	-1.1
	PGF	74.15	15 P	30 06.88	-2.2	DMK	76.05	1 iP	30 17.60	-2.1	TDS	77.74	10 Pc	30 26.80	-2.3
	SKI	74.19	83 eP	30 13.38	3.9	MGG	76.08	82 eP	30 17.00	-3.2	AFI	77.80	200 ePc	30 35.74	6.1
	PSN	74.19	0 iPc	30 09.00	-0.1	RZN	76.14	3 iPc	30 19.00	-1.5			ed	30 58.09	84kmX
	HVAR	74.25	9 iPc	30 06.60	-2.8	EVJA	76.17	25 iPc	30 19.20	-1.4			iS	40 15.07	
	PLE	74.29	7 iPc	30 08.40	-1.4	KDZ	76.19	2 iPc	30 19.00	-1.5	ENIJ	77.84	25 iPd	30 28.10	-1.6
	CPB	74.34	82 eP	30 06.69	-3.6	MMB	76.21	4 iPc	30 19.00	-1.7	PAIG	77.87	4 iPc	30 27.30	-2.5
	MAO	74.52	13 Pc	30 08.60	-2.5	TIR	76.29	7 IPd	30 19.00	-2.1	SDV	77.91	94 iP	30 30.00	-0.6
	EROQ	74.58	22 eP	30 09.50	-1.9	EVAL	76.31	28 iPc	30 19.90	-1.3	PLAT	77.93	28 eP	30 30.00	-0.2
	EBR	74.60	22 eP	30 08.00	-3.5	BBL	76.35	83 eP	30 17.50	-4.3	EZN	78.03	2 iP	30 28.30	-2.3
			eS	39 25.00		EBAN	76.37	26 iPc	30 20.60	-1.0	SLB	78.03	83 eP	30 29.37	-1.7
	PVL	74.63	2 iPc	30 10.00	-1.6	EHOR	76.40	27 iPc	30 20.30	-1.4	IGT	78.12	7 iPc	30 28.90	-2.3
	TOL	74.66	25 iPc	30 10.46	-1.5	KAS	76.42	356 iPc	30 21.20	-0.7	DST	78.27	360 iP	30 30.00	-2.0
			ec	30 12.77		VAY	76.44	5 iPc	30 20.00	-1.9	BMG	78.38	97 iPd	30 32.00	-1.1
			epPc	30 39.09	112kmX		0.8s	102.00nm		5.7mb	SVV	78.40	84 eP	30 31.20	-1.9
			esPd	30 48.53				i	30 26.00	19kmX	MAIO	78.47	335 iPc	30 32.30	-1.0
			ed	30 51.18				i	30 50.00			0.8s	106.52nm		5.7mb
			iPP	32 48.00		OHR	76.57	6 iPc	30 20.40	-2.3			i	31 01.00	112kmX
			eS	39 37.17			1.3s	488.00nm		6.1mb			eS	40 23.00	
			iS	40 25.00				i	30 31.30	36kmX	PRK	78.61	2 eP	30 31.30	-2.5
			iPS	40 57.00				i	30 49.40		OLLA	78.69	90 iP	30 33.70	-1.1
	BRY	74.66	8 iPc	30 09.32	-2.7	BRT	76.59	9 Pc	30 20.40	-2.4	AGG	78.72	5 iPc	30 32.10	-2.4
	LIS	74.68	30 iPc	30 10.50	-1.5	KNT	76.61	4 iPc	30 21.40	-1.5	TAB	78.79	346 iP	30 34.00	-1.1
	BAG	74.68	276 ePc+	30 08.00	-4.6			e	30 49.80	111kmX	ALT	78.81	359 iP	30 33.00	-2.1
		1.1s	202.53nm		5.8mb	KVT	76.62	354 iP	30 22.00	-1.0	RAB	78.93	238 e(P)	30 33.00	-2.9
			eS	39 35.00		SRS	76.68	4 iPc	30 21.80	-1.4	LVI	79.03	13 P	30 34.50	-1.6
	MNS	74.71	12 Pc	30 09.30	-2.9	ACU	76.68	23 iPd	30 22.60	-0.8	GUN	79.04	311 Pc	30 35.88	-1.0
	IVA	74.77	7 iPc	30 10.59	-2.0	CTT	76.73	0 iP	30 21.50	-2.0		1.0s	1689.00nm		6.8mb
	NKY	74.78	7 iPc	30 10.20	-2.5	ITU	76.77	360 iPc	30 21.00	-2.7	ATN	79.15	11 P	30 33.20	-3.6
	AQU	74.81	12 P	30 11.10	-1.7	GRG	76.80	5 iPc	30 22.50	-1.4	GIB	79.19	12 P	30 33.40	-3.8
	BPA	74.84	82 eP	30 10.00	-3.3	ISK	76.81	360 iP	30 21.30	-2.6	MNO	79.31	11 P	30 38.00	0.0
	KMI	75.00	295 iPc	30 12.05	-2.3	FNA	76.93	6 iPc	30 22.40	-2.3	KKN	79.36	311 Pc	30 37.28	-1.1
			3.0s	2600.00nm				e	30 25.40	10kmX	CVT	79.38	13 P	30 38.90	0.9
	Z	34s	6.80um		5.7MszX	EHUE	76.95	25 iPc	30 23.40	-1.5	GKN	79.39	312 Pc	30 37.34	-1.1
			ic	30 14.69		ALN	76.96	2 iPc	30 22.90	-1.8	IZM	79.47	1 iP	30 36.30	-2.3
			epPc	30 41.18	115kmX			e	30 41.50	68kmX	FUO	79.48	98 eP	30 35.00	-4.3
			ePP	33 03.14		HRT	77.05	359 iP	30 23.70	-1.6	VLS	79.49	6 eP	30 36.40	-2.2



690 obs. associated						
* MAY 01, 1991	07h	26m	50.22±	0.83s		
29.336 S ± 9.5km			68.025 W ± 0.1km			
DEPTH = 163.0 ± 32.8 km						
SAN JUAN PROVINCE, ARGENTINA					(137)	
ZON	2.27	194	iPc	27	28.80	-1.0
			eS	27	56.80	
MDZ	3.61	191	iP	27	47.10	0.7
			i	28	18.90	
JACH	4.00	213	ePd	27	52.70	1.2
PEL	4.43	210	iPd	27	57.50	0.4
			i	28	55.00	
ROCH	4.44	214	iP	27	57.50	0.1
SAN	4.68	208	eP	28	01.00	0.5
PCH	4.77	206	eP	28	02.50	0.8
TACH	4.97	209	iPd	28	03.90	-0.4
LCCB	5.12	215	iP	28	05.50	-0.7
LNW	5.44	211	iPd	28	08.70	-1.6
ANT	6.00	339	e(P)	28	18.00	0.1
SIV	14.74	27	P	30	12.00	-0.1
S.D. = 0.9 on 12 of 12 obs.						
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? MAY 01, 1991	07h	27m	53.58±	0.88s		
17.950 N ± 9.7km			98.144 W ± 9.6km			
DEPTH = 33.0km (normal)						
GUERRERO, MEXICO					(59)	
IIT	1.08	352	(P)	28	16.50	3.9X
			(S)	28	43.80	



01d 07h

PPM 1.20 338 (P) 28 15.14 0.5  
(S) 28 40.59  
IISM 1.26 35 (P) 28 19.18 4.2X  
(S) 28 46.65  
IIA 1.29 338 (P) 28 15.20 -0.2  
(S) 28 42.71  
III 1.33 289 (P) 28 15.50 -0.7  
(S) 28 43.36  
OXX 1.61 122 (P) 28 33.51 13.3X  
(S) 29 01.60  
ACX 1.96 237 (P) 28 25.53 0.4  
(S) 28 51.89  
LVVM 2.40 42 (P) 28 22.75 -8.6X  
(S) 29 43.25  
PBJ 3.02 119 (P) 29 28.50 48.3X  
MRX 3.37 302 (P) 28 04.50 -40.7X  
(S) 28 30.94  
TPX 6.41 117 (P) 29 28.00 -0.1  
S.D. = 0.7 on 5 of 11 obs.

? MAY 01, 1991 07h 46m 00.15 ± 7.41s  
36.372 N ± 6.3km 29.159 E ± 14.0km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 3.4 (ISK).

ELL 0.71 58 iPg 46 14.50 0.2  
eSg 46 28.00  
YER 1.04 318 ePn 46 19.80 0.0  
BCK 1.58 46 iPn 46 28.00 -0.3  
KHL 1.97 8 ePn 46 34.00 0.0  
S.D. = 0.4 on 4 of 4 obs.

\* MAY 01, 1991 07h 47m 48.37 ± 1.12s  
29.714 N ± 11.3km 89.992 E ± 10.6km  
DEPTH = 33.0km (normal)  
TIBET (306)

GUN 4.03 245 P 48 50.74 1.1  
SHL 4.46 157 iP 48 55.50 -0.1  
iS 49 42.00  
KKN 4.56 246 P 48 57.04 0.0  
PKI 4.56 243 P 48 57.46 0.3  
DMN 4.78 245 P 49 00.28 0.1  
GKN 5.00 251 P 49 01.68 -1.5  
OBN 45.43 320 P 56 06.00 0.4  
e 57 41.00  
i 57 53.00  
SKO 55.54 303 eP 57 30.00 7.3X  
SRO 56.73 310 eP 57 39.70 8.6X  
i 57 47.70  
i 58 11.60  
ZST 57.47 311 eP 57 40.60 4.3X  
e 58 10.80  
KSP 57.58 314 eP 57 41.80 4.7X  
2.0s 164.00nm 5.7mb  
ic 57 52.60  
i 58 20.20

PRU 58.82 313 eP 57 45.50 -0.2  
e 57 49.00  
e 58 18.20  
S.D. = 0.9 on 8 of 12 obs.

% MAY 01, 1991 07h 49m 31.42 ± 0.53s  
40.006 N ± 5.3km 28.829 E ± 4.0km  
DEPTH = 12.6 ± 5.1 km  
TURKEY (366)  
MD 2.7 (ISK).

DST 0.43 201 ePg 49 40.30 0.0  
eSg 49 45.30  
KCT 0.44 304 iPg 49 40.30 -0.1  
iSg 49 46.30  
IZI 0.59 56 iPg 49 42.30 -0.9  
eSg 49 50.80  
YLV 0.70 36 ePg 49 44.40 -0.6  
BNT 0.78 297 iPg 49 45.70 -0.7  
iSg 49 57.70  
EDC 0.81 295 iPg 49 46.00 -1.0  
eSg 49 58.00  
HRT 1.04 38 ePg 49 51.20 0.4  
eSg 50 05.50  
EYL 1.16 61 iPn 49 53.10 0.2  
CTT 1.18 345 iPn 49 53.00 -0.2  
KGT 1.25 291 iPn 49 54.80 0.4  
ALT 1.37 133 ePn 49 56.00 -0.4  
S.D. = 0.6 on 11 of 11 obs.

% MAY 01, 1991 08h 09m 19.85 ± 0.69s  
16.299 N ± 6.3km 61.391 W ± 5.7km  
DEPTH = 10.0km (geophysicist)  
LEEWARD ISLANDS (92)  
ML 2.2 (FDF).

SEG 0.15 314 ePd 09 24.20 0.8  
S 09 26.30  
SFG 0.19 103 ePc 09 24.48 0.4  
S 09 28.00  
DEG 0.32 87 iPc 09 26.20 -0.3  
S 09 30.00  
MGG 0.39 169 ePc 09 27.77 0.0  
PAG 0.39 226 ePc 09 27.55 -0.2  
S 09 32.70  
BPA 0.87 329 eP 09 35.80 -0.7  
S.D. = 0.7 on 6 of 6 obs.

\* MAY 01, 1991 09h 09m 40.17 ± 1.60s  
41.444 N ± 10.8km 29.324 E ± 9.5km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 2.6 (ISK).

ISK 0.43 208 ePg 09 49.00 0.1  
GBZT 0.66 172 ePg 09 53.00 -0.3  
HRT 0.67 157 iPg 09 53.60 0.0  
CTT 0.74 247 ePg 09 54.20 -0.4  
YLV 0.88 178 ePg 09 56.90 -0.2  
IZI 1.11 174 ePg 10 01.20 0.1  
DMK 1.23 288 iPg 10 03.10 0.0  
KCT 1.40 212 ePg 10 05.20 -0.6  
BNT 1.52 225 iPg 10 07.60 0.2  
KGT 1.82 238 ePg 10 12.20 0.4  
DST 1.91 196 ePn 10 15.80 0.7  
S.D. = 0.4 on 11 of 11 obs.

% MAY 01, 1991 09h 11m 14.50 ± 1.87s  
41.440 N ± 12.5km 29.289 E ± 12.0km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 2.8 (ISK).

ISK 0.41 205 iPg 11 23.00 0.1  
HRT 0.68 155 iPg 11 28.00 0.0  
CTT 0.71 246 iPg 11 28.20 -0.3  
YLV 0.87 176 ePg 11 31.20 -0.2  
DMK 1.21 289 iPn 11 37.10 0.1  
KCT 1.38 211 ePn 11 40.20 0.4  
S.D. = 0.3 on 6 of 6 obs.

% MAY 01, 1991 09h 18m 50.40 ± 1.77s  
17.865 N ± 15.7km 66.791 W ± 6.6km  
DEPTH = 10.0km (geophysicist)  
PUERTO RICO REGION (90)

CLLP 0.30 44 P 18 56.80 0.2  
MGP 0.32 297 P 18 57.00 0.0  
S 19 03.50  
LRS 0.43 353 P 18 59.10 -0.1  
S 19 05.90  
CPD 0.85 78 P 19 07.00 0.2  
S 19 18.70  
LPR 0.98 63 P 19 08.70 -0.4  
S 20 01.00  
S.D. = 0.3 on 5 of 5 obs.

% MAY 01, 1991 09h 29m 12.63 ± 3.02s  
16.715 N ± 17.7km 61.791 W ± 17.1km  
DEPTH = 119.0 ± 28.3 km  
LEEWARD ISLANDS (92)

BPA 0.33 349 iPd 29 29.61 -0.2  
S 29 41.55  
SEG 0.41 139 eP 29 30.16 0.0  
S 29 42.70  
PAG 0.69 171 ePc 29 32.18 0.1  
S 29 46.80  
SFG 0.73 129 iPc 29 32.51 0.1  
DEG 0.81 120 iPc 29 32.87 -0.2  
S 29 47.60  
NEV 0.86 299 eP 29 33.54 0.1  
S 29 48.40  
MGG 0.91 150 iPc 29 34.30 0.3  
S 29 49.50  
BBL 1.22 166 iPc 29 37.11 -0.1

FDF 2.06 163 iPd 29 47.15 -0.2  
S 30 12.20  
BIM 2.29 162 iPd 29 50.28 0.0  
S.D. = 0.2 on 10 of 10 obs.

% MAY 01, 1991 09h 30m 22.23 ± 0.54s  
40.621 N ± 6.7km 29.088 E ± 4.1km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 2.9 (ISK).

YLV 0.22 104 iPg 30 27.40 0.3  
IZI 0.41 134 iPg 30 30.80 0.2  
HRT 0.48 65 iPg 30 31.80 -0.3  
iSg 30 38.10  
KCT 0.67 237 ePg 30 35.20 -0.4  
CTT 0.72 317 iPg 30 35.90 -0.6  
EYL 0.82 94 ePg 30 37.80 -0.3  
BNT 0.93 254 ePn 30 40.10 0.1  
DMK 1.56 320 ePn 30 51.00 0.9  
S.D. = 0.6 on 8 of 8 obs.

% MAY 01, 1991 09h 41m 12.71 ± 0.81s  
16.275 N ± 7.3km 61.388 W ± 5.9km  
DEPTH = 10.0km (geophysicist)  
LEEWARD ISLANDS (92)  
ML 1.8 (FDF).

SEG 0.17 318 eP 41 16.80 0.2  
S 41 19.00  
SFG 0.18 97 eP 41 17.12 0.3  
S 41 19.40  
DEG 0.32 83 ePc 41 18.80 -0.5  
S 41 22.80  
MGG 0.36 169 eP 41 20.49 0.3  
PAG 0.37 229 eP 41 20.00 -0.4  
S 41 27.30  
S.D. = 0.6 on 5 of 5 obs.

? MAY 01, 1991 09h 45m 40.40 ± 2.40s  
39.700 N ± 19.9km 29.353 E ± 13.9km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 2.6 (ISK).

DST 0.57 261 ePg 45 51.80 -0.2  
eSg 46 01.80  
YLV 0.87 1 iPn 45 56.70 -0.4  
KCT 0.94 306 ePn 45 58.70 0.3  
EYL 1.06 35 ePn 46 00.70 0.2  
S.D. = 0.6 on 4 of 4 obs.

& MAY 01, 1991 10h 09m 00.60s  
37.062 N 121.892 W  
DEPTH = 11.0km  
CENTRAL CALIFORNIA (39)  
<BRK>. ML 3.7 (BRK).  
Mo=2.3\*10\*\*14 Nm (BRK). Felt  
(IV) at Boulder Creek, Mount  
Herman and Santa Cruz; (III) at  
Aptos and Scotts Valley. Also  
felt at Los Gatos.

GCC 0.09 249 iPd 09 03.40 0.1  
ARN 0.41 45 iPd 09 09.10 0.1  
SAO 0.47 129 iPd 09 09.20 -0.9  
PCC 0.59 318 iPd 09 11.70 -0.7  
PRS 0.84 150 iPc 09 16.20 -0.6  
BKS 0.86 342 iPc 09 16.80 -0.2  
eS 09 28.90  
BRK 0.86 340 iPd 09 16.70 -0.4  
iS 09 28.50  
LLA 0.88 120 iPd 09 16.60 -0.8  
ZSP 0.93 342 eP 09 17.40 -0.8  
i 09 18.40  
PRI 1.35 133 eP 09 24.80 -0.6  
i 09 47.80  
CMB 1.54 51 eP 09 26.80 -1.3  
NWRM 1.60 331 eP 09 26.40 -2.4  
PHAM 1.72 135 eP 09 29.40 -1.2  
FRI 1.75 92 eP 09 29.30 -1.7  
iS 09 51.10  
BCH 2.38 141 eP 09 38.50 -1.7  
ORV 2.51 7 eP 09 40.00 -1.9  
16 obs. associated

\* MAY 01, 1991 10h 35m 55.57 ± 0.70s



22.766 S  $\pm$  7.9km 66.187 W  $\pm$  10.9km  
 DEPTH = 269.6  $\pm$  13.0 km  
 4.3mb ( 2 obs.)

JUJUY PROVINCE, ARGENTINA (128)

ANT 4.00 256 iPc 37 00.20 -0.5  
 IS 37 47.90  
 CCH 5.36 0 P 37 18.50 1.3  
 LPB 6.46 343 P 37 30.00 -0.8  
 S 38 43.00  
 ZOBO 6.72 344 P 37 36.00 1.8  
 S 38 50.00  
 ARE 8.02 321 iPd 37 49.00 -1.2  
 IS 39 16.00  
 SIV 8.29 37 iPd 37 51.60 -1.7  
 JACH 10.62 201 iPd 38 30.00 7.3X  
 PEL 11.07 200 iPc 38 29.00 0.7  
 0.7s 41.10nm 4.7mb  
 LCCH 11.68 203 eP 38 35.50 -0.2  
 i 38 40.50  
 LNV 12.06 201 eP 38 40.00 -0.4  
 i 38 44.50  
 PPD 13.78 90 eP 39 03.80 2.1  
 e 39 06.50  
 VAO 17.71 94 iPc 39 45.60 -0.7  
 e 39 48.60  
 SOB1 27.74 65 eP 41 20.40 -1.3  
 KIC 66.66 72 P 46 19.10 -0.8  
 YKA 93.23 340 eP 48 41.70 1.7  
 0.6s 0.60nm 3.8mb  
 GBA 144.34 98 PKPc 55 01.00 0.1  
 0.8s 7.90nm  
 S.D. = 1.4 on 15 of 16 obs.

% MAY 01, 1991 11h 29m 06.25  $\pm$  0.78s  
 35.099 N  $\pm$  7.1km 110.921 E  $\pm$  9.1km  
 DEPTH = 10.0km (geophysicist)  
 EASTERN CHINA (664)  
 ML 3.8 (BJI).

XAN 1.96 238 iPnd 29 41.60 1.7  
 Pg 29 45.00  
 Sn 30 09.00  
 Sg 30 12.50  
 TIY 2.88 25 ePg 29 54.10 1.0  
 Sg 30 30.10  
 TIA 5.17 76 Pg 30 37.70 12.2X  
 Sg 31 39.80  
 WHN 5.38 147 ePn 30 28.00 -0.5  
 Pg 30 49.00  
 Sn 31 30.50  
 BTO 5.54 353 ePn 30 30.20 -0.6  
 Pg 30 45.60  
 Sg 31 54.40  
 LZH 5.85 282 ePn 30 35.50 0.2  
 Pg 30 54.50  
 Sn 31 43.00  
 Sg 32 04.50  
 BJI 6.46 39 ePg 30 58.50 14.8X  
 Sg 32 19.00  
 CD2 7.32 237 P 30 55.20 -0.7  
 GYA 9.36 204 Pc 31 24.00 -0.2  
 GTA 9.84 299 P 31 30.00 -1.0  
 S.D. = 1.1 on 8 of 10 obs.

MAY 01, 1991 11h 36m 37.16  $\pm$  0.35s  
 40.768 N  $\pm$  3.6km 29.205 E  $\pm$  2.8km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 MD 3.2 (ISK).

GBZT 0.18 83 ePg 36 41.30 0.0  
 ISg 36 45.50  
 YLV 0.24 148 iPg 36 42.20 -0.1  
 ISK 0.32 340 iPg 36 44.10 0.4  
 HRT 0.36 81 iPg 36 44.50 0.0  
 IZI 0.48 155 iPg 36 46.40 -0.5  
 CTT 0.70 303 iPg 36 50.40 -0.6  
 EYL 0.75 105 iPg 36 51.50 -0.5  
 KCT 0.83 232 iPg 36 52.70 -0.5  
 ISg 37 04.70  
 GPA 0.97 119 iPg 36 56.00 0.4  
 eSg 37 10.00  
 BNT 1.06 248 iPn 36 57.60 0.4  
 EDC 1.11 248 iPn 36 57.50 -0.4  
 DST 1.24 201 ePn 37 01.30 1.0  
 KGT 1.48 258 iPn 37 03.70 -0.1

DMK 1.52 314 iPn 37 04.60 0.3  
 EZN 2.39 248 ePn 37 22.00 5.0X  
 KHL 2.45 174 ePn 37 18.00 0.1  
 S.D. = 0.5 on 15 of 16 obs.

MAY 01, 1991 11h 44m 47.66  $\pm$  0.53s  
 40.763 N  $\pm$  5.5km 29.211 E  $\pm$  4.1km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 MD 2.8 (ISK).

GBZT 0.18 82 ePg 44 52.00 0.3  
 ISg 44 55.00  
 YLV 0.23 148 iPg 44 52.20 -0.5  
 ISg 44 55.70  
 HRT 0.35 80 iPg 44 55.20 0.3  
 ISg 45 00.20  
 IZI 0.47 155 ePg 44 56.70 -0.5  
 CTT 0.71 303 iPg 45 00.70 -0.9  
 ISg 45 10.70  
 BNT 1.06 248 ePn 45 08.00 0.3  
 DST 1.24 201 ePn 45 11.30 0.6  
 KGT 1.49 259 ePn 45 14.70 0.3  
 DMK 1.52 314 ePn 45 15.10 0.2  
 S.D. = 0.6 on 9 of 9 obs.

% MAY 01, 1991 12h 51m 04.76  $\pm$  0.79s  
 40.741 N  $\pm$  8.0km 29.232 E  $\pm$  7.0km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 MD 2.6 (ISK).

YLV 0.20 148 iPg 51 09.20 -0.1  
 ISg 51 14.30  
 HRT 0.34 76 ePg 51 12.00 0.2  
 eSg 51 16.90  
 IZI 0.44 155 ePg 51 13.70 -0.1  
 CTT 0.73 304 iPg 51 17.50 -1.6X  
 ISg 51 27.60  
 KGT 1.50 259 ePn 51 32.00 0.3  
 DMK 1.55 315 ePn 51 32.10 -0.3  
 S.D. = 0.4 on 5 of 6 obs.

\* MAY 01, 1991 13h 01m 57.95  $\pm$  1.12s  
 33.410 S  $\pm$  13.7km 67.345 W  $\pm$  10.4km  
 DEPTH = 208.4  $\pm$  8.3 km  
 3.9mb ( 1 obs.)

MENDOZA PROVINCE, ARGENTINA (139)

MDZ 1.37 292 e(P) 02 33.30 1.6  
 ZON 2.17 328 eP 02 38.70 -0.6  
 eS 03 02.70  
 RTCB 2.28 327 iPd 02 40.50 0.1  
 eS 03 01.00  
 RTLL 2.28 335 iPc 02 39.90 -0.5  
 PEL 2.81 275 iPc 02 46.60 0.3  
 IS 03 22.50  
 JACH 2.82 284 iPd 02 47.50 1.0  
 i 03 09.50  
 TCA 3.11 49 iPd 02 49.80 -0.1  
 (S) 03 27.50  
 LNV 3.43 260 iPd 02 53.00 -0.6  
 LCCH 3.53 268 iPc 02 52.50 -2.3  
 IS 03 42.00  
 IHA 3.62 275 eP 02 56.00 0.1  
 IS 03 37.60  
 RTRS 3.70 330 iPc 02 58.00 1.2  
 S 03 39.80

ANT 10.04 344 eP 04 17.50 -0.9  
 LPB 16.82 358 P 05 43.00 -0.5  
 ZOBO 17.08 357 P 05 47.00 0.4  
 PPD 18.14 55 eP 05 57.20 0.1  
 SIV 18.25 20 P 05 57.60 -0.8  
 VAO 20.70 65 eP 06 30.90 7.7X  
 ALQ 77.25 328 eP 13 32.00 1.4  
 0.7s 1.88nm 3.9mb  
 YAK 149.36 344 ePKP 21 23.40 5.6X  
 S.D. = 1.1 on 17 of 19 obs.

% MAY 01, 1991 13h 17m 53.21  $\pm$  0.75s  
 40.752 N  $\pm$  8.4km 29.216 E  $\pm$  7.1km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 MD 2.7 (ISK).

YLV 0.22 147 iPg 17 57.70 -0.3  
 HRT 0.35 78 iPg 18 00.80 0.4

eSg 18 05.30  
 IZI 0.46 155 iPg 18 02.30 -0.3  
 CTI 0.71 304 iPg 18 06.10 -1.2  
 eSg 18 15.60  
 KGT 1.49 259 ePn 18 21.00 1.0  
 DMK 1.53 315 ePn 18 21.00 0.4  
 S.D. = 1.0 on 6 of 6 obs.

\* MAY 01, 1991 14h 04m 54.09  $\pm$  0.74s  
 42.957 N  $\pm$  9.0km 42.677 E  $\pm$  11.3km  
 DEPTH = 10.0km (geophysicist)  
 3.9mb ( 4 obs.)

WESTERN CAUCASUS (362)

KVT 5.28 251 ePn 06 14.60 -0.4  
 TAB 5.62 149 eP 06 20.00 0.1  
 OBN 12.78 344 eP 08 10.00 11.6X  
 Z 12s 0.70um  
 N 12s 0.70um  
 ePPP 08 30.00  
 e 10 14.00  
 e 11 41.00  
 SPC 16.74 300 eP 09 03.00 12.8X  
 ZST 18.61 295 e(P) 09 19.80 6.4X  
 KSP 19.60 303 eP 09 25.50 0.2  
 NUR 20.70 334 eP 09 42.90 6.3X  
 KHC 21.04 297 eP 09 54.00 13.7X  
 e 10 02.00  
 KAF 21.50 339 iP 09 44.90 0.2  
 0.6s 3.60nm 3.9mb  
 esP 09 49.80  
 CLL 21.73 303 eP 09 50.00 2.8X  
 GRF 22.63 298 e(P) 09 56.50 0.3  
 HFS 24.60 324 eP 10 15.00 -0.2  
 0.7s 6.50nm 4.4mb  
 Z 16s 0.13um 3.5mszx  
 e 10 17.90  
 e 10 22.20  
 LR 20 05.00  
 SOD 25.96 346 eP 10 27.00 -1.0  
 NB2 26.11 325 P 10 30.30 0.7  
 0.7s 1.00nm 3.6mb  
 YKA 73.33 349 eP 16 22.10 -5.1X  
 0.6s 0.70nm 3.9mb  
 S.D. = 0.6 on 8 of 15 obs.

\* MAY 01, 1991 14h 37m 53.79  $\pm$  1.11s  
 42.458 N  $\pm$  18.8km 43.374 E  $\pm$  12.4km  
 DEPTH = 10.0km (geophysicist)  
 3.8mb ( 2 obs.)

WESTERN CAUCASUS (362)

KVT 5.65 258 ePn 39 19.60 -0.3  
 KSP 20.30 304 eP 42 33.00 0.6  
 NUR 21.37 334 eP 42 54.00 10.9X  
 KAF 22.15 339 eP 42 50.80 -0.2  
 HFS 25.30 325 eP 43 22.50 0.9  
 0.5s 2.00nm 4.1mb  
 e 43 25.50  
 e 43 35.00  
 SOD 26.57 346 eP 43 41.00 7.7X  
 KEV 28.64 348 eP 43 48.00 -4.1X  
 GKN 36.29 100 P 45 00.00 0.5  
 YKA 73.91 350 eP 49 28.70 -1.6  
 0.7s 0.40nm 3.6mb  
 S.D. = 1.2 on 6 of 9 obs.

\* MAY 01, 1991 14h 39m 31.85  $\pm$  2.00s  
 32.310 S  $\pm$  10.4km 69.659 W  $\pm$  23.0km  
 DEPTH = 10.0km (geophysicist)

MENDOZA PROVINCE, ARGENTINA (139)

RTCB 1.10 42 iPc 39 53.50 0.9  
 eS 40 08.70  
 ZON 1.13 48 eP 39 54.50 1.5  
 eS 40 08.50  
 CFA 1.40 60 ePd 39 56.00 -1.4  
 eS 40 12.00  
 RTLL 1.41 46 iPd 39 56.20 -1.4  
 RTRS 2.14 5 iPd 40 08.00 0.0  
 S 40 34.40  
 RFA 2.65 158 iPd 40 15.80 0.4  
 (S) 40 46.80  
 S.D. = 1.5 on 6 of 6 obs.

% MAY 01, 1991 15h 07m 59.90  $\pm$  0.83s  
 40.090 N  $\pm$  7.4km 28.958 E  $\pm$  6.8km



01d 15h

DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 2.5 (ISK).

IZI 0.46 58 iPg 08 09.30 -0.1  
eSg 08 15.00  
KCT 0.49 289 ePg 08 09.10 -0.7  
DST 0.55 208 iPg 08 11.20 0.2  
eSg 08 18.90  
YLV 0.57 34 iPg 08 11.50 -0.1  
HRT 0.91 36 ePn 08 17.00 -0.3  
CTT 1.13 339 ePn 08 22.00 0.9  
S.D. = 0.7 on 6 of 6 obs.

\* MAY 01, 1991 16h 41m 56.12±1.26s  
16.001 S ±10.1km 167.366 E ±12.5km  
DEPTH = 46.8 ± 10.7 km  
4.9mb ( 6 obs.)

VANUATU ISLANDS (186)

BKM 1.86 153 iPc 42 28.00 1.9  
PVC 1.95 152 iPc 42 26.00 -1.4  
iS 42 50.30  
DZM 6.10 188 iPc 43 24.00 -2.2  
iS 44 32.80  
HNR 9.74 311 eP 44 17.00 0.3  
eS 46 10.00  
SVO 10.03 312 eP 44 23.00 2.4  
eS 46 17.00  
VSG 10.04 311 eP 44 21.00 0.3  
eS 46 14.00  
RMO 20.22 236 eP 46 30.00 0.0  
CMS 24.95 228 eP 47 18.00 1.3  
e 47 28.00  
STK 28.26 231 eP 47 42.70 -4.4X  
1.3s 1.30nm 3.4mb X  
ASPA 32.33 251 iPc 48 22.40 -0.9  
0.7s 22.90nm 5.1mb  
ePp 48 32.90 38kmX  
iSp 48 38.90  
MAT 59.07 333 eP 51 51.00 -3.0  
1.0s 7.00nm 4.7mb  
MDJ 69.44 332 eP 53 00.90 -0.5  
1.0s 22.00nm 5.1mb  
CN2 70.78 329 eP 53 08.60 -1.0  
0.5s 10.00nm 5.0mb  
GYA 72.51 305 P 53 20.00 -0.5  
TIY 74.25 318 eP 53 24.40 -5.9X  
XAN 74.61 313 P 53 31.00 -1.5  
CHG 75.69 295 eP 53 38.50 -0.4  
LZH 79.24 312 eP 53 56.50 -1.9  
1.6s 18.00nm 4.8mb  
Z 25s 0.26um 4.5MsZ X  
pP 54 10.20 47kmX  
YAK 83.24 343 iPd 54 17.10 -1.5  
SHL 84.25 299 iP 54 23.50 -1.2  
YKA 98.63 27 eP 55 28.10 -2.8  
0.9s 0.40nm 3.9mb  
KAF 126.41 338 iPKP 00 52.80 -2.3X  
0.5s 1.50nm  
eSp 00 53.10  
NUR 128.07 338 ePKP 00 47.10 -11.2X  
NB2 131.87 345 PKP 01 04.10 -1.5  
0.7s 1.50nm  
HFS 131.96 343 ePKP 01 02.00 -3.7X  
0.5s 0.50nm  
e 01 16.20  
KHC 140.65 333 ePKP 01 28.50 6.1X  
SKO 140.95 318 ePKP 01 17.50 -5.6X  
CDF 143.78 337 ePKP 01 27.90 0.0  
BSF 144.44 337 ePKP 01 28.10 -1.0  
HAU 144.46 338 ePKP 01 28.90 -0.1  
Z 23s 0.10um 4.5MsZ X  
SFI 145.27 328 PKP 01 30.10 -0.3  
TDS 145.45 319 PKP 01 30.20 -0.7  
MME 145.64 330 PKP 01 29.50 -1.9  
FIR 145.67 329 ePKP 01 28.00 -3.1X  
FLN 145.84 346 ePKP 01 29.10 -2.2X  
LDF 145.91 345 ePKP 01 29.30 -2.1X  
LOR 145.96 340 ePKP 01 30.60 -1.0  
0.6s 9.00nm  
Z 23s 0.13um 4.6MsZ X  
LBF 146.17 339 ePKP 01 32.00 0.1  
0.6s 9.90nm  
SSF 146.25 340 ePKP 01 31.70 -0.3  
0.6s 18.05nm  
LSD 146.26 335 PKP 01 32.35 -0.1

GRR 146.28 346 ePKP 01 31.30 -0.7  
LPL 146.38 335 ePKP 01 34.10 1.5  
0.6s 7.20nm  
PCP 146.38 332 PKP 01 31.84 -0.6  
LPG 146.39 335 ePKP 01 34.20 1.5  
0.6s 12.65nm  
SMF 146.51 339 ePKP 01 33.40 1.0  
0.6s 8.10nm  
AVF 146.54 340 ePKP 01 32.40 -0.1  
0.6s 9.90nm  
LPF 146.66 346 ePKP 01 32.50 -0.1  
0.6s 10.80nm  
FIN 146.80 332 PKP 01 33.48 0.5  
RRL 146.85 334 PKP 01 34.61 1.3  
ROB 146.88 333 PKP 01 33.79 0.6  
BGF 146.91 340 ePKP 01 33.50 0.4  
0.6s 13.55nm  
PZZ 147.05 334 PKP 01 35.22 1.7  
ENR 147.13 333 PKP 01 35.94 2.3X  
STV 147.16 333 PKP 01 36.35 2.7X  
MAF 147.30 340 ePKP 01 34.60 0.9  
0.6s 9.00nm  
TCF 147.36 341 ePKP 01 34.70 0.9  
SBF 147.41 333 ePKP 01 36.10 2.0  
LSF 147.60 342 ePKP 01 35.10 0.9  
0.6s 9.00nm  
PGF 147.69 329 ePKP 01 35.90 1.3  
MFF 147.76 344 ePKP 01 35.60 1.2  
0.6s 12.65nm  
FRF 148.00 333 ePKP 01 36.30 1.4  
LRG 148.21 333 ePKP 01 37.60 2.4X  
Z 23s 0.13um 4.6MsZ X  
LMR 148.24 333 ePKP 01 37.00 1.7  
RJF 148.45 341 ePKP 01 37.70 2.1  
Z 23s 0.10um 4.5MsZ X  
CAF 148.61 340 ePKP 01 38.30 2.4X  
LFF 149.02 341 ePKP 01 39.90 3.4X  
0.6s 16.25nm  
LPO 149.11 341 ePKP 01 39.50 2.9X  
EPF 150.87 340 ePKP 01 45.10 5.7X  
S.D. = 1.3 on 51 of 68 obs.

\* MAY 01, 1991 17h 05m 25.95±0.80s  
41.135 N ±13.0km 70.726 E ±15.3km  
DEPTH = 33.0km (normal)  
4.4mb ( 4 obs.)

KIRGHIZ SSR (716)

MAIO 10.01 245 eP 07 51.00 0.3  
eS 09 42.00  
HYB 24.58 162 eP 10 44.50 0.3  
OBN 26.41 314 P 11 19.00 18.0X  
e 11 33.00  
e 11 39.00  
MLR 32.55 293 ePd 12 02.00 5.9X  
HFS 39.37 319 eP 12 54.40 0.7  
0.6s 4.20nm 4.4mb  
e 12 57.50  
e 13 06.00  
e 13 31.20  
YAK 40.41 39 eP 12 57.30 -4.9X  
NB2 40.62 320 P 13 00.47 -3.6X  
0.6s 1.50nm 3.9mb  
INK 69.37 9 eP 16 31.50 -0.3  
LKO 73.49 268 P 16 55.96 -1.4  
YKA 76.63 3 eP 17 14.00 -0.5  
0.6s 2.70nm 4.4mb  
FFC 84.31 356 iPd 17 56.30 0.9  
0.6s 5.00nm 4.9mb  
S.D. = 1.0 on 7 of 11 obs.

MAY 01, 1991 17h 09m 16.42±0.42s  
4.980 S ± 7.7km 139.876 E ± 8.8km  
DEPTH = 33.0km (normal)  
4.4mb ( 7 obs.) 4.5MsZ ( 2 obs.)

WEST IRIAN (201)

MNDI 3.94 107 eP 10 07.00 -9.3X  
MDG 5.89 93 eP 10 43.36 -0.3  
LAT 7.28 104 eP 11 02.96 -0.3  
PMG 8.45 122 eP 11 15.50 -4.1X  
1.0s 98.00nm 5.9mb X  
OIS 15.49 181 eP 12 50.00 -4.2X  
eS 15 45.00  
i 17 30.00  
WB2 15.82 199 iPc 12 53.90 -4.5X  
0.9s 8.20nm 3.9mb

ASPA 19.45 197 eP 13 42.70 -0.7  
1.3s 21.80nm 4.3mb  
eS 17 09.70  
QLP 21.88 169 iPd 14 08.00 -0.4  
WARB 24.59 210 eP 14 36.00 1.0  
MBL 25.24 229 eP 14 42.00 0.9  
STK 26.81 177 eP 14 57.40 1.8  
0.6s 2.90nm 4.1mb  
SSE 40.07 335 P 16 52.00 1.5  
1.0s 14.00nm 4.7mb  
Z 20s 0.50um 4.4MsZ  
XAN 48.59 325 P 17 57.00 -2.0  
TIY 49.56 331 eP 18 07.30 0.9  
CD2 49.64 318 eP 18 10.60 3.5X  
BJI 49.83 336 eP 18 19.00 10.7X  
MDJ 50.23 350 eP 18 11.20 -0.1  
CN2 50.27 346 eP 18 12.00 0.4  
Z 20s 0.80um 4.7MsZ  
PP 18 18.00  
LZH 52.98 323 eP 18 31.80 -0.7  
1.4s 27.00nm 5.0mb  
Z 25s 0.26um 4.2MsZ X  
pP 18 38.00 20kmX  
sP 18 42.50  
BTO 52.99 332 eP 18 31.80 -0.5  
GTA 57.58 324 P 19 06.80 1.2  
0.8s 11.00nm 5.0mb  
GUN 61.44 305 P 19 31.20 -1.5  
KKN 61.88 305 P 19 35.20 -0.3  
DMN 61.95 305 P 19 36.60 0.5  
GKN 62.48 305 P 19 38.60 -0.9  
YAK 67.26 355 eP 20 10.80 1.2  
WMO 67.50 322 P 20 13.00 1.4  
YKA 101.55 27 ePd diff 23 07.80 1.5  
1.0s 0.60nm 4.1mb  
KIC 144.77 274 PKP 28 50.90 -1.8  
0.7s 10.50nm  
LPB 145.04 128 PKP 28 39.00 -14.6X  
TIC 145.04 274 PKP 28 51.68 -1.5  
LIC 145.05 274 PKP 28 51.70 -1.4  
ZOBO 145.17 128 PKPc 28 44.30 -9.7X  
1.0s 17.50nm  
i 28 56.00  
SIV 150.61 136 PKP 29 07.80 5.9X  
i 29 24.60  
S.D. = 1.2 on 25 of 34 obs.

\* MAY 01, 1991 17h 48m 24.13±0.89s  
6.899 S ± 8.1km 146.885 E ±17.1km  
DEPTH = 33.0km (normal)  
3.9mb ( 2 obs.)

EAST PAPUA NEW GUINEA REGION (207)

LAT 0.27 25 iP 48 31.84 0.3  
YYYY 1.12 305 iPc 48 50.80 7.1X  
eS 49 22.40  
MDG 1.97 326 eP 48 55.28 -0.6  
PMG 2.51 174 eP 49 02.50 -1.0  
0.8s 225.37nm  
eS 49 48.00  
WB2 17.78 222 eP 52 31.30 0.4  
0.6s 4.60nm 3.8mb  
STK 25.34 191 eP 53 50.50 0.8  
0.5s 2.00nm 4.0mb  
NANU 33.98 239 eP 55 16.20 9.2X  
S.D. = 1.1 on 5 of 7 obs.

\* MAY 01, 1991 17h 52m 45.13±0.51s  
40.229 N ± 5.2km 27.699 E ± 3.5km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)

MD 3.0 (ISK).

EDC 0.17 47 iPg 52 49.50 0.5  
iSg 52 52.00  
BNT 0.21 53 iPg 52 50.00 0.3  
iSg 52 52.50  
KGT 0.38 307 iPg 52 53.00 0.2  
KCT 0.50 88 iPg 52 55.00 -0.4  
iSg 53 02.50  
DST 0.95 131 iPg 53 03.70 0.5  
CTT 1.07 31 iPg 53 05.30 0.0  
EZN 1.13 250 iPn 53 06.10 -0.2  
YLV 1.32 75 ePn 53 09.20 -0.4  
IZI 1.36 85 ePn 53 10.00 -0.2



DMK 1.59 2 ePn 53 13.10 -0.3  
HRT 1.61 68 ePn 53 14.00 0.2  
EYL 1.91 79 ePn 53 18.00 -0.1  
S.D. = 0.3 on 12 of 12 obs.

MAY 01, 1991 18h 45m 10.13±0.51s  
40.809 N ± 5.0km 22.889 E ± 4.4km  
DEPTH = 10.0km (geophysicist)  
GREECE (364)  
ML 3.3 (SKO). MD 3.1 (ATH). MD  
2.9 (THE).

THE 0.19 162 iPg 45 14.20 -0.1  
iSg 45 17.30  
KNT 0.35 1 iPg 45 16.70 -0.7  
eSg 45 20.70  
SOH 0.35 88 iPg 45 17.30 -0.1  
eSg 45 21.90  
GRG 0.40 292 iPg 45 17.40 -0.9  
eSg 45 22.80  
VAY 0.57 335 iPg 45 20.40 -1.2  
iSg 45 27.30  
SRS 0.61 60 iPg 45 21.40 -1.1  
eSg 45 29.40  
LIT 0.77 203 iPg 45 24.70 -0.5  
eSg 45 36.40  
OUR 0.96 119 ePg 45 28.40 0.1  
eSg 45 41.80  
KZN 0.99 240 ePb 45 30.20 1.3  
PAIG 1.07 145 ePb 45 29.30 -0.9  
eSb 45 44.80  
FNA 1.15 269 ePbc 45 32.10 0.4  
eSb 45 47.90  
SKO 1.59 317 iPn 45 38.80 0.4  
iSg 45 59.50  
RDO 2.03 80 ePg 45 46.80 2.0  
eSn 46 05.80  
ALN 2.40 87 ePn 45 49.10 -0.9  
KGT 3.38 95 ePn 46 00.00 -4.0X  
COZ 4.63 13 ePd 46 37.00 15.1X  
MLR 5.19 24 eP 46 32.00 2.3  
S.D. = 1.2 on 15 of 17 obs.

& MAY 01, 1991 19h 09m 43.56s  
61.152 N 151.954 W  
DEPTH = 92.9km  
SOUTHERN ALASKA ( 2 )  
<AEIC>.

SPU 0.06 302 iPc 09 56.19 1.0  
eS 10 06.56  
CRP 0.15 320 iPc 09 56.64 1.1  
eS 10 06.45  
CKL 0.19 284 iPc 09 56.64 1.1  
eS 10 07.50  
BGL 0.24 298 iPc 09 57.03 1.3  
NCG 0.27 339 iPc 09 56.94 -0.6  
NKA 0.54 139 iPc 10 00.45 1.4  
RDT 0.62 201 ePd 09 59.05 -0.9  
SUA 0.66 61 iPc 10 00.01 -0.4  
eS 10 12.72  
DFR 0.67 213 iPd 09 59.57 -0.8  
eS 10 11.96  
RDN 0.75 212 iPd 10 00.26 -1.0  
NCT 0.76 219 iPd 10 00.58 -0.7  
RDW 0.79 212 ePd 10 00.63 -1.1  
RS2 0.80 210 ePd 10 00.92 -0.8  
RSO 0.80 210 ePd 10 00.95 -0.8  
RED 0.84 209 iPd 10 01.23 -0.8  
SKT 0.86 14 iPd 10 01.26 -0.9  
iS 10 15.18  
SLKM 1.07 127 ePc 10 03.89 -0.7  
PWA 1.12 62 ePc 10 04.48 -0.6  
NNL 1.16 163 ePc 10 05.99 0.4  
PMS 1.16 84 iPc 10 05.20 -0.5  
PLRM 1.43 71 eP 10 07.32 -1.6  
CUT 1.49 32 ePd 10 08.92 -0.8  
eS 10 28.61  
GHO 1.58 66 ePc 10 09.44 -1.5  
SEW 1.62 129 eP 10 10.01 -1.4  
CNPM 1.67 167 ePd 10 10.92 -1.1  
KNK 1.71 80 iPc 10 10.97 -1.6  
PDB 1.76 220 iPd 10 12.21 -1.0  
SML 1.86 68 eP 10 12.32 -2.2  
KNIM 2.22 109 ePc 10 16.12 -3.3  
MCNL 2.30 212 ePd 10 19.30 -1.2  
SCM 2.32 71 eP 10 18.72 -2.1

GLI 2.38 94 ePc 10 18.24 -3.3  
CDD 2.39 202 eP 10 20.17 -1.4  
MTU 2.42 117 eP 10 19.67 -2.4  
TRF 2.44 18 eP 10 21.44 -1.0  
VZW 2.62 90 ePc 10 22.05 -2.8  
RND 2.69 31 eP 10 23.94 -1.8  
VLZ 2.73 88 ePc 10 23.54 -2.6  
TOA 2.92 68 eP 10 27.39 -1.6  
KLU 2.93 81 iPc 10 26.32 -2.7  
GLB 3.94 82 ePc 10 39.81 -3.1  
CCB 3.99 27 eP 10 41.29 -2.2  
FBA 4.21 25 eP 10 42.92 -3.7  
CROM 4.32 91 eP 10 46.26 -2.0  
GLM 4.37 26 eP 10 46.88 -2.1  
TGL 4.47 91 eP 10 47.76 -2.5  
46 obs. associated

% MAY 01, 1991 20h 47m 13.95±2.59s  
32.711 N ±17.1km 35.705 E ±20.6km  
DEPTH = 10.0km (geophysicist)  
DEAD SEA REGION (373)

SHMJ 0.05 72 Pc 47 15.73 -0.4  
SALJ 0.70 181 Pc 47 27.40 -0.4  
KFNJ 0.85 182 P 47 30.02 -0.2  
MASJ 0.98 179 Pd 47 32.47 -0.1  
MKRJ 1.16 183 Pc 47 35.39 -0.2  
MDSJ 1.17 157 P 47 35.95 0.1  
LISJ 1.48 187 Pc 47 41.44 0.9  
SHBJ 1.63 104 P 47 43.38 0.5  
S.D. = 0.6 on 8 of 8 obs.

& MAY 01, 1991 22h 00m 00.91s  
60.131 N 153.221 W  
DEPTH = 139.3km  
SOUTHERN ALASKA ( 2 )  
<AEIC>.

RED 0.37 38 iPc 00 19.94 0.8  
eS 00 35.24  
RS2 0.41 35 iPc 00 20.34 -0.7  
RSO 0.41 35 iPc 00 20.30 -0.8  
RDW 0.41 30 iPc 00 20.30 -0.8  
eS 00 35.89  
RDN 0.45 30 iPc 00 20.43 -0.7  
NCT 0.46 18 iPc 00 20.45 -0.7  
DFR 0.53 30 iPc 00 20.57 -1.0  
eS 00 37.09  
PDB 0.60 235 iPc 00 20.73 -1.1  
eS 00 36.28  
RDT 0.60 42 iPc 00 21.13 -0.8  
AUE 0.78 186 iPd 00 22.44 -0.6  
AUH 0.78 188 eP 00 22.86 -0.3  
AUI 0.81 188 eP 00 22.63 -0.7  
eS 00 39.60  
NNL 0.97 94 iPc 00 24.72 0.0  
XLV 1.02 131 eP 00 24.35 -0.8  
MCNL 1.11 211 ePd 00 24.77 -1.2  
CKL 1.15 22 iPd 00 25.68 -0.9  
eS 00 45.36  
NKA 1.16 57 eP 00 27.12 0.7  
CNPM 1.17 120 iPc 00 26.02 -0.6  
eS 00 45.70  
SPU 1.20 28 ePd 00 25.80 -1.1  
eS 00 46.08  
BGL 1.21 19 ePd 00 26.42 -0.6  
CDD 1.22 190 iPd 00 26.09 -1.0  
eS 00 45.61  
CRP 1.25 24 ePd 00 26.79 -0.8  
NCG 1.38 22 ePd 00 27.95 -0.9  
SLKM 1.54 74 eP 00 29.35 -1.1  
SUA 1.81 41 ePd 00 32.36 -1.3  
SEW 1.89 89 eP 00 33.40 -1.0  
SKT 2.03 23 ePd 00 34.77 -1.4  
PMS 2.12 57 eP 00 35.61 -1.7  
PWA 2.23 46 eP 00 37.31 -1.3  
GHO 2.67 50 ePc 00 41.59 -2.6  
KNIM 2.74 83 eP 00 42.90 -2.2  
MTU 2.80 91 ePc 00 44.69 -1.1  
SML 2.92 53 eP 00 44.05 -3.4  
GLI 3.12 73 eP 00 47.51 -2.5  
KLU 3.83 66 iPc 00 56.73 -2.7  
RND 3.89 30 eP 00 57.70 -2.5  
36 obs. associated

? MAY 01, 1991 22h 37m 21.28±11.95s  
8.134 S ±105.km 128.174 E ±22.0km

DEPTH = 148.5 ± 45.4 km  
4.5mb ( 2 obs.)  
TIMOR SEA (290)

MTN 5.51 148 eP 38 42.70 0.3  
0.3s 221.00nm 5.9mb X  
eS 39 38.00  
KNA 7.59 176 iPc 39 10.20 -0.2  
eS 40 37.00  
WB2 13.18 154 iPd 40 20.80 -3.1X  
0.3s 8.30nm 4.6mb  
MBL 15.25 211 eP 40 50.00 -0.1  
eS 43 33.00  
QIS 16.57 139 iPd 41 06.20 -0.3  
eS 44 04.00  
WARB 18.01 184 iPc 41 23.90 0.3  
0.5s 10.00nm 4.4mb  
S.D. = 0.6 on 5 of 6 obs.

\* MAY 01, 1991 23h 19m 11.84±0.66s  
42.719 N ±15.0km 44.053 E ± 8.6km  
DEPTH = 10.0km (geophysicist)  
4.1mb ( 6 obs.) 3.5Msz ( 1 obs.)  
WESTERN CAUCASUS (362)

TAB 4.96 159 eP 20 39.00 10.7X  
MLR 13.31 288 ePd 22 22.00 -1.4  
OBN 13.31 341 P 22 35.00 11.8X  
e 22 44.00  
e 23 52.00  
MAIO 13.53 113 eP 22 25.00 -1.3  
OHR 17.38 273 eP 23 17.00 1.1  
SPC 17.73 300 eP 23 19.10 -1.4  
KRA 18.13 302 eP 23 25.00 -0.1  
ZST 19.63 295 e(P) 23 45.60 2.3X  
GAR 20.18 92 iP 23 50.10 0.7  
KSP 20.58 303 eP 23 54.00 0.7  
NUR 21.36 333 eP 24 18.80 17.7X  
KAF 22.09 338 eP 24 08.70 0.2  
0.8s 10.70nm 4.3mb  
esP 24 15.60  
QUE 22.18 117 eP 24 13.50 3.7X  
CLL 22.71 303 eP 24 16.00 1.3  
1.7s 15.00nm 4.2mb  
HFS 25.38 324 eP 24 40.00 -0.5  
1.0s 7.90nm 4.4mb  
Z 18s 0.12um 3.5Msz  
e 24 45.50  
LR 34 34.00  
SOD 26.44 345 eP 24 51.00 0.8  
NB2 26.89 324 P 24 51.10 -3.4X  
0.8s 1.90nm 3.8mb  
GBA 40.86 125 Pd 26 56.20 0.7  
0.3s 1.00nm 4.0mb  
DAG 42.67 342 ePc 27 09.90 0.2  
INK 69.29 359 eP 30 26.00 5.4X  
YKA 73.74 350 eP 30 46.00 -1.4  
0.7s 0.70nm 3.8mb  
S.D. = 1.1 on 14 of 21 obs.

% MAY 02, 1991 00h 08m 06.81±1.01s  
60.228 N ± 9.3km 6.971 E ± 8.0km  
DEPTH = 10.0km (geophysicist)  
SOUTHERN NORWAY (535)  
MD 2.0 (BER).

EGD 0.87 274 iP 08 23.20 -0.3  
eSg 08 34.53  
ASK 0.92 287 iPc 08 23.78 -0.6  
eSg 08 36.36  
HYA 1.02 338 iP 08 25.50 -0.5  
iSg 08 38.95  
KMY 1.34 221 iP 08 32.23 0.7  
iSg 08 49.23  
SUE 1.37 308 eP 08 31.76 -0.1  
eSg 08 49.57  
NRA0 2.32 75 Pn 08 44.60 -1.0  
Sg 09 18.00  
MOL 2.37 6 eP 08 48.06 1.8  
eSg 09 18.75  
S.D. = 1.2 on 7 of 7 obs.

\* MAY 02, 1991 00h 29m 02.18±1.08s  
17.867 S ±13.1km 69.307 W ±18.9km  
DEPTH = 161.3 ± 10.5 km  
3.9mb ( 1 obs.)  
PERU-BOLIVIA BORDER REGION (118)



02d 00h

LPB 1.76 41 Pc 29 35.90 -0.2  
S 30 03.00  
ZOBO 1.95 36 iPc 29 39.00 0.6  
S 30 10.00  
CCH 3.06 81 Pc 29 56.90 5.4X  
ANT 5.90 190 eP 30 28.50 0.0  
SIV 8.10 78 P 30 57.40 -0.6  
KIC 68.10 75 P 39 47.80 0.8  
YKA 87.65 341 eP 41 32.40 -0.6  
0.7s 1.00nm 3.9mb  
S.D. = 0.9 on 6 of 7 obs.

\* MAY 02, 1991 00h 41m 22.27± 2.46s  
21.465 S ±14.6km 66.861 W ±15.4km  
DEPTH = 310.3 ± 53.5 km

SOUTHERN BOLIVIA (125)

ANT 3.97 235 iP 42 29.20 0.1  
iS 43 16.00  
CCH 4.12 10 Pc 42 30.80 -0.3  
LPB 5.04 346 iPc 42 41.50 -0.2  
S 43 38.00  
ZOBO 5.30 347 iPc 42 45.70 0.8  
0.9s 34.60nm 4.2mb X  
S 43 46.00  
ARE 6.63 318 eP 43 00.00 -0.3  
iS 44 13.50  
SIV 7.73 46 P 43 13.40 0.0  
(S) 44 30.00  
S.D. = 0.7 on 6 of 6 obs.

? MAY 02, 1991 00h 59m 54.74± 7.87s  
40.751 N ±60.7km 19.416 E ±23.8km  
DEPTH = 10.0km (geophysicist)

ALBANIA (391)

ML 3.0 (TTG).

ULC 1.22 354 ePg 00 17.20 -0.2  
eSg 00 39.70  
BDV 1.59 344 ePn 00 24.00 1.0  
eSn 00 50.00  
TTG 1.68 356 ePn 00 24.70 0.4  
eSn 00 51.00  
HCY 1.83 338 ePn 00 25.50 -1.0  
eSn 00 54.00  
PVY 1.89 13 ePn 00 27.00 -0.4  
eSn 00 57.30  
NKY 2.08 352 ePn 00 30.00 -0.2  
eSn 01 02.00  
IVA 2.15 9 ePn 00 31.00 -0.2  
eSn 01 05.00  
PLE 2.58 360 ePn 00 38.00 0.7  
eSn 01 14.30  
S.D. = 0.8 on 8 of 8 obs.

MAY 02, 1991 01h 25m 30.14± 0.22s  
42.541 N ± 4.3km 43.960 E ± 2.7km  
DEPTH = 10.0km (geophysicist)  
5.1mb (46 obs.) 4.5MsZ (8 obs.)

WESTERN CAUCASUS (362)

TAB 4.82 157 iPc 26 45.00 0.4  
i 26 51.00  
i 26 55.00  
KVT 6.09 259 iPn 27 01.00 -1.4  
GAZ 7.46 226 eP 27 19.00 -2.6  
KAS 7.69 265 eP 27 14.50 -10.4X  
KER 8.54 162 eP 27 37.00 0.1  
BBTK 8.86 256 eP 27 43.00 1.7  
EYL 10.53 264 eP 28 06.90 2.6  
BHL 10.81 220 P 28 07.00 -1.1  
S 31 04.00  
HRT 10.83 266 eP 28 07.00 -1.3  
GBZT 11.00 266 eP 28 10.00 -0.5  
ALT 11.06 256 eP 28 08.30 -3.2X  
YLV 11.11 265 eP 28 12.40 0.3  
CSS 11.22 231 eP 28 17.00 3.4X  
ITU 11.25 268 eP 28 13.00 -0.9  
HRI 11.30 218 eP 28 16.00 1.3  
PSN 11.59 281 iPd 28 13.00 -5.6X  
CFR 11.71 288 eP 28 18.00 -2.2  
TLB 11.74 285 eP 28 20.00 -0.5  
DST 11.94 261 eP 28 24.00 0.6  
KCT 11.94 264 eP 28 22.00 -1.4  
DMK 12.05 272 eP 28 20.20 -4.5X  
PPE 12.26 293 ePd 28 36.00 8.4X  
IAS 12.52 297 eP 28 30.00 -1.1

VRI 12.81 291 eP 28 36.00 1.1  
ISR 12.84 288 ePd 28 36.50 1.1  
DSI 12.91 215 eP 28 36.00 -0.3  
PTT 13.24 295 eP 28 33.00 -7.6X  
MLR 13.30 289 iPc 28 42.50 0.9  
OBN 13.46 342 eP 28 40.20 -3.2X  
ePP 28 50.00  
ePPP 28 59.00  
eS 29 16.00  
eS 31 24.00  
eSS 31 40.00  
ALN 13.49 269 eP 28 43.10 -0.8  
MAIO 13.52 112 eP 28 41.00 -3.5X  
0.9s 10.66nm 4.8mb  
eS 31 36.00

DIM 13.65 274 eP 28 45.00 -1.1  
PVL 13.68 279 eP 28 43.00 -3.5X  
PRK 13.78 262 eP 28 48.60 0.8  
KDZ 13.80 273 eP 28 50.00 1.9  
RDO 13.81 270 eP 28 57.90 9.8X  
MTUR 13.89 288 eP 29 00.00 10.7X  
CMP 13.91 288 ePd 29 01.00 11.4X  
RMN 14.16 215 iPc 28 51.90 -1.0  
PLD 14.26 275 eP 28 55.00 1.0  
RZN 14.31 273 eP 28 54.00 -1.0  
COZ 14.41 288 ePc 28 56.30 0.1  
TNR 14.48 289 ePc 29 00.00 3.0X  
PGB 14.59 277 eP 28 57.50 -1.0  
MMB 15.06 273 eP 29 05.00 0.4  
HQL 15.07 211 eP 29 19.00 14.3X  
SRS 15.25 272 eP 29 08.10 1.0  
VTS 15.29 277 eP 29 10.00 2.2  
DEV 15.46 290 ePd 29 16.50 6.8X  
KKB 15.49 275 eP 29 10.50 0.4  
KNT 15.75 272 eP 29 14.10 0.5  
BADA 15.76 210 eP 29 21.00 7.3X  
THE 15.82 270 eP 29 18.20 3.7X  
VAY 15.96 273 iP 29 17.50 1.2  
NPS 16.01 249 eP 29 21.10 4.2X  
BZS 16.34 288 eP 29 22.50 1.5  
TIM 16.62 289 iPd 29 25.00 0.4  
SKO 16.68 276 iP 29 26.00 0.6

Z 14s 1.23um 5.9MsZ  
N 14s 1.54um  
E 13s 1.15um

AGG 16.75 265 eP 29 30.60 4.3X  
KZN 16.79 270 eP 29 29.90 3.1X  
FNA 16.96 272 eP 29 30.00 1.0  
DHR 16.97 161 iPc 29 31.00 1.9  
BBU 17.14 160 iP 29 31.70 0.5  
0.4s 307.00nm 5.8mb  
BEO 17.14 286 eP 29 31.00 -0.2  
VLI 17.19 257 eP 29 31.80 0.0  
OHR 17.32 273 iP 29 34.50 1.0  
1.6s 163.00nm 4.9mb  
i 29 39.90

PHP 17.46 275 iPd 29 37.00 1.8  
LSK 17.69 270 eP 29 40.10 1.9  
PSZ 17.75 296 iP 29 38.00 -0.9  
SPC 17.76 300 eP 29 37.40 -1.7  
RYD 17.91 172 ePd 29 38.00 -2.9  
TIR 17.95 274 eP 29 44.00 2.7  
KRA 18.17 303 iP 29 43.00 -0.9  
1.2s 268.00nm 5.3mb  
i 29 45.90

VLS 18.32 264 eP 29 46.40 0.5  
UZD 18.50 291 eP 29 49.00 1.0  
SRO 18.79 295 eP 29 50.90 -0.7  
LCI 19.60 272 P 29 59.00 -2.4  
ZST 19.64 296 eP 30 01.60 -0.2  
BRT 20.02 274 P 30 05.10 -0.7  
HVAR 20.15 281 iP 30 05.80 -1.3  
VKA 20.17 296 iPc 30 07.60 0.2  
4.8s 824.00nm 5.3mb X  
20.24 91 eP 30 08.10 -0.2  
eS 33 57.00

ZAG 20.29 289 iPc 30 08.00 -0.5  
PTJ 20.30 289 iPc 30 08.10 -0.7  
KSP 20.62 303 ePc 30 11.00 -1.0  
1.2s 77.00nm 4.9mb  
e 36 26.70  
ORI 20.78 272 P 30 13.10 -0.7  
VBY 20.80 288 eP 30 13.50 -0.4  
TDS 20.98 271 P 30 15.20 -0.6  
LJU 21.30 290 iPc 30 19.30 0.4

CEY 21.38 289 eP 30 19.90 0.1  
NUR 21.48 333 iP 30 19.50 -1.2  
1.0s 66.00nm 5.0mb  
i 30 26.20  
PRU 21.56 300 Pc 30 21.80 0.3  
1.8s 65.60nm 4.7mb  
Z 11s 1.90um 4.8MsZ  
N 12s 1.50um  
E 10s 1.30um

e 30 39.00  
S 34 28.00  
KMR 21.61 295 iP- 30 23.80 1.7  
VOY 21.74 290 iP 30 23.30 -0.2  
TRI 21.84 289 eP 30 24.20 -0.2  
DUI 21.86 278 P 30 25.80 1.0  
KHC 22.07 298 iP 30 27.50 0.8  
1.5s 31.00nm 4.5mb  
Z 14s 1.40um 4.5MsZ  
N 14s 0.50um  
E 12s 1.20um

e 30 43.30  
S 34 40.00  
BRG 22.08 303 iPc 30 27.20 0.4  
2.0s 100.00nm 4.9mb  
e 30 36.50  
eS 34 46.00  
KBA 22.11 292 iPc 30 27.50 0.2  
1.1s 95.80nm 5.2mb  
i 30 36.70  
i 30 55.50

KAF 22.23 338 eP 30 28.80 0.7  
0.8s 57.90nm 5.1mb  
eS 30 40.60  
SDI 22.32 278 P 30 29.70 0.4  
BHG 22.44 294 iPc 30 32.10 1.7  
AQU 22.49 280 P 30 32.20 1.2  
FVI 22.50 291 P 30 31.30 0.4  
AZI 22.54 279 P 30 33.10 1.7  
ARV 22.64 283 P 30 32.90 0.5  
CLL 22.75 303 iPc 30 34.20 0.9  
1.4s 160.00nm 5.3mb  
eS 34 50.00

RSM 22.93 284 P 30 36.80 1.6  
MNS 23.01 280 P 30 37.10 1.0  
RMP 23.11 279 P 30 37.60 0.5  
RDP 23.12 279 P 30 37.80 0.7  
CTI 23.30 290 P 30 39.30 0.3  
CRE 23.33 284 P 30 40.80 1.5  
SFI 23.36 284 P 30 41.30 1.9  
PGD 23.46 284 P 30 42.20 1.6  
MOX 23.51 301 eP 30 42.50 1.7  
2.6s 202.00nm 5.2mb  
FUR 23.53 295 eP 30 42.30 1.2  
SOTA 23.57 293 iPc 30 41.30 -0.3  
1.2s 143.00nm 5.4mb  
i 30 53.60  
i 31 07.70  
i 30 43.60

UPP 23.67 326 iP 30 43.60 1.4  
i 30 54.70  
iS 35 14.00  
FAI 23.75 267 P 30 45.00 1.8  
FIR 23.81 284 eP 30 46.00 2.3  
i 31 18.00  
i 32 18.00  
iS 35 04.00

SAL 24.12 289 P 30 47.90 1.2  
MME 24.15 285 P 30 50.10 2.8X  
COP 24.22 314 iPd 30 50.20 2.6  
0.8s 80.60nm 5.4mb  
BDI 24.24 285 P 30 48.90 0.9  
KSH 24.29 86 P 30 51.00 2.4  
S 35 08.00  
sS 35 23.00

OSS 24.31 291 ePc 30 49.50 0.7  
VDL 24.79 291 ePc 30 53.80 0.3  
DHJN 24.80 181 eP 30 55.00 1.1  
LLS 25.09 292 ePd 30 56.10 -0.3  
SLE 25.40 294 ePd 30 58.70 -0.4  
ZLA 25.48 293 ePd 30 59.90 0.0  
HFS 25.49 324 eP 30 59.50 -0.2  
0.8s 49.60nm 5.3mb  
Z 17s 3.43um 4.9MsZ  
epP 31 04.20 17kmX



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02d 02h

Best Double Couple: Mo=1.7\*10\*\*17  
 NP1: Strike=203 Dip=19 Slip= 86  
 NP2: 27 71 91

AFI 8.03 15 eP 25 27.00 -9.7X  
 SVA 8.03 295 eP 25 36.20 -0.4  
 VUN 8.08 296 ePd 25 36.20 -1.1  
 MBU 8.41 303 eP 25 46.20 4.2X  
 SGE 8.73 297 eP 25 46.20 -0.2  
 NDF 9.05 294 eP 25 52.30 1.6  
 RAR 13.16 90 P 26 40.00 -6.5X  
 MNNG 20.88 203 eP 28 21.40 0.4  
 SNZO 21.77 204 P 28 28.00 -2.0  
 KHZ 23.17 204 eP 28 45.20 1.5  
 PAE 23.24 84 eP 28 45.00 0.3  
 TVO 23.52 85 eP 28 50.00 2.6  
 LTZ 23.97 206 eP 28 52.10 0.5  
 RMO 34.34 255 iPc 30 23.30 -1.9  
 CMS 37.12 246 eP 30 47.00 -1.7  
 STK 40.75 246 iPd 31 17.90 -1.0  
 ASPA 47.98 257 eP 32 11.20 -6.0X  
 Z 19s 38.70nm 5.3mb  
 Z 19s 1.10um 4.9Msz  
 WB2 48.21 262 iPc 32 15.70 -3.3X  
 1.0s 16.90nm 5.0mb  
 FORR 52.30 247 eP 32 48.00 -2.0  
 OCP 73.28 294 eP 35 10.00 0.3  
 ADK 73.33 358 P 35 06.70 -2.5  
 1.1s 85.00nm 5.7mb  
 MAT 73.50 321 eP 35 10.00 -0.6  
 44 39.00  
 BAG 74.54 295 eP 35 14.00 -3.2X  
 PRS 76.13 41 eP 35 26.50 0.8  
 MHC 76.62 40 eP 35 29.70 1.1  
 FRI 77.58 42 eP 35 33.70 0.0  
 CMB 77.83 41 eP 35 35.00 -0.2  
 ORV 78.16 39 eP 35 36.90 0.0  
 MIN 78.62 38 eP 35 39.40 -0.2  
 TNP 79.80 42 P 35 45.10 -1.1  
 1.1s 10.39nm 4.7mb  
 SSE 81.43 308 P 35 55.00 0.4  
 Z 20s 0.46um 4.8Msz  
 E 10s 0.23um  
 MAW 81.68 199 eP 35 59.00 3.7X  
 NJ2 83.62 308 Pc 36 06.00 0.1  
 RSO 83.68 10 P 36 07.60 1.7  
 MDJ 83.75 323 eP 36 06.00 -0.3  
 KGM 84.03 275 eP 36 10.00 1.6  
 SLKM 84.17 12 P 36 06.40 -1.7  
 ALO 85.23 50 eP 36 13.00 -1.2  
 1.2s 8.59nm 4.8mb  
 Z 20s 1.06um 5.2Msz  
 ANMO 85.23 50 P 36 13.00 -1.2  
 1.2s 11.72nm 5.0mb  
 Z 20s 2.13um 5.5Msz  
 PMR 85.38 12 P 36 13.00 -1.0  
 1.4s 45.45nm 5.5mb  
 Z 20s 1.80um 5.5Msz  
 PNT 85.59 32 eP 36 15.00 -0.4  
 CN2 85.63 321 eP 36 18.00 2.3  
 1.0s 10.00nm 5.0mb  
 Z 20s 1.50um 5.4Msz  
 WHN 86.26 305 eP 36 19.50 0.4  
 TIA 86.94 311 Pd 36 22.80 0.5  
 46 51.00  
 BW06 87.28 42 P 36 21.60 -2.6  
 PSI 88.36 274 ePc 36 34.50 4.9X  
 GOL 88.37 46 P 36 35.00 5.5X  
 Z 19s 0.85um 5.2Msz  
 SNG 88.45 278 eP 36 32.00 2.0  
 GLD 88.49 46 P 36 35.00 5.0X  
 Z 18s 1.29um 5.4Msz  
 FBA 88.66 11 P 36 29.30 -0.7  
 1.0s 25.00nm 5.5mb  
 BJI 89.47 314 eP 36 35.00 0.7  
 2.0s 72.00nm 5.6mb  
 GYA 90.59 298 P 36 42.00 2.0

SKS 47 14 00  
 SES 90.65 35 eP 36 39.00 -0.6  
 TIY 90.96 310 eP 36 38.50 -2.9X  
 XAN 91.93 306 P 36 46.50 0.6  
 HHC 92.96 313 eP 36 51.00 0.4  
 KMI 93.32 296 Pd 36 54.00 1.3  
 1.5s 50.00nm 5.7mb  
 CHG 94.26 288 eP 37 05.00 35kmX  
 INK 94.49 14 eP 36 56.00 -0.8  
 YKA 96.05 24 eP 37 03.30 -0.8  
 0.8s 0.60nm 4.1mb  
 LZH 96.56 306 eP 36 56.00 -11.3X  
 1.8s 32.00nm  
 Z 20s 0.24um 4.7Msz  
 eS 47 40.00  
 i 48 34.00  
 i 49 52.00  
 RSNY 111.44 49 Pd diff 38 20.00 6.6X  
 Z 19s 3.23um 5.9Msz  
 OBN 139.60 333 ePKP 43 03.00 -2.0X  
 KRA 149.69 342 ePKP 43 28.00 5.9X  
 e 43 39.50  
 KSP 149.86 347 ePKP 43 09.00 -13.4X  
 ic 43 27.30  
 CLL 149.98 351 iPKPc 43 27.80 5.3X  
 1.7s 52.00nm  
 BRG 150.26 350 ePKP 43 25.20 2.2X  
 1.5s 36.00nm  
 e 43 41.00  
 SPC 150.37 341 ePKP 43 23.40 -0.1  
 e 43 29.10  
 MOX 150.81 353 ePKP 43 30.50 6.7X  
 1.5s 31.00nm  
 UCC 150.95 2 ePKP 43 41.00 17.0X  
 BBTK 151.00 315 ePKP 43 31.00 6.4X  
 PRU 151.01 349 ePKP 43 30.20 6.1X  
 1.1s 12.20nm  
 Z 22s 0.40um 5.2Msz  
 N 22s 0.40um  
 E 22s 0.40um  
 MEM 151.17 0 PKP 43 30.40 6.1X  
 SNF 151.23 2 PKP 43 30.80 6.4X  
 MLR 151.26 330 ePKPd 43 33.00 8.2X  
 PSZ 151.61 340 ePKP 43 32.30 7.1X  
 DOU 151.66 2 PKP 43 31.80 6.7X  
 MTUR 151.86 331 ePKP 43 28.00 2.3X  
 ABH 151.88 358 ePKP 43 24.04 -1.4  
 KHC 152.01 350 iPKP 43 32.50 6.8X  
 1.2s 12.50nm  
 ZST 152.15 344 e(PKP) 43 26.70 0.8  
 SRO 152.18 342 e(PKP) 43 32.00 6.1X  
 CDF 153.35 358 ePKP 43 30.10 2.4X  
 HAU 153.78 360 ePKP 43 29.90 1.7  
 0.6s 3.60nm  
 Z 20s 0.45um 5.3Msz  
 BSF 153.95 359 ePKP 43 31.30 2.7X  
 SSF 154.64 4 ePKP 43 30.80 1.5  
 1.0s 10.00nm  
 VBY 155.12 345 e(PKP) 43 30.00 0.0  
 FIR 157.59 350 ePKP 43 36.00 2.7X  
 LKO 163.48 135 PKP 43 39.56 -0.8  
 S.D. = 1.3 on 56 of 89 obs.  
 \* MAY 02, 1991 03h 42m 26.11 ± 1.23s  
 42.608 N ± 19.7km 43.477 E ± 10.7km  
 DEPTH = 10.0km (geophysicist)  
 4.0mb ( 4 obs.)  
 WESTERN CAUCASUS (362)  
 TAB 5.03 153 e(P) 43 58.00 14.5X  
 KVT 5.76 257 ePn 43 49.30 -4.4X  
 MLR 12.94 289 ePd 45 33.00 0.2  
 OBN 13.29 343 eP 45 38.00 0.9  
 SPC 17.42 300 eP 46 31.00 0.2  
 KSP 20.28 303 eP 47 07.50 3.0X  
 GAR 20.60 91 eP 47 08.40 0.4  
 NUR 21.27 334 iP 47 14.20 -0.2  
 KHC 21.72 298 P 47 22.00 2.8X  
 KAF 22.04 338 iP 47 22.70 0.5  
 0.6s 3.90nm 4.0mb  
 eS 47 26.80  
 CLL 22.41 303 eP 47 27.00 1.0  
 HFS 25.22 324 eP 47 52.60 -0.6  
 0.6s 7.60nm 4.6mb  
 e 47 56.10

epP 48 02.00 34kmX  
 SOD 26.44 345 iP 48 20.60 16.1X  
 NB2 26.74 325 P 48 05.70 -1.6  
 0.8s 2.40nm 3.9mb  
 YKA 73.78 350 eP 54 01.20 -0.6  
 0.7s 0.50nm 3.7mb  
 WB2 103.85 104 ePd diff 56 27.90 -2.2X  
 S.D. = 0.9 on 10 of 16 obs.  
 \* MAY 02, 1991 04h 30m 53.91 ± 1.15s  
 42.481 N ± 17.7km 43.201 E ± 10.7km  
 DEPTH = 10.0km (geophysicist)  
 3.9mb ( 4 obs.)  
 WESTERN CAUCASUS (362)  
 KVT 5.53 258 ePn 32 17.30 -1.0  
 MLR 12.79 289 ePd 34 00.50 1.9  
 GAR 20.80 90 eP 35 38.60 0.7  
 NUR 21.29 334 eP 35 42.00 -0.5  
 KAF 22.08 339 iP 35 50.00 -0.4  
 0.7s 7.60nm 4.2mb  
 esP 35 56.70  
 CLL 22.31 304 e(P) 35 59.00 6.2X  
 HFS 25.21 325 eP 36 20.80 -0.1  
 0.6s 6.70nm 4.5mb  
 NB2 26.72 325 P 36 35.40 0.4  
 0.6s 0.60nm 3.5mb  
 YKA 73.86 349 eP 42 29.10 -1.0  
 0.7s 0.40nm 3.6mb  
 S.D. = 1.2 on 8 of 9 obs.  
 & MAY 02, 1991 04h 32m 56.62s  
 60.156 N 142.535 W  
 DEPTH = 0.0km  
 SOUTHERN ALASKA ( 2 )  
 <AEIC>. ML 2.9 (AEIC).  
 TGL 0.62 346 eP 33 09.49 0.5  
 eS 33 20.88  
 CROM 0.67 334 eP 33 10.19 0.1  
 eS 33 21.81  
 HMT 0.88 283 eP 33 13.26 -0.9  
 BALM 0.89 6 iP 33 13.87 -0.5  
 CTGM 1.01 36 eP 33 15.82 -0.9  
 eS 33 31.21  
 RAGM 1.09 283 eP 33 16.86 -1.2  
 eS 33 34.05  
 SGAM 1.37 286 eP 33 21.28 -1.6  
 GLB 1.43 335 iP 33 22.28 -1.6  
 eS 33 42.28  
 YKU 1.54 112 iP 33 24.10 -1.3  
 eS 33 44.17  
 CVA 1.65 285 eP 33 25.38 -1.5  
 PNL 1.65 106 iP 33 24.50 -2.6  
 HIN 1.99 279 eP 33 30.04 -1.9  
 VLZ 2.11 299 eP 33 32.55 -1.1  
 KLU 2.13 310 iP 33 32.63 -1.4  
 VZW 2.18 296 eP 33 33.54 -1.2  
 GLI 2.37 290 eP 33 35.56 -1.8  
 MTU 2.57 268 iP 33 37.12 -3.1  
 KNIM 2.60 277 eP 33 37.28 -3.4  
 TOA 2.63 320 eP 33 40.56 -0.6  
 SDG 2.79 330 eP 33 41.65 -1.7  
 SCM 2.88 308 eP 33 43.45 -1.3  
 PAX 3.15 335 eP 33 46.22 -2.4  
 KNK 3.17 296 eP 33 47.07 -1.6  
 23 obs. associated  
 MAY 02, 1991 06h 54m 14.39 ± 0.86s  
 34.804 N ± 6.2km 26.477 E ± 4.9km  
 DEPTH = 20.4 ± 5.9 km  
 4.6mb ( 2 obs.)  
 CRETE (370)  
 NPS 0.84 303 iPbc 54 28.70 -1.5  
 YER 2.75 32 iP 54 58.50 0.2  
 CIN 3.08 25 eP 55 04.00 1.2  
 ELL 3.40 54 iP 55 08.00 0.5  
 VLI 3.45 305 ePn 55 08.00 -0.2  
 IZM 3.64 10 eP 55 10.50 -0.5  
 ATH 3.87 326 ePb 55 16.50 2.5X  
 BCK 4.25 50 eP 55 19.00 -0.7  
 KHL 4.28 34 eP 55 15.50 -4.6X  
 PRK 4.44 358 ePn 55 22.50 0.4  
 EZN 5.01 359 eP 55 28.70 -1.6  
 DST 5.09 19 eP 55 30.00 -1.4  
 AGG 5.36 323 eP 55 36.80 1.5



KCT	5.64	15	eP	55	35.30	-3.8X	UPA	2.26	260	iPd-	02	33.40	0.4	Z	22s	5.41um	5.1Msz	
BNT	5.66	11	eP	55	39.00	-0.5				(S)	02	55.90				S	12 16.00	
KGT	5.68	6	eP	55	38.00	-1.7	BMG	4.76	119	eP	03	07.00	-1.6			eLR	15 48.00	
ALN	6.09	357	eP	55	44.20	-1.3	HOBG	5.13	167	iPc	03	11.71	-2.2	RSCP	27.16	345	iP	07 39.30 0.0
LIT	6.16	330	ePc	55	57.70	11.1X	DVD	5.20	260	P	03	16.54	1.9	Z	20s	9.04um	5.3Msz	
YLV	6.19	21	eP	55	47.00	0.0				S	04	13.50		LPB	27.31	161	Pc	07 38.80 -2.5
EYL	6.45	26	eP	55	52.30	1.6	FUD	5.25	138	iP	03	11.50	-4.2X		1.1s	569.62nm	6.1mb	
HRT	6.52	22	eP	55	46.00	-5.6X	CLMC	5.52	173	P	03	18.46	-0.9			S	12 12.00	
SRS	6.70	341	ePc	55	55.40	1.3	BUGC	5.56	169	P	03	18.74	-1.1			LR	16 12.00	
KNT	6.95	337	ePd	55	59.70	2.1	BOG	5.71	146	iPc	03	22.00	-0.3	BLA	27.84	355	ePd	07 46.50 1.0
BBTK	7.09	43	eP	56	00.00	0.3				iS	03	54.00			1.4s	422.22nm	5.9mb	
VAY	7.20	336	eP	56	03.40	2.3X	ANCC	5.85	176	iPc	03	23.33	-0.7			e	08 00.60 58kmX	
FNA	7.21	327	eP	56	02.70	1.5	HOOC	5.92	174	iPc	03	23.82	-1.4	NAV	27.98	354	P	07 47.40 0.6
OHR	7.73	326	eP	56	05.00	-3.6X	SDV	6.58	94	ePn	03	31.80	-2.6	CVL	28.48	358	P	07 51.50 0.3
DSI	8.13	111	eP	56	13.00	-1.1				iSn	04	45.10		NA2	28.61	359	P	07 53.00 0.7
SKO	8.17	333	e(P)	56	14.50	-0.2	SILC	6.73	172	P	03	36.89	0.3	CBN	28.69	360	eP	07 53.80 0.8
MKT	8.25	115	eP	56	16.00	0.2	PURC	7.08	173	ePc	03	42.81	1.1		0.1s	44.00nm	6.1mb	
MBH	8.70	123	eP	56	23.00	0.8	TOV	7.40	86	ePn	03	42.20	-3.5X	CCH	28.79	157	P	07 54.00 -0.5
MLR	10.68	358	eP	56	57.00	7.6X				iSn	04	58.00		OLY	29.04	336	P	07 54.80 -1.4
LPG	18.43	311	eP	58	35.70	5.2X	PSO	8.15	180	eP	03	58.00	1.5	ELC	29.80	341	P	08 01.70 -1.3
LPL	18.45	311	eP	58	35.00	4.3X	CUMC	8.40	184	ePc	04	00.19	0.2	SIV	29.89	147	iPc	08 01.80 -2.3
CDF	19.70	319	eP	58	42.10	-3.3X	SPJ	8.56	358	Pc	04	00.23	-1.6	CCM	31.19	338	ePc	08 14.74 -0.5
LBF	20.83	313	eP	58	56.90	-0.2				S	05	28.28				epPc	08 25.25 38km	
	1.0s	20.00nm			4.5mb		STH	8.65	3	iPc	04	01.40	-1.6			esPd	08 29.14	
LOR	21.03	313	eP	58	58.10	-1.0				S	05	29.33				eS	13 16.42	
SSF	21.15	312	eP	58	59.70	-0.6	MORO	8.95	80	iP	04	03.20	-4.1X			eS	13 17.41	
	0.9s	31.10nm			4.7mb					eS	05	34.30				eSS	15 23.50	
KIC	40.36	233	P	01	53.20	0.7	COTA	9.06	187	Pd	04	10.30	1.1			eSS	15 23.88	
GKN	49.52	81	P	03	06.00	0.2	CAYA	9.28	184	P	04	14.00	1.8	TUL	31.32	330	iPc	08 14.60 -1.9
DMN	50.05	81	P	03	10.40	0.3	YANA	9.53	188	iPd	04	17.30	1.6		1.0s	207.10nm	5.9mb	
KKN	50.12	81	P	03	10.00	-0.6	QUR	9.58	188	iP+	04	18.00	1.7	Z	21s	2.21um	4.8Msz	
GUN	50.56	81	P	03	13.60	-0.5	OTO	9.62	188	P	04	18.20	1.4			e	08 30.90 68kmX	
S.D. = 1.1 on 32 of 43 obs.							ANGL	9.72	182	P	04	06.40	-11.9X			LR	16 17.80	
MAY 02, 1991 07h 01m 57.24±0.12s							QUIL	10.21	189	iP	04	26.20	1.2	LVNJ	31.37	4	P	08 17.90 1.1
9.392 N ± 2.1km 77.281 W ± 2.8km							OLLA	10.35	86	iP	04	21.10	-5.4X	BIX	31.40	330	eP	08 16.60 -0.6
DEPTH = 36.1km ( 36 depth phases)							GCM	10.61	338	eP	04	26.45	-3.5X	GMTN	31.48	4	iP	08 19.00 1.2
5.7mb ( 69 obs.) 5.3Msz ( 19 obs.)							LRS	13.45	48	P	05	01.20	-6.9X	PNJ	31.51	5	iP	08 19.20 1.2
NEAR NORTH COAST OF COLOMBIA ( 96)							CLLP	13.51	49	P	05	01.00	-7.9X	TBR	31.74	4	P	08 21.40 1.3
Ms 5.2 (BRK). MD 5.0 (UPA).							SJG	13.85	50	iP	05	06.00	-7.5X	TXNY	31.77	4	iP	08 21.60 1.2
Mo=3.0*10**17 Nm (PPT). Felt at							CPD	13.99	51	P	05	07.40	-7.8X	MEQ	31.92	326	iPc	08 20.30 -1.5
Panama City, Panama.							LPR	14.18	50	P	05	11.20	-6.6X	WVLY	32.97	358	P	08 32.20 1.4
FAULT PLANE SOLUTION: P-Waves							TCE	15.35	84	eP	05	29.37	-3.6X	DLA	33.55	354	P	08 35.65 -0.2
NP1:Strike=175 Dip=77 Slip= 160							TPP	15.63	85	eP	05	32.09	-4.5X	ANT	33.57	169	iP	08 37.50 1.3
NP2: 270 71 14							TPX	15.63	292 (P)		05	36.50	-0.2	LDN	33.69	355	P	08 37.15 0.1
Principal Axes:							TRN	15.69	84	eP	05	38.50	1.1	ELF	33.86	355	P	08 38.25 -0.2
T Plg=23 Azm=131							RSNY	35.11	3	ePc					3	ePc	08 49.70 0.5	
P 4 223							TBH	16.01	85	eP	05	36.63	-4.9X		1.1s	256.73nm	6.1mb	
Comment: The focal mechanism is							NEV	16.25	60	eP	05	38.31	-6.3X	Z	20s	2.82um	5.0Msz	
poorly controlled and							TPR	16.34	82	eP	05	40.57	-5.1X			epP	09 03.10 51kmX	
corresponds to strike-slip							BOT	16.39	82	eP	05	43.98	-2.4			ePP	10 15.30	
faulting with a moderate							PAG	16.58	65	eP	05	40.91	-7.9X	BNH	35.45	7	P	08 53.80 1.6
reverse component. The							DPMT	16.58	68	eP	05	42.69	-6.1X	EMM	36.22	12	P	09 00.00 1.4
preferred fault plane is not							BBL	16.59	67	eP	05	42.81	-6.1X	MIM	36.42	10	P	09 01.40 1.1
determined.							MDN	16.59	68	eP	05	42.43	-6.4X	ALO	36.85	318	iPc	09 04.10 -0.2
MOMENT TENSOR SOLUTION							DFD	16.64	70	eP	05	42.18	-7.4X		0.9s	213.66nm	6.0mb	
Dep 38 Na. af sta: 6										S	08	09.00		Z	20s	2.84um	5.1Msz	
Moment Tensor: Scale 10**18 Nm							BIM	16.65	71	eP	05	44.31	-5.4X			epP	09 16.00 43km	
Mrr=-0.38 Mtt= 0.58							BPA	16.82	62	eP	05	44.80	-7.1X	ANMO	36.85	318	ePc	09 04.25 0.0
Mff=-0.20 Mrt=-0.49							MVM	16.83	71	eP	05	45.90	-6.0X		0.9s	186.97nm	6.0mb	
Mrf=-0.37 Mtf= 0.93							MGG	16.87	66	eP	05	45.51	-6.8X	Z	21s	4.84um	5.3Msz	
Principal axes:							SEG	16.88	64	eP	05	46.11	-6.4X			esPd	09 18.74	
T Val= 1.23 Plg= 8 Azm=149							SFG	17.09	65	eP	05	50.89	-4.3X			ePP	10 30.41	
N 0.00 54 250							CPB	17.11	60	eP	05	48.24	-7.1X			eS	14 47.75	
P -1.22 35 53							DEG	17.24	65	eP	05	51.22	-5.9X			eS	14 48.13	
Best Double Couple:Ma=1.2*10**18							PBJ	18.99	293 (P)		06	01.00	-17.7X	CBM	38.22	10	eP	09 16.40 1.0
NP1:Strike=197 Dip=60 Slip=-159							OXX	20.40	294 (P)		06	32.73	-1.5	GLD	39.17	325	P	09 23.90 0.2
NP2: 96 72 -32							LVVM	21.19	301 (P)		06	45.09	3.1X		1.1s	568.95nm	6.3mb	
CENTROID, MOMENT TENSOR (HRV)							PIO	21.47	291 (P)		06	44.50	-0.4	Z	20s	2.50um	5.0Msz	
Data Used: GDSN							IISM	21.67	298 (P)		06	46.87	0.0	GOL	39.22	325	iP	09 23.80 -0.4
L.P.B.: 19S, 56C							IIT	22.50	297 (P)		06	57.50	2.1		1.0s	275.00nm	6.0mb	
Centroid Location:							PPM	22.79	297 (P)		07	01.00	2.4	Z	19s	5.19um	5.4Msz	
Origin Time 07:01:59.0 0.7							IIA	22.85	297 (P)		07	03.06	4.5X	RTRS	40.05	169	ePc	09 32.40 1.7
Lat 9.19N 0.07 Lon 77.24W 0.04							TPM	23.14	297 (P)		07	04.50	2.8	PPD	40.30	141	iPc	09 31.40 -1.6
Dep 45.7 4.0 Half-duration 3.3							III	23.29	295 (P)		07	04.00	0.8			e	09 35.10 12kmX	
Moment Tensor: Scale 10**17 Nm							UNM	23.38	297 (P)		07	12.50	8.4X			e	09 46.10	
Mrr=-0.13 0.29 Mtt=-1.83 0.28							HBF	23.60	353 P		07	07.30	1.6	SOB1	40.67	116	eP	09 35.10 -1.0
Mff=-1.96 0.35 Mrt=-2.03 0.35							SGS	23.87	353 P		07	08.50	0.1			e	09 41.90 23kmX	
Mrf=-0.02 0.40 Mtf= 7.53 0.35							PRM	25.01	350 P		07	20.00	0.6			e	09 46.30	
Principal Axes:							JSC	25.04	352 P		07	20.00	0.4			e	10 06.10	
T Val= 8.03 Plg= 9 Azm=129							LHS	25.18	353 P		07	20.80	-0.1	PV09	40.70	321	eP	09 35.80 -0.6
N 0.00 75 256							MRX	25.28	297 (P)		07	07.00	-15.0X			i	09 51.00 59kmX	
P -8.03 11 37							ARE	26.32	167 eP		07	33.00	1.0	ITB	40.75	147 Pc	09 34.20 -2.5	
Best Double Couple:Ma=8.0*10**17								1.2s	101.56nm				5.3mb	ITB7	41.04	147 Pc	09 36.40 -2.6	
NP1:Strike=173 Dip=75 Slip=-178							TKL	26.81	348 P		07	36.00	-0.1	RTLL	41.36	169 ePd	09 41.70 0.1	
NP2: 83 88 -15							GBTN	26.91	347 P		07	36.90	-0.1	RTCB	41.45	169 ePc	09 43.00 0.6	
							ZOBO	27.06	160 iPc		07	37.08	-2.1	ZON	41.53	169 eP	09 43.50 0.5	
														GLA	41.83	310 eP	09 46.00 0.5	



02d 07h

TCA	42.28	164	ePc	09 47.20	-2.0	COR	52.91	320	ePc	11 11.17	-0.9	EPF	74.61	48	eP	13 35.20	0.4
JACH	42.32	172	eP	09 56.00	6.5X	LON	53.03	323	P	11 11.80	-1.2	-	1.2s	56.55nm			5.4mb
IHA	42.52	173	iPc	09 52.60	1.6	PNT	53.14	327	ePd	11 12.00	-1.7	EBR	74.68	50	eP	13 35.00	-0.2
MSU	42.65	319	P	09 52.80	0.4		1.2s	221.00nm			6.0mb		eS	23 08.30			
PEL	42.76	172	iPc	09 53.70	0.6	GMW	54.00	323	P	11 18.00	-2.1	RSO	74.72	330	eP	13 34.60	-0.7
	1.1s	430.38nm			6.1mb	PGC	54.93	324	ePd	11 26.00	-0.8	AIA	75.07	174	eP	13 36.50	-0.3
MDZ	42.80	170	i(P)	09 54.70	1.3		1.1s	244.00nm			6.1mb	LPO	75.27	46	eP	13 38.30	-0.2
LCCH	42.97	173	iPd	09 56.00	1.3	MBO	59.11	79	iPc	11 57.30	0.3	PDB	75.35	329	P	13 37.40	-1.2
SAN	43.07	172	ePc	09 56.20	0.7	YKA	59.47	341	eP	11 56.40	-2.4	CAF	75.89	46	eP	13 42.10	0.0
BAR	43.09	308	eP	09 58.00	2.2		0.8s	129.20nm			6.1mb	IMA	75.96	336	P	13 41.80	-0.3
			e	10 10.00	43km	RKT	65.02	239	iP	12 37.00	0.6		1.2s	31.25nm			5.2mb
DAU	43.15	321	P	09 56.80	0.2		1.2s	35.00nm			5.3mb	TCF	76.02	45	eP	13 42.20	-0.5
TACH	43.23	172	eP	09 57.50	0.7	REY	66.95	23	eP	13 02.30	14.3X		1.2s	23.80nm			5.1mb
LVN	43.47	173	eP	09 59.00	0.3	PTO	67.84	49	eP	13 03.20	9.1X	PPN	76.11	249	iP	13 53.10	9.4X
PLM	43.51	309	eP	09 59.00	-0.4	EZAM	67.90	48	eP	12 52.70	-1.8		1.4s	125.00nm			5.7mb
			e	10 13.00	53kmX	TIO	68.12	60	iPc	12 56.50	0.2	SVW	76.20	331	ePd	13 41.70	-1.8
BW06	43.62	325	iP	09 58.00	-1.4	VAL	68.55	38	eP	13 07.00	8.7X		1.0s	300.00nm			6.2mb
	1.0s	187.50nm			5.8mb	EVAL	68.92	53	eP	13 01.50	0.6			ipP	13 54.90	45km	
PDCR	43.72	119	eP	09 58.70	-2.4	ERUA	69.07	48	eP	12 58.30	-3.5X	PPT	76.25	249	iP	13 54.30	9.8X
			e	10 07.10	28km	AKU	69.09	22	iP	13 03.30	1.9		1.4s	170.00nm			5.9mb
			e	11 37.10			1.0s	32.00nm			5.3mb	MAF	76.26	45	eP	13 43.90	-0.2
VAO	43.78	138	eP	10 00.70	-0.9	INK	69.24	341	eP	13 01.00	-1.3	PAE	76.28	249	iP	13 54.40	9.8X
			e	10 12.90	44km		0.9s	113.00nm			5.9mb		1.4s	200.00nm			5.9mb
			e	10 32.30				pP	13 16.00	54kmX	AFR	76.43	249	iP	13 55.00	9.5X	
			e	11 43.60		EPLA	69.64	51	eP	13 04.50	-0.8		1.4s	185.00nm			5.9mb
PEC	43.96	310	eP	10 03.80	1.0	EJIF	69.87	55	eP	13 08.30	1.6	BGF	76.46	44	eP	13 44.90	-0.3
			epP	10 17.00	49kmX	BALM	69.87	332	ePd	13 06.30	-0.1	TTA	76.56	333	P	13 45.00	-0.5
DUG	44.00	320	eP	10 02.90	-0.3			e	13 19.20	44km			pP	13 58.00	44km		
RVR	44.16	310	eP	10 04.00	-0.4	IFR	70.02	58	iPc	13 03.00	-4.9X	AVF	76.81	44	eP	13 46.60	-0.5
			e	10 15.00	38km	EHOR	70.12	53	eP	13 08.20	0.0		1.4s	39.20nm			5.2mb
RFA	44.71	170	eP	10 09.00	0.2	LKO	70.58	83	P	13 09.10	-2.4	SSF	76.92	44	eP	13 47.10	-0.6
MWC	44.77	310	eP	10 09.00	-0.6	ECB	70.73	38	eP	13 27.50	15.9X		1.0s	18.00nm			5.1mb
			e	10 20.00	38km	MAL	70.73	54	iPc	13 13.00	1.1	SMF	77.15	44	eP	13 48.50	-0.5
SBB	44.78	311	eP	10 10.00	0.4	DMU	70.92	36	eP	13 12.50	-0.3		1.0s	19.00nm			5.1mb
			e	10 20.00	34km		0.9s	67.00nm			5.7mb	LOR	77.16	44	eP	13 48.50	-0.6
PAS	44.83	310	eP	10 13.00	3.2X	ETA	71.13	37	eP	13 29.10	15.1X		1.0s	22.00nm			5.1mb
			epP	12 03.00		TOL	71.18	51	iPc	13 15.00	0.3	SNF	77.46	40	P	13 50.80	0.2
			eS	16 52.00			1.4s	232.56nm			6.0mb		e	14 02.70	40km		
			eSKS	20 04.00		EBAN	71.29	53	eP	13 15.30	-0.1	UCC	77.51	40	eP+	14 06.00	15.2X
			eLg	20 31.00		ECOG	71.43	54	eP	13 16.80	0.5	DOU	77.65	41	Pc	13 51.80	0.1
			eLR	23 34.00		AFC	71.44	54	eP	13 16.60	0.1			ed	14 07.80	57kmX	
CLC	45.09	312	eP	09 58.00	-14.0X	TIC	71.50	86	P	13 15.92	-1.1			S	23 40.00		
			e	10 11.00	48kmX		1.2s	122.50nm			5.8mb	ENN	78.50	40	eP	13 56.50	0.2
BMA	45.50	135	eP	10 15.30	0.0	LIC	71.55	87	P	13 16.32	-1.0		0.9s	87.00nm			5.8mb
ISA	45.67	311	ePc	10 16.35	-0.2		1.0s	139.50nm			5.9mb		e	14 06.00	30km		
			e	10 26.00	32km	KLU	71.66	332	P	13 16.80	-0.4	MEM	78.55	40	P	13 57.80	1.2
			ePP	12 02.36				pP	13 31.00	50kmX			e	14 06.30	27km		
TNP	45.84	315	ePd	10 17.60	-0.5	KIC	71.81	86	P	13 18.06	-0.8	CDR	78.57	47	eP	14 06.90	10.0X
	0.7s	63.33nm			5.6mb		1.1s	163.00nm			5.9mb	VITF	78.58	43	P	13 56.73	-0.1
SCH	46.07	8	ePd	10 19.60	0.2	TOA	71.93	333	P	13 18.00	-0.8	WLF	78.66	41	eP	14 07.50	10.3X
	1.0s	298.00nm			6.2mb	EHUE	72.22	53	eP	13 21.60	0.6	HAU	78.83	43	eP	13 57.90	-0.4
BCH	46.68	310	P	10 26.00	1.4	ENIJ	72.50	54	eP	13 22.30	-0.3	LRG	79.01	48	eP	13 59.50	0.3
			pP	10 38.00	43km	PMR	73.18	332	ePd	13 25.00	-1.0	WTS	79.03	39	eP	14 00.00	0.8
FRI	47.13	313	eP	10 26.30	-1.7		1.0s	150.00nm			5.9mb			148.00nm			6.0mb
			epP	10 38.50	44km	Z	19s	4.12um			5.7msz		e	15 09.50	297kmX		
LRM	47.16	327	ePc	10 28.10	-0.3	ESK	73.28	35	eP	13 26.50	-0.2			e	15 36.00		
PR1	47.49	311	eP	10 29.50	-1.5	EKA	73.30	35	Pd	13 26.10	-0.8	LMR	79.12	48	eP	14 00.00	0.1
LPA	47.71	158	iPc+	10 31.00	-1.5		0.8s	16.70nm			5.1mb	BSF	79.14	43	eP	13 59.50	-0.5
	0.7s	197.26nm			6.2mb	COL	73.32	335	ePd	13 26.19	-0.6		1.0s	20.00nm			5.1mb
Z	20s	4.26um			5.4msz			esPd	13 41.00			BNI	79.16	46	P	14 00.30	0.0
LLA	47.89	312	eP	10 32.50	-1.5			iS	22 52.71			LOMF	79.18	44	P	13 59.92	-0.3
			epP	10 45.50	48kmX			eS	22 53.10			LPL	79.19	45	eP	14 01.00	0.5
CMB	48.06	313	ePd	10 34.00	-1.3			e	23 11.64				0.7s	7.70nm			4.8mb
	1.0s	50.00nm			5.5mb			eScS	23 29.68			LPG	79.20	45	eP	14 01.30	0.6
PRS	48.09	311	eP	10 33.50	-2.1	FBA	73.32	335	iPd	13 25.60	-1.2	FRF	79.21	47	eP	14 00.40	0.0
ARN	48.61	312	P	10 40.30	0.7		1.2s	136.36nm			5.8mb		1.2s	53.55nm			5.4mb
MHC	48.69	312	eP	10 40.20	-0.1			e	13 40.40	52kmX		RRL	79.25	46	P	14 17.26	16.4X
			epP	10 52.00	42km			i	13 58.50			BNS	79.29	40	iPc	14 08.00	7.4X
BKS	49.33	313	ePc	10 46.50	1.4	SLKM	73.49	330	eP	13 26.70	-1.2	MOF	79.37	43	P	14 01.84	0.6
	Z	20s	2.30um		5.2msz			i	13 40.00	46km		ECH	79.37	43	P	14 01.18	0.0
	N	20s	1.40um			RUV	73.62	251	iP	13 43.40	14.1X	CDF	79.44	42	P	14 00.61	-1.0
	E	20s	1.50um				1.4s	200.00nm				LSD	79.49	45	P	14 18.80	16.6X
			eS	18 09.00		TPT	73.79	251	iP	13 44.60	14.3X	WLS	79.49	42	P	14 01.38	-0.5
			eLO	23 32.00			1.4s	170.00nm				PZZ	79.49	46	P	14 19.21	17.1X
			eLR	25 40.00		VAH	73.86	251	iP	13 45.00	14.3X	ABH	79.56	41	eP	14 02.75	0.6
BRK	49.35	312	eP	10 34.00	-11.2X		1.4s	150.00nm				DOI	79.60	46	P	14 03.40	0.8
			epP	10 58.30	102kmX	LPF	73.88	43	eP	13 30.00	-0.3	DIX	79.63	45	eP	14 03.80	0.8
SES	49.49	332	ePc	10 45.20	-0.9	DAG	73.95	12	iPd	13 29.60	-0.7	BBS	79.64	43	P	14 02.39	-0.3
	1.2s	458.00nm			6.4mb		0.7s	45.21nm			5.6mb	GWf	79.65	42	P	14 02.77	0.1
			pP	10 54.00	29km	Z	19s	5.14um			5.8msz	STV	79.67	47	P	14 19.52	16.6X
ORV	49.49	315	eP	10 44.90	-1.4	PMO	74.05	251	iP	13 46.20	14.4X	ENR	79.74	47	P	14 19.52	16.2X
			ipP	10 57.70	47kmX		1.4s	295.00nm				SBF	79.77	47	eP	14 03.30	-0.2
LBFM	50.53	317	P	10 53.00	-1.5	FLN	74.30	42	eP	13 31.50	-1.3	FEL	79.96	43	P	14 04.03	-0.5
			pP	11 05.00	43km	MFF	74.40	44	eP	13 33.40	0.0	MMK	80.02	45	eP	14 07.10	2.1
FHC	51.74	315	eP	11 01.30	-2.1		1.3s	57.75nm			5.4mb	ROB	80.05				



ZIA	80.23	43 eP	14 06.50	0.6	ZST	85.98	42 iP	14 36.40	1.2		i	24 40.00	
FIN	80.30	47 P	14 21.46	15.2X			i	14 45.70	29km		SS	41 25.00	
PCP	80.52	46 P	14 22.90	15.4X	KEV	86.15	20 iP	14 35.40	-0.2	SSE	136.02 337 PKP	21 32.50	15.6X
LLS	80.68	44 eP	14 09.20	0.7		1.0s	56.00nm		5.7mb	Z	21s	1.40um	
ANM	80.77	334 eP	14 08.20	-0.1			i	14 48.20	43km	N	20s	1.00um	
		eP	14 23.20	53kmX	SOD	86.69	22 iP	14 38.00	-0.3	E	20s	1.00um	
PGF	80.99	48 eP	14 09.90	-0.2			i	14 47.80	31km		ePP	24 12.00	
VDL	81.03	44 eP	14 11.30	1.0	TDS	86.85	50 P	14 40.30	0.6	XAN	136.41 353 ePKP	21 16.50	-1.1
NB2	81.13	30 P	14 10.60	0.3	SRO	86.85	42 eP	14 40.70	1.2	STK	137.63 232 ePKP	21 19.50	-0.5
	0.8s	47.20nm		5.5mb	KRA	87.48	40 ePd	14 44.70	2.3		0.8s	1.60nm	
OSS	81.48	44 eP	14 13.40	0.8		1.2s	83.00nm		5.9mb		e	21 27.90	
SAL	81.84	45 P	14 30.60	16.4X			e	14 53.40	27km	GKN	138.91 25 PKP	21 16.20	-6.4X
GRF	81.95	41 eP	14 15.30	0.5			e	15 00.00		KKN	139.36 24 PKP	21 16.60	-6.9X
	1.0s	20.00nm		5.1mb	NUR	87.71	29 iP	14 44.50	1.2	DMN	139.45 24 PKP	21 16.10	-7.7X
Z	20s	2.00um		5.5MsZ		0.8s	17.60nm		5.4mb	GUN	139.49 23 PKP	21 14.60	-9.3X
		e	14 25.00	31km			i	14 53.20	27km	LSA	139.57 16 ePKP	21 25.00	0.8
		e	14 32.00		SPC	87.85	41 eP	14 45.50	1.0	PKI	139.61 24 PKP	21 15.90	-8.2X
MOX	82.12	40 eP	14 17.00	1.4	PSZ	87.88	42 eP	14 46.20	1.7	POO	140.23 46 ePKP	21 12.50	-12.6X
	1.5s	73.00nm		5.5mb	KAF	88.05	27 iP	14 44.00	-0.9	OIS	142.77 248 ePKP	21 25.00	-4.5X
Z	23s	1.90um		5.4MsZ X		1.1s	57.30nm		5.8mb		i	24 52.60	
N	23s	1.00um					eSP	15 03.20		GYA	144.16 354 PKPc	21 29.60	-2.2X
E	26s	0.90um			ADK	88.44	322 ePd	14 46.70	-0.3	HYB	144.22 42 ePKP	21 29.60	-2.4X
		eS	24 29.00			1.0s	212.00nm		6.4mb		1.0s	25.00nm	
COP	82.16	35 iPc	14 15.30	-0.3	BZS	89.52	44 eP	14 53.50	1.2	KMI	145.70 360 ePKPd	21 34.20	-0.4
	0.5s	64.79nm		5.9mb	OHR	89.92	48 eP	14 42.70	-11.7X		2.0s	120.00nm	
HFS	82.42	30 eP	14 16.20	-0.7		1.2s	72.00nm		86kmX	Z	24s	1.30um	5.6MsZ X
	0.6s	7.50nm		4.9mb	SKO	90.20	47 iP	14 56.50	0.9			eSPKd21	49.43
Z	21s	1.39um		5.3MsZ			i	15 06.20	30km	GBA	146.06 48 PKPd	21 33.50	-1.6
		e	14 26.60	33km			i	15 06.00			0.5s	11.30nm	
		e	14 31.70		FNA	90.42	49 ePc	14 57.80	1.1	ASPA	147.01 241 ePKP	21 35.10	-1.4
		e	14 34.00		VAY	91.18	48 eP	15 02.30	2.3		1.2s	40.70nm	
		LR	43 48.00		LIT	91.40	49 eP	15 01.20	0.1		i	21 52.70	
FIR	82.53	47 e(P)	14 25.00	7.2X	KKB	91.42	47 iPd	15 03.00	1.8	BAG	148.86 325 ePKP	21 42.80	3.0X
CTI	82.58	45 P	14 18.20	0.0	KNT	91.45	48 eP	15 02.90	1.5	QCP	149.98 322 ePKP	21 55.00	13.7X
PGD	82.85	47 P	14 20.40	0.6	AGG	91.53	50 ePd	15 02.90	1.1	QIZ	150.90 346 ePKP	21 45.00	2.4X
CLL	82.93	39 eP	14 20.00	0.2	CMP	91.94	44 ePc	15 04.00	0.5	CHG	151.73 8 ePKP	21 49.00	5.1X
	1.7s	36.00nm		5.2mb	SRS	91.97	48 eP	15 04.60	0.9		1.0s	11.25nm	
Z	21s	1.50um		5.3MsZ	MLR	92.50	43 iPc	15 09.50	3.3X	WARB	151.84 231 iPKPc	21 49.90	6.0X
		i	14 29.80	31km	CVO	92.56	43 eP	15 10.50	4.1X	NWAO	153.01 208 ePKP	21 51.00	5.7X
		i	14 37.20		RZN	92.65	47 iPd	15 08.00	0.9	BDT	153.28 8 ePKP	21 45.90	-0.2
		eS	24 35.00		VR1	92.92	43 eP	15 09.00	1.0	LOE	153.36 2 ePKP	22 00.00	13.8X
BRN	82.93	38 eP	14 30.50	10.8X	SNA	93.77	161 eP	15 12.50	1.2	MUN	154.28 207 ePKP	21 55.00	7.9X
WET	83.08	41 iPc	14 21.60	0.9		1.4s	134.88nm		6.2mb	BAL	155.19 210 ePKP	22 00.00	11.6X
BHG	83.24	43 iPc	14 22.40	0.9	ALN	93.82	48 eP	15 13.10	0.9	SNG	163.41 7 ePKP	22 14.00	16.0X
KHC	83.54	41 iP	14 23.70	0.7	OBN	95.56	32 eP	15 19.00	-0.9	PSI	167.41 18 ePKP	22 19.00	17.6X
	1.2s	15.00nm		5.0mb			i	15 35.00	55kmX		S.D. = 1.1 on 286 of 382 obs.		
	Z 18s	1.00um		5.2MsZ			e	25 52.00					
	N 18s	0.30um			NVL	98.51	160 (P)	15 33.00	0.2		* MAY 02, 1991 07h 05m 32.05±0.74s		
	E 18s	1.00um					e	19 34.00			9.126 N ± 9.2km 81.884 W ±10.8km		
		e	14 33.50	31km			(S)	26 18.00			DEPTH = 10.0km (geophysicist)		
BRG	83.57	40 iP	14 23.40	0.3	SPA	99.33	180 iPc	15 36.50	-0.3		PANAMA (81)		
	1.4s	30.00nm		5.2mb		1.4s	63.73nm		6.0mb		MD 4.8 (UPA), 4.8 (SJR). Felt at		
Z	20s	1.50um		5.4MsZ	YAK	105.77	347 ePd	16 20.60	15.1X		Changuinola, Chiriqui Grande and		
N	20s	1.00um					e	19 02.00			as far east as Panama City. Also		
E	20s	1.00um					e	19 30.00			felt in northeastern Costa Rica.		
		i	14 32.80	30km			e	20 01.00					
		i	14 38.60				e	20 18.00		DVD	0.89 219 P	05 49.00	0.0
KBA	83.63	43 e(P)	14 23.70	0.0			i	20 35.00			S	06 08.60	
	0.9s	75.90nm		5.8mb			e	24 04.00		UPA	2.33 93 (P)	06 11.00	0.0
		i	14 38.20	50kmX			e	25 58.00			S	06 38.50	
ARV	83.78	47 P	14 39.60	15.3X	WMQ	125.31	13 PKP	20 54.20	-2.0	TKL	26.47 357 P	11 10.80	-0.4
PRU	84.06	40 Pc	14 26.70	1.1	Z	24s	1.30um		5.5MsZ X	GBTN	26.50 356 P	11 12.00	0.5
	1.2s	19.80nm		5.1mb			sPKP	21 11.00		RSCP	26.57 353 eP	11 11.00	-1.1
Z	22s	1.90um		5.4MsZ			PP	22 46.00			1.1s	75.26nm	5.3mb
N	22s	0.40um			QUE	127.74	40 ePKP	21 02.90	1.4	BLA	27.99 2 P	11 25.00	-0.1
E	22s	1.40um			BJI	129.26	347 ePKP	21 03.00	-0.8		1.2s	80.30nm	5.4mb
		e	14 35.80	29km	HHC	129.35	351 ePKP	21 03.00	-1.1	ELC	28.81 348 P	11 33.50	1.1
		e	14 43.20			Z 33s	0.30um		4.8MsZ X		S.D. = 0.8 on 7 af 7 obs.		
TRI	84.09	45 eP	14 26.10	0.3	BRS	129.61	242 iPKPd	21 20.50	15.6X				
		e	24 48.00		GTA	131.37	3 ePKP	21 07.80	-0.2		* MAY 02, 1991 07h 26m 03.13±0.92s		
VOY	84.13	44 eP	14 27.40	1.2		1.2s	20.00nm				5.540 S ±10.6km 77.011 W ±15.5km		
UPP	84.41	30 iP	14 27.60	0.5	Z	23s	2.30um		5.8MsZ X		DEPTH = 97.3 ± 8.7 km		
		i	14 39.10	37km			sPKP	21 23.30			4.6mb ( 10 obs.)		
CEY	84.54	45 eP	14 29.40	1.3			SKS	28 13.50		NORTHERN PERU		(111)	
RIY	84.57	45 eP	14 26.80	-1.4	TIA	132.66	344 ePKP	21 10.60	0.2	QUIL	5.12 338 eP	27 19.20	-0.1
LJU	84.57	44 e(P)	14 28.50	0.2	Z	30s	1.60um		5.6MsZ X	ANGL	5.14 354 eP	27 32.50	12.9X
SDI	84.65	49 P	14 29.10	0.3			sPKP	21 25.10		OTO	5.51 344 P	27 26.10	1.4
KSP	85.05	39 iPc	14 31.40	0.9	RMO	133.30	242 iPKPc	21 12.00	0.1	OUR	5.54 344 eP	27 28.70	3.5X
	0.9s	49.00nm		5.7mb			e	21 21.00		YANA	5.61 344 eP	27 25.00	-1.1
		ec	14 40.60	29km			i	24 34.20		ARE	12.13 154 e(P)	28 55.00	0.8
		i	14 47.70		LZH	134.75	359 PKP	21 22.00	7.4X	ZOBO	13.77 141 eP	29 11.00	-5.0X
DUI	85.13	49 P	14 32.80	1.6	Z	28s	1.61um		5.6MsZ X	LPB	13.99 142 P	29 19.00	0.3
VBY	85.15	45 eP	14 31.50	0.4	E	25s	1.79um			CCH	15.86 139 eP	29 41.00	-1.4
PTJ	85.58	44 eP	14 32.90	-0.5			PP	23 46.00					



02d 07h

SIV	18.77	125 P	30	12.00	-5.6X
TUL	44.84	338 ePc	34	08.90	-0.4
	0.6s	7.10nm			4.7mb
FVM	45.06	345 P	34	10.30	-0.7
	0.7s	15.65nm			5.0mb
ALO	48.90	328 ePc	34	41.00	-0.3
	0.9s	7.98nm			4.6mb
ANMO	48.90	328 P	34	41.70	0.4
	0.7s	6.51nm			4.7mb
GLD	52.04	332 P	35	06.80	1.7
	0.8s	30.59nm			5.4mb
GOL	52.07	332 P	35	05.50	0.0
	0.5s	1.53nm			4.3mb
PV09	52.99	328 P	35	12.50	0.2
DUG	56.17	327 P	35	35.00	-0.3
BW06	56.43	332 P	35	35.60	-1.7
	1.0s	4.33nm			4.4mb
TNP	57.25	323 P	35	42.60	-0.4
	0.6s	1.85nm			4.3mb
MCMT	59.55	331 eP	35	59.50	0.6
SCH	60.74	7 eP	36	07.00	0.4
ORV	60.78	322 P	36	07.40	0.3
SES	62.98	336 ePc	36	21.80	0.1
LKO	72.72	78 P	37	21.88	-1.2
	0.6s	6.50nm			4.7mb
TIC	72.86	81 P	37	25.10	1.2
KIC	73.10	82 P	37	25.80	0.6
YKA	73.66	343 eP	37	27.00	-0.6
	0.5s	2.40nm			4.3mb
INK	83.39	342 eP	38	21.00	0.6
WB2	140.09	230 ePKP	45	16.80	-6.1X
	1.4s	1.00nm			
LZH	149.59	359 iPKPc	45	43.80	5.2X
	1.0s	25.00nm			
		eLg	48	35.00	
GKN	151.66	36 PKP	45	49.20	7.2X
KKN	152.20	35 PKP	45	50.20	7.4X
GUN	152.45	34 PKP	45	50.40	7.1X
	S.D. = 0.9 on 25 of 34 obs.				

\* MAY 02, 1991 09h 00m 35.24 ± 0.76s  
 42.704 N ± 15.2km 43.692 E ± 9.3km  
 DEPTH = 10.0km (geophysicist)  
 4.1mb ( 6 obs.)

WESTERN CAUCASUS (362)

TAB	5.05	156 eP	02	04.00	11.1X
KAS	7.51	263 eP	02	26.50	-1.0
MLR	13.06	288 eP	03	45.00	1.5
OBN	13.24	342 eP	03	58.00	12.3X
		e	04	11.00	
MAIO	13.77	112 eP	03	54.00	1.2
OHR	17.11	272 eP	04	36.00	0.0
SPC	17.51	300 eP	04	40.70	-0.4
KRA	17.91	302 eP	04	49.60	3.7X
ZST	19.40	296 eP	05	10.90	6.8X
NUR	21.25	334 iP	05	18.10	-5.3X
		e	05	24.00	
KAF	22.01	338 iP	05	31.70	0.7
	0.6s	6.30nm			4.2mb
		eS	05	40.90	
CLL	22.49	303 eP	05	39.00	3.1X
	1.3s	20.00nm			4.4mb
GRF	23.40	299 e(P)	05	49.00	4.1X
HFS	25.24	324 eP	06	03.30	0.8
	1.1s	15.30nm			4.6mb
Z	17s	0.25um			3.8mszX
		e	06	09.30	
		e	06	15.60	
		LR	15	34.00	
SOD	26.39	345 eP	06	18.00	4.9X
NB2	26.75	325 P	06	17.60	1.0
	0.8s	2.00nm			3.9mb
GBA	41.07	125 Pc	08	20.30	-0.3
	0.9s	3.20nm			4.1mb
INK	69.30	359 eP	11	42.00	-2.0
YKA	73.71	350 eP	12	09.00	-1.6
	1.2s	1.50nm			3.9mb
	S.D. = 1.3 on 11 of 19 obs.				

% MAY 02, 1991 09h 14m 34.35 ± 0.78s  
 39.088 N ± 6.3km 27.643 E ± 8.0km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.8 (ISK).

IZM 0.75 203 iPg 14 49.10 0.0

DST	0.92	56 ePn	14	52.10	0.1
EZN	1.26	306 ePn	14	57.70	0.0
EDC	1.27	8 ePn	14	58.00	0.1
KCT	1.28	25 ePn	14	57.70	-0.5
BNT	1.28	9 ePn	14	58.60	0.4
KGT	1.39	349 iPn	14	59.50	-0.2
	S.D. = 0.3 on 7 of 7 obs.				

% MAY 02, 1991 09h 29m 23.62 ± 1.00s  
 39.118 N ± 8.3km 27.612 E ± 10.2km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.6 (ISK).

IZM	0.77	201 ePg	29	39.00	0.3
		eSg	29	50.10	
DST	0.93	58 ePn	29	40.60	-0.7
EZN	1.22	306 ePn	29	45.70	-0.6
EDC	1.24	9 ePn	29	48.00	1.3
KGT	1.35	350 iPn	29	48.20	-0.3
	S.D. = 1.2 on 5 of 5 obs.				

% MAY 02, 1991 09h 32m 35.59 ± 2.93s  
 39.629 N ± 21.4km 29.509 E ± 15.1km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.7 (ISK).

DST	0.68	268 ePg	32	48.10	-1.0
		eSg	32	59.00	
IZI	0.71	358 iPg	32	48.80	-0.8
YLV	0.94	354 iPn	32	53.50	-0.1
EYL	1.06	28 ePn	32	55.90	0.3
KCT	1.08	305 ePn	32	55.70	-0.2
BNT	1.42	301 ePn	33	02.60	1.2
EDC	1.45	300 ePn	33	02.00	0.1
KGT	1.88	297 ePn	33	08.70	0.6
	S.D. = 0.8 on 8 of 8 obs.				

\* MAY 02, 1991 09h 37m 12.66 ± 2.61s  
 36.834 N ± 19.9km 21.526 E ± 15.5km  
 DEPTH = 10.0km (geophysicist)

SOUTHERN GREECE (368)

ML 3.5 (ATH). MD 3.7 (THE).

VLI	1.14	95 ePb	37	34.00	0.0
VLS	1.53	331 ePn	37	40.00	-0.1
ATH	2.08	56 ePb	37	53.00	5.0X
		eSn	38	21.50	
AGG	2.28	16 ePnc	37	52.20	1.3
		eSn	38	26.40	
LIT	3.35	13 ePn	38	06.10	0.0
KZN	3.47	3 ePn	38	08.00	0.1
PAIG	3.52	28 ePn	38	08.00	-0.5
FNA	3.95	358 ePn	38	13.90	-0.7
GRG	4.17	9 ePnd	38	16.90	-0.9
SOH	4.23	19 ePn	38	20.20	1.6
OHR	4.31	353 ePn	38	20.50	0.7
KNT	4.45	13 ePnd	38	21.50	-0.2
SRS	4.57	20 ePn	38	22.00	-1.4
SKO	5.13	359 e(Pn)	38	41.00	9.6X
POD	49.17	97 eP	46	21.80	18.9X
	S.D. = 1.0 on 12 of 15 obs.				

MAY 02, 1991 09h 44m 41.41 ± 0.30s  
 42.483 N ± 7.5km 43.507 E ± 3.8km  
 DEPTH = 10.0km (geophysicist)

WESTERN CAUCASUS (362)

TAB	4.91	153 eP	46	11.00	13.9X
KVT	5.75	258 iPn	46	09.10	0.2
KAS	7.35	265 iPc	46	31.60	0.2
BBTK	8.53	256 eP	46	50.00	2.1
CFR	11.42	289 eP	47	27.00	-0.4
VRI	12.51	291 eP	47	48.50	6.2X
MLR	13.00	289 eP	47	50.50	1.6
OBN	13.41	343 eP	47	53.00	-1.1
		e	48	05.00	
		eS	50	30.00	
MAIO	13.81	111 eP	47	57.00	-2.6
KNT	15.42	272 eP	48	27.60	7.0X
SKO	16.35	276 eP	48	42.00	9.5X
OHR	16.98	273 eP	48	44.30	3.7X
SPC	17.50	301 eP	48	41.20	-6.0X
		e	58	18.90	

KRA	17.92	303 eP	48	52.10	0.0
KSP	20.37	304 eP	49	21.60	0.9
VBY	20.50	288 e(P)	49	20.00	-2.1
LJU	21.00	290 e(P)	49	31.50	4.3X
NUR	21.39	334 eP	49	31.00	0.0
		e	49	38.00	
VOY	21.45	290 e(P)	49	32.00	0.2
BRG	21.83	303 e(P)	49	39.50	3.9X
	1.3s	16.00nm			4.3mb
KAF	22.16	338 eP	49	38.90	0.2
	0.6s	12.90nm			4.5mb
		eS	49	45.20	
CLL	22.50	304 eP	49	43.00	0.8
	1.2s	22.00nm			4.5mb
GRF	23.39	299 eP	49	50.00	-1.0
UPP	23.54	327 iP	49	58.00	5.8X
PGF	25.34	282 eP	50	09.60	-0.3
	0.7s	13.25nm			4.7mb
HFS	25.34	324 eP	50	09.60	0.0
	0.8s	18.50nm			4.8mb
Z	17s	0.26um			3.8mszX
		e	50	13.00	
		LR	00	01.00	
LPL	26.48	289 eP	50	20.10	-0.5
HAU	26.56	295 eP	50	21.00	-0.1
	0.9s	6.55nm			4.3mb
SOD	26.57	345 iP	50	26.50	5.6X
		i	50	38.20	
FRF	26.83	285 eP	50	24.30	0.7
	0.7s	8.80nm			4.6mb
NB2	26.85	325 P	50	22.40	-1.3
	0.7s	3.40nm			4.1mb
LRG	27.06	285 eP	50	27.50	1.9
AVF	28.67	293 eP	50	40.40	0.2
NDI	30.46	106 iPc	50	57.00	0.6
WMO	31.98	72 P	51	10.40	0.7
Z	16s	0.30um			4.1mszX
EKA	32.62	310 Pc	51	15.00	0.0
	0.9s	5.50nm			4.5mb
GKN	36.20	100 P	51	46.86	0.5
DMN	36.77	100 P	51	51.86	0.7
KKN	36.79	100 P	51	51.50	0.2
PKI	37.01	100 P	51	53.58	0.3
	0.6s	12.00nm			4.9mb
GUN	37.16	99 P	51	55.06	0.5
GBA	41.06	124 Pc	52	26.20	-0.4
	0.9s	3.90nm			4.1mb
GTA	41.98	75 eP	52	34.90	0.7
	1.4s	10.00nm			4.4mb
		pP	52	40.60	19kmX
LZH	46.28	77 eP	53	08.50	-0.5
	2.0s	29.00nm			4.9mb
HHC	49.60	68 eP	53	35.20	0.5
XAN	50.91	77 P	53	44.80	0.0
TIY	51.62	71 eP	53	52.90	2.7
CHG	52.18	99 eP	53	54.30	-0.2
LKO	53.94	247 P	54	04.34	-3.2X
	0.6s	3.50nm			4.5mb
TIC	55.67	244 P	54	18.00	-1.3
KIC	55.69	244 P	54	19.00	-1.3
LIC	55.98	244 P	54	21.10	-1.3
SSE	61.24	73 Pd	55	02.50	3.7X
	0.8s	10.00nm			5.0mb
INK	69.51	359 eP	55	50.00	-1.5
FBA	72.59	5 eP	56	09.80	-0.4
YKA	73.90	350 eP	56	16.90	-1.0
	0.6s	1.90nm			4.3mb
SES	84.86	344 eP	57	18.00	0.7
NEW	88.03	347 ePc	57	33.30	0.4
	0.9s	15.35nm			5.3mb
	S.D. = 1.1 on 46 of 58 obs.				



KMR	1.40	276	iPg+	15	45.30	1.9	SAL	4.54	241	P	16	30.00	1.9	SMF	8.51	266	Pn	17	22.20	-1.7
			iSg	16	04.20		STU	4.75	283	ePc	16	32.00	0.8				Sn	18	50.90	
SRO	1.42	94	ePn	15	42.80	-0.8		1.0s	100.00nm					SSF	8.65	269	Pn	17	25.00	-0.8
BUD	1.95	102	ePn	15	50.00	-1.3	HVAR	4.75	178	iPn	16	31.30	0.1	AVF	8.80	267	Pn	17	25.80	-2.2
UZD	2.10	129	ePn	15	53.20	-0.2				iSn	17	25.60		BGF	9.20	266	Pn	17	31.50	-1.9
ZAG	2.12	184	iPn	15	58.40	4.7X	VDL	4.81	255	iP	16	34.20	2.0				Sn	19	08.80	
			i	16	18.70		ARV	4.99	209	P	16	34.10	-0.3	MAF	9.47	265	Pn	17	35.50	-1.6
			iSn	16	23.00		LLS	5.01	260	iP	16	35.50	0.5	TCF	9.69	265	Pn	17	37.90	-2.3
			iSg	16	28.00		DEV	5.02	112	ePd	16	29.00	-5.9X				Sn	19	20.00	
KBA	2.12	247	iPnc	15	56.10	2.2	SFI	5.03	219	P	16	34.80	-0.2	LSF	10.15	266	Pn	17	44.70	-1.9
			iPg	15	58.90					eSn	17	30.00					Sn	19	31.60	
			iSg	16	27.60		PGD	5.12	219	P	16	36.70	0.2	CAF	10.22	258	Pn	17	43.40	-4.1X
KHC	2.12	306	iPn	15	56.00	2.2	TOD	5.18	292	ePg	16	37.54	0.4	LDF	10.91	280	Pn	17	56.20	-0.7
			ePg	16	00.00		SLE	5.20	271	iP	16	37.30	-0.2	FLN	11.14	280	Pn	17	59.20	-0.9
			Sn	16	22.00		CRE	5.23	216	P	16	37.90	-0.1	MFF	11.20	269	Pn	17	59.00	-1.8
			Sg	16	27.60		ZLA	5.30	268	iP	16	38.80	-0.1	LPF	11.57	277	Pn	18	04.40	-1.4
LJU	2.21	212	iPnc	15	56.50	1.5	FIR	5.40	222	eP	16	40.00	-0.3	HFS	12.32	354	eP	18	16.70	0.8
	0.4s	60.00nm					BDI	5.50	227	P	16	41.70	-0.1		0.5s	1.50nm			4.5mb	X
			eSg	16	30.50		FEL	5.51	272	ePg	16	41.20	-0.8	NRA0	13.11	350	Pn	18	25.30	-1.2
BHG	2.25	266	iPnc	15	57.60	1.9	KTD	5.57	288	ePg	16	43.53	0.9				Lg	22	37.20	
PRU	2.34	333	Pg	16	03.30	6.5X	TNS	5.59	297	ePd	16	43.60	0.5	YKA	63.17	337	eP	25	46.70	-0.9
			Sn	16	20.50					e	18	18.70			0.9s	0.60nm			3.8mb	
			Sg	16	25.30		GWF	5.81	284	P	16	46.17	0.1	S.D. = 1.2 on 108 of 118 obs.						
			i	16	32.50		BBS	5.89	269	P	16	46.74	-0.5	-----						
PRU	2.34	333	Pn	15	57.30	0.5	WLS	5.94	278	P	16	47.69	-0.3	%	MAY 02, 1991 10h 22m 25.22± 0.88s					
			i	15	59.30		MMK	5.94	255	iP	16	49.40	1.2	39.110 N ± 7.4km 27.596 E ± 13.3km						
			i	16	02.80		TNR	5.99	109	ePc	16	50.00	1.5	DEPTH = 10.0km (geophysicist)						
			Sn	16	19.80		CDF	6.00	278	P	16	47.80	-0.9	TURKEY (366)						
			e	16	24.30		ABH	6.04	292	ePg	16	49.53	0.3							
VOY	2.47	221	iPnc	15	59.90	1.1	ECH	6.07	276	P	16	49.06	-0.7	IZM	0.76	200	ePg	22	40.10	0.0
			iPg	16	06.10		MNS	6.08	206	P	16	49.10	-0.8				eSg	22	51.10	
			eSg	16	39.60		MOF	6.11	273	P	16	49.29	-1.0	DST	0.94	58	ePn	22	43.10	-0.1
PSZ	2.48	89	iPn	15	57.40	-1.5	DIX	6.29	256	iP	16	54.00	0.8	EDC	1.25	9	ePn	22	48.50	0.0
CEY	2.51	210	e(Pn)	16	00.00	0.7	RUP	6.30	290	ePg	16	52.75	-0.2	BNT	1.27	11	ePn	22	49.10	0.3
			eSg	16	40.50		PCP	6.30	240	P	16	53.49	0.4	KGT	1.36	351	iPn	22	49.90	-0.3
VBY	2.51	195	iPnc	16	00.00	0.7	BSF	6.34	273	Pn	16	52.40	-1.2	S.D. = 0.3 on 5 of 5 obs.						
			iPg	16	07.10					Pg	17	20.30		-----						
			iSn	16	33.90					Sn	18	01.20		*	MAY 02, 1991 10h 37m 00.51± 1.47s					
			iSb	16	40.40					Sg	18	44.00		30.663 S ± 7.3km 72.249 W ± 15.6km						
			iSg	16	43.50		LOMF	6.37	268	P	16	52.71	-1.3	DEPTH = 33.0km (normol)						
WET	2.53	300	iPnc	16	01.20	1.7	CKI	6.53	240	P	16	55.80	-0.4	OFF COAST OF CENTRAL CHILE (134)						
FVI	2.69	241	Pd	16	04.10	2.3	EMS	6.61	257	iP	16	56.70	-0.9	IHA	2.41	168	eP	37	43.00	4.5X
			eSn	16	35.00		HAU	6.62	274	Pn	16	56.80	-0.8				i(S)	38	15.30	
TRI	2.78	218	ePn	16	04.10	0.9				Pg	17	25.40		JACH	2.46	145	eP	37	37.00	-2.3
			i(Sn)	16	38.00					Sn	18	08.00					i	37	41.00	
			i(Sg)	16	48.50					Sg	18	51.70					iS	38	08.40	
RIY	2.87	207	iPnc	16	05.20	0.8	BNS	6.63	301	iPc	17	03.80	6.2X	RTRS	2.46	79	iPc	37	39.70	0.6
			iSn	16	34.30		CMP	6.64	110	ePc	17	31.00	33.2X				S	38	09.00	
			iSg	16	51.50		FIN	6.69	239	P	16	57.90	-0.7	ROCH	2.53	156	iPd	37	42.00	1.6
KSP	2.92	1	iPnd	16	04.60	-0.5	LSO	6.70	252	P	16	59.23	0.4	PEL	2.81	152	iPd	37	42.50	-1.6
			iPg	16	11.40		ROB	6.84	241	P	17	00.05	-0.6				iS	38	16.40	
			iSn	16	40.60		VITF	6.86	276	P	17	00.00	-0.8				iPd	37	42.50	-1.6
			iSg	16	49.50		WLF	6.87	288	iPc	17	00.80	-0.1	LCCH	2.86	169	eP	37	48.00	3.2X
SPC	2.96	63	iPnd	16	05.00	-0.9				ic	17	08.58					i	38	20.00	
	0.8s	0.24nm					LPG	6.94	253	Pn	17	02.00	-0.3	RTCB	3.07	106	ePc	37	48.40	0.5
			i(Pg)	16	14.50		LPL	6.95	253	Pn	17	02.40	0.1				eS	38	27.70	
			i(Sn)	16	40.20		RSL	6.95	255	P	17	01.63	-0.6	TACH	3.18	160	eP	37	50.50	1.1
KRA	3.25	48	Lg	16	50.00		SKO	7.02	146	ePn	17	04.00	1.0				iS	38	34.20	
			eP	16	07.00	-2.2	MLR	7.12	106	eP	17	12.00	7.4X	ZON	3.19	107	eP	37	49.70	0.2
			e	16	12.90		ENR	7.14	242	P	17	03.84	-1.1				i	38	32.70	
			i	16	22.50		RRL	7.17	249	P	17	07.53	2.1	PCH	3.30	154	eP	37	52.50	1.4
			i	16	46.10		BNI	7.18	250	P	17	06.30	0.8				iS	38	38.50	
BRG	3.30	334	iPn	16	11.00	0.5	PZZ	7.19	245	P	17	05.59	0.1	RTLL	3.31	103	ePc	37	51.10	-0.2
			i	16	21.00		STV	7.19	242	P	17	04.36	-1.2	LNV	3.36	168	eP	37	51.00	-0.9
FUR	3.32	276	ePn	16	12.50	1.7	MEM	7.19	296	Pc	17	05.80	0.3				i	37	57.00	
SQTA	3.46	260	iPnd	16	14.20	1.3				iS	18	40.00					iS	38	39.50	
			i(Pg)	16	26.70		ENN	7.29	297	ePn	17	06.50	-0.4	CFA	3.56	106	ePd	37	55.00	0.1
			iSg	17	12.50			0.8s	11.00nm			5.1mb	X				eS	38	39.80	
CTI	3.64	241	P	16	16.80	1.3	WTS	7.30	307	e(Sn)	18	36.00		RFA	5.19	143	eP	38	18.20	0.2
			eSn	17	00.50					eSn	18	30.00					(S)	39	16.20	
OGA	3.68	255	iPnd	16	18.30	2.2	SBF	7.35	240	Pn	17	07.30	-0.4	TCA	6.61	98	eP	38	34.20	-3.8X
HOF	3.71	312	iPnc	16	18.90	2.5	PGF	7.40	226	Pn	17	07.00	-1.5				(S)	39	51.60	
CLL	3.97	330	iPnd	16	21.70	1.7	VR1	7.49	102	eP	17	10.50	0.8	ANT	7.12	14	e(P)	39	12.00	27.0X
	0.5s	50.00nm					OHR	7.56	153	ePn	17	14.70	4.0X	LPB	14.57	16	eP	40	13.00	-13.6X
			iPg	16	34.80		DOU	7.94	290	Pc	17	15.00	-0.9	ZOBO	14.82	16	P	40	31.00	1.0
			iSn	17	06.60			0.7s	41.10nm			5.8mb	X	SIV	17.83	38	P	41	06.20	-1.6
			iSg	17	25.00					i	17	23.90		S.D. = 1.3 on 14 of 19 obs.						
			eSg	25	55.00					iS	18	40.20		-----						
MOX	4.05	314	ePn	16	22.70	1.5	FRF	7.99	240	Pn	17	15.00	-1.6	? MAY 02, 1991 11h 19m 12.59± 1.88s						
			ePg	16	34.00		VAY	8.01	143	ePn	17	18.60	1.7	47.868 N ± 16.3km 16.394 E ± 9.8km						
			eSn	17	11.00		LMR	8.20	240	Pn	17	17.20	-2.4	DEPTH = 10.0km (geophysicist)						
CEI	4.22	91	eP	17	08.00	44.5X	LRG	8.22	241	Pn	17	18.20	-1.6	AUSTRIA (546)						
BEO	4.28	135	ePn	16	25.00	0.6	LBF	8.35	268	Pn	17	19.30	-2.4	ML 2.2 (VKA).						
			e(Sn)	17	42.20					Sn	18	46.10								
OSS	4.31	255	iP	16	26.60	1.6	LOR	8.38	270	Pn	17	21.30	-0.8	VKA	0.40	353	iPg	19	20.80	0.0
BZS	4.38	120	ePc	16	14.00	-11.8X				Sn	18	49.20					iSg	19	26.90	



02d 11h

ZST 0.58 55 iPg 19 24.30 0.0  
iSg 19 31.70  
KMR 1.53 278 iPg- 19 40.00 0.0  
iSg 20 00.00  
PRU 2.45 331 ePn 19 53.20 0.0  
ePg 19 59.00  
eSn 20 15.00  
Sg 20 22.50  
i 20 27.50  
VBY 2.49 199 eP 20 03.90 10.1X  
iRg 20 05.60  
S.D. = 0.0 on 4 of 5 obs.

% MAY 02, 1991 11h 38m 02.07±0.85s  
39.141 N ± 6.8km 27.606 E ± 8.3km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 2.6 (ISK).

IZM 0.79 200 ePg 38 17.60 0.1  
eSg 38 30.60  
DST 0.92 59 ePn 38 19.60 -0.1  
EZM 1.20 305 ePn 38 24.00 -0.5  
BNT 1.24 11 ePn 38 25.60 0.5  
KCT 1.25 27 ePn 38 24.60 -0.7  
KGT 1.33 350 iPn 38 27.10 0.5  
S.D. = 0.6 on 6 of 6 obs.

MAY 02, 1991 11h 49m 06.16±0.47s  
21.035 S ± 6.5km 178.892 W ± 9.4km  
DEPTH = 613.1 ± 5.7 km  
4.9mb (9 obs.)  
FIJI ISLANDS REGION (181)

SVA 3.83 319 ePc 50 31.20 -0.6  
eS 51 29.30  
VUN 3.91 320 eP 50 32.30 -0.1  
OVA 3.99 326 eP 50 32.90 0.0  
KRO 4.04 336 ePc 50 32.80 -0.5  
SGE 4.56 318 iPc 50 38.60 1.5  
NDE 4.74 339 ePc 50 38.30 -0.1  
NDF 4.75 313 eP 50 28.10 -10.2X  
NOZ 17.72 188 eP 52 41.00 1.3  
MNG 20.10 193 eP 53 00.90 -0.8  
0.2s 9.00nm 5.0mb  
THZ 21.80 197 eP 53 16.80 -0.3  
KHZ 22.25 195 eP 53 20.50 -0.6  
LTZ 22.92 197 eP 53 25.90 -1.3  
TLC 26.06 200 eP 53 54.60 -0.3  
COO 27.90 244 iPc 54 12.00 1.1  
0.6s 16.00nm 4.8mb

PMG 34.66 284 eP 55 08.00 0.1  
STK 36.81 245 iPd 55 27.30 1.9  
0.5s 6.80nm 4.5mb

ASPA 43.59 257 iPd 56 19.80 0.1  
0.6s 45.10nm 5.1mb

WB2 43.69 263 iPc 56 19.80 -0.7  
0.2s 44.00nm 5.6mb

FORR 48.28 247 iPc 56 55.50 0.3  
MTN 48.34 271 eP 56 55.00 -0.9  
WARB 49.87 253 iPd 57 07.10 0.0

MBL 56.83 258 iPd 57 56.10 -0.1  
0.4s 30.00nm 4.9mb

NANU 60.45 255 iPd 58 30.90 10.6X  
0.4s 22.00nm

ADK 72.63 1 P 59 32.60 -1.4  
0.5s 26.45nm 5.0mb

TNP 82.50 44 P 00 28.40 1.2  
0.7s 2.44nm 3.9mb X

SLKM 84.52 14 P 00 36.00 -0.4  
PMR 85.73 14 P 00 41.50 -0.6  
0.7s 7.56nm 4.5mb

BALM 86.93 17 P 00 48.00 -0.1  
PNT 87.56 34 eP 00 52.00 0.9  
ALO 88.39 52 e(P) 00 56.00 0.5

ANMO 88.39 52 P 00 56.50 1.0  
FBA 88.94 13 P 00 56.00 -1.1  
0.9s 14.17nm 4.9mb

CHG 89.64 290 eP 01 09.30 8.0X  
NB2 139.41 352 PKP 07 17.40 -8.5X  
0.7s 1.30nm

HFS 139.93 350 ePKP 07 19.20 -7.6X  
0.3s 1.00nm  
EKA 145.60 4 PKP 07 39.00 2.3X  
0.8s 5.80nm  
KSP 147.95 342 iPKP 07 45.00 4.4X  
MLR 148.21 326 ePKP 07 48.00 6.6X

PRU 149.21 343 ePKP 07 44.50 2.0X  
KHC 150.25 343 ePKP 07 51.00 6.8X  
GRF 150.30 347 e(PKP) 07 54.00 9.8X  
S.D. = 0.9 on 30 of 41 obs.

? MAY 02, 1991 11h 52m 39.05±1.17s  
41.145 N ± 11.8km 28.449 E ± 10.5km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)  
MD 2.5 (ISK).

CTT 0.01 280 iPg 52 39.60 -1.4  
DMK 0.85 323 iPg 52 55.70 0.2  
iSg 53 08.20

YLV 0.91 129 ePg 52 56.60 0.1  
eSg 53 10.60  
KGT 1.11 232 ePn 53 00.10 0.2  
S.D. = 1.3 on 4 of 4 obs.

MAY 02, 1991 12h 20m 20.65±0.41s  
41.100 N ± 4.0km 22.428 E ± 3.4km  
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)  
ML 2.5 (SKO). MD 2.9 (THE).

GRG 0.14 188 iPg 20 24.30 0.3  
eSg 20 26.40

VAY 0.25 26 iPg 20 26.00 0.1  
iSg 20 29.40

KNT 0.36 80 iPg 20 28.20 0.1  
eSg 20 32.70

THE 0.62 139 ePg 20 32.40 -0.7  
eSg 20 40.70

SOH 0.75 111 ePg 20 35.10 -0.3  
eSg 20 45.40

FNA 0.86 249 ePg 20 37.10 -0.1  
eSg 20 49.20

SRS 0.88 88 ePg 20 37.30 -0.3  
eSg 20 49.10

LIT 1.00 177 ePg 20 39.70 0.1  
eSg 20 54.30

SKO 1.14 320 iPn 20 42.50 0.4  
iSn 20 58.30

OHR 1.23 271 ePn 20 42.80 -0.8  
OUR 1.41 122 ePb 20 46.20 -0.1

PAIG 1.51 140 ePb 20 48.40 0.7  
eSb 21 08.70

AGG 2.08 182 ePn 20 56.50 0.5  
S.D. = 0.5 on 13 of 13 obs.

% MAY 02, 1991 12h 27m 19.89±0.85s  
39.097 N ± 7.5km 27.631 E ± 8.6km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)  
MD 2.6 (ISK).

IZM 0.76 203 ePg 27 34.70 0.0  
iSg 27 45.20

DST 0.92 56 ePn 27 37.60 0.0  
EZM 1.25 306 ePn 27 43.00 0.0

KCT 1.28 26 ePn 27 43.60 0.0  
KGT 1.38 350 iPn 27 45.10 0.0  
S.D. = 0.0 on 5 of 5 obs.

\* MAY 02, 1991 14h 35m 23.93±1.17s  
45.359 N ± 9.5km 14.466 E ± 7.9km  
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)  
RIY 0.06 255 iPg 35 26.20 0.0  
iSg 35 29.10

CEY 0.38 356 e(Pg) 35 31.50 -0.3  
iSg 35 39.00

VBY 0.58 75 e(Pg) 35 35.50 -0.1  
e(Sg) 35 43.50

LJU 0.69 4 e(Pg) 35 38.00 0.5  
e(Sg) 35 48.10

VOY 0.78 329 e(Pg) 35 39.10 -0.1  
eSn 35 53.90  
S.D. = 0.4 on 5 of 5 obs.

% MAY 02, 1991 14h 42m 45.53±0.92s  
39.424 N ± 7.3km 27.962 E ± 8.7km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 2.8 (ISK).

DST 0.55 70 iPg 42 56.60 0.0  
eSg 43 04.60  
KCI 0.88 20 iPn 43 03.50 1.1  
EDC 0.92 355 ePn 43 02.00 -1.2  
BNT 0.93 358 iPn 43 02.50 -0.8  
KGT 1.14 334 ePn 43 08.00 1.1  
IZM 1.16 208 ePn 43 07.20 -0.1  
YLV 1.57 43 ePn 43 13.50 -0.1  
S.D. = 1.1 on 7 of 7 obs.

% MAY 02, 1991 14h 56m 24.19±0.80s  
40.791 N ± 7.0km 29.470 E ± 6.9km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)  
MD 2.6 (ISK).

GBZT 0.02 263 ePg 56 25.00 -1.1  
HRT 0.15 78 iPg 56 27.60 -0.2  
iSg 56 30.10

YLV 0.24 198 iPg 56 29.50 0.2  
IZI 0.45 180 iPg 56 33.50 0.1

CTT 0.86 295 iPg 56 40.50 -0.3  
eSg 56 54.90

DMK 1.65 309 ePn 56 54.20 0.9  
S.D. = 0.8 on 6 of 6 obs.

MAY 02, 1991 15h 02m 30.17±0.33s  
53.483 N ± 7.3km 165.547 W ± 4.1km  
DEPTH = 33.0km (normal)

4.9mb (36 obs.) 3.9Msz (4 obs.)  
FOX ISLANDS, ALEUTIAN ISLANDS (9)

SDN 3.49 56 eP 03 24.30 0.9  
ADK 6.96 261 eP 04 14.50 2.2

PDB 8.88 40 eP 04 40.00 0.9  
TTA 10.71 24 eP 05 04.30 0.0

KLU 13.21 45 eP 05 34.40 -3.5X  
TOA 13.41 42 eP 05 37.70 -2.8X

IMA 13.93 20 eP 05 49.10 1.8  
FBA 14.55 31 eP 05 57.50 2.3

INK 21.15 33 ePd 07 11.00 -3.1X  
0.5s 17.00nm 4.7mb

YKA 27.76 51 eP 08 17.60 0.3  
0.6s 6.20nm 4.5mb

NEW 30.52 80 eP 08 42.50 0.3  
0.7s 6.00nm 4.5mb

LBFM 31.44 95 eP 08 52.00 1.4  
SES 33.06 73 ePc 09 04.50 0.1

YAK 34.18 311 iPc 09 13.10 -0.9  
e 10 47.00

TNP 36.29 95 eP 09 33.50 1.0  
0.7s 3.33nm 4.4mb

BW06 37.94 83 eP 09 46.80 0.5  
0.7s 2.19nm 4.1mb

MAT 42.03 270 eP 10 20.00 0.1  
1.0s 21.00nm 4.8mb

GOL 42.32 84 eP 10 23.00 0.5  
ALO 44.82 90 eP 10 42.00 -0.8

0.9s 1.47nm 3.9mb X  
CN2 44.92 287 Pc 10 42.40 -0.9

0.6s 10.00nm 4.9mb  
FRB 46.71 37 ePc 10 57.20 0.1

0.4s 15.00nm 5.3mb  
FVM 52.22 75 eP 11 37.50 -2.4

SCH 53.05 46 eP 11 45.00 -0.9  
ELC 53.39 75 eP 11 46.70 -1.8

BTO 55.68 293 P 12 05.30 0.0  
SSE 55.97 278 P 12 06.80 -0.6

1.0s 12.00nm 4.9mb  
TIY 56.35 289 Pd 12 10.80 0.6  
KEV 56.73 355 iP 12 11.00 -1.4

0.6s 11.70nm 5.1mb  
CVL 58.98 67 eP 12 27.40 -1.2  
SOD 59.12 355 iP 12 28.00 -1.2

WHN 60.39 282 eP 12 38.50 0.2  
XAN 60.96 289 Pd 12 42.00 -0.3  
GTA 62.00 299 Pc 12 48.20 -1.1

0.8s 10.00nm 5.0mb  
LZH 62.29 294 eP 12 48.00 -3.3X  
1.0s 23.00nm 5.3mb

Z 18s 0.29um 4.5Msz  
PcP 13 29.00  
KAF 64.37 354 iP 13 03.10 -1.3  
0.5s 15.80nm 5.4mb

esP 13 03.60  
WMO 64.63 310 P 13 06.30 -0.2  
NB2 65.80 2 P 13 12.50 -1.1



NUR	0.7 s	7.60nm	4.9mb	SSE	23.09	347 Pc	32 25.50	1.4	63.044 N	149.927 W				
	66.07	354 iP	13 13.20		0.9 s	33.00nm		4.8mb	DEPTH = 95.1km					
	0.5 s	15.40nm	5.4mb		Z 20 s	0.46um		3.9Msz	CENTRAL ALASKA	( 1 )				
CD2	66.20	290 P	13 16.80		E 10 s	0.23um			<AEC>					
	0.8 s	30.00nm	5.4mb	KNA	24.18	176 eP	32 35.00	0.2						
HFS	66.73	0 eP	13 18.00		NJ2	24.59	343 Pd	32 39.50	0.9	HUR	0.15 116 eP	24 15.88	1.6	
	0.4 s	15.90nm	5.5mb	PCT	25.75	286 eP	32 51.20	1.6		S		24 25.70		
Z	19 s	0.4um	3.6Msz	IPM	26.06	263 ePd	32 53.90	1.4	TRF	0.44 338 eP	24 17.72	0.0		
		LR	36 33.00			0.9 s	35.20nm	4.9mb		eS		24 29.10		
HFS	66.73	0 ePc	13 23.00		LOE	26.10	292 eP	32 53.00	0.2	RND	0.61 53 iP	24 18.48	-0.4	
	0.2 s	1.30nm	4.7mb		SNQ	26.13	269 eP	32 54.20	1.1		eS		24 30.32	
UPP	66.98	358 iP	13 19.60		NST	27.16	288 eP	33 03.00	0.5	CUT	0.66 194 eP	24 19.01	-0.2	
GYA	67.92	285 P	13 28.20		KHT	28.45	285 eP	33 14.10	-0.1	MCK	0.82 32 eP	24 20.47	-0.4	
EKA	70.58	11 Pd	13 43.50		BDT	28.57	290 eP	33 14.50	-0.7	SKT	1.30 216 iP	24 25.73	-0.6	
	0.7 s	7.20nm	4.8mb		TIA	28.98	343 eP	33 18.50	-0.3		eS		24 43.40	
LSA	74.00	298 Pc	14 05.80		CHG	29.04	294 eP	33 19.00	-0.5	GHO	1.36 159 eP	24 27.06	0.0	
CLL	75.57	1 eP	14 12.00			0.1 s	188.89nm	6.7mb X			eS		24 47.02	
	1.2 s	12.00nm	4.8mb		WB2	29.21	166 eP	33 26.20	5.2X	PWA	1.40 179 iP	24 27.85	0.4	
GAR	76.04	318 eP	14 16.10			0.8 s	1.80nm	3.8mb X		SML	1.45 148 iP	24 27.78	-0.4	
MOX	76.22	2 eP	14 16.50				e	34 29.30		PLRM	1.50 165 eP	24 28.56	-0.2	
	1.2 s	11.00nm	4.7mb					36 22.30		NEA	1.58 13 eP	24 28.62	-1.2	
DOU	76.46	7 P	14 18.30		XAN	30.34	329 P	33 28.50	-2.4	SUA	1.63 194 eP	24 30.68	0.1	
PRU	76.90	360 eP	14 21.00		OIS	31.46	157 iPd	33 29.20	-1.7	WRH	1.65 29 iP	24 29.79	-0.9	
GRF	77.16	2 ePc	14 22.60		TIY	31.89	338 Pc	33 44.50	0.0	SCM	1.71 134 eP	24 30.94	-0.7	
	0.6 s	6.00nm	4.8mb		ASPA	32.71	168 eP	33 42.60	-0.1X	KNK	1.78 157 eP	24 31.89	-0.5	
SPC	77.59	356 eP	14 23.70			1.1 s	3.00nm	4.0mb		PMS	1.81 174 eP	24 32.44	-0.4	
KHC	77.76	1 P	14 26.00		BJI	32.83	345 eP	33 52.50	0.0	CCB	1.86 29 iP	24 32.37	-1.1	
GUN	78.18	301 Pc	14 28.54			1.0 s	26.00nm	5.0mb		HDA	1.90 43 iP	24 33.12	-0.9	
	0.5 s	39.00nm	5.7mb		SNY	33.30	355 Pc	33 57.40	0.8	THY	1.93 77 eP	24 35.25	0.9	
CDF	78.30	5 eP	14 28.30			1.2 s	58.00nm	5.3mb		NCG	1.95 213 eP	24 34.24	-0.5	
	0.7 s	4.40nm	4.6mb		WARB	34.50	181 eP	34 08.00	0.8	RDS	1.96 23 eP	24 33.88	-0.8	
KKN	78.58	301 Pc	14 30.50		LZH	34.59	326 eP	34 06.00	-2.1	DDM	1.97 66 eP	24 34.49	-0.5	
	0.8 s	28.00nm	5.3mb			1.8 s	19.00nm	4.7mb		TOA	1.98 117 eP	24 35.01	-0.1	
HAU	78.65	6 eP	14 30.00		Z	18 s	0.29um	4.1Msz		PAX	2.04 90 eP	24 35.68	-0.2	
	0.7 s	4.40nm	4.6mb		HHC	34.98	339 P	34 11.20	0.0	CRP	2.07 211 eP	24 36.49	0.1	
Z	20 s	0.05um	3.8Msz		CN2	35.16	358 eP	34 16.00	3.4X	SDG	2.08 102 eP	24 36.19	-0.2	
ZST	78.67	358 e(P)	14 30.20		MDJ	36.03	3 eP	34 21.50	1.6	SPU	2.12 209 eP	24 36.44	-0.5	
PKI	78.70	301 Pc	14 30.86			1.0 s	16.00nm	4.9mb		BGL	2.13 214 eP	24 37.41	0.3	
	0.7 s	27.00nm	5.4mb		GTA	39.20	326 eP	34 46.20	-0.5	CKL	2.17 212 eP	24 37.67	0.0	
GKN	78.74	302 Pc	14 31.24			1.0 s	10.00nm	4.7mb		GLM	2.25 29 eP	24 37.68	-1.0	
DMN	78.82	301 Pc	14 32.06		Z	18 s	0.40um	4.3Msz		TZL	2.32 114 eP	24 39.65	0.1	
	0.7 s	37.00nm	5.5mb		E	13 s	0.20um			KLU	2.44 128 eP	24 39.93	-1.3	
BSF	78.85	5 eP	14 31.00				pP	35 02.60	66kmX	SLKM	2.55 183 eP	24 42.47	-0.2	
	0.8 s	8.05nm	4.8mb		LSA	39.60	307 P	34 51.00	0.4	GLI	2.55 147 eP	24 41.05	-1.7	
SRO	79.03	357 eP	14 35.70		STK	42.54	161 eP	35 13.10	-1.0	DOT	2.71 74 eP	24 44.47	-0.5	
LOR	79.22	7 eP	14 33.00			0.9 s	1.50nm	3.8mb X		GLB	3.28 117 eP	24 51.31	-1.4	
	0.8 s	8.05nm	4.8mb		GUN	43.25	302 P	35 20.18	-0.2		36 obs. associated			
Z	20 s	0.08um	4.0Msz			0.5 s	46.00nm	5.5mb			MAY 02, 1991 16h 58m 26.15± 0.48s			
SSF	79.40	8 eP	14 34.10		PKI	43.54	301 Pc	35 22.14	-0.6		21.849 S ± 8.2km 175.194 E ± 9.2km			
	0.9 s	16.40nm	5.0mb			0.6 s	20.00nm	5.1mb			DEPTH = 33.0km (normal)			
LBF	79.51	7 eP	14 34.50		KKN	43.72	302 Pc	35 23.48	-0.5		4.6mb ( 8 obs.)			
	0.6 s	3.60nm	4.5mb		DMN	43.81	301 Pc	35 24.26	-0.6		SOUTH OF FIJI ISLANDS (171)			
AVF	79.66	8 eP	14 35.40			0.7 s	21.00nm	5.1mb			CENTROID, MOMENT TENSOR (HRV)			
	0.6 s	6.30nm	4.8mb		GKN	44.32	302 P	35 27.88	-1.0		Dato Used: GDSN			
SMF	79.84	7 eP	14 36.40			0.6 s	32.00nm	5.3mb			L.P.B.: 14S, 20C			
	0.7 s	8.80nm	4.9mb		HYB	47.88	286 eP	36 03.00	6.1X		Centroid Location:			
LSF	80.03	9 eP	14 37.70		WMQ	49.01	323 P	36 05.80	0.5		Origin Time	16:58:39.4 3.9		
TCF	80.06	9 eP	14 37.60		Z	20 s	0.30um	4.3Msz			Lat 21.22S 0.34 Lon 175.15E 0.14			
KHT	81.70	283 eP	14 47.20		NDI	50.81	300 iPc	36 18.00	-1.2		Dep 15.0 FIX Half-duration 1.5			
PGF	84.23	4 eP	15 00.00			0.5 s	28.17nm	5.6mb			Moment Tensor: Scale 10**16 Nm			
SNG	86.57	277 eP	15 06.50		YAK	53.43	2 eP	36 37.90	-0.2		Mrr=-2.15 0.43 Mtt=-2.02 0.56			
WB2	89.52	235 eP	15 25.10		GAR	58.93	311 iP	37 17.60	-0.6		Mff= 4.18 0.77 Mrt= 0.11 1.61			
	0.8 s	1.60nm	4.4mb		MAIO	66.86	306 iPc	38 10.60	0.0		Mrf= 1.24 1.64 Mtf=-4.71 0.38			
HYB	90.61	301 iPc	15 31.00		KEV	85.50	340 eP	39 56.00	1.4		Principal Axes:			
	1.0 s	25.00nm	5.5mb				e	40 06.00			T Val= 6.83 Plg= 7 Azm=242			
BUL	144.98	336 iPKPc	22 05.20		INK	85.65	22 eP	40 16.00	20.6X		N -2.09 73 354			
	1.0 s	57.50nm			SOD	86.15	338 iP	39 58.20	0.3		P -4.75 15 150			
WIN	149.07	355 ePKP	22 17.00				i	40 08.80			Best Double Couple:Mo=5.8*10**16			
	0.5 s	10.56nm			KAF	87.48	332 iP	40 05.00	0.6		NP1:Strike=287 Dip=74 Slip=-174			
BFT	149.89	331 ePKP	22 19.00			0.7 s	4.30nm	4.7mb			NP2: 195 84 -16			
	1.0 s	15.00nm			NUR	88.65	331 iP	40 09.80	-0.2					
SLR	150.42	334 iPKPc	22 20.00			0.7 s	20.00nm	5.4mb		NDF	4.59 28 eP	59 23.10	-12.0X	
	0.8 s	14.93nm					i	40 21.10			eS	00 19.20		
	S.D. = 0.9 on 69 of 79 obs.				HFS	93.90	333 eP	40 33.70	-0.7	SVA	4.82 40 iP	59 36.80	-1.4	
	MAY 02, 1991 15h 27m 24.21± 1.69s					1.2 s	14.60nm	5.3mb			eS	00 33.80		
	8.526 N ± 7.0km 126.963 E ± 9.6km				Z	16 s	0.08um	4.3MszX		VUN	4.91 39 iPc	59 37.20	-2.3	
	DEPTH = 75.8 ± 15.6 km						e	40 37.20			iS	00 34.70		
	5.0mb ( 18 obs.)						e	40 44.00		SGE	4.96 32 eP	59 40.00	-0.4	
	MINDANAO, PHILIPPINE ISLANDS (259)						LR	23 54.00			eS	00 41.00		
DAV	1.98 224 ePc-	27 55.00	-1.3		NB2	94.62	334 P	40 37.30	-0.4	OYA	5.34 40 eP	59 44.00	-1.7	
OCP	8.37 317 eP	29 15.00	-10.1X			0.8 s	3.20nm	4.8mb		KRO	6.00 42 eP	59 39.90	-15.2X	
TSM	9.81 245 ePc	29 47.50	2.7		YKA	95.06	24 eP	40 41.70	2.0	DZM	8.12 267 iPc	00 22.90	-2.0	
BAG	10.01 322 eP	29 51.80	4.1X			0.8 s	1.70nm	4.5mb			iS	01 48.90		
OIZ	19.61 304 P	31 47.80	-1.5			S.D. = 1.1 on 44 of 51 obs.				MNG	18.71 179 P	02 44.00	-0.2	
											0.6 s	13.00nm	4.3mb	
											WEL	19.38 181 P	02 52.00	-0.1



02d 17h

VSG 19.45 308 eP 02 53.00 -0.1  
 KHZ 20.56 183 P 03 04.60 0.1  
 1.0s 80.00nm 5.0mb  
 LTZ 21.02 186 P 03 09.40 0.1  
 BRS 21.10 250 iPc 03 10.00 -0.3  
 i 03 32.50  
 COO 22.61 243 eP 03 25.00 -0.4  
 RMO 24.54 254 iPd 03 43.10 -1.0  
 0.8s 97.00nm 5.4mb  
 STK 31.49 244 eP 04 45.00 -2.2  
 1.0s 2.90nm 4.1mb  
 ASPA 38.03 259 iPd 06 06.70 23.4X  
 0.4s 19.40nm  
 WB2 38.13 265 eP 06 03.20 19.0X  
 0.4s 1.80nm  
 iP 06 49.40 220kmX  
 i 07 13.60  
 e 07 57.60  
 FORR 42.88 248 iPd 06 22.00 -1.2  
 SPA 68.28 180 iPc 09 25.40 -0.5  
 1.0s 17.00nm 5.1mb  
 WHN 78.26 310 eP 10 25.00 0.5  
 TIY 83.58 315 Pd 10 53.60 1.1  
 FRI 84.75 47 eP 11 08.00 9.7X  
 CHG 84.80 292 eP 11 00.50 1.5  
 CMB 84.85 46 eP 11 01.30 2.4  
 HHC 85.87 317 eP 11 05.60 1.6  
 CD2 86.27 305 P 11 08.60 2.5  
 TNP 87.00 47 eP 11 11.90 2.1  
 1.0s 4.00nm 4.6mb  
 FBA 91.04 15 eP 11 27.70 -0.3  
 1.0s 0.90nm 4.1mb  
 NEW 92.27 38 eP 11 30.00 -4.0X  
 0.9s 1.54nm 4.4mb  
 GTA 93.00 311 eP 11 39.00 1.3  
 pP 11 47.00 25kmX  
 MLR 145.55 321 ePKP 18 04.00 1.2  
 SPC 146.25 330 ePKP 18 06.30 2.4X  
 KSP 146.68 335 ePKP 18 06.80 2.6X  
 e 18 15.00  
 CLL 147.48 339 ePKP 18 08.00 2.5X  
 BRG 147.53 338 e(PKP) 18 09.60 4.0X  
 2.0s 22.00nm  
 e 18 19.80  
 PRU 148.04 336 ePKP 18 19.00 12.6X  
 ZST 148.40 332 ePKP 18 17.60 10.5X  
 KHC 149.10 336 iPKP 18 14.00 5.8X  
 S.D. = 1.5 on 26 of 39 obs.  
 \* MAY 02, 1991 17h 29m 04.70±0.88s  
 48.493 N ±16.8km 154.657 E ±16.2km  
 DEPTH = 33.0km (normol)  
 4.4mb ( 9 obs.) 4.0Msz ( 2 obs.)  
 KURIL ISLANDS (221)  
 KUSJ 8.79 236 P 31 12.40 0.0  
 S 32 46.40  
 ASAJ 9.39 247 eP 31 26.30 5.6X  
 HOOJ 10.05 237 eP 31 30.50 0.7  
 eS 33 18.60  
 MRRJ 11.30 243 eP 31 47.90 1.1  
 MAT 16.98 231 (P) 33 01.00 -0.1  
 0.8s 5.22nm 3.7mb  
 FBA 34.15 40 eP 35 48.20 -0.1  
 0.9s 0.90nm 3.7mb  
 INK 39.62 34 eP 36 34.00 -0.3  
 YKA 48.90 38 eP 37 47.80 -1.0  
 0.8s 1.20nm 4.0mb  
 CHG 53.54 257 ePc 38 24.60 0.2  
 1.0s 20.00nm 5.1mb  
 GUN 55.89 275 P 38 40.74 -1.2  
 KKN 56.37 275 P 38 44.34 -0.9  
 0.2s 6.00nm 5.3mb  
 PKI 56.43 275 P 38 44.78 -1.0  
 DMN 56.60 275 P 38 46.24 -0.7  
 GKN 56.65 276 P 38 46.32 -0.9  
 HYB 68.00 272 eP 40 02.00 -0.8  
 HAU 80.03 339 eP 41 13.20 1.2  
 0.6s 1.80nm 4.2mb  
 Z 20s 0.05um 3.9Msz  
 LOR 81.30 340 eP 41 19.40 0.7  
 Z 20s 0.10um 4.2Msz  
 SSF 81.57 341 eP 41 19.80 -0.3  
 AVF 81.86 341 eP 41 21.40 -0.2  
 0.7s 3.30nm 4.5mb  
 SMF 81.89 340 eP 41 21.70 -0.1  
 LPL 82.26 338 eP 41 24.50 0.5

1.0s 5.00nm 4.5mb  
 LPG 82.28 338 eP 41 24.70 0.5  
 MAF 82.58 341 eP 41 26.00 0.6  
 1.0s 10.00nm 4.8mb  
 SBF 83.63 337 eP 41 31.70 0.8  
 FRF 84.11 337 eP 41 34.70 1.4  
 S.D. = 0.8 on 24 of 25 obs.  
 MAY 02, 1991 17h 41m 31.75±0.68s  
 5.105 S ± 5.1km 151.408 E ± 6.9km  
 DEPTH = 154.4 ± 6.6 km  
 4.9mb ( 14 obs.)  
 NEW BRITAIN REGION (192)  
 RAB 1.18 40 iPd 41 58.50 -0.3  
 0.4s 3728.81nm  
 iS 42 18.00  
 LAT 4.65 250 iPd 42 41.21 -0.1  
 OIS 19.17 216 iPd 45 45.70 -0.2  
 GUA 19.61 341 eP 45 51.20 0.7  
 0.7s 224.66nm 5.7mb  
 PJG 19.67 341 eP 45 51.60 0.5  
 RMO 21.42 187 iPd 46 08.00 -0.5  
 0.8s 83.00nm 5.2mb  
 BRS 22.20 177 iPc 46 17.00 0.8  
 DZM 22.28 141 iPd 46 17.40 0.4  
 OLP 22.43 197 iPd 46 19.50 1.1  
 ASPA 25.00 221 iPd 46 42.80 -0.2  
 0.6s 29.80nm 5.0mb  
 e 47 11.70  
 eS 51 08.20  
 STK 28.18 198 iPc 47 10.90 -0.9  
 0.5s 4.40nm 4.4mb  
 e 48 00.40  
 OZH 43.71 315 Pd 49 24.50 1.3  
 0.7s 31.00nm 5.0mb  
 CN2 54.02 337 eP 50 42.40 0.3  
 XAN 55.89 317 Pd 50 55.90 0.0  
 TIY 55.92 323 eP 50 59.50 3.4X  
 CHG 56.87 296 eP 51 03.40 0.4  
 CD2 57.89 311 iPd 51 10.40 0.4  
 HHC 58.49 325 P 51 14.80 0.7  
 ADK 62.95 22 P 51 40.00 -3.8X  
 GTA 64.94 318 P 51 57.60 0.4  
 0.8s 10.00nm 4.8mb  
 YAK 68.98 349 eP 52 21.20 -0.7  
 GUN 71.09 302 Pc 52 35.78 -0.1  
 0.8s 21.90nm 5.0mb  
 PKI 71.40 301 P 52 37.20 -0.5  
 0.9s 8.00nm 4.5mb  
 KKN 71.57 301 P 52 38.04 -0.5  
 0.9s 20.00nm 4.9mb  
 DMN 71.67 301 P 52 39.18 0.0  
 GKN 72.18 301 P 52 41.70 -0.3  
 0.9s 32.00nm 5.0mb  
 GBA 75.71 285 Pc 53 01.10 -1.3  
 1.1s 6.10nm 4.2mb  
 TTA 78.56 22 P 53 17.00 -0.4  
 PMR 80.54 25 P 53 25.00 -2.8  
 IMA 81.21 20 P 53 31.00 -0.4  
 0.6s 1.85nm 4.0mb  
 KLU 81.85 26 P 53 34.50 -0.2  
 FBA 82.68 22 P 53 38.00 -0.9  
 0.4s 12.93nm 5.1mb  
 INK 89.23 21 eP 54 11.00 0.1  
 CMB 91.70 52 eP 54 24.70 1.7  
 FRI 92.14 53 eP 54 26.50 1.5  
 YKA 96.34 28 eP 54 43.40 -0.3  
 0.7s 1.50nm 4.5mb  
 SES 98.72 40 eP 54 55.00 0.2  
 BW06 100.08 48 Pd diff 55 00.00 -1.4X  
 HFS 116.44 338 ePKP 59 57.20 -1.2X  
 0.4s 0.50nm  
 ZOBO 135.50 119 PKP 00 35.00 -1.8X  
 S.D. = 0.9 on 35 of 40 obs.  
 ? MAY 02, 1991 18h 39m 50.48±7.00s  
 51.318 N ±46.5km 16.137 E ±46.7km  
 DEPTH = 10.0km (geophysicist)  
 POLAND (548)  
 KSP 0.49 168 iP 39 59.60 -0.7  
 0.3s 29.00nm  
 iS 40 08.40  
 e 40 14.20  
 BRG 1.45 253 iPg 40 15.00 -1.7  
 iSg 40 34.50

PRU 1.67 218 Pn 40 20.00 0.0  
 CLL 1.97 271 i(Pg) 40 24.00 -0.2  
 iSg 40 50.90  
 KHC 2.74 218 Pn 40 39.50 4.2X  
 Pg 40 46.20  
 eSg 41 07.50  
 Sn 41 18.00  
 MOX 2.94 259 ePg 40 43.00 5.0X  
 iSg 41 22.00  
 S.D. = 1.4 on 4 of 6 obs.  
 MAY 02, 1991 18h 55m 38.11±0.78s  
 44.336 N ± 4.7km 7.306 E ± 8.2km  
 DEPTH = 10.0km (geophysicist)  
 NORTHERN ITALY (545)  
 ML 2.2 (LDG). MD 1.5 (STR).  
 DOI 0.17 345 Pd 55 42.20 0.1  
 eSg 55 45.00  
 TOUF 0.33 187 Pg 55 45.34 0.4  
 AUTN 0.35 166 Pg 55 45.19 -0.2  
 Sg 55 50.02  
 SAOF 0.39 153 Pg 55 46.14 0.0  
 Sg 55 51.91  
 AURF 0.45 178 Pg 55 47.05 -0.2  
 Sg 55 53.88  
 MVIF 0.45 194 Pg 55 48.31 0.9  
 SBF 0.48 169 Pg 55 47.80 -0.1  
 Sg 55 54.20  
 FRF 0.91 212 Pg 55 55.40 -0.1  
 Sg 56 06.10  
 LRG 1.12 218 Pg 55 58.60 -0.4  
 Sg 56 12.90  
 LMR 1.16 210 Pg 55 59.40 -0.3  
 Sg 56 13.60  
 S.D. = 0.5 on 10 of 10 obs.  
 \* MAY 02, 1991 19h 34m 51.63±1.10s  
 28.448 S ± 7.9km 68.967 W ±13.2km  
 DEPTH = 194.0 ± 23.4 km  
 LA RIOJA PROVINCE, ARGENTINA (138)  
 RTRS 1.77 194 iPc 35 27.00 -0.6  
 (S) 35 50.80  
 RTLL 2.90 172 iPd 35 40.20 -0.1  
 S 36 13.50  
 RTCB 3.03 177 ePc 35 42.20 0.3  
 S 36 14.80  
 ZON 3.10 175 eP 35 42.70 0.1  
 CFA 3.21 169 iPd 35 44.10 0.1  
 eS 36 21.00  
 MDZ 4.42 179 eP 36 01.30 2.1  
 TCA 4.77 128 ePd 36 02.80 -0.8  
 (S) 36 53.40  
 ANT 4.90 344 eP 36 05.50 0.3  
 PEL 4.91 197 iPd 36 06.00 0.6  
 PCH 5.32 194 iPd 36 11.50 0.7  
 TACH 5.46 198 iP 36 12.10 -0.4  
 LCCH 5.49 203 iP 36 12.00 -0.8  
 LNV 5.88 200 eP 36 16.60 -1.3  
 RFA 6.32 176 ePc 36 23.70 0.0  
 S.D. = 0.9 on 14 of 14 obs.  
 ? MAY 02, 1991 19h 40m 46.66±3.91s  
 43.015 N ±18.6km 0.848 W ±31.9km  
 DEPTH = 10.0km (geophysicist)  
 PYRENEES (378)  
 MD 1.0 (STR).  
 ISSF 0.04 71 Pg 40 48.95 0.1  
 Sg 40 50.25  
 ATE 0.13 56 Pg 40 49.03 -0.8  
 Sg 40 50.29  
 MADF 0.13 9 Pg 40 49.53 -0.3  
 Sg 40 51.26  
 LHE 0.20 121 Pg 40 50.25 -0.8  
 S.D. = 0.7 on 4 of 4 obs.  
 MAY 02, 1991 19h 42m 34.73±0.29s  
 46.483 N ± 8.8km 150.044 E ± 5.1km  
 DEPTH = 23.5km ( 3 depth phases)  
 5.0mb ( 23 obs.) 4.1Msz ( 3 obs.)  
 KURIL ISLANDS (221)  
 KUSJ 5.09 230 P 43 49.50 -1.9  
 eS 44 47.20  
 ASAJ 5.73 248 P 44 06.50 6.0X



HOQJ	6 34	232 eP	44 09.30	0.2	SES	60.87	46 ePc	52 47 00	-0.4			eSn	22 35.00	
MAT	13 30	226 (P)	45 40.00	-4.6X	LRM	63.03	51 eP	53 02 30	0.1	DUI	119.46	316 Pd	22 16.40	2.5X
	0.9s	12 60nm		4 9mb	HYB	64.88	269 eP	53 13.80	-0.6	-		eSn	22 37.70	
MDJ	14.45	270 eP	46 04.50	4.9X	FRB	65.97	18 eP	53 19.00	-1.7	SDI	119.89	316 Pd	22 22.90	7.1X
Z	12s	0.90um			DUG	66.49	56 P	53 25.00	0.4			eSn	22 48.90	
E	12s	0.98um			CLC	66.55	62 eP	53 25.00	0.1	KIC	144.85	274 PKP	26 39.52	-0.6
		pP	46 08.00		BW06	66.59	52 P	53 25.00	-0.3	LPB	144.91	128 PKP	26 40.50	-0.1
		sP	46 12.00			0.8s	11.61nm		5.1mb	ZOBO	145.04	128 PKP	26 42.20	1.1
		S	48 48.00		DAU	67.23	55 P	53 30 00	0.5		1.2s	16.89nm		
CN2	17.54	270 eP	46 42.00	2.9	MWC	67.31	64 eP	53 30.00	0.1	Z	20s	0.07um		4.5Msz
	1.0s	20.00nm		4.2mb	GSC	67.37	62 eP	53 30.00	-0.2			LR	36 16.00	
Z	16s	1.80um		3.9Msz	WB2	67.62	196 iPd	53 30.50	-1.1	LIC	145.14	274 PKP	26 40.40	-0.2
N	14s	0.70um				0.9s	11.40nm		5.0mb	LKO	145.55	279 PKP	26 39.50	-1.8
E	14s	0.50um					iP	53 37.60	23km	CCH	145.90	131 PKP	26 46.70	4.5X
		pP	46 47.60		MSU	67.98	57 P	53 35.20	1.0	SIV	150.47	136 PKP	26 55.60	6.6X
		eS	49 54.00		GBA	68.30	267 Pd	53 34.90	-1.1	S.D.	= 1.1	on 24 of 37 obs.		
YAK	19.43	330 eP	47 01.10	-1.0		0.7s	6.20nm		4.9mb	? MAY 02, 1991	20h 32m 48.29± 2.65s			
		epP	47 21.00	100kmX	GLA	70.09	63 eP	53 48.00	1.1		44.536 N ±17.6km	6.863 E ±27.6km		
		ePP	47 26.00		GOL	71.00	52 P	53 53.00	0.4		DEPTH = 10.0km	(geophysicist)		
		ePPP	47 35.00		ASPA	71.33	196 iPc	53 54.60	0.2		FRANCE		(538)	
		eS	50 45.00			0.9s	16.00nm		5.1mb		ML 1.9 (GEN).			
		ePcP	50 58.00		ANMO	73.76	56 P	54 09.40	0.5					
		eSS	51 17.00			0.9s	13.66nm		5.0mb	PZZ	0.17	100 P	32 52.32	0.0
		eSSS	51 45.00		ALO	73.76	56 eP	54 09.00	0.0			S	32 54.78	
		eScS	58 37.00			0.9s	4.20nm		4.5mb	RRL	0.39	352 P	32 56.31	0.0
SNY	19.51	266 eP	47 02.80	-0.3	PDCR	145.28	16 ePKP	02 11.40	-0.9			S	33 01.36	
Z	14s	1.10um					e	02 19.80		STV	0.44	131 P	32 57.44	0.1
E	14s	0.80um			NVL	148.51	205 ePKP	02 20.00	4.1X			S	33 03.05	
		S	50 46.00		PPD	150.08	43 ePKP	02 21.20	1.4	ENR	0.51	128 P	32 58.40	-0.2
DL2	22.13	260 eP	47 30.00	-0.1		S.D.	= 0.9	on 53 of 58 obs.				S	33 04.62	
		S	51 31.00								S.D.	= 0.2	on 4 of 4 obs.	
BJI	25.35	268 eP	48 04.00	2.7	* MAY 02, 1991	20h 07m 03.73± 0.48s					* MAY 02, 1991	21h 52m 28.27± 1.94s		
	1.3s	25.00nm		4.7mb		5.092 S ± 7.0km	139.955 E ±10.4km					38.096 N ±26.3km	68.545 E ± 9.7km	
TIA	26.58	259 eP												



02d 22h

KZN 3.41 14 ePb 13 43.00 2.4X  
 PAIG 3.75 38 ePn 13 44.10 -1.2  
 FNA 3.82 8 ePn 13 48.20 1.8  
 eSn 14 30.90  
 OHR 4.11 1 e(Pn) 13 51.50 1.0  
 SOH 4.35 28 ePn 13 53.50 -0.3  
 KNT 4.50 22 ePn 13 56.20 0.3  
 eSn 14 44.40  
 SRS 4.69 28 ePn 13 58.00 -0.7  
 S.D. = 1.5 on 11 of 13 obs.

MAY 02, 1991 22h 27m 45.55±0.60s  
 47.910 N ± 6.7km 16.317 E ± 5.2km  
 DEPTH = 10.0km (geophysicist)

AUSTRIA (546)  
 ML 3.1 (KBA), ML 2.7 (VKA), Felt  
 (IV) at Ebenfurth.

VKA 0.36 0 iPg 27 53.10 0.2  
 iSg 27 58.50  
 ZST 0.60 61 iPg 27 56.70 -1.0  
 iSg 28 05.80  
 SRO 1.35 93 iPn 28 09.00 -1.3  
 i 28 11.40  
 i(Sn) 28 23.70  
 i 28 25.20  
 i 28 27.00  
 KMR 1.48 277 iPg- 28 12.60 0.4  
 iSg 28 31.80  
 BUD 1.88 102 eP 28 20.60 2.7  
 PTJ 2.03 187 eP 28 18.90 -1.3  
 UZD 2.03 130 ePn 28 24.00 3.9X  
 KBA 2.18 249 iPnc 28 22.20 -0.3  
 iPg 28 25.00  
 i 28 51.70  
 iSg 28 53.80  
 KHC 2.19 305 ePn 28 22.60 0.0  
 Pg 28 24.10  
 Sn 28 46.30  
 Sg 28 54.30  
 PRU 2.39 331 Pn 28 25.70 0.4  
 Pg 28 30.00  
 e 28 44.00  
 Sg 28 55.20  
 i 28 58.80  
 WET 2.60 300 iPnc 28 30.00 1.7  
 FVI 2.75 243 P 28 30.50 0.1  
 eSn 29 10.00  
 SPC 2.91 62 eP 28 34.00 1.1  
 e(Sn) 29 06.40  
 KSP 2.94 360 ePn 28 30.80 -2.3  
 iPg 28 37.30  
 iSn 29 07.40  
 iSg 29 16.50  
 BRG 3.35 333 iPg 28 48.60 9.7X  
 i 28 50.60  
 iSn 29 17.60  
 iSg 29 28.50  
 CTI 3.70 241 P 28 34.00 -10.1X  
 eSn 29 36.00  
 HOF 3.78 311 ePn 28 55.00 9.9X  
 GRF 3.81 300 e(Pn) 28 44.90 -0.7  
 e(Pg) 28 56.80  
 e(Sn) 29 29.70  
 eSg 29 44.40  
 CLL 4.03 329 iPn 28 48.70 0.2  
 iSn 29 34.90  
 iSg 29 51.20  
 MOX 4.12 313 ePn 28 50.00 0.1  
 eSn 29 38.00  
 eSg 29 53.00  
 S.D. = 1.3 on 16 of 20 obs.

? MAY 02, 1991 22h 30m 03.34±4.35s  
 32.409 S ± 17.4km 179.216 W ± 71.5km  
 DEPTH = 434.6 ± 20.0 km  
 4.1mb (2 obs.)

SOUTH OF KERMADEC ISLANDS (179)

HBZ 5.56 201 eP 31 32.70 -0.7  
 PUZ 6.02 199 eP 31 37.90 -0.3  
 S 32 52.60  
 NOZ 6.59 199 P 31 44.10 -0.1  
 WLZ 6.89 217 eP 31 48.30 0.8  
 NGZ 7.96 210 eP 31 58.90 -0.5  
 PGZ 8.96 203 P 32 12.20 1.7  
 MNG 9.24 206 P 32 13.80 0.1

KIW 9.67 208 eP 32 17.70 -0.8  
 CAW 9.82 206 eP 32 19.90 -0.3  
 MRW 10.06 207 eP 32 21.70 -1.2  
 eS 34 12.40  
 WEL 10.08 207 eP 32 25.00 1.8  
 S 34 15.00  
 TCW 10.22 209 eP 32 23.70 -1.0  
 eS 34 14.30  
 THZ 11.25 212 eP 32 36.00 -0.3  
 KHZ 11.53 208 eP 32 39.90 0.7  
 LTZ 12.35 211 eP 32 48.40 0.2  
 DZM 16.37 305 iPc 33 30.90 0.5  
 ASPA 42.01 270 eP 37 16.40 0.1  
 0.4s 5.20nm 4.3mb  
 WB2 43.17 275 iPd 37 24.70 -0.7  
 0.4s 2.00nm 3.9mb  
 KAF 146.06 339 iPKP 49 00.00 7.9X  
 0.4s 1.10nm  
 esP 49 00.30  
 NUR 147.81 338 ePKP 48 51.10 -3.9X  
 NB2 150.56 350 PKP 49 12.00 12.8X  
 0.8s 1.40nm  
 HFS 150.98 347 ePKP 49 12.70 12.9X  
 0.5s 0.50nm  
 S.D. = 0.9 on 18 of 22 obs.

MAY 02, 1991 22h 48m 06.77±0.79s  
 18.562 S ± 9.0km 69.713 W ± 8.4km  
 DEPTH = 128.4 ± 9.5 km  
 4.7mb (3 obs.)

NORTHERN CHILE (123)

LPB 2.54 38 iPc 48 47.30 -1.1  
 1.0s 690.00nm  
 ARE 2.69 321 iPc 48 50.00 -0.2  
 iS 49 20.00  
 ZOBO 2.74 34 iPc 48 51.50 0.4  
 S 49 34.00  
 CCH 3.60 72 iPc 49 03.00 0.8  
 ANT 5.16 187 iPd 49 22.00 -1.0  
 NNA 9.49 313 eP 50 22.00 0.3  
 0.5s 7.75nm 4.7mb  
 ITB1 15.48 116 e(P) 51 39.10 -0.3  
 ITB 15.68 116 e(P) 51 43.00 1.1  
 ITB7 15.83 117 e(P) 51 46.00 2.2  
 PPD 17.60 104 eP 52 05.00 -0.6  
 e 52 07.10  
 VAO 21.71 106 eP 52 48.10 -0.6  
 BMA 24.26 104 eP 53 13.50 0.1  
 SOB1 29.44 76 eP 54 00.30 -0.3  
 PDCR 30.05 83 (P) 54 05.00 -0.9  
 KIC 68.65 75 P 58 58.10 -0.4  
 LKO 69.13 72 Pc 58 59.72 -1.8  
 0.5s 11.00nm 4.9mb  
 YKA 88.18 341 eP 00 46.10 2.2  
 0.6s 2.70nm 4.5mb  
 S.D. = 1.2 on 17 of 17 obs.

\* MAY 02, 1991 23h 19m 47.40±1.21s  
 47.930 N ± 13.5km 16.352 E ± 7.3km  
 DEPTH = 10.0km (geophysicist)

AUSTRIA (546)

Felt (III) at Ebenfurth.

VKA 0.34 356 iPg 19 54.50 0.2  
 e(Sg) 20 00.00  
 ZST 0.57 62 iPg 19 58.00 -0.9  
 iSg 20 07.40  
 e 27 28.60  
 SRO 1.33 94 iP 20 12.60 0.8  
 KMR 1.50 276 ePg 20 13.50 -0.8  
 eSg 20 33.00  
 KHC 2.20 304 Pg 20 25.40 0.8  
 e 20 49.00  
 eSg 20 55.00  
 WET 2.61 299 iPd 20 35.30 5.0X  
 GRF 3.82 299 e(Pg) 20 52.10 4.5X  
 eSg 21 46.80  
 S.D. = 1.2 on 5 of 7 obs.

MAY 03, 1991 00h 59m 50.35±0.51s  
 40.525 N ± 6.5km 19.583 E ± 4.0km  
 DEPTH = 15.1 ± 5.9 km

ALBANIA (391)

ML 4.0 (TIR), MD 3.2 (THE).

VLO 0.09 230 iPg 59 54.50 0.9  
 iSg 59 59.30  
 BERA 0.33 57 iPg 59 55.90 -1.5  
 iSg 00 00.30  
 TPE 0.40 125 iPg 59 56.70 -1.9  
 iSg 00 00.20  
 LSK 0.86 115 ePg 00 04.00 -2.5  
 iSg 00 21.00  
 OHR 1.09 57 iPg 00 09.10 -1.4  
 iSg 00 25.10  
 Lg 00 30.10  
 LACI 1.11 5 iPg 00 12.00 1.3  
 iSg 00 27.50  
 IGT 1.15 150 ePb 00 13.30 2.0  
 eSb 00 30.50  
 LCI 1.26 262 Pd 00 13.10 -0.1  
 eSn 00 30.00  
 PHP 1.33 29 ePg 00 12.40 -1.9  
 iSg 00 29.90  
 FNA 1.39 79 ePbc 00 14.10 -1.0  
 eSb 00 34.40  
 SDA 1.49 358 e(Pn) 00 18.30 1.8  
 KKS 1.67 22 ePn 00 21.50 2.4X  
 iSn 00 46.00  
 BRT 1.84 282 P 00 24.30 2.6X  
 eSn 00 46.00  
 SKO 2.01 43 eP 00 48.00 23.9X  
 GRG 2.18 78 ePnc 00 27.80 1.2  
 eSn 00 54.90  
 LIT 2.26 100 ePn 00 29.00 1.2  
 eSn 00 58.40  
 VAY 2.40 70 ePn 00 30.40 0.8  
 ORI 2.44 260 P 00 30.70 0.5  
 eSn 01 01.70  
 THE 2.58 87 ePn 00 32.50 0.3  
 KNT 2.59 75 ePnd 00 32.70 0.3  
 eSn 01 04.00  
 AGG 2.60 124 ePn 00 35.90 3.4X  
 TDS 2.64 252 P 00 33.90 0.9  
 eSn 01 07.80  
 SOH 2.88 83 ePnc 00 37.30 0.7  
 eSn 01 11.80  
 KKB 2.96 62 eP 00 39.00 1.4  
 SRS 3.10 78 ePn 00 39.90 0.3  
 PAIG 3.19 99 ePn 00 41.00 0.1  
 eSn 01 19.70  
 MMB 3.31 70 eP 00 44.00 1.4  
 VTS 3.41 52 iPc 00 45.00 0.8  
 DUI 4.04 288 P 00 51.00 -1.9  
 RZN 4.05 72 P 00 54.00 0.8  
 ALN 4.93 84 ePn 01 04.00 -1.5  
 ARV 5.77 303 P 01 16.80 -0.6  
 CRE 6.47 301 P 01 26.20 -1.2  
 CTI 7.99 316 P 01 46.00 -2.8X  
 S.D. = 1.4 on 29 of 34 obs.

MAY 03, 1991 02h 14m 14.43±0.09s  
 28.080 N ± 2.4km 139.585 E ± 2.5km  
 DEPTH = 433.1km (geophysicist)  
 6.0mb (114 obs.)

BONIN ISLANDS REGION (212)

mb 6.0 (BRK), Mo=6.0\*10\*\*18 Nm

(PPT). Felt on Chichi-shimo.

Depth from broadband

displacement seismograms.

FAULT PLANE SOLUTION: P-Waves

NP1: Strike=355 Dip=80 Slip=-90

NP2: 175 10 -90

Principal Axes:

T P1g=35 Azm= 85

P 55 265

Comment: The focal mechanism is

poorly controlled and

corresponds to normal

faulting. The preferred fault

plane is not determined.

RADIATED ENERGY

No. of sto: 10 Focal mech. M

Energy 5.2±1.6\*10\*\*13 Nm

MOMENT TENSOR SOLUTION

Dep 445 No. of sto: 15

Moment Tensor; Scale 10\*\*19 Nm

Mrr=-0.43 Mtt= 0.12

Mff= 0.31 Mrt= 0.30

Mrf=-0.98 Mtr=-0.23

Principal axes:

T Val= 1.12 P1g=33 Azm= 66



N	0.00	6	160	BAG	21.04	241	ePd-	18	27.00	-0.4	ADK	40.25	42	iPc	21	12.90	0.0			
P	-1.12	56	259		1.5s	988.89nm				6.1mb		0.7s	1465.12nm				6.5mb			
Best Double Couple:Mo=1.1*10**19							eS	20	30.00					e	26	10.40				
NP1:Strike=132 Dip=13 Slip=-119				OCP	21.78	236	iP	18	28.00	-6.1X				eS	26	47.20				
NP2: 341 79 -84				WHN	22.13	282	iPd	18	40.00	2.7	MTN	41.50	192	eP	21	22.50	-0.8			
CENTROID, MOMENT TENSOR (HRV)					8.0s	*****nm				6.6mb X		0.4s	325.00nm				6.1mb			
Data Used: GDSN							iS	22	10.00		SVO	41.87	149	eP	21	26.00	-0.3			
L.P.B.: 23S, 66C M.W.: 13S, 17C				BJI	22.70	308	ePd	18	43.31	0.9	HNR	42.17	149	eP	21	30.00	1.2			
Centroid Location:							i	20	49.39		LSA	42.19	284	iPd	21	31.80	2.4			
Origin Time 02:14:23.2 0.1							ePcP	22	17.59					PP	23	18.00				
Lat 28.14N 0.01 Lon 139.65E 0.01							eScS	28	57.50					S	27	17.00				
Dep 453.4 0.6 Half-duration 4.6				HKC	23.68	262	P	18	50.00	-1.5				sS	29	51.00				
Moment Tensor; Scale 10**19 Nm				GZH	24.16	264	Pd	18	57.60	1.7	SNG	42.29	248	iPd	21	37.90	8.2X			
Mrr=-0.70 0.01 Mtt= 0.46 0.01					0.8s	680.00nm				6.2mb		1.0s	1698.00nm				6.4mb			
Mff= 0.24 0.01 Mrt= 0.42 0.01							sP	21	05.00		KGM	43.25	240	ePd	21	39.90	2.6			
Mrf=-1.02 0.01 Mtf=-0.45 0.01				MCO	24.28	262	eP	18	59.10	2.2		1.5s	1415.10nm				6.1mb			
Principal Axes:				TIY	24.67	300	iPd	19	01.50	1.1	IPM	43.46	245	ePd	21	42.10	3.1X			
T Val= 1.33 Plg=27 Azm= 50					8.0s	4900.00nm				6.1mb X		0.8s	435.10nm				5.9mb			
N 0.03 15 147							sP	21	10.50					e	23	21.00				
P -1.36 58 263							S	22	49.50		KLM	43.86	242	ePc	21	45.50	3.3X			
Best Double Couple:Mo=1.3*10**19							ScP	25	20.00			0.8s	750.70nm				6.1mb			
NP1:Strike=107 Dip=22 Slip=-133				DAV	24.74	215	eP	19	01.00	-0.1	TRT	44.09	220	ePc	21	36.50	-7.4X			
NP2: 332 74 -75					1.3s	1507.69nm				6.3mb	WMQ	44.13	305	iPd	21	45.53	1.4			
				HHC	26.26	306	iPd	19	15.70	0.9		3.0s	*****nm				6.7mb X			
WKYJ	7.01	332	iP+	16	05.30	5.4X								ePP	23	41.75				
			S	17	34.00									ed	23	42.51				
IIDJ	7.51	350	iP+	16	08.70	3.2X	XAN	26.87	290	P	19	21.00	0.9	e	25	43.14				
			S	17	45.40			9.0s	8800.00nm					iS	27	42.61				
TKSJ	7.56	322	iP+	16	11.40	5.5X								esS	30	16.55				
CHJJ	7.96	357	iP+	16	12.00	1.6	BTO	27.29	305	iPd	19	25.00	1.2	iScS	30	50.90				
			S	17	44.50			8.0s	7000.00nm					e	31	31.05				
TSRJ	8.04	339	iP+	16	15.80	4.5X								eP	21	48.80	-0.7			
			eS	17	51.90									0.6s	146.00nm		5.6mb			
KAKJ	8.12	3	iPd	16	12.90	0.8	QIZ	28.65	258	iPd	19	38.00	2.2	46.26	244	ePd	22	05.60	4.8X	
			S	17	47.20			5.0s	5900.00nm					0.9s	160.70nm		5.4mb			
MAJO	8.52	352	ePc	16	18.44	1.8								47.07	240	ePd	22	07.70	0.6	
			iS	17	56.29									47.09	283	Pd	22	09.02	1.5	
MAT	8.52	352	P	16	18.00	1.3								47.57	283	Pd	22	12.12	0.9	
SHK	8.73	319	iP	16	24.60	5.5X								47.63	283	Pd	22	12.56	1.0	
	1.1s	1974.68nm			6.3mb		GYA	29.26	275	iPd	19	42.40	1.2	47.82	283	Pd	22	14.20	1.1	
SEO	14.20	315	P	17	23.00	4.0X		3.0s	6600.00nm					48.13	284	P	22	16.92	1.6	
SAP	15.01	5	iP	17	29.50	2.0								48.32	172	iPd-	22	15.90	-0.5	
			iS	20	07.00									1.2s	443.75nm		5.7mb			
PJC	15.24	160	eP	17	32.10	2.1										iS	28	36.00		
GUA	15.30	160	eP	17	32.20	1.6										e	24	05.50		
	0.9s	2326.05nm			6.7mb											e	26	52.70		
			eS	20	18.20		KKM	31.17	230	ePd	19	59.20	1.4	ANM	50.14	27	eP	22	30.00	0.3
SSE	16.28	285	iPc	17	41.50	0.9		1.2s	651.00nm							e	24	05.50		
	1.0s	210.00nm			5.6mb		LZH	31.18	294	iPd	19	59.79	1.9			e	26	52.70		
			sP	19	28.00			4.0s	5690.00nm					SDN	50.41	40	P	22	30.40	-1.4
			S	20	32.00									ASPA	51.74	187	iPd	22	40.60	-1.3
			ScP	24	58.00										0.6s	303.10nm		5.8mb		
ANP	16.41	264	iPd	17	45.60	3.6X								Z	23s	1.10um		4.8mszx		
			iS	20	32.00											iPcP	23	47.60		
MDJ	18.34	337	iPd	18	04.20	3.3X										iScP	27	00.60		
	8.0s	9500.00nm			6.3mb X											iS	29	24.80		
			sP	19	58.00											iScS	31	45.00		
			S	21	06.00															
NJ2	18.37	287	iPd	18	03.20	1.9	CD2	31.23	284	iPd	19	59.60	1.4	MBL	52.54	203	iPd	22	47.10	-0.7
	9.0s	*****nm			6.5mb X										0.4s	95.00nm		5.5mb		
			sP	20	00.00											e	23	11.00		
			iS	21	10.00		TSM	31.34	225	ePc	20	01.80	2.7			e	23	52.00		
			ScP	25	01.50			1.1s	816.00nm					KSH	53.10	300	iPd	22	53.00	1.2
DL2	18.43	310	iPd	18	03.00	1.2	KMI	33.00	274	iPd	20	15.50	2.0			ScS	31	54.00		
	3.0s	*****nm			6.9mb X			4.0s	7400.00nm				SVW	53.70	33	ePc	22	55.60	-0.2	
			S	21	08.00		MDG	33.67	169	ePc	20	21.10	2.3			e	27	08.00		
SNY	18.94	321	iPd	18	09.50	2.8	MNDI	34.26	173	e(P)	20	15.00	-9.0X			eS	30	01.60		
	1.0s	1400.00nm			6.4mb		RAB	34.30	157	iPc	20	25.00	0.9	TTA	53.77	31	P	22	56.50	0.2
			sP	20	06.00										54.26	35	P	22	59.30	-0.5
			iS	21	19.00		GTA	34.69	299	iPd	20	28.60	1.2	PDB	54.29	287	iPd	23	00.30	-0.1
			ScP	25	03.40			9.0s	8390.00nm					NDI	0.5s	232.39nm		5.8mb		
			ScS	28	48.00											iS	30	01.00		
QZH	19.04	265	iPd	18	09.50	1.6										iPc	23	00.10	-1.9	
	0.7s	1150.00nm			6.5mb											i	23	59.90		
			iS	21	16.00											i	27	15.60		
YSS	19.06	7	P	18	10.00	2.1														
CN2	19.37	328	iPd	18	13.40	2.4														
	4.0s	*****nm			6.8mb X		SMY	35.47	36	P	20	35.80	2.3	RSO	55.03	34	eP	23	04.00	-1.5
			sP	20	12.00		LOE	36.36	261	iPd	20	42.50	1.1	IMA	55.26	27	P	23	06.90	0.0
			eS	21	26.00		BKB2	36.41	221	iPc	20	59.00	17.2X	BRW	55.28	21	P	23	07.40	0.7
			ScS	28	49.00			0.8s	52.56nm					WARB	55.37	194	iPc	23	08.00	0.1
TIA	20.64	299	Pd	18	25.30	2.0	PCT	37.80	257	eP	20	55.30	2.1		0.5s	67.00nm		5.2mb</		



KEY

DHR  
MHZ  
NEW

DHR	77.64	293	iPd	25	27.00	0.8
MHZ	77.66	159	P	25	25.30	-0.6
NEW	77.73	42	iPc	25	26.40	0.0
	0.9s	276.32nm				5.9mb
		epP	27	02.40	430kmX	
		eS	34	39.30		
LBFM	77.91	50	P	25	28.10	0.4
LTCM	78.26	51	P	25	29.80	0.5
MIN	78.55	50	iPc	25	30.80	-0.3
		epP	27	13.20	463kmX	
JNW	78.62	350	iPc	25	32.73	2.1
JNE	78.63	350	iPd	25	35.01	4.3X
JMI	78.75	350	eP	25	36.13	4.8X
ORV	78.98	51	iPc	25	33.50	0.3
		epP	27	15.20	459kmX	
NSS	79.11	340	eP	25	33.26	0.0
BRK	79.22	53	iPc	25	35.20	0.8
		e	27	12.00		
		epP	27	16.20	455kmX	
		esP	28	02.00		
		ePP	28	44.00		
		iS	34	52.00		
		eSP	35	40.00		
		esSP	38	56.00		
		eSS	40	18.00		
		eSSS	42	56.80		
		ePKKP	43	52.00		
		eLQ	46	20.00		
BKS	79.24	53	iPc	25	35.40	0.9
	0.8s	322.00nm				6.0mb
		epP	27	17.60	461kmX	
		iS	34	55.00		
		iPS	36	55.00		
		iSs	38	00.00		
		iSP	38	55.00		
		iSS	40	09.00		
		iSSS	42	58.00		
		iLQ	46	13.00		
PCC	79.30	53	ePc	25	35.30	0.5
GCC	79.79	54	ePc	25	37.80	0.4
MHC	79.90	53	ePc	25	38.80	0.6
		epP	27	20.50	457kmX	
ARN	79.97	53	P	25	39.00	0.6
		pP	27	21.00	459kmX	
SES	80.09	38	ePc	25	39.00	0.3
	1.0s	525.00nm				6.2mb
SAO	80.30	54	eP	25	40.80	0.7
UPP	80.32	334	iPd	25	39.00	-0.6
	0.5s	900.00nm				6.7mb
		iPP	27	24.20	475kmX	
		iPP	28	51.50		
		iS	35	02.40		
CMB	80.46	52	ePc	25	41.06	0.1
		epPc	27	19.06	437kmX	
		ePP	28	49.81		
		eHPP	28	50.37		
		iS	35	07.46		
		e	35	09.77		
		e	35	13.75		
		ePS	35	56.95		
PRS	80.56	54	ePc	25	42.30	0.8
		epP	27	19.00	430kmX	
RGS	80.66	339	iP	25	41.00	-0.4
LLA	80.73	54	ePc	25	43.20	0.8
		epP	27	20.30	432kmX	
PRI	81.15	54	ePc	25	45.70	1.0
RYD	81.20	293	iPd	25	47.00	2.0
KVT	81.37	312	iP	25	46.90	1.3
FRI	81.43	53	ePc	25	46.30	0.4
		epP	27	21.80	423kmX	
		eS	35	17.50		
PHAM	81.49	54	P	25	47.50	1.2
KVN	81.54	50	P	25	47.60	0.8
		pP	27	30.30	460kmX	
HFS	81.60	336	eP	25	44.90	-1.4
	0.5s	563.00nm				6.5mb
Z	16s	5.91um				6.0MsZx
		ePcP	25	48.00		
		e	25	52.90		
		LR	00	18.00		
LRM	81.71					



BCH	0.8s	70.00nm		5.4mb		ISR	85.07	319	eP	27	51.70	SRE	87.26	320	ePc	26	17.50	2.9X
FFC	82.02	54 P	25	50.00	0.8					26	07.00	KGT	87.31	315	iP	26	14.70	-0.2
	82.11	31 iPc	25	49.30	0.3	BW06	85.11	44 iPc		26	04.50	ABHA	87.37	289	ePd	26	12.00	-3.9X
	0.7s	65.00nm		5.4mb			0.9s	90.40nm			5.5mb	DIM	87.46	317	iPd	26	16.00	0.4
PMO	82.18	112 iP	25	52.70	2.8X			e (pP)	27	45.30	446kmX	BZS	87.55	322	ePc	26	15.50	-0.4
	0.8s	45.00nm		5.2mb				e	39	49.20		ELL	87.71	311	iP	26	15.00	-2.0
TPT	82.40	111 iP	25	53.80	2.8X	KMY	85.19	338 iPc	26	05.67	1.4	BUD	87.75	324	eP	26	16.30	-0.5
	0.8s	30.00nm		5.0mb		COP	85.20	333 iPc	26	04.70	0.3	ALN	87.83	316	iPd	26	16.60	-0.7
SYP	82.41	55 eP	25	52.00	0.8		0.8s	835.82nm			6.6mb	SRO	87.90	325	iPd	26	17.30	-0.2
		e	27	27.00				i	26	17.00		PLD	87.93	318	iPd	26	17.00	-0.8
GAZ	82.50	308 iP	25	52.60	1.2			i	26	32.00		BRG	87.93	329	iPd	26	16.80	-0.8
TVO	82.55	115 eP	25	55.00	3.1X			i	27	51.00			1.6s	540.00nm			6.1mb	
	0.8s	40.00nm		5.2mb		COP	85.20	333 iPc	26	07.20	2.8X			iP	28	04.00	475kmX	
TNP	82.62	51 iP	25	52.80	0.5		1.2s	*****nm			7.7mb X			iS	36	16.00		
	0.8s	95.59nm		5.6mb				i	26	10.00				iS	39	28.00		
		iP	27	31.60	439kmX			i	26	23.00				e	40	24.00		
		ePP	29	09.90				i	29	35.00				ePKKP	44	01.50		
		eS	35	10.40		MLR	85.21	320 iPc	26	06.50	1.7	PGB	87.98	318	iPd	26	18.00	-0.1
SBC	82.65	55 ePc	25	53.10	1.0	BHL	85.24	306 Pd	26	04.00	-1.2	RDO	87.99	316	iPd	26	17.00	-1.1
		epPc	27	28.45	421kmX			PP	28	42.00		HOL	88.05	302	eP	26	20.00	1.4
		eS	35	32.76				S	35	44.00		CLL	88.05	330	iPd	26	17.40	-0.8
RUV	82.70	111 iP	25	55.20	2.6	PLM	85.24	55 iP+	26	05.00	-0.3		1.7s	650.00nm			6.2mb	
	0.8s	30.00nm		5.1mb				e	27	40.00				iP	28	06.00	482kmX	
KAS	82.70	313 iPd	25	53.70	1.3	CPE	85.31	55 eP	26	07.50	2.1			eS	36	18.00		
ISA	82.94	53 iPc	25	53.12	-0.6	DAU	85.36	46 P	26	06.00	0.1			P'P'	52	11.00		
		iPc	27	30.79	432kmX	TBI	85.38	119 eP	26	10.00	4.2X	RZN	88.17	317	iPd	26	19.00	-0.2
		eHPP	29	10.32			1.0s	75.00nm			5.4mb	ZST	88.25	326	iP	26	19.40	0.2
		ePP	29	14.18		EYL	85.44	314 iP	26	04.80	-1.3	PRU	88.27	328	iPd	26	18.90	-0.3
		eS	35	29.15		GPA	85.50	314 iP	26	04.50	-1.7		1.7s	664.80nm			6.2mb	
IAS	83.31	320 eP	25	55.00	-0.2	HRT	85.61	314 iP	26	06.50	-0.3			e	27	09.00		
FRO	83.33	340 eP	25	56.08	1.1	KRA	85.63	326 iPd	26	06.60	0.0			pP	28	09.00	490kmX	
PTI	83.33	45 P	25	57.60	2.0		0.8s	283.00nm			6.1mb			PP	29	59.00		
		pP	27	40.60	459kmX			i	26	09.10				PPP	32	20.00		
HYA	83.38	339 iPc	25	55.83	0.6			i	26	24.50				S	36	20.00		
KONO	83.40	337 ePd	25	53.81	-1.6	MDB	85.70	321 iPc	26	08.00	0.9			sS	39	32.00		
		e	27	37.10		BAR	85.72	55 eP	26	08.00	0.5	EZN	88.28	315	iP	26	18.60	-0.9
		ePP	29	15.66		BUC	85.75	319 iPd	26	07.00	-0.3	CIN	88.44	312 eP	26	21.00	0.8	
FOO	83.40	340 eP	25	56.72	1.4	GBZT	85.77	314 eP	26	06.60	-0.9	BADA	88.47	302 ePc	26	20.00	-0.6	
CLC	83.49	53 iP+	25	57.00	0.6	MSU	85.79	48 P	26	09.30	1.3	IZM	88.51	313 iP	26	19.50	-1.2	
		e	27	36.00		CEI	85.82	323 eP	26	10.00	2.5	VTB	88.52	319 iPd	26	21.00	0.2	
IMW	83.65	43 P	25	53.90	-3.5X	FRB	85.82	12 eP	26	08.00	0.7	UZD	88.56	324 iPd	26	20.20	-0.4	
PPE	83.83	320 eP	26	00.50	2.6		0.5s	121.00nm			5.9mb	YER	88.57	312 iP	26	19.70	-1.3	
SBB	83.88	54 iP+	25	59.00	0.5	FAM	85.84	308 eP	26	07.50	-0.4	VKA	88.60	326 eP	26	20.50	-0.3	
		e	27	36.00		CMP	85.85	320 iPd	26	08.00	0.1		1.7s	951.00nm			6.3mb	
PAS	83.90	55 ePc	25	59.07	0.6	ISK	85.86	315 iP	26	07.20	-0.7	Z	13s	3.40um			6.0MszX	
		ePcP	26	04.00		MTUR	85.86	320 eP	26	10.50	2.5			i	26	21.40		
		iPcP	27	34.75	421kmX	ITU	85.87	315 iPd	26	07.00	-0.9			id	28	08.30		
		ePPP	29	22.00		JARJ	85.87	304 Pd	26	07.35	-0.9			i	29	31.40		
		epPP	30	23.00		CSTJ	85.90	303 Pd	26	07.58	-0.8			LR	11	43.00		
		iS	35	39.11		YLV	85.94	314 eP	26	07.20	-1.2	PRK	88.65	314 eP	26	20.00	-1.2	
		e	35	48.21		MDSJ	85.95	304 Pd	26	07.86	-0.8	BEQ	88.69	322 iP	26	21.00	-0.3	
		eSP	36	42.00		SPC	86.03	325 eP	26	08.80	0.0			i	29	57.00		
		eScS	37	44.00				i	29	11.60				iPd	26	22.00	0.0	
		eSS	40	47.00				i	29	38.70		MMB	88.82	318	iPd	26	22.00	0.0
		eSSS	44	11.00		TNR	86.06	321 ePd	26	10.00	1.2	KKB	89.04	318 iP	26	23.00	0.0	
		eLg	47	08.00		IKP	86.15	55 eP	26	12.00	2.4	MOX	89.14	330 iPd-	26	23.00	-0.3	
SUE	83.91	340 iP	25	58.59	0.7	SALJ	86.18	304 Pd	26	08.72	-1.0		1.7s	496.00nm			6.1mb	
MWC	83.95	54 eP	25	59.00	0.1	CTT	86.21	315 iP	26	08.40	-1.2	Z	16s	4.30um			6.0MszX	
		e	27	38.00		COZ	86.22	320 ePd	26	12.50	2.7	N	16s	5.90um				
CFR	84.10	319 eP	25	59.00	-0.2	DMK	86.24	316 iP	26	09.20	-0.6			epP	28	12.00	483kmX	
PTT	84.12	321 eP	25	51.50	-7.8X	MASJ	86.30	304 Pd	26	09.21	-1.1			eSKS	36	19.00		
BBTK	84.15	312 iPd	26	00.00	0.2	ALT	86.30	313 iP	26	08.80	-1.4			eS	36	30.00		
ODD1	84.20	338 iP	25	59.92	0.4	CSS	86.33	308 eP	26	09.50	-0.8			P'P'	52	36.00		
ASK	84.22	339 iPc	26	00.09	0.6	MKRJ	86.44	304 Pd	26	09.90	-1.1	SRS	89.19	317 iPd	26	22.00	-0.9	
BER	84.25	339 iPc	26	00.21	0.6	RAC	86.47	327 eP	26	11.00	0.4	HOF	89.26	330 iPd	26	23.50	-0.4	
GSC	84.30	53 ePc	26	01.09	0.5	JMB	86.59	317 iPd	26	11.00	-0.4		1.2s	192.00nm			5.8mb	
		epPc	27	37.76	425kmX	DRA	86.65	320 eP	26	16.00	4.4X	KHC	89.32	328 iPd	26	24.00	-0.2	
		iSKS	35	40.14		DEV	86.68	321 iPd	26	13.00	1.3		1.1s	121.00nm			5.7mb	
		eS	35	44.28		LISJ	86.72	304 Pd	26	11.27	-0.9	Z	16s	6.80um			6.2MszX	
EGD	84.37	339 iPc	26	00.84	0.6	KCT	86.76	314 iP	26	11.70	-0.6	N	14s	2.25um				
DUG	84.47	47 eP	26	01.90	0.5	GLA	86.86	54 iP+	26	14.00	1.0	E	14s	6.20um				
		epP	27	46.70	467kmX			e	27	53.00				e	26	27.90		
		e	35	39.20		BCK	86.86	311 iP	26	11.50	-1.4			e	30	03.50		
TLB	84.51	318 eP	26	03.50	2.3	KSP	86.87	328 iPd	26	12.20	-0.4			S	35	22.00		
VRI	84.54	320 eP	26	01.50	0.1		1.3s	821.00nm			6.3mb							
RVR	84.55	54 eP	26	01.00	-0.7			i	28	00.00		OUR	89.43	316 iPd	26	24.40	-0.3	
		e	27	43.00				i	29	44.00		GOL	89.47	44 ePc	26	25.80	0.5	
BRD	84.56	319 eP	26	06.00	4.5X	PVL	86.90	318 iPd	26	14.00	1.2		0.8s	25.00nm			5.1mb	
PEC	84.76	54 iPc	26	02.90	0.1	REY	86.94	352 iP	26	13.50	0.9			e (pP)	28	06.00	437kmX	
		epP	27	41.80	436kmX	DST	86.95	314 eP	26	12.50	-0.8			ePP	29	58.00		
		eS	35	52.10		BNT	86.98	315 iP	26	12.60	-0.7	SOH	89.51	317 iPd	26	24.20	-1.0	
CVO	84.88	320 ePd	26	05.50	2.4	PSZ	87.01	324 iP	26	13.80	0.4	GLD	89.53	44 ePc	26	26.40	0.9	
OSG	84.92	340 eP	26	02.56	-0.4	EDC	87.02	315 iP	26	13.00	-0.5		1.0s	104.00nm			5.7mb	
KMSA	84.92	290 eP	26	05.00	1.2	DHJN	87.04	288 iPd	26	16.00	1.7			e (pP)	28	07.00	439kmX	
PSN	84.93	317 iPd	26	04.00	0.7	PPCY	87.06	308 eP	26	12.50	-1.3			ePP	30	02.90		
AKU	84.97	351 iPd	26	05.10	2.0	KHL	87.09	312 eP	26	12.40	-1.6	KNT	89.58	318 iPd	26	24.90	-0.6	
	1.5s	333.33nm		5.9mb		BRN	87.18	330 ePd	26	14.00	0.0	WIT	89.60	334 eP	26	25.50	0.2	



03d 02h

WET	89.64	328	iPd	26	25.40	-0.2	PLH	90.92	332	ePd	26	30.60	-0.7	BSF	93.35	330	P	26	41.94	-0.9
	1.5s	312.00nm			6.0mb		BRY	90.99	321	iPd	26	31.06	-1.0	DMU	93.36	341	eP	26	42.40	-0.2
Z	16s	6.00um			6.1MsZ		LJU	91.00	325	ePd	26	31.00	-0.9		0.9s	106.00nm			5.9mb	
VAY	89.67	318	iPd	26	25.40	-0.5			iS	37	45.00		VITF	93.41	331	P	26	42.38	-0.5	
	0.8s	247.00nm			6.1mb		VBY	91.00	324	iPd	26	31.70	-0.2	HAU	93.41	331	iPd	26	42.00	-1.0
KMR	89.81	327	iP-	26	26.90	0.5	EKA	91.01	340	P	26	31.00	-0.8		0.6s	77.50nm			6.0mb	
				30	10.60			1.2s	189.90nm			5.9mb	Z	20s	5.75um			6.0MsZ		
PAIG	89.86	316	iPd	26	25.70	-1.0	ATH	91.02	315	eP	26	31.20	-0.9	RSM	93.54	325	P	26	44.00	0.4
THE	89.86	317	iPd	26	25.90	-0.8	SDA	91.02	320	eP	26	32.20	0.2	ARV	93.59	324	P	26	43.60	-0.3
				35	09.60		FUR	91.08	328	iPd	26	32.50	0.2	LOMF	93.70	330	P	26	43.57	-0.9
				39	46.00		LACI	91.15	319	eP	26	25.70	-6.9X	SFI	93.85	325	Pd	26	45.40	0.4
SKO	89.93	319	iPd	26	27.00	-0.1	ULC	91.20	320	iPd	26	33.05	0.1	PGD	93.95	325	Pd	26	46.10	0.4
	1.3s	321.00nm			6.1mb		BDV	91.23	320	iPd	26	32.61	-0.4	CRE	94.01	325	P	26	45.40	-0.5
E	24s	6.48um					AGG	91.24	316	iPd	26	31.50	-1.7	ORI	94.04	320	P	26	46.40	0.4
				26	30.20		CEY	91.27	325	iPd	26	32.40	-0.8	DUI	94.06	322	P	26	46.70	0.5
				28	17.00		HCY	91.31	321	iPd	26	32.71	-0.7	AQU	94.15	323	P	26	46.90	0.3
				30	10.00		VOY	91.33	326	iPd	26	32.20	-1.4	MMK	94.17	329	ePd	26	46.30	-0.5
				32	30.00		NPS	91.41	312	eP	26	32.50	-1.5	ETA	94.20	340	eP	26	46.20	-0.3
				36	14.00		ABH	91.47	331	eP	26	33.60	-0.4	MME	94.23	326	Pd	26	47.40	0.3
				36	40.00		ENN	91.47	333	iPd	26	33.40	-0.5	FIR	94.25	325	eP	26	46.50	-0.4
				39	33.00			0.9s	217.00nm			6.1mb			iPP	29	53.00			
EDU	89.94	340	ePd	26	26.40	-0.4			ePP	30	17.50				i(SKS)	36	37.00			
	0.5s	335.00nm			6.5mb		FVI	91.49	326	Pd	26	32.20	-1.9	BDI	94.37	326	P	26	46.30	-1.3
GRG	90.00	318	iPd	26	26.40	-1.0	MEM	91.56	332	iPd	26	33.87	-0.5	TDS	94.38	320	Pd	26	47.50	-0.1
GRF	90.01	329	ePd	26	27.20	-0.1	RIY	91.56	325	eP	26	33.30	-1.2	SCH	94.38	15	eP	26	48.00	0.6
	1.4s	505.00nm			6.2mb		LSK	91.57	318	eP	26	34.20	-0.6	SDI	94.38	322	Pd	26	46.40	-1.2
Z	20s	4.00um			5.8MsZ		STU	91.59	330	iPd-	26	33.90	-0.6	AZI	94.39	323	P	26	47.80	0.3
				26	30.00			1.1s	506.33nm			6.4mb	DIX	94.40	329	ePd	26	47.20	-0.7	
				29	29.10		ANMO	91.59	49	ePc	26	35.77	0.7	BOB	94.42	327	P	26	47.77	0.0
				30	08.20			0.8s	111.94nm			5.9mb			0.9s	573.60nm			6.7mb	
KOT	90.08	304	eP	26	27.00	-0.9			e	28	09.13		DRV	94.44	180	P	26	49.10	2.2	
WTS	90.17	333	ePd	26	27.50	-0.4			iPpc	28	14.09	426kmX			PPP	33	05.00			
	0.7s	247.00nm			6.2mb				ePP	30	18.31				S	38	37.00			
				30	08.00				eHPP	30	18.64				SP	41	47.00			
PLE	90.23	321	iPd	26	28.73	0.1			iSKS	36	26.74		ORO	94.48	328	P	26	47.00	-1.1	
IVA	90.25	320	iPd	26	28.70	0.1			iS	36	54.77		MNS	94.51	324	P	26	47.40	-0.8	
EBH	90.34	340	ePd	26	28.50	-0.2			ePS	38	06.06		EMS	94.63	329	ePd	26	48.10	-0.8	
PTJ	90.38	324	iPd	26	28.40	-0.7			i	39	37.99		ECB	94.66	340	eP	26	48.30	-0.3	
PVY	90.38	320	iPd	26	28.98	-0.3	ALO	91.59	49	iPc+	26	36.00	0.9	ECP	94.70	340	eP	26	48.70	-0.1
ZAG	90.42	324	iPd	26	28.50	-0.7		0.9s	113.45nm			5.8mb	GRI	94.89	319	P	26	50.77	0.8	
				30	11.20		Z	21s	11.11um			6.3MsZ			1.6s	1188.50nm			6.8mb	
LIT	90.47	317	iPd	26	24.20	-5.4X			ePP	28	20.00	456kmX	RMP	94.90	323	P	26	49.50	-0.4	
HLW	90.48	304	eP-	26	29.40	-0.4			e	30	16.00		RDP	94.93	323	P	26	49.80	-0.3	
				29	06.00		BERA	91.61	319	eP	26	34.50	-0.2	LSD	94.99	329	P	26	50.21	-0.4
				30	17.20		TRI	91.62	325	Pd	26	33.20	-1.5	PCP	95.02	327	P	26	49.08	-1.4
				36	17.00		SQTA	91.79	328	iPd	26	34.80	-0.9	LOR	95.05	331	eP	26	49.50	-1.0
ARO	90.49	283	iPd	26	31.20	1.1		1.6s	633.00nm			6.3mb			1.0s	156.25nm			6.1mb	
EDI	90.52	340	ePd	26	29.10	-0.4			i	26	37.70		Z	24s	8.25um			6.1MsZ		
EBL	90.60	340	ePd	26	29.80	-0.1			i	29	47.90		LPL	95.14	329	iPd	26	50.30	-0.9	
EAB	90.63	341	ePd	26	29.90	-0.1			i	29	55.00			0.6s	155.00nm			6.3mb		
BHG	90.64	327	iPd	26	30.30	0.1			i	30	25.80		LPG	95.14	329	iPd	26	50.40	-0.9	
	1.0s	348.00nm			6.2mb		HVAR	91.95	322	iP	26	37.70	1.4	LBF	95.22	331	eP	26	50.10	-1.2
EAU	90.66	340	ePd	26	30.10	-0.1	UCC	92.07	333	P	26	36.00	-0.7	CKI	95.24	327	P	26	49.90	-1.5
	0.6s	231.00nm			6.3mb				e	28	17.00		MAO	95.28	324	P	26	42.90	-8.7X	
PHP	90.69	319	iPc	26	27.90	-2.6	VVI	92.09	326	P	26	36.34	-0.6	GRC	95.36	332	P	26	51.59	-0.2
FNA	90.72	318	iPd	26	30.10	-0.7	GWF	92.12	331	P	26	36.76	-0.3	SSF	95.36	332	eP	26	51.10	-0.8
DBN	90.74	334	eP	26	31.00	0.5	IGT	92.12	318	iPd	26	36.80	-0.4	FIN	95.43	327	P	26	50.10	-2.2
Z	20s	5.00um			5.9MsZ		WLF	92.22	332	iPd	26	37.17	-0.2	BNI	95.52	329	Pd	26	51.90	-0.9
				30	10.00		VLI	92.27	314	eP	26	35.00	-2.9X	ROB	95.53	327	P	26	50.72	-2.0
				32	28.00		SNF	92.33	333	iPd	26	37.21	-0.7	SMF	95.55	331	eP	26	51.80	-0.9
				36	44.00		STR	92.36	330	P	26	38.33	0.3	RRL	95.57	328	P	26	52.15	-1.0
				38	03.00		ASW	92.41	299	eP	26	46.00	7.2X	FLN	95.58	335	eP	26	51.70	-1.1
				42	40.00				eS	36	16.00			0.7s	77.15nm			6.0mb		
KZN	90.78	317	iPd	26	29.40	-1.7	CTI	92.43	327	Pd	26	37.30	-1.3	Z	21s	5.25um			6.0MsZ	
NKY	90.79	321	iPd	26	30.78	-0.4	DOU	92.53	333	iPc	26	38.60	-0.3	LDF	95.58	334	eP	26	51.80	-1.1
BNS	90.81	332	iPd	26	30.50	-0.4			e-	28	27.00			0.7s	66.15nm			5.9mb		
	0.8s	245.00nm			6.2mb				e	28	41.60		AVF	95.64	331	iPd	26	52.30	-0.8	
Z	16s	9.00um			6.3MsZ				e	30	37.00		PZZ	95.73	328	P	26	52.46	-1.3	
				30	13.50				SKS	36	32.00		ENR	95.79	328	P	26	52.26	-1.7	
TNS	90.83	331	iPd	26	30.90	-0.2	SLE	92.65	329	ePd	26	38.50	-1.0	STV	95.83	328	P	26	52.26	-1.9
OHR	90.85	319	iPd	26	30.50	-0.9	WLS	92.67	330	P	26	39.12	-0.5	SAOF	95.91	327	P	26	52.90	-1.6
	1.1s	384.00nm			6.2mb		OSS	92.68	328	ePd	26	39.50	-0.4	AUTN	95.96	327	P	26	53.68	-1.3
				26	37.20		CDF	92.70	330	P	26	39.26	-0.5	GRR	96.03	335	eP	26	54.10	-0.8
				26	42.20		FEL	92.78	330	P	26	39.37	-0.9		0.9s	127.75nm			6.1mb	
KBA	90.87	327	iPd	26	30.40	-1.1	VLS	92.83	316	iPc	26	39.50	-1.0	BGF	96.04	332	eP	26	54.10	-0.8
	1.9s	875.00nm			6.4mb		ECH	92.90	330	P	26	39.99	-0.7	TOUF	96.04	328	P	26	53.79	-1.4
				26	33.30		ZLA	92.91	329	ePd	26	39.99	-0.8	VAL	96.04	342	ePKP	26	54.00	-0.8
				28	26.80		LCI	93.00	319	P	26	40.90	-0.3	SBF	96.06	327	eP	26	53.40	-1.8
				28	30.60		BRT	93.07	320	P	26	41.00	-0.5	AURF	96.09	327	P	26	53.85	-1.5
				28	35.50		LLS	93.08	329	ePd	26	41.20	-0.6	MVIF	96.17	328	P	26	54.29	-1.5
				29	18.60															



MAF	96.42	332	eP	26	56.30	-0.4					i	32	53.00				i	33	23.00	
TCF	96.52	332	eP	26	56.50	-0.6	MAW	110.77	204	ePKP	31	58.00	0.6				i	35	11.00	
PYM	96.61	331	P	26	57.21	-0.4		0.8s		27.00nm							i	33	14.50	-0.2
CSY	96.65	191	eP	27	07.40	10.5X	AVE	111.39	331	iPd iff	27	58.00	-5.5X				i	35	07.00	
	0.8s		29.20nm				AVE	111.39	331	iPKP	31	58.50	-1.2				i	33	15.70	0.1
FRF	96.66	328	eP	26	56.30	-1.5	MTD	113.32	263	iPKPd	32	08.00	4.1X				i	33	14.70	-0.7
	1.2s		136.85nm			6.0mb					33	05.10					i	33	16.00	0.3
RKT	96.79	112	iP	27	04.40	5.9X					33	05.40					i	33		
	0.8s		15.00nm			5.3mb					34	58.70					i	33		
USI	96.82	321	P	26	58.00	-0.5	TIO	113.34	329	iPKP	32	03.50	-0.2				i	33	15.50	-0.2
LSF	96.83	332	eP	26	57.70	-0.8					32	49.00					i	33	16.00	0.1
LRG	96.88	328	eP	26	57.50	-1.2					32	58.00					i	33	18.50	1.3
	1.2s		142.80nm			6.1mb					33	03.00					i	33	18.40	1.3
Z	18s		6.25um			6.1Msz					34	54.50					i	33	17.50	-0.4
LMR	96.90	328	eP	26	57.50	-1.4	KRI	115.07	264	iPKPc	32	10.00	2.7X				i	33	18.50	0.4
LBL	96.91	331	P	26	58.90	0.1					33	10.10					i	33	17.60	-0.4
MEU	96.92	319	P	26	58.70	-0.5					35	02.00					i	33	17.80	-0.6
PZI	96.98	318	P	27	00.06	0.7	SPA	117.92	180	iPKPd	32	09.20	-2.1X				i	33	17.90	-0.8
	1.5s		834.90nm			6.7mb											i	33	21.00	-0.3
CDR	96.99	328	ePd	26	58.50	-0.8		1.0s		135.00nm							i	33	22.00	-0.5
			i	27	01.50		Z	20s		3.15um			5.9Msz				i	33	26.20	0.8
			e	29	56.10						33	31.50					i	33	28.60	
MFF	97.22	333	eP	26	59.60	-0.7	BFT	117.94	254	iPKPc	32	12.50	-0.2				i	34	12.00	
FAI	97.53	319	P	27	05.20	3.4X		0.6s		176.67nm							i	33	28.00	0.9
RJF	97.60	332	eP	27	01.50	-0.5	SLR	119.45	255	ePd iff	28	40.00	0.3				i	33		
	Z	20s	5.50um			6.0Msz	SLR	119.45	255	iPKPd	32	15.00	-0.5				i	33	27.70	-0.8
CAF	97.67	331	eP	27	02.10	-0.3		1.0s		150.00nm			5.9Msz				i	34	25.00	
TUL	97.71	42	eP	27	03.00	0.3		Z	22s	3.33um							i	35	21.80	
	0.6s		7.20nm			5.2mb	UPA	127.20	51	iPKPc	32	29.30	-1.2				i	36	08.50	
			e	28	30.70			0.7s		98.63nm							i	38	13.40	
			e	30	56.40		Z	20s		1.95um			5.8Msz				i	33	31.50	1.3
			e	36	41.50		LRS	127.28	32	PKP	32	27.00	-3.6X				i	33	33.10	2.7X
			LR	38	57.40		CPD	127.93	31	PKP	32	31.00	-0.8				i	33	34.00	3.5X
LVI	97.79	321	P	27	02.60	-0.4	WIN	128.12	262	ePKP	32	18.00	-14.3X				i	33	32.50	1.2
LFF	98.21	332	eP	27	04.40	-0.4		1.0s		106.00nm							i	33	34.60	
LPO	98.23	331	eP	27	04.50	-0.4	NVL	128.39	200	iPKP	32	30.00	-1.1				i	33	49.00	
CCM	98.81	38	ePd iff	27	09.74	2.1				ePP	34	45.00					i	34	44.90	
			epPc	28	44.43	408kmX				ePKS	35	56.00					i	33	33.20	0.0
			esPd	29	37.40					eSKS	36	06.00					i	33	34.70	
			ePP	31	16.26					e	44	30.00					i	35	30.90	
			iSKS	36	59.76					ePPS	45	40.00					i	36	48.80	
			eHSKKS	37	31.71		LKO	129.66	313	PKP	32	23.46	-11.8X				i	42	55.10	
			eSKKS	37	34.53		BPA	130.57	27	ePKP	32	33.00	-3.8X				i	44	51.00	
			iSDIF	37	52.57		TIC	131.43	310	PKP	32	22.28	-16.3X				i	33	35.50	1.7
			e	40	13.81		KIC	131.45	309	PKP	32	23.52	-15.1X				i	33	40.70	
			esS	40	51.76		DEG	131.55	27	ePKP	32	34.00	-4.7X				i			
FVM	99.31	38	e(P)	27	11.70	1.8	PAG	131.56	28	ePKP	32	35.00	-3.8X				i			
			ePP	31	20.90		LIC	131.74	310	PKP	32	23.50	-15.6X				i			
BTH	100.09	331	ePd iff	27	14.00	0.9	MGG	131.80	27	ePKP	32	36.00	-3.1X				i			
			e	27	37.00		MBO	132.05	329	ePKP	32	42.30	2.7X				i			
			esP	29	18.50		B8L	132.09	28	ePKP	32	37.00	-2.7X				i			
			e	30	06.00		SNA	132.55	196	iPKPc	32	25.00	-14.0X				i			
			ePP	31	20.00			1.0s		294.00nm							i			
			i	31	27.00		TOV	132.83	41	ePKP	32	34.90	-6.4X				i			
			epPPP	34	25.00		BMG	132.93	47	ePKP	32	30.00	-11.5X				i			
			eS	38	00.00		FDF	132.94	28	ePKP	32	41.70	0.3				i			
			SP	39	41.00		SDV	133.05	43	ePKP	32	29.60	-12.3X				i			
			e(SSP)	45	12.00		BIM	133.17	28	ePKP	32	41.87	0.1				i			
			e	50	30.00		MVM	133.20	28	ePKP	32	42.10	0.2				i			
			eSSS	52	20.00		SLW	133.67	28	ePKP	32	40.08	-2.7X				i			
CBM	101.25	19	Pd iff	27	22.00	3.8X				e	35	27.53					i			
			pP	29	08.20		FUQ	133.68	49	ePKP	32	42.00	-1.3				i			
ETOR	102.76	331	ePd iff	27	25.00	-0.2	SLB	133.80	28	ePKP	32	41.25	-1.8				i			
ECHE	103.30	330	ePd iff	27	34.50	7.0X				e	35	29.55					i			
GUD	103.79	332	ePd iff	27	32.00	2.2X	BOG	134.08	50	ePKP	32	44.00	-0.1				i			
HRV	104.12	23	ePd iff	27	37.89	6.9X	SVV	134.18	29	ePKP	32	43.90	0.2				i			
			iSKS	37	25.28					e	35	30.24					i			
			eHSKKS	38	09.64		TCE	136.27	31	ePKP	32	46.50	-1.2				i			
			eSKKS	38	11.63					e	35	33.32					i			
			iSDIF	38	37.45		TPR	136.27	30	ePKP	32	51.00	3.3X				i			
			ePS	41	16.51					e	35	35.58					i			
			eS	41	40.57		TRN	136.47	31	ePKP	32	41.00	-7.1X				i			
TOL	104.39	332	iPd iff	27	35.95	3.6X	Z	20s		3.57um			6.1Msz				i			
			iPP	31	52.00					e	35	33.85					i			
			ePPP	34	18.00		TBH	136.77	30	ePKP	32	48.50	-0.2				i			
			iSDIF	38	39.80		ARE	149.10	75	iPKPd	33	11.00	0.9				i			
			ePS	41	21.99		ZOBO	151.85	71	ePKP	33	14.17	-0.3				i			
			esS	41	49.75		Z	24s		1.67um			5.8MszX				i			
PTO	105.09	336	ePKP	31	51.70	4.2X				LR	57	10.00					i			
LIJA	107.48	331	ePKP	31	54.00	1.7	LPB	152.00	72	PKP	33	13.20	-1.3				i			
ALJ	107.75	331	ePKP	31	54.00	1.2	Z	24s		5.43um			6.3MszX				i			
CNIL	108.20	331	ePKP	32	03.00	9.5X				i	33	21.00					i			
PLAT	108.28	331	ePKP	32	03.00	9.3X				PP	35	09.00					i			
IFR	110.19	329	iPKP	32	02.00	4.4X				LR	57	10.00					i			
			i	32	36.00		ANT	152.70	88	ePKP	33	04.00	-10.8X				i			
							LCCM	152.76	109	iPKP	33	14.50	-0.1				i			
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03d 06h

KHC 21.71 298 P 13 32.00 1.8  
 KAF 22.12 339 iP 13 34.10 0.0  
 0.8s 24.70nm 4.7mb  
 esP 13 41.00  
 CLL 22.41 304 iP 13 37.70 0.6  
 1.6s 32.00nm 4.5mb  
 e 13 51.00  
 GRF 23.30 299 e(P) 13 47.00 1.2  
 Z 19s 0.30um 3.8msz  
 UPP 23.48 327 eP 13 47.00 -0.4  
 i 13 51.30  
 HFS 25.28 325 eP 14 04.30 -0.5  
 0.8s 43.80nm 5.2mb  
 Z 17s 0.27um 3.8mszX  
 e 14 09.10  
 e 14 11.00  
 e 14 13.80  
 ePP 14 30.10  
 LR 23 32.00  
 LPL 26.38 289 eP 14 15.30 -0.2  
 1.0s 13.00nm 4.6mb  
 HAU 26.46 295 eP 14 15.00 -1.0  
 1.0s 8.00nm 4.4mb  
 SOD 26.54 346 eP 14 17.00 0.5  
 e 14 35.00  
 NB2 26.79 325 P 14 18.00 -0.9  
 0.9s 11.60nm 4.6mb  
 AVF 28.57 293 eP 14 34.30 -0.8  
 0.9s 22.95nm 5.0mb  
 KEV 28.61 348 eP 14 54.00 18.8X  
 MAF 29.18 292 eP 14 40.10 -0.5  
 1.0s 14.00nm 4.7mb  
 GBA 41.14 124 Pd 16 23.30 0.2  
 0.8s 3.90nm 4.2mb  
 YKA 73.89 350 eP 20 11.80 -1.7  
 0.8s 1.50nm 4.1mb  
 SES 84.84 344 eP 21 13.00 0.0  
 S.D. = 0.9 on 23 of 30 obs.

? MAY 03, 1991 06h 12m 54.23±3.71s  
 41.933 N ±37.9km 43.800 E ±30.7km  
 DEPTH = 33.0km (normal)  
 4.2mb ( 5 obs.)

TURKEY-USSR BORDER REGION (367)

KVT 5.88 264 ePn 14 21.30 -0.1  
 KAS 7.54 269 eP 14 44.50 -0.1  
 KSP 20.86 305 eP 17 35.50 -0.1  
 NUR 21.98 334 iP 17 52.00 5.3X  
 0.8s 14.70nm 4.5mb  
 KHC 22.26 299 eP 17 48.50 -1.2  
 BRG 22.32 304 e(P) 17 51.30 1.1  
 KAF 22.75 339 iP 17 54.10 -0.2  
 0.7s 5.70nm 4.2mb  
 esP 17 56.50  
 CLL 22.99 305 e(P) 17 58.00 1.2  
 e 18 09.00  
 HFS 25.91 325 eP 18 23.10 -1.6  
 0.4s 11.20nm 4.8mb  
 e 18 28.00  
 NB2 27.43 325 P 18 39.40 0.8  
 0.8s 3.30nm 4.0mb  
 YKA 74.48 350 eP 24 30.70 0.1  
 0.8s 0.70nm 3.7mb  
 S.D. = 1.0 on 10 of 11 obs.

& MAY 03, 1991 08h 30m 26.50s  
 37.267 N 121.673 W  
 DEPTH = 5.0km  
 CENTRAL CALIFORNIA (39)  
 <BRK>. ML 2.8 (BRK).

MHC 0.08 19 iPd 30 28.40 -0.1  
 ARN 0.14 54 iPc 30 28.90 -0.5  
 GCC 0.35 228 ePc 30 33.80 0.2  
 iS 30 39.80  
 SAO 0.53 160 iPd 30 37.10 -0.1  
 PCC 0.61 293 eP 30 38.30 -0.4  
 BKS 0.75 324 ePd 30 41.50 -0.1  
 eS 30 54.40  
 BRK 0.76 323 ePc 30 41.20 -0.6  
 iS 30 54.30  
 LLA 0.87 138 eP 30 42.70 -1.1  
 PRS 0.96 165 eP 30 44.30 -1.0  
 CMB 1.28 53 eP 30 49.80 -0.9  
 eS 31 06.30  
 PRI 1.38 144 eP 30 53.00 0.4

FRI 1.59 99 eP 30 53.40 -2.0  
 iS 31 13.80  
 BONR 2.76 75 e(P) 31 13.50 0.9  
 13 obs. associated

\* MAY 03, 1991 09h 14m 59.05±1.00s  
 19.481 S ±8.5km 70.182 W ±13.2km  
 DEPTH = 51.5 ± 16.6 km  
 4.4mb ( 1 obs.)

NEAR COAST OF NORTHERN CHILE (122)

ARE 3.25 337 iPc 15 49.00 -0.1  
 iS 16 30.00  
 LPB 3.54 34 P 15 54.00 0.7  
 ZOBO 3.75 32 P 15 56.00 -0.3  
 i 16 02.00  
 ANT 4.21 183 eP 16 02.30 0.0  
 CCH 4.37 62 P 16 04.50 -0.3  
 SIV 9.35 70 P 17 07.00 -7.0X  
 YKA 88.90 341 eP 27 48.70 0.0  
 0.7s 1.40nm 4.4mb  
 S.D. = 0.6 on 6 of 7 obs.

% MAY 03, 1991 09h 23m 29.24±0.86s  
 39.093 N ±7.3km 27.583 E ±13.1km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.7 (ISK).

Izm 0.74 200 iPg 23 43.80 0.0  
 eSg 23 54.10  
 DST 0.96 57 ePn 23 47.50 0.0  
 EDC 1.27 10 iPn 23 52.50 -0.3  
 BNT 1.29 12 iPn 23 54.00 0.9  
 KCT 1.30 27 iPn 23 53.00 -0.3  
 KGT 1.37 351 iPn 23 54.10 -0.3  
 S.D. = 0.6 on 6 of 6 obs.

? MAY 03, 1991 10h 03m 46.51±8.73s  
 39.525 N ±50.2km 29.573 E ±46.0km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.6 (ISK).

DST 0.73 277 ePg 04 01.00 0.0  
 eSg 04 11.00  
 IZI 0.81 355 iPg 04 01.80 -0.6  
 YLV 1.05 352 ePg 04 07.00 0.6  
 eSg 04 22.00  
 KCT 1.18 308 ePg 04 08.50 -0.1  
 S.D. = 0.8 on 4 of 4 obs.

? MAY 03, 1991 10h 09m 27.90±6.44s  
 39.534 N ±41.1km 29.487 E ±32.4km  
 DEPTH = 11.6km (geophysicist)

TURKEY (366)

MD 2.8 (ISK).

DST 0.67 276 ePg 09 41.00 -0.1  
 eSg 09 51.50  
 YLV 1.04 355 ePg 09 47.00 -0.4  
 KCT 1.12 310 ePn 09 49.00 0.2  
 HRT 1.29 6 ePn 09 52.00 0.3  
 S.D. = 0.5 on 4 of 4 obs.

? MAY 03, 1991 14h 05m 35.38±2.06s  
 53.973 N ±42.1km 164.475 W ±20.2km  
 DEPTH = 33.0km (normal)  
 4.7mb ( 3 obs.)

UNIMAK ISLAND REGION (10)

SDN 2.69 58 eP 06 16.00 -1.2  
 ADK 7.67 259 e(P) 07 27.00 -0.5  
 INK 20.39 33 eP 10 12.00 0.5  
 FRB 45.93 38 eP 13 58.00 1.9  
 KEV 56.30 355 eP 15 08.00 -6.5X  
 SOD 58.69 355 iP 15 31.80 0.4  
 KAF 63.95 354 iP 16 05.10 -1.7  
 0.6s 3.60nm 4.6mb  
 esP 16 07.40  
 NUR 65.64 355 eP 16 18.00 0.3  
 HFS 66.23 1 eP 16 20.70 -0.9  
 0.3s 1.00nm 4.4mb  
 e 16 25.00  
 GUN 78.47 302 P 17 35.40 0.5  
 0.6s 12.00nm 5.1mb  
 PKI 78.98 302 P 17 38.00 0.3

GKN 79.01 303 P 17 38.00 0.4  
 S.D. = 1.1 on 11 of 12 obs.

\* MAY 03, 1991 14h 35m 59.76±0.76s  
 40.757 N ±10.3km 15.866 E ±8.2km  
 DEPTH = 23.6 ± 10.7 km  
 SOUTHERN ITALY (390)

ORI 0.82 147 P 36 15.40 0.1  
 eSg 36 29.20  
 BAI 0.84 64 P 36 15.50 -0.1  
 eSg 36 30.00  
 BRT 1.02 83 P 36 18.30 -0.3  
 eSg 36 34.10  
 TDS 1.16 162 P 36 20.60 0.1  
 eSn 36 37.60  
 DUI 1.39 311 P 36 24.50 0.6  
 LCI 1.65 104 P 36 30.50 3.0X  
 eSn 36 52.40  
 SDI 1.81 302 P 36 28.80 -1.2  
 eSn 36 53.70  
 SDA 3.01 64 ePn 36 51.00 4.1X  
 iSn 37 36.20  
 LACI 3.03 72 ePn 36 57.00 9.7X  
 TIR 3.08 78 ePn 36 56.00 8.0X  
 BERA 3.10 90 ePn 36 56.60 8.3X  
 PHP 3.57 73 ePn 36 57.30 2.3  
 IGT 3.64 108 eP 37 23.30 27.4X  
 OHR 3.75 83 ePn 36 49.00 -8.6X  
 FNA 4.18 88 eP 37 04.60 0.8  
 VBY 4.77 355 eP 37 39.80 27.9X  
 i(Sn) 38 31.20  
 GRG 4.96 86 eP 37 13.50 -1.2  
 LIT 5.10 95 eP 37 16.30 -0.3  
 KNT 5.34 83 eP 37 19.10 -1.0  
 SOH 5.68 87 eP 37 24.40 -0.6  
 S.D. = 1.2 on 12 of 20 obs.

MAY 03, 1991 15h 03m 07.90±0.25s  
 40.846 N ±2.9km 27.897 E ±2.2km  
 DEPTH = 12.8 ± 1.9 km

TURKEY (366)

BNT 0.49 178 iPg 03 18.40 0.5  
 iSg 03 24.00  
 EDC 0.50 183 iPg 03 18.00 0.0  
 CTT 0.50 53 iPg 03 18.00 -0.1  
 KGT 0.60 229 iPg 03 19.90 0.2  
 KCT 0.69 149 iPg 03 20.90 -0.4  
 ISK 0.91 76 iPg 03 24.90 -0.1  
 DMK 0.98 354 iPg 03 26.80 0.5  
 iSg 03 39.30  
 YLV 1.16 103 iPg 03 28.90 -0.4  
 GBZT 1.18 92 iPg 03 29.80 0.2  
 eSg 03 46.10  
 HRT 1.34 90 iPn 03 32.40 0.0  
 DST 1.36 155 iPn 03 32.90 0.3  
 ALN 1.41 273 iPd 03 33.40 0.3  
 e 03 35.20  
 e 03 54.10  
 EZN 1.58 230 iPn 03 35.80 0.2  
 RDO 1.81 280 ePn 03 39.50 0.5  
 GPA 1.92 106 ePn 03 41.00 0.4  
 PRK 2.03 219 ePn 03 42.00 -0.1  
 eSn 04 14.00  
 KDZ 2.04 294 iPd 03 43.00 0.7  
 DIM 2.15 305 iPd 03 44.00 0.1  
 ALT 2.47 136 iPn 03 50.10 1.6  
 IZM 2.49 192 ePn 03 51.00 2.2  
 PLD 2.71 299 eP 03 52.00 0.1  
 KHL 2.81 153 iPn 03 53.00 -0.5  
 OUR 3.02 262 eP 03 56.40 0.1  
 PVL 3.04 322 iPc 03 57.00 0.5  
 MMB 3.23 285 iPc 04 00.00 0.6  
 SRS 3.27 276 ePc 03 59.60 -0.3  
 e 04 09.00  
 PGB 3.27 303 iPd 04 01.00 1.1  
 PAIG 3.35 255 ePc 04 08.90 7.9X  
 SOH 3.45 271 eP 04 01.80 -0.6  
 e 04 14.10  
 YER 3.72 175 ePn 04 05.00 -1.3  
 KKB 3.76 287 iP 04 07.00 0.1  
 KNT 3.80 276 ePc 04 07.10 -0.3  
 BBTK 3.85 104 eP 04 24.00 15.8X  
 VTS 3.92 298 eP 04 09.00 -0.2  
 VAY 4.05 278 ePn 04 11.00 0.1  
 GRG 4.17 273 eP 04 17.70 5.1X



LIT 4.19 262 eP 04 11.50 -1.4  
 CFR 4.34 2 eP 05 00.00 45.0X  
 SKO 4.98 285 ePn 04 24.00 -0.2  
 Lg 06 03.80  
 OHR 5.38 275 ePn 04 29.70 -0.1  
 BZS 6.62 318 ePc 04 46.00 -1.2  
 S.D. = 0.7 on 37 of 41 obs.

& MAY 03, 1991 15h 18m 41.26s  
 61.962 N 151.883 W  
 DEPTH = 98.5km  
 SOUTHERN ALASKA ( 2 )  
 <AEIC>.

SKT 0.17 84 iPc 18 54.66 1.0  
 iS 19 04.92  
 NCG 0.58 193 iPd 18 57.12 -0.7  
 CRP 0.71 191 iPd 18 58.43 -0.6  
 eS 19 11.69  
 SUA 0.74 132 iPd 18 58.87 -0.4  
 eS 19 12.69  
 BGL 0.74 199 iPd 18 58.73 -0.6  
 SPU 0.79 186 iPd 18 58.73 -1.0  
 CKL 0.80 196 iPd 18 59.19 -0.7  
 eS 19 13.54  
 CUT 0.88 59 iPc 18 59.79 -0.7  
 eS 19 14.39  
 PWA 1.00 107 ePc 19 01.56 -0.3  
 eS 19 17.54  
 NKA 1.26 165 ePc 19 05.99 1.1  
 PMS 1.32 122 iPc 19 05.15 -0.5  
 eS 19 23.42  
 PLRM 1.36 105 ePc 19 04.52 -1.5  
 S 19 23.63  
 GH0 1.42 96 ePc 19 05.72 -1.1  
 eS 19 25.76  
 RDT 1.42 191 iPd 19 06.17 -0.7  
 DFR 1.43 196 ePd 19 06.05 -1.0  
 HUR 1.46 45 ePc 19 06.53 -0.8  
 eS 19 25.71  
 NCT 1.49 200 ePd 19 07.18 -0.7  
 RDN 1.51 197 iPd 19 07.47 -0.7  
 REF 1.53 195 eP 19 07.86 -0.5  
 RDW 1.55 197 iPd 19 08.17 -0.5  
 RS2 1.56 196 ePd 19 08.25 -0.6  
 RSO 1.56 196 iPd 19 08.33 -0.5  
 RED 1.61 196 iPd 19 08.70 -0.6  
 SLKM 1.67 150 ePc 19 09.39 -0.6  
 eS 19 31.00  
 TRF 1.67 25 ePc 19 09.06 -1.0  
 eS 19 31.52  
 SML 1.69 94 ePc 19 08.74 -1.5  
 KNK 1.72 107 iPc 19 09.27 -1.4  
 eS 19 30.97  
 >NNL 1.95 171 ePc 19 13.57 0.0  
 SVW 1.99 246 ePd 19 12.87 -1.3  
 eS 19 37.51  
 RND 2.01 43 eP 19 13.26 -1.3  
 eS 19 37.54  
 TTA 2.15 299 ePc 19 14.63 -1.7  
 SCM 2.16 91 ePc 19 14.72 -1.8  
 SEW 2.21 147 eP 19 16.54 -0.5  
 MCK 2.23 36 eP 19 16.43 -1.0  
 PDB 2.46 208 ePd 19 19.71 -0.7  
 CNPM 2.47 172 ePc 19 18.70 -1.8  
 BWN 2.48 25 ePc 19 19.75 -0.9  
 XLV 2.52 178 eP 19 19.77 -1.4  
 GLI 2.55 113 iPc 19 18.73 -2.8  
 KNIM 2.58 127 iPd 19 18.93 -3.1  
 TOA 2.70 84 eP 19 22.26 -1.4  
 VZW 2.71 107 eP 19 21.21 -2.6  
 VLZ 2.79 105 iPc 19 22.05 -2.7  
 MTU 2.86 132 ePd 19 23.50 -2.3  
 KLU 2.88 97 ePc 19 23.68 -2.5  
 NEA 2.92 25 eP 19 24.93 -1.7  
 SDG 3.02 76 eP 19 26.59 -1.5  
 TZL 3.05 86 eP 19 27.16 -1.2  
 WRH 3.05 33 eP 19 26.23 -2.2  
 PAX 3.15 68 eP 19 28.15 -1.7  
 CDD 3.16 197 eP 19 29.31 -0.7  
 CCB 3.26 33 eP 19 29.04 -2.3  
 DDM 3.31 54 eP 19 32.45 0.4  
 HDA 3.32 40 eP 19 30.11 -2.0  
 RDS 3.33 29 ePc 19 30.24 -2.0  
 SYI 3.37 185 eP 19 31.10 -1.7  
 MDM 3.43 27 ePc 19 31.57 -2.0  
 FBA 3.47 30 eP 19 32.59 -1.6

GLM 3.64 32 eP 19 34.90 -1.7  
 GLB 3.88 94 iPc 19 37.43 -2.4  
 DOT 3.97 61 eP 19 38.79 -2.3  
 IMA 4.20 350 ePd 19 42.08 -2.2  
 TMW 4.32 68 eP 19 44.44 -1.5  
 CROM 4.38 102 eP 19 44.59 -2.3  
 TGL 4.52 102 eP 19 45.86 -2.9  
 BALM 4.66 97 ePc 19 48.07 -2.6  
 66 obs. associated

MAY 03, 1991 15h 22m 35.45±1.12s  
 41.291 N ±9.2km 29.048 E ±6.0km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 3.1 (ISK).

ISK 0.23 178 iPg 22 39.60 -0.7  
 iSg 22 44.90  
 CTT 0.49 253 iPg 22 44.60 -0.8  
 GBZT 0.58 149 ePg 22 46.60 -0.7  
 iSg 22 54.80  
 HRT 0.66 135 iPg 22 48.70 0.0  
 eSg 22 57.40  
 YLV 0.76 161 iPg 22 50.00 -0.4  
 IZI 1.01 161 iPg 22 54.30 -0.3  
 DMK 1.10 299 iPn 22 56.30 0.1  
 KCT 1.17 207 iPn 22 57.90 0.7  
 BNT 1.27 223 iPn 22 58.90 -0.1  
 EDC 1.30 224 ePn 22 59.00 -0.6  
 GPA 1.39 136 ePn 23 01.00 0.2  
 KGT 1.57 238 iPn 23 03.40 0.1  
 DST 1.71 191 ePn 23 08.00 2.4  
 S.D. = 0.9 on 13 of 13 obs.

& MAY 03, 1991 15h 37m 05.64s  
 57.487 N 142.969 W  
 DEPTH = 10.0km (geophysicist)  
 GULF OF ALASKA ( 15 )  
 <AEIC>. ML 2.8 (AEIC).

PNL 2.88 39 iP 37 46.99 -5.4  
 eS 38 18.57  
 HQN 2.92 46 iP 37 47.16 -5.7  
 eS 38 19.43  
 YAH 2.95 12 iP 37 48.61 -5.0  
 eS 38 21.14  
 BCPM 3.02 34 eP 37 49.04 -5.4  
 eS 38 21.25  
 TGL 3.28 1 iP 37 52.39 -5.8  
 eS 38 30.19  
 CROM 3.28 359 iP 37 52.36 -5.9  
 BALM 3.57 5 eP 37 56.40 -6.0  
 eS 38 37.00  
 CTGM 3.59 13 eP 37 57.02 -5.6  
 GLB 3.99 354 eP 38 01.92 -6.3  
 eS 38 45.10  
 KLU 4.29 341 eP 38 05.62 -6.9  
 CNPM 4.79 299 eP 38 13.74 -5.9  
 SLKM 4.82 312 eP 38 15.51 -4.5  
 KNK 4.83 327 eP 38 15.37 -4.7  
 RDT 5.77 306 eP 38 27.21 -6.2  
 PDB 6.30 296 eP 38 34.81 -6.0  
 15 obs. associated

\* MAY 03, 1991 16h 44m 12.93±1.56s  
 11.067 N ±8.2km 61.807 W ±24.1km  
 DEPTH = 33.0km (normal)  
 WINDWARD ISLANDS ( 95 )  
 MD 3.4 (TRN).

TCE 0.37 172 eP 44 21.51 -0.2  
 eS 44 31.66  
 TRN 0.58 136 eP 44 24.85 0.3  
 eS 44 36.91  
 TPP 0.82 155 eP 44 28.22 0.1  
 eS 44 41.94  
 TBH 0.93 128 eP 44 29.34 -0.3  
 eS 44 45.62  
 SVV 2.31 14 eP 44 49.48 0.0  
 SLB 2.84 15 eP 45 24.88 27.8X  
 eS 45 37.73  
 S.D. = 0.3 on 5 of 6 obs.

\* MAY 03, 1991 16h 51m 05.90±1.93s  
 17.713 N ±14.2km 60.791 W ±12.3km  
 DEPTH = 33.0km (normal)  
 LEEWARD ISLANDS ( 92 )

ML 4.3 (FDF). MD 4.3 (TRN).

CPB 0.99 266 eP 51 23.80 0.3  
 BPA 1.21 237 iPd 51 25.55 -1.1  
 S 51 38.10  
 DEG 1.42 191 iPc 51 29.18 -0.4  
 S 51 44.40  
 SEG 1.47 208 iPc 51 30.16 -0.2  
 S 51 48.50  
 SFG 1.50 195 iPc 51 30.92 0.1  
 NEV 1.79 252 iPc 51 35.55 0.5  
 S 51 56.30  
 MGG 1.85 196 eP 51 36.55 0.6  
 S 51 59.50  
 PAG 1.88 207 iPc 51 36.29 0.0  
 S 51 59.00  
 BBL 2.27 197 eP 51 42.01 0.1  
 MDN 2.45 194 eP 51 45.07 0.6  
 DBCT 2.49 193 eP 51 45.61 0.6  
 eS 52 22.36  
 DPMT 2.51 193 eP 51 45.61 0.4  
 eS 52 22.01  
 FDF 2.98 187 iPc 51 51.50 -0.5  
 0.1s 2.70nm  
 S 52 24.40  
 MVM 3.14 182 iPc 51 54.06 -0.2  
 S 52 28.90  
 BIM 3.19 185 iPc 51 54.71 -0.2  
 SLW 3.67 182 eP 52 01.62 -0.2  
 eS 52 43.87  
 SLB 3.87 184 eP 52 04.62 0.0  
 eS 52 47.31  
 SVV 4.39 185 eP 52 11.19 -0.8  
 eS 52 59.12  
 FCV 4.55 186 eP 52 13.20 -1.1  
 eS 53 07.82  
 TCE 7.04 188 eP 52 49.49 0.2  
 eS 53 39.85  
 TRN 7.05 185 eP 52 52.40 2.9X  
 eS 53 41.11  
 TBH 7.19 182 eP 52 52.00 0.5  
 eS 53 42.72  
 TPP 7.38 185 eP 52 55.63 1.5  
 eS 53 45.16  
 SIV 33.49 180 iPc 57 45.20 0.7  
 ZOBO 34.53 192 P 57 53.00 -1.1  
 Z 24s 0.18um 3.7mszx  
 LR 08 44.00  
 LPB 34.78 192 (P) 58 07.00 10.9X  
 S.D. = 0.7 on 24 of 26 obs.

? MAY 03, 1991 16h 58m 17.01±5.47s  
 12.939 S ±49.8km 118.844 E ±29.8km  
 DEPTH = 33.0km (normal)  
 3.4mb ( 1 obs.)  
 SOUTH OF SUMBAWA ISLAND (291)

MBL 8.23 174 iPd 00 17.70 0.6  
 0.3s 23.00nm 5.8mb X  
 eS 01 58.00  
 NANU 10.08 198 eP 00 48.10 5.5X  
 0.3s 8.00nm 5.5mb X  
 eS 02 44.00  
 MEKA 13.61 181 eP 01 29.60 -0.5  
 0.4s 12.00nm 5.1mb X  
 eS 04 03.00  
 WARB 15.08 152 eP 01 52.00 2.6X  
 WB2 16.42 117 eP 02 06.50 -0.2  
 0.5s 1.50nm 3.4mb  
 BAL 17.69 186 eP 02 21.30 -1.3  
 COOL 17.98 174 eP 02 26.40 0.2  
 eS 05 47.00  
 KLB 18.59 183 eP 02 34.00 0.3  
 MUN 19.10 187 eP 02 40.00 0.1  
 NWA0 19.95 184 eP 02 50.00 0.8  
 S.D. = 0.8 on 8 of 10 obs.

? MAY 03, 1991 17h 28m 13.96±2.84s  
 36.728 S ±20.7km 143.965 E ±25.9km  
 DEPTH = 33.0km (normal)  
 3.4mb ( 2 obs.)  
 VICTORIA, AUSTRALIA (602)  
 ML 3.3 (TOO). 3.2 (CNB).

BFD 1.22 248 iPc 28 35.00 0.2  
 TOO 1.48 125 iPd 28 36.20 -2.4X  
 iS 28 52.00



03d 17b

CNB	4.60	74	e(P)	29	29.00	6.0X
			eS	30	24.00	
STK	5.22	337	iPd	29	33.00	1.3
	0.8s	13.20nm				4.5mb X
			eS	30	32.50	
CMS	5.45	17	eP	29	35.00	0.0
			eS	30	36.00	
TAU	6.69	158	e(P)	29	43.00	-9.4X
ASPA	15.64	324	eP	31	53.10	-0.5
	0.9s	6.00nm				3.8mb
WB2	18.72	331	eP	32	31.20	-0.9
	0.9s	1.20nm				3.1mb
MAIO	106.76	303	iPKPd	46	33.20	-4.4X
			e	48	18.00	
S.D.	= 1.2	on	5 of	9 obs.		

	1.4 s	50.00nm		4.8mb
SSE	38.21	1 Pc	42 39.00	1.1
	0.8s	12.00nm		4.5mb
		S	47 53.00	
VSG	38.92	96 P	42 44.00	-0.1
SVD	39.02	95 P	42 45.00	0.1
HNR	39.15	96 eP	42 46.00	0.1
NJ2	39.19	358 Pc	42 46.80	0.9
	0.9s	40.00nm		4.9mb
CD2	41.24	338 iPc	43 02.80	0.2
	0.8s	67.00nm		5.2mb
XAN	42.56	346 iPc	43 12.50	-0.5
TIA	43.42	356 eP	43 19.00	-0.7
TIY	45.42	351 eP	43 34.80	-0.6
LZH	45.91	341 iPc	43 39.00	-0.3
	1.5s	51.00nm		4.8mb

PDCR	151.66	226	e	54	51.00	
LPB	154.84	160	ePKP	54	58.40	5.2X
ZOBO	155.08	160	PKPc	55	00.00	6.0X
	1.2s		10.14nm			1.4
SIV	156.78	176	PKP	55	00.80	0.7
S.D.	= 1.0		on	76	of	91 obs.

& MAY 03, 1991 18h 55m 26.40s  
34.060 N 116.410 W  
DEPTH = 7.0km  
SOUTHERN CALIFORNIA (43)  
<PAS-P>. ML 3.2 (PAS). Felt in  
the Desert Hot Springs area.

PEC	0.65	255	iPc	55	38.80	-0.6
PLM	0.80	208	iPd	55	41.80	-0.5
BAR	1.39	189	ePd	55	50.70	-1.6
GLA	1.66	127	eP	55	54.00	-2.1
BCH	3.23	291	eP	56	17.50	-1.1
PHAM	3.72	300	e(P)	56	25.00	-0.6
TNP	4.07	351	e(P)	56	27.50	-3.1
7 obs. associated						

? MAY 03, 1991 19h 21m 04.11± 1.10s  
46.263 N ±25.4km 150.289 E ±17.6km  
DEPTH = 33.0km (normol)  
4.5mb ( 5 obs.)

KURIL ISLANDS (221)

KUSJ	5.08	233	eP	22	18.30	-1.6
			eS	23	15.10	
ASAJ	5.81	251	eP	22	30.90	0.6
HO0J	6.34	235	eP	22	38.40	0.7
MAT	13.27	227	(P)	24	16.00	3.4X
YKA	52.47	36	eP	30	21.10	5.7X
	0.8s		0.50nm			3.5mb
FFC	62.35	39	eP	31	25.00	-0.3
	1.3s		17.00nm			5.0mb
WB2	67.46	196	ePd	31	58.50	-0.1
	0.7s		3.50nm			4.6mb
WRA	67.46	196	P	31	58.00	-0.6
	0.7s		3.40nm			4.6mb
ASPA	71.17	196	eP	32	22.80	1.4
	1.0s		4.00nm			4.4mb

S.D. = 1.2    an 7 of 9 obs.

? MAY 03, 1991 19h 35m 31.67± 9.56s  
17.542 N ±60.6km 60.932 W ±39.3km  
DEPTH = 10.0km (geophysicist)  
LEEWARD ISLANDS (92)  
ML 3.1 (FDF).

BPA	1.01	241	eP	35	50.75	-0.1
			S	36	03.10	
D EG	1.23	186	eP	35	54.40	-0.2
SEG	1.26	206	eP	35	55.10	0.1
			S	36	12.50	
PAG	1.67	206	eP	36	01.20	0.1
			S	36	22.60	
BBL	2.07	195	eP	36	07.00	0.0
			S	36	07.00	
S.D. = 0.2 on 5 of 5 obs.						

MAY 03, 1991 20h 19m 38.86± 0.16s  
42.683 N ± 3.1km 43.247 E ± 2.0km  
DEPTH = 10.0km (geophysicist)  
5.3mb ( 60 obs.) 5.2Msz ( 20 obs.)

WESTERN CAUCASUS (362)

At least 3 people killed by  
landslides in Georgia, USSR.  
CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN  
L.P.B.: 17S. 31C

Centroid Location:

Origin Time 20:19:41.2 1.1

Lot 42.54N 0.09 Lon 42.94E 0.10

Dep 15.0 FIX Half-duration 2.4

Moment Tensor; Scale 10\*\*17 Nm

Mrr= 2.65 0.12      Mtt=-2.26 0.15

$$M_{ff} = -0.39 \quad 0.14 \quad M_{rt} = 0.97 \quad 0.51$$

Mrf = 1.49 0.58      Mtf = 0.94 0.15

Principal Axes:

T Vol= 3.53 Plg=64 Azm=299

N	-0.86	26	108
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P	-2.68	4	200
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Best Double Couple:  $M_o = 3.1 \cdot 10^{17}$

NP1:Strike=315 Dip=47 Slip= 127

IPM	22.68	301	eS	43	22.30	
BAL	23.42	188	eP	40	26.30	1.6
COOL	23.44	178	eP	40	30.40	-1.1
PSI	23.65	294	ePc	40	35.90	2.5
KLB	24.27	186	eP	40	38.00	-0.9
SNG	24.45	306	eP	40	41.90	1.3
FORR	24.48	164	iPc	40	40.00	-0.8
MUN	24.84	189	eP	40	41.00	-3.1X
NWAO	25.64	186	eP	40	47.00	-4.2X
PMG	26.53	96	eP	40	58.30	-0.9
RKG	26.80	186	eP	41	06.00	4.6X
QIZ	28.19	338	Pc	41	14.80	1.1
LOE	30.74	323	eP	41	35.50	-0.3
KHT	30.84	315	eP	41	37.20	0.6
STK	31.41	144	iPd	41	41.30	0.0
	1.1s		10.50nm			4.3mb
			ePP	43	03.60	
			iP	44	18.90	
			eS	46	04.70	
QZH	32.13	357	P	41	47.50	0.1
	0.8s		60.00nm			5.2mb
BDT	32.31	319	eP	41	49.70	0.6
RMO	33.00	129	eP	41	54.70	-0.2
			i	43	25.00	
CHG	33.51	321	eP	42	00.30	1.1
	0.9s		11.55nm			4.4mb
CMS	33.77	139	eP	42	02.00	0.8
			i	43	31.60	
BFD	35.89	149	eP	42	19.00	0.2
GYA	36.14	339	Pc	42	22.00	0.8
	1.0s		40.00nm			4.9mb
			PcP	44	35.00	
			S	47	24.00	
KMI	36.56	332	Pc	42	26.50	1.7
	1.5s		60.00nm			4.9mb
BRS	36.58	127	iPc	42	36.00	11.2X
COO	37.46	132	iPc	42	34.00	2.0
WHN	38.10	352	Pc	42	38.50	1.5

DL2	46.01	1	eP	43	39.50	-0.3
KOD	46.19	292	eP	43	41.50	-0.4
LSA	46.34	324	Pd	43	43.80	0.7
DZM	46.67	113	iPc	43	45.10	-0.2
MAT	46.72	20	iP	43	42.00	-3.4X
	0.8s		7.46nm			4.3mb
BJI	47.29	356	eP	43	48.50	-1.1
	1.0s		18.00nm			4.5mb
			PcP	45	11.50	
GBA	47.47	296	Pd	43	50.20	-1.1
	1.0s		30.10nm			4.7mb
HYB	48.12	301	iPd	43	55.00	-1.3
	1.0s		40.00nm			4.8mb
GUN	48.38	318	P	43	58.22	-0.3
	0.7s		57.00nm			5.1mb
PKI	48.48	317	P	43	58.42	-0.8
	0.5s		17.00nm			4.8mb
HHC	48.63	351	eP	44	00.20	0.3
BTO	48.64	349	eP	43	58.80	-1.2
KKN	48.71	317	P	44	00.26	-0.6
DMN	48.71	317	P	44	00.30	-0.6
GKN	49.28	317	P	44	04.38	-0.7
	0.4s		25.00nm			5.0mb
GTA	50.27	339	Pc	44	12.60	0.5
	1.0s		20.00nm			4.5mb
			PcP	45	22.60	
			pP	45	50.60	511kmX
			sP	46	17.00	
			sP	46	51.20	
			PcS	49	18.20	
			S	50	46.00	
			ScS	53	08.40	
CN2	51.09	5	eP	44	16.00	-1.9
MDJ	52.36	8	eP	44	26.50	-0.7
	1.0s		14.00nm			4.2mb
WMO	58.89	333	P	45	13.20	0.3
	1.0s		100.00nm			5.2mb
			S	52	39.50	
QUE	63.39	309	eP	45	41.10	-1.6
			eS	53	29.50	
SBA	74.40	171	iPd	46	49.10	1.4
TAB	82.14	310	eP	47	31.00	1.2
BUL	89.19	250	iPc	48	04.70	0.5
	1.0s		12.00nm			4.7mb
PMO	89.75	105	iP	48	10.20	3.6X
	0.9s		45.00nm			5.4mb
VAH	89.97	105	iP	48	11.20	3.6X
	0.9s		25.00nm			5.1mb
TPT	90.02	105	iP	48	11.60	3.8X
	0.9s		35.00nm			5.3mb
KAF	98.35	332	iP	48	43.80	-1.1
	0.6s		2.60nm			4.8mb
			eSP	48	44.60	
NUR	99.17	330	eP	48	47.60	-1.0
HFS	104.63	330	ePdiff	49	12.20	-0.7
	0.7s		1.90nm			5.1mb
			e	49	16.70	
N82	105.63	331	Pdiff	49	16.20	-1.2
	0.9s		2.30nm			5.1mb
YKA	112.10	24	ePKP	53	37.00	-2.7X
	0.8s		2.30nm			
SES	119.53	35	ePKP	53	54.00	-0.4
KIC	125.57	273	PKP	54	06.70	-0.4
LIC	125.84	272	PKP	54	07.30	-0.3
TIC	125.86	273	PKP	54	07.20	-0.5
LKO	126.59	276	PKP	54	07.22	-1.8
ALQ	129.00	50	ePKP	54	14.00	0.7
VAO	147.43	202	e(PKP)	54	45.00	-1.7



NP2:			87	55	57	BZS	15.79	288	ePc	23	21.50	-1.3	GMB	21.29	267	P	24	27.70	-0.1		
TAB	5.18	152	eP	21	02.00	3.7X	HLW	15.98	221	eP	23	23.00	-2.2	TRI	21.30	288	Pd	24	28.10	0.4	
KVT	5.61	256	iPn	21	02.50	-1.9	TIM	16.08	288	ePd	23	29.00	2.6	DUL	21.32	277	P	24	29.00	0.9	
KAS	7.18	263	eP	21	24.80	-1.7	SKO	16.14	275	eP	23	26.00	-1.3	KHC	21.54	298	iPc	24	30.50	0.4	
GAZ	7.20	222	eP	21	25.80	-0.8		Z	13s	4.72um					1.5s	107.00nm			5.0mb		
BBTK	8.39	254	ePg	21	42.00	-1.5		N	13s	5.16um					N	12s	3.30um		5.3Mszx		
			i	22	00.00			E	13s	6.45um					E	12s	5.00um				
KER	8.85	159	eP	21	54.00	4.2X				i	23	28.90					24	49.30			
TEH	9.38	135	eP	22	01.00	3.9X				iPP	23	42.20				S	28	30.00			
GPA	10.00	261	eP	22	06.20	0.6				iPPP	23	57.90		BRG	21.56	302	iPc	24	30.90	0.6	
EYL	10.03	262	eP	22	05.50	-0.6				i	24	18.00			2.2s	420.00nm			5.5mb		
HRT	10.32	264	iP	22	08.60	-1.4				iS	26	44.00				i	24	40.00			
GBZT	10.49	264	eP	22	09.40	-2.9				LR	32	18.00		KBA	21.57	292	iPc	24	30.80	0.2	
ALT	10.59	254	iP	22	13.20	-0.5	AGG	16.24	264	eP	23	30.00	1.4		1.1s	289.00nm			5.6mb		
BHL	10.60	217	P	22	10.00	-3.9X	FNA	16.43	271	eP	23	34.40	3.3X			i	24	31.70			
			S	24	34.00		BEO	16.60	285	eP	23	33.50	0.4				24	43.30			
YLV	10.60	263	eP	22	12.20	-1.7	OHR	16.78	272	ePd	23	37.00	1.5	ATN	21.58	267	P	24	31.40	0.7	
ISK	10.71	266	eP	21	58.00	-17.2X				2.4s	1492.00nm	5.7mb	RFI	21.75	276	P	24	34.90	2.7		
CSS	10.91	228	eP	22	20.00	1.9	PHP	16.93	274	iPd	23	30.40	-6.8X	SDI	21.78	277	Pd	24	33.70	1.0	
BCK	11.01	246	iP	22	19.50	0.0	PVY	17.12	278	iPd	23	41.80	2.0	KAF	21.90	338	iP	24	34.40	0.8	
PSN	11.05	280	iPc	22	16.00	-3.9X	IVA	17.14	279	iPd	23	39.32	-0.6		0.8s	212.20nm			5.6mb		
CTT	11.15	267	eP	22	17.20	-4.1X	PSZ	17.22	296	iP	23	40.10	-0.8			esP	24	42.30			
CVD	11.18	284	eP	22	17.00	-4.6X	SPC	17.24	300	iP	23	41.20	-0.1	AQU	21.95	279	P	24	35.70	1.3	
TLB	11.19	285	ePc	22	19.00	-2.8	DHR	17.29	159	ePc	23	43.00	1.2	FVI	21.96	291	P	24	34.50	0.2	
KHL	11.32	252	iP	22	23.70	0.0	TIR	17.42	274	ePn	23	42.50	-0.9	WET	22.00	298	eP	24	35.40	0.7	
KCT	11.44	263	iP	22	22.80	-2.4	PLE	17.45	280	iPd	23	45.90	2.0	AZI	22.00	278	Pd	24	36.70	2.0	
DST	11.44	259	eP	22	26.00	0.6	LACI	17.48	275	iPd	23	46.80	2.7	ARV	22.09	282	Pd	24	36.50	0.8	
DMK	11.52	271	eP	22	20.80	-5.5X	IGT	17.54	267	eP	23	47.60	2.6	CLL	22.23	303	iPc	24	37.80	0.9	
PCPY	11.53	231	eP	22	26.50	0.1	KRA	17.65	303	ePd	23	44.20	-2.0		2.0s	590.00nm			5.7mb		
PPE	11.72	293	eP	22	30.00	1.0		0.6s		49.00nm	4.8mb					eS	28	44.00			
BNT	11.73	264	iP	22	27.30	-1.8				i	23	51.20		MNO	22.23	267	Pd	24	43.40	6.0X	
EDC	11.77	264	eP	22	27.00	-2.7				i	24	04.70		BRN	22.35	306	ePc	24	38.80	0.7	
ELL	11.85	244	eP	22	32.00	1.0	TTG	17.67	277	iPd	23	52.65	6.2X	MEU	22.37	265	P	24	38.20	-0.4	
JARJ	11.92	211	Pd	22	31.70	-0.2	ULC	17.75	276	iPd	23	49.72	2.1	PZI	22.41	265	P	24	38.70	-0.3	
BURJ	11.98	212	Pd	22	33.75	1.1	NKY	17.80	279	iPd	23	50.92	2.6	MNS	22.47	280	Pd	24	40.90	1.4	
BRD	11.99	289	eP	22	26.00	-6.7X	UZD	17.96	291	eP	23	50.70	0.6	RMP	22.57	278	P	24	50.40	9.9X	
IAS	11.99	297	eP	22	32.00	-0.7	BRY	18.12	279	iPd	23	52.20	-0.1	RDP	22.57	278	P	24	42.50	2.0	
KGT	12.15	265	eP	22	30.00	-4.9X	RYD	18.13	170	iPc	23	42.00	-10.4X	RDP	22.57	278	P	24	38.00	-2.5	
SALJ	12.23	212	P	22	35.93	-0.1	SRO	18.26	295	iP	23	53.80	0.1	CTI	22.76	289	P	24	43.60	1.2	
VRI	12.26	291	ePc	22	37.00	0.6	RAC	18.74	302	eP	23	58.00	-1.7	CRE	22.79	283	Pd	24	45.50	2.8X	
JMB	12.29	275	eP	22	33.00	-3.7X				eS	27	39.00		SFI	22.82	284	Pd	24	45.30	2.5	
ISR	12.30	287	eP	22	36.50	-0.4	ZST	19.11	296	iP	24	04.50	0.3	PGD	22.92	284	P	24	47.00	3.0X	
MDSJ	12.35	209	Pc	22	38.19	0.5				e	29	21.00		MOX	22.98	301	eP+	24	46.50	2.1	
MASJ	12.46	211	Pc	22	39.53	0.3	BRT	19.49	274	Pd	24	08.50	-0.3		1.8s	229.00nm			5.4mb		
BUC	12.57	284	iPd	22	44.00	3.6X	HVAR	19.61	281	iP	24	09.00	-1.1	Z	14s	6.10um			5.2Mszx		
BUC1	12.61	283	eP	22	44.00	3.0X	VKA	19.64	296	eP	24	10.00	-0.5	N	15s	7.10um					
CVO	12.64	290	ePc	22	41.50	0.1				5.3s	5023.00nm	6.0mb X	E	16s	3.00um						
MKRJ	12.65	211	Pd	22	41.13	-0.6					ic	24	11.00				eS	29	00.00		
CSTJ	12.68	207	Pc	22	40.45	-1.6					e	27	55.00		FUR	22.99	295	eP	24	46.80	2.2
PTT	12.70	295	eP	22	31.00	-11.3X					i	28	10.60		SOTA	23.03	292	iPc	24	44.80	-0.2
OTRJ	12.74	209	Pc	22	43.29	0.4	PTJ	19.76	289	iPc	24	10.70	-1.1		1.2s	221.00nm			5.6mb		
YER	12.75	249	iP	22	42.50	-0.5	KSP	20.10	303	ePc	24	14.20	-1.1	GRF	23.13	299	ePc	24	46.90	1.1	
MLR	12.75	289	ePd	22	43.50	0.4				i	24	25.30		Z	22s	4.00um			4.8Msz		
IZM	12.89	256	eP	22	44.40	-0.4				e	27	55.00				e	24	53.80			
ALN	12.96	268	eP	23	01.90	16.2X	ORI	20.25	272	Pd	24	16.70	-0.3			e	25	07.50			
EZN	13.05	263	eP	22	45.00	-1.9	VBY	20.26	288	eP	24	16.50	-0.5			e(S)	29	09.00			
DIM	13.12	273	eP	22	44.00	-3.8X	ASW	20.44	208	eP	24	20.00	1.0	FIR	23.26	284	iPc	24	49.00	1.8	
PVL	13.14	278	iPc	22	45.00	-3.0X				eS	28	12.00				iS	29	18.00			
KDZ	13.27	272	iP	22	46.00	-3.8X	TDS	20.45	271	P	24	18.60	-0.4	UPP	23.26	326	iP	24	47.50	0.5	
MTUR	13.35	287	eP	22	58.50	7.6X	GRI	20.65	268	P	24	20.57	-0.6		1.2s	1400.00nm			6.4mb X		
CMP	13.37	287	ePc	22	50.00	-1.1		1.0s		96.30nm	5.1mb					i	24	53.00			
PLD	13.72	274	eP	22	52.00	-3.7X	LJU	20.75	289	iPd	24	22.80	0.7			i	24	59.10			
RZN	13.78	272	iPc	22	53.00	-3.7X				i	24	28.80		SAL	23.57	288	P	24	52.30	2.2	
COZ	13.86	287	ePd	22	56.50	-1.2				iS	28	24.00		MME	23.60	285	P	24	53.80	3.0X	
MDB	13.92	291	eP	23	08.00	9.7X	GAR	20.77	91	iP	24	22.00	-0.5	BDI	23.69	285	P	24	53.20	1.7	
TNR	13.94	289	ePd	22	58.00	-0.6				iPP	24	47.00		OSS	23.77	291	iPc	24	52.90	0.6	
PGB	14.06	276	iPd	22	57.00	-3.2X				iS	28	18.00		VDL	24.25	291	iPc	24	57.70	0.8	
MAIO	14.06	112	eP	22	58.00	-2.4	CEY	20.83	288	eP	24	24.80	1.8	ABHA	24.36	181	ePd	25	00.00	1.7	
			eS	25	52.00		RIY	20.88	287	eP	24	23.80	0.4		24.55	292	iPc	24	59.70	-0.2	
MMB	14.53	272	ePd	23	09.00	2.6	PRU	21.03	300	Pc	24	24.50	-0.4	KSH	24.80	86	P	25	04.00	1.7	
SRS	14.72	271	eP	23	05.30	-3.6X		Z	14s	7.60um	5.2Mszx		N	10s	12.20um						
VTS	14.75	276	iP	23	06.00	-3.4X		N	14s	8.90um			SLE	24.86	294	ePc	25	02.40	-0.3		
DEV	14.91	289	ePd	23	13.50	2.1		E	13s	7.00um			ZLA	24.94	293	ePc	25	02.90	-0.6		
HOL	14.93	209	eP	23	14.00	2.4				e	25	40.00		DHJN	24.94	179	iPd	25	09.00	5.0X	
PAIG	14.96	266	eP	23	18.00	6.0X				S	28	20.00		TNS	24.95	300	ePc	25	04.80	1.2	
SOH	14.97	270	eP	23	11.70	-0.4	KMR	21.08	295	iP+	24	25.60	0.2	HFS	25.06	324	iPc	25	05.00	0.5	
GZR	14.97	287	ePd	23	10.00	-2.1				iS	28	11.70			0.7s	209.30nm			5.9mb		
KNT	15.23	271	eP	23	15.60	0.1	NUR	21.12	334	iP	24	25.40	-0.3	Z	17s	11.98um			5.5Mszx		
THE	15.30	269	eP	23	22.60	6.2X															



03d 20h

MMK	25.32	290	iPc	25	06.70	-0.6	ARO	31.04	181	ePd	26	02.00	2.9	N	12s	1.40um			
FIN	25.37	286	P	25	06.29	-1.3	GRR	31.08	296	eP	25	58.10	-1.0	E	12s	2.00um			
ROB	25.60	286	P	25	08.96	-0.8		0.8s	53.75nm			5.5mb				sP	28	48.00	
DIX	25.70	290	iPc	25	10.70	-0.2	LPF	31.24	295	eP	25	59.40	-1.1			PP	30	27.00	
BNS	25.82	301	ePc	25	13.30	1.7		1.2s	113.05nm			5.6mb		XAN	51.05	77	Pc	28	43.50
	2.0s	184.00nm				5.4mb	BTH	31.57	286	iPd	26	06.00	2.5	N	14s	2.80um			
	Z	15s	4.40um			5.1MsZ			iP	26	09.50	12kmX		E	14s	2.40um			
SAOF	25.87	285	P	25	12.77	0.5	EBR	31.70	281	eP	26	10.50	5.9X			S	36	00.00	
ENR	25.93	286	P	25	12.34	-0.5	WMO	32.10	73	P	26	09.00	0.7	KMI	51.35	90	eP	28	45.00
LSD	25.94	289	P	25	12.85	-0.3		6.0s	1100.00nm			6.0mb X			4.0s	800.00nm		6.0mb X	
AUTN	25.96	285	P	25	14.18	0.9		Z	16s	9.90um		5.6MsZ		Z	20s	1.80um		5.1MsZ	
SBF	25.98	285	iPc	25	13.50	0.2			pP	26	12.00	10kmX		E	13s	1.00um			
STV	26.00	286	P	25	12.95	-0.5			sP	26	16.00					PP	30	46.00	
BSF	26.01	294	eP	25	12.70	-0.9			PP	27	10.00			TIY	51.74	71	iPc	28	48.50
	0.8s	18.80nm				4.8mb	EKA	32.34	309	P	26	10.00	-0.1		6.0s	560.00nm		5.7mb X	
EMS	26.03	290	ePc	25	13.40	-0.5		1.2s	20.50nm			4.9mb		N	11s	2.20um			
REVF	26.05	285	P	25	14.35	0.4	ECRI	33.34	286	eP	26	24.80	5.8X			S	36	11.00	
AURF	26.05	285	P	25	14.72	0.7	ETOR	33.54	282	e(P)	26	25.80	5.0X			sS	36	17.50	
TOUF	26.09	285	P	25	15.46	1.0	ETA	34.14	304	eP	26	36.50	10.8X	CHG	52.40	99	ePc	28	52.50
PZZ	26.11	286	P	25	13.36	-1.2	ECF	34.27	304	eP	26	32.40	5.6X		1.3s	34.62nm		5.1mb	
WTS	26.15	304	eP	25	17.00	2.4	DMU	34.51	307	eP	26	31.80	2.9X	BJI	53.20	66	eP	28	59.50
	1.0s	121.00nm				5.5mb		1.2s	102.00nm			5.6mb			6.0s	550.00nm		5.7mb X	
MVIF	26.18	285	P	25	15.91	0.7	EVIA	34.61	279	eP	26	30.50	0.4	N	16s	4.77um			
RRL	26.27	287	P	25	16.44	0.2	EHUE	34.99	278	eP	26	33.00	-0.3	BDT	53.45	100	eP	29	01.00
RSL	26.29	289	P	25	15.69	-0.5	ENIJ	35.04	276	eP	26	33.50	-0.2	GYA	53.48	86	P	29	01.40
HAU	26.30	294	iPc	25	15.10	-1.1	GUD	35.11	283	eP	26	35.20	0.8		Z	28s	1.80um		5.0MsZ
	1.2s	101.15nm				5.4mb	TOL	35.29	282	iPc	26	25.00	-10.8X	N	16s	2.20um			
	Z	20s	4.75um			5.0MsZ		1.2s	78.13nm				E	16s	2.40um				
SOD	26.33	346	iP	25	16.80	0.6			ePP	27	52.00				pP	29	11.00	32kmX	
		i		25	32.00				eS	32	10.00				S	36	35.00		
BN1	26.33	288	P	25	16.80	0.2	POO	35.36	123	eP	26	39.50	3.0X	LKO	53.84	247	P	28	59.96
WIT	26.33	305	eP	25	22.00	5.7X	EBAN	35.73	279	eP	26	39.20	-0.3	KHT	54.77	103	eP	29	10.00
MEM	26.54	300	iPc	25	20.00	1.8	AFC	35.91	277	eP	26	40.00	-1.2	NST	55.29	101	eP	29	15.00
NB2	26.58	325	P	25	18.20	-0.4	ECOG	35.91	277	eP	26	40.00	-1.2	TIC	55.58	244	P	29	14.02
	0.7s	19.40nm				4.9mb	GKN	36.42	100	P	26	45.70	0.0	KIC	55.61	244	P	29	14.34
FRF	26.60	285	iPc	25	18.90	0.0		0.8s	60.00nm			5.5mb				S	37	01.00	
	0.9s	101.55nm				5.5mb	VAL	36.67	304	eP	26	51.00	3.8X	TIA	55.74	70	eP	29	18.20
ENN	26.60	301	eP	25	20.00	1.2	EPLA	36.69	283	eP	26	47.00	-0.6		4.5s	700.00nm		6.0mb X	
	2.0s	167.00nm				5.4mb	EHOR	36.92	279	eP	26	49.00	-0.5	Z	18s	2.30um		5.3MsZ	
		e		25	26.00		DMN	36.99	100	P	26	50.86	0.3	N	16s	5.10um			
LRG	26.82	284	eP	25	21.00	0.1		0.9s	52.00nm			5.3mb		E	16s	2.40um			
	Z	20s	5.75um			5.1MsZ	KKN	37.01	100	P	26	50.74	0.1			S	37	04.50	
DBN	27.16	304	eP	25	24.00	0.1	PKI	37.23	100	P	26	52.64	0.0	LIC	55.90	244	P	29	16.44
	Z	20s	1.50um			4.6MsZ	GUN	37.38	99	P	26	54.00	0.1		Z	20s	0.46um		4.6MsZ
		eS		39	32.00		IFR	38.70	273	iPc	27	04.00	-0.7	WHN	56.80	77	eP	29	25.50
CDR	27.20	285	ePc	25	24.50	0.1	HYB	39.15	119	ePc	27	08.40	-0.1		6.0s	600.00nm		5.8mb X	
DOU	27.43	299	P	25	27.80	1.4		1.8s	146.70nm			5.4mb		Z	12s	1.80um		5.4MsZ	
		S		29	34.00				eS	33	08.00		N	17s	2.60um				
UCC	27.59	301	P	25	24.00	-3.9X	LSA	40.26	93	P	27	19.00	0.9	E	14s	2.30um			
SNF	27.63	300	P	25	31.20	3.0X		E	12s	0.81um			SNY	57.23	61	iPc	29	27.00	
SSB	27.79	289	P	25	29.58	-0.3			PP	28	50.00			8.0s	900.00nm		5.9mb X		
RGS	27.90	328	eP	25	30.50	0.0			PcP	29	24.00			Z	20s	4.50um		5.6MsZ	
LBF	27.97	292	eP	25	30.20	-1.3	AKU	40.43	326	iP	27	21.30	2.9X		N	14s	3.40um		
	0.9s	31.10nm				5.1mb		0.9s	33.61nm			5.0mb		E	12s	2.00um			
LOR	28.03	293	eP	25	30.50	-1.4			e	28	54.90				S	37	24.00		
	0.9s	31.10nm				5.1mb	AVE	40.49	274	iP	27	20.50	1.2	DL2	57.43	65	Pc	29	29.00
SMF	28.10	292	iPc	25	31.60	-1.0			i	27	41.00				4.0s	600.00nm		6.0mb X	
	1.5s	125.35nm				5.5mb	GBA	41.33	124	Pc	27	25.10	-1.2	Z	15s	1.70um		5.3MsZ	
SSF	28.29	293	eP	25	33.10	-1.1		0.9s	10.30nm			4.6mb		N	11s	1.20um			
	0.8s	28.20nm				5.1mb	GTA	42.11	75	eP	27	33.60	0.9	E	11s	1.80um			
KEV	28.40	348	eP	25	34.00	-1.0		0.8s	20.00nm			4.9mb				S	37	25.00	
	0.6s	9.10nm				4.7mb		Z	20s	4.40um		5.3MsZ	CN2	57.43	58	Pc	29	29.00	
		i		25	41.00				e	27	45.00	41kmX			5.0s	300.00nm		5.6mb X	
AVF	28.42	292	iPc	25	34.60	-0.8			pP	29	16.00			Z	15s	10.60um		6.1MsZ	
BGF	28.79	292	eP	25	37.90	-0.9			PP	29	16.00			N	12s	2.20um			
MAF	29.03	291	eP	25	40.50	-0.4	SHL	43.11	97	eP	27	40.00	-1.1	E	12s	0.90um			
TCF	29.26	291	eP	25	42.80	-0.3			iS	34	10.00				pP	29	39.00	33kmX	
CAF	29.58	289	eP	25	45.50	-0.5	KOD	44.00	127	eP	27	49.90	1.4		eS	37	27.00		
	0.8s	61.80nm				5.5mb			eS	34	02.00		MBO	58.54	260	eP	29	37.30	
LSF	29.74	291	eP	25	46.50	-0.8	LZH	46.42	77	iPc	28	07.40	-0.1	NJ2	59.18	73	Pc	29	43.00
TRO	29.78	343	eP	25	47.00	-0.4		7.0s	840.00nm			5.9mb X			4.0s	900.00nm		6.3mb X	
RJF	29.90	290	eP	25	48.60	-0.1		Z	20s	5.10um		5.5MsZ		Z	15s	1.50um		5.2MsZ	
	0.9s	49.15nm				5.3mb		N	13s	4.84um			N	15s	2.30um				
	Z	20s	6.75um			5.3MsZ			pP	28	17.00	32kmX	E	17s	2.20um				
LFF	30.50	289	eP	25	53.70	-0.4			PcP	29	35.00				S	37	50.00		
	1.0s	92.00nm				5.6mb	BTO	48.75	69	P	28	26.00	0.3	MDJ	59.58	56	eP	29	45.50
LDF	30.57	296	eP	25	54.00	-0.6		N	12s	1.40um					6.0s	700.00nm		6.0mb X	
	0.6s	13.55nm				5.0mb		E	14s	2.40um			Z	12s	2.70um		5.6MsZ		
NDI	30.70	106	iPd	25	56.00	0.0			pP	28	34.00	27kmX	N	15s	3.20um				
	0.8s	41.04nm				5.4mb			PP	30	01.50		E	15s	4.10um				
FLN	30.79	297	eP	25	55.60	-1.0	CD2	48.91	83	eP	28	27.00	0.1	KRI	60.53	195	iPd	29	55.10
	1.0s	40.00nm				5.2mb		Z	14s	2.40um		5.3MsZ	FRB	61.10	332	eP	29	53.00	
	Z	18s	3.75um			5.1MsZ	HHC	49.70	68	P	28	34.30	1.3	SSE	61.36	73	Pc	29	56.00
MFF	30.83	292	eP	25	55.60	-1.3		1.0s	40.00nm			5.4mb			4.0s	500.00nm		6.0mb X	
	1.0s	24.00nm				5.0mb		Z	18s	3.60um		5.4MsZ		Z	20s	1.80um		5.2MsZ	
														N	18s	2.10um			



PSI	63.46	113	eP	30	13.00	1.7	DEPTH = 239.4 ± 37.9 km	CVO	12.66	290	eP	44	05.50	0.9
IPM	63.54	110	ePc	30	11.30	-0.6	ROMANIA	PTT	12.73	295	eP	43	56.00	-9.5X
SCH	66.13	324	ePc	30	27.20	-0.9	(358)	YER	12.75	249	eP	44	06.00	0.2
PPI	66.76	114	eP	30	34.00	1.4	VRI	0.42	191	iPc	37	19.50	0.9	
BFT	69.11	193	iPd	30	46.00	-1.3	PPE	0.55	96	ePc	37	25.50	6.5X	
	1.5s	333.33nm			6.3mb		CVO	0.65	226	ePd	37	19.00	-0.4	
WIN	69.26	206	iPd	30	47.50	-0.8	PTT	0.73	335	eP	37	17.00	-2.7	
	1.5s	69.44nm			5.6mb		BRD	0.78	169	iPc	37	21.50	0.9	
INK	69.31	359	eP	30	47.00	-0.7	ISR	1.16	190	ePc	37	21.50	-1.3	
		pP	31	16.50	118kmX		CFR	1.43	139	ePd	37	26.50	1.9	
SLR	69.46	194	iPc	30	50.00	0.6	MTUR	1.63	230	ePd	37	26.00	-0.4	
	1.3s	96.15nm			5.8mb		TLB	1.89	153	iPc	37	29.50	1.1	
Z	17s	2.04um			5.4MsZ		TNR	1.89	252	ePd	37	28.00	-0.6	
MAT	69.57	59 (P)		30	48.00	-2.0	COZ	1.99	242	iPd	37	31.00	1.4	
	1.8s	68.18nm			5.5mb		DEV	2.77	263	ePd	37	40.00	2.7	
Z	20s	2.48um			5.5MsZ		PSN	2.77	159	eP	37	38.00	0.7	
		eS	39	56.00			PVL	3.24	200	iPd	37	41.00	-1.5	
BAG	69.83	86	eP	30	51.00	-0.9	JMB	3.81	183	eP	37	48.00	-1.2	
IMA	70.80	7	P	30	56.70	-0.4	PGB	4.19	208	eP	37	53.00	-0.7	
	1.2s	25.57nm			5.2mb		DIM	4.33	193	eP	37	54.00	-1.4	
FBA	72.41	5	P	31	06.80	0.2	KDZ	4.74	193	iP	38	00.00	-0.4	
	1.2s	41.67nm			5.4mb		RZN	4.84	199	iPd	38	02.00	0.2	
YKA	73.67	349	eP	31	13.20	-0.8	KKB	5.17	213	iPc	38	06.00	0.2	
	1.1s	10.50nm			4.8mb		MMB	5.20	207	ePc	38	07.00	0.9	
PMR	75.59	6	P	31	24.00	-1.0		S.D. = 1.4	on	20	of	21	obs.	
	1.3s	42.45nm			5.3mb									
KLU	75.91	5	P	31	26.80	-0.2								
RSNY	76.91	319	P	31	31.00	-1.8								
	1.0s	10.85nm			4.9mb									
Z	20s	1.36um			5.3MsZ									
FFC	78.53	340	ePc	31	41.40	-0.1								
	1.0s	21.00nm			5.2mb									
SES	84.62	344	ePc	32	14.00	0.4								
	1.2s	88.00nm			5.9mb									
PNT	87.16	349	eP	32	27.00	0.9								
NEW	87.80	347	P	32	30.20	1.0								
	0.9s	49.34nm			5.8mb									
RSCP	89.15	321	P	32	39.00	3.1X								
	Z	20s			5.3MsZ									
LRM	89.26	343	eP	32	37.10	0.5								
BW06	91.48	340	P	32	46.60	-0.3								
	1.3s	10.93nm			5.0mb									
GOL	93.21	336	P	32	54.80	-0.1								
	Z	20s			5.3MsZ									
TUL	93.30	328	eP	32	54.40	-0.7								
	1.2s	25.50nm			5.5mb									
Z	20s	1.04um			5.3MsZ									
		LR	06	22.10										
DAU	94.13	341	P	33	00.00	0.8								
LBFM	95.28	349	P	33	05.00	0.6								
MSU	96.15	341	P	33	09.00	0.5								
TNP	97.67	345	P	33	15.00	-0.3								
ANMO	97.92	335	P	33	16.00	-0.4								
	1.4s	37.79nm			5.8mb									
ALO	97.93	335	e(P)	33	16.00	-0.5								
	1.4s	7.56nm			5.1mb									
Z	18s	1.37um			5.5MsZ									
BONR	98.00	345	P	33	17.70	0.8								
	S.D. = 1.2	on	272	of	329	obs.								
* MAY 03, 1991 22h 32m 33.36±1.25s														
37.411 N ±10.0km 21.641 E ±9.3km														
DEPTH = 10.0km (geophysicist)														
SOUTHERN GREECE (368)														
ML 3.1 (ATH). MD 3.4 (THE).														
VLS	1.13	313	ePn	32	53.20	-1.3								
VLI	1.25	123	ePb	32	56.70	0.2								
AGG	1.70	18	ePb	33	02.00	-1.2								
			eSb	33	24.00									
ATH	1.74	71	iPnd	33	03.80	0.0								
			eSn	33	25.00									
IGT	2.35	335	ePn	33	13.90	1.2								
			eSn	33	43.30									
LIT	2.77	14	ePnc	33	19.00	0.4								
			eSn	33	53.00									
KZN	2.89	2	ePn	33	20.60	0.2								
PAIG	2.98	32	ePn	33	20.20	-1.2								
FNA	3.37	357	ePn	33	28.00	0.8								
GRG	3.59	9	ePnc	33	31.50	1.3								
SOH	3.66	21	ePn	33	31.40	0.2								
KNT	3.87	14	ePn	33	33.90	-0.3								
SRS	4.00	22	ePn	33	35.60	-0.4								
	S.D. = 1.0	on	13	of	13	obs.								
? MAY 03, 1991 22h 36m 47.62±4.78s														
46.278 N ±29.1km 26.836 E ±18.8km														
ROMANIA (358)														
VRI	0.42	191	iPc	37	19.50	0.9								
PPE	0.55	96	ePc	37	25.50	6.5X								
CVO	0.65	226	ePd	37	19.00	-0.4								
PTT	0.73	335	eP	37	17.00	-2.7								
BRD	0.78	169	iPc	37	21.50	0.9								
ISR	1.16	190	ePc	37	21.50	-1.3								
CFR	1.43	139	ePd	37	26.50	1.9								
MTUR	1.63	230	ePd	37	26.00	-0.4								
TLB	1.89	153	iPc	37	29.50	1.1								
TNR	1.89	252	ePd	37	28.00	-0.6								
COZ	1.99	242	iPd	37	31.00	1.4								
DEV	2.77	263	ePd	37	40.00	2.7								
PSN	2.77	159	eP	37	38.00	0.7								
PVL	3.24	200	iPd	37	41.00	-1.5								
JMB	3.81	183	eP	37	48.00	-1.2								
PGB	4.19	208	eP	37	53.00	-0.7								
DIM	4.33	193	eP	37	54.00	-1.4								
KDZ	4.74	193	iP	38	00.00	-0.4								
RZN	4.84	199	iPd	38	02.00	0.2								
KKB	5.17	213	iPc	38	06.00	0.2								
MMB	5.20	207	ePc	38	07.00	0.9								
	S.D. = 1.4	on	20	of	21	obs.								
* MAY 03, 1991 22h 54m 41.86±1.49s														
37.431 N ±12.9km 21.589 E ±11.9km														
DEPTH = 10.0km (geophysicist)														
SOUTHERN GREECE (368)														
ML 3.3 (ATH). MD 3.5 (THE).														
VLS	1.09	314	eP	55	01.50	-0.8								
VLI	1.29	123	iPd	55	06.00	0.2								
AGG	1.69	20	ePb	55	10.00	-1.6								
ATH	1.77	72	eP	55	12.50	-0.2								
			eS	55	34.50									
IGT	2.32	335	eP	55	20.90	0.2								
			eSn	55	50.00									
LIT	2.76	15	ePn	55	26.90	0.0								
			eSn	55	59.90									
KZN	2.87	3	ePn	55	31.00	2.4								
FNA	3.35	357	ePn	55	35.60	0.2								
			eSn	56	15.60									
KNT	3.86	15	ePn	55	42.10	-0.5								
			eSn	56	27.90									
	S.D. = 1.2	on	9	of	9	obs.								
MAY 03, 1991 23h 41m 01.87±0.15s														
42.647 N ±3.2km 43.263 E ±1.9km														
DEPTH = 10.8km ( 7 depth phases)														
5.2mb ( 64 obs.) 3.9MsZ ( 6 obs.)														
WESTERN CAUCASUS (362)														
Felt in the Dzhava-Chiotura-Ambrolauri oreo, USSR.														
TAB	5.14	152	eP	42	26.00	5.3X								
			i	42	36.00									
KVT	5.61	256	iPn	42	26.00	-1.3								
GAZ	7.18	222	eP	42	48.70	-0.6								
KAS	7.19	263	eP	42	48.50	-1.0								
BBTK	8.39	254	iPd	43	05.00	-1.4								
			i	43	20.00									
KER	8.81	159	eP	43	13.00	0.8								
TEH	9.34	135	eP	43	21.00	1.4								
HRT	10.33	264	iP</											



ARV	22.11	283 P	45 59.70	0.9	Z	21s	0.22um	3.7MsZ	MHC	49.70	68 P	49 56.50	0.6	
KMSA	22.23	177 ePc	46 00.00	-0.2	SMF	28.12	292 eP	46 55.10	-0.6	1.0s	40.00nm		5.4mb	
CLL	22.26	303 iPc	46 00.90	0.8		0.9s	18.00nm	4.9mb	N	12s	0.50um			
	1.7s	260.00nm		5.4mb	SSF	28.31	293 iPc	46 56.40	-0.9	XAN	51.05	77 Pc	50 06.00	-0.1
		eS	50 08.00			0.8s	18.80nm	4.9mb	KMI	51.34	90 eP	50 07.50	-1.2	
MEU	22.38	265 P	46 01.00	-0.6	PLDF	28.36	290 P	46 57.48	-0.4		1.5s	60.00nm		5.3mb
MNS	22.49	280 P	46 03.50	0.9	KEV	28.44	348 eP	46 59.00	0.8	TIY	51.74	71 eP	50 11.50	0.1
RMP	22.59	278 P	46 04.00	0.5			i	47 25.20	122kmX	N	11s	0.35um		
QUE	22.67	116 eP	46 00.50	-4.1X	AVF	28.44	292 iPc	46 58.10	-0.4	CHG	52.38	99 ePc	50 15.20	-1.1
CTI	22.78	289 P	46 07.10	1.6		0.8s	44.35nm	5.3mb	BJI	53.20	66 eP	50 22.50	0.3	
CRE	22.81	283 P	46 09.50	3.7X	GRC	28.58	293 P	46 59.18	-0.5		1.0s	44.00nm		5.4mb
SFI	22.84	284 P	46 08.00	2.1	AGO	28.69	291 P	47 00.26	-0.5	BDT	53.43	100 eP	50 23.00	-1.0
MOX	23.01	301 eP	46 12.00	4.4X	LBL	28.73	289 P	47 01.16	0.1	GYA	53.47	86 Pc	50 23.60	-0.9
	1.3s	41.00nm		4.8mb	PYM	28.81	290 P	47 01.76	-0.2	LKO	53.84	247 P	50 22.94	-4.2X
		eS	50 35.00		BGF	28.82	292 eP	47 01.40	-0.5	KHT	54.75	103 eP	50 20.30	-13.5X
FUR	23.02	295 eP	46 09.50	1.8	MAF	29.05	291 iPc	47 04.00	0.0	NST	55.27	101 eP	50 38.00	0.4
SOTA	23.05	293 iPc	46 08.20	0.0		0.9s	29.50nm	5.1mb	TIC	55.58	244 P	50 37.04	-0.8	
	0.9s	92.30nm		5.3mb	TCF	29.29	291 iPc	47 06.20	0.0	KIC	55.60	244 P	50 37.30	-2.7
		i	46 09.20	4km		1.0s	32.00nm	5.1mb	TIA	55.75	70 eP	50 40.50	-0.3	
GRF	23.15	299 eP	46 11.00	2.0	CAF	29.61	289 eP	47 09.00	0.0	LIC	55.89	244 P	50 39.38	-2.7
		e	46 15.60	17km	LSF	29.76	291 iPc	47 09.90	-0.5	WHN	56.80	77 Pd	50 48.50	0.1
FIR	23.28	284 e(P)	46 13.50	3.3X	RJF	29.92	290 eP	47 12.10	0.3		1.0s	100.00nm		5.8mb
UPP	23.30	326 iP	46 10.70	0.5		0.6s	25.25nm	5.2mb	SNY	57.23	61 eP	50 50.20	-1.2	
		iS	50 24.00		Z	20s	0.30um	3.9MsZ	DL2	57.43	65 P	50 52.30	-0.5	
SAL	23.59	288 P	46 15.50	2.3	LPO	30.26	288 eP	47 14.60	-0.3		1.0s	110.00nm		5.8mb
MME	23.62	285 P	46 16.90	3.0X	LFF	30.53	289 iPc	47 17.10	-0.1	CN2	57.44	58 eP	50 51.00	-1.8
BDI	23.71	285 P	46 15.80	1.3		0.9s	29.50nm	5.1mb		1.0s	10.00nm		4.8mb	
OSS	23.79	291 iPd	46 16.50	1.1	LDF	30.60	296 eP	47 17.40	-0.3	Z	16s	1.20um		5.1MsZ
VDL	24.27	291 iPd	46 21.10	1.0	NDI	30.68	106 iPc	47 18.50	-0.2	N	14s	0.30um		
ABHA	24.32	181 ePd	46 23.00	2.2	FLN	30.82	297 eP	47 19.00	-0.7	E	14s	0.10um		
BOB	24.44	287 P	46 24.50	2.9X	Z	22s	0.28um	3.9MsZ			eP	51 00.00	29kmX	
LLS	24.57	292 iPd	46 23.20	0.2	MFF	30.85	293 eP	47 19.10	-0.9			eS	58 47.00	
KSH	24.79	86 P	46 28.00	2.9	GRR	31.10	296 eP	47 21.50	-0.7	NJ2	59.18	73 Pc	51 04.50	-0.6
SLE	24.89	294 iPd	46 25.80	0.0		0.9s	36.05nm	5.3mb		0.8s	100.00nm		6.0mb	
DHJN	24.91	179 ePd	46 28.00	1.5	LPF	31.27	295 eP	47 22.90	-0.7	KRI	60.50	195 eP	51 18.00	3.7X
ZJLA	24.96	293 iPd	46 26.50	-0.1		1.2s	65.45nm	5.4mb	FRB	61.14	332 eP	51 17.00	-1.1	
HFS	25.10	324 eP	46 28.40	0.7	WMQ	32.10	72 P	47 31.60	0.5	PSI	63.43	113 ePd	51 35.50	1.5
	0.6s	160.10nm		5.9mb		1.0s	100.00nm	5.7mb	IPM	63.52	110 ePd	51 34.80	0.2	
		e	46 35.00	23kmX	N	10s	1.50um			0.9s	40.70nm		5.6mb	
		LR	55 09.00		E	10s	1.70um		BUL	63.92	195 iPd	51 35.10	-2.1	
PCP	25.11	286 P	46 28.14	0.2			pP	47 37.20	19km		1.0s	20.50nm		5.3mb
PGF	25.13	282 eP	46 30.10	1.9			sP	47 46.00		BRW	65.46	7 P	51 47.10	0.7
	1.4s	161.20nm		5.5mb	EKA	32.37	309 Pc	47 32.70	-0.6	SCH	66.17	324 eP	51 51.00	-0.3
FEL	25.21	294 eP	46 27.52	-1.5		0.7s	5.60nm	4.6mb	WIN	69.23	206 iPd	52 10.00	-1.0	
CKI	25.31	286 P	46 31.30	1.5	EHUE	35.01	278 eP	47 56.20	-0.2		0.5s	14.08nm		5.4mb
MMK	25.34	290 iPd	46 30.30	-0.1	ENIJ	35.05	276 eP	47 56.20	-0.5	INK	69.35	359 eP	52 10.00	-0.8
FIN	25.39	286 P	46 30.19	-0.5	GUD	35.13	283 eP	47 56.70	-0.7	MAT	69.58	59 iPc	52 10.70	-2.2
ROB	25.62	286 P	46 32.14	-0.7	TOL	35.31	282 eP	47 58.00	-0.8		1.6s	66.67nm		5.5mb
CDF	25.69	295 eP	46 32.80	-0.7			eS	53 53.00		IMA	70.83	7 P	52 20.00	-0.2
DIX	25.72	290 iPd	46 34.10	0.1	POO	35.33	123 iPc	48 00.00	0.8		1.2s	11.93nm		4.9mb
ENR	25.95	286 P	46 35.73	-0.2	AFC	35.92	277 eP	48 03.70	-0.5	CBM	72.11	318 P	52 30.20	2.2
LSD	25.97	289 P	46 35.83	-0.4	ECOG	35.93	277 eP	48 03.30	-0.9	FBA	72.44	5 P	52 29.70	0.1
SBF	26.00	285 eP	46 37.00	0.6	EGUA	36.11	277 eP	48 05.00	-0.6		0.9s	16.67nm		5.1mb
	0.8s	80.60nm		5.5mb	EHOR	36.94	279 eP	48 12.00	-0.6	TTA	73.65	9 P	52 31.50	-5.3X
STV	26.02	286 P	46 35.93	-0.6	DMN	36.97	100 P	48 13.64	0.4		1.1s	14.06nm		4.9mb
BSF	26.03	294 eP	46 35.70	-1.0	KKN	37.00	100 P	48 13.32	-0.1	YKA	73.71	349 eP	52 36.20	-0.9
EMS	26.06	290 iPd	46 36.70	-0.3		0.9s	89.00nm	5.6mb	KLU	75.95	5 P	52 50.30	0.2	
PZZ	26.13	287 P	46 36.55	-1.1	PKI	37.21	100 P	48 15.24	-0.1	PDB	76.92	9 P	52 56.00	0.6
WTS	26.17	304 eP	46 42.50	4.7X		0.8s	112.00nm	5.7mb	FFC	78.57	340 iPc	53 04.80	0.2	
	1.0s	48.00nm		5.1mb	GUN	37.36	99 P	48 16.68	0.0		0.8s	14.00nm		5.1mb
LPG	26.24	289 iPc	46 38.90	0.0		0.8s	117.00nm	5.7mb	SES	84.66	344 ePc	53 36.50	-0.1	
	0.8s	41.65nm		5.2mb	EJIF	37.66	277 eP	48 18.20	-0.4	PNT	87.19	349 eP	53 50.00	0.8
LPL	26.26	289 iPc	46 38.90	0.0	IFR	38.71	273 iPc	48 27.50	-0.2		0.6s	6.00nm		5.0mb
	0.8s	40.30nm		5.2mb	HYB	39.13	119 iPc	48 30.80	-0.3	NEW	87.83	347 P	53 53.30	1.0
RRL	26.30	288 P	46 39.52	0.2		1.0s	75.00nm	5.3mb		0.7s	45.00nm		5.9mb	
HAU	26.32	295 eP	46 38.70	-0.6	LSA	40.25	93 Pc	48 42.00	1.1	LRM	89.30	343 eP	54 00.40	0.8
	1.0s	36.00nm		5.0mb	AKU	40.46	326 iPc	48 44.80	3.2X	GMW	89.35	351 P	53 59.60	0.1
Z	21s	0.35um		3.9MsZ		1.0s	28.00nm	4.9mb	LON	90.01	350 P	54 02.50	-0.2	
BNI	26.35	288 P	46 40.40	0.7	AVE	40.50	274 eP	48 42.00	-0.3	BW06	91.52	340 P	54 10.20	0.3
WIT	26.36	305 eP	46 48.00	8.5X			i	48 53.50	41kmX		1.1s	4.96nm		4.8mb
SOD	26.36	346 iP	46 40.10	0.7	GBA	41.30	124 Pc	48 48.20	-0.8	GOL	93.24	336 P	54 17.90	-0.1
		i	46 53.40	54kmX		0.7s	17.80nm	4.9mb		0.8s	4.09nm		4.9mb	
MEM	26.57	300 Pc	46 43.00	1.6	TIO	41.56	271 iPc	48 51.00	-0.2	TUL	93.34	328 eP	54 16.80	-1.3
NB2	26.62	325 P	46 41.40	-0.4			i	48 54.00	10km		1.2s	20.90nm		5.4mb
	0.8s	27.70nm		5.0mb	GTA	42.11	75 Pc	48 56.20	0.6	DAU	94.17	341 P	54 23.20	0.9
FRF	26.62	285 eP	46 42.40	0.4		1.0s	20.00nm	4.8mb	LBFM	95.32	349 P	54 27.60	0.2	
	0.9s	42.60nm		5.1mb	Z	16s	0.69um	4.6MsZ	MSU	96.19	341 P	54 32.60	1.1	
LRG	26.84	284 eP	46 44.50	0.5			PP	50 34.00		TNP	97.71	345 P	54 39.10	0.8
	21s	0.17um		3.6MsZ	SHL	43.09	97 eP	49 03.00	-0.9	ANMO	97.96	335 P	54 39.00	-0.5
CDR	27.22	285 ePc	46 47.70	0.2	KOD	43.97	127 eP	49 11.30	0.2		1.2s	14.06nm		5.5mb
DOU	27.45	299 Pc	46 50.90	1.4	LZH	46.42	77 eP	49 30.00	-0.4	ALO	97.97	335 eP	54 39.00	-0.5
SSB	27.82	289 P	46 52.74	-0.2		1.5s	90.00nm	5.6mb		1.1s	3.16nm		4.9mb	
LBF	28.00	293 iPc	46 53.60	-1.0	Z	18s	0.74um	4.7MsZ		S.D. = 1.1 on 220 of 251 obs.				
	1.0s	30.00nm		5.0mb	N	15s	0.71um							
LOR	28.05	293 iPc	46 53.90	-1.1	BTO	48.76	69 eP	49 49.90	1.3					
	1.0s	19.00nm		4.8mb	CD2	48.90	83 eP	49 49.80	0.1					
							</							

AY 03, 1991 23h 56m 58.27± 0.23s



29.811 N  $\pm$  5.1km 42.721 W  $\pm$  3.7km  
 DEPTH = 10.0km (geophysicist)  
 5.1mb ( 38 obs.) 5.1Msz ( 10 obs.)

NORTH ATLANTIC RIDGE (403)

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 95, 19C

Centroid Location:

Origin Time 23:57: 5.5 0.7

Lat 29.42N 0.11 Lon 41.81W 0.17

Dep 15.0 FIX Half-duration 2.1

Moment Tensor: Scale 10\*\*17 Nm

Mrr=-1.03 0.23 Mtt=-0.16 0.09

Mff= 1.18 0.22 Mrt= 0.00 0.00

Mrf= 0.00 0.00 Mtf=-0.04 0.21

Principal Axes:

T Vol= 1.19 Plg= 0 Azm=268

N -0.16 0 178

P -1.03 90 180

Best Double Couple: Mo=1.1\*10\*\*17

NP1:Strike=358 Dip=45 Slip=-90

NP2: 178 45 -90

TBH 25.74 225 eP 02 30.87 0.2

TRN 25.83 226 eP 02 32.22 0.8

TCE 26.01 227 eP 02 34.81 1.6

TPP 26.11 226 eP 02 37.41 3.3X

TBR 27.89 302 P 02 51.80 1.6

RSNY 29.09 309 P 03 10.00 9.0X

NA2 30.07 295 P 03 12.00 2.2

SCH 30.38 332 eP 03 12.00 -0.5

IFR 32.10 74 iP 03 28.00 0.0

MAL 32.60 68 iPd 03 34.50 2.4

JSC 32.84 288 P 03 36.00 1.9

TOL 33.07 62 iPc 03 40.50 4.3X

1.8s 227.27nm 5.8mb

ePP 04 55.00

eS 08 58.00

RSCP 36.30 291 P 04 03.50 -0.5

2.1s 135.14nm 5.4mb

LPF 36.65 48 eP 04 07.00 0.4

1.1s 31.75nm 5.0mb

GRR 36.85 48 eP 04 08.50 0.1

MFF 36.91 51 eP 04 09.10 0.2

1.3s 43.30nm 5.1mb

FLN 37.19 47 eP 04 11.30 0.1

Z 21s 3.75um 5.2Msz

LFF 37.23 54 eP 04 11.60 0.0

1.1s 14.65nm 4.7mb

LDF 37.38 48 eP 04 12.90 0.1

0.9s 14.75nm 4.8mb

FRB 37.73 342 eP 04 15.00 -0.5

EKA 37.93 36 Pc 04 15.50 -1.8

0.8s 7.80nm 4.5mb

LSF 37.99 52 eP 04 17.90 -0.1

1.1s 22.00nm 4.8mb

TCF 38.46 52 eP 04 22.10 0.1

1.1s 15.85nm 4.7mb

MAF 38.69 52 eP 04 23.80 -0.1

SOB1 38.83 177 eP 04 25.00 -0.3

AVF 39.32 51 eP 04 29.10 0.0

SSF 39.46 51 eP 04 30.20 -0.1

1.3s 28.90nm 4.8mb

SMF 39.63 52 eP 04 31.90 0.2

1.3s 46.95nm 5.0mb

LOR 39.73 51 eP 04 32.40 -0.2

1.3s 32.50nm 4.8mb

Z 21s 1.42um 4.8Msz

LBF 39.77 51 eP 04 32.70 -0.2

1.1s 19.55nm 4.7mb

LKO 40.10 112 P 04 34.82 -1.1

DOU 40.72 47 P 04 42.20 1.6

LPL 41.50 54 eP 04 48.30 1.0

1.0s 10.00nm 4.5mb

HAU 41.51 50 eP 04 47.00 -0.1

0.9s 16.40nm 4.8mb

Z 21s 1.30um 4.8Msz

ENN 41.69 46 eP 04 47.50 -1.0

1.0s 101.00nm 5.5mb

BSF 41.78 50 eP 04 49.10 -0.4

CDF 42.18 49 eP 04 52.80 0.1

PDCR 42.24 175 eP 04 51.20 -2.1

TIC 42.27 115 P 04 53.80 0.1

WTS 42.48 44 eP 04 56.00 1.0

1.0s 22.00nm 4.8mb

LIC 42.52 116 P 04 54.90 -0.9

Z 20s 3.75um 5.3Msz

S 11 21.00

ABH 42.56 47 eP 04 57.66 1.9

KIC 42.66 116 P 04 57.00 0.1

SOTA 44.71 52 iPc 05 14.00 0.7

1.4s 59.10nm 5.3mb

i 05 46.50

i 05 50.80

GRF 44.90 48 ePd 05 15.00 0.3

ed 05 16.90

MOX 45.25 47 eP 05 19.00 1.5

1.2s 24.00nm 5.0mb

eS 12 00.00

BAO 45.46 187 ePd 05 19.90 0.3

KBA 46.16 52 iPc 05 13.50 -11.4X

3.3s 155.00nm

i 05 26.40

i 05 50.60

CLL 46.19 46 eP 05 24.00 -0.8

Z 21s 1.50um 4.9Msz

eS 12 14.00

KHC 46.39 49 P 05 27.30 0.7

BRG 46.74 47 eP 05 29.20 0.0

2.4s 100.00nm 5.5mb

e 12 24.00

MEO 46.97 291 e(P) 05 32.30 1.0

PRU 47.07 48 eP 05 30.50 -1.3

2.4s 148.30nm 5.7mb

Z 17s 1.20um 4.9Msz

N 17s 0.70um

E 16s 1.20um

e 07 26.00

S 12 27.00

NB2 47.07 33 P 05 31.30 -0.4

1.0s 18.60nm 5.1mb

HFS 48.02 34 eP 05 38.90 -0.3

1.0s 30.40nm 5.3mb

Z 19s 0.66um 4.6Msz

e 05 43.70

e 05 45.50

e 05 48.70

e 06 48.20

LR 20 00.00

KSP 48.23 47 ePc 05 41.00 0.1

FFC 48.65 318 eP 05 43.00 -1.1

0.7s 6.00nm 4.8mb

ZST 48.71 50 iP 05 43.90 -0.8

SIV 48.85 204 P 05 44.80 -1.3

SRO 49.53 51 iP 05 50.70 -0.3

UPP 49.91 35 iP 05 52.60 -1.1

KRA 50.55 48 eP 05 54.60 -4.1X

e 05 58.90

SPC 50.77 49 eP 05 58.30 -2.4

GOL 51.48 299 P 06 07.40 1.1

1.4s 13.05nm 4.7mb

Z 20s 2.50um 5.2Msz

ZOBO 51.95 212 P 06 09.60 -0.8

1.3s 31.55nm 5.1mb

S 13 40.00

LR 21 24.00

CCH 52.07 209 P 06 14.60 3.6X

LPB 52.17 211 P 06 09.00 -2.8X

1.0s 100.00nm 5.7mb

Z 24s 2.33um 5.1Msz

LR 22 38.00

PPD 52.20 190 eP 06 11.30 -0.2

VAO 52.67 185 eP 06 13.80 -1.2

ANMO 53.28 293 P 06 20.10 0.4

2.4s 362.50nm 5.9mb

ALO 53.28 293 eP 06 20.00 0.3

2.0s 58.82nm 5.2mb

Z 22s 2.78um 5.3Msz

NUR 53.47 35 iP 06 19.80 -0.7

1.0s 22.00nm 5.1mb

KKB 53.49 58 eP 06 22.00 1.0

BW06 54.10 303 P 06 24.00 -1.6

1.4s 54.24nm 5.4mb

SES 54.16 313 eP 06 26.00 0.2

KAF 54.35 33 iP 06 26.40 -0.6

0.9s 29.70nm 5.3mb

esP 06 29.30

RZN 54.73 58 eP 06 30.00 -0.2

PVL 54.90 56 eP 06 30.00 -1.3

SOD 54.92 26 iP 06 30.00 -1.1

MLR 54.97 53 eP 06 34.00 2.1

KDZ 55.25 58 iP 06 34.00 0.2

KEV 55.35 23 eP 06 33.00 -1.2

LRM 55.66 307 eP 06 37.70 0.7

YKA 55.70 328 eP 06 34.10 -2.7

1.1s 5.30nm 4.5mb

DAU 55.79 301 P 06 37.20 -0.9

MSU 56.91 299 P 06 46.00 -0.1

DUG 57.00 301 P 06 46.00 -0.6

NEW 58.39 311 P 06 54.80 -1.3

1.2s 20.83nm 5.1mb

OBN 60.18 41 eP 07 08.00 -0.3

e 15 32.00

GLA 60.48 293 eP 07 12.00 1.3

TNP 60.85 299 P 07 12.50 -0.6

2.5s 90.00nm 5.5mb

BBTK 61.09 58 eP 07 15.00 0.2

GSC 61.35 296 eP 07 14.00 -2.6

BONR 61.70 300 P 07 19.50 0.2

CLC 61.81 297 eP 07 19.00 -0.7

SBB 62.33 296 eP 07 24.00 0.7

ISA 62.53 297 eP 07 27.00 2.4

INK 62.96 335 ePd 07 26.00 -0.8

CMB 63.25 300 P 07 31.00 1.7

ADI 65.10 65 eP 07 44.00 2.6

JVI 65.60 66 eP 07 45.00 0.3

PRNI 65.89 68 eP 07 47.00 0.5

FBA 69.45 334 P 08 08.30 0.0

1.2s 22.73nm 5.2mb

KLU 70.20 330 P 08 11.80 -1.2

IMA 71.05 336 P 08 18.20 0.0

1.3s 15.33nm 5.0mb

PMR 71.52 331 P 08 20.00 -0.9

Z 20s 2.00um 5.4Msz

MAIO 81.78 53 eP 09 21.00 2.1

eS 19 42.00

SLR 87.62 121 iPc 09 50.00 1.6

1.2s 45.31nm 5.6mb

YAK 88.29 4 eP 09 51.20 0.3

e 10 22.00

QUE 90.33 55 eP 10 00.37 -1.0

S.D. = 1.1 on 103 of 110 obs.

\* MAY 04, 1991 00h 02m 54.67  $\pm$  0.67s

29.631 N  $\pm$  11.7km 42.823 W  $\pm$  11.6km

DEPTH = 10.0km (geophysicist)

4.5mb ( 7 obs.)

NORTH ATLANTIC RIDGE (403)

SCH 30.50 332 eP 09 10.00 0.1



04d 00h

VLS 1.42 336 ePn 14 18.50 3.1X  
 ATH 2.19 59 ePg 14 33.50 7.0X  
 AGG 2.28 20 ePn 14 29.80 1.9  
 eSn 14 56.80  
 IGT 2.77 344 iPnc 14 35.00 0.3  
 eSn 15 07.60  
 LIT 3.35 15 ePn 14 43.50 0.6  
 eSn 15 22.00  
 KZN 3.44 6 ePn 14 44.50 0.2  
 PAIG 3.56 31 ePn 14 45.50 -0.4  
 eSn 15 25.30  
 FNA 3.90 1 ePn 14 50.50 -0.3  
 eSn 15 34.70  
 THE 3.96 18 ePn 14 51.30 -0.3  
 GRG 4.16 11 ePn 14 54.30 -0.1  
 eSn 15 42.10  
 SOH 4.25 21 ePn 14 55.90 0.2  
 eSn 15 43.20  
 KNT 4.45 15 ePn 14 58.30 -0.3  
 eSn 15 48.40  
 SRS 4.59 22 ePn 14 59.40 -1.1  
 ATN 4.84 287 P 15 04.50 0.4  
 ORI 4.98 311 P 15 06.30 0.2  
 BRT 5.13 322 P 15 07.00 -1.2  
 HFS 23.79 351 eP 18 58.30 -4.5X  
 0.4s 1.30nm 3.9mb  
 e 19 03.30

NB2 25.02 348 P 19 10.20 -4.6X  
 0.6s 0.40nm 3.3mb  
 S.D. = 0.8 on 15 of 19 obs.

& MAY 04, 1991 00h 17m 33.28s  
 61.209 N 150.629 W  
 DEPTH = 39.2km  
 SOUTHERN ALASKA (2)  
 <AEIC>. ML 2.6 (AEIC).

SUA 0.26 348 iPd 17 41.34 0.1  
 eS 17 48.43  
 PMS 0.52 86 iPc 17 43.98 -0.3  
 NKA 0.55 213 eP 17 46.21 1.5  
 PWA 0.57 39 iPc 17 44.43 -0.5  
 eS 17 53.40  
 SPU 0.69 268 iPd 17 46.07 -0.6  
 eS 17 56.55  
 SLKM 0.73 164 iPc 17 46.49 -0.8  
 CRP 0.74 275 iPd 17 46.87 -0.6  
 eS 17 57.80  
 NCG 0.76 286 iPd 17 46.99 -0.8  
 eS 17 57.78  
 PLRM 0.82 61 ePc 17 47.29 -1.1  
 eS 17 59.07  
 PMR 0.82 61 ePc 17 47.70 -0.7  
 CKL 0.83 270 iPd 17 47.85 -0.8  
 BGL 0.85 274 iPd 17 48.18 -0.9  
 eS 17 59.80  
 SKT 0.89 331 iPd 17 48.41 -1.0  
 eS 18 00.75  
 GHO 0.99 55 iPd 17 50.18 -0.8  
 eS 18 03.86  
 KNK 1.07 78 ePd 17 51.25 -0.8  
 eS 18 05.72  
 RDT 1.08 235 iPd 17 51.28 -0.9  
 eS 18 06.06  
 DFR 1.18 239 iPd 17 52.78 -0.9  
 eS 18 08.97  
 CUT 1.21 8 eP 17 52.96 -1.0  
 >NNL 1.22 196 eP 17 54.47 0.4  
 SEW 1.25 152 eP 17 54.25 -0.3  
 SML 1.25 60 ePd 17 53.70 -1.0  
 RDN 1.26 237 iPd 17 53.69 -1.1  
 eS 18 10.42  
 RSO 1.28 235 ePd 17 54.39 -0.8  
 eS 18 11.41  
 RS2 1.28 235 ePd 17 54.43 -0.8  
 RDW 1.29 237 ePd 17 54.52 -0.8  
 eS 18 11.95  
 NCT 1.30 241 iPd 17 54.60 -0.8  
 RED 1.32 234 ePd 17 54.68 -0.9  
 eS 18 12.09  
 KNIM 1.66 120 ePc 17 58.10 -2.3  
 SCM 1.70 67 eP 17 59.54 -1.5  
 CNPM 1.72 190 ePc 18 00.43 -0.8  
 GLI 1.75 99 ePc 17 59.49 -2.2  
 HUR 1.84 14 eP 18 01.42 -1.5  
 MTU 1.91 129 eP 18 04.06 0.0  
 VZW 1.98 93 ePd 18 02.95 -2.2

VLZ 2.08 90 ePd 18 04.34 -2.1  
 KLU 2.29 81 iPd 18 07.21 -2.2  
 TOA 2.31 65 eP 18 08.40 -1.3  
 GLB 3.30 83 eP 18 20.97 -2.8  
 38 obs. associated

? MAY 04, 1991 00h 25m 01.60±2.70s  
 29.610 N ±17.1km 42.391 W ±60.6km  
 DEPTH = 10.0km (geophysicist)  
 3.8mb (1 obs.)

NORTH ATLANTIC RIDGE (403)

ZOBO 51.93 212 P 34 12.50 -1.1  
 LPB 52.15 212 P 34 16.00 1.0  
 ALO 53.62 293 e(P) 34 27.00 1.5  
 BW06 54.45 303 eP 34 31.50 -0.1  
 YKA 56.02 328 eP 34 41.60 -0.8  
 0.9s 1.00nm 3.8mb  
 MSU 57.25 299 e(P) 34 50.50 -1.3  
 INK 63.26 335 eP 35 33.00 0.8  
 pP 35 48.00 54kmX  
 S.D. = 1.4 on 7 of 7 obs.

& MAY 04, 1991 01h 14m 59.25s  
 36.564 N 89.797 W  
 DEPTH = 9.0km  
 NEW MADRID, MISSOURI REGION (486)  
 <SLM>. mbLg 2.0 (SLM).  
 Foreshock.

NRMS 0.19 114 iP 15 03.25 0.0  
 DWM 0.34 46 P 15 06.14 -0.2  
 ACTN 0.45 119 iP 15 08.02 -0.3  
 OHTN 0.47 151 P 15 08.16 -0.6  
 ECD 0.52 193 P 15 09.34 -0.3  
 MFTN 0.52 141 P 15 09.30 -0.4  
 WGAR 0.78 204 P 15 13.90 -0.6  
 ELC 0.85 32 P 15 14.98 -0.8  
 JHP 1.12 211 P 15 20.13 -0.2  
 CSIL 1.34 37 P 15 23.57 -0.4  
 FVM 1.50 341 P 15 26.62 0.2  
 OLY 1.72 233 P 15 29.39 -0.1  
 12 obs. associated

& MAY 04, 1991 01h 18m 54.91s  
 36.564 N 89.823 W  
 DEPTH = 5.0km  
 4.4mb (5 obs.)  
 NEW MADRID, MISSOURI REGION (486)  
 <SLM>. mbLg 5.0 (BLA), 4.9  
 (TUL), 4.6 (GS). Slight damage  
 (VI) at Campbell, Bloomfield,  
 Gideon, Malden, New Madrid,  
 Risco and Tallapoosa, Missouri.  
 Also slight damage (VI) at  
 Corning, Marmoduke, Piggott and  
 Pacahantas, Arkansas. Felt (V)  
 in many parts of southeastern  
 Missouri and northeastern  
 Arkansas. Also felt (V) at  
 Memphis, Bogota and Tiptonville,  
 Tennessee. Felt in parts of  
 Arkansas, Illinois, Kentucky,  
 Mississippi, Missouri and  
 Tennessee.

NRMS 0.20 112 iP 18 59.11 0.0  
 NMNO 0.22 84 iP 18 59.49 0.1  
 OGTN 0.31 118 iP 19 00.92 -0.2  
 DWM 0.36 48 P 19 01.90 -0.2  
 HATI 0.40 163 P 19 02.04 -1.0  
 ACTN 0.47 117 P 19 03.85 -0.4  
 OHTN 0.48 149 iP 19 04.13 -0.4  
 ECD 0.51 191 iP 19 04.94 -0.2  
 MFTN 0.53 139 iP 19 05.13 -0.4  
 WGAR 0.77 203 iP 19 09.59 -0.7  
 PGA 0.82 232 iP 19 09.71 -1.5  
 ELC 0.86 33 iP 19 10.78 -1.2  
 JHP 1.11 210 iP 19 15.44 -0.7  
 GOIL 1.23 54 P 19 16.95 -1.3  
 CSIL 1.35 37 iP 19 19.08 -1.2  
 FVM 1.50 341 iP 19 22.13 -0.3  
 OLY 1.70 232 iP 19 25.15 -0.3  
 NHIL 1.89 44 iP 19 28.23 0.1  
 BPIL 1.91 31 iP 19 28.84 0.5  
 TYS 2.05 343 P 19 30.74 0.4  
 CCMO 2.21 347 iP 19 33.20 0.4

WDIN 2.27 47 P 19 33.23 -0.4  
 WSIL 2.38 35 P 19 35.85 0.7  
 THI 3.44 34 P 19 58.00 7.8  
 S 21 00.00  
 RSCP 3.58 104 iP 19 51.00 -1.2  
 BLO 3.69 44 ePn 19 55.80 2.0  
 GBTN 4.63 99 eP 20 05.30 -1.9  
 TUL 4.87 264 ePn 20 08.40 -2.2  
 eSn 21 04.00  
 eLg 21 26.30  
 TKL 4.98 99 eP 20 10.10 -2.0  
 PRM 6.58 110 eP 20 30.20 -4.5  
 MEO 7.35 259 iPc 20 41.20 -4.3  
 JSC 7.35 106 eP 20 40.50 -5.0  
 BLA 7.56 82 eP 20 46.40 -2.1  
 CVL 9.17 78 eP 21 07.50 -3.3  
 CBN 10.04 77 e(P) 21 51.00 28.1  
 e 22 46.00  
 e 24 02.00

GOL 12.64 289 eP 21 51.80 -6.6  
 GMTN 12.95 66 Pn 22 02.30 0.0  
 PNJ 12.98 66 Pn 22 02.00 -0.6  
 Lg 25 34.90

ALO 13.61 268 eP 22 08.40 -2.9  
 RSNY 14.08 51 eP 22 12.50 -4.7  
 SXM 18.64 308 ePc 23 10.70 -4.8  
 LRM 19.32 366 eP 23 20.40 -3.6  
 SES 20.60 319 P 23 34.00 -3.4  
 0.8s 7.40nm 4.1mb

TNP 21.81 282 eP 23 50.50 0.4  
 NEW 23.17 309 eP 24 00.00 -3.2  
 1.0s 17.50nm 4.6mb

SCH 24.15 34 eP 24 12.00 -0.5  
 YKA 30.15 337 eP 25 03.10 -4.6  
 0.7s 0.60nm 3.5mb X

INK 39.91 336 P 26 28.00 -3.1  
 1.4s 1.70nm 3.5mb X  
 FBA 44.06 329 eP 27 03.20 -1.9  
 0.8s 12.07nm 4.8mb  
 IMA 46.67 330 eP 27 24.30 -1.7  
 0.7s 3.63nm 4.6mb

ZOBO 56.40 155 P 28 36.10 -4.3  
 LPB 56.66 155 eP 28 53.00 11.0  
 SIV 58.90 147 P 28 54.30 -3.1  
 HFS 65.21 32 eP 29 35.20 -3.9  
 0.5s 0.80nm 4.2mb  
 e 29 37.20  
 e 29 41.00

54 obs. associated

\* MAY 04, 1991 01h 31m 16.94±1.40s  
 31.318 S ±11.6km 68.271 W ±12.3km  
 DEPTH = 104.9 ± 16.2 km  
 SAN JUAN PROVINCE, ARGENTINA (137)

RTLL 0.17 266 iPc 31 31.90 -0.3  
 CFA 0.29 175 iPc 31 33.10 0.5  
 eS 31 44.70

ZON 0.42 237 eP 31 32.00 -1.0  
 eS 31 44.00

RTCB 0.48 250 ePd 31 34.00 0.5  
 RTRS 1.54 318 iPc 31 44.40 0.2

TCA 3.15 91 ePd 32 05.60 -0.1  
 RFA 3.45 183 ePc 32 09.80 0.1  
 S 32 45.80

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

& MAY 04, 1991 01h 33m 44.62s  
 61.936 N 150.697 W  
 DEPTH = 4.1km  
 SOUTHERN ALASKA (2)  
 <AEIC>. ML 2.6 (AEIC).

SKT 0.40 277 iPd 33 52.78 0.2  
 eS 33 58.44

SUA 0.47 183 iPd 33 54.82 0.7  
 eS 34 02.33

PWA 0.48 126 iPc 33 54.70 0.4  
 CUT 0.51 23 ePd 33 54.76 -0.1  
 PLRM 0.82 114 ePd 34 00.60 -0.4  
 IS 34 11.84

PMR 0.82 114 iPd 34 01.10 0.1  
 GHO 0.86 100 ePd 34 00.92 -0.8  
 NCG 0.88 233 iPd 34 01.52 -0.6  
 IS 34 13.54

PMS 0.88 141 ePc 34 01.71 -0.4



CRP	0.97	227	eS	34	13.72	
			ePd	34	03.18	-0.5
			S	34	17.19	
SPU	1.00	221	iPd	34	03.82	-0.3
			S	34	17.52	
BGL	1.05	231	ePd	34	04.53	-0.6
CKL	1.08	227	ePd	34	05.12	-0.5
			S	34	20.28	
SML	1.13	95	ePd	34	05.72	-0.6
			S	34	21.41	
HUR	1.16	25	ePd	34	06.18	-0.6
			eS	34	21.66	
KNK	1.19	115	eP	34	05.98	-1.4
			eS	34	22.40	
NKA	1.23	193	eP	34	08.72	0.8
SLKM	1.45	171	eP	34	10.86	-0.8
			iS	34	30.08	
TRF	1.53	7	ePc	34	12.98	0.0
RDT	1.60	212	ePd	34	13.59	-0.2
			eS	34	34.31	
SCM	1.60	92	eP	34	13.34	-0.5
DFR	1.66	216	ePd	34	14.65	0.0
			eS	34	36.51	
RND	1.70	29	eP	34	14.56	-0.8
RDN	1.74	216	eP	34	15.42	-0.5
NCT	1.75	219	eP	34	16.27	0.2
			eS	34	39.57	
RDW	1.78	216	eP	34	16.40	-0.1
			eS	34	39.76	
RS2	1.78	215	eP	34	15.86	-0.7
			eS	34	39.93	
RSO	1.78	215	eP	34	16.70	0.1
			eS	34	40.53	
RED	1.82	214	eP	34	16.98	-0.1
			eS	34	41.26	
SEW	1.94	161	eP	34	18.84	0.3
MCK	1.98	23	eP	34	19.21	0.0
GLI	2.03	120	eP	34	20.69	0.7
TOA	2.14	83	eP	34	22.69	1.1
KNIM	2.14	137	eP	34	21.50	-0.1
VZW	2.17	112	eP	34	23.73	1.6
VLZ	2.24	109	eP	34	23.81	0.8
KLU	2.32	99	eP	34	24.75	0.5
CNPM	2.43	186	eP	34	26.36	0.6
MTU	2.45	141	eP	34	26.35	0.3
SVW	2.50	253	ePc	34	30.80	4.0
PAX	2.64	65	eP	34	29.04	0.2
TTA	2.67	294	eP	34	34.20	5.0
FBA	3.25	22	eP	34	39.60	2.3

43 obs. associated

\* MAY 04, 1991 01h 52m 54.15± 0.60s  
 29.620 N ±13.1km 42.827 W ± 6.5km  
 DEPTH = 10.0km (geophysicist)  
 4.9mb (17 obs.) 4.7Msz (8 obs.)  
 NORTH ATLANTIC RIDGE (403)

SCH	30.51	332	eP	59	09.00	-0.4
MAL	32.76	67	eP	59	33.00	3.6X
			S	04	52.00	
TOL	33.24	62	eP	59	42.00	8.5X
			eS	05	06.00	
RSCP	36.28	291	P	00	06.00	6.3X
MFF	37.11	51	eP	00	06.10	-0.3
	1.3s		18.05nm			4.7mb
FRB	37.88	342	eP	00	15.00	2.4
TCF	38.65	52	eP	00	18.70	-0.7
AVF	39.51	51	eP	00	25.80	-0.7
	1.4s		47.90nm			5.0mb
SSF	39.66	51	eP	00	26.90	-0.9
SMF	39.82	51	eP	00	28.40	-0.7
LOR	39.93	51	eP	00	29.10	-0.9
	1.0s		12.00nm			4.5mb
	Z 21s		0.77um			4.5Msz
LBF	39.96	51	eP	00	29.50	-0.9
	1.2s		14.90nm			4.5mb
LKO	40.11	112	P	00	21.48	-10.4X
HAU	41.70	50	eP	00	43.60	-1.0
	Z 22s		0.73um			4.5Msz
BSF	41.97	50	eP	00	45.70	-1.2
ABH	42.76	47	eP	00	55.32	2.1
GRF	45.10	48	eP	01	11.50	-0.7
	Z 20s		0.70um			4.6Msz
MOX	45.45	47	eP	01	14.90	0.0
	1.9s		34.00nm			5.0mb
	Z 21s		1.10um			4.8Msz
			eS	07	53.00	

CLL	46.39	46	eP	01	22.00	-0.3
			e	01	43.00	
KHC	46.59	49	P	01	23.00	-1.0
BRG	46.94	46	eP	01	29.00	2.3
	1.7s		19.00nm			4.9mb
PRU	47.26	48	eP	01	30.50	1.3
	2.2s		53.40nm			5.2mb
Z 18s			0.90um			4.8Msz
E 16s			0.60um			
			e	01	37.00	
			S	08	25.00	
NB2	47.28	32	P	01	28.30	-1.0
	1.6s		54.40nm			5.4mb
HFS	48.23	34	eP	01	35.40	-1.3
	2.0s		144.40nm			5.7mb
Z 19s			0.35um			4.4Msz
			e	01	38.30	
			e	01	41.90	
			LR	15	52.00	
KSP	48.42	47	eP	01	40.40	2.1
FFC	48.73	319	eP	01	41.00	0.3
	0.8s		10.00nm			4.9mb
ZST	48.90	50	eP	01	42.90	0.9
SRO	49.72	51	eP	01	48.00	-0.3
KRA	50.74	48	eP	01	57.40	1.3
GOL	51.49	299	P	02	03.50	1.2
	1.0s		5.25nm			4.4mb
CCH	51.86	209	eP	02	05.00	-0.2
LPB	51.96	211	P	02	05.00	-1.1
BZS	52.13	53	eP	02	05.00	-1.6
ANMO	53.27	293	P	02	18.00	2.5
	1.8s		197.73nm			5.8mb
ALO	53.27	293	eP	02	15.00	-0.5
	1.6s		35.00nm			5.1mb
Z 22s			1.52um			5.0Msz
NUR	53.68	35	iP	02	05.40	-12.5X
			e	02	25.00	
BW06	54.12	303	P	02	20.80	-0.9
SES	54.22	313	eP	02	24.00	1.9
KAF	54.56	33	iP	02	22.80	-1.6
	0.8s		13.90nm			5.0mb
			esP	02	26.70	
SXM	54.80	308	eP	02	26.10	-0.5
SOD	55.13	26	eP	02	25.00	-3.5X
			e	02	35.00	
MLR	55.16	53	eP	02	31.00	1.8
KEV	55.57	23	eP	02	32.00	0.4
VR1	55.64	52	eP	02	37.00	4.5X
YKA	55.81	328	eP	02	31.20	-2.3
	1.0s		8.00nm			4.7mb
MSU	56.92	299	P	02	42.80	0.8
NEW	58.44	311	P	02	50.70	-1.6
PNT	59.87	313	eP	03	10.00	7.8X
OBN	60.38	41	eP	03	05.00	-0.5
	Z 19s		0.60um			4.8Msz
			e	03	17.00	
			e	04	41.00	
TNP	60.86	300	P	03	08.60	-0.7
INK	63.09	335	ePd	03	22.10	-1.5
ZNT	65.40	66	eP	03	41.00	1.8
JVI	65.76	66	eP	03	43.00	1.4
PRNI	66.05	68	eP	03	44.00	0.6
FBA	69.58	334	P	04	04.50	-0.5
IMA	71.18	336	P	04	05.30	-9.6X
	1.0s		10.25nm			4.9mb
PMR	71.64	331	P	04	17.90	0.4
	1.0s		10.50nm			4.9mb
MAIO	81.97	53	eP	05	16.00	0.2
YAK	88.49	4	eP	05	48.30	0.6
			e	06	09.00	
QUE	90.52	55	eP	06	04.80	6.7X
DZM	152.66	279	iPKPc	12	56.70	10.9X

S.D. = 1.3 on 50 of 61 obs.

? MAY 04, 1991 02h 34m 31.15± 2.18s  
 16.369 S ±17.0km 168.229 E ±23.8km  
 DEPTH = 32.4 ± 14.7 km  
 4.1mb (3 obs.)  
 VANUATU ISLANDS (186)

BKM	1.29	179	iP	34	52.00	-1.1
			iS	35	10.50	
PVC	1.37	177	iP	34	55.00	0.9
			iS	35	15.50	
DZM	5.92	196	iPc	35	59.00	0.0
			iS	37	02.90	
STK	28.69	233	eP	40	28.00	0.5

	2.7s		1.70nm		3.3mb	
ASPA	33.00	252	iPd	41	05.20	-0.4
	1.3s		10.70nm			4.6mb
YKA	98.57	27	eP	48	07.50	0.0
	1.0s		0.80nm			4.2mb
S.D. = 1.1 on 6 of 6 obs.						
* MAY 04, 1991 03h 04m 39.29± 1.10s						
40.876 N ±17.9km 25.828 E ±11.9km						
DEPTH = 10.0km (geophysicist)						
AEGEAN SEA (365)						
KDZ	0.83	338	iPd	04	55.00	-0.4
RZN	1.17	314	iP	05	02.00	0.8
KGT	1.20	110	ePn	05	01.70	0.1
MMB	1.74	295	eP	05	09.00	-0.7
KKB	2.29	297	eP	05	18.00	0.3
VTS	2.60	312	ePg	05	31.00	8.7X
S.D. = 0.8 on 5 of 6 obs.						

MAY 04, 1991 03h 42m 54.53± 0.15s  
 9.542 N ± 3.0km 82.418 W ± 2.4km  
 DEPTH = 10.0km (geophysicist)  
 5.6mb (64 obs.) 6.2Msz (34 obs.)  
 PANAMA-COSTA RICA BORDER REGION (80)  
 Ms 6.2 (BRK). Mo=3.0\*10\*\*18 Nm  
 (PPT). Thirty-six people  
 injured, 400 families homeless,  
 ground cracks and liquefaction  
 in the Changuinola-Almirante-  
 Bocos del Toro area, Ponomo.  
 Felt strongly at Limon, Costa  
 Rica. Felt from the Central  
 Valley of Costa Rica as far east  
 as Santiago, Ponomo.  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 21S, 58C  
 Centroid Location:  
 Origin Time 03:43: 2.7 0.5  
 Lat 9.88N 0.04 Lon 82.34W 0.03  
 Dep 15.0 FIX Half-duration 4.7  
 Moment Tensor: Scale 10\*\*18 Nm  
 Mrr= 1.32 0.03 Mtt=-0.79 0.03  
 Mff=-0.53 0.04 Mrt=-1.40 0.10  
 Mrf= 0.80 0.09 Mtf= 0.72 0.03  
 Principal Axes:  
 T Val= 2.08 Plg=65 Azm=203  
 N 0.05 5 304  
 P -2.13 25 37  
 Best Double Couple: Mo=2.1\*10\*\*18  
 NP1: Strike=138 Dip=21 Slip= 105  
 NP2: 302 70 84

TIG	1.00	240	P	43	12.60	-1.0
DVD	1.10	182	iPc	43	16.10	0.9
			S	44	43.10	
PBC	1.27	209	P	43	17.50	-0.7
CDM	1.33	271	P	43	17.60	-1.8
VTU	1.40	290	P	43	19.50	-1.0
IRZ2	1.52	286	P	43	20.70	-1.4
OCM	1.56	283	P	43	21.10	-1.4
QPS	1.70	265	P	43	23.50	-0.8
HDC2	1.75	286	P	43	24.60	-0.7
POA2	1.91	289	P	43	27.10	-0.7
PTCR	2.00	277	P	43	28.00	-0.8
EPA	2.19	282	P	43	31.10	-0.5
CAO	2.65	274	P	43	37.50	-0.6
UPA	2.90	101	ePd-	43	40.50	-1.1
			S	44	16.00	
FUQ	9.51	115	eP	45	11.50	-3.4X
BMG	9.57	104	iPc	45	14.00	-1.5
PCJ	9.61	31	Pd	45	12.93	-3.1X
BOG	9.62	120	iPd	45	18.00	1.6
			iS	47	03.00	
SPJ	9.64	29	Pd	45	14.90	-1.5
PSO	9.72	148	eP	45	18.50	0.6
GCM	9.74	6	eP	45	15.95	-1.8
STH	10.08	32	Pd	45	19.52	-2.9X
YHJ	10.10	34	Pd	45	20.84	-1.9
YANA	10.33	158	Pd	45	27.30	1.0
QUR	10.40	158	eP	45	28.60	1.4
QTO	10.43	158	P	45	25.00	-2.7
QUIL	10.81	161	eP	45	35.00	2.2
TPX	11.00	300	(P)	45	36.50	1.5
ANGL	11.00	154	eP	45	25.00	-10.5X
SDV	11.65	92	eP	45	41.60	-2.5



04d 03h															
SCX	12.25	307	iS	47 49.20				1.2s	107.42nm	5.7mb	FRB	55.01	7 eP	52 25.00	-3.2X
TOV	12.45	88	eP	45 57.50	5.5X			Z 18s	13.40um	5.7Msz	YKA	57.76	343 eP	52 45.40	-2.5
			e(S)	45 54.00	-0.8	ELF	33.54	1 P	49 36.10	-0.4		1.1s	76.90nm		5.6mb
CEOS	13.91	91	iP	46 09.40	-4.8X	ANT	35.06	161 eP+	49 49.00	-0.9	RKT	60.80	237 iP	53 08.00	-1.5
PBJ	14.39	300	(P)	46 17.50	-2.9X			iS	55 24.80			1.2s	45.00nm		5.5mb
OLLA	15.40	87	iP	46 30.30	-3.4X			iSS	57 17.20		SIT	62.42	331 P	53 30.00	10.2X
OXX	15.80	300	(P)	46 39.00	-0.1	RSNY	35.54	10 P	50 05.00	11.3X	Z 18s	10.48um			6.0Msz
PJO	16.75	296	(P)	46 50.00	-0.9						MBO	64.05	79 iP	53 32.30	1.0
LVVM	16.93	308	(P)	46 55.00	1.8	GLD	36.30	330 P	49 59.90	-0.6			iS	02 13.00	
MGP	17.09	59	P	46 52.00	-3.2X			1.4s	101.35nm	5.5mb	INK	67.47	342 eP	53 50.50	-1.9
IISM	17.26	305	(P)	46 57.00	-0.3			Z 18s	17.48um	5.9Msz	RUV	68.89	250 iP	54 01.80	-0.3
LRS	17.43	58	P	46 57.50	-2.0	GOL	36.34	329 P	50 00.00	-0.9		1.3s	95.00nm		5.8mb
SJG	17.93	60	eP	47 07.01	1.2			1.2s	84.02nm	5.5mb	TPT	69.05	250 iP	54 02.80	-0.3
IIT	18.04	303	(P)	47 10.50	3.1X			Z 18s	9.53um	5.6Msz		1.3s	55.00nm		5.6mb
CPD	18.10	60	P	47 07.00	-0.9	BAR	39.10	311 eP	50 31.00	7.1X	VAH	69.14	250 iP	54 03.30	-0.3
LPR	18.26	60	P	47 10.00	0.1	MSU	39.30	322 P	50 25.00	-0.7		1.3s	70.00nm		5.7mb
PPM	18.32	303	(P)	47 12.00	0.9	TPC	39.34	314 eP	50 26.00	0.1	KLU	69.17	333 P	54 02.50	-0.7
ACX	18.47	295	(P)	47 15.00	2.6	DAU	40.00	325 P	50 32.40	0.8	PMO	69.32	250 iP	54 04.50	-0.2
TPM	18.65	302	(P)	47 17.50	2.7	GSC	40.49	315 eP	50 35.00	-0.4		1.3s	105.00nm		5.8mb
III	18.72	300	(P)	47 17.00	1.3	BW06	40.74	329 P	50 35.60	-1.9	TOA	69.48	333 ePc	54 05.70	0.6
UNM	18.91	303	(P)	47 21.00	2.9	DUG	40.75	324 P	50 38.40	0.9		1.4s	549.10nm		6.5mb
TAC	18.96	303	(P)	47 18.00	-0.7	MWC	40.85	312 eP	50 40.00	1.5	PMR	70.66	332 eP	54 11.50	-0.6
TCE	20.38	85	eP	47 32.02	-2.3	PAS	40.90	312 eP	50 39.00	0.3		1.4s	121.70nm		5.8mb
TPP	20.67	86	eP	47 36.42	-0.9			eP	51 08.00	128kmX	FBA	71.08	336 ePc	54 14.60	0.0
			e	48 00.16				eSP	51 21.00			0.9s	60.90nm		5.7mb
TRN	20.72	85	ePc	47 35.67	-2.1			ePP	52 00.00		PPN	71.45	248 iP	54 17.20	-0.4
	0.8s	93.75nm			5.2mb			ePPP	53 20.00			1.3s	60.00nm		5.5mb
Z 18s	28.85um				5.7Msz			ePcS	55 54.00		VAL	71.56	38 P	54 17.00	-0.7
			e	48 03.60				iS	56 53.00				S	03 36.00	
MRX	20.76	301	(P)	47 42.50	4.2X			iLg	00 50.00		EZAM	71.60	49 eP	54 19.00	0.8
SVV	21.11	78	eP	47 43.00	1.1			eLR	03 03.00		PTO	71.60	50 eP	54 18.00	-0.2
PAG	21.22	70	eP	47 42.00	-1.0	SBB	40.91	313 eP	50 42.00	3.2X			eS	03 26.00	
BBL	21.28	72	eP	47 42.00	-1.6	CLC	41.31	315 eP	50 41.00	-1.0	PAE	71.62	248 iP	54 18.40	-0.3
BPA	21.34	67	eP	47 42.00	-2.2	RTRS	41.40	163 ePc	50 44.60	1.9		1.3s	125.00nm		5.9mb
SLB	21.36	76	eP	47 44.50	0.1	ISA	41.85	314 eP	50 47.00	0.5	STS	71.75	48 eP	54 19.20	0.1
SEG	21.48	69	eP	47 43.00	-2.6	TNP	42.24	318 P	50 49.00	-0.9	AVE	72.32	58 iP	54 23.20	0.5
MGG	21.53	71	eP	47 45.00	-1.0			1.3s	56.12nm	5.1mb			i	54 43.00	
DEG	21.87	70	eP	47 47.00	-2.5	IMW	42.24	329 P	50 48.60	-1.3	PDB	72.66	330 P	54 23.30	-0.8
NNA	22.09	165	iP	47 51.00	-0.8	SYF	42.40	312 eP	50 59.00	7.9X	EMON	72.68	48 eP	54 25.30	0.6
	1.0s	170.00nm			5.4mb	RTLL	42.78	162 ePd	50 54.20	0.1	ERUA	72.76	49 eP	54 25.20	0.1
Z 20s	79.79um				6.1Msz	CFA	43.11	162 ePd	50 56.80	0.0	EVAL	72.90	54 eP	54 28.20	2.1
			eS	52 00.00		FRI	43.37	315 eP	51 00.30	1.5	CNIL	73.45	55 eP	54 31.00	1.8
CGX	22.70	299	(P)	47 59.00	1.0	PRI	43.64	313 eP	51 01.90	0.7	EPLA	73.48	51 eP	54 30.20	0.8
HBF	23.35	4	P	48 05.60	1.6	ROCH	43.65	166 eP	51 04.50	3.1X	SVW	73.60	331 eP	54 28.50	-1.2
SGS	23.60	4	P	48 07.80	1.4	PD	43.77	136 eP	51 01.90	-0.3		1.3s	164.90nm		5.9mb
PRM	24.42	0	P	48 15.40	1.0	PEL	43.89	166 iPc	51 02.50	-0.6	PLAT	73.68	55 eP	54 33.50	2.9X
JSC	24.64	2	P	48 17.70	1.2			1.5s	277.78nm	5.9mb	IMA	73.76	336 eP	54 30.00	-0.7
LHS	24.86	3	P	48 19.00	0.4	LLA	44.06	314 eP	51 05.30	0.8		1.3s	108.50nm		5.7mb
TKL	26.03	357	P	48 29.70	0.1	TCA	44.09	158 ePc	51 03.80	-1.0	DMU	73.81	37 eP	54 30.60	-0.3
GBTN	26.06	357	P	48 30.00	0.1	MDZ	44.13	164 e(P)	51 05.80	0.7		1.0s	77.00nm		5.7mb
RSCP	26.10	354	P	48 30.60	0.3	CMB	44.35	316 eP	51 07.20	0.3	ALJ	73.81	55 eP	54 33.00	1.5
						LRM	44.37	330 eP	51 06.30	-0.8	EJIF	73.92	55 iPc	54 34.00	2.0
BLA	27.61	3	P	48 45.20	1.1	PCH	44.39	166 eP	51 07.00	-0.2	LIJA	73.96	54 eP	54 34.00	1.7
	1.1s	68.75nm			5.3mb	LNV	44.50	167 eP	51 04.00	-4.0X	EHOR	74.10	53 eP	54 34.00	1.1
ARE	28.01	157	iPc	48 43.90	-4.3X	MHC	44.89	314 eP	51 11.50	0.2	TTA	74.10	333 eP	54 33.30	0.7
	1.0s	58.00nm			5.3mb	SOB1	45.34	113 eP	51 14.70	-0.4		1.3s	119.60nm		5.8mb
ELC	28.30	348	P	48 51.80	1.5	BKS	45.56	315 eP	51 16.00	-0.4	IFR	74.23	58 iPc	54 35.00	0.9
CVL	28.54	7	P	48 52.40	0.0								i	54 35.50	
CBN	28.90	8	eP	48 56.00	0.4	Z 20s	25.00um			6.2Msz	MAL	74.77	55 iPc	54 39.00	2.1
TUL	28.93	337	ePd	48 54.10	-1.9	N 20s	27.00um						iS	04 19.00	
	1.0s	67.80nm			5.4mb	E 20s	49.00um				GUD	74.96	50 iPc	54 39.20	1.1
Z 21s	19.64um				5.7Msz			eS	58 01.00		TOL	75.04	51 iP-	54 40.00	1.6
			e	49 56.00				eLO	01 16.00				iPP	57 25.00	
			e	54 16.50		BRK	45.57	315 e(P)	51 16.30	-0.2			ePPP	59 20.00	
MEO	29.16	332	iPc	48 56.60	-1.5	ORV	45.86	317 eP	51 18.30	-0.5			iS	04 23.00	
FVM	29.22	347	P	48 56.80	-1.8	RFA	46.01	164 ePc	51 19.20	-0.9			iPS	05 10.00	
ZOBO	29.29	151	Pc	48 59.20	-0.9	MIN	46.33	318 eP	51 21.50	-1.2			iSS	09 00.00	
			S	54 08.00		SCH	46.84	12 ePd	51 25.00	-1.3	SDN	75.43	325 eP	54 42.90	2.7
			eLR	00 20.00				1.0s	54.00nm	5.6mb		1.3s	382.00nm		6.3mb
LPB	29.53	151	P	48 59.00	-3.1X	LBFM	47.03	319 P	51 26.70	-1.6	ECOG	75.44	54 eP	54 42.00	1.1
						SES	47.10	335 eP	51 28.00	-0.5	EGUA	75.45	54 eP	54 41.50	0.7
Z 23s	50.00um				6.1MszX			1.6s	347.00nm	6.2mb	AFC	75.45	54 iPc	54 42.50	1.5
			S	54 15.00		VAO	47.44	133 eP	51 28.50	-3.1X	LKO	75.59	83 P	54 40.64	-1.4
			LR	00 30.00				e	53 24.00			0.8s	25.50nm		5.3mb
CCH	31.22	149	P	49 19.20	2.3	FFC	47.68	345 eP	51 31.00	-1.9	AIA	75.81	172 e(P)	54 43.00	0.9
CLE	31.83	1	iP	49 22.10	0.5			1.2s	26.00nm	5.2mb	BRW	76.01	341 P	54 43.10	-0.2
GMTN	32.05	12	iP	49 24.50	0.9	PDCR	48.28	116 eP	51 36.40	-1.8	EKA	76.10	35 Pc	54 42.20	-1.9
PNJ	32.08	12	iP	49 25.10	1.2	NEW	48.37	329 P	51 37.30	-1.2		1.0s	18.50nm		5.1mb
SIV	33.02	140	eP	49 25.00	-7.3X			1.3s	94.34nm	5.7mb	ECRI	76.19	48 eP	54 46.00	1.0
			i	49 30.80		8MA	49.31	131 eP	51 45.30	-0.7	EHUE	76.20	53 eP	54 46.30	1.1
DLA	33.19	1	P	49 33.45	-0.1	LPA	49.92	154 eP+	51 51.00	0.6	ENIJ	76.53	54 eP	54 47.00	0.1
LDN	33.39	2	P	49 35.05	-0.1			Z 19s	15.28um	6.0Msz	TIC	76.54	85 P	54 47.34	-0.1
ALO	33.50	323	ePc	49 34.00	-2.5			eS	58 59.00		ETOR	76.55	50 eP	54 48.30	1.2
	1.0s	20.00nm			5.0mb	LON	49.93	325 P	51 49.00	-1.5	LIC	76.60	86 P	54 47.86	0.2
Z 19s	15.17um				5.7Msz	PNT	50.31	329 eP	51 52.00	-1.3		1.2s	153.00nm		6.0mb
ANMO	33.50	323	P	49 32.40	-4.1X	PGC	51.93	326 eP	52 07.00	1.5		Z 20s	5.00um		5.8Msz



KIC	76.86	86 P	54 49.40	0.2	MOX	85.25	40 eP-	55 32.50	-0.2	AFI	91.64	256 eP	56 08.00	4.1X
	1.3s	147.00nm		5.9mb		1.8s	60.00nm		5.5mb	BZS	92.90	43 eP	56 10.00	0.9
LPF	77.21	43 eP	54 49.70	-0.7	Z	21s	11.60um		6.2Msz	GZR	93.74	43 eP	56 32.50	19.4X
	1.2s	83.30nm		5.7mb			iS	06 00.00		SKO	93.81	47 eP	56 10.00	-3.4X
BOH	77.29	48 P	54 52.45	1.3	SQTA	85.53	43 iPd	55 34.40	0.1	Z	19s	5.48um		6.0Msz
GRR	77.33	43 eP	54 50.60	-0.5		1.1s	32.20nm		5.4mb	N	19s	3.12um		
	1.2s	104.15nm		5.8mb			i	55 37.80		E	19s	5.64um		
ISSF	77.45	48 P	54 53.28	1.3			i	55 54.40				i	56 17.70	
ATE	77.51	48 P	54 54.97	2.7	CLL	86.00	39 iP	55 36.90	0.5			i	58 04.00	
LHE	77.58	48 P	54 55.10	2.4		1.5s	71.00nm		5.6mb			i	59 03.00	
FLN	77.58	42 eP	54 51.90	-0.6	Z	17s	7.00um		6.1MszX			iPP	00 08.50	
	1.1s	68.05nm		5.7mb	FIR	86.12	46 eP	55 38.00	0.9			iSKS	06 47.50	
Z	20s	30.00um		6.6Msz	WET	86.31	41 iPc	55 39.00	1.0			iS	07 26.00	
ESCF	77.61	48 P	54 54.71	1.9			eS	06 13.00				iPS	08 40.00	
OGE	77.68	48 P	54 54.19	1.0	Z	21s	22.00um		6.5Msz			iSS	13 12.00	
JAU	77.76	48 P	54 54.51	0.7	BRG	86.67	39 iP	55 40.00	0.3			iSSS	17 30.00	
LDF	77.82	42 eP	54 53.20	-0.6		1.5s	52.00nm		5.5mb			LR	35 52.00	
	1.2s	89.25nm		5.7mb	Z	18s	8.50um		6.2Msz	MLR	95.83	42 eP	56 15.00	-7.8X
MFF	77.83	44 eP	54 53.50	-0.4	N	18s	3.00um			OBN	98.06	31 eP	56 35.00	2.6
	1.2s	65.45nm		5.6mb	E	18s	6.00um			Z	14s	1.90um		5.7MszX
BTH	77.87	48 Pd	54 56.50	2.3			i	55 43.40		N	14s	0.70um		
		sP	55 10.50				e	59 20.00		E	14s	0.50um		
		iSKS	05 02.00				e	03 30.00				iPP	00 32.00	
EPF	78.28	48 eP	54 56.60	0.1	KHC	86.76	41 P	55 41.00	0.7			iSKS	07 06.00	
ANM	78.42	334 eP	54 56.60	-0.2		1.2s	24.00nm		5.3mb			eScS	07 28.00	
EBR	78.49	50 eP	55 00.00	2.4	Z	21s	18.40um		6.5Msz			eS	07 50.00	
		eS	05 00.00		N	21s	3.60um					iPS	09 22.00	
LFF	78.50	46 eP	54 57.30	-0.3	E	21s	17.00um					eSS	14 44.00	
LPO	78.83	46 eP	54 59.00	-0.4			S	06 06.00				eSSS	18 38.00	
LSF	79.00	45 eP	54 59.60	-0.8	UPP	86.83	30 iP	55 39.00	-1.2	SPA	99.48	180 eP	56 36.00	-2.7
RJF	79.03	46 eP	55 00.00	-0.5		1.0s	100.00nm		6.0mb	HLW	105.29	56 ePKP	01 28.00	8.4X
	1.2s	65.45nm		5.5mb			iPP	59 00.00		SNZO	105.90	230 Pd iff	57 16.00	8.3X
Z	20s	17.50um		6.4Msz			iS	06 05.00		SNZO	105.90	230 PKP	01 36.00	15.6X
CAF	79.44	46 eP	55 02.30	-0.5	KBA	86.99	43 iPc	55 41.80	0.2	DZM	113.05	250 iPd iff	41 00	0.9
TCF	79.47	45 eP	55 02.10	-0.8		1.3s	55.50nm		5.6mb	WMQ	126.14	9 PKP	01 58.50	-0.7
	1.3s	46.95nm		5.3mb			i	55 45.60		Z	16s	8.20um		6.5MszX
MAF	79.72	45 eP	55 03.50	-0.8	PRU	87.21	40 eP	55 43.00	0.6	N	16s	10.70um		
	1.3s	61.35nm		5.4mb		2.5s	104.60nm		5.6mb	E	16s	5.00um		
BGF	79.90	44 eP	55 04.20	-1.0	Z	20s	21.90um		6.6Msz			PP	03 54.00	
AVF	80.23	44 eP	55 05.70	-1.2	N	19s	2.80um					SKKS	10 48.00	
	1.2s	29.75nm		5.1mb	E	20s	16.00um					SS	20 48.00	
SSF	80.32	44 eP	55 06.20	-1.2			e	56 03.00		BJI	127.75	342 ePd iff	58 27.00	-18.1X
	1.2s	26.80nm		5.1mb			e	58 39.00		N	16s	5.36um		
LOR	80.55	44 eP	55 07.40	-1.3			ePP	59 06.50				ScP	03 50.00	
	1.2s	38.70nm		5.3mb	KMR	87.33	42 iP+	55 45.20	2.2	BJI	127.75	342 ePKP	02 03.00	0.8
Z	19s	30.00um		6.7Msz	TRI	87.53	44 eP	55 43.00	-1.0			PP	04 05.00	
SMF	80.58	44 eP	55 07.50	-1.3			ePP	59 18.00		HHC	128.23	347 ePKP	02 05.00	1.7
SNF	80.62	40 P	55 12.20	3.3X			e(S)	06 16.00		Z	22s	11.60um		6.5Msz
LBF	80.65	44 eP	55 07.60	-1.6			e(SS)	12 16.00		N	20s	6.30um		
	1.3s	46.95nm		5.3mb			eLR	23 40.00		E	18s	6.40um		
UCC	80.65	40 P-	55 10.00	1.0	VOY	87.56	44 eP	55 48.00	3.7X			PP	04 07.00	
		S	05 17.00		KEV	87.70	19 eP	55 47.00	2.7			SKKS	10 57.00	
		e	06 02.00		Z	18s	7.20um		6.1Msz			SS	21 18.00	
DOU	80.85	41 P	55 07.00	-3.1X			e	59 10.00		BTO	128.81	348 ePKP	02 06.00	1.6
	Z	20s	12.70um				e	06 10.00		N	20s	7.60um		
		S	05 19.00				e	12 22.00		E	20s	4.50um		
DBN	81.07	39 eP	55 08.00	-3.2X			LR	38 08.00				eSKS	09 13.00	
	Z	20s	10.00um		CEY	87.98	44 eP	55 49.50	3.3X	QUE	130.73	36 ePKP	02 10.90	2.4X
		eS	05 24.00		LJU	87.99	44 iPd	55 48.00	1.8	TIA	130.91	339 ePKP	02 08.30	-0.1
KBS	81.54	11 iPd	55 15.20	1.9			i	55 50.00		Z	21s	6.60um		6.3Msz
ENN	81.64	40 eP	55 12.50	-1.7			iS	06 15.20		N	17s	4.80um		
	1.0s	23.00nm		5.2mb			i	24 08.00		E	17s	2.60um		
MEM	81.71	40 Pd	55 18.20	3.6X	KSP	88.13	39 eP	55 45.80	-1.0	TIY	130.98	344 ePKP	02 12.00	3.4X
WTS	82.09	39 eP	55 17.00	0.5			e	59 17.50		N	16s	4.90um		
	1.0s	42.00nm		5.5mb	SOD	88.44	21 eP	55 50.00	2.1			PP	04 24.00	
HAU	82.17	43 eP	55 16.00	-1.1	VKA	88.71	41 eP	55 51.00	1.4			SKS	09 16.00	
	Z	20s	22.50um		Z	17s	5.70um		6.1MszX			SKKS	11 11.00	
BNS	82.41	40 iPd	55 20.00	1.7			LR	37 21.00		GTA	131.26	358 ePKP	02 11.00	1.9
	Z	20s	11.00um		PTJ	88.99	44 eP	55 50.50	-0.6		7.0s	1160.00nm		
BSF	82.48	43 eP	55 17.60	-1.3	ZST	89.24	41 eP	55 51.70	-0.4	Z	20s	10.60um		6.5Msz
	1.1s	19.55nm		5.2mb	NUR	90.01	28 eP	55 55.00	-0.4	N	19s	9.80um		
CDF	82.74	42 eP	55 19.10	-1.1			e	59 28.00				SKS	09 20.00	
LMR	82.76	47 eP	55 19.60	-0.6			e	06 22.00				SKKS	11 18.00	
ABH	82.76	41 eP	55 20.06	-0.1			e	07 52.00		SSE	133.69	332 ePKP	02 32.00	18.2X
SBF	83.36	47 eP	55 22.90	-0.6			e	12 58.00		Z	20s	4.20um		6.2Msz
NB2	83.49	29 P	55 23.00	-0.7	SRO	90.12	41 e(P)	55 56.00	-0.2	N	19s	2.40um		
	1.3s	40.60nm		5.5mb			i	56 00.60		E	17s	2.40um		
HFS	84.84	30 eP	55 28.50	-1.9	KAF	90.20	26 iP	55 55.20	-1.1			PKS	06 10.00	
	1.0s	16.10nm		5.2mb		1.2s	19.00nm		5.2mb			SS	22 32.00	
		e	55 33.10		KRA	90.58	39 eP	55 59.50	1.2	LZH	134.24	353 ePKP	02 10.00	-4.9X
GRF	85.15	41 eP	55 32.40	0.2		1.0s	37.00nm		5.6mb	Z	20s	8.36um		6.5Msz
	Z	20s	20.00um				e	56 02.00		N	16s	6.74um		
		e	55 36.10		SPC	91.01	40 eP	55 57.00	-3.6X			PP	04 44.00	
ADK	85.20	322 eP	55 32.90	0.5	PSZ	91.12	41 eP	56 02.60	1.6			PKS	05 45.00	
	1.2s	415.70nm		6.5mb								SKS	09 18.00	



SOUTH OF FIJI ISLANDS					(171)	
WLZ	11.80	191	eP	57	43.40	2.5
NOZ	12.34	181	eP	57	44.70	-1.4
PGZ	14.44	187	eP	58	05.70	-1.0
KIW	14.86	190	eP	58	10.20	-0.7
MTW	15.07	188	eP	58	11.20	-1.6
CAW	15.08	190	eP	58	12.80	-0.1
WDW	15.25	190	eP	58	15.10	0.6
MRW	15.26	191	eP	58	14.40	-0.2
BLW	15.28	188	eP	58	15.10	0.2
TCW	15.31	192	eP	58	15.30	0.1
THZ	16.13	195	P	58	23.40	0.2
KHZ	16.62	193	eP	58	27.90	0.1
LTZ	17.24	195	eP	58	33.50	-0.4
BRS	22.90	261	iPc	59	27.00	1.1
RMQ	26.55	263	iPc	59	57.70	-0.4
	0.5s		28.00nm			5.1mb
			e	02	07.00	
TOO	30.00	240	iPc	00	28.50	0.7
	0.7s		26.00nm			5.0mb

?	MAY 04, 1991	05h	34m	44.92 ± 7.77 s	
	28.928 S	± 63.8 km	70.454 W	± 34.1 km	
	DEPTH = 169.4 ± 28.1 km				
	CENTRAL CHILE				(136)
RTRS	1.51	145	iPc	35 16.00	-0.4
			S	35 33.10	
RTLL	2.95	145	iPc	35 33.00	0.0
			S	36 03.90	
CFA	3.29	145	ePc	35 37.80	0.6
			eS	36 12.00	
ROCH	4.06	187	eP	35 47.50	0.2
PEL	4.21	183	iP	35 00.00	-49.1X
			iS	36 34.00	
PCH	4.68	181	eP	35 56.00	0.7
			eS	36 45.50	
TACH	4.73	185	eP	35 55.50	-0.4
			eS	36 45.50	
TCA	5.62	117	ePc	36 07.70	0.1
			(S)	37 03.70	
RFA	6.07	164	ePc	36 12.70	-0.9
	S.D. = 0.7 on 8 of 9 obs.				
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	MAY 04, 1991	05h	36m	33.59 ± 0.21 s	
	23.900 N	± 3.9 km	123.390 E	± 3.6 km	
	DEPTH = 33.0 km (normal)				
	5.2mb ( 47 obs.) 5.0Msz ( 4 obs.)				
	SOUTHWESTERN RYUKYU ISLANDS				(246)
TWC	1.58	297	iPc	37 01.20	1.6
			eS	37 22.00	
TWD	1.66	277	iPc	37 00.90	0.2

TWF1	2.00	255	eS	37	22.10	
-			iPc	37	05.30	-0.5
TWZ	2.04	306	eS	37	29.20	
ANP	2.14	307	ePd	37	08.10	1.8
			iPc	37	10.00	2.3
			eS	37	29.00	
TWG	2.39	244	ePc	37	10.50	-0.8
OZH	4.50	284	Pc	37	40.20	-1.1
Z	18s	20.60um				
E	14s	11.90um				
		S		38	30.50	
SSE	7.43	345	iPd	38	22.00	-0.4
	0.8s	220.00nm				6.2mb X
Z	20s	8.30um				3.6MszX
N	12s	6.70um				
E	14s	6.70um				
		pP		38	26.60	
BAG	7.91	200	eP	38	27.00	-2.3
NJ2	9.06	335	Pc	38	43.50	-1.5
	0.6s	70.00nm				6.0mb
Z	13s	5.10um				
N	11s	6.00um				
E	10s	3.10um				
WHN	10.42	311	eP	39	02.60	-1.2
Z	14s	5.30um				
E	10s	5.70um				
TIA	13.41	338	eP	39	46.10	2.1
	6.5s	1400.00nm				6.0mb X
Z	14s	6.30um				4.1Msz
N	13s	4.90um				
E	13s	2.50um				
		sP		39	56.50	
DL2	15.04	355	eP	40	07.00	1.7
	1.4s	160.00nm				5.1mb
GYA	15.36	283	P	40	11.00	1.2
Z	16s	4.40um				4.5Msz
		pP		40	16.00	
		PP		40	25.00	
		S		43	05.00	
XAN	16.19	312	P	40	21.00	0.8
N	12s	1.40um				
E	12s	3.60um				
		S		43	15.60	
TIY	16.66	328	eP	40	28.80	2.6
	1.0s	57.00nm				4.7mb
N	13s	2.60um				
DAV	16.85	173	eP	40	23.80	-4.8X
BJ1	17.21	341	eP	40	34.00	1.0
	8.0s	1830.00nm				5.3mb X
N	13s	4.00um				
		eS		43	48.00	
SNY	17.88	0	Pc	40	41.00	-0.3
	6.0s	600.00nm				4.9mb X
Z	16s	4.00um				4.5MszX
N	12s	2.50um				
E	12s	1.70um				
		sP		40	52.00	
		eS		43	55.00	
MAT	17.93	42	(P)	40	40.00	-2.0
	1.2s	12.50nm				3.9mb X
Z	20s	2.13um				3.8MszX
		eS		44	11.00	
CD2	18.77	296	P	40	52.00	-0.5
	1.0s	100.00nm				5.0mb
Z	20s	5.10um				5.0MszX
E	12s	3.20um				
		epP		40	59.00	
KMI	18.84	278	Pc	40	55.00	1.5
	5.0s	900.00nm				5.2mb X
E	11s	0.60um				
		pP		41	04.50	
HHC	19.60	332	Pc	41	01.80	-0.3
	1.4s	130.00nm				5.0mb
Z	16s	5.70um				
N	13s	2.80um				
E	13s	1.80um				
CN2	19.92	4	P	41	03.20	-2.2
	4.0s	500.00nm				5.2mb X
Z	14s	11.00um				4.4Msz
N	13s	2.20um				
E	13s	4.80um				
		epP		41	10.00	26kmX
		eS		44	43.00	
BTO	20.09	329	P</			



LZH	20.79	310	iPc	41	13.50	-1.2	INK	72.73	22	ePc	47	58.80	-1.1	PCP	89.63	320	P	49	28.32	-1.2
	1.5s	130.00nm			5.1mb		KVT	72.80	308	eP	48	01.00	0.1	EMS	89.70	321	ePc	49	29.80	-0.2
Z	16s	6.14um			5.1MsZ		NUR	73.67	329	iP	48	04.70	-0.8	LSD	89.92	321	P	49	31.29	0.1
E	14s	2.87um						0.7s	25.40nm			5.3mb		FIN	90.01	319	P	49	30.16	-1.1
		pP	41	18.00	17kmX		BBTK	75.57	307	eP	48	18.00	0.9	NEW	90.07	36	P	49	32.50	1.0
		sP	41	23.50			CFR	76.96	314	eP	48	23.00	-1.5		1.0s	18.13nm			5.3mb	
		eS	45	06.00			UPP	77.16	330	iP	48	24.50	-0.8	LPL	90.13	321	iPc	49	31.90	-0.2
		sS	45	15.00			TLB	77.25	313	eP	48	28.50	2.3		0.6s	10.80nm			5.3mb	
		ScS	52	38.50			VRI	77.65	315	ePc	48	30.00	1.6	ROB	90.17	320	P	49	30.98	-1.1
LOE	21.27	256	eP	41	20.00	0.6	YLV	77.76	309	eP	48	28.70	-0.5	RRL	90.45	321	P	49	32.62	-0.9
MDJ	21.28	12	eP	41	18.00	-1.3	ALT	77.76	307	iP	48	28.40	-0.9	PZZ	90.50	320	P	49	32.62	-1.1
	1.2s	38.00nm			4.7mb		MLR	78.30	315	ePc	48	35.00	2.9	STV	90.52	320	P	49	32.21	-1.5
N	12s	3.60um					KCT	78.60	309	iP	48	33.10	-0.6	LOR	90.71	324	eP	49	33.70	-0.7
E	12s	2.20um					DST	78.64	308	eP	48	33.00	-1.0		Z	19s	0.63um		5.1MsZ	
PJG	22.74	113	eP	41	36.50	2.4	ELL	78.74	305	iP	48	34.00	-0.7	LBF	90.81	323	eP	49	34.20	-0.8
GUA	22.80	113	eP	41	36.00	1.3	HFS	78.79	331	eP	48	33.00	-1.3	SMF	91.09	323	iPc	49	35.70	-0.5
	0.8s	107.46nm			5.4mb			0.7s	23.50nm			5.3mb			1.0s	16.00nm			5.3mb	
Z	18s	4.12um			4.9MsZ			Z	17s	2.24um		5.6MsZ		AVF	91.27	323	iPc	49	36.50	-0.5
CHG	23.32	262	ePc	41	41.50	1.8			e	48	42.10				1.3s	18.05nm			5.3mb	
	1.3s	49.04nm			4.9mb		CMP	78.97	315	ePc	48	38.00	2.3	LBFM	91.32	43	P	49	39.00	1.4
GTA	25.23	313	Pc	41	57.00	-1.2	TNR	79.32	315	ePc	48	38.00	0.4	SES	91.78	31	eP	49	40.00	0.6
	5.0s	330.00nm			5.2mb X		NB2	79.41	333	P	48	36.80	-1.0	FRB	92.14	5	eP	49	39.00	-1.7
Z	15s	4.10um			5.1MsZ			0.7s	16.50nm			5.1mb		TCF	92.20	324	eP	49	41.40	0.1
E	13s	4.20um					PVL	79.57	313	eP	48	37.00	-1.9	ORV	92.56	44	eP	49	51.30	8.2X
LSA	29.30	288	Pc	42	36.80	1.0	DIM	79.89	311	iP	48	41.00	0.3	FFC	92.57	24	iPc	49	43.00	0.2
IRK	31.86	338	eP	42	54.30	-3.4X	KDZ	80.13	311	iPd	48	43.00	1.0	CAF	93.13	323	eP	49	46.00	0.4
		e	43	23.70			KRA	80.17	320	ePc	48	42.00	0.0	RJF	93.20	323	eP	49	46.20	0.3
		e	44	13.00				0.6s	29.00nm			5.5mb			1.4s	30.50nm			5.5mb	
GUN	33.90	285	Pc	43	16.22	0.1	SPC	80.36	320	eP	48	43.00	-0.3		Z	21s	0.38um		4.8MsZ	
	0.7s	38.00nm			5.5mb		GZR	80.39	315	ePd	48	43.50	0.1	LRM	94.09	35	eP	49	52.00	1.6
PKI	34.33	284	Pc	43	19.46	-0.3	PLD	80.44	312	ePc	48	44.00	0.4	CMB	94.13	45	eP	49	51.30	0.9
	0.6s	14.00nm			5.0mb		RZN	80.59	311	iPc	48	45.00	0.3	PRI	95.02	47	eP	49	41.60	-13.0X
KKN	34.43	285	Pc	43	20.34	-0.2	PGB	80.62	312	iPc	48	45.00	0.3	BONR	95.52	44	P	49	58.00	0.8
	0.8s	44.00nm			5.5mb		BZS	81.04	316	eP	48	46.50	-0.1	TNP	96.14	44	P	50	00.80	0.9
DMN	34.60	284	Pc	43	21.78	-0.2	PSZ	81.12	319	iP	48	47.10	-0.1		1.0s	8.33nm			5.2mb	
GKN	34.99	285	Pc	43	24.92	-0.3	VTs	81.25	313	iP	48	49.00	0.9	ISA	96.75	46	eP	50	10.00	7.5X
WMO	35.32	313	P	43	27.00	-0.8	KSP	81.90	322	iPc	48	51.30	0.2	CLC	97.24	46	eP	50	05.00	0.4
	1.0s	20.00nm			5.0mb		SRO	82.12	319	iP	48	52.00	-0.3	SBB	97.75	47	eP	50	18.00	11.0X
		sP	43	45.00			VAY	82.21	312	eP	48	52.40	-0.5	GSC	98.06	46	eP	50	17.00	8.6X
YAK	38.34	5	iPc	43	50.10	-2.7	YKA	82.44	23	eP	48	53.50	-0.1	TOV	144.12	23	e(PKP)	55	56.50	-12.0X
		e	45	44.00				1.1s	24.90nm			5.2mb		SDV	144.65	24	ePKP	56	08.40	-1.2X
		e	49	49.00			UZD	82.51	318	eP	48	54.00	-0.3	ZOBO	166.79	57	PKP	56	40.00	1.9X
PMG	40.43	142	eP	44	11.00	0.3	ZST	82.67	320	eP	48	54.90	-0.2		1.6s	15.66nm				
NDI	41.48	287	iPc	44	19.00	-0.2			e	49	11.50		LPB	166.96	58	PKP	56	38.00	0.0X	
HYB	42.32	270	eP	44	44.50	18.2X	SKO	82.70	313	iP	48	55.60	0.2	SIV	171.08	29	PKP	56	41.40	1.4X
WB2	44.87	165	iPc	44	46.10	-0.7	BRG	83.19	323	iP	48	57.60	-0.1		S.D. = 1.1	on 148	of 166	obs.		
	0.7s	21.70nm			5.1mb			1.6s	31.00nm			5.2mb			%	MAY 04, 1991	06h	21m	44.35±1.35s	
		i	44	55.20			PRU	83.30	322	ePc	48	58.60	0.3			43.022 N ± 9.6km	18.665 E ± 9.0km			
		e	46	33.10			CLL	83.49	324	iPc	48	59.20	0.0			DEPTH = 10.0km	(geophysicist)			
POO	46.31	273	eP	44	59.00	0.6		1.5s	38.00nm			5.3mb				YUGOSLAVIA			(383)	
OIS	46.92	159	iPd	45	03.20	0.2	KHC	84.27	322	iPc	49	04.00	0.7			ML 1.6 (TTG).				
ASPA	48.37	167	eP	45	13.60	-0.8		1.4s	21.50nm			5.1mb		BRY	0.15	216	iPg	21	48.10	0.1
	0.7s	19.90nm			5.3mb		PTJ	84.45	318	eP	49	02.50	-1.8			iSg	21	50.81		
SVO	48.42	128	P	45	29.00	14.1X	MOX	84.58	324	eP	49	05.60	0.8	NKY	0.32	130	iPg	21	51.13	0.1
CTA	49.07	151	iPd	45	20.20	0.4		1.7s	46.00nm			5.4mb				iSg	21	56.53		
	1.0s	23.00nm			5.2mb		WET	84.65	322	eP	49	05.90	0.7	HCY	0.59	192	iPg	21	55.90	-0.3
QUE	50.24	290	iPc	45	29.40	0.4	GRF	85.30	323	iPc	49	09.40	1.0			iSg	22	04.78		
MAIO	55.76	299	iPc	46	10.20	0.4		1.8s	89.00nm			5.7mb		PLE	0.62	60	iPg	21	56.81	0.0
	1.1s	14.13nm			4.9mb				e	49	18.00				iSg	22	05.75			
STK	58.13	162	eP	46	26.20	-0.2			e	49	25.20		TTG	0.74	143	iPg	21	58.75	0.0	
	0.8s	5.60nm			4.7mb				e	49	36.50				iSg	22	09.48			
ADE	60.32	166	eP	46	39.50	-2.0	BHG	85.38	321	eP	49	09.20	0.3	BDV	0.75	171	iPg	21	59.20	0.2
ANM	60.62	28	ePd	46	43.70	0.4	FUR	86.07	322	eP	49	13.00	0.7		S.D. = 0.2	on 6	of 6	obs.		
DZM	61.97	134	iPc	47	00.00	7.0X	WTS	86.37	326	eP	49	14.00	0.4							
BFD	63.37	163	eP	47	03.00	1.1		0.8s	11.00nm			5.1mb								
TTA	64.74	30	ePc	47	11.40	0.7	GMW	87.37	32	P	49	20.00	1.4							
	0.7s	16.20nm			5.2mb		OSS	87.51	321	ePc	49	19.80	0.2							
SVW	65.05	32	eP	47	13.40	0.7	ENN	87.53	326	eP	49	23.00	3.7X							
IMA	65.56	26	ePc	47	16.60	0.6		0.4s	5.00nm			5.1mb								
	1.1s	15.90nm			5.0mb		SLE	87.86	322	ePc	49	20.30	-0.7	TWC	1.68	299	iPc	56	45.90	1.1
PMR	68.09	31	ePc	47	31.50	-0.4	FEL	88.07	323	eP	49	03.91	-18.2X							
	0.6s	12.20nm			5.2mb		PNT	88.12	36	eP	49	23.00	0.8	TWD	1.73	280	ePc	56	45.40	-0.1
FBA	68.13	27	ePc	47	32.20	0.1	CDF	88.17	323	iPc	49	22.30	-0.3							
OBN	68.96	322	iP	47	35.50	-1.9		1.2s	23.80nm			5.4mb		TWF1	2.03	258	iPc	56	49.60	-0.3
		i	47	44.00			LON	88.36	39	P	49	24.50	1.0							
		e	48	37.00			BSF	88.77	323	iPc	49	24.70	-0.8							
TOA	69.37	30	ePc	47	40.90	1.0		0.8s	6.70nm			5.0mb		ANP	2.25	309	eP	56	57.50	4.4X
	1.1s	98.40nm			5.8mb		EKA	88.90	333	P	49	29.00	3.2X							
KLU	69.62	31	P	47	41.00	-0.5		1.8s	37.20nm			5.4mb		TWG	2.40	247	ePc			



04d 07h

NB2 79.54 333 P 08 21.40 -0.8  
0.7s 1.00nm 3.9mb  
YKA 82.52 23 eP 08 38.20 0.4  
0.7s 0.50nm 3.7mb  
S.D. = 0.7 on 9 of 10 obs.

MAY 04, 1991 06h 59m 00.65 ± 0.60s  
37.859 N ± 5.0km 6.386 W ± 5.5km  
DEPTH = 10.0km (geophysicist)  
SPAIN (377)  
mbLg 3.1 (MDD).

EVAL 0.40 226 iP 59 08.50 -0.3  
eS 59 14.30  
EHOR 0.90 92 iPg 59 18.00 0.1  
eSg 59 30.50  
LIJA 1.23 141 eP 59 24.00 0.3  
ALJ 1.34 152 eP 59 30.00 4.6X  
CNIL 1.51 170 eP 59 34.00 6.3X  
EJIF 1.58 152 ePg 59 32.60 3.8X  
eSg 59 54.00  
EBAN 2.08 81 ePn 59 35.30 -0.7  
eSn 00 01.00  
EPLA 2.21 6 ePn 59 38.40 0.4  
eSn 00 05.50  
AFC 2.34 104 ePn 59 40.20 0.3  
EGUA 2.47 114 ePn 59 42.20 0.6  
eSn 00 11.50  
TOL 2.72 41 e(Pg) 59 45.00 -0.2  
eSn 00 14.00  
iSg 00 25.00  
EHUE 3.00 90 ePn 59 48.50 -0.7  
eSn 00 23.60  
EVIA 3.16 75 ePn 59 51.00 -0.4  
eSn 00 27.60  
GUD 3.28 31 iPnc 59 53.20 0.0  
PTO 3.70 333 ePn 00 36.50 37.5X  
eSn 00 50.70  
ETOR 4.47 47 ePn 00 10.60 0.5  
S.D. = 0.5 on 12 of 16 obs.

% MAY 04, 1991 07h 11m 34.11 ± 1.04s  
45.326 N ± 11.7km 26.566 E ± 9.2km  
DEPTH = 33.0km (normal)  
ROMANIA (358)

BRD 0.39 61 ePc 11 47.50 4.4X  
MLR 0.47 291 iPc 11 44.50 0.1  
VRI 0.56 12 iPc 11 46.50 1.0  
CVO 0.57 331 iPc 11 45.00 -0.7  
CFR 1.13 97 iPc 11 52.50 -1.1  
PPE 1.16 39 eP 11 54.00 0.0  
TLB 1.28 125 eP 11 56.50 0.8  
S.D. = 1.1 on 6 of 7 obs.

? MAY 04, 1991 07h 33m 34.94 ± 4.75s  
50.035 N ± 18.0km 9.708 E ± 33.9km  
DEPTH = 10.0km (geophysicist)  
GERMANY (543)  
ML 3.0 (LDG).

TOD 0.73 234 ePg 33 48.88 -0.4  
TNS 0.83 284 ePg 33 51.30 0.2  
eSg 33 58.10  
KTD 1.27 236 ePg 33 59.08 0.5  
ABH 1.40 265 ePg 34 00.43 -0.1  
RUP 1.75 260 ePg 34 05.20 -0.3  
CDF 2.28 225 Pg 34 17.40 4.2X  
Sg 34 42.00  
FEL 2.43 208 ePg 34 15.57 0.1  
BSF 2.93 222 Pg 34 29.20 6.8X  
Sg 35 02.20  
HAU 3.00 229 Pg 34 30.00 6.6X  
Sg 35 04.00  
S.D. = 0.4 on 6 of 9 obs.

& MAY 04, 1991 07h 46m 53.13s  
59.996 N 152.579 W  
DEPTH = 94.2km  
SOUTHERN ALASKA (2)  
<AEIC>.

RED 0.44 347 iPd 47 07.52 -0.7  
eS 47 18.73  
RSO 0.48 350 iPd 47 07.99 -0.6  
RS2 0.48 349 iPd 47 08.01 -0.6  
RDW 0.50 347 iPd 47 08.07 -0.7

RDN 0.53 350 iPd 47 08.24 -0.7  
eS 47 20.36  
RDT 0.59 8 iPd 47 08.51 -0.8  
eS 47 21.25  
NCT 0.59 343 eP 47 08.83 -0.6  
DFR 0.60 355 iPd 47 08.69 -0.8  
eS 47 21.04  
NNL 0.65 85 ePc 47 10.18 0.4  
XLV 0.70 141 ePc 47 09.58 -0.6  
AUE 0.76 213 eP 47 10.06 -0.7  
AUH 0.77 215 eP 47 10.58 -0.5  
AUI 0.79 213 eP 47 10.12 -1.0  
eS 47 23.27  
CNPM 0.83 124 iPc 47 11.18 -0.4  
eS 47 25.52  
PDB 0.84 256 ePd 47 10.71 -0.9  
eS 47 24.84  
NKA 1.00 41 iPd 47 14.50 1.1  
CDD 1.20 207 ePd 47 14.61 -1.2  
MCNL 1.21 228 iPd 47 14.76 -1.1  
eS 47 31.47  
CKL 1.21 6 iPd 47 15.12 -0.9  
SPU 1.22 12 iPd 47 15.15 -0.9  
BGL 1.28 4 iPd 47 16.04 -0.7  
SLKM 1.28 65 eP 47 15.67 -1.1  
CRP 1.29 9 ePd 47 16.33 -0.7  
SYI 1.39 176 ePc 47 17.41 -0.7  
SEW 1.57 85 eP 47 19.08 -1.3  
SUA 1.73 31 ePd 47 21.78 -0.8  
eS 47 43.16  
PMS 1.95 49 ePc 47 24.09 -1.2  
SKT 2.06 14 ePd 47 25.31 -1.5  
PWA 2.12 37 ePc 47 26.55 -1.1  
PLRM 2.33 45 eP 47 28.09 -2.3  
KNIM 2.45 80 eP 47 29.25 -2.8  
KNK 2.48 53 eP 47 30.00 -2.4  
MTU 2.48 88 eP 47 30.53 -1.9  
GHO 2.52 43 ePc 47 31.35 -1.8  
CUT 2.66 24 eP 47 33.63 -1.3  
SML 2.76 47 eP 47 33.95 -2.3  
GLI 2.86 70 eP 47 35.39 -2.2  
VZW 3.16 68 eP 47 39.75 -2.1  
KLU 3.60 62 eP 47 44.87 -3.0  
39 obs. associated

\* MAY 04, 1991 09h 21m 34.49 ± 1.75s  
38.685 N ± 6.0km 27.130 E ± 24.0km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 3.4 (ISK).

IZM 0.30 160 iPg 21 39.90 -1.0  
eSg 21 44.60  
CIN 1.32 145 eP 22 00.00 1.2  
DST 1.48 51 iPn 22 01.10 -0.2  
KGT 1.77 4 ePn 22 06.10 0.8  
BNT 1.78 20 iPn 22 05.00 -0.5  
KCT 1.83 31 ePn 22 05.60 -0.6  
YLV 2.56 42 ePn 22 17.00 0.3  
S.D. = 0.9 on 7 of 7 obs.

\* MAY 04, 1991 09h 57m 01.02 ± 1.35s  
31.467 S ± 10.6km 68.648 W ± 10.5km  
DEPTH = 114.1 ± 15.9 km  
SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.08 198 iPd 57 16.80 -0.4  
eS 57 28.80  
RTLL 0.20 48 iPc 57 16.70 -0.8  
CFA 0.38 112 ePc 57 18.00 0.1  
eS 57 29.90  
MDZ 1.42 187 iP 57 29.20 1.6  
iS 57 46.20  
RTRS 1.47 331 iPc 57 28.80 0.8  
S 57 48.00  
PCH 2.66 216 iPd 57 44.50 1.0  
iS 58 18.50  
TACH 2.91 221 iPd 57 46.60 -0.1  
iS 58 22.00  
RFA 3.30 177 iPc 57 51.60 -0.3  
(S) 58 21.20  
LNV 3.40 222 iPd 57 51.50 -1.7  
TCA 3.47 89 ePc 57 54.20 -0.1  
(S) 58 27.40  
S.D. = 1.2 on 10 of 10 obs.

& MAY 04, 1991 10h 22m 44.59s  
57.937 N 145.447 W  
-DEPTH = 10.0km (geophysicist)  
GULF OF ALASKA (15)  
<AEIC>. ML 2.5 (AEIC).

MTU 2.35 332 eP 23 18.77 -5.1  
eS 23 44.80  
HMT 2.48 14 eP 23 20.61 -5.1  
eS 23 48.60  
RAGM 2.49 9 eP 23 20.61 -5.2  
eS 23 48.14  
HIN 2.53 348 eP 23 21.16 -5.2  
SGAM 2.58 3 eP 23 22.04 -5.0  
eS 23 51.02  
CVA 2.62 357 eP 23 22.31 -5.4  
eS 23 49.93  
KNIM 2.69 335 eP 23 23.20 -5.5  
WAX 2.85 27 eP 23 25.47 -5.6  
SEW 3.00 318 eP 23 27.74 -5.3  
CROM 3.07 22 eP 23 28.55 -5.6  
eS 24 01.70  
TGL 3.13 24 iP 23 29.45 -5.5  
eS 24 02.73  
VZW 3.18 350 eP 23 29.99 -5.7  
VLZ 3.24 352 eP 23 30.85 -5.5  
CNPM 3.41 300 eP 23 35.05 -3.9  
BALM 3.49 26 iP 23 34.33 -5.7  
eS 24 11.02  
SLKM 3.56 318 eP 23 36.64 -4.4  
KLU 3.58 356 eP 23 35.58 -5.7  
GLB 3.61 13 eP 23 35.80 -6.0  
eS 24 14.19  
KNK 3.81 338 eP 23 39.75 -4.8  
SML 4.15 341 eP 23 45.52 -3.8  
GHO 4.23 337 eP 23 46.76 -3.8  
RDT 4.44 309 eP 23 48.90 -4.7  
RDN 4.56 308 eP 23 50.67 -4.6  
DFR 4.57 309 eP 23 50.53 -4.9  
SPU 4.68 317 eP 23 52.33 -4.6  
CKL 4.79 316 eP 23 54.11 -4.5  
NCG 4.86 318 eP 23 55.39 -4.2  
SKT 5.08 326 eP 23 57.83 -4.7  
CUT 5.09 334 eP 23 57.65 -5.0  
29 obs. associated

% MAY 04, 1991 12h 02m 33.29 ± 0.52s  
42.760 N ± 5.0km 19.202 E ± 4.0km  
DEPTH = 10.0km (geophysicist)  
YUGOSLAVIA (383)  
ML 1.7 (TTG).

NKY 0.16 289 iPg 02 37.21 0.2  
iSg 02 40.21  
TTG 0.33 172 iPg 02 40.46 0.3  
iSg 02 46.19  
BRY 0.50 286 iPg 02 43.27 -0.3  
iSg 02 51.04  
IVA 0.52 78 iPg 02 43.62 -0.3  
iSg 02 53.10  
BDV 0.55 210 iPg 02 44.66 0.2  
iSg 02 54.06  
PLE 0.59 14 iPg 02 45.62 0.4  
iSg 02 55.12  
PVY 0.59 106 iPg 02 45.27 -0.1  
iSg 02 55.57  
HCY 0.61 239 iPg 02 45.22 -0.3  
iSg 02 55.26  
S.D. = 0.3 on 8 of 8 obs.

\* MAY 04, 1991 12h 14m 57.15 ± 1.75s  
5.593 S ± 15.5km 131.440 E ± 19.3km  
DEPTH = 33.0km (normal)  
4.6mb (2 obs.)  
BANDA SEA (280)

AAI 3.75 300 eP 15 54.20 0.1  
eS 16 56.50  
MTN 7.21 182 eP 16 44.00 1.0  
0.3s 179.00nm 6.5mb X  
eS 18 03.00  
KNA 10.43 194 eP 17 27.20 -0.4  
0.3s 52.00nm 6.2mb X  
eS 19 19.00  
WRA 14.54 169 P 18 34.00 11.4X  
0.4s 7.20nm  
WB2 14.54 169 iPd 18 18.70 -3.9X



	0.5s	15.00nm	4.7mb	TNP	57.72	68 P	50 43.20	0.3	VDL	78.54	339 ePc	52 52.70	0.6	
		i	18 30.80		0.7s	8.15nm		5.0mb	GRR	78.61	346 eP	52 52.40	0.2	
QIS	16.86	153 eP	18 52.00	-0.3	GUN	58.28	276 P	50 43.20	-3.8X	LOR	78.93	343 iPc	52 54.00	0.0
		eS	21 46.00		ISA	58.66	71 eP	50 49.00	-0.2		1.0s	26.00nm	5.1mb	
ASPA	18.13	173 eP	19 08.20	0.0	KKN	58.74	276 P	50 43.78	-6.3X	Z	22s	0.15um	4.3msz	
	0.6s	25.90nm	4.5mb	BW06	58.76	59 P	50 50.00	-0.1	LPF	78.99	346 eP	52 54.70	0.4	
		eS	22 19.70			1.0s	21.67nm	5.2mb	GRC	79.04	343 P	52 55.11	0.5	
MBL	19.13	215 eP	19 20.00	-0.4	PKI	58.81	276 P	50 45.96	-4.8X	LBF	79.18	343 eP	52 55.30	-0.1
	S.D. = 0.7	on	6 of 8 obs.		FRB	58.91	22 ePc	50 48.50	-2.0		0.8s	12.10nm	4.9mb	
					DMN	58.97	276 P	50 45.94	-5.8X	SSF	79.19	343 iPc	52 55.60	0.2
					GKN	58.98	277 P	50 45.76	-5.9X		0.9s	11.45nm	4.8mb	
	MAY 04, 1991	12h	40m	56.51 ± 0.20s	CLC	59.07	70 eP	50 52.00	0.0	MMK	79.28	340 ePc	52 56.70	0.5
				51.889 N ± 4.9km	SBB	59.72	71 eP	50 57.00	0.4	DIX	79.37	340 ePc	52 57.20	0.4
				158.881 E ± 3.6km	GSC	59.89	70 eP	50 58.00	0.3	AVF	79.48	343 eP	52 57.30	0.3
				DEPTH = 65.2km ( 4 depth phases)	MSU	60.29	65 P	51 01.40	0.8		1.0s	26.00nm	5.1mb	
				4.9mb ( 49 obs.)	KAF	60.30	337 eP	50 58.00	-2.1	EMS	79.48	341 ePc	52 57.50	0.3
				NEAR EAST COAST OF KAMCHATKA (218)		0.6s	2.40nm	4.5mb	SMF	79.53	343 eP	52 57.60	0.3	
KUSJ	12.99	233 eP	43 55.80	-3.9X			esP	50 58.80			1.2s	34.20nm	5.2mb	
ASAJ	13.35	241 eP	44 09.30	4.9X	NUR	62.09	336 eP	50 58.00	-14.2X	BGF	79.79	343 eP	52 59.20	0.5
HOOJ	14.22	234 eP	44 13.00	-2.8	GLA	62.63	71 P	51 16.40	0.2	LPL	80.05	341 eP	53 01.30	0.9
MRRJ	15.34	239 eP	44 30.10	-0.1	GOL	63.17	59 P	51 20.60	0.7		1.0s	18.00nm	5.0mb	
OFUJ	17.54	230 eP	44 53.30	-4.6X		1.0s	11.88nm	4.9mb	LPG	80.07	341 eP	53 01.50	1.0	
YAK	18.69	314 eP	45 08.30	-3.4X		64.49	343 P	51 26.50	-1.5	TCF	80.17	344 eP	53 01.30	0.6
		iPP	45 21.00		NB2	0.7s	19.00nm	5.2mb		1.0s	14.00nm	4.8mb		
		iPP	45 28.00		HFS	64.87	342 eP	51 28.50	-1.8	MAF	80.17	344 eP	53 01.60	0.9
		eSS	49 08.00			0.3s	8.80nm	5.2mb		1.0s	22.00nm	5.0mb		
YAMJ	19.04	231 eP	45 16.20	0.2		Z	20s	0.17um	4.2msz	PLDF	80.22	343 P	53 01.91	0.8
NIIJ	20.28	232 P	45 29.20	0.2			e	51 34.20	18kmX	AGO	80.23	343 P	53 02.17	1.1
KAKJ	20.56	228 P	45 32.10	0.2			e	52 04.20		MFF	80.25	345 eP	53 01.80	0.7
MDJ	20.71	261 eP	45 32.50	-0.9			LR	18 07.00		LSF	80.32	344 eP	53 02.00	0.5
	1.0s	22.00nm	4.4mb		ANMO	66.04	64 P	51 38.50	0.0		1.0s	20.00nm	5.0mb	
	E	14s	0.44um			1.0s	28.75nm	5.2mb	PYM	80.55	343 P	53 03.71	0.9	
MAT	21.22	232 iPc	45 39.10	0.5	ALQ	66.04	64 ePc	51 38.80	0.3	SGS	80.62	47 P	53 04.30	1.1
	0.4s	9.32nm	4.5mb			1.0s	8.25nm	4.7mb	LBL	81.00	343 P	53 06.36	1.3	
		eS	49 32.00		SCH	67.09	27 eP	51 44.00	-0.6	RJF	81.24	344 eP	53 07.20	0.9
CHJJ	21.24	230 P	45 39.70	0.9	TUL	71.02	56 ePc	52 08.30	-0.7		1.1s	19.55nm	5.0mb	
IIDJ	22.21	231 P	45 50.20	1.7		0.8s	16.80nm	5.0mb	Z	22s	0.17um	4.4msz		
CN2	23.68	263 eP	46 02.00	-0.7		Z	20s	0.10um	4.1msz	CAF	81.51	344 eP	53 09.10	1.3
	1.0s	10.00nm	4.2mb				LR	17 26.40			1.1s	26.85nm	5.1mb	
	Z	18s	1.20um	4.4msz	FVM	72.07	51 P	52 15.00	-0.3	LFF	81.72	345 eP	53 10.10	1.3
	N	13s	0.10um		EKA	72.11	349 Pc	52 14.40	-0.8	LPO	81.90	344 eP	53 10.90	1.1
	E	13s	0.30um			0.6s	4.50nm	4.6mb	EPF	83.65	344 eP	53 20.60	1.7	
		epP	46 12.00	37kmX	KSP	72.85	336 eP	52 18.40	-1.3		S.D. = 0.9	on 109 of 122 obs.		
		eS	50 07.00		ELC	73.20	51 P	52 21.90	0.0					
TTA	26.11	47 P	46 25.00	-0.6	CLL	73.21	338 iPc	52 20.30	-1.4					
	0.8s	15.52nm	4.6mb			1.1s	16.00nm	4.9mb						
IMA	27.44	41 P	46 36.40	-1.4	BRG	73.40	338 eP	52 22.30	-0.5					
	0.8s	11.21nm	4.5mb			1.0s	10.00nm	4.7mb						
PMR	29.34	50 P	46 53.00	-1.7	OLY	73.52	53 P	52 23.20	-0.6					
FBA	29.81	43 P	46 58.00	-0.9	WTS	73.85	342 eP	52 25.00	-0.4					
	0.9s	37.50nm	5.1mb			0.9s	30.00nm	5.2mb						
KLU	30.88	50 P	47 07.60	-0.8	PRU	74.08	337 eP	52 26.20	-0.6	QUIL	5.63	342 eP	02 16.30	0.2
INK	35.28	37 iPc	47 45.60	-0.7		1.0s	4.30nm	4.3mb	ANGL	5.72	356 eP	02 31.00	13.6X	
	0.7s	33.00nm	5.4mb		MOX	74.14	339 eP	52 27.20	0.0	NNA	5.82	177 iP	02 23.50	5.0X
LZH	41.59	270 eP	48 38.00	-1.5	GBA	74.15	272 Pd	52 27.40	-0.3		0.6s	73.33nm	5.5mb	
	2.0s	36.00nm	4.8mb			1.0s	17.10nm	4.9mb			iS	03 31.00		
	Z	24s	0.41um	4.2mszX	WB2	74.67	204 iPd	52 30.90	0.4	OTO	6.05	347 P	02 25.00	3.0X
		sP	49 04.00			0.7s	8.70nm	4.8mb	OUR	6.08	347 eP	02 27.80	5.3X	
GTA	42.01	277 eP	48 43.40	0.6			i	54 35.40		ZOBO	13.41	139 P	04 02.80	-0.4
	1.2s	10.00nm	4.5mb				i	52 44.70	48kmX		Z	20s	1.66um	
YKA	44.56	41 eP	49 02.20	-0.8	WRA	74.68	204 P	52 30.00	-0.5			S	06 44.00	
	0.8s	9.30nm	4.6mb			1.6s	8.90nm	4.4mb			LR	09 20.00		
GYA	46.51	258 P	49 20.00	0.9	SRO	75.10	334 iP	52 32.00	-0.7	LPB	13.62	140 P	04 05.00	-0.8
WMO	46.67	290 P	49 19.20	-0.9	KHC	75.11	337 iP	52 33.10	0.3		Z	18s	4.12um	
PNT	49.21	59 eP	49 40.00	0.3		1.1s	8.00nm	4.6mb				S	07 43.00	
	0.9s	19.00nm	5.1mb		GRF	75.13	339 ePc	52 33.20	0.3			LR	09 40.00	
NEW	51.16	59 P	49 54.80	0.2		1.1s	25.00nm	5.1mb	UPA	15.20	351 (P)	04 16.00	-10.1X	
	0.8s	11.46nm	5.0mb			Z	19s	0.10um	4.1msz	CCH	15.52	137 P	04 39.60	9.0X
FHC	52.00	70 eP	49 57.80	-3.3X	ENN	75.19	343 eP	52 33.00	-0.1	SDV	16.28	24 eP	04 39.70	-0.5
LBFM	52.87	68 P	50 08.40	0.6		0.9s	38.00nm	5.3mb	TOV	17.44	25 eP	04 53.10	-1.5	
		pP	50 25.00	64km	MEM	75.32	343 iPd	52 33.42	-0.5	SIV	18.56	123 P	05 07.00	-1.5
SES	52.95	53 eP	50 08.00	-0.1	SNF	75.73	344 Pd	52 36.50	0.3	PPD	29.55	125 eP	06 57.00	0.8
MIN	53.68	69 eP	50 13.80	0.2	DOU	76.07	343 P	52 38.30	0.1	BAO	30.12	111 ePc	07 02.00	0.5
		epP	50 30.00	62km	RSCP	76.29	49 P	52 41.00	1.3	VAO	33.57	123 (P)	07 18.00	-13.6X
ORV	54.26	70 eP	50 18.00	0.3	CDF	77.17	341 iPc	52 44.40	-0.1	SOB1	36.06	97 (P)	07 53.00	0.1
FFC	54.40	45 eP	50 18.00	-0.6		0.9s	18.00nm	5.0mb	PDCR	38.03	102 eP	08 07.70	-1.7	
	0.7s	12.00nm	5.0mb								e	08 29.10		
BRK	54.93	72 eP	50 21.30	-1.3	CVL	77.49	43 P	52 46.80	0.6	JSC	40.38	355 P	08 28.00	-0.6
BKS	54.95	72 eP	50 19.40	-3.4X	FEL	77.54	340 eP	52 46.03	-0.5	CVL	43.91	359 P	08 57.00	-0.4
LRM	55.18	58 eP	50 24.60	-0.1	HAU	77.75	342 eP	52 47.50	0.0	MEQ	45.44	335 iPc	09 01.00	-8.9X
		e	50 42.80	71km		0.9s	9.85nm	4.8mb		LVNJ	46.76	2 P	09 22.00	1.9
MHC	55.65	72 eP	50 28.50	0.5		Z	22s	0.13um	4.2msz	WVLY	48.39	359 P	09 32.30	-0.6
SOD	55.78	340 eP	50 37.00	8.6X	BSF	77.83	341 iPc	52 47.80	-0.3	ALO	49.32	328 iPc	09 40.80	0.4
CMB	55.92	70 eP	50 30.40	0.5		0.9s	9.85nm	4.8mb			0.9s</			



04d 13h

0.7s 4.25nm 4.5mb  
 TPC 54.34 320 eP 10 18.00 0.0  
 MSU 55.04 327 P 10 23.00 -0.3  
 GSC 55.58 321 eP 10 28.00 0.9  
 MWC 55.71 319 eP 10 25.00 -3.2X  
 SBB 55.85 320 eP 10 29.00 0.0  
 DAU 55.93 329 P 10 29.60 -0.2  
 CLC 56.41 321 eP 10 33.00 0.0  
 DUG 56.59 328 P 10 34.40 0.1  
 ISA 56.87 320 eP 10 37.00 0.7  
 BW06 56.89 332 P 10 35.00 -1.5

0.9s 6.36nm 4.6mb  
 TNP 57.63 323 P 10 41.80 0.0  
 0.6s 2.93nm 4.5mb  
 BONR 58.20 322 P 10 46.40 0.5  
 LRM 60.55 332 eP 11 01.00 -0.9  
 ORV 61.15 322 P 11 06.30 0.5  
 SCH 61.35 7 eP 11 06.00 -0.9  
 LBFM 62.48 323 P 11 14.50 -0.5  
 SES 63.46 336 ePc 11 20.80 -0.3  
 FFC 64.08 344 eP 11 24.00 -1.0

1.1s 25.00nm 5.2mb  
 NEW 64.51 332 P 11 27.00 -1.0  
 0.8s 21.88nm 5.3mb  
 LON 65.84 328 P 11 36.00 -0.6  
 BMW 66.42 327 P 11 40.00 -0.3  
 PNT 66.43 331 ePc 11 41.00 0.7

0.9s 27.00nm 5.3mb  
 FRB 69.99 4 eP 12 01.00 -1.1  
 LKO 72.99 78 P 12 19.96 -1.1  
 KIC 73.33 82 P 12 23.80 0.8  
 YKA 74.19 343 eP 12 25.50 -1.6

0.6s 6.50nm 4.8mb  
 INK 83.90 342 eP 13 20.00 0.4  
 LPF 85.33 41 eP 13 29.00 1.9  
 KLU 85.43 333 P 13 28.00 0.5  
 GRR 85.54 41 eP 13 28.90 0.7  
 LSF 86.62 43 eP 13 34.70 1.1  
 PMR 86.91 333 P 13 34.80 0.2

0.6s 3.69nm 4.8mb  
 FBA 87.44 336 P 13 37.60 0.4  
 0.7s 4.65nm 4.9mb

AVF 87.97 43 eP 13 42.70 2.7  
 SSF 88.12 42 eP 13 44.00 3.2X  
 SMF 88.27 43 eP 13 44.50 3.0X

1.2s 11.90nm 5.1mb  
 LOR 88.40 42 eP 13 44.50 2.3  
 0.9s 4.90nm 4.8mb

IMA 90.14 337 P 13 50.50 0.4  
 0.9s 5.21nm 4.8mb

BSF 90.45 42 eP 13 55.50 3.6X  
 CDF 90.85 42 eP 13 55.70 2.0  
 0.9s 6.55nm 5.0mb

WRA 139.61 229 PKP 20 20.00 0.8X  
 2.2s 2.10nm  
 BTO 145.09 350 PKP 20 28.00 -0.3X  
 GTA 146.76 4 ePKP 20 32.00 0.9X

pPKP 20 41.80  
 NDI 146.98 44 ePKP 20 35.00 3.4X  
 TIA 147.33 338 ePKP 20 33.20 1.3X  
 TIY 147.38 346 PKPc 20 34.80 2.7X

SSS 149.79 328 PKP 20 39.00 3.1X  
 LZH 150.18 358 PKPc 20 42.50 5.9X  
 1.0s 42.00nm

pP 21 00.50  
 i 21 16.50

GKN 152.23 36 PKP 20 48.02 8.1X  
 KKN 152.76 36 PKP 20 48.04 7.3X  
 DMN 152.80 36 PKP 20 47.96 7.1X  
 PKI 153.00 36 PKP 20 48.04 6.8X  
 GUN 153.02 35 PKP 20 49.20 7.9X

S.D. = 1.0 on 53 of 78 obs.

MAY 04, 1991 13h 32m 22.49±0.72s  
 41.074 N ± 6.8km 22.495 E ± 6.0km  
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)  
 ML 1.6 (SKO). MD 1.9 (THE).

GRG 0.14 211 ePg 32 25.30 -0.5  
 eSg 32 27.60

VAY 0.25 13 iPg 32 27.60 -0.3  
 iSg 32 31.30

THE 0.57 141 ePg 32 33.70 -0.3  
 eSg 32 41.50

SOH 0.70 111 ePg 32 36.70 0.4  
 eSg 32 46.50

SRS 0.83 87 ePg 32 38.70 0.1  
 eSg 32 50.60

FNA 0.90 251 ePg 32 40.20 0.5  
 S.D. = 0.5 on 6 of 6 obs.

% MAY 04, 1991 14h 05m 47.20±0.71s  
 43.120 N ± 7.3km 0.563 W ± 5.0km  
 DEPTH = 10.0km (geophysicist)

PYRENEES (378)  
 MD 1.0 (STR).

ESCF 0.04 192 Pg 05 48.88 -0.5  
 Sg 05 49.74

OGE 0.08 53 Pg 05 49.63 -0.1  
 ATE 0.11 252 Pg 05 49.89 -0.2  
 Sg 05 51.50

JAU 0.16 120 Pg 05 51.22 0.2  
 Sg 05 54.10

MADF 0.19 278 Pg 05 51.56 0.1  
 Sg 05 54.58

ISSF 0.19 242 Pg 05 51.67 0.1  
 Sg 05 55.05

LHE 0.21 192 Pg 05 52.11 0.3  
 S.D. = 0.3 on 7 of 7 obs.

? MAY 04, 1991 14h 06m 18.83±6.58s  
 4.962 S ± 72.7km 145.337 E ± 10.2km  
 DEPTH = 13.3 ± 8.4 km  
 3.2mb (1 obs.)

NEAR N COAST OF PAPUA NEW GUINEA(200)

MDG 0.52 123 iPd 06 28.80 -0.6  
 YYY 1.42 154 iPd 06 47.10 2.8X  
 eS 07 14.30

MNDI 2.05 235 eP 06 53.00 -0.6  
 LAT 2.36 136 iPc 06 58.60 0.8

PMG 4.77 158 eP 07 31.50 -0.6  
 eS 08 30.00

WB2 18.33 215 eP 10 35.20 0.6  
 0.9s 1.60nm 3.2mb  
 S.D. = 1.4 on 5 of 6 obs.

% MAY 04, 1991 14h 08m 05.06±0.65s  
 42.509 N ± 6.6km 19.422 E ± 5.5km  
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)  
 ML 1.4 (TTG).

TTG 0.14 237 iPg 08 08.70 0.3  
 iSg 08 11.98

PVY 0.42 78 iPg 08 13.88 0.3  
 iSg 08 19.85

NKY 0.44 314 iPg 08 14.00 0.0  
 iSg 08 20.81

BDV 0.49 243 iPg 08 15.03 -0.1  
 iSg 08 22.36

IVA 0.50 44 iPg 08 15.06 -0.3  
 iSg 08 23.66

ULC 0.56 193 iPg 08 16.18 -0.3  
 iSg 08 24.75

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

\* MAY 04, 1991 14h 23m 34.73±0.71s  
 44.733 N ± 11.5km 150.270 E ± 12.2km  
 DEPTH = 33.0km (normal)  
 4.8mb (19 obs.)

KURIL ISLANDS REGION (222)

KUSJ 4.34 250 P 24 40.00 0.0  
 eS 25 25.00

ASAJ 5.50 266 eP 25 00.60 4.2X  
 HOOJ 5.59 248 eP 24 59.60 1.9  
 eS 26 00.40

MRRJ 7.07 254 eP 25 20.40 2.0  
 eS 26 36.40

OFUJ 8.54 232 eP 25 37.70 -1.6  
 S 27 05.70

MAT 12.27 232 (P) 26 29.00 -1.0  
 (S) 28 45.00

YAK 21.05 333 eP 28 16.00 -1.8  
 LZH 35.98 273 eP 30 34.00 -0.4  
 1.0s 18.00nm 5.0mb

GUN 53.18 275 P 32 52.62 0.3  
 0.5s 21.00nm 5.4mb

KKN 53.68 275 P 32 55.10 -0.6  
 0.6s 9.00nm 5.0mb

PKI 53.72 275 P 32 55.90 -0.3

0.5s 12.00nm 5.1mb  
 YKA 53.73 35 eP 32 55.70 0.4  
 0.7s 2.00nm 4.2mb

DMN 53.91 275 P 32 56.58 -0.9  
 GKN 54.01 275 P 32 58.34 0.3

FFC 0.6s 17.00nm 5.3mb  
 63.56 38 eP 34 05.00 1.1

0.7s 9.00nm 5.0mb  
 KAF 64.42 334 iP 34 07.50 -1.9  
 0.4s 2.50nm 4.7mb

esP 34 07.90  
 WB2 65.98 196 eP 34 18.90 -1.0  
 0.7s 2.20nm 4.4mb

i 34 38.60  
 i 35 10.60

WRA 65.99 196 P 34 20.00 0.1  
 0.6s 2.40nm 4.5mb

NUR 66.16 334 iP 34 19.10 -1.5  
 FRB 67.59 18 ePc 34 28.10 -1.5

NB2 69.47 340 P 34 40.30 -1.1  
 0.7s 4.50nm 4.6mb

HFS 69.63 338 eP 34 40.70 -1.6  
 0.4s 4.00nm 4.8mb

e 34 44.50  
 e 34 47.00

KRA 76.18 330 eP 35 21.70 0.8  
 CLL 77.44 334 iP 35 28.00 0.1

1.1s 18.00nm 5.0mb  
 PRU 78.10 333 eP 35 32.00 0.5

KHC 79.15 333 eP 35 38.90 1.5  
 FLN 83.43 341 eP 36 00.50 0.7

0.6s 4.50nm 4.8mb  
 LOR 83.73 338 eP 36 00.20 -1.2

SSF 84.01 338 eP 36 02.50 -0.3  
 0.8s 2.70nm 4.5mb

SMF 84.31 337 eP 36 03.40 -0.9  
 0.7s 4.95nm 4.8mb

LPG 84.52 335 eP 36 06.20 0.4  
 0.7s 3.30nm 4.6mb

MAF 85.04 338 eP 36 09.40 1.4  
 0.8s 5.35nm 4.8mb

TCF 85.07 338 eP 36 10.20 2.0  
 LSF 85.28 339 eP 36 09.60 0.4

MFF 85.38 340 eP 36 09.60 0.0  
 0.7s 4.40nm 4.8mb

RJF 86.17 338 eP 36 15.30 1.7  
 LFF 86.71 339 eP 36 18.60 2.4

S.D. = 1.2 on 36 of 37 obs.

MAY 04, 1991 14h 31m 29.96±0.14s  
 27.148 N ± 3.1km 140.074 E ± 3.0km  
 DEPTH = 430.7km (6 depth phases)  
 5.2mb (63 obs.)

BONIN ISLANDS REGION (212)  
 CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN  
 L.P.B.: 20S, 49C

Centroid Location:  
 Origin Time 14:31:32.1 0.6

Lat 27.17N 0.08 Lon 140.08E 0.04  
 Dep 420.9 2.3 Half-duration 2.5

Moment Tensor: Scale 10<sup>17</sup> Nm  
 Mrr=-2.51 0.12 Mtt=-0.51 0.22  
 Mff=3.02 0.20 Mrt=-1.67 0.19  
 Mrf=-0.38 0.22 Mtr=-1.81 0.17

Principal Axes:  
 T Val= 3.80 Plg= 3 Azm=246  
 N -0.11 35 154  
 P -3.69 55 340

Best Double Couple: Mo=3.8\*10<sup>17</sup>  
 NP1: Strike= 7 Dip=52 Slip=-44  
 NP2: 127 57 -133

WKYJ 8.03 332 P 33 29.50 2.7  
 S 35 04.30

MAT 9.50 351 iPc 33 41.90 -1.4  
 1.0s 90.00nm 5.1mb

SHK 9.72 321 iPd 33 48.20 2.4  
 1.1s 405.06nm 5.7mb

PJC 14.22 161 eP 34 36.20 1.2  
 GUA 14.28 161 eP 34 36.50 0.9

0.7s 169.86nm 5.6mb  
 eS 37 08.70

SAP 15.91 3 eP 34 53.00 0.7  
 eS 37 38.00

ANP 16.77 267 eP 35 04.00 2.7



SSE	16.96	288	eP	35 02.00	-1.1	YAK	35.55	352	iPd	37 50.00	0.2	TOA	58.82	32	ePcP	43 01.10	KLU	58.94	33	P	40 47.00	-1.0	GBA	59.72	270	Pc	40 51.60	-2.2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	5.0s	330.00nm		5.0mb	X		6.0s	600.00nm		5.2mb	X		PP	39 22.00		ePP		42 14.70		ePcP	43 01.10			ePd	40 47.20	0.1		eS	49 13.50																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
NJ2	19.08	290	iPd	35 24.00	0.1	MDJ	19.36	337	iPd	35 28.40	1.9	DL2	19.37	312	P	35 25.00	-1.6	QZH	19.43	268	P	35 27.00	-0.3	SNY	19.93	321	iPd	35 33.00	0.9	CN2	20.39	328	Pd	35 37.00	0.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	4.0s	700.00nm		5.5mb	X		7.0s	300.00nm		4.9mb	X		6.0s	1100.00nm		5.5mb	X		4.0s	1300.00nm		5.8mb	X		5.0s	1800.00nm		5.8mb	X		6.0s	1500.00nm		5.7mb	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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	7.0s	300.00nm		4.9mb	X		6.0s	1100.00nm		5.5mb	X		4.0s	1300.00nm		5.8mb	X		5.0s	1800.00nm		5.8mb	X		6.0s	1500.00nm		5.7mb	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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	6.0s	1100.00nm		5.5mb	X		4.0s	1300.00nm		5.8mb	X		5.0s	1800.00nm		5.8mb	X		6.0s	1500.00nm		5.7mb	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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BAG	20.99	243	eP+	35 42.00	-0.6	TIA	21.48	301	Pd	35 47.60	0.7	WHN	22.77	285	eP	36 00.00	1.2	BJI	23.61	309	eP	36 05.50	-1.0	DAV	24.24	217	eP	36 10.00	-2.4	TIY	25.51	301	Pd	36 24.00	0.2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
							5.5s	1300.00nm		5.6mb	X		1.0s	100.00nm		5.3mb	1.5s		78.00nm		5.0mb	1.8s	200.00nm			5.3mb	2.5s	100.00nm			5.2mb	3.0s	100.00nm		5.1mb	3.5s	100.00nm		5.0mb	4.0s	100.00nm		4.9mb	4.5s	100.00nm		4.8mb	5.0s	100.00nm		4.7mb	5.5s	100.00nm		4.6mb	6.0s	100.00nm		4.5mb	6.5s	100.00nm		4.4mb	7.0s	100.00nm		4.3mb	7.5s	100.00nm		4.2mb	8.0s	100.00nm		4.1mb	8.5s	100.00nm		4.0mb	9.0s	100.00nm		3.9mb	9.5s	100.00nm		3.8mb	10.0s	100.00nm		3.7mb	10.5s	100.00nm		3.6mb	11.0s	100.00nm		3.5mb	11.5s	100.00nm		3.4mb	12.0s	100.00nm		3.3mb	12.5s	100.00nm		3.2mb	13.0s	100.00nm		3.1mb	13.5s	100.00nm		3.0mb	14.0s	100.00nm		2.9mb	14.5s	100.00nm		2.8mb	15.0s	100.00nm		2.7mb	15.5s	100.00nm		2.6mb	16.0s	100.00nm		2.5mb	16.5s	100.00nm		2.4mb	17.0s	100.00nm		2.3mb	17.5s	100.00nm		2.2mb	18.0s	100.00nm		2.1mb	18.5s	100.00nm		2.0mb	19.0s	100.00nm		1.9mb	19.5s	100.00nm		1.8mb	20.0s	100.00nm		1.7mb	20.5s	100.00nm		1.6mb	21.0s	100.00nm		1.5mb	21.5s	100.00nm		1.4mb	22.0s	100.00nm		1.3mb	22.5s	100.00nm		1.2mb	23.0s	100.00nm		1.1mb	23.5s	100.00nm		1.0mb	24.0s	100.00nm		0.9mb	24.5s	100.00nm		0.8mb	25.0s	100.00nm		0.7mb	25.5s	100.00nm		0.6mb	26.0s	100.00nm		0.5mb	26.5s	100.00nm		0.4mb	27.0s	100.00nm		0.3mb	27.5s	100.00nm		0.2mb	28.0s	100.00nm		0.1mb	28.5s	100.00nm		0.0mb	29.0s	100.00nm		0.0mb	29.5s	100.00nm		0.0mb	30.0s	100.00nm		0.0mb	30.5s	100.00nm		0.0mb	31.0s	100.00nm		0.0mb	31.5s	100.00nm		0.0mb	32.0s	100.00nm		0.0mb	32.5s	100.00nm		0.0mb	33.0s	100.00nm		0.0mb	33.5s	100.00nm		0.0mb	34.0s	100.00nm		0.0mb	34.5s	100.00nm		0.0mb	35.0s	100.00nm		0.0mb	35.5s	100.00nm		0.0mb	36.0s	100.00nm		0.0mb	36.5s	100.00nm		0.0mb	37.0s	100.00nm		0.0mb	37.5s	100.00nm		0.0mb	38.0s	100.00nm		0.0mb	38.5s	100.00nm		0.0mb	39.0s	100.00nm		0.0mb	39.5s	100.00nm		0.0mb	40.0s	100.00nm		0.0mb	40.5s	100.00nm		0.0mb	41.0s	100.00nm		0.0mb	41.5s	100.00nm		0.0mb	42.0s	100.00nm		0.0mb	42.5s	100.00nm		0.0mb	43.0s	100.00nm		0.0mb	43.5s	100.00nm		0.0mb	44.0s	100.00nm		0.0mb	44.5s	100.00nm		0.0mb	45.0s	100.00nm		0.0mb	45.5s	100.00nm		0.0mb	46.0s	100.00nm		0.0mb	46.5s	100.00nm		0.0mb	47.0s	100.00nm		0.0mb	47.5s	100.00nm		0.0mb	48.0s	100.00nm		0.0mb	48.5s	100.00nm		0.0mb	49.0s	100.00nm		0.0mb	49.5s	100.00nm		0.0mb	50.0s	100.00nm		0.0mb	50.5s	100.00nm		0.0mb	51.0s	100.00nm		0.0mb	51.5s	100.00nm		0.0mb	52.0s	100.00nm		0.0mb	52.5s	100.00nm		0.0mb	53.0s	100.00nm		0.0mb	53.5s	100.00nm		0.0mb	54.0s	100.00nm		0.0mb	54.5s	100.00nm		0.0mb	55.0s	100.00nm		0.0mb	55.5s	100.00nm		0.0mb	56.0s	100.00nm		0.0mb	56.5s	100.00nm		0.0mb	57.0s	100.00nm		0.0mb	57.5s	100.00nm		0.0mb	58.0s	100.00nm		0.0mb	58.5s	100.00nm		0.0mb	59.0s	100.00nm		0.0mb	59.5s	100.00nm		0.0mb	60.0s	100.00nm		0.0mb	60.5s	100.00nm		0.0mb	61.0s	100.00nm		0.0mb	61.5s	100.00nm		0.0mb	62.0s	100.00nm		0.0mb	62.5s	100.00nm		0.0mb	63.0s	100.00nm		0.0mb	63.5s	100.00nm		0.0mb	64.0s	100.00nm		0.0mb	64.5s	100.00nm		0.0mb	65.0s	100.00nm		0.0mb	65.5s	100.00nm		0.0mb	66.0s	100.00nm		0.0mb	66.5s	100.00nm		0.0mb	67.0s	100.00nm		0.0mb	67.5s	100.00nm		0.0mb	68.0s	100.00nm		0.0mb	68.5s	100.00nm		0.0mb	69.0s	100.00nm		0.0mb	69.5s	100.00nm		0.0mb	70.0s	100.00nm		0.0mb	70.5s	100.00nm		0.0mb	71.0s	100.00nm		0.0mb	71.5s	100.00nm		0.0mb	72.0s	100.00nm		0.0mb	72.5s	100.00nm		0.0mb	73.0s	100.00nm		0.0mb	73.5s	100.00nm		0.0mb	74.0s	100.00nm		0.0mb	74.5s	100.00nm		0.0mb	75.0s	100.00nm		0.0mb	75.5s	100.00nm		0.0mb	76.0s	100.00nm		0.0mb	76.5s	100.00nm		0.0mb	77.0s	100.00nm		0.0mb	77.5s	100.00nm		0.0mb	78.0s	100.00nm		0.0mb	78.5s	100.00nm		0.0mb	79.0s	100.00nm		0.0mb	79.5s	100.00nm		0.0mb	80.0s	100.00nm		0.0mb	80.5s	100.00nm		0.0mb	81.0s	100.00nm		0.0mb	81.5s	100.00nm		0.0mb	82.0s	100.00nm		0.0mb	82.5s	100.00nm		0.0mb	83.0s	100.00nm		0.0mb	83.5s	100.00nm		0.0mb	84.0s	100.00nm		0.0mb	84.5s	100.00nm		0.0mb	85.0s	100.00nm		0.0mb	85.5s	100.00nm		0.0mb	86.0s	100.00nm		0.0mb	86.5s	100.00nm		0.0mb	87.0s	100.00nm		0.0mb	87.5s	100.00nm		0.0mb	88.0s	100.00nm		0.0mb	88.5s	100.00nm		0.0mb	89.0s	100.00nm		0.0mb	89.5s	100.00nm		0.0mb	90.0s	100.00nm		0.0mb	90.5s	100.00nm		0.0mb	91.0s	100.00nm		0.0mb	91.5s	100.00nm		0.0mb	92.0s	100.00nm		0.0mb	92.5s	100.00nm		0.0mb	93.0s	100.00nm		0.0mb	93.5s	100.00nm		0.0mb	94.0s	100.00nm		0.0mb	94.5s	100.00nm		0.0mb	95.0s	100.00nm		0.0mb	95.5s	100.00nm		0.0mb	96.0s	100.00nm		0.0mb	96.5s	100.00nm		0.0mb	97.0s	100.00nm		0.0mb	97.5s	100.00nm		0.0mb	98.0s	100.00nm		0.0mb	98.5s	100.00nm		0.0mb	99.0s	100.00nm		0.0mb	99.5s	100.00nm		0.0mb	100.0s	100.00nm		0.0mb	100.5s	100.00nm		0.0mb	101.0s	100.00nm		0.0mb	101.5s	100.00nm		0.0mb	102.0s	100.00nm		0.0mb	102.5s	100.00nm		0.0mb	103.0s	100.00nm		0.0mb	103.5s	100.00nm		0.0mb	104.0s	100.00nm		0.0mb	104.5s	100.00nm		0.0mb	105.0s	100.00nm		0.0mb	105.5s	100.00nm		0.0mb	106.0s	100.00nm		0.0mb	106.5s	100.00nm		0.0mb	107.0s	100.00nm		0.0mb	107.5s	100.00nm		0.0mb	108.0s	100.00nm		0.0mb	108.5s	100.00nm		0.0mb	109.0s	100.00nm		0.0mb	109.5s	100.00nm		0.0mb	110.0s	100.00nm		0.0mb	110.5s	100.00nm		0.0mb	111.0s	100.00nm		0.0mb	111.5s	100.00nm		0.0mb	112.0s	100.00nm		0.0mb	112.5s	100.00nm		0.0mb	113.0s	100.00nm		0.0mb	113.5s	100.00nm		0.0mb	114.0s	100.00nm		0.0mb	114.5s	100.00nm		0.0mb	115.0s	100.00nm		0.0mb	115.5s	100.00nm		0.0mb	116.0s	100.00nm		0.0mb	116.5s	100.00nm		0.0mb	117.0s	100.00nm		0.0mb	117.5s	100.00nm		0.0mb	118.0s	100.00nm		0.0mb	118.5s	100.00nm		0.0mb	119.0s	100.00nm		0.0mb	119.5s	100.00nm		0.0mb	120.0s	100.00nm		0.0mb	120.5s	100.00nm		0.0mb	121.0s	100.00nm		0.0mb	121.5s	100.00nm		0.0mb	122.0s	100.00nm		0.0mb	122.5s	100.00nm		0.0mb	123.0s	100.00nm		0.0mb	123



[illegible]



CFA	3.24	86	ePd	01 30.00	-1.1	8.633 S ±18.6km	69.000 E ±19.7km		eS	11 51.10	
			eS	02 16.20		DEPTH = 10.0km (geophysicist)			NCG	0.96 279	iPc 11 37.96 -0.6
RFA	4.14	135	ePc	01 44.00	0.2	4.7mb ( 9 obs.)			SML	1.03 58	ePc 11 38.45 -1.0
TCA	6.37	87	ePd	02 11.20	-4.2X	CHAGOS ARCHIPELAGO REGION	(426)		CKL	1.05 267	iPc 11 38.99 -0.8
			(S)	03 25.00						eS	11 53.18
ANT	8.28	10	e(P)	02 48.50	6.5X	GBA	23.63 21 Pd	38 32.10 1.3	BGL	1.07 270	iPc 11 39.34 -0.7
LPB	15.70	14	eP	04 31.00	8.6X		0.9s 13.30nm	4.5mb	CUT	1.14 358	eP 11 40.27 -0.6
ZOBO	15.95	14	P	04 21.20	-4.6X	HYB	27.55 20 eP	39 07.50 -0.3	SEW	1.23 163	eP 11 40.97 -1.2
	Z 20s		0.16um			OUÉ	38.65 357 eP	40 40.10 -4.2X	RDT	1.30 238	iPc 11 42.39 -0.8
			LR	10 24.00		CHG	40.20 47 eP	41 01.40 4.2X		eS	11 59.64
SIV	18.71	35	P	04 53.20	-6.6X	LSA	43.67 28 P	41 27.70 1.8	NNL	1.35 205	ePd 11 44.30 0.3
LKO	75.60	69	P	12 20.48	-5.6X	MAIO	45.58 349 eP	41 33.00 -7.8X	DFR	1.40 242	eP 11 44.03 -0.8
WB2	122.59	210	iPKPd	19 33.10	-3.7X	GYA	50.53 45 P	42 21.20 1.7	SCM	1.48 66	eP 11 45.09 -0.8
	0.5s		1.10nm			WMO	54.89 16 P	42 48.00 -3.8X	RDN	1.48 240	eP 11 44.90 -1.1
WRA	122.60	210	Pdiff	16 07.00	0.4	GTA	55.69 29 Pd	42 56.20 -1.5	RSO	1.50 238	ePc 11 45.56 -0.8
	1.0s		1.00nm				1.0s 10.00nm	4.8mb	RS2	1.50 238	ePc 11 45.60 -0.8
	S.D. = 0.9	on 15 of 23 obs.					pP	43 07.50 39kmX	KNIM	1.51 127	ePd 11 44.09 -2.3
? MAY 04, 1991 16h 17m 57.39±3.63s						XAN	56.86 40 P	43 05.00 -1.1	NCT	1.52 243	eP 11 45.09 -0.7
32.147 S ±21.5km						TIY	61.40 38 Pc	43 37.00 -0.5		S	12 04.70
71.843 W ±25.7km						BTO	61.87 35 eP	43 39.60 -1.1	RED	1.53 237	ePc 11 45.85 -0.9
DEPTH = 33.0km (normal)						WRA	63.98 108 P	43 56.00 1.1		eS	12 05.64
NEAR COAST OF CENTRAL CHILE							0.6s 2.10nm	4.5mb	GLI	1.55 103	ePd 11 45.16 -1.8
						WB2	63.99 108 eP	43 54.80 -0.2		eS	12 05.05
IHA	0.89	169	eP	18 14.00	0.5		0.9s 1.90nm	4.3mb	HUR	1.73 8	eP 11 48.85 -0.7
			iS	18 34.70			e	45 02.50		eS	12 10.76
ROCH	1.08	140	iP	18 16.50	0.0	BJI	65.13 38 eP	44 02.00 0.0	VZW	1.77 95	eP 11 48.51 -1.6
			iS	18 36.00			1.0s 11.00nm	5.0mb		eS	12 11.20
JACH	1.18	117	iPd	18 16.50	-1.3	SNY	70.78 40 Pc	44 35.00 -1.4	MTU	1.79 135	eP 11 48.51 -1.9
			i	18 35.00			1.2s 17.00nm	5.1mb	CNPM	1.83 197	eP 11 50.13 -0.8
LCCH	1.34	170	iPc	18 20.00	0.0	CLL	76.64 328 iP	45 11.00 -0.2	VLZ	1.87 93	eP 11 49.15 -2.2
			iS	18 42.00			1.0s 10.00nm	4.9mb	KLU	2.06 82	ePd 11 52.76 -1.5
PEL	1.39	136	iPc	18 21.00	0.2	KAF	77.87 341 iP	45 18.70 0.9		eS	12 17.81
LNV	1.84	169	eP	18 26.50	-0.7		0.6s 3.90nm	4.7mb	TOA	2.08 65	iPc 11 54.80 0.3
PCH	1.85	143	iPc	18 27.90	0.5		esP	45 19.70	RND	2.23 16	eP 11 56.65 0.0
			iS	18 56.50		MAT	78.80 50 eP	45 23.00 -0.5	SDG	2.53 58	eP 12 01.04 0.2
MDZ	2.63	107	e(P)	18 39.30	0.7	HFS	81.22 335 eP	45 36.00 0.1	SVW	2.64 269	iPc 12 01.40 -1.1
			i	19 20.10			0.6s 1.70nm	4.3mb	PAX	2.79 50	eP 12 04.60 0.0
ZON	2.76	78	eP	18 40.30	0.0	SOD	81.65 345 eP	45 29.00 -9.0X	GLB	3.07 84	eP 12 06.26 -2.4
	S.D. = 0.7	on 9 of 9 obs.				KEV	83.34 346 eP	45 36.00 -10.7X	TTA	3.21 304	eP 12 09.70 -0.9
* MAY 04, 1991 16h 29m 37.33±1.56s						YKA	126.18 2 ePKP	52 13.80 -8.8X	TGL	3.61 95	eP 12 13.54 -2.8
31.901 S ±13.3km							0.9s 0.50nm		BALM	3.80 90	eP 12 16.22 -2.8
72.059 W ±17.4km							S.D. = 1.1	on 16 of 23 obs.		44 obs. associated	
DEPTH = 99.2 ±24.8 km											
OFF COAST OF CENTRAL CHILE											
IHA	1.18	163	eP	30 00.50	0.5	MAY 04, 1991 17h 06m 04.08±0.54s			* MAY 04, 1991 17h 58m 45.48±1.42s		
			iS	30 19.50		38.401 N ±4.2km	23.559 E ±9.7km		0.357 N ±10.0km	122.195 E ±16.6km	
ROCH	1.39	141	iPc	30 01.30	-1.5	DEPTH = 10.0km (geophysicist)			DEPTH = 146.2 ±13.4 km		
			i	30 20.00		GREECE	(364)		4.7mb ( 9 obs.)		
JACH	1.47	122	iPc	30 01.50	-2.1	ML 2.6 (ATH). MD 2.8 (THE).			MINAHASSA PENINSULA	(265)	
			iS	30 20.00							
LCCH	1.62	165	iP	30 06.00	0.5	ATH	0.45 164 ePb	06 13.30 0.1	TSM	5.63 313	iPd 00 08.00 -0.2
			i	30 24.20			eSb	06 18.30	MBL	21.51 186	eP 03 24.50 0.6
PEL	1.70	137	iPc	30 05.60	-0.9	AGG	1.14 303 ePb	06 25.60 0.1	WB2	23.43 150	iPc 03 42.10 -0.5
			iS	30 31.00			eSb	06 43.20		0.7s 10.00nm	4.4mb
SAN	1.95	143	eP	30 09.30	-0.4	PAIG	1.53 3 ePb	06 31.10 -0.3		iScP	07 25.10
			i	30 33.00			eSb	06 52.90	NANU	23.69 195	eP 03 56.10 11.1X
LNV	2.12	165	eP	30 12.50	0.6	VLJ	1.75 197 ePb	06 34.50 -0.2		0.4s 20.00nm	
			iS	30 43.00		LIT	1.89 334 ePn	06 36.50 -0.2	ASPA	26.45 155	eP 04 10.50 -0.2
PCH	2.15	143	iP	30 12.50	0.0		eSn	07 01.80		0.4s 8.30nm	4.7mb
			iS	30 40.50		OUR	1.96 10 ePn	06 37.40 -0.2	WARB	26.73 171	iPc 04 13.70 0.5
RTCB	2.81	82	ePc	30 21.30	0.0	SOH	2.42 356 ePn	06 44.30 -0.1		0.5s 43.00nm	5.3mb
			S	30 58.00		SRS	2.71 1 ePn	06 49.00 0.5	MEKA	27.05 187	eP 04 16.00 -0.1
RTRS	2.82	53	ePc	30 20.60	-0.8	KNT	2.80 350 ePn	06 50.00 0.2		0.5s 39.00nm	5.3mb
			S	30 53.70			S.D. = 0.3	on 9 of 9 obs.	CHG	29.28 310	eP 04 37.00 0.8
MDZ	2.89	111	eP	30 24.40	2.0	& MAY 04, 1991 17h 11m 21.26s			BAL	31.23 189	iPc 04 53.00 -0.2
			i	30 27.10		61.273 N	150.176 W		KLB	32.05 187	eP 05 00.00 -0.3
ZON	2.90	84	eP	30 25.30	2.7	DEPTH = 36.3km			NWAO	33.43 188	eP 05 12.00 -0.3
RTLL	3.12	80	ePc	30 26.10	0.6	SOUTHERN ALASKA	( 2)		STK	36.95 152	iPc 05 42.70 0.6
			S	31 05.00		<AEIC>. ML 2.7 (AEIC).				0.6s 3.30nm	4.3mb
CFA	3.27	86	ePc	30 27.90	0.4				GUN	44.28 311	P 06 43.18 0.3
			eS	31 11.70						0.5s 14.00nm	4.9mb
RFA	4.15	135	ePc	30 40.80	1.1	PMS	0.30 95 iPc	11 29.38 0.1	PKI	44.46 311	P 06 43.90 -0.3
TCA	6.39	87	ePd	31 08.20	-2.5	SUA	0.33 305 iPd	11 29.79 0.0	KKN	44.67 311	P 06 45.88 0.1
LPB	15.72	14	(P)	33 31.00	16.2X		eS	11 36.78		0.7s 10.00nm	4.6mb
ZOBO	15.97	14	P	33 19.00	0.9	PWA	0.41 21 iPc	11 30.07 -0.5	DMN	44.71 310	P 06 46.40 0.3
SIV	18.73	35	eP	33 50.00	-1.2	PLRM	0.60 57 iPc	11 32.23 -1.0	GKN	45.26 311	P 06 50.46 0.1
ASPA	119.42	207	iPdiff	45 06.50	27.2X		eS	11 41.28		0.5s 11.00nm	4.8mb
	0.7s		4.00nm			PMR	0.60 57 iPc	11 32.80 -0.4	HYB	46.15 294	eP 06 58.00 0.6
GBA	146.66	116	PKPd	49 15.80	8.1X	NKA	0.74 225 ePd	11 36.21 0.9	GBA	46.22 289	Pc 06 57.60 -0.3
	0.8s		3.00nm			SLKM	0.77 182 iPd	11 34.71 -1.0		0.4s 3.80nm	4.4mb
	S.D. = 1.5	on 18 of 21 obs.				GHO	0.78 50 iPc	11 35.01 -0.9	QUE	60.22 305	eP 08 39.40 -1.4
? MAY 04, 1991 16h 33m 18.61±1.19s						KNK	0.84 80 ePc	11 36.01 -0.7		S.D. = 0.6	on 19 of 20 obs.
							eS	11 48.34			
						SPU	0.91 265 iPc	11 36.82 -1.0	& MAY 04, 1991 18h 28m 19.80s		
							eS	11 49.57	37.552 N	118.432 W	
						CRP	0.96 271 ePc	11 37.99 -0.5	DEPTH = 5.0km		
							eS	11 50.80	CALIFORNIA-NEVADA BORDER REGION ( 40)		
						SKT	0.96 318 iPc	11 37.68 -0.7	<BRK>. ML 4.1 (BRK), 4.0 (PAS).		



04d 18h

BONR	0.42	14	iP	28 27.70	-0.5
PPK	0.44	107	P	28 27.90	-0.7
SVP	0.53	72	P	28 29.60	-0.8
LCH	0.70	117	P	28 32.30	-1.5
MGM	0.75	98	P	28 33.80	-1.3
TNP	1.10	61	iP	28 40.00	-1.0
FRI	1.16	242	iPc	28 40.80	-1.2
KVN	1.52	10	iP	28 47.30	-0.5
CMB	1.62	288	iPc	28 48.80	-0.4
CLC	1.86	159	eP	28 50.90	-1.7
PKEM	2.01	223	eP	28 55.60	0.9
LLA	2.21	246	ePc	28 58.20	0.4
PRI	2.28	233	eP	28 59.40	0.6
			iS	29 17.21	
PHAM	2.33	223	eP	28 59.00	-0.4
ARN	2.48	266	eP	29 01.20	-0.3
SAO	2.53	253	iPd	29 03.20	0.9
MHC	2.56	266	eP	29 03.20	0.4
PRS	2.65	244	eP	29 04.40	0.4
BCH	2.71	210	eP	29 04.20	-0.8
BKS	3.03	277	iPc	29 10.00	0.6
			eS	29 53.50	
BRK	3.05	277	eP	29 10.10	0.5
ORV	3.13	311	eP	29 10.20	-0.5
PCC	3.14	270	iPd	29 11.30	0.5
BLP	3.38	209	eP	29 14.50	0.1
PEC	3.80	164	eP	29 19.40	-0.9
PLM	4.38	163	eP	29 27.60	-1.1
MSU	5.03	77	eP	29 37.50	-0.5
DUG	5.12	57	e(P)	29 38.50	-0.6
BW06	8.57	50	eP	30 26.50	-1.1
ANMO	10.02	101	e(P)	30 49.00	1.4
ALO	10.02	101	eP	30 49.00	1.4
31 obs. associated					

\* MAY 04, 1991 18h 34m 34.58±2.68s  
31.849 S ±11.9km 72.160 W ±23.3km  
DEPTH = 33.0km (normal)  
OFF COAST OF CENTRAL CHILE (134)

IHA	1.25	160	e(P)	34 56.60	0.8
			iS	35 15.20	
ROCH	1.48	139	iPc	34 59.00	-0.4
			iS	35 18.50	
JACH	1.57	122	iPd	34 59.40	-1.1
			iS	35 18.50	
LCCH	1.70	163	iP	35 02.60	0.3
			i	35 24.00	
LNV	2.19	164	iP	35 09.00	-0.4
			i	35 44.00	
			i	35 47.00	
PCH	2.25	142	iPd	35 10.20	-0.1
			iS	35 38.30	
RTRS	2.86	55	ePc	35 18.10	-0.7
RTCB	2.89	84	ePd	35 19.50	0.1
			S	35 56.80	
ZON	2.98	85	eP	35 22.30	1.6
RTLL	3.19	82	ePc	35 23.90	0.3
			S	36 04.40	
CFA	3.35	87	ePc	35 25.50	-0.4
			eS	36 13.20	
RFA	4.25	134	ePd	35 38.80	0.1
			(S)	36 46.20	
TCA	6.48	87	eP	36 06.30	-3.9X
S.D. = 0.8 on 12 of 13 obs.					

\* MAY 04, 1991 19h 12m 33.63s  
61.175 N 150.061 W  
DEPTH = 14.8km  
SOUTHERN ALASKA (2)  
<AEIC>. ML 2.5 (AEIC).

PMS	0.25	74	iPc	12 39.67	0.3
			iS	12 43.82	
SUA	0.44	312	iPd	12 42.31	-0.3
			eS	12 48.96	
PWA	0.49	10	iPc	12 43.40	0.1
			eS	12 50.11	
PLRM	0.61	47	iPc	12 44.60	-0.9
			eS	12 52.93	
SLKM	0.67	187	eP	12 45.72	-0.9
			eS	12 56.32	
NKA	0.72	233	ePc	12 48.64	1.3
GHO	0.81	42	eP	12 48.33	-0.6
			eS	12 59.92	
KNK	0.81	72	eP	12 49.35	0.4
			eS	13 00.19	

SPU	0.97	271	iPd	12 50.50	-1.1
			S	13 03.04	
CRP	1.02	276	ePd	12 51.64	-0.9
NCG	1.04	284	iPd	12 51.97	-0.9
SML	1.04	52	eP	12 52.49	-0.4
SKT	1.07	320	iPd	12 52.77	-0.6
			eS	13 06.03	
CKL	1.10	272	ePd	12 52.84	-1.1
			eS	13 07.02	
SEW	1.12	164	eP	12 52.83	-1.3
BGL	1.13	276	ePd	12 53.42	-1.0
CUT	1.24	356	eP	12 55.55	-0.6
			eS	13 11.13	
NNL	1.29	209	eP	12 56.40	-0.6
RDT	1.30	243	ePd	12 56.02	-1.2
			eS	13 12.57	
DFR	1.41	247	eP	12 57.50	-1.3
			eS	13 15.35	
KNIM	1.41	125	eP	12 58.88	0.2
GLI	1.47	100	eP	12 59.83	0.2
RDN	1.48	245	eP	12 58.68	-1.1
RSO	1.50	243	eP	12 59.28	-0.9
RDW	1.52	244	eP	12 59.21	-1.2
RED	1.53	241	eP	12 59.55	-1.0
NCT	1.53	248	eP	12 59.69	-0.9
MTU	1.68	134	eP	13 03.51	0.9
VZW	1.71	92	eP	13 03.75	0.7
CNPM	1.75	200	eP	13 03.88	0.2
VLZ	1.81	90	eP	13 05.59	1.2
KLU	2.02	79	eP	13 07.99	0.4
32 obs. associated					

\* MAY 04, 1991 19h 20m 02.46±2.24s  
43.349 N ±7.6km 8.838 W ±21.1km  
DEPTH = 10.0km (geophysicist)  
SPAIN (377)  
mbLg 3.0 (MDD). Felt (III) at  
Santiago.

STS	0.51	156	iP	20 13.00	0.2
			eS	20 15.40	
EMON	1.10	B5	iPgc	20 26.70	3.5X
			eSg	20 40.80	
EZAM	1.20	175	iPg	20 25.00	0.1
			eSg	20 35.60	
ERUA	1.57	127	iPg	20 30.80	0.4
			eSg	20 45.40	
PTO	2.22	175	ePn	20 44.00	4.2X
			eSn	21 05.10	
			iSg	21 08.30	
GUD	4.42	126	iPnd	21 09.80	-1.3
			eSn	21 53.60	
ECRI	4.70	97	ePn	21 16.00	0.8
TOL	4.99	132	e(Pg)	21 36.00	16.8X
			eSg	22 34.00	
BTH	6.31	89	Pc	22 32.00	54.2X
			Sn	22 56.00	
			eSg	23 21.00	
EPF	6.72	90	Pn	21 44.30	0.7
MFF	6.97	59	Pn	21 48.60	1.5
			Sn	23 00.20	
RJF	7.68	72	Pn	21 57.20	0.2
			Sn	23 16.20	
LSF	7.92	65	Pn	22 00.10	-0.3
			Sn	23 21.40	
CAF	8.00	75	Pn	22 00.60	-0.9
			Sn	23 23.40	
TCF	8.39	66	Pn	22 06.40	-0.5
			Sn	23 32.40	
BGF	8.88	65	Pn	22 13.70	-0.1
			Sn	23 44.70	
AVF	9.29	64	Pn	22 19.20	-0.1
LBF	9.75	64	Pn	22 25.20	-0.6
LOR	9.76	62	Pn	22 26.00	0.0
			Sn	24 06.10	
S.D. = 0.8 on 15 of 19 obs.					

MAY 04, 1991 19h 37m 45.11±0.81s  
41.125 N ±6.1km 22.375 E ±5.9km  
DEPTH = 10.0km (geophysicist)  
YUGOSLAVIA (383)  
ML 1.6 (SKO). MD 1.9 (THE).

GRG	0.17	173	ePg	37 48.90	-0.1
			eSg	37 51.10	
VAY	0.25	37	iPg	37 50.40	0.1
			iSg	37 54.00	

KNT	0.40	84	iPg	37 53.30	0.1
			eSg	37 58.80	
THE	0.66	138	ePg	37 57.60	-0.7
			eSg	38 06.40	
SOH	0.80	112	ePg	38 00.30	-0.4
			eSg	38 12.20	
FNA	0.83	246	ePg	38 01.00	-0.2
			eSg	38 13.30	
SRS	0.92	90	ePg	38 02.60	-0.1
			eSg	38 15.00	
LIT	1.03	175	ePg	38 04.70	0.2
PAIG	1.56	140	ePb	38 14.00	1.2
S.D. = 0.6 on 9 of 9 obs.					

& MAY 04, 1991 20h 31m 05.76s  
58.528 N 142.829 W  
DEPTH = 10.0km (geophysicist)  
GULF OF ALASKA (15)  
<AEIC>. ML 3.3 (AEIC).

WRG	1.57	15	iP	31 29.22	-4.5
			S	31 46.92	
YKU	1.90	56	iPc	31 35.20	-3.3
WAX	1.93	360	iP	31 33.98	-5.0
HMT	1.96	339	eP	31 34.29	-5.1
			S	31 56.64	
MID	2.03	298	iPd	31 35.50	-4.8
RAGM	2.09	334	eP	31 36.34	-5.0
			S	32 01.02	
PNL	2.11	56	iP	31 36.47	-5.1
			iS	32 00.35	
TGL	2.24	360	iP	31 38.26	-5.2
CROM	2.24	356	iP	31 38.26	-5.4
SGAM	2.32	330	eP	31 39.82	-4.8
			S	32 07.30	
CVA	2.51	325	eP	31 42.14	-5.1
BALM	2.53	5	iP	31 42.55	-5.1
			eS	32 10.59	
CTGM	2.56	17	eP	31 42.97	-5.1
HIN	2.65	317	eP	31 44.16	-5.2
MTU	2.88	303	eP	31 46.39	-6.1
			S	32 18.67	
GLB	2.96	351	iP	31 48.20	-5.6
			eS	32 21.44	
KNIM	3.10	308	eP	31 49.38	-6.2
VZW	3.16	325	eP	31 50.43	-6.1
KLU	3.35	334	eP	31 53.52	-5.8
PLBC	3.47	72	Pd	31 55.40	-5.5
			S	32 33.50	
HYT	3.55	47	P	31 57.10	-5.0
			S	32 37.00	
SEW	3.74	298	eP	31 57.87	-6.9
TZL	3.76	341	eP	32 00.26	-4.7
TOA	3.95	337	ePd	32 03.30	-4.5
SCM	4.00	328	eP	32 02.73	-5.8
KNK	4.05	318	eP	32 03.62	-5.4
SLKM	4.26	301	eP	32 05.34	-6.8
SIT	4.28	107	ePc	32 05.60	-6.7
SML	4.29	322	eP	32 07.04	-5.5
PMS	4.35	312	eP	32 07.89	-5.5
PLRM	4.41	317	eP	32 08.08	-6.1
PMR	4.41	317	eP	32 10.40	-3.7
GHO	4.46	319	eP	32 09.27	-5.7
CNPM	4.46	287	eP	32 09.32	-5.6
WHC	4.51	57	P	32 11.60	-4.0
RDT	5.29	297	eP	32 19.85	-6.9
SPU	5.36	304	eP	32 20.55	-7.2
RED	5.41	295	eP	32 21.80	-6.7
RSO	5.42	295	eP	32 22.28	-6.4
RS2	5.42	295	eP	32 22.32	-6.4
DFR	5.42	297	eP	32 21.53	-7.1
RDN	5.44	296	eP	32 22.12	-6.8
CKL	5.49	303	eP	32 22.68	-6.9
NCG	5.50	306	eP	32 23.26	-6.5
BGL	5.54	304	eP	32 24.19	-6.1
SKT	5.54	312	eP	32 24.03	-6.3
SVW	6.95	297	eP	32 44.00	-6.1
47 obs. associated					

\* MAY 04, 1991 21h 03m 16.94±2.00s  
10.484 N ±14.9km 125.275 E ±21.9km  
DEPTH = 55.4 ±19.3 km  
4.4mb (4 obs.)

LEYTE, PHILIPPINE ISLANDS (256)				
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04d 21h

BAG	7.45 323 eP	05 04.50	-1.3	MDJ	33.48 340 eP	34 44.00	-0.5	WARB	43.49 204 iPd	36 09.20	1.2
WRA	31.53 164 P	09 49.00	12.8X		1.0s	16.00nm	4.8mb		0.5s	52.00nm	5.6mb
	0.6s	1.40nm		E	15s	0.52um		SNQ	44.06 266 eP	36 14.20	1.4
WB2	31.53 164 iPd	09 32.30	-3.9X			eS	39 50.00	IPM	44.27 262 ePc	36 16.50	2.0
	0.6s	6.50nm	4.6mb	TIA	33.54 317 eP	34 45.30	0.1		e	37 59.60	
		e	10 18.70	Z	17s	0.80um	4.5MsZ	CHG	44.39 283 eP	36 15.70	0.2
		e	12 30.80	E	13s	0.60um			e	37 58.10	
ASPA	34.97 166 iPd	10 04.10	-1.9			i	37 22.50		e	41 41.20	
	0.6s	10.60nm	4.9mb			eS	40 02.00	CMS	44.95 179 iPd	36 19.00	-0.6
GUN	40.82 301 P	10 55.48	0.2	SNY	33.61 330 Pc	34 44.00	-1.7	SMY	45.30 25 eP	36 23.00	0.8
PKI	41.12 300 P	10 59.24	1.5		1.0s	8.30nm	4.5mb		0.6s	939.90nm	6.7mb X
KKN	41.29 300 P	10 58.76	-0.2			sP	35 19.00	STK	45.45 184 iPd	36 22.80	-0.8
DMN	41.39 300 P	11 03.66	3.8X			PP	36 06.00		0.5s	28.80nm	5.3mb
STK	44.93 160 eP	11 27.20	-1.0	CN2	34.34 335 Pc	34 50.00	-1.9	NANU	46.18 219 iPd	36 40.20	10.7X
	0.8s	1.80nm	3.9mb		6.0s	800.00nm	5.7mb X		0.4s	35.00nm	
DZM	51.74 129 iPd	12 21.80	0.5	Z	15s	0.90um	4.6MsZ	PSI	46.79 261 ePd	36 38.70	4.2X
INK	84.45 21 eP	15 45.00	0.5	N	15s	0.40um		GTA	47.17 311 Pc	36 37.60	0.2
YKA	93.96 24 eP	16 30.30	0.5	E	15s	0.50um			8.0s	360.00nm	5.2mb X
	0.8s	0.70nm	4.1mb			ePP	36 08.00	Z	14s	0.40um	4.5MsZ
S.D. = 1.4 on 10 of 14 obs.						PcP	37 24.00	E	11s	0.30um	
						eS	40 14.00			pP	37 06.00 123kmX
						ScP	40 58.00			sP	37 23.00
MAY 04, 1991 21h 28m 14.52± 0.26s				QIS	34.47 189 eP	34 52.70	-0.5		PcP	38 07.40	
13.717 N ± 3.0km 144.981 E ± 4.0km				WB2	35.05 198 iPd	34 57.30	-0.9		ScP	41 51.40	
DEPTH = 116.0 ± 2.3 km					0.5s	10.50nm	5.0mb		S	43 20.00	
5.3mb (49 obs.)						i	35 29.90		sS	44 11.00	
MARIANA ISLANDS (216)						iPcP	36 58.50		ScS	46 20.00	
Felt (IV) in northern Guam and						e	37 56.80	MEKA	47.62 213 eP	36 40.00	-0.8
(III) in central Guam.						e	40 21.20	ADE	48.78 187 eP	36 50.50	0.9
CENTROID, MOMENT TENSOR (HRV)						iS	41 02.50	ADK	48.90 31 ePd	36 50.00	-0.3
Data Used: GDSN						i	41 53.00		0.5s	165.29nm	6.1mb
L.P.B.: 17S, 30C				BJI	36.41 321 eP	35 09.50	0.1	YAK	49.46 351 eP	36 53.50	-0.9
Centroid Location:					1.0s	35.00nm	5.2mb		e	37 20.00	
Origin Time 21:28:19.5 1.0						sP	35 46.00		e	38 11.00	
Lat 13.95N 0.12 Lon 145.15E 0.06						ePP	36 36.00		e	53 31.00	
Dep 112.5 4.8 Half-duration 2.1						PcP	37 32.50	COOL	49.92 207 eP	36 57.10	-1.3
Moment Tensor: Scale 10**17 Nm						eS	40 43.00		0.4s	21.00nm	5.4mb
Mrr= 0.64 0.11 Mtt=-0.66 0.18						ScP	41 09.00	BFD	50.67 183 iPd	37 03.80	-0.1
Mff= 0.03 0.19 Mrt= 1.75 0.11				TIY	37.51 316 Pc	35 19.80	0.9	TOO	51.02 179 iPd	37 08.00	1.4
Mrf= 0.71 0.10 Mtf= 0.74 0.14					0.6s	29.00nm	5.3mb		0.4s	36.00nm	5.7mb
Principal Axes:				Z	20s	0.63um	4.4MsZ	BAL	51.79 211 eP	37 11.30	-1.2
T Val= 2.30 Plg=48 Azm=323				E	15s	0.43um			0.4s	30.00nm	5.6mb
N -0.40 24 82						PP	36 50.00	LSA	52.04 297 Pc	37 15.40	0.3
P -1.91 33 188						sS	41 50.00	KLB	52.07 210 eP	37 13.00	-1.7
Best Double Couple: Mo=2.1*10**17				GYA	38.00 295 P	35 25.00	1.8		0.4s	19.00nm	5.4mb
NP1:Strike=331 Dip=25 Slip= 161						pP	35 48.00	MUN	53.15 211 eP	37 21.50	-1.0
NP2: 78 82 66						PcP	37 37.60	NWAO	53.42 209 eP	37 24.00	-0.5
						S	41 10.00	TAU	56.39 178 eP	37 46.00	0.1
PJG	0.17 221 iPd	28 31.20	-0.6			ScP	41 14.80	PKI	56.95 294 P	37 49.80	-0.8
GUA	0.19 201 iPd	28 31.20	-0.7			sS	41 58.00		0.6s	28.00nm	5.4mb
	e(S)	28 42.00				ScS	45 24.00	WMO	57.13 314 P	37 52.00	0.6
MDG	18.86 178 iPd	32 30.00	1.6	XAN	38.40 308 iPd	35 26.50	0.2		1.0s	40.00nm	5.4mb
RAB	19.17 158 iPd	32 31.50	-0.2		0.5s	50.00nm	5.6mb	Z	20s	0.30um	4.4MsZ
	iS	36 20.00				S	41 11.00			pP	38 21.50 123kmX
DAV	20.18 253 eP	32 43.90	1.8	TRT	38.52 238 ePc	35 31.40	3.9X			S	45 41.00
KAGJ	21.68 326 eP	32 57.20	0.1	ASPA	38.70 196 iPd	35 29.20	0.3			ScS	47 27.50
IIDJ	22.59 345 P	33 04.50	-1.4		0.5s	68.50nm	5.7mb	DMN	57.22 294 P	37 51.50	-0.9
KUMJ	22.76 328 eP	33 08.70	1.1	Z	18s	1.60um	4.9MsZ		0.6s	35.00nm	5.5mb
KAKJ	22.80 350 P	33 07.30	-0.7			e	37 00.50	SDN	58.96 33 ePd	38 03.60	-0.2
CHJJ	22.88 347 P	33 07.60	-1.1	HHC	39.75 319 P	35 38.20	0.8		0.7s	409.20nm	6.6mb X
TSRJ	23.19 341 P	33 13.80	2.1			S	41 38.00	NOZ	60.55 151 P	38 13.60	-1.2
MAT	23.52 346 iPd	33 13.80	-1.2			eS	42 25.00	THZ	60.92 156 eP	38 15.70	-1.7
	0.7s	62.33nm	5.1mb	QLP	40.06 181 eP	35 38.00	-2.0	MNG	61.01 154 P	38 15.80	-2.2
Z	20s	1.42um	4.4MsZ	RMQ	40.13 175 eP	35 39.00	-1.6		0.5s	16.00nm	5.3mb
		eS	37 19.00	BTO	40.61 318 P	35 45.00	0.5			e	38 59.20
SHK	23.53 334 eP	33 16.40	1.4	N	13s	0.40um		ANM	61.04 22 ePd	38 16.80	-1.1
MTMJ	23.66 345 P	33 15.50	-0.9	E	12s	0.30um		SNZO	61.26 155 P	38 17.00	-2.6
BAG	23.71 280 eP	33 18.00	0.9			eP	36 05.00	PGZ	61.36 153 eP	38 18.50	-1.7
SHNJ	23.90 331 eP	33 18.50	-0.1			ePP	37 19.00	LTZ	61.55 157 P	38 20.10	-1.5
AAI	24.01 225 eP	33 19.40	-0.4			S	41 51.00	MSZ	61.74 162 P	38 22.40	-0.3
NIJ	24.03 348 P	33 19.10	-0.7			eS	42 30.50	SVW	63.50 28 ePd	38 33.70	-0.6
YAMJ	24.75 351 P	33 27.30	0.6	DZM	41.33 149 iPd	35 50.90	0.4	PDB	63.71 30 P	38 34.00	-1.6
OFUJ	25.43 354 eP	33 23.60	-0.4	CD2	41.52 301 P	35 52.40	0.3	TTA	63.99 26 eP	38 36.50	-1.0
SSE	27.88 312 Pc	33 55.00	-0.4	BRS	41.56 170 iPd	35 53.00	0.7	IMA	66.09 23 eP	38 50.10	-0.9
	0.8s	20.00nm	4.8mb	LOE	41.76 281 eP	35 57.00	2.9		0.6s	4.00nm	4.5mb
Z	22s	1.00um	4.4MsZ	MBL	42.56 216 eP	36 00.30	-0.2	PMR	66.62 28 ePd	38 52.50	-1.7
E	10s	0.20um			0.5s	41.00nm	5.4mb		0.5s	17.00nm	5.2mb
HOJ	28.60 357 eP	34 00.50	-1.2	LZH	43.03 309 Pc	36 04.20	-0.2	FBA	68.06 25 ePd	39 01.20	-2.1
MRRJ	28.80 354 P	34 03.90	0.4		1.5s	99.00nm	5.4mb		0.5s	24.79nm	5.4mb
KUSJ	29.28 360 eP	34 06.50	-1.3	Z	22s	0.50um	4.4MsZ	KLU	68.09 29 P	39 02.20	-1.4
NJ2	30.07 312 eP	34 15.00	0.1	N	15s	0.40um		TOA	68.11 28 ePd	39 03.30	-0.4
ASAJ	30.36 357 eP	34 17.70	0.4			pP	36 31.00	PPT	71.66 114 iP	39 27.00	1.1
DL2	32.48 325 P	34 36.00	0.1			sP	36 45.00		1.2s	45.00nm	5.2mb
	Z	20s	0.40um			PcP	37 55.00	PPN	71.78 114 iP	39 27.90	1.3
		eS	39 43.00			eS	42 21.00		1.2s	45.00nm	5.1mb
WHN	32.80 306 eP	34 39.50	0.7			sS	43 08.00	TVO	72.03 114 iP	39 29.60	1.4
	0.6s	20.00nm	5.1mb			ScS	45 50.00		1.2s	80.00nm	5.4mb
		eS	39 49.00								



04d 21h

PMD	72.27	111	iP	39	30.40	0.9	BSF	108.30	332	ePKP	46	32.00	1.2	Sg	55	03.30				
	1.2s		45.00nm			5.1mb		0.5s		1.45nm				FIN	1.21	125	P	54	49.95	0.2
TPT	72.52	111	iP	39	31.60	0.6	LPL	110.01	330	ePKP	46	35.20	0.9	S	55	05.40				
	1.2s		35.00nm			5.0mb		0.5s		2.90nm				PCP	1.27	106	P	54	51.84	0.9
VAH	72.59	111	iP	39	32.00	0.6	LPG	110.02	330	ePKP	46	34.70	0.3	S	55	08.30				
	1.2s		30.00nm			5.0mb		0.5s		2.20nm				FRF	1.36	186	Pn	54	51.60	-0.6
RUV	72.80	111	iP	39	33.60	1.0	LOR	110.04	333	ePKP	46	34.30	0.3	Sg	55	09.30				
	1.2s		40.00nm			5.1mb		Z 22s		0.10um			4.3msz	CDR	1.46	212	eP	54	54.20	0.6
QUE	73.00	298	eP	39	32.70	-1.2	SMF	110.52	333	ePKP	46	35.60	0.7	e	55	11.90				
			eS	48	52.80		FLN	110.67	336	ePKP	46	35.90	0.8	LRG	1.50	193	Pn	54	53.80	-0.3
INK	74.21	22	eP	39	38.00	-1.9		0.6s		7.20nm							Sg	55	13.50	
	0.6s		22.00nm			5.1mb		Z 21s		0.15um			4.5msz	LMR	1.60	189	Pn	54	55.80	0.2
MAIO	78.42	305	eP	40	05.00	0.7	PGF	110.96	327	ePKP	46	36.30	0.3	Sg	55	16.50				
			eS	49	55.00			0.6s		8.10nm				SMF	2.72	311	Pn	55	12.90	1.2
PGC	80.87	42	eP	40	17.00	0.1	GRR	111.12	336	ePKP	46	36.90	1.0	LBF	2.87	317	Pn	55	14.80	0.9
MCW	81.26	42	P	40	19.50	0.4		0.6s		3.60nm				BSF	2.92	359	Pn	55	14.30	-0.3
BMW	81.41	44	P	40	20.30	0.3	LPF	111.49	336	ePKP	46	37.30	0.7	HAU	3.11	354	Pn	55	17.40	0.2
GMW	81.51	43	P	40	20.40	0.0		0.6s		7.20nm				BGF	3.24	302	Pn	55	19.20	0.1
FHC	81.95	50	eP	40	25.20	2.4	TCF	111.52	333	ePKP	46	37.70	0.9	CDF	3.51	5	Pn	55	22.50	-0.5
LON	82.32	44	P	40	24.10	-0.6		0.6s		2.70nm							S.D. = 0.6	on 22	of 22	obs.
YKA	82.70	27	eP	40	25.20	-1.0	LMR	111.70	329	ePKP	46	37.60	0.4							
	0.5s		16.10nm			5.1mb	MFF	112.28	335	ePKP	46	39.90	1.7							
PNT	83.21	41	ePc	40	29.00	-0.1	LPO	113.22	333	ePKP	46	40.20	0.1							
	0.7s		94.00nm			5.8mb		0.5s		4.35nm										
LBFM	83.39	49	P	40	31.20	0.7	EPF	114.90	332	ePKP	46	45.30	1.8							
MIN	83.82	50	eP	40	32.20	-0.4		0.5s		2.20nm										
PCC	83.84	53	eP	40	33.20	0.7	IFR	125.06	329	iPKPd	47	05.00	1.6							
BRK	83.86	53	eP	40	34.30	1.7	TIO	128.21	329	iPKP	47	10.50	1.0							
BKS	83.87	53	iPc	40	33.80	1.1	LKO	142.75	307	PKP	47	31.48	-5.3X							
	0.7s		106.00nm			5.8mb		0.4s		8.00nm										
ORV	84.07	51	P	40	33.80	0.1	KIC	143.92	302	PKP	47	36.62	-2.2							
GCC	84.24	53	eP	40	34.80	0.3		0.5s		90.00nm										
MHC	84.45	53	eP	40	36.20	0.4	TIC	144.00	302	PKP	47	36.68	-2.2							
DPW	84.46	42	P	40	35.50	0.0		0.5s		76.50nm										
ARN	84.53	53	P	40	36.60	0.5	LIC	144.24	302	PKP	47	37.66	-1.6							
PRS	84.89	54	eP	40	38.80	1.0		0.5s		178.00nm										
LLA	85.16	54	eP	40	40.60	1.4	ARE	144.71	99	iPKPc	47	41.00	0.6							
CMB	85.26	52	eP	40	39.80	0.1		1.0s		30.00nm										
PRI	85.49	54	eP	40	42.30	1.3	MBO	146.84	327	iPKP	47	47.70	4.2X							
FRI	86.04	53	eP	40	44.30	0.8	LPB	147.96	99	PKP	47	45.00	-0.9							
BCH	86.18	55	P	40	45.00	0.6	CCH	149.81	101	PKP	47	57.00	8.4X							
SYP	86.42	55	eP	40	46.00	0.4	SIV	154.72	98	PKP	47	56.00	0.8							
KEV	86.43	342	iP	40	44.20	-0.6		i		48	04.20									
	0.6s		44.30nm			5.6mb	PPD	162.44	120	ePKP	48	05.20	1.2							
BONR	86.88	52	P	40	48.00	0.0	PDCR	175.83	74	(PKP)	48	14.00	1.8							
ISA	87.33	54	eP	40	50.00	0.1		S.D. = 1.1	on 178	of 185	obs.									
TNP	87.67	51	P	40	51.90	0.2														
	0.7s		33.33nm			5.5mb														
SOD	87.78	340	iP	40	50.40	-0.9														
PAS	87.96	55	eP	40	54.00	1.1	? MAY 04, 1991 22h 38m 42.89±2.72s													
CLC	87.98	54	eP	40	53.00	0.0	38.841 N ±20.8km 23.466 E ±26.3km													
MWC	88.03	55	eP	40	55.00	1.5	DEPTH = 33.0km (normal)													
SBB	88.10	55	eP	40	54.00	0.4	GREECE													
SES	88.23	38	eP	40	53.00	-0.9	ML 3.2 (ATH).													
	0.4s		53.00nm			5.9mb	ATH	0.89	167	iPnc	38	58.60	-0.4							
RVR	88.64	55	eP	40	56.00	-0.1		eSn		39	07.30									
GSC	88.74	54	eP	40	57.00	0.3	VLI	2.16	191	ePn	39	17.50	0.2							
LRM	88.82	43	ePc	40	57.00	-0.1	PRK	2.22	79	ePn	39	17.50	-0.6							
PEC	88.84	56	P	40	57.00	-0.1	EZN	2.43	65	ePn	39	25.00	3.9X							
OBN	89.04	327	iP	40	57.70	0.2	IZM	3.01	97	ePn	39	30.00	0.6							
			e	41	13.00		KGT	3.37	60	ePn	39	34.60	0.1							
			e	43	36.00			S.D. = 0.7	on 5	of 6	obs.									
PLM	89.23	56	P	40	58.50	-0.6														
TPC	89.67	55	eP	41	02.00	1.0	MAY 04, 1991 22h 54m 27.11±0.29s													
DUG	90.34	48	P	41	04.50	0.4	44.915 N ±2.5km 6.835 E ±3.8km													
KAF	90.65	336	iP	41	02.70	-2.2	DEPTH = 9.1 ± 2.8 km													
	0.4s		7.10nm			5.2mb	FRANCE													
			eSP	41	04.40		ML 2.7 (GEN), 2.6 (LDG).													
DAU	91.40	48	P	41	10.00	0.8														
FFC	91.65	32	eP	41	09.00	-0.6	RRL	0.04	278	P	54	28.56	-0.7							
	0.7s		16.00nm			5.4mb		S		54	29.98									
BW06	91.80	45	P	41	10.50	-0.4	BNI	0.18	321	P	54	30.50	-0.6							
	0.7s		6.82nm			5.0mb		eSg		54	34.50									
NUR	92.18	335	iP	41	10.30	-1.7	PZZ	0.45	155	P	54	35.55	-0.8							
	0.7s		10.70nm			5.2mb		S		54	42.06									
SBA	92.24	175	P	41	15.00	3.2X	LPG	0.59	354	Pg	54	38.60	-0.4							
GOL	95.87	47	P	41	30.00	0.3		Sg		54	47.70									
	0.6s		3.09nm			5.0mb	LSD	0.59	23	P	54	39.12	0.1							
HFS	96.72	338	ePKP	41	30.70	-2.1		S		54	48.26									
	0.5s		5.80nm			5.3mb	LPL	0.61	353	Pg	54	39.00	-0.3							
ANMO	96.88	52	P	41	35.00	0.7		Sg		54	47.90									
	0.7s		7.71nm			5.3mb	STV	0.76	152	P	54	41.01	-1.0							
ALO	96.88	52	eP	41	35.00	0.7		S		54	51.50									
	0.9s		4.20nm			4.9mb	ENR	0.81	148	P	54	42.39	-0.5							
NB2	96.97	339	P	41	34.20	0.2		S		54	53.60									
	0.7s		3.50nm			5.0mb	ROB	0.97	130	P	54	45.74	0.1							
CDF	107.65	332	ePKP	46	31.70	2.2		S		54	59.19									
							SBF	1.14	158	Pq	54	48.90	0.4							

FIN	1.21	125	P	54	49.95	0.2
			S	55	05.40	
PCP	1.27	106	P	54	51.84	0.9
			S	55	08.30	
FRF	1.36	186	Pn	54	51.60	-0.6
			Sg	55	09.30	
CDR	1.46	212	eP	54	54.20	0.6
			e	55	11.90	
LRG	1.50	193	Pn	54	53.80	-0.3
			Sg	55	13.50	
LMR	1.60	189	Pn			



LPG	1.00	249	Pg	15	57.20	-0.1			1.0s	33.00nm	5.1mb																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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DAV	3.25	174	eP	09	49.00	0.4
QCP	5.87	317	eP	10	33.00	7.6X
BAG	7.53	324	eP	10	48.80	0.1
TSM	9.33	230	ePd	11	25.90	12.6X
QZH	15.82	337	eP	12	40.50	1.0
GZH	17.01	320	P	12	58.00	3.6X
QIZ	17.18	302	eP	12	55.40	-1.2
SSE	20.99	350	Pc	13	40.20	0.6
Z	20s	0.50um				3.9MsZ
		sP		14	02.30	
NJ2	22.39	346	Pc	13	53.00	-0.6
E	13s	0.80um				
WHN	22.50	335	eP	13	56.00	1.3
E	14s	0.70um				
GYA	23.75	315	P	14	09.00	1.9
N	16s	0.40um				
E	16s	0.60um				
LOE	23.84	290	eP	14	08.00	0.1
IPM	24.64	258	ePd	14	17.50	1.8
	0.8s	52.10nm				5.1mb
KMI	25.90	308	eP	14	29.00	1.3
KHT	26.34	282	eP	14	31.00	-0.5
CHG	26.75	291	eP	14	35.30	0.0
TIA	26.78	345	eP	14	34.20	-1.1
E	13s	0.60um				
XAN	27.91	330	Pd	14	44.50	-1.2
	1.0s	40.00nm				5.0mb
CD2	28.56	319	P	14	51.20	-0.4
	0.08s	95.00nm				5.5mb
MAT	28.62	22	eP	14	50.00	-2.0
		eS		19	32.00	
DL2	28.62	354	P	14	52.00	0.0
	1.0s	38.00nm				5.0mb
TIY	29.58	339	Pd	15	01.60	0.9
Z	20s	0.50um				4.1MsZ
E	15s	0.43um				
		S		19	54.00	
BJI	30.65	346	eP	15	09.00	-1.0
	1.2s	12.00nm				4.5mb
SNY	31.39	358	iPc	15	16.60	0.1
WB2	31.41	163	iPd	15	14.60	-2.3
	0.6s	14.60nm				4.9mb
LZH	32.13	326	iPd	15	22.00	-1.3
	2.0s	89.00nm				5.2mb
Z	30s	0.63um				4.1MsZ
N	15s	0.62um				
		PP		16	36.00	
HHC	32.69	341	P	15	26.60	-1.4
	1.0s	63.00nm				5.4mb
BTO	33.00	339	eP	15	30.00	-0.7
N	11s	0.20um				
E	11s	0.20um				
CN2	33.33	0	eP	15	32.60	-0.8
Z	20s	0.60um				4.3MsZ
N	13s	0.30um				
E	13s	0.10um				
		eP		15	48.00	62kmX
		eS		20	44.00	
QIS	33.81	155	iPc	15	36.20	-1.6
	0.5s	12.00nm				5.1mb
MDJ	34.36	6	eP	15	42.50	0.2
	1.5s	54.00nm				5.3mb
SHL	35.00	300	iP	15	48.40	0.1
		eS		21	12.50	
GTA	36.74	326	Pd	16	03.00	0.3
	1.0s	30.00nm				5.2mb
E	12s	0.40um				
GUN	40.83	301	P	16	37.60	0.4
PKI	41.13	300	P	16	39.40	-0.2
	0.8s	53.00nm				5.3mb
KKN	41.31	301	P	16	40.80	-0.1
	0.8s	38.00nm				5.2mb
GKN	41.91	301	P	16	45.60	-0.2
	0.8s	24.00nm				5.0mb
STK	44.82	160	eP	17	09.00	-0.1
	1.0s	9.20nm				4.6mb

GBA	46.79	279	Pd	17	25.20	0.3
	0.8s		20.40nm			5.1mb
ADE	46.84	165	eP	17	26.10	1.0
KOD	46.94	274	eP	17	26.20	-0.3
BFD	49.99	162	eP	17	49.00	-0.4
POO	50.26	285	iPc	17	52.00	0.1
CNB	50.83	154	eP	17	57.00	1.1
YAK	51.69	3	iPd	18	01.80	-0.1
DZM	51.70	129	iPc	18	03.00	0.2
GAR	56.45	310	eP	18	36.00	-1.5
QUE	57.49	299	eP	18	45.00	-0.1
MAIO	64.40	305	eP	19	31.00	-0.6
ANM	71.93	25	eP	20	16.80	-1.0
BRW	76.43	19	ePd	20	45.20	1.5
IMA	77.00	24	ePd	20	48.60	1.4
	1.0s		16.10nm			5.0mb
RSO	77.15	30	e(P)	20	50.00	1.9
PMR	78.92	29	ePd	20	58.00	0.5
	1.0s		27.40nm			5.1mb
FBA	79.44	26	eP	21	00.90	0.6
	0.9s		9.70nm			4.7mb
TOA	80.30	28	ePc	21	07.20	2.2
	0.8s		42.60nm			5.4mb
BALM	82.22	29	eP	21	15.30	0.1
KEV	83.20	340	eP	21	40.00	20.0X
SOD	83.82	337	eP	21	23.00	-0.1
INK	84.60	21	ePd	21	27.60	0.6
	1.1s		41.00nm			5.4mb
KAF	85.08	332	iP	21	29.00	-0.5
	0.8s		12.00nm			5.1mb
			eSP	21	30.30	
NUR	86.23	331	eP	21	35.50	0.3
NB2	92.23	334	P	22	01.80	-1.9
	1.0s		3.20nm			4.7mb
YKA	94.11	24	eP	22	11.80	-0.4
	1.1s		6.20nm			5.0mb
ALO	113.56	45	ePKP	27	33.00	-0.1X
LPB	165.67	117	PKP	28	59.00	-0.4X
SIV	171.70	133	PKP	29	00.80	-1.9X
S.D. = 1.0 on 62 of 69 obs.						
<hr/>						
& MAY 05, 1991 05h 15m 21.82s						
62.109 N 149.232 W						
DEPTH = 44.0km						
CENTRAL ALASKA (1)						
<AEIC>. ML 2.4 (AEIC).						
PMR	0.52	175	iPd	15	32.70	-0.3
TOA	1.44	89	iPc	15	46.30	0.4
FBA	2.88	12	iPc	16	05.00	-1.2
SVW	3.21	255	eP	16	10.30	-0.8
TTA	3.25	288	eP	16	05.20	-6.5
IMA	4.43	336	eP	16	26.70	-1.7
6 obs. associated						
<hr/>						
* MAY 05, 1991 05h 45m 25.66±2.32s						
35.487 S ±19.9km 71.019 W ±13.3km						
DEPTH = 113.8 ± 11.7 km						
CENTRAL CHILE (136)						
LNV	1.56	348	iPc	45	54.00	0.2
			iS	46	13.00	
TACH	1.83	2	iPc	45	57.20	0.0
			iS	46	20.10	
PCH	1.91	13	iPc	45	58.60	0.4
			iS	46	23.00	
SAN	2.05	8	eP	46	00.00	0

RTRS	5.46	14	e(P)	46	46.90	0.9
PPD	21.81	57	eP	50	09.70	0.1
S.D. = 0.5 on 15 of 16 obs.						
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MAY 05, 1991 05h 46m 45.75± 0.68s						
38.415 N ± 6.1km 21.702 E ± 7.2km						
DEPTH = 10.0km (geophysicist)						
GREECE (364)						
ML 3.3 (ATH). MD 3.2 (THE).						
AGG	0.78	39	iPc	47	00.20	-0.8
			eSg	47	10.80	
VLS	0.91	255	eP	47	03.00	-0.1
IGT	1.54	317	ePb	47	16.40	3.1X
			eSb	47	37.60	
ATH	1.65	105	eP	47	15.50	0.7
			eS	47	35.00	
LIT	1.79	20	ePb	47	18.00	1.1
			eSb	47	37.60	
KZN	1.89	2	eP	47	14.00	-4.4X
VLI	1.96	150	eP	47	19.00	-0.3
FNA	2.38	354	ePn	47	25.60	0.1
			eSn	47	58.40	
SOH	2.72	27	ePn	47	29.60	-0.7
OHR	2.78	346	ePn	47	37.00	5.8X
KNT	2.89	18	ePn	47	33.30	0.6
SRS	3.07	28	ePn	47	34.60	-0.5
			eSn	48	12.80	
SKO	3.56	357	ePn	47	48.00	5.9X
S.D. = 0.8 on 9 of 13 obs.						
-----						
? MAY 05, 1991 05h 58m 00.34± 5.61s						
45.901 N ± 32.6km 26.777 E ± 13.8km						
DEPTH = 101.6 ± 45.5 km						
ROMANIA (358)						
VRI	0.05	229	iPc	58	14.00	0.0
CVO	0.43	260	iPc	58	16.00	-0.1
BRD	0.43	153	iPc	58	16.00	0.0
PPE	0.66	61	eP	58	25.00	7.2X
MLR	0.71	235	iPc	58	18.50	0.1
ISR	0.78	192	ePc	58	19.00	0.0
CFR	1.20	126	ePc	58	23.50	0.1
TLB	1.58	145	iPc	58	28.00	-0.1
S.D. = 0.1 on 7 of 8 obs.						
-----						
MAY 05, 1991 06h 33m 37.12± 0.40s						
42.249 N ± 4.4km 13.663 E ± 3.7km						
DEPTH = 20.3 ± 4.1 km						
3.5mb (1 obs.)						
CENTRAL ITALY (381)						
ML 3.6 (LDG).						
AQU	0.22	299	Pd	33	41.10	-1.6
			eSg	33	45.40	
SDI	0.55	168	Pd	33	47.20	-0.9
			iSg	33	55.60	
MNS	0.74	281	P	33	50.20	-1.1
			eSg	34	03.30	
DUI	0.83	134	P	33	52.10	-0.8
			eSg	34	05.00	
RMP	0.84	239	P	33	53.20	0.3
			eSg	34	04.40	
RDP	0.86	236	P	33	53.80	0.5
			eSg	34	06.10	
ARV	1.36	337	P	34	01.10	0.1
			eSn	34	20.80	
CRE	1.87	318	P	34	09.70	1.3
			eSn	34	32.50	
MAO	1.87	276	P	34	09.60	1.2
RSM	1.90	333	P	34	10.50	1.8
			eSn	34	34.70	
SFI	2.13	322	P	34	13.30	1.1
PGD	2.16	319	P	34	13.70	0.9
HVAR	2.25	65	i(Pn)	34	19.10	5.2X
FIR	2.33	312	ePn	34	15.00	0.0
			e(Sn)	34	52.00	
BDI	2.88	310	P	34	23.80	0.9
MME	2.91	313	P	34	24.60	1.2
BRT	2.99	116	P	34	23.50	-0.8
RIY	3.14	9	iPnc	34	26.30	-0.1
			iSg	35	04.50	
VBY	3.45	19	ePn	34	32.60	1.7
			iSn	35	13.00	
TRI	3.46	1	e(P)	34	30.00	-1.0
PGF	3.47	277	Pn	34	32.00	0.8</



			eSn	34 43.00					1.0s	30.00nm	4.6mb	KHC	22.66	159	P	41 18.00	2.3
VOY	3.79	2	e(Pn)	34 34.80	-0.9	SHL	21.49	112	eP	13 53.00	2.8	KRA	1.0s	5.20nm			4.0mb
			eSn	35 21.30					eS	14 06.50			22.68	148	eP	41 18.30	2.6
LJU	3.84	9	eP	34 12.50	-24.0X	GBA	23.20	161	Pd	17 55.50	13.9X	CDF		e	41 24.90		
			e	34 25.00			1.2s	12.40nm		14 34.10			22.84	170	eP	41 18.90	1.5
			e	34 35.00		GTA	23.92	73	Pc	14 29.20	1.9	HAU	1.3s	14.45nm			4.3mb
ZAG	3.94	24	iP	35 09.60	31.8X		0.8s	10.00nm			4.3mb	Z	23.19	172	eP	41 22.10	1.2
PTJ	4.01	24	iPnd	34 39.10	0.3	TIY		PP	14 55.80				20s	0.08um			3.1Msz
			eSn	35 25.90		KAF	33.92	74	eP	15 57.60	0.8	SPC	23.57	148	eP	41 26.67	2.0
			e	35 52.80			37.66	328	iP	16 27.90	0.0	LOR	23.85	176	eP	41 26.80	-0.4
SAL	4.05	327	P	34 40.00	0.7		0.2s	0.90nm			4.3mb	Z	22s	0.10um			3.2Msz
CTI	4.06	340	P	34 39.20	-0.5	NUR		esP	16 28.50				24.04	154	eP	41 30.10	1.1
SDA	4.35	91	ePn	34 45.00	1.4	HFS	37.81	325	eP	16 29.40	0.2	SSF	24.05	177	eP	41 28.80	-0.3
FVI	4.39	352	P	34 43.70	-0.4		43.00	322	eP	17 11.10	-0.8	LBF	24.13	176	eP	41 29.80	-0.2
LACI	4.55	96	ePn	34 47.10	0.6		0.5s	5.80nm			4.6mb		1.1s	13.45nm			4.5mb
SBF	4.84	292	Pn	34 51.40	0.7	Z	11s	0.02um			3.2MszX	AVF	24.32	177	eP	41 31.30	-0.4
PHP	5.08	94	ePn	34 53.50	-0.5			e	17 15.70			SMF	24.47	176	eP	41 32.70	-0.5
FRF	5.32	287	Pn	34 57.40	0.0	NB2	44.33	324	P	17 21.80	-0.9	BGF	24.54	178	eP	41 33.50	-0.4
LMR	5.37	284	Pn	34 58.00	-0.2		0.7s	5.90nm			4.5mb		0.8s	16.10nm			4.7mb
OHR	5.46	100	ePn	35 00.20	0.7	MAT	54.04	68	eP	18 35.00	-2.3	SRO	24.59	152	e(P)	41 36.60	2.3
LRG	5.50	285	Pn	35 00.10	0.1	KIC	73.83	266	P	20 46.60	-0.2	TCF	24.81	179	eP	41 35.90	-0.6
UZD	5.59	37	e(P)	35 41.00	39.8X	TIC	73.90	267	P	20 47.00	-0.2	MAF	24.87	178	eP	41 36.60	-0.5
SKO	5.79	90	ePn	34 52.00	-12.0X	LIC	74.14	266	P	20 48.30	-0.3		0.7s	8.25nm			4.5mb
ZST	6.42	21	eP	36 03.80	50.9X	INK	74.66	9	eP	20 51.00	0.3	LPL	25.70	172	eP	41 45.40	0.2
KHC	6.88	360	eP	35 29.50	10.1X	FBA	75.32	16	eP	20 54.40	-0.1	RJF	25.79	180	eP	41 45.10	-0.6
			e	35 52.80			0.6s	9.36nm			4.8mb		1.1s	24.40nm			4.8mb
BSF	7.40	321	Pn	35 25.10	-1.7	YKA	81.91	2	eP	21 29.60	-0.6	Z	19s	0.08um			3.2Msz
			Sn	36 42.20			0.7s	2.80nm			4.2mb	MLR	28.19	142	eP	42 10.00	2.2
CDP	7.63	326	Pn	35 27.50	-2.4	WRA	82.45	121	P	21 34.00	0.3	OHR	31.52	152	eP	42 37.50	0.1
			Sn	36 47.70			0.4s	2.70nm			4.4mb	INK	37.72	335	eP	43 30.00	-0.2
GRF	7.64	348	e(Pg)	36 20.80	50.9X	ASPA	84.65	124	eP	21 45.90	1.1	YKA	39.67	319	eP	43 46.00	-0.5
			eSg	36 51.80			1.3s	3.60nm			4.1mb		0.8s	5.00nm			4.2mb
HAU	7.74	321	Pn	35 28.50	-2.9		S.D. = 1.4 on 27 of 29 obs.					FBA	42.73	341	e(P)	44 13.00	1.3
PRU	7.77	4	eP	36 22.50	50.8X		MAY 05, 1991 09h 36m 13.46± 0.34s						0.8s	6.21nm			4.4mb
			Sg	36 54.60			71.018 N ± 5.6km 1.620 E ± 5.2km					FFC	43.53	305	iPd	44 19.20	1.0
YKA	67.68	337	eP	44 34.90	0.4		DEPTH = 10.0km (geophysicist)					SES	49.81	309	eP	45 09.00	1.2
	0.5s	0.20nm					4.4mb ( 22 obs.) 3.2Msz ( 4 obs.)					PNT	52.88	315	eP	45 32.00	0.9
	S.D. = 1.1 on 37 of 47 obs.						NORWEGIAN SEA (642)						0.8s	5.00nm			4.5mb
% MAY 05, 1991 06h 57m 09.21± 0.63s						JNE	3.24	274	eP	37 04.09	-1.2	BW06	56.47	305	eP	45 56.30	-1.3
16.289 N ± 5.4km 61.385 W ± 5.3km						JNW	3.28	275	eP	37 04.31	-1.6		0.8s	2.98nm			4.4mb
DEPTH = 10.0km (geophysicist)								eS	37 39.69			GOL	58.17	300	eP	46 09.80	0.1
LEEWARD ISLANDS ( 92)						JMI	3.39	273	eP	37 06.48	-1.0	DUG	59.75	306	eP	46 20.60	0.1
ML 2.4 (FDF).								eS	37 42.51			PV09	60.34	302	eP	46 24.60	-0.2
SEG	0.16	315	iPc	57 13.68	0.8	LOF	5.08	119	eP	37 32.34	1.0	GKN	61.54	87	P	46 32.32	-0.5
			S	57 15.80				iS	38 27.15			KKN	61.95	86	P	46 33.88	-1.8
SFG	0.18	101	iPc	57 13.88	0.6	TRO	6.00	95	iP	37 42.61	-1.7	GUN	62.03	86	P	46 37.66	1.2
			S	57 16.50				eS	38 44.89				0.9s	28.00nm			5.5mb X
DEG	0.31	86	iPc	57 15.29	-0.5	MOR7	6.73	128	iP	37 53.91	-0.8	DMN	62.06	86	P	46 37.56	1.1
			S	57 19.50				iS	39 05.48		PKI	62.19	86	P	46 38.12	0.7	
MGG	0.37	170	iPc	57 17.21	0.3	NSS	7.59	144	iP	38 04.89	-1.8	TNP	62.88	309	eP	46 41.50	-0.2
			S	57 23.00				eS	39 24.07			0.7s	1.89nm			4.4mb	
PAG	0.38	228	iPc	57 17.02	-0.1	KTK1	7.65	95	iP	38 06.37	-1.2	ANMO	62.91	299	eP	46 41.90	0.0
			S	57 21.20				eS	39 26.65			0.8s	3.92nm			4.6mb	
BBL	0.77	187	eP	57 23.74	-0.5	KEV	8.60	86	eP	38 19.00	-1.7	ALQ	62.91	299	ePc	46 41.90	-0.1
			S	57 33.40		RGS	8.73	153	iP	38 20.00	-2.5		1.0s	5.00nm			4.7mb
BPA	0.88	329	eP	57 25.45	-0.6			eS	39 52.20			S.D. = 1.3 on 56 of 60 obs.					
			S	57 37.00		MOL	8.80	162	iP	38 20.75	-2.7		MAY 05, 1991 11h 05m 03.60± 0.63s				
	S.D. = 0.7 on 7 of 7 obs.					SOD	9.57	100	eP	38 34.00	-0.1		23.353 N ± 7.8km 125.678 E ± 6.6km				
						SUE	10.08	171	eP	38 37.00	-4.2X		DEPTH = 33.0km (normol)				
								eS	40 23.00			4.6mb ( 5 obs.)					
						NRA0	11.07	154	P	38 51.30	-3.4X		SOUTHWESTERN RYUKYU ISLANDS (246)				
						HFS	11.98	150	eP	39 04.30	-2.7						
							0.8s	12.30nm			5.2mb	TWC	3.72	290	ePc	06 00.40	0.3
						Z	18s	0.05um			3.5Msz			eS	06 31.80		
								LR	41 47.00			TWD	3.81	282	iPc	06 00.50	-0.9
						NUR	14.03	127	eP	39 34.00	-0.1	TWF1	4.03	271	ePc	06 02.80	-1.7
							0.7s	14.70nm			4.9mb			eS	06 35.00		
								i	39 49.80			ANP	4.21	297	eP	06 09.60	2.4
						EKA	15.88	190	Pd	40 02.90	4.6X	TWG	4.27	264	ePc	06 06.40	-1.6
							0.7s	4.40nm			3.7mb	QZH	6.66	285	eP	06 39.50	-2.2
						CLL	20.45	159	eP	40 53.00	-0.3	BAG	8.41	216	eP	07 07.00	0.7
							1.2s	14.00nm			4.2mb	SSE	8.68	334	eP	07 06.70	-3.2X
						MOX	20.95	162	eP	40 59.40	0.9		Z	20s	1.00um		3.9Msz
							1.4s	14.00nm			4.1mb	N	10s	0.70um			
						BRG	20.99	158	eP	41 02.20	3.3X	E	10s	0.60um			
							1.1s	10.00nm			4.1mb	QCP	9.70	207	eP	07 36.50	12.6X
								e	41 29.60			NJ2	10.56	327	Pd	07 36.50	0.8
						KSP	21.34	154	ePd	41 02.70	0.3	Z	14s	0.40um			
								i	41 06.30			TIA	14.80	332	eP	08 35.00	2.8X
						GRF	21.86	163	eP	41 09.10	1.4		Z	21s	0.60um		
							21s	0.10um			3.2Msz	N	14s	0.70um			
						PRU	21.94	157	Pd	41 09.80	1.4	E	14s	1.00um			
							1.0s	14.50nm			4.4mb	MTMJ	16.84	36	eP	08 58.30	-0.2
								e	41 30.50			MAT	17.03	37	eP	09 01.00	0.2



05d 11h

1.8s 45.45nm 4.3mb  
eS 12 22.00  
CHJJ 17.12 39 P 09 01.10 -0.8  
GYA 17.52 284 P 09 11.80 4.6X  
NIIJ 17.97 37 eP 09 08.70 -3.8X  
XAN 18.13 310 eP 09 16.20 1.7  
BJI 18.48 336 eP 09 17.50 -1.2  
SNY 18.51 355 eP 09 13.50 -5.5X

Z 20s 0.60um  
N 11s 0.50um  
eS 12 45.00  
CN2 20.40 360 eP 09 36.60 -3.7X  
Z 16s 0.60um 4.0mszX  
N 13s 0.30um  
E 13s 0.30um

epP 09 43.00 24kmX  
CD2 20.89 296 P 09 46.20 0.6  
HHC 21.10 329 eP 09 46.60 -1.1  
BTO 21.67 326 eP 09 53.00 -0.4

N 13s 0.40um  
E 13s 0.30um  
eS 13 49.50

LZH 22.75 309 eP 10 07.50 3.2X  
2.0s 25.00nm 4.3mb  
Z 24s 0.63um 4.0mszX  
N 12s 0.90um

LOE 23.20 260 eP 10 12.00 3.4X  
CHG 25.33 265 eP 10 31.10 1.9  
GTA 27.14 312 eP 10 47.40 1.6

N 10s 0.30um  
pP 10 55.80 30kmX  
GUN 36.06 286 P 12 00.00 -4.6X  
WMO 37.22 313 eP 12 13.80 0.0  
WRA 43.86 168 P 13 28.00 19.4X

0.8s 6.10nm  
WB2 43.86 168 eP 13 08.20 -0.4  
0.6s 26.10nm 5.2mb

i 13 18.70  
e 13 37.40  
ASPA 47.42 170 eP 13 37.30 0.4  
0.5s 13.90nm 5.2mb

INK 72.43 23 eP 16 28.00 -0.2  
YKA 82.09 24 eP 17 22.00 0.2  
1.0s 0.70nm 3.7mb

S.D. = 1.3 on 23 of 34 obs.

% MAY 05, 1991 11h 23m 19.48 ± 0.88s  
39.118 N ± 7.6km 27.716 E ± 12.5km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)  
MD 2.7 (ISK).

IZM 0.80 206 iPg 23 35.10 0.0  
iSg 23 47.10

DST 0.86 55 ePn 23 36.20 0.1  
EDC 1.23 5 ePn 23 42.70 0.3  
KCT 1.23 23 ePn 23 41.70 -0.7

BNT 1.25 7 ePn 23 43.20 0.6  
KGT 1.37 347 iPn 23 44.20 -0.4  
S.D. = 0.6 on 6 of 6 obs.

MAY 05, 1991 11h 43m 20.82 ± 0.49s  
44.574 N ± 7.3km 114.278 W ± 5.3km  
DEPTH = 5.0km (geophysicist)

WESTERN IDAHO (33)  
ML 2.9 (BUT).

MCMT 1.05 76 iPc 43 40.90 -0.4  
HPI 1.21 135 eP 43 43.80 -0.2  
LTMT 1.55 91 ePnd 43 50.00 0.6

TID 1.61 229 P 43 49.90 0.0  
CPI 1.62 245 P 43 50.20 0.2  
HBMT 1.70 43 iPnd 43 51.50 0.0

BGMT 1.72 67 ePn 43 52.20 0.4  
LRM 1.80 45 ePnd 43 52.80 -0.1  
BUT 1.88 39 ePg 43 58.60 4.5X

eSn 44 19.00  
eSg 44 21.70

WPI 2.20 235 P 43 58.30 -0.2  
SXM 2.68 53 ePn 44 05.30 -0.3  
S.D. = 0.3 on 10 of 11 obs.

% MAY 05, 1991 12h 13m 45.99 ± 3.59s  
40.666 N ± 8.7km 29.793 E ± 27.6km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)  
MD 2.7 (ISK).

HRT 0.18 329 iPg 13 49.70 -0.4  
GBZT 0.29 295 iPg 13 50.90 -1.2  
iSg 13 53.10

YLV 0.33 253 iPg 13 54.00 1.1  
eSg 13 58.70

IZI 0.41 217 ePg 13 53.70 -0.7  
CTT 1.14 295 iPn 14 07.20 -0.1  
DMK 1.92 308 ePn 14 20.40 1.4

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

MAY 05, 1991 13h 04m 35.47 ± 0.71s  
41.116 N ± 6.3km 22.483 E ± 5.5km  
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)  
ML 1.5 (SKO). MD 1.8 (THE).

GRG 0.17 201 ePg 04 38.80 -0.6  
eSg 04 41.20

VAY 0.22 18 iPg 04 40.00 -0.1  
iSg 04 43.70

KNT 0.32 82 iPg 04 42.20 0.1  
eSg 04 47.20

THE 0.61 143 ePg 04 48.00 0.3  
SOH 0.72 114 iPg 04 49.80 0.1  
SRS 0.84 90 ePg 04 51.40 -0.3

eSg 05 03.20  
FNA 0.90 249 ePg 04 53.20 0.4  
eSg 05 08.30

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

% MAY 05, 1991 13h 53m 02.95 ± 0.55s  
39.464 N ± 4.4km 29.168 E ± 4.7km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)  
MD 3.0 (ISK).

DST 0.44 289 iPg 53 11.60 -0.4  
eSg 53 18.60

IZI 0.90 15 ePn 53 20.00 -0.3  
KCT 1.00 322 iPn 53 22.70 0.7  
YLV 1.11 8 iPn 53 23.40 -0.5

eSg 53 39.20  
KHL 1.17 166 iPn 53 24.70 -0.2  
GPA 1.20 46 iPn 53 25.80 0.4

BNT 1.31 313 iPn 53 27.20 0.0  
EDC 1.34 312 ePn 53 27.50 -0.1  
HRT 1.41 16 ePn 53 28.80 0.1

KGT 1.74 305 ePn 53 33.20 -0.2  
IZM 1.83 235 ePn 53 35.00 0.3  
S.D. = 0.4 on 11 of 11 obs.

? MAY 05, 1991 13h 53m 18.12 ± 5.00s  
44.288 N ± 33.5km 6.079 E ± 17.9km  
DEPTH = 10.0km (geophysicist)

FRANCE (538)  
ML 2.7 (LDG).

CDR 0.65 200 eP 53 31.10 -0.1  
e 53 31.80

i 53 33.20  
e 53 41.80

FRF 0.83 150 Pg 53 35.90 -0.4  
Sg 53 46.20

LRG 0.86 166 Pg 53 34.70 0.1  
Sg 53 46.90

LMR 1.00 162 Pg 53 37.40 0.3  
Sg 53 51.20

SBF 1.07 113 Pg 53 38.30 0.1  
Sg 53 55.40

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

\* MAY 05, 1991 14h 13m 17.40 ± 1.11s  
41.888 N ± 8.7km 20.340 E ± 9.9km  
DEPTH = 10.0km (geophysicist)

ALBANIA (391)  
ML 1.9 (SKO).

KKS 0.19 16 ePg 13 20.50 -1.2  
iSg 13 24.00

PHP 0.21 159 iPg 13 21.10 -0.9

LACI 0.53 242 ePg 13 29.10 0.9

SKO 0.82 84 ePg 13 35.20 1.8

eSg 13 44.50

OHR 0.85 156 ePg 13 33.20 -0.6

iSg 13 46.80

BERA 1.22 194 ePg 13 43.30 3.2X

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

\* MAY 05, 1991 15h 05m 46.97 ± 1.89s  
10.201 N ± 9.2km 125.107 E ± 15.8km  
DEPTH = 75.0 ± 20.2 km  
4.8mb (7 obs.)

LEYTE, PHILIPPINE ISLANDS (256)

DAV 3.13 171 eP 06 35.00 0.1  
OCP 5.91 319 eP 07 34.50 20.6X

BAG 7.58 325 eP 07 33.80 -3.4X  
NJ2 22.50 346 eP 10 36.00 -5.2X  
WHN 22.58 335 eP 10 42.00 0.0

GYA 23.78 315 P 10 58.00 4.2X  
N 15s 0.40um  
E 15s 0.40um

CHG 26.71 292 eP 11 26.40 5.1X  
XAN 27.98 330 P 11 31.50 -1.2

CD2 28.60 319 eP 11 38.20 -0.1  
MAT 28.78 22 (P) 11 41.00 1.1  
TIY 29.67 339 eP 11 46.50 -1.4

Z 19s 0.49um 4.2mszX  
E 11s 0.19um

BJI 30.76 347 (P) 11 58.50 1.2  
WB2 31.31 163 iPd 12 01.00 -1.4  
0.5s 13.50nm 5.0mb

i 12 04.90  
i 13 04.30

SNY 31.53 358 Pc 12 02.90 -1.1  
LZH 32.19 327 eP 12 10.00 -0.1

2.0s 36.00nm 4.9mb  
Z 25s 0.31um 3.9mszX  
N 15s 0.80um

HHC 32.79 341 eP 12 15.00 -0.2  
CN2 33.48 0 eP 12 23.00 2.0

OIS 33.73 155 eP 12 23.00 -0.4  
0.6s 20.00nm 5.2mb

i 13 26.00  
ASPA 34.74 166 eP 12 32.40 0.3  
0.5s 19.30nm 5.3mb

GTA 36.80 326 eP 12 49.90 0.5  
1.4s 10.00nm 4.6mb  
N 20s 0.70um

HYB 45.68 284 eP 14 08.00 5.6X  
GBA 46.71 279 Pc 14 12.20 1.7

0.9s 6.00nm 4.5mb  
DZM 51.69 129 iPc 14 50.00 1.1

YAK 51.83 3 eP 14 47.40 -1.8  
INK 84.77 21 eP 18 14.00 0.2

YKA 94.28 24 eP 18 58.60 -0.4  
0.7s 1.10nm 4.4mb

S.D. = 1.2 on 20 of 26 obs.

MAY 05, 1991 15h 33m 04.28 ± 0.86s  
45.564 N ± 8.3km 27.786 E ± 8.4km  
DEPTH = 33.0km (normal)

ROMANIA (358)

CFR 0.46 145 iPc 33 14.00 -0.3  
BRD 0.52 265 iPc 33 14.50 -0.7

PPE 0.66 350 eP 33 17.50 0.3  
VRI 0.80 293 ePc 33 18.00 -1.2

ISR 0.97 244 ePc 33 22.00 0.3  
TLB 0.99 170 ePd 33 22.00 0.2

CVO 1.16 283 iPd 33 25.00 0.7  
MLR 1.30 267 ePc 33 27.00 0.7

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

\* MAY 05, 1991 16h 01m 54.04 ± 0.53s  
9.067 N ± 8.8km 126.725 E ± 12.3km  
DEPTH = 33.0km (normal)

4.9mb (14 obs.)  
MINDANAO, PHILIPPINE ISLANDS (259)

OIZ 19.12 303 Pc 06 17.70 0.5

MTN 22.21 169 eP 06 50.00 0.7

0.3s 86.00nm 5.7mb

KNA 24.74 175 iPd 07 14.90 0.9

LOE 25.68 291 eP 07 24.00 1.1

IPM 25.90 262 ePc 07 25.80 0.8

PSI 28.35 259 ePc 07 50.00 2.6

WB2 29.79 165 iPd 07 58.80 -1.5

0.5s 5.80nm 4.6mb

e 08 10.00

e 08 46.90

i 11 03.00

i 12 44.70

MBL 30.79 193 eP 08 07.50 -1.5



TIY	31.30	338	eP	08 17.60	4.1X	SPU	1.83	235	ePd	22 57.14	-0.4	eSg	42 00.20
QIS	32.05	157	iPc	08 20.00	-0.1	SLKM	1.87	199	eP	22 57.33	-0.8	FAI	1.16 250 P
	0.4s	10.00nm			5.1mb	NKA	1.88	216	ePd	23 00.22	2.0	TDS	2.21 27 P
SNY	32.75	356	Pc	08 28.20	2.3	THY	1.88	51	eP	22 58.42	0.1		S.D. = 0.3 on 6 of 6 obs.
ASPA	33.28	168	eP	08 30.40	-0.4	BGL	1.91	240	eP	22 58.57	-0.3		MAY 05, 1991 17h 16m 57.03± 0.31s
	0.3s	14.60nm			5.4mb	BWN	1.92	354	eP	22 58.77	-0.1		40.273 N ± 3.6km 15.952 E ± 2.8km
		eS		13 43.90		CKL	1.93	238	eP	22 58.53	-0.5		DEPTH = 33.0km (normal)
NANU	33.29	199	eP	08 39.00	8.1X	KNIM	2.02	162	eP	22 59.27	-1.0		4.1mb ( 5 obs.)
MDJ	35.50	4	Pc	08 54.00	4.3X	DDM	2.08	42	ePd	23 02.29	1.0		SOUTHERN ITALY (390)
	1.0s	22.00nm			5.0mb	SEW	2.18	186	eP	23 02.60	0.0		ML 4.3 (TTG). MD 4.6 (TRI), 4.1
SHL	36.93	301	iP	09 01.30	-0.9	HIN	2.23	146	ePc	23 02.52	-0.7		(ATH), 4.1 (THE).
GTA	38.62	326	eP	09 17.60	1.4	WRH	2.25	10	ePd	23 02.32	-1.2		
	0.6s	10.00nm			4.8mb	NEA	2.32	359	eP	23 03.01	-1.5		
LSA	39.09	307	eP	09 20.80	0.1	CVA	2.32	137	eP	23 04.23	-0.3	ORI	0.43 119 Pd
GUN	42.77	302	P	09 50.18	-0.6	HDA	2.33	22	ePd	23 03.67	-1.0		eSg
PKI	43.06	301	P	09 52.40	-0.8	RDY	2.37	226	ePc	23 04.57	-0.7	TDS	0.68 154 P
	0.7s	11.00nm			4.7mb	MTU	2.38	164	ePc	23 05.07	-0.3		eSg
KKN	43.24	301	P	09 53.74	-0.7	CCB	2.45	12	ePd	23 04.85	-1.4	BAI	1.10 39 P
	0.8s	14.00nm			4.8mb	DFR	2.45	228	ePc	23 05.90	-0.6		eSg
DMN	43.33	301	P	09 55.88	0.6	NNL	2.50	208	eP	23 07.69	0.6	BRT	1.13 57 P
GKN	43.84	301	P	09 58.20	-1.1	RDN	2.53	228	eP	23 06.92	-0.8		eSg
	0.8s	15.00nm			4.8mb	SGAM	2.54	133	ePc	23 06.16	-1.5	LCI	1.53 87 P
HYB	47.51	285	eP	10 27.50	-0.9	NCT	2.56	230	eP	23 07.52	-0.5		eSg
BFD	48.33	163	eP	10 35.00	0.6	RSO	2.57	227	eP	23 07.74	-0.5	DUI	1.79 321 P
WMO	48.44	322	eP	10 35.00	-0.4	RS2	2.57	227	eP	23 08.09	-0.2	ATN	2.14 190 P
GBA	48.47	280	Pc	10 34.80	-1.1	RDW	2.57	228	eP	23 07.93	-0.4		eSn
	0.6s	8.70nm			5.0mb	GLB	2.59	106	eP	23 07.73	-0.7	SDI	2.16 312 P
TOO	49.61	160	eP	10 45.00	0.7				eS	23 39.43		MNO	2.53 203 P
YAK	52.90	2	eP	11 06.30	-2.5	RDS	2.60	8	ePd	23 07.14	-1.4	AZI	2.56 313 P
INK	85.23	22	eP	14 17.00	-11.2X				eS	23 36.63		GIB	2.73 214 P
KAF	86.89	332	iP	14 37.30	0.7	RED	2.60	226	eP	23 07.91	-0.8	AQU	2.83 318 P
	0.5s	2.80nm			4.7mb				eS	23 39.02		RDP	2.86 302 P
		eS		14 39.60		DOT	2.64	56	eP	23 09.09	-0.1	HCY	2.90 41 iPnd
NUR	88.06	331	eP	14 41.60	-0.6	FBA	2.70	11	eP	23 08.50	-1.4		iSn
HFS	93.32	333	eP	15 04.90	-1.8	MDM	2.72	7	ePd	23 08.95	-1.4	RMP	2.90 303 P
	0.5s	3.20nm			5.0mb				eS	23 39.46		HVAR	2.93 7 iPn
Z	16s	0.03um			3.8MsZx	RAGM	2.80	130	ePc	23 10.61	-0.9		iSn
		e		15 08.70		GLM	2.82	14	eP	23 10.19	-1.6		iSg
		e		15 11.40		TMW	2.95	66	eP	23 13.04	-0.4	BDV	2.95 46 iPnc
NB2	94.03	334	P	15 09.10	-0.9	CNPM	2.96	203	ePd	23 13.04	-0.7		iSn
	0.6s	1.10nm			4.5mb	HMT	2.99	128	ePc	23 13.32	-0.8	ULC	3.01 55 iPnc
YKA	94.67	24	eP	15 15.60	2.7	CROM	3.18	116	ePc	23 15.93	-1.0		iSn
	0.9s	1.10nm			4.3mb	TGL	3.31	115	ePc	23 17.39	-1.4	BERA	3.08 81 ePn
	S.D. = 1.3 on 30 of 34 obs.					TTA	3.32	285	iPc	23 18.10	-0.7		iSn
						SVW	3.37	253	iPd	23 18.30	-1.2	LACI	3.15 63 ePn
&	MAY 05, 1991 16h 22m 28.04s					BALM	3.40	108	ePc	23 18.72	-1.2	SDA	3.19 56 ePn
	62.268 N			148.978 W		WAX	3.47	119	ePc	23 19.10	-1.8	MNS	3.24 312 P
	DEPTH = 47.5km					AUE	3.63	218	eP	23 22.25	-0.8	MEU	3.27 194 P
	CENTRAL ALASKA ( 1)					AUH	3.64	219	eP	23 23.08	-0.3	BRY	3.27 36 iPnd
	<AEIC>. ML 3.2 (AEIC).					AUI	3.66	219	eP	23 23.29	-0.3		iSn
						CTGM	3.88	106	eP	23 26.41	-0.4	TTG	3.29 48 iPnd
GHO	0.50	177	iPc	22 38.63	-0.7	WRG	4.04	121	eP	23 27.34	-1.6		iSn
		eS		22 46.90		MCNL	4.06	223	ePd	23 28.29	-0.9	NKY	3.42 41 iPnc
SML	0.55	146	iPc	22 39.09	-0.8	CDD	4.06	217	eP	23 28.03	-1.3		iSn
CUT	0.62	283	iPc	22 40.01	-0.7	IMA	4.33	334	iPc	23 31.70	-1.5	IGT	3.45 101 ePn
PLRM	0.68	186	iPc	22 40.47	-1.0	FYU	4.61	19	eP	23 36.19	-0.7		eSn
		eS		22 51.13					77 obs. associated			FAI	3.48 211 P
PMR	0.68	186	iPc	22 40.90	-0.6				MAY 05, 1991 16h 32m 32.83± 0.88s		LSK	3.56 90 ePn	
PWA	0.75	215	iPd	22 41.91	-0.5				37.700 N ± 7.3km 15.047 E ± 7.7km		PHP	3.68 66 ePn	
HUR	0.77	337	iPc	22 42.22	-0.6				DEPTH = 10.0km (geophysicist)		OHR	3.78 76 ePn	
		eS		22 53.00		SICILY (398)					PVY	3.81 51 iPnd	
SCM	0.89	119	iPc	22 43.54	-0.9	MNO	0.36	310 Pd	32 41.00	0.7		iSn	
KNK	0.89	164	iPc	22 43.94	-0.5						ARV	3.93 326 P	
		eS		22 56.33		ATN	0.56	35 P	32 44.80	0.5	IVA	3.94 47 iPnd	
PMS	1.06	195	ePd	22 46.36	-0.5	MEU	0.61	189 P	32 45.00	-0.1		iSn	
RND	1.14	3	iPd	22 47.36	-0.6				32 53.50		PLE	3.99 39 iPnd	
		eS		23 01.95		GIB	0.86	290 P	32 48.30	-1.1		iSn	
SUA	1.16	227	iPd	22 47.81	-0.5				33 01.40		FNA	4.17 81 iPnc	
		iS		23 05.25		FAI	1.17	249 P	32 55.30	0.6		eSn	
SKT	1.23	258	iPd	22 48.32	-0.9				33 09.40		VLS	4.17 119 ePn	
		eS		23 04.17		TDS	2.20	27 P	33 09.40	-0.5	MAO	4.20 302 P	
TOA	1.33	96	ePc	22 51.20	0.7				S.D. = 0.9 on 6 of 6 obs.		KZN	4.45 88 ePn	
TRF	1.33	334	iPc	22 49.98	-0.7						SKO	4.48 66 ePn	
		eS		23 06.97					MAY 05, 1991 16h 41m 32.01± 0.77s			i	
MCK	1.47	1	ePd	22 52.30	-0.2				37.691 N ± 6.4km 15.041 E ± 6.8km			i	
SDG	1.62	79	ePd	22 54.55	-0.1				DEPTH = 10.0km (geophysicist)		RSM	4.48 326 P	
KLU	1.64	117	ePc	22 54.57	-0.5	SICILY (398)					CRE	4.49 320 P	
		eS		23 16.28		MNO	0.36	311 Pd	41 39.30	-0.3	SFI	4.75 321 P	
GLI	1.66	146	iPc	22 54.77	-0.4				41 45.80		FIR	4.95 317 e(Pn)	
VZW	1.68	135	iPc	22 54.72	-0.7	ATN	0.58	35 P	41 43.90	0.2	LIT	5.01 90 ePnc	
TZL	1.68	96	ePc	22 56.22	0.7				41 53.80			eSn	
VLZ	1.70	131	iPc	22 54.67	-1.0	MEU	0.59	189 P	41 44.00	-0.1	AGG	5.08 102 ePn	
		eS		23 17.09					41 52.00			eSn	
NCG	1.74	241	ePc	22 55.59	-0.8	GIB	0.86	291 P	41 48.80	0.2	VAY	5.13 76 ePn	
PAX	1.77	65	ePd	22 56.75	-0.1						RIY	5.20 348 ePn	
		eS		23 18.52								i	
CRP	1.81	238	ePd	22 57.12	-0.4							i	



05d 17h

VBY	5.25	355	ePn	18	15.10	-0.2
			iSn	19	14.20	
KNT	5.35	78	ePn	18	15.70	-1.0
			eSn	19	15.00	
THE	5.36	84	ePn	18	16.50	-0.3
ZAG	5.54	0	iPn	18	19.00	-0.3
			iSn	19	20.80	
CEY	5.58	349	e(Pn)	18	21.00	1.2
			eSn	19	21.40	
PTJ	5.62	0	iPnc	18	19.80	-0.8
			e	19	02.10	
BEO	5.63	35	ePn	18	38.30	17.7X
			e(Sg)	20	12.00	
SOH	5.67	82	iPnc	18	20.20	-1.0
TRI	5.66	344	e(Pn)	18	19.60	-1.4
			e(Sn)	19	24.10	
PGF	5.70	296	Pn	18	22.20	0.5
LJU	5.86	350	ePn	18	22.80	-1.0
			eSn	19	28.00	
SRS	5.87	79	iPnc	18	22.60	-1.4
PAIG	5.94	91	ePn	18	24.00	-0.9
VOY	5.95	346	ePn	18	24.60	-0.6
			eSn	19	31.60	
VLI	6.53	121	iPnc	18	33.40	0.2
CTI	6.57	333	P	18	32.50	-1.4
SAL	6.65	325	P	18	33.97	-1.0
FVI	6.73	341	P	18	35.00	-0.9
BZS	6.77	36	eP	18	53.65	17.1X
KBA	7.06	345	iPnc	18	39.20	-1.6
			i	18	59.00	
			iSn	19	55.30	
			i	19	58.50	
SBF	7.28	302	Pn	18	43.90	0.0
FRF	7.68	298	Pn	18	48.60	-0.7
LMR	7.69	297	Pn	18	49.60	0.1
ALN	7.71	82	ePn	18	48.10	-1.7
SRO	7.73	12	eP	18	46.50	-3.5X
SQTA	7.75	335	iPnc	18	49.20	-1.2
			iSn	20	12.80	
			i	20	16.70	
BHG	7.77	344	ePn	18	50.80	0.2
ZST	7.96	6	eP	18	54.40	1.1
			e	19	34.50	
			e	24	12.70	
PRK	8.02	94	ePn	18	53.00	-1.1
BNI	8.34	308	P	19	01.00	2.3
LPG	8.53	311	Pn	19	00.60	-0.9
LPL	8.56	311	Pn	19	00.80	-1.0
MLR	9.00	51	eP	19	11.00	3.2X
KHC	9.02	350	ePn	19	05.00	-2.9
			Pg	19	06.70	
			e	19	19.50	
			eSg	20	50.00	
WET	9.14	347	iPd	19	07.60	-1.9
VRI	9.66	51	eP	19	24.50	7.7X
PRU	9.77	355	ePn	19	16.00	-2.2
	11s		0.30um			
			eSg	21	00.00	
GRF	9.99	342	e(Pg)	19	19.00	-2.3
			e(Sg)	21	06.00	
BSF	10.02	322	Pn	19	19.20	-2.6
			Sn	21	04.70	
CDF	10.23	326	Pn	19	21.50	-3.2X
			Sn	21	08.50	
HAU	10.36	321	Pn	19	23.20	-3.1X
MOX	10.81	345	e(P)	19	30.00	-2.5
HFS	19.93	357	eP	21	28.50	-0.2
	0.7s		2.60nm			3.7mb
Z	17s		0.02um			5.7msz
			e	21	31.70	
			e	21	37.50	
			LR	28	24.00	
NB2	21.00	354	P	21	39.00	-0.8
	0.7s		2.30nm			3.7mb
LKO	36.10	218	P	23	57.30	-0.5
	0.6s		11.00nm			5.0mb
LIC	38.78	215	P	24	21.30	1.1
GKN	56.86	80	P	26	40.74	-0.4
	0.8s		14.00nm			5.0mb
DMN	57.42	80	P	26	45.26	0.0
KKN	57.46	80	P	26	45.08	-0.3
PKI	57.67	80	P	26	45.60	-1.4
GUN	57.85	79	P	26	47.88	-0.4
YKA	70.17	338	eP	28	07.90	0.0
	0.8s		0.80nm			3.8mb
CHG	72.85	80	eP	28	25.30	0.6
S.D.	1.3			89	of 101 obs.	

\* MAY 05, 1991 17h 52m 08.26 ± 0.98s  
 37.659 N ± 7.0km 15.053 E ± 8.5km  
 DEPTH = 10.0km (geophysicist)  
 SICILY (398)

MNO	0.39	314	P	52	16.00	-0.4
			eSn	52	20.50	
MEU	0.57	190	P	52	19.50	-0.3
			eSg	52	29.00	
ATN	0.60	33	P	52	20.50	0.2
			eSg	52	29.30	
GIB	0.88	292	P	52	25.20	0.0
			eSg	52	37.20	
FAI	1.16	251	P	52	30.40	0.5
			eSn	52	45.70	
S.D.	0.5			5	of 5 obs.	

\* MAY 05, 1991 18h 11m 54.34 ± 0.92s  
 2.901 S ± 7.4km 134.558 E ± 23.4km  
 DEPTH = 33.0km (normol)  
 4.8mb (6 obs.)  
 WEST IRIAN REGION (196)

MTN	10.45	199	eP	14	25.50	0.5
			eS	16	23.00	
KNA	13.98	204	eP	15	11.50	-0.9
WB2	16.94	181	iPd	15	49.30	-1.3
	1.1s		7.20nm			3.7mb X
			i	15	54.40	
			i	16	59.70	
			eS	18	46.80	
QIS	18.23	165	eP	16	05.00	-1.6
			eS	19	22.00	
ASPA	20.65	182	iPd	16	36.20	2.2
	0.9s		133.80nm			5.3mb
			eS	20	21.00	
MBL	23.13	217	eP	17	01.00	2.3
CHG	41.15	303	eP	19	37.00	-0.5
XAN	43.97	329	P	20	00.00	-0.3
TIY	45.32	335	eP	20	11.10	-0.1
			eS	26	53.00	
BJI	45.94	340	eP	20	16.00	0.1
CN2	47.21	351	eP	20	28.00	2.1
HHC	48.34	337	eP	20	35.80	0.9
GTA	52.84	326	eP	21	08.40	-0.9
	1.2s		10.00nm			4.7mb
GUN	55.93	307	P	21	30.66	-1.6
	0.6s		9.00nm			5.0mb
PKI	56.17	306	P	21	34.04	0.1
KKN	56.36	306	P	21	31.52	-3.7X
	0.9s		9.00nm			4.8mb
DMN	56.43	306	P	21	34.28	-1.5
	0.7s		7.00nm			4.8mb
GKN	56.97	306	P	21	35.42	-4.1X
HYB	58.79	292	eP	21	53.00	0.8
GBA	58.98	288	P	21	56.00	2.5X
	0.4s		1.40nm			4.4mb
WMO	62.64	324	P	22	17.80	-0.3
LPB	150.44	132	PKP	31	46.00	5.9X
ZDBO	150.58	131	PKP	31	48.80	8.3X
S.D.	1.4			18	of 23 obs.	

MAY 05, 1991 18h 38m 02.89 ± 0.53s  
 70.841 N ± 14.3km 7.485 W ± 7.9km  
 DEPTH = 10.0km (geophysicist)  
 3.8mb (2 obs.)  
 JAN MAYEN ISLAND REGION (639)  
 MD 3.3 (BER).

JNE	0.31	300	iPgc	38	10.55	1.3
JNW	0.36	302	iPg	38	10.93	0.6
JMI	0.42	283	ePg	38	10.00	-1.5
LOF	7.85	100	iP	39	59.26	-0.4
MOR7	9.29	109	iP	40	20.45	0.8
			iS	41	59.98	
NSS	9.69	121	iP	40	25.92	0.7
			eS	42	07.42	
MOL	10.18	137	eP	40	31.71	-0.2
			eS	42	16.17	
KTK1	10.65	85	eP	40	37.23	-1.1
NRA0	12.71	133	P	41	05.60	-0.6
HFS	13.77	131	eP	41	21.00	0.9
	0.4s		2.20nm			4.4mb
Z	15s		0.04um			
			ePP	41	30.00	
			LR	46	43.00	

KAF 15.83 106 eP 41 50.60 3.6X  
 YKA 37.73 314 eP 45 19.20 -0.6  
 0.8s 0.40nm 3.2mb  
 S.D. = 1.0 on 11 of 12 obs.

\* MAY 05, 1991 19h 31m 22.52 ± 0.83s  
 14.494 S ± 13.0km 71.482 W ± 10.2km  
 DEPTH = 33.0km (normol)  
 4.5mb (2 obs.)  
 PERU (116)

ARE	1.96	180	iPc	31	54.00	-0.3
			iS	31	59.00	
ZOBO	3.69	119	P	32	24.00	4.9X
			S	33	36.00	
LPB	3.84	122	eP	32	22.00	0.9
	1.0s		260.00nm			
			i	32	27.00	
			S	33	37.00	
HUA	4.47	303	iP	32	35.00	4.9X
			iS	33	37.20	
NNA	5.78	295	eP	32	48.50	0.1
	0.7s		20.55nm			4.8mb
SIV	10.16	100	P	33	48.60	-0.7
YKA	83.80	341	eP	43	49.50	0.0
	0.7s		1.00nm			4.1mb
WB2	137.37	217	ePKP	50	50.60	5.2X
	1.5s		1.50nm			
WRA	137.38	217	PKP	50	51.00	5.6X
	1.2s		0.90nm			
S.D.	0.8			5	of 9 obs.	

MAY 05, 1991 19h 36m 44.33 ± 0.42s  
 17.759 N ± 8.1km 65.049 W ± 4.4km  
 DEPTH = 62.3 ± 12.3 km  
 3.6mb (1 obs.)  
 PUERTO RICO REGION (90)

CPD	0.87	289	P	37	00.70	-0.2
LPR	0.95	305	P	37	00.90	-1.1
SJG	1.11	289	iP	37	04.30	0.3
CLLP	1.49	283	P	37	09.80	0.6
LRS	1.					



05d 20h

KNIM 1.20 176 eP 06 14.10 -0.9  
 TZL 1.28 66 eP 06 15.77 -0.7  
 HIN 1.34 149 eP 06 18.02 0.7  
 SUA 1.36 268 ePc 06 17.68 -0.1  
 CUT 1.41 309 ePd 06 18.41 0.1  
 CVA 1.45 133 eP 06 19.47 0.6  
 SDG 1.49 47 ePc 06 19.01 -0.5  
 SLKM 1.53 228 eP 06 20.46 0.4  
 MTU 1.56 175 eP 06 21.37 0.9  
 SEW 1.63 208 eP 06 22.04 0.7  
 HUR 1.65 331 eP 06 21.89 0.1  
 SGAM 1.68 127 eP 06 23.20 1.0

SKT 1.78 286 eP 06 24.08 0.5  
 NKA 1.80 245 eP 06 27.63 3.7  
 PAX 1.83 37 iPc 06 24.23 -0.3

RND 1.92 347 eP 06 26.47 0.7  
 RAGM 1.96 125 eP 06 27.42 1.2  
 GLB 1.97 91 eP 06 25.32 -1.1  
 SPV 2.03 262 eP 06 28.72 1.4  
 NCG 2.04 268 eP 06 29.18 1.6  
 CRP 2.06 264 eP 06 29.48 1.6  
 HMT 2.15 123 eP 06 29.18 0.1  
 CKL 2.16 263 eP 06 30.86 1.6  
 BGL 2.17 265 eP 06 30.39 0.9  
 TRF 2.21 331 eP 06 31.34 1.3  
 >NNL 2.24 229 eP 06 32.64 2.3  
 RDT 2.39 248 eP 06 33.24 0.7  
 CROM 2.44 107 eP 06 34.09 0.7  
 DDM 2.44 22 eP 06 35.50 2.2  
 DFR 2.51 250 eP 06 35.65 1.4  
 RDN 2.58 249 eP 06 36.16 0.9  
 TGL 2.59 106 eP 06 36.18 0.9  
 RSO 2.60 247 eP 06 36.98 1.4  
 RS2 2.60 248 eP 06 37.24 1.7  
 CNPM 2.61 221 eP 06 36.40 0.9  
 RDW 2.61 248 eP 06 36.59 0.8  
 RED 2.62 247 eP 06 37.13 1.3  
 NCT 2.63 250 eP 06 37.30 1.3  
 WAX 2.70 112 eP 06 37.78 0.9  
 BALM 2.73 98 eP 06 37.74 0.3  
 DOT 2.76 38 eP 06 38.87 1.1  
 TMW 2.90 50 eP 06 41.79 2.1  
 HDA 2.91 8 eP 06 40.95 1.2  
 WRH 2.94 358 eP 06 40.81 0.6  
 CCB 3.12 1 eP 06 43.95 1.2  
 CTGM 3.23 97 eP 06 46.28 1.8  
 RDS 3.30 358 eP 06 46.00 0.6  
 FBA 3.37 1 eP 06 48.70 2.3  
 MDM 3.43 358 eP 06 48.94 1.7  
 GLM 3.47 4 eP 06 48.76 1.0  
 TTA 4.04 294 eP 06 50.00 -5.9  
 IMA 5.21 333 eP 07 13.50 0.9

65 obs. associated

? MAY 05, 1991 20h 41m 05.39±6.24s  
 33.651 S ±22.0km 72.097 W ±43.2km  
 DEPTH = 17.7 ±10.0 km  
 OFF COAST OF CENTRAL CHILE (134)

LCCH 0.47 68 iPd 41 15.00 0.1  
 IHA 0.73 32 iPc 41 18.90 -0.4  
 TACH 0.97 90 iPd 41 23.00 -0.3  
 ROCH 1.13 54 iPc 41 25.70 -0.6  
 SAN 1.21 81 iPd 41 27.00 -0.5  
 PCH 1.32 89 iPd 41 28.60 -0.5  
 JACH 1.59 53 iP 41 32.50 -0.4  
 MDZ 2.83 75 eP 41 51.30 0.7

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

MAY 05, 1991 20h 59m 24.16±0.72s  
 41.093 N ±7.4km 22.476 E ±6.2km  
 DEPTH = 10.0km (geophysicist)  
 3.7mb (1 obs.)  
 YUGOSLAVIA (383)

GRG 0.15 203 ePg 59 27.40 -0.2  
 VAY 0.24 17 iPg 59 29.50 0.3  
 KNT 0.33 78 iPg 59 31.60 0.7  
 THE 0.59 141 ePg 59 35.60 -0.5  
 SOH 0.72 112 ePg 59 38.40 0.1  
 SRS 0.84 88 ePg 59 40.70 0.3  
 FNA 0.89 250 ePg 59 42.50 1.2  
 YKA 71.16 340 eP 10 42.70 -1.8

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

MAY 05, 1991 21h 36m 46.66±0.61s  
 37.627 N ±5.5km 15.090 E ±5.8km  
 DEPTH = 10.0km (geophysicist)  
 SICILY (398)  
 MD 3.1 (ROM).

MNO 0.44 314 Pd 36 54.70 -0.9  
 MEU 0.54 194 P 36 59.00 1.4  
 ATN 0.61 29 P 36 59.20 0.3  
 PZI 0.61 193 P 36 57.13 -1.9  
 MSI 0.68 32 P 37 01.40 1.2  
 GMB 0.82 48 P 37 01.34 -1.2  
 GIB 0.92 294 P 37 04.00 -0.3  
 MCT 1.16 271 P 37 08.80 0.4  
 FAI 1.18 253 P 37 09.40 0.7  
 CVT 1.82 272 P 37 18.20 -0.1  
 TDS 2.25 25 P 37 24.80 0.3  
 ORI 2.65 23 P 37 30.30 0.1

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

? MAY 05, 1991 21h 52m 05.87±1.32s  
 6.440 S ±18.5km 123.757 E ±18.6km  
 DEPTH = 33.0km (normal)  
 4.2mb (2 obs.)  
 BANDA SEA (280)

MTN 9.66 132 eP 54 25.00 -0.7  
 KNA 10.48 152 eP 54 42.00 5.1X  
 MBL 15.12 194 eP 55 39.00 0.2  
 WB2 16.91 144 iPc 56 03.20 1.4  
 NANU 17.89 206 eP 56 21.30 7.4X  
 ASPA 19.71 151 eP 56 34.00 -1.7  
 OIS 20.81 134 eP 56 48.00 0.9  
 GUN 50.04 315 P 01 00.00 0.0

S.D. = 1.4 on 6 of 8 obs.

MAY 05, 1991 22h 15m 47.97±0.23s  
 53.527 N ±6.0km 169.857 E ±2.8km  
 DEPTH = 28.1km (15 depth phases)  
 5.0mb (49 obs.) 4.5Msz (10 obs.)  
 KOMANDORSKY ISLANDS REGION (4)  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 15S, 26C  
 Centroid Location:  
 Origin Time 22:15:49.7 1.0  
 Lat 53.94N 0.10 Lon 169.85E 0.16  
 Dep 27.0 FIX Half-duration 1.5  
 Moment Tensor: Scale 10\*\*16 Nm  
 Mrr= 2.09 0.32 Mtt=-4.09 0.46  
 Mff= 2.00 0.30 Mrt= 9.13 0.89  
 Mrf=-0.73 0.68 Mtf= 1.34 0.46  
 Principal Axes:  
 T Val= 8.65 Plg=54 Azm=357  
 N 2.17 5 95

P -10.82 35 188  
 Best Double Couple: Mo=9.7\*10\*\*16  
 NP1: Strike=303 Dip=11 Slip= 119  
 NP2: 94 81 85

ADK 8.34 96 P 17 49.00 -0.9  
 ANM 16.73 39 ePd 19 44.80 3.2X  
 SVW 19.92 54 ePc 20 20.20 0.2  
 TTA 0.8s 17.80nm 4.4mb  
 20.04 49 ePc 20 21.80 0.5  
 0.9s 52.80nm 4.9mb  
 RSO 21.27 56 P 20 33.70 -0.5  
 IMA 21.83 41 iPc 20 39.80 0.2  
 1.1s 43.40nm 4.8mb  
 YAK 22.68 308 eP 20 44.50 -3.4X  
 iPP 21 18.00  
 iPPP 21 31.00  
 iS 24 44.00  
 eSS 25 23.00  
 eSSS 25 35.00  
 BRW 23.06 27 iPc 20 52.10 0.6  
 PMR 23.08 53 ePc 20 52.30 0.5  
 0.4s 4.20nm 4.3mb  
 FBA 23.97 45 ePc 21 01.20 0.8  
 0.8s 34.10nm 4.9mb  
 TOA 24.49 52 ePc 21 06.30 0.7  
 BALM 26.37 54 P 21 21.90 -1.4  
 MDJ 27.52 268 eP 21 32.80 -1.0  
 Z 20s 0.93um 4.4Msz  
 MAT 27.76 245 eP 21 37.00 0.9  
 1.0s 25.00nm 4.9mb  
 eS 26 26.00  
 CN2 30.44 270 P 21 59.00 -1.0  
 Z 18s 1.70um 4.7Msz  
 N 16s 1.00um  
 E 16s 0.50um  
 epP 22 07.00 28km  
 SNY 32.71 268 P 22 20.10 0.2  
 Z 22s 0.90um 4.4Msz  
 N 18s 1.60um  
 E 20s 1.40um  
 eS 27 29.00  
 BJI 38.23 272 eP 23 06.00 -0.9  
 N 15s 0.50um  
 YKA 38.76 46 eP 23 10.50 -0.6  
 0.5s 7.00nm 4.7mb  
 HHC 40.47 276 eP 23 26.50 0.9  
 Z 18s 0.60um 4.5Msz  
 N 15s 0.30um  
 E 16s 0.40um  
 BTO 41.55 277 eP 23 35.00 0.6  
 N 15s 0.70um  
 E 15s 0.80um  
 epP 23 43.50 29km  
 ePP 25 11.00  
 eS 29 50.00  
 TIY 41.96 272 Pd 23 39.20 1.4  
 Z 24s 0.95um 4.6MszX  
 N 17s 1.10um  
 PNT 42.54 66 iPc 23 43.10 0.7  
 0.7s 28.00nm 5.1mb  
 NEW 44.49 66 P 23 58.00 -0.3  
 FHC 45.14 78 ePc 24 05.20 1.6  
 WHN 45.79 263 eP 24 09.50 0.8  
 SES 46.48 60 ePc 24 13.80 -0.2  
 XAN 46.54 271 eP 24 14.50 -0.2  
 MIN 46.82 77 ePc 24 17.40 0.4  
 ORV 47.40 78 ePc 24 21.50 0.1  
 LZH 48.16 277 eP 24 28.50 0.9  
 1.5s 28.00nm 5.1mb  
 Z 15s 0.96um 4.9MszX  
 E 15s 0.89um  
 pP 24 37.50 30km  
 sP 24 41.50  
 eS 31 24.00  
 GTA 48.31 283 P 24 28.60 0.0  
 1.1s 10.00nm 4.8mb  
 Z 16s 1.60um 5.1MszX  
 E 16s 1.30um  
 pP 24 38.40 33km  
 S 31 27.00  
 sS 31 41.00  
 FFC 48.35 51 iPc 24 28.10 -0.5  
 0.4s 6.00nm 5.0mb  
 LRM 48.51 66 eP 24 30.00 -0.3  
 MHC 48.78 80 eP 24 32.80 0.5  
 CMB 49.06 79 ePc 24 34.90 0.6



05d 22h

PRS	49.63	81	ePc	24	39.00	0.3	EKA	71.35	356	Pd	27	06.60	0.0	ATZ	85.42	323	eP	28	25.00	1.1
LLA	49.69	81	ePc	24	39.90	0.8		0.9s	14.50nm			5.1mb		DSI	86.51	322	eP	28	29.00	-0.3
FRI	50.16	79	eP	24	43.00	0.3	MAIO	72.24	307	eP	27	21.00	8.7X	SIV	125.56	67	PKP	34	47.20	-0.9
PR1	50.17	81	e(P)	24	43.80	0.8			eS	36	43.00			S.D. = 0.9 on 127 of 134 obs.						
TNP	50.87	77	P	24	48.80	0.4	DMU	72.91	358	eP	27	15.60	-0.2	* MAY 05, 1991 23h 42m 46.08±2.10s						
	0.7s		14.78nm			5.0mb	QUE	73.39	298	eP	27	19.00	-0.3	0.334 S ±12.6km 125.059 E ±16.4km						
ISA	51.79	80	eP	24	55.00	-0.2	KSP	73.65	343	ePc	27	19.40	-0.8	DEPTH = 104.7 ± 20.8 km						
CD2	51.83	272	P	24	55.60	0.0	KRA	73.72	340	eP	27	20.90	0.3	4.8mb ( 6 obs.)						
			eS	32	15.00		CLL	73.74	345	iP	27	29.40	27km	MOLUCCA SEA (269)						
DUG	51.97	72	P	24	56.70	0.0		1.5s	17.00nm			4.8mb		TSM	8.32	303	eP	44	46.50	0.8
BW06	52.07	67	P	24	57.20	-0.2	BRG	74.02	344	eP	27	20.60	-1.7	KNA	15.75	167	eP	46	22.00	-1.3
	0.8s		18.45nm			5.1mb			e	30	16.40		WB2	21.51	156	iPc	47	26.90	-1.1	
CLC	52.20	79	eP	24	58.00	-0.3		1.0s	10.00nm			4.8mb			0.5s		14.50nm			4.6mb
WMO	52.23	295	P	24	57.80	-0.7	SPC	74.48	340	eP	27	24.70	-0.6	NANU	23.96	202	eP	48	04.00	12.1X
	1.2s		10.00nm			4.6mb	MOX	74.60	346	ePd	27	25.90	0.2	QIS	24.62	146	iPd	47	59.90	1.6
Z	16s		1.40um			5.1MsZ			e	27	28.00	2.3		0.4s		45.00nm			5.3mb	
N	18s		2.70um				ECP	74.62	358	eP	27	28.00	0.3	ASPA	24.73	160	iPc	48	00.60	1.3
E	18s		2.00um				PRU	74.78	344	P	27	27.00	0.3		0.6s		16.40nm			4.6mb
			pP	25	07.50	32km			e	27	35.00	26km				iPcP	51	37.40		
SBB	52.85	80	eP	25	03.00	-0.2	ENN	75.20	350	eP	27	31.50	2.4	CHG	31.93	308	eP	49	04.50	0.4
GSC	53.02	79	eP	25	05.00	0.5		0.8s	8.00nm			4.8mb		MAT	38.67	17	(P)	50	00.00	-1.2
GYA	53.35	266	P	25	07.60	0.6	MEM	75.35	349	P	27	30.40	0.4	TOO	41.57	155	ePd	50	32.00	6.9X
	N	15s	0.40um				GRF	75.59	346	ePc	27	31.80	0.4	GTA	45.81	333	eP	50	59.00	-0.3
	E	15s	0.40um					1.0s	8.00nm			4.7mb			0.7s		10.00nm			4.7mb
			S	32	37.00		Z	21s	0.10um			4.1MsZ		GUN	46.90	310	P	51	08.10	-0.3
KEV	54.10	345	eP	25	11.00	-0.7			e	27	40.60	28km			0.4s		28.00nm			5.4mb
			e	25	27.00	61kmX	KHC	75.77	344	iPc	27	33.00	0.5	PKI	47.09	309	P	51	09.76	-0.1
TPC	54.30	79	eP	25	13.00	-0.8		1.0s	8.80nm			4.7mb		KKN	47.30	310	P	51	11.46	0.1
PLM	54.36	81	eP	25	12.00	-2.4			e	27	42.00	29km		DMN	47.35	309	P	51	11.30	-0.5
FRB	54.59	28	ePc	25	13.90	-1.5	ZST	76.05	342	iP	27	35.00	1.0	GKN	47.90	309	P	51	15.34	-0.6
PV09	55.21	71	P	25	20.50	-0.3			i	27	43.30	27km		HYB	49.05	294	eP	51	24.00	-0.8
SOD	56.31	344	iP	25	39.30	11.4X	SRO	76.18	341	eP	27	35.10	0.3	GBA	49.16	288	Pd	51	25.10	-0.5
GOL	56.47	67	P	25	30.10	0.3	MLR	76.66	335	eP	27	39.00	1.4		0.8s		2.40nm			4.2mb
	1.0s		41.25nm			5.4mb	HYB	76.96	282	eP	27	39.00	-0.6	WMO	55.16	328	P	52	11.30	1.2
GLD	56.52	67	P	25	31.00	1.0	FLN	77.76	353	eP	27	43.00	-0.5	OBN	89.39	325	iP	55	33.10	1.1
	0.9s		71.58nm			5.7mb		1.0s	16.00nm			5.0mb	YKA	103.87	24	ePd	56	56.00	18.4X	
KMI	56.69	268	eP	25	31.60	0.2		Z	19s	0.20um		4.5MsZ			0.8s		0.30nm			
	Z	20s	0.50um			4.6MsZ	KBA	77.80	344	iPc	27	44.90	0.9	S.D. = 1.0 on 17 of 20 obs.						
			S	33	25.00			1.1s	44.60nm			5.4mb		% MAY 05, 1991 23h 48m 43.90±1.49s						
ANMO	59.25	72	P	25	49.70	0.5			i	27	54.10	29km		23.689 N ± 9.5km 121.652 E ±19.8km						
	0.7s		11.99nm			5.1mb	SOTA	78.00	345	iPc	27	45.30	0.3	DEPTH = 10.0km (geophysicist)						
ALO	59.25	72	ePc	25	49.30	0.1		1.6s	45.40nm			5.3mb		TAIWAN (244)						
	1.0s		16.50nm			5.1mb			i	27	54.30	29km		TWD	0.39	352	iPc	48	52.40	0.5
LSA	60.19	280	Pd	25	56.40	0.4	GRR	78.16	354	eP	27	45.40	-0.3			eS	48	57.70		
KAF	61.17	341	iP	26	00.10	-1.6	PTJ	78.48	342	eP	27	47.50	-0.1	TWF1	0.47	224	iPd	48	53.40	0.0
	0.4s		7.60nm			5.2mb	LPF	78.52	354	eP	27	47.50	-0.2			eS	49	00.40		
SCH	62.34	33	ePc	26	08.20	-1.5	LOR	78.88	350	eP	27	49.40	-0.3	TWC	0.93	11	ePd	49	01.80	0.1
SHL	62.83	277	iP	26	12.50	-1.0	VBY	78.99	342	e(P)	27	34.50	-15.8X	TWG	1.02	212	ePc	49	03.30	0.2
NUR	62.97	342	iP	26	11.80	-1.9			e	27	51.00	59kmX	TKW	1.15	249	ePc	49	05.30	-0.1	
	0.8s		19.10nm			5.3mb	SSF	79.12	351	eP	27	50.90	-0.1	TWZ	1.40	357	eP	49	08.90	-0.6
			e	26	20.00	26km		1.1s	11.00nm			4.8mb				eS	49	28.50		
MEO	63.76	67	iPc	26	19.50	0.2	LBF	79.15	350	eP	27	51.00	-0.2	S.D. = 0.5 on 6 of 6 obs.						
TUL	64.43	64	eP	26	22.00	-1.7	WB2	79.33	214	iPc	27	52.60	0.3	MAY 06, 1991 00h 10m 23.42±1.17s						
	0.6s		12.60nm			5.2mb		1.4s	5.50nm			4.4mb		10.373 N ± 4.9km 125.328 E ± 6.1km						
Z	18s		0.32um			4.6MsZ	WRA	79.33	214	P	27	52.00	-0.4	DEPTH = 25.3 ± 8.7 km						
			LR	49	01.50			1.3s	5.60nm			4.4mb		5.1mb ( 29 obs.) 5.2MsZ ( 7 obs.)						
NB2	64.52	349	P	26	22.80	-1.2	AVF	79.40	351	eP	27	52.50	0.0	LEYTE, PHILIPPINE ISLANDS (256)						
	0.7s		17.40nm			5.3mb		1.1s	22.00nm			5.1mb		CENTROID, MOMENT TENSOR (HRV)						
GUN	64.60	283	P	26	24.10	-1.2	SMF	79.50	350	eP	27	52.80	-0.2	Data Used: GDSN						
	0.9s		60.00nm			5.7mb	BGF	79.68	351	eP	27	54.10	0.1	L.P.B.: 19S, 35C						
GAR	64.81	302	eP	26	24.50	-1.7	BBTK	79.91	328	eP	28	04.00	8.5X	Centroid Location:						
KKN	65.04	283	P	26	22.69	-5.3X	TCF	80.01	351	eP	27	55.90	0.1	Origin Time 00:10:25.3 0.4						
	0.8s		26.00nm			5.4mb	MAF	80.04	351	eP	27	56.50	0.5	Lat 10.31N 0.05 Lon 125.23E 0.07						
OBN	65.08	333	eP	26	26.50	-1.1	LPL	80.29	348	eP	27	58.70	1.1	Dep 28.0 FIX Half-duration 2.6						
			eS	26	34.00	24km	LPG	80.30	348	eP	27	58.90	1.2	Moment Tensor: Scale 10+17 Nm						
HFS	65.09	347	eP	26	25.50	-2.1		1.2s	17.85nm			5.0mb		Mrr=-0.80 0.13 Mtt= 3.43 0.18						
	0.6s		10.60nm			5.1mb	GBA	80.62	280	Pc	27	58.80	-0.6	Mff=-2.64 0.19 Mrt= 1.86 0.48						
Z	21s		0.39um			4.6MsZ		0.8s	7.00nm			4.7mb		Mrf=-0.08 0.34 Mtf= 1.15 0.16						
			e	26	28.40	9kmX	BNI	80.75	348	Pc	28	01.20	1.3	Principal Axes:						
			e	26	32.90		MME	81.03	345	P	28	03.30	1.8	T Val= 4.29 Plg=20 Azm=351						
PKI	65.13	283	P	26	27.38	-1.3	BDI	81.18	345	P	28	03.10	1.0	N -1.35 66 133						
	1.0s		40.00nm			5.5mb	PGD	81.18	344	P	28	04.30	2.1	P -2.95 14 256						
GKN	65.25	284	P	26	28.10	-1.2	ARV	81.34	343	P	28	04.10	1.2	Best Double Couple: Mo=3.6+10+17						
	0.9s		34.00nm			5.5mb	FIR	81.35	344	eP	28	04.00	1.2	NP1:Strike= 32 Dip=66 Slip= 176						
DMN	65.27	283	P	26	28.72	-0.8	CAF	81.37	351	eP	28	03.80	0.8	NP2: 124 86 24						
	0.9s		18.00nm			5.2mb		1.1s	14.65nm			4.9mb								
FVM	65.67	59	P	26	30.20	-1.4	LFF	81.47	352	eP	28	04.00	0.5	DAV	3.27	176	eP	11		



TSM	9.44	230	eP	12	50.00	9.1X	SNY	31.37	357	eP	16	41.00	-3.3X	Z	20s	5.00um	5.5MsZ							
OZH	15.84	337	P	14	06.00	-0.4		1.0s	100.00nm			5.6mb		N	18s	9.50um								
	0.8s	10.00nm			4.0mb	X		Z	14s	6.00um		5.4MsZ		E	18s	5.00um								
	Z	16s	11.30um					N	11s	2.30um						pP	18	55.00	13kmX					
	N	14s	7.20um					E	12s	3.90um						ADE	46.84	165	eP	18	54.50	1.2		
	E	14s	5.10um							sP	16	52.00				GBA	46.90	279	Pd	18	52.40	-1.6		
HKC	15.97	319	eP	14	13.80	5.7X	WB2	31.41	164	eP	16	42.40	-2.5				0.8s	16.50nm					5.1mb	
			eS	17	24.00												KOD	47.05	274	eP	18	57.00	1.4	
GZH	17.06	319	eP	14	23.00	1.1				e	17	02.70					COO	48.06	149	e(P)	19	03.00	0.1	
	1.2s	100.00nm			4.8mb					i	18	03.60					BFD	49.98	162	eP	19	18.00	0.4	
	Z	16s	8.10um		3.9MsZ					i	18	35.80					POO	50.36	285	eP	19	21.50	0.6	
	N	14s	6.90um							ePcP	19	36.90					CNB	50.81	155	eP	19	22.00	-2.0	
	E	14s	5.40um							iS	21	50.70							i	19	28.00			
OIZ	17.26	302	P	14	26.50	2.0				eScP	23	19.70					TOO	51.30	159	eP	19	30.80	3.1X	
	N	18s	6.50um				MBL	31.80	190	eP	16	45.00	-3.3X				DZM	51.63	129	iPc	19	31.00	0.5	
	E	18s	5.90um				LZH	32.17	326	eP	16	51.00	-0.6				YAK	51.65	3	eP	19	29.00	-0.9	
GUA	19.41	79	eP	15	00.50	9.6X				8.0s	360.00nm		5.4mb	X					ePp	19	56.00	114kmX		
SSE	20.98	350	Pc	15	07.00	-0.2				Z	24s	7.95um		5.3MsZ					ePcP	20	33.00			
	1.2s	58.00nm			4.9mb					N	17s	8.34um							ePP	21	25.00			
	Z	20s	4.90um		4.9MsZ						pP	16	55.50	16kmX					eS	26	49.00			
	N	12s	2.10um								sP	16	59.50						eSSS	32	18.00			
	E	12s	5.30um								PP	17	57.50					QUE	57.58	299	eP	20	10.50	-3.5X
			pP	15	13.50	24kmX					eS	22	00.00				MAIO	64.48	305	eP	21	03.00	2.5	
			sP	15	17.00						sS	22	09.00						eS	30	44.00			
			sS	19	12.00		HHC	32.70	340	P	16	56.20	0.0				ANM	71.85	25	eP	21	47.10	1.3	
NJ2	22.39	345	Pc	15	22.50	1.1				1.0s	40.00nm		5.3mb				DHR	72.27	294	ePc	21	52.00	3.0X	
	Z	18s	4.00um		4.9MsZ					Z	18s	7.70um		5.4MsZ					eS	30	05.00			
	N	10s	1.50um							N	13s	2.10um					RYD	75.56	293	ePd	22	20.00	11.8X	
	E	11s	0.60um							E	14s	3.20um							eS	31	00.00			
			sP	15	34.50						pP	17	06.20	35kmX				TTA	75.67	28	eP	22	09.70	1.6
WHN	22.52	335	eP	15	23.00	0.3					PP	18	09.00				SVW	75.69	29	eP	22	08.90	0.6	
	6.0s	600.00nm			5.3mb	X					S	22	14.00				BRW	76.37	19	ePd	22	13.30	1.5	
	Z	16s	5.90um		5.1MsZ												IMA	76.93	24	ePc	22	16.30	1.0	
	N	12s	5.20um				BTO	33.01	338	eP	16	58.00	-0.9						0.6s	3.10nm			4.5mb	
	E	13s	7.10um							N	14s	4.10um					KMSA	77.94	289	ePd	22	21.30	-0.3	
										E	14s	3.60um					SLKM	78.32	30	P	22	24.70	1.9	
KGM	23.38	251	eP	15	31.50	0.2					epP	17	07.50	33kmX			PMR	78.83	29	ePd	22	26.10	0.5	
MTN	23.78	166	eP	15	35.00	0.0					ePP	18	12.00						0.6s	4.40nm			4.7mb	
GYA	23.81	315	P	15	36.40	0.9					eS	22	19.00				DHJN	79.22	286	ePd	22	30.00	1.1	
	Z	16s	3.60um		4.9MsZ												FBA	79.36	26	ePd	22	28.60	0.2	
	N	16s	8.70um															0.7s	13.08nm			5.1mb		
	E	16s	7.00um														TOA	80.21	28	ePd	22	35.00	1.9	
			S	19	50.00													0.5s	14.40nm			5.3mb		
LOE	23.93	290	eP	15	36.00	-0.6											OBN	80.86	324	eP	22	38.00	1.4	
SNG	24.62	265	eP	15	42.00	-1.3													e	22	56.00			
			e	20	07.50														e	23	09.00			
IPM	24.76	258	ePc	15	45.50	0.8													e	23	34.00			
	0.8s	74.00nm			5.3mb														e	32	40.00			
NST	25.09	285	eP	15	48.00	0.2													e	43	35.00			
KMI	25.98	307	eP	15	57.00	0.7	ASPA	34.85	166	iPc	17	13.90	-0.9						e	48	00.00			
	Z	16s	5.00um		5.1MsZ					Z	22s	7.30um		5.4MsZ					e					
	N	13s	1.90um																ePp	17	54.20	192kmX		
	E	13s	1.50um																eS	22	48.70			
			pP	16	01.60	16kmX													e	23	34.80			
			sS	20	40.00														e	23	16.30	-0.8		
KNA	26.18	172	eP	16	06.50	8.7X	SHL	35.09	300	iP	17	16.30							iS	22	51.50			
KHT	26.45	282	eP	16	00.50	0.1																		
TIA	26.78	345	eP	16	02.60	-0.7	CTA	36.61	146	iPc	17	33.10	3.4X											
	Z	38s	6.30um		4.9MsZ					1.0s	31.00nm		5.1mb											
	N	12s	2.90um								iS	23	21.00											
	E	12s	5.50um				GTA	36.77	326	Pc	17	31.00	-0.1											
CHG	26.85	291	eP	16	04.70	0.6																		
XAN	27.94	330	P	16	12.50	-1.5					1.0s	20.00nm		4.9mb										
	N	13s	4.50um							Z	23s	6.10um		5.3MsZ										
			S	21	00.00																			
MAT	28.54	22	eP	16	17.00	-2.3																		
	1.0s	11.00nm			4.5mb																			
	Z	19s	4.51um		5.1MsZ																			
			eS	20	04.00																			
DL2	28.61	354	eP	16	19.50	-0.3																		
	1.3s	100.00nm			5.4mb																			
	N	12s	1.00um																					
	E	11s	3.00um																					
			eS	21	10.00																			
CD2	28.62	319	iPd	16	19.10	-1.0																		
	1.2s	100.00nm			5.4mb																			
	Z	11s	3.80um		5.3MsZ																			
	E	13s	6.30um																					
			eS	21	07.10																			
TIY	29.59	339	eP	16	26.70	-2.1																		
	N	20s	10.70um																					
	E	20s	13.40um																					
			S	21	23.00																			
			sS	21	30.00																			
BJI	30.64	346	eP	16	37.00	-1.0																		
	1.3s	42.00nm			5.1mb																			
	N	13s	3.20um																					
			eS	21	32.00																			







RUV	90.16 105 iP	39 16.90	4.9X	Pg	31 20.00		i	12 30.50		
	1.2s 15.00nm		5.1mb	Sg	31 45.10		i	13 09.90		
SBA	91.05 172 iPd	39 17.50	2.6	ePg	31 17.30	-0.2	iPcP	14 21.10		
HFS	91.51 332 eP	39 17.10	-0.4	iSg	31 41.50		eS	16 29.50		
	0.5s 0.70nm		4.3mb X	MEM	2.04 294 P	0.3	iPd	11 28.80	-0.2	
Z	18s 2.72um		5.7Msz	FEL	2.04 198 ePg	-1.3	30.00nm		5.1mb	
	e	39 22.10	16kmX	ENN	2.15 297 eP	31 52.50	pP	11 40.80	46kmX	
	LR	19 26.00			0.6s 11.00nm		eP	11 41.10	0.0	
KRA	91.78 322 eP	39 19.40	0.5	BSF	2.45 216 Pg	31 32.30	6.9X	eP	11 45.20	-0.6
SPC	91.86 321 eP	39 18.70	-0.8		Sg	32 05.80		eP	11 48.00	-0.3
NB2	92.24 334 P	39 18.20	-2.7	HAU	2.50 224 Pn	31 24.80	-1.2	eP	11 57.50	-0.1
	0.9s 5.80nm		5.0mb		Pg	31 32.80				
SKO	93.22 314 eP	39 24.00	-1.7		Sg	32 07.40				
KSP	93.70 323 ePc	39 28.80	1.0	WTS	2.56 329 e(P)	31 06.00	-20.8X			
	e	43 14.60			0.7s 8.00nm					
YKA	94.09 24 eP	39 28.20	-1.1	DOU	2.82 277 iP	31 38.00	7.5X			
	1.1s 14.60nm		5.3mb	CLL	2.99 59 ePg	31 37.00	4.1X			
ZST	94.15 320 eP	39 29.70	-0.2		iSg	32 15.00				
PRU	95.06 323 eP	39 34.00	0.0	KHC	3.11 101 ePg	31 42.50	7.9X			
	Z 20s 1.70um		5.5Msz		Sg	32 19.50				
N	23s 3.70um			BRG	3.38 70 ePg	31 45.40	6.9X			
E	23s 1.70um				iSg	32 26.70				
	e	42 36.00		PRU	3.63 85 ePg	31 52.50	10.5X			
BRG	95.07 324 eP	39 34.10	0.1		eSg	32 34.20				
	1.4s 16.00nm		5.3mb	LOR	4.23 235 Pn	31 47.30	-3.4X			
CLL	95.44 324 iPd	39 35.60	-0.1		Sn	32 36.60				
	1.7s 23.00nm		5.3mb		Sg	32 59.20				
Z	17s 1.50um		5.5MszX	LBF	4.36 231 Pn	31 49.40	-3.1X			
KHC	95.97 322 P	39 26.50	-11.8X		Sn	32 39.60				
	Z 20s 1.50um		5.5Msz		Sg	33 03.00				
N	20s 0.80um			SSF	4.55 235 Pn	31 52.50	-2.6X			
E	20s 1.80um				Sn	32 44.70				
	e	39 38.00	37km		Sg	33 09.30				
GRF	97.15 323 eP	39 43.00	-0.5	SMF	4.66 229 Pn	31 54.30	-2.4			
NEW	99.91 37 P	39 56.50	0.4		Sn	32 47.20				
FFC	104.01 26 ePdiff	40 16.00	1.9		Sg	33 14.60				
	1.0s 8.00nm		5.5mb							
SW06	107.26 39 PKP	44 40.00	1.7							
GOL	111.59 40 PKP	44 47.00	0.4							
MAL	113.47 318 ePdiff	40 50.00	-6.6X							
	eS	50 42.00								
ANMO	113.52 45 PKP	44 50.80	0.4							
ALQ	113.52 45 ePKP	44 50.50	0.1							
Z	20s 0.71um		5.3Msz							
LKO	127.25 290 PKP	45 17.00	0.1							
KIC	127.51 286 PKP	45 19.50	2.0							
UPA	148.74 53 iPKPc	46 01.00	5.2X							
	Z 20s 0.43um		5.2Msz							
PDCR	164.53 260 (PKP)	46 21.00	5.7X	EZN	1.44 358 iPn	49 10.50	0.1			
LPB	165.64 117 PKP	46 17.00	0.2	CIN	1.56 120 iPnd	49 12.00	-0.1			
	LR	45 44.00			iSg	49 33.00				
ZOBO	165.72 116 PKP	46 00.00	-17.0X	YER	1.96 129 iPn	49 17.80	-0.2			
	1.2s 22.30nm			DST	2.13 55 iPn	49 20.10	-0.4			
Z	25s 0.75um			KGT	2.18 19 iPn	49 20.60	-0.6			
	i	46 19.90		EDC	2.27 30 ePn	49 23.00	0.6			
	SKS	56 38.00		BNT	2.30 31 ePn	49 23.00	0.1			
	eLR	43 00.00		KCT	2.41 39 iPn	49 25.40	1.0			
SIV	171.67 133 PKP	46 21.80	1.8	KHL	2.47 91 iPn	49 25.80	0.4			
	S.D. = 1.2 on 110 of 128 obs.			RDO	2.83 347 ePn	49 29.70	-0.7			
				YLV	3.18 46 ePn	49 35.90	0.5			
				KDZ	3.34 347 eP	49 35.00	-2.7			
				RZN	3.54 339 eP	49 41.00	0.4			
				DMK	3.59 17 ePn	49 40.50	-0.6			
				MMB	3.79 328 eP	49 46.00	1.9			
					S.D. = 1.1 on 17 of 17 obs.					
					</					



\* MAY 06, 1991 01h 35m 27.94 ± 0.63s  
42.747 N ± 10.6km 43.126 E ± 7.7km  
DEPTH = 10.0km (geophysicist)  
4.4mb ( 10 obs.)

WESTERN CAUCASUS (362)

TAB 5.27 151 eP 36 50.00 1.2  
KVT 5.54 255 ePn 36 50.80 -1.7  
KAS 7.10 262 eP 37 13.00 -1.5  
BBTK 8.33 253 eP 37 33.00 1.3  
VRI 12.16 290 ePc 38 36.00 11.9X  
MLR 12.65 288 eP 38 32.00 1.2  
OBN 13.08 343 iP 38 51.00 14.8X

N 12s 1.00um  
E 15s 0.60um  
ePPP 39 14.00  
eS 41 21.00

MAIO 14.17 112 eP 38 51.00 0.2  
SKO 16.05 275 eP 39 20.00 4.8X  
KRA 17.54 303 eP 39 41.30 7.4X  
ZST 19.00 296 eP 39 52.90 0.9  
KSP 19.99 303 eP 40 07.00 3.8X  
GAR 20.86 91 eP 40 11.50 -1.0  
NUR 21.03 334 iP 40 16.20 2.4  
0.7s 16.00nm 4.5mb

KHC 21.43 298 P 40 22.50 4.4X  
i 40 30.50  
KAF 21.81 339 iP 40 22.20 0.4  
1.0s 38.10nm 4.8mb

esP 40 29.80  
CLL 22.12 303 eP 40 28.00 3.1X  
1.5s 15.00nm 4.2mb

GRF 23.02 299 e(P) 40 34.00 0.1  
HFS 24.96 324 eP 40 52.90 0.4  
0.8s 12.10nm 4.6mb

esP 40 56.50 13kmX  
e 41 20.50  
LPG 26.12 289 eP 41 05.00 1.1  
1.0s 10.00nm 4.5mb

LPL 26.13 289 eP 41 04.30 0.4  
0.9s 6.55nm 4.3mb

SOD 26.24 346 iP 41 20.90 16.4X  
NB2 26.48 325 P 41 04.20 -2.6  
0.9s 4.30nm 4.1mb

SMF 27.99 292 eP 41 19.90 -0.8  
1.1s 8.55nm 4.5mb

AVF 28.31 292 eP 41 22.60 -0.9  
1.0s 11.00nm 4.6mb

YKA 73.59 349 eP 47 01.40 -1.2  
0.7s 0.70nm 3.8mb

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

? MAY 06, 1991 02h 54m 24.44 ± 1.94s  
41.903 N ± 41.7km 43.288 E ± 16.3km  
DEPTH = 33.0km (normol)  
4.0mb ( 4 obs.) 3.5Msz ( 1 obs.)

TURKEY-USSR BORDER REGION (367)

TAB 4.49 148 eP 55 51.00 19.0X  
MLR 13.05 292 eP 57 30.00 -0.2  
GAR 20.74 89 eP 59 04.60 -0.2  
NUR 21.84 335 eP 59 14.00 -1.5  
CLL 22.69 305 iPc 59 28.30 4.2X

2.0s 21.00nm 4.3mb  
GRF 23.54 300 e(P) 59 32.00 -0.3  
HFS 25.72 325 eP 59 55.80 2.7X

1.0s 11.30nm 4.4mb  
Z 18s 0.13um 3.5Msz  
e 59 59.80  
e 00 02.00  
e 00 21.30  
LR 00 33.00

NB2 27.24 326 P 00 08.80 1.7  
0.7s 1.10nm 3.6mb

YKA 74.44 350 eP 06 01.20 0.6  
0.8s 0.60nm 3.6mb

S.D. = 1.4 on 6 of 9 obs.

MAY 06, 1991 03h 40m 25.31 ± 1.45s  
10.904 S ± 4.9km 162.567 E ± 11.0km  
DEPTH = 97.0 ± 10.6 km  
5.4mb ( 19 obs.)

SOLOMON ISLANDS (193)

HNR 2.97 299 iP 41 11.00 -0.3

SVO 3.22 303 iS 41 49.90  
iP 41 15.00 0.2

DZM 11.71 162 iS 41 43.00  
iPc 43 03.60 -7.1X  
iS 45 05.50

PMG 15.25 274 eP 44 00.00 3.4X  
1.0s 360.00nm 5.6mb

CTA 18.16 238 iPc 44 34.00 1.2  
1.0s 185.00nm 5.3mb

BRS 18.81 208 iPd 44 41.50 1.4  
e 45 26.00  
e(S) 48 16.00

RMO 20.25 218 iPc 44 54.70 -0.5  
1.0s 147.00nm 5.3mb

i 45 09.00  
e 46 13.00  
COO 21.95 205 iPd 45 12.80 0.6

QLP 23.29 225 ePc 45 25.70 0.5  
OIS 24.07 244 iPc 45 33.10 0.2

CMS 25.68 215 iPc 45 48.00 0.1  
0.6s 130.00nm 5.6mb

STK 28.48 220 iPd 46 13.40 0.0  
0.7s 11.90nm 4.6mb

WB2 28.61 248 iPd 46 13.80 -0.9  
0.5s 2.40nm 4.1mb X

i 46 46.00  
iPcP 49 22.90  
ASPA 30.10 241 iPc 46 26.70 -1.2

0.7s 48.70nm 5.3mb  
Z 22s 0.70um 4.3Msz

TOO 30.67 207 iPd 46 33.40 0.6  
BFD 31.77 211 eP 46 41.00 -1.4

KNA 33.22 258 iPc 46 54.80 -0.4  
0.6s 50.00nm 5.5mb

FORR 37.60 233 eP 47 31.00 -1.2  
MBL 42.20 251 iPc 48 10.70 0.3

0.6s 87.00nm 5.8mb  
COOL 43.18 236 eP 48 18.00 -0.3

MEKA 44.28 243 iPc 48 27.90 0.6  
KLB 46.16 236 eP 48 41.00 -1.1

NANU 46.33 249 iPc 48 54.40 10.9X  
0.5s 57.00nm 5.8mb

BAL 46.77 238 eP 48 46.70 -0.2  
0.7s 100.00nm 5.8mb

NWAO 46.97 235 eP 48 48.20 -0.2  
MUN 47.54 236 eP 48 52.70 -0.2

MAT 52.47 335 eP 49 29.00 -1.4  
NJ2 59.76 317 Pd 50 23.00 0.6

MDJ 62.81 334 eP 50 42.00 -0.8  
1.0s 10.00nm 4.7mb

CN2 64.06 331 eP 50 50.40 -0.6  
Z 20s 0.60um 4.8Msz

epP 51 02.00 39kmX  
eS 59 15.00

GYA 65.78 306 P 51 03.00 0.5  
8JI 66.44 323 eP 51 06.50 0.2

TIY 67.37 319 eP 51 11.70 -0.7  
XAN 67.74 314 Pc 51 14.50 -0.3

CHG 69.32 295 ePc 51 24.50 -0.2  
1.2s 19.53nm 4.8mb

HHC 69.73 321 P 51 28.00 1.1  
CD2 70.05 309 iPc 51 29.10 0.1

LZH 72.37 313 Pc 51 43.00 0.0  
1.5s 62.00nm 5.2mb

Z 24s 0.26um 4.4MszX  
pP 51 53.00 32kmX  
sP 52 03.00

GTA 76.73 315 iPc 52 09.20 1.3  
1.0s 20.00nm 4.9mb

pP 52 24.80 56kmX  
YAK 77.09 345 eP 52 09.00 -0.2

SVW 78.97 19 eP 52 21.20 1.6  
0.6s 19.70nm 5.1mb

GUN 83.53 300 Pc 52 45.10 0.5  
0.9s 67.00nm 5.6mb

PKI 83.84 299 Pc 52 46.42 0.3  
0.8s 54.00nm 5.6mb

KKN 84.01 300 Pc 52 47.30 0.5  
0.7s 48.00nm 5.5mb

DMN 84.11 299 Pc 52 48.14 0.7  
0.8s 112.00nm 5.9mb

FBA 84.18 19 eP 52 44.70 -1.9  
0.8s 12.07nm 4.9mb

CMB 86.65 50 e(P) 52 58.60 -0.9  
WMO 86.80 316 eP 53 01.20 1.1

ISA 87.47 53 eP 53 14.00 10.5X

SBB 87.74 54 eP 53 16.00 11.2X

CLC 88.20 53 eP 53 19.00 12.0X  
YKA 96.29 28 eP 53 44.40 0.7

0.8s 0.50nm 4.1mb X  
ALQ 96.94 56 eP 54 05.00 17.5X

PDCR 148.28 137 (PKP) 00 01.00 1.9X  
S.D. = 0.8 on 46 of 54 obs.

& MAY 06, 1991 04h 04m 17.09s  
60.110 N 153.238 W

DEPTH = 135.5km  
SOUTHERN ALASKA ( 2 )  
<AEIC>.

RED 0.39 37 iPc 04 35.68 -0.9  
eS 04 50.10

RS2 0.43 34 iPc 04 36.13 -0.8  
eS 04 50.96

RSO 0.43 34 iPc 04 36.12 -0.8  
eS 04 50.92

RDW 0.43 30 iPc 04 36.11 -0.8  
eS 04 50.87

RDN 0.47 30 iPc 04 36.32 -0.7  
NCT 0.48 19 iPc 04 36.28 -0.8

eS 04 50.73  
DFR 0.56 29 iPc 04 36.53 -0.9

eS 04 52.50  
PDB 0.58 236 ePd 04 36.29 -1.2

RDT 0.62 41 iPc 04 37.08 -0.8  
eS 04 52.18

AUH 0.76 188 ePc 04 38.19 -0.6  
AUE 0.76 185 eP 04 37.44 -1.2

AUI 0.78 187 ePd 04 38.05 -0.9  
eS 04 53.97

NNL 0.98 93 ePc 04 40.94 0.4  
MCNL 1.08 211 ePd 04 40.40 -1.2

CKL 1.18 22 iPc 04 42.09 -0.5  
NKA 1.18 57 iPc 04 43.46 1.0

CDD 1.20 190 iPd 04 41.60 -1.2  
eS 05 01.40

SPU 1.22 28 iPc 04 42.27 -0.7  
BGL 1.23 19 iPc 04 42.82 -0.3

BRLK 1.23 105 ePd 04 42.64 -0.5  
eS 05 01.30

CRP 1.28 24 iPc 04 43.26 -0.4  
NCG 1.40 22 iPc 04 44.45 -0.5

SVW 1.54 31 iPd 04 45.40 -1.1  
SLKM 1.55 74 iPc 04 45.54 -1.0

eS 05 06.95  
SYI 1.57 164 eP 04 45.67 -1.0

SUA 1.83 41 iPc 04 49.07 -0.8  
SEW 1.90 89 eP 04 49.42 -1.1

SKT 2.05 23 ePc 04 51.58 -0.9  
eS 05 18.52

PMS 2.14 56 ePc 04 52.06 -1.5  
PWA 2.26 45 eP 04 53.42 -1.5

KDC 2.40 170 eP 04 55.00 -1.7  
PLRM 2.50 52 ePc 04 55.56 -2.4

PMR 2.50 52 eP 04 56.40 -1.6  
GHO 2.69 50 ePc 04 58.24 -2.3

S 05 30.62  
KNK 2.69 59 ePc 04 58.10 -2.3

eS 05 30.31  
CUT 2.71 31 ePc 04 59.59 -1.1

KNIM 2.76 83 ePc 04 58.82 -2.5  
MTU 2.80 90 ePc 05 00.86 -1.1

SML 2.94 52 ePc 05 01.33 -2.4  
GLI 3.14 73 eP 05 03.15 -3.1

HUR 3.35 29 eP 05 08.14 -1.0  
SCM 3.36 56 eP 05 06.91 -2.4

VZW 3.43 71 ePc 05 07.81 -2.4  
VLZ 3.55 70 eP 05 09.22 -2.5

eS 05 50.39  
TRF 3.63 21 eP 05 11.59 -1.4

KLU 3.84 66 ePc 05 13.18 -2.6  
RND 3.91 30 ePd 05 14.83 -1.8

TOA 3.97 57 iPd 05 16.40 -1.0  
SDG 4.43 54 eP 05 21.65 -1.9

PAX 4.70 49 eP 05 25.28 -1.9  
GLB 4.81 70 eP 05 25.99 -2.7

NEA 4.88 22 eP 05 27.77 -1.8  
WRH 4.99 27 ePc 05 28.97 -2.1

CROM 5.05 78 eP 05 30.54 -1.4  
DDM 5.07 40 eP 05 30.48 -1.7

TGL 5.20 78 eP 05 32.48 -1.4  
CCB 5.21 27 ePc 05 31.56 -2.4

HDA 5.21 32 ePc 05 31.88 -2.2



RDS 5.29 24 eP 05 33.04 -2.0  
MDM 5.39 23 ePc 05 34.24 -2.2  
FBA 5.43 25 iPd 05 35.70 -1.2  
BALM 5.45 75 ePc 05 36.09 -1.3  
GLM 5.59 26 eP 05 36.75 -2.4  
CTGM 5.94 77 ePc 05 43.08 -1.0  
IMA 5.99 358 eP 05 44.30 -0.4  
PNL 6.98 88 eP 05 55.40 -2.6  
66 obs. associated

% MAY 06, 1991 04h 45m 50.61 ± 0.93s  
31.305 S ± 10.9km 67.923 W ± 6.8km  
DEPTH = 10.0km (geophysicist)  
SAN JUAN PROVINCE, ARGENTINA (137)

CFA 0.40 222 ePc 45 59.00 0.1  
eS 46 06.10  
RTLL 0.47 267 iPc 45 59.80 -0.3  
RTCB 0.77 256 ePc 46 05.90 0.2  
RTRS 1.74 310 iPd 46 21.20 0.2  
S 46 44.20  
TCA 2.85 92 eP 46 37.00 -0.1  
(S) 47 15.80  
S.D. = 0.3 on 5 of 5 obs.

& MAY 06, 1991 05h 13m 49.70s  
40.473 N 124.692 W  
DEPTH = 13.0km  
NEAR COAST OF NORTHERN CALIF. (35)  
<BRK>. ML 3.3 (BRK).

FHC 0.63 58 iPc 14 01.90 -0.2  
i 14 08.40  
iS 14 10.20  
LTCM 1.98 97 eP 14 21.40 -1.8  
LBFM 2.30 67 eP 14 26.70 -1.3  
MIN 2.36 92 ePc 14 26.00 -2.9  
e(S) 14 53.10  
ORV 2.62 109 ePd 14 29.60 -2.8  
e(S) 14 58.10  
BKS 3.22 143 e(P) 14 52.40 11.5  
ARN 3.97 141 eP 14 48.70 -3.0  
SAO 4.49 144 eP 14 54.10 -4.9  
8 obs. associated

& MAY 06, 1991 05h 15m 53.40s  
40.478 N 124.710 W  
DEPTH = 15.0km  
NEAR COAST OF NORTHERN CALIF. (35)  
<BRK>. ML 3.1 (BRK).

FHC 0.64 59 ePc 16 05.60 -0.2  
eS 16 14.10  
LBFM 2.31 67 eP 16 30.60 -1.0  
MIN 2.37 92 ePd 16 30.00 -2.5  
ORV 2.63 109 eP 16 33.00 -3.1  
4 obs. associated

? MAY 06, 1991 05h 26m 05.67 ± 2.05s  
14.843 S ± 14.6km 167.245 E ± 19.5km  
DEPTH = 240.1 ± 17.6 km  
4.6mb (4 obs.)  
VANUATU ISLANDS (186)

DZM 7.23 186 iPc 27 49.70 -0.2  
iS 29 10.20  
SVO 9.21 307 eP 28 16.00 0.7  
eS 29 59.00  
COO 21.07 219 eP 30 35.00 2.8X  
CMS 25.65 226 iPc 31 17.00 1.7  
STK 28.91 230 eP 31 35.70 -8.8X  
0.3s 5.10nm 4.7mb  
i 31 46.20  
WB2 31.76 256 iPc 32 07.70 -2.0  
0.4s 4.70nm 4.5mb  
eS 32 02.30  
ASPA 32.61 249 iPc 32 15.90 -1.1  
0.6s 11.70nm 4.7mb  
YKA 97.66 27 eP 39 11.10 -2.5  
0.6s 0.20nm 3.6mb  
FIR 144.62 329 ePKP 45 14.50 -0.7  
FLN 144.70 346 ePKP 45 13.30 -1.9  
LDF 144.77 345 ePKP 45 13.70 -1.6  
LOR 144.84 340 ePKP 45 14.50 -1.0  
0.9s 9.65nm  
LBF 145.05 340 ePKP 45 15.20 -0.7  
0.7s 5.75nm

SSF 145.13 340 ePKP 45 15.70 -0.3  
0.7s 21.85nm  
GRR 145.14 346 ePKP 45 15.20 -0.7  
0.6s 14.25nm  
LSD 145.16 335 PKP 45 16.30 -0.1  
LPL 145.29 336 ePKP 45 16.70 0.1  
0.7s 14.00nm  
LPG 145.29 336 ePKP 45 16.90 0.2  
0.7s 15.85nm  
PCP 145.31 333 PKP 45 15.68 -0.7  
SMF 145.39 340 ePKP 45 16.40 0.0  
1.1s 23.20nm  
AVF 145.42 340 ePKP 45 16.30 -0.1  
0.9s 11.15nm  
LPF 145.52 346 ePKP 45 16.60 0.1  
0.5s 11.95nm  
FIN 145.72 333 PKP 45 16.61 -0.5  
RRL 145.75 335 PKP 45 17.94 0.5  
BGF 145.79 341 ePKP 45 17.60 0.5  
0.6s 8.65nm  
ROB 145.80 333 PKP 45 16.81 -0.4  
PZZ 145.96 334 PKP 45 16.81 -0.8  
ENR 146.05 334 PKP 45 16.30 -1.4  
STV 146.08 334 PKP 45 16.50 -1.2  
MAF 146.18 341 ePKP 45 18.90 1.2  
0.8s 5.65nm  
TCF 146.23 341 ePKP 45 19.00 1.1  
0.7s 4.75nm  
SBF 146.33 333 ePKP 45 19.10 1.0  
0.7s 19.95nm  
LSF 146.47 342 iPKPc 45 19.40 1.2  
MFF 146.62 344 ePKP 45 20.00 1.6  
0.9s 17.85nm  
PGF 146.64 330 ePKP 45 20.30 1.6  
0.8s 25.80nm  
FRF 146.92 334 ePKP 45 20.80 1.8  
0.9s 20.15nm  
LMR 147.16 334 ePKP 45 21.50 2.1  
1.1s 29.05nm  
RJF 147.33 341 ePKPc 45 22.20 2.6  
LFF 147.89 342 ePKP 45 23.80 3.3X  
0.7s 11.70nm  
LPO 147.99 341 ePKP 45 24.10 3.4X  
0.7s 12.35nm  
S.D. = 1.3 on 36 of 40 obs.

MAY 06, 1991 06h 44m 18.14 ± 0.92s  
39.517 N ± 8.5km 21.968 E ± 7.9km  
DEPTH = 10.0km (geophysicist)  
GREECE (364)  
MD 2.7 (THE).

AGG 0.57 150 iPgD 44 28.90 -0.8  
eSg 44 38.60  
LIT 0.71 34 ePgD 44 31.60 -0.5  
eSg 44 42.40  
IGT 1.26 271 ePb 44 43.00 1.4  
FNA 1.34 340 ePb 44 42.70 -0.2  
eSb 45 02.10  
PAIG 1.38 72 ePb 44 43.50 0.1  
eSb 45 01.20  
SOH 1.68 39 ePb 44 48.90 1.1  
eSb 45 10.50  
OHR 1.83 331 e(Pn) 44 47.80 -2.1  
SRS 2.02 37 ePn 44 53.70 1.0  
eSn 45 19.30  
S.D. = 1.4 on 8 of 8 obs.

% MAY 06, 1991 07h 25m 20.92 ± 0.47s  
37.554 N ± 4.5km 2.338 W ± 4.2km  
DEPTH = 10.0km (geophysicist)  
SPAIN (377)  
mbLg 3.5 (MDD). Felt (III) at  
Chirivel.

ENIJ 0.59 170 iPgC 25 32.80 -0.1  
eSg 25 40.10  
EALH 0.79 67 ePg 25 35.40 -0.9  
eSg 25 48.30  
AFC 1.01 253 iPgD 25 40.30 0.2  
eSg 25 54.70  
ECOG 1.02 255 ePg 25 40.70 0.5  
eSg 25 54.00  
EVIA 1.09 353 iPgC 25 41.90 0.4  
eSg 25 57.50  
EGUA 1.22 234 iPgC 25 43.50 -0.1  
eSg 26 00.20

EBAN 1.30 298 iPnd 25 45.50 0.5  
eSn 26 03.00  
ACU 1.80 57 ePn 25 53.00 0.8  
eSn 26 15.90  
MAL 1.85 244 iPnd 25 57.00 4.1X  
iSg 26 21.50  
ECHE 2.30 27 eP 26 05.68 6.2X  
eS 26 34.40  
EHOR 2.32 278 ePn 25 59.50 -0.3  
eSn 26 28.30  
LIJA 2.54 256 eP 26 23.50 20.6X  
TOL 2.68 331 ePg 26 13.00 8.1X  
eSn 26 35.50  
iSg 26 47.00  
ALJ 2.75 252 eP 26 17.50 11.5X  
ETOR 3.27 4 ePn 26 13.70 0.4  
eSn 26 51.80  
GUD 3.39 336 ePn 26 14.20 -0.9  
EPLA 3.85 312 ePn 26 20.30 -1.2  
EROO 3.90 32 iPnc 26 22.40 0.2  
ECRI 5.05 359 ePn 26 38.80 0.3  
S.D. = 0.7 on 14 of 19 obs.

\* MAY 06, 1991 07h 26m 22.60 ± 1.57s  
32.130 S ± 8.3km 68.341 W ± 13.2km  
DEPTH = 119.1 ± 21.4 km  
MENDOZA PROVINCE, ARGENTINA (139)

CFA 0.53 10 ePc 26 41.00 0.1  
eS 26 54.50  
RTCB 0.75 329 iPc 26 42.20 -0.5  
eS 26 57.00  
RTLL 0.81 352 iPd 26 42.80 -0.3  
MDZ 0.87 210 iP 26 44.30 0.7  
iS 26 58.80  
RTRS 2.18 334 iPc 26 59.00 0.3  
S 27 25.00  
RFA 2.64 182 ePd 27 04.30 -0.5  
S 27 29.80  
TCA 3.29 77 ePc 27 13.70 0.2  
S.D. = 0.6 on 7 of 7 obs.

MAY 06, 1991 08h 02m 44.69 ± 0.39s  
1.061 N ± 6.2km 126.143 E ± 11.2km  
DEPTH = 33.0km (normal)  
5.0mb (10 obs.)  
MOLUCCA PASSAGE (266)

TSM 8.65 291 ePd 04 56.80 6.2X  
KNA 16.90 171 eP 06 41.20 0.7  
WB2 22.37 159 eP 07 37.50 -4.2X  
0.6s 24.90nm 4.8mb  
e 07 41.90  
eS 11 38.40  
MBL 22.93 195 eP 07 49.00 1.9  
OIS 25.21 149 iPc 08 09.00 -0.1  
ASPA 25.71 163 iPd 08 13.20 -0.7  
0.6s 24.80nm 5.0mb  
eS 12 39.60  
GYA 31.44 325 P 09 06.00 0.4  
FORR 31.79 177 iPc 09 07.10 -1.2  
0.3s 12.00nm 5.2mb  
STK 35.89 157 iPc 09 43.30 -0.4  
0.8s 6.70nm 4.6mb  
CD2 36.49 327 eP 09 48.60 -0.3  
MAT 37.03 16 (P) 09 52.00 -1.3  
TIY 38.60 342 eP 10 07.50 0.9  
BJI 39.84 348 eP 10 16.50 -0.3  
LZH 40.53 332 Pc 10 23.00 0.3  
1.5s 48.00nm 5.0mb  
Z 24s 0.41um 4.2Mszz  
pP 10 35.00 44kmX  
SNY 40.65 357 iPd 10 24.40 1.1  
1.2s 40.00nm 5.0mb  
pP 10 34.80 36kmX  
SHL 41.04 309 eP 10 27.50 0.5  
CN2 42.56 359 eP 10 42.00 3.0X  
MDJ 43.48 4 eP 10 47.50 1.0  
1.0s 30.00nm 5.0mb  
pP 10 52.00 15kmX  
LSA 43.80 314 eP 10 51.00 1.1  
GUN 46.86 308 P 11 13.96 -0.3  
PKI 47.08 308 P 11 15.08 -0.8  
KKN 47.28 308 P 11 15.34 -2.0  
DMN 47.33 308 P 11 17.24 -0.6  
HYB 49.51 292 ePc 11 35.00 0.4  
1.0s 45.00nm 5.5mb



06d 08h

GBA 49.77 287 Pd 11 36.10 -0.4  
 1.1s 15.20nm 4.9mb  
 WMO 54.59 326 P 12 12.40 0.1  
 GAR 63.31 314 eP 13 12.90 -0.1  
 OBN 88.87 325 eP 15 42.00 5.2X  
 YKA 102.15 24 ePdiff16 37.40 0.2  
 0.8s 0.30nm 4.0mb  
 S.D. = 0.9 on 25 of 29 obs.

% MAY 06, 1991 08h 45m 21.22±0.84s  
 39.138 N ± 6.6km 27.597 E ± 11.7km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.7 (ISK).

IZM 0.78 200 iPg 45 36.50 0.0  
 iSg 45 49.00  
 DST 0.93 59 ePn 45 39.10 0.2  
 EDC 1.22 10 ePn 45 44.00 0.0  
 BNT 1.24 11 iPn 45 44.70 0.4  
 KCT 1.25 28 ePn 45 44.00 -0.5  
 KGT 1.33 350 ePn 45 45.70 -0.1  
 S.D. = 0.4 on 6 of 6 obs.

\* MAY 06, 1991 08h 45m 24.96±2.33s  
 37.979 N ± 15.5km 19.965 E ± 17.0km  
 DEPTH = 10.0km (geophysicist)  
 IONIAN SEA (399)  
 MD 3.3 (ATH).

VLS 0.53 68 ePg 45 35.00 -0.7  
 KEK 1.74 356 ePb 45 55.80 0.5  
 AGG 2.13 60 iPc 46 02.80 1.7  
 VLI 2.68 117 ePg 46 08.70 -0.2  
 LIT 2.89 42 eP 46 15.00 3.1X  
 FNA 3.01 21 eP 46 13.20 -0.3  
 OHR 3.19 11 ePn 46 15.50 -0.7  
 SKO 4.15 15 ePn 46 35.00 5.3X  
 S.D. = 1.2 on 6 of 8 obs.

% MAY 06, 1991 08h 48m 13.80±3.25s  
 37.577 N ± 13.9km 2.433 W ± 29.0km  
 DEPTH = 10.0km (geophysicist)  
 SPAIN (377)  
 mbLg 2.7 (MDD).

EHUE 0.27 332 iP 48 19.00 -0.5  
 eS 48 24.20  
 AFC 0.94 250 ePg 48 33.00 1.1  
 eSg 48 45.00  
 ECOG 0.95 252 ePg 48 31.60 -0.4  
 eSg 48 44.00  
 EVIA 1.06 357 ePg 48 34.20 0.3  
 eSg 48 50.00  
 EGUA 1.17 231 ePg 48 35.00 -0.7  
 S.D. = 1.1 on 5 of 5 obs.

MAY 06, 1991 09h 31m 42.85±0.19s  
 29.853 N ± 4.0km 131.510 E ± 3.6km  
 DEPTH = 31.6km (9 depth phases)  
 5.2mb (41 obs.) 5.0Msz (7 obs.)  
 RYUKYU ISLANDS REGION (239)

SHK 4.77 12 iPd 32 54.80 0.4  
 1.0s 560.00nm  
 MAT 8.72 38 eP 33 49.00 -0.7  
 0.7s 69.18nm 5.9mb  
 eS 35 15.00  
 SSE 8.99 281 Pd 33 55.30 1.8  
 1.2s 56.00nm 5.6mb  
 Z 20s 3.40um  
 N 13s 1.50um  
 E 14s 2.80um

pP 34 00.50  
 S 35 40.00  
 sS 35 50.00  
 NJ2 11.08 285 Pc 34 22.50 0.3  
 Z 16s 2.00um  
 N 12s 1.40um  
 E 15s 2.40um

pP 34 32.50  
 DL2 12.16 321 eP 34 35.00 -1.8  
 Z 16s 2.00um  
 N 14s 2.10um  
 E 14s 1.40um

eS 36 55.00  
 SNY 13.56 334 eP 34 53.20 -2.1

1.6s 100.00nm  
 Z 18s 4.50um  
 N 13s 1.90um  
 E 12s 1.00um  
 sP 35 06.00  
 CN2 14.74 343 Pd 35 12.00  
 6.0s 600.00nm  
 Z 18s 11.40um  
 N 15s 3.30um  
 E 15s 1.40um

epP 35 19.00  
 PP 35 25.00  
 S 38 00.00  
 MDJ 14.82 355 Pc 35 13.50  
 1.7s 70.00nm  
 Z 20s 1.80um  
 E 12s 1.20um

pP 35 25.00  
 BJI 16.15 313 eP 35 32.00 3.1X  
 1.0s 140.00nm  
 E 16s 3.34um  
 BAG 16.72 219 eP 35 38.00 1.5  
 TIY 17.67 301 Pc 35 51.80 3.6X  
 1.0s 100.00nm  
 Z 16s 2.60um  
 N 15s 1.30um  
 E 13s 1.00um

S 39 06.50  
 QCP 17.94 215 eP 35 38.00 -13.6X  
 HHC 19.58 309 eP 36 10.80 -0.5  
 Z 24s 2.30um  
 N 15s 1.30um  
 E 16s 1.40um

sP 36 24.00  
 S 39 51.00  
 XAN 19.61 288 P 36 09.50 -2.1  
 GUA 20.43 140 eP 36 23.80 3.6X  
 0.5s 112.68nm  
 BTO 20.52 307 eP 36 20.50 -0.6  
 N 16s 1.70um  
 E 15s 1.80um

sP 36 34.50  
 S 40 07.50  
 GYA 22.15 267 P 36 37.60 -0.2  
 Z 18s 1.20um  
 N 15s 1.20um  
 E 15s 1.90um

pP 36 52.00 62kmX  
 sS 40 54.00  
 QIZ 22.44 246 P 36 42.00 1.5  
 N 14s 0.90um  
 E 16s 1.20um

eS 40 46.00  
 CD2 23.94 280 eP 36 54.40 -0.8  
 Z 16s 1.50um  
 E 14s 1.80um  
 LZH 23.98 292 Pd 36 56.00 0.4  
 1.6s 56.00nm  
 Z 18s 3.74um  
 N 16s 1.26um  
 E 16s 2.11um

pP 37 06.00 37km  
 PP 37 32.00  
 eS 41 08.00  
 sS 41 26.00  
 GTA 27.65 299 P 37 31.00 1.2  
 0.9s 10.00nm  
 Z 16s 2.00um  
 E 13s 1.40um

pP 37 36.20 18kmX  
 sP 37 40.40  
 CHG 31.54 257 eP 38 04.10 -0.5  
 YAK 32.19 358 eP 38 08.80 -1.0  
 e 43 14.00  
 e 43 39.00  
 e 44 37.00  
 WMO 37.30 304 P 38 57.00 3.1X  
 Z 16s 1.10um  
 GUN 39.80 279 P 39 15.06 -0.3  
 PKI 40.29 278 P 39 18.62 -0.7  
 KKN 40.35 279 P 39 18.84 -0.8  
 DMN 40.54 279 P 39 18.74 -2.5  
 ADK 43.81 45 P 39 48.40 1.1  
 KNA 45.41 184 eP 40 01.00 0.5  
 WRA 49.58 177 P 40 32.00 -1.1  
 0.7s 22.10nm  
 WB2 49.58 176 iPd 40 32.10 -1.0

5.4mb  
 3.9Msz  
 0.8s 20.00nm 5.2mb  
 e 40 45.20 48kmX  
 e 41 53.20  
 GAR 50.46 298 eP 40 35.60 -4.3X  
 OIS 50.72 170 iPc 40 41.00 -0.7  
 0.4s 13.00nm 5.3mb  
 ANM 51.95 29 P 40 50.90 0.3  
 ASPA 53.26 177 iPc 41 00.10 -0.7  
 0.6s 28.50nm 5.4mb  
 Z 23s 0.70um 4.6MszX

KOD 53.88 261 eP 41 07.20 1.3  
 SVW 56.14 34 ePc 41 20.90 -0.6  
 PMR 59.23 33 P 41 42.10 -1.6  
 1.0s 21.00nm 5.2mb  
 MAIO 59.43 297 eP 41 48.00 3.1X  
 FBA 59.48 29 P 41 44.60 -0.2  
 1.4s 34.09nm 5.3mb  
 DZM 61.60 143 iPc 41 59.10 -0.8  
 STK 62.14 170 iPd 42 02.90 -0.3  
 0.7s 10.40nm 5.1mb

KEV 67.14 339 eP 42 36.00 0.8  
 SOD 68.26 336 eP 42 53.00 10.7X  
 TOO 68.34 168 eP 42 44.00 0.9  
 OBN 68.74 322 eP 42 45.50 0.0  
 Z 16s 1.30um 5.3MszX  
 N 16s 0.60um  
 E 16s 1.20um

e 42 56.00 34km  
 e 51 42.00  
 KAF 70.73 331 iP 42 56.40 -1.1  
 0.5s 14.80nm 5.3mb  
 eS 43 06.50  
 NUR 72.20 330 iP 43 07.60 1.3  
 0.5s 16.80nm 5.3mb  
 i 43 14.90 23km  
 YKA 74.02 26 eP 43 15.80 -1.1  
 1.2s 6.60nm 4.5mb  
 UPP 75.52 332 e(P) 43 25.00 -0.5  
 HFS 76.95 333 eP 43 32.70 -0.9  
 0.7s 8.40nm 4.9mb  
 Z 17s 0.79um 5.1MszX

e 43 35.60 9kmX  
 e 43 39.70  
 ePcP 43 42.60  
 e 43 49.20  
 LR 19 51.00  
 NAO 77.61 334 P 43 36.40 -0.9  
 0.6s 7.10nm 4.9mb  
 PNT 79.01 39 eP 43 45.00 -0.2  
 MLR 79.16 316 eP 43 47.00 0.8  
 KRA 80.05 323 eP 43 51.60 0.9  
 SPC 80.38 322 eP 43 53.20 0.4  
 FHC 80.96 48 ePc 43 56.60 0.8  
 NEW 80.97 39 eP 43 55.50 -0.2  
 1.1s 18.52nm 5.0mb

KSP 81.47 325 ePc 43 58.90 0.7  
 SRO 82.23 321 eP 44 03.80 1.6  
 BRG 82.62 326 iP 44 04.80 0.6  
 1.4s 29.00nm 5.2mb  
 e 44 15.20 33km  
 ZST 82.65 322 eP 44 04.70 0.3  
 MIN 82.73 48 eP 44 04.50 -0.7  
 CLL 82.80 326 iPc 44 05.80 0.7  
 1.5s 70.00nm 5.5mb  
 i 44 16.50 34km

SES 82.86 35 ePc 44 05.70 0.2  
 PRU 82.88 325 P 44 06.20 0.7  
 1.6s 37.50nm 5.2mb  
 Z 16s 0.90um 5.2MszX  
 N 16s 0.50um  
 E 16s 0.70um

e 44 17.10 35km  
 ORV 83.23 48 eP 44 07.00 -0.6  
 BKS 83.66 50 eP 44 10.20 0.4  
 SKO 83.82 315 eP 44 11.00 0.5  
 i 44 22.50 37km  
 MOX 83.90 326 ePc 44 11.00 0.2  
 1.8s 47.00nm 5.4mb  
 Z 18s 0.70um 5.1Msz  
 KHC 83.91 324 iPc 44 12.00 1.1  
 1.4s 18.30nm 5.1mb

Z 16s 0.80um 5.2MszX  
 N 16s 0.20um  
 E 16s 0.60um  
 e 44 19.30 23km  
 e 47 08.50  
 FFC 84.06 28 ePc 44 11.00 -0.4



1.2s 30.00nm 5.3mb				S.D. = 0.3 on 6 of 7 obs.				TUL 49.62 82 e(P) 43 07.90 12.9X			
MHC	84.35	50 ePc	44 13.30 -0.2	-----				SCH	52.44	46 eP	43 15.00 -1.1
OHR	84.71	315 eP	44 15.30 0.2	% MAY 06, 1991 09h 54m 38.99± 4.58s				BJL	53.49	290 eP	43 23.00 -1.0
GRF	84.72	326 ePc	44 16.10 1.2	32.257 N ±26.7km 36.491 E ±21.4km				HHC	55.50	294 eP	43 40.00 1.1
Z	21s	1.60um	5.4Msz	DEPTH = 10.0km (geophysicist)					1.2s	20.00nm	5.0mb
		e	44 25.10 28km	DEAD SEA REGION (373)				Z	16s	1.20um	5.1MszX
		e	44 28.20	JARJ 0.46 268 Pc 54 48.94 0.5				E	16s	1.40um	
		e	44 36.10	MDSJ 0.66 198 Pd 54 52.85 0.7				BTO	56.52	294 P	43 46.00 -0.2
CMB	84.80	49 ePc	44 15.50 -0.1	SALJ 0.73 250 Pc 54 53.03 -0.3				N	14s	0.60um	
LRM	84.99	39 eP	44 16.50 -0.2	KFNJ 0.80 240 Pc 54 54.14 -0.3				E	14s	0.90um	
PRS	85.09	51 eP	44 17.00 0.0	MASJ 0.84 231 Pc 54 54.81 -0.5						eP	43 57.00 37kmX
LLA	85.22	50 eP	44 17.60 -0.1	MKRJ 1.01 226 Pd 54 57.92 -0.2				KEV	56.86	355 iP	43 46.90 -1.2
KBA	85.34	323 iPd	44 19.40 1.1	QTRJ 1.04 203 Pc 54 58.99 0.3					0.5s	16.80nm	5.3mb
	1.0s	12.60nm	5.1mb	CSTJ 1.14 172 Pd 55 00.09 -0.4				TIY	57.21	290 Pd	43 51.00 -0.1
		ic	44 20.00 2kmX	S.D. = 0.5 on 8 of 8 obs.				N	15s	0.60um	
		i	44 27.10	MAY 06, 1991 10h 34m 04.99± 0.26s				NJ2	57.55	281 Pd	43 52.70 -0.7
FRB	85.38	9 ePc	44 17.50 -0.4	53.436 N ± 6.0km 164.047 W ± 3.3km				SOD	59.25	355 iP	44 04.10 -0.8
PRI	85.67	51 ePc	44 18.80 -1.3	DEPTH = 33.0km (normal)				WHN	61.28	283 P	44 19.00 -0.2
FRI	85.83	49 ePc	44 20.20 -0.5	5.0mb ( 32 obs.) 4.7Msz ( 7 obs.)					1.0s	30.00nm	5.4mb
EKA	86.71	336 P	44 26.00 1.4	UNIMAK ISLAND REGION ( 10)				XAN	61.82	290 P	44 22.00 -0.9
	1.0s	7.30nm	4.9mb	SDN 2.82 46 ePc 34 48.90 0.3				GTA	62.80	300 Pc	44 28.50 -0.9
TNP	86.82	47 ePd	44 25.50 -0.3	ADK 7.84 264 eP 35 59.10 -0.4					1.6s	50.00nm	5.4mb
	1.3s	34.18nm	5.4mb	SVW 8.94 27 eP 36 15.90 1.2				Z	20s	1.70um	5.2Msz
		epP	44 40.20 50kmX	RSO 9.35 37 P 36 19.20 -1.4				E	15s	1.10um	
CDF	87.50	327 eP	44 28.50 -0.2	SLKM 10.34 41 P 36 31.20 -2.8				LZH	63.13	295 P	44 30.50 -1.2
	1.4s	26.15nm	5.3mb	TTA 10.41 21 eP 36 39.50 4.4X					2.0s	89.00nm	5.5mb
CLC	87.90	49 eP	44 31.00 0.2	ANM 11.18 357 eP 36 52.60 7.1X				Z	16s	1.17um	5.2MszX
BSF	88.13	326 eP	44 30.90 -0.9	PMR 11.42 38 eP 36 44.60 -4.1X				N	15s	0.71um	
HAU	88.22	327 eP	44 31.50 -0.6	KLU 12.62 43 eP 37 00.30 -4.6X				E	15s	0.81um	
	1.1s	8.30nm	5.0mb	TOA 12.86 40 ePd 37 05.20 -2.8						pP	44 41.50 36kmX
Z	20s	0.77um	5.1Msz	0.5s 25.50nm 5.6mb				KAF	64.51	355 iP	44 39.20 -0.9
DUG	88.28	44 eP	44 33.50 0.8	IMA 13.68 18 eP 37 20.70 1.9					0.5s	7.80nm	5.1mb
BW06	88.53	40 eP	44 33.80 -0.2	BALM 13.95 48 P 37 18.80 -3.6X						esP	44 39.70 0.1
	1.2s	11.42nm	5.1mb	FBA 14.13 29 eP 37 20.40 -4.3X				WMO	65.34	311 P	44 46.00 5.8mb
		esP	44 54.90	YKA 27.09 51 eP 39 47.20 1.1				Z	1.2s	100.00nm	5.0MszX
GSC	88.72	49 eP	44 36.00 1.1	0.7s 5.60nm 4.3mb				N	16s	0.80um	
LPL	89.78	325 eP	44 39.60 -0.3	LON 27.58 87 eP 39 52.00 1.2				E	16s	1.00um	
LPG	89.79	325 eP	44 39.50 -0.5	PNT 27.69 80 eP 39 56.00 4.3X						pP	44 59.00 45kmX
LOR	89.93	327 eP	44 39.40 -0.8	1.0s 12.00nm 4.5mb				NB2	65.81	3 P	44 46.80 -1.7
	1.3s	11.55nm	5.0mb	NEW 29.64 81 eP 40 09.20 -0.1					1.3s	17.40nm	5.0mb
Z	19s	0.45um	4.9Msz	1.5s 40.82nm 5.0mb				NUR	66.19	355 eP	44 52.00 1.1
SMF	90.39	327 eP	44 41.70 -0.7	SES 32.21 74 eP 40 31.00 -0.9				HFS	66.77	1 eP	44 53.50 -1.1
AVF	90.51	327 eP	44 42.40 -0.5	CMB 33.55 99 eP 40 44.00 0.3					0.4s	9.10nm	5.2mb
PV09	91.56	43 ePc	44 49.00 0.7	1.0s 11.00nm 4.7mb				CD2	67.05	291 eP	44 57.30 0.4
LSF	91.76	328 eP	44 48.20 -0.5	FRI 34.65 100 e(P) 40 52.10 -0.9				OBN	70.49	348 eP	45 16.00 -1.7
MFF	92.26	329 eP	44 50.80 -0.1	YAK 34.89 311 eP 40 51.80 -3.1X				Z	18s	0.80um	5.0Msz
	1.3s	32.15nm	5.6mb	TNP 35.39 96 eP 40 59.50 -0.2						e	45 27.00
RJF	92.47	327 eP	44 51.80 -0.2	0.8s 5.00nm 4.5mb						e	55 02.00
Z	19s	0.77um	5.2Msz	DUG 36.67 90 eP 41 10.00 -0.4				KMI	72.07	288 eP	45 27.80 -0.1
CAF	92.50	327 eP	44 51.80 -0.3	CLC 36.69 100 eP 41 11.00 0.5				LSA	74.81	299 P	45 45.00 0.8
CAF	92.50	327 eP	44 52.10 0.0	e 41 23.00				CLL	75.60	2 iP	45 47.80 0.1
	1.5s	20.35nm	5.3mb	BW06 37.05 84 eP 41 13.00 -0.7					1.3s	14.00nm	4.8mb
GOL	92.93	40 eP	44 55.00 0.5	SBB 37.34 101 eP 41 16.00 0.1				BRG	76.05	1 eP	45 50.20 -0.1
	1.8s	41.67nm	5.6mb	GSC 37.51 100 eP 41 18.00 0.6					1.0s	16.00nm	5.0mb
GLD	92.98	40 ePc	44 56.00 1.3	e 41 30.00						e	46 02.40
	1.2s	30.30nm	5.6mb	MSU 38.12 92 eP 41 22.50 -0.2				KSP	76.09	360 eP	45 50.00 -0.5
ANMO	95.52	44 ePd	45 07.80 1.4	TPC 38.79 100 eP 41 28.00 -0.1				MOX	76.23	3 ePc	45 51.50 0.2
	1.5s	13.89nm	5.2mb	e 41 39.00					1.5s	19.00nm	4.9mb
ALO	95.52	44 eP	45 07.10 0.6	PLM 38.85 102 eP 41 29.00 0.3						e	46 04.00
	1.6s	14.17nm	5.2mb	BAR 39.44 102 eP 41 29.00 -4.5X				GAR	76.67	319 iP	45 59.60 5.5X
KIC	124.70	303 PKP	50 41.20 -0.4	PV09 39.95 89 eP 41 37.00 -1.0						e	48 57.00
ZOBO	157.48	57 PKP	51 38.00 -0.3	GOL 41.43 85 eP 41 49.80 -0.3				PRU	76.94	1 eP	45 55.50 0.2
		LR	46 08.00	0.9s 4.36nm 4.2mb				Z	16s	0.50um	4.9MszX
LPB	157.67	58 ePKP	51 37.00 -1.3	GLD 41.49 85 eP 41 53.00 2.6				N	16s	0.40um	
SIV	162.00	43 PKP	51 43.80 1.4	1.5s 46.88nm 5.0mb				E	16s	0.30um	
				MAT 42.93 271 iPc 42 02.00 -0.1						e	46 07.40
				1.2s 39.06nm 5.0mb				GRF	77.17	3 ePc	45 57.00 0.4
				eS 48 17.00				Z	21s	0.20um	4.4Msz
				ANMO 43.92 91 eP 42 09.50 -0.8						e	46 09.00
				1.2s 10.94nm 4.5mb				SPC	77.69	357 eP	46 00.30 0.7
				ALO 43.92 91 eP 42 09.90 -0.5						e	46 11.70
				1.0s 3.00nm 4.0mb				SHL	77.73	296 eP	45 59.00 -1.2
				Z 18s 0.34um 4.3Msz				KHC	77.79	2 iP	46 01.00 1.0
				CN2 45.79 288 Pc 42 23.80 -1.2						e	46 13.00
				Z 15s 1.20um 5.0MszX				CDF	78.26	6 eP	46 03.40 0.7
				N 15s 0.60um				HAU	78.61	7 eP	46 05.20 0.7
				E 15s 0.40um				Z	19s	0.35um	4.7Msz
				epP 42 36.00 44kmX				ZST	78.74	359 eP	46 05.50 0.3
				eS 49 07.00						e	03 02.40
				eSS 52 24.00				BSF	78.81	6 eP	46 06.40 0.7
FRB	46.20	38 ePd	42 27.80 -0.1	GUN 78.97 302 P 46 07.70 0.5					0.5s	53.00nm	5.8mb
SNY	48.11	287 iPc	42 42.80 -0.4	SRO 79.11 358 e(P) 46 08.20 1.0				LOR	79.15	8 eP	46 08.40 0.9
	1.4s	40.00nm	5.3mb								
Z	20s	0.90um	4.7Msz								
S.D. = 0.9 on 104 of 112 obs.											
? MAY 06, 1991 09h 43m 42.61± 8.61s											
44.267 N ±51.4km 7.441 E ±18.9km											
DEPTH = 10.0km (geophysicist)											
NORTHERN ITALY (545)											
ML 2.4 (LDG).											
AUTN	0.27	182 Pg	43 48.28 -0.1								
TOUF	0.29	209 Pg	43 48.48 -0.3								
		Sg	43 53.35								
SAOF	0.29	164 Pg	43 48.59 -0.1								
AURF	0.39	192 Pg	43 50.58 0.0								
		Sg	43 56.73								
SBF	0.40	181 Pg	43 51.30 0.4								
		Sg	43 56.70								
FRF	0.91	219 Pg	44 10.00 10.0X								
		Sg	44 14.50								
LMR	1.15	216 Pg	44 04.30 0.2								
		Sg	44 20.30								



	0.8s	8.05nm	4.8mb	SCM	2.82	30 eP	29 35.41	-2.2	RSCP	43.77	284 P	09 38.00	0.8
Z	19s	0.25um	4.6msz	CUT	2.99	0 eP	29 38.80	-1.0	FVM	46.61	289 P	10 00.00	0.2
CHG	79.18	287 eP	46 07.50	KLU	2.99	44 iPd	29 37.22	-2.8	OBN	46.98	46 eP	10 02.80	0.3
SSF	79.32	9 eP	46 09.30	SVW	3.15	305 eP	29 43.20	0.9	i			10 08.00	
	0.5s	5.90nm	4.8mb	TOA	3.35	35 iPc	29 44.00	-1.2	FFC	49.83	314 eP	10 25.00	0.3
KKN	79.37	303 P	46 09.46	TZL	3.54	40 eP	29 45.93	-1.9	1.0s	11.00nm		4.8mb	
LBF	79.44	8 eP	46 09.70	GLB	3.79	55 iPc	29 47.46	-3.9	PDCR	51.17	191 (P)	10 36.00	0.8
	0.4s	2.70nm	4.6mb	CRQM	3.81	66 eP	29 47.50	-4.3	YKA	54.44	325 eP	10 57.40	-1.7
PKI	79.48	302 P	46 10.14	SDG	3.87	35 eP	29 50.62	-1.8	0.9s	4.10nm		4.5mb	
AVF	79.57	9 eP	46 10.50	TGL	3.96	67 eP	29 51.34	-2.4	SES	56.36	311 eP	11 14.00	0.7
	0.4s	2.65nm	4.6mb	RND	4.05	9 eP	29 53.03	-2.0	BW06	58.37	302 P	11 26.50	-1.3
DMN	79.61	303 P	46 10.82	BALM	4.27	64 iPc	29 53.60	-4.6	1.3s	10.38nm		4.7mb	
SMF	79.76	8 eP	46 11.60	FBA	5.61	11 eP	30 14.80	-2.3	ALO	59.64	292 eP	11 35.00	-1.7
KBA	79.84	2 iPc	46 12.50	53 obs. associated					1.0s	2.50nm		4.3mb	
	1.5s	46.50nm	5.3mb						PV09	59.94	297 P	11 39.00	0.2
	i	46 18.80		MAY 06, 1991 12h 01m 28.84± 0.54s					NEW	60.86	310 P	11 43.20	-1.4
		46 24.80		38.223 N ±12.7km	30.235 W ± 4.1km				1.5s	48.10nm		5.4mb	
LSF	79.93	10 eP	46 12.50	DEPTH = 10.0km (geophysicist)					SIV	61.20	214 P	11 49.40	2.2X
TCF	79.96	10 eP	46 12.70	4.8mb ( 20 obs.) 3.8msz ( 4 obs.)					ZOBO	64.82	221 P	12 14.10	2.3X
MAIO	83.00	326 eP	46 29.00	AZORES ISLANDS (405)					1.1s	13.05nm		5.0mb	
SKO	84.85	356 eP	46 38.60						Z	22s	0.18um	4.2msz	
	i	46 50.00							LR			33 24.00	
QUE	85.71	318 eP	46 42.50	CALA	1.26	73 iPd	01 26.20	-27.1X	LPB	65.03	220 P	12 09.00	-4.0X
OHR	85.74	356 eP	46 42.00	HOR	1.30	76 iPc	01 52.70	-1.1	TNP	65.72	300 P	12 16.30	-0.8
	1.2s	60.00nm	5.7mb	iS			02 07.50		1.0s	7.50nm		4.8mb	
POO	92.78	306 eP	47 16.00	PICO	1.45	78 iPc	01 55.10	-1.1	BALM	66.80	331 P	12 25.00	1.5
GBA	95.19	301 Pc	47 25.80	eS			02 11.60		ORV	67.83	303 P	12 30.50	0.3
	0.8s	3.60nm	4.9mb	ROSA	1.64	72 eP	01 57.50	-1.3	CMB	67.89	302 e(P)	12 29.50	-1.2
BUL	145.36	339 iPKPd	53 41.40	eS			02 16.00		PMR	68.96	333 P	12 37.70	0.9
	1.0s	31.00nm		ADH	2.39	79 iP	02 08.00	-1.7	0.9s	12.50nm		5.1mb	
BFT	150.35	334 iPKPe	53 54.50	iS			02 35.20		YAK	78.80	9 eP	13 29.80	-4.1X
	0.9s	15.13nm		PDA	3.64	96 iPc	02 26.20	-1.2	S.D. = 1.0 on 49 of 61 obs.				
S.D. = 1.0 on 86 of 98 obs.				eS			03 08.00						
& MAY 06, 1991 11h 28m 52.12s				TOL	20.38	77 eP	06 11.00	1.6	? MAY 06, 1991 12h 15m 18.98± 2.54s				
59.429 N	150.273 W			MAL	20.53	86 eP	06 16.00	5.1X	44.759 N ±16.8km	7.208 E ±23.2km			
DEPTH = 13.9km				IFR	20.86	95 iPc	06 18.00	3.5X	DEPTH = 10.0km (geophysicist)				
KENAI PENINSULA, ALASKA ( 14)				EPF	23.63	69 eP	06 44.50	2.7X	NORTHERN ITALY (545)				
<AEIC>. ML 2.7 (AEIC).				1.3s	34.30nm		4.8mb		ML 1.8 (GEN).				
BRLK	0.46	317 eP	29 00.93	LPO	24.32	65 eP	06 50.40	1.9	PZZ	0.26	197 P	15 24.61	0.0
CNPM	0.50	282 iPc	29 01.78	LSF	24.72	61 eP	06 52.60	0.3	S			15 27.89	
		eS	29 09.53	1.0s	30.20nm		4.9mb		RRL	0.34	298 P	15 26.15	0.0
HOM	0.74	289 iPc	29 06.03	EKA	24.99	38 P	07 01.00	6.2X	S			15 30.70	
		eS	29 16.64	1.4s	15.20nm		4.5mb		STV	0.52	171 P	15 29.63	0.1
XLV	0.74	273 ePc	29 04.89	MAF	25.43	61 eP	07 00.00	0.9	S			15 36.40	
		eS	29 15.32	1.3s	36.45nm		4.9mb		ENR	0.55	164 P	15 30.22	-0.1
SEW	0.79	31 iPd	29 06.32	BGF	25.66	60 eP	07 00.70	-0.6	S			15 37.44	
		eS	29 17.73	1.0s	23.80nm		4.8mb		S.D. = 0.1 on 4 of 4 obs.				
NNL	0.80	320 ePc	29 07.70	AVF	26.04	60 eP	07 04.30	-0.4	* MAY 06, 1991 12h 48m 51.93± 0.60s				
SLKM	1.08	1 ePd	29 10.96	1.3s	16.60nm		4.6mb		31.369 N ± 7.7km	141.669 E ±11.5km			
SYI	1.37	234 eP	29 14.10	SSF	26.18	59 eP	07 05.30	-0.7	DEPTH = 33.0km (normal)				
NKA	1.40	340 eP	29 17.99	SMF	26.36	60 eP	07 07.40	-0.3	4.8mb ( 8 obs.)				
MTU	1.44	66 eP	29 16.85	1.1s	26.35nm		4.8mb		SOUTH OF HONSHU, JAPAN (211)				
RDT	1.57	318 eP	29 18.04	LOR	26.44	59 eP	07 08.70	0.2	MAT	5.91	332 eP	50 19.00	-0.4
KNIM	1.58	53 ePd	29 16.41	0.9s	6.55nm		4.3mb		0.9s	37.82nm		5.0mb	
AUE	1.59	269 eP	29 18.77	Z	22s	0.20um	3.6msz		(S)			51 23.00	
RED	1.60	309 eP	29 18.00	LBF	26.49	60 eP	07 08.50	-0.4	BJI	22.38	300 eP	53 48.00	-0.6
		eS	29 39.19	HAU	28.20	58 eP	07 23.60	-0.9	1.0s	11.00nm		4.3mb	
AUI	1.62	268 eP	29 18.83	Z	19s	0.20um	3.7msz		CHG	40.42	262 eP	56 29.00	0.1
		eS	29 40.25	LPL	28.29	63 eP	07 26.70	1.2	GUN	48.18	281 P	57 31.32	-0.3
AUH	1.62	269 eP	29 19.45	LPG	28.30	63 eP	07 27.10	1.4	0.8s	26.00nm		5.3mb	
RSO	1.62	311 eP	29 18.31	BSF	28.48	58 eP	07 27.00	-0.1	PKI	48.68	281 P	57 35.18	-0.3
RS2	1.62	311 eP	29 19.12	CDF	28.87	57 eP	07 29.60	-1.0	KKN	48.72	281 P	57 35.80	0.2
RDW	1.66	311 eP	29 19.22	1.2s	26.80nm		4.9mb		0.9s	30.00nm		5.3mb	
RDN	1.66	312 eP	29 18.86	GRF	31.58	55 eP	07 55.70	1.1	DMN	48.92	281 P	57 37.60	0.3
DFR	1.68	315 eP	29 19.72	Z	19s	0.20um	3.8msz		GKN	49.19	281 P	57 39.74	0.5
		eS	29 41.47	e			08 02.00		WB2	51.50	189 iPd	57 56.50	0.0
NCT	1.75	312 eP	29 20.60	MOX	31.93	53 eP	07 58.50	0.9	0.7s	6.60nm		4.7mb	
CDD	1.81	255 eP	29 21.32	1.2s	14.00nm		4.8mb		eP			58 08.40	42kmX
PMS	1.86	11 eP	29 21.80	CLL	32.88	52 eP	08 06.00	0.2	WRA	51.50	189 P	57 56.00	-0.6
SPU	1.97	334 eP	29 23.72	KBA	32.89	60 iPc	08 06.90	0.7	0.6s	4.90nm		4.6mb	
PDB	2.02	282 eP	29 24.59	1.2s	28.10nm		5.1mb		ASPA	55.23	189 eP	58 24.20	0.1
CKL	2.05	331 eP	29 25.08	KHC	33.08	56 iP	08 08.80	1.1	0.6s	8.40nm		4.9mb	
SUA	2.06	354 eP	29 25.77	e			08 15.00		YKA	68.62	29 eP	59 53.00	-0.4
CRP	2.07	334 eP	29 25.90	BRG	33.43	53 eP	08 11.00	0.4	1.2s	0.90nm		3.7mb X	
MCNL	2.10	265 eP	29 26.00	PRU	33.75	55 eP	08 12.90	-0.5	NB2	79.49	338 P	00 56.60	0.2
BGL	2.12	331 eP	29 26.10	e			08 19.30		0.9s	3.40nm		4.3mb	
KNK	2.18	24 eP	29 25.96	FRB	34.24	331 eP	08 22.00	4.6X	KSP	85.03	329 eP	01 26.60	1.3
NCG	2.19	336 eP	29 27.37	NB2	34.35	35 P	08 18.20	-0.4	ZOBO	149.00	68 PKP	08 42.00	6.8X
PLRM	2.24	14 eP	29 26.81	1.1s	13.20nm		4.8mb		LPB	149.17	68 PKP	08 45.00	9.7X
PMR	2.24	14 eP	29 27.40	KSP	34.91	54 eP	08 24.00	0.6	S.D. = 0.6 on 14 of 16 obs.				
GHO	2.44	15 ePc	29 30.26	KRA	37.23	55 eP	08 45.80	0.8	MAY 06, 1991 13h 30m 49.54± 0.67s				
VZW	2.47	47 eP	29 29.33	OHR	38.94	69 eP	08 49.50	-8.0X	44.388 N ± 6.6km	7.395 E ± 5.9km			
SML	2.57	21 eP	29 32.00	NUR	40.57	38 eP	09 09.30	-1.4	DEPTH = 10.0km (geophysicist)				
VLZ	2.60	47 eP	29 31.60	KAF	41.59	36 eP	09 19.40	0.4					
SKT	2.63	347 eP	29 33.42	MLR	41.73	61 eP	09 22.00	1.4					
				KEY	43.45	25 eP	09 30.00	-4.1X					



NORTHERN ITALY (545)																			
ML 1.4 (GEN)																			
STV	0.15	199	P	30 53.39 0.2	SNY	42.89	282	iPc	21 04.00	SPC	78.81	351	eP	25 10.60	GRE	78.92	357	iPc	25 06.00 6.4X
			S	30 55.51		1.2s	100.00nm		5.4mb										25 01.00 1.0
ENR	0.16	174	P	30 53.08 -0.3	Z	24s	0.90um		4.6MszX	KHC	79.38	355	eP	25 14.50	LDF	79.95	4	iPc	25 03.70 1.2
			S	30 55.45	SBB	42.98	91	eP	20 58.00 1.6										25 16.00
PZZ	0.24	299	P	30 54.72 0.0					21 09.00	LDF	79.95	4	iPc	25 05.20 -0.3	ZST	80.08	353	e(P)	25 05.60 -0.6
			S	30 58.41	BW06	43.12	76	eP	20 56.00 -0.8										25 20.00
ROB	0.35	105	P	30 57.18 0.3		0.7s	6.34nm		4.5mb	CDF	80.28	359	eP	25 07.60 0.2					
			S	31 02.41	GSC	43.21	89	eP	20 58.00 -0.3										
FIN	0.61	107	P	31 01.59 -0.3	MSU	44.06	82	eP	21 05.20 -0.1	LPF	80.47	5	iPc	25 08.40 0.2	HAU	80.69	0	eP	25 09.80 0.3
RRL	0.69	321	P	31 03.33 0.0	PLM	44.46	91	eP	21 09.00 0.5										
			S.D. = 0.3	on 6 of 6 obs.	DL2	45.83	280	eP	21 19.40 0.3										
						0.8s	50.00nm		5.5mb										
?	MAY 06, 1991	13h	40m	05.24 ± 4.77s	GOL	47.49	76	eP	21 32.00 -0.5	MAIO	80.82	319	eP	25 11.00 0.5	BSF	80.87	360	eP	25 10.60 0.1
				45.774 N ± 33.9km		0.7s	4.85nm		4.6mb										
				26.732 E ± 11.8km	BJI	48.44	285	eP	21 40.00 0.5										
				DEPTH = 152.2 ± 40.5 km		1.0s	11.00nm		4.8mb	LOR	81.41	2	eP	25 13.50 0.2					
ROMANIA (358)					ANMO	49.87	82	eP	21 51.00 0.1										
VR1	0.10	357	iPc	40 25.50 0.3		1.0s	20.63nm		5.1mb										
MLR	0.62	243	iPc	40 27.50 -0.4	ALQ	49.87	82	eP	21 51.00 0.1	KBA	81.44	355	iPd	25 13.90 0.3					
ISR	0.65	192	iPc	40 28.00 0.0		1.1s	6.65nm		4.6mb										
CFR	1.16	120	ePc	40 31.50 -0.4	Z	18s	0.26um		4.3Msz										
PTT	1.19	348	eP	40 45.50 13.4X	TIA	50.30	281	Pc	21 53.90 0.0	SSF	81.61	2	eP	25 14.60 0.3					
MTUR	1.30	246	ePc	40 33.50 0.2	FRB	51.04	34	eP	21 57.00 -2.1										
TLB	1.50	142	iPd	40 35.50 0.3	SSE	51.22	273	eP	22 03.30 2.4	LBF	81.69	2	eP	25 14.80 0.0	MLR	81.75	346	eP	25 17.00 1.8
COZ	1.74	256	eP	40 38.00 -0.1	BTO	51.74	290	P	22 05.20 0.2										
			S.D. = 0.4	on 7 of 8 obs.	TIY	52.17	285	eP	22 09.50 1.3										
					Z	22s	0.90um		4.8Msz	AVF	81.88	2	eP	25 15.80 0.2	SMF	82.03	2	eP	25 16.60 0.1
					XAN	56.74	284	P	22 40.50 -1.1										
					FVM	57.47	69	eP	22 44.00 -2.6										
					SCH	57.75	41	eP	22 47.00 -1.4	TCF	82.35	3	eP	25 18.30 0.1	LSF	82.36	3	eP	25 18.50 0.3
					KEV	57.94	352	eP	23 05.00 15.5X										
					LZH	58.36	289	Pc	22 53.00 -0.1										
						1.5s	57.00nm		5.4mb	MAF	82.42	3	eP	25 19.60 1.0	QUE	82.72	311	eP	25 21.00 0.4
					Z	20s	0.73um		4.8Msz										
					GTA	58.41	295	Pc	22 52.80 -0.6	WB2	84.54	228	iPd	25 28.00 -1.6					
						0.8s	10.00nm		5.0mb										
					Z	18s	0.60um		4.8Msz										
					ELC	58.64	68	eP	22 52.50 -2.3										
					SOD	60.29	351	eP	23 06.00 0.2	WRA	84.54	228	P	25 34.00 4.4X					
					RSNY	61.54	53	eP	23 12.40 -2.2										
						0.8s	12.02nm		5.1mb										
					WMO	61.84	306	P	23 16.60 -0.1										
					CD2	62.04	285	eP	23 18.10 -0.1										
						1.0s	50.00nm		5.6mb	WRA	84.54	228	P	25 42.00 12.4X					
					CBM	62.89	48	eP	23 21.70 -1.8										
					GYA	63.48	280	P	23 28.00 0.2										
									45kmX										
					LVNJ	64.12	56	eP	23 30.00 -1.7	SKO	85.81	349	iP	25 36.40 0.6					
					CVL	64.20	61	eP	23 31.50 -0.8	OHR	86.74	349	eP	25 37.70 -2.7					
					JSC	65.34	66	eP	23 38.00 -1.6	HYB	87.08	294	eP	25 42.20 -0.2					
					KAF	65.45	350	iP	23 38.30 -1.7										
						0.5s	5.10nm		4.9mb	ASPA	87.97	227	iPd	25 46.10 -0.2					
									esP										
					KMI	66.85	282	Pc	23 51.00 1.3										
					NUR	67.20	350	iP	23 50.30 -0.8	POO	88.79	299	iPc	25 50.70 0.1					
						0.6s	13.00nm		5.2mb	GBA	90.77	293	Pd	25 59.40 -0.4					
					NB2	67.56	357	P	23 52.30 -1.2										
						0.6s	1.60nm		4.3mb	STK	92.02	217	iPc	26 18.40 13.4X					
					HFS	68.38	356	eP	23 57.00 -1.5										
						0.7s	6.00nm		4.8mb	BUL	144.03	323	iPKPc	32 30.60 -2.0					
									e										
									ePcP										
					LSA	70.33	293	Pc	24 12.80 1.3										
					SHL	73.03	290	iP	24 26.50 -0.8										
					LOE	73.25	277	eP	24 27.50 -0.9										
					GAR	73.89	313	iP	24 32.50 0.4										
					CHG	73.90	280	eP	24 32.00 -0.2										
					GUN	74.69	296	P	24 37.84 0.7										
						0.7s	176.00nm		6.2mb X	LOMF	0.49	19	Pc	41 28.92 2.5					
					KKN	75.11	296	P	24 39.96 0.5										
						0.7s	62.00nm		5.7mb	BBS	0.85	47	Pg	41 33.49 0.6					
					PKI	75.21	296	P	24 40.38 0.2										
						1.0s	86.00nm		5.7mb	EMS	0.85	164	iPd	41 33.20 0.1					
					GKN	75.31	296	P	24 43.56 3.1X	BSF	0.95	8	Pg	41 36.50 1.8					
					DMN	75.35	296	P	24 41.50 0.7										
						0.9s	83.00nm		5.8mb	DIX	0.99	145	iPd	41 35.50 0.0					
					CLL	77.23	356	iP	24 50.60 0.0	MOF	1.03	21	Pn	41 35.97 0.0					
						0.9s	11.00nm		4.9mb	HAU	1.13	352	Pg	41 39.80 2.1					
									e										
					BRG	77.62	355	iP	24 52.70 -0.1										
						0.7s	14.00nm		5.1mb	MMK	1.27	131	iPd	41 40.30 0.1					
									e										
					PRU	78.47	355	eP	24 57.20 -0.3	ZLA	1.36	64	eP	41 42.30 0.8					
									e										
									25 06.20	FEL	1.38	44	Pn	41 39.33 -2.6					
										ECH	1.38	16	Pn	41 40.71 -1.1					
										LPL	1.38	176	Pg	41 42.70 0.7					



06d 16h

VITF	1.39	343	Pn	41	42.52	0.7	SOH	2.01	42	ePn	28	15.80	0.8	Z	16s	1.64um	4.9mszx							
LPG	1.40	175	Pg	41	42.60	0.3	KNT	2.08	28	ePn	28	16.30	0.3			e	41	03.50						
			Sg	41	59.80				eSn	28	44.30					e	41	06.20						
LSD	1.49	165	P	41	44.59	1.1	OUR	2.09	61	ePn	28	16.90	0.7			e	41	11.50						
			S	42	02.63		VAY	2.12	20	ePn	28	16.60	0.1	SMF	38.45	307	eP	41	05.80					
SLE	1.56	55	eP	41	45.80	1.4	SRS	2.35	40	ePn	28	19.60	-0.3		0.7s	5.50nm		4.5mb						
CDP	1.59	17	Pn	41	43.59	-1.3			eSn	28	48.50		LOR	38.53	308	eP	41	06.00						
WLS	1.61	18	Pn	41	43.72	-1.3	PHP	2.50	340	ePn	28	24.30	2.3		0.7s	3.85nm		-0.7						
LLS	1.65	90	ePc	41	44.40	-1.4	SKO	2.63	358	ePn	28	22.50	-1.4	Z	22s	0.45um		4.3mb						
LBF	1.80	274	Pn	41	47.90	0.1			eSn	29	01.20							4.2msz						
			Pg	41	53.00		LACI	2.70	329	ePn	28	31.90	7.0X	SSF	38.74	308	eP	41	08.00					
			Sg	42	15.90		VLI	2.83	157	ePn	28	27.60	0.9	SOD	38.92	346	iP	41	10.30					
BNI	1.84	178	P	41	51.60	3.1X	SDA	3.11	330	ePn	28	39.50	8.9X	NB2	39.24	331	P	41	11.70					
			eSn	42	13.80		RDO	3.52	58	ePn	28	35.60	-0.9		0.9s	3.80nm		-0.7						
LOR	1.91	282	Pn	41	50.30	0.9	MLR	6.94	26	eP	29	31.00	6.0X	KEV	40.89	348	eP	41	39.00					
			Pg	41	55.00				e	39	00.00		GTA	41.33	64	Pc	41	32.00						
			Sg	42	19.20				e	52	22.00			0.8s	10.00nm		1.9							
SMF	1.91	264	Pn	41	49.40	0.0	S.D. = 1.1 on 20 of 24 obs.											pP	41	36.00	13kmx			
			Pg	41	54.60													sP	41	39.20				
			Sg	42	20.50		MAY 06, 1991 18h 33m 45.67 ± 0.26s											LZH	44.91	68	Pc	42	00.00	0.7
RRL	1.98	176	P	41	54.12	3.5X	30.987 N ± 4.9km 49.736 E ± 3.4km												1.2s	44.00nm		5.2mb		
			S	42	19.13		DEPTH = 33.0km (normal)											CHG	45.92	93	eP	42	05.50	18kmx
SSF	2.12	276	Pg	41	58.90	6.4X	4.6mb (17 obs.) 4.2msz (1 obs.)											KMI	46.78	83	eP	42	06.00	-0.4
			Sg	42	26.70		WESTERN IRAN											BTO	48.99	61	P	42	14.00	-0.3
AVF	2.23	269	Pn	41	54.40	0.4	ML 4.2 (BMU).											XAN	49.40	70	iPc	42	31.80	0.7
			Pg	42	00.80		KER	4.02	327	eP	35	06.00	19.4X	GYA	49.67	80	P	42	34.00	-0.3				
			Sg	42	30.40		DHR	4.68	176	iPc	35	00.00	4.2X			pP	42	35.60	-1.0					
PZZ	2.41	171	P	42	01.09	4.3X	BBU	4.80	172	iPn	34	58.20	0.8	TIY	51.36	64	Pc	42	44.60	30kmx				
BGF	2.60	264	Pn	41	58.80	-0.5	TEH	4.93	16	eP	34	59.00	-0.6	Z	16s	0.40um		42	49.30	0.1				
			Sg	42	42.40		BEE	5.00	172	iPn	35	01.50	1.1	WHN	54.78	73	eP	43	14.50	-0.1				
STV	2.70	169	P	42	04.17	3.4X	RYD	6.83	205	iPc	35	27.00	0.9	TIA	55.36	65	Pc	43	18.00	0.0				
PCP	2.72	149	P	42	06.86	5.8X	TAB	7.60	339	eP	36	13.00	35.9X	LKO	55.51	260	P	43	18.82	-1.3				
ENR	2.73	167	P	42	05.27	4.0X	MAIO	9.71	54	eP	36	07.00	0.8	LIC	56.78	256	P	43	30.00	0.7				
RUP	2.83	6	ePg	42	01.61	-1.0	KMSA	11.58	205	ePc	36	29.00	-2.7X	NJ2	57.96	69	Pd	43	37.00	-0.2				
MAF	2.86	258	Pn	42	02.00	-1.0	BHL	12.25	287	P	36	45.00	4.3X	YAK	58.52	33	eP	43	37.60	-3.2X				
			Sg	42	50.60				S	38	33.00		CN2	59.55	54	eP	43	46.00	-2.1					
ABH	3.06	12	ePg	42	03.59	-2.2	PRNI	12.71	271	eP	36	47.00	0.2	FRB	73.87	336	eP	45	19.00	0.4				
TCF	3.08	260	Pn	42	05.10	-1.0	HOL	12.83	266	eP	36	46.00	-2.4	YKA	86.00	353	eP	46	23.80	0.2				
			Sg	42	57.00		MBH	12.89	268	eP	36	47.00	-2.2	WRA	95.61	110	P	47	15.00	5.8X				
S.D. = 1.3 on 28 of 35 obs.							BADA	13.04	263	ePc	36	51.00	-0.1		1.7s	1.30nm		4.1mb						
MAY 06, 1991 16h 42m 37.67 ± 1.16s							ABHA	14.18	208	eP	37	14.00	7.5X	S.D. = 1.0 on 51 of 62 obs.										
41.185 N ± 11.6km 23.153 E ± 5.5km							QUE	14.85	89	eP	37	15.80	0.6	MAY 06, 1991 18h 46m 32.14 ± 0.50s										
DEPTH = 10.0km (geophysicist)									0.9s	38.24nm			73.252 N ± 7.7km 6.552 E ± 8.5km											
GREECE-BULGARIA BORDER REGION (363)							BBTK	16.40	307	eP	41	53.30	4.8mb	DEPTH = 10.0km (geophysicist)										
MD 2.0 (THE).							GAR	18.64	59	iP	38	02.50	-0.3	4.6mb (15 obs.)										
KNT	0.19	263	iPg	42	41.70	-0.3	CMP	23.98	313	ePc	39	02.00	4.1X	GREENLAND SEA (640)										
			eSg	42	44.80		SKO	25.15	304	eP	39	11.40	2.2	TRO	5.36	127	eP	47	53.78	-0.2				
SRS	0.34	101	ePg	42	44.70	0.0	OHR	25.38	301	eP	39	13.50	2.0	LOF	5.64	152	eP	47	55.99	-2.0				
			eSg	42	48.80		OBH	25.85	343	eP	39	16.00	0.3			eS	48	53.06						
SOH	0.39	157	ePg	42	45.70	-0.1	HYB	29.45	111	eP	39	48.50	-0.3	KTK1	6.86	120	eP	48	15.22	0.0				
			eSg	42	51.80		GBA	30.79	118	Pc	39	59.70	-0.9	KEV	7.36	108	eP	48	22.00	-0.1				
THE	0.57	195	ePg	42	49.20	0.0			1.1s	6.00nm			SOD	8.94	121	eP	48	43.00	-1.0					
			eSb	42	57.50		DMN	30.95	87	P	40	01.32	-0.9	NSS	8.97	165	eP	48	40.99	-3.6X				
GRG	0.61	248	ePg	42	50.30	0.3	KKN	31.05	87	P	40	02.16	-1.0	MOL	10.74	178	iP	49	02.22	-6.6X				
			eSg	42	57.90		PKI	31.22	87	P	40	03.72	-1.0			eS	50	53.64						
FNA	1.40	254	ePb	43	03.40	0.1			1.0s	49.00nm			KAF	13.35	137	eP	49	42.00	-2.0					
VOY	8.28	309	ePg	44	48.60	7.9X	GUN	31.54	86	P	40	06.76	-0.8		0.6s	7.90nm		4.9mb						
			eRg	44	53.40		KBA	32.17	310	iPc	40	13.50	0.8	HFS	13.46	164	eP	49	39.70	-5.7X				
S.D. = 0.2 on 6 of 7 obs.									1.2s	15.60nm				0.6s	6.20nm		4.8mb							
MAY 06, 1991 18h 27m 40.47 ± 0.56s							WMO	32.48	56	P	40	16.20	0.9			e	49	42.20						
39.339 N ± 5.3km 21.587 E ± 5.0km							KHC	32.68	314	iPd	40	18.20	1.3	NUR	14.52	142	iP	49	58.00	-1.3				
DEPTH = 8.6 ± 3.6 km							KOD	33.00	123	eP	40	20.90	0.6		0.7s	17.40nm		4.8mb						
GREECE (364)							CLL	33.82	318	iP	40	27.20	0.5	EKA	18.43	198	Pd	50	08.00					
MD 3.4 (ATH), 3.3 (THE).									1.2s	10.00nm				1.0s	5.30nm		50	44.60	-4.3X					
AGG	0.66	118	iPg	27	54.40	0.7	GRF	34.31	314	ePc	40	31.90	0.9	OBN	21.96	130	eP	51	31.00	3.7X				
			eSg	28	04.30				1.9s	54.00nm			Z	23s	1.50um		51	39.00						
KZN	0.98	8	ePg	27	59.00	-0.2	KAF	34.65	341	iP	40	33.10	-0.6	N	22s	1.30um		51	54.00					
IGT	0.99	282	iPg	27	58.50	-0.9			0.3s	2.20nm						i	51	54.00						
			eSg	28	11.70		LPG	36.29	306	eP	40	48.00	-0.2	CLL	22.20	169	eP	51	29.00	-0.7				
LIT	1.03	42	ePg	28	01.20	1.1			0.8s	8.05nm					1.5s	31.00nm		4.5mb						
			eSg	28	17.80		LPL	36.31	306	iPc	40	48.00	-0.3			i	51	51.60						
LSK	1.11	317	ePn	28	01.50	0.0	HFS	37.71	331	eP	40	59.20	-0.4	ENN	22.57	181	eP	51	35.00	1.7				
VLS	1.40	214	ePb	28	05.20	-1.0			0.4s	3.00nm					1.0s	19.00nm		4.5mb						
KEK	1.43	286	ePg	28	08.40	1.7								BRG	22.69	168	eP	51	33.40	-1.1				
FNA	1.45	354	ePbc	28	07.10	0.1									1.5s	15.00nm		4.3mb						
			eSb	28	28.10																			
THE	1.67	39	ePb	28	10.70	0.7																		
PAIG	1.72	69	ePb	28	01.40	-9.4X																		
GRG	1.73	21	ePbc	28	11.10	0.1																		
			eSb	28	34.40																			
OHR	1.87	341	iPn	28	15.10	2.1																		
			iSn	28	41.10																			



	eS	55	48.00		GIB	0.85	293	P	21	41.00	-0.2	PAE	26.88	88 iP	55	47.00	-0.2
MOX	22.80	172 eP	51	36.80	1.2			eSg	21	51.80			0.9s	230.00nm			5.7mb
	1.6s	32.00nm			4.6mb	FAI	1.14	250 P	21	46.30	0.3	PPT	26.90	88 iP	55	47.50	0.0
KSP	22.88	164 eP	51	37.50	1.0			eSn	22	01.80			0.9s	300.00nm			5.8mb
ABH	23.46	178 eP	51	42.82	0.7	TDS	2.24	27 P	22	00.70	-1.6	PPN	27.04	88 iP	55	48.40	-0.3
PRU	23.61	167 eP	51	44.50	1.0			eSn	22	29.50			0.9s	120.00nm			5.4mb
Z	17s	0.90um			4.3MsZx	ORI	2.64	24 P	22	08.50	0.5	TVO	27.16	88 iP	55	49.50	-0.3
N	18s	0.80um				S.D. = 0.9	on	8 af	8 abs.				0.9s	125.00nm			5.4mb
E	17s	0.30um										BRS	27.53	251 iPc	55	54.00	1.1
	e		51	46.00									i		56	29.00	
	e		52	19.20									e		57	15.00	
GRF	23.73	172 ePc	51	46.40	1.7								e(S)		59	29.00	
	1.9s	54.00nm			4.8mb	DEPTH = 10.0km	(geophysicist)					COO	28.83	244 iPd	56	05.00	0.7
	e		51	51.40		SPAIN	mbLg 3.2 (MDD).						i		01	56.00	
	e		52	09.00								PMO	29.08	83 iP	56	06.10	-0.3
KRA	24.00	158 eP	51	49.20	1.9			eP	15	23.93	-0.7		0.9s	200.00nm			5.6mb
	e		51	52.70		EHUE	0.34	323 eP	15	28.80		VAH	29.26	84 iP	56	07.60	-0.4
KHC	24.40	169 iP	51	53.00	1.7			iPgC	15	29.20	-0.1		0.9s	150.00nm			5.5mb
Z	16s	0.70um			4.2MsZx			eSg	15	35.90		TPT	29.34	84 iP	56	08.50	-0.2
N	16s	0.50um				AFC	1.01	254 ePg	15	36.80	0.1		0.9s	400.00nm			5.9mb
E	18s	0.20um						eSg	15	51.30		RUV	29.50	84 iP	56	09.80	-0.3
	e		52	05.50		ECOG	1.02	255 ePg	15	37.20	0.3		0.9s	450.00nm			6.0mb
SPC	24.89	158 eP	51	55.50	-0.7			eSg	15	49.70		RMQ	31.02	253 iPd	56	22.80	-0.4
ZST	25.58	164 eP	52	04.00	1.6	EVIA	1.10	353 ePg	15	38.70	0.4		1.1s	244.00nm			5.6mb
SRO	26.06	162 eP	52	09.50	2.6X			eSg	15	54.20			e		57	49.00	
LOR	26.10	184 eP	52	06.10	-1.2	EGUA	1.21	235 iPgC	15	39.90	-0.2	CNB	32.12	236 iPc	56	33.20	-0.7
	1.1s	10.25nm			4.4mb			eSg	15	56.50			e		57	33.00	
SSF	26.31	185 eP	52	08.10	-1.1	EBAN	1.31	299 iPnd	15	42.10	0.3		e		58	10.00	
LBF	26.38	184 eP	52	08.60	-1.3			eSn	15	59.50		CTA	33.58	265 iPd	56	45.20	0.4
TCF	27.12	187 eP	52	13.40	-3.3X	MAL	1.85	245 iPn	15	54.00	4.4X		1.0s	250.00nm			5.7mb
	1.4s	13.05nm			4.4mb			iSg	16	22.00			iS		01	26.00	
LSF	27.19	188 eP	52	18.00	0.7	S.D. = 0.5	on	7 af	8 obs.			CMS	34.11	244 iPd	56	49.90	0.7
OHR	32.94	160 eP	53	08.00	-0.5							QLP	35.07	253 iPd	56	56.70	-0.5
YKA	38.92	321 eP	53	59.40	0.4	MAY 06, 1991	22h	50m	45.37±0.13s			PMG	35.55	283 iPd	57	01.00	-0.3
	1.0s	1.40nm			3.6mb	20.871 S ± 4.1km	177.868 W ± 3.1km						1.0s	382.00nm			5.9mb
YAK	39.73	38 eP	54	07.20	1.5	DEPTH = 496.5km	( 11 depth phases)					TOO	35.78	234 iPd	57	03.90	0.8
MAIO	45.15	115 eP	54	55.00	4.7X	5.5mb ( 55 obs.)						STK	37.74	245 eP	57	20.00	0.8
SES	49.50	312 eP	55	25.00	0.8	FIJI ISLANDS REGION	(181)						0.5s	17.00nm			4.8mb
BW06	56.38	307 eP	56	13.00	-2.7	CENTROID, MOMENT TENSOR	(HRV)					MDG	38.53	289 eP	57	26.20	0.4
	1.2s	9.13nm			4.7mb	Data Used: GDSN						QIS	39.69	263 iPd	57	34.80	-0.5
GOL	58.31	303 P	56	29.00	-0.3	L.P.B.: 14S, 25C							0.4s	25.00nm			5.1mb
KKN	60.39	92 P	56	45.60	1.8	Centraid Location:							e		02	34.00	
MSU	61.04	308 P	56	48.00	-0.1	Origin Time	22:50:55.5	0.5				RKT	39.73	101 iP	57	36.40	0.9
ANMO	63.09	302 P	57	01.00	-0.8	Lat 20.33S 0.07 Lon 177.91W	0.04						1.3s	240.00nm			5.6mb
	1.2s	21.48nm			5.2mb	Dep 507.6	2.6 Half-duration	2.3				ASPA	44.56	257 iPd	58	13.70	-0.3
ALO	63.09	302 eP	57	01.00	-0.8	Moment Tensor:	Scale 10**17 Nm						1.0s	281.20nm			5.7mb
	1.2s	3.91nm			4.5mb	Mrr=-1.71 0.07	Mtt=-0.43 0.13					Z	19s	0.50um			4.5MsZ
S.D. = 1.3	on	33	of	41	abs.	Mff= 2.13 0.13	Mrt=-0.76 0.12						iPp		59	46.30	492km
						Mrf=-1.60 0.12	Mtf= 0.05 0.10						iScP		02	46.90	
						Principal Axes:							iS		04	10.90	
						T Val= 2.74	Pig=21	Azm= 96					iScS		07	17.60	
						N -0.22	15	192				WB2	44.66	262 iPc	58	13.50	-1.3
						P -2.52	64	316					0.3s	112.40nm			5.9mb
						Best Double Couple:Mo=2.6*10**17							i		59	08.90	
						NP1:Strike=161 Dip=28 Slip=-124							iS		00	14.80	
						NP2: 19 67 -73							eS		04	10.40	
													eScS		07	12.60	
															58	13.00	-1.9
DAV	3.44	181 eP	33	17.40	1.7	KRO	4.39	323 iPc	52	07.70	0.1	WRA	44.67	262 P	58	13.00	-1.9
OCP	6.04	313 eP	34	28.00	35.5X	SVA	4.42	308 iPc	52	08.50	0.7		0.5s	166.30nm			5.8mb
BAG	7.64	320 eP	34	18.00	3.0X			eS	53	15.70		FORR	49.22	247 iPd	58	48.50	-0.9
WB2	31.49	164 iPd	38	42.30	-1.9			iP	52	09.20	0.9		0.3s	36.00nm			5.3mb
	1.0s	1.80nm			3.9mb	OVA	4.47	314 iP	52	08.10	-0.3	GUA	50.07	310 ePd	58	55.60	-0.2
ASPA	34.95	167 eP	39	15.40	1.1	VUN	4.48	309 iPc	52	08.10			0.7s	893.15nm			6.3mb
	1.3s	8.60nm			4.5mb			eS	53	15.10			50.13	310 iPd	58	55.90	-0.4
SHL	35.28	300 eP	39	16.00	-1.3	NDE	5.03	327 ePc	52	13.70	0.3	PJG	55.19	246 eP	59	31.00	-1.6
GUN	41.11	301 P	40	06.20	0.0	MBU	5.05	320 eP	52	14.10	0.6	COOL	57.51	184 iPd	59	50.90	3.0
	0.8s	27.00nm			5.0mb			eS	53	26.50		SBA	57.80	258 iPd	59	49.70	-1.0
PKI	41.41	300 P	40	08.50	-0.1	SGE	5.14	309 iPd	52	16.10	1.7	MBL	0.7s	214.00nm			5.6mb
KKN	41.58	300 P	40	10.28	0.4			eS	53	31.30			58.01	245 eP	59	51.00	-1.0
DMN	41.68	300 P	40	11.06	0.3	AFI	9.04	41 iPc	52	50.00	-3.9X	KLB	0.3s	9.00nm			4.6mb
STK	44.86	161 eP	40	34.80	-1.4			eS	54	24.00			58.31	244 eP	59	53.00	-1.1
	1.4s	1.40nm			3.7mb	PVC	13.41	281 iPc	53	41.00	1.1	NWAO	59.02	246 eP	59	57.80	-1.1
YAK	51.46	2 eP	41	28.40	1.4	DZM	14.65	262 iPc	53	53.20	0.5	BAL	59.28	245 eP	59	59.00	-1.6
QUE	57.77	299 eP	42	13.80	-0.1			iS	56	28.70		MUN	61.42	255 iPd	00	24.40	9.6X
S.D. = 1.3	on	11	of	13	abs.			ScP	01	19.00		NANU	0.3s	33.00nm			5.3mb
													62.09	290 eP	00	18.90	-0.3
													0.9s	369.75nm			5.9mb
													67.54	284 ePc	00	56.20	2.7
													69.26	325 iPd	01	03.10	-0.4
													69.79	324 iPd	01	06.20	-0.5
													69.97	285 ePd	01	08.30	0.0
													0.8s	137.50nm			5.5mb
													69.98	323 iPd	01	07.50	-0.4
													70.44	320 P	01	10.60	-0.1
													70.58	324 iPd	01	10.60	-0.8
													0.9s	115.97nm			5.4mb
													eS		09	26.00	
MNO	0.37	316 Pd	21	32.50	0.1	RAR	16.90	94 P	54	16.00	1.1	DAV	62.09	290 eP	00	18.90	-0.3
	iSg		21	36.40		PUZ	17.47	190 eP	54	22.80	2.4		0.9s	369.75nm			5.9mb
MEU	0.57	188 P	21	36.20	-0.1	WLZ	17.84	197 eP	54	26.60	2.6	TSM	67.54	284 ePc	00	56.20	2.7
	eSg		21	44.90		NOZ	18.04	190 eP	54	27.50	1.6	KAKJ	69.26	325 iPd	01	03.10	-0.4
ATN	0.60	35 Pd	21	37.10	0.2	MNG	20.48	195 eP	54	47.50	-1.9	CHJJ	69.79	324 iPd	01	06.20	-0.5
	eSg		21	46.70			0.3s	15.00nm			5.1mb	KKM	69.97	285 ePd	01	08.30	0.0
MSI	0.68	38 P	21	39.00	0.8		22.24	198 eP	55	06.00	0.4		0.8s	137.50nm			5.5mb
							22.67	197 P	55	08.60	-0.8	IIDJ	69.98	323 iPd	01	07.50	-0.4



06d 23h

OFUJ	70.64	328	P	01	11.20	-0.4	0.9s	10.08nm	4.6mb	HRI	147.77	300	ePKP	09	31.00	-0.8			
NIIJ	70.65	325	P	01	11.20	-0.5		epP	04 30 50	486kmX	ECB	147.81	10	ePKP	09	34.00	3.0X		
YAMJ	70.80	326	P	01	12.70	0.1	ANMO	87.54	51 P	02 41 70	0.5		0.9s	95.00nm					
MTMJ	70.84	323	P	01	12.60	-0.4		0.8s	9.33nm	4.6mb	WIT	147.92	355	ePKP	09	33.50	2.3X		
BAG	70.85	297	eP	01	12.50	-1.0		pP	04 31 00	487km	VRJ	147.94	327	ePKPd	09	37.50	6.0X		
TSRJ	71.13	322	P	01	14.50	0.0	NEW	87.60	36 P	02 40 60	-0.3	BRD	148.01	326	ePKP	09	39.00	7.4X	
TKSJ	71.21	319	P	01	15.20	0.1		0.8s	25.83nm	5.1mb	ECP	148.06	10	ePKP	09	34.60	3.2X		
KAGJ	71.38	315	P	01	16.40	0.3	TIY	87.62	312 Pc	02 42 50	1.2		0.9s	129.00nm					
KUMJ	72.28	316	eP	01	21.00	-0.3		1.4s	150.00nm	5.6mb	KSP	148.08	343	ePKP	09	31.30	-0.3		
YONJ	72.38	320	iP	01	21.60	-0.3	NST	88.26	287 eP	02 46 50	1.9		1.0s	130.00nm					
ADK	72.45	1	P	01	20.00	-1.8	XAN	88.45	307 Pd	02 46 00	0.8			id	09	35.60			
SHNJ	73.13	318	P	01	25.40	-0.7	FBA	88.58	12 P	02 43 70	-1.4			e	11	38.50			
QZH	76.72	303	P	01	46.00	-0.3		0.7s	72.67nm	5.6mb				ic	12	27.30			
	1.0s	100.00nm			5.2mb			pP	04 34 90	496km	TLB	148.09	324	ePKPd	09	37.50	5.8X		
PRS	78.00	44	ePd	01	54.30	1.3	LRM	88.92	39 eP	02 48 10	0.7	KFNJ	148.13	297	PKP	09	36.10	3.9X	
SSE	78.02	310	Pd	01	53.50	0.3	BW06	89.15	43 P	02 48 30	-0.2	MKRJ	148.23	296	PKP	09	36.00	3.5X	
	1.0s	41.00nm			4.8mb			0.7s	18.52nm	5.0mb	SPC	148.26	337	ePKP	09	32.50	0.3		
GCC	78.02	43	ePd	01	54.00	0.9		pP	04 40 90	503km				i	09	36.30			
PCC	78.07	42	ePd	01	54.20	0.9	KMI	89.63	297 Pd	02 53 00	2.0	DSI	148.44	297	ePKP	09	33.00	0.3	
SAO	78.21	43	ePd	01	54.90	0.7	BDT	89.85	288 eP	02 51 30	-0.6	CLL	148.45	347	iPKP	09	32.20	0.1	
PRJ	78.34	44	eP	01	55.30	0.3		1.0s	91.10nm	5.6mb			1.4s	28.00nm					
BKS	78.39	42	iPc	01	56.70	1.6	CHG	90.49	290 ePd	02 56 50	1.7	PSN	148.57	322	iPKPd	09	37.00	4.5X	
	0.8s	50.00nm			5.0mb			1.0s	63.00nm	5.5mb	MLR	148.60	327	ePKPc	09	38.50	5.8X		
MHC	78.44	43	ePd	01	56.70	1.2	BT0	90.62	314 eP	02 55 60	0.5	BRG	148.65	346	iPKP	09	31.80	-0.6	
		e		02	15.00		CD2	91.09	303 eP	02 58 20	0.7			i	09	36.70			
HKC	78.97	299	eP	01	59.50	1.1	SES	92.10	36 iPc	03 02 60	1.0			i	09	42.00			
FHC	79.17	39	ePd	02	00.40	1.3		0.7s	32.00nm	5.5mb				epPKP	11	36.30			
PLM	79.30	48	eP	02	01.00	0.8	YAK	92.48	338 iPc	03 02 00	-1.0	WTS	148.72	354	ePKP	09	32.50	0.0	
SBB	79.39	47	eP	02	01.00	0.5			e	04 56.00		MDB	148.91	329	iPKPc	09	38.00	5.0X	
PEC	79.40	48	P	02	01.00	0.5			e	06 48.00		EYL	149.13	316	iPKP	09	37.70	4.0X	
		pP		03	51.00	504km			e	12 44.00		CSS	149.21	304	ePKP	09	37.70	3.9X	
ISA	79.51	45	eP	02	03.00	1.9	LZH	93.09	307 Pd	03 07 50	0.8	CMP	149.22	328	ePKPc	09	38.00	4.5X	
CMB	79.65	43	ePd	02	02.40	0.7		4.0s	380.00nm	5.8mb X	MTUR	149.23	327	ePKP	09	40.00	6.4X		
		e		03	52.30				sP	05 33.00		RMN	149.28	295	ePKP	09	34.00	-0.2	
ORV	79.87	41	ePd	02	03.60	0.8	INK	94.60	15 ePd	03 12.00	-0.6	HRT	149.31	317	ePKP	09	37.80	4.0X	
GZH	80.01	299	iPd	02	05.20	1.4			pP	05 04.00	497km	TNR	149.32	329	ePKPd	09	38.00	4.3X	
CLC	80.18	46	eP	02	05.00	0.5	YKA	96.80	25 eP	03 20.80	-1.8	PRU	149.32	344	PKP	09	33.60	0.1	
NJ2	80.21	310	Pd	02	05.50	0.8		1.0s	3.40nm	4.6mb				i	09	38.60			
	1.2s	100.00nm			5.2mb		GTA	97.30	309 Pd	03 26.00	0.4			e	09	45.20			
KGM	80.27	276	ePc	02	07.20	1.8		1.4s	30.00nm	5.4mb	MOX	149.36	348	iPKP	09	33.80	0.3		
TPC	80.28	48	eP	02	06.00	0.9	ZOBO	101.82	113 Pd diff	03 51.20	4.2X		1.2s	21.00nm					
GSC	80.42	47	eP	02	07.00	1.1	PKI	105.09	294 PKP	08 11.00	-1.8			epPKP	11	35.00			
GLA	80.57	49	eP	02	08.00	1.4	KKN	105.25	294 PKP	08 11.00	-2.0	PSZ	149.45	336	ePKP	09	33.80	-0.1	
MDJ	80.89	325	iPd	02	09.00	1.1	DMN	105.35	294 PKP	08 12.20	-1.0	GBZT	149.47	317	iPKPd	09	39.00	5.0X	
	1.0s	300.00nm			5.8mb		FRB	117.05	28 ePKP	08 33.00	-1.0	COZ	149.52	328	iPKPd	09	41.90	7.7X	
		sP		04	34.30		GAR	119.52	304 iPKP	08 39.10	-0.6	YLV	149.64	316	ePKP	09	38.40	4.0X	
QIZ	81.12	294	eP	02	09.90	0.2	QUE	121.45	293 ePKP	08 43.40	-0.3	BNS	149.71	354	iPKPd	09	39.30	5.3X	
TNP	81.71	44	P	02	13.00	0.4			ePP	11 33.40			1.2s	206.00nm					
	0.9s	30.27nm			4.8mb		PDCR	127.60	126 ePKP	08 54.60	-1.1	CTT	149.92	318	ePKP	09	39.20	4.5X	
		pP		04	02.30	496km			e	11 26.70		DMK	149.94	320	ePKP	09	40.00	5.3X	
DL2	82.08	317	Pd	02	14.00	-0.1	MAIO	128.04	300 ePKP	08 56.00	-0.1	PPCY	150.00	304	ePKP	09	34.50	-0.5	
	3.0s	800.00nm			5.7mb				e	10 56.00		ENN	150.02	355	ePKP	09	34.00	-0.5	
SNY	82.57	320	Pc	02	16.60	0.1	SOB1	128.22	121 ePKP	08 56.60	-0.4		1.0s	16.00nm					
	0.8s	100.00nm			5.4mb		KEY	128.86	349 ePKP	08 53.00	-3.5X	ENN	150.02	355	iPKP	09	40.00	5.5X	
CN2	82.67	322	iPd	02	17.00	0.0	SOD	130.99	348 iPKP	08 59.10	-1.5		1.0s	102.00nm					
	4.0s	900.00nm			5.7mb X		KAF	135.54	344 iPKP	09 04.60	-4.8X			e	09	47.00			
		pP		03	54.00	429kmX			5.50nm	esP	09 09.60		UCC	150.08	357	iPKP-	09	41.00	6.4X
WHN	82.76	306	Pd	02	19.20	1.5		0.5s	5.50nm				SRO	150.11	338	ePKP	09	32.90	-1.8
	1.5s	200.00nm			5.4mb		OBN	137.14	331 ePKP	09 11.30	-1.3			i	09	40.40			
IPM	83.34	277	ePd	02	22.10	1.1	NUR	137.33	344 ePKP	09 04.80	-8.0X			i	09	48.70			
	1.0s	124.70nm			5.4mb		TAB	138.30	304 ePKP	09 14.00	-1.5			e	10	54.30			
RSO	83.57	12	P	02	20.10	-1.3	NB2	139.36	353 PKP	09 07.00	-9.6X			i	11	40.10			
TJA	83.61	312	Pd	02	22.40	0.5		0.8s	8.30nm			BUD	150.13	337	e(PKP)	09	40.00	5.2X	
SVW	83.64	11	P	02	20.60	-0.9	NAI	139.56	241 ePKP	09 11.50	-7.1X	MEM	150.17	355	PKPc	09	35.00	0.3	
	0.8s	31.03nm			5.0mb		HFS	139.92	351 ePKP	09 08.00	-9.5X			id	09	40.30			
SLKM	84.14	13	P	02	22.40	-1.6		0.4s	10.20nm			ZST	150.19	340	ePKP	09	34.60	-0.2	
		pP		04	13.10	499km			e	09 11.00				i	09	41.50			
SNG	84.67	280	eP	02	29.40	1.9			e	09 12.70				e	11	39.70			
	1.0s	122.00nm			5.5mb		EKA	145.36	5 PKPd	09 26.70	-0.3	GZR	150.22	330	ePKPd	09	33.00	-2.1X	
PMR	85.35	13	P	02	28.80	-1.0		0.8s	27.90nm			JMB	150.25	322	iPKPd	09	41.00	5.9X	
	0.7s	26.16nm			5.0mb		DMU	146.31	10 iPKPd	09 30.20	1.6	TNS	150.29	352	ePKPd	09	40.40	5.4X	
		pP		04	19.40	497km			110.00nm			BCK	150.31	310	iPKP	09	40.00	4.5X	
ANM	85.71	5	P	02	31.00	-0.5	IAS	146.62	328 ePKP	09 31.00	1.7	GRF	150.35	348	ePKP	09	35.40	0.3	
BJI	86.24	315	eP	02	35.00	0.5	BRN	147.36	347 ePKPd	09 33.50	3.2X		Z	22s	0.10um	4.6Msz			
	3.0s	580.00nm			5.8mb		PTT	147.38	329 ePKPc	09 35.50	4.9X			id	09	41.40			
BALM	86.50	16	P	02	34.80	-0.7			e	09 35.50		KHC	150.36	345	iPKP	09	35.50	0.4	
		pP		04	24.00	488km		CSTJ	147.44	295 PKP	09 34.50	3.2X			i	09	41.20		
PNT	86.89	34	ePd	02	38.00	0.5	ETA	147.58	9 ePKP	09 33.60	2.9X			e	09	49.50			
	0.9s	57.00nm			5.3mb		KRA	147.64	338 ePKP	09 30.20	-0.7	SNF	150.37	357	PKPc	09	35.30	0.3	
GYA	86.94	300	iPd	02	39.40	1.0		1.0s	74.00nm					ed	09	40.90			
	1.2s	100.00nm			5.4mb				e	09 33.80		VKA	150.38	341	ePKP	09	35.00	-0.1	
PV09	87.33	47	P	02	40.40	0.2			e	09 39.40			2.2s	148.00nm					
		pP		04	32.90	505km	CFR	147.64	325 ePKPd	09 35.50	4.5X			ec	09	49.20			
LOE	87.50	290	eP	02															



KCT	150.46	317	iPKP	09 41.30	5.8X	SDA	154.33	329	ePKP	09 48.60	7.8X	ROB	0.93	128	P	07 06.17	
PVL	150.46	324	ePKP	09 35.00	-0.4	OHR	154.35	326	ePKP	09 40.20	-0.8				S	07 06.59	0.2
BZS	150.58	332	ePKP	09 34.50	-1.0	LACI	154.52	328	ePKP	09 48.80	7.7X	SBF	1.09	157	Pg	07 02.60	0.9
DST	150.63	315	ePKP	09 38.00	2.1X	TCF	154.65	360	ePKP	09 41.10	-0.1				Sg	07 16.80	
KHL	150.67	312	ePKP	09 42.00	6.0X		0.9s	9.00nm				PCP	1.25	104	P	07 04.62	0.1
BNT	150.68	317	iPKP	09 41.80	5.9X	LSF	154.68	1	ePKP	09 40.80	-0.5	FRF	1.31	186	Pg	07 05.50	0.0
EDC	150.72	317	iPKP	09 42.00	6.1X	AGG	154.93	321	ePKP	09 40.80	-1.1				Sg	07 22.40	
DOU	150.77	357	PKP	09 37.00	1.4	LSK	155.14	325	ePKP	09 54.50	12.3X	LRG	1.45	194	Pg	07 07.80	0.3
			id	09 41.90		BNI	155.59	352	PKP	09 42.80	0.1				Sg	07 26.60	
			e	11 45.00		RJF	155.63	1	ePKP	09 42.40	-0.2	LMR	1.55	189	Pg	07 09.10	0.2
KGT	151.02	318	ePKP	09 41.80	5.5X	SFI	155.63	343	PKP	09 42.60	0.0				Sg	07 28.90	
UZD	151.05	336	e(PKP)	09 42.00	5.8X	MME	155.68	345	PKP	09 43.50	0.5	S.D. = 0.4 on 14 of 14 obs.					
WLF	151.09	355	PKPc	09 37.00	0.9	FIR	155.92	344	ePKP	09 42.00	-1.0	MAY 07, 1991 00h 15m 00.09±0.84s					
			id	09 42.95		TOL	160.33	14	ePKP	09 50.00	1.8	28.113 N ± 7.9km 55.697 E ± 4.3km					
			i	09 51.96		LIC	163.87	154	PKP	09 52.24	-0.1	DEPTH = 68.1 ± 9.8 km					
DIM	151.11	322	ePKP	09 36.00	-0.4		1.3s	69.50nm				4.4mb ( 12 obs.)					
ELL	151.11	309	iPKP	09 42.00	5.2X	KIC	164.11	154	PKP	09 52.48	-0.1	SOUTHERN IRAN (353)					
KDZ	151.43	322	iPKP	09 45.00	8.1X		1.1s	32.50nm				BBU	5.04	249	iPn	16 15.70	0.9
ALN	151.53	320	ePKP	09 42.80	5.8X	TIC	164.25	153	PKP	09 52.62	-0.1				eSn	17 24.00	
ALN	151.53	320	ePKP	09 54.80	17.8X		1.1s	32.50nm				BEE	5.06	247	iPn	16 16.40	1.2
PGB	151.55	324	ePKPd	09 44.00	6.9X	IFR	165.85	26	iPKPc	09 56.00	2.2X	DHR	5.27	251	ePc	16 48.00	29.9X
PLD	151.55	323	iPKPd	09 44.00	7.0X	LKO	166.50	145	PKP	09 52.64	-2.0				S	17 58.00	
BEO	151.72	332	iPKP	09 43.80	6.6X	S.D. = 1.0 on 217 of 293 obs.						MAIO	8.77	21	eP	17 08.00	1.3
RZN	151.81	322	iPKPd	09 44.00	6.3X	? MAY 06, 1991 22h 50m 53.93±2.75s						RYD	8.82	250	eP	17 06.00	-1.3
FLN	152.09	4	ePKP	09 37.10	-0.5	39.089 N ± 9.5km 26.765 E ± 31.0km									S	18 40.00	
			1.3s	43.30nm		DEPTH = 10.0km (geophysicist)						KER	9.63	312	eP	17 20.00	1.5
YER	152.10	311	ePKP	09 45.00	6.9X	TURKEY (366)						QUE	10.05	75	eP	17 22.40	-1.9
HLW	152.19	295	(PKP)	09 45.50	7.2X	MD 2.7 (ISK).									1.0s	20.00nm	5.1mb
			e	09 58.00		IZM	0.79	150	ePg	51 09.30	-0.1	KMSA	12.79	235	eP	17 57.00	-3.8X
CDF	152.21	353	ePKP	09 37.30	-0.6				eSg	51 20.30		ABHA	15.42	233	eP	18 35.00	-0.2
			1.4s	16.55nm		KGT	1.42	17	ePn	51 20.10	0.3	GAR	16.30	44	eP	18 46.10	0.0
LDF	152.28	3	ePKP	09 37.30	-0.6	DST	1.53	70	ePn	51 22.00	0.6				e	24 00.00	
KBA	152.31	343	iPKPc	09 37.40	-0.8	KCT	1.69	46	iPn	51 22.80	-0.8				e	24 45.00	
			0.8s	27.30nm		S.D. = 1.1 on 4 of 4 obs.						HR1	17.91	292	eP	19 04.00	-2.1
			i	09 44.70		& MAY 06, 1991 22h 56m 03.31s						DS1	17.96	286	eP	19 07.00	0.4
			i	09 59.70		58.108 N 143.399 W						BHL	18.12	294	P	19 07.00	-1.6
			i	13 29.00		DEPTH = 10.0km (geophysicist)									S	25 24.00	
			i	13 33.00		GULF OF ALASKA ( 15)						RMN	18.53	282	eP	19 13.00	-0.7
MMB	152.43	323	iPKPd	09 55.00	16.6X	<AEIC>. ML 2.6 (AEIC).						BBTK	22.26	308	eP	19 53.00	0.4
PTJ	152.58	339	iPKPc	09 38.50	0.0	PNL	2.60	51	eP	56 40.85	-5.3	HYB	23.57	112	eP	20 07.00	1.6
KKB	152.60	325	iPKPc	09 46.00	7.4X	CROM	2.66	3	eP	56 41.76	-5.4	DMN	25.98	84	P	20 28.34	-0.1
FEL	152.64	351	ePKP	09 37.62	-1.0	TGL	2.67	6	eP	56 41.93	-5.3	KKN	26.11	84	P	20 29.50	-0.1
ZAG	152.64	339	e(PKP)	09 44.00	5.5X				eS	57 11.30		PKI	26.25	84	P	20 30.80	-0.3
HAU	152.72	354	ePKP	09 38.30	-0.3	BALM	2.99	10	eP	56 46.27	-5.4	GUN	26.62	83	P	20 34.42	0.0
			1.5s	31.35nm					eS	57 18.82		MLR	29.24	314	eP	21 02.00	4.3X
SRS	152.82	323	ePKP	09 45.00	6.1X	CTGM	3.05	19	eP	56 47.41	-5.2	OHR	31.30	304	e(P)	21 15.30	-0.6
			e	09 59.60					eS	57 21.14		ZST	35.88	315	eP	21 55.40	0.2
BSF	152.84	353	ePKP	09 38.40	-0.5	KNIM	3.17	317	eP	56 48.32	-5.8	KBA	37.97	312	iPc	22 12.50	-0.5
			1.5s	31.35nm		GLB	3.35	357	eP	56 51.04	-5.8				1.1s	6.00nm	4.4mb
FVI	152.91	344	PKP	09 39.00	0.2				eS	57 28.18					i	22 19.50	
LJU	152.91	341	ePKP	09 39.00	0.1	GLI	3.36	327	iP	56 51.02	-5.8	KHC	38.39	315	iP	22 16.00	-0.3
			i	09 40.00		VZW	3.37	333	eP	56 51.35	-5.7				e	22 19.00	
			e	09 46.40		KLU	3.63	341	iP	56 54.95	-5.8	GRF	40.02	315	eP	22 30.50	0.7
			e	11 49.00					eS	57 38.32		Z	18s	0.10um		3.7MsZ	
VOY	153.12	342	ePKP	09 37.30	-2.0	KNK	4.19	324	eP	57 03.39	-5.2	LPG	42.16	308	eP	22 48.70	0.9
			i	09 46.40		SLKM	4.24	307	eP	57 04.65	-4.8				0.8s	4.15nm	4.3mb
VBY	153.16	339	ePKPd	09 38.50	-0.7	CNPM	4.32	293	eP	57 05.76	-4.7	LPL	42.18	308	eP	22 49.50	1.7
KNT	153.18	324	ePKP	09 46.00	6.6X	RDT	5.23	302	eP	57 18.03	-5.4				0.7s	4.10nm	4.3mb
			e	10 01.60		SPU	5.36	309	eP	57 19.46	-5.9	CDF	42.26	312	eP	22 48.60	0.3
CEY	153.22	341	ePKP	09 37.50	-1.8	15 obs. associated						HFS	42.75	330	eP	22 51.00	-1.0
			e	09 47.00		MAY 07, 1991 00h 06m 41.24±0.35s									0.7s	3.60nm	4.3mb
VAY	153.26	324	ePKP	09 38.00	-1.5	44.867 N ± 2.9km 6.849 E ± 5.2km						Z	17s	0.06um		3.6MsZ	
VAY	153.26	324	iPKP	09 46.30	6.8X	DEPTH = 10.0km (geophysicist)									e	22 56.80	
			1.3s	56.00nm		FRANCE (538)						HAU	42.80	311	eP	22 53.30	0.7
SKO	153.40	327	ePKP	09 38.60	-1.1	ML 2.4 (LDG).						Z	21s	0.08um		3.6MsZ	
TRI	153.45	342	ePKPd	09 47.10	7.5X	RRL	0.07	319	P	06 43.78	-0.1	MEM	43.50	315	Pc	23 15.50	17.3X
PAIG	153.55	321	ePKP	09 46.90	7.0X				S	06 45.62		NB2	44.26	331	P	23 02.80	-1.5
			e	10 02.80		BNI	0.22	327	P	06 46.00	-0.1				0.9s	2.80nm	4.1mb
GRG	153.60	324	ePKP	09 45.60	5.6X				eSg	06 49.30		DOU	44.29	314	Pc	23 08.70	4.1X
			e	10 02.90		PZZ	0.40	153	P	06 49.21	-0.3				0.7s	7.80nm	4.6mb
LOR	153.63	357	ePKP	09 39.70	-0.1				S	06 55.24		SMF	44.31	309	eP	23 04.80	0.0
			1.1s	29.30nm		LSD	0.63	20	P	06 54.44	0.4	LOR	44.36	310	eP	23 06.40	1.1
CTI	153.70	345	PKP	09 40.00	-0.1				S	07 03.67					0.9s	5.40nm	4.4mb
SSF	153.85	358	ePKP	09 40.00	-0.1	LPG	0.63	354	Pg	06 54.10	-0.1	Z	20s	0.08um		3.6MsZ	
			1.4s	41.80nm					Sg	07 02.90		SSF	44.58	310	eP	23 07.00	0.0
LBF	153.91	357	ePKP	09 40.00	-0.2	LPL	0.66	353	Pg	06 54.30	-0.2				0.9s	11.15nm	4.7mb
			1.4s	23.95nm					Sg	07 03.00		TCF	45.40	308	eP	23 13.70	0.2
PHP	154.11	327	iPKPc	09 38.90	-1.7	STV	0.71	151	P	06 54.54	-0.7	BTH	47.01	304	eP	23 36.00	9.7X
LIT	154.13	322	ePKP	09 47.50	6.8X	ENR	0.76	147	P	07 03.98					i	23 37.20	
			e	10 04.80					S	06 55.74	-0.4						
SMF	154.25	357	ePKP	09 40.30	-0.4												
MFF	154.27	4	ePKP	09 40.40	-0.3												
FNA	154.28	325	ePKP	09 39.90	-1.0												



07d 00h

FLN 47.41 312 eP 23 28.50 -0.8  
 Z 21s 0.10um 3.8msz  
 LPF 47.73 311 eP 23 31.60 -0.2  
 YKA 89.38 356 eP 27 50.40 0.3  
 0.7s 1.00nm 4.2mb  
 SBA 121.69 167 PKP 33 40.10 -6.4X  
 ZOBO 127.07 270 PKP 34 03.00 3.6X  
 LPB 127.15 270 ePKP 34 09.00 9.6X  
 e 34 30.00  
 S.D. = 1.0 on 36 of 45 obs.

MAY 07, 1991 00h 36m 20.23 ± 0.59s  
 37.562 N ± 5.9km 2.329 W ± 5.5km  
 DEPTH = 10.0km (geophysicist)

SPAIN (377)

mbLg 4.0 (MDD). Felt (IV) at  
 Chirivel.

ENIJ 0.60 171 iPgc 36 31.90 -0.4  
 eSg 36 40.00  
 EALH 0.78 67 ePg 36 34.70 -0.7  
 eSg 36 46.30  
 AFC 1.02 253 iPgc 36 39.60 0.0  
 eSg 36 52.30  
 ECOG 1.03 254 ePg 36 39.50 -0.2  
 eSg 36 52.00  
 EVIA 1.08 353 iPgc 36 41.20 0.5  
 EGUA 1.23 234 iPgc 36 42.80 -0.2  
 eSg 36 59.00  
 EBAN 1.30 298 iPnc 36 44.80 0.5  
 eSn 37 01.30  
 ACU 1.79 57 ePn 36 53.30 1.9  
 eSn 37 17.70  
 MAL 1.86 244 iPnc 36 54.20 1.8  
 iSg 37 21.00  
 ECHE 2.29 27 ePn 36 58.80 0.1  
 eSn 37 29.20  
 EHOR 2.33 277 iPnd 36 58.90 -0.3  
 eSn 37 27.00  
 EPRU 2.39 256 iP 37 02.27 2.2  
 eS 37 30.60  
 LIJA 2.55 256 eP 37 00.30 -2.1  
 TOL 2.68 330 ePn 37 04.00 -0.2  
 iPg 37 12.50  
 iSn 37 31.00  
 iSg 37 46.50  
 ALJ 2.76 252 eP 37 16.50 11.0X  
 PLAT 3.10 243 eP 37 18.50 8.3X  
 ETOR 3.26 4 iPnc 37 13.00 0.5  
 eSn 37 49.80  
 GUD 3.39 336 ePn 37 14.90 0.6  
 eSn 37 54.60  
 EVAL 3.51 272 ePn 37 14.80 -1.1  
 eSn 37 54.70  
 EPLA 3.85 312 ePn 37 19.90 -0.9  
 eSn 38 05.10  
 EROO 3.89 32 ePn 37 22.40 1.1  
 EBR 3.92 33 eP 37 38.00 16.2X  
 IFR 4.64 210 iPc 38 28.00 55.9X  
 ECR 5.04 358 iPnc 37 38.30 0.6  
 BTH 5.79 16 iPnc 37 49.80 1.7  
 i 37 59.80  
 e 38 26.00  
 iSn 38 55.00  
 iSg 39 37.00  
 EPF 5.83 20 Pn 37 48.90 0.1  
 Sn 38 48.90  
 Sg 39 20.30  
 LPO 7.59 19 Pn 38 12.00 -1.5  
 LFF 7.72 16 Pn 38 14.40 -1.0  
 CAF 8.07 23 Pn 38 17.20 -3.0  
 S.D. = 1.3 on 25 of 29 obs.

\* MAY 07, 1991 01h 08m 46.85 ± 1.00s  
 44.442 N ± 7.7km 16.680 E ± 13.4km  
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

HVAR 1.27 188 i(Pn) 09 10.40 -0.1  
 iSn 09 32.00  
 ZAG 1.46 341 iPn 09 12.20 -1.0  
 iSn 09 34.00  
 VBY 1.47 317 ePnd 09 13.80 0.5  
 eSn 09 36.40  
 PTJ 1.54 341 ePn 09 11.70 -2.8X

CEY 2.06 310 e(Sn) 09 34.40  
 eP 09 27.00 5.1X  
 e(Sg) 09 57.00  
 LJU 2.21 317 eP 09 17.00 -7.0X  
 e 09 19.20  
 e 09 30.50  
 e(Sg) 09 59.20  
 TRI 2.42 303 eP 10 06.00 38.9X  
 VOY 2.53 310 e(Pg) 09 29.00 0.3  
 eSg 20 09.50  
 UZD 2.53 31 e(P) 09 29.00 0.4  
 S.D. = 0.9 on 5 of 9 obs.

\* MAY 07, 1991 01h 29m 47.15 ± 0.86s  
 32.741 S ± 7.1km 68.802 W ± 15.1km  
 DEPTH = 33.0km (normol)

MENDOZA PROVINCE, ARGENTINA (139)

MDZ 0.15 196 iP 29 52.40 -1.0  
 ZON 1.20 5 eP 30 06.80 -0.9  
 CFA 1.23 23 iPc 30 08.00 -0.1  
 eS 30 24.90  
 RTLL 1.43 11 ePc 30 10.80 -0.3  
 RFA 2.04 172 ePc 30 20.70 0.7  
 S 30 54.20  
 RTRS 2.62 347 eP 30 29.40 1.3  
 S 31 03.00  
 TCA 3.84 70 ePd 30 45.70 0.3  
 S 31 46.30  
 S.D. = 1.0 on 7 of 7 obs.

% MAY 07, 1991 01h 42m 53.73 ± 0.73s  
 39.863 N ± 5.9km 22.935 E ± 6.1km  
 DEPTH = 10.0km (geophysicist)

GREECE (364)

MD 1.6 (THE).

LIT 0.42 305 ePg 43 02.50 0.3  
 eSg 43 09.40  
 PAIG 0.58 83 ePg 43 05.70 0.3  
 eSg 43 15.10  
 THE 0.77 2 ePg 43 08.20 -0.5  
 eSg 43 19.80  
 AGG 0.96 209 ePg 43 11.70 -0.3  
 SOH 1.01 18 ePg 43 13.30 0.4  
 eSg 43 32.50  
 GRG 1.17 340 ePb 43 32.50 17.0X  
 KNT 1.30 359 ePb 43 17.00 -0.8  
 eSb 43 35.40  
 SRS 1.35 22 ePb 43 18.60 0.0  
 FNA 1.51 308 eP 43 21.40 0.6  
 S.D. = 0.6 on 8 of 9 obs.

\* MAY 07, 1991 02h 13m 55.58 ± 0.86s  
 40.566 N ± 8.2km 29.294 E ± 7.4km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.6 (ISK).

YLV 0.06 89 iPg 13 57.20 -0.7  
 eSg 14 00.20  
 IZI 0.27 149 iPg 14 01.30 0.1  
 eSg 14 05.30  
 HRT 0.38 48 ePg 14 03.80 0.4  
 DST 1.09 208 ePn 14 16.20 0.2  
 KGT 1.52 266 ePn 14 22.70 -0.1  
 S.D. = 0.6 on 5 of 5 obs.

\* MAY 07, 1991 02h 17m 50.36 ± 1.82s  
 16.281 N ± 9.8km 147.997 E ± 16.5km  
 DEPTH = 76.1 ± 15.8 km  
 4.5mb ( 5 obs.)

MARIANA ISLANDS REGION (215)

PJG 4.04 229 eP 18 59.20 0.1  
 GUA 4.04 228 eP 18 58.80 -0.3  
 eS 19 40.00  
 KAKJ 21.03 342 eP 22 39.00 1.2  
 CHJJ 21.26 340 P 22 39.70 -0.4  
 MAT 21.97 339 eP 22 47.00 -0.3  
 1.0s 19.00nm 4.5mb  
 MTMJ 22.16 338 P 22 48.40 -0.8  
 NIJJ 22.34 341 eP 22 52.20 1.3  
 BJI 36.39 317 eP 24 57.00 -0.1  
 1.5s 19.00nm 4.8mb  
 WB2 38.41 201 iPc 25 14.90 0.6  
 1.1s 5.60nm 4.4mb

GYA 39.65 292 P 25 26.00 1.3  
 LZH 43.82 305 eP 25 57.00 -1.7  
 1.8s 19.00nm 4.6mb  
 LSA 53.54 295 P 27 15.80 1.6  
 GUN 58.18 293 P 27 47.20 -0.3  
 PKI 58.62 293 P 27 50.30 -0.2  
 KKN 58.72 293 P 27 50.80 -0.3  
 DMN 58.88 293 P 27 51.20 -1.0  
 INK 70.74 23 eP 29 07.50 -0.4  
 YKA 79.09 28 eP 29 55.40 -0.2  
 0.8s 2.30nm 4.2mb

LIC 145.18 308 PKP 37 30.60 0.9X  
 ZOBO 145.35 95 PKP 37 33.20 2.6X  
 LPB 145.40 96 PKP 37 29.00 -1.5X  
 SIV 152.08 94 ePKP 37 43.00 2.6X  
 S.D. = 1.0 on 18 of 22 obs.

MAY 07, 1991 03h 02m 43.91 ± 0.90s  
 51.580 N ± 5.8km 16.251 E ± 9.7km  
 DEPTH = 10.0km (geophysicist)

3.8mb ( 1 obs.)

POLAND (548)

ML 3.6 (VKA), 3.6 (GRF).

KSP 0.74 178 iPd 02 58.40 0.0  
 0.3s 151.00nm  
 iS 03 07.30  
 i 03 12.70  
 BRG 1.61 245 iPn 03 12.20 -0.3  
 iPg 03 13.40  
 iSg 03 33.40  
 PRU 1.93 215 Pnd 03 16.90 -0.1  
 Pg 03 18.60  
 e 03 22.80  
 Sn 03 34.90  
 eSg 03 40.20  
 CLL 2.05 264 iPnd 03 18.90 0.1  
 0.5s 16.00nm  
 iPg 03 22.00  
 iSg 03 48.00

KRA 2.79 122 eS 03 40.20 10.8X  
 eS 04 17.60  
 KHC 2.99 216 Pn 03 32.00 -0.2  
 Pg 03 38.70  
 Sg 04 21.00

MOX 3.07 254 ePn 03 33.70 0.4  
 iPg 03 41.00  
 iSg 04 20.00  
 VKA 3.32 179 iPg 03 46.20 9.3X  
 iSg 04 29.30

ZST 3.43 170 eP 03 32.70 -5.8X  
 e 03 51.10  
 i 04 37.20  
 SPC 3.50 132 e(Pn) 03 50.30 10.7X  
 i 04 38.80  
 GRF 3.72 241 ePn 03 42.80 0.2  
 e(Pg) 03 53.00  
 e(Sn) 04 28.60  
 eSg 04 39.60

SRO 4.00 160 eP 04 38.80 52.3X  
 KBA 4.89 204 iPnc 03 59.20 -0.2  
 i 04 15.20  
 i 05 06.00  
 iSn 05 17.50  
 i 05 21.20

MEM 6.53 265 iP 04 22.00 -0.2  
 HFS 8.69 352 eP 04 51.50 -1.1  
 0.4s 3.20nm 5.0mb X  
 e 05 00.60  
 eS 06 27.40

YKA 59.83 336 eP 12 52.70 1.4  
 0.5s 0.40nm 3.8mb  
 S.D. = 0.7 on 11 of 16 obs.

\* MAY 07, 1991 03h 08m 55.87 ± 1.42s  
 18.233 S ± 7.4km 168.705 E ± 15.1km  
 DEPTH = 44.3 ± 11.8 km  
 4.2mb ( 6 obs.) 4.4msz ( 5 obs.)  
 VANUATU ISLANDS (186)

PVC 0.62 323 iPc 09 09.50 1.2  
 iS 09 19.00  
 BKM 0.71 322 iPc 09 10.50 0.8  
 iS 09 21.00  
 DZM 4.37 209 iPd 10 00.50 -1.1  
 iS 10 47.10  
 SVO 12.49 315 eP 11 52.00 -1.7



BRS	17.27	235	eS	13	26.00	
COO	19.60	228	iPd	12	56.00	0.5
			eP	13	22.00	-1.5
			e	13	31.00	
MNG	23.06	167	eP	13	59.30	1.0
THZ	23.73	172	eP	14	06.30	1.5
LTZ	24.66	174	eP	14	14.10	0.3
STK	27.98	236	eP	14	42.50	-2.0
	0.6s		1.90nm		3.9mb	
WB2	32.48	261	eP	15	18.70	-5.9X
	0.4s		2.00nm		4.3mb	
ASPA	32.90	254	iPd	15	23.20	-5.0X
	0.9s		16.20nm		4.9mb	
Z	20s		0.20um		3.8msz	
SBA	59.66	180	P	18	57.00	-0.5
CHG	77.78	295	eP	20	27.50	-23.0X
ORV	86.76	47	e(P)	21	34.80	-1.9
CMB	86.87	48	ePd	21	33.30	-4.0X
FRI	86.90	50	eP	21	35.60	-1.8
MIN	87.04	46	eP	21	35.90	-2.3
TNP	89.15	49	eP	21	47.10	-1.4
	0.6s		1.94nm		4.6mb	
FBA	89.27	17	eP	21	47.10	-1.0
	0.7s		0.50nm		3.9mb	
YKA	100.01	27	ePd	22	34.50	-2.9X
	0.5s		0.20nm		3.9mb	
NB2	134.35	345	PKP	28	06.20	-4.1X
	0.7s		0.80nm			
GRF	143.77	335	ePKP	28	22.00	-5.8X
Z	20s		0.10um		4.6msz	
KBA	144.83	330	iPKPd	28	24.10	-5.8X
	1.2s		20.60nm			
			i	28	37.30	
ABH	144.99	339	ePKP	28	25.59	-4.3X
CDF	146.32	338	iPKPd	28	29.60	-2.6X
	0.8s		15.30nm			
BSF	146.98	337	ePKP	28	31.30	-2.0X
HAU	147.00	338	ePKP	28	31.50	-1.7
	1.1s		18.05nm			
Z	22s		0.08um		4.4msz	
FIR	148.23	328	ePKP	28	35.00	-0.3
FLN	148.31	346	ePKP	28	34.80	-0.4
	0.8s		10.75nm			
Z	22s		0.08um		4.4msz	
LOR	148.48	340	iPKPd	28	35.50	-0.1
	0.8s		13.15nm			
Z	22s		0.05um		4.3msz	
LBF	148.69	340	ePKP	28	36.10	0.1
	1.1s		12.45nm			
GRR	148.74	347	ePKP	28	36.10	0.1
SSF	148.78	340	iPKPd	28	36.50	0.4
	0.8s		18.25nm			
LPL	148.93	335	ePKP	28	37.30	0.6
	0.7s		6.95nm			
LPG	148.94	335	ePKP	28	37.40	0.6
	0.7s		8.60nm			
AVF	149.07	340	ePKP	28	36.70	0.2
LPF	149.12	347	iPKPd	28	37.20	0.7
	0.9s		17.05nm			
BGF	149.43	341	ePKP	28	37.90	0.8
	0.7s		10.35nm			
TCF	149.87	341	ePKP	28	39.10	1.3
LSF	150.11	342	ePKP	28	39.40	1.3
	0.8s		15.85nm			
MFF	150.25	344	ePKP	28	39.90	1.6
PGF	150.26	329	ePKP	28	40.00	1.4
	1.1s		53.70nm			
FRF	150.56	333	ePKP	28	40.50	1.6
	0.8s		14.25nm			
LMR	150.80	333	ePKP	28	41.10	1.9
RJF	150.97	341	ePKP	28	41.80	2.3X
CAF	151.14	340	ePKP	28	42.30	2.5X
LFF	151.53	342	ePKP	28	43.10	2.8X
	0.8s		16.40nm			
LPO	151.63	341	iPKPd	28	43.30	2.8X
S.D. = 1.3 on 34 of 49 obs.						
* MAY 07, 1991 04h 36m 48.55±1.09s						
23.425 N ± 9.4km 121.790 E ± 11.5km						
DEPTH = 10.0km (geophysicist)						
4.1mb ( 6 obs.)						
TAIWAN (244)						
TWF1	0.46	261	iPd	36	57.50	-0.4
			eS	37	01.00	
TWD	0.68	345	ePd	37	02.80	0.9
			eS	37	11.10	

TWG	0.89	228	ePc	37	07.40	1.7
			eS	37	19.60	
TWC	1.18	3	eP	37	13.20	2.7X
TWK	1.21	263	ePc	37	09.40	-1.7
			eS	37	22.00	
ANP	1.77	352	iP	37	23.80	4.3X
			eS	37	42.50	
QZH	3.29	298	iPnc	37	37.50	-3.6X
			Sn	38	11.00	
SSE	7.66	356	e(P)	38	37.50	-5.3X
Z	11s		2.20um			
E	10s		0.50um			
GZH	7.77	269	eP	38	51.00	6.5X
			S	40	15.00	
NJ2	8.98	344	Pc	38	57.60	-3.6X
Z	11s		0.40um			
			sP	39	09.00	
			S	40	37.00	
WHN	9.71	319	P	39	07.50	-3.7X
			eS	40	47.00	
QIZ	11.97	251	eP	39	45.00	2.8X
GYA	14.05	286	P	40	11.80	1.8
Z	12s		1.20um			
N	10s		0.50um			
E	10s		1.10um			
			S	42	40.40	
XAN	15.45	316	P	40	25.50	-2.7X
TIY	16.35	333	eP	40	41.00	1.3
Z	14s		0.80um			
BJI	17.23	345	eP	40	53.00	2.2X
	1.4s		20.00nm		4.1mb	
CD2	17.68	299	eP	40	58.00	1.4
N	10s		0.70um			
HHC	19.39	336	eP	41	19.00	1.4
BTO	19.79	333	eP	41	21.00	-1.0
N	13s		0.50um			
E	12s		0.50um			
LZH	20.01	313	eP	41	22.50	-1.9
	5.0s		220.00nm		4.7mb X	
Z	12s		1.05um		4.4mszX	
E	10s		0.65um			
			pP	41	30.50	30kmX
			sP	41	36.20	
CN2	20.55	8	P	41	38.00	8.2X
Z	12s		0.90um		4.4mszX	
CHG	21.79	262	eP	41	44.70	2.0
	0.9s		15.76nm		4.4mb	
GTA	24.51	316	P	42	09.40	0.0
	1.6s		30.00nm		4.7mb	
Z	14s		0.60um		4.2mszX	
E	10s		0.40um			
GUN	32.60	286	P	43	21.80	-1.1
KKN	33.13	285	P	43	25.60	-1.8
GKN	33.70	286	P	43	30.60	-1.7
WB2	44.81	163	iPd	45	04.90	0.3
	0.5s		1.50nm		4.2mb	
NB2	79.15	332	P	48	53.80	-1.0
	0.8s		0.90nm		3.8mb	
YKA	83.45	23	eP	49	17.20	-0.1
	0.8s		0.50nm		3.8mb	
S.D. = 1.5 on 18 of 29 obs.						
% MAY 07, 1991 04h 41m 52.01±1.14s						
43.019 N ± 7.9km 18.664 E ± 7.1km						
DEPTH = 10.0km (geophysicist)						
YUGOSLAVIA (383)						
ML 1.5 (TTG).						
BRY	0.15	217	iPg	41	55.60	0.0
			iSg	41	58.00	
NKY	0.32	130	iPg	41	58.53	-0.2
			iSg	42	03.88	
HCY	0.58	192	iPg	42	03.80	0.0
			iSg	42	12.60	
PLE	0.62	60	iPg	42	04.35	-0.2
			iSg	42	14.33	
TTG	0.74	143	iPg	42	06.56	0.1
			iSg	42	17.18	
BDV	0.75	171	iPg	42	06.90	0.3
			iSg	42	18.08	
IVA	0.92	99	iPg	42	10.13	0.5
PVY	1.05	113	iPg	42	11.75	-0.2
ULC	1.14	157	iPg	42	13.01	-0.4
S.D. = 0.3 on 9 of 9 obs.						
? MAY 07, 1991 05h 03m 14.33±3.12s						
60.551 N ± 22.6km 5.219 E ± 61.6km						

DEPTH = 10.0km (geophysicist)						
SOUTHERN NORWAY (535)						
- MD 1.6 (BER).						
ASK	0.07	190	iP	03	16.08	-0.6
			eS	03	18.36	
EGD	0.28	179	iP	03	19.49	-0.7
HYA	0.78	37	iPc	03	29.18	-0.3
KMY	1.34	179	ePg	03	39.40	0.4
			eS	03	56.75	
S.D. = 0.8 on 4 of 4 obs.						
-----						
MAY 07, 1991 06h 03m 17.51± 0.93s						
44.005 N ± 7.5km 19.165 E ± 8.9km						
DEPTH = 10.0km (geophysicist)						
YUGOSLAVIA (383)						
ML 2.5 (TTG).						
PLE	0.70	166	ePg	03	30.50	-0.8
			eSg	03	43.00	
BRY	1.19	203	ePg	03	39.00	-0.9
			eSg	03	59.50	
NKY	1.20	186	ePg	03	40.00	0.1
			eSg	04	00.00	
BEO	1.23	48	ePg	03	40.30	-0.1
			iSg	03	57.80	
IVA	1.25	155	ePg	03	41.00	0.1
			eSg	04	02.00	
TTG	1.58	177	ePn	03	46.50	1.0
			eSn	04	11.00	
HCY	1.63	198	ePn	03	47.00	0.6
			eSn	04	14.00	
HVAR	2.14	248	i(Pn)	03	53.70	0.0
			iSn	04	20.00	
BZS	2.37	46	ePc	04	01.00	3.9X
VBY	3.16	300	eP	04	10.70	2.4X
			e(Sn)	05	03.00	
S.D. = 0.8 on 8 of 10 obs.						
-----						
? MAY 07, 1991 06h 35m 35.29± 4.74s						
41.242 N ± 38.5km 29.300 E ± 23.7km						
DEPTH = 10.0km (geophysicist)						
TURKEY (366)						
MD 2.7 (ISK).						
HRT	0.50	146	iPg	35	45.50	0.0
			iSg	35	52.10	
CTT	0.66	262	iPg	35	48.50	0.0
YLV	0.68	175	iPg	35	48.70	-0.1
IZI	0.91	172	ePg	35	52.90	0.1
S.D. = 0.1 on 4 of 4 obs.						
-----						
MAY 07, 1991 06h 38m 05.81± 0.31s						
20.727 S ± 4.6km 67.875 W ± 6.9km						
DEPTH = 182.5km ( 7 depth phases)						
4.8mb ( 19 obs.)						
SOUTHERN BOLIVIA (125)						
CCH	3.71	27	Pc	39	05.00	0.8
ANT	3.78	218	iPc	39	04.30	-0.5
			iS	39	42.20	
			i	39	45.00	
LPB	4.18	357	iPc	39	08.00	-2.3
	1.0s	1470.00nm				
ZOBO	4.44	357	iPc	39	14.20	0.4
			S	40	00.00	
ARE	5.45	320	iPc	39	24.50	-2.3
			iS	40	22.50	
SIV	7.99	55	iPc	39	57.20	-2.9
RTRS	9.51	188	ePd	40	18.80	-1.0
			(S)	42	01.70	
RTLL	10.57	183	ePd	40	31.10	-2.6
CFA	10.84	182	ePc	40	30.20	-7.0X
			eS	42	32.50	
TCA	10.97	165	ePc	40	36.20	-2.7
MDZ	12.14	184	i(P)	40	56.20	2.2
NNA	12.22	314	eP	40	53.30	-1.9
	0.8s	71.64nm				5.2mb
			i	41	00.50	
			eS	43	04.00	
PEL	12.62	191	eP	40	59.50	-0.6
	0.8s	82.09nm				5.2mb
SAN	12.92	190	eP	41	04.50	0.7
			i	43	41.00	
ITB1	13.04	110	eP	41	09.00	3.5X
PCH	13.06	190	eP	41	06.20	0.5
TACH	13.16	191	eP	41	05.00	-1.9



07d 06h

ITB	13.24	110	e(P)	41	09.80	1.8
ITB7	13.36	112	e(P)	41	11.50	2.0
LNK	13.54	193	eP	41	08.00	-3.7X
RFA	14.00	182	eP	41	15.30	-2.3
PPD	15.48	98	ePc	41	35.70	-0.3
			e	41	37.70	
BMA	22.12	99	eP	42	46.70	-0.4
			e	42	48.20	5kmX
			e	42	58.10	
SOB1	28.42	70	eP	43	44.20	-1.4
			i	43	45.40	4kmX
			e	43	46.50	-1.5
PDCR	28.69	78	eP	44	37.14	-0.9
SVV	34.46	12	eP	44	41.78	-0.8
SLB	34.99	12	iP	47	44.70	-0.2
RSCP	58.47	343	P	47	46.70	-0.6
BLA	58.83	348	P	48	08.60	-0.9
	0.6s	10.91nm		48	08.80	-1.4
FVM	62.13	340	P	48	08.80	-1.4
TUL	62.22	335	ePc	48	08.80	-1.4
	0.8s	14.40nm		48	10.80	-0.9
MEO	62.44	332	eP	48	29.60	0.0
RSNY	65.24	355	P	48	29.60	0.0
	0.7s	15.92nm		48	37.80	0.4
ALQ	66.39	326	ePd	49	21.00	183km
	0.9s	12.40nm		49	37.80	0.4
			epP	49	21.00	183km
ANMO	66.39	326	P	49	21.00	183km
	0.9s	12.60nm		49	44.00	2.1
NVL	67.21	159	ePc	48	56.00	41kmX
			e	48	42.18	-0.7
LIC	67.24	74	Pc	48	42.18	-0.7
	0.8s	15.00nm		48	42.80	0.0
CBM	67.34	360	P	48	43.46	-0.7
TIC	67.43	73	P	48	43.46	-0.7
	1.0s	25.50nm		48	44.42	-0.5
KIC	67.56	74	Pc	48	44.42	-0.5
SPA	69.40	180	iPc	48	57.80	2.2
	0.8s	9.58nm		49	40.30	178km
GLD	69.54	330	P	48	57.70	0.9
	0.8s	47.06nm		48	56.00	-1.0
GOL	69.57	330	P	48	56.00	-1.0
	0.8s	17.11nm		49	40.20	186km
PV09	70.49	327	P	49	03.50	0.8
PEC	71.78	318	P	49	11.80	1.6
DUG	73.66	326	P	49	22.50	1.3
			pP	50	06.60	183km
BW06	73.94	329	P	49	22.90	0.0
	0.8s	8.93nm		50	12.30	207kmX
TNP	74.62	322	P	49	28.00	1.1
	0.9s	9.77nm		50	12.60	185km
SCH	75.24	1	eP	49	30.00	0.3
LRM	77.60	330	eP	49	45.10	1.8
ORV	78.11	320	P	49	48.10	2.1
			pP	50	32.30	181km
SES	80.41	334	iPd	49	59.10	1.0
IFR	80.52	49	iP	50	01.00	1.7
FFC	80.62	341	eP	49	59.00	-0.1
	1.0s	16.00nm		50	05.00	0.8
NEW	81.57	329	P	50	05.00	0.8
	0.6s	7.87nm		50	15.00	1.0
PNT	83.50	329	eP	50	15.00	1.0
	0.8s	13.00nm		50	18.00	0.9
FRB	84.19	360	eP	50	18.00	0.9
BUL	88.79	111	iPd	50	43.00	2.2
	1.0s	11.50nm		50	49.50	0.7
YKA	90.78	340	eP	50	49.50	0.7
	0.6s	12.40nm		56	59.40	1.5
ASPA	131.04	207	iPKPc	56	59.40	1.5
	1.1s	6.40nm		57	22.50	0.1
KUSJ	144.81	317	PKP	57	22.50	0.1
KOD	145.08	102	ePKP	57	26.50	2.4X
ASAJ	145.58	320	ePKP	57	26.30	2.6X
HOJ	146.07	317	ePKP	57	27.60	3.1X
GBA	146.16	96	PKPc	57	27.90	2.4X
	0.6s	18.60nm		57	33.50	4.9X
HYB	148.13	90	ePKP	57	33.50	4.9X
MAT	152.33	310	ePKP	57	42.00	7.6X
	1.0s	13.00nm				
S.D. = 1.4 on 58 of 67 obs.						
MAY 07, 1991 06h 45m 24.51± 0.70s						
6.443 S ± 7.3km 147.620 E ± 8.1km						

DEPTH = 75.7 ± 7.4 km  
4.9mb ( 4 obs.)

EAST PAPUA NEW GUINEA REGION (207)

LAT	0.65	251	iPc	45	39.00	-0.5
YYYY	1.66	277	iPc	45	55.90	3.6X
			eS	46	18.00	
MDG	2.18	303	eP	46	00.50	1.2
			eS	46	37.00	
PMG	2.98	189	iPd	46	10.40	-0.1
			eS	46	47.00	
MNDI	3.95	274	eP	46	04.00	-20.2X
RAB	5.05	64	eP	46	39.00	-0.5
QIS	16.04	208	eP	49	07.00	0.1
RMO	19.96	177	iPd	49	52.20	-1.1
	0.7s	56.00nm				5.0mb
BRS	21.40	167	iPc	50	08.50	0.6
ASPA	21.62	216	eP	50	09.80	-0.3
	0.6s	26.90nm				4.8mb
			eS	54	09.30	
DZM	23.91	132	iPc	50	37.90	5.3X
COO	24.34	171	iPc	50	37.90	1.3
CMS	24.97	184	eP	50	43.00	0.5
BFD	30.94	188	eP	51	36.00	-0.4
PPI	47.49	275	eP	53	53.30	-0.9
	0.7s	51.80nm				5.6mb
GBA	72.45	286	Pc	56	44.70	-0.5
	0.7s	3.10nm				4.3mb
PPD	146.16	147	ePKP	04	58.10	0.6
KIC	152.53	271	PKP	05	14.90	7.5X
LIC	152.81	271	PKP	05	15.48	7.7X
TIC	152.82	272	PKP	05	15.42	7.6X
S.D. = 0.8 on 14 of 20 obs.						

MAY 07, 1991 06h 51m 10.59± 1.07s  
67.701 N ± 8.5km 158.836 W ± 6.2km  
DEPTH = 33.0km (normal)

ALASKA (676)

ML 3.4 (AEIC), 3.3 (PMR).

IMA	2.61	126	ePd	51	52.60	1.1
ANM	4.12	223	eP	52	12.70	0.0
TTA	4.94	165	eP	52	24.90	0.5
NEA	5.05	124	eP	52	26.26	0.3
MDM	5.08	118	eP	52	26.38	-0.1
RDS	5.19	119	eP	52	27.85	-0.1
BWN	5.22	128	eP	52	28.11	-0.2
FBA	5.27	117	eP	52	28.70	-0.3
GLM	5.35	115	eP	52	30.13	-0.1
CCB	5.42	119	eP	52	31.14	0.0
WRH	5.44	122	eP	52	31.30	-0.1
TRF	5.55	136	eP	52	33.00	-0.1
MCK	5.70	130	eP	52	34.95	-0.2
HDA	5.86	119	eP	52	36.82	-0.5
RND	5.98	131	eP	52	38.82	-0.3
CUT	6.43	142	eP	52	45.47	0.1
SKT	6.53	148	eP	52	46.30	-0.5
SVW	6.76	167	eP	52	49.80	-0.3
NCG	6.94	152	eP	52	52.39	-0.3
BGL	7.03	154	eP	52	53.48	-0.4
CRP	7.07	153	eP	52	54.93	0.4
PMR	7.40	141	e(P)	52	59.90	0.9
INK	9.49	75	eP	53	28.00	0.2
S.D. = 0.4 on 23 of 23 obs.						

MAY 07, 1991 06h 59m 02.73± 2.21s  
3.751 S ± 10.0km 80.580 W ± 26.2km  
DEPTH = 99.7 ± 21.7 km  
4.1mb ( 3 obs.)

PERU-ECUADOR BORDER REGION (110)

QUIL	3.40	29	P	59	56.30	1.1
QUR	4.10	30	eP	00	04.70	-0.1
			S	00	57.00	
YANA	4.13	29	eP	00	04.20	-1.1
ANGL	4.51	42	eP	00	03.80	-6.6X
NNA	8.98	156	eP	01	11.00	-0.5
	0.5s	5.63nm				4.6mb
			eS	02	46.00	
ZOBO	17.45	136	P	03	06.60	4.6X
LPB	17.65	137	P	03	05.00	0.7
SIV	22.71	124	P	03	56.80	-0.2
			i	04	51.80	
ALQ	45.53	330	eP	07	15.00	0.6
	0.9s	3.57nm				4.2mb
YKA	70.95	344	eP	10	10.30	-0.6
	0.7s	0.40nm				3.4mb

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

% MAY 07, 1991 08h 00m 28.33± 0.90s  
39.119 N ± 6.9km 27.520 E ± 13.2km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.4 (ISK).

IZM	0.75	196	ePg	00	43.00	0.0
			eSg	00	56.00	
DST	0.99	60	ePn	00	47.10	0.0
EDC	1.25	12	ePn	00	52.00	0.4
BNT	1.27	14	ePn	00	51.60	-0.4
KGT	1.34	353	ePn	00	53.00	0.0

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

\* MAY 07, 1991 08h 24m 42.62± 1.22s  
7.397 S ± 9.3km 128.905 E ± 15.3km  
DEPTH = 145.0 ± 14.3 km  
5.3mb ( 8 obs.)

BANDA SEA (280)

AAI	3.75	349	iP	25	42.00	1.8
MTN	5.84	158	iPd	26	08.80	0.7
KNA	8.30	181	iPc	26	39.60	-1.7
			iS	28	06.50	
WB2	13.55	158	eP	27	45.50	-4.6X
	0.5s	96.00nm				5.4mb
QIS	16.69	143	eP	28	27.00	-2.4
			eS	31	21.00	
ASPA	16.87	164	eP	28	29.10	-2.6
	0.5s	71.10nm				5.2mb
Z	19s	0.50um				3.9Msz
			i	30	35.90	
			iS	31	29.10	
NANU	19.83	219	eP	29	15.60	11.4X
	0.4s	28.00nm				
CTA	21.02	129	iPc	29	16.90	0.6
			iS	32	41.00	
FORR	23.34	182	iPc	29	39.80	1.0
	0.3s	45.00nm				5.4mb
			i	29	47.00	
QLP	24.01	144	iPc	29	46.10	0.7
BAL	25.76	205	eP	30	02.60	1.0
KLB	26.22	202	eP	30	07.50	1.7
MUN	27.17	204	eP	30	15.00	0.6
NWAO	27.62	202	eP	30	19.00	0.6
Z	20s	0.60um				4.2Msz
COO	31.55	140	eP	30	53.60	0.2
BFD	32.14	159	iPc	30	58.70	0.4
TOO	33.60	156	eP	31	12.90	1.9
GUN	54.40	312	P	33	56.70	-0.7
	0.4s	42.00nm				5.6mb
PKI	54.56	311	P	33	57.50	-1.1
	0.4s	13.00nm				5.1mb
KKN	54.78	312	P	33	59.04	-1.0
	0.4s	17.00nm				5.2mb
DMN	54.81	311	P	33	59.48	-0.8
	0.3s	12.00nm				5.2mb
GKN	55.37	311	P	34	03.32	-0.9
	0.4s	49.00nm				5.8mb
YKA	108.58	26	ePdiff	39	02.00	11.7X
	0.9s	0.90nm				
PPD	150.75	180	(PKP)	44	21.00	6.9X
ZOBO	151.07	144	PKP	44	31.00	15.6X
S.D. = 1.4 on 20 of 25 obs.						
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* MAY 07, 1991 08h 25m 29.99±1.93s						
3.611 S ±13.4km 145.739 E ±11.8km						
DEPTH = 29.7 ± 13.6 km						
5.3mb ( 3 obs.)						
NEAR N COAST OF PAPUA NEW GUINEA(200)						
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MDG	1.63	179	eP	25	57.80	0.8
MNDI	3.27	219	eP	26	18.80	-1.8
LAT	3.27	157	eP	26	21.10	0.7
			eS	26	27.40	
PMG	5.93	166	ePc	26	57.10	-1.0
	0.8s	141.79nm				5.7mb
HNR	15.25	113	eP	29	05.00	0.0
WB2	19.67	213	eP	30	01.10	1.3
	0.7s	82.50nm				5.1mb
DZM	27.21	134	iPc	31	12.00	-1.4
KMI	50.56	307	eP	34	29.00	0.5
	1.3s	40.00nm				5.2mb
CHG	51.16	298	eP	34	39.20	6.3X
LZH	55.59	319	eP	34	55.00	-10.6X



2.0s	21.00nm					DST	0.99	63	ePn	12	12.60	0.2	TRF	1.75	316	ePc	24	05.89	-1.0				
Z	24s	0.41um	4.4MsZX			KCT	1.27	32	ePn	12	17.00	-0.3	SKT	1.88	264	eP	24	08.21	-0.3				
		pP	35	01.00	20kmX	KGT	1.29	354	iPn	12	17.70	0.1	-	-	S		24	30.55					
							S.D. = 0.4 on 4 of 4 obs.						KNIM	1.89	182	ePd	24	07.13	-1.6				
GUN	65.52	303	PKP	36	15.18	1.5							CVA	1.90	152	ePc	24	07.45	-1.4				
PKI	65.81	302	PKP	36	15.28	-0.2							HIN	1.91	164	iPc	24	07.74	-1.3				
KKN	65.99	302	PKP	36	15.90	-0.6							GLB	1.95	112	eP	24	08.29	-1.3				
DMN	66.08	302	PKP	36	15.48	-1.6									eS		24	31.72					
GKN	66.59	302	PKP	36	16.98	-3.3X							SGAM	2.07	146	eP	24	09.24	-2.1				
LPB	141.03	122	(PKP)	44	51.00	-9.7X							BWN	2.13	337	ePc	24	11.04	-1.1				
SIV	147.10	127	PKP	45	08.00	-2.5X							DOT	2.15	47	eP	24	11.17	-1.2				
KIC	150.47	276	PKP	45	25.60	9.7X							SLKM	2.15	218	eP	24	12.31	-0.1				
TIC	150.72	277	PKP	45	26.10	9.8X							HDA	2.20	7	ePd	24	12.63	-0.5				
LIC	150.76	276	PKP	45	26.00	9.7X							MTU	2.25	181	ePd	24	13.37	-0.4				
	S.D. = 1.3 on 12 of 20 obs.												WRH	2.26	354	ePc	24	12.77	-1.2				
? MAY 07, 1991 08h 40m 33.38±1.69s													NKA	2.31	231	eP	24	17.64	3.1				
	11.216 N ±28.9km 63.426 W ±19.0km													RAGM	2.32	142	eP	24	13.06	-1.7			
	DEPTH = 33.0km (normol)													SEW	2.32	204	eP	24	13.99	-0.7			
	4.0mb ( 1 obs.)													NGC	2.33	251	eP	24	13.84	-1.2			
	CARIBBEAN SEA ( 94)													TMW	2.37	60	eP	24	15.07	-0.5			
	MD 4.5 (TRN).													SPU	2.38	246	ePc	24	14.56	-1.1			
TCE	1.72	107	iPc	41	02.30	0.8								CCB	2.43	358	ePc	24	14.98	-1.3			
			eS	41	17.95									NEA	2.45	345	ePc	24	15.09	-1.6			
TRN	2.07	106	eP	41	06.22	-0.2								HMT	2.48	138	eP	24	15.72	-1.4			
			iS	41	23.20									BGL	2.49	249	eP	24	16.51	-0.7			
TPP	2.14	115	eP	41	07.26	-0.2								CROM	2.59	123	eP	24	16.93	-1.8			
			eS	41	27.04									RDS	2.62	355	ePc	24	17.59	-1.4			
TBH	2.43	107	eP	41	11.27	-0.4								FBA	2.68	358	ePc	24	18.90	-1.0			
			eS	41	33.96										0.5s	45.45nm							
TPR	2.60	90	eP	41	14.04	0.0								TGL	2.71	121	ePc	24	18.03	-2.4			
			eS	41	39.02									MDM	2.76	354	ePc	24	19.46	-1.6			
BOT	2.66	91	eP	41	14.75	-0.1								BALM	2.77	113	ePc	24	18.89	-2.4			
			eS	41	38.16									GLM	2.77	2	ePd	24	19.84	-1.4			
YKA	62.82	336	eP	50	57.90	0.0								RDT	2.86	237	ePc	24	21.51	-1.0			
	0.5s 0.70nm 4.0mb													WAX	2.89	126	eP	24	20.88	-2.1			
	S.D. = 0.5 on 7 of 7 obs.													DFR	2.96	239	ePc	24	22.86	-1.1			
% MAY 07, 1991 08h 49m 28.28±0.88s														RDN	3.03	238	ePc	24	23.82	-1.3			
	38.902 N ± 9.3km 27.546 E ±15.7km													RSO	3.06	237	eP	24	24.87	-0.7			
	DEPTH = 10.0km (geophysicist)													RS2	3.06	237	eP	24	24.70	-0.9			
	TURKEY (366)													RDW	3.07	238	eP	24	23.47	-2.2			
	MD 2.7 (ISK).													NCT	3.07	239	eP	24	24.79	-0.8			
IZM	0.55	204	iPg	49	39.50	0.0								RED	3.10	236	eP	24	24.81	-1.1			
			iSg	49	48.50									CTGM	3.24	110	ePd	24	26.01	-2.0			
DST	1.09	50	ePn	49	49.10	0.2								CNPM	3.25	215	eP	24	26.63	-1.4			
BNT	1.48	11	ePn	49	55.10	0.1								TTA	3.97	284	eP	24	35.90	-2.3			
KCT	1.48	25	ePn	49	54.50	-0.5								SVW	4.00	257	eP	24	36.30	-2.3			
KGT	1.56	353	iPn	49	56.20	0.1								IMA	4.69	328	ePd	24	46.60	-1.8			
	S.D. = 0.4 on 5 of 5 obs.													ANM	8.32	294	eP	25	37.90	-1.0			
* MAY 07, 1991 09h 01m 23.64±1.00s													YKA	15.21	74	eP	27	03.90	-7.1				
	42.606 N ±16.1km 43.125 E ±10.1km														0.8s	0.40nm			2.7mb				
	DEPTH = 10.0km (geophysicist)														69 obs. associated								
	4.2mb ( 4 obs.)														MAY 07, 1991 10h 58m 07.33±0.34s								
	WESTERN CAUCASUS (362)														10.646 N ± 5.5km 62.563 W ± 4.4km								
KAS	7.08	263	eP	03	10.00	0.1									DEPTH = 101.1 ± 5.8 km								
MLR	12.69	289	eP	04	36.00	8.9X									4.1mb ( 4 obs.)								
OBN	13.21	343	eP	04	48.00	14.3X									NEAR COAST OF VENEZUELA ( 97)								
	7.0s 500.00nm														MD 4.5 (TRN). Felt at Port of								
GAR	20.86	91	eP	06	08.60	0.4									Spain, Trinidad.								
NUR	21.15	334	iP	06	11.20	0.4									TCE	0.80	86	iPd	58	25.51	-0.5		
KAF	21.94	339	iP	06	18.90	0.1										eS		58	36.62				
	0.7s 13.00nm 4.5mb														TRN	1.14	90	iPc	58	29.32	-0.3		
			eS	06	25.60											iS		58	43.59				
HFS	25.07	325	eP	06	50.20	0.9										TPP	1.14	107	eP	58	29.98	0.3	
	0.7s 10.50nm 4.6mb															eS		58	42.40				
Z	17s	0.07um	3.2MsZX													TBH	1.48	96	eP	58	33.75	0.0	
		e	06	54.80												eS		58	48.40				
		LR	15	49.00												PIG	1.77	73	eP	58	37.24	-0.2	
NB2	26.59	325	P	07	03.30	-0.2										iS		58	59.15				
	1.2s 4.20nm 4.0mb															TPR	1.83	73	iP	58	37.82	-0.5	
FRB	61.13	332	eP	11	39.00	-0.9										eS		59	00.00				
YKA	73.73	349	eP	12	58.30	-0.8											BOT	1.88	74	iP	58	38.29	-0.6
	0.7s 0.80nm 3.9mb																eS		59	00.89			
	S.D. = 0.7 on 8 of 10 obs.																SVV	2.96	26	iP	58	53.27	-0.1
? MAY 07, 1991 09h 11m 53.67±1.03s																	SOA	3.04	27	eP	58	54.81	0.3
	39.167 N ± 8.0km 27.487 E ±13.6km																		eS		59	31.95	
	DEPTH = 10.0km (geophysicist)																		iP		58	56.60	1.1
	TURKEY (366)																		eS		59	34.40	
	MD 2.5 (ISK).																		eS		59	03.87	0.2
IZM	0.79	193	iPg	12	09.00	0.0													eS		59	46.38	
			eSg	12	20.00														eS		59	10.80	0.1
																			eS		59	59.60	
																			eS		59	12.20	0.5
																			eS		59	18.00	0.4
																			eS		00	11.00	
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07d 10h

CEOS	5.91	255	eP	59	33.00	-1.0
			eS	00	37.60	
BPA	6.40	6	eP	59	42.50	1.8
			eS	00	48.00	
TOV	7.17	264	ePn	59	52.00	0.7
			eSn	01	10.60	
SDV	8.14	258	eP	00	03.30	-1.5
			iS	01	30.70	
SIV	26.51	177	iPd	03	38.40	1.1
MNA	26.59	213	iPc	03	38.00	-0.1
ZOBO	27.30	192	P	03	46.00	0.9
LPB	27.55	192	(P)	03	41.00	-6.2X
TUL	39.22	315	e(P)	05	25.40	-2.0
	0.6s		3.10nm			4.3mb
ALO	46.64	308	eP	06	28.10	0.5
	0.8s		1.87nm			4.0mb
			e	06	52.00	
SES	56.08	325	eP	07	37.00	-1.2
YKA	63.69	336	eP	08	26.30	-3.6X
	0.4s		2.00nm			4.4mb
NB2	72.90	29	P	09	27.30	0.3
	0.7s		1.50nm			3.9mb

S.D. = 0.9 on 25 of 27 gbs.

% MAY 07, 1991 11h 45m 04.50± 1.25s  
39.269 N ±10.5km 22.886 E ±10.8km  
DEPTH = 10.0km (geophysicist)

GREECE (364)

MD 2.5 (THE).

AGG	0.50	240	iPgC	45	14.60	0.0
			eSg	45	23.60	
LIT	0.88	340	ePgD	45	21.40	-0.1
			eSg	45	34.90	
PAIG	0.90	43	ePgC	45	21.60	-0.1
			eSg	45	35.00	
THE	1.36	3	ePb	45	29.80	0.3
			eSb	45	47.20	
SOH	1.59	13	ePb	45	32.90	0.1
			eSb	45	53.70	
GRG	1.73	348	ePb	45	34.70	0.0
KNT	1.89	0	ePb	45	36.90	-0.2

S.D. = 0.2 gm 7 gf 7 gbs.

MAY 07, 1991 12h 14m 20.95± 0.72s  
47.079 N ± 5.1km 6.803 E ± 8.2km  
DEPTH = 10.0km (geophysicist)

FRANCE (538)

ML 2.3 (LDG).

BSF	0.75	359	Pg	14	35.40	-0.4
			Sg	14	46.60	
HAU	0.98	342	Pg	14	39.00	-0.5
			Sg	14	52.20	
CDF	1.37	13	Pg	14	47.00	0.8
			Sg	15	05.70	
LPL	1.56	182	Pg	14	49.10	0.1
			Sg	15	09.00	
LPG	1.58	181	Pg	14	49.00	-0.4
			Sg	15	09.30	
LBF	1.94	268	Pg	14	53.60	-0.7
			Sg	15	17.50	
LOR	2.02	276	Pg	14	55.20	-0.2
			Sg	15	20.40	
SMF	2.08	259	Pg	14	56.60	0.3
			Sg	15	22.20	
SSF	2.25	271	Pg	14	59.80	1.0
			Sg	15	27.30	

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

% MAY 07, 1991 13h 08m 53.72± 0.97s  
39.106 N ± 8.9km 27.605 E ±16.6km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.6 (ISK).

I Z M	0.76	201	e P g	09 08.50	0.0
			e S g	09 20.00	
D S T	0.94	58	e P n	09 12.00	0.4
E D C	1.26	9	e P n	09 17.50	0.5
B N T	1.27	11	e P n	09 17.50	0.2
K C T	1.28	27	e P n	09 16.50	-1.0

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

MAY 07, 1991 13h 09m 28.75 ± 0.10s  
39.430 N ± 2.3km 144.714 E ± 1.9km  
DEPTH = 10.0km (geophysicist)

DEPT. OF AGRICULTURE (geophy, 57153)

6.4mb (102 obs.) 5.8Msz ( 35 obs.)  
OFF EAST COAST OF HONSHU, JAPAN (229)  
Ms 5.7 (BRK), 5.6 (PAS).

Mo=1.0\*10\*\*18 Nm (PPT). Complex event observed on broadband displacement seismograms.

FAULT PLANE SOLUTION: P-Waves  
NP1: Strike=171 Dip=64 Slip=-160  
NP2: 72 72 -27

Principal Axes:

T	Plg= 5	Azm=123
P	32	30

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: 9 Focal mech. F  
Energy 2.7+0.9\*10\*\*14 Nm

```

Energy      2.710.90100014 Nm
MOMENT TENSOR SOLUTION
Dep 27      No. of sta: 15
Moment Tensor: Scale 10**18 Nm

```

Mrr=-1.42	Mtt= 0.11
Mff= 1.31	Mrt= 0.66
Mrf= 0.06	Mtf=-0.74

Principal axes:  
T Val= 1.68 Plg= 5 Azm= 63  
N 0.02 23 331

Best Double Couple: Mo=1.7\*10\*\*18  
NP1: Strike=176 Dip=45 Slip= -57

NP1: Strike=176 Dip=45 Slip= -57  
NP2: 313 54 -119  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN

Data Used: GUSDN  
L.P.B.: 18S, 46C  
Centroid Location:  
Origin Time 13.00.32 3 0 3

Origin time 13:09:32.3 0.3  
Lat 39.50N 0.04 Lon 144.51E 0.04  
Dep 15.0 BDY Half-duration 3.7  
Moment Tensor: Scale 10<sup>18</sup> Nm

```

Moment tensor;      Scale 10**18 Nm
Mrr=-1.37 0.03      Mtt= 0.54 0.04
Mff= 0.83 0.04      Mrt=-0.25 0.11
Mrf= 0.08 0.13      Mft=-0.03 0.03

```

```

Mrf= 0.08 0.13   Mtf=-0.03 0.03
Principal Axes:
  T Val= 0.84   Plg= 3   Azm=262
  N      0.66      7      132

```

```

N      0.56      7      172
P     -1.40     83      15
Best Double Couple: Mo=1.1*10**18
NP1: CStrike=350 Dip=42 Slip= 80

```

NP1: Strike=359 Dip=42 Slip= -80  
NP2: 166 48 -99

FUJ	2.39	263	iP+	10	09.10	0.5
			eS	10	36.00	
OOJ	3.14	340	P	10	19.30	0.2
			eS	10	55.00	
OMJ	3.52	290	iP+	10	25.70	1.1
			S	11	05.90	
USJ	3.66	360	P	10	24.90	-1.7
			eS	11	05.90	
AMJ	3.86	253	iP+	10	29.80	0.3
RRJ	4.07	318	P	10	32.20	-0.1
			S	11	16.20	
AP	4.43	326	eP	10	37.00	-0.5
			iS	11	25.30	
AKJ	4.83	230	P	10	41.20	-1.9
			S	11	32.40	
SAJ	4.93	342	eP	10	44.10	-0.5
			eS	11	40.90	
IJJ	4.99	246	P	10	45.60	0.1
HJJ	5.65	235	P	10	53.40	-1.4
			S	11	54.10	
AJO	5.89	243	ePc	10	58.66	0.5
AT	5.89	243	iPc	10	58.60	0.4
			eS	12	02.00	
TMJ	6.15	245	P	11	02.10	0.2
IDJ	6.69	236	P	11	09.00	-0.6
SS	7.72	350	P	11	20.00	-3.8 X
SRJ	7.95	243	P	11	27.90	0.8
			S	12	54.30	
KYJ	8.97	237	iPd	11	39.80	-1.5
ONJ	9.91	248	P	11	52.90	-1.4
KSJ	10.14	241	P	11	54.90	-2.5
HK	10.79	247	iP	12	05.00	-1.4
	1.0s	720.00nm			7.0mb x	

1.0s 720.00nm 7.0mp X

SHNJ	12.12	248	eP	12	23.60	-0.8
MDJ	12.38	300	Pc	12	27.50	-0.3
-	4.0s	4700.00nm				7.1mb X
Z	20s	37.30um				4.2Msz X
N	13s	6.50um				
E	13s	35.20um				
		pP	12	33.00		
		sP	12	37.00		
		S	14	50.00		
		SS	15	05.00		
KUMJ	13.17	243	P	12	37.10	-1.4
KAGJ	13.96	238	eP	12	47.20	-1.5
CN2	15.05	293	iPc	13	01.00	-2.1
	5.0s	1800.00nm				5.8mb X
Z	16s	52.00um				4.1Msz X
N	16s	26.00um				
E	16s	18.30um				
		pP	13	08.00		
		eS	15	44.00		
SNY	16.22	285	iPc	13	17.00	-1.2
	4.5s	1900.00nm				5.5mb X
Z	16s	38.80um				5.3Msz X
N	14s	12.80um				
E	15s	27.50um				
		pP	13	23.00		
		sP	13	28.00		
		S	16	16.00		
DL2	17.91	276	iPc	13	39.00	-0.4
	5.0s	4400.00nm				5.8mb X
Z	16s	20.00um				
N	15s	15.10um				
E	16s	16.40um				
SSE	20.89	254	Pc	14	12.00	-1.5
	8.0s	3600.00nm				5.8mb X
Z	20s	27.50um				5.6Msz
N	13s	5.20um				
E	14s	16.80um				
		PP	14	33.00		
		sS	18	12.00		
BJ1	21.92	281	ePc	14	21.89	-2.0
	4.0s	1890.00nm				5.9mb X
E	14s	14.40um				
		eS	18	16.00		
TIA	22.00	270	Pc	14	23.30	-1.4
Z	15s	31.60um				5.9Msz X
N	13s	9.50um				
E	14s	24.30um				
		pP	14	32.00		31kmX
		S	18	18.00		
NJ2	22.20	259	iPc	14	25.50	-1.2
	4.0s	1900.00nm				5.9mb X
Z	20s	16.00um				5.4Msz
N	17s	9.10um				
E	15s	16.30um				
		pP	14	33.00		27kmX
		iS	18	33.00		
ANP	24.12	241	iPc	14	47.20	1.6
		iS	19	08.00		
SMY	24.14	47	eP	14	48.50	3.0X
	1.8s	2569.70nm				6.5mb
Z	20s	15.00um				5.5Msz
YAK	24.40	343	iPd-	14	47.50	-0.5
		epP	15	08.00		93kmX
		ePP	15	25.00		
		ePPP	15	33.00		
		ePcP	18	19.00		
		iS	19	04.00		
		iPS	19	28.00		
		iS	19	34.00		
		iSS	20	00.00		
		eSSS	20	39.00		
		iScS	25	58.00		
TIY	25.23	276	Pd	14	56.00	-0.2
	1.6s	1000.00nm				6.3mb
		S	19	21.00		
HHC	25.30	284	P	14	56.00	-1.0
	1.4s	600.00nm				6.1mb
Z	16s	36.80um				6.0Msz X
N	12s	2.40um				
E	15s	49.80um				
		pP	15	06.00		37kmX
		S	19	20.00		
PJG	25.74	180	eP	15	05.20	4.1X
GUA	25.79	180	eP	15	04.50	2.9X
	1.8s	1272.73nm				6.3mb
Z	22s	12.89um				5.4Msz
OZH	26.29	244	iPc	15	07.00	0.9



	4.0s	3230.00nm		5.4mb X		N 17s	4.90um			PPI	56.69	237 eP	19 15.00	0.1
Z	14s	18.70um		5.8Msz X		E 17s	8.10um			KNA	56.88	198 eP	19 15.00	-1.0
N	15s	11.40um					ePP	18 14.86		KBS	58.75	350 iPd	19 28.00	-0.6
E	14s	7.10um					eS	22 36.70		CTA	59.22	178 iPc	19 32.00	-0.4
			sP	15 18.00			e	23 11.71			1.2s	106.25nm		5.8mb
			S	19 38.00			eSS	25 22.24				iS	27 32.00	
			sS	19 48.00			iSSS	25 54.52		QIS	59.86	186 eP	19 34.40	-2.4
WHN	26.31	260 Pc	15 07.00	0.7		ANM	38.19	32 ePd	16 51.00 1.2	YKA	60.42	32 eP	19 38.50	-1.8
	3.0s	3100.00nm		6.5mb		SDN	39.26	48 eP	16 57.60 -1.2		1.1s	89.70nm		5.8mb
Z	20s	14.40um		5.5Msz		Z	20s	10.00um	5.6Msz	HYB	60.85	269 iPd	19 42.50	-1.4
N	15s	3.20um				TTA	41.97	36 eP	17 22.60 1.5		1.2s	242.80nm		6.2mb
E	15s	15.80um					1.5s	264.20nm	5.7mb			eS	28 00.00	
			S	19 34.00		SVW	42.02	39 ePd	17 22.90 1.4	PVC	61.00	154 iPc	19 45.50	0.9
BTO	26.50	284 P	15 08.50	0.4		WMO	42.13	295 ePd	17 22.98 0.3	KEV	62.12	340 iP	19 51.10	-0.6
	N 12s	5.30um					4.0s	2200.00nm	6.2mb X		1.3s	403.60nm		6.5mb
E	15s	30.40um					N 16s	7.00um	5.6Msz X	Z	10s	8.70um		6.2Msz X
			sP	15 17.00			E 14s	8.30um				e	22 12.00	
			PP	15 54.50				8.10um				e	28 16.00	
			S	19 42.00				iS	23 41.95			e	32 08.00	
XAN	29.06	271 P	15 31.00	-0.3				iSS	27 05.56			LR	52 10.00	
E	16s	20.40um				TSM	42.55	221 ePc	17 27.50 1.2	QUE	62.70	288 eP	19 54.20	-2.2
			S	20 20.00		PDB	42.69	41 P	17 26.00 -1.0		1.5s	276.39nm		6.2mb
ADK	29.36	52 ePd	15 31.70	-2.0		BRW	43.18	24 P	17 32.00 1.2			e	22 58.70	
	1.3s	252.83nm		5.9mb		LOE	43.19	252 eP	17 31.00 -0.6			eS	28 19.20	
			ePP	16 31.70		IMA	43.30	32 ePd	17 32.40 0.4	PGC	62.80	48 eP	19 56.50	0.0
IRK	30.52	308 eP	15 43.00	-1.1			1.7s	453.90nm	6.0mb	MCW	63.15	48 P	19 59.00	0.1
			e	16 24.00		RSO	43.41	40 iPd	17 33.20 0.1	ASPA	63.58	191 iPd	19 59.90	-1.9
			ePP	16 52.00		KDC	43.63	44 eP	17 34.90 0.3		1.0s	87.20nm		5.9mb
			ePPP	17 05.00		RAB	43.95	169 e(P)	17 39.00 1.4			epP	20 13.90	50kmX
			ePcP	18 08.10				iS	24 10.00			iS	28 29.50	
			eS	20 46.00		CHG	44.40	256 eP	17 42.00 0.7			iP*P*	48 48.40	
			e	21 02.00			0.7s	5.14nm	4.5mb X	GMW	63.74	49 P	20 02.00	-0.8
			e	21 26.00				eS	24 12.80	SOD	63.76	338 iP	20 01.60	-0.9
			e	21 36.00		LSA	44.60	274 iP	17 44.00 0.6	POO	63.85	273 iPd	20 02.00	-1.9
			eSS	22 04.00			N 14s	3.20um			1.8s	890.91nm		6.7mb
			eSSS	23 03.00		E	16s	5.00um		GBA	63.98	266 Pd	20 03.50	-1.2
			e	23 50.00				PcS	23 18.00		1.6s	468.00nm		6.4mb
HKC	31.08	246 eP	15 50.50	1.2				S	24 18.00	BMW	64.03	50 P	20 04.60	-0.1
		eS	20 55.00		SLKM	44.66	40 eP	17 41.00 -2.0		TRO	64.28	342 iPc	20 04.70	-1.2
BAG	31.13	229 eP	15 48.00	-2.0			i	19 24.80		BOM	64.44	274 iP	20 07.20	-0.4
		eS	20 48.00									iS	28 37.10	
GZH	31.18	248 Pd	15 52.00	1.9		PMR	45.15	38 ePd	17 45.10 -1.7	DZM	64.47	158 iPc	20 09.50	1.8
	Z 16s	18.40um		5.8Msz X			1.1s	262.50nm	6.1mb	PNT	64.64	46 ePd	20 07.00	-1.6
N	16s	10.50um				Z	22s	7.53um	5.6Msz		1.6s	560.00nm		6.5mb
E	14s	10.20um				BDT	45.32	254 eP	17 50.00 1.3	LON	64.72	49 ePd	20 08.92	-0.3
			S	20 53.00			0.8s	11.00nm	4.9mb X			ec	20 15.63	
LZH	32.29	277 ePd	15 59.79	-0.2		NST	45.48	252 eP	17 52.00 2.1			ePP	22 25.48	
	5.0s	880.00nm		5.9mb X		COL	45.68	33 iPd	17 51.18 0.1			eHPP	22 29.12	
			ec	16 05.00				iS	24 33.92					
			PP	17 04.00		FBA	45.68	33 iPd	17 50.70 -0.4	MAIO	64.85	297 iPd	20 09.80	-0.5
			PcP	18 48.00			1.1s	456.25nm	6.4mb		2.0s	220.93nm		6.0mb
			iS	21 12.75				i	18 16.50			eS	28 52.00	
			SS	23 02.00				iPcP	19 50.10	COR	64.95	52 ePd	20 11.27	0.6
			iSS	23 31.95				eS	24 31.30			ec	20 18.38	
			i	26 07.22		LAT	45.90	177 eP	17 54.20 1.0			eSS	28 54.76	
GYA	34.20	259 P	16 17.00	0.4		SHL	46.04	269 iP	17 55.00 0.4			eSS	33 01.21	
	Z 20s	9.60um		5.5Msz				iS	24 39.00	QLP	65.67	180 iPd	20 14.20	-1.0
N	15s	7.90um				TOA	46.52	37 eP	17 59.60 1.8			i	20 28.40	
E	15s	11.40um				KLU	46.69	38 P	17 58.60 -0.5	RMO	65.68	176 iPd	20 13.70	-1.7
			PcP	18 57.00		KHT	47.18	252 eP	18 04.50 1.1		1.0s	235.00nm		6.3mb
			S	21 40.00		BALM	48.46	38 ePd	18 12.30 -0.8			i	20 28.00	
			ScP	22 33.00		PMG	48.64	177 eP	18 15.00 0.3	KOD	66.02	263 eP	20 18.00	-0.2
			PcS	22 38.00		GUN	49.51	275 P	18 21.68 -0.2			eS	29 04.00	
CD2	34.30	269 eP	16 16.50	-0.9		KKN	50.04	276 P	18 25.42 -0.3	FHC	66.52	56 ePd	20 21.30	0.5
	Z 16s	14.80um		5.8Msz X		PKI	50.04	275 P	18 25.34 -0.6	NEW	66.60	46 iPd	20 19.50	-1.8
N	15s	20.70um				MKS	50.17	214 iPc	18 29.00 2.5		1.2s	401.52nm		6.5mb
			iS	21 41.50		DMN	50.26	275 P	18 27.24 -0.3			ePcP	20 49.90	
GTA	34.41	285 eP	16 18.40	0.1		SVO	50.33	160 eP	18 28.00 0.3	BRS	66.90	172 iPc	20 22.50	-0.7
	8.0s	1570.00nm		6.0mb X		GKN	50.43	276 P	18 28.30 -0.4	KAF	67.35	333 eP	20 24.40	-1.3
	Z 16s	32.50um		6.2Msz X		HNR	50.63	160 (P)	18 48.00 18.0X		1.1s	336.70nm		6.4mb
E	16s	27.90um				SNG	50.92	243 eP	18 32.60 0.3			eSP	20 26.20	
			PP	17 32.00			1.5s	866.67nm	6.5mb	NANU	67.44	209 eP	20 35.00	8.4X
			PcP	18 58.40				eS	25 51.80	LBFM	67.56	54 P	20 27.00	-0.6
			S	21 43.00		INK	51.06	28 iPd	18 33.00 0.3	OBN	67.71	324 iP	20 27.00	-1.0
			PcS	22 36.00			0.7s	92.00nm	5.8mb		2.0s	3000.00nm		7.1mb
			SS	23 57.00		IPM	52.52	240 ePd	18 46.10 1.6		Z 17s	17.00um		6.3Msz X
QIZ	36.28	246 eP	16 36.00	1.8			0.6s	25.50nm	5.3mb X		N 16s	1.60um		
	N 15s	8.30um			SIT	52.87	42 eP	18 48.00 1.5		E 16s	4.20um			
	E 15s	5.50um			KGM	52.93	236 eP	18 48.50 1.0				iPcP	20 41.50	
			sP	16 47.00		PSI	55.32	241 ePd	19 10.40 5.4X			e	21 09.00	
			PP	17 58.00		TRT	55.52	220 iPd	18 57.50 -8.8X			ePP	22 54.00	
			S	22 15.50		NDI	55.77	281 iPd	19 07.50 -0.7			ePPP	24 36.00	
			eSS	24 39.50				eS	26 51.00			ePcS	24 56.00	
DAV	36.51	213 eP	16 35.20	-1.0				eSS	30 44.00			iS	29 23.00	
KMI	37.90	261 ePd	16 48.35	0.2	GAR	56.03	295 iP	19 08.60 -1.4				ePS	29 56.00	
	3.0s	1200.00nm		6.1mb				iS	26 21.50			eScS	30 20.00	
	Z 20s	15.10um		5.8Msz				eSS	31 48.00			eSS	33 32.00	
								eSS	33 06.50			eSSS	37 00.00	



MIN	68.29	55	ePd	20	31.20	-1.0			1.2s	218.75nm	6.1mb		i	21	49.20					
SES	68.65	42	eP	20	33.00	-1.1	GSC	74.31	57	iPd	21	08.00	-0.2	PP	24	46.00				
	1.0s		222.00nm			6.3mb	KER	74.31	302	eP	21	07.00	-1.3	S	31	47.00				
ORV	68.80	56	ePd	20	33.70	-1.4	AKU	74.37	353	iP	21	10.30	2.4	GBZT	80.76	316	eP	21	43.00	-0.7
NUR	69.04	333	iP	20	35.00	-1.2		1.3s		330.77nm		6.2mb	ITU	80.76	316	iPd	21	56.00	12.3X	
	1.2s		404.70nm			6.5mb	BAL	74.39	205	eP	21	06.50	-1.9	ISK	80.77	316	iP	21	44.50	0.8
Z	20s		14.30um			6.2Msz	CNB	74.50	176	eP	21	10.00	1.0	GZR	80.78	323	iPc	21	44.00	0.1
			e	23	16.00				i	21	23.40		ELO	80.79	343	eP	21	43.50	-0.1	
			e	24	56.00		KONO	74.56	338	ePd	21	08.53	-0.6	BUD	80.89	326	eP	21	45.00	0.7
			e	29	36.00				ec	21	13.83		DMK	80.92	318	eP	21	44.50	-0.1	
			e	37	32.00		DAU	74.63	50	P	21	10.00	-0.3	EBH	80.95	343	eP	21	44.40	0.0
			LR	53	14.00		SUE	74.68	341	eP	21	10.50	0.8		1.2s		283.00nm		6.2mb	
BRK	69.25	58	eP	20	37.50	-0.4	RVR	74.72	59	eP	21	09.00	-1.5	YLV	80.95	316	eP	21	46.00	1.2
BKS	69.26	58	ePd	20	37.90	-0.1	PEC	74.93	59	ePd	21	10.80	-1.0	ESY	81.04	342	eP	21	44.80	-0.1
	Z	20s	5.00um			5.8Msz	ASK	75.06	341	iPc	21	13.00	1.1	ANMO	81.06	52	P	21	46.20	0.5
	N	20s	4.10um				BER	75.11	340	iPc	21	13.10	0.9		Z	20s	3.72um		5.7Msz	
	E	20s	5.00um				MSU	75.26	52	P	21	13.70	-0.2	ALO	81.06	52	iPd-	21	46.00	0.3
			iPP	20	52.20	51kmX	PLM	75.45	59	iPd	21	14.00	-1.0		1.5s		338.19nm		6.2mb	
			iPP	23	16.00		TPC	75.53	58	eP	21	13.00	-2.2		Z	20s	3.55um		5.7Msz	
			iS	29	48.00		BAR	75.99	59	eP	21	17.00	-0.8	JMB	81.06	319	iPc	21	47.00	1.7
			iSS	30	13.00		BFD	76.26	182	iPd	21	19.00	0.1	ZST	81.15	328	iP	21	46.30	0.7
			eSSS	37	44.00				e	21	31.60					i	21	47.40		
			e	38	09.00		NWAO	76.37	204	eP	21	19.00	-0.7				e	42	04.00	
			eLQ	38	48.00			Z	20s	1.20um		5.2Msz	PVL	81.15	320	iPc	21	45.00	-0.7	
			eLR	41	08.00		TOO	76.63	179	e(P)	21	21.00	0.0	BZS	81.15	323	eP	21	45.50	-0.2
PCC	69.38	58	eP	20	38.50	-0.2			i	21	22.40		EAB	81.19	343	eP	21	45.90	0.2	
GCC	69.89	58	eP	20	41.50	-0.3	KVT	76.90	313	eP	21	23.00	0.2	WIT	81.19	336	eP	21	47.00	1.3
MHC	69.95	58	ePd	20	42.00	-0.4	BBU	76.92	293	iP										



CSS	82.59	310	eP	21	53.50	0.1	GWF	84.14	333	P	22	00.87	-0.2	1.4s	312.40nm	6.3mb				
BNS	82.60	335	iPd	21	53.20	0.1	FVI	84.19	329	P	22	01.20	-0.1	Z	19s	1.95um	5.5msz			
	1.7s	600.00nm			6.5mb		DOU	84.20	335	P-	22	01.60	0.3		e	42	44.50			
	20s	11.00um			6.2msz			1.6s	571.40nm			6.6mb		LR	51	03.90				
VTS	82.67	321	iPd	21	54.00	0.2			11.90um			6.3msz								
PMO	82.82	116	iP	21	56.50	1.8			ec	22	16.50			DIX	86.68	332	eP	22	14.40	0.3
	1.5s	185.00nm			6.0mb				PP	25	18.00			SFI	86.76	328	P	22	15.80	1.7
JARJ	82.84	306	P	21	56.66	1.8			S	32	24.00			ORX	86.85	331	P	22	14.76	0.0
BURJ	82.93	306	Pd	21	57.09	1.8			SP	33	16.00			PGD	86.85	328	P	22	16.70	1.9
TPT	83.00	116	iP	21	57.50	1.9	VOY	84.20	328	iPc	22	01.40	-0.1	EMS	86.86	332	eP	22	14.90	0.0
	1.5s	175.00nm			6.0mb		CEY	84.21	328	ePc	22	01.90	0.4	LOR	86.90	334	eP	22	14.40	-0.4
MDSJ	83.05	305	Pd	21	56.62	0.7	PVY	84.22	322	iPd	22	00.95	-0.8		1.5s	856.60nm		6.8mb		
EZN	83.11	317	iP	21	56.20	0.3	THE	84.25	319	iPd	22	02.30	0.6	Z	20s	11.25um		6.3msz		
CSTJ	83.13	305	Pd	21	56.74	0.4	GRG	84.29	320	iPc	22	02.60	0.6	FLN	86.93	338	eP	22	14.40	-0.5
MMB	83.15	320	iPd	21	57.00	0.8	SQTA	84.29	330	iPc	22	03.10	1.1		1.9s	799.20nm		6.6mb		
SALJ	83.16	306	Pd	21	57.06	0.6		1.6s	534.00nm			6.5mb		Z	22s	5.50um		5.9msz		
VAH	83.17	116	iP	21	58.20	1.8			i	22	17.20		LDF	86.98	337	eP	22	14.60	-0.6	
	1.5s	105.00nm			5.8mb		PAIG	84.41	319	iPc	22	02.60	0.0		1.9s	930.05nm		6.7mb		
ENN	83.19	335	ePd	21	56.00	-0.1	MNG	84.47	157	P	22	02.20	-0.4	KOT	86.99	307	eP	22	15.00	-0.5
	1.1s	257.00nm			6.3mb				e	22	08.50		MME	87.00	329	P	22	17.00	1.3	
		i	22	03.60					e	22	16.00		BOB	87.02	330	P	22	16.60	1.1	
BHG	83.23	330	iPd	21	56.80	0.3			e	22	19.60		LBF	87.10	334	eP	22	15.40	-0.5	
		i	21	58.20			NKY	84.51	323	iPd	22	01.87	-1.3		1.5s	578.70nm		6.6mb		
KKB	83.27	320	iPc	21	59.00	2.2	TRI	84.51	328	eP	22	02.70	-0.2	FIR	87.12	328	iPd	22	17.00	1.1
MEM	83.29	335	iPd	21	56.55	-0.1			e(S)	32	17.00		GRC	87.13	335	P	22	16.27	0.4	
		ec	22	10.80					e(SS)	42	22.00		BDI	87.15	329	P	22	16.00	-0.2	
RUV	83.30	116	iP	21	59.10	1.9			eLR	51	40.00		SSF	87.19	335	eP	22	16.10	-0.1	
	1.5s	165.00nm			6.0mb		KIW	84.52	157	P	22	03.50	0.7		1.6s	644.30nm		6.6mb		
ELL	83.35	313	iP	21	56.00	-1.4	RIY	84.55	327	e(P)	22	02.70	-0.4	DHLJ	87.24	308	Pd	22	01.23	-15.4X
JVI	83.42	306	eP	21	58.00	0.2	BRY	84.65	323	iPd	22	02.07	-1.8	RSL	87.30	332	P	22	17.37	0.4
PTJ	83.44	327	iPd	21	57.00	-0.7	TTG	84.69	323	iPd	22	02.42	-1.4	LSD	87.30	332	P	22	18.15	1.0
PPT	83.45	119	eP	22	00.00	2.1			eS	32	25.00		HLW	87.34	307	eP-	22	17.00	-0.2	
	1.5s	145.00nm			6.0mb		PHP	84.70	322	iPc	22	04.10	0.2		ePP	25	42.00			
FUR	83.49	331	eP	21	57.80	0.0	WLS	84.71	333	P	22	03.77	-0.2		eS	32	42.00			
	2.0s	1230.00nm			6.8mb		CDF	84.74	333	P	22	03.85	-0.4	CCM	87.36	41	iPd	22	17.25	0.1
Z	16s	6.00um			6.1mszX		CAW	84.80	157	eP	22	05.00	0.8		eHPP	25	47.88			
MKRJ	83.49	306	Pd	21	58.51	0.3	MRW	84.80	158	P	22	04.90	0.7		ePP	25	48.54			
PPN	83.52	119	eP	21	59.00	0.8	ETA	84.84	343	iPc	22	06.00	1.5		eSKS	32	39.88			
	1.5s	95.00nm			5.8mb		SLE	84.85	332	eP	22	04.90	0.2		eS	32	56.10			
KBA	83.57	329	iPc	21	59.10	0.6	SNZO	84.87	158	P	22	05.00	0.5	GRR	87.38	338	eP	22	16.80	-0.3
	1.5s	459.00nm			6.5mb				PP	25	24.00			1.9s	974.35nm		6.7mb			
		i	22	18.00					S	32	40.00		LPL	87.41	332	eP	22	17.30	-0.3	
SRS	83.57	319	iPc	21	59.10	0.8			SP	33	36.00			1.5s	287.25nm		6.3mb			
IZM	83.64	315	eP	21	59.00	0.2			SS	38	20.00		LPG	87.42	332	eP	22	17.50	-0.2	
UCC	83.66	336	iP-	21	59.00	0.4	LIT	84.89	319	iPc	22	05.10	0.1		1.5s	353.10nm		6.4mb		
		PP	25	13.00			SDA	84.89	322	iPc	22	05.90	1.0	SMF	87.45	334	eP	22	17.30	-0.2
		SP	33	12.00			WDW	84.92	158	eP	22	05.00	0.2		1.6s	1134.30nm		6.9mb		
GHZJ	83.71	305	Pd	21	59.92	0.6			e	22	10.70		AVF	87.48	335	eP	22	17.50	-0.1	
LISJ	83.80	306	Pd	22	00.23	0.7	FNA	84.93	320	iPc	22	05.40	0.2		1.5s	1069.70nm		6.9mb		
TVO	83.82	119	eP	22	01.00	1.2	FEL	84.94	332	P	22	04.79	-0.4	PCP	87.56	330	P	22	17.74	-0.3
	1.5s	205.00nm			6.1mb		ECH	84.95	333	P	22	04.71	-0.5	LFP	87.75	338	eP	22	18.90	0.0
DMU	83.88	344	eP	21	59.80	0.2	OHR	84.96	321	iP	22	02.70	-2.7		2.0s	1077.55nm		6.8mb		
	1.4s	641.00nm			6.7mb				1000.00nm			6.7mb	CKI	87.76	330	P	22	18.90	-0.1	
KNT	83.89	320	iPc	22	00.80	0.9			i	22	11.50		ELF	87.81	32	P	22	20.65	1.4	
SOH	83.91	319	iP	22	00.40	0.3			i	22	19.00		BNI	87.82	332	P	22	20.30	0.8	
LJU	83.93	328	ePc	22	00.00	0.0	BDV	85.00	323	iPd	22	03.37	-2.1	FVM	87.83	40	ePd	22	18.40	-1.0
		e	22	01.00			HCY	85.03	323	iPd	22	03.07	-2.5		1.5s	421.95nm		6.5mb		
		e	25	16.00			ULC	85.05	322	iPd	22	05.62	-0.1	BGF	87.85	335	eP	22	19.30	-0.1
		eS	32	12.00			LACI	85.09	322	eP	22	06.50	0.6		1.9s	926.00nm		6.8mb		
PLE	83.93	323	iPd	22	00.58	0.3	CTI	85.09	329	P	22	06.00	0.0	RRL	87.90	332	P	22	20.10	0.1
VAY	83.93	320	iPd	22	01.20	1.1	ZLA	85.13	332	eP	22	06.20	0.1	DLA	87.98	32	P	22	21.95	1.9
	1.5s	232.00nm			6.2mb		MOW	85.14	157	eP	22	06.70	0.8	ROB	88.02	331	P	22	19.99	-0.3
		i	22	04.40					e	22	20.60		BSS	88.03	324	P	22	07.43	-12.9X	
SNF	83.93	336	P	22	00.80	0.8	OSS	85.15	331	ePc	22	06.50	0.1	PLDF	88.11	334	P	22	20.84	0.1
OUR	83.96	319	iPc	22	00.70	0.5	MBH	85.18	305	eP	22	07.00	0.3	PZZ	88.13	331	P	22	19.38	-1.6
SKO	84.00	321	iPd	22	01.10	0.6	MOF	85.27	333	P	22	06.15	-0.7	AGO	88.20	334	P	22	21.13	0.0
	1.5s	870.00nm			6.8mb		ECB	85.28	343	iPc	22	08.20	1.5	MAF	88.24	335	eP	22	21.60	0.3
Z	18s	8.94um			6.2msz		ECP	85.35	343	iPc	22	08.70	1.7		1.7s	1055.80nm		6.9mb		
N	16s	7.14um					VITF	85.36	334	P	22	06.72	-0.4	ENR	88.25	331	P	22	19.89	-1.6
E	18s	6.65um					BSF	85.41	333	P	22	06.92	-0.6	TCF	88.30	335	eP	22	21.70	0.1
		i	22	02.30			HAU	85.41	333	eP	22	06.90	-0.6		1.9s	897.85nm		6.8mb		
		i	22	07.60					8.25um			6.1msz	BST	88.35	340	P	22	20.66	-1.1	
		i	22	15.60			LLS	85.42	331	ePc	22	07.80	0.0	SSB	88.39	333	P	22	22.49	0.4
		i	22	24.40			LTZ	85.56	160	P	22	08.70	0.7	PYM	88.51	334	P	22	22.93	0.2
		iPP	25	14.00			VDL	85.57	331	ePc	22	08.80	0.3	SBF	88.55	331	eP	22	21.70	-1.2
		iPPP	27	06.60			BERA	85.69	321	iPd	22	09.50	0.6	LSF	88.56	335	eP	22	22.70	-0.1
		i	28	43.00			AGG	85.78	319	iPc	22	08.60	-0.9		1.8s	932.20nm		6.8mb		
		iS	32	22.50			LSK	85.79	320	eP	22	09.30	-0.3	MFF	88.77	337	eP	22	23.60	-0.2
		iPS	33	05.00			LOMF	85.80	333	P	22	09.19	-0.3		2.2s	778.05nm		6.6mb		
		iSS	37	43.00			MEO	85.83	48	iPd	22	09.50	-0.3	LBL	88.88	334	P	22	23.69	-0.6
		i	38	49.00			SAL	85.90	330</											



07d 13h

	2.1s	598.95nm	6.5mb	
Z	19s	6.00um	6.0MsZ	
LMR	89.36	331 eP	22 25.50	-1.1
	2.1s	386.75nm	6.3mb	
RJF	89.40	335 eP	22 26.70	-0.1
	1.8s	642.20nm	6.6mb	
Z	19s	10.00um	6.3MsZ	
CAF	89.55	334 eP	22 27.90	0.3
	1.8s	769.95nm	6.6mb	
LFF	89.97	335 eP	22 29.70	0.2
	1.9s	938.10nm	6.7mb	
LPO	90.66	335 eP	22 30.00	0.1
	1.9s	773.00nm	6.6mb	
ASW	90.38	302 iPd	22 32.00	0.3
		eS	33 24.00	
AKSR	90.59	302 iPc	22 35.00	2.3
AGMR	90.98	302 iPc	22 35.50	1.0
ETER	91.59	333 eP	22 37.80	0.8
MLS	91.62	334 eP	22 37.10	-0.1
EPF	91.81	335 eP	22 37.50	-0.6
	1.8s	181.25nm	6.1mb	
BTH	91.90	335 iPc	22 39.00	0.6
		epP	22 44.00	16kmX
		esP	22 52.00	
HRV	92.06	26 iPd	22 41.40	2.3
		ePP	26 28.09	
		eSKS	33 18.91	
		eS	33 39.27	
		ePS	34 48.14	
RSCP	92.10	39 ePd	22 38.40	-1.1
		e	24 06.00	
PNJ	92.55	28 iP	22 42.20	0.8
ECRI	93.10	336 iPc	22 45.30	1.2
BLA	93.17	35 iPc	22 44.50	0.1
	1.6s	181.82nm	6.2mb	
CVL	93.36	33 P	22 45.20	0.0
EBR	93.72	334 eP	22 46.00	-0.8
		ePP	26 36.00	
		eS	34 00.00	
EMON	93.72	340 iPc	22 46.90	0.0
EROQ	93.75	334 iPc	22 47.50	0.5
ESEL	93.80	331 iPc	22 48.20	1.0
ETOR	94.58	335 iPc	22 51.80	0.9
ERUA	94.65	339 iPc	22 51.30	0.2
JSC	95.23	37 P	22 53.00	-0.9
LHS	95.27	36 P	22 53.50	-0.6
EZAM	95.28	340 iPc	22 54.00	-0.1
ECHE	95.32	334 eP	22 54.80	0.5
GUD	95.40	337 eP	22 55.30	0.5
TOL	96.06	336 iPd	22 58.00	0.3
	1.8s	363.64nm	6.6mb	
		iPP	26 49.00	
		iPPP	28 28.00	
		eSKS	33 35.00	
		eS	34 20.00	
		iPS	35 30.00	
EPLA	96.50	338 eP	22 59.90	0.2
EVIA	96.69	335 eP	23 01.60	0.9
EHUE	97.47	334 eP	23 04.70	0.6
EBAN	97.54	335 eP	23 04.90	0.5
ECOG	98.28	335 eP	23 07.50	-0.3
AFC	98.29	335 eP	23 07.70	-0.2
EHOR	98.32	336 eP	23 08.40	0.6
EGUA	98.68	335 eP	23 09.10	-0.4
MAL	99.06	335 PDIF	23 10.00	-1.2
EJIF	99.65	336 eP	23 14.20	0.3
NAI	104.60	281 ePd	23 38.50	1.9
SBA	117.79	175 iPKP	28 16.00	0.5
KRI	119.78	272 iPKPd	28 23.50	2.3X
		i	29 43.50	
BUL	122.46	270 iPKPc	28 25.20	-1.1
		iPP	28 39.70	
		iPP	30 01.70	
LKO	124.01	324 PKP	28 25.96	-3.4X
SLR	125.74	264 iPKPc	28 31.00	-1.6
	1.0s	35.00nm		
Z	20s	2.48um	5.9MsZ	
TIC	126.28	322 PKP	28 33.02	-0.7
KIC	126.40	321 PKP	28 32.86	-1.1
LIC	126.65	321 PKP	28 33.78	-0.6
	Z	20s	2.75um	5.9MsZ
PRY	126.97	264 iPKPd	28 35.00	0.1
SPA	129.24	180 iPKP	28 35.20	-2.7X
	1.0s	30.00nm		
NNA	134.24	65 ePKP	28 48.00	-0.9
	0.7s	12.33nm		
Z	20s	0.53um	5.3MsZ	

NVL	140.49	202 ePKPc	28 51.00	-7.8X
		e	28 59.00	
		e	29 14.00	
		e	30 14.00	
		e	31 05.00	
		ePP	32 00.00	
		e	32 11.10	
		e	32 36.00	
ARE	141.06	64 ePKP	28 55.00	-6.8X
ZOBO	143.24	60 PKP	29 01.00	-4.9X
	1.5s	90.32nm		
Z	24s	2.11um	5.8MsZ	
		LR	18 00.00	
LPB	143.44	61 iPKPc	29 00.00	-6.1X
	1.0s	80.00nm		
		LR	18 50.00	
SNA	144.62	199 iPKPc	29 07.80	1.9
	1.0s	192.00nm		
CCH	145.36	59 PKP	29 08.70	-0.5
ANT	146.46	73 iPKPd	29 11.50	1.1
	0.8s	110.45nm		
SIV	147.56	51 PKPd	29 11.40	-1.0
AIA	149.21	157 e(PKP)	29 24.00	10.5X
SOB1	149.49	11 ePKP	29 16.10	0.5
		e	29 20.70	
		e	29 25.30	
		e	29 34.00	
LCCH	150.35	90 iPKP	29 17.00	0.7
		i	29 21.40	
ROCH	150.60	89 ePKP	29 18.00	1.0
		e	29 22.50	
RTRS	150.60	82 ePKPc	29 18.20	1.5
LNW	150.65	91 ePKP	29 16.00	-0.7
TACH	150.91	90 ePKP	29 17.50	0.4
		e	29 23.00	
SAN	151.05	89 ePKP	29 18.00	0.6
PCH	151.23	89 ePKP	29 18.00	0.3
		e	29 23.60	
RTCB	151.70	84 ePKPc	29 19.00	0.5
ZON	151.82	84 ePKP	29 23.80	5.2X
RTLL	151.88	84 e(PKP)	29 18.60	-0.1
CFA	152.18	84 ePKPd	29 16.90	-2.2X
PDOR	152.99	8 ePKP	29 20.10	-0.5
		e	29 27.70	
		e	29 38.60	
		e	33 09.80	
RFA	153.22	90 ePKP	29 19.70	-0.8
TCA	154.86	80 ePKPc	29 22.70	-0.1
PPD	157.91	43 ePKP	29 28.10	1.1
LPA	161.41	83 ePKP	29 30.00	-0.3
	Z	20s	2.84um	
		ePP	33 58.00	
		S.D. = 1.0	on 495 of 517 obs.	
		MAY 07, 1991	13h 12m 04.30±0.50s	
			47.470 N ± 6.5km 115.980 W ± 5.2km	
			DEPTH = 1.0km (geophysicist)	
			MONTANA (456)	
			ML 2.9 (BUT). Felt at Wallace, Idaho.	
EBI	0.64	189 iPd	12 17.20	0.1
NEW	1.10	316 eP	12 25.80	-0.1
		eS	12 52.00	
DPW	1.55	286 Pd	12 33.30	0.1
BUT	2.76	121 ePg	12 57.30	6.5X
		eSg	13 33.30	
HBMT	2.87	125 ePnc	12 52.90	0.6
HRV	2.93	103 ePn	12 53.40	0.3
LRM	2.94	123 ePn	12 52.80	-0.5
MCMT	3.42	139 ePn	13 00.30	0.1
BGMT	3.53	128 ePn	13 01.10	-0.5
SXM	3.53	110 ePn	13 01.70	0.0
MEMT	3.93	117 ePn	13 07.50	0.2
LTMT	3.99	136 ePn	13 07.90	-0.4
		S.D. = 0.4	on 11 of 12 obs.	
		? MAY 07, 1991	13h 17m 05.03±2.61s	
			31.518 S ± 14.2km 68.488 W ± 34.3km	
			DEPTH = 109.4 ± 22.8 km	
			SAN JUAN PROVINCE, ARGENTINA (137)	
ZON	0.17	260 iPd	17 20.40	-0.4
		eS	17 32.40	
RTLL	0.19	5 iPc	17 20.50	-0.4
CFA	0.23	113 iPc	17 21.70	0.7
		eS	17 34.00	

RTCB	0.27	277 iPd	17 20.60	-0.6
MDZ	1.40	193 iP	17 32.20	1.2
		iS	17 50.80	
RTRS	1.58	328 iPc	17 33.50	0.3
		S	17 52.10	
RFA	3.24	180 ePc	17 54.20	-0.9
		S.D. = 1.1	on 7 of 7 obs.	
		MAY 07, 1991	13h 20m 41.60±0.89s	
			44.357 N ± 8.2km 6.769 E ± 6.7km	
			DEPTH = 10.0km (geophysicist)	
			FRANCE (538)	
PZZ	0.28	58 P	20 48.43	0.9
		S	20 53.15	
ENR	0.49	105 P	20 51.16	-0.3
		S	20 57.83	
RRL	0.56	1 P	20 52.84	-0.4
		S	21 00.65	
ROB	0.79	94 P	20 57.45	0.4
		S	21 08.22	
CDR	0.99	227 ePd	21 00.60	0.2
		e	21 14.50	
PCP	1.29	81 P	21 04.73	-0.7
		S.D. = 0.8	on 6 of 6 obs.	
		? MAY 07, 1991	13h 37m 25.87±0.90s	
			44.391 N ± 11.2km 7.364 E ± 10.3km	
			DEPTH = 10.0km (geophysicist)	
			NORTHERN ITALY (545)	
			ML 1.8 (GEN).	
ENR	0.17	166 P	37 29.61	-0.2
		S	37 32.07	
PZZ	0.22	301 P	37 31.25	0.5
		S	37 35.25	
ROB	0.38	105 P	37 33.81	0.2
		S	37 39.35	
RRL	0.67	322 P	37 38.83	-0.5
		S.D. = 0.8	on 4 of 4 obs.	
		MAY 07, 1991	15h 02m 06.61±0.59s	
			37.542 N ± 4.9km 2.370 W ± 5.0km	
			DEPTH = 10.0km (geophysicist)	
			SPAIN (377)	
			mbLg 2.9 (MDD).	
EHUE	0.32	327 iP	02 12.79	-0.6
		eS	02 17.60	
ENIJ	0.58	167 iPg	02 18.00	-0.4
		eSg	02 24.70	
EALH	0.82	67 ePg	02 22.90	0.5
		eSg	02 33.30	
AFC	0.98	253 ePg	02 25.70	0.4
		eSg	02 39.80	
ECOG	0.99	255 ePg	02 25.50	0.1
EVIA	1.10	355 iPg	02 27.20	-0.1
		eSg	02 42.80	
EGUA	1.19	234 iPg	02 28.80	0.0
		eSg	02 45.80	
EBAN	1.28	299 iPnd	02 30.90	0.5
		eSn	02 48.40	
MAL	1.82	244 ePn	02 42.00	3.8X
		iSg	03 07.50	
EHOR	2.30	278 ePn	02 44.90	-0.3
ECHE	2.32	28 ePg	02 52.30	6.8X
		eSg	03 22.10	
ETOR	3.28	4 ePg	03 10.80	11.6X
		eSg	03 50.40	
		S.D. = 0.5	on 9 of 12 obs.	
		MAY 07, 1991	15h 52m 43.37±0.58s	
			32.937 S ± 6.8km 69.121 W ± 5.9km	
			DEPTH = 5.0km (geophysicist)	
			MENDOZA PROVINCE, ARGENTINA (139)	
			Felt (III) at Mendoza.	
MDZ	0.23	77 iP	52 45.30	-2.9
		iS	52 50.40	
JACH	1.27	281 iPd	53 06.00	-1.4
		iS	53 21.00	
PCH	1.35	239 iPd	53 09.00	0.1
		iS	53 27.30	
SAN	1.39	248 iPd	53 09.40	-0.1
		i	53 26.70	
		i	53 30.70	
ZON	1.44	15 iPd	53 10.80	0.6



RTCB	1.47	11	iPd	53	11.10	0.4	PTJ	3.41	52	eP	21	38.60	8.5X	eSg	59	01.00				
CFA	1.52	30	iPc	53	13.00	1.7	KHC	5.36	10	Pg	21	55.50	-2.2	DST	0.65	99	iPg	58	53.30	-0.2
			eS	53	33.00					Sg	22	58.50					iSg	59	03.30	
ROCH	1.59	268	iPd	53	11.90	-0.6	CIN	13.64	112	iPg	23	56.00	4.5X	KCT	0.69	38	iPg	58	54.90	0.8
			iS	53	31.40					iSg	24	02.00		KGT	0.83	333	iPg	58	56.40	-0.2
TACH	1.68	244	iPd	53	14.20	0.6	YER	14.02	113	iPg	23	47.80	-8.8X				iSg	59	07.40	
			iS	53	36.50			S.D. = 1.4	on	15	of	18	obs.	EZN	1.14	276	ePg	59	02.20	0.3
RTLL	1.70	19	iPc	53	15.00	1.2										eSg	59	15.70		
RFA	1.91	164	iPc	53	18.50	1.6	* MAY 07, 1991	18h	04m	20.63±	1.67s		IZI	1.43	64	ePg	59	06.70	0.2	
IHA	2.12	267	iPd	53	19.20	-0.7		19.531 N	±17.4km	64.359 W	± 9.7km		CTT	1.51	18	ePn	59	06.80	-0.8	
			iS	53	45.60			DEPTH =	27.9 ±	8.7 km		DMK	2.11	359	ePn	59	15.50	-0.8		
LCCH	2.12	255	iPc	53	20.00	0.1		3.8mb ( 1 obs.)						S.D. = 0.7	on	8	of	8	obs.	
			iS	53	47.50		VIRGIN ISLANDS				( 91)									
LNV	2.17	241	iPc	53	20.70	0.1		ML 4.7 (FDF).												
			iS	53	49.10		CPD	2.09	225	iP	04	53.00	-1.5							
RTRS	2.77	354	iPd	53	31.90	2.6X	SJG	2.21	235	i(P)	04	55.00	-1.2							
TCA	4.16	69	ePd	53	49.00	0.0	CLLP	2.55	236	P	05	04.00	3.0X							
ANT	9.27	353	eP	55	02.30	1.7	LRS	2.66	243	iP	05	05.00	2.4							
CCH	15.72	11	eP	56	28.00	0.5	NEV	2.93	144	eP	05	06.80	0.5							
LPB	16.36	3	P	56	35.00	-0.8	BPA	3.43	136	eP	05	13.50	0.0							
ZOBO	16.62	3	Pc	56	37.20	-2.1				S	05	56.00								
	S.D. = 1.3	on	19	of	20	obs.	PAG	4.32	143	eP	05	26.51	0.3							
									S	06	15.00									
% MAY 07, 1991	16h	44m	37.11±	1.25s			DEG	4.48	135	eP	05	28.00	-0.6							
	43.874 N	±12.5km	12.163 E	± 8.3km			BBL	4.84	145	eP	05	33.80	0.2							
	DEPTH =	10.0km	(geophysicist)				TOV	11.02	209	eP	07	05.00	5.3X							
CENTRAL ITALY			(381)				SDV	12.20	211	eP	07	20.30	4.5X							
SFI	0.23	282	Pc	44	41.60	-0.4	SIV	35.45	175	P	11	16.00	-0.7							
			eSg	44	44.30		ZOBO	35.77	186	P	11	21.00	0.9							
CRE	0.29	212	Pc	44	43.40	0.2	ALO	40.15	301	eP	12	00.00	3.7X							
			eSg	44	48.70		YKA	54.94	334	eP	13	50.80	-0.4							
PGD	0.32	270	P	44	43.40	-0.4		0.9s	0.90nm	3.8mb										
			eSg	44	47.10			S.D. = 1.3	on	11	of	15	obs.							
ARV	0.68	123	P	44	50.50	-0.1	? MAY 07, 1991	18h	40m	48.79±	1.26s									
			eSg	45	02.70			35.947 S	± 8.8km	177.740 E	±13.9km									
MME	1.10	287	P	44	58.70	0.7		DEPTH =	10.0km	(geophysicist)										
			eSg	45	13.00			4.9mb ( 3 obs.)												
	S.D. = 0.7	on	5	of	5	obs.	OFF E. COAST OF N. ISLAND, N.Z. (160)													
							HBZ	1.71	165	eP	41	18.30	-0.4							
MAY 07, 1991	16h	50m	42.93±	0.72s			PUZ	2.16	169	P	41	25.90	0.5							
	38.448 N	± 6.9km	22.024 E	± 7.7km						eS	41	56.20								
	DEPTH =	10.0km	(geophysicist)				WLZ	2.56	222	P	41	42.40	11.4X							
GREECE			(364)				NOZ	2.68	175	eP	41	32.80	0.1							
ML 3.1 (ATH).							NGZ	3.64	207	eP	41	53.00	6.4X							
AGG	0.62	23	iPd	50	54.90	-0.6	CNZ	3.68	208	eP	41	53.90	6.8X							
			eS	51	05.50		PGZ	4.80	193	eP	42	02.40	-0.5							
VLS	1.16	257	ePb	51	04.50	-0.1	MNG	4.99	200	eP	42	06.10	0.6							
ATH	1.42	109	ePn	51	09.20	0.5				eS	43	10.40								
			eSn	51	27.00		KIW	5.39	203	eP	42	11.70	0.6							
LIT	1.69	12	eP	51	15.80	3.2X	CAW	5.56	201	eP	42	13.20	-0.4							
KZN	1.87	354	ePn	51	16.00	0.7	WDW	5.73	201	eP	42	15.40	-0.5							
VLI	1.87	157	ePn	51	15.00	-0.3	MRW	5.79	203	eP	42	16.60	-0.1							
PAIG	1.96	41	eP	51	16.20	-0.3				eS	43	30.10								
	S.D. = 0.7	on	6	of	7	obs.	TCW	5.92	206	eP	42	18.60	0.1							
									eS	43	34.40									
MAY 07, 1991	17h	20m	35.76±	0.58s			LTZ	8.03	210	eP	42	48.20	-0.1							
	43.873 N	± 5.7km	12.103 E	± 5.4km					S	44	24.60									
	DEPTH =	10.0km	(geophysicist)				STK	30.16	267	eP	47	04.80	3.6X							
CENTRAL ITALY			(381)					1.9s	1.20nm	3.4mb X										
MD 3.1 (FIR), 3.0 (TRI).							ASPA	39.65	276	iPd	48	24.10	1.5							
SFI	0.19	285	Pd	20	39.80	-0.1		0.7s	9.50nm	4.6mb										
			eSg	20	42.20		WB2	41.16	281	eP	48	34.60	-0.4							
CRE	0.27	204	Pc	20	41.40	-0.1		0.5s	14.10nm	5.0mb										
			eSg	20	45.10		WRA	41.16	281	P	48	34.00	-1.0							
PGD	0.28	271	P	20	41.50	-0.1		0.6s	15.80nm	4.9mb										
			eSg	20	45.00		SOD	144.47	341	ePKP	00	44.00	18.1X							
FIR	0.62	261	ePg	20	49.50	1.3	KAF	148.31	335	iPKP	00	22.90	-9.5X							
			iSg	20	58.00			0.6s	5.20nm											
ARV	0.71	121	P	20	49.00	-0.9			eS	00	24.50									
			eSg	21	01.20		NUR	149.99	333	ePKP	00	27.00	-8.0X							
MME	1.06	288	P	20	55.50	-0.4	LIC	150.31	174	PKP	00	31.20	-5.7X							
			eSn	21	09.10		NB2	153.46	345	PKP	00	35.10	-5.0X							
BDI	1.10	280	P	20	56.30	-0.2		0.7s	1.70nm											
			eSg	21	11.30		HFS	153.70	342	ePKP	00	33.50	-6.9X							
MNS	1.55	164	P	21	03.80	0.4		1.1s	9.90nm											
TRI	2.18	32	e(Pg)	21	16.30	3.7		S.D. = 0.7	on	14	of	24	obs.							
			i(Sg)	21	48.30		% MAY 07, 1991	19h	58m	40.51±	1.05s									
RIY	2.20	47	ePn	21	12.40	-0.4		39.711 N	± 9.5km	27.801 E	± 6.1km									
CTI	2.20	352	P	21	12.40	-0.5		DEPTH =	10.0km	(geophysicist)										
SDI	2.51	149	P	21	17.00	-0.2	TURKEY				(366)									
FVI	2.76	10	P	21	20.90	0.1	MD 3.0 (ISK).													
KBA	3.32	15	iPnc	21	28.70	-0.3	EDC	0.64	4	iPa	58	54.00	0.7							
			iSn	22	10.90															
			i	22	12.60															



07d 21h

E 13s	0.40um					PKI	56.04 306 P	54 23.74	-1.1			e(Pg)	13 40.90	
CN2	33.25 0 eP	54 04.00				KKN	56.24 306 P	54 24.36	-1.8			eSg	14 14.90	
Z 16s	1.60um					DMN	56.30 306 P	54 24.02	-2.6	MOX	3.37 62 eP	13 50.00	12.3X	
N 14s	0.30um					GKN	56.84 306 P	54 28.38	-2.0			eSg	14 30.00	
E 14s	0.40um					KOD	58.24 284 eP	54 41.50	1.0	KHC	4.36 88 eP	13 51.00	-0.8	
ASPA	34.92 166 iPd	53 05.10	-0.8			HYB	58.69 292 eP	54 43.00	-0.3			e	14 12.00	
1.2s	11.10nm					WMO	62.49 323 P	55 09.60	0.8	PRU	5.02 78 eP	14 22.50	21.5X	
Z 22s	1.00um					GAR	72.00 312 eP	56 09.60	0.6			eSg	15 28.00	
36.69 326 P		53 21.40	0.6			QUE	72.17 303 eP	56 12.00	1.8	S.D. = 0.9 on 15 of 19 obs.				
3.5s	250.00nm					MAIO	79.60 307 eP	56 54.00	2.0	MAY 08, 1991 03h 19m 55.73± 0.60s				
Z 22s	0.90um					LPB	150.57 131 PKP	04 34.00	1.9X	45.517 N ± 5.5km 14.320 E ± 5.6km				
N 20s	2.00um					ZOBO	150.72 131 PKP	04 41.80	9.3X	DEPTH = 10.0km (geophysicist)				
GUN	40.84 301 P	53 55.62	-0.1			CCH	151.45 135 PKP	04 43.50	10.3X	YUGOSLAVIA (383)				
PKI	41.14 300 P	53 58.32	0.1			SIV	155.83 141 (PKP)	04 42.00	3.0X	MD 3.2 (LJU), 2.5 (TRI), ML 3.0				
KKN	41.31 300 P	53 58.60	-0.9			S.D. = 1.4 on 22 of 31 obs.				(KBA). Felt (IV) in the Jelsane area.				
DMN	41.40 300 P	54 00.76	0.5			* MAY 08, 1991 00h 01m 58.65± 1.29s				RIY				
1.0s	41.00nm					18.859 N ± 19.3km 66.755 W ± 12.5km				0.18 165 iPg				
GKN	41.91 300 P	54 03.86	-0.5			DEPTH = 80.8 ± 12.3 km				iSg				
STK	44.88 160 eP	54 28.30	0.2			3.8mb ( 1 obs.)				0.23 18 iPg				
0.9s	2.80nm					PUERTO RICO REGION ( 90)				iSg				
IRK	45.06 342 eP	54 28.20	-1.1			LRS	0.57 189 iP	02 12.50	-0.8	CEY	0.23 18 iPg	20 00.00	-0.8	
HYB	45.78 284 eP	54 39.50	4.0X				S	02 24.80		TRI	0.44 296 iPg	20 02.90	-1.7	
WMO	46.49 323 P	54 41.80	0.9			CLLP	0.79 168 P	02 16.90	1.3	LJU	0.55 16 iPg	20 06.00	-0.8	
1.2s	10.00nm					MGP	0.90 201 iP	02 17.10	0.3		iSg	20 09.70		
N 20s	2.80um					SJG	0.94 142 iP	02 18.00	0.7	VOY	0.60 330 iPg	20 06.20	-1.6	
E 20s	1.40um					LPR	1.00 123 iP	02 17.80	-0.3		eSg	20 16.00		
GBA	46.83 279 Pc	54 42.60	-1.2				S	02 32.80		VBY	0.66 91 ePg	20 08.80	0.0	
0.4s	2.40nm					CPD	1.14 136 iP	02 18.00	-1.8	ZAG	1.20 75 ePg	20 17.50		
YAK	51.60 3 eP	55 28.10	8.3X			PAG	5.60 119 eP	03 15.00	-6.3X		iSg	20 21.00	2.9X	
1.0s	10.00nm					MGG	5.96 119 eP	03 27.00	0.8		iSg	20 37.50		
DZM	51.71 129 iPd	55 21.90	0.5			UPA	15.81 233 eP	05 26.30	-11.6X	PTJ	1.21 71 iPg	20 19.40	1.1	
GAR	56.43 310 eP	55 55.50	-0.4			ZOBO	34.93 182 P	08 45.00	-0.5		eSg	20 35.30		
QUE	57.50 299 eP	56 02.60	-1.1			SIV	35.08 170 (P)	08 50.00	3.9X	VVI	1.41 290 Pd	20 22.50	1.1	
MAIO	64.40 305 eP	56 51.00	0.8			LPB	35.19 182 eP	08 45.00	-2.5X		eSg	20 41.70		
IMA	76.90 24 eP	58 06.90	1.7			YKA	54.58 335 eP	11 20.70	0.1	FVI	1.52 316 P	20 24.30	1.4	
1.4s	22.80nm						0.6s 0.60nm		3.8mb		eSg	20 44.10		
TOA	80.19 28 eP	58 28.10	5.0X			S.D. = 1.2 on 9 of 13 obs.				KBA	1.70 337 iPg	20 27.10	1.3	
SOD	83.76 337 eP	58 42.00	0.5			? MAY 08, 1991 01h 37m 06.59± 6.54s				CTI	1.94 287 P	20 30.60	1.4	
INK	84.50 21 eP	58 45.00	-0.1			50.772 N ± 108.km 173.663 W ± 13.2km					eSn	20 52.40		
KAF	85.03 332 eP	58 47.30	-0.6			DEPTH = 33.0km (normal)				ARV	2.25 207 P	20 33.40	-0.1	
NAI	88.71 268 iPd	59 13.50	6.4X			4.1mb ( 3 obs.)					eSn	21 01.70		
YKA	94.01 24 eP	59 30.50	0.1			ANDREANOF ISLANDS, ALEUTIAN IS. ( 7)				SFI	2.38 229 P	21 02.30	27.0X	
1.1s	2.20nm					ADK	2.20 302 eP	37 41.50	0.0	PGD	2.48 229 P	21 08.40	31.5X	
TUL	119.81 38 e(PKP)	05 28.50	25.1X				e(S)	38 07.00		CRE	2.54 223 P	20 37.10	-0.6	
LPB	165.66 116 PKP	06 23.00	4.9X			IMA	18.42 26 e(P)	41 13.00	-7.8X	KHC	3.65 352 Pn	20 49.50	-4.0X	
ZOBO	165.74 115 PKP	06 27.00	8.6X			INK	26.15 33 eP	42 39.00	0.0		Pg	20 54.00		
S.D. = 1.0 on 43 of 52 obs.						YKA	33.30 46 eP	43 42.90	0.1		eSn	21 40.00		
* MAY 07, 1991 23h 44m 46.13± 1.13s							0.5s 0.50nm		3.7mb		Sg	21 54.00		
2.740 S ± 9.1km 134.518 E ± 26.0km						NB2	68.47 357 P	48 07.30	0.3	S.D. = 1.2 on 13 of 17 obs.				
DEPTH = 33.0km (normal)							0.7s 1.20nm		4.1mb	& MAY 08, 1991 03h 24m 21.87s				
4.7mb ( 7 obs.) 4.0Msz ( 1 obs.)						HFS	69.29 356 eP	48 11.50	-0.4	62.889 N 151.310 W				
WEST IRIAN REGION (196)							0.6s 1.70nm		4.3mb	DEPTH = 115.3km				
						S.D. = 0.4 on 5 of 6 obs.				CENTRAL ALASKA ( 1)				
						MAY 08, 1991 03h 12m 43.94± 0.43s				<AEIC>.				
						49.159 N ± 3.6km 6.934 E ± 5.5km				CUT				
						DEPTH = 10.0km (geophysicist)				0.68 135 iPd				
						GERMANY (543)				eS				
						MD 2.8 (STR), 2.2 (UCC).				24 41.02				
						GWF	0.49 112 Pg	12 53.95	0.1	eS				
						RUP	0.55 9 ePg	12 54.71	-0.4	24 55.31				
						WLF	0.72 315 iPd	12 57.80	-0.3	24 55.80				
							iS	13 07.71		24 55.80				
						CDF	0.78 163 Pg	12 58.84	-0.4	24 55.80				
						WLS	0.80 159 Pg	12 59.21	-0.3	24 55.70				
						ECH	0.96 171 Pg	13 02.12	0.0	24 42.75				
						VITF	1.13 214 Pg	13 04.75	-0.4	24 58.74				
						MOF	1.32 174 Pg	13 08.77	0.5	24 45.77				
							Sg	13 27.15		25 05.38				
						TNS	1.45 42 ePnc	13 10.00	-0.3	24 47.49				
						FEL	1.47 150 Pg	13 12.18	1.6	25 07.23				
						MEM	1.57 338 P	13 11.20	-0.7	24 48.15				
							id	13 13.60		25 09.07				
						ENN	1.74 338 iPnc	13 16.50	2.2	24 48.94				
							0.7s 43.00nm			25 09.45				
						DOU	1.79 303 P	13 14.60	-0.4	24 50.88				
						LOMF	1.81 182 Pn	13 14.95	-0.5	24 49.51				
						SNF	2.19 309 iP	13 25.20	4.4X	25 10.93				
						GRF	2.85 78 e(Pn)	13 39.00	8.7X	24 50.11				
										25 12.08				
										24 50.50				
										25 13.30				
										24 50.60				
										24 51.32				
										25 14.17				
										24 51.94				
										24 51.70				



SML	1.76	127	eS	25 15.04	
			eP	24 51.83	-0.8
			eS	25 15.29	
CKL	1.77	196	iPd	24 52.35	-0.4
			eS	25 16.69	
PMS	1.84	153	ePc	24 53.03	-0.6
			eS	25 16.88	
NEA	1.96	29	iPd	24 54.19	-0.9
KNK	2.00	137	iPc	24 54.67	-0.9
			eS	25 20.07	
SCM	2.14	118	ePc	24 56.25	-1.2
			eS	25 23.58	
TTA	2.15	273	ePc	24 57.40	-0.2
NKA	2.15	179	eP	24 59.50	2.0
RDT	2.38	193	ePd	24 59.78	-0.8
			eS	25 30.82	
DFR	2.40	196	ePd	25 00.63	-0.2
SLKM	2.45	167	eP	25 01.01	-0.4
NCT	2.46	199	eP	25 01.23	-0.4
HDA	2.47	50	ePd	25 00.58	-1.1
RDN	2.48	197	eP	25 01.32	-0.6
TOA	2.51	106	eP	25 02.30	0.0
RDW	2.52	197	eP	25 01.97	-0.5
RS2	2.53	196	eP	25 02.37	-0.3
RSO	2.53	196	eP	25 02.28	-0.4
FBA	2.55	36	ePd	25 02.30	-0.4
RED	2.58	196	eP	25 02.57	-0.6
THY	2.58	76	eP	25 03.94	0.8
DDM	2.62	67	eP	25 02.85	-0.8
PAX	2.67	86	eP	25 03.73	-0.7
SDG	2.68	95	ePd	25 03.92	-0.6
SVW	2.71	231	ePd	25 04.60	-0.3
GLM	2.73	38	iPd	25 04.22	-0.9
GLI	2.84	133	iPc	25 04.98	-1.6
NNL	2.86	180	eP	25 07.32	0.7
TZL	2.86	105	ePc	25 06.38	-0.5
KLU	2.89	117	iPc	25 05.42	-1.9
VZW	2.90	127	ePc	25 05.53	-1.9
			eS	25 40.10	
SEW	2.93	161	eP	25 06.81	-1.0
VLZ	2.94	125	iPc	25 05.71	-2.1
KNIM	3.07	145	iPc	25 07.08	-2.5
IMA	3.35	343	ePc	25 13.00	-0.6
DOT	3.36	74	iPd	25 12.43	-1.2
CNPM	3.38	179	iPd	25 13.03	-0.8
MTU	3.40	147	iPc	25 11.90	-2.2
AUI	3.71	197	eP	25 18.51	0.2
TMW	3.80	80	ePd	25 17.94	-1.6
GLB	3.81	109	ePc	25 17.90	-1.7
MCNL	4.00	203	eP	25 21.88	-0.3
CDD	4.13	197	eP	25 23.28	-0.8
SYI	4.33	188	eP	25 25.09	-1.5
CROM	4.43	115	eP	25 26.29	-1.9
TGL	4.55	114	eP	25 27.77	-2.1
BALM	4.62	110	ePc	25 28.42	-2.4
CTGM	5.09	108	eP	25 35.46	-1.8

64 obs. associated

MAY 08, 1991 03h 29m 26.68±0.48s  
 44.332 N ± 3.4km 7.304 E ± 4.3km  
 DEPTH = 10.0km (geophysicist)  
 NORTHERN ITALY (545)  
 ML 2.2 (LDG), 1.7 (GEN), 1.4 (STR).

ENR	0.13	142	P	29 30.23	0.2
			S	29 32.54	
PZZ	0.23	320	P	29 31.35	-0.3
			S	29 34.44	
TOUF	0.32	187	Pg	29 32.87	-0.6
AUTN	0.35	165	Pg	29 33.90	-0.1
SAOF	0.39	152	Pg	29 34.37	-0.3
			Sg	29 40.05	
ROB	0.41	95	P	29 35.28	0.2
			S	29 40.80	
AURF	0.45	178	Pg	29 35.50	-0.3
			Sg	29 41.92	
MVIF	0.45	194	Pg	29 35.81	-0.1
			Sg	29 42.07	
SBF	0.48	169	Pg	29 36.60	0.2
			Sg	29 42.20	
RRL	0.70	328	P	29 40.59	0.0
FRF	0.91	212	Pg	29 44.60	0.6
			Sg	29 55.20	
LRG	1.11	218	Pg	29 47.50	0.0
			Sg	30 00.70	
LMR	1.15	210	Pg	29 48.60	0.4

Sg 30 02.20  
 S.D. = 0.3 on 13 of 13 obs.  
 ? MAY 08, 1991 04h 03m 33.00±1.63s  
 40.596 N ± 10.6km 29.302 E ± 13.6km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.6 (ISK).

YLV 0.06 118 iPg 03 35.60 0.2  
 IZI 0.29 153 ePg 03 38.90 -0.2  
 eSg 03 45.40  
 HRT 0.36 51 iPg 03 40.30 -0.1  
 iSg 03 46.80  
 DST 1.12 208 ePg 03 54.00 0.0  
 S.D. = 0.3 on 4 of 4 obs.

\* MAY 08, 1991 04h 34m 01.66±1.07s  
 6.339 N ± 13.2km 72.251 W ± 9.6km  
 DEPTH = 10.0km (geophysicist)  
 NORTHERN COLOMBIA (99)

BMG 1.10 312 iPd 34 22.50 0.2  
 BOG 2.48 227 iPd 34 43.00 -0.1  
 iS 35 14.00  
 SDV 3.00 32 iPnd 34 52.00 1.8X  
 iSn 35 30.10  
 TOV 4.20 35 iPnc 35 06.60 -0.7  
 eSn 35 56.60  
 CEOS 4.71 55 iP 35 16.00 1.4  
 OLLA 6.51 56 eP 35 39.30 -0.8  
 UPA 7.68 290 eP 36 32.00 35.7X  
 YKA 64.01 340 eP 44 51.20 13.8X  
 0.5s 0.20nm  
 S.D. = 1.2 on 5 of 8 obs.

\* MAY 08, 1991 05h 20m 59.06±1.01s  
 5.584 S ± 19.7km 150.811 E ± 14.0km  
 DEPTH = 89.7 ± 18.1 km  
 4.0mb ( 3 obs.)  
 NEW BRITAIN REGION (192)

RAB 1.94 44 iPd 21 31.00 0.1  
 iS 21 48.00  
 PMG 5.25 223 eP 22 16.50 -0.2  
 0.5s 232.39nm 5.7mb X  
 eS 23 19.00  
 BKM 20.85 127 iPd 25 47.00 11.3X  
 WB2 21.45 227 eP 25 41.80 0.1  
 0.6s 3.80nm 3.9mb  
 BRS 21.77 175 iPc 25 45.50 0.6  
 DZM 22.30 139 iPc 25 49.90 -0.3  
 ASPA 24.26 220 iPc 26 10.00 0.9  
 0.4s 11.10nm 4.6mb  
 STK 27.55 197 iPc 26 39.10 -0.3  
 0.6s 2.10nm 3.9mb  
 FORR 32.97 218 eP 27 26.50 -0.9  
 S.D. = 0.7 on 8 of 9 obs.

\* MAY 08, 1991 05h 34m 12.28s  
 58.078 N 153.366 W  
 DEPTH = 43.6km  
 3.0mb ( 1 obs.)  
 KODIAK ISLAND REGION (13)  
 <AEIC>. ML 2.7 (AEIC).

KDC 0.57 125 iP 34 23.48 -0.6  
 S 34 33.29  
 SYI 0.74 44 iP 34 25.40 -1.0  
 eS 34 35.86  
 CDD 0.87 350 eP 34 27.20 -1.0  
 MCNL 1.22 336 iP 34 31.94 -1.3  
 eS 34 48.08  
 AUI 1.26 359 eP 34 32.89 -0.9  
 eS 34 49.18  
 AUE 1.28 360 iP 34 33.66 -0.4  
 AUH 1.29 358 eP 34 33.45 -0.8  
 XLV 1.63 31 eP 34 38.60 -0.3  
 PDB 1.77 346 eP 34 39.26 -1.7  
 S 35 01.66  
 CNPM 1.83 36 eP 34 40.27 -1.5  
 >NNL 2.24 28 iP 34 46.52 -1.1  
 RED 2.37 7 eP 34 47.83 -1.8  
 RSO 2.41 7 eP 34 49.45 -0.9  
 RS2 2.41 7 eP 34 49.55 -0.8  
 RDW 2.43 7 eP 34 49.52 -1.0  
 RDN 2.46 7 eP 34 49.66 -1.3

NCT 2.50 5 eP 34 49.24 -2.3  
 DFR 2.55 8 eP 34 50.52 -1.6  
 RDT 2.55 11 iP 34 50.32 -1.9  
 SEW 2.87 43 eP 34 53.15 -3.4  
 NKA 2.89 21 eP 34 57.68 0.9  
 SLKM 2.92 32 eP 34 54.35 -3.1  
 CKL 3.17 9 eP 34 58.70 -2.3  
 SPU 3.18 12 eP 34 58.91 -2.3  
 BGL 3.23 8 eP 34 59.79 -2.1  
 SVW 3.25 340 eP 34 59.50 -2.6  
 CRP 3.26 10 eP 35 00.41 -1.9  
 NCG 3.39 10 eP 35 01.55 -2.6  
 MTU 3.52 55 eP 35 02.98 -2.9  
 SUA 3.65 20 eP 35 05.97 -1.8  
 KNIM 3.68 49 eP 35 05.21 -2.9  
 PMS 3.72 30 eP 35 05.02 -3.7  
 SKT 4.02 12 eP 35 11.24 -1.7  
 PLRM 4.12 29 eP 35 10.74 -3.6  
 KNK 4.17 35 eP 35 10.96 -4.1  
 GLI 4.26 46 eP 35 13.15 -3.2  
 GHO 4.33 29 eP 35 14.43 -2.9  
 VZW 4.58 46 eP 35 17.48 -3.3  
 VLZ 4.71 46 eP 35 18.63 -3.9  
 YKA 19.49 61 eP 38 32.90 -5.3  
 0.3s 0.30nm 3.0mb  
 40 obs. associated

\* MAY 08, 1991 07h 49m 06.64±8.57s  
 19.219 N ± 58.0km 66.796 W ± 23.0km  
 DEPTH = 10.0km (geophysicist)  
 PUERTO RICO REGION (90)

LRS 0.92 183 iP 49 24.50 0.2  
 CLLP 1.15 170 P 49 28.40 0.2  
 MGP 1.24 193 iP 49 29.30 -0.3  
 SJG 1.26 151 iP 49 29.80 -0.3  
 S 49 44.80  
 LPR 1.26 136 iP 49 30.00 -0.1  
 S 49 44.70  
 CPD 1.44 144 iP 49 33.00 0.2  
 S.D. = 0.3 on 6 of 6 obs.

\* MAY 08, 1991 08h 51m 04.34±0.40s  
 22.043 S ± 10.0km 68.322 E ± 8.3km  
 DEPTH = 10.0km (geophysicist)  
 5.1mb ( 18 obs.)  
 MID-INDIAN RISE (429)

SLR 36.70 256 iPd 58 50.00 0.3  
 1.1s 25.32nm 4.9mb  
 CHG 50.46 39 eP 00 42.00 1.5  
 QUE 51.95 358 eP 00 54.10 2.3  
 DMN 51.96 19 P 00 50.92 -1.2  
 1.0s 18.00nm 5.0mb  
 PKI 52.01 19 P 00 51.68 -0.9  
 0.9s 16.00nm 4.9mb  
 KKN 52.18 19 P 00 52.60 -1.1  
 1.0s 28.00nm 5.1mb  
 GUN 52.48 20 P 00 54.90 -1.2  
 0.9s 32.00nm 5.2mb  
 KMI 57.57 37 eP 01 34.00 1.0  
 ASPA 59.96 105 eP 01 48.70 -0.8  
 0.8s 11.90nm 5.1mb  
 WRA 61.23 101 P 01 57.00 -1.2  
 0.7s 11.70nm 5.1mb  
 WB2 61.24 101 iPc 01 57.60 -0.7  
 0.7s 11.50nm 5.1mb  
 STK 64.95 116 eP 02 22.70 0.0  
 1.1s 2.30nm 4.3mb  
 XAN 67.85 36 eP 02 39.50 -1.5  
 GTA 67.85 26 P 02 42.00 0.9  
 1.2s 20.00nm 5.2mb  
 pP 02 46.20 14kmX  
 WMO 67.91 15 P 02 41.00 -0.3  
 SPA 68.09 180 iPc 02 42.60 0.3  
 1.1s 22.62nm 5.3mb  
 TIA 74.05 39 eP 03 19.40 1.1  
 KIC 76.85 282 Pd 03 34.60 -0.1  
 LIC 77.05 282 Pd 03 35.90 0.1  
 TIC 77.21 283 Pd 03 36.70 -0.1  
 MLR 77.47 331 eP 03 36.00 -1.7  
 LKO 78.92 285 Pd 03 44.44 -1.7  
 0.9s 16.50nm 5.0mb  
 KRA 83.57 331 eP 04 10.00 0.2  
 ZST 83.60 328 eP 04 09.60 -0.4  
 CN2 83.84 38 eP 04 13.80 2.5  
 LPL 87.42 322 eP 04 28.70 -0.6



08d 09h

CLL 87.66 329 iP 04 30.50 0.5  
1.3s 13.00nm 5.1mb  
BSF 88.72 324 eP 04 35.00 -0.3  
1.0s 10.40nm 5.1mb  
CDF 88.80 324 eP 04 35.50 -0.2  
1.0s 6.00nm 4.8mb  
HAU 89.07 324 eP 04 36.70 -0.2  
1.0s 9.60nm 5.0mb  
LBF 89.83 322 eP 04 40.40 -0.1  
1.0s 9.60nm 5.0mb  
LOR 90.05 322 eP 04 41.40 -0.1  
0.9s 3.95nm 4.6mb  
Z 40s 0.08um 3.8mszx  
SSF 90.14 322 eP 04 42.00 0.1  
1.5s 26.10nm 5.3mb  
BGF 90.25 321 eP 04 42.90 0.5  
1.2s 14.00nm 5.3mb  
ZOBO 122.81 232 PKP 10 41.00 1.4  
YKA 139.52 2 ePKP 11 02.70 -6.6X  
0.9s 1.60nm 5.3mb  
FFC 146.56 350 ePKP 11 22.00 0.3  
1.2s 14.00nm 5.3mb  
SES 151.70 359 ePKP 11 36.00 6.1X  
PNT 152.06 11 ePKP 11 37.00 6.5X  
1.0s 22.00nm 5.3mb  
ALO 166.36 342 ePKP 11 48.70 1.4  
1.0s 1.75nm 5.3mb  
S.D. = 1.1 on 37 of 40 obs.

\* MAY 08, 1991 08h 52m 35.21±0.72s  
31.530 S ± 7.8km 68.556 W ± 6.9km  
DEPTH = 10.0km (geophysicist)  
SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.11 261 iPc 52 38.50 0.4  
eS 53 48.50  
RTCB 0.21 282 ePd 52 38.90 -1.0  
RTLL 0.21 20 iPd 52 40.00 0.1  
MDZ 1.37 190 iP 52 55.50 -4.9X  
iS 53 21.60  
JACH 2.08 236 iPc 53 11.00 0.4  
i 53 13.50  
i 53 38.10  
PCH 2.66 218 eP 53 21.20 2.2X  
iS 53 58.40  
TACH 2.92 223 iPd 53 23.50 0.9  
iS 54 05.70  
RFA 3.23 179 ePc 53 26.00 -1.1  
S 54 17.00  
TCA 3.39 88 eP 53 29.50 0.1  
i 53 36.80  
S 54 20.20  
S.D. = 0.9 on 7 of 9 obs.

? MAY 08, 1991 09h 11m 10.25±1.07s  
39.051 N ± 13.8km 27.613 E ± 24.1km  
DEPTH = 54.1km (geophysicist)  
TURKEY (366)  
MD 2.5 (ISK).

IZM 0.71 203 ePg 11 24.40 0.0  
eSg 11 35.40  
DST 0.96 55 ePn 11 28.10 0.3  
EDC 1.31 8 ePn 11 33.00 0.5  
KCT 1.33 25 ePn 11 32.00 -0.8  
S.D. = 1.0 on 4 of 4 obs.

\* MAY 08, 1991 09h 42m 13.39±0.50s  
16.602 S ± 12.6km 66.884 E ± 9.3km  
DEPTH = 10.0km (geophysicist)  
5.1mb (14 obs.)  
MID-INDIAN RISE (429)

CHG 47.26 43 eP 50 49.10 0.2  
DMN 47.37 22 P 50 50.26 0.3  
1.0s 52.00nm 5.6mb  
PKI 47.44 23 P 50 50.10 -0.5  
0.5s 8.00nm 5.1mb  
GKN 47.56 21 P 50 51.40 0.1  
1.0s 87.00nm 5.8mb  
KKN 47.59 22 P 50 51.30 -0.4  
0.8s 41.00nm 5.6mb  
GUN 47.92 23 P 50 51.96 -2.5  
0.7s 40.00nm 5.6mb  
ASPA 62.83 108 iPc 52 41.70 -0.3  
0.8s 8.10nm 5.0mb  
WRA 65.76 104 P 52 48.00 -0.2  
0.7s 13.10nm 5.2mb  
WB2 65.77 104 iPd 52 48.50 0.2

0.7s 13.10nm 5.2mb  
STK 68.63 118 eP 53 19.40 0.2  
0.7s 1.50nm 4.3mb  
SPA 73.50 180 iPc 53 30.90 -17.1X  
1.0s 7.00nm 4.3mb  
KIC 74.38 282 P 53 53.36 -0.4  
0.8s 5.00nm 4.6mb  
LIC 74.61 281 P 53 54.58 -0.5  
TIC 74.74 282 P 53 54.54 -1.3  
OBN 75.91 343 eP 54 02.00 0.3  
e 54 08.00  
LKO 76.23 284 P 54 01.88 -2.5  
SPC 77.43 331 eP 54 11.60 1.0  
KHC 80.66 328 eP 54 28.50 0.6  
PRU 80.72 329 eP 54 28.80 0.6  
CLL 82.32 329 eP 54 37.00 0.6  
LPL 82.32 322 eP 54 37.60 0.7  
BSF 83.55 324 eP 54 43.90 0.8  
CDF 83.60 325 eP 54 43.90 0.6  
NUR 84.00 340 eP 54 43.00 -1.9  
SMF 84.63 322 eP 54 49.10 0.7  
0.7s 3.30nm 4.7mb  
LBF 84.72 322 eP 54 49.09 0.2  
0.9s 7.35nm 4.9mb  
KAF 84.73 342 iP 54 48.80 0.3  
0.8s 7.50nm 5.0mb  
eS 54 49.90  
LOR 84.94 322 eP 54 51.00 1.1  
0.8s 4.30nm 4.7mb  
Z 38s 0.05um 3.6mszx  
SES 146.25 358 ePKP 01 55.00 0.4  
PNT 146.94 8 ePKP 01 59.00 3.3X  
0.5s 3.00nm 3.6mszx  
NEW 148.25 5 ePKP 01 59.70 1.8  
0.8s 13.75nm 3.6mszx  
FVM 150.81 321 ePKP 02 08.80 6.7X  
LRM 150.86 359 ePKP 02 14.40 12.1X  
BW06 153.73 354 ePKP 02 13.00 6.5X  
ALQ 160.79 343 e(PKP)02 21.00 5.8X  
S.D. = 1.0 on 29 of 35 obs.

? MAY 08, 1991 10h 44m 15.91±0.91s  
31.840 S ± 8.7km 68.225 W ± 10.8km  
DEPTH = 33.0km (normal)  
SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.49 307 iPd 44 26.60 0.2  
RTLL 0.55 338 iPc 44 27.70 0.4  
RTCB 0.60 306 iPd 44 27.10 -1.0  
MDZ 1.17 207 iP 44 37.70 1.7  
iS 44 55.50  
RFA 2.93 184 ePc 44 59.80 -1.5  
(\$ 45 31.00  
TCA 3.14 82 ePd 45 04.50 0.2  
S.D. = 1.4 on 6 of 6 obs.

MAY 08, 1991 11h 06m 31.72±0.52s  
5.242 N ± 6.2km 123.841 E ± 8.8km  
DEPTH = 550.1 ± 7.4 km  
4.9mb (18 obs.)  
MINDANAO, PHILIPPINE ISLANDS (259)

TSM 5.84 260 iPd 08 09.00 -0.6  
QIZ 19.34 316 Pc 10 23.20 0.4  
QZH 20.23 346 eP 10 30.30 -0.7  
1.0s 30.00nm 4.9mb  
LOE 24.78 301 eP 11 12.50 0.2  
WHN 26.71 342 Pd 11 30.00 0.9  
GYA 26.73 324 iPd 11 30.00 0.5  
NJ2 27.08 351 Pc 11 32.00 -0.3  
WB2 27.08 158 iPc 11 31.20 -1.3  
0.5s 15.30nm 4.9mb  
e 12 43.70  
eS 15 29.60  
CHG 27.78 301 iPd 11 39.20 0.6  
0.8s 12.69nm 4.6mb  
ASPA 30.36 162 iPc 12 00.90 0.1  
0.6s 21.30nm 5.0mb  
eS 16 22.80  
TIA 31.43 350 eP 12 09.00 -0.7  
CD2 31.76 326 eP 12 12.10 -0.5  
1.0s 30.00nm 4.9mb  
XAN 31.83 336 P 12 12.50 -0.6  
TIY 33.95 344 Pc 12 31.00 0.0  
BJI 35.33 350 eP 12 41.50 -0.7  
1.2s 30.00nm 4.8mb  
LZH 35.78 332 Pd 12 47.00 0.7

1.5s 76.00nm 5.1mb  
pP 13 05.50 76kmX  
FORR 36.12 174 iPc 12 49.10 0.3  
0.2s 20.00nm 5.4mb  
HHC 37.12 344 eP 12 51.80 -5.4X  
LSA 39.29 312 iP 13 17.50 2.1  
GTA 40.35 331 iPd 13 24.20 0.7  
0.8s 20.00nm 4.8mb  
STK 40.61 157 iPc 13 26.40 1.0  
0.4s 5.90nm 4.5mb  
eS 18 53.80  
GUN 42.51 306 Pd 13 41.52 0.5  
0.7s 104.00nm 5.5mb  
PKI 42.75 306 P 13 42.68 -0.2  
0.9s 38.00nm 4.9mb  
BRS 42.83 141 iPd 13 44.00 0.9  
KKN 42.95 306 P 13 44.36 0.1  
1.0s 80.00nm 5.2mb  
DMN 43.01 306 P 13 45.22 0.3  
0.9s 65.00nm 5.2mb  
GKN 43.55 306 Pd 13 48.78 -0.2  
1.0s 57.00nm 5.0mb  
HYB 45.90 289 eP 14 07.50 0.4  
GBA 46.46 284 Pc 14 09.70 -1.6  
0.9s 19.50nm 4.6mb  
WMO 49.86 326 P 14 37.30 0.8  
NDI 49.89 303 eP 14 37.00 0.1  
POO 50.50 290 eP 14 40.50 -1.1  
MAIO 66.31 307 eP 16 28.00 0.1  
OBN 84.16 325 iP 18 06.00 0.1  
0.8s \*\*\*\*\*nm 7.9mb X  
KAF 88.93 332 iP 18 27.30 -1.1  
0.4s 2.50nm 4.5mb  
eS 18 28.10  
NB2 96.15 333 P 19 00.40 -1.2  
0.7s 1.00nm 4.2mb  
YKA 99.30 24 eP 19 16.00 0.3  
0.4s 0.10nm 3.6mb X  
S.D. = 0.8 on 36 of 37 obs.

\* MAY 08, 1991 11h 31m 47.09±0.61s  
6.334 S ± 7.4km 133.357 E ± 11.0km  
DEPTH = 33.0km (normal)  
4.2mb (3 obs.)  
AROE ISLANDS REGION (204)

MTN 6.83 199 eP 33 28.90 1.3  
KNA 10.38 205 eP 34 16.70 -0.2  
eS 36 11.50  
WB2 13.56 176 eP 34 54.50 -5.2X  
0.1s 2.10nm 5.0mb  
eS 34 57.40  
PMG 14.00 103 eP 35 06.00 0.6  
QIS 15.38 157 eP 35 22.00 -1.5  
iS 38 07.20  
ASPA 17.24 178 iPd 35 46.20 -0.9  
0.8s 11.90nm 4.1mb  
iP 35 53.20  
eS 38 52.20  
FORR 24.88 191 eP 37 10.50 2.2X  
STK 26.56 164 eP 37 25.10 1.2  
0.5s 2.20nm 4.0mb  
CHG 42.13 307 eP 39 38.00 -0.3  
TIY 47.97 338 eP 40 24.50 -0.3  
GTA 55.07 329 Pc 41 18.40 0.0  
WMO 64.71 325 P 42 24.50 0.1  
S.D. = 1.0 on 10 of 12 obs.

MAY 08, 1991 11h 49m 34.64±0.37s  
40.137 N ± 3.2km 29.286 E ± 3.1km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 3.9 (ISK), 3.5 (ATH). Felt in the Bursa area.

IZI 0.25 35 iPg 49 40.20 0.3  
YLV 0.43 9 iPg 49 44.30 0.8  
GBZT 0.66 10 iPgc 49 48.30 0.5  
iSg 49 56.00  
KCT 0.72 279 iPg 49 48.70 -0.1  
DST 0.73 224 iPg 49 48.90 -0.2  
HRT 0.74 23 iPg 49 50.10 0.9  
EYL 0.79 57 iPg 49 49.10 -1.0  
GPA 0.80 79 iPg 49 48.80 -1.4  
iSg 49 59.80  
ISK 0.94 350 iPg 49 53.10 0.5  
ITU 0.99 348 ePg 49 55.00 1.6



BNT	1.07	282	iSg	50	07.00	
EDC	1.11	281	iPg	49	55.60	0.8
ALT	1.25	149	iPn	49	58.50	0.5
KHL	1.82	174	iPn	50	06.50	0.2
DMK	2.04	326	iPn	50	09.50	0.1
IZM	2.34	223	ePn	50	15.50	1.7
PRK	2.49	250	ePb	50	23.00	7.2X
8BTK	2.69	95	eP	50	24.00	5.2X
			eS	50	51.00	
RDO	3.03	291	ePb	50	30.50	7.1X
JMB	3.09	320	iPd	50	25.00	0.6
YER	3.10	195	ePn	50	30.00	5.5X
KDZ	3.30	299	iPd	50	28.00	0.6
DIM	3.42	305	iP	50	29.00	-0.1
KAS	3.62	69	eP	50	41.00	9.0X
PSN	3.64	347	iPc	50	32.00	-0.1
RZN	3.79	296	iPc	50	34.00	-0.6
PLD	3.98	301	iP	50	37.00	0.0
PVL	4.27	317	iPc	50	41.00	-0.1
MMB	4.46	291	iPd	50	43.00	-0.8
PGB	4.55	304	iPd	50	45.00	-0.1
KKB	5.00	292	iPc	50	51.00	-0.5
VTS	5.19	300	iP	50	54.00	-0.3
			iS	51	50.00	
VAY	5.24	285	ePn	51	12.00	17.1X
KZN	5.76	274	ePn	51	01.80	-0.4
MLR	5.89	336	ePd	51	04.50	0.4
	0.4s	4.73nm			4.5mb	
CMP	6.01	330	ePc	51	04.00	-1.7
VR1	6.03	343	ePc	51	06.00	0.0
SKO	6.21	290	ePn	51	38.00	29.5X
TNR	6.63	328	ePd	51	13.00	-1.5

S.D. = 0.8 on 32 of 39 obs.

MAY 08, 1991 12h 38m 34.60 ± 0.52s  
 26.491 N ± 7.1km 128.744 E ± 7.7km  
 DEPTH = 33.1km ( 5 depth phases)  
 4.8mb ( 13 obs.) 4.5msz ( 1 obs.)  
 RYUKYU ISLANDS (238)

KAGJ	5.04	21	eP	39	50.30	0.4
			S	40	42.10	
KUMJ	6.29	16	P	40	07.30	-0.2
			S	41	16.80	
SSE	8.06	306	Pc	40	32.20	-0.1
	1.2s	17.00nm			5.0mb	
Z	20s	0.90um				
N	12s	0.70um				
E	12s	0.80um				
		pP	40	38.00		
NJ2	10.26	305	eP	40	58.00	-4.6X
	Z	12s	0.90um			
	N	10s	0.80um			
	E	11s	0.90um			
MAT	12.86	37	eP	41	49.00	11.3X
BJ1	17.09	325	eP	42	35.50	3.0X
	N	13s	0.44um			
CN2	17.48	352	eP	42	39.00	1.7
	Z	14s	1.90um			
	N	11s	0.50um			
	E	11s	0.20um			
		sP	42	50.00		
		eS	45	52.00		
TIY	17.75	313	eP	42	43.00	2.2
	Z	12s	0.90um			
	N	11s	0.30um			
XAN	18.68	298	P	42	51.00	-1.3
GYA	19.77	275	P	43	05.80	0.8
BTO	20.95	317	eP	43	17.50	0.3
	N	13s	0.30um			
	E	13s	0.30um			
CD2	22.34	287	eP	43	32.20	1.1
	Z	15s	0.50um			4.1mszX
	E	15s	0.90um			
LZH	23.27	300	eP	43	39.00	-1.4
	1.8s	41.00nm				4.6mb
	Z	17s	0.58um			4.1mszX
	N	12s	0.28um			
	E	11s	0.23um			
		pP	43	49.00	37km	
		sP	43	57.50		
KMI	23.44	272	eP	43	43.50	1.4
GTA	27.35	305	iPc	44	17.00	-1.8
	0.4s	10.00nm				4.8mb
	Z	16s	0.60um			4.3mszX
	E	12s	0.40um			

CHG	28.49	261	pP	44	26.00	32km
GUN	38.01	282	eP	44	39.60	10.5X
	0.5s	25.00nm				5.3mb
PKI	38.47	282	P	45	55.64	-0.1
	0.4s	19.00nm				5.2mb
KKN	38.55	282	P	45	56.04	-0.3
	0.5s	21.00nm				5.2mb
DMN	38.73	282	P	45	56.72	-1.1
GKN	39.08	283	P	46	00.46	-0.2
	0.5s	25.00nm				5.2mb
WRA	46.48	173	P	47	00.00	-0.5
	0.8s	3.70nm				4.4mb
WB2	46.48	173	iPc	47	00.90	0.4
	0.6s	4.20nm				4.6mb
		i	47	11.70	37km	
ASPA	50.11	174	iPc	47	29.70	1.0
	1.4s	6.10nm				4.4mb
INK	68.47	23	eP	49	35.00	-0.1
KEV	69.36	339	eP	49	24.00	-16.6X
KAF	72.49	331	iP	49	58.90	-0.7
	0.4s	2.40nm				4.5mb
		esP	50	00.10		
NUR	73.89	330	eP	50	06.00	-1.7
YKA	78.10	25	eP	50	30.60	-0.8
	0.5s	0.40nm				3.7mb X
HFS	78.80	332	eP	50	34.70	-0.7
	1.0s	7.90nm				4.7mb
Z	16s	0.14um				4.4mszX
		e	50	38.20	11kmX	
		LR	27	08.00		
NB2	79.28	334	P	50	37.60	-0.4
	1.0s	5.60nm				4.5mb
CLL	84.20	325	iPd	51	05.10	1.3
		e	51	14.00	28km	
GRF	86.08	325	eP	51	14.00	0.7
	Z	19s	0.20um			4.5msz
		e	51	24.00	31km	
FRB	89.04	8	eP	51	32.00	4.8X

S.D. = 1.1 on 28 of 34 obs.

% MAY 08, 1991 12h 53m 12.44 ± 1.41s  
 43.068 N ± 9.1km 18.664 E ± 8.8km  
 DEPTH = 10.0km (geophysicist)  
 YUGOSLAVIA (383)  
 ML 1.8 (TTG).

BRY	0.19	208	iPg	53	16.65	-0.1
			iSg	53	19.13	
NKY	0.35	136	iPg	53	19.71	-0.1
			iSg	53	25.13	
PLE	0.59	64	iPg	53	24.60	0.0
			iSg	53	33.18	
HCY	0.63	191	iPg	53	25.05	-0.1
			iSg	53	34.78	
TTG	0.77	145	iPg	53	27.16	-0.4
			iSg	53	39.20	
BDV	0.79	171	iPg	53	27.88	0.0
			iSg	53	39.86	
IVA	0.93	102	iPg	53	30.15	-0.1
ULC	1.19	158	ePg	53	35.10	0.5

S.D. = 0.3 on 8 of 8 obs.

% MAY 08, 1991 13h 48m 59.21 ± 1.87s  
 40.652 N ± 8.2km 27.616 E ± 20.2km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.6 (ISK).

EDC	0.36	148	iPg	49	06.00	-0.6
			eSg	49	08.50	
BNT	0.38	142	iPg	49	06.50	-0.4
			eSg	49	09.50	
KCT	0.69	125	ePg	49	12.70	-0.3
DMK	1.17	5	ePn	49	21.00	-0.1
DST	1.30	143	ePn	49	24.60	1.3
YLV	1.34	93	iPn	49	24.10	0.1

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

? MAY 08, 1991 15h 29m 39.15 ± 1.61s  
 6.353 S ± 18.9km 146.266 E ± 22.8km  
 DEPTH = 116.8 ± 19.6 km  
 3.6mb ( 2 obs.)  
 EAST PAPUA NEW GUINEA REGION (207)

YYYY	0.32	290	eP	29	58.10	0.7
			eS	30	10.50	

LAT	0.79	112	iPc	29	59.10	-0.1
			eS	30	14.10	
MDG	1.20	336	eP	30	02.80	-0.5
PMG	3.16	164	eP	30	20.00	-0.2
			eS	31	06.00	
WB2	17.79	219	eP	33	40.00	-1.0
	0.5s	1.50nm				3.5mb
ASPA	20.92	213	eP	34	15.20	1.0
	0.9s	3.50nm				3.7mb

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

MAY 08, 1991 15h 46m 22.11 ± 0.69s  
 44.397 N ± 13.5km 8.231 E ± 8.8km  
 DEPTH = 10.0km (geophysicist)  
 NORTHERN ITALY (545)  
 ML 2.3 (LDG), 2.1 (GEN).

CKI	0.05	51	P	46	24.00	-0.2
			eSg	46	25.80	
PCP	0.27	57	P	46	27.73	-0.1
			S	46	32.60	
ROB	0.28	249	P	46	27.34	-0.6
			S	46	32.02	
ENR	0.61	254	P	46	33.50	-0.9
			S	46	42.42	
SBF	0.78	227	Pg	46	36.50	-0.9
			Sg	46	46.30	
PZZ	0.82	278	P	46	38.62	0.6
			S	46	50.17	
FRF	1.42	234	Pg	46	47.90	0.0
			Sg	47	06.30	
LMR	1.64	230	Pg	46	51.80	0.8
			Sg	47	12.30	
LRG	1.65	236	Pg	46	52.50	1.3
			Sg	47	13.00	

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

MAY 08, 1991 15h 49m 12.69 ± 0.82s  
 22.415 S ± 6.0km 178.005 W ± 9.0km  
 DEPTH = 366.7 ± 8.2 km  
 4.8mb ( 16 obs.)  
 SOUTH OF FIJI ISLANDS (171)

SVA	5.41	322	eP	50	38.20	0.1
			eS	51	44.16	
VUN	5.50	322	iPc	50	38.10	-1.0
SGE	6.14	321	iPd	50	47.10	0.7
MBU	6.23	330	eP	50	47.20	-0.2
AFI	10.32	36	eP	51	27.00	-8.5X
			e	53	12.00	
DZM	14.40	268	iPc	52	25.00	2.3
PUZ	15.93	191	eP	52	39.70	0.9
PGZ	18.78	194	eP	53	07.80	0.2
MNG	18.97	195	P	53	07.10	-2.4
CAW	19.53	196	eP	53	15.00	0.0
WDW	19.70	196	P	53	16.50	-0.1
MRW	19.74	196	eP	53	16.50	-0.5
WEL	19.78	196	P	53	18.00	0.7
THZ	20.75	199	eP	53	27.60	0.7
KHZ	21.16	198	Pd	53	30.80	0.0
	0.3s	22.00nm				5.0mb
LTZ	21.87	200	P	53	36.50	-1.1
BRS	26.93	253	iPc	54	25.50	1.6
COO	28.08	247	iPc	54	35.80	1.0
	0.4s	19.00nm				4.8mb
RMQ	30.48	256	eP	54	55.00	0.0
	0.9s	87.00nm				5.1mb
CMS	33.36	246	iPd	55	20.30	0.7
	1.0s	55.00nm				4.8mb
TAU	35.28	226	iPc	55	36.30	0.7
PMG	35.81	286	iPd	55	40.00	-0.3
	1.0s	200.00nm				5.4mb
BFD	36.98	238	iPd			



08d 15h

COOL	0.3s	20.00nm	4.9mb	TSM	9.42	230	ePc	02	45.50	0.8	Z	17s	3.60um	5.0mszX				
BAL	54.47	247	eP	58	04.20	-1.7	KKM	9.98	245	ePd	02	52.50	0.0	N	15s	6.80um		
MUN	58.29	247	eP	58	31.00	-1.6	ANP	15.19	347	eP	04	06.00	3.9X			ePcP	09 37.00	
NANU	58.51	245	iPc	58	33.10	-0.9				eS	08	14.00		TIY	29.61	339	P	06 32.00
	60.91	256	iPd	58	59.80	9.5X	QZH	15.86	337	Pc	04	09.50	-1.2	Z	20s	3.20um	4.9msz	
	0.4s	18.00nm	5.0mb					4.0s	600.00nm				5.1mb X	N	15s	2.80um		
SPA	67.72	180	eP	59	35.00	1.7	Z	24s	8.60um				4.0msz	E	13s	2.50um		
	1.3s	20.83nm	4.7mb				N	13s	3.30um							S	11 25.00	
TRT	68.05	271	iPc	59	28.00	-8.0X			S	07	07.00			BJI	30.66	346	eP	06 42.00
TNP	82.90	44	eP	00	58.90	0.3	HKC	15.98	319	eP	04	18.40	6.1X		1.0s	44.00nm	5.2mb	
	0.9s	3.71nm	4.2mb						eS	07	28.00			N	12s	1.59um		
FBA	90.10	12	iP	01	31.90	-0.4	GZH	17.07	319	P	04	20.00	1.9			eSS	13 20.00	
	0.8s	3.60nm	4.3mb				Z	20s	3.70um					SNY	31.39	357	Pc	06 48.50
BW06	90.36	43	eP	01	34.30	0.0	N	14s	6.30um						1.0s	100.00nm	5.6mb	
	0.6s	1.63nm	4.1mb				E	12s	3.30um					Z	20s	4.20um	5.1msz	
CHG	90.89	290	eP	01	38.90	2.0	QIZ	17.27	302	eP	04	26.50	-2.2	E	14s	3.10um		
YKA	98.24	25	eP	02	08.50	-1.0		N	13s	2.80um						S	11 47.00	
	0.6s	0.20nm	3.6mb X				E	15s	3.90um					LZH	32.18	326	iPd	06 56.50
NB2	140.87	353	PKP	07	52.70	-7.9X			sP	04	46.50				4.0s	450.00nm	5.7mb X	
	0.5s	1.30nm							eS	07	38.00			Z	15s	7.94um	5.5mszX	
HFS	141.42	351	ePKP	07	53.90	-7.6X	GUA	19.42	79	eP	05	01.00	6.0X	N	20s	12.10um		
	0.5s	5.20nm					SSE	21.00	350	Pc	05	11.00	-0.4	E	20s	9.12um		
EKA	146.90	5	PKPd	08	12.40	1.6		1.2s	170.00nm				5.3mb			pP	07 05.50	
	0.6s	8.50nm					Z	20s	6.20um				5.0msz			sP	07 13.00	
KRA	149.01	337	ePKP	08	19.10	4.8X	E	14s	5.50um							PP	08 06.00	
KSP	149.51	342	iPKPd	08	20.00	4.9X			pP	05	20.00	33km				eS	12 04.00	
SPC	149.62	336	ePKP	08	19.60	4.0X			PP	05	40.00					sS	12 18.00	
CLL	149.91	346	iPKPd	08	20.70	5.1X			S	09	03.00					SS	13 57.00	
	0.9s	28.00nm							sS	09	16.00			HHC	32.72	340	P	07 00.80
		i	08	26.60			KAGJ	21.37	13	P	05	16.60	1.4		1.0s	100.00nm	5.7mb	
BRG	150.10	345	iPKPd	08	21.10	5.1X	TRT	21.94	216	iPd	05	13.60	-7.4X	Z	24s	8.10um	5.3mszX	
	0.9s	20.00nm					NJ2	22.41	345	Pd	05	26.00	0.4	N	13s	1.40um		
WTS	150.24	354	iPKP	08	21.90	5.8X		1.2s	100.00nm				5.2mb	E	13s	0.50um		
	0.9s	28.00nm					Z	18s	2.40um				4.7msz			pP	07 05.50	
PRU	150.76	343	PKP	08	22.40	5.4X	N	12s	2.00um							S	12 18.00	
	0.8s	13.80nm					E	15s	8.50um					BTO	33.03	338	P	07 02.00
MOX	150.83	347	ePKP	08	23.00	5.9X			S	09	29.00			N	13s	1.50um	-1.0	
	1.0s	15.00nm					WHN	22.54	335	Pd	05	29.00	2.1	E	16s	4.00um		
SRO	151.48	337	ePKP	08	37.30	19.2X		5.0s	1200.00nm				5.6mb X			pP	07 16.00	
ENN	151.53	355	iPKPc	08	25.20	7.1X	Z	16s	5.40um				5.1mszX			eS	12 23.00	
	0.8s	15.00nm					N	15s	22.80um					CN2	33.32	0	Pc	07 04.50
		id	08	33.20			E	12s	4.50um						4.0s	200.00nm	5.4mb X	
ZST	151.58	339	ePKP	08	23.40	5.2X	KUMJ	22.65	12	eP	05	29.00	1.0	Z	16s	6.70um	5.4mszX	
		e	17	23.80			KGM	23.37	251	eP	05	35.50	0.3	N	13s	1.50um		
KHC	151.80	344	ePKP	08	26.00	7.4X	GYA	23.82	315	iPd	05	42.00	2.4	E	13s	1.00um		
GRF	151.82	347	ePKP	08	25.50	6.9X		5.0s	1400.00nm				5.7mb X			pP	07 09.40	
		e	08	36.00				Z	20s	3.70um			4.9msz			ePP	08 12.00	
FLN	153.63	4	ePKP	08	29.00	7.9X		N	12s	3.50um						eS	12 18.00	
	0.4s	5.40nm					E	12s	2.20um					QIS	33.77	155	iPd	07 08.20
LDF	153.82	3	ePKP	08	29.30	7.9X			S	09	57.00				0.9s	41.00nm	5.4mb	
	0.4s	3.25nm							SS	10	48.00			MDJ	34.34	5	eP	07 14.50
GRR	153.98	4	ePKP	08	30.00	8.4X	LOE	23.94	290	eP	05	42.00	1.3		4.0s	400.00nm	5.7mb X	
LPF	154.32	5	ePKP	08	30.80	8.8X	SNG	24.62	265	iPc	05	48.50	1.2	ASPA	34.83	166	iPc	07 17.80
	0.6s	9.65nm							e	10	07.50				0.8s	26.20nm	5.2mb	
SSF	155.38	358	ePKP	08	34.80	11.3X	IPM	24.76	258	ePd	05	49.10	0.5			iS	13 19.10	
KIC	162.77	157	PKP	08	33.20	0.5		0.9s	343.90nm				6.0mb	GTA	36.79	326	Pc	07 35.00
TIC	162.92	156	PKP	08	33.60	0.7	SHK	24.99	14	eP	05	52.30	1.6		3.5s	660.00nm	5.9mb X	
LKO	165.28	149	PKP	08	33.78	-1.3	NST	25.10	285	eP	05	53.80	2.0	Z	22s	4.40um	5.2msz	
	S.D. = 1.1	on 43	of 66	obs.			KMI	25.99	307	eP	06	01.00	0.6	N	19s	7.40um		
								1.5s	130.00nm				5.3mb			PP	09 02.60	
								Z	16s	4.40um			5.1mszX			S	13 17.00	
								N	12s	0.70um				LSA	37.22	306	Pd	07 40.80
								E	12s	2.00um						pP	07 50.00	
									sP	06	15.00					S	13 27.00	
									eP	06	01.50	-0.2				PcS	13 46.00	
									eP	06	04.30	-0.2	GUN	40.93	301	P	08 09.98	
									Pd	06	07.50	0.0		0.9s	185.00nm	5.8mb		
									100.00nm				5.3mb	FORR	41.05	176	eP	08 10.00
									2.80um				4.8msz	PKI	41.23	300	P	08 11.56
									2.40um						0.8s	38.00nm	5.2mb	
									ePc	06	08.10	-0.1	KKN	41.40	300	P	08 13.22	
									63.95nm				5.1mb		0.9s	60.00nm	5.3mb	
									eS	10	44.00			DMN	41.49	300	P	08 14.06
									eP	06	09.50	-0.2		0.9s	52.00nm	5.3mb		
									ePd	06	15.60	3.4X	GKN	42.00	301	P	08 17.74	
									P	06	17.00	-1.1		0.8s	37.00nm	5.2mb		
									100.00nm				5.5mb	NWAO	43.72	190	eP	08 32.00
									22 eP	06	22.00	-1.5		0.6s	23.00nm	5.2mb		
									17.19nm				4.7mb	Z	20s	1.10um	4.8msz	
									3.90um				5.0msz	N	20s	0.60um		
									eS	11	13.00			E	20s	1.00um		
									eP	06	22.00	-2.0	STK	44.79	160	eP	08 40.60	
									150.00nm				4.9mb		0.7s	12.60nm	4.9mb	
									2.87um				4.8mszX	IRK	45.15	342	eP	08 43.50
									2.53um				-0.2			e	09 14.00	
									100.00nm				5.5mb			e	09 43.50	

DAV 3.25 176 eP 01 13.00 -5.0X  
 QCP 5.94 316 eP 02 26.50 30.3X  
 BAG 7.59 323 eP 02 18.00 -1.4



			e	11	33.00				Z	17s	0.50um	5.1MsZx	GCC	34.71	52	eP	28	00.20	0.5			
			eS	15	23.00				KHC	96.02	322	P	13	54.00		eS	28	14.80				
			e	16	11.00				GRF	97.19	323	e(P)	13	59.00	-0.2	ePc	28	01.60	0.9			
			e	17	30.00				Z	19s	0.80um	5.2MsZ	BRK	34.82	51	eP	28	01.60				
			eSS	18	31.00				ALO	113.47	45	e(PKP)	19	06.00	0.3	eS	28	16.40				
			eSSS	19	30.00				PEL	152.95	149	ePKP	20	30.50	13.4X	iPc	28	01.95	1.1			
			e	20	36.00					1.0s	52.00nm		BKS	34.84	51	iPc	28	01.95				
HYB	45.85	284	iPd	08	50.00	0.2			ZOBO	165.65	116	PKPc	20	33.00	0.5	0.8s	156.00nm	6.0mb				
	1.0s	75.00nm			5.6mb					1.2s	15.20nm		Z	20s	2.90um		5.0MsZ					
BRS	46.00	145	eP	08	40.00	-10.7X			Z	24s	0.38um		N	20s	1.80um							
			i	09	06.00	112kmX					i	21	35.00		E	20s	2.10um					
CMS	46.01	155	eP	08	51.00	0.3			SIV	171.62	133	PKP	20	36.00	0.5	eP	28	13.00	40kmX			
WMQ	46.59	323	Pd	08	55.00	-0.3				S.D. = 1.0	on	94 of 105 obs.				eS	28	16.90				
	1.5s	100.00nm			5.6mb											e	30	33.50				
Z	20s	5.00um			5.5MsZ											eLO	35	52.40				
E	18s	8.00um														eLR	37	05.20				
			pP	09	03.00	27km			&	MAY	08, 1991	18h 21m 11.07s	ZSP	34.85	51	iPc	28	02.51	1.6			
			S	15	45.00					19.373	N	156.267	FHC	34.86	45	ePc	28	03.10	2.1			
ADE	46.82	165	eP	08	58.50	1.4				DEPTH =	36.3km					eS	28	18.00				
GBA	46.90	279	Pc	08	57.80	-0.2				5.5mb (	44 obs.)	5.0MsZ (	PRS	34.94	54	iPc	28	02.80	1.1			
	0.8s	25.50nm			5.3mb				HAWAII			(613)				eS	28	18.20				
BFD	49.96	162	eP	09	21.00	-0.5				<HV0-P>.	ML 5.2 (HV0).	Ms 5.1	SAO	35.03	53	ePc	28	03.20	0.7			
POO	50.37	285	eP	09	22.50	-2.4				(BRK).	Mo=1.6*10**17 Nm (PPT).					eS	28	18.00				
			iS	16	42.50					Felt (V) at	Hawi, Halaualoo and		MHC	35.08	52	eP	28	04.30	1.2			
DZM	51.62	129	iPc	09	34.00	-0.4				Papaloa; (IV) at	Hawaii					eS	28	19.20				
YAK	51.67	3	iPd	09	33.40	-0.7				Volcanoes National Park,			PMO	35.14	166	iP	28	03.40	-0.1			
			iPcP	09	52.00	74kmX				Honounou, Honomu, Kapaou,						1.2s	70.00nm	5.5mb				
			eS	16	52.00					Loupahoehe, Ooakala, Paauhou,			ARN	35.17	52	eP	28	04.50	0.8			
			e	17	26.00					Pahalo and Papoikou. Also felt			TPT	35.19	165	iP	28	03.50	-0.4			
			eSSS	20	27.00					(IV) at	Hana, Kualapuu and					1.2s	50.00nm	5.3mb				
			eSSS	22	39.00					Makawao on Maui. Felt on Hawaii,			LLA	35.36	54	iPc	28	06.29	1.0			
										Kauoi, Maui, Molokai and Oahu.			PRI	35.42	54	iPc	28	07.26	1.3			
GAR	56.53	310	iP	10	09.30	-1.0			CPH	0.35	71	iPd	21	18.67	-1.0	e	28	29.40	94kmX			
			eS	18	00.00				KKH	0.38	40	P	21	19.20	-0.8		28	05.60	-0.3			
QUE	57.59	299	eP	10	17.60	-0.5			KUH	0.39	106	iPd	21	19.25	-1.0	1.2s	55.00nm	5.4mb				
	1.1s	25.32nm			5.2mb				KIH	0.49	74	iPd	21	20.86	-0.9		28	05.90	-0.1			
ADK	62.40	36	eP	10	50.70	0.3					iS	21	27.41		1.2s	40.00nm	5.2mb					
MAIO	64.49	305	iPd	11	04.60	0.0			HUH	0.51	52	iPd	21	20.70	-1.4	BCH	35.58	56	eP	28	08.30	1.0
			eS	19	48.00				DAH	0.57	92	iPd	21	21.48	-1.5	ORV	36.03	49	iPc	28	12.20	1.3
ANM	71.87	25	eP	11	51.10	1.1			KHU	0.63	101	iPd	21	21.95	-1.7			eS	28	26.90		
TAB	75.06	307	eP	12	10.00	0.7			SWH	0.63	83	iPd	21	22.32	-1.7	ADK	36.18	339	eP	28	10.50	-1.5
RYD	75.56	293	ePd	12	13.00	0.7			MWH	0.64	80	iPd	21	22.52	-1.3			e	28	18.00	25kmX	
SVW	75.71	29	eP	12	14.20	1.8			WIH	0.65	81	iPd	21	22.68	-1.6	CMB	36.26	51	iPc	28	14.30	1.3
	1.5s	89.19nm			5.6mb				WOB	0.67	76	iPd	21	22.94	-1.5			eS	28	29.00		
IMA	76.95	24	ePc	12	20.40	1.0			TRH	0.68	86	iPd	21	22.93	-1.7	MIN	36.28	47	iPc	28	14.25	1.1
	1.2s	26.90nm			5.2mb				SPT	0.69	124	iPc	21	22.38	-2.0	FRI	36.42	53	iPc	28	15.24	1.1
RSO	77.08	30	P	12	19.80	-0.5			HPO	0.73	113	P	21	23.30	-1.6			eS	28	29.80		
KMSA	77.94	289	ePd	12	27.00	1.4			WOH	0.73	99	iPd	21	23.21	-1.8	LBFM	36.52	46	eP	28	17.10	1.8
PMR	78.85	29	eP	12	30.10	0.4			AIN	0.76	90	iPd	21	23.89	-1.7	PAS	36.83	59	eP	28	18.00	0.3
	1.3s	54.90nm			5.4mb						iS	21	33.06		MWC	36.94	59	eP	28	19.00	0.1	
FBA	79.38	26	eP	12	32.80	0.2			HMH	0.77	72	iPd	21	24.55	-1.3	ISA	36.98	56	eP	28	20.00	1.0
	0.8s	15.52nm			5.1mb						iS	21	33.65		AFR	37.23	170	iP	28	21.50	0.4	
TOA	80.23	28	eP	12	39.20	1.9			PLL	0.78	78	iPd	21	23.92	-2.0		1.2s	250.00nm	6.0mb			
OBN	80.87	324	eP	12	40.00	-0.6			PPL	0.79	106	iPd	21	23.81	-1.9	PPN	37.28	169	iP	28	21.90	0.4
	0.9s	*****nm			8.1mb X			KFH	0.80	86	iPd	21	24.44	-1.7		1.2s	120.00nm	5.6mb				
Z	18s	1.50um			5.4MsZ			HTC	0.83	99	iPd	21	24.60	-1.8	PPT	37.29	169	iP	28	22.20	0.5	
E	16s	0.60um						DES	0.83	92	iPd	21	24.55	-1.9		1.2s	180.00nm	5.8mb				
			e	13	57.00	332kmX			MLH	0.84	81	iPd	21	25.06	-1.6	PAE	37.38	169	iP	28	22.70	0.3
			e	14	20.00				HPU	0.86	62	iPd	21	25.64	-1.6		1.2s	90.00nm	5.5mb			
			ePP	15	36.00				MLX	0.87	84	iPd	21	25.59	-1.6	RVR	37.44	59	eP	28	23.00	0.2
			S	22	44.00				KOH	0.88	31	iPd	21	25.67	-1.5	TVO	37.56	169	iP	28	24.60	0.6
			LO	38	20.00				MHA	0.88	23	P	21	26.10	-0.9		1.2s	170.00nm	5.8mb			
			e	44	30.00				CPK	0.89	88	iPd	21	25.40	-1.9	PEC	37.59	59	eP	28	24.80	0.6
BALM	82.16	29	P	12	46.80	-0.6			HLP	0.91	94	iPd	21	25.71	-1.8			e	28	36.50	43kmX	
KEV	83.23	340	eP	12	53.00	0.3			KNH	0.92	92	iPd	21	25.85	-1.9	CLC	37.70	56	iP+	28	26.00	0.9
SOD	83.85	337	iP	12	55.40	-0.5			NPH	0.93	87	iPd	21	25.85	-2.0	PLM	37.72	60	eP	28	26.00	0.6
ADI	84.52	302	e(P)	12	54.00	-6.0X			OUT	0.93	89	iPd	21	25.86	-2.0	BAR	37.75	61	eP	28	26.00	0.5
INK	84.55	21	ePd	13	00.00	0.6			RIM	0.94	88	iPd	21	25.99	-2.0	GSC	38.20	57	iP+	28	30.00	0.7
	1.1s	49.00nm			5.6mb				AHA	0.95	90	iPd	21	26.13	-2.0	KVN	38.29	51	eP	28	31.10	0.9
DSI	84.62	301	eP	13	01.00	0.5			ESR	0.97	88	iPd	21	26.36	-2.1	TPC	38.54	59	eP	28	33.00	0.9
KAF	85.12	332	iP	13	01.30	-1.0			PWH	0.99	95	iPd	21	26.85	-1.8	TNP	38.64	53	eP	28	34.20	1.1
	0.6s	8.70nm			5.2mb				PUH	0.99	90	iPd	21	26.51	-2.2	GMW	39.11	36	eP	28	38.70	2.1
			eS	13	05.10				KKU	1.01	59	iPd	21	27.66	-1.5			e	28	48.00	31kmX	
BADA	85.42	298	ePd	13	06.06	1.6			MKA	1.04	90	iPd	21	27.22	-2.2			e	28	54.00		
RMN	85.42	300	iPd	13	05.00	0.3			KAE	1.07	94	iPd	21	28.02	-1.8	LON	39.22	38	eP	28	39.30	1.6
NUR	86.27	331	iP	13	07.20	-0.9			MVH	1.14	83	iPd	21	29.08	-1.8			e	28	49.50	35kmX	
	0.9s	18.60nm			5.3mb				WHA	1.15	92	iPd	21	28.82	-2.1			e	28	55.00		
NAI	88.77	268	eP	13	14.50	-6.9X			HIL	1.16	73	P	21	29.90	-1.2	GLA	39.34	61	eP	28	40.00	1.2
UPP	89.82	331	iP	13	23.20	-1.9			NGH	1.21	74	iPd	21	30.24	-1.5	PGC	39.38	35	eP	28	41.00	2.2
SPC	91.90	321	eP	13	34.60	-0.6			HUL	1.22	88	iPd	21	29.64	-2.2	SIT	40.72	17	P	28	51.00	1.3
NB2	92.27	334	P	13	34.40	-2.1			PFH	1.25	84	P	21	31.10	-1.2		0.8s	31.03nm	5.1mb			
	0.9s	3.90nm			4.8mb				HLK	1.33	0	P	21	32.10	-1.8	RSO	41.12	3	eP	28	53.10	-0.2
YKA	94.06	24	eP	13																		



08d 18h

PMR	0.8s	99.00nm	5.6mb	BRS	67.80	228	iPd	32	09.00	1.2			sP	34	27.60		
	42.48	5 eP	29 04.60				i (pP)	32	14.00	16kmX	SOD	93.49	359 eP	34	23.00	-0.9	
	0.8s	65.00nm	5.4mb				i	32	39.50		ZOBO	93.58	106 P	34	25.00	-0.9	
DUG	42.53	51 ePc	29 11.50	SGS	68.01	61	eP	32	09.00	-0.1		1.0s	21.25nm		5.5mb		
MSU	42.57	54 eP	29 06.00				e	32	18.00	29kmX	LPB	93.69	106 P	34	23.00	-3.2	
KLU	42.70	7 eP	29 06.40				e	32	22.50		WMQ	94.16	319 P	34	27.60	0.0	
		e	29 13.50	WVLY	68.24	51	eP	32	09.20	-1.3	CCH	95.73	106 eP	34	37.00	1.6	
NEW	42.73	38 ePc	29 06.80	CN2	68.52	310	Pc	32	10.00	-2.1	SIV	99.93	103 P	34	52.60	-1.5	
	0.8s	69.58nm	5.4mb				1.3s	100.00nm	5.7mb		HFS	100.36	5 ePdfff	34	52.90	-2.2	
BALM	42.77	10 ePc	29 07.80				Z 14s	4.00um	5.8mszX			1.6s	23.70nm		5.5mb		
		i	29 14.20				N 12s	1.40um			NUR	100.40	360 ePdfff	34	54.00	-1.3	
		ePP	30 56.20				E 12s	0.60um			UPP	100.90	3 iPdfff	34	55.10	-2.4	
		ePcP	31 04.70					pP	32	16.00	GUN	103.70	306 Pdfff	35	00.00	-11.3	
TOA	43.27	7 ePc	29 11.80					eS	41	12.00	OBN	105.02	352 ePKP	39	27.00	-3.6	
TTA	43.52	0 ePc	29 12.70	CVL	68.92	56	eP	32	14.20	-0.5		Z 16s	1.40um		5.6mszX		
	0.9s	26.40nm	5.0mb				e	32	22.00	25kmX		E 16s	0.60um				
LRM	44.60	44 iPc	29 22.90					e	32	20.00			e	39	46.00		
PV09	44.90	55 iPc	29 24.80	SNY	70.14	308	eP	32	20.60	-1.4			e	41	22.00		
ANM	45.58	355 ePc	29 29.50				1.4s	100.00nm	5.7mb				e	52	34.00		
BW06	45.59	49 ePc	29 29.80	RMQ	70.17	231	eP	32	21.60	-0.8			e	52	42.00		
	0.9s	57.56nm	5.5mb				i	32	26.80	17kmX	BRG	109.53	7 ePdfff	35	35.80	-0.4	
FBA	45.85	5 eP	29 30.80	COO	70.36	226	eP	32	23.00	-0.5			e	35	42.80		
	1.2s	79.55nm	5.5mb				e	32	29.00	19kmX	BRG	109.53	7 iPKP	39	40.20	0.9	
		epP	29 38.00	RSNY	70.88	48	eP	32	25.20	-1.3	KHC	111.21	7 PKP	39	42.50	-0.1	
ALO	46.49	60 iPc	29 37.90	PNJ	71.74	52	iP	32	31.50	-0.2		Z 22s	0.90um		5.3msz		
	1.4s	55.23nm	5.3mb	FRB	71.82	28	eP	32	30.70	-1.0		N 20s	0.30um				
Z 20s		0.98um	4.8msz				0.9s	144.00nm	6.0mb			E 22s	1.10um				
		e	29 49.90	SCH	74.11	37	eP	32	44.00	-1.4			e	40	27.50		
		ePcP	31 11.00	QIS	74.28	241	iPd	32	45.50	-1.4	KBA	113.20	8 iPKPc	39	44.90	-1.8	
IMA	46.70	1 ePc	29 37.70				i	32	51.50	19kmX		1.1s	4.50nm				
	1.6s	33.90nm	5.1mb	UPA	74.62	86	iPc	32	48.50	-0.5			i	40	35.90		
RKT	47.07	153 iP	29 42.10				1.2s	109.38nm	5.7mb		VBV	114.98	7 e(PKP)	39	50.20	0.3	
	1.2s	115.00nm	5.7mb	Z 20s			0.71um	5.0msz			QUE	115.51	319 ePKP	39	51.60	-0.1	
SES	47.24	38 ePc	29 42.80	CBM	74.87	45	eP	32	49.20	-0.7			7 PKP	39	54.60	-1.5	
	1.3s	159.00nm	5.9mb	CMS	75.10	228	eP	32	51.00	-0.4	GBA	117.80	298 PKPc	39	54.60	-1.5	
		pP	29 58.00				e	32	56.90	19kmX		0.8s	4.40nm				
GOL	48.00	54 iPc	29 49.00	BJI	75.99	308	eP	32	55.50	-0.9	SKO	118.93	2 ePKP	39	56.80	-0.8	
	0.8s	24.26nm	5.3mb				1.5s	39.00nm	5.2mb				i	40	04.00		
		iPcP	31 16.50				pP	33	01.00	18kmX	HRI	126.41	347 iPKPd	40	12.80	0.4	
GLD	48.12	54 ePc	29 50.60	TIA	76.17	304	Pc	32	56.20	-1.3	DSI	128.13	347 iPKPd	40	15.70	0.1	
Z 18s		1.75um	5.1msz				pP	33	02.80	21kmX	MBH	129.98	347 iPKPd	40	19.20	0.0	
		iPcP	31 17.60	STK	78.35	230	iPd	33	09.40	-0.1	LKO	139.25	48 PKP	40	24.54	-12.5	
INK	50.96	11 iPc	30 10.00				0.9s	6.30nm	4.6mb		TIC	141.65	50 PKP	40	35.54	-5.9	
	0.9s	150.00nm	6.0mb	WB2	78.41	244	eP	33	08.20	-1.9	LIC	141.93	51 PKP	40	35.84	-6.0	
YKA	51.72	23 eP	30 15.00				0.7s	6.80nm	4.8mb		KIC	142.05	50 PKP	40	36.22	-5.9	
	1.0s	49.30nm	5.4mb	WRA	78.42	244	P	33	08.00	-2.2	NAI	157.92	323 ePKP	41	09.50	3.2	
MEO	52.94	61 iPc	30 25.60				0.7s	7.10nm	4.8mb			211 obs. associated					
FFC	53.97	36 iPc	30 32.30	WRA	78.42	244	P	33	28.00	17.8							
	1.0s	34.00nm	5.3mb				1.1s	7.10nm									
DZM	55.00	223 iPc	30 47.90	HHC	79.18	309	P	33	13.80	-0.4							
TUL	55.23	59 iPc	30 42.10				Z 17s	1.80um	5.5mszX								
	0.8s	68.30nm	5.7mb				N 11s	0.90um									
Z 20s		0.89um	4.8msz				E 11s	0.90um									
		e	30 54.50	WHN	79.89	299	eP	33	18.00	-0.1	SSE	7.96	306 Pc	43	12.50	-9.4X	
		eS	38 25.40				pP	33	23.50	18kmX		1.2s	34.00nm		5.3mb		
		LR	47 11.70				sP	33	30.00		Z 20s		2.80um				
ASAJ	56.12	311 P	30 49.20	BTO	80.38	310	eP	33	20.00	-0.6	N 11s		1.70um				
YAMJ	57.81	303 eP	31 00.90	ASPA	80.40	241	iPc	33	19.80	-1.1	E 12s		2.20um				
NIIJ	58.65	302 P	31 11.30				1.2s	16.10nm	4.9mb				sP	43	28.50		
CHJJ	58.69	301 P	31 07.30				i	33	26.30	21kmX			eS	44	56.70		
OLY	58.76	60 eP	31 06.60	IRK	80.49	322	ePc	33	20.30	-0.5			Lg	46	09.00		
MAT	59.30	302 eP	31 11.00				e	33	27.00	21kmX	SSE	7.96	306 Pc	43	22.50	0.6	
	1.2s	25.00nm	5.2mb				e	33	41.60			1.2s	34.00nm		5.3mb		
		eS	39 40.00				e	33	47.10		Z 20s		2.80um				
FVM	59.51	57 eP	31 11.90				e	33	47.10		N 11s		1.70um				
IIDJ	59.59	300 P	31 14.10	BFD	80.50	225	e(P)	33	20.00	-1.1	E 12s		2.20um				
MTMJ	59.63	302 P	31 13.90				i	33	26.00	19kmX			pP	43	28.50		
ELC	60.49	58 eP	31 19.00	XAN	83.23	304	P	33	34.00	-1.5			eS	44	56.70		
PMG	62.64	248 eP	31 36.00	NNA	84.18	105	iPc	33	40.00	-0.5	NJ2	10.15	305 Pd	43	52.50	0.3	
RSCP	63.55	59 eP	31 38.50				1.0s	30.00nm	5.4mb			Z 12s		2.20um			
		e	31 52.00	LZH	86.44	307	eP	33	51.00	-0.7		N 11s		2.20um			
		e	31 52.00				2.0s	46.00nm	5.4mb		E 11s		2.50um				
GBTN	64.64	59 eP	31 46.30				Z 16s	1.46um	5.5mszX		MAT	12.87	37 (P)	44	40.00	11.2X	
TKL	65.00	59 eP	31 48.50				E 11s	0.69um			SNY	15.80	346 eP	45	07.70	0.5	
MDJ	65.48	311 iPd	31 51.70					pP	33	59.00		Z 16s		2.60um			
	1.5s	300.00nm	6.2mb					sP	34	04.50		N 13s		1.10um			
YAK	65.58	330 iPc	31 50.20	GYA	87.59	297	P	33	56.40	-1.0							
		i	31 57.00	GTA	88.13	311	eP	33	59.00	-0.8	BJI	17.00	325 eP	45	22.00	-0.3	
		i	32 04.00				1.2s	100.00nm	6.0mb			1.0s	18.00nm		4.2mb		
		e	32 17.00					pP	34	06.00		N 13s		1.23um			
WEL	66.06	204 P	32 00.00					sP	34	12.80		E 13s		0.82um			
PRM	66.35	61 eP	31 57.90					sP	34	12.80				pP	45	26.00	
NAV	67.18	57 eP	32 03.50	CD2													



GYA 19.68 275 P 45 56.60 1.6  
 Z 16s 1.40um  
 N 12s 0.80um  
 E 12s 1.70um  
 HHC 20.09 320 eP 45 58.20 -1.0  
 BTQ 20.85 317 eP 46 05.00 -2.2  
 CD2 22.24 287 eP 46 19.60 -1.5  
 LZH 23.17 300 eP 46 31.00 0.6  
 1.8s 52.00nm 4.7mb  
 Z 18s 0.63um 4.1msz  
 N 11s 0.31um  
 pP 46 36.00 18kmX  
 sP 46 40.00  
 KMI 23.35 272 Pc 46 34.00 1.7  
 1.5s 60.00nm 4.9mb  
 GTA 27.25 305 eP 47 07.20 -1.6  
 0.8s 20.00nm 4.8mb  
 Z 14s 1.60um 4.7mszX  
 E 12s 1.10um  
 pP 47 17.00 35km  
 PP 47 55.40  
 S 51 48.00  
 CHG 28.42 260 eP 47 20.30 0.9  
 LSA 33.13 284 P 48 01.80 0.3  
 YAK 35.47 1 eP 48 19.20 -1.5  
 i 48 29.00 33km  
 WMO 37.21 308 P 48 35.20 -0.5  
 1.2s 10.00nm 4.6mb  
 GUN 37.91 282 P 48 41.10 -1.0  
 PKI 38.38 282 P 48 45.92 -0.1  
 0.3s 16.00nm 5.3mb  
 KKN 38.46 282 P 48 46.14 -0.4  
 0.4s 14.00nm 5.1mb  
 DMN 38.64 282 P 48 47.48 -0.6  
 GKN 38.99 282 P 48 50.44 -0.5  
 WRA 46.54 173 P 49 51.00 -1.0  
 0.9s 9.00nm 4.7mb  
 WB2 46.54 173 iPc 49 51.30 -0.7  
 0.9s 8.70nm 4.7mb  
 HYB 47.09 270 eP 49 57.50 1.0  
 QIS 48.01 166 iPc 50 03.80 0.2  
 GAR 49.83 300 eP 50 17.60 -0.1  
 ASPA 50.18 174 iPc 50 20.60 0.4  
 1.1s 11.00nm 4.8mb  
 i 52 01.80 533kmX  
 POO 50.92 273 eP 50 25.50 -0.6  
 QUE 53.83 289 eP 50 39.10 -8.8X  
 MAIO 58.70 298 eP 51 23.00 0.5  
 STK 59.40 167 eP 51 26.50 -0.7  
 1.3s 1.20nm 3.9mb  
 INK 68.45 23 eP 52 27.00 0.9  
 NUR 73.79 330 iP 53 08.60 10.4X  
 UPP 77.20 331 iP 53 15.90 -1.6  
 YKA 78.08 25 eP 53 22.80 0.4  
 0.6s 0.60nm 3.8mb X  
 HFS 78.71 332 eP 53 24.70 -1.2  
 0.9s 6.10nm 4.6mb  
 Z 16s 0.43um 4.9mszX  
 ePcP 53 34.40 65kmX  
 e 53 42.50  
 LR 31 19.00  
 NB2 79.20 334 P 53 28.00 -0.6  
 1.1s 9.50nm 4.7mb  
 KRA 81.10 322 eP 53 39.40 0.5  
 e 53 48.90 30km  
 KSP 82.66 324 eP 53 47.60 0.6  
 e 53 59.00 37km  
 BRG 83.87 325 eP 53 54.20 1.0  
 PRU 84.07 324 P 53 55.30 1.1  
 Z 16s 0.70um 5.1mszX  
 N 16s 0.40um  
 E 16s 0.40um  
 CLL 84.10 325 iPd 53 55.50 1.2  
 1.3s 19.00nm 5.1mb  
 Z 18s 0.50um 4.9msz  
 i 54 05.10 30km  
 KHC 85.07 323 eP 54 00.50 1.2  
 Z 18s 0.50um 4.9msz  
 E 18s 0.30um  
 GRF 85.98 325 eP 54 05.30 1.5  
 Z 18s 0.60um 5.0msz  
 e 54 07.50 7kmX  
 e 54 17.00  
 FFC 88.14 27 eP 54 24.00 9.8X  
 1.0s 17.00nm 5.3mb  
 S.D. = 1.0 on 44 of 49 abs.

& MAY 08, 1991 19h 13m 04.00s  
 63.316 N 149.945 W  
 DEPTH = 110.0km  
 CENTRAL ALASKA ( 1 )  
 <AEIC>.

TRF 0.21 311 iPd 13 19.63 1.5  
 eS 13 31.11  
 HUR 0.37 157 iPd 13 19.86 -0.5  
 eS 13 31.91  
 RND 0.50 79 iPc 13 20.87 -0.3  
 eS 13 33.67  
 MCK 0.62 47 iPc 13 21.77 -0.2  
 eS 13 34.83  
 BWN 0.89 14 ePc 13 24.22 -0.1  
 S 13 39.22  
 CUT 0.93 189 iPd 13 24.32 -0.4  
 NEA 1.32 16 iPd 13 28.27 -0.8  
 S 13 46.21  
 WRH 1.42 34 iPd 13 29.66 -0.6  
 eS 13 48.94  
 SKT 1.53 209 iPd 13 30.78 -0.8  
 eS 13 51.27  
 GH0 1.62 163 iPc 13 32.73 0.0  
 eS 13 55.21  
 CCB 1.64 34 iPd 13 32.12 -0.7  
 PWA 1.67 179 ePd 13 33.16 -0.1  
 SML 1.69 153 iPc 13 33.07 -0.5  
 eS 13 56.15  
 RDS 1.71 27 iPd 13 33.18 -0.6  
 eS 13 55.44  
 HDA 1.72 49 iPd 13 33.17 -0.7  
 eS 13 55.01  
 PLRM 1.77 167 eP 13 34.06 -0.4  
 PMR 1.77 167 eP 13 34.70 0.2  
 MDM 1.81 24 iPd 13 34.41 -0.7  
 eS 13 58.06  
 FBA 1.85 30 iPd 13 35.50 0.0  
 DDM 1.89 74 ePc 13 35.52 -0.6  
 THY 1.89 85 ePc 13 37.28 1.2  
 SUA 1.90 192 iPd 13 36.00 -0.3  
 SCM 1.92 140 ePc 13 35.90 -0.6  
 GLM 2.02 33 iPd 13 37.03 -0.7  
 KNK 2.03 159 ePc 13 37.40 -0.5  
 PAX 2.06 98 iPc 13 38.25 -0.1  
 S 14 05.61  
 PMS 2.09 175 ePd 13 38.41 -0.2  
 S 14 03.37  
 TOA 2.12 123 iPc 13 39.60 0.5  
 SDG 2.16 109 iPc 13 39.34 -0.3  
 NCG 2.18 209 iPd 13 39.11 -0.8  
 S 14 07.76  
 CRP 2.30 208 ePd 13 40.84 -0.7  
 BGL 2.36 210 eP 13 41.89 -0.3  
 SPU 2.36 206 iPd 13 41.40 -0.8  
 CKL 2.40 209 ePd 13 42.18 -0.7  
 TZL 2.44 119 eP 13 42.99 -0.3  
 KLU 2.62 133 iPc 13 44.31 -1.4  
 NKA 2.65 194 eP 13 48.42 2.4  
 DOT 2.66 80 ePc 13 45.33 -0.9  
 S 14 17.38  
 VZW 2.77 143 ePc 13 45.82 -1.8  
 VLZ 2.77 141 eP 13 45.74 -1.8  
 eS 14 18.24  
 TTA 2.78 265 ePc 13 47.10 -0.8  
 GLI 2.79 150 iPc 13 46.11 -1.8  
 SLKM 2.82 183 ePd 13 48.04 -0.3  
 RDT 2.99 204 eP 13 50.16 -0.5  
 DFR 3.03 207 eP 13 50.51 -0.6  
 NCT 3.10 208 eP 13 51.93 -0.3  
 RDN 3.11 207 eP 13 52.13 -0.2  
 TMW 3.14 87 eP 13 51.14 -1.4  
 RDW 3.15 207 eP 13 52.55 -0.4  
 KNIM 3.16 160 ePc 13 51.18 -1.7  
 RS2 3.16 206 eP 13 52.90 -0.1  
 RSO 3.16 206 eP 13 53.43 0.4  
 IMA 3.20 332 ePc 13 52.70 -0.8  
 RED 3.20 206 eP 13 53.19 -0.3  
 SEW 3.23 176 eP 13 52.95 -0.9  
 >NNL 3.35 192 ePc 13 55.96 0.5  
 HIN 3.35 149 ePc 13 53.75 -1.8  
 S 14 32.93  
 CVA 3.41 143 eP 13 54.90 -1.4  
 GLB 3.42 121 iPc 13 55.34 -1.1  
 SVW 3.46 233 eP 13 56.10 -0.9  
 MTU 3.51 161 ePc 13 56.64 -1.0  
 SGAM 3.61 139 ePc 13 56.60 -2.3

CNPM 3.85 190 ePd 14 01.16 -1.2  
 RAGM 3.86 137 eP 14 00.61 -1.8  
 HMT 4.02 135 ePc 14 02.93 -1.7  
 CROM 4.11 126 ePc 14 04.56 -1.4  
 TGL 4.22 124 ePc 14 05.33 -2.1  
 BALM 4.23 119 ePc 14 05.89 -1.7  
 WAX 4.42 127 ePc 14 08.35 -1.7  
 CTGM 4.68 116 ePc 14 12.39 -1.3  
 CDD 4.75 204 eP 14 13.98 -0.6  
 SYI 4.87 195 eP 14 15.11 -1.0  
 WRG 5.00 128 eP 14 16.96 -1.0  
 INK 8.38 46 eP 15 02.50 -1.6  
 74 obs. associated

MAY 08, 1991 19h 53m 21.67±0.17s  
 13.875 S ± 3.7km 74.458 W ± 4.4km  
 DEPTH = 107.1km (geophysicist)  
 5.6mb (75 obs.)

PERU (116)  
 Felt (III) at Chinchá and Ica  
 and (II) at Lima. Depth from  
 broadband displacement  
 seismograms.  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 11S, 23C  
 Centroid Location:  
 Origin Time 19:53:25.6 0.5  
 Lat 13.94S 0.05 Lon 74.31W 0.10  
 Dep 121.8 2.3 Half-duration 2.2  
 Moment Tensor: Scale 10\*\*17 Nm  
 Mrr=-2.13 0.15 Mtt=1.67 0.21  
 Mff=0.45 0.29 Mrt=0.29 0.11  
 Mrf=-0.35 0.14 Mtf=-1.44 0.19  
 Principal Axes:  
 T Val= 2.67 Plg= 5 Azm= 34  
 N -0.49 4 124  
 P -2.18 83 254  
 Best Double Couple: Mo=2.4\*10\*\*17  
 NP1: Strike=119 Dip=40 Slip=-97  
 NP2: 308 50 -84

HUA 2.01 335 iPc 53 57.00 1.4  
 iS 55 18.50  
 NNA 2.99 309 iPc 54 05.70 -2.5  
 0.4s 677.97nm  
 ARE 3.85 132 eP 54 18.00 -2.2  
 eS 54 58.00  
 ZOBO 6.57 112 ePc 54 57.33 -0.5  
 LPB 6.68 114 iPc 54 56.20 -3.1X  
 1.0s 1210.00nm 6.3mb  
 CCH 8.74 115 Pc 55 26.00 -1.2  
 SIV 13.11 101 P 56 17.20 -7.8X  
 ANGL 13.74 347 eP 56 50.80 17.2X  
 QUIL 13.76 341 eP 56 36.00 2.1  
 QTO 14.16 343 P 56 41.40 2.3  
 QUR 14.20 343 eP 56 40.10 0.6  
 GGP 14.21 343 eP 56 42.00 2.1  
 YANA 14.26 343 eP 56 38.10 -2.4  
 PSO 15.24 349 eP 56 51.00 -1.7  
 ZON 18.37 164 e(P) 57 30.00 -1.0  
 BOG 18.38 1 iPc 57 32.00 0.5  
 iS 01 02.00  
 FUQ 19.23 2 eP 57 36.00 -4.6X  
 ROCH 19.27 171 eP 57 39.50 -1.3  
 PEL 19.49 170 iPc 57 41.80 -1.0  
 1.0s 560.00nm 5.9mb  
 MDZ 19.60 166 i(P) 57 44.10 0.1  
 TCA 19.60 154 eP 57 42.40 -1.7  
 LCCH 19.69 173 iPd 57 44.00 -0.9  
 SAN 19.79 171 eP 57 45.50 -0.5  
 PCH 19.98 170 eP 57 47.20 -0.8  
 BMG 20.85 4 iPd 57 57.00 0.0  
 RFA 21.50 166 ePd 58 03.00 -0.3  
 ITB1 21.74 123 eP 58 05.60 0.0  
 ITB 21.95 123 e(P) 58 07.00 -0.7  
 ITB7 22.12 123 e(P) 58 10.60 1.2  
 SDV 22.93 10 eP 58 17.10 -0.4  
 UPA 23.26 347 iPc 58 22.30 1.8  
 1.3s 276.92nm 5.5mb  
 i 58 57.00  
 PPD 23.44 114 ePd 58 22.90 0.6  
 CEQS 23.55 15 iP 58 22.90 -0.6  
 TOV 23.96 11 eP 58 27.20 -0.2  
 iPP 58 27.40  
 VAO 27.57 113 eP 59 01.30 0.5



08d 19h

BMA	30.03	111	eP	59	22.70	-0.1	SES	71.58	336	eP	04	31.00	-2.0	AVF	91.85	42	eP	06	18.30	-0.4	
			e	59	27.40			0.9s	219.00nm				6.0mb		1.5s	51.20nm			5.6mb		
SVV	30.03	26	eP	59	20.81	-1.9	LIC	71.73	79	P	04	32.58	-1.9	SSF	92.03	42	eP	06	18.90	-0.7	
SLB	30.56	26	eP	59	26.51	-0.9		1.0s	31.00nm				5.1mb		1.5s	51.70nm			5.6mb		
SOB1	33.19	86	eP	59	49.80	-0.6	Z	20s	0.68um				4.9Msz		92.04	341	eP	06	18.00	-1.2	
TPX	33.58	328	(P)	59	55.50	1.8	TIC	71.85	78	P	04	33.26	-2.0		1.1s	51.00nm			5.7mb		
PDCR	34.41	92	eP	59	57.50	-3.4X		1.1s	22.50nm				4.9mb						06	54.50	142kmX
PBJ	36.54	325	(P)	00	19.50	0.7	KIC	72.04	79	P	04	34.60	-1.8	SMF	92.12	42	eP	06	19.80	-0.3	
IISM	39.70	325	(P)	00	47.50	2.4		1.0s	48.00nm				5.3mb		1.5s	74.70nm			5.8mb		
IIT	40.26	324	(P)	00	52.50	2.5	LKO	72.18	75	Pd	04	34.02	-3.2X	SSB	92.17	44	P	06	20.59	0.2	
III	40.43	322	(P)	00	53.00	1.6		1.0s	38.50nm				5.2mb		LBF	92.31	42	eP	06	20.40	-0.6
PPM	40.48	323	(P)	00	54.50	2.4	FFC	72.21	344	iPd	04	34.80	-1.8		1.6s	46.00nm			5.5mb		
TPM	40.66	323	iP	00	59.00	5.7X		1.1s	77.00nm				5.4mb		LOR	92.32	42	eP	06	20.40	-0.6
MRX	42.49	321	(P)	01	10.00	2.0	NEW	72.55	332	eP	04	37.70	-1.1		1.5s	47.55nm			5.6mb		
RSCP	50.32	348	eP	02	05.90	-3.5X		1.0s	55.00nm				5.3mb		Z	22s	0.47um			4.9Msz	
BLA	51.12	354	eP	02	14.30	-1.2	PNT	74.46	331	eP	04	50.00	0.2	LRG	92.89	46	eP	06	24.00	0.4	
	1.1s	112.50nm				5.8mb		1.2s	91.00nm				5.5mb		1.4s	61.00nm			5.7mb		
TUL	55.47	338	iPd	02	30.70	-2.2	PGC	75.86	329	eP	04	59.00	1.3	Z	22s	1.00um			5.2Msz		
	1.0s	331.40nm				6.3mb	FRB	77.51	3	Pd	05	05.00	-1.5	LMR	92.96	46	eP	06	24.20	0.2	
Z	17s	0.29um				4.4MszX		0.9s	80.00nm				5.5mb		1.5s	61.65nm			5.7mb		
MEO	55.54	335	iPd	02	31.10	-2.4	EVAL	81.49	48	eP	05	28.50	-0.1	FRF	93.12	46	eP	06	24.90	0.2	
FVM	53.72	344	ePd	02	31.70	-3.0X	SBA	82.31	191	iP	05	33.90	1.7		1.7s	75.75nm			5.7mb		
	0.7s	132.65nm				6.0mb	YKA	82.32	342	eP	05	29.70	-2.6	SNF	93.57	39	P	06	27.30	0.7	
CCM	54.00	344	ePd	02	35.43	-1.4		1.1s	31.80nm				5.1mb	DOU	93.64	39	Pc	06	27.70	0.8	
		iPPc	03	00.59	104kmX		EHOR	82.68	48	eP	05	35.30	0.6		S	16	58.00				
		iSPc	03	12.51			ERUA	83.26	43	eP	05	39.00	1.4	LPL	93.72	44	eP	06	28.30	0.6	
		eS	10	01.20			EMON	83.59	42	eP	05	38.00	-1.3		1.2s	34.50nm			5.6mb		
		e	10	11.80			ECOG	83.69	49	eP	05	41.00	1.0	LPG	93.73	44	eP	06	28.50	0.7	
PNJ	54.50	0	iP	02	39.30	-1.1	AFC	83.70	49	eP	05	41.00	0.9		1.4s	54.90nm			5.7mb		
HRV	56.16	3	ePd	02	51.57	-0.8	TOL	84.35	47	ePd	05	44.41	1.2	SBF	93.75	46	eP	06	27.70	0.0	
		ePPc	03	16.73	103kmX			1.3s	346.15nm				6.1mb		1.6s	72.15nm			5.8mb		
		eSPc	03	28.48					ePPc	06	11.23	102kmX		PRY	94.13	119	iPd	06	31.00	1.0	
		eS	10	35.39					eSPc	06	23.14		HAU	94.15	42	eP	06	29.20	-0.2		
		iS	11	17.77					ePP	09	26.00		Z	22s	0.43um			4.9Msz			
ALO	57.26	329	eP	02	58.70	-1.9			eS	15	50.00		BSF	94.39	42	eP	06	30.30	-0.3		
	1.1s	41.14nm				5.4mb			ePS	16	49.00			1.5s	56.95nm			5.8mb			
		e	03	25.00					eSS	21	40.00		ENN	94.65	39	eP	06	32.50	1.0		
RSNY	58.14	360	ePd	03	04.70	-1.6			eSSS	24	55.00			1.1s	29.00nm			5.6mb			
	0.8s	57.69nm				5.7mb	EHUE	84.61	49	eP	05	45.00	0.4	MEM	94.65	39	Pc	06	32.60	1.1	
GLA	60.52	321	eP	03	23.00	0.1	EVIA	84.98	48	eP	05	40.00	1.5	CDF	94.86	41	eP	06	32.40	-0.3	
GLD	60.55	333	ePd	03	22.00	-1.2	ETOR	86.12	46	eP	05	53.00	1.0		1.6s	74.00nm			5.8mb		
	1.5s	134.38nm				5.8mb	WIN	86.19	112	eP	05	53.00	0.1	PMR	94.96	332	e(P)	06	29.70	-3.0X	
GOL	60.58	333	eP	03	21.60	-1.9		1.3s	44.23nm				5.3mb	SLR	95.18	118	iPd	06	35.00	0.1	
	1.5s	78.62nm				5.5mb	ECB	87.82	35	eP	05	59.50	-0.3		0.9s	21.01nm			5.6mb		
CBM	60.79	5	ePd	03	23.10	-1.3		1.1s	71.00nm				5.6mb	ABH	95.41	40	eP	06	35.23	0.1	
PV09	61.38	329	eP	03	27.80	-1.2	EROO	87.87	47	eP	06	02.20	1.9	WTS	95.52	38	eP	06	36.00	0.5	
BAR	61.41	320	eP	03	28.00	-0.9	EBR	87.92	47	eP	06	01.00	0.4		1.1s	37.00nm			5.8mb		
PLM	61.97	320	eP	03	33.00	0.1	ECP	87.97	35	eP	06	00.30	-0.2	FBA	95.55	336	ePc	06	34.50	-0.9	
TPC	61.98	321	eP	03	33.00	0.2		1.0s	156.00nm				6.0mb		1.0s	45.00nm			5.9mb		
PEC	62.52	321	eP	03	35.40	-0.9	BTH	88.24	45	iPc	06	03.00	0.9	WIT	95.65	37	eP	06	38.50	2.4	
RVR	62.72	320	eP	03	37.00	-0.6			iPp	06	24.00	76kmX		RSO	96.28	331	eP	06	38.00	-1.1	
GSC	63.25	322	eP	03	41.00	-0.2			e(SP)	06	34.00		BUL	97.17	113	iPKPc	06	44.50	0.6		
MWC	63.30	320	eP	03	42.00	0.4	ETA	88.28	34	eP	06	01.90	-0.1		iPP	07	14.60				
PAS	63.32	320	ePc	03	39.10	-2.4		1.1s	86.00nm				5.7mb	CTI	97.19	44	P	06	43.80	0.5	
		ePPc	04	07.74	117kmX		DMU	88.43	33	eP	06	02.80	0.1	FUR	97.39	42	eP	06	45.10	1.0	
		eP	03	43.10	0.4			1.1s	73.00nm				5.7mb		1.0s	36.00nm			5.8mb		
MBO	63.46	66	eP	03	45.00	-1.5	EPF	88.58	45	eP	06	04.10	0.3	GRF	97.68	41	eP	06	45.70	0.3	
CLC	64.08	322	eP	03	49.00	-0.3		1.4s	67.95nm				5.5mb		1.3s	37.00nm			5.7mb		
ISA	64.50	321	eP	03	48.80	-0.6	LPF	89.46	40	eP	06	07.20	-0.5	Z	20s	0.10um			4.3Msz		
DUG	64.52	328	eP	03	49.70	-2.4		1.2s	67.85nm				5.6mb			e	07	15.50			
BW06	64.92	332	eP	03	53.80	-1.4	LFF	89.51	43	eP	06	07.90	-0.1	FVI	98.06	44	P	06	47.40	0.3	
	1.3s	49.18nm				5.3mb		1.3s	102.55nm				5.8mb	MOX	98.13	40	eP	06	47.80	0.4	
TNP	65.40	324	ePd	03	58.20	-1.4	MFF	89.51	42	eP	06	07.90	-0.1	BHG	98.35	43	iPd	06	49.40	1.0	
		i	04	34.50				1.3s	54.15nm				5.5mb	KBA	98.54	44	iPd	06	44.30	-5.2X	
FRI	66.13	322	eP	03	59.70	-0.3	GRR	89.70	40	eP	06	08.40	-0.4		1.4s	26.80nm			5.6mb		
PRI	66.16	320	ePc	04	02.70	-0.2		1.4s	83.65nm				5.7mb	KHC	99.08	42	iP	06	52.50	0.8	
LLA	66.64	321	ePc	04	03.00	-0.4	LPO	89.73	44	eP	06	08.80	-0.3		1.4s	18.30nm			5.5mb		
PRS	66.72	320	ePc	04	06.21	-0.4		1.3s	69.30nm				5.6mb			e	07	22.50			
CMB	67.22	322	ePd	04	44.45		FLN	90.07	39	eP	06	10.40	-0.1	CLL	99.12	39	iPd	06	53.00	1.2	
		eSPc	04	47.70	-1.0			1.2s	86.00nm				5.7mb		1.8s	32.00nm			5.6mb		
MHC	67.53	321	ePc	04	08.50	-0.1	RJF	90.15	43	eP	06	10.70	-0.3			e	07	21.00			
GCC	67.55	320	ePc	04	13.30	0.4		1.3s	53.05nm				5.5mb	BRG	99.63	40	iP	06	54.70	0.6	
BKS	68.24	321	ePd	04	12.30	-0.6	LDF	90.23	40	eP	06	11.00	-0.3		1.4s	36.00nm			5.8mb		
	1.2s	119.00nm				5.7mb		1.2s	68.75nm				5.7mb			e	07	23.00			
BRK	68.25	321	eP	04	14.60	-0.7	CAF	90.40	44	eP	06	11.90	-0.3	PRU	99.85	41	eP	06	56.00	0.8	
LRM	68.60	332	eP	04	14.00	-1.6		1.2s	39.85nm				5.4mb		1.3s	16.30nm			5.5mb		
SCH	68.73	5	ePd	04	16.70	0.0	LSF	90.48	42	eP	06	12.10	-0.4			e	07	25.00			
	1.0s	128.00nm				5.7mb		1.4s	58.40nm				5.6mb	NB2	99.93	30	P	06			



STK	122.87	217	ePKP	12 06.90	-0.2	LHE	0.26	233	Pg	51 44.94		eS	06 04.43									
	1.6s	2.00nm								51 44.31	0.2	iPc	05 58.22	-1.4								
YAK	128.90	346	ePKP	12 16.20	-1.6	ATE	0.27	274	Pg	51 44.03	-0.2	eS	06 06.87									
			e	14 21.00						51 47.99		eP	05 59.40	-0.6								
OIS	132.13	225	iPKPd	12 25.20	0.0	MADF	0.36	282	Pg	51 46.20	0.2	ePc	06 02.01	-1.1								
			e	12 53.00			S.D. = 0.2	on	6 of	6 obs.		eS	06 14.00									
MAIO	133.23	53	ePKP	12 28.00	1.0	-----								SML	0.94	282	ePd	06 02.98	-1.8			
WB2	136.04	221	ePKP	12 17.90	-14.8X	MAY 08, 1991 21h 43m 48.77±0.48s								SDG	0.98	24	iPc	06 04.14	-1.2			
	0.9s	1.30nm				37.465 N ± 6.8km 77.714 E ± 8.7km										iS	06 16.88					
			e	12 31.70		DEPTH = 33.0km (normol)								KNK	1.02	258	ePc	06 05.07	-0.7			
			e	13 01.20		4.2mb ( 8 obs.)										eS	06 18.44					
WRA	136.04	221	PKP	12 27.00	-5.7X	SOUTHERN XINJIANG, CHINA (321)								CVA	1.13	164	ePc	06 06.77	-0.6			
	1.0s	14.70nm													eS	06 21.99						
GAR	140.13	45	ePKP	12 40.70	0.8	NDI	8.77	183	iPd	45 58.00	1.8	ePd	06 07.41	-1.3	CHO	1.22	278	eS	06 24.08			
QUE	140.94	59	ePKP	12 36.20	-5.5X				eS	47 36.00		eS	06 08.71	-0.3			iPc	06 08.71				
IRK	141.69	1	ePKP	12 36.80	-5.3X	GKN	11.09	146	P	46 28.36	0.1	eS	06 26.31		HIN	1.24	183	eS	06 26.31			
			e	12 43.40		QUE	11.52	234	eP	46 32.70	-1.4	ePc	06 07.91	-1.2	GLB	1.25	98	iPc	06 07.91			
			e	13 09.00					eS	48 35.20		eS	06 23.70				eS	06 08.79	-0.6			
			e	15 44.50		KKN	11.56	144	P	46 33.96	-0.7	ePc	06 09.34	-0.6	SGAM	1.27	153	ePc	06 09.34			
CHJJ	142.78	312	PKP	12 42.10	-2.4X		0.6s	21.00nm		5.5mb X					PLRM	1.31	269	eP	06 26.14			
MAT	143.10	314	ePKP	12 41.00	-4.0X	DMN	11.63	146	P	46 36.02	0.3	eS	06 10.25	-1.2			eS	06 28.15				
	1.0s	40.00nm				GUN	11.74	142	P	46 36.28	-1.1	ePc	06 11.32	-0.6	PAX	1.41	17	ePc	06 11.32			
MDJ	143.15	331	ePKP	12 41.00	-3.8X	PKI	11.80	144	P	46 37.40	-0.7	eS	06 12.25	-0.5			eS	06 12.58	-0.2			
MTMJ	143.36	314	PKP	12 41.20	-4.4X		0.6s	22.00nm		5.5mb X							eS	06 14.54	-0.6			
LIDJ	143.82	312	PKP	12 45.10	-1.2	MAIO	14.63	271	eP	47 23.00	7.7X	eS	06 16.85	0.3	KNIM	1.45	208	iPc	06 16.85			
TSRJ	145.16	314	PKP	12 47.50	-1.0				eS	49 45.00							S	06 29.39				
CN2	145.64	334	PKPd	12 47.00	-2.1X	HYB	19.99	178	eP	48 21.50	0.1				RAGM	1.50	146	eP	06 12.25	-0.5		
WMO	146.47	24	ePKPd	12 51.88	1.3	LZH	20.96	86	e(P)	48 31.50	0.0				PMS	1.57	257	ePc	06 13.58	-0.2		
			epP'df	13 20.03			2.0s	25.00nm		4.3mb					HMT	1.66	141	eP	06 14.54	-0.6		
SHK	148.00	315	ePKP	12 54.70	1.5		Z 16s	0.29um		3.8mszX							eS	06 36.05				
SNY	148.05	334	ePKP	12 52.40	-0.6		E 11s	0.23um							MTU	1.76	201	eP	06 16.85	0.3		
POO	149.24	77	iPKPd	12 55.60	0.0	KAF	39.83	325	eP	51 21.00	0.7				CROM	1.80	118	ePd	06 16.78	-0.5		
NDI	149.88	56	ePKP	12 57.50	1.3		0.5s	3.10nm		4.3mb					TGL	1.93	116	eP	06 18.29	-0.8		
DL2	151.30	333	PKP	13 03.40	5.4X				esP	51 26.60					CUT	1.99	295	eP	06 19.53	-0.2		
BJI	152.31	342	ePKPd	13 00.02	0.5	HFS	45.67	321	eP	52 07.70	0.0				HUR	2.03	313	eP	06 19.92	-0.5		
			e	13 06.31			0.6s	5.40nm		4.6mb					BALM	2.04	105	eP	06 19.30	-1.3		
			ePKPab	13 14.25			Z 15s	0.06um		3.7mszX					WAX	2.09	123	eP	06 21.56	0.3		
HHC	152.62	350	PKP	13 01.40	1.3				e	52 13.20					SUA	2.09	267	ePd	06 20.94	-0.4		
GBA	152.70	87	PKPd	13 00.60	-0.1				e	52 24.70					RND	2.11	328	eP	06 21.10	-0.5		
	1.3s	49.80nm							LR	09 29.00				SEW	2.15	226	eP	06 21.72	-0.2			
BTO	153.09	352	ePKP	13 01.40	0.7	NB2	46.88	322	P	52 17.60	0.2				SLKM	2.18	240	eP	06 22.88	0.4		
HYB	153.78	79	iPKPc	13 03.40	1.2		0.7s	4.80nm		4.6mb					SKT	2.47	280	ePd	06 25.35	-1.3		
	1.0s	30.00nm				EKA	55.31	317	P	53 26.00	4.9X				CTGM	2.53	103	eP	06 27.46	-0.2		
			e	13 10.50			0.9s	4.20nm		4.5mb					TRF	2.57	317	eP	06 27.66	-0.5		
GTA	154.07	10	ePKP	13 03.00	0.8	INK	71.98	12	eP	55 09.00	-1.5				WRG	2.67	125	eP	06 30.12	0.7		
TIA	155.45	337	ePKP	13 04.50	0.6	WRA	78.09	127	P	55 47.00	0.9				NCC	2.77	268	eP	06 29.29	-1.7		
TIY	155.48	347	PKPd	13 05.20	1.2		1.6s	1.40nm		3.7mb					HDA	2.79	355	eP	06 30.76	-0.4		
GKN	156.00	51	PKP	13 05.40	0.2	WB2	78.10	127	iPd	55 47.20	1.1				CKL	2.89	264	eP	06 32.60	-0.1		
DMN	156.56	51	PKP	13 07.00	1.0		1.0s	1.40nm		3.9mb					BGL	2.91	265	eP	06 33.07	0.2		
KKN	156.59	51	PKP	13 06.00	0.0	YKA	79.89	6	eP	55 55.40	0.2				RDT	3.11	253	eP	06 35.47	-0.3		
PKI	156.80	51	PKP	13 06.40	0.0		0.9s	1.20nm		3.9mb					41 obs. associated							
GUN	156.97	50	PKP	13 07.00	0.3		S.D. = 1.0	on	16 of	18 obs.					-----							
SSE	157.63	323	PKP	13 08.00	1.1	% MAY 08, 1991 21h 58m 58.40±1.36s									* MAY 08, 1991 22h 37m 50.04±0.51s							
	Z 20s	0.30um			5.1msz	39.056 N ±12.2km 21.758 E ± 6.7km									18.561 N ±11.4km 119.648 E ±20.2km							
LZH	157.83	4	PKP	13 08.00	0.8	DEPTH = 10.0km (geophysicist)									DEPTH = 33.0km (normol)							
	8.0s	360.00nm				GREECE (364)									4.2mb ( 6 obs.)							
	Z 28s	0.53um			5.2mszX	MD 2.7 (THE).									PHILIPPINE ISLANDS REGION (248)							
NJ2	158.19	328	PKPd	13 08.00	0.5	AGG	0.45	94	iPg	59 07.50	0.0				XAN	18.15	330	P	42 00.50	-0.7		
LSA	159.38	38	PKPc	13 10.50	1.0				eSg	59 15.10					CD2	18.93	314	eP	42 11.20	0.3		
XAN	159.69	352	PKP	13 09.50	0.3	LIT	1.19	28	ePb	59 21.10	0.6				TIY	20.10	343	eP	42 23.60	-0.3		
WHN	161.53	335	ePKP	13 13.00	2.0X				eSb	59 36.50					Z 12s		0.40um		4.0mszX			
CD2	162.97	5	ePKP	13 14.00	1.4	IGT	1.20	294	ePb	59 21.00	0.2				N 17s		0.40um					
PSI	167.11	149	ePKPc	13 21.50	4.9X				eSb	59 38.00							S	45 57.50				
GYA	167.44	355	iPKPd	13 17.80	1.2	FNA	1.75	350	ePb	59 28.80	-0.2				BJI	21.61	353	(P)	42 39.00	-0.2		
KMI	168.50	13	ePKPd	13 18.73	1.3				eSb	59 51.70					LZH	22.35	325	Pd	42 46.70	-0.1		
			epP'df	13 47.20		GRG	1.96	14	ePn	59 31.60	-0.5				Z 2.0s		36.00nm		4.5mb			
			ePKPob	14 26.60					eSn	59 57.70					Z 15s		0.43um		4.0mszX			
CHG	171.99	51	ePKP	13 20.00	0.9	SOH	2.15	34	ePn	59 34.50	-0.3						pP	42 54.00	26kmX			
	1.4s	48.26nm							eSn	00 00.00							sP	42 57.50				
BDT	172.86	61	ePKP	13 19.00	-0.4	KNT	2.28	22	ePn	59 36.90	0.3						PP	43 19.00				
LOE	174.92	46	iPKPc	13 21.50	1.3		S.D. = 0.4	on	7 of	7 obs.					HHC	23.27	344	eP	42 57.00	1.3		
	S.D. = 1.1	on	208 of	231 obs.		& MAY 08, 1991 22h 05m 47.69s									GTA	26.95	325	eP	43 31.40	0.8		
% MAY 08, 1991 20h 51m 38.58±2.52s											61.634 N 146.387 W					Z 14s		0.30um		4.0mszX		
43.069 N ± 8.9km 0.337 W ±17.7km											DEPTH = 31.4km					E 12s		0.40um				
DEPTH = 10.0km (geophysicist)											SOUTHERN ALASKA ( 2)					GUN	32.31	293	P	44 00.00	-18.7X	
PYRENEES (378)											<AEIC>. ML 2.5 (AEIC).					WMO	36.78	320	P	44 56.40	-0.2	
MD 1.1 (STR).																WRA	40.89	159	P	45 42.00	11.1X	
JAU	0.04	217	Pg	51 40.73	-0.1	KLU	0.26	122	iPd	05 54.88	-0.1				0.7s		2.60nm					
			Sg	51 41.88					eS	06 00.68					WB2	40.89	159	iPc	45 31.40	0.5		
OGE	0.14	315	Pg	51 41.95	0.0	TOA	0.48	12	ePc	05 57.53	-0.5				1.0s		13.70nm		4.6mb			
			Sg	51 44.18		SCM	0.49	294	iPd	05 57.12	-1.0				ASPA	44.22	161	eP	45 57.00	-1.0		
ESCF	0.17	273	Pg	51 42.51	0.0				S	06 04.96					1.7s		6.90nm		4.2mb			
						VLZ	0.51	177	iPc	05 57.13	-1.1				STK	54.39	157	eP	47 16.90	0.8		
															0.9s		1.90nm		4.1mb			
															NB2	82.51	332	P	50 09.60	-1.0		
															1.0s		1.30nm		3.9mb			



08d 22h

YKA 88.69 22 eP 50 41.10 -0.1  
0.8s 0.90nm 4.1mb  
S.D. = 0.8 on 13 of 15 obs.

% MAY 08, 1991 22h 42m 44.01 ± 2.54s  
39.854 N ± 7.4km 30.529 E ± 24.3km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)  
MD 2.7 (ISK).

GPA 0.47 339 iPg 42 53.20 -0.3  
eSg 42 57.20

ALT 0.86 202 ePg 43 00.60 -0.1  
eSg 43 11.60

IZI 0.94 301 iPg 43 01.80 -0.2

YLV 1.14 309 ePg 43 04.40 -0.9

HRT 1.17 326 ePg 43 06.50 0.6

DST 1.49 261 ePn 43 10.00 -0.8

KCT 1.71 284 ePn 43 15.80 1.7

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

& MAY 08, 1991 22h 43m 39.60s  
38.100 N 119.333 W

DEPTH = 8.0km  
CALIFORNIA-NEVADA BORDER REGION (40)  
<BRK>. ML 3.2 (BRK).

BONR 0.83 100 eP 43 54.00 -2.0

CMB 0.83 266 iPc 43 54.80 -1.1

FRI 1.15 195 iPd 44 00.30 -0.9

KVN 1.35 45 eP 44 03.50 -1.4

TNP 1.67 90 eP 44 09.30 -0.1

ARN 1.90 247 eP 44 13.60 1.0

LLA 1.96 221 iPd 44 15.10 1.6

iS 44 40.50

MHC 1.98 248 eP 44 15.00 1.1

PRI 2.23 209 ePc 44 19.10 1.7

ORV 2.23 311 iPd 44 19.10 1.7

BRK 2.32 265 e(P) 44 21.10 2.4

GCC 2.37 244 e(P) 44 22.80 3.4

PRS 2.40 223 eP 44 20.70 0.9

PHAM 2.42 201 eP 44 21.00 0.9

BCH 2.97 192 eP 44 29.30 1.3

15 obs. associated

\* MAY 08, 1991 23h 24m 50.59 ± 0.56s  
26.453 N ± 8.6km 128.609 E ± 9.4km  
DEPTH = 32.0km (4 depth phases)

4.8mb (12 obs.) 5.0MsZ (4 obs.)

RYUKYU ISLANDS (238)

SSE 7.99 307 Pc 26 47.00 -0.3

4.0s 400.00nm 5.9mb X

Z 20s 4.90um

N 12s 3.00um

E 12s 3.60um

sP 27 06.00

S 28 25.00

QZH 9.16 263 eP 27 11.00 7.5X

Z 14s 2.00um

eS 28 47.00

NJ2 10.18 306 eP 27 15.00 -2.6

Z 13s 3.70um 4.0MsZ X

N 11s 3.30um

E 11s 4.20um

DL2 13.73 336 eP 28 06.00 0.7

Z 14s 1.80um

N 14s 2.30um

eS 30 40.00

TIA 13.81 318 eP 28 08.00 1.7

Z 18s 2.20um

N 11s 0.80um

E 11s 1.80um

BJI 17.06 326 eP 28 50.50 2.4

N 12s 1.59um

E 14s 1.92um

CN2 17.50 352 Pc 28 52.00 -1.7

Z 15s 2.00um 4.0MsZ X

N 12s 2.30um

E 12s 0.60um

S 32 05.00

TIY 17.69 313 eP 28 56.00 -0.2

Z 14s 3.40um

N 13s 1.60um

E 13s 1.60um

XAN 18.60 299 P 29 07.00 -0.4

N 14s 1.40um

E 15s 2.10um

GYA 19.65 275 P 29 21.40 1.5

Z 12s 2.10um

N 12s 1.20um

E 12s 3.30um

HHC 20.13 320 eP 29 24.00 -0.8

Z 20s 2.70um 4.6MsZ

N 11s 1.40um

E 11s 1.40um

eS 33 05.00

sS 33 16.00

BTO 20.90 317 eP 29 34.50 1.8

N 13s 1.20um

E 13s 0.80um

CD2 22.23 287 eP 29 47.40 1.2

Z 15s 2.40um 4.7MsZ X

E 13s 2.80um

eS 33 41.50

LZH 23.19 300 P 29 56.00 0.3

6.0s 210.00nm 4.8mb X

Z 17s 2.43um 4.7MsZ X

N 14s 1.20um

E 13s 1.23um

pP 30 11.00 64kmX

PP 30 33.00

eS 34 07.00

sS 34 22.00

KMI 23.32 272 eP 30 00.00 2.9X

1.5s 60.00nm 4.9mb

Z 14s 3.20um 4.9MsZ X

N 12s 0.40um

E 12s 2.00um

sP 30 13.50

eS 34 04.00

sS 34 20.00

GTA 27.28 305 Pc 30 32.20 -2.0

1.0s 20.00nm 4.7mb

Z 15s 2.80um 5.0MsZ X

E 13s 2.00um

CHG 28.37 261 eP 30 45.00 0.9

LSA 33.12 284 P 31 26.20 -0.3

YAK 35.56 1 eP 31 39.20 -7.4X

WMQ 37.24 308 P 32 00.00 -1.1

1.0s 10.00nm 4.6mb

Z 20s 1.20um 4.7MsZ

N 12s 0.60um

E 12s 0.90um

pP 32 07.80 26km

sP 32 11.80

GUN 37.90 282 P 32 07.00 -0.1

0.4s 19.00nm 5.3mb

PKI 38.36 282 P 32 09.96 -1.0

KKN 38.44 282 P 32 11.48 0.0

DMN 38.62 282 P 32 12.06 -1.0

GKN 38.97 283 P 32 14.96 -1.0

WRA 46.45 173 P 33 16.00 -0.4

0.9s 9.70nm 4.8mb

WB2 46.46 173 eP 33 16.10 -0.3

0.9s 9.60nm 4.8mb

i 48 25.60

HYB 47.05 270 eP 33 19.00 -2.4

GAR 49.85 300 eP 33 42.50 -0.4

e 57 21.00

ASPA 50.09 174 iPc 33 45.70 1.0

1.1s 11.70nm 4.8mb

QUE 53.83 289 eP 34 12.40 -0.6

MAIO 58.71 298 eP 34 49.00 1.3

INK 68.55 23 eP 35 51.00 -0.8

pP 36 10.50 74kmX

KEV 69.35 339 eP 36 06.00 9.3X

OBN 69.85 322 eP 35 55.50 -4.4X

e 36 28.00 132kmX

SOD 70.33 336 eP 36 18.00 15.3X

NUR 73.86 330 eP 36 25.00 1.3

UPP 77.26 331 iP 36 41.80 -1.2

YKA 78.18 25 eP 36 47.00 -1.1

0.6s 0.60nm 3.8mb X

HFS 78.78 332 eP 36 49.20 -2.2

1.1s 11.30nm 4.8mb

e 36 54.00 15kmX

e 36 56.70

ePcP 36 59.20

NB2 79.26 334 P 36 52.80 -1.3

1.0s 7.40nm 4.6mb

MLR 79.82 316 eP 36 54.00 -3.5X

KRA 81.15 322 eP 37 05.20 0.9

KSP 82.71 324 eP 37 13.00 0.6

BRG 83.93 325 eP 37 20.30 1.7

1.3s 13.00nm 4.9mb

PRU 84.12 324 eP 37 22.00 2.4

Z 15s 0.80um 5.2MsZ X

N 16s 0.50um

E 15s 0.60um

e 37 32.00 32km

CLL 84.16 325 eP 37 20.00 0.2

1.3s 15.00nm 5.0mb

Z 18s 1.00um 5.2MsZ

e 37 31.00 35km

SKO 84.38 314 eP 37 21.60 0.5

KHC 85.13 323 eP 37 26.00 1.3

Z 16s 0.80um 5.2MsZ X

E 16s 0.80um

GRF 86.04 325 eP 37 31.00 1.8

Z 18s 1.00um 5.3MsZ

e 37 42.00 35km

KBA 86.45 322 iP 37 32.00 1.3

FFC 88.24 27 eP 37 40.00 0.2

0.8s 7.00nm 5.0mb

FRB 89.09 8 eP 37 42.00 -1.6

S.D. = 1.3 on 46 of 53 obs.

? MAY 08, 1991 23h 30m 42.87 ± 3.12s  
43.079 N ± 34.8km 0.542 W ± 18.4km  
DEPTH = 10.0km (geophysicist)

PYRENEES (378)

MD 1.0 (STR).

ESCF 0.02 268 Pg 30 44.78 -0.1

Sg 30 45.84

OGF 0.10 29 Pg 30 45.63 0.0

ATE 0.12 273 Pg 30 45.91 0.0

Sg 30 47.73

MADF 0.21 288 Pg 30 47.49 0.0

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

& MAY 09, 1991 00h 47m 31.77s

19.360 N 156.359 W

DEPTH = 43.5km

HAWAII (613)

<HVO>P>. ML 3.9 (HVO). Felt at

Kono.

CPH 0.44 73 iPd 47 40.69 -1.2

eS 47 47.65

KUH 0.47 101 iPd 47 41.37 -1.0

eS 47 48.05

KIH 0.58 75 iPd 47 42.89 -1.1

eS 47 50.53

HUH 0.59 56 eP 47 43.03 -1.1

DAH 0.65 90 iPd 47 43.56 -1.5

KHU 0.71 99 iPd 47 44.07 -1.6

SWH 0.72 82 iPd 47 44.38 -1.7

MWH 0.73 80 iPd 47 44.56 -1.3

WIH 0.74 81 iPd 47 44.72 -1.7

WOB 0.75 76 iPd 47 44.97 -1.5

SPT 0.76 120 iPd 47 44.53 -1.6

TRH 0.77 86 iPd 47 45.03 -1.6

WOH 0.82 97 iPd 47 45.32 -1.8

WKH 0.83 53 iPd 47 46.40 -0.9

AIN 0.85 89 ePd 47 45.96 -1.6

HMH 0.86 73 iPd 47 46.58 -1.3

PLL 0.86 78 iPd 47 45.96 -2.0

PPL 0.87 103 iPd 47 45.92 -1.8

KFH 0.89 86 iPd 47 46.53 -1.6

HTC 0.91 97 iPd 47 46.70 -1.7



09d 00h

MKA 1.13 89 iPd 47 49.27 -2.2  
 KAE 1.16 93 iPd 47 50.11 -1.7  
 MVH 1.23 83 iPd 47 51.12 -1.7  
 WHA 1.24 91 ePc 47 50.99 -1.9  
 NGH 1.30 75 iPd 47 52.32 -1.5  
 HUL 1.30 87 ePc 47 51.75 -2.1  
 POH 1.42 86 ePc 47 53.46 -2.1  
 KPO 1.44 84 ePd 47 53.50 -2.3

44 obs. associated

MAY 09, 1991 01h 11m 31.56± 0.40s  
 39.145 N ± 4.4km 25.353 E ± 3.2km  
 DEPTH = 5.9 ± 2.4 km

AEGEAN SEA (365)  
 ML 3.3 (ATH).

PRK 0.72 82 iPd 11 47.40 1.4  
 PAIG 1.51 302 ePb 11 58.70 -0.5  
 OUR 1.59 319 ePb 12 01.10 0.8  
 IZM 1.67 116 ePn 12 03.00 1.5  
 ATH 1.74 228 ePn 12 02.00 -0.4  
 ALN 1.83 17 ePb 12 03.00 -0.7  
 RDO 2.00 4 ePn 12 05.90 -0.4  
 SOH 2.27 318 ePn 12 10.40 0.1  
 EDC 2.28 57 ePn 12 09.50 -0.8  
 BNT 2.32 58 iPn 12 10.30 -0.6  
 AGG 2.36 268 ePn 12 11.70 0.3  
 THE 2.36 310 ePn 12 11.20 -0.3  
 SRS 2.39 326 ePn 12 11.80 -0.1  
 LIT 2.41 294 ePn 12 12.40 0.2  
 KDZ 2.50 1 iPd 12 13.00 -0.5  
 KCT 2.57 64 iPn 12 14.90 0.5  
 DST 2.58 79 iPn 12 15.00 0.4  
 RZN 2.59 349 iP 12 15.00 0.2  
 MMB 2.74 334 iPd 12 17.00 0.1  
 KNT 2.76 318 ePn 12 17.80 0.7  
 GRG 2.90 310 ePn 12 12.50 -6.7X  
 VAY 3.04 316 eP 12 23.40 2.3  
 YER 3.06 130 ePn 12 21.00 -0.4  
 VLI 3.09 219 ePn 12 20.70 -1.0  
 KKB 3.22 328 iP 12 24.00 0.3  
 DMK 3.24 34 iPn 12 23.00 -0.9  
 YLV 3.40 64 ePn 12 26.00 -0.4  
 FNA 3.47 299 ePn 12 26.80 -0.4  
 PGB 3.52 346 iPd 12 28.00 0.1  
 VTS 3.81 335 iP 12 34.00 1.8  
 PVL 4.07 360 eP 12 34.00 -1.6  
 SKO 4.11 315 ePn 12 36.20 0.0

S.D. = 0.9 on 31 of 32 obs.

MAY 09, 1991 01h 15m 43.56± 1.15s  
 70.867 N ± 12.4km 1.560 E ± 14.1km  
 DEPTH = 10.0km (geophysicist)  
 3.4mb (1 obs.)

NORWEGIAN SEA (642)

LOF 5.02 117 eP 17 01.97 1.3  
 TRO 6.01 94 iPc 17 13.59 -0.9  
 NSS 7.48 143 iP 17 35.90 0.7  
 MOL 8.66 161 iP 17 51.96 0.3  
 NRA0 10.94 153 P 18 21.80 -1.3  
 HFS 11.86 149 eP 18 35.20 -0.2  
 0.7s 1.20nm 4.3mb X  
 YKA 39.77 319 eP 23 17.60 0.2  
 0.7s 0.70nm 3.4mb  
 S.D. = 1.1 on 7 of 7 obs.

MAY 09, 1991 01h 15m 58.44± 0.66s  
 24.040 N ± 7.7km 123.289 E ± 7.9km  
 DEPTH = 22.2km (4 depth phases)  
 4.5mb (6 obs.)

SOUTHWESTERN RYUKYU ISLANDS (246)

TWC 1.43 294 ePd 16 22.90 -0.3  
 TWD 1.55 272 eP 16 24.80 -0.1

TWF1 1.95 250 ePc 16 30.40 -0.3  
 ANP 1.97 306 iP 16 29.80 -1.3  
 TWG 2.37 240 ePc 16 35.60 -1.1  
 OZH 4.37 283 ePn 17 03.50 -1.6

Z 10s 3.40um  
 SSE 7.27 346 eP 17 48.20 2.2  
 N 10s 1.00um

BAG 8.00 199 eP 17 51.70  
 NJ2 8.89 335 eP 17 56.20 -0.3  
 Z 13s 0.90um  
 E 10s 0.80um

S 18 20.00  
 S 19 46.50  
 GZH 9.17 266 P 18 22.00 9.5X

Z 14s 2.70um  
 N 11s 0.60um  
 E 12s 2.40um

WHN 10.25 311 eP 18 30.50 3.2X  
 Z 12s 1.20um 4.6Msz  
 N 10s 1.39um

TIA 13.25 338 eP 19 12.00 4.3X  
 Z 16s 0.90um  
 N 13s 0.60um

E 13s 0.60um  
 OIZ 13.47 251 eP 19 20.00 9.3X  
 N 14s 0.80um

E 16s 1.30um  
 DL2 14.89 355 eP 19 31.00 1.7  
 Z 15s 0.60um

N 13s 0.80um  
 GYA 15.24 283 P 19 39.40 5.4X  
 Z 12s 1.50um

E 10s 1.20um  
 TIY 16.49 328 eP 19 55.40 5.4X  
 Z 20s 0.50um

N 13s 0.50um  
 BJI 17.04 341 eP 20 01.50 4.6X  
 SNY 17.74 1 Pd 20 02.00 -3.6X

Z 16s 1.10um  
 E 12s 0.50um  
 CD2 18.62 296 eP 20 16.60 0.0

Z 14s 1.50um  
 E 11s 1.60um  
 KMI 18.72 278 eP 20 20.50 2.4

2.5s 80.00nm 4.5mb  
 Z 15s 2.20um 4.7Msz  
 HHC 19.43 332 eP 20 26.00 -0.4

Z 18s 0.90um  
 N 10s 0.40um  
 CN2 19.79 5 eP 20 28.00 -2.1

Z 14s 3.50um  
 N 13s 1.00um  
 E 13s 0.50um

eP 20 34.00 23km  
 eS 24 11.00  
 BTO 19.92 329 eP 20 31.00 -0.6

N 11s 0.40um  
 E 11s 0.50um  
 CHG 23.24 262 eP 20 37.00 23km

epP 20 37.00 23km  
 GTA 25.07 313 eP 21 07.30 2.1  
 Z 16s 0.90um 4.4MszX

E 11s 0.80um  
 GUN 33.77 285 P 22 46.30 5.1X  
 PKI 34.20 284 P 22 45.74 0.8

KKN 34.30 285 P 22 49.04 3.3X  
 DMN 34.46 284 P 22 47.66 0.5  
 GKN 34.86 285 P 22 52.02 1.6

DZM 62.14 134 iPc 26 21.40 0.9  
 INK 72.63 22 eP 27 25.00 -0.8  
 HFS 78.62 331 eP 27 57.90 -1.9

0.7s 1.10nm 4.0mb  
 Z 16s 0.20um 4.5MszX  
 e 28 03.20 17km

e 28 05.20  
 ePcP 28 10.00  
 LR 01 50.00

NB2 79.24 333 P 28 01.70 -1.6  
 0.9s 1.30nm 4.0mb  
 YKA 82.35 23 eP 28 18.60 -1.0

1.0s 5.70nm 4.6mb  
 NEW 90.02 36 ePc 28 58.00 0.3  
 0.7s 8.00nm 5.1mb

SES 91.72 31 eP 29 07.00 1.5  
 FRB 92.01 5 eP 29 02.00 -4.5X  
 FFC 92.48 24 eP 29 08.80 -0.1

0.8s 9.00nm 5.2mb  
 SNA 124.16 199 e(Pdif31 23.80 -6.2X  
 0.9s 30.25nm

S.D. = 1.3 on 28 of 40 obs.

MAY 09, 1991 01h 17m 27.78± 1.84s  
 9.561 N ± 7.1km 126.095 E ± 9.8km  
 DEPTH = 68.1 ± 17.6 km

4.8mb (15 obs.)  
 MINDANAO, PHILIPPINE ISLANDS (259)

DAV 2.51 192 eP 18 08.00 0.9  
 QCP 7.04 316 eP 19 20.00 9.6X  
 BAG 8.67 322 eP 19 30.30 -2.9X

KNA 25.29 174 eP 22 49.60 0.1  
 IPM 25.36 260 ePd 22 56.80 6.5X  
 NST 26.04 286 eP 23 03.00 6.4X

CHG 27.85 292 eP 23 14.00 0.9  
 PMG 28.19 131 eP 23 12.00 -4.1X  
 XAN 29.02 330 P 23 21.50 -2.0

N 10s 0.70um  
 E 12s 1.50um  
 WB2 30.43 165 iPd 23 33.70 -2.4

0.7s 3.80nm 4.2mb  
 i 24 06.30  
 TIY 30.62 338 eP 23 36.60 -1.1

BJI 31.61 345 eP 23 45.50 -0.8  
 1.0s 18.00nm 4.8mb  
 OIS 32.75 156 iPc 23 54.70 -1.7

HHC 33.72 340 eP 24 04.70 -0.1  
 ASPA 33.89 167 eP 23 58.10 -8.2X  
 1.0s 3.00nm 4.2mb

eS 29 23.90  
 CN2 34.12 359 P 24 07.00 -1.0  
 MDJ 35.06 4 P 24 15.50 -0.5

1.0s 40.00nm 5.3mb  
 Z 15s 0.89um 4.6MszX  
 N 13s 1.40um

E 13s 0.52um  
 GTA 37.87 326 eP 24 39.00 -0.9  
 0.8s 10.00nm 4.8mb

Z 18s 0.60um 4.4Msz  
 FORR 40.22 177 eP 24 59.80 0.4  
 GUN 41.98 301 P 25 14.94 0.5

PKI 42.28 301 P 25 18.40 1.6  
 KKN 42.45 301 P 25 17.82 -0.3  
 DMN 42.55 301 P 25 18.90 0.0

GKN 43.06 301 P 25 22.64 -0.3  
 STK 43.79 161 iPd 25 28.30 -0.3  
 0.4s 3.70nm 4.5mb

e 25 34.80  
 ADE 45.87 166 eP 25 45.50 0.4  
 GBA 47.78 280 P 26 02.30 1.8

0.6s 2.60nm 4.4mb  
 YAK 52.43 2 iPd 26 34.30 -0.9  
 e 33 58.00

MAIO 65.56 305 eP 28 07.00 0.2  
 ANM 72.26 25 eP 28 48.30 0.9  
 SVW 76.02 29 eP 29 11.20 1.9

TTA 76.03 27 eP 29 10.60 1.3  
 IMA 77.35 24 eP 29 18.00 1.3  
 0.7s 8.00nm 4.8mb

KMSA 78.91 289 eP 29 16.00 -10.0X  
 PMR 79.17 29 eP 29 26.70 0.2  
 1.2s 21.90nm 5.0mb

FBA 79.76 26 eP 29 30.20 0.5  
 0.9s 6.60nm 4.6mb  
 TOA 80.56 28 eP 29 35.50 1.4

BALM 82.47 29 P 29 44.80 0.7  
 KEV 84.23 340 eP 29 57.00 4.2X  
 SOD 84.87 337 iP 29 56.10 0.1

INK 85.00 22 ePd 29 57.00 0.4  
 BHL 85.11 303 P 30 05.00 7.0X  
 KAF 86.17 332 iP 30 02.20 -0.3

0.6s 12.00nm 5.2mb  
 esP 30 03.20  
 NUR 87.33 331 iP 30 07.60 -0.6

0.6s 17.00nm 5.4mb



09d 01h

HFS 92.59 332 eP 30 31.70 -1.1  
0.7s 8.20nm 5.3mb  
e 30 38.50  
NB2 93.31 334 P 30 35.00 -1.2  
0.7s 2.90nm 4.8mb  
YKA 94.47 24 eP 30 41.50 0.0  
0.9s 5.10nm 5.0mb  
S.D. = 1.1 on 38 of 47 obs.

\* MAY 09, 1991 01h 17m 38.06 ± 0.63s  
11.540 N ± 6.8km 61.226 W ± 14.5km  
DEPTH = 58.5 ± 17.3 km  
3.3mb ( 1 obs.)  
WINDWARD ISLANDS ( 95)  
MD 3.6 (TRN).

PIG 0.53 135 eP 17 49.97 -0.4  
eS 17 58.92  
TPR 0.56 129 eP 17 49.88 -0.8  
eS 17 58.81  
BOT 0.62 127 eP 17 51.14 -0.2  
eS 18 00.38  
TRN 0.90 191 eP 17 54.45 -0.4  
eS 18 06.72  
TCE 0.98 212 eP 17 55.27 -0.7  
eS 18 07.95  
TBH 1.06 172 eP 17 59.38 2.4  
eS 18 14.90  
FCV 1.61 359 eP 18 04.60 0.1  
eS 18 23.77  
SVV 1.77 0 eP 18 06.95 0.2  
eS 18 30.75  
SLB 2.28 5 eP 18 14.56 0.5  
eS 18 42.70  
YKA 63.42 335 eP 28 03.00 -0.6  
0.3s 0.10nm 3.3mb  
S.D. = 1.1 on 10 of 10 obs.

\* MAY 09, 1991 03h 04m 15.53 ± 2.34s  
45.688 N ± 10.5km 26.468 E ± 10.0km  
DEPTH = 116.3 ± 26.8 km  
ROMANIA (358)

VRI 0.26 44 iPc 04 32.00 0.6  
MLR 0.42 242 iPd 04 32.00 -1.0  
BRD 0.44 113 iPc 04 33.50 0.5  
ISR 0.55 174 iPd 04 33.00 -0.7  
CLI 1.03 33 ePc 04 38.50 0.6  
CMP 1.09 248 ePc 04 24.00 -14.5X  
PTT 1.25 357 iPc 04 40.00 -0.2  
CFR 1.29 112 iPc 04 40.00 -0.6  
BUC 1.30 192 eP 04 43.00 2.2  
MDB 1.53 288 ePd 04 44.50 1.1  
TNR 1.54 269 ePd 04 42.00 -1.6  
TLB 1.56 134 iPd 04 42.90 -0.9  
S.D. = 1.3 on 11 of 12 obs.

? MAY 09, 1991 04h 11m 17.62 ± 1.05s  
37.021 N ± 10.4km 29.417 E ± 7.9km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)

ELL 0.48 124 iPg 11 27.00 -0.4  
eSg 11 35.00  
YER 0.91 277 ePn 11 35.40 0.3  
BCK 1.03 64 iPn 11 37.90 0.7  
KHL 1.30 4 ePn 11 41.20 -0.6  
S.D. = 1.0 on 4 of 4 obs.

MAY 09, 1991 05h 26m 10.77 ± 0.39s  
56.039 N ± 8.9km 161.542 E ± 5.5km  
DEPTH = 33.0km (normal)  
4.7mb ( 26 obs.) 4.1msz ( 1 obs.)  
NEAR EAST COAST OF KAMCHATKA (218)

YAK 17.31 303 eP 30 15.20 4.1X  
SVW 22.58 59 P 31 06.00 -3.1X  
0.9s 18.33nm 4.5mb  
IMA 23.34 46 eP 31 18.20 1.6  
RSO 24.06 60 P 31 26.40 2.7X  
FBA 25.80 49 eP 31 40.70 0.7  
INK 31.05 41 eP 32 27.00 -0.2  
YKA 40.45 45 eP 33 47.20 0.0  
0.5s 1.70nm 4.0mb  
GTA 43.17 274 iPc 34 11.90 2.0  
0.8s 20.00nm 4.9mb  
LZH 43.26 268 e(P) 34 10.00 -0.7

2.0s 21.00nm 4.5mb  
Z 18s 0.24um 4.1msz  
WMO 46.84 288 P 34 39.80 0.7  
BGMT 52.38 63 eP 35 21.60 -0.2  
SOD 52.42 340 iP 35 21.20 -0.3  
FRB 54.47 25 eP 35 31.00 -5.6X  
TNP 54.84 73 P 35 39.60 -0.4  
0.8s 10.29nm 4.9mb  
BW06 55.39 63 P 35 42.70 -1.3  
0.6s 2.17nm 4.4mb  
DUG 55.62 68 P 35 45.00 -0.5  
KAF 57.11 337 iP 35 55.10 -0.6  
0.3s 6.60nm 5.1mb  
esP 35 55.50  
NUR 58.90 337 iP 36 07.80 -0.5  
0.7s 24.00nm 5.4mb  
GUN 59.44 275 P 36 13.20 0.3  
GOL 59.78 63 P 36 15.30 0.3  
0.9s 2.84nm 4.4mb  
KKN 59.87 276 P 36 16.02 0.3  
PKI 59.97 275 P 36 16.48 0.0  
GKN 60.07 276 P 36 15.68 -1.2  
DMN 60.11 276 P 36 17.82 0.5  
HFS 61.40 342 eP 36 23.30 -2.1  
0.5s 8.60nm 5.1mb  
e 36 30.80  
e 36 33.30  
e 36 45.50  
ePcP 37 04.60

ALO 62.88 67 eP 36 35.00 -0.9  
0.8s 1.49nm 4.2mb  
FVM 68.29 54 P 37 12.20 2.0  
0.5s 8.40nm 5.1mb  
EKA 68.29 351 P 37 10.00 0.0  
0.8s 4.60nm 4.6mb  
KSP 69.65 337 iP 37 18.80 0.4  
CLL 69.89 340 iPc 37 20.00 0.2  
1.4s 18.00nm 4.9mb  
i 37 39.90

DMU 70.02 353 eP 37 20.50 0.0  
BRG 70.12 339 iP 37 21.00 -0.2  
1.0s 14.00nm 5.0mb  
MOX 70.79 340 eP 37 25.60 0.3  
PRU 70.83 338 Pc 37 26.00 0.4  
GRF 71.78 340 ePd 37 32.00 0.7  
0.8s 15.00nm 5.1mb  
MEM 71.79 344 Pc 37 31.40 0.1  
KHC 71.85 338 P 37 32.50 0.7  
1.0s 5.50nm 4.5mb  
ZST 71.96 336 eP 37 33.10 0.7  
CDF 73.72 342 eP 37 42.40 -0.4  
0.8s 5.90nm 4.6mb  
KBA 73.85 338 eP 37 44.50 0.8  
HAU 74.27 343 eP 37 45.30 -0.6  
0.6s 4.70nm 4.7mb

BSF 74.36 343 eP 37 45.80 -0.8  
1.0s 9.00nm 4.7mb  
FLN 74.49 348 eP 37 46.30 -0.9  
LOR 75.38 344 eP 37 51.60 -0.7  
1.2s 14.30nm 4.8mb  
GBA 75.55 273 Pc 37 52.20 -1.5  
0.4s 1.00nm 4.2mb  
LPL 76.62 342 eP 38 00.10 0.5  
0.8s 8.60nm 4.8mb  
LPG 76.63 342 eP 38 00.40 0.7  
0.8s 8.35nm 4.8mb  
LSF 76.71 346 eP 37 59.50 -0.3  
WB2 79.11 206 iPc 38 12.70 -0.5  
0.8s 2.40nm 4.2mb

WRA 79.11 206 P 38 14.00 0.8  
0.9s 1.60nm 4.0mb  
S.D. = 0.8 on 46 of 50 obs.

% MAY 09, 1991 07h 20m 10.43 ± 0.92s  
39.171 N ± 7.2km 27.548 E ± 12.6km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)

MD 2.4 (ISK).  
IZM 0.80 196 ePg 20 26.00 -0.1  
eSg 20 36.90  
DST 0.94 62 ePn 20 28.80 0.4  
BNT 1.22 13 ePn 20 35.00 -0.1  
KCT 1.24 30 ePn 20 35.00 -0.5  
KGT 1.29 352 ePn 20 34.70 0.3  
S.D. = 0.5 on 5 of 5 obs.

? MAY 09, 1991 07h 59m 02.94 ± 1.25s  
3.047 S ± 10.1km 137.700 E ± 23.5km  
- DEPTH = 33.0km (normal)  
4.6mb ( 3 obs.)  
WEST IRIAN (201)

MTN 11.71 213 eP 01 50.30 -0.4  
eS 03 54.00  
KNA 15.38 214 eP 02 39.70 0.4  
eS 05 19.00  
WB2 17.11 191 eP 03 01.20 -0.1  
0.4s 9.70nm 4.3mb  
i 03 10.40  
OIS 17.50 174 eP 03 06.00 -0.2  
eS 05 55.00  
ASPA 20.83 190 eP 03 44.90 0.5  
0.8s 27.00nm 4.7mb  
eS 07 31.20  
SSE 37.42 336 Pd 06 14.80 -0.1  
0.7s 8.00nm 4.7mb  
LPB 147.93 128 ePKP 18 32.00 -12.8X  
ZOBO 148.06 128 PKP 18 50.00 4.8X  
S.D. = 0.5 on 6 of 8 obs.

MAY 09, 1991 08h 57m 15.09 ± 0.40s  
39.485 N ± 4.7km 16.554 E ± 5.0km  
DEPTH = 21.5 ± 4.7 km  
3.5mb ( 2 obs.)  
SOUTHERN ITALY (390)

TDS 0.24 316 Pd 57 20.10 -0.9  
eSg 57 24.20  
ORI 0.58 352 Pd 57 26.10 -0.4  
eSg 57 35.80  
LCI 1.37 51 P 57 40.60 1.6  
eSn 58 00.00  
SOI 1.46 196 P 57 40.50 0.2  
BRT 1.48 19 P 57 40.60 0.0  
eSn 57 59.00  
MSI 1.50 212 P 57 43.00 2.2  
ATN 1.57 213 P 57 41.40 -0.6  
BAI 1.65 8 P 57 44.00 1.0  
MNO 2.13 224 P 57 49.00 -1.2  
GIB 2.48 234 P 57 54.60 -0.5  
DUI 2.70 324 P 57 59.00 0.8  
LSK 3.19 77 ePn 58 04.90 -0.2  
LACI 3.22 47 ePn 59 11.00 65.5X  
OHR 3.63 62 ePn 58 10.70 -0.7  
SKO 4.47 55 ePn 58 22.00 -1.2  
i 59 12.70

AGG 4.51 94 eP 58 24.00 0.2  
LIT 4.61 80 eP 58 25.30 -0.1  
GRG 4.71 70 eP 58 22.80 -3.9X  
VAY 4.95 66 ePn 58 53.40 23.4X  
KNT 5.13 69 eP 58 31.90 -0.7  
PAIG 5.51 83 eP 58 37.60 -0.4  
KGT 8.31 80 ePn 59 18.10 0.8  
HFS 20.75 356 eP 01 56.00 -0.6  
0.5s 1.00nm 3.5mb  
NUR 21.65 11 eP 02 22.00 16.3X  
NB2 21.83 353 P 02 08.30 0.6  
0.7s 1.30nm 3.5mb  
S.D. = 1.0 on 21 of 25 obs.

? MAY 09, 1991 09h 21m 37.55 ± 0.96s  
39.114 N ± 9.6km 27.699 E ± 14.3km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)

MD 2.6 (ISK).  
IZM 0.79 206 ePg 21 53.00 0.0  
eSg 22 05.90  
DST 0.87 55 ePn 21 54.30 0.0  
KCT 1.24 24 ePn 22 00.70 0.1  
KGT 1.37 347 ePn 22 02.60 0.0  
S.D. = 0.1 on 4 of 4 obs.

% MAY 09, 1991 09h 42m 18.40 ± 0.89s  
39.123 N ± 6.9km 27.580 E ± 12.8km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 2.6 (ISK).  
IZM 0.77 199 iPg 42 33.40 0.0  
eSg 42 44.90  
DST 0.94 59 ePn 42 36.30 -0.1  
EDC 1.24 10 ePn 42 41.50 0.0



BNT 1.26 12 iPn 42 42.10 0.3  
KGT 1.34 351 ePn 42 42.80 -0.3  
S.D. = 0.3 on 5 of 5 obs.

\* MAY 09, 1991 09h 42m 44.49±0.83s  
31.698 S ±11.7km 67.763 W ±7.7km  
DEPTH = 33.0km (normol)  
SAN JUAN PROVINCE, ARGENTINA (137)

CFA 0.42 282 iPc 42 53.90 0.0  
eS 43 01.10  
RTLL 0.71 301 iPc 42 58.80 0.7  
S 43 10.60  
ZON 0.80 281 iPc 42 59.00 -0.3  
eS 43 11.00  
RTCB 0.91 283 e(P) 43 00.10 -0.9  
TCA 2.73 83 eP 43 26.80 -0.3  
(S) 44 03.70  
RFA 3.12 191 ePd 43 32.70 0.1  
(S) 44 19.20  
S.D. = 0.7 on 6 of 6 obs.

MAY 09, 1991 09h 47m 08.68±0.41s  
39.459 N ±4.6km 16.501 E ±5.3km  
DEPTH = 24.2 ±4.6 km  
3.7mb (3 obs.)  
SOUTHERN ITALY (390)

TDS 0.24 328 Pd 47 13.40 -1.3  
eSg 47 19.50  
ORI 0.60 356 P 47 21.90 1.3  
eSn 47 31.20  
LCI 1.42 52 P 47 34.10 1.1  
eSn 47 53.00  
SOI 1.43 194 P 47 33.30 0.1  
MSI 1.45 211 P 47 34.00 0.4  
BRT 1.52 21 P 47 34.50 0.0  
eSn 47 56.20  
ATN 1.53 212 P 47 35.00 0.3  
eSn 47 55.50  
BAI 1.68 9 P 47 38.00 1.1  
MNO 2.08 223 P 47 43.50 0.6  
GIB 2.43 234 P 47 47.70 0.0  
eSn 48 17.00  
DUI 2.69 325 P 47 52.00 0.5  
IGT 2.97 87 eP 48 04.20 9.0X  
SDI 3.04 319 P 47 58.00 1.7  
FAI 3.11 226 P 47 57.40 0.1  
LACI 3.27 47 ePn 48 01.20 1.7  
SDA 3.42 41 ePn 48 01.60 -0.1  
OHR 3.68 62 ePn 48 07.00 1.6  
PHP 3.74 52 ePn 48 04.30 -1.9  
FNA 3.97 69 eP 48 12.70 3.2X  
SKO 4.52 55 ePn 48 13.50 -3.8X  
i 49 06.30  
AGG 4.55 94 eP 48 17.40 -0.4  
eS 48 35.40  
LIT 4.66 80 eP 48 18.90 -0.4  
VAY 4.99 66 ePn 48 22.50 -1.5  
PAIG 5.56 83 eP 48 33.00 1.0  
VBY 6.11 352 e(Pn) 48 39.90 0.2  
e(Sn) 50 03.70  
HFS 20.77 356 eP 51 49.20 -0.9  
0.8s 2.10nm 3.6mb  
e 51 55.80  
e 51 58.20  
NB2 21.85 353 P 52 02.00 0.9  
0.7s 2.10nm 3.7mb  
YKA 71.08 338 eP 58 24.90 -1.4  
0.8s 0.50nm 3.7mb  
S.D. = 1.1 on 25 of 28 obs.

% MAY 09, 1991 11h 09m 12.01±0.79s  
40.442 N ±6.0km 23.091 E ±7.4km  
DEPTH = 10.0km (geophysicist)  
GREECE (364)  
MD 1.8 (THE).

THE 0.21 333 iPg 09 15.80 -0.8  
iSg 09 19.20  
SOH 0.43 28 ePg 09 20.50 -0.3  
LIT 0.57 234 ePg 09 23.80 0.2  
eSg 09 31.10  
PAIG 0.68 139 ePg 09 25.20 -0.3  
eSg 09 36.10  
GRG 0.73 315 ePg 09 27.30 0.9  
eSg 09 38.70

KNT 0.73 349 ePg 09 25.70 -0.7  
SRS 0.77 29 ePg 09 28.30 1.2  
S.D. = 0.9 on 7 of 7 obs.

& MAY 09, 1991 11h 54m 03.23s  
62.890 N 149.086 W  
DEPTH = 72.1km  
CENTRAL ALASKA (1)  
<AEIC>.

HUR 0.27 290 iP 54 14.49 -0.1  
eS 54 23.20  
RND 0.53 11 iP 54 16.56 -0.2  
eS 54 26.74  
CUT 0.73 229 iP 54 18.72 -0.1  
eS 54 30.97  
TRF 0.78 316 iP 54 19.55 -0.1  
eS 54 31.70  
MCK 0.85 5 iP 54 20.17 -0.1  
eS 54 32.71  
GHO 1.12 176 eP 54 23.46 -0.3  
eS 54 39.58  
SML 1.14 162 iP 54 23.62 -0.3  
BWN 1.30 353 eP 54 25.44 -0.5  
S 54 43.57  
PWA 1.30 197 eP 54 26.20 0.3  
S 54 44.80  
PLRM 1.30 181 eP 54 25.88 -0.1  
S 54 43.30  
SCM 1.34 142 iP 54 26.61 0.0  
S 54 44.89  
SKT 1.46 232 iP 54 27.82 -0.3  
eS 54 47.05  
TOA 1.57 119 eP 54 30.32 0.7  
eS 54 51.31  
THY 1.60 69 eP 54 30.52 0.4  
SUA 1.63 209 eP 54 30.85 0.3  
eS 54 54.14  
WRH 1.65 15 iP 54 29.81 -0.9  
PAX 1.66 86 eP 54 30.96 0.1  
eS 54 51.96  
PMS 1.67 188 eP 54 30.80 -0.2  
eS 54 52.91  
SDG 1.67 101 eP 54 31.45 0.4  
eS 54 52.96  
NEA 1.69 0 iP 54 30.33 -1.0  
HDA 1.79 31 eP 54 32.01 -0.7  
CCB 1.85 17 iP 54 32.40 -1.1  
TZL 1.90 115 eP 54 34.38 0.2  
RDS 1.99 12 iP 54 34.44 -0.9  
KLU 2.04 132 eP 54 35.26 -0.9  
eS 55 01.87  
NCG 2.07 225 eP 54 36.74 0.1  
FBA 2.10 15 iP 54 35.92 -0.9  
MDM 2.11 10 iP 54 36.21 -0.9  
CRP 2.18 223 eP 54 36.85 -1.2  
VLZ 2.19 142 eP 54 36.72 -1.4  
VZW 2.19 146 eP 54 36.91 -1.3  
SPU 2.21 221 eP 54 38.52 0.0  
GLI 2.23 154 eP 54 37.30 -1.3  
GLM 2.24 19 eP 54 37.39 -1.4  
CKL 2.29 223 eP 54 39.80 0.2  
DOT 2.40 69 eP 54 40.20 -0.8  
SLKM 2.45 193 eP 54 42.51 0.7  
KNIM 2.63 165 eP 54 43.77 -0.5  
SEW 2.80 184 eP 54 46.82 0.2  
TMW 2.80 78 eP 54 44.75 -1.9  
RDT 2.81 216 eP 54 47.40 0.6  
DFR 2.87 218 eP 54 47.29 -0.4  
LTI 2.92 168 eP 54 47.29 -1.0  
RDN 2.96 218 eP 54 47.98 -1.0  
NCT 2.97 220 eP 54 48.04 -1.0  
RDW 3.00 218 eP 54 50.66 1.1  
46 obs. associated

% MAY 09, 1991 12h 42m 09.96±0.97s  
41.876 N ±8.8km 7.571 W ±9.1km  
DEPTH = 10.0km (geophysicist)  
PORTUGAL (376)  
mbLg 2.7 (MDD).

ERUA 0.61 32 iP 42 21.50 -0.7  
eS 42 29.60  
EZAM 0.88 288 eP 42 26.30 -0.6  
eS 42 37.50  
STS 1.24 325 eP 42 33.60 0.5  
eS 42 59.00

EMON 1.57 6 eP 42 38.50 0.6  
eS 42 59.00  
EPLA 2.13 148 eP 42 46.30 0.2  
S.D. = 0.9 on 5 of 5 obs.

\* MAY 09, 1991 13h 31m 57.02±0.78s  
17.521 S ±18.8km 178.769 W ±16.1km  
DEPTH = 553.8 ±5.0 km  
5.0mb (9 obs.)  
FIJI ISLANDS REGION (181)

KRO 1.77 276 ePc 33 06.10 -1.5  
NDE 2.05 297 eP 33 08.00 0.1  
OVA 2.34 266 eP 33 09.50 0.3  
MBU 2.46 282 eP 33 10.40 0.5  
VUN 2.68 259 eP 33 11.20 0.2  
SVA 2.71 257 eP 33 10.90 -0.2  
SGE 3.16 268 ePc 33 14.70 0.7  
DZM 14.63 250 iPc 35 02.70 0.2  
BRS 28.01 244 iPc 37 06.00 0.3  
COO 29.68 239 eP 37 20.00 -0.1  
RMO 31.33 248 iPd 37 34.60 0.5  
0.7s 45.00nm 5.2mb  
e 37 48.00  
PMG 34.06 279 eP 37 58.00 0.9  
CMS 34.92 240 iPd 38 04.40 0.3  
0.8s 27.00nm 4.9mb  
LAT 35.11 284 ePc 38 07.80 2.0  
TOO 37.15 230 iPc 38 23.40 1.0  
0.8s 33.00nm 5.0mb  
TAU 38.30 221 eP 38 32.00 0.3  
STK 38.52 241 iPd 38 34.30 0.7  
0.6s 18.70nm 4.9mb  
WB2 44.35 259 eP 39 17.90 -2.3  
0.5s 11.10nm 4.6mb  
WRA 44.36 259 P 39 18.00 -2.2  
0.3s 17.30nm 5.1mb  
ASPA 44.57 254 iPd 39 21.30 -0.5  
0.7s 106.00nm 5.5mb  
FORR 49.83 244 iPd 40 00.40 -1.0  
0.5s 73.00nm 5.5mb  
KNA 50.17 264 eP 40 03.80 -0.3  
NANU 61.51 253 eP 41 22.00 -0.5  
0.4s 17.00nm 4.8mb  
TNP 79.93 45 eP 43 10.50 0.5  
1.3s 2.55nm 3.5mb X  
FBA 85.51 13 eP 43 36.20 -0.9  
0.9s 0.90nm 3.5mb X  
YKA 94.12 25 eP 44 16.00 -1.1  
0.7s 0.30nm 3.6mb X  
CLL 145.01 347 iPKPd 50 32.80 0.3  
1.1s 14.00nm  
eSg 21 42.00  
BRG 145.21 346 iPKP 50 33.00 0.1  
eSg 21 15.00  
PRU 145.88 345 PKP 50 35.90 1.9  
ZST 146.77 340 ePKP 50 38.70 3.2X  
GRF 146.91 348 ePKP 50 39.00 3.3X  
KHC 146.92 345 ePKP 50 32.00 -3.8X  
CDF 148.80 352 ePKP 50 43.30 4.5X  
0.6s 3.15nm  
FLN 148.81 2 ePKP 50 43.00 4.3X  
0.8s 10.05nm  
LDF 148.99 2 ePKP 50 43.30 4.3X  
HAU 149.31 353 ePKP 50 44.50 5.0X  
LPP 149.51 3 ePKP 50 44.90 5.1X  
LOR 150.26 356 ePKP 50 46.80 5.8X  
0.4s 2.85nm  
SSF 150.48 357 ePKP 50 47.40 6.1X  
0.5s 3.35nm  
S.D. = 1.0 on 29 of 39 obs.

& MAY 09, 1991 15h 04m 07.00s  
37.868 N 122.003 W  
DEPTH = 3.0km  
CENTRAL CALIFORNIA (39)  
<BRK>. ML 2.4 (BRK).  
Ma=5.2\*10\*\*13 Nm (BRK). Felt at  
Alamo and Walnut Creek.

BKS 0.18 273 iPc 04 10.80 0.1  
iS 04 14.30  
BRK 0.20 272 iPc 04 11.10 0.0  
iS 04 14.60  
ZSP 0.21 291 iPc 04 12.00 0.7  
PCC 0.47 219 iPd 04 16.20 -0.3  
MHC 0.60 151 iPc 04 19.40 0.4



09d 15h

ARN 0.64 144 eP 04 19.50 -0.3  
 GCC 0.84 180 ePc 04 22.90 -0.8  
 SAO 1.19 158 eP 04 28.50 -1.3  
 CMB 1.29 82 iPd 04 29.80 -1.8  
 IS 04 46.60

9 obs. associated

? MAY 09, 1991 15h 21m 36.22 ± 3.96s  
 45.040 N ± 13.7km 28.808 E ± 31.1km  
 DEPTH = 10.0km (geophysicist)  
 SOUTHWESTERN USSR (357)

CFR 0.49 288 iPc 21 45.00 -1.1  
 TLB 0.71 231 iPd 21 49.40 -0.8  
 BRD 1.33 292 ePc 22 03.50 2.7X  
 PPE 1.44 325 iPc 22 01.50 -0.9  
 ISR 1.61 274 ePc 22 06.50 1.7  
 VRI 1.69 300 iPd 22 06.50 0.6  
 MLR 2.07 284 ePc 22 12.00 0.4

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

? MAY 09, 1991 15h 26m 25.20 ± 3.54s  
 41.103 N ± 52.6km 28.472 E ± 31.3km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)

MD 2.7 (ISK).

CTT 0.05 324 iPg 26 27.00 -0.4  
 ISK 0.45 95 iPg 26 34.00 -0.3  
 DMK 0.90 323 iPg 26 42.40 0.0  
 eSg 26 54.90  
 HRT 0.95 107 iPn 26 43.50 0.2

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

% MAY 09, 1991 16h 45m 16.88 ± 1.05s  
 40.712 N ± 9.7km 23.109 E ± 7.0km  
 DEPTH = 10.0km (geophysicist)  
 GREECE (364)

MD 1.6 (THE).

THE 0.14 234 ePgc 45 20.10 0.0  
 eSg 45 22.10  
 SOH 0.22 60 ePgc 45 21.90 0.3  
 eSg 45 25.30  
 KNT 0.48 340 iPgc 45 26.80 0.2  
 eSg 45 34.60  
 SRS 0.55 42 ePg 45 27.50 -0.4  
 eSg 45 35.70  
 GRG 0.59 295 ePgc 45 28.70 -0.1

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

\* MAY 09, 1991 17h 00m 40.24 ± 0.93s  
 5.129 N ± 15.8km 31.590 E ± 14.7km  
 DEPTH = 10.0km (geophysicist)  
 4.8mb (4 obs.)  
 SUDAN (557)

NAI 8.22 141 iPnd 02 42.60 0.0  
 Pg 03 04.00  
 Sg 04 28.00  
 Lg 04 54.00  
 KRI 21.90 185 ePn 05 43.00 7.3X  
 eSn 09 54.00  
 iLR 12 00.00  
 LKO 37.12 279 P 07 53.08 -0.1  
 1.2s 31.00nm 5.0mb  
 KHC 46.44 344 P 09 10.00 1.0  
 e 09 13.50  
 GKN 55.18 59 P 10 14.20 -1.8  
 DMN 55.49 60 P 10 18.60 0.3  
 KKN 55.69 60 P 10 19.00 -0.7  
 PKI 55.75 60 P 10 21.40 1.2  
 GUN 56.23 60 P 10 23.30 -0.4  
 KAF 56.99 357 eP 10 31.70 3.5X  
 0.8s 6.50nm 4.7mb  
 esP 10 32.30  
 NB2 57.86 348 P 10 33.00 -1.3  
 1.1s 5.90nm 4.5mb  
 LZH 72.66 54 eP 12 12.50 1.9  
 2.0s 29.00nm 5.0mb  
 Z 16s 0.19um 4.5mszx  
 pP 12 18.50 19kmX

S.D. = 1.3 on 10 of 12 obs.

& MAY 09, 1991 18h 20m 57.79s  
 64.494 N 151.407 W  
 DEPTH = 66.5km

CENTRAL ALASKA  
<AEIC>

(1)

BWN 0.91 110 eP 21 15.89 0.7  
 eS 21 29.11  
 NEA 1.01 84 eP 21 16.52 0.0  
 eS 21 30.56  
 TRF 1.16 154 eP 21 18.18 -0.4  
 eS 21 33.88  
 MCK 1.33 124 eP 21 20.76 0.0  
 eS 21 37.74  
 WRH 1.44 89 eP 21 21.88 -0.3  
 S 21 39.98  
 MDM 1.44 70 eP 21 21.98 -0.3  
 eS 21 40.85  
 RDS 1.44 75 eP 21 22.18 -0.1  
 S 21 40.74  
 CCB 1.56 83 eP 21 23.62 -0.3  
 RND 1.57 133 eP 21 24.45 0.4  
 FBA 1.61 74 eP 21 24.31 -0.2  
 HUR 1.71 152 eP 21 25.80 -0.2  
 GLM 1.79 72 eP 21 27.08 -0.1  
 eS 21 49.82  
 IMA 1.85 330 eP 21 29.81 1.9  
 eS 21 49.97  
 HDA 1.93 91 eP 21 30.01 1.0  
 eS 21 52.66  
 CUT 2.16 166 iP 21 33.14 1.0  
 SKT 2.52 181 eP 21 37.80 0.5  
 TTA 2.58 235 eP 21 39.32 1.2  
 PWA 2.94 166 eP 21 43.60 0.6  
 GHO 2.96 156 eP 21 43.37 0.0  
 SML 3.04 151 eP 21 44.08 -0.4  
 NCG 3.12 187 eP 21 45.40 -0.3  
 PMS 3.37 165 eP 21 49.95 0.8

22 obs. associated

\* MAY 09, 1991 19h 57m 43.91 ± 0.56s  
 46.049 N ± 11.8km 149.833 E ± 11.1km  
 DEPTH = 33.0km (normal)  
 4.4mb (10 obs.)  
 KURIL ISLANDS (221)

YAK 19.74 331 iPd 02 14.90 1.4  
 e 05 44.00  
 IMA 35.71 36 eP 04 41.60 0.6  
 0.6s 12.90nm 5.0mb  
 FBA 38.11 38 eP 05 02.10 1.1  
 0.9s 14.60nm 4.8mb  
 INK 43.45 32 eP 05 44.80 -0.1  
 CHG 49.75 254 eP 06 36.60 1.5  
 GUN 52.79 273 P 06 57.80 -0.7  
 0.4s 48.00nm 5.8mb X  
 YKA 52.83 35 eP 06 56.30 -1.6  
 0.5s 1.40nm 4.2mb  
 KKN 53.28 274 P 07 01.34 -0.6  
 PKI 53.32 273 P 07 01.68 -0.8  
 0.3s 9.00nm 5.3mb  
 DMN 53.51 274 P 07 03.24 -0.5  
 0.6s 61.00nm 5.8mb X  
 GKN 53.59 274 P 07 03.56 -0.6  
 0.5s 82.00nm 6.0mb X  
 BW06 66.97 52 eP 08 34.60 -1.0  
 0.6s 1.28nm 4.2mb  
 WB2 67.16 196 eP 08 35.90 -0.7  
 0.8s 2.60nm 4.4mb  
 WRA 67.16 196 P 08 37.00 0.4  
 0.6s 1.50nm 4.3mb  
 NB2 68.13 340 P 08 37.70 -4.6X  
 0.6s 1.00nm 4.1mb  
 HFS 68.29 338 eP 08 38.00 -5.2X  
 0.4s 0.70nm 4.1mb  
 ASPA 70.87 195 iPc 09 00.80 1.4  
 0.4s 3.80nm 4.8mb

S.D. = 1.1 on 15 of 17 obs.

MAY 09, 1991 20h 10m 13.87 ± 0.63s  
 16.338 N ± 8.6km 121.046 E ± 9.8km  
 DEPTH = 18.2km (4 depth phases)  
 4.4mb (8 obs.) 4.0msz (3 obs.)  
 LUZON, PHILIPPINE ISLANDS (249)

BAG 0.45 279 eP 10 21.10 -2.1  
 QCP 1.69 179 eP 10 49.30 6.6X  
 DAV 10.21 154 eP 12 29.00 -13.6X  
 QIZ 11.01 286 eP 12 48.20 -5.3X  
 SSE 14.69 0 eP 13 43.00 0.4

Z 20s 0.50um  
 E 12s 0.30um  
 NJ2 15.77 353 eP 13 56.00 -0.6  
 GYA 16.74 309 P 14 11.40 2.2  
 TIA 20.10 351 eP 14 49.00 -0.4  
 XAN 20.73 330 P 14 55.20 -0.8  
 CHG 21.21 280 eP 15 02.60 1.6  
 CD2 21.43 316 eP 15 02.60 -0.6  
 eS 19 01.50  
 KHT 21.68 269 eP 15 10.50 4.7X  
 TIY 22.61 342 eP 15 17.00 2.1  
 Z 20s 0.50um 3.9msz  
 N 15s 0.40um  
 BJI 23.99 351 eP 15 29.00 0.7  
 pP 15 35.00 21km  
 LZH 24.92 325 eP 15 38.20 0.7  
 1.5s 28.00nm 4.7mb  
 Z 20s 0.39um 3.9msz  
 pP 15 42.50 15km  
 SNY 25.50 4 P 15 41.60 -1.0  
 pP 15 47.40 21km  
 HHC 25.77 343 eP 15 47.60 2.2  
 BTO 26.00 341 eP 15 45.40 -2.1  
 CN2 27.63 7 eP 16 01.50 -0.8  
 Z 14s 0.60um 4.3mszx  
 N 14s 0.10um  
 E 14s 0.30um  
 epP 16 06.00 16km  
 GTA 29.53 325 eP 16 20.00 0.3  
 Z 18s 0.40um 4.1msz  
 E 12s 0.40um  
 LSA 30.46 301 P 16 29.40 1.0  
 GUN 34.43 296 P 17 02.10 -0.9  
 PKI 34.77 295 P 17 06.52 0.6  
 KKN 34.93 295 P 17 06.94 -0.2  
 DMN 35.04 295 P 17 07.18 -1.0  
 GKN 35.53 295 P 17 10.66 -1.5  
 WB2 38.35 160 eP 17 35.50 -0.2  
 0.8s 7.50nm 4.5mb  
 i 18 13.10  
 ASPA 41.70 162 eP 18 04.00 0.7  
 0.8s 6.00nm 4.4mb  
 YAK 46.04 6 eP 18 36.10 -1.8  
 STK 51.84 158 eP 19 23.00 -0.1  
 1.0s 1.60nm 3.9mb  
 MAIO 57.71 303 eP 20 08.00 1.9  
 KEV 76.20 339 eP 22 03.00 0.6  
 SOD 76.75 337 eP 22 08.00 2.5  
 KAF 77.91 331 eP 22 11.90 -0.1  
 0.5s 1.10nm 4.2mb  
 esP 22 12.90  
 INK 80.53 21 eP 22 30.50 4.4X  
 HFS 84.33 331 eP 22 44.20 -1.7  
 0.6s 2.30nm 4.6mb  
 Z 16s 0.07um 4.1mszx  
 e 22 48.40  
 e 22 58.00  
 LR 58 01.00  
 NB2 85.08 333 P 22 47.60 -2.1  
 0.9s 4.70nm 4.7mb  
 YKA 90.23 23 eP 23 14.90 0.5  
 0.8s 0.70nm 4.0mb  
 S.D. = 1.4 on 33 of 38 obs.

? MAY 09, 1991 21h 42m 23.99 ± 2.66s  
 23.808 S ± 20.3km 179.425 W ± 17.2km  
 DEPTH = 551.4 ± 29.1 km  
 5.1mb (9 obs.)  
 SOUTH OF FIJI ISLANDS (171)

DZM 13.13 275 iPc 45 14.90 0.3  
 BRS 25.30 256 iPd 47 09.50 0.5  
 COO 26.34 249 eP 47 17.00 -1.1  
 RMQ 28.89 258 iPd 47 40.90 0.6  
 0.4s 19.00nm 5.1mb  
 CMS 31.62 248 iPd 48 03.70 0.2  
 CTA 32.00 270 iPd 48 07.10 0.3  
 0.6s 72.00nm 5.5mb  
 TOO 32.94 237 iPd 48 15.30 0.7  
 0.5s 15.00nm 4.9mb  
 PMG 34.97 288 eP 48 32.00 0.3  
 STK 35.25 248 iPd 48 34.10 0.2  
 0.4s 5.10nm 4.5mb  
 OIS 37.98 267 eP 48 56.00 -0.5  
 ASPA 42.57 260 iPd 49 33.10 -0.2  
 0.5s 26.70nm 5.0mb  
 eS 55 14.30



WBZ	42.93	266	iPc	49	35.30	-0.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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 & MAY 10, 1991 01h 13m 24.18s  
 61.660 N 150.762 W  
 DEPTH = 55.7km  
 SOUTHERN ALASKA ( 2 )  
 <AEIC>. Feit (IV) at Skwentna.

SUA	0.20	177	iPd	13	33.55	0.2
			eS	13	41.22	
PWA	0.42	91	iPc	13	34.99	0.0
SKT	0.49	312	ePc	13	34.95	-0.8
			eS	13	43.95	
CGLM	0.69	240	eP	13	37.94	-0.4
			eS	13	48.48	
PMS	0.71	125	ePd	13	37.92	-0.6
NCG	0.72	250	eP	13	37.99	-0.6
			eS	13	49.23	
CRP	0.78	240	iPc	13	39.06	-0.4
PLRM	0.78	94	ePd	13	38.25	-1.1
			eS	13	50.15	
PMR	0.78	94	iPc	13	39.00	-0.3
CUT	0.78	17	ePc	13	38.56	-0.8
SPU	0.79	233	iPc	13	38.75	-0.7
			iS	13	50.72	
BGL	0.88	244	iPc	13	40.08	-0.6
			eS	13	52.41	
GHO	0.88	82	iPc	13	40.13	-0.6
			eS	13	52.39	
CKL	0.89	239	iPc	13	40.13	-0.7
NKA	0.95	194	ePc	13	42.84	1.3
KNK	1.13	102	eP	13	43.34	-0.7
			eS	13	59.38	
SML	1.17	82	ePc	13	43.41	-1.1
SLKM	1.19	167	ePc	13	43.84	-1.0
			eS	13	59.38	
RDT	1.35	217	iPc	13	46.35	-0.8
			eS	14	04.15	
DFR	1.42	222	iPc	13	47.40	-0.7
HUR	1.42	21	ePc	13	47.60	-0.5
			eS	14	05.74	
RDN	1.51	221	iPc	13	48.55	-0.8
NCT	1.52	225	iPc	13	49.00	-0.6
			S	14	08.44	
RS2	1.54	220	iPc	13	49.36	-0.6
RSO	1.54	220	iPc	13	49.38	-0.6
RDW	1.54	221	iPc	13	49.42	-0.5
RED	1.58	219	iPc	13	49.76	-0.6
			eS	14	09.23	
SCM	1.64	82	ePc	13	50.10	-1.1
			eS	14	11.03	
NNL	1.64	189	ePd	13	51.46	0.3
SEW	1.69	157	eP	13	51.34	-0.4
			S	14	11.08	
TRF	1.81	7	ePc	13	52.36	-1.3
GLI	1.94	112	iPd	13	52.87	-2.4
RND	1.96	26	ePc	13	54.36	-1.3
KNIM	1.98	130	iPc	13	52.82	-3.0
HOM	2.05	193	eP	13	56.81	-0.1
VZW	2.11	105	ePc	13	55.65	-2.1
CNPM	2.15	186	ePd	13	56.93	-1.4
			eS	14	24.15	
LTl	2.16	138	eP	13	55.60	-2.8
VLZ	2.20	102	eP	13	56.47	-2.4
TOA	2.22	76	eP	13	59.00	-0.3
MCK	2.24	21	eP	13	58.60	-1.0
MTU	2.27	136	eP	13	57.27	-2.6
KLU	2.32	92	ePd	13	58.51	-2.2
			S	14	27.29	
SVW	2.40	259	eP	14	00.40	-1.5
HIN	2.43	120	eP	14	03.75	1.5
PDB	2.52	223	ePc	14	01.95	-1.5
TZL	2.56	79	eP	14	03.03	-1.0
BWN	2.59	13	eP	14	03.29	-1.1
SDG	2.60	68	eP	14	04.19	-0.5
AUE	2.65	210	eP	14	04.84	-0.4
AUH	2.66	211	eP	14	05.32	-0.1
CVA	2.68	112	eP	14	05.61	0.0
TTA	2.76	300	iPc	14	05.60	-1.4
PAX	2.80	60	eP	14	06.60	-0.9
SGAM	2.94	111	ePd	14	06.03	-3.4
NEA	3.03	14	eP	14	08.58	-2.1
MCNL	3.05	217	eP	14	09.37	-1.7
WRH	3.07	22	eP	14	09.36	-2.0
CDD	3.09	209	ePc	14	10.59	-1.1
DDM	3.11	44	eP	14	12.21	0.3
SYI	3.17	196	eP	14	11.56	-1.1
RAGM	3.23	111	eP	14	10.42	-3.1

HDA	3.26	31	eP	14	12.33	-1.6
CCB	3.28	23	eP	14	11.96	-2.4
GLB	3.33	91	eP	14	13.80	-1.3
HMT	3.43	110	eP	14	12.73	-3.7
MDM	3.50	18	eP	14	14.93	-2.5
FBA	3.52	21	ePc	14	15.80	-1.8
GLM	3.67	23	eP	14	17.40	-2.4
DOT	3.68	54	eP	14	19.22	-0.7
CRQM	3.80	100	eP	14	20.28	-1.4
TGL	3.94	100	eP	14	21.89	-1.8
KDC	4.02	193	eP	14	24.60	0.0
WAX	4.03	104	ePd	14	21.34	-3.6
BALM	4.10	95	eP	14	23.12	-2.8
WRG	4.57	107	eP	14	28.10	-4.3
CTGM	4.60	95	eP	14	31.46	-1.4
IMA	4.61	345	eP	14	30.40	-2.6
ANM	7.23	300	eP	15	08.00	-1.7
INK	9.85	40	P	15	41.00	-4.7
	0.3s		1.20nm			4.5mb X
FRB	35.33	50	eP	20	12.00	-3.3
	81	abs.	associated			

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 MAY 10, 1991 01h 25m 15.61± 0.37s  
 42.496 N ± 9.6km 43.153 E ± 4.0km  
 DEPTH = 10.0km (geophysicist)  
 4.6mb ( 21 abs.) 4.1msz ( 2 abs.)  
 WESTERN CAUCASUS (362)

TAB	5.04	150	eP	26	44.00	10.8X
			i	26	49.00	
KAS	7.09	264	eP	27	03.00	1.0
BBTK	8.28	255	iPc	27	25.00	6.4X
CFR	11.16	289	eP	27	56.50	-1.7
VRI	12.27	292	eP	28	13.00	-0.2
MLR	12.75	289	eP	28	18.50	-1.3
OBN	13.32	343	eP	28	27.00	-0.1
	Z 14s		1.30um			
	N 16s		1.10um			
	E 14s		0.70um			
			ePP	28	35.00	
			i	28	56.00	
			i	29	32.00	
			eS	30	50.00	
			eSSS	31	28.00	
MAIO	14.06	111	eP	28	34.00	-3.1X
			e	31	15.00	
SKO	16.09	275	eP	29	08.70	5.3X
BEO	16.58	286	eP	29	12.00	2.4
PSZ	17.24	296	eP	29	18.30	0.4
SPC	17.27	301	eP	29	17.10	-1.4
KRA	17.69	303	eP	29	22.40	-1.1
SRO	18.27	295	eP	29	30.00	-0.7
ZST	19.13	296	eP	29	42.20	1.0
KSP	20.15	304	eP	29	51.00	-1.5
GAR	20.84	90	eP	30	00.00	0.0
PRU	21.07	301	eP	30	00.00	-2.0
			e	30	33.50	
NUR	21.26	334	iP	30	03.80	-0.1
	0.8s		29.30nm			4.7mb
DUI	21.28	278	P	29	47.40	-17.0X
			eSg	29	53.60	
KHC	21.56	298	P	30	08.00	0.9
			e	30	14.50	
KBA	21.58	293	iPd	30	08.10	0.6
	0.9s		20.30nm			4.5mb
			i	30	12.20	
			i	30	17.70	
BRG	21.61	303	eP	30	10.40	2.9X
	1.6s		20.00nm			4.3mb
SDI	21.74	278	P	29	55.60	-13.4X
			eSg	30	11.00	
KAF	22.05	339	eP	30	12.40	0.6
	0.8s		23.90nm			4.7mb
			eSP	30	17.90	
CLL	22.27	304	iPd	30	15.00	0.9
	1.7s		31.00nm			4.5mb
			eS	39	13.00	
QUE	22.68	115	eP	30	16.50	-2.1
MOX	23.02	302	eP	30	27.00	5.4X
GRF	23.16	299	eP	30	24.50	1.6
FIR	23.24	284	eP	30	27.00	3.3X
UPP	23.38	327	iP	30	26.00	1.1
HFS	25.18	325	eP	30	42.50	0.2
	0.9s		28.30nm			5.0mb
	Z 18s		0.29um			3.8msz
			e	30	50.70	
			LR	39	42.00	

CDF	25.69	296	eP	30	47.00	-0.3
BSF	26.02	294	eP	30	50.00	-0.4
LPG	26.22	289	eP	30	53.00	0.5
	0.9s		17.20nm			4.7mb
LPL	26.23	289	eP	30	53.10	0.6
	0.9s		16.40nm			4.7mb
HAU	26.31	295	eP	30	53.00	0.0
SOD	26.49	346	eP	30	56.00	1.6
MEM	26.57	301	P	30	59.40	4.1X
NB2	26.69	325	P	30	54.80	-1.6
	1.0s		8.00nm			4.4mb
DOU	27.46	299	Pc	31	05.30	1.9
LBF	27.98	293	eP	31	07.80	-0.5
	1.0s		10.40nm			4.6mb
LOR	28.04	293	eP	31	08.10	-0.6
	0.9s		4.75nm			4.3mb
SMF	28.11	292	eP	31	09.30	-0.1
SSF	28.29	293	eP	31	10.70	-0.3
	1.0s		6.00nm			4.3mb
AVF	28.43	292	eP	31	12.20	0.0
	0.9s		15.40nm			4.8mb
MAF	29.03	291	eP	31	18.20	0.5
	1.0s		12.80nm			4.7mb
TCF	29.27	292	eP	31	20.30	0.4
LSF	29.74	292	eP	31	24.10	0.0
	1.0s		12.60nm			4.7mb
MFF	30.84	293	eP	31	33.30	-0.4
GRR	31.10	296	eP	31	35.80	-0.2
	1.0s		15.80nm			4.9mb
LPF	31.26	296	eP	31	37.10	-0.3
	1.0s		14.80nm			4.8mb
WMO	32.23	72	P	31	46.20	0.1
	Z 16s		0.30um			4.1mszX
	N 12s		0.30um			
	E 12s		0.40um			
GKN	36.46	100	P	32	22.62	-0.1
DMN	37.03	100	P	32	28.18	0.6
KKN	37.05	99	P	32	28.08	0.4
PKI	37.27	100	P	32	29.50	-0.2
	1.0s		14.00nm			4.7mb
GUN	37.42	99	P	32	30.92	-0.1
GTA	42.23	74	eP	33	11.00	0.5
	1.2s		10.00nm			4.4mb
XAN	51.17	76	P	34	19.50	-1.4
TIY	51.87	71	eP	34	27.00	0.8
	Z 14s		0.40um			4.6mszX
GYA	53.56	86	P	34	41.00	2.0
SSE	61.48	73	eP	35	34.00	-0.7
	Z 20s		0.30um			4.4msz
YKA	73.84	349	eP	36	50.40	-1.3
	1.3s		2.10nm			4.0mb
FFC	78.68	340	eP	37	19.00	-0.1
	1.0s		8.00nm			4.7mb
	S.D. = 1.0	on	55	af		



iS 51 01.00  
 EDC 2.49 80 ePn 50 54.00 -0.6  
 BNT 2.54 80 ePn 50 55.00 -0.3  
 DMK 3.00 51 ePn 51 04.00 2.2  
 DST 3.09 95 ePn 51 03.00 -0.1  
 CTT 3.11 66 ePn 51 09.00 5.6X  
 S.D. = 1.4 on 7 of 8 obs.

? MAY 10, 1991 05h 31m 04.49±1.27s  
 10.037 N ±11.4km 124.157 E ±21.1km  
 DEPTH = 84.4 ± 18.5 km  
 4.6mb ( 1 obs.)

LEYTE, PHILIPPINE ISLANDS (256)

DAV 3.25 154 eP 31 54.30 0.1  
 BAG 7.23 332 eP 32 49.50 -0.2  
 SSE 21.14 353 eP 35 44.50 0.2  
 PSI 26.10 255 iPd 36 32.40 0.1  
 ASPA 34.83 164 eP 37 49.20 -0.2  
 0.5s 3.70nm 4.6mb  
 DZM 52.33 128 iPd 40 26.00 15.8X  
 S.D. = 0.3 on 5 of 6 obs.

% MAY 10, 1991 07h 29m 03.94±1.04s  
 39.123 N ± 9.3km 27.589 E ±17.5km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.6 (ISK).

IZM 0.77 200 ePg 29 18.90 -0.1  
 eSg 29 30.40  
 DST 0.94 59 ePn 29 22.40 0.5  
 EDC 1.24 10 ePn 29 27.50 0.5  
 BNT 1.26 12 iPd 29 27.70 0.4  
 KCT 1.27 28 ePn 29 26.20 -1.3  
 S.D. = 1.1 on 5 of 5 obs.

MAY 10, 1991 08h 13m 20.83±0.94s  
 49.164 N ± 6.1km 6.857 E ± 9.2km  
 DEPTH = 10.0km (geophysicist)

GERMANY (543)

MD 2.1 (STR).

GWF 0.54 110 Pg 13 31.35 -0.3  
 RUP 0.55 14 ePg 13 32.10 0.0  
 CDF 0.80 160 Pg 13 35.80 -0.7  
 Sg 13 48.90  
 WLS 0.82 156 Pg 13 36.19 -0.6  
 Sg 13 50.37  
 ECH 0.97 168 Pg 13 39.49 0.2  
 VITF 1.11 212 Pg 13 41.32 -0.3  
 Sg 13 56.38  
 MOF 1.33 172 Pg 13 45.79 0.4  
 FEL 1.50 149 Pg 13 49.25 1.3  
 S.D. = 0.8 on 8 of 8 obs.

% MAY 10, 1991 08h 47m 10.43±0.61s  
 39.480 N ± 4.4km 27.793 E ± 9.1km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

DST 0.66 79 ePn 47 22.90 -0.7  
 EDC 0.87 4 ePn 47 27.00 -0.1  
 BNT 0.88 6 ePn 47 27.00 -0.3  
 KCT 0.88 29 ePn 47 28.70 1.3  
 KGT 1.04 339 ePn 47 29.60 -0.5  
 IZM 1.16 201 iPg 47 32.40 0.3  
 eSg 47 40.40

YLV 1.63 48 ePn 48 03.60 24.3X  
 KHL 1.78 130 ePn 47 47.00 5.5X  
 CIN 1.89 173 ePn 47 43.00 0.0  
 iSg 48 02.00  
 YER 2.37 171 ePn 47 50.00 -0.1  
 S.D. = 0.7 on 8 of 10 obs.

% MAY 10, 1991 08h 52m 52.85±0.89s  
 39.119 N ± 7.6km 27.625 E ±13.1km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.6 (ISK).

IZM 0.77 202 iPg 53 07.90 -0.1  
 eSg 53 17.90  
 DST 0.92 58 ePn 53 10.90 0.5  
 EDC 1.24 8 ePn 53 16.00 0.1  
 BNT 1.26 10 iPd 53 16.60 0.4  
 KCT 1.26 26 ePn 53 15.20 -1.1

KGT 1.35 350 ePn 53 17.90 0.2  
 S.D. = 0.7 on 6 of 6 obs.

? MAY 10, 1991 09h 28m 30.21±5.50s  
 33.056 S ±10.3km 70.082 W ±48.8km  
 DEPTH = 161.0 ± 37.2 km

CHILE-ARGENTINA BORDER REGION (127)

MDZ 1.05 81 iP 28 56.80 0.0  
 iS 29 10.90  
 RTCB 1.91 35 iPd 29 05.30 -0.1  
 eS 29 30.50  
 ZON 1.92 39 iPd 29 05.50 0.0  
 CFA 2.13 48 iPd 29 07.90 0.0  
 eS 29 34.30  
 RFA 2.17 142 iPd 29 08.50 0.0  
 S 29 35.80  
 RTLL 2.20 39 iPd 29 08.90 0.2  
 S 29 36.00  
 TCA 4.96 71 ePd 29 44.10 0.0  
 (S) 30 39.30

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

MAY 10, 1991 10h 51m 27.19±0.50s  
 4.020 S ± 3.2km 154.411 E ± 5.0km  
 DEPTH = 478.0 ± 6.1 km  
 5.1mb ( 30 obs.)

SOLOMON ISLANDS (193)

RAB 2.24 266 iPd 52 31.00 -1.2  
 0.5s 2535.21nm  
 iS 53 23.00  
 HNR 7.69 135 eP 53 21.00 -0.1  
 eS 54 54.00  
 LAT 7.83 250 eP 53 24.10 1.6  
 PMG 8.98 233 iPd 53 36.50 1.6  
 0.9s 105.88nm 5.2mb  
 eS 55 21.00  
 CTA 17.84 206 iPd 55 08.20 1.4  
 1.0s 500.00nm 6.1mb  
 DZM 21.41 148 iPd 55 41.00 0.0  
 OIS 21.86 220 iPd 55 45.30 0.2  
 RMO 22.99 193 iPd 55 55.60 0.2  
 0.8s 71.00nm 5.3mb  
 e 56 11.00  
 e 56 27.00

BRS 23.29 184 iPd 55 57.80 -0.4  
 i 57 20.00  
 QLP 24.46 202 iPd 56 08.60 0.0  
 0.7s 212.00nm 5.8mb  
 W82 25.15 229 iPd 56 15.00 0.0  
 0.7s 111.40nm 5.5mb  
 WRA 25.16 229 P 56 14.00 -1.1  
 0.7s 18.20nm 4.7mb  
 COO 26.52 185 iPd 56 26.90 -0.1  
 KNA 27.78 243 eP 56 37.40 -0.8  
 ASPA 27.81 224 iPd 56 37.60 -0.9  
 0.7s 82.20nm 5.3mb  
 iS 00 43.90  
 CMS 28.49 196 iPd 56 44.00 -0.2  
 0.9s 39.00nm 4.9mb  
 MNI 30.05 280 eP 56 57.60 -0.4  
 STK 30.22 202 iPd 56 58.70 -0.5  
 0.7s 10.30nm 4.4mb  
 e 57 41.70

CNB 31.49 188 iPd 57 11.10 1.0  
 0.6s 48.00nm 5.2mb  
 ADE 34.06 203 eP 57 32.00 0.2  
 BFD 34.75 197 iPd 57 37.00 -0.5  
 FORR 36.43 220 iPd 57 51.10 -0.4  
 0.4s 151.00nm 5.8mb  
 MBL 37.66 240 eP 57 59.00 -2.7  
 TAU 39.23 188 iPd 58 16.00 1.7  
 PUZ 40.28 150 P 58 23.10 0.2  
 MEKA 41.00 233 iPd 58 28.60 -0.4  
 0.4s 16.00nm 4.9mb  
 THZ 41.06 159 P 58 29.40 0.1  
 MNG 41.08 155 P 58 29.40 0.0  
 0.2s 14.00nm 5.1mb

TCW 41.10 157 P 58 29.80 0.3  
 COOL 41.18 226 iPd 58 29.70 -0.6  
 0.4s 16.00nm 4.9mb  
 MRW 41.29 157 P 58 30.70 -0.3  
 CAW 41.33 156 P 58 31.20 -0.1  
 PGZ 41.42 155 P 58 32.10 0.1  
 0.8s 53.00nm 5.1mb  
 WDW 41.43 156 P 58 31.80 -0.4

MTW 41.55 156 P 58 32.70 -0.4  
 LTZ 41.74 160 P 58 34.90 0.2  
 NANU 41.89 240 iPd 58 35.90 -0.2  
 MSZ 42.19 166 P 58 39.10 1.0  
 IIDJ 42.23 340 P 58 38.20 -0.4  
 CHJJ 42.39 341 P 58 39.00 -0.8  
 TSRJ 42.98 338 P 58 44.80 0.4  
 MAT 43.10 341 iPd 58 44.30 -1.1  
 0.7s 20.55nm 4.7mb

MTMJ 43.27 340 P 58 46.20 -0.7  
 NIJJ 43.48 342 P 58 48.30 -0.1  
 YAMJ 44.05 344 P 58 53.20 0.3  
 BAL 44.29 229 iPd 58 53.80 -1.2  
 MUN 45.34 228 eP 59 02.00 -1.1  
 SSE 47.15 320 P 59 17.30 0.4  
 1.5s 37.00nm 4.6mb  
 NJ2 49.28 319 P 59 33.50 0.5  
 WHN 51.43 315 eP 59 49.50 0.6  
 1.0s 30.00nm 4.6mb  
 DL2 52.35 328 P 59 55.40 -0.1  
 0.8s 100.00nm 5.2mb

TIA 53.06 322 eP 00 00.00 -0.7  
 MDJ 53.28 338 P 00 02.00 -0.1  
 1.2s 70.00nm 4.9mb

SNY 53.56 332 P 00 03.60 -0.6  
 1.2s 100.00nm 5.0mb  
 GYA 55.22 306 P 00 17.00 0.7  
 TIY 56.92 321 P 00 27.60 -0.3  
 KMI 57.90 303 Pd 00 36.40 1.4  
 CHG 59.11 295 eP 00 43.30 0.2  
 CD2 59.47 309 iPd 00 45.00 -0.3  
 0.7s 100.00nm 5.4mb  
 BTO 60.16 322 P 00 50.00 0.3  
 LZH 61.81 315 iPd 01 01.50 0.7  
 1.5s 88.00nm 5.1mb  
 pP 02 39.00 467kmX

GTA 66.19 316 iPd 01 29.40 0.8  
 1.0s 40.00nm 5.0mb  
 YAK 68.52 348 iPd 01 42.50 0.3  
 GUN 73.10 301 P 02 11.04 0.8  
 0.8s 75.00nm 5.3mb  
 PKI 73.42 300 P 02 12.50 0.4  
 KKN 73.59 300 P 02 13.44 0.6  
 0.6s 26.00nm 5.0mb

DMN 73.69 300 P 02 14.30 0.8  
 0.9s 84.00nm 5.3mb  
 GKN 74.19 300 P 02 16.70 0.5  
 1.0s 113.00nm 5.4mb  
 WMO 76.27 317 P 02 28.20 0.9  
 SPA 86.01 180 iPd 03 17.80 0.9  
 0.9s 13.64nm 4.7mb  
 INK 87.16 21 eP 03 22.00 -0.2  
 YKA 93.99 28 eP 03 53.20 -0.6  
 0.9s 3.30nm 4.5mb  
 HFS 116.53 339 ePKP 09 15.70 -1.4  
 0.4s 0.60nm  
 BMA 147.84 146 ePKP 10 20.60 4.5X  
 S.D. = 0.8 on 73 of 74 obs.

MAY 10, 1991 12h 14m 37.48±0.74s  
 42.580 N ± 7.7km 23.984 E ± 8.5km  
 DEPTH = 10.0km (geophysicist)

BULGARIA (359)

MD 2.6 (THE).

SRS 1.49 191 ePb 15 04.30 0.0  
 eSb 15 26.70  
 KNT 1.63 210 ePb 15 06.50 0.2  
 eSb 15 29.80  
 VAY 1.64 220 ePn 15 06.80 0.3  
 SOH 1.82 195 ePn 15 09.00 -0.1  
 eSn 15 35.90  
 SKO 1.98 253 ePn 15 11.10 -0.3  
 ALN 2.28 137 ePn 15 15.60 -0.1  
 MLR 3.24 25 eP 15 31.80 2.4X  
 e 21 17.00  
 BZS 3.48 331 ePd 15 40.00 7.3X  
 VRI 3.83 30 eP 15 37.90 0.1  
 S.D. = 0.3 on 7 of 9 obs.

MAY 10, 1991 12h 15m 54.33±0.40s  
 37.459 N ± 4.8km 106.578 W ± 3.9km  
 DEPTH = 5.0km (geophysicist)

COLORADO (479)

ML 3.4 (GS). Felt (III) at  
 Chromo and Pogoso Springs. Felt  
 strongly at Summitville.



10d 12h

RW4	1.08	311	iPc	16	14.03	-1.3
RW5	1.17	302	iPc	16	16.03	-0.9
RW3	1.18	312	ePc	16	15.93	-1.1
RW1	1.25	310	ePc	16	16.98	-1.2
RW6	1.31	305	P	16	18.22	-1.0
PV01	1.72	294	ePc	16	25.87	0.6
PV06	1.72	301	ePc	16	25.91	0.5
PV02	1.87	294	iPc	16	28.60	1.2
PV07	1.91	301	iPc	16	29.04	1.0
PV03	1.96	295	iPc	16	29.83	1.0
PV04	2.06	298	iPc	16	31.56	1.3
PV05	2.09	288	iPc	16	30.67	0.0
PV10	2.15	296	iPc	16	32.13	0.5
PV09	2.27	298	ePc	16	34.53	1.1
GOL	2.43	23	P	16	36.20	0.6
ANMO	2.51	178	P	16	37.20	0.6
ALO	2.51	178	ePn	16	36.80	0.1
GLD	2.52	24	P	16	38.00	1.2
MSU	4.55	285	P	17	05.00	-0.6
DAU	4.69	310	P	17	08.00	0.2
BW06	5.78	338	P	17	20.40	-2.7X
MEO	7.00	110	eP	17	40.00	0.0
GLA	8.05	239	eP	17	54.00	-0.8
TPC	8.39	249	eP	18	15.00	15.4X
TNP	8.45	277	P	17	58.30	-2.2X
GSC	8.52	258	eP	18	02.00	0.5
BIX	8.74	96	e(P)	18	04.50	0.1
TUL	8.80	97	eP	18	04.00	-1.2

0.6s 6.50nm 5.2mb  
e 18 37.60  
e 20 41.00  
PLM 9.34 247 P 18 11.80 -1.0  
SXM 9.34 340 eP 18 10.30 -2.5X  
YKA 25.55 351 eP 21 23.80 -1.5  
0.9s 2.00nm 3.8mb  
S.D. = 0.9 on 27 of 32 obs.

& MAY 10, 1991 12h 21m 59.00s  
37.450 N 106.600 W  
DEPTH = 5.0km (geophysicist)  
COLORADO (479)  
<SPEC>. Held to mainshock  
location. ML 2.4 (GS). Felt at  
Summitville.

GOL	2.44	23	P	22	40.00	-0.5
ANMO	2.50	177	P	22	41.00	-0.2
ALO	2.50	177	e(P)	22	41.00	-0.3
MSU	4.53	285	P	23	09.00	-1.1

3 obs. associated

MAY 10, 1991 13h 26m 09.69± 1.76s  
22.953 S ± 8.3km 175.649 W ± 8.1km  
DEPTH = 88.3 ± 14.9 km  
5.3mb (20 obs.)

TONGA ISLANDS REGION (174)

SVA	7.32	310	eP	27	56.20	0.3
			eS	28	34.40	
VUN	7.39	311	iPd	27	56.10	-0.8
MBU	7.96	317	eP	28	05.00	0.3
SGE	8.05	310	ePc	28	07.80	1.8
NDF	8.28	307	P	27	55.30	-13.8X
RAR	14.82	86	P	29	11.00	-24.9X
			S	37	12.00	
PVC	15.91	286	iPc	29	56.50	6.8X
DZM	16.57	270	iPc	30	01.00	2.9X
MNG	19.14	201	eP	30	20.50	-8.1X
			eS	33	38.50	
MRW	19.95	202	eP	30	31.60	-5.4X
WEL	19.98	202	eP	30	36.00	-1.3
			S	34	01.00	
KHZ	21.40	202	eP	30	46.70	-5.0X
			eS	34	30.50	
RMO	32.46	256	eP	32	33.00	-0.8
CTA	35.49	267	iPc	32	59.10	-0.8
			0.5s 14.08nm		5.1mb	
PMG	38.05	285	eP	33	20.50	-0.9
			1.0s 60.00nm		5.5mb	
STK	38.78	247	iPc	33	27.50	0.1
			0.4s 6.20nm		4.8mb	
QIS	41.51	264	eP	33	49.00	-0.9
ASPA	46.14	259	iPc	34	26.00	-1.2
			0.5s 32.90nm		5.5mb	
			iS	41	07.80	
WB2	46.46	264	iPc	34	28.50	-1.3
			0.7s 60.60nm		5.6mb	
WRA	46.47	264	P	34	40.00	10.1X
			0.4s 4.60nm			
SBA	55.59	184	iPd	35	41.10	3.2X
NANU	62.89	256	eP	36	28.00	-0.9
			0.4s 12.00nm		5.2mb	
SPA	67.19	180	iPd	36	57.40	1.2
			1.0s 85.50nm		5.6mb	
Z	20s	2.25um			5.4msz	
			i	45	17.10	
MAT	73.47	323	(P)	37	33.00	-1.4
PRS	78.12	42	eP	38	01.20	0.6
GCC	78.19	41	eP	38	01.00	0.0
PRI	78.44	43	eP	38	04.30	1.8
LLA	78.57	42	eP	38	07.70	4.6X
BRK	78.58	40	eP	38	07.80	4.7X
BKS	78.60	40	ePc	38	07.80	4.6X
			1.2s 75.00nm		5.4mb	
PAS	78.79	45	eP	38	08.00	3.6X
MWC	78.91	45	eP	38	09.00	3.7X
PLM	79.19	47	eP	38	06.00	-0.8
PEC	79.31	46	P	38	05.00	-2.2
SBP	79.35	45	eP	38	06.00	-1.5
ISA	79.52	44	eP	38	05.00	-3.4X
FRI	79.57	42	eP	38	12.30	3.8X
CMB	79.81	41	eP	38	11.30	1.4
ORV	80.13	39	P	38	11.30	-0.1
TPC	80.18	47	eP	38	12.00	0.1
CLC	80.18	44	eP	38	12.00	0.1
GSC	80.39	45	eP	38	13.00	0.0
GLA	80.39	48	eP	38	13.00	0.0
TNP	81.80	43	P	38	20.20	-0.3
			1.0s 17.50nm		4.9mb	
MDJ	83.77	324	eP	38	30.50	0.3
			1.0s 30.00nm		5.2mb	
RSO	85.18	11	P	38	43.00	5.8X
SVW	85.32	10	P	38	36.00	-1.6
CN2	85.57	322	eP	38	39.60	0.4
IPM	85.64	277	ePc	38	44.60	4.4X
DUG	85.81	43	P	38	39.00	-1.7
NVL	86.39	182	ePc	38	43.50	0.6
			e	38	57.00	
			e	39	11.00	
			e	39	46.00	
SNA	86.87	178	iPd	38	46.90	1.7
			1.1s 101.27nm		5.8mb	
PMR	86.91	12	P	38	44.60	-0.7

	0.8 s	13.79nm		5.1mb	
ALO	87.25	50 eP	38	47.60	-0.3
-	1.1 s	20.57nm		5.1mb	
ANMO	87.25	50 P	38	48.00	0.1
	1.0 s	38.75nm		5.4mb	
PNT	87.49	33 eP	38	49.00	0.6
	0.9 s	43.00nm		5.5mb	
NEW	88.10	35 P	38	49.00	-2.5
	0.7 s	10.00nm		5.0mb	
TACH	88.93	126 eP	38	56.00	0.1
BJI	89.16	315 eP	38	57.00	0.4
SAN	89.23	126 eP	38	57.00	-0.3
PCH	89.26	126 eP	38	57.50	0.0
BW06	89.28	42 P	38	56.50	-0.9
	0.8 s	4.17nm		4.7mb	
PEL	89.35	126 ePd	38	58.00	0.1
	1.3 s	119.23nm		5.9mb	
FBA	90.18	11 P	38	59.40	-1.4
	0.7 s	20.35nm		5.4mb	
GOL	90.38	47 P	39	03.50	0.8
GLD	90.51	47 P	39	04.00	0.9
TIY	90.53	311 Pc	39	05.00	1.9
XAN	91.35	306 P	39	08.50	1.6
HHC	92.62	313 eP	39	14.20	1.5
MEO	92.89	53 iPd	39	13.00	-1.0
CHG	93.12	289 eP	39	18.10	2.8
YAK	95.18	337 eP	39	25.30	1.5
INK	96.07	15 eP	39	29.00	1.2
YKA	97.83	24 eP	39	35.00	-0.8
	0.9 s	1.60nm		4.5mb	
LPB	99.03	112 eP	39	43.00	0.1
ZOBO	99.13	112 P	39	46.00	2.5
MAIO	130.85	299 ePKP	45	13.00	0.3
KEV	131.27	350 ePKP	45	26.00	13.7X
SOD	133.44	348 ePKP	45	27.00	10.5X
NUR	139.88	345 ePKP	45	22.00	-6.7X
OBN	139.94	332 ePKP	45	32.00	3.0X
		e	45	51.00	
NB2	141.64	355 PKP	45	30.20	-1.8
	1.0 s	4.60nm			
HFS	142.27	352 ePKP	45	26.90	-6.1X
	0.6 s	3.40nm			
		e	45	34.20	
		e	45	36.50	
EKA	147.18	8 PKPc	45	43.30	1.9
	0.9 s	6.70nm			
KAS	149.27	314 ePKP	45	51.00	5.7X
PPE	150.12	327 ePKP	45	59.00	12.7X
WIT	150.13	357 ePKP	45	52.00	6.0X
KRA	150.31	340 ePKP	45	52.00	5.6X
BHL	150.50	299 PKP	45	54.00	6.6X
HRI	150.57	297 ePKP	45	54.00	6.5X
KSP	150.65	344 ePKP	45	51.00	4.1X
		ic	45	53.50	
VRI	150.80	327 ePKP	45	53.50	6.2X
CLL	150.91	349 iPKPc	45	53.60	6.3X
	1.0 s	31.00nm			
		i	45	57.70	
		e	46	08.00	
WTS	150.94	357 ePKP	45	53.50	6.2X
	0.9 s	29.00nm			
SPC	150.96	338 ePKP	45	53.70	6.0X
		e	45	59.80	
MML	151.01	296 iPKPd	45	55.40	7.3X
BRG	151.14	347 iPKP	45	54.60	7.0X
	1.2 s	26.00nm			
		i	45	59.20	
		iSg	51	44.80	
ISR	151.40	326 ePKP	45	55.00	6.7X
MLR	151.46	327 ePKP	45	52.50	4.0X
PRNI	151.70	292 iPKPd	45	56.60	7.4X
MOX	151.78	350 ePKP	45	55.70	7.1X
	1.0 s	11.00nm			
PRU	151.85	346 ePKP	45	55.50	6.8X
	1.0 s	13.00nm			
		e	46	15.50	
		e	46	39.20	
CMP	152.07	328 ePKPc	46	09.00	19.7X
PSZ	152.16	337 ePKP	45	56.30	6.9X
ENN	152.21	358 ePKP	45	57.00	7.8X
	1.0 s	20.00nm			
COZ	152.37	329 ePKP	46	03.00	13.1X
GRF	152.77	350 ePKP	46	00.00	9.9X
SRO	152.79	339 ePKP	46	03.80	13.7X
		e	46	11.60	
ZST	152.84	341 e(PKP)	46	09.40	19.2X
KHC	152.87	347 ePKP	45	56.60	6.3X

& MAY 10, 1991 13h 23m 45.00s  
37.450 N 106.600 W  
DEPTH = 5.0km (geophysicist)  
COLORADO (479)  
<SPEC>. Held to mainshock  
location. ML 2.0 (GS). Felt at  
Summitville.



BZS	153.38	332	ePKP	45	58.00	7.0X	1.3s	770.00nm	6.0mb	FORR	54.42	243	eP	43	08.40	-1.5	
			e	53	23.00		23.70	97 iP	38 55.10	0.5	KNA	54.74	262	eP	43	06.50	-5.9X
CDF	154.49	355	ePKP	46	11.10	18.5X	23.87	98 iP	38 56.60	0.2	-	0.5s	72.00nm			5.9mb	
LPF	154.61	8	ePKP	46	01.20	8.6X	1.3s	455.00nm	5.8mb	DRV	58.69	200	P	43	39.60	0.0	
							24.30	111 iP	39 00.20	-0.2		S		50	33.00		
LIC	161.07	150	PKP	46	01.50	0.2	1.7s	3770.00nm	6.6mb	COOL	60.40	243	iPc	43	49.90	-2.1	
KIC	161.32	151	PKP	46	01.86	0.3	24.71	199 eP	39 02.80	-1.5	MBL	62.38	254	iPd	44	04.00	-1.3
TIC	161.44	149	PKP	46	01.90	0.2	25.31	91 iP	39 10.00	0.1		0.4s	14.00nm			5.3mb	
LKO	163.62	143	PKP	46	02.40	-1.5	1.3s	330.00nm	5.7mb	SBA	62.49	184	iPd	44	06.90	1.7	
	S.D. = 1.2	on	65	of	117	obs.	25.54	92 iP	39 11.90	-0.1	MNI	62.69	280	ePc	44	06.50	-1.0
							1.3s	220.00nm	5.5mb	MEKA	62.95	248	iPc	44	07.60	-1.5	
							25.58	91 iP	39 12.30	-0.1		0.4s	20.00nm			5.4mb	
							1.3s	440.00nm	5.8mb	NWAO	63.65	241	iPc	44	12.20	-1.4	
							25.78	92 iP	39 14.00	-0.3	Z	20s	3.90um			5.6Msz	
							1.3s	330.00nm	5.7mb	N	20s	4.00um					
							25.79	197 P	39 12.40	-1.8	E	20s	3.30um				
							26.02	198 eP	39 12.60	-3.7X	DAV	63.95	286	eP	44	14.00	-1.7
							26.11	282 eP	39 18.00	0.7	MUN	64.56	242	iPc	44	19.00	-0.6
							26.31	282 eP	39 20.00	0.8	MKS	65.89	271	ePc	44	25.20	-3.1X
							26.60	198 eP	39 16.90	-4.7X	NANU	66.15	252	iPd	44	29.10	-0.7
							26.82	199 eP	39 20.20	-3.3X	KAKJ	67.61	321 P		44	37.60	-1.1
								e	44 46.70		CHJJ	68.22	320 P		44	41.50	-1.0
							26.85	199 P	39 24.00	0.2	IIDJ	68.52	319 P		44	43.60	-0.9
								eS	44 13.00		OFUJ	68.70	324 eP		44	44.50	-0.9
							26.94	200 eP	39 21.20	-3.4X	NIIJ	69.00	321 eP		44	48.30	1.0
							27.89	201 eP	39 31.30	-2.0	YAMJ	69.01	323 P		44	47.00	-0.3
								e	44 55.40		MAJO	69.02	320 iPd		44	46.61	-0.9
							28.26	199 eP	39 33.60	-2.9X		esPc		45	27.66		
							29.01	201 eP	39 39.40	-4.0X		eS		53	24.00		
								e	45 04.60			eP		44	46.00	-1.5	
							32.61	244 iPd	40 14.30	-0.8	MAT	69.02	320 eP		44	46.00	-1.5
								i	41 30.80		Z	20s	1.42um			5.2Msz	
								i	43 03.30			eS		53	24.00		
								iS	46 02.30		MTMJ	69.30	320 P		44	49.30	0.1
							34.19	239 iPd	40 27.20	-1.6	TSRJ	69.78	318 eP		44	51.70	-0.4
							0.2s	19.00nm	5.6mb	KUSJ	69.98	329 eP		44	51.60	-1.5	
								i	43 06.60		TSM	69.98	281 ePd		44	55.00	1.3
							35.14	286 eP	40 32.00	-4.9X	HOJJ	70.17	328 eP		44	54.40	0.1
							35.83	234 eP	40 45.00	2.4	KAGJ	70.68	312 eP		44	57.60	-0.1
								e	42 12.00		QCP	70.90	292 eP		45	08.00	8.8X
								e	46 36.00		TRT	71.83	267 iPc		44	58.10	-6.8X
								e	49 04.00			1.4s	1142.40nm			6.5mb	
							35.96	247 iPd	40 42.90	-0.8	SYF	72.00	45 eP		45	08.00	2.3
							0.5s	118.00nm	6.0mb	BAG	72.03	294 eP		45	05.00	-1.2	
								i	40 56.40		PRS	72.13	42 eP		45	04.80	-1.4
							37.47	107 iP	40 57.10	0.7		epP		45	41.30	149kmX	
							1.4s	405.00nm	6.1mb	GCC	72.15	42 eP		45	06.20	-0.1	
							37.75	233 iPd	40 58.40	-0.3	PCC	72.19	41 eP		45	06.60	0.1
							0.4s	85.00nm	6.0mb	SAO	72.34	42 eP		45	07.30	-0.2	
								i	41 32.50			epP		45	40.70	135kmX	
							37.79	258 iPc	40 58.00	-1.2	PRJ	72.48	43 eP		45	08.50	0.1
							1.1s	151.90nm	5.8mb		epP		45	43.50	142kmX		
								iPcP	43 18.00		BRK	72.49	41 eP		45	08.30	0.0
								iS	46 37.00		Z	20s	4.40um			5.7Msz	
								iScP	47 02.90			epP		45	42.30	138kmX	
							38.28	275 iPd	41 04.00	0.7	BKS	72.51	41 ePc		45	08.00	-0.4
							1.0s	750.00nm	6.5mb		0.8s	98.00nm				5.7mb	
							39.17	279 eP	41 12.40	1.7	Z	20s	3.20um			5.6Msz	
							39.45	240 iPd	41 12.50	-0.4	N	20s	2.50um				
							1.0s	452.00nm	6.2mb	E	20s	2.40um					
								i	41 47.70			ePcP		45	15.90		
								e	44 18.00			epP		45	42.00	137kmX	
								e	46 51.00			eS		54	24.40		
							39.98	248 iPd	41 16.20	-1.1		eLR		06	51.60		
							0.6s	293.00nm	6.3mb	MHC	72.56	42 eP		45	09.20	0.3	
							40.75	281 iPc	41 26.40	2.7	LLA	72.58	42 eP		45	07.00	-1.9
							41.46	231 iPc	41 28.90	-0.4		epP		45	42.50	144kmX	
							0.2s	108.00nm	6.3mb	PAS	73.03	46 eP		45	10.00	-1.5	
								i	43 23.70			ePcP		45	36.00		
							42.31	223 eP	41 35.00	-1.1		ePPP		49	29.00		
								e	48 38.00			eS		54	35.00		
							43.06	240 eP	41 42.00	-0.4		eSS		59	18.00		
							1.1s	180.90nm	5.8mb		eSSS		02	30.00			
								iPP	43 27.90			eLg		03	52.00		
								e	48 00.30			eLR		06	09.00		
								e	49 01.40		PAS	73.03	46 eP		45	16.02	4.5X
							43.56	233 eP	41 44.70	-1.7		ePcP		45	36.00		
								e	43 30.00			ePPP		49	29.00		
							44.01	257 eP	41 51.00	0.7		iS		54	34.23		
								e	43 34.00			eSS		59	18.00		
							46.03	237 iPd	42 05.00	-1.2		eSSS		02	30.00		
							1.2s	875.00nm	6.4mb		eLg		03	52.00			
							48.97	257 iPd	42 27.80	-1.4		eLR		06	09.00		
							0.7s	206.70nm	6.1mb	MWC	73.15	46 eP		45	11.00	-1.5	
							50.06	304 eP	42 37.80	0.3	BAR	73.28	48 eP		45	13.00	-0.1
							1.2s	975.00nm	6.6mb	RVR	73.49	46 eP		45	14.00	-0.2	
							50.12	304 eP	42 38.30	0.3	PLM	73.51	47 eP		45	15.00	0.4
											SBB	73.56	46 eP		45	13.00	-1.7



PEC	73.59	47	P	45	13.20	-1.6		9.0s	1800.00nm	5.9mb	X	KMI	90.69	296	ePd	46	45.82	2.0			
FRI	73.60	43	eP	45	12.50	-2.2		sP	46	48.00		-	5.0s	1600.00nm			6.4mb	X			
			ePcP	45	23.50		WHN	82.90	304	eP	46	07.00	1.4	Z	44s	7.10um		5.8msz	X		
			epP	45	46.40	137kmX		8.0s	1700.00nm	6.0mb	X					esPc	47	25.72			
ISA	73.66	44	eP	45	15.00	-0.3		40s	3.10um	5.4msz	X					ePP	50	22.40			
CMB	73.77	42	ePd	45	15.60	-0.2			sP	46	50.00		YKA	91.03	24	eP	46	42.80	-1.5		
			ePcP	45	24.70				eSKS	56	16.00			1.2s	9.40nm			4.9mb			
			epP	45	47.00	125kmX	LRM	83.02	38	eP	46	05.80	-0.5		91.31	126	eP	46	47.00	0.7	
ORV	73.98	40	eP	45	16.30	-0.7	TIA	83.12	311	eP	46	06.90	0.2		91.46	285	eP	46	49.50	2.3	
CLC	74.34	45	eP	45	18.00	-1.2		7.0s	1500.00nm	6.0mb	X	CD2	91.57	302	eP	46	48.40	0.8			
MIN	74.40	39	ePd	45	18.80	-0.7		Z	42s	2.90um	5.3msz	X		8.0s	1050.00nm			6.1mb	X		
			ePcP	45	28.30		N	16s	1.00um				BDT	91.76	287	eP	46	48.80	0.2		
TPC	74.48	47	eP	45	19.00	-1.0	OXX	83.13	70	(P)	46	12.50	5.2X		0.8s	9.80nm			5.1mb		
GSC	74.60	46	eP	45	19.00	-1.7	COL	83.23	11	ePd	46	06.27	-0.3	TACH	91.78	126	eP	46	52.00	3.4X	
GLA	74.80	48	eP	45	21.00	-0.9			iS	56	15.44			92.16	125	ePd	46	52.00	1.6		
ANP	74.90	302	eP	45	22.00	-0.7			epPS	56	56.65		PEL	0.9s	87.39nm			6.0mb			
TNP	75.85	43	P	45	27.30	-0.6			esS	57	05.76				i			47	25.20		
	1.1s		87.66nm			5.5mb	FBA	83.23	11	P	46	05.70	-0.9	CHG	92.25	289	ePd	46	52.00	1.1	
			pP	45	59.90	130kmX		0.7s	190.41nm		6.1mb			0.8s	28.17nm				5.6mb		
COR	76.07	35	ePd	45	30.17	1.5			pP	46	39.90	135kmX			e			57	08.00		
			iS	55	06.07		BW06	83.28	42	P	46	06.80	-0.9	LZH	93.07	307	ePd	46	54.77	0.3	
			esS	55	57.72			0.7s	32.16nm		5.3mb			1.5s	93.00nm				5.9mb		
			eSS	59	57.39		KGM	83.39	274	ePc	46	10.30	1.8			esPc	47	37.31			
QZH	77.20	301	Pd	45	35.50	0.1	AIA	83.54	157	eP	46	10.50	2.2			SKS	57	20.00			
	4.0s		1750.00nm			6.2mb	PBJ	84.11	71	(P)	46	12.00	0.0	FFC	93.09	34	eP	46	54.00	0.0	
Z	40s		6.00um			5.6msz	GOL	84.66	46	P	46	14.50	-0.2		2.1s	75.00nm			5.6mb		
E	40s		6.10um					1.0s	30.00nm		5.1mb		NVL	93.24	182	ePc	46	54.50	0.0		
			sP	46	24.00		GLD	84.79	46	P	46	16.80	1.5			e	46	59.50			
			S	55	16.00			1.4s	100.00nm		5.5mb				e	47	11.00				
SSE	77.82	308	iPd	45	38.00	-0.7	BJI	85.44	314	ePd	46	18.82	0.6			e	47	38.00			
	Z	20s	0.90um			5.1msz		8.0s	1560.00nm		6.0mb	X			e	47	52.00				
	E	16s	1.00um						esPc	46	59.87				e	48	08.00				
			pP	46	16.00	154kmX			eS	56	37.60				ePP	50	45.00				
			S	55	16.00		PPI	85.51	271	eP	46	19.00	-0.2			eSKS	57	17.00			
RSO	78.23	11	P	45	38.70	-2.0		1.0s	138.70nm		5.8mb				eS	57	55.00				
LON	78.25	34	ePd	45	42.41	1.6	SES	86.19	35	ePd	46	20.60	-1.2			ePS	59	02.00			
SVW	78.37	9	P	45	40.30	-0.9		1.2s	187.00nm		5.9mb				ePPS	59	24.00				
	0.8s		68.97nm			5.5mb			pP	46	54.00	130kmX			e	02	05.00				
PGC	78.62	32	eP	45	43.00	0.3			ePd	46	25.20	2.1			e	05	22.00				
SLKM	78.75	12	P	45	42.20	-1.1	IPM	86.30	276	ePd	46	25.20	2.1			eSSS	07	05.00			
			pP	46	17.10	139kmX		0.9s	189.00nm		6.1mb				e	11	13.00				
MDJ	79.15	323	eP	45	46.00	0.3	TIY	87.16	310	iPd	46	27.90	1.1	SNA	93.61	177	iPc	46	57.00	0.8	
	1.2s		60.00nm			5.3mb		7.0s	1300.00nm		6.0mb	X		1.2s	187.50nm				6.3mb		
DUG	79.87	43	P	45	49.00	-0.9		Z	22s	1.50um	5.4msz		MDZ	93.69	126	eP	47	02.30	4.9X		
HKC	79.88	297	eP	45	51.20	1.1	N	16s	0.40um				GTA	97.06	309	eP	47	12.60	0.0		
PMR	79.96	12	P	45	48.60	-1.0			sS	57	52.50			1.9s	70.00nm				5.8mb		
	1.0s		105.00nm			5.6mb	SNG	87.42	278	eP	46	29.90	1.5	Z	25s	1.50um			5.4msz	X	
NJ2	80.02	307	Pd	45	51.00	0.4		1.3s	480.77nm		6.4mb		E	19s	1.60um						
	Z	18s	1.50um			5.4msz			e	50	39.20				PP	51	06.00				
	N	10s	1.20um				MEO	87.67	53	e(P)	46	29.60	0.4			SKS	57	34.00			
	E	10s	0.60um				GYA	87.74	298	iPd	46	31.20	1.3			SKS	57	36.00			
			sP	46	35.00			5.0s	2000.00nm		6.4mb	X	LPB	100.19	111	ePd	47	46.00	18.3X		
ACX	80.23	69	(P)	45	57.00	5.0X			pP	47	06.60	138kmX			SKS	58	00.00				
ANM	80.71	4	P	45	53.40	-0.1			sP	47	18.00				LR	20	20.00				
GZH	80.88	297	Pc	45	57.00	1.7			PP	49	58.00		ZOBO	100.25	110	ePd	47	32.00	3.8X		
	8.0s		1800.00nm			5.9mb			S	56	53.00		Z	18s	1.46um				5.5msz		
Z	14s		6.70um			6.1msz	PSI	87.79	273	ePc	46	35.40	5.2X			SKS	58	06.00			
			PP	49	04.00		XAN	88.46	306	Pd	46	33.30	0.2			LR	20	40.00			
BALM	80.98	15	P	45	53.60	-1.7		8.0s	1400.00nm		6.1mb	X	CRZF	105.22	211	ePd	47	56.00	7.1X		
			pP	46	27.80	136kmX			sP	47	21.00				e(PP)	52	24.00				
PNT	81.00	33	eP	45	55.00	-0.4			S	56	58.00				e(S)	00	56.00				
	0.8s		37.00nm			5.2mb	HHC	88.98	313	eP	46	34.00	-1.5	KKN	106.51	295	Pdiff	48	00.00	4.7X	
DL2	81.16	315	P	45	56.00	-0.5		6.0s	3400.00nm		6.6mb	X	HYB	110.79	283	ePKP	52	14.50	0.4		
	6.0s		1800.00nm			6.0mb	Z	50s	3.60um		5.4msz	X			e	52	52.50				
	Z	20s	0.60um			4.9msz			SKS	56	47.00		PDCR	127.19	120	ePKP	52	44.00	-1.6		
			sP	46	42.00		INK	89.13	14	eP	46	35.00	-0.4			e	53	19.60			
CN2	81.17	320	Pd	45	56.00	-0.4			pP	47	47.00	302kmX		MAIO	128.53	304	ePKP	52	48.00	0.3	
	6.0s		1300.00nm			5.9mb	YAK	89.46	337	iPd	46	35.30	-1.8			i	54	54.00			
			pP	46	26.00	117kmX			iPp	47	12.00	143kmX		SLR	133.02	208	iPKPd	52	57.50	0.9	
			sS	56	52.00				iPP	50	11.00				1.0s	20.00nm					
SNY	81.32	318	iPd	45	57.00	-0.2			esS	57	39.00		SLR	133.02	208	ePd	49	50.19	-2.9X		
	8.0s		1600.00nm			5.9mb			ePS	58	14.00				ec	50	49.62				
	Z	20s	1.00um			5.2msz			eSS	17	02.40		OBN	134.47	336	iPKP	53	00.50	2.3X		
			sS	56	50.00		BTO	89.98	312	P	46	41.00	0.9	Z	22s	1.00um			5.5msz		
PV09	81.51	46	P	45	57.50	-1.2		7.0s	1200.00nm		6.1mb	X			ePP	55	28.00				
			pP	46	32.50	139kmX	N	15s	0.40um						ePKS	56	24.00				
PIO	81.63	70	(P)	46	02.00	2.7	E	15s	0.50um						ePcSP	04	42.00				
TPM	81.67	68	(P)	46	05.00	5.3X			sP	47	25.00				ePS	05	44.00				
NEW	81.70	35	P	45	57.70	-1.4			ePP	50	16.00				eSS	13	14.00				
ALO	81.81	50	ePc	46	00.00	-0.2			SKS	56	56.50				eSSS	18	50.00				
	1.7s		126.92nm			5.4mb			S	57	23.50										
	Z	18s	3.44um			5.8msz			sS	58	19.00		NB2	134.97	356	PKP	52	57.60	-1.5		
			epP	46	32.00	126kmX	TUL	90.20	53	eP	46	41.80	0.7		0.8s	5.30nm					
ANMO	81.81	50	P	46	02.00	1.8		0.8s	11.90nm		5.1mb		HFS	135.67	354	ePKP	52	44.70	-15.7X		
	1.2s		125.00nm			5.6mb	Z	17s	2.15um		5.6msz	X		0.6s	7.60nm						
PPM	82.08	68	(P)	46	07.00	4.7X			LR	19	58.20</										



KONO	136.44	357	ePKPc	53	01.26	-0.6	BST	146.88	12	PKP	53	22.14	1.6	LSF	149.74	6	ePKP	53	29.60	4.5X
BUL	137.59	213	ePKP	52	53.70	-11.7X	COZ	147.00	336	ePKP	53	26.00	4.9X		1.1s	128.95nm				
			i	53	06.90		BUC	147.00	333	ePKPd	53	20.00	-0.8	ALN	149.74	329	ePKPd	53	29.20	4.0X
			i	56	44.30		BUC	147.00	333	ePKP	53	22.00	1.2	TRI	149.76	349	ePKPd	53	29.30	4.2X
DHR	137.67	291	ePKP	53	10.00	4.8X	FLN	147.03	8	ePKP	53	22.30	1.5			eLR	44	20.00		
RYD	140.97	289	ePKP	53	08.00	-3.3X		1.2s	176.75nm					TCF	149.76	5	ePKP	53	29.80	4.6X
KMSA	143.11	283	ePKPd	53	15.00	-0.1	Z	22s	1.13um			5.6MsZ			1.3s	168.25nm				
WIT	143.38	359	ePKP	53	14.00	-0.5	DEV	147.07	338	ePKP	53	25.00	4.1X	CTI	149.76	352	PKP	53	29.10	3.8X
ARO	143.82	268	ePKPd	53	15.00	-1.5	GWf	147.19	358	PKP	53	22.88	1.8	RZN	149.77	331	ePKP	53	26.00	0.4
DBN	144.09	1	ePKP-	53	12.00	-3.7X	LDF	147.24	7	ePKP	53	22.80	1.7	PPCY	149.80	313	ePKP	53	29.00	3.5X
IAS	144.17	334	ePKP	53	21.00	5.0X		0.9s	111.70nm				RDO	149.80	330	ePKP	53	20.00	-5.3X	
WTS	144.19	359	ePKP	53	14.50	-1.4	GRR	147.35	8	ePKP	53	23.40	2.1X	PRNI	149.81	303	ePKP	53	31.00	5.3X
	0.8s	23.00nm						0.6s	112.55nm				MAF	149.86	5	ePKP	53	30.20	4.9X	
		e	54	55.00			KMR	147.42	350	iPKP-	53	24.20	2.8X	AGO	150.06	4	PKP	53	27.82	2.2X
KRA	144.27	344	ePKP	53	12.80	-3.3X			ipPKP	54	01.30		HOL	150.15	301	ePKP	53	30.00	3.8X	
		e	53	15.80			DRA	147.56	335	ePKP	53	18.00	-3.7X	PLDF	150.18	3	PKP	53	28.24	2.4X
KSP	144.35	349	iPKPd	53	14.00	-2.3X	LPF	147.67	9	ePKP	53	24.40	2.6X	PYM	150.36	4	PKP	53	27.83	1.7
	1.2s	103.00nm						0.7s	124.80nm				ELL	150.38	319	ePKP	53	30.00	3.5X	
		i	53	51.00			FUR	147.73	353	iPKPc	53	25.20	3.2X	RLS	150.51	359	PKP	53	32.26	5.8X
		i	54	24.50			WLS	147.77	358	PKP	53	24.65	2.6X	ORX	150.52	357	PKP	53	29.65	3.2X
CLL	144.43	352	iPKP	53	14.10	-2.3X	CDF	147.77	358	PKP	53	24.86	2.8X	EMON	150.54	20	e(PKP)	53	32.00	5.5X
	0.7s	32.00nm					EYL	147.78	324	ePKP	53	25.00	2.6X	STS	150.61	22	e(PKP)	53	32.30	5.8X
Z	17s	1.00um			5.7MsZ		GPA	147.88	323	ePKP	53	23.30	0.8	RJF	150.67	6	ePKP	53	32.00	5.4X
		pPKP	54	27.70			HRT	147.89	325	iPKP	53	24.50	2.0X		1.3s	154.50nm				
		PKKP	04	51.00			ECH	147.97	358	PKP	53	24.83	2.5X	Z	21s	1.25um		5.7MsZ		
BRG	144.72	351	iPKP	53	14.80	-2.1X	VITF	147.99	360	PKP	53	24.35	2.1X	LPL	150.68	359	ePKP	53	33.20	6.3X
		i	53	16.40			GBZT	148.03	325	ePKP	53	25.00	2.4X		0.7s	39.25nm				
		i	54	27.40			ITU	148.05	326	iPKPd	53	24.00	1.4	LPG	150.70	359	ePKP	53	33.40	6.4X
		i	54	56.60			ISK	148.05	326	ePKP	53	15.00	-7.6X		0.8s	44.45nm				
PTT	144.86	335	ePKPd	53	17.50	0.2	HRI	148.08	308	ePKP	53	24.50	1.4	LSD	150.73	358	PKP	53	31.81	4.8X
NAI	144.89	243	ePKPd	53	21.00	2.4X	DMK	148.19	328	ePKP	53	22.80	-0.1	SRS	150.74	332	ePKP	53	31.40	4.6X
PPE	144.92	333	ePKP	53	17.00	-0.4	HAU	148.20	359	ePKP	53	26.00	3.3X	PRK	150.84	326	ePKP	53	32.60	5.6X
SPC	144.99	343	ePKP	53	15.70	-2.0	Z	19s	1.08um			5.7MsZ	LBL	150.89	4	PKP	53	29.47	2.7X	
KAS	145.17	322	iPKPd	53	18.20	0.1	YLV	148.22	325	ePKP	53	26.00	2.9X	IZM	150.90	324	ePKP	53	29.50	2.3X
BNS	145.22	359	iPKPd	53	17.20	-0.5	FEL	148.28	357	ePKP	53	25.88	2.9X	SSB	150.90	2	PKP	53	33.01	6.1X
	1.8s	922.00nm					PVL	148.29	332	iPKPd	53	25.00	2.1X	LEF	150.94	7	ePKP	53	32.80	5.9X
MOX	145.24	354	iPKPd	53	17.30	-0.5	CTT	148.33	326	ePKP	53	25.50	2.4X		1.0s	100.00nm				
	1.0s	41.00nm					MOF	148.33	358	PKP	53	24.78	1.8	SKO	150.95	336	iPKPd	53	27.00	-0.1
		i	53	54.00			JARJ	148.34	306	PKP	53	26.02	2.5X		1.1s	115.00nm				
UCC	145.38	2	iPKP-	53	18.00	0.0	BSF	148.36	359	PKP	53	24.83	1.7	Z	16s	0.88um		5.7MsZ		
		e+	53	54.00			KBA	148.50	350	e(PKP)	53	24.00	0.6	E	18s	0.91um				
ENN	145.43	360	ePKP	53	17.50	-0.6			i	54	14.90				i	53	35.00			
	1.3s	235.00nm					SQTA	148.67	353	ePKP	53	24.00	0.4			i	53	37.20		
		e	53	53.00				1.2s	71.40nm						i	54	15.00			
CFR	145.48	332	ePKP	53	18.00	-0.3			i	53	27.30				i	55	57.20			
PRU	145.49	350	PKPd	53	17.90	-0.3	BBS	148.71	358	PKP	53	25.51	1.9X			i	56	11.00		
	1.6s	257.50nm					MASJ	148.72	305	PKP	53	26.65	2.5X			iPP	57	14.20		
Z	18s	1.00um			5.6MsZ		ALT	148.81	322	iPKP	53	29.20	5.1X			i	57	50.00		
N	17s	0.30um					GRC	148.82	4	PKP	53	27.93	4.3X			iPPP	00	23.00		
E	17s	0.70um					BEO	148.84	340	ePKP	53	28.50	4.7X			i	02	35.00		
		i	53	54.50			LOMF	148.84	359	PKP	53	26.01	2.2X			i	05	11.00		
VR1	145.57	334	iPKPd	53	18.50	0.0	LOR	148.89	3	ePKP	53	27.80	4.0X			i	05	25.00		
MEM	145.59	360	iPKPd	53	18.07	-0.3		1.2s	101.15nm							iSKSP	07	28.00		
		ec	53	53.80			Z	22s	1.08um			5.6MsZ			i	12	26.00			
CEI	145.66	340	ePKP	53	23.00	4.4X	KCT	149.00	325	iPKP	53	25.00	0.8			iSS	17	13.00		
SNF	145.67	2	PKPd	53	18.40	-0.1	DSI	149.05	305	ePKP	53	26.00	1.5	KNT	151.01	333	ePKP	53	30.80	3.6X
		e	53	54.00			CS	149.07	313	ePKP	53	28.00	3.5X	VAY	151.03	333	ePKP	53	32.30	5.1X
TNS	145.91	357	ePKPd	53	19.30	0.3	FVI	149.07	351	PKP	53	28.80	4.8X	RSP	151.03	358	PKP	53	32.63	5.4X
TLB	145.99	331	ePKP	53	20.20	1.0	SSF	149.08	3	ePKP	53	28.40	4.3X	SOH	151.08	332	ePKP	53	31.60	4.2X
DOU	146.09	1	PKPd	53	19.80	0.6		1.3s	248.40nm				CAF	151.10	6	ePKP	53	33.20	5.9X	
		e	53	55.00			PTJ	149.12	346	e(PKP)	53	22.70	-1.6		1.2s	80.35nm				
MLR	146.21	334	iPKPc	53	20.20	0.4	BNT	149.16	326	iPKP	53	27.50	3.0X	BN1	151.14	359	PKP	53	34.30	6.9X
GRF	146.23	354	iPKPd	53	20.80	1.3	LBF	149.18	3	ePKP	53	28.50	4.2X	YER	151.15	321	ePKP	53	30.00	2.4X
	Z	21s	0.90um		5.5MsZ			0.7s	30.30nm				EZAM	151.20	23	e(PKP)	53	35.00	7.6X	
		e	53	25.60			MFF	149.19	8	ePKP	53	28.30	4.0X	LPO	151.25	7	ePKP	53	33.40	6.0X
		e(pPKP)	53	52.00			ZAG	149.19	346	ePKP	53	29.80	5.5X	RRL	151.27	359	PKP	53	34.06	6.3X
		e	53	57.70			EDC	149.20	326	ePKP	53	27.00	2.5X	BHB	151.34	358	PKP	53	30.99	3.4X
ISR	146.23	333	ePKP	53	21.00	1.3	LJU	149.29	348	ePKPd	53	22.00	-2.5X	ERUA	151.53	20	e(PKP)	53	35.00	7.0X
PSZ	146.24	343	iPKP	53	20.80	1.1			e	53	25.40		HVAR	151.55	344	iPKP	53	33.60	5.7X	
ABH	146.29	358	ePKP	53	20.45	0.8			i	53	37.10		PCP	151.57	356	PKP	53	33.04	5.0X	
KHC	146.47	351	PKP	53	20.00	0.1			i	54	05.00		PHP	151.58	337	ePKP	53	33.30	5.3X	
	1.1s	31.50nm					DST	149.30	324	ePKP	53	27.00	2.3X	PAIG	151.64	330	ePKP	53	34.10	6.0X
	Z	16s	1.00um		5.7MsZ		AVF	149.34	3	ePKP	53	28.60	4.1X	SDA	151.64	338	ePKP	53	33.50	5.4X
	N	16s	0.50um				VOY	149.42	349	ePKP	53	25.40	0.6	PZZ	151.68	358	PKP	53	32.73	4.5X
	E	16s	0.60um					e	54	07.90			CKI	151.70	356	PKP	53	33.80	5.7X	
WLF	146.54	360	iPKPd	53	21.74	1.8	KGT	149.42	327	ePKP	53	28.00	3.2X	MME	151.71	353	PKP	53	34.50	6.0X
ZST	146.69	346	iPKP	53	22.20	2.0X	BCK	149.51	319	ePKP	53	26.00	0.8	SFI	151.82	351	PKP	53	33.10	4.9X
BBTK	146.																			



10d 13h

FNA 151.98 334 ePKPd 53 32.30 3.6X  
 ARV 152.04 349 PKP 53 32.30 3.6X  
 FIR 152.05 352 iPKPc 53 35.00 6.4X  
 LIT 152.05 332 ePKP 53 33.30 4.5X  
 KZN 152.20 333 ePKP 53 36.00 6.9X  
 SBF 152.31 358 ePKP 53 35.50 6.4X  
 0.8s 48.20nm  
 KOT 152.50 305 ePKP 53 31.00 1.3  
 CDR 152.53 0 iPKPc 53 36.80 7.5X  
 e 54 13.30  
 BTH 152.59 10 ePKP 53 35.00 5.6X  
 i 53 40.40  
 sPKP 54 39.00  
 FRF 152.63 359 ePKP 53 36.30 6.8X  
 ECR 152.64 14 e(PKP) 53 37.00 7.4X  
 LRG 152.75 359 ePKP 53 36.90 7.3X  
 Z 21s 1.48um 5.8msz  
 EPF 152.76 9 ePKP 53 37.30 7.6X  
 LMR 152.86 359 ePKP 53 36.90 7.1X  
 HLW 152.92 305 ePKP 53 30.50 0.2  
 TPE 152.94 336 ePKP 53 35.60 5.6X  
 AGG 152.99 331 ePKP 53 36.30 6.1X  
 AQU 153.06 348 PKP 53 38.50 8.3X  
 MNS 153.17 349 PKP 53 36.50 6.2X  
 PGF 153.52 355 ePKP 53 38.20 7.3X  
 NPS 154.00 321 ePKP 53 37.00 5.4X  
 GUD 154.06 18 e(PKP) 53 33.00 1.3  
 ETOR 154.45 14 e(PKP) 53 37.00 4.8X  
 TOL 154.79 18 iPKP 53 35.00 2.5X  
 iPKP 53 59.50  
 ePKS 57 03.00  
 IPP 57 33.00  
 eSKS 00 35.00  
 IPPP 00 55.00  
 ePS 10 25.00

EBR 154.95 10 ePKP 53 34.00 1.4  
 EJIF 157.38 24 e(PKP) 53 40.50 4.5X  
 MAL 157.54 22 iPKP 53 36.00 -0.2  
 IPP 58 22.00  
 LIC 165.50 131 PKP 53 44.26 -0.6  
 TIC 165.79 130 PKP 53 44.28 -0.8  
 KIC 165.80 132 PKP 53 44.54 -0.6  
 LKO 167.08 119 PKPc 53 44.18 -2.0  
 S.D. = 1.1 on 228 of 397 obs.

& MAY 10, 1991 14h 21m 15.00s  
 37.450 N 106.600 W  
 DEPTH = 5.0km (geophysicist)  
 COLORADO (479)  
 <SPEC>. Held to mainshock  
 location. ML 2.4 (GS). Felt at  
 Summitville.

RW4 1.07 312 ePc 21 34.50 -1.3  
 RW5 1.16 303 ePd 21 36.20 -1.2  
 RW3 1.17 313 P 21 36.78 -0.8  
 RW2 1.24 314 P 21 37.61 -1.0  
 RW1 1.24 311 P 21 37.52 -1.2  
 RW6 1.30 306 P 21 38.85 -0.9  
 PV01 1.70 294 P 21 46.67 0.9  
 PV06 1.71 302 P 21 46.55 0.6  
 PV02 1.85 295 P 21 48.57 0.6  
 PV07 1.89 302 ePc 21 49.05 0.5  
 PV03 1.95 295 P 21 49.83 0.5  
 PV08 1.97 305 P 21 50.18 0.5  
 PV04 2.05 298 P 21 51.47 0.7  
 PV05 2.08 288 P 21 50.41 -0.8  
 PV10 2.14 296 P 21 53.55 1.5  
 PV09 2.26 298 P 21 55.23 1.3  
 GOL 2.44 23 P 21 56.00 -0.5  
 ANMO 2.50 177 P 21 57.00 -0.2  
 ALO 2.50 177 e(P) 21 57.00 -0.3  
 MSU 4.53 285 P 22 25.50 -0.6  
 20 obs. associated

? MAY 10, 1991 16h 22m 56.49 ± 1.06s  
 46.058 N ± 41.1km 5.523 E ± 21.7km  
 DEPTH = 10.0km (geophysicist)  
 FRANCE (538)  
 ML 2.4 (LDG).

LPL 1.00 122 Pg 23 15.80 0.1  
 Sg 23 29.90  
 LPG 1.03 123 Pg 23 15.90 -0.2  
 Sg 23 29.90  
 SMF 1.30 297 Pg 23 19.80 -0.8  
 Sg 23 35.90

AVF 1.67 297 Pg 23 26.80 0.9  
 Sg 23 47.70  
 BGF 1.92 286 Pn 23 26.60 -3.0X  
 Pg 23 29.90  
 Sg 23 54.40  
 MAF 2.06 276 Pg 23 31.60 0.0  
 Sg 23 55.80  
 S.D. = 0.9 on 5 of 6 obs.

% MAY 10, 1991 16h 26m 46.81 ± 2.93s  
 40.015 N ± 23.0km 28.077 E ± 7.7km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.8 (ISK).

KCT 0.32 42 iPg 26 52.90 -0.5  
 iSg 26 58.40  
 BNT 0.36 341 iPg 26 54.50 0.2  
 eSg 26 59.50  
 EDC 0.37 334 ePg 26 54.50 0.1  
 eSg 27 00.00  
 KGT 0.74 307 iPg 27 01.00 -0.2  
 YLV 1.13 61 iPn 27 08.50 0.4  
 S.D. = 0.5 on 5 of 5 obs.

? MAY 10, 1991 16h 36m 15.83 ± 0.80s  
 31.771 S ± 8.9km 68.377 W ± 9.6km  
 DEPTH = 33.0km (normol)  
 SAN JUAN PROVINCE, ARGENTINA (137)

CFA 0.20 36 iPc 36 28.50 6.0X  
 eS 36 42.00  
 ZON 0.34 311 iPd 36 24.50 0.3  
 eS 36 36.00  
 RTLL 0.45 350 iPc 36 25.90 0.2  
 (S) 36 36.90  
 RTCB 0.46 308 iPd 36 25.50 -0.4  
 eS 36 36.90  
 RFA 2.99 181 ePc 37 02.20 0.1  
 S 37 42.30  
 TCA 3.26 83 eP 37 05.80 -0.1  
 (S) 37 47.80  
 S.D. = 0.4 on 5 of 6 obs.

% MAY 10, 1991 18h 47m 51.08 ± 0.50s  
 42.225 N ± 4.5km 13.212 E ± 4.9km  
 DEPTH = 10.0km (geophysicist)  
 CENTRAL ITALY (381)

AQU 0.19 48 Pd 47 55.00 -0.4  
 iSg 47 59.00  
 AZI 0.29 145 P 47 58.00 0.9  
 eSg 48 03.00  
 MNS 0.43 292 Pd 47 59.40 -0.4  
 eSg 48 08.10  
 RMP 0.56 223 P 48 03.10 0.6  
 RDP 0.59 219 P 48 02.30 -0.9  
 eSg 48 13.50  
 SDI 0.69 139 P 48 04.60 -0.1  
 eSg 48 15.10  
 DUI 1.09 121 P 48 11.00 -0.6  
 ARV 1.29 351 P 48 15.20 0.2  
 eSg 48 32.00  
 CRE 1.68 327 P 48 20.20 -0.5  
 SFI 1.97 330 P 48 25.80 1.1  
 S.D. = 0.8 on 10 of 10 obs.

& MAY 10, 1991 19h 16m 58.63s  
 63.259 N 151.276 W  
 DEPTH = 11.3km  
 CENTRAL ALASKA (1)  
 <AEIC>. ML 2.6 (AEIC).

TRF 0.49 66 iPc 17 08.23 -0.4  
 eS 17 15.67  
 HUR 0.80 110 iPd 17 13.73 -0.3  
 eS 17 24.88  
 CUT 0.97 151 iPd 17 17.12 0.1  
 RND 1.10 81 ePc 17 19.12 -0.2  
 eS 17 34.28  
 MCK 1.15 65 ePd 17 20.33 0.2  
 eS 17 36.15  
 BWN 1.22 41 eP 17 21.57 0.4  
 eS 17 38.87  
 SKT 1.29 185 iPd 17 21.93 -0.5  
 eS 17 38.29  
 NEA 1.64 35 ePc 17 26.01 -1.5

eS 17 49.68  
 PWA 1.74 157 ePd 17 29.28 0.4  
 eS 17 52.48  
 SUA 1.82 172 eP 17 30.42 0.3  
 GH0 1.85 143 ePc 17 30.46 -0.1  
 eS 17 55.24  
 WRH 1.86 48 eP 17 30.67 0.0  
 NCG 1.91 193 ePd 17 31.18 -0.2  
 PLRM 1.95 148 eP 17 31.99 0.1  
 SML 2.00 136 ePc 17 32.39 -0.3  
 CRP 2.04 192 eP 17 33.80 0.4  
 eS 18 00.35  
 BGL 2.07 195 eP 17 34.27 0.5  
 CCB 2.07 46 ePc 17 32.12 -1.5  
 RDS 2.09 40 eP 17 32.47 -1.5  
 SPU 2.12 190 eP 17 34.78 0.4  
 CKL 2.13 194 ePd 17 34.85 0.2  
 MDM 2.17 37 ePc 17 33.48 -1.7  
 eS 18 04.39  
 PMS 2.18 158 eP 17 35.70 0.4  
 TTA 2.18 263 eP 17 36.75 1.4  
 HDA 2.24 57 ePc 17 34.61 -1.5  
 FBA 2.25 41 eP 17 34.56 -1.7  
 KNK 2.27 143 eP 17 36.91 0.3  
 SCM 2.32 126 eP 17 38.22 0.8  
 GLM 2.43 43 eP 17 37.40 -1.5  
 TOA 2.62 114 eP 17 42.02 0.4  
 SDG 2.73 103 eP 17 43.21 0.1  
 DFR 2.76 195 eP 17 45.09 1.5  
 NCT 2.82 197 eP 17 45.46 1.0  
 RDN 2.84 195 eP 17 45.15 0.3  
 RDW 2.88 195 eP 17 47.07 1.7  
 RS2 2.89 195 eP 17 46.54 0.9  
 RSO 2.89 195 eP 17 46.89 1.3  
 RED 2.94 195 eP 17 48.10 2.0  
 KLU 3.06 123 eP 17 48.20 0.4  
 39 obs. associated

% MAY 10, 1991 20h 05m 37.07 ± 4.45s  
 45.821 N ± 10.7km 26.525 E ± 22.1km  
 DEPTH = 126.2 ± 41.8 km  
 ROMANIA (358)

VRI 0.15 71 iPc 05 53.20 -0.7  
 MLR 0.52 231 iPc 05 56.50 0.2  
 ISR 0.68 179 iPc 05 57.70 0.4  
 PPE 0.86 62 ePd 06 00.00 1.4  
 CLI 0.90 36 iPd 05 58.00 -1.0  
 CFR 1.31 118 iPc 06 03.00 -0.1  
 IAS 1.55 27 eP 06 06.00 0.2  
 TLB 1.63 139 iPc 06 06.30 -0.4  
 S.D. = 1.0 on 8 of 8 obs.

MAY 10, 1991 20h 30m 45.34 ± 0.32s  
 42.627 N ± 9.6km 43.449 E ± 4.1km  
 DEPTH = 27.7km (4 depth phases)  
 4.4mb (16 obs.) 4.3msz (2 obs.)  
 WESTERN CAUCASUS (362)

TAB 5.06 153 eP 32 16.00 14.6X  
 KAS 7.32 263 eP 32 31.50 -1.7  
 BBTk 8.52 255 eP 32 50.00 0.0  
 e 33 04.00  
 KER 8.74 160 eP 32 07.00 -46.1X  
 HRT 10.46 265 ePn 33 13.00 -3.6X  
 CFR 11.33 288 eP 33 28.50 0.1  
 PPE 11.88 293 eP 33 52.00 16.2X  
 VRI 12.42 291 eP 33 45.00 1.9  
 ISR 12.45 287 eP 33 50.50 6.9X  
 MLR 12.91 289 eP 33 49.00 -0.8  
 OBN 13.26 343 eP 34 41.00 46.9X

Z 14s 1.30um  
 N 14s 0.90um  
 e 35 01.00  
 e 36 56.00  
 i 37 59.00  
 e 38 11.00  
 CMP 13.53 288 ePc 34 03.00 5.2X  
 MAIO 13.90 112 eP 34 03.00 0.2  
 SKO 16.30 275 e(Pn) 34 29.00 -4.7X  
 SPC 17.39 300 eP 35 02.80 15.1X  
 KRA 17.80 303 eP 34 51.60 -0.9  
 SRO 18.41 295 eP 35 05.40 5.3X  
 e 46 44.30  
 ZST 19.27 296 e(P) 35 10.80 0.3  
 e 46 04.50  
 KSP 20.26 303 eP 35 22.00 0.9



GAR	20.62	91	eP	35	23.00	-2.1	RS1	0.58	270	eP	31	47.53	-0.8			eSg	47	19.00				
PRU	21.19	300	eP	35	31.00	0.3			S		31	58.04		KHC	5.02	245	ePn	46	16.10	-0.4		
NUR	21.24	334	eP	35	29.00	-2.0	RDN	0.58	276	iPd	31	47.59	-0.7			eSg	46	53.00				
	0.9s	25.30nm			4.6mb				iS		31	57.96				Sg	47	03.90				
		i		35	37.20	30km	RED	0.59	266	iPd	31	47.61	-0.7			S.D. = 0.5	on	5 of	8 obs.			
KHC	21.70	298	eP	35	37.50	1.7			eS		31	58.07										
		e		35	45.40	29km	RDW	0.60	272	iPd	31	47.98	-0.7									
BRG	21.72	303	e(P)	35	36.00	0.0	NCT	0.67	279	iPd	31	48.72	-0.6			MAY 10, 1991	20h	52m	27.34 ± 0.22s			
KBA	21.73	292	eP	35	37.00	0.6	SLKM	0.68	86	iPc	31	48.85	-0.6			42.534 N ± 5.3km		43.986 E ± 2.9km				
	1.1s	15.10nm			4.3mb		SPU	0.76	343	iPc	31	49.59	-0.8			DEPTH = 10.0km (geophysicist)						
		i		35	39.00	7kmX			eS		32	01.65				4.7mb ( 31 obs.)		4.3msz ( 4 obs.)				
		i		35	48.30		BRLK	0.79	153	ePc	31	50.26	-0.5			WESTERN CAUCASUS			(362)			
KAF	22.01	338	iP	35	39.80	1.0			eS		32	02.11		TAB	4.81	157	eP	53	44.00	2.4		
	0.5s	3.30nm			4.0mb		HOM	0.81	182	ePd	31	50.93	0.0			i		53	55.00			
		esP		35	44.30				eS		32	02.02		KAS	7.71	265	eP	54	20.50	-1.8		
CLL	22.38	303	iP	35	43.00	0.4	CKL	0.82	334	iPc	31	50.72	-0.5			KER	8.53	162	eP	54	33.00	-0.9
	1.3s	24.00nm			4.5mb		CRP	0.85	341	ePc	31	51.26	-0.4			BBTK	8.88	256	eP	54	38.00	-0.7
		e		36	06.00	110kmX			S		32	03.19		EYL	10.55	264	eP	55	03.40	1.7		
QUE	22.54	116	eP	35	46.20	1.7	BGL	0.89	334	iPc	31	51.68	-0.5			HRT	10.85	266	eP	55	00.00	-5.7X
SOTA	23.19	293	iPd	35	50.80	0.1	CNPM	0.96	169	iPc	31	52.41	-0.5			HRI	11.30	218	eP	55	13.00	1.0
	0.9s	10.00nm			4.3mb				eS		32	05.80				CFR	11.73	288	eP	55	16.50	-1.2
		i		35	52.00	4kmX	NCG	0.98	344	iPc	31	52.92	-0.5			TLB	11.76	285	eP	55	14.00	-4.0X
GRF	23.28	299	eP	35	51.00	-0.4			S		32	07.30				JVI	12.61	216	eP	55	29.00	-0.7
UPP	23.39	326	iP	35	58.30	6.0X	XLV	1.01	184	ePd	31	52.78	-0.9			VRI	12.83	291	eP	55	28.00	-4.4X
HFS	25.20	324	eP	36	09.00	-0.8			eS		32	06.03				ISR	12.86	288	eP	55	32.00	-0.9
	0.6s	9.10nm			4.6mb		SUA	1.09	22	iPd	31	54.43	-0.4			MLR	13.32	289	eP	55	36.00	-3.0X
Z	16s	0.28um			3.9mszX				eS		32	09.72				OBN	13.47	342	eP	55	36.00	-4.8X
		e		36	15.90	25km	SEW	1.13	108	ePc	31	53.88	-1.3			Z	16s	1.40um				
		e		36	19.00		PMS	1.27	51	eP	31	56.59	-0.6			N	16s	1.20um				
		LR		45	23.00		AUE	1.42	220	ePd	31	58.35	-0.9					ePP	55	45.00		
SBF	26.14	285	eP	36	19.00	0.2	AUH	1.44	221	eP	31	59.16	-0.5					e	56	18.00		
	1.1s	29.30nm			4.8mb		PWA	1.46	34	ePd	31	59.10	-0.6					eS	58	06.00		
LPG	26.38	289	eP	36	20.70	-0.6	AUI	1.46	220	eP	31	59.37	-0.4			MAIO	13.50	112	eP	55	39.00	-2.4
	0.9s	6.55nm			4.3mb				eS		32	17.68						i	58	22.00		
LPL	26.39	289	eP	36	20.60	-0.7	SKT	1.52	1	iPd	31	59.82	-0.9			CMP	13.93	288	ePd	55	57.00	10.0X
	0.9s	6.55nm			4.3mb				eS		32	19.48				RMN	14.16	215	eP	55	49.00	-1.2
SOD	26.42	345	eP	36	31.00	10.0X	PLRM	1.65	46	ePd	32	01.05	-1.4			BZS	16.36	288	eP	56	18.00	-0.5
		e		36	39.00	28km	KNK	1.80	57	iPd	32	03.30	-1.3			SKO	16.70	276	eP	56	25.00	2.1
NB2	26.71	325	P	36	25.40	1.5	GHO	1.85	43	iPd	32	03.78	-1.5			BEO	17.16	286	eP	56	30.00	1.3
	1.0s	3.70nm			4.0mb		CDD	1.86	215	ePd	32	04.11	-1.2			OHR	17.33	273	eP	56	24.20	-6.7X
AVF	28.58	292	eP	36	39.90	-0.9	MCNL	1.89	228	ePd	32	03.94	-1.8			PSZ	17.77	296	iP	56	37.70	1.4
	0.9s	6.55nm			4.4mb		SYI	1.90	193	eP	32	04.81	-1.1			SPC	17.78	300	eP	56	35.90	-0.7
MAF	29.19	291	eP	36	45.90	-0.5	KNIM	1.92	92	ePc	32	03.43	-2.8			KRA	18.19	303	eP	56	39.60	-1.7
	0.9s	3.30nm			4.1mb		SVW	2.08	290	eP	32	06.06	-2.4					e	56	52.10		
WMO	31.98	72	P	37	11.80	0.7	SML	2.08	48	ePd	32	06.88	-1.6			SRO	18.81	295	eP	56	49.50	0.5
Z	16s	0.70um			4.4mszX		GLI	2.25	77	eP	32	07.71	-3.2			ZST	19.67	296	eP	57	00.40	1.2
GKN	36.27	100	P	37	48.44	0.1	SCM	2.48	55	ePd	32	12.35	-1.9			VKA	20.19	296	e(P)	57	05.00	0.2
DMN	36.83	100	P	37	54.16	1.0	VZW	2.55	74	ePd	32	12.18	-2.9				3.0s	201.00nm			4.9mb	
KKN	36.86	100	P	37	53.30	0.0	VLZ	2.67	73	ePd	32	13.97	-2.7			GAR	20.22	91	eP	57	05.00	-0.3
PKI	37.07	100	P	37	54.90	-0.4			eS		32	44.44				PTJ	20.32	289	eP	57	04.00	-2.3
	0.8s	10.00nm			4.7mb		KLU	2.95	67	iPd	32	18.29	-2.6			KSP	20.64	303	eP	57	09.00	-0.4
GUN	37.22	99	P	37	59.74	3.2X	TOA	3.09	55	ePd	32	21.28	-1.6			VBY	20.83	288	eP	57	10.20	-1.1
HYB	39.00	119	eP	38	11.00	-0.1	TZL	3.38	59	ePd	32	24.63	-2.2					e	57	17.80		
GTA	41.98	75	eP	38	36.20	0.6	SDG	3.56	52	eP	32	27.46	-2.0			LJU	21.32	290	e(P)	57	18.00	1.6
	1.2s	10.00nm			4.4mb		PAX	3.85	47	ePd	32	31.67	-1.9			NUR	21.50	333	iP	57	18.00	0.0
Z	20s	0.40um			4.3msz		GLB	3.92	72	eP	32	31.08	-3.4				0.9s	28.70nm			4.7mb	
LZH	46.29	77	eP	39	05.00	-5.4X	DDM	4.28	36	eP	32	39.33	-0.3					i	57	23.00		
	2.0s	25.00nm			4.8mb		HDA	4.51	27	ePd	32	40.56	-2.1			PRU	21.58	300	eP	57	19.20	0.3
Z	20s	0.29um			4.2msz		CCB	4.55	21	ePd	32	40.90	-2.3					e	57	32.50		
N	10s	0.24um					BALM	4.58	79	eP	32	39.56	-4.2			VOY	21.76	290	e(P)	57	20.90	0.0
HHC	49.58	68	P	39	37.00	1.0	RDS	4.66	18	ePc	32	42.52	-2.3			TRI	21.86	289	eP	57	21.90	0.1
XAN	50.92	77	P	39	45.50	-0.7	RMS	4.77	17	eP	32	43.69	-2.7			KHC	22.09	298	P	57	25.40	1.3
TIY	51.62	71	eP	39	51.30	-0.1	FBA	4.78	20	ePd	32	43.98	-2.6				1.3s	15.00nm			4.3mb	
	Z	10s	0.50um		4.8mszX		GLM	4.94	21	ePd	32	46.13	-2.7			BRG	22.10	303	eP	57	24.60	0.4
CHG	52.24	99	eP	39	55.20	-1.1	YKA	17.62	67	eP	35	33.00	-5.0				1.8s	35.00nm			4.5mb	
GYA	53.33	86	P	40	03.80	-0.6		0.9s	1.50nm			3.2mb						e	57	40.70		
YKA	73.75	350	eP	42	17.10	-1.1		57 obs. associated								KBA	22.13	292	eP	57	24.00	-0.7
	0.8s	0.90nm			3.8mb												1.6s	40.70nm			4.6mb	
PEL	128.34	257	ePd	46	36.50	1.2												i	57	26.50		
		i		47	46.30		? MAY 10, 1991 20h 44m 59.34 ± 13.05s											i	57	49.50		
		i		48	08.50		51.431 N ± 89.3km 20.539 E ± 79.6km															
							DEPTH = 10.0km (geophysicist)															
							POLAND (548)															
							ML 2.7 (KRA).															
& MAY 10, 1991 20h 31m 35.38s																						
60.463 N 151.594 W																						
DEPTH = 58.0km																						
3.2mb ( 1 obs.)																						
KENAI PENINSULA, ALASKA																						
<AEIC>.																						
NKA	0.33	32	iPc	31	47.38	1.8																



Z	22s	0.10um	3.2Msxz	Z	14s	0.70um	4.9Msxz	0.7s	20.30nm	5.3mb	
UPP	23.69	326 iP	57 53.80	NJ2	58.70	74 Pd	02 22.00 23kmX	LPO	89.50	42 eP	20 34.00 0.5
FIR	23.83	284 eP	57 46.20 6.6X	SSE	60.88	73 Pc	02 26.50 -0.9	-	0.7s	10.15nm	5.0mb
MME	24.17	285 P	57 46.70 2.0	1.0s	20.00nm	5.2mb	MFF	89.54	40 eP	20 34.00 0.3	
OSS	24.33	291 ePd	57 47.10 0.9	FRB	61.49	332 eP	02 45.00 -1.1	GRR	89.95	38 eP	20 35.30 -0.2
VDL	24.81	291 ePd	57 51.50 0.6	YKA	73.92	350 eP	04 03.30 -0.6	0.6s	8.05nm	4.9mb	
LLS	25.11	292 ePd	57 53.50 -0.3	1.1s	1.30nm	3.9mb	RJF	89.98	42 eP	20 36.10 0.3	
SLE	25.42	294 ePd	57 55.90 -0.6	SES	84.91	344 eP	05 04.00 0.5	0.7s	4.95nm	4.7mb	
ZLA	25.50	293 ePd	57 57.30 0.1	S.D. = 1.1	on 95 of 107 obs.		CAF	90.16	42 eP	20 37.10 0.4	
HFS	25.50	324 eP	57 56.50 -0.6				0.7s	4.75nm	4.7mb		
0.9s	24.30nm	4.9mb		* MAY 10, 1991 21h 16m 16.85±0.93s			FLN	90.34	38 eP	20 37.30 0.0	
Z	18s	0.61um	4.2Msx	38.529 N ± 8.5km	13.289 E ± 9.2km		0.8s	8.75nm	4.9mb		
e	58 03.50			DEPTH = 10.0km (geophysicist)			LDF	90.48	38 eP	20 37.80 -0.1	
e	58 10.90			SICILY (398)			0.7s	8.80nm	5.0mb		
e	58 16.00			USI 0.20 334 Pc	16 21.00 -0.2		SMF	92.02	41 eP	20 45.40 0.3	
LR	07 12.00			eSg	16 23.90		LOR	92.30	41 eP	20 46.00 -0.4	
MMK	25.88	290 ePd	58 00.30 -0.8	ERC 0.74 228 P	16 31.40 0.0		0.8s	3.75nm	4.6mb		
DIX	26.26	290 ePd	58 04.20 -0.4	GIB 0.79 133 P	16 31.00 -1.3		KOD	146.65	99 ePKP	27 21.00 3.7X	
EMS	26.60	290 ePd	58 06.40 -1.2	FAI 1.29 166 P	16 41.30 0.6		GBA	147.51	93 PKPd	27 22.40 4.2X	
SOD	26.61	345 iP	58 07.80 0.5	SOI 2.22 101 P	16 55.20 0.9		0.9s	14.20nm			
i	58 22.60			S.D. = 1.2	on 5 of 5 obs.		HYB	149.22	87 ePKP	27 26.50 5.6X	
LPL	26.80	289 eP	58 08.60 -0.9				1.0s	25.00nm			
1.0s	6.60nm	4.3mb		MAY 10, 1991 22h 07m 51.01±0.60s			MAT	149.92	313 ePKP	27 28.00 6.6X	
HAU	26.86	295 eP	58 08.40 -1.3	18.387 S ± 4.6km	69.100 W ± 6.2km		S.D. = 1.1	on 40 of 48 obs.			
1.0s	9.40nm	4.4mb		DEPTH = 139.0 ± 6.4 km			?	MAY 10, 1991 23h 30m 44.54±5.29s			
NB2	27.02	325 P	58 10.20 -0.9	4.9mb (16 obs.)			36.999 S ±38.0km	98.929 W ±63.7km			
0.9s	7.00nm	4.4mb		NORTHERN CHILE (123)			DEPTH = 10.0km (geophysicist)				
MEM	27.08	301 P	58 13.30 1.6	Felt (II) at Arequipa.			5.1mb (2 obs.)				
LBF	28.53	293 eP	58 23.30 -1.7	LPB 2.08 28 iPd	08 29.00 1.7		SOUTHERN PACIFIC OCEAN (692)				
1.0s	5.80nm	4.3mb		ARE 2.98 310 iS	08 37.50 -1.1		LNV	22.59	91 eP	35 46.00 -0.3	
SMF	28.66	292 eP	58 24.70 -1.4	CCH 2.99 71 iPc	08 40.00 1.3		LCCCH	22.59	89 eP	35 46.00 -0.4	
1.0s	7.00nm	4.4mb		ANT 5.43 193 iPd	09 09.30 -1.6		PCH	23.40	90 eP	35 54.50 0.1	
SSF	28.85	293 eP	58 26.20 -1.5	i	09 16.50		PEL	23.40	89 eP	35 55.00 0.6	
0.9s	3.75nm	4.2mb		iS	10 27.20		1.1s	50.63nm	5.0mb		
AVF	28.98	293 eP	58 27.60 -1.3	SIV 8.03 74 iPc	09 44.20 -2.1		ARE	31.73	57 eP	37 11.00 -0.2	
0.8s	8.60nm	4.6mb		NNA 9.81 309 iPd	10 05.70 -4.3X		LPB	34.02	61 P	37 32.00 0.7	
NDI	30.14	106 eP	58 39.00 -0.5	eS	11 50.50		ZOBO	34.18	61 iPc	37 33.00 0.2	
LSF	30.30	292 eP	58 39.50 -1.3	JACH 14.30 185 eP	11 09.00 0.7		1.0s	31.25nm	5.2mb		
WMO	31.63	73 P	58 53.60 1.0	MDZ 14.44 179 e(P)	11 09.80 -0.2		SIV	39.47	68 Pc	38 16.00 -0.8	
1.0s	100.00nm	5.7mb X		i	11 12.00		VAO	46.58	88 (P)	39 15.00 0.4	
Z	16s	0.30um	4.1Msxz	ROCH 14.62 186 eP	11 13.50 0.9		PDCR	58.51	82 eP	40 43.30 -0.2	
GRR	31.63	296 eP	58 51.10 -1.3	PEL 14.76 185 eP	11 10.50 -3.6X		S.D. = 0.6	on 10 of 10 obs.			
0.8s	7.40nm	4.7mb		i	11 14.60		MAY 11, 1991 01h 55m 22.51±0.87s				
LPF	31.80	296 eP	58 52.30 -1.6	e	13 49.00		41.134 N ± 6.8km	22.407 E ± 6.5km			
1.6s	36.05nm	5.0mb		ITB1 15.03 117 eP	11 18.20 0.7		DEPTH = 10.0km (geophysicist)				
EKA	32.86	309 Pc	59 02.20 -0.9	SAN 15.07 185 eP	11 18.50 0.6		YUGOSLAVIA (383)				
1.0s	7.30nm	4.6mb		LCCCH 15.19 188 iPd	11 19.00 -0.4		ML 1.6 (THE), 1.5 (SKO).				
DMN	36.43	101 P	59 33.84 -0.4	PCH 15.22 184 eP	11 21.00 1.0		GRC	0.18	181 iPgc	55 25.97 -0.6	
0.9s	22.00nm	5.0mb		ITB 15.24 117 eP	11 21.10 0.9		eSg	55 28.78			
KKN	36.45	100 P	59 33.74 -0.7	TACH 15.29 186 eP	11 20.70 0.0		VAY	0.22	33 iPg	55 27.40 0.1	
PKI	36.67	100 P	59 36.08 -0.3	ITB7 15.39 118 e(P)	11 23.00 0.9		iSg	55 32.20			
0.9s	16.00nm	4.8mb		LNV 15.64 187 eP	11 24.00 -1.0		KNT	0.37	86 ePgc	55 30.23 0.1	
GUN	36.82	100 P	59 37.34 -0.3	PPD 17.08 105 eP	11 41.40 -1.5		eSg	55 35.78			
HYB	38.60	120 eP	59 52.00 -0.4	e	11 44.50		THE	0.66	140 ePg	55 34.74 -0.8	
LSA	39.71	93 P	00 03.00 1.0	e	11 47.40		eSg	55 42.98			
GBA	40.79	125 P	00 11.00 0.6	VAO 21.20 106 eP	12 25.70 -1.3		SOH	0.78	113 ePg	55 37.18 -0.6	
0.5s	3.30nm	4.3mb		e	12 39.60		eSg	55 47.82			
GTA	41.62	75 eP	00 18.20 1.0	BMA 23.74 105 eP	12 52.10 0.4		FNA	0.86	246 ePg	55 38.42 -0.6	
1.0s	10.00nm	4.5mb		e	12 56.50		eSg	55 49.02			
Z	18s	0.30um	4.2Msxz	SDV 27.14 357 eP	13 21.30 -2.1		SRS	0.90	91 ePg	55 40.06 0.4	
pP	00 22.80 15kmX			TUL 59.63 335 eP	17 41.70 -0.8		eSg	55 51.78			
LZH	45.92	77 Pc	00 53.20 1.1	0.8s	13.80nm	5.0mb	LIT	1.03	176 ePg	55 42.46 0.4	
1.8s	57.00nm	5.3mb		ANMO 63.81 326 eP	18 11.90 1.1		eSg	55 56.58			
Z	22s	0.51um	4.4Msxz	1.1s	6.33nm	4.5mb	AGG	2.11	182 ePn	56 00.02 1.7	
pP	00 57.00 13kmX			LIC 67.73 75 Pc	18 35.28 -0.6		S.D. = 0.9	on 9 of 9 obs.			
BTO	48.30	69 eP	01 11.00 0.3	0.7s	24.00nm	5.2mb	MAY 11, 1991 02h 15m 24.00±0.14s				
CD2	48.39	83 eP	01 12.00 0.6	TIC 67.90 75 Pc	18 36.30 -0.7		24.249 N ± 3.2km	93.705 E ± 2.6km			
HHC	49.25	68 Pd	01 19.00 1.0	KIC 68.04 75 Pc	18 37.44 -0.4		DEPTH = 62.7km (24 depth phases)				
XAN	50.56	77 P	01 28.00 0.0	0.6s	79.00nm	5.7mb	4.9mb (57 obs.)				
KMI	50.81	90 Pc	01 28.00 -2.2	LKO 68.52 72 Pc	18 39.02 -1.9		BURMA-INDIA BORDER REGION (294)				
TIY	51.27	71 eP	01 34.00 0.6	0.6s	93.00nm	5.8mb	Felt at Aizawl, Shillong and in the Barak River Valley, India.				
Z	20s	0.50um	4.5Msxz	SCH 72.93 1 eP	19 06.00 -0.5		Also felt at Dhaka, Bangladesh.				
YAK	51.69	37 eP	01 36.30 0.1	MCMT 74.46 329 eP	19 18.60 2.7X		CENTROID, MOMENT TENSOR (HRV)				
CHG	51.84	99 ePc	01 37.00 -0.8	e	19 49.90		Data Used: GDSN				
0.9s	9.03nm	4.7mb		SES 77.81 334 eP	19 36.00 1.7		L.P.B.: 12S, 21C				
BJI	52.76	67 eP	01 45.00 0.5	PNT 80.91 329 eP	19 54.00 3.1X		Centraid Location:				
1.6s	27.00nm	4.9mb		0.6s	5.00nm	4.4mb	Origin Time	02:15:22.8 0.9			
GYA	52.94	86 P	01 48.60 2.4	TOL 83.80 45 iPd	20 08.00 2.0		Lat 23.42N 0.09 Lon 93.25E 0.07				
LKO	54.29	248 P	01 51.72 -4.3X	1.0s	40.00nm	5.2mb	Dep 73.6 4.6 Half-duration 1.9				
TIC	56.01	245 P	02 05.20 -3.3X	YKA 88.21 341 eP	20 27.70 0.7		Moment Tensor; Scale 10**17 N				
KIC	56.03	244 P	02 05.50 -3.2X	0.8s	6.40nm	4.7mb					
WHN	56.30	78 eP	02 10.50 0.1	LFF 89.33 42 eP	20 33.30 0.6						
LIC	56.32	244 P	02 07.30 -3.5X								
DL2	57.00	65 eP	02 14.80 -0.5								
0.8s	10.00nm	4.9mb									
CN2	57.04	59 eP	02 15.00 -0.6								



Mrr= 0.12 0.05	Mtt=-0.94 0.09	N 12s	1.60um	MDJ	35.51	46	eP	22	16.60	0.0
Mff= 0.81 0.10	Mrt=-0.22 0.07	E 12s	1.50um	TSRJ	38.08	63	P	22	38.50	0.2
Mrf=-0.30 0.09	Mtf= 1.07 0.08		pP	20	08.00		eP	22	51.70	0.2
Principal Axes:			S	23	35.20			KER	41.56	295
T Val= 1.42	Plg=16	Azm=116	IPM	20.79	159	ePc	20	03.50	1.1	0.7
N 0.02	74	285		0.9s	255.80nm		5.6mb	BHL	51.06	295
P -1.44	3	25	TIY	20.88	46	iPd	20	01.00	-2.2	0.0
Best Double Couple: Mo=1.4+10**17				1.0s	200.00nm		5.4mb	JVI	51.53	292
NP1: Strike=159	Dip=77	Slip= 171	Z 18s		0.97um		4.2MsZ	MBL	51.80	148
NP2:	251	81	N 10s		5.40um				0.3s	14.00nm
				pP	20	17.00	74kmX	RMN	52.33	291
LSA	5.29	338	P	16	53.00	1.8		KNA	52.46	136
			S	17	52.80			BBTK	52.99	303
CHG	7.28	137	ePnc	17	08.20	-1.9				e
			eSn	18	28.00			EYL	54.95	304
			eSg	19	08.60			HRT	55.30	304
GUN	7.92	299	P	17	16.00	-3.4X		ELL	55.46	299
PKI	8.17	296	P	17	18.90	-3.8X		ISK	55.75	304
KMI	8.26	82	iPc	17	26.50	2.6		MEKA	55.97	153
	1.4s	220.00nm			5.8mb			DST	56.19	303
Z 12s		5.20um			4.0MsZ			CFR	56.23	309
			sP	17	41.50			KGT	57.13	304
			S	19	00.00			VRI	57.21	310
			sS	19	05.00			ISR	57.37	309
KKN	8.36	297	P	17	21.14	-4.1X		MLR	57.77	310
DMN	8.43	295	P	17	22.16	-4.1X		ALN	58.04	304
BDT	8.55	144	eP	17	27.00	-0.6		PVL	58.36	307
	1.0s	34.50nm			5.2mb			CMP	58.42	309
GKN	8.97	297	P	17	29.44	-4.1X		KDZ	58.44	305
LOE	10.13	131	eP	17	49.00	-0.3		RZN	58.95	305
NST	10.45	144	eP	17	54.80	1.2		SOD	59.06	335
KHT	10.48	153	iPc	17	54.00	0.0				i
CD2	11.11	51	eP	18	01.60	-1.0		WB2	59.13	134
	Z 10s		1.40um						0.6s	15.90nm
	N 10s		3.60um					PGB	59.27	306
GYA	11.92	77	P	18	11.80	-1.8		KEV	59.43	338
	Z 14s		1.70um						0.8s	16.10nm
	N 10s		7.40um							i
	E 10s		3.20um							i
			S	20	23.00			MUN	59.90	158
LZH	14.69	34	Pd	18	47.50	-2.3		VTS	59.97	306
	8.0s	600.00nm			5.0mb X			LAT	60.33	114
	Z 18s		2.52um		3.9MsZ			KNT	60.37	305
	N 10s		2.05um					KTK1	60.60	337
			pP	18	54.00			BZS	60.79	310
			PP	19	02.00			LIT	60.82	304
NDI	15.41	290	iPd	18	53.00	-6.1X		AGG	61.11	303
	0.5s	66.90nm			5.1mb			SKD	61.35	306
			iS	21	32.00					i
HYB	15.70	247	eP	18	59.00	-3.9X		SPC	61.40	314
	1.0s	100.00nm			4.9mb			KRA	61.53	315
			eS	21	51.00			ASPA	61.56	138
QIZ	15.87	106	P	19	05.00	0.0			0.7s	45.90nm
	N 11s		1.30um							iS
	E 11s		1.00um					FNA	61.57	305
			eS	22	04.00			OHR	61.95	305
GTA	15.98	17	Pd	19	03.00	-3.3X		PMG	61.96	116
	6.0s	480.00nm			4.8mb X				0.8s	59.70nm
	Z 10s		1.70um		4.9MsZ			TRO	62.20	338
			PP	19	16.20			UPP	62.39	326
			S	21	59.00					i
			SS	22	15.00					i
			ScP	27	31.00			SRO	62.82	313
			ScS	31	09.00			QIS	63.08	131
XAN	16.47	50	P	19	09.00	-3.5X			0.6s	15.00nm
			S	22	16.20			ZST	63.58	313
GZH	18.03	90	Pc	19	30.00	-1.8				e
	Z 12s		2.80um					KSP	63.77	316
	N 10s		5.10um					FORR	63.93	147
			S	22	50.00			LOF	64.08	336
SNG	18.22	158	eP	19	34.50	0.3		HFS	64.35	327
			e	22	54.10				0.8s	28.80nm
GBA	18.66	238	Pd	19	38.90	-0.6			Z 18s	0.40um
	0.7s	25.70nm			4.5mb					e
HKC	18.90	92	eP	19	44.00	1.6				e
POO	19.34	257	eP	19	48.50	1.3				e
			iS	23	03.50					e
WHN	19.36	67	eP	19	47.00	-0.4				LR
	1.0s	30.00nm			4.5mb			PRU	65.00	316
	N 10s		2.67um							e
	E 10s		1.69um					VBY	65.24	311
			S	23	14.00					e(P)
BOM	20.14	259	eP	19	55.10	-0.5				e
			eS	23	00.60			BRG	65.24	317
WMO	20.14	347	P	19	55.20	-0.3			0.8s	14.00nm
	1.2s	200.00nm			5.3mb					i
	Z 12s		1.20um		4.5MsZ					i



11d 02h

NB2	65.49 328 P	26 01.80 -0.7	TCF	73.88 314 eP	26 54.40 0.4	VITF	1.08 213 Pg	11 27.91 0.2	
	0.7s 6.90nm	4.7mb		0.9s 11.30nm	4.8mb		Sg	11 43.22	
LJU	65.64 311 e(P)	26 04.00 0.3	EKA	74.17 324 Pc	26 55.90 0.5	MOF	1.28 172 Pg	11 31.86 0.4	
KHC	65.75 315 P	26 04.50 0.1		0.5s 3.20nm	4.5mb		Sg	11 50.43	
CLL	65.76 317 iPc	26 04.20 -0.2	CAF	74.40 313 eP	26 57.70 0.6	BSF	1.29 182 Pg	11 32.56 1.0	
	1.1s 10.00nm	4.7mb		0.9s 6.40nm	4.6mb	FEL	1.46 148 Pn	11 33.78 -0.4	
	e	26 21.00 62km	CMS	74.54 136 iPd	26 58.40 0.5	TNS	1.51 42 ePnc	11 35.60 0.8	
CEY	65.77 311 eP	26 04.90 0.4	LDF	74.64 317 eP	26 58.30 0.0		eSn	11 57.10	
VOY	66.08 311 eP	26 06.30 -0.3		1.0s 12.20nm	4.8mb	MEM	1.59 340 iP	11 34.90 -0.9	
	e	26 24.70 69km	RJF	74.65 313 eP	26 59.20 0.7	ENN	1.76 340 iPnd	11 40.30 2.1	
TRI	66.23 311 eP	26 06.80 -0.6		1.0s 14.20nm	4.9mb		0.5s 19.00nm		
KBA	66.26 313 iPc	26 06.80 -1.1	Z	23s 0.20um	4.3MsZ		eSn	12 03.00	
	0.8s 6.40nm	4.7mb	LPO	75.07 312 eP	27 01.50 0.6	DOU	1.77 304 P	11 39.00 0.6	
	i	26 24.30 65km		0.9s 10.30nm	4.8mb	LOMF	1.77 181 Pn	11 38.31 -0.3	
	i	27 11.60	GRR	75.17 317 eP	27 02.10 0.8	SNF	2.17 311 P	11 52.00 7.7X	
MOX	66.74 317 eP	26 10.60 -0.1	LFF	75.29 313 eP	27 02.80 0.7	GRF	2.91 77 ePg	12 03.10 8.3X	
	1.2s 12.00nm	4.7mb		0.9s 11.15nm	4.8mb		eSg	12 42.30	
	e	26 28.00 65km	LPF	75.40 316 eP	27 03.00 0.3	MOX	3.43 62 e(P)	12 17.00 14.8X	
MOL	67.03 330 eP	26 12.52 0.3	BRS	76.69 128 iPc	27 11.50 1.3		e	13 03.00	
GRF	67.16 316 ePc	26 14.00 0.6	IMA	76.72 23 eP	27 11.00 1.0		S.D. = 0.9 on 15 of 18 obs.		
	1.0s 14.00nm	4.9mb		1.3s 11.70nm	4.7mb		MAY 11, 1991 03h 21m 03.35± 0.84s		
Z	22s 0.30um	4.5MsZ	BUL	77.21 241 iPc	27 15.30 1.9		40.927 N ± 7.9km 21.287 E ± 7.3km		
	e	26 31.00 63km		1.0s 11.00nm	4.8mb		DEPTH = 10.0km (geophysicist)		
ARV	67.25 309 P	26 30.50 16.5X	ECRI	78.32 311 e(P)	27 40.00 20.9X		GREECE (364)		
SQTA	67.66 313 iPc	26 15.60 -1.1	TOO	78.42 140 eP	27 20.00 0.4		ML 2.2 (THE).		
	0.5s 8.40nm	5.0mb		e	27 30.00 66km				
	i	26 33.00 64km	SVW	78.43 28 eP	27 20.60 1.3	FNA	0.16 155 iPgc	21 06.96 -0.1	
	i	26 37.20		0.9s 50.00nm	5.5mb		eSg	21 09.78	
CRE	67.92 309 P	26 18.40 0.0		pP	27 30.50 65km	OHR	0.41 297 iPg	21 13.20 1.4	
SFI	67.93 309 P	26 34.30 16.1X	CNB	79.27 137 iPc	27 24.90 0.6		0.7s 98.00nm		
PGD	68.03 309 P	26 37.50 18.4X		e	27 41.00 57km		iSg	21 22.10	
FIR	68.38 309 e(P)	26 21.00 0.0	FBA	79.42 22 eP	27 26.10 1.5		Lg	21 24.60	
OSS	68.49 313 ePd	26 21.40 -0.5		1.0s 23.75nm	5.1mb	GRG	0.84 88 ePg	21 20.62 0.9	
MME	68.67 310 Pc	26 24.10 0.9		pP	27 43.50 63km		eSg	21 34.34	
VDL	68.99 313 ePd	26 24.80 -0.2	GUD	80.21 310 e(P)	27 30.70 1.2	SKO	1.05 6 ePn	21 21.00 -2.2	
LLS	69.21 313 ePd	26 25.70 -0.7	SLR	80.44 236 eP	27 31.00 0.1	LIT	1.23 132 ePb	21 25.10 -1.2	
SLE	69.34 314 ePd	26 27.00 0.1		1.5s 52.78nm	5.2mb		eSb	21 43.54	
WTS	69.42 319 eP	26 28.00 0.8	TOL	80.44 309 eP	27 33.00 2.4	KNT	1.24 79 ePb	21 27.02 0.6	
	0.9s 15.00nm	4.9mb	PMR	80.83 26 eP	27 33.40 1.3		eSb	21 45.10	
	e	26 45.00 62km		1.6s 63.10nm	5.3mb	SOH	1.57 93 ePb	21 32.42 1.0	
CDF	69.98 315 eP	26 30.50 -0.4	INK	81.45 16 eP	27 36.00 0.8		eSb	21 52.18	
	0.9s 9.15nm	4.7mb		0.8s 34.00nm	5.4mb	IGT	1.57 208 ePb	21 30.82 -0.5	
MMK	70.11 312 ePd	26 31.80 -0.1		pP	27 54.00 65km		S.D. = 1.5 on 8 of 8 obs.		
MEM	70.24 317 Pd	26 51.80 19.6X	KLU	82.13 25 P	27 40.80 1.8		MAY 11, 1991 03h 45m 28.28± 0.44s		
	ec	27 17.20 99kmX		pP	27 59.00 66km		19.543 S ± 6.4km 175.672 W ± 8.5km		
ENN	70.25 318 eP	26 50.00 17.7X	YKA	90.65 13 eP	28 20.80 0.1		DEPTH = 231.3km ( 4 depth phases)		
	1.0s 10.00nm			0.7s 1.40nm	4.4mb		5.1mb ( 15 obs.)		
QLP	70.26 133 iPd	26 33.60 0.9	LKO	94.48 282 P	28 56.88 17.8X		TONGA ISLANDS (173)		
PGF	70.28 309 eP	26 32.70 -0.2	KIC	95.07 279 P	28 43.00 1.2	SVA	5.74 283 iPc	46 56.50 3.1	
	1.1s 28.10nm	5.1mb	ANMO	118.10 19 PKP	34 07.50 1.6		eS	48 09.10	
BSF	70.43 314 eP	26 33.20 -0.5		pP	34 29.50	VUN	5.76 284 iPc	46 55.80 2.1	
	0.9s 4.90nm	4.4mb	ALO	118.11 19 ePKP	34 07.20 1.2		eS	48 06.40	
DIX	70.47 313 ePd	26 34.50 0.3		e	34 29.00	MBU	5.91 295 ePc	46 57.30 1.7	
HAU	70.68 315 eP	26 34.70 -0.4	PPD	147.80 267 ePKP	35 05.40 4.5X	AFI	6.73 34 eP	46 58.00 -8.1X	
	Z 21s 0.35um	4.6MsZ		e	35 25.60		eS	48 05.00	
EMS	70.80 313 ePd	26 36.00 0.0	ZOBO	161.21 292 PKP	35 25.00 5.4X	DZM	16.91 258 iPc	49 14.90 1.9	
LPG	71.07 312 eP	26 37.90 0.1	LPB	161.31 291 PKP	35 39.00 19.5X	PUZ	19.20 195 eP	49 35.40 -1.4	
	0.6s 5.60nm	4.7mb		S.D. = 0.9 on 159 of 187 obs.		WLZ	19.76 201 eP	49 44.80 2.5	
LPL	71.08 312 eP	26 37.90 0.1		? MAY 11, 1991 02h 42m 02.85± 4.09s		NOZ	19.78 195 eP	49 41.90 -0.6	
	0.4s 5.60nm	4.8mb		41.311 N ± 35.9km 28.894 E ± 10.6km		PGZ	22.11 196 eP	50 06.50 1.2	
BNI	71.24 312 P	26 37.20 -1.5		DEPTH = 10.0km (geophysicist)		MNG	22.33 198 eP	50 06.70 -0.8	
DOU	71.24 317 iPd	26 58.00 19.6X	TURKEY	MD 2.3 (ISK).			0.3s 31.00nm	5.3mb	
	S	36 15.00		ISK	0.27 153 iPg	MTW	22.83 197 P	50 12.70 0.4	
SNF	71.32 318 P	26 53.20 14.4X		CTT	0.39 245 iPg	WDW	23.07 198 eP	50 14.70 0.0	
LRG	71.90 310 eP	26 42.30 -0.1			iSg	TCW	23.24 199 eP	50 15.90 -0.4	
	1.3s 55.25nm	5.3mb		HRT	0.76 130 ePg	THZ	24.19 201 eP	50 25.90 0.7	
	Z 22s 0.15um	4.2MsZ		I2I	1.07 156 iPg	KHZ	24.56 199 eP	50 28.90 0.3	
STK	72.18 138 iPc	26 43.70 -0.4			S.D. = 0.3 on 4 of 4 obs.		0.3s 31.00nm	5.4mb	
	0.5s 6.50nm	4.8mb			MAY 11, 1991 03h 11m 07.36± 0.42s	LTZ	25.31 201 eP	50 34.90 -0.6	
	e	26 59.10 55km			49.121 N ± 3.6km 6.860 E ± 5.9km	BRS	29.92 249 iPd	51 16.80 -0.1	
LOR	72.50 314 eP	26 45.50 -0.4			DEPTH = 8.0 ± 4.3 km	RMO	33.39 251 eP	51 47.00 0.0	
	1.0s 6.00nm	4.5mb			GERMANY (543)		0.8s 58.00nm	5.3mb	
	Z 20s 0.30um	4.6MsZ			MD 2.6 (STR).		i	52 39.20 260kmX	
LBF	72.50 314 eP	26 45.60 -0.4			GWF	0.52 106 Pg	i	54 25.00	
SMF	72.69 314 eP	26 46.80 -0.3			RUP	0.60 13 ePg	CNB	34.57 236 eP	51 57.00 0.0
	0.9s 9.85nm	4.7mb			WLF	0.71 320 iPd	CTA	35.77 263 iPd	52 07.10 -0.1
ADE	72.72 143 eP	26 48.00 0.7				iS	0.9s 319.33nm	5.9mb	
SSF	72.79 314 eP	26 47.50 -0.1					CMS	36.55 243 eP	52 13.00 -0.6
	0.8s 11.30nm	4.8mb				PMG	37.30 280 eP	52 19.00 -1.0	
AVF	72.97 314 eP	26 48.50 -0.2					0.9s 75.63nm	5.3mb	
	0.9s 10.15nm	4.8mb				QLP	37.43 252 iPd	52 20.80 -0.3	
RMO	73.29 130 iPc	26 52.00 1.2				MDG	40.12 286 eP	52 43.80 0.5	
	0.5s 31.00nm	5.5mb				STK	40.18 243 iPc	52 44.20 0.6	
	i	27 09.80 65km							
MAF	73.66 314 eP	26 53.20 0.5							
	0.9s 8.50nm	4.7mb							



	1.0s	14.70nm	4.4mb	BSF	151.71	356	ePKP	04 56.20	6.3X			Sg	47 07.00					
OIS	41.93	261 eP	52 57.00	-1.1		0.6s	4.35nm			CDF	1.26	44	Pg	47 09.70 0.8				
ASPA	46.87	256 iPd	53 36.50	-1.0	SOTA	151.83	350 ePKP	04 56.00	5.8X	-		Sg	47 25.20					
	0.7s	423.50nm	5.9mb			0.8s	10.30nm	ic	04 56.70	FEL	1.43	74	ePn	47 11.50 0.0				
		iS	00 09.70		LOR	152.34	1 ePKP	04 57.80	7.0X	LOR	1.46	261	Pg	47 10.60 -1.2				
MTN	51.36	269 eP	54 10.20	-1.5		0.7s	3.55nm			LBF	1.46	250	Pg	47 11.00 -0.8				
FORR	51.64	246 eP	54 12.30	-1.3	SSF	152.54	1 ePKP	04 58.20	7.2X			Sg	47 28.70					
KNA	52.90	265 eP	54 21.50	-1.5		0.8s	7.00nm			SMF	1.69	240	Pg	47 16.10 0.9				
COOL	57.61	245 iPc	54 54.70	-2.0	VBY	152.57	343 e(PKP)	04 58.90	7.8X			Sg	47 35.60					
MEKA	60.37	250 eP	55 13.50	-2.1X	LBF	152.63	1 ePKP	04 58.30	7.1X	SSF	1.74	256	Pg	47 16.00 0.2				
KLB	60.44	244 eP	55 14.50	-1.5	TCF	153.27	3 ePKP	04 58.70	6.6X			Sg	47 37.20					
NWAO	60.75	243 eP	55 17.00	-1.1		S.D. = 1.3 on 58 of 88 obs.								AVF	1.93	249	Pg	47 19.50 0.9
BAL	61.44	245 iPc	55 21.20	-1.5		S.D. = 1.0 on 9 of 9 obs.												
MUN	61.71	244 iPd	55 23.70	-0.8	% MAY 11, 1991 05h 42m 31.87±1.33s					& MAY 11, 1991 07h 29m 36.96s								
NANU	63.76	254 eP	55 37.00	-1.0	40.106 N ± 9.3km 27.675 E ± 9.4km					59.755 N 152.936 W								
	0.4s	39.00nm	5.5mb		DEPTH = 10.0km (geophysicist)					DEPTH = 104.3km								( 2 )
KAKJ	69.41	323 P	56 11.40	-1.7	TURKEY (366)					SOUTHERN ALASKA								
CHJJ	69.97	322 P	56 15.10	-1.5	MD 2.7 (ISK).					<AEIC>.								
IJDJ	70.21	321 P	56 16.60	-1.5						AUE	0.46	209	eP	29 52.92 -0.2				
SPA	70.58	180 iPc	56 22.40	2.4	EDC	0.28	31 iPg	42 37.70	-0.1	AUI	0.49	211	eP	29 53.15 -0.2				
	1.1s	13.10nm	4.6mb									eS	30 04.09					
NIJJ	70.80	323 P	56 20.10	-1.4	BNT	0.31	37 iPg	42 38.20	-0.2			eS	29 54.22 -0.2					
MTMJ	71.04	322 P	56 21.70	-1.4						PDB	0.64	274	eP	29 54.31 -0.4				
TSRJ	71.41	320 P	56 24.10	-1.0	KGT	0.45	321 iPg	42 41.00	0.0	HOM	0.66	98 iPc	29 54.08 -0.8					
TNP	79.33	43 P	57 09.60	-0.4								eS	30 08.03					
		pP	58 06.00	236km	DST	0.89	124 iPg	42 48.70	-0.2	RED	0.67	7 iPc	30 07.20					
MDJ	81.02	324 eP	57 19.00	0.6								eS	29 54.50 -0.4					
	1.0s	40.00nm	5.1mb		IZI	1.40	80 iPn	42 57.90	0.5	XLV	0.69	115 eP	29 54.73 -0.7					
CN2	82.90	321 eP	57 28.00	-0.2		S.D. = 0.4 on 5 of 5 obs.												
	1.0s	20.00nm	4.8mb		MAY 11, 1991 06h 03m 53.04±0.64s					RSO	0.72	7 iPc	29 54.77 -0.6					
ALO	85.10	50 eP	57 40.00	0.3	46.724 N ± 5.4km 7.049 E ± 8.5km							eS	30 08.09					
	0.9s	3.57nm	4.2mb		DEPTH = 10.0km (geophysicist)					RS2	0.72	7 iPc	30 08.15					
ANMO	85.11	50 P	57 40.50	0.8	SWITZERLAND (544)					RDW	0.73	5 iPc	29 54.85 -0.7					
		eP	58 36.00	229km	ML 2.3 (LDG).							eS	30 08.46					
SNG	86.49	279 eP	57 48.30	1.7						RDN	0.77	6 iPc	29 55.19 -0.6					
BJI	86.77	314 eP	57 47.50	0.1	EMS	0.66	187 iP	04 04.80	-1.5			eS	30 08.92					
	1.0s	18.00nm	4.9mb		DIX	0.69	159 iP	04 06.00	-0.9	NCT	0.81	0 ePc	29 55.42 -0.7					
FBA	86.86	12 P	57 47.00	-0.3	MMK	0.92	136 iP	04 10.70	-0.2			eS	30 09.47					
		pP	58 43.00	230km	BSF	1.12	351 Pg	04 13.40	-0.7	DFR	0.85	8 iPc	29 55.79 -0.7					
GYA	88.09	299 P	57 55.00	0.7								eS	30 10.41					
XAN	89.31	307 Pd	58 00.40	0.7	LPL	1.23	190 Pg	04 17.00	1.0	RDT	0.86	18 iPc	29 55.81 -0.8					
CHG	91.99	289 ePd	58 13.50	1.2	HAU	1.37	340 Pg	04 17.40	-0.7			iS	30 10.22					
	1.0s	12.50nm	4.9mb							NNL	0.88	70 ePc	29 56.49 -0.2					
INK	92.79	14 eP	58 14.00	-0.9	SLE	1.43	43 iP	04 19.50	0.4	CNP	0.89	104 iPc	29 56.13 -0.8					
		pP	58 30.00	55kmX	VDL	1.69	97 iP	04 24.50	1.6			eS	30 10.91					
YKA	94.74	24 eP	58 23.60	-0.4	CDF	1.70	5 Pn	04 22.30	-0.6	CDD	0.90	204 ePd	29 55.97 -1.0					
	0.7s	0.40nm	3.7mb X							MCNL	0.92	232 iPd	29 56.11 -1.0					
NB2	138.26	355 PKP	04 22.30	-4.8X	LBF	2.12	278 Pg	04 30.80	1.7			eS	30 10.71					
	0.7s	0.80nm								BRLK	1.04	89 ePc	29 57.51 -0.9					
HFS	138.90	353 ePKP	04 17.30	-10.9X								eS	30 13.46					
	0.5s	0.60nm			SMF	2.21	269 Pg	04 32.90	2.6X	SYI	1.18	166 eP	29 58.69 -1.3					
KAS	146.84	317 ePKP	04 46.00	3.4X								eS	30 16.25					
KRA	147.11	341 ePKP	04 44.70	2.1	LOR	2.25	285 Pg	04 33.60	2.7X	NKA	1.30	40 ePc	30 02.39 1.0					
KSP	147.36	346 ePKP	04 46.00	3.0X						CKL	1.48	11 ePd	30 02.83 -0.8					
		e	05 49.00		SSF	2.45	279 Pg	04 37.40	3.7X			eS	30 22.84					
CLL	147.57	350 iPKPd	04 46.00	2.7	AVF	2.54	273 Pg	04 39.10	4.1X	SPU	1.50	17 ePd	30 02.92 -0.9					
	0.8s	19.00nm										S	30 22.99					
		pP	05 43.00		S.D. = 1.3 on 10 of 14 obs.													
SPC	147.78	340 ePKP	04 46.20	2.2	? MAY 11, 1991 06h 10m 03.55±2.80s					BGL	1.54	10 ePd	30 03.77 -0.6					
BRG	147.82	349 iPKP	04 47.20	3.4X	5.667 S ± 27.8km 146.367 E ± 22.8km					SLKM	1.55	60 eP	30 03.18 -1.4					
	0.8s	10.00nm			DEPTH = 134.2 ± 17.9 km					CRP	1.57	14 eP	30 03.93 -0.9					
		e	05 48.00		3.6mb ( 1 obs.)					NCG	1.70	13 eP	30 05.73 -0.7					
VRJ	147.90	330 ePKP	04 47.50	3.4X	EAST PAPUA NEW GUINEA REGION (207)					SEW	1.79	77 ePc	30 06.15 -1.3					
MOX	148.43	351 ePKP	04 47.60	2.8X						SVW	1.90	317 iPd	30 07.47 -1.5					
	1.3s	10.00nm			YYYY	0.70	215 iPd	10 24.80	0.1	KDC	2.03	173 ePd	30 08.47 -2.0					
		e	05 50.00							SUA	2.03	31 ePd	30 10.15 -0.5					
ISR	148.52	329 ePKP	04 50.50	5.3X	MDG	0.72	305 iPd	10 24.20	-0.5	PMS	2.24	47 ePc	30 12.33 -1.1					
PRU	148.55	347 ePKP	04 49.00	4.0X	LAT	1.16	147 eP	10 29.60	0.9	SKT	2.34	17 iPd	30 13.31 -1.4					
MLR	148.55	330 ePKP	04 49.00	3.7X						PWA	2.42	37 eP	30 15.68 -0.1					
HRI	148.86	302 iPKPd	04 50.70	4.6X	MNDI	2.74	260 eP	10 48.00	0.3	PLRM	2.63	44 eP	30 17.41 -1.1					
MML	149.37	301 ePKPd	04 52.00	5.2X	PMG	3.80	168 eP	11 00.50	-1.0	KNIM	2.68	75 ePc	30 16.89 -2.3					
GRF	149.42	351 ePKP	04 51.50	5.2X						GHO	2.82	42 eP	30 20.04 -1.2					
		e	04 57.00		WB2	18.38	218 eP	14 11.20	0.3	CUT	2.96	25 eP	30 21.78 -1.2					
KHC	149.56	348 PKP	04 52.00	5.4X		0.4s	1.30nm	3.6mb		GLI	3.12	66 eP	30 22.75 -2.4					



11d 08h

TKW	1.01	331	iPc	01 02.20	1.0	NNA	13.62	316	iP	09 52.20		GLA	71.21	319	pP	16 27.80	192km
TWD	1.77	17	ePc	01 14.60	2.5X		1.0s	480.00nm		07 46.50	-4.0X				eP	15 44.00	0.3
TWC	2.35	19	eP	01 23.40	3.1X						5.9mb				e	16 31.00	197km
ANP	2.83	9	eP	01 28.70	1.5					07 52.50		BAR	72.09	318	eP	15 49.00	0.1
SSE	8.68	1	P	02 51.00	1.4					10 14.50					e	16 36.00	197km
						PPD	14.72	93	iPc	08 04.10	0.0	PLM	72.66	318	eP	15 52.00	-0.4
						LPA	15.15	150	iPd+	08 09.20	-0.2				e	16 40.00	201km
							0.8s	573.13nm			6.0mb	TPC	72.67	319	eP	15 53.00	0.7
NJ2										10 51.20					e	16 39.00	192km
						BMA	21.30	96	eP	09 16.40	0.1	PEC	73.21	318	P	15 55.90	0.5
WHN	10.09	325	eP	03 14.00	5.1X	ANGL	23.79	334	P	09 51.30	10.5X				0.8s	25.97nm	5.0mb
BJI	18.08	348	eP	04 55.00	1.4	QUIL	24.07	330	eP	09 44.00	0.5	RVR	73.41	318	eP	15 57.00	0.5
BTO	20.41	335	eP	05 25.30	4.8X	OTO	24.38	332	P	09 46.70	0.4				e	16 43.00	192km
CN2	21.68	9	eP	05 31.50	-1.8	OUR	24.41	332	Pd	09 46.80	0.2	MSU	73.56	325	P	15 58.00	0.4
WRA	44.03	162	P	08 54.00	4.0X	GGP	24.43	331	eP	09 47.30	0.2	GSC	73.94	320	eP	16 00.00	0.4
						YANA	24.48	332	iPd+	09 47.50	0.1				e	16 47.00	196km
WB2	44.03	162	iPc	08 49.20	-0.8	PDCR	28.37	75	eP	10 19.80	-2.4	MWC	73.98	318	eP	16 01.00	0.9
										16 54.00					e	16 46.00	187km
ASPA	47.45	164	eP	09 18.30	1.1	SDV	30.94	353	iP	10 42.00	-3.0	PAS	74.00	318	eP	16 01.00	1.1
						TOV	31.75	355	eP	10 47.60	-4.3X				e	16 46.00	187km
FBA	70.48	27	P	11 57.00	0.5	UPA	33.14	337	iPc	11 04.20	0.3	SBB	74.15	319	eP	16 01.00	0.2
NB2	79.75	332	P	12 49.20	-0.4		1.1s	215.19nm			5.7mb				e	16 45.00	182kmX
										11 44.50	193km	DAU	74.47	327	P	16 03.60	0.7
YKA	84.69	23	eP	13 14.60	-0.5	BIM	36.84	10	eP	11 31.50	-3.7X	CLC	74.76	320	eP	16 04.00	-0.3
						MVM	36.91	10	eP	11 34.20	-1.5				e	16 50.00	191km
						FDF	37.04	10	eP	11 34.90	-2.0	ABL	75.12	318	P	16 06.90	0.3
						AIA	43.22	178	eP	12 30.00	3.0X	DUG	75.12	325	P	16 06.90	0.5
						TPX	44.21	324	(P)	12 36.00	0.5	ISA	75.19	319	eP	16 07.00	0.2
						OXX	48.48	321	(P)	13 09.50	0.3				e	16 53.00	191km
						PIO	48.78	319	(P)	13 11.50	0.2	SYN	75.38	317	eP	16 08.00	0.0
						ACX	50.21	318	(P)	13 22.50	0.3				e	16 56.00	200km
						IISM	50.36	322	(P)	13 23.50	0.2	RUV	75.55	259	iP	16 11.50	2.4
						IIT	50.93	321	(P)	13 28.50	0.6				1.0s	30.00nm	5.0mb
						PPM	51.15	321	(P)	13 30.00	0.1	VAH	75.75	259	iP	16 12.70	2.4
						TPM	51.34	320	(P)	13 36.50	5.6X				1.0s	55.00nm	5.2mb
						MRX	53.18	319	(P)	13 44.50	0.3	TPT	75.83	259	iP	16 13.30	2.6
						HBF	56.12	347	P	14 03.50	-1.8				1.0s	55.00nm	5.2mb
										14 47.70	195km	BCH	75.87	318	P	16 11.60	0.9
						SGS	56.40	347	P	14 06.00	-1.2	TNP	76.06	321	P	16 12.50	0.7
										14 56.40	224kmX	PMO	76.07	259	iP	16 14.70	2.7
						JSC	57.61	346	P	14 14.00	-1.7				1.0s	40.00nm	5.1mb
										15 03.40	218kmX	PKEM	76.45	318	P	16 14.80	1.0
						PRM	57.67	345	P	14 14.40	-1.8	PHAM	76.49	318	P	16 15.20	1.2
						LHS	57.70	347	P	14 14.60	-1.7	SCH	76.56	0	eP	16 13.00	-0.9
										15 05.00	223kmX	PAE	76.73	256	iP	16 18.30	2.7
						TKL	59.52	344	P	14 26.60	-2.3				1.0s	115.00nm	5.6mb
						GBTN	59.64	344	P	14 27.40	-2.3	FRI	76.81	319	eP	16 15.30	-0.4
										15 18.10	223kmX	PRI	76.85	318	ePd	16 16.80	0.7
						BLA	60.26	348	P	14 32.80	-1.2				e	17 03.80	195km
							0.5s	11.81nm			4.9mb	PTI	76.85	328	P	16 16.00	0.0
						NAV	60.44	348	P	14 33.80	-1.3	IMW	76.92	329	P	16 22.50	6.0X
										15 24.10	220kmX	KVN	77.23	322	P	16 18.80	0.6
						CVL	60.66	350	P	14 34.50	-2.1	LLA	77.32	318	ePd	16 18.80	0.2
										15 26.10	226kmX	PRS	77.41	318	eP	16 20.00	1.0
						NA2	60.69	350	P	14 34.90	-1.8	SAO	77.73	318	eP	16 21.20	0.4
										15 26.20	225kmX	CMB	77.90	320	iPd	16 22.30	0.6
						CBN	60.71	351	eP	14 35.30	-1.6				e	17 08.00	188km
						SNA	60.99	159	iPc	14 40.20	1.6	ARN	78.16	319	P	16 24.30	1.1
							1.0s	112.00nm			5.6mb	MHC	78.22	319	iPd	16 24.70	1.1
						MBO	61.13	58	iP	14 39.60	-0.5				e	17 12.50	197km
						OLY	61.71	338	P	14 41.00	-2.6	GCC	78.24	318	eP	16 24.00	0.5
						ELC	62.58	340	P	14 46.90	-2.4	BKS	78.92	319	ePd	16 28.00	0.8
										15 31.80	193km				0.8s	63.00nm	5.4mb
						LVNJ	62.94	354	P	14 50.00	-1.7	BRK	78.93	319	ePd	16 27.40	0.1
										15 42.00	226kmX	LRM	79.07	330	ePd	16 28.90	0.7
						TBR	63.22	354	P	14 51.90	-1.6	ORV	79.55	320	iPd	16 31.40	0.8
						FVM	63.60	340	P	14 56.90	0.8				e	17 19.30	197km
						MEQ	63.92	331	iPd	14 56.50	-1.7	MIN	80.11	321	ePd	16 33.30	-0.5
						WVLY	65.06	351	P	15 04.20	-1.2	LTCM	80.33	321	P	16 34.90	0.2
										15 56.00	223kmX	LBFM	80.92	322	P	16 38.20	0.2
						BNH	66.43	357	P	15 13.40	-0.7	FHC	81.81	320	e(P)	16 43.00	0.6
						RSNY	66.62	354	P	15 14.20	-1.1	SES	81.88	333	ePd	16 42.20	-0.4
							0.8s	49.41nm			5.3mb				1.0s	119.00nm	5.6mb
						LIC	67.01	73	Pc	15 17.26	-1.1	FFC	82.08	340	iPd	16 43.00	-0.5
						TIC	67.21	72	Pc	15 18.48	-1.1				0.9s	30.00nm	5.0mb
						KIC	67.32	73	Pc	15 19.34	-1.0	EVAL	82.13	44	iPc	16 45.20	1.1
							0.8s	84.50nm			5.6mb	EJIF	82.32	46	iPc	16 46.70	1.6
						ALO	67.85	326	iPd	15 23.00	-0.4	VGB	83.02	325	P	16 49.60	1.1
							0.9s	80.88nm			5.5mb	NEW	83.04	329	P	16 47.20	-1.4
										16 08.00	190km				0.9s	29.61nm	5.0mb
						ANMO	67.85	326	P	15 23.20	-0.2	EHOR	83.25	45	eP	16 50.70	0.9
						LKO	68.05	69	P	15 22.32	-2.5	DPW	83.29	328	P	16 50.40	0.5
							0.9s	137.50nm			5.7mb	EPLA	83.99	43	iPc	16 54.50	1.0
						CBM	68.67	359	P	15 27.00	-0.9	ECOG	84.05	46	iPc	16 54.60	0.6
						GLD	71.01	330	P	15 42.30	-0.2	AFC	84.05	46	iPd	16 54.90	0.8
							1.3s	68.97nm			5.2mb	PRY	84.20	117	iPd	16 56.50	1.3
						GOL	71.04	330	P	15 42.00	-0.8				1.0s	70.00nm	5.4mb

MAY 11, 1991 08h 04m 43.90±0.17s

22.061 S ± 3.1km 67.180 W ± 4.8km

DEPTH = 193.8km ( 21 depth phases)

5.3mb ( 30 obs.)

CHILE-BOLIVIA BORDER REGION (124)

mb 5.4 (BRK).

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 15S, 28C

Centroid Location:

Origin Time 08:04:56.4 0.5

Lat 21.22S 0.05 Lon 67.35W 0.06

Dep 199.0 2.0 Half-duration 2.2

Moment Tensor: Scale 10\*\*17 Nm

Mrr=-0.03 0.09 Mtt=0.21 0.14

Mff=-0.18 0.15 Mrt=-0.13 0.08

Mrf=-2.20 0.08 Mtf=0.56 0.11

Principal Axes:

T Val= 2.21 Plg=44 Azm=109

N 0.13 15 4

P -2.34 43 260

Best Double Couple: Mo=2.3\*10\*\*17

NP1: Strike=276 Dip=15 Slip= 1



LON 84.37 326 P 16 55.10 -0.2  
 EBAN 84.39 45 iPd 16 56.90 1.3  
 ERUA 84.70 40 eP 16 57.90 0.9  
 ENIJ 84.80 47 eP 16 57.60 0.0  
 BMW 84.94 325 P 16 58.90 0.7  
 PNT 84.97 329 ePd 16 58.00 -0.2  
 1.0s 43.00nm 5.1mb  
 EHUE 84.99 46 iPd 16 58.80 0.1  
 TOL 85.17 44 iPc 17 01.00 1.6  
 1.4s 232.56nm 5.7mb  
 iS 27 15.00  
 EMON 85.21 39 eP 17 00.40 0.9  
 SLR 85.32 116 iPc 17 01.20 0.5  
 1.0s 90.00nm 5.5mb  
 GMW 85.39 326 P 17 00.40 0.1  
 EVIA 85.50 45 iPd 17 02.10 0.9  
 GUD 85.53 43 eP 17 02.30 1.0  
 MCW 86.14 327 P 17 00.40 -3.6X  
 PGC 86.44 326 eP 17 06.00 0.7  
 ETOR 86.96 44 eP 17 09.30 1.1  
 ECHE 87.01 45 eP 17 09.90 1.5  
 ECR1 87.64 42 eP 17 12.10 0.7  
 BUL 87.72 111 iPc 17 14.10 1.7  
 0.9s 15.97nm 4.9mb  
 i 18 03.20 199km  
 i 24 16.80  
 EGRA 88.80 43 eP 17 19.40 2.6  
 EPF 89.65 43 eP 17 22.20 1.4  
 0.7s 6.30nm 4.7mb  
 LFF 90.87 41 eP 17 26.60 0.3  
 0.6s 9.10nm 5.0mb  
 MFF 91.20 39 eP 17 27.90 0.1  
 0.6s 6.65nm 4.9mb  
 LPF 91.43 38 eP 17 28.50 -0.3  
 LDF 92.25 38 eP 17 32.30 -0.3  
 YKA 92.25 340 eP 17 32.00 -0.3  
 0.8s 33.50nm 5.5mb  
 LPL 94.86 43 eP 17 45.90 0.9  
 0.5s 2.05nm 4.6mb  
 LPG 94.87 43 eP 17 46.10 1.0  
 INK 102.02 340 ePd 18 16.00 -0.5  
 ASPA 130.13 206 ePKP 23 33.90 1.0  
 0.4s 4.60nm  
 MAIO 131.89 60 ePKP 23 37.00 1.0  
 e 24 32.00  
 e 26 46.00  
 WRA 133.25 208 PKP 23 40.00 1.1  
 0.7s 6.50nm  
 POO 143.35 88 iPKPd 23 54.50 -2.9  
 KOD 144.16 103 ePKP 23 59.00 -0.2  
 GBA 145.35 98 PKPc 24 01.60 0.8  
 1.3s 162.80nm  
 KUSJ 146.22 316 ePKP 24 01.80 0.3  
 ASAJ 147.01 319 ePKP 24 04.60 1.9  
 NDI 147.25 71 iPKPc 24 07.00 3.4X  
 0.6s 100.00nm  
 HYB 147.46 92 iPKPc 24 07.50 3.3X  
 1.0s 100.00nm  
 e 24 59.00  
 HOOJ 147.48 316 ePKP 24 07.00 3.5X  
 WMO 149.95 38 PKP 24 14.00 6.5X  
 pPKP 24 58.00  
 OFUJ 150.10 311 PKP 24 13.50 5.8X  
 YAMJ 151.65 311 PKP 24 17.90 7.8X  
 MDJ 153.60 332 ePKP 24 13.70 1.1  
 GKN 153.82 71 PKP 24 23.32 9.7X  
 DMN 154.28 72 PKP 24 22.28 7.9X  
 KKN 154.41 72 PKP 24 23.30 8.8X  
 PKI 154.55 72 PKP 24 20.26 5.4X  
 GUN 154.92 71 PKP 24 25.34 10.0X  
 HHC 161.24 3 ePKP 24 24.00 2.0  
 S.D. = 1.2 on 170 of 193 obs.

% MAY 11, 1991 08h 18m 15.78 ± 0.94s  
 39.135 N ± 7.6km 27.567 E ± 13.1km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.6 (ISK).  
 IZM 0.77 198 ePg 18 30.90 0.0  
 iSg 18 41.40  
 DST 0.95 60 ePn 18 34.00 0.1  
 BNT 1.25 12 iPn 18 39.70 0.7  
 KCT 1.27 28 ePn 18 38.70 -0.6  
 KGT 1.33 351 iPn 18 40.10 -0.2  
 S.D. = 0.7 on 5 of 5 obs.

% MAY 11, 1991 09h 49m 22.41 ± 0.88s  
 39.100 N ± 7.3km 27.539 E ± 13.6km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.7 (ISK).  
 IZM 0.73 197 iPg 49 36.90 0.0  
 iSg 49 48.70  
 DST 0.98 59 ePn 49 41.00 -0.1  
 EDC 1.27 11 iPn 49 46.00 0.0  
 BNT 1.29 13 iPn 49 46.60 0.3  
 KCT 1.31 29 ePn 49 42.70 -3.9X  
 KGT 1.36 352 ePn 49 47.10 -0.3  
 S.D. = 0.3 on 5 of 6 obs.

? MAY 11, 1991 09h 57m 08.83 ± 4.41s  
 39.671 N ± 28.3km 29.473 E ± 26.2km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.7 (ISK).  
 DST 0.66 265 ePg 57 22.00 0.1  
 eSg 57 31.00  
 IZI 0.67 0 ePg 57 22.70 0.6  
 YLV 0.90 355 ePn 57 26.10 0.0  
 KCT 1.03 304 ePn 57 28.20 -0.2  
 HRT 1.16 7 ePn 57 30.00 -0.5  
 S.D. = 0.6 on 5 of 5 obs.

MAY 11, 1991 10h 41m 26.46 ± 0.85s  
 39.953 N ± 8.7km 21.949 E ± 5.0km  
 DEPTH = 10.0km (geophysicist)  
 GREECE (364)  
 ML 2.2 (THE).  
 LIT 0.44 70 ePg 41 36.27 0.8  
 eSg 41 43.70  
 FNA 0.94 332 ePg 41 44.10 -0.3  
 eSg 41 57.62  
 THE 1.03 49 ePg 41 45.62 -0.3  
 eSg 42 00.46  
 GRG 1.06 19 ePg 41 46.02 -0.4  
 IGT 1.32 252 ePb 41 50.30 -0.5  
 eSb 42 06.82  
 PAIG 1.33 91 ePb 41 51.26 0.3  
 eSb 42 07.69  
 SOH 1.38 51 ePb 41 51.38 -0.4  
 KNT 1.41 31 ePb 41 52.18 0.1  
 eSb 42 12.06  
 OHR 1.45 323 ePn 41 54.20 1.4  
 SRS 1.71 47 ePb 41 55.74 -0.7  
 S.D. = 0.8 on 10 of 10 obs.

\* MAY 11, 1991 11h 06m 57.46 ± 3.56s  
 2.031 N ± 10.4km 126.615 E ± 15.8km  
 DEPTH = 73.9 ± 34.6 km  
 5.0mb (7 obs.)  
 MOLUCCA PASSAGE (266)  
 TSM 8.80 285 eP 09 06.00 1.7  
 WB2 23.12 161 iPd 11 57.50 -0.4  
 0.5s 20.20nm 4.8mb  
 ASPA 26.51 165 eP 12 30.40 0.4  
 0.3s 9.90nm 4.8mb  
 CHG 31.83 303 eP 13 09.50 -8.1X  
 FORR 32.73 178 eP 13 24.70 -0.5  
 TSRJ 34.45 14 P 13 39.00 -1.1  
 CHJJ 35.74 17 P 13 48.70 -2.3  
 MTMJ 35.91 15 P 13 51.20 -1.3  
 STK 36.60 158 eP 13 57.10 -1.2  
 1.2s 1.60nm 3.8mb X  
 YAMJ 38.02 17 P 14 10.00 -0.1  
 OFUJ 39.35 19 P 14 21.30 0.0  
 GUN 46.64 307 P 15 20.08 -0.8  
 PKI 46.87 307 P 15 21.22 -1.5  
 KKN 47.07 307 P 15 25.52 1.4  
 DMN 47.13 307 P 15 23.94 -0.7  
 0.8s 24.00nm 5.2mb  
 GKN 47.67 307 P 15 27.14 -1.7  
 0.8s 22.00nm 5.2mb  
 SVW 82.32 29 eP 19 14.60 2.4X  
 TTA 82.46 27 eP 19 15.10 2.1  
 IMA 83.97 24 ePc 19 22.80 2.1  
 0.8s 11.40nm 5.0mb  
 PMR 85.48 29 eP 19 29.40 1.3  
 0.9s 18.40nm 5.1mb  
 TOA 86.91 28 eP 19 37.40 2.2

YKA 101.08 24 ePd 20 40.50 0.2  
 0.8s 0.50nm 4.2mb  
 URA 151.74 67 ePKP 26 43.50 4.0X  
 i 27 09.00  
 S.D. = 1.5 on 20 of 23 obs.

? MAY 11, 1991 11h 36m 20.57 ± 7.00s  
 22.571 S ± 47.5km 175.602 W ± 35.1km  
 DEPTH = 168.9 ± 56.5 km  
 4.3mb (5 obs.)  
 TONGA ISLANDS REGION (174)

SGE 7.85 308 eP 38 12.10 -0.9  
 DZM 16.62 268 iPc 40 07.30 1.9  
 STK 38.97 247 iPd 43 32.50 0.7  
 0.3s 2.10nm 4.3mb  
 ASPA 46.26 258 iPd 44 30.80 -0.1  
 0.7s 11.30nm 4.5mb  
 WB2 46.54 263 iPc 44 32.50 -0.7  
 0.8s 6.60nm 4.2mb  
 WRA 46.55 263 P 44 32.00 -1.3  
 0.7s 6.20nm 4.3mb  
 FORR 50.52 248 eP 45 02.00 -1.6  
 NANU 63.03 255 eP 46 33.00 1.0  
 TNP 81.49 43 P 48 20.80 0.3  
 ALQ 86.98 50 eP 48 47.40 -0.7  
 1.1s 5.38nm 4.3mb  
 ANMO 86.98 50 P 48 47.10 -1.0  
 PNT 87.14 33 eP 48 50.00 1.7  
 FBA 89.80 11 P 49 01.20 0.7  
 e 49 14.50  
 SES 92.24 35 eP 49 12.00 -0.1  
 MEO 92.62 53 eP 49 14.00 -0.2  
 KSP 150.29 345 ePKP 55 55.50 8.2X  
 CLL 150.54 349 iPKPd 55 55.80 8.2X  
 1.1s 11.00nm  
 BRG 150.78 348 iPKP 55 56.80 8.8X  
 0.8s 12.00nm  
 MLR 151.16 328 ePKP 55 56.00 7.0X  
 MOX 151.41 350 e(PKP) 55 59.00 10.0X  
 e 56 11.00  
 PRU 151.50 346 PKPc 55 58.50 9.4X  
 e 56 14.50  
 KHC 152.51 347 ePKP 56 00.90 10.2X  
 S.D. = 1.2 on 15 of 22 obs.

? MAY 11, 1991 11h 46m 22.37 ± 1.64s  
 42.999 N ± 9.7km 13.957 E ± 14.9km  
 DEPTH = 10.0km (geophysicist)  
 CENTRAL ITALY (381)  
 AQU 0.76 213 P 46 37.60 0.3  
 eSg 46 44.70  
 ARV 0.89 304 P 46 40.00 0.5  
 eSg 46 52.40  
 MNS 1.12 237 P 46 43.20 -0.3  
 eSg 46 56.00  
 DUI 1.39 164 P 46 47.80 0.0  
 SFI 1.79 302 P 46 53.00 -0.5  
 S.D. = 0.5 on 5 of 5 obs.

% MAY 11, 1991 12h 02m 59.61 ± 0.86s  
 39.157 N ± 6.9km 27.649 E ± 11.7km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.6 (ISK).

IZM 0.82 202 ePg 03 15.40 -0.1  
 iSg 03 27.40  
 DST 0.88 59 ePn 03 16.90 0.3  
 EDC 1.20 8 ePn 03 22.50 0.5  
 BNT 1.22 10 ePn 03 22.00 -0.2  
 KCT 1.22 26 ePn 03 21.60 -0.7  
 KGT 1.32 348 ePn 03 24.10 0.1  
 S.D. = 0.6 on 6 of 6 obs.

MAY 11, 1991 12h 18m 18.43 ± 0.45s  
 10.439 N ± 6.4km 125.293 E ± 10.6km  
 DEPTH = 19.8km (2 depth phases)  
 4.5mb (9 obs.) 4.4Msz (8 obs.)  
 LEYTE, PHILIPPINE ISLANDS (256)

DAV 3.34 175 eP 19 08.00 -2.7  
 BAG 7.50 323 eP 20 09.00 -0.7  
 SSE 20.91 350 Pd 23 03.00 0.9  
 1.0s 25.00nm 4.6mb  
 Z 20s 0.90um 4.1Msz



11d 12h

N	12s	0.30um																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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XAN 39.91 8 Pc 17 24.50 -0.8  
 LZH 41.52 1 Pc 17 39.00 0.4  
 2.0s 46.00nm 4.9mb  
 Z 18s 0.66um 4.6MsZ  
 E 12s 0.26um  
 pP 17 54.00 58kmX  
 NDI 41.99 326 iPd 17 42.00 -0.4  
 TIY 44.09 11 eP 17 59.00 -0.4  
 Z 18s 0.85um 4.7MsZ  
 N 16s 0.71um  
 S 24 26.50  
 STK 44.80 131 iPd 18 05.00 -0.2  
 0.8s 13.10nm 4.8mb  
 GTA 44.90 357 P 18 06.40 0.4  
 1.0s 10.00nm 4.6mb  
 Z 20s 0.70um 4.6MsZ  
 N 17s 0.80um  
 HHC 46.98 9 P 18 23.30 0.8  
 0.9s 30.00nm 5.3mb  
 Z 18s 0.60um 4.6MsZ  
 BJI 47.14 14 eP 18 23.00 -0.5  
 0.9s 16.00nm 5.0mb  
 Z 18s 0.64um 4.6MsZ  
 CMS 47.89 128 iPc 18 30.00 0.3  
 RMO 48.59 121 eP 18 36.00 0.8  
 e 18 48.00 43km  
 WMO 51.04 346 P 18 55.00 1.3  
 1.0s 30.00nm 5.2mb  
 Z 24s 0.30um 4.2MsZ  
 S 26 10.00  
 BRS 52.29 120 iPd 19 04.00 0.6  
 i 19 16.00 43km  
 CN2 53.35 20 P 19 09.00 -1.9  
 Z 16s 0.60um 4.7MsZ  
 pP 19 21.00 42km  
 BUL 73.08 251 iPd 21 20.70 -1.3  
 1.0s 7.50nm 4.6mb  
 MLR 84.73 317 eP 22 25.00 0.3  
 KAF 88.59 333 iP 22 43.50 0.5  
 0.7s 8.20nm 5.1mb  
 esP 22 44.20  
 SOD 89.82 338 iP 22 49.10 0.4  
 HFS 94.31 330 eP 23 08.70 -0.8  
 0.5s 1.10nm 4.5mb  
 Z 18s 0.09um 4.3MsZ  
 e 23 22.90 48km  
 LR 07 00.00  
 YKA 117.02 18 ePKP 28 33.50 -1.6  
 0.8s 0.50nm  
 FFC 127.19 18 ePKP 29 06.00 11.1X  
 0.8s 8.00nm  
 TNP 131.53 42 (PKP) 29 05.60 1.6  
 e 29 17.50  
 ANMO 140.37 39 (PKP) 29 21.10 0.5  
 e 29 32.30  
 SIV 153.12 217 ePKP 29 47.00 5.5X  
 ZOBO 156.39 203 PKP 29 47.00 0.4  
 i 30 15.00  
 S.D. = 1.0 on 42 of 45 obs.  
 MAY 11, 1991 14h 18m 45.83 ± 0.51s  
 20.603 S ± 7.3km 69.905 W ± 7.6km  
 DEPTH = 33.0km (normal)  
 4.4mb ( 1 abs.)  
 NORTHERN CHILE (123)  
 ANT 3.12 189 eP 19 34.20 0.3  
 iS 20 14.20  
 ARE 4.38 340 iPd 19 52.00 -0.2  
 iS 20 39.50  
 LPB 4.40 23 P 20 01.00 8.6X  
 ZOBO 4.63 22 eP 20 01.00 5.2X  
 i 20 02.00  
 SIV 9.56 63 P 21 04.40 0.0  
 NNA 10.85 321 eP 21 23.00 1.0  
 0.8s 14.93nm 5.2mb X  
 e 23 21.00  
 PPD 17.38 98 eP 22 48.00 0.4  
 VAO 21.43 101 eP 23 33.60 0.2  
 KIC 69.35 75 P 29 52.50 -0.3  
 YKA 90.04 341 eP 31 42.20 -0.8  
 0.9s 2.10nm 4.4mb  
 WB2 133.23 212 iPKPc 38 00.70 0.0  
 0.9s 1.90nm  
 WRA 133.23 212 PKP 38 00.00 -0.7  
 1.1s 1.60nm  
 S.D. = 0.6 on 10 of 12 obs.

? MAY 11, 1991 14h 25m 46.84 ± 0.97s  
 41.138 N ± 16.8km 28.478 E ± 11.1km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.4 (ISK).  
 CTT 0.04 285 iPg 25 48.00 -0.9  
 ISK 0.45 99 iPg 25 55.50 -0.4  
 DMK 0.87 322 iPg 26 04.20 0.6  
 iSg 26 16.70  
 HRT 0.95 109 ePg 26 00.50 -4.6X  
 IZI 1.10 136 ePn 26 08.00 0.4  
 S.D. = 1.2 on 4 of 5 obs.  
 MAY 11, 1991 15h 26m 29.74 ± 0.25s  
 12.413 N ± 4.6km 47.516 E ± 3.4km  
 DEPTH = 17.0km ( 11 depth phases)  
 5.2mb ( 54 obs.) 4.8MsZ ( 13 obs.)  
 EASTERN GULF OF ADEN (415)  
 CENTROID OF MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 15S, 28C  
 Centroid Location:  
 Origin Time 15:26:34.4 0.9  
 Lat 12.84N 0.08 Lon 47.48E 0.06  
 Dep 15.0 FIX Half-duration 2.0  
 Moment Tensor: Scale 10\*\*17 Nm  
 Mrr=-0.34 0.05 Mtt= 1.53 0.05  
 Mff=-1.19 0.08 Mrt= 0.02 0.21  
 Mrf=-0.17 0.18 Mtf= 0.29 0.06  
 Principal Axes:  
 T Vol= 1.56 Plg= 0 Azm=174  
 N -0.31 79 84  
 P -1.25 11 264  
 Best Double Couple:Ma=1.4\*10\*\*17  
 NP1:Strike=308 Dip=82 Slip=-8  
 NP2: 40 82 -172  
 ARO 4.65 260 iPd 27 39.00 -2.0  
 ABHA 7.40 322 iPc 28 22.90 3.0  
 KMSA 8.43 340 P 28 33.30 -0.8  
 AAE 9.23 249 eP 28 44.30 -1.1  
 RYD 12.27 356 iPc 29 20.50 -6.2X  
 S 32 34.00  
 DHR 14.04 10 iPd 29 48.00 -2.0  
 S 34 09.00  
 NAI 17.26 219 ePd 30 32.00 0.1  
 eS 35 43.00  
 HOL 20.39 327 iPc 31 09.30 0.8  
 MBH 20.88 328 eP 31 14.00 0.3  
 CSTJ 21.14 333 P 31 18.82 2.5  
 SAGI 21.35 328 iP 31 19.40 1.0  
 eS 37 30.00  
 MKT 21.70 330 eP 31 23.00 1.1  
 eS 37 41.00  
 LISJ 21.78 331 P 31 24.64 2.0  
 KER 21.84 359 iPc 31 24.60 1.1  
 MKRJ 21.97 332 P 31 26.75 2.1  
 JVI 22.42 332 iP 31 30.60 1.5  
 HLW 22.95 322 eP+ 31 36.00 1.7  
 eS 35 50.00  
 HRI 23.39 334 eP 31 41.00 2.4  
 TEH 23.48 8 ePc 31 42.00 2.4  
 BHL 23.97 335 P 31 45.00 0.7  
 S 36 08.00  
 BOM 25.18 72 eP 32 00.70 4.7X  
 eS 36 18.50  
 QUE 25.24 43 eP 32 00.50 3.8X  
 1.1s 46.20nm 5.1mb  
 eS 36 35.00  
 POO 26.08 73 iPc 32 05.30 0.8  
 2.0s 494.12nm 5.8mb  
 eS 35 46.00  
 MAIO 26.12 22 iPc 32 05.90 1.2  
 1.4s 96.15nm 5.3mb  
 eS 36 44.00  
 NPA 28.52 197 iP 32 27.80 1.2  
 ELL 28.94 330 iP 32 31.50 1.1  
 GBA 29.17 84 Pc 32 31.00 -1.5  
 0.7s 10.30nm 4.7mb  
 HYB 30.38 77 eP 32 43.00 -0.4  
 1.4s 100.00nm 5.5mb  
 KAS 31.26 340 eP 32 51.50 0.6  
 DST 31.82 332 eP 32 55.00 -0.8  
 EYL 31.93 335 eP 32 56.50 -0.3  
 NDI 32.05 55 iPc 32 58.80 0.9

0.9s 92.44nm 5.7mb  
 eS 38 16.00  
 eSS 40 10.00  
 KGT 33.11 331 eP 33 07.00 0.0  
 GAR 33.32 33 eP 33 10.00 1.0  
 iS 38 33.00  
 iSS 40 41.00  
 i 42 37.00  
 ScS 43 29.00  
 KRI 34.02 212 eP 33 28.60 13.4X  
 ALN 34.06 330 eP 33 16.08 0.9  
 PAIG 34.54 327 ePc 33 19.68 0.3  
 AGG 34.66 324 ePd 33 20.12 -0.3  
 KDZ 34.94 331 eP 33 24.00 1.2  
 DIM 35.19 331 eP 33 26.00 1.1  
 RZN 35.31 330 iPc 33 27.00 0.8  
 LIT 35.31 326 ePc 33 25.40 -0.6  
 SRS 35.45 328 ePc 33 26.88 -0.3  
 PLD 35.63 330 iPc 33 30.00 1.4  
 MMB 35.73 329 ePd 33 30.00 0.5  
 KNT 35.84 328 ePc 33 30.00 -0.5  
 GRG 35.96 327 ePc 33 30.96 -0.6  
 VAY 36.13 327 eP 33 32.80 -0.1  
 IGT 36.15 323 eP 33 33.52 0.4  
 KKB 36.26 329 iPc 33 35.00 1.0  
 FNA 36.40 326 ePc 33 35.00 -0.1  
 CFR 36.60 337 eP 33 35.00 -1.8  
 VTS 36.73 329 iPc 33 39.00 0.9  
 BUC 36.80 334 ePd 33 38.00 -0.4  
 SKO 37.19 327 iP 33 42.20 0.4  
 1.5s 73.00nm 5.3mb  
 Z 14s 5.00um 5.5MsZ  
 i 33 48.70 22km  
 i 34 19.00  
 iPP 35 17.60  
 iPPP 35 46.00  
 iS 39 33.00  
 iSS 42 24.00  
 eSSS 43 14.00  
 LR 49 42.00  
 ISR 37.20 335 eP 33 44.00 2.1  
 VRI 37.73 336 eP 33 47.50 1.2  
 MLR 37.73 335 eP 33 45.50 -1.0  
 GKN 37.95 60 P 33 48.08 -0.5  
 1.2s 138.00nm 5.6mb  
 DMN 38.24 61 P 33 50.96 -0.2  
 1.0s 170.00nm 5.8mb  
 KKN 38.44 61 P 33 52.60 -0.2  
 1.0s 296.00nm 6.0mb  
 PKI 38.49 61 P 33 52.78 -0.5  
 1.2s 185.00nm 5.7mb  
 GUN 38.98 61 P 33 57.26 -0.2  
 1.1s 411.00nm 6.0mb  
 BEO 39.72 330 eP 34 03.00 0.1  
 BZS 39.74 331 eP 34 03.50 0.4  
 UZD 41.90 330 eP 34 22.00 1.2  
 PSZ 42.24 332 iP 34 23.60 -0.1  
 SLR 42.29 206 eP 34 25.50 1.1  
 1.0s 30.00nm 5.0mb  
 ZAG 42.69 327 eP 34 28.00 0.7  
 PTJ 42.76 327 eP 34 28.00 0.0  
 VBY 42.88 327 eP 34 29.00 0.2  
 SRO 42.90 331 iP 34 29.70 0.8  
 ARV 42.96 323 P 34 29.90 0.3  
 SPC 43.04 334 eP 34 30.70 0.4  
 CEY 43.48 326 e(P) 34 37.50 3.8X  
 LJU 43.61 327 ePc 34 35.20 0.4  
 e 34 39.40 14km  
 e 41 13.60  
 e 45 38.80  
 e 49 32.00  
 PRY 43.68 206 iPc 34 37.00 1.3  
 1.0s 45.00nm 5.2mb  
 ZST 43.75 331 iP 34 35.90 0.1  
 KRA 43.83 334 iPd 34 36.50 0.1  
 1.0s 62.00nm 5.4mb  
 e 34 41.50 17km  
 e 34 49.30  
 SFI 43.85 323 P 34 37.20 0.5  
 LSA 43.91 60 P 34 34.70 -3.3X  
 VOY 43.95 326 ePc 34 37.80 0.2  
 VKA 44.17 330 iPc 34 40.40 1.1  
 1.8s 134.00nm 5.5mb  
 i 34 52.70 45kmX  
 KBA 44.90 327 e(P) 34 43.00 -2.4  
 FVI 44.90 326 P 34 45.70 0.5  
 CTI 45.20 325 P 34 47.90 0.2



TSM	70.13	90	eS	46	48.00	
CN2	72.83	48	eP	37	43.00	-0.8
	1.0s		40.00nm			5.4mb
	20s		1.00um			5.1MsZ
	N 12s		0.10um			
	E 12s		0.30um			
			eP	38	05.00	18km
			eS	47	22.00	
MDJ	75.78	47	eP	38	22.00	5.4X
	1.0s		30.00nm			5.3mb
YAMJ	84.40	52	eP	39	03.50	0.7
OFUJ	85.47	51	eP	39	08.30	0.2
WRA	91.23	110	P	39	37.00	1.1
	0.9s		20.60nm			5.5mb
WB2	91.24	110	iPc	39	37.10	1.2
	1.1s		9.00nm			5.0mb
			iP	39	42.30	16km
ASPA	91.65	114	iPd	39	38.90	1.1
	1.0s		5.30nm			4.9mb
YKA	104.04	352	ePd	40	33.50	0.5
	0.8s		0.40nm			4.3mb
ZOBO	117.74	258	ePKP	45	23.00	4.6X
	Z 20s		0.29um			4.9MsZ
			LR	20	12.00	
TNP	127.77	345	PKP	45	38.80	2.1
	S.D. = 1.1	on 174	of 184	obs.		
<hr/>						
* MAY 11, 1991 15h 38m 11.11± 2.27s						
15.636 N ±10.2km 60.244 W ±19.6km						
DEPTH = 33.0km (normal)						
LEEWARD ISLANDS (92)						
MD 3.4 (TRN). ML 3.4 (FDF).						
DBCT	1.13	251	eP	38	30.48	-0.2
			eS	38	44.17	
DSVT	1.16	250	eP	38	30.81	-0.2
			eS	38	45.05	
MDN	1.16	254	eP	38	31.00	-0.1
			eS	38	45.05	
DPMT	1.16	251	eP	38	30.85	-0.3
BBL	1.19	265	iPd	38	31.50	-0.1
			S	38	43.60	
MYM	1.25	210	iPd	38	34.38	2.1
			S	38	49.10	
FDF	1.25	224	iPd	38	32.93	0.5
	0.1s		4.80nm			
			S	38	45.90	
PAG	1.44	286	ePc	38	35.00	-0.1
			S	38	49.50	
SLW	1.74	203	eP	38	40.01	0.5
			eS	38	59.47	
SLB	1.96	203	eP	38	42.70	0.0
			eS	39	03.57	
BPA	2.09	312	eP	38	44.79	0.3
			eS	39	05.77	
SVV	2.49	202	eP	38	49.26	-1.0
			eS	39	15.41	
FCV	2.65	202	eP	38	51.03	-1.4
			eS	39	18.27	
	S.D. = 0.9	an	13	of 13	abs.	
<hr/>						
* MAY 11, 1991 15h 38m 27.45± 0.46s						
13.315 S ± 9.9km 168.780 E ± 8.2km						
DEPTH = 22.9km ( 4 depth phases)						
4.7mb ( 10 obs.) 4.9MsZ ( 1 abs.)						
VANUATU ISLANDS (186)						
DZM	8.99	194	iPc	40	36.00	-3.0
			iS	42	14.30	
HNR	9.48	293	eP	40	47.00	1.3
SVO	9.72	294	eP	40	49.00	0.0
VUN	10.43	118	eP	40	59.90	1.1
SVA	10.47	118	eP	41	01.00	1.7
BRS	20.49	224	iPd	43	09.50	2.9X
LAT	22.44	285	eP	43	28.10	1.8
CTA	22.59	250	iPc	43	32.30	4.5X
	0.9s		27.73nm			4.7mb
			iS	47	40.00	
RMQ	22.90	232	iPc	43	32.60	1.8
COO	23.19	220	eP	43	37.00	3.3X
QLP	26.52	236	eP	44	08.00	2.7X
CMS	27.78	226	eP	44	17.00	0.2
STK	31.03	229	eP	44	47.30	1.5
	1.0s		7.70nm			4.5mb
WB2	33.59	254	iPc	45	08.20	-



iPcP 47 48.00			0.6s 356.70nm			COO 58.14 127 eP 59 24.00 0.7				
WRA	33.60 254 P	45 08.00 -0.5	e 51 30.10			HNR	60.24 101 eP	59 36.00 -1.9		
0.9s 5.90nm 4.5mb			SNG	6.21 3 eP	51 20.10 -1.1	DZM	68.31 114 iPc	00 28.60 -1.4		
ASPA	34.56 248 eP	45 16.70 0.0	e 52 30.50			MBH	68.33 302 eP	00 29.00 -1.0		
1.1s 14.00nm 4.8mb			KHT	13.87 353 eP	53 00.20 1.2	JVI	68.40 304 eP	00 29.50 -0.9		
SSE	63.54 315 Pc	48 58.10 -0.4	CHG	17.82 356 eP	53 45.00 -0.4	ADI	68.77 305 eP	00 32.00 -0.5		
1.5s 31.00nm 5.2mb			TSM	18.02 79 eP	53 46.60 -0.8	KRI	71.84 252 eP	00 54.00 2.6		
pP 49 06.50 27km			MKS	20.07 108 iPc	54 10.00 1.7	BUL	73.19 249 iPc	00 59.40 0.2		
SBA	64.55 180 iPd	49 05.20 0.7	QIZ	20.26 27 P	54 11.00 0.7	0.9s 28.15nm 5.0mb				
BJI	72.11 320 eP	49 52.50 0.4	KOD	24.54 293 eP	54 52.00 0.2	e 01 52.50 225km				
1.5s 19.00nm 4.9mb			BAG	25.20 51 eP	54 58.60 0.9	SLR	74.28 243 iPd	01 04.00 -1.5		
KMI	74.83 301 eP	50 09.50 0.9	GYA	26.10 13 P	55 05.40 -0.4	0.5s 21.13nm 5.1mb				
1.5s 50.00nm 5.3mb			PcP 58 27.60			PRY	75.17 242 iPd	01 11.00 0.4		
pP 50 16.50 22km			ScS 05 34.00			ALN	77.54 312 eP	01 22.00 -1.2		
LZH	78.47 312 eP	50 26.50 -2.2	HYB	26.97 309 eP	55 10.00 -3.6X	VR1	77.95 317 eP	01 25.50 0.1		
2.0s 32.00nm 5.0mb			NANU	27.65 149 eP	55 19.50 -0.1	MLR	78.42 316 eP	01 28.00 -0.1		
Z 22s 0.62um 4.9Msz			MBL	29.08 140 iPd	55 31.10 -1.3	e 13 07.00				
N 11s 0.36um			0.4s 9.00nm 4.8mb			MNG	79.36 132 P	01 33.00 -0.1		
pP 50 35.00 27km			LSA	29.92 344 iP	55 40.00 -0.2	KNT	79.93 312 eP	01 34.90 -1.2		
sP 50 37.50			S 00 20.50			LIT	80.10 310 eP	01 35.40 -1.7		
FBA	84.57 17 P	51 01.70 1.9	PKI	30.11 333 P	55 40.62 -1.1	FNA	81.03 311 eP	01 40.00 -1.9		
epP 51 06.50 15km			0.6s 21.00nm 5.0mb			SKO	81.12 312 iPc	01 41.00 -1.3		
YKA	95.63 27 eP	51 51.20 -0.8	GUN	30.19 334 P	55 41.80 -0.7	KAF	81.74 333 iP	01 45.30 0.2		
0.9s 1.00nm 4.3mb			DMN	30.28 332 P	55 42.14 -1.0	0.7s 39.20nm 5.2mb				
LBF	144.09 342 ePKP	58 00.80 -2.3	0.3s 14.00nm 5.2mb			esP 01 45.80				
SSF	144.16 343 ePKP	58 01.50 -1.7	KKN	30.35 333 P	55 42.80 -1.0	NUR	82.16 331 iP	01 47.30 0.0		
1.1s 17.10nm 5.3mb			0.4s 27.00nm 5.3mb			0.6s 18.90nm 5.0mb				
LPF	144.36 348 ePKP	58 02.20 -1.2	GKN	30.83 332 P	55 46.94 -0.9	SOD	82.91 338 iP	01 51.20 0.2		
1.2s 26.80nm 5.3mb			0.4s 28.00nm 5.3mb			KEV	83.40 340 iP	01 53.60 0.1		
AVF	144.45 343 ePKP	58 02.30 -1.3	MEKA	32.53 149 iPd	56 02.30 -0.1	SRO	83.94 318 eP	01 57.60 1.0		
1.1s 12.20nm 5.3mb			MTN	33.48 115 eP	56 10.30 -0.5	ZST	84.79 318 iP	02 01.40 0.6		
LPG	144.48 338 ePKP	58 03.20 -1.0	XAN	33.91 13 iPd	56 13.00 -1.2	KSP	85.51 321 iPc	02 05.00 0.6		
1.1s 14.65nm 5.3mb			BAL	35.02 155 iPd	56 24.30 0.6	UPP	85.53 330 iP	02 04.10 -0.1		
MAF	145.19 343 ePKP	58 05.40 0.4	LZH	35.13 5 eP	56 23.80 -0.9	VBY	85.88 315 e(P)	02 06.80 0.5		
1.1s 19.55nm 4.5mb			1.5s 23.00nm 4.5mb			LJU	86.41 316 ePd	02 09.10 0.2		
TCF	145.23 344 ePKP	58 05.00 0.0	NDI	35.34 323 iPd	56 26.00 -0.4	e 02 09.80 2kmX				
1.1s 22.00nm 5.3mb			0.6s 50.00nm 5.3mb			eS 12 26.00				
LSF	145.45 344 ePKP	58 05.60 0.2	eS 01 43.50			PRU	86.58 320 P	02 10.40 0.8		
1.1s 19.55nm 5.3mb			SSE	35.92 31 Pc	56 32.00 0.8	VOY	86.85 316 iPd	02 11.00 -0.1		
MFF	145.53 346 ePKP	58 06.10 0.6	1.0s 25.00nm 4.8mb			BRG	86.99 321 iPc	02 12.10 0.5		
1.3s 36.10nm 4.3Msz			Z 20s 0.50um 4.3Msz			1.0s 20.00nm 4.9mb				
RJF	146.33 344 ePKP	58 09.30 2.4X	MUN	36.02 157 iPd	56 32.70 0.7	e 03 02.80 206kmX				
0.9s 9.85nm 6.1mb X			0.7s 375.00nm 6.1mb X			KHC	87.17 319 eP	02 13.00 0.5		
CAF	146.52 343 ePKP	58 10.70 3.5X	KLB	36.33 154 eP	56 35.00 0.4	HFS	87.52 330 eP	02 13.50 -0.3		
LFF	146.87 344 ePKP	58 11.60 3.9X	NWAO	37.26 156 iPd	56 43.40 1.0	0.6s 13.00nm 4.9mb				
0.6s 7.20nm 0.0			COOL	37.32 150 iPd	56 43.00 0.0	e 02 29.20 54kmX				
S.D. = 1.4 on 28 of 35 obs.			TIY	38.26 16 eP	56 50.60 -0.2	CLL	87.60 321 iP	02 14.90 0.4		
? MAY 11, 1991 16h 44m 36.16 ± 0.90s			GTA	38.30 359 iPc	56 50.40 -0.8	1.3s 21.00nm 4.8mb				
52.196 N ± 18.2km 159.083 E ± 18.5km			0.6s 10.00nm 4.6mb			e 02 20.00 16kmX				
DEPTH = 33.0km (normol)			sP 58 01.20			MOX	88.47 320 iP	02 19.50 0.8		
4.5mb ( 5 obs.)			PcP 59 00.00			0.7s 14.00nm 4.9mb				
OFF EAST COAST OF KAMCHATKA (219)			WB2	39.27 124 iPd	56 58.20 -1.1	GRF	88.72 319 iPd	02 21.00 1.1		
			0.6s 87.50nm 5.5mb			0.9s 19.00nm 5.0mb				
YKA	44.24 42 eP	52 43.20 -0.3	epP 57 44.00 217km			NB2	88.76 331 P	02 19.40 -0.5		
1.0s 1.30nm 3.7mb			BTO	40.45 11 eP	57 08.50 -0.3	1.2s 6.90nm 4.4mb				
TNP	57.49 68 P	54 24.70 0.2	ASPA	40.76 129 iPd	57 11.00 -0.5	OSS	89.46 316 ePc	02 24.40 0.8		
1.0s 8.00nm 4.7mb			0.4s 20.80nm 5.0mb			VDL	89.93 316 ePc	02 25.80 0.0		
UPP	64.06 340 iP	55 07.70 -0.7	i 59 09.00			LLS	90.24 317 ePc	02 27.70 0.5		
NB2	64.23 343 P	55 09.40 -0.2	FORR	41.18 143 eP	57 14.10 -0.6	SLE	90.56 318 ePc	02 28.90 0.5		
0.7s 2.30nm 4.4mb			BJI	41.51 18 eP	57 17.50 0.2	ZLA	90.64 317 ePc	02 29.00 0.2		
HFS	64.61 342 eP	55 11.00 -1.0	1.2s 24.00nm 4.6mb			MMK	90.98 316 ePc	02 31.40 0.7		
0.6s 5.60nm 4.8mb			ScP 02 39.00			CDF	91.34 318 eP	02 32.10 0.0		
e 55 28.70			eS 03 18.00			0.5s 3.35nm 4.6mb				
SCH	66.76 27 eP	55 26.00 0.1	eS 04 40.00			DIX	91.37 316 ePc	02 33.30 0.8		
CLL	72.97 339 eP	56 04.00 0.3	eS 06 27.00			SBF	91.45 314 eP	02 33.00 0.3		
KHC	74.87 337 eP	56 16.70 1.8	QUE	43.03 316 eP	57 29.40 -0.7	BSF	91.70 318 eP	02 33.50 -0.3		
WB2	75.01 204 iPc	56 15.60 -0.2	QIS	43.97 121 iPd	57 38.00 0.5	EMS	91.70 316 ePc	02 34.50 0.6		
0.7s 2.50nm 4.3mb			0.4s 11.00nm 4.7mb			LPG	91.86 315 eP	02 35.20 0.4		
S.D. = 0.9 on 9 of 9 obs.			WMQ	44.16 347 P	57 39.00 0.2	0.5s 6.65nm 4.9mb				
			1.0s 100.00nm 5.2mb			LPL	91.87 315 eP	02 35.20 0.4		
			PP 59 20.00			0.5s 8.75nm 5.0mb				
MAY 11, 1991 16h 49m 50.19 ± 0.15s			S 03 57.00			HAU	91.99 318 eP	02 35.20 0.2		
0.930 N ± 3.4km 100.329 E ± 3.9km			LAT	47.18 100 iPd	58 03.80 0.9	0.7s 8.50nm 4.9mb				
DEPTH = 220.8km ( 2 depth phases)			CN2	48.19 24 iPd	58 09.60 -0.6	FRF	92.04 313 eP	02 36.20 0.9		
4.9mb ( 39 obs.)			1.0s 10.00nm 4.2mb			0.5s 8.25nm 5.0mb				
NORTHERN SUMATERA (706)			Z 16s 0.60um 4.7MszX			LBF	93.67 317 eP	02 42.90 0.1		
			CTA	49.59 118 iPd	58 22.10 0.8	0.5s 2.05nm 4.5mb				
			0.9s 43.70nm 4.9mb			LOR	93.72 317 eP	02 43.10 0.1		
PPI	1.38 177 ePc	50 23.00 -2.0	QLP	50.36 126 iPd	58 28.00 0.9	0.5s 5.85nm 5.0mb				
eS 50 30.00			i 58 30.00 7kmX			SMF	93.79 317 eP	02 43.40 0.1		
PSI	2.25 321 iPc	50 35.60 2.5	ADE 50.61 139 iPd 58 28.80 -0.1			0.5s 4.90nm 4.9mb				
i(S) 51 07.00			STK	50.88 134 iPc	58 29.90 -1.0	SSF	93.98 317 eP	02 44.30 0.1		
KLM	2.53 31 ePd	50 35.20 -0.9	0.6s 14.80nm 4.7mb			0.4s 1.15nm 4.4mb				
0.9s 2140.00nm			CMS	53.82 131 iPd	58 52.60 0.0	AVF	94.11 317 eP	02 45.00 0.2		
KGM	3.18 70 ePd	50 45.30 1.9	0.9s 22.00nm 4.7mb			MAF	94.71 316 eP	02 47.90 0.3		
0.7s 1236.00nm			TOO	56.61 138 eP	59 13.00 0.5	IMA	95.60 23 eP	02 52.10 0.7		
e 51 28.10			BRS	57.69 123 iPd	59 19.00 -1.3	LDF	96.22 319 eP	02 54.04 -0.3		
IPM	3.69 11 ePd	50 51.00 1.5								



11d 17h

FLN 96.43 319 eP 02 55.30 0.0  
0.6s 5.85nm 5.1mb  
EKA 96.89 326 P 02 58.00 0.8  
0.9s 3.20nm 4.6mb  
YKA 111.49 17 ePKP 07 59.20 0.0  
0.5s 0.20nm  
PNT 119.30 29 ePKP 08 14.00 -0.7  
SCH 123.43 351 ePKP 08 22.00 -0.4  
ANMO 136.39 32 PKP 08 47.20 -0.8  
PPD 145.33 231 ePKP 09 04.80 0.8  
SIV 156.33 230 ePKP 09 20.00 -0.4  
i 09 49.80  
ZOBO 160.98 216 PKP 09 28.00 1.7  
e 10 11.00  
S.D. = 0.9 on 121 of 122 obs.

\* MAY 11, 1991 17h 26m 26.70 ± 0.84s  
22.072 N ± 8.0km 121.082 E ± 11.1km  
DEPTH = 10.0km (geophysicist)  
4.0mb ( 3 obs.)

TAIWAN REGION (243)

TWG 0.74 359 iPc 26 40.40 -0.9  
eS 26 49.40  
TWF1 1.29 9 ePc 26 49.90 -0.7  
TWC 2.62 15 eP 27 10.90 1.1  
SSE 8.99 1 eP 28 47.00 7.6X  
N 12s 0.80um  
E 12s 0.30um  
QIZ 10.96 256 eP 29 13.20 6.6X  
N 12s 0.10um  
E 12s 0.40um  
GYA 13.85 291 P 29 45.40 -0.2  
XAN 16.02 321 eP 30 09.10 -4.7X  
N 12s 0.50um  
BJI 18.39 348 eP 30 43.50 0.1  
Z 14s 0.59um  
N 11s 0.29um  
HHC 20.38 339 P 31 06.70 0.3  
LZH 20.50 317 Pd 31 08.50 0.8  
1.8s 32.00nm 4.4mb  
Z 15s 0.58um 4.1MszX  
E 10s 0.39um  
BTO 20.71 336 eP 31 09.00 -0.8  
N 13s 0.50um  
E 13s 0.60um  
GTA 25.05 318 eP 31 53.00 0.3  
1.0s 100.00nm 5.5mb X  
WB2 43.73 162 eP 34 33.30 -0.6  
0.6s 1.40nm 3.9mb  
YKA 84.94 23 eP 39 03.70 0.7  
0.7s 0.30nm 3.6mb  
S.D. = 0.8 on 11 of 14 obs.

MAY 11, 1991 17h 34m 08.35 ± 0.83s  
26.456 N ± 7.4km 96.237 E ± 4.9km  
DEPTH = 10.1 ± 12.5 km  
4.9mb ( 8 obs.)

BURMA (296)

LSA 5.54 307 iP 35 32.40 2.2  
S 36 31.50  
KMI 6.01 101 Pc 35 38.00 1.5  
CD2 7.96 54 iPc 36 03.20 0.2  
0.8s 50.00nm 5.2mb  
CHG 8.01 161 eP 36 04.50 0.9  
1.1s 26.27nm 4.8mb  
GUN 9.34 281 P 36 21.30 -0.7  
GYA 9.34 88 P 36 21.60 -0.3  
PKI 9.72 279 P 36 26.22 -0.9  
KKK 9.85 280 P 36 28.02 -0.8  
DMN 9.99 279 P 36 29.46 -1.2  
GKN 10.44 281 P 36 35.10 -1.5  
LZH 11.59 32 iPd 36 51.50 -0.3  
1.0s 150.00nm 5.7mb  
GTA 13.26 12 eP 37 13.20 -0.4  
XAN 13.31 52 P 37 11.60 -2.6  
QIZ 14.56 118 eP 37 35.00 4.7X  
NDI 17.01 282 eP 38 02.50 1.5  
eS 40 54.00  
TIY 17.70 47 eP 38 09.00 -0.5  
Z 14s 0.59um  
N 14s 0.35um  
BTO 18.16 36 eP 38 14.70 -0.3  
WMO 18.66 340 P 38 23.00 2.3  
HYB 18.69 245 iPc+ 38 22.00 0.8  
eS 40 46.50

HHC 19.16 38 eP 38 27.30 1.3  
TIA 20.28 56 eP 38 38.00 0.4  
QUE 26.02 285 e(P) 39 37.00 3.7X  
e(S) 44 30.00  
MLR 58.16 309 eP 44 21.00 27.8X  
WRA 59.11 137 P 43 59.00 -0.9  
0.8s 9.70nm 5.0mb  
WB2 59.12 137 iPd 43 59.60 -0.4  
0.7s 10.40nm 5.0mb  
ASPA 61.72 140 iPc 44 17.30 -0.4  
0.8s 7.50nm 4.8mb  
HFS 63.78 326 P 44 36.70 5.9X  
0.5s 0.80nm 3.9mb  
NB2 64.85 328 P 44 44.70 6.9X  
0.5s 0.50nm 3.7mb X  
STK 72.36 141 eP 45 24.40 0.0  
0.6s 2.40nm 4.2mb  
S.D. = 1.3 on 24 of 29 obs.

\* MAY 11, 1991 17h 58m 14.34 ± 1.65s  
0.007 N ± 16.2km 77.369 W ± 18.9km  
DEPTH = 67.5 ± 15.6 km  
4.0mb ( 2 obs.)  
COLOMBIA-ECUADOR BORDER REGION (106)  
MD 4.4 (QUI).

ANGL 0.43 204 P 58 29.60 2.6  
CAYA 0.62 277 Pd 58 25.90 -3.0  
eS 58 37.40  
COTA 1.02 289 P+ 58 33.70 -0.1  
OUR 1.17 261 iPd 58 35.50 -0.2  
YANA 1.21 264 P 58 35.90 -0.3  
VC1 1.22 238 Pd 58 35.70 -0.7  
GGP 1.24 262 Pd 58 36.80 0.1  
QUIL 1.73 244 eP 58 45.60 2.4  
TUNG 1.7B 217 Pd 58 43.90 0.1  
eS 59 08.40  
NNA 11.93 178 eP 01 02.00 -1.7  
0.7s 4.79nm 4.6mb  
ZOBO 18.57 151 P 02 29.00 -0.1  
LPB 18.81 151 P 02 35.00 3.2X  
e 08 22.00  
SIV 22.61 135 P 03 10.20 -0.3  
YKA 68.30 342 eP 09 11.60 1.5  
0.7s 0.40nm 3.5mb  
ASPA 141.60 230 ePKP 17 40.30 -0.3  
1.0s 4.50nm  
S.D. = 1.7 on 14 of 15 obs.

MAY 11, 1991 18h 21m 01.34 ± 0.19s  
44.374 N ± 1.5km 7.322 E ± 2.3km  
DEPTH = 10.6 ± 1.9 km  
NORTHERN ITALY (545)  
ML 3.1 (GEN). 2.9 (LDG).

STV 0.13 179 P 21 04.96 0.3  
ENR 0.16 154 P 21 05.54 0.3  
S 21 07.59  
PZZ 0.21 310 P 21 06.50 0.5  
S 21 08.63  
TOUF 0.36 188 Pg 21 09.02 0.1  
AUTN 0.39 169 Pg 21 09.45 0.1  
Sg 21 14.67  
ROB 0.40 101 P 21 10.41 0.8  
S 21 15.00  
SAOF 0.42 157 Pg 21 10.15 0.2  
Sg 21 15.56  
BHB 0.47 355 P 21 10.86 -0.1  
S 21 16.32  
AURF 0.49 180 Pg 21 11.08 -0.2  
MVIF 0.49 194 Pg 21 11.34 -0.1  
Sg 21 17.73  
SBF 0.52 171 Pg 21 11.80 0.0  
Sg 21 17.50  
REVF 0.63 177 Pg 21 13.89 -0.2  
FIN 0.66 104 P 21 14.68 0.3  
S 21 23.50  
RRL 0.67 325 P 21 14.64 -0.1  
S 21 22.79  
CKI 0.69 85 P 21 15.30 0.4  
eSg 21 24.50  
CALN 0.70 207 Pg 21 15.04 -0.1  
Sg 21 24.04  
RSP 0.78 357 P 21 15.47 -1.1  
S 21 25.60  
BNI 0.82 326 P 21 17.30 0.0

eSg 21 28.00  
PCP 0.89 79 P 21 19.19 0.8  
S 21 31.27  
FRF 0.95 211 Pg 21 19.00 -0.3  
Sg 21 31.00  
LSD 1.09 354 P 21 21.05 -0.9  
LRG 1.15 217 Pg 21 22.80 0.0  
Sg 21 38.20  
LMR 1.19 210 Pg 21 23.60 0.1  
Sg 21 38.30  
LPG 1.20 340 Pg 21 23.90 0.1  
Sg 21 41.80  
LPL 1.22 340 Pg 21 24.30 0.2  
Sg 21 41.90  
CDR 1.32 239 iPg 21 26.00 0.3  
i 21 26.50  
iSg 21 41.10  
i 21 42.00  
SSB 2.18 296 Pg 21 38.68 0.6  
Sg 22 04.71  
PGF 2.20 146 Pn 21 36.58 -1.8  
SMF 3.34 314 Pn 21 55.00 0.4  
Sg 22 34.20  
Sg 22 48.90  
LBF 3.51 319 Pn 21 57.30 0.3  
Sg 22 38.00  
Sg 22 52.60  
AVF 3.69 312 Pn 22 00.00 0.5  
Sg 22 42.10  
HAU 3.70 350 Pn 21 58.80 -0.9  
Sg 22 42.00  
LOR 3.77 321 Pn 22 01.00 0.2  
Sg 22 43.70  
Sg 23 03.20  
SSF 3.79 317 Pn 22 01.30 0.3  
Sg 22 43.60  
Sg 23 03.80  
CAF 3.79 280 Pn 22 00.80 -0.3  
MAF 3.83 301 Pn 22 02.00 0.4  
BGF 3.83 306 Pn 22 02.00 0.4  
TCF 4.08 300 Pn 22 05.40 0.3  
LPO 4.40 276 Pn 22 09.00 -0.6  
S.D. = 0.5 on 39 of 39 obs.

? MAY 11, 1991 18h 35m 19.15 ± 1.19s  
43.293 N ± 19.7km 44.543 E ± 40.7km  
DEPTH = 10.0km (geophysicist)  
3.8mb ( 4 obs.)

WESTERN CAUCASUS (362)

TAB 5.39 165 eP 36 42.00 0.3  
NUR 21.01 332 eP 40 05.00 0.1  
0.4s 2.00nm 3.8mb  
KAF 21.70 337 eP 40 13.90 2.0  
0.8s 3.80nm 3.9mb  
eS 40 17.50  
CLL 22.70 302 e(P) 40 22.00 0.1  
HFS 25.14 323 eP 40 44.20 -1.2  
0.8s 1.60nm 3.8mb  
Z 17s 0.06um 3.2MszX  
e 40 48.70  
e 40 51.00  
LR 50 28.00  
YKA 73.24 350 eP 46 50.50 -1.2  
0.7s 0.50nm 3.7mb  
S.D. = 1.6 on 6 of 6 obs.

\* MAY 11, 1991 19h 06m 28.24 ± 1.29s  
41.360 N ± 18.3km 14.648 E ± 12.3km  
DEPTH = 10.0km (geophysicist)  
SOUTHERN ITALY (390)

DUI 0.33 335 P 06 35.30 0.1  
eSg 06 40.00  
SDI 0.71 299 P 06 42.00 -0.3  
eSg 06 53.70  
MNS 1.79 306 P 07 00.00 0.6  
BRT 1.99 103 P 07 02.30 0.0  
HVAR 2.26 36 iPn 07 11.80 5.7X  
ARV 2.48 330 P 07 09.00 -0.3  
S.D. = 0.5 on 5 of 6 obs.

MAY 11, 1991 19h 59m 00.02 ± 0.21s  
9.958 S ± 5.2km 119.890 E ± 6.6km  
DEPTH = 33.0km (normal)  
5.3mb ( 28 obs.) 4.4Msz ( 8 obs.)  
SUMBA ISLAND REGION (287)



KUPT	3.66	93	ePc	59	55.20	-0.5	TAU	40.63	149	eP	06	39.00	0.5	NB2	107.67	331	PKP	17	24.70	-0.4
			e(S)	00	40.50					e	13	42.00			0.9s		4.10nm			
MKS	4.73	355	iPd	00	11.00	0.1	SSE	40.84	2	Pd	06	41.00	0.7	KHC	108.14	318	ePKP	17	29.10	2.7X
TRT	7.51	287	iPd	00	41.00	-9.1X		4.0s	400.00nm				5.5mb X	CLL	108.26	321	e(PKP)	17	42.00	15.6X
			iS	01	52.50		Z	20s	0.50um				4.4MsZ	GRF	109.60	319	ePKP	17	31.00	1.9
KNA	10.39	125	eP	01	26.80	-3.1	NJ2	41.78	359	Pd	06	47.00	-1.0	Z	21s		0.10um			4.4MsZ
MBL	11.14	180	eP	01	34.30	-5.8X	CD2	43.48	340	eP	07	01.70	-0.4	BSF	112.79	318	ePKP	17	35.60	0.3
			eS	03	29.00			1.2s	200.00nm				5.8mb	YKA	114.70	25	ePKP	17	37.30	-1.1
MTN	11.39	106	eP	01	39.00	-4.5X	Z	12s	0.40um				4.5MsZ		0.9s		5.80nm			
			eS	03	40.00		E	16s	0.80um					LOR	114.85	318	ePKP	17	39.90	0.7
NANU	13.21	198	eP	02	02.00	-5.9X			eS		13	25.50			1.0s		4.80nm			
	0.4s		64.00nm			6.0mb	XAN	44.98	347	Pd	07	12.50	-1.6	SSF	115.13	317	ePKP	17	40.50	0.8
			eS	04	19.00		TIA	45.99	357	eP	07	22.90	0.9		0.6s		4.05nm			
TSM	14.20	353	ePd	02	27.60	6.6X	KOD	46.73	294	eP	07	28.00	-0.5	GMW	115.64	42	PKP	17	42.00	1.3
KKM	16.31	347	ePd	02	53.00	4.6X	TIY	47.93	352	eP	07	38.00	0.6	BGF	115.69	317	ePKP	17	41.80	1.0
MEKA	16.62	184	eP	02	48.00	-4.2X	Z	20s	0.62um				4.6MsZ	TCF	116.18	317	ePKP	17	42.70	0.9
	0.4s		65.00nm			5.1mb	N	14s	0.34um					LON	116.48	43	PKP	17	41.50	-0.9
			eS	05	40.00		LSA	48.18	326	P	07	39.80	-0.1	CAF	116.59	315	ePKP	17	44.00	1.4
WB2	17.13	127	iPc	02	53.70	-4.9X	GBA	48.20	298	Pd	07	37.70	-2.0	RJF	116.88	316	ePKP	17	44.30	1.2
	1.2s		44.30nm			4.5mb		0.6s	27.70nm				5.5mb	PNT	117.20	39	ePKP	17	44.00	0.4
			e	04	49.90		LZH	48.23	343	eP	07	38.50	-1.4		0.8s		10.00nm			
			eS	05	53.00		Z	20s	450.00nm				5.9mb X	LPO	117.25	315	ePKP	17	45.20	1.4
DAV	17.85	19	eP	03	01.00	-6.7X	E	13s	0.49um				4.5MsZ	FLN	117.28	320	ePKP	17	44.70	1.0
ASPA	19.10	137	iPd	03	21.40	-1.5			0.29um					LFF	117.50	316	ePKP	17	45.70	1.4
	0.8s		80.30nm			5.0mb			eS		14	35.00			0.6s		3.70nm			
			iS	06	40.10		HYB	49.07	303	eP	07	45.50	-1.0	LBFM	117.63	48	PKP	17	43.60	-1.3
KGM	20.34	305	eP	03	37.50	1.1		1.0s	40.00nm				5.4mb	MFF	117.67	318	ePKP	17	45.30	0.8
BAL	20.76	188	iPd	03	39.00	-1.7	BJI	49.86	356	eP	07	50.00	-2.1		0.9s		6.40nm			
	1.0s		237.00nm			5.5mb		1.5s	97.00nm				5.6mb	LPF	117.85	319	ePKP	17	45.80	1.0
COOL	20.85	177	iPd	03	49.30	7.6X			ePcP		09	12.00			0.7s		8.50nm			
PPI	21.57	295	eP	03	41.00	-7.9X			eS		14	58.00		TNP	121.85	51	PKP	17	54.40	1.3
KLB	21.62	185	P	03	48.00	-1.4	GUN	50.01	320	P	07	52.46	-1.4	SES	121.96	36	ePKP	17	51.00	-1.7
QIS	21.72	121	ePd	03	48.70	-1.8	PKI	50.08	319	P	07	52.48	-1.9	LRM	122.94	41	ePKP	17	56.10	1.2
			i	03	53.00		DMN	50.30	319	P	07	54.26	-1.7	PTI	124.04	45	PKP	17	58.60	1.5
			i	06	11.80			1.1s	193.00nm				6.0mb	FFC	124.44	28	ePKPd	17	57.30	0.1
			i	07	44.00		KKN	50.31	319	P	07	54.30	-1.7		1.0s		19.00nm			
MUN	22.18	188	eP	03	53.00	-1.9	GKN	50.87	319	P	07	58.40	-1.8	DUG	124.59	48	PKP	17	59.00	0.8
NWAO	22.99	186	iPd	04	02.10	-0.8	BTO	51.12	350	P	08	00.50	-1.4	KIC	125.12	271	PKP	17	59.92	0.1
	1.0s		110.00nm			5.3mb	HHC	51.13	352	eP	08	00.40	-1.5	LIC	125.39	271	PKP	18	00.46	0.2
	Z	20s	0.70um			4.1MsZ	YAMJ	51.45	20	eP	08	02.50	-1.8	TIC	125.44	271	PKP	18	00.72	0.3
	N	20s	0.70um				SNY	51.64	4	Pd	08	04.10	-1.5	MSU	125.57	50	PKP	18	02.30	2.0
	E	20s	0.50um				GTA	52.54	340	Pd	08	11.60	-1.1	FRB	125.96	5	ePKP	18	00.00	0.1
IPM	23.70	307	ePc	04	12.00	2.0		4.0s	420.00nm				5.8mb X	LKO	126.32	275	PKP	18	01.18	-1.0
	1.2s		68.70nm			5.0mb	Z	20s	0.60um				4.6MsZ	GOL	130.11	46	PKP	18	10.70	1.7
PSI	24.37	300	ePc	04	20.20	3.7X	E	16s	0.80um					ANNO	131.04	52	PKP	18	13.10	2.3X
SNG	25.66	311	eP	04	45.00	16.3X			pP		08	16.40	16kmX	ALQ	131.04	52	ePKP	18	12.00	1.2
BAG	26.21	1	eP	04	35.00	1.0			S		15	40.00		SCH	134.94	5	ePKP	18	19.00	1.7
PMG	26.88	91	eP	04	39.00	-1.0	OFUJ	52.83	21	eP	08	12.30	-2.3	MEQ	137.09	49	e(PKP)	18	15.00	-7.1X
CTA	27.34	115	iPd	04	45.00	0.8	POO	53.52	302	eP	08	16.50	-3.6X	FVM	141.01	39	PKP	18	22.90	-6.2X
	1.0s		29.00nm			4.9mb	CN2	53.74	5	eP	08	15.00	-6.2X	ELC	142.19	39	PKP	18	25.50	-5.7X
			iS	09	34.00				PcP		09	29.00		CBM	142.53	9	PKP	18	30.00	-1.4
OLP	28.33	129	eP	04	53.00	-0.1	MDJ	55.02	8	eP	08	29.00	-1.6	BNH	144.17	14	PKP	18	31.60	-2.8
			eS	10	25.00			1.0s	30.00nm				5.3mb	VAO	144.81	201	ePKP	18	35.70	-0.4
STK	29.66	141	iPd	05	04.20	-0.8	WMO	60.99	334	P	09	11.00	-1.6	GBTN	146.30	37	PKP	18	38.40	0.2
	0.8s		10.90nm			4.7mb	Z	20s	0.30um				4.4MsZ	TBR	146.53	20	PKP	18	39.20	0.8
ADE	30.25	148	eP	05	05.00	-5.2X	OUE	64.65	310	eP	09	36.00	-1.3	TKL	146.56	36	PKP	18	40.20	1.6
QIZ	30.46	341	P	05	13.70	1.6		1.0s	32.50nm				5.4mb	LVNJ	146.65	20	PKP	18	38.70	0.1
			eS	10	12.00				eS		18	10.40		PNJ	146.76	20	ePKP	18	40.00	1.3
RMO	31.85	125	eP	05	24.00	-0.4	SBA	71.91	171	iPc	10	22.90	1.5				i			
NST	32.11	322	eP	05	25.00	-1.7	MAIO	73.03	313	iPd	10	28.50	-0.4	NAV	146.98	31	PKP	18	39.70	0.4
CMS	32.21	135	eP	05	27.00	-0.4			eS		20	00.00		PPD	147.06	195	ePKP	18	42.90	3.1X
KHT	32.40	319	iPd	05	29.30	0.1	SPA	80.11	180	iPc	11	08.40	0.3	BLA	147.25	31	PKP	18	40.00	0.3
BFD	33.95	147	eP	05	41.00	-1.5		1.0s	15.00nm				4.9mb	CVL	147.58	28	PKP	18	41.20	1.0
			i	05	46.60		KER	81.68	307	eP	11	20.00	3.1X	CBN	147.88	26	ePKP	18	42.00	1.4
BDT	34.01	322	eP	05	41.50	-1.7	TAB	83.42	310	eP	11	27.00	1.1	PRM	148.49	37	PKP	18	43.20	1.5
	0.7s		25.80nm			5.3mb	SLR	87.18	245	eP	11	42.00	-2.8	JSC	149.00	35	PKP	18	43.80	1.3
QZH	34.71	358	P	05	50.70	1.6		1.3s	36.54nm				5.5mb	PDCR	149.44	223	ePKP	18	47.60	3.9X
	0.7s		20.00nm			5.2mb	PRY	87.69	243	iPc	11	49.00	1.7	SCS	150.21	36	PKP	18	44.20	-0.2
CHG	35.27	324	eP	05	52.00	-2.0	BUL	87.81	250	iPd	11	49.50	1.6	ARE	151.44	157	ePKP	18	55.00	7.9X
	1.0s		11.25nm			4.8mb		1.2s	23.44nm				5.3mb	LPB	152.52	163	PKP	18	51.00	2.2X
BRS	35.49	124	iPc	05	56.00	0.1	SVW	95.98	29	eP	12	26.10	1.2		1.0s		64.00nm			
TOO	35.88	144	iPd	06	00.00	1.0	TTA	96.11	27	eP	12	26.30	0.9				i			
COO	36.15	129	e(P)	06	03.00	1.6	IMA	97.58	24	eP	12	33.10	1.0	NNA	152.58	142	ePKP	18	55.20	6.8X
CNB	36.84	138	eP	06	08.00	0.8		1.3s	17.40nm				5.4mb		0.9s		15.13nm			
GYA	38.41	341	P	06	21.00	0.5	VR1	99.26	315	eP	12	43.00	3.1X	ZOBO	152.76	163	PKP	18	51.90	2.6X
	N	16s	0.40um				MLR	99.78	315	eP	12	44.00	1.5		1.1s		31.32nm			
	E	18s	0.50um				SOD	100.38	337	ePdiff12	47.00	2.5X				LR		11	32.00	
			pP	06	30.00	30kmX	KAF	100.40	332											



11d 20h

ENIJ	0.57	170	iP	24 07.20	0.1
			eS	24 06.51	
			eS	24 13.30	
EALH	0.79	66	eP	24 09.48	-0.6
			eS	24 20.10	
AFC	1.01	254	iP	24 14.13	0.2
			eS	24 28.80	
ECOG	1.02	256	eP	24 14.41	0.3
			eS	24 29.90	
EVIA	1.11	353	iP	24 16.02	0.4
			eS	24 31.40	
EGUA	1.21	235	iP	24 17.44	0.1
			eS	24 33.70	
EBAN	1.31	299	iP	24 19.47	0.5
			eS	24 36.80	
ACU	1.80	57	eP	24 26.50	0.4
MAL	1.85	245	Pnd	24 30.80	4.0X
			iSg	24 56.30	
ECHE	2.31	27	eP	24 39.90	6.4X
			eS	25 08.50	
EHOR	2.33	278	eP	24 33.57	-0.2
			eS	25 02.30	
ETOR	3.28	4	iP	24 47.62	0.3
			eS	25 23.30	
EVAL	3.51	272	eP	24 49.59	-0.9
			eS	25 30.80	

S.D. = 0.5 on 12 of 14 obs.

MAY 11, 1991 20h 39m 15.02±0.44s  
 39.444 N ± 5.5km 16.604 E ± 4.6km  
 DEPTH = 10.0km (geophysicist)  
 SOUTHERN ITALY (390)  
 MD 3.2 (ATH), ML 3.2 (THE).

TDS	0.30	316	Pd	39 21.00	-0.2
			iSg	39 25.80	
ORI	0.63	349	P	39 26.90	-0.8
			eSg	39 36.70	
LCI	1.37	49	P	39 41.10	1.0
			eSg	40 01.50	
SOI	1.44	198	P	39 40.70	-0.4
			eSn	39 58.80	
BRT	1.50	18	P	39 42.20	0.2
			eSn	40 02.80	
ATN	1.56	215	P	39 41.70	-1.2
			eSn	40 02.20	
BAI	1.69	7	P	39 40.00	-4.6X
MNO	2.12	225	P	39 51.80	0.6
			eSn	40 17.40	
KEK	2.48	83	ePb	40 01.00	4.9X
GIB	2.49	235	P	39 55.40	-0.9
MEU	2.69	210	P	39 59.40	0.3
TPE	2.76	71	ePn	40 02.50	2.4
IGT	2.89	87	eP	40 02.32	0.4
			eS	40 36.76	
FAI	3.16	228	P	40 07.40	1.7
LACI	3.22	46	ePn	40 18.40	11.8X
VLS	3.36	111	ePn	40 09.20	0.6
SDA	3.38	40	ePn	40 09.80	0.9
OHR	3.61	61	e(Pn)	40 17.30	5.0X
PHP	3.68	51	ePn	40 14.90	1.7
FNA	3.90	68	eP	40 16.16	-0.1
			eS	40 59.68	
KZN	4.07	76	ePg	40 31.70	13.0X
AGG	4.47	94	eP	40 24.88	0.5
			eS	41 14.60	
LIT	4.58	80	eP	40 25.84	-0.1
GRG	4.69	69	eP	40 26.60	-1.0
VAY	4.93	66	ePn	40 29.00	-1.8
KNT	5.11	68	eP	40 32.76	-0.7
			eS	41 25.80	
PAIG	5.48	83	eP	40 37.52	-1.2
SRS	5.60	70	eP	40 40.20	-0.2
			eS	41 39.12	
ALN	7.37	76	eP	41 03.20	-2.1

S.D. = 1.2 on 24 of 29 obs.

? MAY 11, 1991 21h 04m 04.10±9.94s  
 38.831 N ± 26.9km 25.618 E ± 83.9km  
 DEPTH = 10.0km (geophysicist)  
 AEGEAN SEA (365)  
 MD 3.2 (ISK).

IZM	1.36	108	ePn	04 29.10	0.0
KGT	2.08	38	iPn	04 39.40	0.0
EDC	2.30	48	ePn	04 43.00	0.3
BNT	2.34	49	ePn	04 42.90	-0.3

DST	2.46	71	ePn	04 45.00	0.0
YLV	3.38	58	ePn	05 07.90	9.9X

S.D. = 0.3 on 5 of 6 obs.

MAY 11, 1991 22h 12m 17.58±0.40s  
 10.427 N ± 6.2km 125.321 E ± 9.0km  
 DEPTH = 33.0km (normal)  
 4.7mb (9 obs.) 4.1msz (3 obs.)  
 LEYTE, PHILIPPINE ISLANDS (256)

DAV	3.33	176	eP	13 10.90	2.3
BAG	7.53	323	eP	14 07.80	-0.2
QIZ	17.23	302	eP	16 19.40	2.0
SSE	20.92	350	Pc	17 00.50	0.7
	1.0s	25.00nm		4.6mb	
Z	20s	0.50um		3.9msz	
E	14s	0.40um			
NJ2	22.34	345	eP	17 15.00	1.0
WHN	22.47	335	eP	17 16.00	0.7
GYA	23.77	315	P	17 29.40	1.2
	N 16s	0.40um			
	E 16s	0.40um			
IPM	24.77	258	ePc	17 39.10	1.2
KMI	25.94	307	eP	17 49.00	-0.1
CHG	26.82	291	eP	17 57.50	0.5
XAN	27.89	330	Pd	18 05.40	-1.2
CD2	28.57	319	iPd	18 12.20	-0.6
TIY	29.54	339	eP	18 26.50	5.0X
	Z 20s	0.50um		4.1msz	
	N 15s	0.40um			
SNY	31.32	357	Pc	18 36.60	-0.4
	1.0s	20.00nm		4.9mb	
LZH	32.12	326	Pc	18 44.00	-0.4
	1.5s	42.00nm		5.1mb	
	Z 20s	0.44um		4.1msz	
	E 13s	0.29um			
		pP	18 57.50	53kmX	
		PP	19 53.00		
BTO	32.96	338	eP	18 51.00	-0.5
CN2	33.25	0	P	18 54.50	0.6
		esP	19 09.50		
QIS	33.84	155	iPc	18 57.90	-1.4
ASPA	34.91	166	eP	19 07.40	-1.0
	0.5s	7.40nm		4.9mb	
GTA	36.73	326	Pc	19 23.70	-0.1
	1.0s	10.00nm		4.7mb	
		pP	19 29.00	18kmX	
LSA	37.18	306	P	19 29.00	0.9
GUN	40.88	301	P	19 58.46	-0.4
	0.8s	51.00nm		5.3mb	
FORR	41.13	176	eP	19 59.40	-0.8
PKI	41.18	300	P	20 00.06	-1.2
KKN	41.36	300	P	20 01.64	-0.9
	0.8s	14.00nm		4.7mb	
DMN	41.45	300	P	20 02.48	-0.9
GKN	41.96	300	P	20 06.38	-1.1
STK	44.86	160	eP	20 30.00	-0.7
	0.8s	2.00nm		4.1mb	
HYB	45.83	284	eP	20 38.00	-0.7
WMO	46.53	322	P	20 44.60	0.7
DZM	51.67	129	iPc	21 25.10	1.2
QUE	57.55	299	eP	22 06.00	-0.8
INK	84.48	21	eP	24 49.00	1.0
YKA	93.99	24	eP	25 32.90	-0.4
	0.6s	0.90nm		4.4mb	

S.D. = 1.0 on 33 of 34 obs.

MAY 11, 1991 23h 28m 36.95±0.85s  
 39.285 N ± 5.7km 27.614 E ± 10.0km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 3.1 (ISK).

DST	0.85	67	iPg	28 51.70	-1.6
			iSg	29 03.20	
IZM	0.93	197	iPg	28 54.70	0.0
			iSg	29 07.60	
EDC	1.08	10	ePn	28 57.00	-0.2
BNT	1.10	12	iPn	28 56.80	-0.7
KGT	1.19	349	iPn	28 59.80	0.7
CIN	1.72	167	eP	29 06.00	-1.1
KHL	1.77	122	ePn	29 09.30	1.3
IZI	1.78	53	ePn	29 07.30	-0.7
YLV	1.86	46	ePn	29 07.90	-1.3
ALT	1.95	96	ePn	29 11.50	0.9
ISK	2.10	31	ePn	29 15.00	2.5
HRT	2.20	45	ePn	29 15.00	0.9

DMK	2.54	2	ePn	29 18.20	-0.6
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S.D. = 1.3 on 13 of 13 obs.

MAY 12, 1991 00h 03m 48.78±0.70s  
 39.316 N ± 4.9km 27.673 E ± 8.7km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 3.0 (ISK).

DST	0.79	68	iPg	04 03.20	-1.1
			iSg	04 14.70	
IZM	0.97	199	iPg	04 06.40	-0.9
			iSg	04 19.70	
EDC	1.04	8	ePn	04 09.00	-0.6
BNT	1.06	10	iPn	04 08.20	-0.5
KGT	1.17	346	ePn	04 10.80	0.2
IZI	1.72	53	ePn	04 19.80	0.8
CIN	1.74	169	eP	04 20.00	0.8
KHL	1.75	124	ePn	04 20.00	0.5
YLV	1.81	46	ePn	04 19.80	-0.5

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

? MAY 12, 1991 01h 36m 39.01±8.36s  
 35.696 S ± 61.0km 71.386 W ± 44.2km  
 DEPTH = 33.0km (normal)  
 CENTRAL CHILE (136)

LNV	1.74	359	iPc	37 08.50	1.2
			iS	37 28.50	
TACH	2.07	10	iP	37 12.50	0.3
			iS	37 36.50	
PCH	2.19	19	iPd	37 14.40	0.5
			iS	37 39.00	
LCCH	2.22	356	iP	37 13.50	-0.7
			i	37 35.50	
RFA	2.56	70	ePc	37 19.20	0.0
			S	37 47.70	
PEL	2.61	13	iPc	37 19.80	-0.1
			iS	37 49.00	
ROCH	2.74	7	iPd	37 21.50	-0.3
			iS	37 53.50	
JACH	3.08	13	iPd	37 25.60	-0.9
			iS	38 00.50	

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

MAY 12, 1991 01h 47m 12.30±0.48s  
 40.964 N ± 4.9km 22.351 E ± 3.8km  
 DEPTH = 10.0km (geophysicist)  
 GREECE (364)  
 ML 2.3 (SKO), 2.0 (THE).

GRG	0.04	100	iPg	47 14.99	0.6
			eSg	47 17.42	
VAY	0.39	25	iPg	47 20.00	-0.4
			Sg	47 25.00	
KNT	0.46	64	iPg	47 21.78	0.1
			eSg	47 28.02	
THE	0.57	125	iPg	47 23.54	-0.3
			eSg	47 31.38	
FNA	0.76	257	ePg	47 27.29	0.1
			eSg	47 37.14	
SOH	0.77	100	ePg	47 27.42	0.0
			eSg	47 37.50	
LIT	0.87	173	ePg	47 28.77	-0.2
			eSg	47 43.54	
OHR	1.18	278	ePg	47 34.50	0.1
			eSg	47 51.00	
SKO	1.22	326	iPg	47 35.00	0.0
			iSg	47 50.50	

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

\* MAY 12, 1991 02h 03m 16.71±2.60s  
 43.100 N ± 18.1km 127.035 W ± 14.6km  
 DEPTH = 10.0km (geophysicist)  
 3.1mb (1 obs.)  
 OFF COAST OF OREGON (30)

RVW	4.32	44	P	04 23.67	-0.3
VLMM	4.34	54	P	04 24.40	0.1
			S	05 13.28	
VBEM	4.39	62	P	04 25.26	0.2
LVP	4.44	46	P	04 25.67	-0.1
VLL	4.51	57	P	04 27.29	0.5
MTMW	4.52	48	P	04 26.75	-0.1
			S	05 17.64	
FL2	4.56	46	P	04 27.47	0.1
VFP	4.58	59	P	04 28.13	0.4



ERK 4.63 45 P 04 28.19 -0.3  
 CZM 4.64 42 P 04 28.51 0.0  
 STD 4.65 46 P 04 28.79 0.1  
 CDFW 4.67 48 P 04 28.69 -0.2  
 SOSW 4.69 46 P 04 29.68 0.3  
 TDL 4.73 45 P 04 29.57 -0.3  
 CROR 4.75 65 P 04 29.94 -0.2  
 KOSW 4.81 44 P 04 31.05 0.0  
 VIPM 4.85 71 P 04 31.09 -0.6  
 LMW 4.91 42 P 04 32.18 -0.2  
 ASR 4.94 50 P 04 32.80 0.0  
 LON 5.20 44 P 04 36.33 -0.2  
 RVC 5.26 41 P 04 37.20 -0.1  
 GL2 5.28 55 P 04 37.30 -0.3  
 WPW 5.30 45 P 04 37.94 0.0  
 FMW 5.40 43 P 04 39.07 -0.3  
 EBG 5.96 48 P 04 47.48 0.4  
 YKA 20.76 16 eP 07 59.90 0.1  
 0.7s 0.70nm 3.1mb  
 S.D. = 0.3 on 26 of 26 obs.

MAY 12, 1991 03h 01m 17.93±0.37s  
 43.500 N ± 3.2km 0.566 W ± 6.1km  
 DEPTH = 10.0km (geophysicist)  
 PYRENEES (378)  
 ML 3.2 (LDG). mblg 3.0 (MDD).  
 Felt (IV) at Pardies, France.  
 Also felt in the Lagor-Lacq  
 area, France.

OGE 0.34 168 Pg 01 24.86 -0.1  
 MADF 0.40 208 Pg 01 25.51 -0.6  
 ESCF 0.42 181 Pg 01 26.01 -0.5  
 ATE 0.43 194 Pg 01 26.01 -0.6  
 Sg 01 31.95  
 ELYF 0.45 223 Pg 01 27.07 -0.1  
 JAU 0.48 163 Pg 01 27.46 -0.3  
 LHE 0.59 184 Pg 01 28.85 -1.1  
 EPF 0.81 125 Pg 01 34.80 1.1  
 Sg 01 46.70  
 EGRA 1.32 172 eP 01 47.20 5.0X  
 eS 02 06.00  
 ECRI 1.68 239 ePn 01 50.00 2.4  
 eSn 02 11.00  
 LFF 1.72 33 Pn 01 49.80 1.8  
 Pg 01 53.80  
 Sg 02 16.60  
 LPO 1.73 46 Pn 01 50.50 2.3  
 Pg 01 54.20  
 Sg 02 17.60  
 RJF 2.34 39 Pn 01 57.60 0.5  
 Pg 02 04.90  
 Sn 02 26.20  
 Sg 02 36.60  
 CAF 2.37 52 Pn 01 58.60 1.1  
 Pg 02 05.30  
 Sg 02 37.00  
 EROO 2.77 165 ePn 02 09.20 6.0X  
 eSn 02 43.50  
 EBR 2.79 163 eP 02 11.25 7.8X  
 ETOR 2.90 203 ePn 02 05.80 0.8  
 eSn 02 41.00  
 MFF 3.12 5 Pn 02 08.60 0.6  
 Pg 02 19.40  
 Sn 02 44.60  
 Sg 03 00.10  
 LSF 3.13 28 Pn 02 08.40 0.2  
 Pg 02 17.50  
 Sn 02 45.00  
 Sg 03 00.10  
 TCF 3.42 34 Pn 02 11.80 -0.5  
 Pg 02 24.60  
 Sn 02 51.40  
 Sg 03 10.00  
 MAF 3.52 38 Pn 02 13.40 -0.3  
 Pg 02 26.80  
 Sn 02 53.20  
 Sg 03 13.70  
 BGF 3.90 37 Pn 02 18.60 -0.6  
 Sn 03 02.60  
 Sg 03 25.60  
 SML 2.15 308 eP 03 17.29 -1.3  
 GH0 2.37 304 eP 03 20.26 -1.5  
 SEW 2.37 262 iPc 03 18.63 -3.0  
 PLRM 2.37 299 eP 03 20.38 -1.3  
 PMS 2.45 289 ePc 03 21.04 -1.8  
 PAX 2.47 353 eP 03 22.12 -1.1

SSF 4.58 37 Pn 02 27.50 -1.2  
 Sg 03 46.50  
 LBF 4.74 41 Pn 02 29.70 -1.4  
 Sg 03 51.20  
 GRR 4.89 358 Pn 02 33.00 -0.2  
 Sn 03 27.00  
 LDF 5.10 3 Pn 02 35.50 -0.7  
 Sn 03 31.20  
 FLN 5.26 1 Pn 02 37.60 -0.9  
 Sn 03 35.10

S.D. = 1.1 on 27 of 30 obs.

\* MAY 12, 1991 03h 40m 06.67±1.34s  
 38.125 N ± 9.5km 27.408 E ± 16.2km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 MD 3.1 (ISK).

IZM 0.30 337 iPg 40 12.70 -0.2  
 eSg 40 16.20  
 CIN 0.75 134 iPg 40 20.00 -1.3  
 iSg 40 31.00  
 YER 1.21 145 ePn 40 30.50 1.3  
 KHL 1.68 83 ePn 40 36.00 -0.3  
 DST 1.76 32 ePn 40 38.10 0.7  
 BNT 2.26 10 ePn 40 45.00 0.3  
 KGT 2.32 358 ePn 40 45.00 -0.5  
 IZI 2.73 35 ePn 40 57.00 5.6X  
 S.D. = 1.1 on 7 of 8 obs.

& MAY 12, 1991 05h 02m 42.44s  
 60.531 N 144.774 W  
 DEPTH = 11.8km  
 SOUTHERN ALASKA (2)  
 <AEIC>. ML 2.8 (AEIC).

RAGM 0.15 161 iPc 02 46.35 0.1  
 eS 02 50.14  
 SGAM 0.22 262 iPd 02 47.22 -0.1  
 eS 02 51.45  
 HMT 0.32 127 iPd 02 49.13 -0.1  
 S 02 55.03  
 CVA 0.48 272 iPc 02 51.67 -0.6  
 eS 02 59.56  
 CROM 0.84 74 iPd 02 57.55 -1.0  
 eS 03 09.89  
 HIN 0.87 262 iPc 02 57.89 -1.1  
 S 03 10.36  
 WAX 0.96 94 iPd 02 59.51 -1.0  
 eS 03 14.12  
 VLZ 0.97 309 iPc 02 59.39 -1.3  
 eS 03 12.82  
 TGL 0.98 76 ePd 02 59.63 -1.4  
 eS 03 14.50  
 VZW 1.02 302 iPc 03 00.25 -1.4  
 eS 03 14.77  
 GLB 1.03 27 iPd 03 00.56 -1.2  
 eS 03 14.30  
 KLU 1.12 330 iPc 03 01.86 -1.4  
 GLI 1.19 288 iPc 03 02.70 -1.8  
 BALM 1.30 66 iPd 03 04.58 -1.8  
 eS 03 22.08  
 MID 1.36 216 eP 03 05.63 -1.5  
 eS 03 21.48  
 WRG 1.45 109 eP 03 07.67 -0.9  
 eS 03 27.64  
 KNIM 1.48 264 iPc 03 06.57 -2.3  
 MTU 1.53 250 eP 03 07.39 -2.3  
 eS 03 26.77  
 TZL 1.55 349 eP 03 09.38 -0.5  
 LTI 1.61 254 iPc 03 08.51 -2.3  
 eS 03 30.68  
 TOA 1.72 337 ePc 03 12.33 -0.1  
 eS 03 35.26  
 CTGM 1.74 74 ePd 03 11.55 -1.3  
 eS 03 32.01  
 SCM 1.80 318 ePc 03 12.36 -1.2  
 eS 03 37.03  
 KNK 2.00 298 eP 03 14.96 -1.5  
 SDG 2.04 350 eP 03 14.88 -2.1  
 SML 2.15 308 eP 03 17.29 -1.3  
 GH0 2.37 304 eP 03 20.26 -1.5  
 SEW 2.37 262 iPc 03 18.63 -3.0  
 PLRM 2.37 299 eP 03 20.38 -1.3  
 PMS 2.45 289 ePc 03 21.04 -1.8  
 PAX 2.47 353 eP 03 22.12 -1.1

SLKM 2.69 272 ePc 03 23.50 -2.9  
 PWA 2.72 297 eP 03 25.65 -1.1  
 PNL 2.83 105 eP 03 25.75 -2.5  
 SUA 3.05 290 eP 03 29.13 -2.4  
 CUT 3.24 308 eP 03 32.93 -1.1  
 CNPM 3.40 256 eP 03 33.04 -3.3  
 RND 3.47 328 eP 03 36.60 -0.8  
 SKT 3.57 297 ePc 03 35.91 -2.9  
 SPU 3.62 284 ePc 03 36.04 -3.5  
 CRP 3.68 285 ePc 03 37.45 -3.1  
 NCG 3.70 287 eP 03 37.56 -3.2  
 CKL 3.76 284 ePc 03 38.00 -3.6  
 RDT 3.77 274 eP 03 37.92 -3.8  
 BGL 3.79 284 eP 03 38.48 -3.6  
 DFR 3.91 274 iPc 03 39.74 -3.9  
 46 obs. associated

MAY 12, 1991 05h 08m 42.13±0.71s  
 35.959 N ± 7.8km 30.033 E ± 11.5km  
 DEPTH = 33.0km (normal)  
 EASTERN MEDITERRANEAN SEA (371)

ELL 0.79 353 iPg 08 56.00 -1.0  
 iSg 09 06.40  
 BCK 1.56 16 iPn 09 09.40 1.4  
 YER 1.83 310 iPn 09 12.50 0.6  
 CIN 2.26 317 eP 09 18.00 0.1  
 KHL 2.39 350 ePn 09 18.40 -1.6  
 ALT 3.09 1 ePn 09 30.50 0.7  
 ADI 5.16 122 eP 09 59.00 -0.1  
 KOT 6.20 165 ePn 10 14.00 0.3  
 eSn 11 18.75  
 DSI 6.24 133 eP 10 14.00 -0.4  
 eS 11 21.00  
 S.D. = 1.0 on 9 of 9 obs.

? MAY 12, 1991 05h 56m 40.70±1.41s  
 16.818 N ± 22.2km 46.472 W ± 32.4km  
 DEPTH = 10.0km (geophysicist)  
 4.4mb (2 obs.)  
 NORTH ATLANTIC RIDGE (403)

ZOBO 39.20 214 P 04 16.10 4.5X  
 S 10 26.00  
 LR 15 32.00  
 LPB 39.41 214 P 04 13.00 -0.1  
 FRB 49.29 347 eP 05 35.00 3.6X  
 FFC 56.71 325 eP 06 25.00 -1.7  
 1.4s 15.00nm 4.8mb  
 CLL 58.05 40 iP 06 36.40 0.2  
 SES 61.04 319 eP 06 59.00 2.0  
 YKA 65.15 332 eP 07 24.00 0.2  
 1.2s 1.30nm 4.0mb  
 INK 73.42 337 eP 08 14.00 -0.6  
 S.D. = 1.6 on 6 of 8 obs.

MAY 12, 1991 06h 43m 49.81±0.25s  
 3.592 S ± 4.6km 139.257 E ± 5.9km  
 DEPTH = 35.1km (3 depth phases)  
 5.2mb (27 obs.)  
 WEST IRIAN (201)

MNDI 5.07 120 eP 45 00.00 -5.7X  
 YYYY 7.18 112 eP 45 40.50 5.1X  
 LAT 8.29 112 eP 45 53.00 2.3  
 PMG 9.74 117 eP 46 12.50 1.8  
 1.0s 650.00nm 6.8mb X  
 MTN 12.21 221 eP 46 44.50 0.2  
 KNA 15.89 220 iPd 47 33.90 1.3  
 0.3s 123.00nm 5.5mb  
 eS 50 18.00  
 KUPT 16.84 246 ePd 47 46.00 1.3  
 OIS 16.87 179 ePd 47 42.80 -2.2  
 0.3s 55.00nm 5.2mb  
 eS 50 40.00  
 WB2 16.94 196 iPd 47 44.10 -1.9  
 0.7s 230.30nm 5.4mb  
 iPP 47 50.00  
 iPP 48 06.40  
 iS 50 35.30  
 iPCP 51 32.60  
 iScP 55 08.70  
 e 56 54.90  
 e 57 41.40  
 CTA 17.76 158 iPc 47 59.20 3.0X  
 0.7s 27.40nm 4.5mb  
 i 48 15.90



12d 06h

MKS	19.79	265	iPc	48	23.00	2.7	HHC	50.96	333	Pd	52	50.00	-0.2	LPB	146.37	127	PKP	03	29.00	0.1
ASPA	20.62	194	iPd	48	28.40	-0.5	BTO	51.48	332	eP	52	54.00	-0.2	ZOBO	146.50	127	PKP	03	29.80	0.5
	0.9s	106.80nm			5.2mb		LZH	51.51	323	Pd	52	55.30	0.7	CCH	147.40	131	PKP	03	33.20	2.8
			eP	48	37.70	35km			1.2s	63.00nm		5.5mb		PPD	152.52	158	ePKP	03	44.80	7.1X
			e	48	47.60		Z	25s	0.26um			4.2MsZ		S.D. = 1.4 on 100 of 111 obs.						
			eS	52	10.10				sP	53	10.00			* MAY 12, 1991 07h 45m 19.62± 0.74s						
			e	57	00.80		SHL	54.28	305	iP	53	16.00	0.6	25.503 N ± 9.7km 128.621 E ± 12.3km						
SVO	21.16	106	eP	48	37.00	2.6	GTA	56.10	324	iPd	53	28.60	0.3	DEPTH = 33.0km (normol)						
HNR	21.35	107	P	48	39.00	2.6			1.2s	40.00nm		5.3mb		4.4mb ( 9 obs.)						
TSM	22.55	290	ePc	48	55.00	6.7X	GUN	60.14	305	P	53	57.10	0.1	RYUKYU ISLANDS (238)						
QLP	23.35	169	eP	48	56.00	-0.1	PKI	60.39	304	P	53	59.10	0.3							
			i	49	05.40	34km			0.8s	17.00nm		5.2mb		MAT	13.72	34	eP	48	33.00	-1.2
			eS	53	17.00		KKN	60.58	305	P	54	00.60	0.7	BJI	17.85	327	eP	49	27.50	0.5
RMO	24.52	159	e(P)	49	10.00	2.6	DMN	60.66	304	P	54	01.20	0.7		0.7s	12.00nm			4.1mb	
			e	54	28.00				0.8s	45.00nm		5.7mb		TIY	18.36	315	eP	49	32.70	-0.7
WARB	25.51	207	iPd	49	16.20	-0.7	GKN	61.19	305	P	54	04.00	0.0	Z	12s	0.60um				
	0.3s	30.00nm			5.4mb		GBA	63.66	287	P	54	21.00	0.7			S	52	51.00		
			e	49	33.00	73kmX			0.4s	5.20nm		5.0mb		CN2	18.44	353	eP	49	35.40	1.2
			eS	54	00.00		YAK	65.83	355	iPd	54	32.30	-1.3		Z	16s	0.50um			
MBL	25.72	226	eP	49	18.40	-0.5	WMO	66.03	322	iPd	54	36.00	0.6		N	12s	0.10um			
	0.4s	23.00nm			5.1mb				1.0s	100.00nm		5.9mb			E	12s	0.30um			
			eS	54	06.00					sP	54	52.50				eP	49	44.00		
BRS	26.96	153	iPc	49	33.00	2.8				S	03	20.00		XAN	19.08	301	eP	49	39.50	-2.6
			i	49	52.00	83kmX	POO	68.01	292	eP	54	49.00	0.7	GYA	19.76	278	P	49	55.40	5.4X
			i	50	03.00		GAR	76.09	311	eP	55	36.50	0.4	HHC	20.87	321	eP	50	02.10	0.7
			i	50	42.50		SDN	76.59	31	eP	55	37.40	-0.9	LZH	23.69	302	eP	50	27.00	-2.4
			e(S)	54	13.00		QUE	76.61	302	P	55	41.20	1.9		1.0s	18.00nm			4.5mb	
			e	58	20.00		SVW	81.40	26	eP	56	05.10	0.7	Z	16s	0.29um			3.8MsZ	
BAG	27.13	318	eP	49	32.00	0.0	TTA	81.98	25	eP	56	07.50	0.1			sP	50	39.00		
STK	28.23	176	eP	49	44.70	3.1X			0.7s	13.30nm		5.1mb		GTA	27.84	307	iPc	51	06.80	-1.4
	0.4s	2.80nm			4.3mb		MAIO	83.88	307	iPc	56	20.00	2.2		0.6s	10.00nm			4.7mb	
			eS	55	13.30		IMA	84.15	22	eP	56	18.40	-0.2							
			iScS	00	01.90				1.1s	13.70nm		5.0mb		WMO	37.85	309	eP	52	35.60	0.5
CMS	28.43	168	e(P)	50	00.00	16.5X	PMR	84.50	27	eP	56	19.30	-0.9	GUN	38.12	283	P	52	40.40	2.5
			e	50	10.00	36km			0.9s	21.70nm		5.3mb		PKI	38.57	283	P	52	41.90	0.2
			e	55	31.00		TOA	85.99	27	eP	56	27.80	0.1	KKN	38.66	283	P	52	42.70	0.4
FORR	29.09	200	eP	49	47.00	-2.3	FBA	86.07	24	eP	56	26.80	-1.2	DMN	38.83	283	P	52	44.20	0.4
			e	50	18.00	147kmX	SPA	86.43	180	eP	56	30.00	0.0	GKN	39.20	284	P	52	47.40	0.7
COO	29.38	157	e(P)	50	11.70	19.6X			0.7s	10.94nm		5.2mb		WRA	45.52	172	P	53	37.00	-0.9
NANU	29.73	229	iPd	49	54.40	-0.9	INK	92.28	22	eP	56	55.00	-2.2		0.6s	7.40nm			4.8mb	
MEKA	30.30	219	eP	49	59.00	-1.3	YKA	100.60	27	ePdiff	57	33.40	-1.8	WB2	45.52	172	iPc	53	37.70	-0.2
ADEA	31.22	181	eP	50	12.00	3.7X			1.0s	0.70nm		4.2mb X			0.6s	7.10nm			4.8mb	
COOL	32.08	210	iPd	50	14.10	-1.8	HFS	110.14	334	ePKP	02	18.70	-0.6			e	53	50.10		
CNB	32.93	165	eP	50	26.00	2.7			0.8s	0.80nm			ASPA	49.15	174	eP	54	06.40	0.1	
			e	53	33.70					e	02	32.70			0.8s	7.50nm			4.8mb	
			e	59	44.00		BSF	120.00	325	ePKP	02	37.50	-1.2	INK	69.42	23	eP	56	29.00	3.0X
BFD	33.56	175	e(P)	50	27.70	-0.9			0.7s	6.85nm			YKA	79.03	25	eP	57	29.60	8.0X	
			e	51	26.00	295kmX	HAU	120.16	325	ePKP	02	37.90	-0.9		1.0s	1.20nm			3.8mb	
			e	55	22.00				0.7s	7.15nm			HFS	79.62	333	eP	57	26.00	1.1	
BAL	34.28	216	eP	50	34.00	-1.0	LPG	121.23	323	ePKP	02	40.60	-0.7		0.5s	0.60nm			3.8mb	
TOO	34.30	171	e(P)	50	22.00	-13.1X	LPL	121.24	323	ePKP	02	40.50	-0.7	Z	17s	0.03um			3.7MsZ	
			e	51	37.00	397kmX	LOR	121.97	326	ePKP	02	41.40	-0.9			LR	30	52.00		
			e	57	42.00				0.8s	3.50nm			NB2	80.12	334	P	57	28.60	1.0	
MUN	35.58	215	iPc	50	45.10	-1.0	LBF	122.07	325	ePKP	02	41.80	-0.7		0.9s	2.00nm			4.1mb	
OIZ	36.65	309	Pc	50	55.70	0.5			0.6s	3.00nm			S.D. = 1.4 on 19 of 22 obs.							
SSE	38.56	335	Pc	51	11.00	-0.1	SSF	122.29	326	ePKP	02	42.30	-0.6	&	MAY 12, 1991 08h 34m 04.97s					
	1.0s	22.00nm			4.9mb				0.7s	4.40nm			62.920 N 150.868 W							
Z	20s	0.50um			4.3MsZ		SMF	122.33	325	ePKP	02	42.30	-0.7	DEPTH = 111.1km						
									0.6s	2.70nm			3.5mb ( 1 obs.)							
IPM	39.05	282	ePc	51	18.10	2.6							CENTRAL ALASKA ( 1 )							
MAT	39.94	359	iPd	51	21.10	-1.4	AVF	122.53	325	ePKP	02	42.40	-0.9	<AEIC>.						
	0.7s	17.81nm			4.9mb		DMU	122.74	337	ePKP	02	43.20	-0.3							
SNG	40.02	286	eP	51	25.20	1.7	LDF	123.33	329	ePKP	02	44.90	0.1	HUR	0.57	84	iPc	34	22.39	-0.3
NJ2	40.40	333	Pc	51	28.00	1.6	FLN	123.41	329	ePKP	02	44.30	-0.7			eS	34	35.66		
PSI	40.79	278	ePc	51	35.00	5.2X			0.6s	5.60nm			CUT	0.59	152	iPc	34	22.84	0.1	
	0.9s	30.20nm			5.0mb		Z	20s	0.08um			4.3MsZ	TRF	0.59	26	iPc	34	22.70	-0.4	
LOE	42.50	301	eP	51	45.00	1.2	TCF	123.46	325	ePKP	02	44.80	-0.4			eS	34	36.16		
NST	43.18	297	eP	51	51.00	1.6			0.6s	7.50nm			SKT	0.99	198	iPd	34	26.24	-0.2	
GYA	43.43	315	iPd	51	53.00	1.6	GRR	123.84	329	ePKP	02	45.20	-0.7			eS	34	42.39		
			PcP	53	39.40				0.7s	5.95nm			RND	1.04	61	iPd	34	26.59	-0.4	
			S	58	18.00		LSF	123.87	326	ePKP	02	45.20	-0.8			iS	34	42.68		
KHT	44.23	295	eP	51	59.00	1.1			0.6s	3.45nm			MCK	1.19	46	ePd	34	28.22	-0.5	
TIA	44.68	334	eP	52	00.60	-0.6	LPG	124.16	329	ePKP	02	46.00	-0.5			eS	34	45.77		
CHG	45.50	301	eP	52	09.00	1.0			0.7s	12.80nm			PWA	1.36	160	iPc	34	30.42	0.0	
	1.0s	12.50nm			4.8mb		CAF	124.33	324	ePKP	02	46.80	-0.2	BWN	1.40	26	iPd	34	31.00	-0.1
KMI	45.51	311	Pc	52	10.00	1.7			0.9s	5.75nm			SUA	1.46	178	ePc	34	31.59	-0.3	
	1.5s	80.00nm			5.4mb		RJF	124.43	325	ePKP	02	46.60	-0.5	GHO	1.47	141	iPc	34	31.69	-0.2
XAN	47.11	325	P	52	20.40	-0.1		Z	20s	0.05um					eS	34	52.81			
SNY	47.40	344	Pd	52	22.40	-0.3	MFF	124.58	327	ePKP	02	46.70	-0.6	PLRM	1.56	148	iPc	34	32.24	-0.7
	0.8s	20.00nm			5.2mb				0.7s	6.50nm			PMR	1.56	148	iPc	34	32.80	-0.1	
TIY	48.05	331	eP	52	28.00	0.1	LPO	124.98	324	ePKP	02	48.10	-0.1	SML	1.63	132	iPc	34	33.16	-0.6
	Z	16s	0.60um		4.7MsZ				0.7s	9.70nm					eS	34	55.63			
BJI	48.32	336	eP	52	29.00	-0.8	LFF	125.09	325	ePKP	02	47.40	-0.9	NCG	1.64	202	iPd	34	33.44	-0.1
	1.5s	39.00nm			5.2mb		ARE	143.66	124	ePKP	03	22.00	-2.2	CRP	1.77	201	ePd	34	35.24	-0.4
MDJ	48.77	351	eP	52	33.30	0.1	KIC	144.03	276	PKP	03	21.86	-2.7			S	34	58.47		
	1.0s	40.00nm			5.4mb															



BGL	1.81	204	iS	34	58.33	
SPU	1.83	198	iPd	34	35.98	-0.2
			eS	34	35.64	-0.8
NEA	1.84	25	iPd	34	59.43	
			eS	34	35.42	-1.1
			eS	34	58.22	
CKL	1.86	202	iPd	34	36.36	-0.5
KNK	1.89	142	iPc	34	36.22	-0.9
SCM	1.98	122	iPc	34	37.20	-1.1
			eS	35	03.12	
WRH	1.99	37	iPd	34	37.32	-1.0
NKA	2.19	185	ePd	34	43.36	2.4
CCB	2.20	37	iPd	34	39.93	-1.2
RDS	2.26	31	iPd	34	40.79	-1.1
HDA	2.30	48	iPd	34	41.08	-1.3
TOA	2.33	108	iPc	34	42.90	0.1
TTA	2.35	273	iPd	34	42.80	-0.4
MDM	2.36	28	iPd	34	42.00	-1.1
THY	2.37	76	eP	34	43.65	0.2
FBA	2.41	33	ePd	34	43.30	-0.5
DDM	2.42	67	ePd	34	43.40	-0.6
			eS	35	11.96	
SLKM	2.44	172	eP	34	43.43	-0.8
RDT	2.47	198	ePd	34	43.92	-0.7
PAX	2.47	86	ePd	34	43.94	-0.8
			eS	35	13.37	
SDG	2.48	97	iPd	34	44.09	-0.8
			eS	35	14.16	
DFR	2.49	201	ePd	34	44.28	-0.7
NCT	2.56	203	ePd	34	45.28	-0.7
RDN	2.58	201	ePd	34	45.34	-0.9
			eS	35	18.38	
GLM	2.58	35	iPd	34	45.06	-1.1
RDW	2.62	202	iPd	34	46.23	-0.5
			eS	35	18.12	
RS2	2.63	201	iPd	34	46.30	-0.6
RSO	2.63	201	ePd	34	46.31	-0.6
			eS	35	19.98	
RED	2.67	201	eP	34	46.74	-0.6
			eS	35	19.34	
GLI	2.72	137	iPc	34	46.25	-1.7
			eS	35	19.98	
KLU	2.72	120	iPc	34	46.17	-1.9
VZW	2.76	131	iPc	34	46.59	-2.0
VLZ	2.79	128	iPc	34	46.69	-2.2
			eS	35	19.39	
SVW	2.89	233	ePd	34	49.70	-0.5
NNL	2.90	184	ePc	34	51.45	1.1
SEW	2.91	166	eP	34	49.17	-1.2
			eS	35	23.75	
KNIM	2.98	149	iPc	34	49.07	-2.4
			eS	35	23.88	
DOT	3.16	74	ePd	34	52.22	-1.7
LTI	3.23	152	ePc	34	52.66	-2.1
HIN	3.28	139	ePc	34	53.56	-1.9
HOM	3.29	187	eP	34	55.79	0.1
MTU	3.32	151	iPc	34	54.01	-2.1
IMA	3.39	340	iPc	34	56.20	-0.9
CVA	3.41	132	ePc	34	55.62	-1.5
CNPM	3.41	183	ePd	34	56.64	-0.6
TMW	3.60	80	eP	34	57.84	-2.0
GLB	3.63	111	ePc	34	58.40	-1.8
			eS	35	39.17	
SGAM	3.63	129	eP	34	57.54	-2.6
AUE	3.77	200	eP	35	02.09	-0.1
AUI	3.81	200	eP	35	03.47	0.9
RAGM	3.90	128	ePc	35	01.97	-1.9
HMT	4.08	126	eP	35	04.04	-2.4
MCNL	4.11	206	eP	35	05.88	-0.9
CDD	4.23	200	ePd	35	07.79	-0.6
CROM	4.26	117	eP	35	07.03	-1.9
FYU	4.38	31	ePd	35	09.19	-1.3
TGL	4.38	116	eP	35	08.17	-2.4
SYI	4.39	190	ePd	35	09.50	-1.0
BALM	4.44	111	ePc	35	08.98	-2.4
WAX	4.55	119	eP	35	10.11	-2.7
CTGM	4.91	109	ePc	35	15.93	-1.9
WRG	5.13	120	eP	35	18.89	-1.8
INK	8.96	45	eP	36	10.50	-2.4
YKA	16.50	75	eP	37	47.90	-2.8
	0.4s		1.20nm		3.5mb	
	80 obs. associated					

\* MAY 12, 1991 08h 57m 09.99± 0.62s  
7.193 N ± 11.0km 77.995 W ± 8.8km  
DEPTH = 33.0km (normal)  
4.4mb (10 obs.)

## PANAMA-COLOMBIA BORDER REGION (82)

UPA	2.34	319	iPc	57	44.60	-2.3
			S	58	14.00	
SDV	7.48	77	iPn	59	01.10	1.3
			eSn	00	23.50	
TOV	8.51	72	ePn	59	14.20	0.1
CEOS	9.74	79	eP	59	28.60	-2.4
OLLA	11.42	75	eP	59	51.40	-2.6
NNA	19.09	177	e(P)	01	42.00	9.2X
	0.9s		7.56nm			3.9mb
ARE	24.37	165	e(P)	02	28.00	1.3
ZOBO	25.28	157	P	02	34.00	-1.7
Z	20s		0.20um			3.6msz
			LR	10	36.00	
LPB	25.53	158	P	02	51.00	13.1X
CCH	27.08	154	P	02	51.80	-0.3
ALQ	38.04	321	eP	04	27.00	-0.4
	0.9s		2.10nm			4.0mb
ANMO	38.04	321	P	04	27.70	0.3
GOL	40.63	327	P	04	49.00	0.1
TNP	46.92	317	P	05	38.80	-0.9
MCMT	48.18	327	eP	05	50.20	0.7
SCH	48.34	9	eP	05	51.00	0.7
YKA	61.32	342	eP	07	29.50	5.0X
	1.0s		2.50nm			4.3mb
INK	71.08	341	eP	08	26.00	-0.6
EPF	76.60	48	ePKP	09	07.30	8.0X
	1.0s		6.00nm			4.6mb
CAF	77.92	46	ePKP	09	09.30	2.8X
	1.2s		14.90nm			4.9mb
MAF	78.32	44	ePKP	09	11.30	2.7X
	0.9s		4.90nm			4.5mb
AVF	78.88	44	ePKP	09	13.80	2.2
	0.9s		3.30nm			4.3mb
SSF	78.99	44	ePKP	09	14.00	1.8
	0.8s		2.70nm			4.3mb
BSF	81.22	43	ePKP	09	26.40	2.1
	0.8s		4.05nm			4.5mb
NB2	83.38	29	P	09	36.00	0.9
	1.1s		3.10nm			4.3mb
ASPA	145.29	238	ePKP	16	46.70	-0.2
	0.7s		4.40nm			
			e	16	55.10	
WB2	146.18	245	ePKP	16	48.30	-0.1
	0.7s		1.70nm			
			i	16	58.40	
WRA	146.19	245	PKP	16	58.00	9.5X
	0.9s		3.70nm			
GBA	148.03	50	PKPc	16	59.40	7.9X
	1.0s		5.00nm			
S.D. = 1.5 on 21 of 29 obs.						
? MAY 12, 1991 09h 04m 12.51± 1.07s						
39.173 N ±10.0km 27.608 E ±17.5km						
DEPTH = 10.0km (geophysicist)						
TURKEY (366)						
MD 2.7 (ISK).						
Izm	0.82	199	ePg	04	28.40	0.0
			iSg	04	39.40	
DST	0.90	61	ePn	04	30.00	0.2
EDC	1.19	9	ePn	04	35.00	0.3
KCT	1.22	28	ePn	04	34.70	-0.5
S.D. = 0.6 on 4 of 4 obs.						
? MAY 12, 1991 09h 13m 24.97± 1.26s						
39.100 N ±11.5km 27.695 E ±28.8km						
DEPTH = 10.0km (geophysicist)						
TURKEY (366)						
MD 2.7 (ISK).						
Izm	0.78	206	iPg	13	40.20	0.0
			iSg	13	51.40	
EDC	1.25	6	ePn	13	48.50	0.3
KCT	1.26	24	ePn	13	48.20	-0.1
KGT	1.38	348	iPn	13	50.10	-0.2
S.D. = 0.3 on 4 of 4 obs.						
% MAY 12, 1991 09h 17m 37.01± 0.67s						
37.086 N ± 7.8km 4.940 W ± 5.3km						
DEPTH = 10.0km (geophysicist)						
SPAIN (377)						
mbLg 2.5 (MDD).						
EPRU	0.26	243	ePg	17	42.50	-0.1
			eSg	17	48.00	

EJIF	0.76	214	ePg	17	52.10	0.2
			eSg	18	03.00	
EHOR	0.78	342	ePg	17	52.00	-0.1
			eSg	18	03.90	
ECOG	1.11	80	ePg	17	58.30	0.3
			eSg	18	13.00	
AFC	1.13	81	ePg	17	58.50	0.3
			eSg	18	13.00	
EGUA	1.13	102	ePg	17	57.60	-0.6
S.D. = 0.4 on 6 of 6 obs.						
MAY 12, 1991 09h 27m 00.61± 1.09s						
33.153 S ± 5.6km 71.666 W ± 10.6km						
DEPTH = 14.0 ± 4.5 km						
NEAR COAST OF CENTRAL CHILE (135)						
IHA	0.13	9	iPc	27	04.00	-0.2
			iS	27	08.00	
LCCH	0.33	166	iPd	27	08.00	0.3
			iS	27	15.00	
PEL	0.82	90	iPd	27	16.50	0.3
			iS	27	29.50	
LNv	0.83	165	iP	27	15.60	-0.6
			iS	27	28.50	
SAN	0.89	110	iPd	27	17.50	0.1
			iS	27	32.10	
JACH	1.02	63	iPd	27	18.00	-1.6
			iS	27	33.00	
MDZ	2.38	84	iP	27	43.20	3.4X
			iS	28	16.90	
RTCB	2.94	56	e(P)	27	47.50	-0.3
ZON	2.99	58	eP	27	49.00	0.5
RFA	3.11	122	eP	27	50.40	0.2
			S	28	41.30	
RTLL	3.26	57	ePd	27	52.60	0.2
			S	28	39.20	
CFA	3.28	63	ePc	27	53.20	0.5
			S	28	39.50	
RTRS	3.52	33	eP	27	56.30	0.4
			S	28	44.90	
TCA	6.26	75	eP	28	31.30	-3.5X
S.D. = 0.7 on 12 of 14 obs.						
MAY 12, 1991 09h 40m 52.05± 0.66s						
40.409 N ± 5.4km 23.729 E ± 6.0km						
DEPTH = 5.0km (geophysicist)						
GREECE (364)						
ML 1.9 (THE).						
OUR	0.21	111	ePg	40	56.38	0.1
			eSg	40	59.16	
PAIG	0.48	185	iPg	41	01.57	-0.2
			eSg	41	08.40	
SOH	0.50	325	ePg	41	02.04	-0.1
			eSg	41	09.36	
THE	0.62	291	ePg	41	04.12	-0.4
			eSg	41	12.20	
SRS	0.72	352	ePg	41	05.50	-0.8
			eSg	41	15.80	
KNT	0.98	320	ePg	41	10.60	-0.6
			eSg	41	23.68	
GRG	1.15	299	ePg	41	14.40	0.4
			eSg	41	30.40	
MMB	1.18	360	iPg	41	14.00	-0.5
			iS	41	30.00	
VAY	1.27	316	eP	41	16.20	0.2
RZN	1.48	30	eP	41	18.00	-1.5
			iS	41	39.00	
KKB	1.54	342	iPc	41	20.00	-0.2
			iS	41	40.00	
PGB	2.16	9	eP	41	31.00	1.7
			eS	42	01.00	
VTS	2.22	350	eP	41	32.00	1.9
			eS	41	57.00	
S.D. = 1.0 on 13 of 13 obs.						
% MAY 12, 1991 09h 41m 55.66± 0.67s						
37.141 N ± 6.6km 4.967 W ± 5.2km						
DEPTH = 10.0km (geophysicist)						
SPAIN (377)						
mbLg 2.5 (MDD).						
EPRU	0.27	231	ePg	42	00.90	-0.5
			eSg	42	05.90	
MAL	0.61	133	iPg	42	08.50	0.6
EHOR	0.72	342	ePg	42	10.00	0.2
			eSg	42	22.00	



12d 09h

EJIF 0.80 210 ePg 42 11.50 0.4  
 ECOG 1.13 83 ePg 42 16.90 0.0  
 AFC 1.14 84 ePg 42 16.90 -0.2  
 EGUA 1.16 105 ePg 42 16.90 -0.5  
 S.D. = 0.5 on 7 of 7 obs.

\* MAY 12, 1991 09h 49m 20.10 ± 1.20s  
 33.166 S ± 6.4km 71.628 W ± 12.8km  
 DEPTH = 10.0km (geophysicist)  
 NEAR COAST OF CENTRAL CHILE (135)

IHA 0.14 355 iPc 49 22.90 -0.5  
 LCCH 0.31 171 iPd 49 27.10 0.5  
 PEL 0.79 89 iPd 49 35.80 0.3  
 LNV 0.81 167 iPc 49 35.00 -0.7  
 JACH 1.00 61 iPd 49 37.00 -2.0  
 MDZ 2.35 84 eP 50 09.20 9.8X  
 RTCB 2.92 56 e(P) 50 07.80 0.2  
 RTLL 3.24 56 ePc 50 11.80 -0.3  
 CFA 3.26 62 ePd 50 13.80 1.5  
 RTRS 3.51 32 eP 50 16.80 1.0  
 S.D. = 1.2 on 9 of 10 obs.

% MAY 12, 1991 09h 49m 50.31 ± 0.76s  
 40.405 N ± 6.3km 23.717 E ± 9.0km  
 DEPTH = 5.0km (geophysicist)  
 GREECE (364)  
 ML 1.9 (THE).

OUR 0.21 109 ePg 49 54.62 -0.1  
 PAIG 0.48 183 ePg 49 59.98 0.1  
 SOH 0.50 327 ePg 50 00.42 0.1  
 SRS 0.72 352 ePg 50 04.80 0.1  
 KNT 0.98 321 ePg 50 09.10 -0.3  
 S.D. = 0.2 on 5 of 5 obs.

? MAY 12, 1991 09h 53m 04.34 ± 2.92s  
 43.556 N ± 23.0km 10.983 E ± 11.5km  
 DEPTH = 10.0km (geophysicist)  
 CENTRAL ITALY (381)  
 MD 2.5 (ROM).

FIR 0.30 42 ePg 53 10.70 0.2  
 BDI 0.58 331 P 53 16.10 0.0  
 MME 0.67 342 P 53 17.80 0.0  
 CRE 0.71 84 P 53 18.50 0.1  
 SFI 0.73 60 P 53 18.30 -0.3  
 S.D. = 0.3 on 5 of 5 obs.

% MAY 12, 1991 09h 54m 20.21 ± 0.73s  
 40.390 N ± 6.6km 23.728 E ± 7.6km  
 DEPTH = 10.0km (geophysicist)  
 GREECE (364)  
 ML 1.9 (THE).

OUR 0.20 106 ePg 54 24.42 -0.2  
 PAIG 0.46 185 ePg 54 29.83 0.2  
 SOH 0.52 327 ePg 54 30.33 -0.4  
 THE 0.63 293 ePg 54 31.62 -1.2  
 SRS 0.73 352 ePg 54 34.78 0.2  
 KNT 1.00 321 ePg 54 39.50 0.4

GRG 1.16 300 ePg 54 52.54 1.0  
 S.D. = 0.9 on 7 of 7 obs.  
 \* MAY 12, 1991 10h 30m 43.72 ± 1.89s  
 27.158 N ± 10.1km 140.210 E ± 10.7km  
 DEPTH = 378.4 ± 19.0 km  
 4.4mb (10 obs.)

BONIN ISLANDS REGION (212)

MAT 9.51 350 iPc 32 56.70 -0.1  
 LZH 32.07 295 Pd 36 38.00 -0.9  
 CHG 38.75 267 eP 37 36.20 1.5  
 WB2 47.17 188 eP 38 38.70 -2.9  
 WRA 47.17 188 P 38 42.00 0.4  
 GUN 47.84 284 P 38 48.00 0.8  
 PKI 48.32 284 P 38 51.20 0.3  
 KKN 48.38 284 P 38 51.80 0.6  
 DMN 48.58 284 P 38 53.30 0.6  
 GKN 48.89 285 P 38 55.80 0.8  
 ASPA 50.89 187 eP 39 10.10 0.4  
 FBA 58.12 29 P 40 01.00 0.2  
 INK 63.70 24 ePd 40 36.80 -0.9  
 YKA 72.92 28 eP 41 33.00 -0.8  
 SOD 73.70 338 iP 41 37.30 -1.0  
 KAF 76.65 334 eP 41 54.10 -0.7  
 NUR 78.21 333 eP 42 02.60 -0.7  
 UPP 81.38 335 iP 42 19.00 -1.0  
 LRM 82.02 42 eP 42 25.30 1.4  
 FFC 82.61 31 eP 42 27.00 0.7  
 HFS 82.66 336 eP 42 25.20 -1.3  
 TNP 82.77 51 P 42 28.50 0.7  
 NB2 82.89 338 P 42 26.70 -1.1  
 ANMO 91.78 49 P 43 12.30 1.4  
 ALQ 91.78 49 eP 43 12.10 1.2  
 S.D. = 1.1 on 25 of 25 obs.

\* MAY 12, 1991 11h 51m 03.91 ± 1.06s  
 72.666 N ± 15.1km 6.379 E ± 16.0km  
 DEPTH = 10.0km (geophysicist)  
 3.0mb (1 obs.)  
 NORWEGIAN SEA (642)  
 MD 3.0 (BER).

TRO 5.08 121 eP 52 21.67 -0.1  
 LOF 5.15 149 eP 52 24.12 1.3  
 KTK1 6.63 115 eP 52 43.70 -0.1  
 HFS 12.91 163 eP 54 09.20 -0.6  
 Z 0.7s 4.00nm 4.7mb X  
 16s 0.03um 3.9msz  
 KAF 12.97 134 iP 54 10.70 0.0  
 NUR 14.10 140 eP 54 24.80 -0.7  
 YKA 39.35 321 eP 58 34.40 0.1  
 S.D. = 0.8 on 7 of 7 obs.

MAY 12, 1991 11h 54m 00.02 ± 0.32s  
 6.749 S ± 3.9km 130.656 E ± 8.8km  
 DEPTH = 55.9km (2 depth phases)  
 5.0mb (12 obs.)  
 BANDA SEA (280)

MTN 6.08 176 iPc 55 31.10 1.6  
 KNA 9.13 192 iPd 56 12.00 0.1  
 WB2 13.60 165 iPc 57 07.10 -4.8X  
 QIS 16.24 149 iPc 57 44.20 -1.8

ASPA 17.11 170 iPd 57 55.50 -1.5  
 MBL 17.75 215 iPc 58 04.70 -0.1  
 WARB 19.70 191 eP 58 27.50 -0.2  
 CTA 20.12 133 iPc 58 32.40 0.3  
 NANU 21.44 221 eP 58 46.00 0.5  
 QLP 23.59 148 eP 59 07.00 0.4  
 FORR 24.10 185 eP 59 11.00 -0.5  
 BAG 25.08 337 eP 59 21.90 0.7  
 RMO 26.13 141 e(P) 59 25.00 -5.7X  
 BAL 27.10 207 eP 59 40.00 0.4  
 KLB 27.50 204 eP 59 43.00 -0.2  
 MUN 28.49 206 eP 59 52.00 -0.2  
 BFD 32.17 162 e(P) 00 27.00 2.4  
 SSE 38.71 347 eP 01 21.20 0.9

BDT 39.33 308 eP 01 25.00 -0.7  
 NJ2 40.19 344 Pd 01 34.00 1.4  
 WHN 40.24 338 P 01 34.50 1.5  
 CHG 40.28 310 ePc 01 34.30 0.7  
 GYA 40.39 326 P 01 35.00 0.5  
 MAT 43.64 9 iPd 02 00.10 -0.7  
 XAN 45.49 334 P 02 15.00 -0.7  
 TIY 47.39 340 Pd 02 31.30 0.6  
 BJI 48.44 345 eP 02 38.50 -0.2  
 LZH 49.49 331 P 02 47.50 0.4

1.5s 45.00nm 5.3mb  
 CN2 50.53 355 eP 02 54.70 0.0  
 GTA 54.07 331 P 03 21.60 0.2  
 Z 1.2s 20.00nm 5.0mb  
 20s 0.35um 4.4msz

GUN 55.28 311 P 03 30.26 -0.5  
 PKI 55.46 310 P 03 31.12 -0.9  
 KKN 55.67 310 P 03 32.74 -0.6  
 DMN 55.71 310 P 03 33.20 -0.5  
 GKN 56.27 310 P 03 37.06 -0.5  
 WMO 63.54 327 P 04 27.00 0.0  
 1.2s 20.00nm 5.0mb  
 pP 04 41.50 52km

YAK 68.56 360 eP 04 56.90 -1.7  
 GAR 71.95 315 eP 05 19.00 -0.9  
 LPB 150.35 141 PKP 13 48.00 5.3X  
 ZOBO 150.53 141 PKP 13 49.00 5.9X  
 S.D. = 0.9 on 36 of 40 obs.

& MAY 12, 1991 12h 00m 57.92s  
 60.075 N 142.607 W  
 DEPTH = 13.7km  
 SOUTHERN ALASKA (2)  
 <AEIC>. ML 2.5 (AEIC).

WRG 0.29 97 iPd 01 03.64 -0.6  
 WAX 0.40 342 iPd 01 05.31 -0.9  
 TGL 0.69 351 iPc 01 10.44 -0.9  
 CROM 0.73 339 iPc 01 10.98 -1.1  
 HMT 0.87 288 iPc 01 13.88 -0.4  
 BALM 0.97 8 iPc 01 14.57 -1.6

RAGM 1.08 288 ePd 01 17.17 -0.7  
 CTGM 1.09 35 iPc 01 16.50 -1.7  
 SGAM 1.36 289 ePd 01 21.56 -0.9  
 eS 01 40.35



GLB 1.49 337 iPc 01 22.93 -1.4  
 YKU 1.55 109 eP 01 24.49 -0.5  
 CVA 1.63 288 ePd 01 24.97 -1.3  
 PNL 1.67 103 ePd 01 25.11 -1.8  
 HIN 1.97 281 eP 01 29.89 -1.4  
 VLZ 2.12 302 eP 01 32.31 -1.1  
 KLU 2.16 313 ePd 01 32.99 -1.1  
 VZW 2.18 299 eP 01 33.38 -1.0  
 GLI 2.36 292 eP 01 35.94 -1.0  
 TZL 2.40 326 eP 01 36.98 -0.5  
 MTU 2.53 270 eP 01 37.24 -2.1  
 KNIM 2.58 278 eP 01 37.29 -2.6  
 LTI 2.63 272 eP 01 38.28 -2.4  
 TOA 2.67 321 eP 01 40.06 -1.3  
 KNK 3.17 298 eP 01 47.11 -1.2

24 obs. associated

& MAY 12, 1991 12h 22m 31.50s  
 37.180 N 121.597 W  
 DEPTH = 3.0km  
 CENTRAL CALIFORNIA (39)  
 <BRK>. ML 2.7 (BRK).

MHC 0.17 348 iPc 22 34.90 0.0  
 ARN 0.18 17 iPc 22 34.90 -0.2  
 GCC 0.35 245 iPc 22 38.90 0.3  
 SAO 0.43 164 iPd 22 40.46 0.3  
 PCC 0.70 297 iPc 22 44.90 -0.6  
 LLA 0.77 137 eP 22 45.80 -1.1  
 BKS 0.86 324 iPd 22 48.20 -0.5  
 BRK 0.87 323 iPd 22 48.50 -0.3  
 ZSP 0.93 326 eP 22 49.30 -0.5  
 PRI 1.28 144 eP 22 55.00 -0.9  
 CMB 1.29 48 eP 22 54.50 -1.5  
 FRI 1.52 97 eP 22 57.70 -1.9

12 obs. associated

MAY 12, 1991 12h 27m 55.30 ± 0.21s  
 21.718 S ± 6.2km 174.034 W ± 4.5km  
 DEPTH = 34.4km (4 depth phases)  
 5.6mb (28 obs.) 5.3MsZ (15 obs.)  
 TONGA ISLANDS (173)

Ms 5.5 (BRK). Mo=3.0\*10\*\*17 Nm  
 (PPT).  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 13S, 22C  
 Centroid Location:  
 Origin Time 12:27:53.4 0.9  
 Lat 21.76S 0.12 Lon 173.29W 0.09  
 Dep 15.0 Fix Half-duration 2.0  
 Moment Tensor: Scale 10\*\*17 Nm  
 Mrr=1.00 0.05 Mtt=-0.27 0.11  
 Mff=-0.73 0.11 Mrt=0.92 0.22  
 Mrf=0.72 0.23 Mtf=-0.53 0.05  
 Principal Axes:  
 T Val=1.56 Plg=64 Azm=334  
 N 0.01 10 223  
 P -1.57 24 129  
 Best Double Couple: Mo=1.6\*10\*\*17  
 NP1: Strike=199 Dip=23 Slip= 64  
 NP2: 47 70 100

SVA 7.92 296 ePd 29 52.00 1.0  
 VUN 7.97 296 iPd 29 52.10 0.4  
 MBU 8.31 303 eP 29 56.20 -0.3  
 SGE 8.62 297 ePc 30 02.80 2.0  
 DZM 18.12 265 iPc 32 08.00 1.8  
 MNG 20.84 203 eP 32 37.50 1.0  
 WEL 21.68 203 P 32 44.00 -1.0  
 KHZ 23.12 204 eP 32 58.80 -0.4  
 LTZ 23.92 205 eP 33 08.20 1.1  
 BR5 30.66 253 iPd 34 09.00 0.0  
 COO 31.74 247 iPc 34 18.30 -0.2  
 0.8s 16.00nm 4.9mb  
 RMO 34.22 255 iPd 34 39.70 -0.3  
 CMS 37.01 246 iPd 35 03.00 -0.6  
 1.0s 68.00nm 5.5mb  
 CTA 37.07 265 iPc 35 02.80 -1.4  
 1.0s 40.00nm 5.2mb

TAU 38.45 228 eP 35 18.00 2.4X  
 PMG 39.22 282 iPd 35 19.90 -2.4  
 0.9s 67.23nm 5.4mb  
 BFD 40.47 238 eP 35 32.00 -0.4  
 STK 40.64 246 iPd 35 33.80 -0.1  
 0.9s 15.00nm 4.7mb  
 ADE 43.26 242 eP 35 55.20 -0.2  
 ASPA 47.86 257 iPc 36 29.80 -2.3  
 0.9s 87.00nm 5.8mb  
 Z 18s 0.10um 3.8MsZ X  
 WB2 48.09 262 iPd 36 30.30 -3.7X  
 0.9s 7.70nm 4.7mb  
 WRA 48.10 262 P 36 31.00 -3.0  
 1.1s 46.60nm 5.4mb  
 WARB 54.00 253 eP 37 17.00 -1.6  
 SBA 56.94 185 iPc 37 43.50 4.4X  
 MBL 61.11 257 iPd 38 07.20 -1.5  
 MUN 62.14 244 eP 38 15.00 -0.6  
 CSY 64.47 206 eP 38 34.20 3.9X  
 0.4s 14.90nm 5.4mb  
 NANU 64.65 255 eP 38 31.50 -0.7  
 SPA 68.41 180 iPd 38 59.50 3.8X  
 1.0s 12.50nm 4.9mb  
 Z 19s 2.24um 5.4MsZ X  
 ADK 73.32 358 ePc 39 23.20 -1.8  
 0.8s 56.20nm 5.6mb  
 MAT 73.42 322 iPc 39 23.90 -2.1  
 1.3s 82.69nm 5.6mb  
 SYP 75.93 44 eP 39 41.00 0.3  
 PRS 76.21 41 eP 39 42.30 0.3  
 GCC 76.28 41 eP 39 43.80 1.4  
 PCC 76.36 40 eP 39 41.30 -1.5  
 PRI 76.52 42 eP 39 44.30 0.4  
 LLA 76.65 41 eP 39 44.50 0.0  
 BRK 76.68 40 eP 39 44.80 0.2  
 Z 20s 4.20um 5.8MsZ X  
 BKS 76.69 40 ePd 39 44.90 0.2  
 1.0s 57.00nm 5.5mb  
 Z 20s 1.80um 5.4MsZ X  
 N 20s 1.50um  
 E 20s 1.50um

MHC 76.70 40 ePc 39 45.00 0.1  
 PLM 77.25 46 eP 39 42.00 -6.1X  
 RVR 77.30 45 eP 39 48.00 -0.1  
 PEC 77.38 46 P 39 48.90 0.3  
 SBB 77.42 45 eP 39 48.00 -0.9  
 ISA 77.60 43 eP 39 49.00 -0.9  
 SDN 77.61 8 eP 39 47.80 -1.5  
 1.0s 920.00nm 6.8mb X  
 FRI 77.66 42 ePc 39 49.70 -0.3  
 CMB 77.91 41 ePc 39 51.30 -0.2  
 ORV 78.23 39 eP 39 53.30 0.2  
 TPC 78.25 46 eP 39 53.00 -0.4  
 CLC 78.26 44 eP 39 54.00 0.5  
 GLA 78.46 47 eP 39 48.00 -6.6X  
 GSC 78.46 45 eP 39 53.00 -1.6  
 BONR 79.13 42 P 39 56.80 -1.7  
 LBFM 79.19 37 P 39 58.60 0.0  
 TNP 79.88 42 P 40 01.80 -0.6  
 1.0s 10.08nm 4.8mb  
 QZH 80.19 302 eP 40 03.00 -1.0  
 KDC 81.18 11 eP 40 08.60 0.1  
 SSE 81.32 308 P 40 08.00 -1.9  
 4.0s 600.00nm 6.0mb X  
 Z 20s 0.50um 4.9MsZ X  
 MAW 81.65 199 eP 40 14.00 19kmX  
 81.94 33 P 40 13.40 0.6  
 SHW 82.25 33 P 40 15.40 0.8  
 HKC 82.52 297 eP 40 17.50 1.2  
 VGB 82.56 35 P 40 16.00 -0.1  
 LON 82.84 33 P 40 17.30 -0.2  
 GMW 82.89 32 P 40 18.00 0.3  
 MSU 83.34 44 P 40 21.70 1.2  
 NJ2 83.52 308 P 40 21.50 0.3  
 5.0s 500.00nm 5.9mb X  
 GZH 83.55 298 Pd 40 22.80 1.2  
 MDJ 83.67 323 eP 40 21.60 -0.1  
 4.0s 990.00nm 6.3mb X

SVW 83.86 9 eP 40 21.70 -0.7  
 KGM 83.91 275 ePd 40 25.70 2.1X  
 OIZ 84.74 293 eP 40 27.50 -0.1  
 4.0s 500.00nm 6.1mb X  
 Z 20s 0.30um 4.7MsZ X  
 DL2 85.18 315 P 40 29.00 -0.4  
 4.0s 500.00nm 6.1mb X  
 Z 20s 0.30um 4.7MsZ X  
 ALO 85.32 50 eP 40 30.30 -0.2  
 1.4s 23.26nm 5.2mb  
 ANMO 85.32 50 P 40 31.00 0.5  
 1.0s 45.38nm 5.6mb  
 PMR 85.40 12 ePc 40 29.30 -0.7  
 1.8s 119.40nm 5.8mb  
 SNY 85.54 318 P 40 31.00 -0.1  
 7.0s 800.00nm 6.0mb X  
 Z 16s 0.50um 5.0MsZ X  
 S 51 01.00 0.1  
 CN2 85.55 321 P 40 31.20 0.3  
 5.0s 600.00nm 6.1mb X  
 Z 20s 1.30um 5.3MsZ X  
 TTA 85.56 8 eP 40 31.20 0.3  
 1.1s 58.50nm 5.7mb  
 PNT 85.65 32 eP 40 32.00 0.5  
 0.9s 23.00nm 5.4mb  
 KLU 85.95 13 P 40 32.50 -0.4  
 WHN 86.16 305 eP 40 35.00 0.5  
 1.5s 70.00nm 5.7mb  
 ANM 86.26 4 ePc 40 34.40 0.2  
 MCMT 86.53 39 eP 40 36.70 0.4  
 TIA 86.84 311 eP 40 37.40 -0.3  
 2.0s 100.00nm 5.7mb  
 Z 26s 0.40um 4.7MsZ X  
 IPM 86.99 276 ePd 40 42.60 3.7X  
 PSI 88.24 274 eP 40 50.50 5.6X  
 SNG 88.33 278 eP 40 47.10 1.8  
 1.0s 120.00nm 6.2mb  
 FBA 88.68 11 ePc 40 45.50 -0.4  
 2.0s 288.20nm 6.2mb  
 IMA 88.87 8 ePc 40 47.20 0.2  
 2.7s 245.10nm 6.1mb  
 BJI 89.38 314 eP 40 50.00 0.3  
 3.0s 480.00nm 6.3mb  
 eSKS 51 16.00 0.7  
 GYA 90.48 298 P 40 56.00 0.7  
 N 20s 0.30um  
 E 20s 0.70um  
 SKS 51 28.00  
 SES 90.71 35 eP 40 54.00 -1.7  
 TIY 90.86 310 P 40 57.50 0.7  
 Z 30s 0.63um 4.9MsZ X  
 XAN 91.83 306 P 41 02.00 0.7  
 E 19s 0.70um  
 NST 91.93 286 eP 41 04.00 2.0  
 HHC 92.87 313 P 41 06.00 0.0  
 Z 24s 0.80um 5.1MsZ X  
 E 16s 0.50um  
 SKS 51 40.00  
 KMI 93.21 296 P 41 09.50 1.5  
 1.5s 190.00nm 6.3mb  
 Z 20s 0.70um 5.1MsZ X  
 TUL 93.50 53 e(P) 41 07.40 -1.4  
 BDT 93.52 287 eP 41 09.50 0.3  
 1.0s 49.70nm 5.9mb  
 BTO 93.82 312 P 41 11.00 0.7  
 eSKS 51 38.00  
 eS 52 15.00  
 CHG 94.14 288 ePc 41 13.00 0.9  
 1.0s 30.75nm 5.7mb  
 INK 94.51 14 eP 41 12.00 -0.8  
 YAK 94.63 337 eP 41 11.20 -2.2  
 e 44 56.00  
 YKA 96.10 24 eP 41 19.00 -1.2  
 1.0s 1.40nm 4.4mb X  
 LZH 96.46 306 eP 41 23.50 0.8  
 4.0s 230.00nm 6.0mb X  
 Z 20s 0.39um 4.9MsZ X  
 pP 41 35.50 39km  
 PP 45 15.00  
 eSKS 51 55.00  
 eS 52 40.00  
 eSS 59 12.00  
 UPA 97.42 83 eP 41 27.00 -0.2



12d 12h

ZOBO	98.19	111 P	41 35.50	4.1X					TTA	21.08	54 eP	39 08.70	1.0	
GAR	122.97	303 ePKP	46 47.00	-2.9						1.3s	75.70nm		4.9mb	
MAIO	131.56	300 ePKP	47 07.00	0.5	BSF	153.94	359 ePKP	47 52.30	7.9X	SVW	21.28	59 ePc	39 10.60	0.9
NUR	139.07	346 ePKP	47 19.00	-0.7	BEO	154.05	336 ePKP	47 52.50	8.1X	IMA	22.34	46 ePc	39 21.40	1.1
NB2	140.54	356 PKP	47 15.40	-7.0X	PGB	154.24	328 ePKP	47 46.00	1.1		0.9s	37.40nm		4.8mb
	0.7s	1.60nm			KDZ	154.25	325 iPKPc	47 45.00	0.1	PMR	24.36	57 eP	39 40.30	0.5
HFS	141.23	354 ePKP	47 17.60	-6.0X	LOR	154.45	3 ePKP	47 53.60	8.6X		0.8s	7.60nm		4.3mb
	0.4s	0.60nm				1.1s	14.65nm			FBA	24.73	49 ePc	39 43.90	0.5
ABHA	145.31	271 iPKPd	47 35.30	3.1X		0.55um		5.4Msz			1.2s	67.50nm		5.1mb
EKA	145.74	9 PKP	47 32.00	0.5	PTJ	154.53	344 ePKP	47 46.20	1.0	TOA	25.68	55 eP	39 53.20	0.8
	2.4s	212.40nm			RZN	154.59	326 ePKP	47 45.00	-0.5	KLU	25.89	57 P	39 53.40	-1.0
WIT	148.95	359 ePKP	47 45.00	8.3X	SSF	154.64	4 ePKP	47 54.10	8.9X	MAT	26.21	234 iPd	39 58.50	1.0
IAS	149.17	331 ePKP	47 41.00	3.7X		1.3s	23.45nm				0.7s	26.03nm		4.9mb
KAS	149.46	316 ePKP	47 44.50	6.5X	VTs	154.67	329 ePKP	47 47.00	1.4			eS	44 42.00	
KRA	149.64	342 ePKP	47 39.70	1.8	MFF	154.68	10 ePKP	47 50.00	4.8X	CN2	27.55	261 eP	40 10.00	0.4
	1.7s	139.00nm			LBF	154.74	3 ePKP	47 54.20	8.8X		Z 14s	1.60um		4.7MszX
		e	47 43.10			1.0s	6.40nm			N 15s	0.40um			
		e	47 46.20		LJU	154.75	346 ePKP	47 45.50	0.2	E 15s	0.40um			
WTS	149.77	359 ePKP	47 43.00	5.0X			e	47 47.00				epP	40 15.00	18kmX
	1.0s	26.00nm					e	48 08.20		INK	30.19	41 eP	40 32.00	-1.1
KSP	149.82	347 ePKP	47 38.50	0.3	VOY	154.90	347 ePKP	47 46.40	0.7	TIY	38.94	265 eP	41 47.50	-1.0
		i	47 44.00				e	48 10.50			Z 18s	0.61um		4.5Msz
PPE	149.87	329 ePKP	47 44.50	6.1X	AVF	154.90	4 ePKP	47 55.30	9.8X		N 13s	0.66um		
CLL	149.96	351 ePKP	47 37.00	-1.3	CEY	155.06	346 e(PKP)	47 45.00	-0.8	YKA	39.46	46 eP	41 51.90	-0.6
	2.0s	21.00nm					i	48 10.20			0.7s	5.40nm		4.4mb
		i	47 43.60		SMF	155.07	3 ePKP	47 56.10	10.3X	PNT	44.43	65 eP	42 33.00	-0.3
BRG	150.24	350 iPKP	47 39.70	0.9	VBY	155.08	344 ePKP	47 47.50	1.7	GTA	44.89	277 Pd	42 37.40	0.1
		i	47 44.80		MMB	155.17	327 ePKP	47 47.00	0.9		0.8s	10.00nm		4.7mb
		i	47 55.60		TRI	155.23	347 ePKP	47 55.50	9.5X		Z 16s	0.60um		4.6MszX
SPC	150.33	341 ePKP	47 38.90	-0.3			e	48 10.00		E 15s	1.10um			
		i	47 44.90		KKB	155.28	328 ePKP	47 47.00	0.8	LON	44.91	69 P	42 37.80	0.6
CFR	150.34	327 ePKP	47 35.00	-4.1X	SKO	155.98	331 ePKP	47 46.00	-1.2	LZH	44.95	270 eP	42 37.00	-0.8
VRI	150.54	330 ePKP	47 45.50	6.1X			i	48 13.50			1.0s	18.00nm		4.9mb
MOX	150.79	353 ePKP	47 40.00	0.4	OHR	156.95	330 ePKP	47 50.20	1.7		Z 14s	0.96um		4.9MszX
		i	47 46.20		SFI	157.33	349 PKP	47 59.80	11.0X		N 13s	0.52um		
BNS	150.80	358 ePKPd	47 40.80	1.2						E 13s	0.47um			
		id	47 46.20		S.D. = 1.1 on 131 of 183 obs.									
TLB	150.82	327 ePKP	47 43.00	3.2X	% MAY 12, 1991 13h 02m 15.91±0.89s					DPW	46.07	66 P	42 46.30	-0.1
CVO	150.83	330 ePKP	47 46.00	6.1X	41.136 N ±16.5km 28.468 E ±10.6km					FHC	47.68	77 eP	43 00.30	1.1
BBTK	150.91	314 ePKP	47 50.00	9.7X	DEPTH = 10.0km (geophysicist)					SES	48.03	59 eP	43 00.00	-1.8
UCC	150.95	2 PKP+	47 41.00	1.2	TURKEY (366)					LBFM	48.46	75 P	43 05.60	0.2
		e-	47 47.00		MD 2.6 (ISK).					WMQ	48.54	290 P	43 06.70	0.8
PRU	150.98	349 ePKP	47 40.00	0.1						Z 16s	0.60um			4.7MszX
	1.8s	75.00nm			CTT	0.03	291 iPg	02 17.00	-0.9	MIN	49.31	76 ePc	43 11.80	-0.1
	Z 20s	0.60um		5.4Msz	ISK	0.45	99 ePg	02 24.50	-0.6	FFC	49.33	50 iPc	43 11.10	-0.5
	N 20s	0.40um			DMK	0.87	322 iPg	02 33.10	0.5		0.9s	18.00nm		5.1mb
	E 20s	0.30um					iSg	02 44.60		ORV	49.92	76 ePc	43 16.20	-0.2
		e	47 46.50		HRT	0.96	109 ePg	02 34.50	0.3	LRM	50.39	64 eP	43 19.90	-0.3
		e	47 53.50		IZI	1.11	136 ePn	02 37.10	0.4	GYA	50.58	259 P	43 22.00	0.3
ENN	151.01	0 ePKP	47 46.00	6.1X						BRK	50.69	78 eP	43 22.80	0.6
	1.0s	27.00nm			S.D. = 0.9 on 5 of 5 obs.					BKS	50.70	78 e(P)	43 22.70	0.4
MEM	151.17	360 PKPc	47 42.00	1.9	? MAY 12, 1991 13h 16m 13.70±0.62s					KEV	51.12	342 eP	43 45.00	19.9X
		ed	47 46.80		25.488 N ±19.8km 98.261 E ±7.8km					MHC	51.41	78 eP	43 28.40	0.5
ISR	151.17	329 ePKP	47 45.20	4.8X	DEPTH = 33.0km (normal)					CMB	51.61	77 ePc	43 29.70	0.4
MLR	151.19	330 ePKP	47 40.00	-0.6	3.9mb ( 2 obs.)					SAO	51.93	79 eP	43 32.00	0.3
SNF	151.23	2 PKP	47 48.00	7.8X	BURMA-CHINA BORDER REGION (297)					KVN	52.13	74 P	43 34.10	0.7
HRI	151.29	300 iPKPd	47 48.70	7.7X						PRS	52.29	79 ePc	43 34.80	0.4
PSZ	151.56	340 ePKP	47 42.00	1.0	GUN	11.33	285 P	18 56.76	0.0	LLA	52.32	78 eP	43 35.50	0.9
DOU	151.66	2 PKPd	47 47.80	6.9X	PKI	11.69	283 P	19 01.64	0.0	FRI	52.73	77 eP	43 38.00	0.3
	Z 20s	0.30um		5.1Msz	KKN	11.84	284 P	19 03.74	0.3	BONR	52.81	75 P	43 39.50	0.9
CMP	151.77	331 ePKPc	47 52.00	10.7X	DMN	11.97	283 P	19 05.74	0.5	PRI	52.82	79 eP	43 39.50	1.0
GRF	151.78	353 ePKP	47 42.00	0.8	GKN	12.43	285 P	19 10.44	-0.9	SOD	53.29	341 eP	43 53.00	11.6X
	Z 20s	0.50um		5.3Msz	SSE	20.93	69 eP	20 56.00	0.0	TNP	53.31	74 P	43 42.40	0.2
		ic	47 48.40								0.7s	24.07nm		5.3mb
		e	47 56.60		Z 16s	0.40um		3.9MszX		DUG	54.16	70 P	43 48.60	0.3
ABH	151.87	358 ePKP	47 42.32	1.0			i	21 43.20			0.8s	7.36nm		4.8mb
BUC	151.92	328 ePKP	47 28.00	-13.5X	WRA	57.18	139 P	26 00.00	0.0	ISA	54.38	77 eP	43 49.00	-0.9
KHC	151.98	349 PKP	47 42.50	1.0		1.3s	0.90nm		3.6mb	CLC	54.75	77 eP	43 53.00	0.4
	1.5s	26.50nm			WB2	57.18	139 eP	26 00.00	0.0	SBB	55.46	78 eP	43 58.00	0.2
	Z 18s	0.30um		5.1Msz		0.9s	1.90nm		4.1mb	GSC	55.57	76 eP	43 59.00	0.4
	N 18s	0.20um			S.D. = 0.5 on 8 of 8 obs.					PAS	55.66	78 eP	43 58.00	-1.2
	E 18s	0.20um								MWC	55.67	78 eP	44 00.00	0.5
		i	47 48.20		MAY 12, 1991 13h 34m 24.46±0.20s					MSU	55.72	71 P	44 00.70	0.9
		i	47 57.50		55.720 N ±5.9km 164.550 E ±2.8km					RVR	56.22	78 eP	44 03.00	-0.2
DSI	152.01	297 iPKPd	47 50.00	8.0X	DEPTH = 35.3km ( 3 depth phases)					PLM	56.98	78 eP	44 09.00	0.1
COZ	152.04	332 ePKP	47 49.20	7.3X	4.9mb ( 32 obs.) 4.8Msz ( 2 obs.)					KAF	58.05	338 iP	44 15.40	-0.3
ZST	152.11	344 ePKP	47 42.10	0.5	KOMANDORSKY ISLANDS REGION ( 4)						0.5s	2.00nm		4.4mb
FLN	152.53	9 ePKP	47 48.90	6.7X								esP	44 17.10	
	Z 20s	0.47um		5.3Msz	SMY	6.35	114 eP	35 58.20	0.1	GLA	58.33	77 eP	44 18.00	-0.2
HQL	152.74	292 PKP	47 52.70	9.6X		0.9s	83.33nm		5.4mb	GOL	58.40	65 P	44 19.60	0.7
LDF	152.74	9 ePKP	47 49.40	6.9X	ADK	11.73	101 eP	37 10.60	-1.7		0.8s	4.54nm		4.6mb
BZS	152.94	335 ePKP	47 43.50	0.6	ANM	17.23	47 eP	38 26.30	2.6	GLD	58.44	65 P	44 19.60	0.6
JMB	153.06	325 ePKP	47 51.00	7.9X	YAK	18.90	304 iPc	38 43.30	-0.9		1.0s	10.00nm		4.9mb
LPF	153.15	10 ePKP	47 50.50	7.4X			ePPP	39 15.00		NUR	59.84	338 iP	44 27.70	-0.5
PVL	153.17	328 ePKP	47 56.00	12.7X			eS	42 14.00				e	44 38.00	34km
CDF	153.34	358 ePKP	47 51.10	7.6X	SDN	19.67	77 eP	38 50.40	-2.6	CHG	60.94	261 ePc	44 36.90	0.7
HAU	153.77	359 ePKP	47 52.10	8.1X		1.2s	133.33nm		5.1mb		0.9s	18.49nm		5.2mb
										GAR	61.04	297 eP	44 37.00	0.2



SUN	61.16 278 P	44 37.52 -0.5	BNT	1.26 11 iPn	46 50.50 -0.1	SALJ	22.44 333 Pc	17 37.81 0.1		
	0.7s 59.00nm	5.8mb	KCT	1.27 27 ePn	46 50.10 -0.7	JARJ	22.52 334 Pc	17 38.67 0.2		
ANMO	61.42 69 P	44 38.40 -1.2	KGT	1.35 350 iPn	46 52.50 0.5	JVJ	22.52 332 iPc	17 39.10 0.6		
	0.8s 14.93nm	5.2mb	S.D. = 0.6 on 6 of 6 obs.					MLL	22.92 333 iPc	17 43.30 0.9
ALO	61.43 69 eP	44 39.10 -0.5	MAY 12, 1991 14h 09m 19.65±0.66s					HLW	23.04 322 eP+	17 44.00 0.5
	0.9s 5.46nm	4.7mb	39.268 N ± 4.9km 27.682 E ± 9.4km						eS	22 00.00
Z	18s 1.13um	5.1msz	DEPTH = 10.0km (geophysicist)					HRI	23.50 335 iPc	17 49.10 1.0
KKN	61.59 278 P	44 40.54 -0.3	TURKEY (366)					ADI	23.55 333 iPc	17 50.00 1.5
	0.7s 52.00nm	5.8mb	MD 3.0 (ISK).					TEH	23.62 8 eP	17 50.00 0.7
PKI	61.69 278 P	44 41.14 -0.5						BHL	24.08 335 P	17 55.00 1.3
NB2	61.69 346 P	44 40.10 -0.8							S	22 17.00
	0.8s 4.10nm	4.6mb	DST	0.81 65 iPg	09 34.70 -0.6	QUE	25.36 42 eP	18 07.60 1.4		
GKN	61.79 279 P	44 41.72 -0.3		iSg	09 45.90		1.1s 74.05nm	5.3mb		
	0.9s 70.00nm	5.8mb	IZM	0.93 201 iPg	09 37.70 0.3		eS	22 40.20		
DMN	61.83 278 P	44 42.10 -0.4		eSg	09 50.00	TAB	25.70 358 eP	18 10.00 0.7		
	0.9s 51.00nm	5.7mb	EDC	1.09 7 iPn	09 39.00 -1.1	CSS	25.98 333 eP	18 13.50 1.8		
SCH	62.11 31 eP	44 43.00 -0.7	BNT	1.10 9 iPn	09 40.50 0.2	POO	26.15 73 iP	18 15.20 1.7		
HFS	62.19 344 eP	44 43.00 -1.1	KCT	1.11 28 iPn	09 40.60 0.1	MAIO	26.25 22 iPc+	18 14.40 0.1		
	0.7s 2.70nm	4.5mb	KGT	1.22 346 iPn	09 42.20 -0.1		1.6s 144.36nm	5.4mb		
	e	45 02.70 76kmX	CIN	1.70 169 eP	09 49.00 -0.4		eS	22 47.00		
TUL	66.15 61 eP	45 08.80 -1.4	KHL	1.72 123 ePn	09 43.00 -6.9X	PPCY	26.37 331 eP	18 15.50 0.2		
	0.8s 8.90nm	4.9mb	IZI	1.74 52 ePn	09 51.10 0.9	ELL	29.04 330 iP	18 40.50 0.8		
FVM	67.08 56 P	45 14.90 -1.2	CTT	1.96 17 ePn	09 54.00 0.7	BBTK	30.38 337 iPc	18 52.00 0.3		
ELC	68.21 56 P	45 22.20 -1.0	DMK	2.55 1 ePn	10 10.00 8.3X	HYB	30.44 77 eP	18 53.50 1.2		
MAIO	68.45 303 eP	45 34.00 9.2X	S.D. = 0.7 on 9 of 11 obs.					KAS	31.37 340 eP	19 00.00 -0.3
OLY	68.58 58 P	45 23.90 -1.6	MAY 12, 1991 16h 12m 37.10±0.33s					DST	31.92 332 eP	19 05.00 -0.2
EKA	68.85 353 Pd	45 27.30 0.4	12.279 N ± 4.9km 47.487 E ± 3.6km					NDI	32.15 55 iPc	19 08.50 1.3
	0.8s 6.70nm	4.7mb	DEPTH = 10.0km (geophysicist)						eS	24 16.00
QUE	69.65 294 iPd	45 33.10 0.7	5.3mb (36 obs.) 4.8msz (8 obs.)					ITU	32.97 334 eP	19 16.00 1.9
KSP	70.58 339 eP	45 37.50 0.0	EASTERN GULF OF ADEN (415)					KGT	33.21 331 eP	19 17.00 0.7
CLL	70.75 342 iPd	45 39.20 0.7	CENTROID, MOMENT TENSOR (HRV)					GAR	33.45 33 iP	19 18.00 -0.5
	1.3s 10.00nm	4.7mb	Data Used: GDSN						iPP	20 26.00
MOX	71.64 342 e(P)	45 44.50 0.6	L.P.B.: 15S, 30C						ePPP	20 39.00
GBTN	71.84 53 P	45 44.00 -1.3	Centroid Location:						ePcP	21 45.00
CVL	72.40 48 P	45 48.00 -0.6	Origin Time 16:12:42.2 1.9						iS	24 42.00
MEM	72.55 346 P	45 50.50 1.3	Lat 12.67N 0.15 Lon 47.07E 0.07						iSS	26 41.00
GRF	72.63 342 eP	45 51.00 1.3	Dep 15.0 FIX Half-duration 2.3						eSSS	27 01.00
KHC	72.74 341 P	45 50.50 0.0	Moment Tensor: Scale 10**17 Nm						i	28 43.00
ZST	72.92 338 eP	45 40.70 -10.8X	Mrr=-1.54 0.09 Mtt= 2.36 0.10					ALN	34.16 330 iPd	19 25.14 0.7
HYB	73.56 277 eP	45 55.00 -0.7	Mff=-0.82 0.16 Mrt= 0.00 0.00					PAIG	34.64 327 eP	19 28.94 0.3
PRM	73.99 53 P	45 57.50 -0.4	Mrf= 0.00 0.00 Mtf=-0.31 0.12					AGG	34.75 324 eP	19 28.38 -1.3
LHS	74.35 51 P	45 59.40 -0.6	Principal Axes:					KDZ	35.04 331 iPd	19 34.00 1.9
GBA	77.27 275 Pc	46 17.30 0.6	T Vol= 2.39 Plg= 0 Azm=185					JMB	35.14 333 eP	19 34.00 1.1
	1.1s 7.00nm	4.6mb	N -0.85 0 95					LIT	35.41 326 eP	19 33.66 -1.6
WB2	79.60 209 iPd	46 29.20 -0.1	P -1.54 90 180					RZN	35.41 330 iPd	19 37.00 1.6
	0.7s 7.60nm	4.8mb	Best Double Couple: Mo=2.0*10**17					SOH	35.46 328 eP	19 34.42 -1.3
	i	46 40.50 37km	NP1:Strike=275 Dip=45 Slip=-90					SRS	35.55 328 eP	19 35.98 -0.4
WRA	79.60 209 P	46 29.00 -0.3	NP2: 95 45 -90					PLD	35.73 330 eP	19 39.00 1.1
	0.7s 8.10nm	4.8mb						MMB	35.83 329 eP	19 39.00 0.2
ASPA	83.27 208 iPc	46 49.50 1.1	OBO	4.11 266 ePd	13 42.28 0.9	KNT	35.94 328 eP	19 39.46 -0.3		
	0.8s 11.00nm	5.0mb	ATA	4.27 259 ePd	13 43.33 -0.3	GRG	36.06 327 ePd	19 40.26 -0.5		
SPA	145.54 180 iPKPd	53 59.50 0.5	MKL	4.28 263 ePd	13 43.77 0.0	VAY	36.23 328 eP	19 42.00 -0.1		
	1.0s 18.50nm		TDD	4.51 264 ePd	13 45.61 -1.4	IGT	36.24 323 ePd	19 42.66 0.4		
S.D. = 0.8 on 92 of 96 obs.			ARO	4.60 261 ePd	13 48.62 0.2	TLB	36.26 336 eP	19 40.50 -1.8		
				S	14 15.00	PVL	36.29 332 eP	19 42.00 -0.6		
			SGH	4.82 261 ePd	13 52.08 0.5	PGB	36.33 330 eP	19 44.00 0.9		
% MAY 12, 1991 13h 38m 15.77±1.31s			KSU	4.99 262 ePd	13 54.28 0.4	KKB	36.36 329 iPc	19 43.00 -0.2		
43.035 N ± 9.3km 18.679 E ± 8.3km			HLD	4.99 263 ePd	13 54.28 0.4	FNA	36.49 326 eP	19 41.74 -2.7		
DEPTH = 10.0km (geophysicist)			GBR	5.05 258 ePd	13 54.28 -0.4	SRN	36.66 323 eP	19 46.50 0.7		
YUGOSLAVIA (383)			ABHA	7.49 323 iPc	14 31.90 2.6	CFR	36.71 337 eP	19 46.00 -0.1		
ML 1.7 (TTG).			KMSA	8.54 341 P	14 38.60 -5.3X		e	39 45.00		
BRY	0.17 216 iPg	38 19.84 0.2	AAE	9.16 250 eP	14 53.20 0.6	VTS	36.83 330 eP	19 48.00 0.6		
	iSg	38 22.54	RYD	12.40 356 Pc	15 29.00 -7.7X	BUCL	36.88 334 eP	19 50.00 2.4		
NKY	0.32 133 iPg	38 22.92 0.4	BEE	13.96 11 eP	15 59.60 2.3	BUC	36.91 334 eP	19 50.00 2.2		
	iSg	38 28.25	BBU	14.14 11 eP	16 00.80 1.2		e	31 30.00		
PLE	0.60 60 iPg	38 27.82 -0.2		1.5s 644.00nm	6.1mb	TPE	36.93 324 eP	19 47.00 -1.0		
	iSg	38 37.79	DHR	14.17 10 P	16 00.00 -0.1	KSH	36.98 38 eP	19 50.00 1.3		
HCY	0.60 193 iPg	38 28.07 0.1	NAI	17.14 219 ePc	16 40.00 1.3		N 10s 8.60um			
	iSg	38 37.24		S	21 44.50	OHR	37.03 326 eP	19 43.00 -6.0X		
TTG	0.74 145 iPg	38 29.87 -0.4	AGMR	18.08 310 eP	16 54.00 3.9X	BUL	37.19 210 iPd	19 52.00 1.4		
	iSg	38 42.19	ASW	18.15 312 iPc	16 53.00 2.0		i	20 02.70		
BDV	0.76 172 ePg	38 30.27 -0.4		eS	20 24.00	SKO	37.29 327 iP	19 51.00 0.0		
	iSg	38 42.29	HOL	20.49 327 iPc	17 18.60 0.7		Z 19s 1.64um	4.8msz		
IVA	0.91 100 iPg	38 33.49 0.3	MBH	20.98 328 iPc	17 23.00 0.0		N 15s 1.83um			
S.D. = 0.4 on 7 of 7 obs.			CSTJ	21.25 334 Pc	17 26.73 1.0		iPP	21 19.50		
			PRNI	21.38 329 iPc	17 27.50 0.4		iS	25 41.00		
% MAY 12, 1991 13h 46m 27.16±0.86s			SAGI	21.45 328 iPc	17 27.80 0.0		iSS	28 33.00		
39.120 N ± 6.9km 27.595 E ± 12.2km				eS	23 33.00		iSSS	29 46.00		
DEPTH = 10.0km (geophysicist)			QTRJ	21.69 333 P	17 30.60 0.3		LR	36 30.00		
TURKEY (366)			MDSJ	21.87 333 Pc	17 32.20 0.2	ISR	37.31 335 eP	19 53.00 1.7		
MD 2.7 (ISK).			LISJ	21.88 331 P	17 32.31 0.3	VRI	37.84 336 eP	19 56.00 0.4		
IZM	0.77 200 iPg	46 42.00 -0.2	KER	21.98 359 iPc	17 35.00 1.8	LACI	37.99 325 eP	19 57.10 0.2		
	iSg	46 52.50	MKRJ	22.07 332 Pc	17 34.05 0.0	MTUR	38.00 334 eP	19 58.50 1.4		
DST	0.94 58 ePn	46 45.40 0.3	YTIR	22.15 331 iPc	17 35.40 0.6		e	39 46.00		
EDC	1.24 10 ePn	46 50.00 -0.2	MASJ	22.19 333 Pc	17 35.26 0.1	CVO	38.02 336 eP	19 57.00 -0.2		
			DSI	22.21 332 iPc	17 35.70 0.4	GKN	38.04 60 P	19 56.68 -1.1		
									1.0s 114.00nm	5.6mb



12d 16h

	CMP	38.04	334	ePc	20	01.00	3.6X		Z	12s	4.60um	5.7MsZ		Z	16s	2.90um	5.4MsZ
	DMN	38.33	61	P	19	59.44	-0.9		N	12s	5.40um			E	10s	8.60um	
		1.2s	137.00nm				5.6mb		E	10s	4.10um			LDF	53.45	322 eP	21 57.60 -1.9
	SDA	38.36	326	eP	19	51.70	-8.3X			pP	21 11.00	10kmX		KMI	53.54	68 Pc	22 00.50 -0.3
	COZ	38.39	333	eP	19	59.50	-0.9	BRG	47.18	331 iP	21 10.20	-1.5			4.0s	400.00nm	5.8mb X
	ATN	38.44	318	P	20	02.30	1.5			1.4s	36.00nm	5.3mb		Z	12s	1.60um	5.3MsZ
	KKN	38.53	61	P	20	01.10	-0.8			e	22 52.40				pP	22 09.50	30kmX
		0.9s	114.00nm				5.6mb			eS	28 04.00		FLN	53.74	322 eP	21 59.70 -1.9	
	PKI	38.58	61	P	20	01.50	-1.0	LLS	47.26	324 ePd	21 11.40	-1.2	Z	21s	0.82um	4.8MsZ	
		1.1s	70.00nm				5.3mb	GRF	47.74	329 iPc	21 14.60	-1.5	LPF	53.76	321 eP	22 00.00 -1.8	
	TDS	38.73	320	P	20	05.50	2.3			1.7s	57.00nm	5.4mb			1.4s	36.15nm	5.2mb
	MNO	38.82	317	P	20	07.00	2.7			e	21 27.30		GRR	53.80	322 eP	21 59.90 -2.2	
	GUN	39.07	61	P	20	05.88	-0.8	DIX	47.75	323 ePd	21 16.10	-0.5	HFS	53.88	340 eP	22 00.00 -2.5	
	G18	39.30	317	P	20	09.00	0.9	LPG	47.85	322 eP	21 16.60	-0.8			1.1s	27.30nm	5.2mb
	BEO	39.82	330	eP	20	11.00	-1.2	CLL	47.92	331 iPc	21 16.10	-1.3	Z	18s	1.53um	5.1MsZ	
	AZI	41.88	321	P	20	33.10	4.0X			1.6s	49.00nm	5.3mb			e	22 14.50	
	SLR	42.16	206	iPc	20	35.00	3.2X			eS	28 15.00				LR	41 03.00	
		1.2s	62.50nm				5.2mb	ZLA	47.95	325 ePd	21 17.10	-0.7	CD2	54.94	61 P	22 11.80 1.0	
	Z	17s	5.44um				5.5MsZ	ELS	48.03	322 ePd	21 17.80	-0.9	Z	11s	1.70um	5.4MsZ	
	PSZ	42.35	332	iP	20	33.10	0.1	SLE	48.05	325 ePd	21 18.10	-0.5	NB2	55.38	340 P	22 10.90 -2.7	
	PTJ	42.86	328	eP	20	36.50	-0.7	MOX	48.15	330 iPc	21 18.00	-1.3			1.3s	27.60nm	5.1mb
	VBY	42.97	327	eP	20	39.00	1.0			1.6s	57.00nm	5.4mb	SOD	56.75	351 eP	22 23.00 -0.2	
	SRO	43.00	331	eP	20	38.20	0.0	FEL	48.38	325 eP	21 20.15	-1.1	GYA	57.14	66 iPc	22 25.80 -1.0	
	ARV	43.05	323	P	20	40.00	1.3	BBS	48.44	324 P	21 21.60	0.0	N	14s	1.00um		
	SPC	43.15	334	eP	20	39.40	-0.3	LOMF	48.77	324 P	21 23.30	-0.9	E	14s	2.10um		
	OBN	43.57	351	iP	20	43.20	0.5	MOF	48.86	325 P	21 24.05	-0.9	EKA	58.16	329 P	22 44.00 10.7X	
		1.5s	105.00nm				5.4mb	BSF	49.05	324 eP	21 25.00	-1.3			0.8s	4.20nm	
	N	24s	2.50um							1.1s	16.85nm	5.0mb	CRZF	58.57	176 e(P)	22 49.00 12.8X	
	E	24s	1.00um					ECH	49.05	325 P	21 25.05	-1.2			e(S)	30 51.00	
		i	20 52.00					WLS	49.05	325 P	21 25.58	-0.7	AKU	68.93	336 eP	23 45.60 1.6	
		e	21 04.00					CDF	49.09	325 P	21 25.34	-1.3			1.5s	66.67nm	5.6mb
		ePcP	22 17.00					GWf	49.21	326 P	21 27.26	-0.2	WRA	91.21	110 P	25 45.00 0.7	
		iPP	22 29.00					HAU	49.39	324 eP	21 27.40	-1.5			0.7s	17.60nm	5.5mb
		ePPP	23 00.00					Z	20s	1.10um	4.9MsZ		ASPA	91.62	114 ePKP	25 45.10 -1.1	
		ePcS	25 57.00					VITF	49.71	324 P	21 30.05	-1.2			0.7s	11.20nm	5.3mb
		iS	27 16.00					CHG	49.86	76 eP	21 32.50	-0.4	Z	19s	2.10um	5.6MsZ	
		iSS	30 24.00					BDT	49.95	78 eP	21 28.10	-5.4X	IMA	100.31	9 ePdiff26	36.60 11.6X	
		eSSS	31 24.00					SMF	50.18	322 eP	21 33.20	-1.7	YKA	104.16	352 ePdiff26	45.70 3.6X	
		LR	34 30.00					LBF	50.26	322 eP	21 34.10	-1.5			0.9s	0.70nm	4.5mb
	CEY	43.57	326	eP	20	45.50	2.6	LOR	50.46	322 eP	21 35.70	-1.4	TNP	127.90	345 PKP	31 46.70 1.3	
	LJU	43.71	327	eP	20	45.00	1.0			1.3s	35.40nm	5.2mb	GSC	130.40	343 ePKP	31 39.00 -11.1X	
		eS	27 15.00					Z	20s	0.80um	4.7MsZ	ISA	130.50	345 ePKP	31 44.00 -6.3X		
	CRE	43.71	322	P	20	50.00	5.8X	AVF	50.54	322 eP	21 35.90	-1.8	SBB	131.26	344 ePKP	31 48.00 -3.7X	
	SHL	43.82	66	eP	20	44.50	-1.0			1.2s	10.40nm	4.7mb	TPC	131.29	342 ePKP	31 54.00 2.2	
		eS	27 15.00					SSF	50.58	322 eP	21 36.30	-1.7	GLA	131.87	340 ePKP	31 55.00 2.1	
	ZST	43.85	331	iP	20	44.80	-0.3			1.1s	18.80nm	4.9mb			S.D. = 1.2	on 187 of 206 obs.	
		e	40 02.30					BGF	50.74	321 eP	21 38.20	-1.0					
	KRA	43.93	335	eP	20	45.00	-0.8			1.3s	40.05nm	5.2mb					
		1.4s	112.00nm				5.5mb	MAF	50.76	321 eP	21 38.20	-1.2					
		e	20 54.10					MEM	50.99	327 P	21 40.50	-0.5					
	VOY	44.04	326	eP	20	46.40	-0.5	NUR	51.00	346 iP	21 38.80	-2.1					
		i	20 57.20							i	21 53.10						
	VKA	44.27	330	iPc	20	48.20	-0.4	TCF	51.01	321 eP	21 40.10	-1.2					
		3.5s	470.00nm				5.8mb X	RJF	51.01	319 eP	21 40.30	-1.0					
		i	20 57.70					Z	21s	13.10nm	4.7mb						
		e	22 43.00					NST	51.10	80 eP	21 42.00	-0.3					
	FVI	45.00	326	P	20	54.00	-0.4	ENN	51.12	327 eP	21 42.00	0.0					
	KBA	45.00	327	e(P)	20	52.00	-2.7			1.0s	24.00nm	5.1mb					
		e	21 15.00					WTS	51.36	329 eP	21 44.00	0.2	BTO	11.48	162 P	20 39.70 -1.2	
	KMR	45.22	329	iP+	20	56.60	0.4	LSF	51.42	320 eP	21 43.20	-1.2					
		i	21 05.30					DOU	51.48	326 P	21 46.20	1.5	HHC	11.58	156 eP	20 40.80 -1.5	
		e	22 27.00							S	29 02.00		Z	10s	10.80um		
	CTI	45.29	325	P	20	57.30	0.4	KIC	51.81	268 P	21 48.82	1.0					
	KSP	46.09	333	eP	21	02.50	-0.5			1.6s	135.00nm	5.6mb	GTA	12.83	200 P	21 00.00 0.9	
		1.2s	51.00nm				5.4mb	SNF	51.86	326 P	21 49.60	2.0					
		i	21 04.00					WIT	51.91	330 eP	21 52.00	4.1X	Z	16s	2.90um		
		e	22 49.00					UCC	51.98	327 eP	21 57.00	8.5X	E	10s	8.60um		
	KHC	46.20	329	iP	21	03.00	-0.9	TIC	52.03	269 P	21 50.52	1.0					
		1.4s	22.00nm				5.0mb	KAF	52.05	348 iP	21 47.20	-1.7					
	Z	14s	1.30um				5.0MsZ			1.1s	19.80nm	5.0mb					
	N	14s	0.50um					LIC	52.11	268 P	21 51.20	1.1	Z	12s	4.80um	3.2MsZ	
	E	14s	1.00um							1.5s	126.00nm	5.6mb					
		e	21 21.50					DBN	52.25	328 eP	21 51.00	0.5	CN2	15.55	112 Pc	21 32.00 -2.4	
		S	27 48.00					Z	20s	0.50um	4.6MsZ						
	PRU	46.30	331	eP	21	04.00	-0.7			eS	29 18.00						
		1.5s	26.80nm				5.0mb	MAL	52.38	307 iPc	21 52.00	0.2					
	Z	12s	1.30um				5.1MsZ			iS	29 18.00		LZH	15.58	185 iPd	21 42.00 6.9X	
	N	10s	0.80um					UPP	52.40	342 iP	21 49.60	-1.9					
	E	14s	0.80um					MFF	52.61	320 eP	21 51.90	-1.5	Z	12s	3.00um	4.0MsZ	
		e	21 14.50					TOL	52.93	311 iPc	21 55.00	-0.9					
		eS	22 44.00							1.1s	50.63nm	5.4mb					
		eS	27 48.00							ePP	23 57.50						
		eS	21 07.00				0.4			eS	29 25.50						
	OSS	46.51	325	ePd	21	07.00	0.4			eSS	32 57.50						
	SBF	46.60	320	eP	21	07.80	0.6										
	WMO	46.68	40	P	21	08.00	0.1	GTA	53.39	50 P	22 00.00	0.6					



LZH	15.58	185	eP	21 35.00	-0.1	MFF	63.19	312	eP	28 22.90	-0.1	eSg	40 47.32					
	2.0s	54.00nm		4.4mb		LFF	64.01	310	eP	28 28.60	0.2	iPgc	40 41.76	-0.5				
Z	23s	8.20um		3.8mszX		SES	73.74	23	eP	29 28.00	-0.3	eSg	40 52.88					
N	12s	4.50um				WRA	75.63	152	P	29 40.00	0.5	ePg	40 43.21	0.5				
SNY	15.80	121	eP	21 35.10	-2.6		0.9s	3.10nm		4.3mb		eSg	40 55.48					
Z	12s	9.40um				ASPA	79.03	154	eP	30 04.30	6.0X	ePg	40 45.08	0.5				
N	10s	5.90um					0.8s	4.90nm		4.6mb		eSg	40 57.12					
		pP	21 43.00			STK	89.02	150	eP	31 04.70	16.1X	iPgc	40 47.00	-0.6				
YAK	16.76	42	iPd	21 52.30	2.6		0.6s	1.30nm				iSg	41 01.00					
DL2	17.03	132	eP	21 54.00	0.7	ALO	89.36	26	eP	30 52.00	1.2	eP	40 51.00	-1.5				
Z	12s	3.80um				ZOBO	144.35	349	ePKP	37 31.00	-0.2	eSg	41 11.00					
N	10s	4.10um				Z	24s	0.28um		4.9mszX		ePg	40 56.00	1.8				
TIA	17.53	147	eP	21 59.70	0.2			LR	09 34.00			eSg	41 16.00					
Z	11s	6.90um					S.D. = 1.2	on	53 of 58 obs.			ePg	41 04.00	1.2				
N	10s	4.80um					% MAY 12, 1991	16h	21m	41.05±1.21s			41 31.00					
E	10s	2.30um					40.339 N ± 7.8km		28.511 E ± 9.4km			S.D. = 1.0	on 12 of 12 obs.					
MDJ	17.54	104	eP	22 00.00	0.4		DEPTH = 10.0km	(geophysicist)				% MAY 12, 1991	19h	43m	51.44±0.57s			
	1.5s	90.00nm		4.7mb			TURKEY			(366)		40.479 N ± 4.6km		23.505 E ± 5.2km				
Z	10s	7.15um		4.1mszX			MD 2.4 (ISK).					DEPTH = 5.0km	(geophysicist)					
N	10s	6.55um										GREECE			(364)			
E	10s	5.79um					KCT	0.15	233	iPg	21 43.50	-1.0	ML 2.0 (THE).					
XAN	17.76	170	P	22 01.80	-0.7													
N	12s	4.70um					BNT	0.45	272	ePg	21 50.00	-0.3	SOH	0.36	341	ePgc	43 58.92	0.2
CD2	20.74	184	P	22 38.00	1.6													
Z	11s	1.70um		4.7mszX			EDC	0.50	271	ePg	21 51.00	-0.1	OUR	0.39	111	ePg	43 59.74	0.4
NJ2	21.91	148	Pc	22 49.00	0.9		DST	0.74	173	ePg	21 56.00	0.4						
Z	12s	3.40um		5.0mszX			CTT	0.81	356	iPg	21 56.50	-0.2	THE	0.44	291	ePg	44 00.38	0.1
N	10s	5.20um					KGT	0.93	277	ePn	22 00.00	1.2						
WHN	22.08	159	eP	22 51.00	1.2			S.D. = 1.0	on	6 of 6 obs.			PAIG	0.57	166	ePg	44 02.38	-0.4
Z	12s	0.80um		4.4mszX														
		eS	26 50.00				* MAY 12, 1991	16h	27m	38.24±0.73s			SRS	0.64	6	ePg	44 03.98	-0.3
SSE	23.59	144	P	23 07.10	2.6		19.921 S ± 12.8km		67.892 E ± 19.0km									
	4.0s	400.00nm		5.3mb X			DEPTH = 10.0km	(geophysicist)					KNT	0.82	326	iPgc	44 07	-0.5
Z	12s	4.10um		5.1mszX			4.9mb ( 4 obs.)											
N	12s	2.10um					MID-INDIAN RISE			(429)			LIT	0.86	244	ePg	44 08.60	0.1
E	12s	1.10um																
		eS	27 17.00				HYB	38.55	156	eP	35 02.50	-0.5	GRG	0.97	300	ePg	44 10.66	0.4
		SS	27 21.00				QUE	49.83	359	eP	36 32.30	-1.4						
GZH	29.15	165	Pd	23 57.60	1.4		DMN	50.10	20	P	36 36.10	0.2						
SOD	39.83	324	eP	25 38.00	10.5X		PKI	50.17	20	P	36 38.82	2.3						
NUR	43.20	314	eP	25 51.00	-4.1X		GKN	50.32	19	P	36 37.14	-0.3						
HFS	48.12	318	eP	26 33.50	-0.8		KKN	50.33	20	P	36 37.58	0.0						
	0.5s	1.50nm		4.3mb			GUN	50.63	21	P	36 40.18	0.1						
		e	26 37.00				SHL	50.87	28	eP	36 41.70	0.0						
		e	26 53.50				MAIO	56.48	352	eP	37 37.00	14.2X						
NB2	48.64	320	P	26 37.80	-0.5		ASPA	60.93	107	eP	37 58.70	4.6X						
	0.6s	1.20nm		4.1mb				0.9s	6.70nm		4.8mb							
FBA	50.91	32	P	26 56.50	0.9		WRA	62.06	103	P	38 02.00	0.2						
KRA	50.99	304	eP	26 57.50	1.1			0.4s	5.10nm		5.1mb							
KSP	52.36	307	eP	27 07.50	0.7		WB2	62.07	103	iPc	38 02.10	0.2						
INK	52.67	24	eP	27 09.00	0.2			0.4s	4.40nm		5.0mb							
TOA	53.30	34	eP	27 15.00	1.3		SPA	70.20	180	eP	38 53.00	-0.2						
BRG	53.50	308	iPc	27 15.40	0.2			1.0s	9.00nm		4.9mb							
	1.4s	24.00nm		5.0mb			VR1	75.37	332	eP	39 30.50	6.8X						
CLL	53.69	309	iP	27 17.50	0.9		CVO	75.58	331	eP	39 33.50	8.6X						
PRU	53.77	307	P	27 18.00	0.8		KIC	76.00	282	P	39 29.40	1.5						
	1.2s	8.30nm		4.6mb			KSP	83.76	330	eP	40 17.00	8.3X						
MOX	54.79	309	eP	27 26.00	1.3		KHC	83.96	328	P	40 16.50	6.7X						
	1.4s	19.00nm		4.9mb			PRU	84.04	329	eP	40 17.50	7.4X						
KHC	54.80	307	iP	27 26.50	1.6		BRG	84.90	329	e(P)	40 24.00	9.6X						
	1.3s	8.00nm		4.6mb			CLL	85.64	329	e(P)	40 26.00	7.9X						
GRF	55.60	308	iPd	27 32.00	1.4		TNS	87.27	326	ePc	40 39.50	13.3X						
	1.4s	36.00nm		5.2mb			YKA	137.43	2	ePKP	47 03.50	0.0						
ABH	57.25	310	eP	27 43.60	1.2			0.9s	0.60nm									
CDF	58.38	309	eP	27 50.00	-0.5		FFC	144.41	350	ePKP	47 14.00	-2.1						
BSF	59.02	309	eP	27 54.30	-0.6			0.8s	6.00nm									
	1.0s	12.00nm		5.0mb			UPA	146.70	256	(PKP)	47 25.00	3.9X						
HAU	59.11	309	eP	27 55.00	-0.5		SES	149.58	359	ePKP	47 35.00	10.3X						
LPG	60.68	307	eP	28 06.10	-0.5		PNT	150.06	10	ePKP	47 39.00	13.6X						
LOR	60.83	310	eP	28 05.90	-1.3			S.D. = 1.1	on	14 of 27 obs.								
	1.2s	9.50nm		4.8mb														
LBF	60.97	310	eP	28 06.70	-1.5			MAY 12, 1991	19h	40m	25.96±0.61s							
SSF	61.14	310	eP	28 08.30	-1.0			40.472 N ± 4.9km		23.477 E ± 5.5km								
	1.0s	10.60nm		4.9mb				DEPTH = 5.0km	(geophysicist)									
SMF	61.28	310	eP	28 09.60	-0.7			GREECE			(364)							
AVF	61.41	310	eP	28 10.40	-0.7			ML 2.0 (THE).										
	0.9s	6.40nm		4.8mb														
LDF	61.72	313	eP	28 12.20	-1.0		SOH	0.36	345	ePgc	40 33.29	0.1						
FLN	61.75	314	eP	28 11.70	-1.7													
YKA	61.90	20	eP	28 12.20	-2.0		OUR	0.41	109	ePg	40 34.12	-0.1						
	0.7s	0.90nm		4.0mb														
MAF	62.20	310	eP	28 16.00	-0.5													
	1.0s	8.00nm		4.8mb			THE	0.42	292	ePg	40 34.38	0.0						
TCF	62.32	310	eP	28 16.40	-0.9													
	1.0s	8.00nm		4.8mb			PAIG	0.57	164	ePg	40 36.64	-0.7						
LSF	62.67	311	eP	28 18.50	-1.1													
							SRS	0.65	8	ePg	40 38.32	-0.6						



12d 20h

BSF 148.67 360 ePKP 13 48.90 18.3X  
 LOR 149.15 4 ePKP 13 50.30 19.1X  
 0.8s 3.90nm  
 S.D. = 0.9 on 14 of 25 obs.

% MAY 12, 1991 20h 05m 22.24 ± 0.57s  
 40.484 N ± 4.6km 23.529 E ± 5.2km  
 DEPTH = 5.0km (geophysicist)

GREECE (364)  
 ML 2.0 (THE).

SOH 0.36 338 ePgc 05 30.07 0.5  
 eSg 05 34.32  
 OUR 0.38 113 ePg 05 29.84 0.0  
 eSg 05 35.64  
 THE 0.45 289 ePg 05 30.96 -0.4  
 eSg 05 37.64  
 PAIG 0.57 168 ePg 05 33.56 -0.1  
 eSg 05 40.80  
 SRS 0.63 4 ePg 05 34.72 -0.2  
 eSg 05 44.24  
 KNT 0.83 325 ePgc 05 38.44 -0.3  
 eSg 05 49.68  
 LIT 0.88 245 ePg 05 39.84 0.2  
 eSg 05 52.20  
 GRG 0.98 299 ePg 05 41.60 0.3  
 eSg 05 55.96

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

\* MAY 12, 1991 20h 14m 42.65 ± 2.09s  
 37.648 N ± 14.9km 20.442 E ± 17.4km  
 DEPTH = 10.0km (geophysicist)  
 3.6mb (1 obs.)

IONIAN SEA (399)  
 MD 3.4 (ATH).

AGG 2.02 47 ePc 15 17.90 0.7  
 KEK 2.12 346 ePn 15 27.00 8.4X  
 VLI 2.20 114 ePn 15 20.00 0.3  
 SRN 2.25 351 ePn 15 29.80 9.3X  
 LSK 2.50 3 ePn 15 25.20 1.1  
 TPE 2.66 353 ePn 15 25.20 -1.2  
 KZN 2.85 21 ePn 15 32.00 2.9X  
 LIT 2.92 33 eP 15 29.90 -0.1  
 FNA 3.21 13 ePc 15 34.60 0.4  
 KNT 3.99 28 eP 15 44.70 -0.5  
 VAY 4.02 24 ePn 15 45.00 -0.5  
 PHP 4.03 360 ePn 15 48.20 2.5  
 SRS 4.24 34 eP 15 47.80 -0.9  
 SKO 4.39 10 ePn 15 50.00 -0.8  
 HFS 22.91 351 eP 19 46.50 -1.0  
 0.9s 1.70nm 3.6mb  
 e 19 50.50

S.D. = 1.2 on 12 of 15 obs.

MAY 12, 1991 22h 39m 47.25 ± 0.65s  
 41.034 N ± 5.9km 22.404 E ± 5.8km  
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)  
 ML 2.5 (SKO), 2.2 (THE).

GRG 0.08 181 iPgc 39 49.48 -0.3  
 eSg 39 51.92  
 VAY 0.31 24 iPg 39 52.00 -1.7  
 iSg 39 56.20  
 KNT 0.39 71 ePgc 39 54.02 -1.3  
 eSg 39 59.24  
 THE 0.59 133 ePg 39 57.74 -1.3  
 eSg 40 05.84  
 SOH 0.75 106 ePgc 40 00.84 -1.1  
 eSg 40 10.80  
 FNA 0.82 253 ePg 40 03.34 0.2  
 eSg 40 15.44  
 SRS 0.90 84 ePg 40 03.32 -1.2  
 eSg 40 14.88  
 LIT 0.93 176 ePg 40 05.40 0.3  
 eSg 40 19.28  
 KKB 0.98 31 ePg 40 05.00 -0.8  
 iSg 40 17.00  
 MMB 1.14 61 iPc 40 08.00 -0.6  
 iSg 40 23.00  
 SKO 1.18 323 ePn 40 08.00 -1.3  
 iSn 40 23.60  
 OHR 1.22 274 ePg 40 10.00 0.1  
 eSg 40 26.50  
 PAIG 1.47 138 ePb 40 14.52 0.7  
 eSb 40 34.48

VTS 1.67 21 eP 40 18.00 1.2  
 eS 40 39.00  
 RZN 1.86 69 iP 40 22.00 2.4  
 iSg 40 47.00  
 PGB 2.01 40 ePg 40 24.00 2.4  
 eS 40 48.00  
 PLD 2.03 57 eP 40 27.00 5.1X  
 eS 40 50.00  
 KDZ 2.35 74 eP 40 29.00 2.5  
 iSg 40 59.00  
 PVL 3.08 44 eP 40 42.00 5.2X  
 eS 41 24.00

S.D. = 1.5 on 17 of 19 obs.

& MAY 13, 1991 00h 03m 24.42s  
 67.266 N 153.524 W  
 DEPTH = 0.0km  
 ALASKA (676)  
 <AEIC>. ML 2.8 (AEIC), 3.2 (PMR).

IMA 1.20 183 iPc 03 47.30 -0.6  
 MDM 3.16 135 eP 04 15.75 -0.7  
 NEA 3.26 144 eP 04 17.60 -0.2  
 RDS 3.29 136 eP 04 17.77 -0.5  
 FBA 3.33 133 ePc 04 18.80 0.0  
 FYU 3.34 98 eP 04 19.01 0.1  
 GLM 3.38 130 eP 04 18.76 -0.9  
 CCB 3.52 136 eP 04 20.94 -0.5  
 BWN 3.53 150 eP 04 21.89 0.2  
 WRH 3.59 139 eP 04 22.15 -0.3  
 HDA 3.94 134 eP 04 26.59 -0.9  
 TRF 4.06 159 eP 04 29.15 -0.2  
 RND 4.34 151 eP 04 32.76 -0.5  
 TTA 4.48 195 eP 04 34.60 -0.6  
 TOA 6.06 145 eP 04 59.90 2.4  
 SVW 6.25 189 eP 04 59.10 -1.1  
 INK 7.64 73 P 05 19.00 -0.6  
 0.3s 1.10nm 4.6mb X  
 YKA 16.97 88 eP 07 29.10 4.7  
 0.6s 0.20nm 2.4mb  
 18 obs. associated

% MAY 13, 1991 00h 23m 30.71 ± 2.09s  
 36.544 N ± 19.7km 13.145 E ± 9.1km  
 DEPTH = 10.0km (geophysicist)  
 MEDITERRANEAN SEA (400)

FAI 0.85 30 Pc 23 48.30 1.3  
 eSg 24 00.70  
 PTS 0.96 286 P 23 49.40 0.4  
 eSg 24 00.30  
 CVT 1.17 346 P 23 51.50 -1.0  
 eSn 24 07.40  
 MEU 1.54 68 P 23 57.70 -0.6  
 eSn 24 18.80  
 GIB 1.61 26 P 23 59.10 -0.2  
 eSn 24 20.40

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

MAY 13, 1991 01h 54m 37.96 ± 0.51s  
 41.110 N ± 4.9km 22.424 E ± 4.2km  
 DEPTH = 10.0km (geophysicist)  
 YUGOSLAVIA (383)  
 ML 2.1 (SKO), 1.9 (THE).

GRG 0.15 186 iPgc 54 41.16 -0.4  
 eSg 54 43.42  
 VAY 0.24 28 iPg 54 43.60 0.6  
 iSg 54 47.70  
 KNT 0.36 82 iPg 54 45.70 0.3  
 eSg 54 50.78  
 THE 0.63 139 ePgc 54 49.48 -1.1  
 eSg 54 57.54  
 SOH 0.76 112 ePg 54 52.58 -0.3  
 eSg 55 02.50  
 FNA 0.86 248 ePg 54 54.82 0.3  
 eSg 55 07.30  
 SRS 0.88 89 ePg 54 54.82 -0.1  
 eSg 55 06.46  
 LIT 1.01 177 ePg 54 57.38 0.3  
 eSg 55 11.86  
 SKO 1.13 320 ePn 54 58.00 -1.2  
 OHR 1.23 271 ePg 55 01.50 0.7  
 eSg 55 18.70  
 PAIG 1.52 141 ePb 55 06.22 1.0  
 eSb 55 26.26

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

& MAY 13, 1991 02h 23m 55.68s  
 60.124 N 152.933 W  
 DEPTH = 120.2km  
 3.0mb (1 obs.)  
 SOUTHERN ALASKA (2)  
 <AEIC>.

RED 0.31 15 iPd 24 12.26 0.8  
 eS 24 25.20  
 RS2 0.35 14 iPd 24 12.65 -0.7  
 eS 24 27.01  
 RSO 0.35 15 iPd 24 12.62 -0.7  
 RDW 0.37 10 iPd 24 12.64 -0.8  
 eS 24 26.39  
 RDN 0.40 12 iPd 24 12.82 -0.7  
 eS 24 27.00  
 NCT 0.44 0 iPd 24 12.96 -0.7  
 eS 24 26.50  
 DFR 0.49 15 iPd 24 13.00 -0.9  
 eS 24 26.95  
 RDT 0.52 30 iPd 24 13.34 -0.8  
 eS 24 27.23  
 PDB 0.72 243 iPc 24 14.48 -1.0  
 eS 24 29.15  
 AUE 0.80 196 eP 24 15.18 -0.9  
 >NNL 0.82 95 iPd 24 16.49 0.1  
 AUI 0.83 198 eP 24 15.64 -0.8  
 eS 24 30.87  
 XLV 0.91 137 ePd 24 16.25 -0.9  
 eS 24 32.45  
 NKA 1.05 53 ePd 24 19.38 0.9  
 CNPM 1.05 124 iPd 24 17.95 -0.6  
 eS 24 34.98  
 CKL 1.12 15 iPd 24 18.66 -0.7  
 eS 24 36.65  
 SPU 1.15 22 iPd 24 18.72 -0.9  
 eS 24 36.49  
 BGL 1.17 13 ePd 24 19.41 -0.5  
 MCNL 1.18 218 ePc 24 18.66 -1.2  
 eS 24 36.70  
 CRP 1.21 18 ePd 24 19.87 -0.5  
 S 24 38.48  
 CDD 1.25 197 ePc 24 19.29 -1.4  
 NCG 1.34 16 eP 24 21.36 -0.4  
 SLKM 1.40 73 eP 24 21.23 -1.2  
 SYI 1.54 169 ePc 24 22.59 -1.4  
 SVW 1.65 308 ePc 24 23.70 -1.7  
 SUA 1.72 38 ePd 24 25.63 -0.6  
 eS 24 48.69  
 SEW 1.74 89 eP 24 24.75 -1.6  
 SKT 1.98 20 eP 24 28.20 -1.2  
 PMS 2.00 54 ePd 24 28.34 -1.4  
 LTI 2.55 90 eP 24 34.69 -1.9  
 KNK 2.55 58 eP 24 35.73 -1.0  
 GHO 2.56 48 eP 24 34.47 -2.5  
 KNIM 2.60 83 eP 24 34.53 -2.9  
 CUT 2.63 28 eP 24 36.15 -1.5  
 GLI 2.99 73 eP 24 40.56 -1.9  
 KLU 3.70 65 ePc 24 49.29 -2.8  
 YKA 18.37 66 eP 27 59.90 -3.5  
 0.5s 0.40nm 3.0mb  
 37 obs. associated

MAY 13, 1991 02h 49m 58.74 ± 1.29s  
 38.526 N ± 10.1km 22.443 E ± 10.2km  
 DEPTH = 10.0km (geophysicist)  
 GREECE (364)  
 ML 3.2 (ATH), 2.7 (THE).

AGG 0.50 350 ePg 50 08.32 -0.6  
 iSg 50 17.76  
 ATH 1.14 118 eP 50 20.00 -0.1  
 eS 50 37.80  
 LIT 1.57 1 ePb 50 26.56 -0.2  
 eSb 50 48.70  
 PAIG 1.70 34 ePbd 50 28.44 -0.1  
 eSb 50 52.60  
 KZN 1.85 344 eP 50 30.80 -0.1  
 IGT 1.93 302 eP 50 34.86 3.0X  
 eS 51 00.72  
 SOH 2.40 17 eP 50 39.32 0.6  
 eS 51 10.68  
 FNA 2.40 340 eP 50 38.12 -0.6  
 eS 51 08.64  
 GRG 2.43 359 eP 50 39.88 0.8



KNT 2.66 7 eP 51 10.32 0.4  
 SRS 2.74 19 eP 50 42.96 -0.5  
 OHR 2.88 334 ePn 50 46.00 0.5  
 ALN 3.65 48 eP 50 56.44 0.0  
 S.D. = 0.5 on 12 of 13 obs.

& MAY 13, 1991 03h 15m 15.40s  
 61.984 N 124.259 W  
 DEPTH = 10.0km (geophysicist)  
 4.5mb ( 6 obs.)  
 NORTHWEST TERRITORIES, CANADA (679)  
 <PGC>. ML 4.4 (PGC).

MUB 3.13 194 P 16 06.20 0.5  
 YKA 4.54 79 eP 16 26.60 0.9  
 0.4s 8.90nm  
 DLB 4.59 222 P 16 26.20 -0.4  
 BDBC 5.92 169 P 16 43.50 -1.7  
 PLBC 6.46 252 P 16 51.70 -1.1  
 HYT 6.47 266 Pd 16 52.00 -1.0  
 DWY 7.21 293 P 17 02.00 -1.3  
 INK 7.44 332 P 17 03.00 -3.5  
 0.5s 10.50nm 5.3mb  
 MNB 10.31 159 P 17 43.50 -3.1  
 FBA 10.91 296 P 17 53.00 -1.4  
 SLEB 11.35 160 P 17 57.60 -3.1  
 PNT 12.96 166 P 18 26.00 3.9  
 1.0s 1.60nm 4.2mb  
 SES 13.71 142 P 18 28.00 -4.1  
 0.8s 3.60nm 4.3mb  
 FFC 13.72 112 iPc 18 25.90 -6.2  
 0.5s 11.00nm 5.0mb  
 FRB 24.79 61 P 20 42.00 3.8  
 0.9s 2.10nm 3.8mb  
 GOL 25.11 144 P 20 44.80 3.1  
 1.0s 10.00nm 4.5mb  
 ANMO 29.31 149 (P) 21 21.50 1.4  
 ALO 29.32 149 eP 21 21.20 1.0  
 18 obs. associated

MAY 13, 1991 03h 24m 20.22± 0.49s  
 40.959 N ± 4.7km 142.042 E ± 7.2km  
 DEPTH = 71.3 ± 4.7 km  
 4.7mb ( 24 obs.)  
 NEAR EAST COAST OF HONSHU, JAPAN(228)

AOMJ 1.33 253 P 24 42.70 -0.6  
 MRRJ 1.64 334 iPd 24 45.90 -1.5  
 S 25 05.80  
 HOOJ 1.70 33 iPd 24 49.10 0.8  
 eS 25 10.80  
 OFUJ 1.90 189 iP+ 24 50.60 -0.5  
 eS 25 14.00  
 KUSJ 2.92 42 iPd 25 04.10 -1.1  
 S 25 37.20  
 YAMJ 3.18 210 eP 25 09.80 0.8  
 ASAJ 3.19 8 P 25 08.90 -0.1  
 eS 25 47.90  
 NIJJ 4.40 213 P 25 26.80 0.7  
 KAKJ 4.97 198 P 25 32.20 -1.7  
 eS 26 27.30  
 CHJJ 5.45 207 eP 25 40.90 0.1  
 S 26 50.20  
 MTMJ 5.48 219 eP 25 42.40 1.2  
 IIDJ 6.36 212 eP 25 54.20 0.8  
 eS 27 13.60  
 TSRJ 7.21 223 eP 26 07.60 2.5  
 MDJ 9.85 296 Pd 26 42.50 1.1  
 SSE 19.49 246 P 28 42.50 -1.6

Z 20s 1.40um  
 N 12s 0.80um  
 E 12s 0.30um  
 TIA 20.02 264 eP 28 45.70 -4.0X  
 CHG 42.85 252 eP 32 13.00 0.0  
 FBA 45.56 34 P 32 35.40 1.3  
 GUN 47.37 272 Pc 32 48.88 -0.5  
 KKN 47.88 273 Pc 32 52.60 -0.7  
 0.8s 50.00nm 5.5mb  
 PKI 47.90 272 Pc 32 52.58 -0.9  
 0.6s 12.00nm 5.0mb  
 DMN 48.11 273 Pc 32 54.30 -0.8  
 0.7s 18.00nm 5.1mb  
 GKN 48.26 273 Pc 32 55.12 -1.0  
 0.7s 27.00nm 5.3mb

INK 50.69 29 eP 33 14.00 0.1  
 pP 33 31.50 69kmX  
 YKA 60.19 31 eP 34 38.90 16.4X  
 0.8s 0.70nm  
 WRA 61.01 188 P 34 26.00 -2.4  
 0.5s 1.70nm 4.4mb  
 ASPA 64.74 188 eP 34 52.30 -0.7  
 0.5s 3.30nm 4.5mb  
 KAF 65.06 332 iP 34 53.40 -1.3  
 0.6s 8.30nm 4.9mb  
 NUR 66.73 331 iP 35 04.30 -1.1  
 0.5s 15.40nm 5.2mb  
 HFS 70.72 335 eP 35 29.00 -1.1  
 0.6s 6.20nm 4.7mb  
 e 35 32.80  
 e 35 54.10  
 NB2 70.77 337 P 35 29.50 -0.9  
 0.8s 7.00nm 4.6mb  
 KRA 76.13 326 eP 36 01.80 0.1  
 BRG 77.93 329 e(P) 36 11.40 -0.2  
 CLL 77.94 330 e(P) 36 11.00 -0.7  
 PRU 78.40 328 eP 36 15.00 0.8  
 KHC 79.46 328 eP 36 21.00 0.9  
 EKA 79.60 341 P 36 21.00 0.3  
 0.9s 3.30nm 4.3mb  
 GRF 79.92 330 eP 36 23.60 1.1  
 0.9s 9.00nm 4.7mb  
 LOR 84.62 333 eP 36 46.90 0.0  
 0.7s 4.40nm 4.6mb  
 Z 20s 0.17um 4.4Msz  
 LDF 84.77 336 eP 36 47.50 0.0  
 LBF 84.82 333 eP 36 47.80 -0.1  
 0.9s 3.30nm 4.4mb  
 SSF 84.92 333 eP 36 48.60 0.3  
 0.7s 3.85nm 4.6mb  
 LPL 85.08 330 eP 36 49.90 0.4  
 0.7s 4.40nm 4.6mb  
 LPG 85.09 330 eP 36 50.10 0.5  
 0.7s 4.40nm 4.6mb  
 SMF 85.16 333 eP 36 49.80 0.2  
 0.8s 6.70nm 4.7mb  
 GRR 85.18 336 eP 36 50.00 0.4  
 0.9s 6.55nm 4.7mb  
 AVF 85.21 333 eP 36 50.10 0.3  
 0.7s 7.15nm 4.8mb  
 MAF 85.97 333 eP 36 54.50 0.9  
 0.7s 8.25nm 4.9mb  
 TCF 86.04 333 eP 36 54.50 0.5  
 LSF 86.30 334 eP 36 55.60 0.4  
 0.6s 7.20nm 4.9mb  
 MFF 86.54 335 eP 36 57.20 0.8  
 0.7s 5.50nm 4.8mb  
 CAF 87.27 333 eP 37 01.30 1.3  
 0.8s 6.70nm 4.8mb  
 LPO 87.79 333 eP 37 03.40 1.0  
 S.D. = 1.0 on 51 of 53 obs.

MAY 13, 1991 03h 30m 57.05± 0.54s  
 32.179 S ± 6.2km 71.392 W ± 8.2km  
 DEPTH = 79.2 ± 6.7 km  
 4.5mb ( 10 obs.)  
 NEAR COAST OF CENTRAL CHILE (135)  
 Felt (IV) at Papudo and  
 Valparaiso and (III) at  
 Quilloto.

JACH 0.84 127 iPd 31 14.50 0.0  
 ROCH 0.85 158 iPc 31 14.70 -0.1  
 IHA 0.87 194 iPd 31 13.60 -1.1  
 iS 31 26.30  
 LCCH 1.30 187 iPc 31 19.70 -0.4  
 SAN 1.41 154 iPc 31 22.00 0.4  
 iS 31 39.00  
 TACH 1.52 166 iPc 31 23.30 0.3  
 PCH 1.62 153 iPc 31 25.00 0.6  
 LNV 1.77 181 iPc 31 25.90 -0.4  
 MDZ 2.26 109 iP 31 36.80 3.7X  
 i 32 04.40  
 ZON 2.39 75 iPc 31 37.00 2.1  
 ANT 8.49 6 e(P) 32 53.50 -5.8X  
 CCH 15.48 19 P 34 33.50 1.1  
 ARE 15.65 360 eP 34 34.00 -0.5  
 ZOBO 16.11 11 P 34 39.90 -0.8  
 LR 40 14.00  
 PPD 20.50 65 ePc 35 29.10 -1.8  
 e 35 33.00  
 e 35 44.00

NNA 20.71 345 eP 35 35.50 2.3X  
 0.7s 5.48nm 4.0mb  
 PDGR 35.47 64 eP 37 46.40 -1.5  
 SPA 58.00 180 iPd 40 44.20 0.6  
 1.0s 32.50nm 5.4mb  
 i 41 08.90  
 RSCP 68.72 348 P 41 54.30 0.1  
 TUL 71.49 339 eP 42 09.70 -1.2  
 0.8s 4.00nm 4.4mb  
 LIC 73.68 72 P 42 23.80 -0.5  
 0.6s 8.00nm 4.8mb  
 TIC 73.94 71 P 42 25.26 -0.5  
 0.7s 7.00nm 4.7mb  
 KIC 73.99 72 P 42 25.72 -0.4  
 0.9s 22.00nm 5.1mb  
 ALO 74.45 331 eP 42 28.20 -0.4  
 1.0s 2.25nm 4.0mb  
 ANMO 74.46 331 P 42 29.10 0.5  
 1.0s 5.50nm 4.4mb  
 GOL 78.15 334 P 42 49.40 0.1  
 0.5s 2.70nm 4.4mb  
 PEC 78.59 323 P 42 51.90 0.4  
 PV09 78.60 331 P 42 52.00 0.2  
 DUG 81.58 329 P 43 08.00 0.6  
 TNP 81.91 325 P 43 10.00 0.8  
 0.8s 5.88nm 4.5mb  
 YAK 147.19 342 iPKPc 50 31.30 1.9  
 ePP 53 21.00  
 e 00 28.00  
 S.D. = 1.0 on 28 of 31 obs.

MAY 13, 1991 03h 30m 57.43± 0.50s  
 32.223 S ± 5.3km 71.392 W ± 7.0km  
 DEPTH = 83.5 ± 6.1 km  
 4.6mb ( 8 obs.)  
 NEAR COAST OF CENTRAL CHILE (135)  
 Felt (IV) at Papudo and  
 Valparaiso and (III) at  
 Quilloto.

ROCH 0.81 157 iPc 31 14.70 -0.3  
 JACH 0.82 124 iPd 31 14.50 -0.4  
 IHA 0.83 195 iPd 31 13.60 -1.3  
 iS 31 26.30  
 LCCH 1.26 187 iPc 31 19.70 -0.4  
 SAN 1.37 154 iPc 31 22.00 0.4  
 iS 31 39.00  
 TACH 1.48 165 iPc 31 23.30 0.3  
 PCH 1.58 152 iPc 31 25.00 0.6  
 LNV 1.73 181 iPc 31 25.90 -0.4  
 MDZ 2.25 108 iP 31 36.80 3.4X  
 i 32 04.40  
 RTCB 2.32 72 iPc 31 36.00 1.5  
 ZON 2.40 74 iPc 31 37.00 1.4  
 RTRS 2.63 39 iPc 31 39.40 0.8  
 RTLL 2.64 71 iPd 31 39.40 0.6  
 CFA 2.75 78 iPd 31 41.20 0.9  
 S 32 05.70  
 RFA 3.53 137 iPc 31 51.30 0.2  
 TCA 5.86 83 eP 32 21.80 -1.8  
 ANT 8.53 6 e(P) 32 53.50 -6.7X  
 CCH 15.52 19 P 34 33.50 0.4  
 ARE 15.69 360 eP 34 34.00 -1.3  
 LPB 15.90 12 P 34 37.60 -0.5  
 ZOBO 16.16 11 P 34 39.90 -1.5  
 LR 40 14.00  
 PPD 20.52 65 ePc 35 29.10 -2.0  
 e 35 33.00  
 e 35 44.00  
 NNA 20.75 345 eP 35 35.50 1.9  
 0.7s 5.48nm 4.0mb  
 PDGR 35.49 64 eP 37 46.40 -1.6  
 SPA 57.95 180 iPd 40 44.20 1.0  
 1.0s 32.50nm 5.4mb  
 i 41 08.90  
 RSCP 68.77 348 P 41 54.30 0.0  
 TUL 71.53 339 eP 42 09.70 -1.4  
 0.8s 4.00nm 4.4mb  
 LIC 73.70 72 P 42 23.80 -0.4  
 0.6s 8.00nm 4.8mb  
 TIC 73.95 71 P 42 25.26 -0.5  
 0.7s 7.00nm 4.7mb  
 KIC 74.01 72 P 42 25.72 -0.3  
 0.9s 22.00nm 5.1mb  
 ALO 74.49 331 eP 42 28.20 -0.5  
 1.0s 2.25nm 4.0mb  
 ANMO 74.49 331 P 42 29.20 0.5



13d 03h

GOL 78.19 334 P 42 49.80 0.4  
 PEC 78.62 323 P 42 51.90 0.3  
 PV09 78.64 331 P 42 52.00 0.1  
 DUG 81.62 329 P 43 08.00 0.5  
 TNP 81.94 325 P 43 10.00 0.7  
 1.0s 10.00nm 4.7mb  
 YAK 147.23 342 iPKPc 50 31.30 2.0  
 ePP 53 21.00  
 e 00 28.00

S.D. = 1.1 on 36 of 38 obs.

MAY 13, 1991 03h 41m 15.75±1.99s  
 1.443 N ± 4.3km 123.496 E ± 6.4km  
 DEPTH = 31.5 ± 14.7 km  
 5.1mb ( 13 obs.) 4.6msz ( 2 obs.)  
 MINAHASSA PENINSULA (265)  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 13S, 22C  
 Centroid Location:  
 Origin Time 03:41:16.0 1.0  
 Lat 1.42N 0.12 Lon 123.62E 0.14  
 Dep 33.0 FIX Half-duration 1.5  
 Moment Tensor: Scale 10\*\*16 Nm  
 Mrr= 4.45 0.68 Mtt=-1.21 0.91  
 Mff=-3.24 1.32 Mrt=-8.77 1.26  
 Mrf= 2.25 1.26 Mtf=-0.22 0.59  
 Principal Axes:  
 T Val= 11.10 Plg=54 Azm=193  
 N -3.21 2 286  
 P -7.89 36 18  
 Best Double Couple: Mo=9.5\*10\*\*16  
 NP1: Strike=122 Dip=9 Slip=106  
 NP2: 286 81 88

DAV 5.98 20 eP 42 44.00 -0.4  
 1.1s 1012.66nm 6.4mb X  
 TSM 6.08 297 ePc 42 45.00 -0.9  
 MKS 7.74 211 iPc 43 12.00 2.8  
 KKM 8.58 302 ePc 43 19.50 -1.5  
 BAG 15.15 349 eP 44 50.50 1.1  
 KNA 17.86 163 eP 45 23.50 -0.1  
 QIZ 22.01 323 eP 46 08.50 -0.8  
 N 14s 1.00um  
 E 14s 1.30um

HKC 22.63 337 P 46 20.00 4.6X  
 IPM 22.65 278 ePd 46 18.10 2.4  
 MBL 22.75 189 eP 46 15.00 -1.6  
 SNG 23.51 285 eP 46 25.60 1.6  
 e 50 47.60  
 GZH 23.66 336 P 46 25.80 0.4  
 Z 15s 4.70um  
 N 16s 3.20um  
 E 14s 3.20um  
 S 50 38.00  
 5.1mszX

WB2 23.77 154 iPKPd 46 24.90 -1.7  
 0.6s 45.20nm 5.2mb  
 i 46 35.70  
 e 49 42.20  
 e 50 33.30  
 e 46 32.00 4.9X

QZH 23.84 349 eP 46 32.00 4.9X  
 Z 16s 2.90um  
 N 14s 1.30um  
 E 14s 1.70um

PSI 24.59 273 eP 46 40.50 6.0X  
 LAT 24.80 109 eP 46 38.70 2.2  
 NANU 25.09 198 eP 46 38.00 -1.2  
 PMG 25.91 115 eP 46 47.00 0.0  
 LOE 26.64 308 eP 46 54.00 0.3  
 ASPA 26.93 159 iPd 46 56.20 -0.2  
 1.2s 14.70nm 4.5mb  
 QIS 26.96 145 iPc 46 55.20 -1.4  
 1.0s 90.00nm 5.4mb  
 MEKA 28.30 189 eP 47 06.80 -1.9  
 CHG 29.62 307 eP 47 20.00 -0.7  
 GYA 29.67 328 P 47 20.80 -0.4  
 Z 18s 1.20um  
 N 16s 2.00um  
 E 16s 2.50um

sP 47 35.40  
 PP 48 24.00  
 S 52 18.00  
 WHN 30.21 344 eP 47 27.00 1.2  
 Z 13s 0.70um 4.5mszX  
 N 12s 0.50um  
 E 12s 0.90um

NJ2 30.76 352 Pc 47 30.50 0.0

Z 13s 0.70um 4.5mszX  
 N 12s 0.50um  
 E 12s 0.90um  
 KMI 30.91 321 eP 47 33.00 0.7  
 1.5s 30.00nm 4.9mb  
 Z 16s 1.00um 4.6mszX  
 E 10s 0.50um  
 pP 47 42.50 33kmX  
 eS 52 38.00  
 eP 47 43.30 -1.7  
 e 48 05.20 -0.3

FORR 32.41 173 eP 47 43.30 -1.7  
 CD2 34.76 329 P 48 05.20 -0.3  
 N 12s 0.80um  
 eS 53 36.00  
 XAN 35.18 339 P 48 08.40 -0.6  
 N 14s 2.10um  
 E 14s 1.40um

RMO 36.95 140 eP 48 24.00 0.0  
 e 49 51.00  
 STK 37.32 154 iPd 48 27.30 0.3  
 0.7s 8.40nm 4.7mb  
 TIY 37.50 346 Pc 48 28.40 -0.2  
 Z 15s 1.40um 4.9mszX  
 N 12s 0.77um  
 S 54 18.00

ADE 38.92 160 iPc 48 41.00 0.5  
 1.1s 126.58nm 5.6mb  
 LZH 38.99 334 eP 48 41.00 -0.2  
 5.0s 220.00nm 5.2mb X  
 N 14s 1.20um

pP 48 52.50 42kmX  
 sP 48 58.00  
 PP 50 16.00  
 PcP 50 46.00  
 eS 54 39.00  
 sS 54 56.00  
 SS 57 25.00  
 BJI 38.99 351 eP 48 40.50 -0.4  
 1.0s 18.00nm 4.8mb

CMS 39.01 149 eP 48 41.00 -0.3  
 e 50 38.00  
 SNY 40.20 0 Pc 48 50.00 -0.9  
 1.4s 20.00nm 4.7mb  
 Z 22s 1.10um 4.7msz

S 54 56.00  
 HHC 40.69 346 eP 48 55.50 0.4  
 Z 14s 2.00um 5.1mszX  
 N 16s 1.10um

S 55 07.50  
 8TO 40.85 344 eP 48 56.00 -0.4  
 Z 14s 1.40um 5.0mszX  
 N 15s 1.30um

GTA 43.53 333 Pd 49 19.00 0.6  
 3.5s 340.00nm 5.5mb X  
 Z 14s 2.60um 5.3mszX  
 E 13s 1.60um

pP 49 26.40 25kmX  
 sP 49 32.80  
 eP 49 22.00 1.2  
 e 51 19.00  
 e 49 22.70 1.8  
 e 51 20.00

CNB 43.84 149 eP 49 22.70 1.8  
 e 51 20.00

GUN 44.57 310 Pd 49 27.28 0.0  
 0.8s 49.00nm 5.4mb  
 PKI 44.77 309 Pd 49 28.40 -0.5  
 KKN 44.97 309 Pd 49 29.96 -0.4  
 DMN 45.02 309 Pd 49 30.52 -0.3

1.0s 35.00nm 5.2mb  
 GKN 45.57 309 P 49 34.68 -0.4  
 0.9s 39.00nm 5.3mb  
 HYB 46.92 293 eP 49 45.00 -0.7  
 POO 51.53 293 eP 50 21.50 0.2  
 WMO 52.83 328 P 50 31.00 0.3

Z 16s 1.10um 5.0mszX  
 sP 50 41.00  
 GAR 61.15 315 eP 51 32.00 2.1  
 MAW 80.51 200 eP 53 26.00 0.0  
 OBN 87.04 325 eP 53 59.00 -0.3

Z 16s 0.50um 5.0mszX  
 N 18s 0.50um  
 E 18s 0.50um

e 54 06.00  
 e 01 00.00  
 eSKS 04 32.00  
 eSKKKS 06 16.00

SPA 91.43 180 iPc 54 20.80 0.8  
 1.0s 20.00nm 5.5mb  
 KAF 92.11 332 iP 54 20.90 -2.1

0.5s 1.50nm 4.7mb  
 ANMO 120.94 47 PKP 00 08.20 0.8  
 e 00 22.40

ALO 120.94 47 ePKP 00 08.00 0.6  
 1.0s 2.00nm  
 LNV 144.77 158 ePKP 00 51.00 -0.6  
 TACH 145.22 159 ePKP 00 52.00 -0.5  
 PCH 145.40 159 ePKPc 00 53.00 0.1  
 SAN 145.50 159 ePKP 00 53.00 0.0  
 PEL 145.77 159 iPKPd 00 54.50 1.0  
 1.0s 100.00nm

ROCH 145.80 158 ePKP 00 54.00 0.2  
 LPB 161.15 143 PKP 01 29.00 13.6X  
 ZOBO 161.34 143 PKP 01 16.00 0.2  
 1.1s 5.80nm  
 Z 24s 0.11um

S.D. = 1.1 on 62 of 66 obs.

MAY 13, 1991 04h 06m 34.33±0.80s  
 38.742 N ± 6.9km 27.845 E ± 11.0km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)

MD 3.3 (ISK).

IZM 0.57 233 iPg 06 46.10 0.2  
 eSg 06 56.10  
 DST 1.06 35 iPn 06 53.30 -1.0  
 CIN 1.16 170 eP 06 56.00 0.1  
 KHL 1.38 107 ePn 06 59.00 -0.7  
 KCT 1.56 15 ePn 07 01.80 -0.3  
 EDC 1.60 1 iPn 07 03.00 0.2

BNT 1.61 2 iPn 07 01.70 -1.2  
 IZI 2.03 38 ePn 07 11.30 2.3  
 YLV 2.17 32 ePn 07 13.20 2.1  
 CTT 2.44 10 ePn 07 15.00 0.1  
 ISK 2.50 22 ePn 07 19.00 3.3X  
 HRT 2.51 33 ePn 07 14.00 -1.8

S.D. = 1.4 on 11 of 12 obs.

MAY 13, 1991 04h 23m 06.19±0.49s  
 4.884 S ± 7.8km 101.873 E ± 9.3km  
 DEPTH = 33.0km (normal)  
 5.2mb ( 10 obs.) 5.2msz ( 5 obs.)  
 SOUTHERN SUMATERA (274)

KGM 7.00 12 eP 24 51.00 1.9  
 PSI 8.08 339 ePc 25 10.30 6.0X  
 IPM 9.44 355 ePd 25 26.80 3.8X  
 SNG 12.05 354 eP 25 51.40 -7.2X  
 e 29 16.10

BSI 12.23 327 eP 25 57.00 -4.0X  
 TSM 18.54 61 ePc 27 22.00 -0.3  
 CHG 23.72 353 ePd 28 16.00 -0.3  
 0.7s 10.27nm 4.5mb  
 QIZ 25.03 18 eP 28 30.70 1.8

N 16s 0.80um  
 E 16s 1.00um  
 GYA 31.50 8 P 29 27.00 -0.5  
 N 16s 0.60um  
 E 16s 1.30um

CD2 35.64 3 P 30 02.20 -1.0  
 PKI 35.97 335 Pc 30 06.52 0.1  
 0.6s 19.00nm 5.2mb  
 ASPA 36.07 124 iPd 30 07.20 0.2  
 1.0s 11.00nm 4.7mb

e 30 16.90 33kmX  
 GUN 36.07 336 Pc 30 07.80 0.5  
 0.5s 78.00nm 5.9mb  
 DMN 36.13 334 Pc 30 07.82 0.1  
 0.6s 21.00nm 5.2mb

KKN 36.22 335 Pc 30 08.64 0.3  
 0.6s 42.00nm 5.5mb  
 GKN 36.68 334 Pc 30 12.64 0.5  
 XAN 39.28 9 P 30 32.80 -1.0

N 13s 0.90um  
 QIS 39.83 116 iPc 30 34.30 -4.1X  
 SSE 40.25 26 P 30 41.50 -0.2  
 Z 20s 0.50um 4.4msz  
 E 16s 0.50um

LZH 40.80 2 Pc 30 45.50 -0.8  
 2.0s 50.00nm 4.9mb  
 N 15s 0.53um

pP 30 52.00 22kmX  
 sP 30 55.00  
 NDI 40.95 326 eP 30 48.50 1.0  
 TIY 43.50 12 eP 31 08.00 -0.4

Z 21s 7.60um 5.6msz



GTA	N 20s	1.30um			
	44.11	358 iPc	31	13.80	0.5
	0.6s	100.00nm		5.8mb	
	Z 18s	1.50um		5.0msz	
STK	N 15s	1.00um			
	sP		31	28.40	
	45.85	131 iPd	31	28.00	0.7
	0.8s	2.80nm		4.2mb X	
BTO	e		31	39.90	43kmX
	45.87	9 eP	31	26.20	-1.2
	HHC	46.37	10 P	31	32.50
	Z 16s	1.20um		4.9mszX	
BJI	46.60	15 eP	31	33.00	0.0
	1.0s	18.00nm		5.0mb	
	Z 18s	1.47um		5.0msz	
	WMO	50.14	347 P	32	00.00
CN2	52.92	21 Pc	32	20.10	-1.3
	N 15s	0.40um			
	E 15s	0.40um			
	epP		32	27.00	23kmX
BRS	53.31	121 i(P)c	32	25.50	0.8
	MDJ	55.20	24 Pd	32	37.50
	0.8s	100.00nm		5.9mb	
	Z 20s	6.50um		5.7msz	
OBN	80.19	328 eP	35	14.00	-0.7
	0.8s	*****nm		8.0mb X	
	e		35	15.00	3kmX
	e		35	45.00	
MLR	83.67	317 eP	35	33.00	-0.2
	NUR	87.96	331 eP	35	55.00
	SOD	88.84	338 eP	35	58.00
	KEV	89.35	340 eP	35	57.00
YKA	116.55	18 ePKP	41	47.00	-1.1
	0.8s	0.50nm			
	TNP	131.47	42 (PKP)	42	19.50
	ANMO	140.24	38 PKP	42	34.00
TUL	145.10	26 ePKP	42	41.10	-1.3
	0.8s	17.50nm			
	FVM	145.20	17 PKP	42	41.50
	S.D. = 0.9	on 35 of 41 obs.			
MAY 13, 1991 05h 55m 02.17 ± 0.80s					
51.518 N ± 6.2km 16.380 E ± 11.7km					
DEPTH = 10.0km (geophysicist)					
3.7mb ( 1 obs.)					
POLAND (548)					
ML 3.6 (VKA), 3.5 (GRF).					
KSP	0.68	185 iPd	55	16.30	0.7
	0.3s	96.00nm			
	iS		55	24.20	
	BRG	1.66	248 iPn	55	31.30
PRU	iPg		55	32.60	-0.2
	iSg		55	52.60	
	Pn		55	35.80	0.5
	Pg		55	37.50	
CLL	Sn		55	54.80	
	Sg		56	01.20	
	iPn		55	38.30	0.1
	iPg		55	41.80	
KHC	iSg		56	08.00	
	Pn		55	51.00	0.5
	Pg		55	56.50	
	eSn		56	23.50	
VKA	Sg		56	36.50	
	iPnc		55	52.30	-2.0
	iPg		56	03.70	
	iSg		56	48.10	
GRF	ePn		56	01.90	0.4
	ePg		56	12.70	
	eSg		56	58.50	
	eP		56	17.00	-0.3
HFS	e(Sg)		57	20.00	
	8.77	351 eP	57	11.30	-0.5
	0.5s	1.60nm		4.6mb X	
	e		57	19.60	
NRA0	eS		58	48.80	
	9.62	346 Pn	57	21.50	-2.1
	Sn		59	06.00	
	NUR	10.12	24 eP	57	32.00
YKA	59.92	336 eP	05	11.40	1.3
	0.8s	0.50nm		3.7mb	
	S.D. = 1.3	on 12 of 12 obs.			
MAY 13, 1991 06h 27m 55.35 ± 0.92s					
40.890 N ± 7.2km 20.808 E ± 8.7km					
DEPTH = 10.0km (geophysicist)					

GREECE-ALBANIA BORDER REGION (392)					
ML 2.4 (THE), 2.1 (SKO).					
OHR	0.22	358	iPg	27 59.70	-0.5
			iSg	28 04.60	
FNA	0.44	104	ePg	28 02.80	-1.6
			eSg	28 10.16	
PHP	0.84	341	ePg	28 12.00	0.4
			iSg	28 24.50	
TIR	0.84	303	ePn	28 22.00	10.4X
LACI	1.11	312	ePn	28 21.50	5.3X
SKO	1.18	24	ePg	28 25.00	7.6X
			eSg	28 35.00	
GRG	1.21	86	ePb	28 17.96	0.1
			eSb	28 35.00	
IGT	1.40	195	ePb	28 20.04	-0.9
LIT	1.51	121	ePb	28 22.60	0.2
			eSb	28 44.80	
KNT	1.60	80	ePb	28 23.12	-0.7
			eSb	28 46.48	
SOH	1.93	91	ePb	28 30.44	1.8
			eSb	28 55.92	
AGG	2.20	147	eP	28 33.76	1.2
			eS	29 03.12	
S.D. = 1.2			on	9 of 12 obs.	
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&	MAY 13, 1991	07h	16m	08.40s	
	37.422 N			121.783 W	
	DEPTH = 3.0km				
CENTRAL CALIFORNIA					( 39)
<BRK>. ML 2.6 (BRK).					
MHC	0.14	125	iPc	16 11.30	0.1
			iS	16 13.95	
ARN	0.21	110	iPd	16 12.80	0.1
GCC	0.43	204	eP	16 17.50	0.6
PCC	0.48	279	ePc	16 17.70	-0.4
BKS	0.58	322	iPd	16 20.20	0.2
BRK	0.59	320	iPd	16 20.30	0.1
			eS	16 31.30	
ZSP	0.64	324	eP	16 21.50	0.3
			iS	16 33.70	
SAO	0.71	158	iPd	16 22.30	-0.3
LLA	1.05	140	ePc	16 27.20	-1.6
CMB	1.27	61	ePd	16 31.30	-1.3
			eS	16 47.80	
NWRM	1.35	320	eP	16 32.30	-1.7
FRI	1.71	104	eP	16 38.50	-0.7
12 obs. associated					
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	MAY 13, 1991	08h	27m	33.74± 1.02s	
	40.447 N ± 9.3km		21.710 E ± 8.0km		
	DEPTH = 10.0km		(geophysicist)		
GREECE					(364)
ML 1.7 (THE).					
FNA	0.42	323	ePg	27 44.00	1.6
			eSg	27 51.68	
LIT	0.69	120	ePg	27 45.64	-1.8
			eSg	27 55.76	
GRG	0.73	46	ePg	27 47.04	-1.1
OHR	0.96	314	eP	27 50.00	-2.0
KNT	1.15	51	ePg	27 56.16	0.9
			eSg	28 09.96	
SOH	1.31	73	ePb	27 57.40	-0.5
IGT	1.40	230	ePb	28 03.24	4.0X
			eSb	28 22.76	
AGG	1.50	161	ePb	28 01.74	1.0
			eSb	28 22.72	
SRS	1.58	64	ePb	28 01.92	0.1
OUR	1.74	93	ePb	28 04.76	0.6
ALN	3.33	81	eP	28 27.96	1.1
S.D. = 1.5			on	10 of 11 obs.	
<hr/>					
	MAY 13, 1991	08h	32m	43.82± 2.89s	
	36.300 N ± 26.8km		71.584 E ± 25.3km		
	DEPTH = 73.7 ± 29.8 km				
	4.1mb ( 6 obs.)				
AFGHANISTAN-USSR BORDER REGION (717)					
NDI	8.96	146	eP	34 54.50	1.8
MAIO	9.76	274	eP	35 23.00	19.2X
GKN	13.80	123	P	35 57.74	0.2
	0.3s	9.00nm		4.7mb	
DMN	14.37	123	P	36 05.08	0.0
GKN	14.37	122	P	36 04.78	-0.3
PKI	14.60	123	P	36 06.30	-1.9

GUN	14.71	121	P	36	05.56	-4.0X
HFS	43.51	322	eP	40	40.70	-0.5
-	0.4s	1.60nm				4.2mb
		e		40	43.70	
NB2	44.82	323	P	40	50.60	-1.3
	0.5s	1.00nm				3.9mb
INK	74.03	9	eP	44	14.00	1.2
FBA	74.53	16	P	44	16.90	1.1
YKA	81.42	3	eP	44	53.90	0.4
	0.7s	1.40nm				4.0mb
WRA	81.49	122	P	44	54.00	-0.5
	0.7s	1.70nm				4.1mb
WB2	81.50	122	eP	44	54.40	-0.2
	0.7s	1.70nm				4.1mb
		e		46	03.80	
S.D. = 1.2 on 12 of 14 obs.						
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? MAY 13, 1991	08h	34m	00.52±	4.47s		
32.985 S ±15.8km		72.090 W	±34.5km			
DEPTH = 22.5 ± 6.7 km						
OFF COAST OF CENTRAL CHILE					(134)	
-----						
IHA	0.38	96	iPc	34	08.50	-0.1
			iS	34	12.80	
LCCH	0.66	138	iPd	34	13.00	-0.2
			iS	34	20.50	
ROCH	0.91	89	iPd	34	25.50	7.9X
			iS	34	43.00	
LNv	1.12	150	iP	34	20.50	-0.3
			iS	34	34.00	
TACH	1.17	125	iPd	34	21.00	-0.6
			iS	34	34.00	
PEL	1.19	98	iPc	34	21.60	-0.3
			iS	34	36.00	
SAN	1.28	112	iPd	34	22.80	-0.4
			iS	34	38.50	
			i	34	41.00	
JACH	1.30	77	iPd	34	23.20	-0.2
			iS	34	40.00	
PCH	1.46	116	iPc	34	25.50	-0.3
			iS	34	43.00	
MDZ	2.73	89	eP	34	47.70	3.8X
			iS	35	23.60	
RFA	3.50	122	eP	34	55.70	0.8
		(S)		35	47.50	
TCA	6.57	78	eP	35	38.30	0.0
S.D. = 0.4 on 10 of 12 obs.						
-----						
? MAY 13, 1991	09h	07m	03.09±	0.97s		
39.170 N ± 7.6km		27.595 E	±13.1km			
DEPTH = 10.0km (geophysicist)						
TURKEY					(366)	
MD 2.7 (ISK).						
-----						
IZM	0.81	199	ePg	07	18.90	0.0
			iSg	07	29.90	
DST	0.91	61	ePn	07	20.50	-0.1
EDC	1.19	10	ePn	07	25.50	0.2
KGT	1.30	350	ePn	07	27.00	-0.1
S.D. = 0.2 on 4 of 4 obs.						
-----						
% MAY 13, 1991	09h	28m	36.50±	0.66s		
44.385 N ± 6.0km		7.346 E	± 6.7km			
DEPTH = 10.0km (geophysicist)						
NORTHERN ITALY					(545)	
ML 1.7 (GEN).						
-----						
STV	0.14	186	P	28	39.91	0.0
			S	28	42.00	
ENR	0.17	161	P	28	40.46	0.1
			S	28	42.92	
PZZ	0.21	304	P	28	41.14	-0.1
			S	28	44.28	
ROB	0.39	103	P	28	44.59	0.1
			S	28	50.68	
BHB	0.46	353	P	28	45.94	0.1
FIN	0.64	106	P	28	49.20	-0.2
			S	28	58.07	
S.D. = 0.2 on 6 of 6 obs.						
-----						
MAY 13, 1991	09h	49m	10.15±	0.66s		
37.519 N ± 5.7km		22.118 E	± 5.6km			
DEPTH = 49.6 ± 14.5 km						
3.7mb ( 4 obs.)						
SOUTHERN GREECE					(368)	
MD 3.7 (ATH).						



VLI	1.03	140	iPbc	49	28.30	-0.2	FIN	0.78	148	P	10	56.80	0.8	S	47	29.35						
ATH	1.35	70	iPbd	49	34.50	1.6			S	11	07.47			RRL	2.36	287	P	47	03.02	1.2		
			eSb	49	55.50		ORX	0.80	18	P	10	55.98	-0.4	BNL	2.47	290	P	47	03.80	0.5		
VLS	1.38	299	ePb	49	33.00	-0.3			S	11	05.93					eSn	47	31.20				
AGG	1.51	6	ePb	49	34.62	-0.6	LPG	0.88	316	Pg	10	58.20	0.3	FRF	2.50	255	Pn	47	02.80	-0.7		
			eSb	49	57.06				Sg	11	09.60					Sn	47	32.40				
IGT	2.45	326	eP	49	49.18	0.7	LPL	0.91	316	Pg	10	58.60	0.3	LPG	2.59	299	Pn	47	07.00	1.9		
			eS	50	22.54				Sg	11	10.00		LPL	2.61	300	Pn	47	07.50	2.1			
LIT	2.59	6	eP	49	51.14	0.6	SBF	1.02	188	Pg	10	59.70	-0.3	LMR	2.67	251	Pn	47	04.90	-1.1		
			eS	50	26.30				Sg	11	12.80					Sn	47	36.00				
PAIG	2.70	26	eP	49	51.18	-0.8	FRF	1.49	209	Pg	11	07.20	-0.2	LRG	2.73	254	Pn	47	06.40	-0.4		
			eS	50	27.14				Sg	11	25.00					Sn	47	38.90				
KZN	2.80	355	ePb	49	58.00	4.5X	LRG	1.68	213	Pg	11	11.20	1.0	FVI	3.06	40	P	47	10.30	-1.1		
KEK	2.85	321	ePn	49	54.50	0.3			Sg	11	31.60					eSn	47	44.50				
SRN	2.88	326	ePn	49	54.70	0.1	LMR	1.74	208	Pg	11	12.00	1.0	VOY	3.29	56	ePn	47	13.00	-2.0		
OUR	3.16	27	eP	49	58.06	-0.6			Sg	11	32.70					eSn	47	52.10				
THE	3.18	12	eP	49	59.60	0.7		S.D. = 0.7	on	17	of	17	obs.	KBA	3.68	39	eP	47	32.00	11.5X		
			eS	50	39.90											e	47	56.00				
TPE	3.22	330	ePn	49	55.00	-4.5X	% MAY 13, 1991	10h	31m	00.62±0.75s						e	48	18.00				
			iSn	50	51.00		41.080 N ± 7.0km		28.702 E ± 5.6km					BSF	4.19	329	Pn	47	27.50	-0.1		
FNA	3.31	350	eP	50	01.98	1.2	DEPTH = 10.0km	(geophysicist)								Sn	48	16.00				
			eS	50	41.74		TURKEY			(366)			HAU	4.50	327	Pn	47	32.10	0.1			
SOH	3.44	16	eP	50	02.42	-0.1	MD 2.8 (ISK).						CDF	4.54	337	Pn	47	32.00	-0.6			
			eS	50	45.10											Sn	48	23.70				
GRG	3.44	4	eP	50	03.82	1.2	CTT	0.22	288	iPg	31	05.10	-0.2	SMF	4.92	301	Pn	47	38.00	0.1		
			eS	50	45.70		YLV	0.72	135	ePg	31	14.50	-0.4				Sn	48	33.00			
NPS	3.61	128	ePn	50	06.00	1.0	HRT	0.78	109	ePg	31	16.10	0.3	LBF	5.00	305	Pn	47	39.00	0.0		
			eSn	50	50.20				eSg	31	27.60					Sn	48	34.80				
KNT	3.69	9	eP	50	06.02	-0.1	KCT	0.87	198	ePg	31	17.60	0.2	LOR	5.21	307	Pn	47	42.30	0.2		
			eS	50	50.02		BNT	0.94	220	ePn	31	18.00	-0.5				Sn	48	40.60			
PRK	3.69	61	ePn	50	08.30	2.2X	DMK	1.03	317	iPn	31	20.00	0.0	AVF	5.28	301	Pn	47	43.00	0.0		
OHR	3.73	344	ePn	50	08.80	2.1X	KGT	1.23	240	ePn	31	24.10	0.5	SSF	5.31	304	Pn	47	43.80	0.3		
SRS	3.77	17	eP	50	07.18	-0.1		S.D. = 0.5	on	7	of	7	obs.	KHC	5.46	26	ePg	47	52.30	6.7X		
			eS	50	52.50											Sg	48	47.50				
VAY	3.81	5	ePn	50	08.30	0.5	MAY 13, 1991	10h	46m	22.22±0.26s				BGF	5.50	297	Pn	47	46.00	-0.2		
IZM	4.16	76	ePn	50	08.00	-4.8X	44.270 N ± 3.8km		9.958 E ± 2.1km							Sn	48	45.90				
TIR	4.20	336	ePn	50	21.50	8.2X	DEPTH = 10.0km	(geophysicist)					CAF	5.68	279	Pn	47	47.60	-1.1			
PHP	4.36	343	ePn	50	20.00	4.5X	NORTHERN ITALY			(545)												
SKO	4.48	354	ePn	50	15.00	-2.2	ML 3.2 (LDG). MD 2.7 (STR).									S.D. = 0.9	on	48	of	50	obs.	
			i	51	10.50																	
RDO	4.49	35	ePn	50	17.50	0.2	BDI	0.50	114	P	46	32.80	0.3	* MAY 13, 1991	10h	50m	02.68±1.16s					
LACI	4.51	336	ePn	50	15.60	-2.0			eSg	46	41.00			29.263 S ± 9.5km		70.408 W ± 14.8km						
ALN	4.55	41	eP	50	17.22	-0.9	MME	0.54	98	P	46	31.40	-1.8	DEPTH = 137.9 ± 30.3 km								
			eS	51	11.62		MME	0.54	98	P	46	34.10	0.9	CENTRAL CHILE							(136)	
YER	4.93	93	ePn	50	24.00	0.3			eSg	46	41.30											
KGT	4.99	52	ePn	50	24.10	-0.3	BOB	0.62	324	P	46	33.50	-1.2	RTRS	1.22	138	iPc	50	27.30	-1.4		
KCT	5.58	59	ePn	50	31.60	-1.1	PCP	1.05	285	P	46	42.30	0.3	RTCB	2.62	148	ePd	50	46.20	0.9		
YLV	6.41	59	ePn	50	44.10	-0.4			S	46	56.97					eS	51	13.20				
MLR	8.47	19	eP	51	14.50	1.5	CKI	1.21	278	P	46	44.40	-0.4	RTLL	2.66	141	iPc	50	46.30	0.5		
HQL	13.57	124	P	52	20.60	-1.2			eSn	47	01.60					S	51	14.30				
HFS	23.27	349	eP	54	18.50	4.7X	FIN	1.26	268	P	46	45.17	-0.5	CFA	2.99	142	ePd	50	50.90	0.8		
	0.5s	2.00nm			3.8mb				S	47	01.42					eS	51	28.80				
		e		54	23.50		PGD	1.33	107	P	46	48.10	1.2	JACH	3.41	183	eP	50	57.00	1.3		
		e		54	25.00				eSn	47	06.30		ROCH	3.73	188	iP	51	09.10	9.0X			
NB2	24.53	347	P	54	27.00	1.0	SAL	1.40	17	P	46	48.30	0.6	MDZ	3.85	160	eP	51	03.50	2.1		
	0.7s	1.70nm			3.7mb		SFI	1.41	104	P	46	48.70	0.8	PEL	3.88	183	eP	51	00.00	-1.8		
EKA	24.70	324	P	54	35.00	7.3X			eSn	47	06.10					iS	51	48.50				
	0.9s	2.70nm			3.8mb		ROB	1.50	272	P	46	48.87	-0.4	SAN	4.18	183	eP	51	07.00	1.1		
KEV	32.40	3	eP	55	44.00	7.1X			S	47	07.63		LCCH	4.31	193	eP	51	07.00	-0.6			
YKA	74.44	341	eP	00	51.50	7.1X	CRE	1.58	113	P	46	51.00	0.6				i	51	12.50			
	0.6s	0.20nm			3.2mb				eSn	47	10.80		PCH	4.35	181	iP	51	09.10	1.0			
	S.D. = 1.0	on	29	of	40	obs.	SAOF	1.75	262	Pn	46	52.98	0.1	TACH	4.40	186	eP	51	08.00	-0.8		
							ENR	1.82	270	P	46	53.81	-0.2	LVN	4.76	190	eP	51	12.00	-1.5		
									S	47	16.37		TCA	5.44	114	ePd	51	21.20	-1.6			
							AUTN	1.84	262	Pn	46	54.35	0.0				(S)	52	22.00			
							PGF	1.86	202	Pn	46	53.83	-0.6	ANT	5.54	360	e(P)	51	24.50	0.5		
							SBF	1.86	258	Pn	46	54.00	-0.5	RFA	5.73	164	ePd	51	26.20	-0.6		
									Sn	47	18.60					(S)	52	29.30				
							STV	1.89	270	P	46	55.22	0.3				S.D. = 1.4	on	15	of	16	obs.
BHB	0.26	264	P	10	48.29	1.2			S	47	18.63											
			S	10	52.91		AURF	1.93	259	Pn	46	55.19	-0.4	& MAY 13, 1991	11h	06m	14.64s					
RSP	0.39	317	P	10	49.83	0.5			Sg	47	26.85			60.011 N		153.515 W						
			S	10	55.37		REVF	1.94	255	Pn	46	55.19	-0.5	DEPTH = 154.6km								
PZZ	0.53	226	P	10	51.47	-0.2			Sg	47	27.87			SOUTHERN ALASKA							( 2 )	
			S	10	58.44		ORX	1.96	315	P	46	55.22	-0.7	<AEIC>.								
ROB	0.60	163	P	10	53.83	0.9	TOUF	1.97	263	Pn	46	56.56	0.4									
			S	11	02.03		BHB	2.01	287	P	46	57.05	0.5	PDB	0.41	237	iPd	06	35.24	0.5		
RRL	0.60	275	P	10	52.91	-0.2			S	47	21.17					eS	06	51.53				
			S	11	00.60		MVIF	2.06	260	Pn	46	57.06	-0.3	RED	0.55	42	iPc	06	36.17	-1.0		
ENR	0.66	193	P	10	53.73	-0.3	PZZ	2.06	278	P	46	56.86	-0.6				eS	06	53.21			
			S	11	02.14				S	47	20.75		RDW	0.59	36	iPc	06	36.63	-0.8			
STV	0.66	199	P	10	53.52	-0.5	RSP	2.12	296	P	46	59.74	1.5				eS	06	53.11			
			S	11	01.42				S	47	24.55		RS2	0.59	39	iPc	06	36.67	-0.8			
LSD	0.68	330	P	10	54.65	0.3	CTI	2.14	33	P	46	57.90	-0.7	RSO	0.59	40	iPc	06	36.67	-0.8		
			S	11	03.26				eSn	47	23.00		NCT	0.62	28	ePc	06	36.81	-0.7			
PCP	0.73	116	P	10	56.09	1.0	ARV	2.29	109	P	47	01.60	0.9				eS					



13d 11h

AUE	0.66	174	eP	06 53.75		NEA	0.45	87	iP	11 25.12	-0.5	PHP	3.63	354	ePn	40 13.60	9.1X
AUI	0.68	176	eP	06 36.91	-0.7				eS	11 31.96		SRS	3.65	33	eP	40 05.26	0.3
			eS	06 37.04	-0.7	BWN	0.48	144	iP	11 26.75	0.6	SKQ	3.91	5	ePn	40 15.00	6.5X
DFR	0.71	35	iPc	06 54.01					eS	11 35.21		S.D. = 1.0 on 12 of 19 obs.					
			eS	06 37.08	-1.0	WRH	0.88	95	iP	11 32.60	-0.3						
RDT	0.79	44	iPc	06 55.59					eS	11 44.97		% MAY 13, 1991	13h	44m	33.36±	2.54s	
			iS	06 37.67	-0.9	RDS	0.89	72	iP	11 32.56	-0.4	33.437 S ±15.7km 70.578 W ±11.9km					
MCNL	0.93	207	iPd	06 55.60					eS	11 45.52		DEPTH = 76.0 ± 28.0 km					
			eS	06 38.33	-1.2	MDM	0.90	63	iP	11 32.61	-0.6	CHILE-ARGENTINA BORDER REGION (127)					
HOM	1.01	110	iPc	06 56.83		MCK	0.98	148	eP	11 34.27	-0.3						
			eS	06 39.61	-0.6				S	11 47.95		SAN	0.07	257	iP	44 45.20	0.6
XLV	1.07	121	ePc	06 58.34		CCB	1.00	84	iP	11 34.17	-0.7				iS	44 54.70	
			eS	06 39.51	-1.2	FBA	1.05	70	iPc	11 35.60	-0.1	PCH	0.19	164	iPd	44 45.10	0.1
CDD	1.09	184	iPd	06 59.03		TRF	1.12	184	eP	11 35.80	-1.0	TACH	0.37	234	iPc	44 46.10	0.3
			eS	06 39.70	-1.2				iS	11 51.10		ROCH	0.59	322	iPd	44 45.10	-2.9
NNL	1.11	87	ePc	06 59.49		GLM	1.24	69	iP	11 37.56	-0.9	JACH	0.75	359	iPc	44 51.00	1.4
CNPM	1.25	112	iPc	06 41.09	0.0				eS	11 55.73					iS	45 05.00	
			iS	06 41.41	-1.0	RND	1.28	154	eP	11 38.74	-0.3	LCCH	0.83	267	iPc	44 51.00	0.6
CKL	1.32	26	iPc	07 01.67					eS	11 56.11					iS	45 05.50	
			eS	06 42.47	-0.7	HDA	1.38	95	eP	11 39.32	-1.0	LNV	0.87	233	iPc	44 50.00	-0.8
BRLK	1.35	99	iPc	07 04.09					eS	11 57.67					iS	45 04.50	
			eS	06 42.45	-0.9	HUR	1.60	172	eP	11 43.77	0.2	IHA	0.98	294	iPd	44 53.20	1.0
NKA	1.35	56	iPc	07 03.44		DDM	2.02	111	eP	11 49.99	0.4				iS	45 10.10	
BGL	1.37	23	iPc	06 43.75	0.5	IMA	2.13	317	eP	11 48.70	-2.6	MDZ	1.55	70	iP	44 59.40	-0.3
SPU	1.38	31	iPc	06 43.19	-0.5	THY	2.24	119	eP	11 53.17	0.4				iS	45 20.80	
			iS	06 42.57	-1.1	PAX	2.61	126	eP	11 57.69	-0.4	S.D. = 1.6 on 9 of 9 obs.					
CRP	1.43	27	iPc	07 04.73		SKT	2.67	195	eP	11 57.95	-0.9						
SVW	1.51	318	iPd	06 43.50	-0.8	DOT	2.81	106	eP	12 01.25	0.4	* MAY 13, 1991	14h	13m	05.84±	3.91s	
			eS	06 43.85	-1.2	GHO	2.85	169	eP	12 00.50	-1.0	44.533 N ±27.2km 111.312 W ±19.1km					
SYI	1.52	157	ePd	07 07.10		FYU	2.86	43	eP	12 01.08	-0.4	DEPTH = 5.0km (geophysicist)					
			eS	06 43.23	-1.8	SML	2.88	163	eP	12 00.73	-1.1	HEBGEN LAKE REGION (458)					
NCG	1.55	25	iPc	07 06.54		SDG	2.89	133	eP	12 02.95	1.0	ML 3.4 (BUT).					
SLKM	1.72	72	iPc	06 44.72	-0.8	PWA	2.92	178	eP	12 01.74	-0.6						
SUA	1.99	42	ePc	06 45.63	-1.6	PLRM	3.01	171	eP	12 03.07	-0.6	LTMT	0.57	270	iPc	13 17.20	-0.1
			eS	06 48.95	-1.5	PMR	3.01	171	eP	12 03.90	0.2	BGMT	0.87	324	iPd	13 22.90	-0.3
SEW	2.04	86	iPc	07 16.07		SCM	3.01	154	eP	12 04.43	0.6	MEMT	1.10	13	eP	13 26.30	-0.8
SKT	2.20	25	eP	06 49.45	-1.4	TOA	3.04	142	eP	12 06.20	2.1	MCMT	1.14	286	ePd	13 27.50	-0.2
			eS	06 51.35	-1.5	TTA	3.09	241	eP	12 02.20	-2.7	LRM	1.52	328	iPnc	13 34.40	0.4
PMS	2.31	56	iPc	07 20.22		SUA	3.12	186	eP	12 04.65	-0.7	HBMT	1.56	324	ePn	13 35.00	0.5
KDC	2.33	166	eP	06 52.10	-2.0	KNK	3.25	166	eP	12 07.06	0.0	SXM	1.62	3	ePn	13 36.00	0.7
			S	06 53.10	-1.2				eS	12 48.73		BUT	1.72	330	iPg	13 38.90	2.1X
PWA	2.42	46	eP	07 21.12		NCG	3.30	197	eP	12 06.69	-1.3				eSn	14 01.90	
PLRM	2.67	52	eP	06 53.26	-2.2	PMS	3.34	175	eP	12 08.76	0.4				iSg	14 03.00	
LTi	2.84	87	iPc	06 55.56	-2.9	TMW	3.38	108	eP	12 09.47	0.6	HRY	2.21	351	ePn	13 43.60	-0.2
GHO	2.86	50	ePc	06 59.17	-1.5	CRP	3.44	197	eP	12 09.36	-0.5	S.D. = 0.6 on 8 of 9 obs.					
			S	06 58.03	-2.9	BGL	3.47	199	eP	12 07.96	-2.4	? MAY 13, 1991	14h	22m	32.63±	2.01s	
KNK	2.86	58	ePc	07 32.44		SPU	3.51	196	eP	12 09.71	-1.1	23.763 N ±23.4km 124.086 E ±17.5km					
CUT	2.87	32	ePc	06 57.89	-3.0	CKL	3.53	198	eP	12 10.34	-0.8	DEPTH = 33.0km (normal)					
KNIM	2.91	81	ePc	06 59.30	-1.7	KLU	3.62	146	eP	12 13.52	1.0	3.5mb ( 1 obs.)					
SML	3.11	52	ePc	06 58.87	-2.7	RDT	4.14	196	eP	12 18.71	-1.1	SOUTHWESTERN RYUKYU ISLANDS (246)					
GLI	3.30	72	ePc	07 01.12	-3.0	DFR	4.16	198	eP	12 19.08	-1.0	TWC	2.21	293	ePc	23 07.80	0.1
HUR	3.51	30	eP	07 04.17	-2.4	NCT	4.22	199	eP	12 20.71	-0.3				eS	23 30.00	
			S	07 07.05	-2.2	RDN	4.24	198	eP	12 21.16	-0.2	TWD	2.30	278	eP	23 08.90	-0.1
HIN	3.52	81	ePc	07 47.46		RDW	4.28	198	eP	12 20.68	-1.2	TWF1	2.59	261	ePc	23 12.80	-0.4
SCM	3.53	56	eP	07 07.35	-2.1	SVW	4.29	219	eP	12 29.60	7.8				eS	23 39.20	
VZW	3.60	70	eP	07 06.79	-2.8	INK	7.62	53	P	13 06.00	-2.7	TWG	2.93	252	ePc	23 18.20	0.3
VLZ	3.72	69	ePc	07 07.76	-2.7	0.3s 1.10nm 4.5mb						WB2	44.58	166	eP	30 43.50	0.0
CVA	3.90	79	iPc	07 09.63	-2.3	46 obs. associated						1.4s 1.00nm 3.5mb					
KLU	4.01	65	eP	07 12.23	-2.1	MAY 13, 1991 12h 39m 06.79± 1.06s						S.D. = 0.4 on 5 of 5 obs.					
RND	4.07	31	eP	07 12.99	-2.9	38.079 N ± 9.4km 20.959 E ± 7.1km						& MAY 13, 1991 15h 35m 32.46s					
TOA	4.14	56	eP	07 14.57	-2.0	DEPTH = 7.0 ± 4.8 km						61.755 N 149.723 W					
SGAM	4.17	80	iPc	07 15.51	-2.1	GREECE (364)						DEPTH = 39.5km					
RAGM	4.43	81	eP	07 15.71	-2.2	ML 3.2 (THE). MD 3.2 (ATH).						SOUTHERN ALASKA ( 2)					
TZL	4.43	59	eP	07 19.11	-2.2	VLS	0.31	289	iPg	39 12.30	-0.8	<AEIC>. ML 2.8 (AEIC).					
SDG	4.60	53	eP	07 20.03	-1.3				eSg	39 19.00		PWA	0.13	215	iPd	35 39.51	0.3
HMT	4.63	82	eP	07 21.34	-2.3	AGG	1.43	48	ePb	39 32.82	-0.4				eS	35 45.34	
GLB	4.98	69	eP	07 22.93	-1.1				eSb	39 53.38		PLRM	0.33	120	iPc	35 40.29	-0.7
WRH	5.14	27	eP	07 26.68	-1.9	IGT	1.53	342	ePb	39 35.26	0.7				eS	35 47.24	
CROM	5.20	77	eP	07 27.89	-2.9				eSb	40 00.74		GHO	0.38	87	iPc	35 41.16	-0.6
WAX	5.33	81	eP	07 30.04	-1.7	KEK	1.87	331	ePg	39 44.70	5.3X				eS	35 48.89	
TGL	5.35	77	eP	07 30.47	-2.9	SRN	1.95	338	ePn	39 45.60	5.1X	PMS	0.52	171	iPc	35 43.00	-0.5
CCB	5.36	27	eP	07 31.84	-1.9	VLI	2.08	130	ePn	39 43.00	0.5	SUA	0.57	240	ePd	35 43.66	-0.6
MDM	5.54	24	ePd	07 30.62	-3.0	KZN	2.31	16	ePn	39 49.50	3.5X				eS	35 53.32	
BALM	5.61	75	iPc	07 33.03	-3.0	TPE	2.33	342	ePn	39 46.00	-0.2	SML	0.66	85	iPc	35 44.41	-1.1
CTGM	6.10	76	ePc	07 35.38	-1.8	LIT	2.34	30	eP	39 47.57	1.2				S	35 54.11	
PNL	7.12	87	eP	07 42.32	-1.4				eS	40 19.38		KNK	0.70	119	iPc	35 45.24	-0.7
YKA	18.68	66	eP	07 55.63	-1.8	PAIG	2.81	48	eP	39 51.78	-1.2				eS	35 56.17	
	0.6s	0.60nm		10 11.30	-11.8	OHR	3.03	358	ePn	39 57.50	1.4	CUT	0.70	339	iPd	35 45.04	-0.9
66 obs. associated						GRG	3.08	21	eP	39 55.86	-0.9	SKT	0.89	286	ePc	35 47.61	-1.0
& MAY 13, 1991 11h 11m 16.39s						SOH	3.31	33	eP	39 59.74	-0.3				eS	35 59.57	
64.560 N 150.110 W									eS	40 04.62		SCM	1.14	85	ePc	35 51.55	-0.7



13d 15h

NKA	1.25	216	eS	36	09.28	
SPU	1.26	244	ePd	35	55.27	1.5
			eS	35	53.54	-0.4
			eS	36	09.81	
CRP	1.26	248	eP	35	53.97	-0.1
SLKM	1.27	191	eP	35	53.05	-1.1
BGL	1.37	250	eP	35	55.27	-0.3
CKL	1.37	247	ePc	35	55.24	-0.4
GLI	1.54	124	iPc	35	57.06	-0.8
SEW	1.66	175	eP	35	59.21	-0.4
VZW	1.68	113	eP	35	59.25	-0.6
RND	1.71	13	iPc	35	59.59	-0.7
KNIM	1.71	145	iPc	35	58.31	-2.0
TOA	1.72	77	ePd	36	00.81	0.4
TRF	1.72	352	ePc	35	59.90	-0.7
VLZ	1.75	110	ePc	35	59.74	-1.0
			eS	36	21.70	
RDT	1.76	229	ePd	36	00.42	-0.6
KLU	1.84	97	eP	36	01.05	-1.1
DFR	1.85	232	eP	36	01.85	-0.6
NNL	1.88	205	eP	36	03.63	0.8
RDN	1.93	231	eP	36	02.70	-0.9
NCT	1.96	234	eP	36	03.72	-0.3
RS2	1.96	230	eP	36	03.95	-0.2
RSO	1.96	230	eP	36	03.42	-0.7
RDW	1.97	231	eP	36	03.73	-0.5
RED	2.00	229	eP	36	04.06	-0.5
MCK	2.02	10	eP	36	04.01	-0.8
MTU	2.04	149	eP	36	03.29	-1.8
HIN	2.08	130	eP	36	04.23	-1.4
SDG	2.11	67	eP	36	06.16	0.1
CVA	2.28	120	eP	36	07.19	-1.2
PAX	2.33	57	eP	36	09.54	0.3
CNPM	2.36	199	eP	36	09.84	0.2
SGAM	2.53	118	eP	36	10.17	-1.8
RAGM	2.81	117	eP	36	17.21	1.2
WRH	2.83	15	eP	36	14.93	-1.3
GLB	2.84	94	eP	36	14.69	-1.8
NEA	2.85	6	eP	36	14.78	-1.7
HMT	3.01	116	eP	36	18.70	-0.2
CCB	3.03	16	eP	36	17.66	-1.4
RDS	3.16	12	ePd	36	19.71	-1.3
FBA	3.28	15	ePc	36	21.15	-1.4
MDM	3.29	11	ePc	36	21.36	-1.4
GLM	3.41	17	ePc	36	23.02	-1.6
TGL	3.48	104	eP	36	24.86	-0.7
WAX	3.58	108	eP	36	25.57	-1.4
BALM	3.62	98	eP	36	25.00	-2.6

57 obs. associated

MAY 13, 1991 16h 28m 15.44±0.13s  
 3.463 S ± 3.6km 82.824 E ± 2.5km  
 DEPTH = 21.8km (geophysicist)  
 5.9mb (89 obs.) 5.4MsZ (30 obs.)  
 SOUTH INDIAN OCEAN (425)

Depth from broadband  
 displaced seismograms.

## RADIATED ENERGY

No. of sta: 7 Focal mech. M  
 Energy 5.6±1.3\*10\*\*12 Nm

## MOMENT TENSOR SOLUTION

Dep 26 No. of sta: 8  
 Moment Tensor; Scale 10\*\*18 Nm

Mrr=0.87 Mtt=-0.96  
 Mff=0.08 Mrt=-0.33  
 Mrf=-0.38 Mtf=0.41

## Principal axes:

T Val=1.13 Plg=62 Azm=119  
 N -0.01 27 284  
 P -1.12 6 17

Best Double Couple: Mo=1.1\*10\*\*18  
 NP1: Strike=134 Dip=46 Slip=129  
 NP2: 264 56 57

## CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN  
 L.P.B.: 21S, 51C

## Centroid Location:

Origin Time 16:28:17.8 0.6  
 Lat 3.72S 0.05 Lon 82.35E 0.04  
 Dep 25.0 BDY Half-duration 3.7

## Moment Tensor; Scale 10\*\*17 Nm

Mrr=3.49 0.22 Mtt=-6.47 0.23  
 Mff=2.98 0.34 Mrt=-8.00 0.56  
 Mrf=2.33 0.45 Mtf=-2.17 0.22

## Principal Axes:

T Val=9.43 Plg=51 Azm=224  
 N 1.54 24 100

P -10.96 28 356  
 Best Double Couple: Mo=1.0\*10\*\*18  
 NP1: Strike=41 Dip=27 Slip=28  
 NP2: 286 78 115

KOD	14.61	339	eP	31	37.00	-6.2X
			eS	34	10.00	
BSI	15.31	55	eP	31	51.50	-0.5
PSI	17.22	69	ePc	32	23.50	7.2X
GBA	17.78	343	Pd	32	19.80	-3.5X
	1.2s	468.20nm			5.5mb	
IPM	19.86	66	ePc	32	49.10	0.9
	1.0s	69.30nm			4.9mb	
KLM	19.91	71	eP	32	50.00	1.3
SNG	20.66	59	eP	32	57.10	0.5
	1.6s	846.67nm			5.9mb	
		e	36	44.80		
HYB	21.17	349	ePd	33	02.20	0.4
	1.0s	440.00nm			5.8mb	
		e	36	47.50		
		eS	36	54.50		
KGM	21.20	75	ePc	33	04.60	2.6X
POO	23.58	338	iPc	33	26.30	0.7
NST	25.59	42	eP	33	46.00	1.1
PCT	25.77	45	eP	33	48.00	1.4
BDT	26.05	37	eP	33	48.20	-0.9
	1.0s	34.50nm			5.0mb	
CHG	27.24	35	ePc	34	01.00	0.9
	1.3s	30.77nm			4.8mb X	
		eS	38	42.00		
LOE	27.89	41	eP	34	07.00	0.9
TRT	29.96	99	iPc	34	18.20	-6.5X
	0.7s	69.00nm			5.6mb	
PKI	30.95	4	P	34	34.40	0.7
	1.1s	13.00nm			4.7mb X	
DMN	30.97	4	P	34	34.92	1.2
	1.0s	108.00nm			5.7mb	
KKN	31.16	4	P	34	36.10	0.7
	0.9s	112.00nm			5.7mb	
GUN	31.33	5	P	34	38.14	1.1
	0.8s	224.00nm			6.1mb	
GKN	31.33	3	P	34	37.50	0.7
	1.1s	241.00nm			6.0mb	
NDI	32.41	351	iPd	34	46.80	0.7
	1.0s	40.00nm			5.3mb	
LSA	33.93	13	P	35	01.40	1.6
Z	16s	4.60um			5.3MsZ	
N	16s	5.10um				
E	14s	1.50um				
		sP	35	10.00		
		S	40	23.00		
		SS	42	33.00		
KMI	34.37	33	ePc	35	04.51	1.1
	1.5s	120.00nm			5.6mb	
Z	18s	6.10um			5.4MsZ	
N	18s	2.10um				
E	18s	2.90um				
		pP	35	11.50	24kmX	
		esPd	35	14.03		
		eS	40	32.74		
		i	40	41.68		
KKM	34.66	74	ePc	35	06.00	0.1
	0.9s	109.40nm			5.8mb	
		e	35	31.00		
QIZ	34.73	49	Pc	35	06.50	0.2
	N 22s	6.20um				
	E 22s	6.80um				
		S	40	38.00		
TSM	36.04	78	ePc	35	16.20	-1.3
MKS	36.58	94	e(P)	35	20.00	-2.1
NANU	36.94	124	eP	35	26.00	1.1
	0.5s	14.00nm			5.0mb	
GVA	37.64	36	P	35	31.60	0.7
	3.0s	1000.00nm			6.1mb	
Z	22s	2.50um			5.0MsZ	
N	18s	2.40um				
E	18s	4.00um				
		sP	35	42.00		
		PP	37	04.00		
		PcP	37	48.80		
		S	41	20.00		
		ScP	41	40.00		
		SS	43	56.00		
CD2	39.59	29	P	35	47.00	-0.1
	1.0s	100.00nm			5.5mb	
Z	24s	3.50um			5.1MsZ	
N	16s	4.40um				

			pP	35	56.50	32kmX
			S	41	46.00	
			sS	42	01.00	
			SS	44	39.00	
GZH	39.78	47	iPc	35	50.20	1.4
Z	16s		4.80um			5.4MsZ
E	16s		4.60um			
			pP	35	59.00	30kmX
			S	41	53.50	
HKC	39.93	49	eP	35	51.50	1.5
MBL	40.05	119	iPc	35	52.10	1.1
KUPT	41.00	101	eP	35	56.00	-2.9
MEKA	41.21	128	eP	36	01.00	0.5
BAL	41.85	134	eP	36	06.60	0.9
BAG	42.22	61	eP	36	09.90	0.8
			eS	42	37.00	
MUN	42.27	136	eP	36	09.00	-0.1
ARO	42.46	291	iP+	36	12.50	1.6
KSH	43.17	352	P	36	16.00	-0.5
	N 12s		8.80um			
	E 14s		11.80um			
			sP	36	27.00	
			S	42	40.00	
DHR	43.31	315	iP	36	19.00	1.4
GAR	43.80	346	iP	36	21.00	-0.6
			ePcP	38	06.00	
			ePPP	38	32.00	
			iS	42	48.00	
			iPPS	43	07.00	
			iScS	45	06.00	
			iSSS	45	43.00	
DAV	43.94	76	eP	36	23.90	1.0
	1.4s		1097.67nm			6.5mb
LZH	43.98	25	ePc	36	22.61	-0.5
	5.0s		580.00nm			5.7mb X
Z	25s		3.89um			5.2MsZ
N	20s		4.02um			
E	21s		4.22um			
			esPd	36	32.29	
			ed	36	34.44	
			PP	38	07.00	
			PcP	38	10.00	
			sS	43	07.00	
			SS	46	02.00	
KMSA	44.45	304	P	36	27.90	0.9
XAN	44.69	31	P	36	27.50	-1.2
	1.4s		200.00nm			5.8mb
	N 18s		2.00um			
	E 15s		2.50um			
			pP	36	39.20	42kmX
			PP	38	10.40	
			ScP	42	02.00	
			SS	46	14.00	
QZH	44.76	49	eP	36	30.50	1.1
Z	16s		7.70um			5.7MsZ
N	16s		5.20um			
E	16s		3.50um			
			S	43	08.00	
RYD	44.97	311	P	36	32.00	0.8
COOL	45.26	131	eP	36	33.50	0.1
WHN	45.27	39	Pd	36	35.00	1.6
	5.0s		600.00nm			5.8mb X
Z	18s		2.40um			5.2MsZ
E	15s		2.50um			
			pP	36	44.00	30kmX
			eS	43	14.00	
GTA	45.44	19	iPc	36	35.00	0.2
	4.0s		580.00nm			5.9mb X
Z	20s		5.00um			5.4MsZ
N	18s		4.30um			
			pP	36	43.00	27kmX
			sP	36	45.00	
			PcP	38	15.00	
			PP	38	18.00	
			PcS	42	08.00	
			S	43	08.00	
			sS	43	24.00	
			SS	46	25.00	
			ScS	46	29.20	
NAI	46.03	272	iPc	36	41.50	1.6
	2.3s		636.36nm			6.2mb
			PSP	43	28.00	
			eSS	46	56.00	
KNA	46.80	108	eP	36	45.70	0.0
PAF	46.97	191	eP	36	48.00	1.5
			eS	43	28.00	
			eSS	47	24.00	



WMQ	47.27	5 ePc	36 50.36	1.2	BUL	55.32	248 iPd	37 50.20	-0.2	KHL	64.40	316 iP	38 51.70	-0.7	
	1.2s	200.00nm		6.0mb			i	37 58.00		IIDJ	64.43	48 P	38 51.70	-1.0	
Z	24s	5.10um		5.4MszX			i	38 13.10		GPA	64.78	318 iP	38 53.90	-0.9	
N	14s	2.80um			AKSR	55.46	302 iPc	37 50.50	-0.7	MTMJ	64.82	47 P	38 55.10	-0.1	
E	14s	2.00um			AGAL	55.55	301 iPc	37 52.50	0.7	MAJO	65.10	47 ePc	38 56.27	-0.6	
		esP	36 59.47		AKRL	55.74	302 iPc	37 53.50	0.3			epPd	39 02.39	20kmX	
		PcP	38 20.00		ASW	55.74	302 iPc	37 54.00	0.8			esPd	39 05.04		
		ePP	38 52.25				eS	45 40.00				eS	47 48.26		
		iS	43 41.94		CSTJ	55.79	312 P	37 55.73	2.2			i	47 57.64		
		S	43 44.00		HQL	56.15	309 iPc	37 53.30	-2.8			e	49 01.37		
		e	43 49.88		MDSJ	56.36	312 Pc	37 58.57	0.9	CMS	65.27	123 eP	38 58.00	-0.1	
WARB	47.66	123 iPd	36 52.80	0.3	PRNI	56.69	310 iPc	38 04.90	4.9X	CHJJ	65.47	48 P	38 58.80	-0.5	
	0.5s	30.00nm		5.6mb	SLR	56.76	241 eP	37 59.50	-1.2	HRT	65.47	318 eP	38 58.40	-0.8	
NJ2	49.17	41 Pc	37 04.00	0.1		0.5s	84.51nm		6.0mb	MAW	65.48	188 eP	38 59.00	0.2	
	17s	1.50um		5.1MszX		Z	17s	4.08um	5.6MszX		0.8s	18.00nm		5.3mb	
N	13s	1.10um			MKRJ	56.77	312 P	38 01.51	0.9	YLV	65.54	318 iP	38 58.90	-0.9	
E	14s	1.70um			MASJ	56.80	312 P	38 01.68	0.9	GBZT	65.60	318 eP	38 59.60	-0.4	
		iPcP	38 27.00		KFNJ	56.90	312 P	38 03.40	2.1	DST	65.60	317 eP	38 58.90	-1.2	
TIY	49.33	31 iPc	37 05.00	-0.2	SALJ	56.96	312 P	38 02.94	1.0	NPS	65.93	311 iPc	39 02.60	0.4	
	5.0s	570.00nm		5.9mb X	DSI	56.98	311 eP	38 07.00	5.0X	NIJ	65.97	47 P	39 02.00	-0.4	
Z	16s	2.60um		5.3MszX	PRY	57.74	240 iP	38 07.50	-0.2	IZM	66.02	315 eP	39 02.50	-0.3	
E	16s	2.30um				1.0s	50.00nm		5.5mb	IZM	66.02	315 iP	39 03.00	0.2	
		S	44 05.00		OIS	57.76	112 iPc	38 07.40	-0.3	ITU	66.04	318 eP	39 01.00	-1.8	
		sS	44 24.00				i	38 14.40		KCT	66.08	317 iP	39 01.90	-1.3	
		SS	47 39.00		ADI	57.82	313 eP	38 13.00	5.1X	TOO	66.38	130 eP	39 06.00	0.8	
SSE	50.16	44 Pc	37 12.00	0.4	BHL	57.92	314 P	38 08.00	-0.7			i	39 35.50		
	4.0s	800.00nm		6.1mb X			PPP	41 38.00		KAKJ	66.40	48 P	39 01.80	-3.4X	
Z	20s	2.80um		5.3Msz			S	46 06.00		BNT	66.43	317 iP	39 02.90	-2.5	
N	16s	3.00um			SNY	58.31	35 iPc	38 10.00	-1.1	KGT	66.89	317 eP	39 08.00	-0.3	
		PP	39 08.00			5.0s	700.00nm		6.0mb X	RMQ	66.95	117 iPc	39 09.70	0.7	
		S	44 20.00			Z	20s	1.80um	5.2Msz			i	39 17.00		
		sS	44 32.00			N	17s	2.30um		PRK	67.08	315 eP	39 10.00	0.5	
BTO	50.42	27 iPc	37 14.00	0.5		E	18s	2.10um		YAMJ	67.10	46 eP	39 09.50	-0.2	
	6.0s	800.00nm		5.9mb X				S	46 06.00	ALN	67.95	317 eP	39 14.00	-0.8	
N	16s	2.20um			IRK	58.44	15 eP	38 11.30	-0.6	JMB	68.28	319 iPc	39 16.00	-1.0	
E	16s	2.80um					e	38 21.50		TLB	68.33	321 eP	39 16.90	-0.3	
		PP	39 10.50				e	38 52.00		RDO	68.40	317 iPc	39 17.10	-0.6	
		S	44 23.50				e	38 52.00		VLI	68.49	312 eP	39 16.80	-1.6	
		eSS	47 55.00				ePcP	39 03.00		CFR	68.54	322 iPc	39 18.00	-0.5	
KER	50.45	321 ePc	37 14.50	0.6			ePP	40 31.00		OFUJ	68.64	46 eP	39 18.80	-0.5	
CRZF	50.55	207 eP	37 18.00	3.7X			eScP	42 56.00		KDZ	68.70	317 iP	39 19.00	-0.6	
		eS	44 34.00				eS	46 00.00		TAU	69.12	135 eP	39 21.00	-1.2	
FORR	50.60	128 eP	37 15.30	0.4			ePS	46 26.00				e	48 26.00		
TIA	50.83	36 P	37 16.70	0.1			e	49 07.00		OUR	69.14	316 eP	39 21.56	-0.7	
	1.6s	100.00nm		5.5mb			eSS	50 15.00		PAIG	69.19	315 eP	39 20.76	-1.9	
Z	25s	2.50um		5.1MszX			eSSS	52 24.00		RZN	69.19	317 iPc	39 22.00	-0.9	
N	17s	1.60um					e	52 58.00		PLD	69.38	318 iP	39 23.00	-0.7	
E	17s	1.70um					e	54 00.00		PVL	69.44	319 iPc	39 24.00	-0.1	
		S	44 28.50				e	57 32.00		BUC	69.47	320 ePc	39 25.00	0.7	
		sS	44 43.00		CSS	60.11	314 eP	38 22.50	-1.3	BUC1	69.49	320 iPc	39 24.40	0.1	
HHC	51.33	28 Pc	37 21.00	0.6	ADE	60.39	129 eP	38 25.50	-0.3	MRRJ	69.60	42 eP	39 23.20	-1.8	
	22s	2.70um		5.2Msz			1.0s	112.00nm	5.9mb	OBN	69.65	334 iPc+	39 24.50	-0.6	
N	15s	1.10um			CN2	60.63	34 Pd	38 26.00	-1.1		2.0s	569.00nm		6.4mb	
E	16s	2.00um				6.0s	600.00nm		5.9mb X	Z	20s	3.00um		5.5Msz	
		sP	37 32.00			Z	20s	5.60um	5.7Msz	N	22s	1.70um			
		PcP	38 35.00			N	17s	2.30um		E	20s	2.80um			
		PcS	42 32.00			E	17s	1.30um				e	39 32.00		
		S	44 40.00					pP	38 35.00	29kmX		ePcP	39 45.00		
WRA	52.79	112 P	37 31.00	-0.7				sP	38 40.00			e	40 15.50		
	0.6s	82.90nm		5.8mb	STK	61.85	124 iPd	38 35.50	-0.1			ePP	42 12.00		
WB2	52.80	112 iPd	37 31.00	-0.8		0.5s	22.20nm		5.6mb			iPPP	43 52.00		
	0.6s	81.00nm		5.8mb			e	38 42.70				iS	48 28.00		
		i	37 37.30					38 42.70				e	48 36.00		
		i	38 40.10		BBTK	62.93	318 iPc	38 43.00	0.2			iScS	49 26.00		
		i	41 23.40		QLP	62.97	118 iPc	38 43.80	0.6			iSS	53 00.00		
BJI	53.01	32 ePc	37 32.79	-0.1	TSRJ	63.04	47 P	38 42.70	-0.7			iSSS	56 48.00		
	1.5s	270.00nm		6.0mb	KAS	63.08	320 eP	38 43.00	-0.7	SRS	69.73	316 eP	39 24.28	-1.7	
Z	20s	4.20um		5.5Msz	ELL	63.40	314 iP	38 45.00	-1.0	VRI	69.75	322 ePc	39 26.00	0.0	
E	19s	3.30um			MDJ	63.49	36 iPc	38 46.50	0.3	SOH	69.77	316 ePc	39 24.76	-1.5	
		epPd	37 39.33	22kmX		5.0s	1120.00nm		6.3mb X	AGG	69.80	314 ePc	39 24.36	-2.1	
		esPd	37 42.89			Z	17s	2.20um	5.4MszX	MMB	69.82	317 iPc	39 26.00	-0.6	
		ePP	39 36.39			N	16s	0.68um		IAS	69.88	323 eP	39 26.00	-0.7	
		eS	45 03.28			E	16s	1.30um		THE	69.97	316 eP	39 26.52	-0.8	
		i	45 13.71					pP	38 57.00	34kmX	MLR	70.06	321 iPc	39 28.90	0.8
ASPA	53.20	117 iPc	37 34.00	-0.7				PP	41 05.00		CVO	70.07	322 eP	39 27.50	-0.5
	1.2s	34.30nm		5.2mb				iS	47 18.00		LIT	70.09	315 ePc	39 26.08	-2.1
Z	23s	3.90um		5.4MszX				sS	47 32.00		KNT	70.22	316 ePc	39 27.44	-1.5
		iP	38 38.80	302kmX	CTA	63.89	111 iPc	38 49.80	0.5	KKB	70.38	317 iP	39 29.00	-0.9	
TAB	53.38	324 iPc	37 36.60	0.7		0.8s	114.18nm		6.1mb	GRG	70.49	316 ePc	39 28.92	-1.7	
KRI	53.86	252 iPc	37 38.60	-1.1			iS	47 27.00		VAY	70.51	316 iP	39 29.60	-1.1	
DL2	55.29	36 P	37 49.00	-0.7	LAT	63.97	96 eP	38 50.60	0.7	CMP	70.53	321 ePd	39 32.00	1.2	
	5.0s	700.00nm		5.9mb X	BFD	64.02	130 eP	38 49.00	-0.9	VTS	70.59	318 iP	39 31.00	-0.3	
Z	20s	1.30um		5.0Msz			e	38 57.00		VLS	70.76	312 eP	39 31.50	-0.8	
N	18s	3.60um			PMG	64.12	99 eP	38 51.00	0.1	HOOJ	71.08	43 eP	39 34.60	0.5	
E	18s	2.70um				1.0s	154.00nm		6.1mb	FNA	71.14	315 ePc	39 32.88	-1.7	
		S	45 30.00		ALT	64.33	317 iP	38 52.00	0.0	ASAJ	71.35	41 eP	39 34.90	-0.8	
										IGT	71.43	314 eP	39 35.04	-1.3	



[illegible]



Z	22s	1.55um	5.4Msz	ECB	92.47	322 iPc	41 27.30	1.3	TOV	152.10	284 ePKP	48 06.00	1.0	
EBR	86.44	311 eP	40 59.50	1.7	1.2s	190.00nm		6.4mb	SDV	153.08	283 ePKP	48 07.00	0.5	
		eS	51 32.00		92.62	324 iPc	41 28.10	1.5	NNA	154.62	232 ePKP	48 09.00	0.6	
LSF	86.47	317 eP	40 58.20	0.3	1.1s	102.00nm		6.2mb		0.5s	11.97nm			
	1.0s	81.20nm		5.9mb	93.51	38 P	41 31.60	0.9	Z	18s	0.52um		5.4Msz	
LPO	86.47	315 eP	40 58.70	0.8	1.2s	202.02nm		6.4mb	UPA	161.63	288 ePKPd	48 18.00	1.4	
	1.0s	68.80nm		5.8mb	ADK	99.19	38 ePd	41 56.50	-0.1		1.4s	74.42nm		
EROO	86.51	311 eP	40 59.70	1.5	1.4s	68.18nm		6.0mb			i	49 04.30		
SPA	86.56	180 iPc	41 00.00	1.9	IMA	106.23	21 Pd iff	42 24.00	-3.9X	TPM	164.47	7 (PKP)	48 26.00	6.5X
	1.0s	45.00nm		5.6mb	PMR	110.30	24 PKP	46 55.00	7.9X		S.D. = 1.0	on 413 of 442 obs.		
Z	20s	3.15um		5.7Msz	Z	20s	2.00um		5.7Msz					
		i	41 13.50		INK	110.77	14 ePKP	46 47.00	-0.8		MAY 13, 1991	16h 33m	56.75± 0.63s	
		e	13 16.00		FRB	116.32	346 ePKP	46 57.00	-1.6		38.765 N ± 5.4km	27.958 E ± 7.4km		
LFF	86.82	315 eP	41 00.40	0.8	YKA	119.69	9 ePKP	47 02.90	-2.1		DEPTH = 10.0km	(geophysicist)		
	1.0s	82.40nm		5.9mb		0.9s	8.60nm			TURKEY			(366)	
ACU	86.84	309 iPd	41 01.30	1.4	SCH	123.18	340 ePKP	47 11.00	-1.0		MD 2.7 (ISK).			
EPF	86.85	313 eP	40 59.70	-0.2	PPD	128.51	238 ePKP	47 23.50	0.2					
BTH	87.26	313 iPd	41 03.20	1.4	FFC	128.75	4 ePKP	47 22.00	-0.7					
		iPcP	41 05.50			1.4s	68.00nm			IZM	0.66	236 ePg	34 10.50	0.6
		isP	41 17.50		CBM	129.92	334 PKP	47 25.00	-0.2			iSg	34 20.50	
		e	41 32.00		PNT	130.48	19 ePKPd	47 27.00	0.8	DST	0.99	32 ePn	34 15.90	0.4
		eS	51 48.00		GMW	130.84	23 PKP	47 28.00	1.1	CIN	1.17	175 eP	34 18.00	-0.5
		eSS	57 18.00		LON	131.87	23 PKP	47 28.00	-1.0	KHL	1.30	109 ePn	34 21.00	0.1
JAU	87.37	313 P	41 03.76	1.3	COR	133.03	25 ePd iff	44 23.39	-4.1X	BNT	1.59	359 ePn	34 24.40	-0.6
ECHE	87.40	310 iPc	41 04.70	2.1	LRM	135.75	15 ePKP	47 35.30	-1.4	KGT	1.76	343 ePn	34 27.00	-0.4
ESCF	87.52	313 P	41 04.21	1.1	MIN	137.17	28 e(PKP)	47 38.40	-1.0	YLV	2.10	31 ePn	34 33.00	0.5
ATE	87.62	313 P	41 04.30	0.8			e	50 43.70			S.D. = 0.6	on 7 of 7 obs.		
MFF	87.66	317 eP	41 04.00	0.4	TBR	137.18	334 PKP	47 38.00	-1.2					
ISSF	87.68	313 P	41 05.00	1.2	PCC	139.00	31 e(PKP)	47 44.00	1.4		MAY 13, 1991	17h 29m	27.45± 0.67s	
MADF	87.71	313 P	41 04.64	0.7	CMB	139.57	29 e(PKP)	47 41.00	-2.7		44.283 N ± 11.5km	9.907 E ± 4.7km		
ELYF	87.84	313 P	41 05.21	0.6			ePP	50 40.60			DEPTH = 10.0km	(geophysicist)		
BOH	87.84	313 P	41 05.71	1.0			eSKP	51 38.30			NORTHERN ITALY		(545)	
LDF	87.91	319 eP	41 05.10	0.4	PRS	140.41	31 e(PKP)	47 41.50	-3.7X		ML 2.6 (LDG).			
	1.1s	103.55nm		6.1mb	BONR	140.60	27 PKP	47 38.00	-7.9X					
KIC	87.96	276 P	41 06.20	0.5	FRI	140.73	29 e(PKP)	47 37.10	-8.6X					
	1.0s	99.50nm		6.1mb			e	50 45.40		BDI	0.54	114 P	29 38.00	-0.5
ENIJ	88.09	307 eP	41 07.50	1.6	PRI	140.92	31 e(PKP)	47 37.30	-9.0X			eSg	29 46.60	
FLN	88.17	319 eP	41 06.30	0.3			e	50 54.40		MME	0.58	99 P	29 39.40	0.1
	1.1s	91.55nm		6.0mb	TNP	140.97	25 PKP	47 39.00	-7.5X			eSg	29 48.10	
Z	18s	3.75um		5.8Msz	DAU	141.08	17 PKP	47 40.00	-6.7X	PCP	1.01	285 P	29 46.68	0.1
LIC	88.24	276 P	41 07.54	0.5	CVL	141.61	336 PKP	47 41.00	-6.3X			S	29 58.65	
	1.1s	108.00nm		6.1mb	MSU	142.53	19 PKP	47 45.00	-4.2X	CKI	1.18	277 P	29 49.20	-0.2
Z	22s	0.79um		5.1Msz	GLD	143.15	10 ePKPd	47 46.60	-3.6X			eSn	30 03.00	
TIC	88.26	277 P	41 07.50	0.3	Z	20s	2.20um		5.9Msz	FIN	1.22	267 P	29 50.06	-0.2
	0.9s	53.00nm		5.8mb	GOL	143.17	11 ePKPd	47 46.00	-4.3X			S	30 04.15	
ETOR	88.36	311 iPc	41 08.70	1.5	Z	20s	1.75um		5.8Msz	ROB	1.46	271 P	29 53.34	-0.6
GRR	88.37	318 eP	41 07.40	0.5			e	50 54.00				S	30 09.37	
	1.0s	81.20nm		6.0mb	PV09	143.46	16 ePKPd	47 48.10	-2.8	ENR	1.79	269 P	29 58.37	-0.3
LPF	88.45	318 eP	41 07.80	0.5	GSC	143.47	27 ePKP	47 48.00	-2.7			S	30 17.55	
	1.1s	106.95nm		6.1mb	SBB	143.49	29 ePKP	47 48.00	-2.8	SBF	1.83	258 Pn	29 59.60	0.3
EHUE	88.48	308 iPc	41 08.60	0.7	MWC	143.74	30 ePKP	47 49.00	-2.4			Sn	30 22.30	
EVIA	88.49	309 iPc	41 09.30	1.4	RVR	144.27	29 ePKP	47 50.00	-2.0	PGF	1.86	201 Pn	30 00.80	1.1
ECRI	88.88	313 iPc	41 11.40	1.7	PEC	144.45	29 ePKP	47 50.10	-2.3			Sn	30 23.80	
SNZO	89.15	131 P	41 16.00	5.1X	TPC	144.81	28 ePKP	47 52.00	-1.0	STV	1.86	270 P	29 59.29	-0.4
		PP	44 58.00		PLM	145.03	29 ePKP	47 52.00	-1.6			S	30 18.96	
		SKS	51 36.00		LPB	145.07	234 PKP	47 53.00	-1.4	BHB	1.97	287 P	30 03.59	2.3
		PS	53 12.00			1.0s	310.00nm			PZZ	2.02	277 P	30 01.24	-0.9
		SS	57 52.00		FVM	145.09	351 iPKPc	47 50.90	-2.4			S	30 22.35	
EGUA	89.16	307 iPc	41 12.00	1.0	CCM	145.15	352 ePKPc	47 51.83	-1.5	FRF	2.46	254 Pn	30 08.40	0.1
ECOG	89.20	307 eP	41 11.10	-0.3			e	47 54.39				Sn	30 37.10	
EBAN	89.45	308 iPc	41 13.00	0.6			ed	48 00.02		LMR	2.64	250 Pn	30 10.20	-0.6
TOL	89.79	310 iPc	41 15.50	1.5			eHPP	51 10.59				Sn	30 42.20	
	1.1s	88.61nm		5.9mb			ePP	51 11.14		LRG	2.70	253 Pn	30 11.10	-0.5
		iPP	44 46.00		ZOBO	145.23	235 ePKPc	47 53.80	-1.0			Sn	30 44.00	
		eSKS	51 20.00				e	47 56.28			S.D. = 0.9	on 15 of 15 obs.		
		iS	52 06.00				ed	48 00.91			MAY 13, 1991	17h 42m	24.06± 1.06s	
		iPS	53 18.00				LR	41 48.00			6.010 S ± 6.4km	76.895 W ± 11.3km		
MAL	89.83	307 iPd	41 15.00	0.9	CPE	145.30	30 ePKP	47 55.10	1.3		DEPTH = 44.8 ± 9.6 km			
		iPP	44 36.00		ELC	145.56	349 PKP	47 46.50	-7.6X		4.8mb ( 12 obs.)			
		iS	51 56.00		LHS	145.59	336 PKP	47 53.50	-0.7	NORTHERN PERU			(111)	
GUD	89.94	311 iPc	41 16.30	1.6	TKL	145.65	340 PKP	47 53.20	-1.1	QUIL	5.60	339 P	43 48.50	1.0
EKA	90.53	325 Pc	41 16.80	-0.2	BAR	145.67	30 ePKP	47 55.00	0.5	ANGL	5.62	353 P	44 04.00	16.3X
	1.7s	118.90nm		5.9mb	GBTN	145.78	341 PKP	47 53.30	-1.2	NNA	5.94	180 iP	43 51.00	-0.9
EHOR	90.58	308 iPc	41 18.40	0.8	IKP	145.97	29 ePKP	47 58.10	3.0X		0.8s	55.22nm		5.1mb
L1JA	90.64	307 eP	41 18.50	0.5	GLA	146.25	27 ePKP	47 57.00	1.6			eS	44 58.00	
EJIF	90.66	306 iPd	41 19.10	1.1	RSCP	146.27	343 PKP	47 54.00	-1.4	OUR	6.02	344 eP	44 04.00	10.6X
PLAT	90.87	306 eP	41 20.00	1.0	SGS	146.57	334 PKP	47 56.00	0.2	GGP	6.04	344 eP	43 59.50	5.7X
GIBL	91.07	307 eP	41 20.00	0.1	HBF	146.73	334 PKP	47 57.00	0.9	ARE	11.66	153 eP	45 18.50	7.5X
CNIL	91.12	306 eP	41 20.00	-0.1	ANMO	147.51	14 ePKPd	47 57.70	0.1	ZOBO	13.34	141 P	45 32.00	-1.6
EPLA	91.36	310 iPc	41 22.80	1.6	Z	20s	2.98um		6.1Msz	LPB	13.55	141 P	45 37.00	0.7
EVAL	91.75	307 eP	41 23.80	0.8	ALO	147.51	14 ePKP	47 57.50	-0.1		1.0s	70.00nm		5.5mb
ETA	92.14	322 eP	41 26.10	1.7	Z	19s	1.74um		5.9Msz	UPA	15.12	350 eP	46 03.50	7.1X
	1.2s	193.00nm		6.4mb	OLY	147.68	351 PKP	47 57.00	-0.6	CEOS	17.21	30 iP	46 21.70	-1.3
ECP	92.21	322 eP	41 25.90	1.2	TUL	147.69	358 e(PKP)	47 57.00	-0.6	TOV	17.21	24 eP	46 24.60	1.5
	1.2s	345.00nm		6.6mb		1.2s	300.80nm			PPD	29.41	125 (P)	48 28.00	2.3
ERUA	92.29	312 eP	41 26.90	1.5			i	47 59.50		PDCR	37.81	103 (P)	49 33.00	-5.2X
EMON	92.47	313 eP	41 27.80	1.6	ARE	147.81	231 ePKP	48 00.00	1.3	ANMO	49.35	328 P	51 11.10	-0.3



13d 17h

SCH	61.19	7 eP	52 36.00	-0.4
PNT	66.45	331 eP	53 23.00	12.0X
KIC	73.05	82 P	53 54.04	2.1
	0.9s	21.50nm		5.1mb
YKA	74.14	343 eP	53 56.50	-0.9
	0.7s	0.90nm		3.8mb
INK	83.86	342 eP	54 50.00	0.0
LPF	85.06	41 eP	54 56.20	-0.1
	0.8s	5.35nm		4.8mb
GRR	85.27	40 eP	54 57.30	-0.1
LFF	85.52	44 eP	54 59.00	0.3
	0.8s	6.70nm		4.9mb
FLN	85.61	40 eP	54 59.20	0.2
LPO	85.78	44 eP	55 00.10	0.1
LSF	86.35	43 eP	55 02.80	0.0
CAF	86.44	44 eP	55 03.40	0.1
	0.8s	4.70nm		4.8mb
TCF	86.82	43 eP	55 05.00	-0.2
MAF	87.05	43 eP	55 05.70	-0.5
BGF	87.31	43 eP	55 06.90	-0.6
AVF	87.70	43 eP	55 08.30	-1.0
	1.0s	6.00nm		4.8mb
SSF	87.85	42 eP	55 09.10	-0.9
	0.7s	2.20nm		4.5mb
SMF	88.00	43 eP	55 10.00	-0.8
	0.9s	4.90nm		4.8mb
LOR	88.13	42 eP	55 11.10	-0.3
	0.8s	4.05nm		4.7mb
LPL	89.79	44 eP	55 19.70	0.1
	0.6s	2.70nm		4.7mb
LPG	89.80	44 eP	55 19.80	0.1
CDF	90.59	42 eP	55 22.30	-0.7
WB2	139.88	229 ePKP	01 51.50	1.4
	1.0s	1.70nm		
WRA	139.89	229 PKP	01 51.00	0.9
	1.0s	2.00nm		
LZH	150.06	359 ePKP	02 21.00	14.1X
	1.2s	21.00nm		
		pP	02 29.00	
		i	02 55.00	
GKN	151.97	37 PKP	02 17.80	7.8X
KKN	152.51	36 PKP	02 19.00	8.2X
GUN	152.76	35 PKP	02 20.20	8.8X
		S.D. = 1.0 on 31 of 42 obs.		

\* MAY 13, 1991 17h 53m 19.63±0.88s  
 15.343 S ±22.0km 70.822 W ±12.9km  
 DEPTH = 185.7 ± 10.4 km  
 4.4mb ( 2 obs.)

SOUTHERN PERU (117)

ARE	1.29	210 iPc	53 49.50	-1.3
		i(S)	54 12.00	
ZOBO	2.76	110 P	54 07.10	0.4
LPB	2.87	115 Pd	54 08.00	0.0
	1.0s	860.00nm		
CCH	4.93	115 Pd	54 36.50	2.7
NNA	6.73	299 iPc	54 56.20	-1.0
	0.7s	25.34nm		4.6mb
		eS	56 05.50	
UPA	25.66	340 eP	58 36.20	2.1
PDCR	30.88	89 (P)	59 18.00	-2.8
ANMO	60.38	327 P	03 11.40	-0.3
LIC	68.59	77 P	04 03.10	-1.7
TNP	68.68	322 P	04 05.80	0.6
KIC	68.91	77 P	04 04.70	-2.0
YKA	84.81	341 eP	05 34.10	0.3
	0.6s	3.20nm		4.3mb
ASPA	134.31	212 ePKP	12 18.80	1.1
	0.8s	3.60nm		
WB2	137.08	216 iPKPc	12 23.20	0.2
	0.5s	2.30nm		
WRA	137.08	216 PKP	12 23.00	0.0
	0.5s	2.30nm		
GBA	149.23	89 PKPc	12 45.50	1.6
	0.3s	2.80nm		
HYB	150.56	82 ePKP	12 53.00	7.1X
GKN	154.01	57 PKP	13 00.40	9.7X
KKN	154.61	57 PKP	13 01.60	10.0X
		S.D. = 1.7 on 16 of 19 obs.		

% MAY 13, 1991 18h 06m 31.17±3.29s  
 40.695 N ± 7.2km 29.814 E ±27.1km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.9 (ISK).

HRT	0.17	319 iPg	06 34.80	-0.2
		eSg	06 38.80	
YLV	0.36	249 iPg	06 38.40	-0.2
IZI	0.44	216 iPg	06 40.30	0.1
ISK	0.68	303 ePg	06 45.00	0.3
DST	1.42	220 ePn	06 57.00	0.0
		S.D. = 0.3 on 5 of 5 obs.		

MAY 13, 1991 19h 00m 43.58±0.32s  
 41.969 N ± 4.4km 142.505 E ± 5.8km  
 DEPTH = 73.1km ( 2 depth phases)  
 4.9mb ( 28 obs.)  
 HOKKAIDO, JAPAN REGION (224)

HOOJ	0.71	54 iP+	00 58.50	-0.5
		S	01 09.90	
MRRJ	1.16	294 iPd	01 03.80	-0.7
		S	01 18.60	
KUSJ	1.98	55 iPd	01 14.90	-0.7
		eS	01 40.60	
AOMJ	2.14	229 eP	01 18.40	0.7
		S	01 45.30	
ASAJ	2.15	3 iPd	01 18.10	0.2
		S	01 45.10	
OFUJ	2.96	193 eP	01 29.00	-0.1
		eS	02 04.90	
YAMJ	4.24	207 eP	01 47.70	0.6
NIIJ	5.44	211 eP	02 04.50	0.6
KAKJ	6.03	198 P	02 09.20	-3.0
		S	03 19.20	
MTMJ	6.49	216 P	02 19.80	1.1
CHJJ	6.51	206 eP	02 17.90	-0.9
IIDJ	7.41	210 P	02 32.60	1.4
TSRJ	8.20	221 P	02 43.90	1.9
MDJ	9.78	290 Pc	03 06.50	2.8X
	0.8s	20.00nm		5.2mb
CN2	12.65	284 eP	03 43.30	1.3
		ePP	03 51.00	
SNY	14.10	276 eP	04 02.20	1.1
	1.0s	20.00nm		4.4mb
BJI	19.94	273 eP	05 09.00	-3.0
	1.0s	18.00nm		4.3mb
SSE	20.22	244 eP	05 07.00	-7.9X
TIA	20.49	262 eP	05 13.60	-4.1X
YAK	21.49	343 eP	05 25.80	-1.7
		i	05 43.00	78km
		e	09 14.00	
TIY	23.42	270 eP	05 44.80	-1.9
XAN	27.49	264 eP	06 23.00	-1.8
IRK	27.66	305 eP	06 25.00	-1.1
GTA	32.23	280 eP	07 06.20	-0.7
	0.8s	10.00nm		4.7mb
CD2	32.81	263 P	07 10.30	-1.7
WMQ	39.58	292 P	08 09.80	0.7
LSA	42.81	270 P	08 37.20	0.9
CHG	43.49	252 ePd	08 42.50	1.2
FBA	44.53	35 (P)	08 49.00	-0.2
GUN	47.68	272 P	09 15.00	0.0
KKN	48.19	272 P	09 18.70	-0.1
	0.8s	45.00nm		5.5mb
PKI	48.21	272 P	09 18.80	-0.3
	0.7s	18.00nm		5.1mb
DMN	48.42	272 P	09 20.80	0.2
	0.6s	23.00nm		5.3mb
GKN	48.56	273 P	09 21.50	0.0
	0.5s	17.00nm		5.3mb
NDI	53.70	278 eP	10 00.00	-0.1
KEV	59.15	339 eP	10 47.00	8.6X
YKA	59.15	32 eP	10 37.30	-1.2
	0.7s	0.80nm		4.0mb
HYB	59.28	266 ePc	10 39.50	-0.5
	1.0s	25.00nm		5.3mb
SOD	60.77	336 iP	10 48.20	-1.3
WB2	62.06	189 eP	10 58.30	-0.3
	0.4s	0.50nm		4.0mb
WRA	62.06	189 P	10 57.00	-1.6
	0.6s	1.80nm		4.4mb
GBA	62.52	264 Pc	11 00.80	-1.1
	0.9s	12.00nm		5.0mb
KAF	64.33	332 iP	11 11.80	-1.4
	0.6s	7.70nm		4.8mb
KOD	64.70	261 eP	11 17.00	0.5
NUR	66.01	331 iP	11 27.00	3.1X
FFC	69.13	34 iPc	11 43.50	-0.1
	0.8s	12.00nm		4.9mb
HFS	69.95	335 eP	11 47.40	-1.1
	0.4s	10.20nm		5.1mb

NB2	69.97	337 P	11 05.70	68km
	0.7s	7.70nm		4.7mb
FRB	71.79	14 eP	11 58.00	-1.5
TNP	72.29	55 P	12 04.80	1.6
KRA	75.49	326 eP	12 21.00	-0.2
CLL	77.24	330 iP	12 31.00	0.0
	0.9s	13.00nm		4.9mb
PRU	77.72	329 eP	12 34.50	0.9
EKA	78.76	341 Pc	12 39.30	0.0
	0.6s	2.60nm		4.3mb
KHC	78.78	329 eP	12 40.00	0.5
GRF	79.22	330 ePc	12 42.90	1.0
	0.7s	10.00nm		4.9mb
LOR	83.88	333 eP	13 06.50	0.2
	0.8s	9.15nm		4.8mb
Z	21s	0.05um		3.9msz
LDF	83.99	336 eP	13 07.40	0.7
LBF	84.09	333 eP	13 07.50	0.2
	0.7s	7.30nm		4.8mb
SSF	84.18	333 eP	13 08.10	0.4
	0.8s	6.45nm		4.7mb
SMF	84.43	333 eP	13 09.50	0.5
	0.7s	6.30nm		4.8mb
AVF	84.47	333 eP	13 09.80	0.6
	0.6s	11.10nm		5.1mb
LPF	84.76	336 eP	13 11.30	0.7
BGF	84.84	333 eP	13 11.60	0.5
MAF	85.23	333 eP	13 14.10	1.1
TCF	85.29	334 eP	13 14.10	0.7
SBF	85.52	329 eP	13 14.50	-0.1
LSF	85.55	334 eP	13 15.30	0.7
MFF	85.77	335 eP	13 16.70	1.0
LRG	86.27	330 eP	13 18.70	0.5
LMR	86.32	329 eP	13 18.70	0.2
RJF	86.38	334 eP	13 19.80	1.0
Z	20s	0.05um		3.9msz
CAF	86.53	333 eP	13 21.00	1.4
	0.6s	7.50nm		5.0mb
LFF	86.96	334 eP	13 23.10	1.5
	0.6s	5.50nm		4.9mb
LPO	87.04	333 eP	13 23.30	1.3
	0.6s	6.30nm		4.9mb
PDCR	150.64	3 (PKP)	20 29.00	5.8X
		S.D. = 1.1 on 70 of 76 obs.		

? MAY 13, 1991 19h 20m 51.00±2.87s  
 20.396 S ±26.5km 68.982 W ±15.6km  
 DEPTH = 116.2 ± 25.9 km  
 3.8mb ( 1 obs.)

CHILE-BOLIVIA BORDER REGION (124)

LPB	3.93	12 iPc	21 51.00	0.1
	1.0s	360.00nm		
CCH	4.03	42 P	21 53.00	0.9
ZOBO	4.18	11 Pc	21 53.90	-0.6
ARE	4.58	328 iP	21 59.50	-0.1
		iS	23 02.00	
NNA	11.26	317 eP	23 40.00	10.2X
	0.8s	5.97nm		
PPD	16.56	99 (P)	24 37.00	-0.7
YKA	90.13	341 eP	33 38.20	-0.5
	0.7s	0.60nm		3.8mb
WB2	133.86	211 ePKP	39 57.00	0.4
	1.7s	1.00nm		
WRA	133.86	211 PKP	39 57.00	0.4
	0.9s	1.00nm		
		S.D. = 0.7 on 8 of 9 obs.		

\* MAY 13, 1991 19h 58m 10.53±1.00s  
 1.103 S ± 7.5km 78.362 W ±19.8km  
 DEPTH = 33.0km (normal)  
 3.7mb ( 1 obs.)

ECUADOR (107)

TUNG	0.32	195 P	58 18.20	-0.8
VC1	0.46	355 P+	58 21.00	0.0
		eS	58 29.70	
QUIL	0.66	301 P	58 24.10	0.3
GGP	0.95	346 P	58 27.70	-0.4
		eS	58 43.40	
YANA	1.00	348 P+	58 28.20	-0.6
YKA	69.05	343 eP	09 15.50	0.6
	0.4s	0.30nm		3.7mb
WB2	141.71	235 ePKP	17 42.30	0.9
	0.9s	1.00nm		
		S.D. = 0.8 on 7 of 7 obs.		







14d 00h

E 12s 0.70um sP 34 10.00	CDF 0.77 162 Pg 20 51.82 -0.6	GHO 1.31 144 ePc 22 20.44 -0.1
GBA 23.58 164 Pc 34 02.00 3.4X	WLS 0.78 158 Pg 20 52.29 -0.4	SUA 1.38 184 ePd 22 21.15 -0.2
0.9s 23.80nm 4.6mb	ECH 0.94 170 Pg 20 55.56 0.2	eS 22 40.75
LZH 26.32 81 eP 34 24.50 -0.2	Sg 21 10.28	PLRM 1.42 151 ePc 22 21.06 -0.6
2.0s 29.00nm 4.5mb	MOF 1.30 174 Pg 21 01.90 0.4	PMR 1.42 151 ePc 22 21.40 -0.3
Z 18s 0.73um 4.3msz	FEL 1.46 150 Pg 21 05.17 1.3	BWN 1.43 20 ePd 22 21.59 -0.2
E 11s 0.46um	MEM 1.59 338 iP 21 06.30 0.8	SML 1.47 134 iPc 22 21.88 -0.5
pP 34 34.50 37kmX	LOMF 1.79 182 Pn 21 07.39 -1.3	eS 22 42.44
PP 35 12.00	S.D. = 0.9 on 9 of 9 obs.	NCG 1.62 208 ePd 22 23.72 -0.7
KOD 26.86 166 eP 34 34.00 4.2X	* MAY 14, 1991 01h 49m 43.78±1.72s	PMS 1.67 163 ePc 22 24.52 -0.4
CD2 27.66 92 eP 34 36.90 0.1	44.438 N ±11.1km 111.217 W ±11.3km	eS 22 45.75
OBN 29.90 319 eP 35 16.00 19.5X	DEPTH = 5.0km (geophysicist)	KNK 1.74 144 ePc 22 25.03 -0.8
Z 18s 0.60um 4.3msz	HEBGEN LAKE REGION (458)	S 22 47.76
N 16s 0.60um	ML 3.1 (BUT).	CRP 1.74 206 eP 22 25.59 -0.4
E 18s 0.60um		BGL 1.80 209 ePd 22 26.42 -0.2
ePP 36 10.00		SPU 1.80 204 iPd 22 26.05 -0.6
CHG 30.20 118 eP 35 04.00 4.5X	LTMT 0.65 278 iPc 49 56.90 0.2	S 22 50.13
XAN 30.85 83 eP 35 04.50 -0.7	BGMT 0.99 324 iPd 50 02.40 -0.7	SCM 1.81 122 iPc 22 25.95 -0.9
GYA 31.80 98 P 35 15.00 1.3	MEMT 1.18 8 eP 50 05.80 -0.6	CKL 1.85 208 ePd 22 26.77 -0.5
sP 35 35.40	MCMT 1.23 289 ePd 50 07.10 -0.2	NEA 1.87 20 iPd 22 26.47 -1.0
VRI 34.25 300 eP 35 34.00 -0.6	HPI 1.54 242 eP 50 12.00 -0.2	WRH 1.98 33 iPd 22 27.90 -1.0
CVO 34.64 300 eP 35 47.50 9.6X	LRM 1.64 328 ePnc 50 13.90 0.3	TOA 2.17 108 eP 22 31.60 0.1
NUR 37.80 324 eP 36 23.00 18.6X	HBMT 1.67 324 ePn 50 14.70 0.6	CCB 2.19 33 iPd 22 30.54 -1.2
SOD 39.69 335 eP 36 26.00 6.0X	SXM 1.71 0 ePn 50 15.00 0.4	HDA 2.25 44 iPd 22 31.55 -1.0
KEV 40.75 338 eP 36 43.00 14.3X	PTI 1.78 208 eP 50 12.20 -3.3X	RDS 2.27 27 ePd 22 31.75 -1.0
HFS 43.05 322 eP 36 41.80 -5.8X	BUT 1.84 329 ePg 50 18.30 1.9X	PAX 2.34 84 ePc 22 33.37 -0.4
0.8s 4.10nm 4.3mb	eSn 50 41.20	eS 23 01.17
Z 16s 0.36um 4.4mszX	iSg 50 42.50	SDG 2.34 95 ePc 22 33.14 -0.5
e 36 46.00	HRY 2.31 349 ePn 50 23.50 0.2	SLKM 2.34 176 eP 22 33.25 -0.5
e 36 47.80	S.D. = 0.5 on 9 of 11 obs.	MDM 2.37 25 iPd 22 33.05 -1.1
e 36 51.30	? MAY 14, 1991 01h 53m 03.68±2.62s	FBA 2.41 29 ePd 22 34.00 -0.6
e 36 57.30	61.806 N ±17.7km 4.789 E ±24.0km	RDT 2.43 202 eP 22 34.22 -0.8
LR 52 53.00	DEPTH = 30.3 ± 8.9 km	DFR 2.47 205 eP 22 35.79 0.3
NB2 44.36 323 P 36 56.60 -1.7	SOUTHERN NORWAY (535)	TTA 2.50 275 ePc 22 35.40 -0.5
0.7s 2.10nm 4.1mb	MD 2.0 (BER).	TZL 2.52 106 eP 22 35.69 -0.4
INK 73.81 9 eP 40 24.00 2.3		NCT 2.55 207 eP 22 35.37 -1.2
FBA 74.37 16 (P) 40 24.60 -0.5	FRO 0.07 138 ePg 53 08.14 -0.7	GLI 2.56 139 ePc 22 35.00 -1.7
YKA 81.16 3 eP 40 56.90 -5.4X	eSg 53 11.99	KLU 2.56 120 iPc 22 34.93 -1.8
0.8s 2.40nm 4.2mb	GLM 2.58 32 ePd 22 35.90 -1.0	GLM 2.58 32 ePd 22 35.90 -1.0
WRA 81.97 122 P 41 07.00 -0.3	RDW 2.59 205 eP 22 36.83 -0.5	RS2 2.60 205 eP 22 37.26 -0.2
0.8s 1.70nm 4.1mb	RS2 2.60 205 eP 22 37.26 -0.2	RSO 2.60 205 eP 22 36.99 -0.4
S.D. = 1.6 on 20 of 32 obs.	SUE 0.75 181 eP 53 18.00 0.0	VZW 2.60 131 ePc 22 35.24 -2.0
MAY 14, 1991 00h 58m 25.80±0.38s	eSg 53 29.00	RED 2.64 204 eP 22 37.33 -0.6
40.803 N ± 3.4km 24.130 E ± 3.1km	HYA 0.93 133 iP 53 21.00 0.5	SEW 2.79 168 eP 22 38.97 -0.8
DEPTH = 5.0km (geophysicist)	eSg 53 36.20	NNL 2.83 187 eP 22 41.31 1.1
AEGEAN SEA (365)	MOL 1.50 58 eP 53 29.93 1.1	KNIM 2.84 150 ePc 22 38.09 -2.3
MD 2.8 (ATH). ML 2.4 (THE).	eSg 53 50.46	SVW 2.95 236 ePd 22 41.40 -0.6
OUR 0.48 194 ePg 58 36.08 0.6	NRA0 3.43 105 Pn 53 55.50 -0.9	DOT 3.05 72 eP 22 41.99 -1.4
eSg 58 41.92	Sn 54 37.40	CNPM 3.34 186 eP 22 46.60 -0.7
SRS 0.51 308 ePg 58 36.21 0.1	S.D. = 1.2 on 6 of 6 obs.	GLB 3.47 111 ePc 22 47.22 -1.8
eSg 58 43.04	% MAY 14, 1991 02h 51m 18.31±0.69s	IMA 3.51 339 ePd 22 49.40 -0.4
SOH 0.59 272 ePg 58 37.80 0.2	40.410 N ± 6.1km 29.253 E ± 6.2km	CDD 4.20 202 eP 22 58.52 -0.6
eSg 58 45.92	DEPTH = 10.0km (geophysicist)	TGL 4.22 116 eP 22 57.05 -2.4
THE 0.90 259 ePg 58 43.60 0.1	TURKEY (366)	BALM 4.28 111 ePc 22 57.77 -2.6
eSg 58 56.64	MD 2.7 (ISK).	SYI 4.33 193 eP 22 59.85 -1.0
PAIG 0.94 202 ePg 58 44.20 0.0	YLV 0.18 30 iPg 51 22.90 0.5	57 obs. associated
eSg 58 56.48	eSg 51 26.40	& MAY 14, 1991 04h 33m 28.38s
RZN 0.99 26 iPc 58 45.00 -0.1	IZI 0.18 114 iPg 51 22.60 0.1	59.809 N 151.410 W
KNT 1.00 291 ePg 58 44.86 -0.3	HRT 0.52 37 ePg 51 28.20 -0.6	DEPTH = 54.3km
eSg 58 58.48	ISK 0.67 347 iPg 51 31.70 0.1	KENAI PENINSULA, ALASKA (14)
RDO 1.12 72 ePn 58 47.50 0.3	eSg 51 40.70	<AEIC>.
eSn 59 01.50	DST 0.94 211 ePg 51 36.10 -0.1	NNL 0.24 14 iPc 33 38.37 0.8
VAY 1.29 294 ePn 58 50.00 -0.1	BNT 1.02 267 ePg 51 37.60 0.0	BRK 0.27 99 iPc 33 37.43 -0.4
GRG 1.32 277 ePb 58 51.12 0.4	eSg 51 51.60	eS 33 44.71
eSb 59 07.80	S.D. = 0.5 on 6 of 6 obs.	CNPM 0.30 163 iPd 33 37.40 -0.6
KKB 1.32 324 iPc 58 51.00 0.3	& MAY 14, 1991 04h 21m 56.13s	eS 33 44.73
LIT 1.43 241 ePb 58 52.36 -0.2	62.836 N 150.564 W	XLV 0.39 204 ePd 33 37.72 -1.1
eSb 59 12.16	DEPTH = 99.2km	eS 33 45.87
ALN 1.46 86 ePb 58 52.08 -0.7	CENTRAL ALASKA (1)	RDT 0.91 327 iPd 33 44.55 -0.8
eSb 59 12.44	<AEIC>.	eS 33 58.10
PGB 1.75 1 ePg 58 58.00 1.0	HUR 0.45 71 iPc 22 11.40 -0.3	RED 0.92 312 ePd 33 44.60 -0.7
KZN 1.86 255 ePn 58 58.00 -0.7	CUT 0.45 162 iPd 22 11.60 -0.1	eS 33 57.73
VTS 1.92 339 eP 58 59.00 -0.5	TRF 0.63 11 ePd 22 13.04 -0.3	SLKM 0.92 40 iPc 33 44.86 -0.5
FNA 2.09 270 eP 59 01.68 -0.3	S 22 25.90	RSO 0.94 315 ePd 33 45.14 -0.6
S.D. = 0.5 on 17 of 17 obs.	RND 0.97 53 iPc 22 16.10 -0.4	eS 33 58.35
MAY 14, 1991 01h 20m 37.40±0.74s	eS 22 30.76	NKA 0.94 5 iPd 33 46.98 1.4
49.140 N ± 5.3km 6.920 E ± 10.7km	SKT 0.97 208 iPd 22 16.18 -0.3	RS2 0.94 315 ePd 33 45.17 -0.6
DEPTH = 10.0km (geophysicist)	eS 22 31.13	eS 33 58.37
GERMANY (543)	MCK 1.16 39 ePc 22 18.48 -0.2	RDW 0.97 315 ePd 33 45.49 -0.7
MD 2.3 (STR).	S 22 35.34	eS 33 59.18
GWF 0.49 109 Pg 20 47.31 0.0	PWA 1.23 165 eP 22 20.09 0.7	RDN 0.98 317 ePd 33 45.43 -0.8
RUP 0.57 9 ePg 20 48.16 -0.8		eS 33 58.91
		DFR 1.01 321 ePd 33 45.78 -0.9



SEW	1.03	72	eS	34 00.23	
NCT	1.07	315	eP	33 45.37	-1.4
			eS	33 46.68	-0.8
AUE	1.10	247	iPc	34 01.74	
AUI	1.13	246	eP	33 46.96	-0.7
			eS	33 47.30	-0.9
SYI	1.30	203	ePd	34 02.19	
PDB	1.41	270	ePc	33 49.17	-1.4
			eS	33 50.72	-1.3
SPU	1.41	347	iPd	34 08.80	
			eS	33 51.63	-0.5
CDD	1.44	233	iPc	34 10.22	
			eS	33 51.27	-1.3
CKL	1.47	342	iPd	34 09.71	
			eS	33 52.36	-0.6
CRP	1.51	346	ePd	34 11.80	
BGL	1.54	342	eP	33 53.31	-0.3
NCG	1.64	347	ePd	33 53.69	-0.3
SUA	1.69	11	ePc	33 55.19	-0.2
PMS	1.71	32	ePc	33 55.99	-0.1
MTU	1.90	83	eP	33 55.95	-0.3
KNIM	1.92	72	iPc	33 57.25	-1.7
KNK	2.17	41	eP	33 56.94	-2.3
SKT	2.18	359	ePd	34 01.60	-1.2
			eS	34 02.76	-0.1
GLI	2.40	62	iPc	34 29.91	
CUT	2.66	12	eP	34 03.22	-2.7
VZW	2.71	60	ePc	34 09.27	-0.4
VLZ	2.84	60	eP	34 08.14	-2.3
KLU	3.19	56	ePc	34 10.29	-2.0
HUR	3.29	14	eP	34 15.04	-2.2
RND	3.81	18	eP	34 18.58	-0.1
BALM	4.66	71	eP	34 25.41	-0.6
			eS	34 34.31	-3.7

39 obs. associated

& MAY 14, 1991 04h 44m 24.08s				
59.409 N 152.937 W				
DEPTH = 82.3km				
SOUTHERN ALASKA ( 2 )				
<AEIC>.				
AUE	0.23	257	ePd	44 36.06 -0.3
AUI	0.26	254	eP	44 36.09 -0.5
			eS	44 44.88
CDD	0.60	217	iPd	44 38.25 -1.0
			eS	44 49.87
XLV	0.62	85	ePc	44 38.73 -0.6
			eS	44 50.25
PDB	0.74	301	iPc	44 39.60 -1.0
			eS	44 51.96
MCNL	0.75	253	ePd	44 39.67 -1.0
			eS	44 51.81
SYI	0.85	160	iPc	44 41.04 -0.7
			eS	44 53.79
CNPM	0.88	82	ePc	44 41.36 -0.7
			eS	44 55.04
RED	1.02	5	iPd	44 42.90 -0.9
			eS	44 57.56
NNL	1.05	52	ePc	44 44.03 -0.1
RS2	1.06	5	iPd	44 43.75 -0.8
			eS	44 59.58
RSO	1.06	5	iPd	44 43.74 -0.7
			eS	44 59.56
RDW	1.08	3	iPd	44 43.87 -0.8
			eS	44 58.50
BRLK	1.10	70	eP	44 44.45 -0.4
RDN	1.11	4	iPd	44 44.29 -0.8
			eS	44 59.71
NCT	1.16	0	ePd	44 44.70 -0.9
			eS	45 00.80
DFR	1.19	6	ePd	44 45.23 -0.8
			eS	45 01.76
RDT	1.20	13	iPd	44 45.10 -1.0
			eS	45 01.54
NKA	1.59	32	ePc	44 51.89 0.9
SLKM	1.76	50	eP	44 52.03 -1.3
CKL	1.82	9	iPd	44 53.56 -0.7
			eS	45 15.63
SPU	1.83	14	iPd	44 53.58 -0.8
BGL	1.88	8	iPd	44 54.47 -0.6
CRP	1.90	11	ePd	44 54.85 -0.6
NCG	2.04	11	iPd	44 56.54 -0.7
SVW	2.17	323	iPc	44 58.30 -0.6
SUA	2.33	27	ePd	45 00.54 -0.7
PMS	2.49	41	ePc	45 02.17 -1.2
LTI	2.65	74	eP	45 04.82 -0.7

SKT	2.67	14	ePd	45 04.52 -1.3
PWA	2.71	33	ePd	45 05.66 -0.6
MTU	2.74	76	eP	45 05.59 -1.2
KNIM	2.79	68	iPc	45 04.65 -2.7
PLRM	2.89	39	ePc	45 06.69 -2.0
PMR	2.89	39	iPc	45 07.30 -1.4
KNK	3.00	46	ePd	45 08.10 -2.2
GHO	3.09	38	eP	45 09.77 -1.9
CUT	3.28	22	eP	45 12.85 -1.3
SML	3.31	41	eP	45 12.51 -2.1
VZW	3.59	60	ePc	45 15.57 -2.9
SCM	3.68	46	ePd	45 17.84 -2.0
KLU	4.06	56	iPd	45 22.44 -2.6
TOA	4.28	48	eP	45 27.30 -0.9
RND	4.46	24	eP	45 29.00 -1.8
GLB	4.96	62	iPc	45 34.55 -3.1
CROM	5.09	70	eP	45 37.16 -2.4
TGL	5.24	71	eP	45 39.24 -2.4
BALM	5.53	68	eP	45 42.48 -3.1
FBA	6.01	21	ePc	45 49.80 -2.4

49 obs. associated

& MAY 14, 1991 05h 46m 06.90s  
37.035 N 121.473 W  
DEPTH = 8.0km  
CENTRAL CALIFORNIA ( 39 )  
<BRK>. ML 2.5 (BRK).

SAO	0.27	175	iPc	46 12.80 0.3
ARN	0.32	351	iPd	46 13.50 0.1
MHC	0.33	336	iPc	46 13.70 -0.1
			eS	46 19.00
GCC	0.42	269	ePc	46 15.10 -0.3
			iS	46 20.90
LLA	0.60	134	ePc	46 18.20 -0.7
			eS	46 28.90
PRS	0.71	173	e(P)	46 20.30 -0.7
PCC	0.86	303	ePc	46 22.60 -1.0
BKS	1.04	324	ePc	46 25.80 -0.8
			iS	46 40.70
BRK	1.05	323	ePc	46 25.70 -1.1
ZSP	1.10	326	ePc	46 27.20 -0.5
CMB	1.32	41	ePd	46 30.50 -1.0
			eS	46 48.00
FRI	1.41	91	eP	46 32.00 -0.9

12 obs. associated

MAY 14, 1991 06h 30m 15.49 ± 0.26s  
38.898 N ± 2.6km 26.018 E ± 2.1km  
DEPTH = 20.8 ± 2.3 km  
3.8mb ( 1 obs.)  
AEGEAN SEA (365)  
MD 4.0 (ISK). ML 3.7 (THE), 3.6 (ATH).

PRK	0.40	30	iPbc	30 23.70 -0.1
IZM	1.10	117	iPn	30 35.10 -0.5
KGT	1.84	32	iPn	30 47.00 0.7
ALN	2.00	1	iPbc	30 48.70 0.2
			eSb	31 15.10
ATH	2.03	244	ePn	30 53.20 4.2X
EDC	2.03	44	iPn	30 49.70 0.7
BNT	2.07	45	iPn	30 49.50 -0.1
CIN	2.08	128	eP	30 49.00 -0.8
PAIG	2.08	300	eP	30 50.14 0.3
			eS	31 16.90
OUR	2.13	313	eP	30 50.54 0.1
DST	2.15	70	ePn	30 50.70 -0.1
KCT	2.26	53	ePn	30 53.00 0.7
RDO	2.28	351	iPnc	30 52.50 0.0
YER	2.51	134	iPn	30 55.50 -0.4
KDZ	2.79	351	iPc	31 00.00 0.2
KHL	2.81	101	iPn	30 59.80 -0.4
SOH	2.81	314	ePc	31 00.30 0.1
AGG	2.88	274	eP	31 02.22 1.1
			eS	31 34.18
SRS	2.90	321	eP	31 00.85 -0.5
			eS	31 35.10
CTT	2.91	39	iPn	31 02.00 0.5
THE	2.92	307	eP	31 01.86 0.2
RZN	2.96	341	iPc	31 03.00 0.6
LIT	2.98	295	eP	31 02.18 -0.4
			eS	31 36.02
IZI	3.03	61	ePn	31 03.00 -0.3
YLV	3.08	56	iPn	31 04.00 0.0
DIM	3.17	353	iP	31 05.00 -0.2
DMK	3.21	24	iPn	31 05.40 -0.4

MMB	3.21	328	iPc	31 06.00 0.2
GBZT	3.24	53	ePn	31 15.60 9.3X
			iSg	32 00.00
VLI	3.27	229	ePn	31 05.00 -1.7
KNT	3.29	314	ePc	31 07.02 0.0
HRT	3.40	54	ePn	31 08.00 -0.6
GRG	3.46	308	ePc	31 09.82 0.4
			eS	31 50.50
VAY	3.58	314	ePn	31 10.70 -0.4
GPA	3.59	66	iPn	31 19.00 7.6X
EYL	3.60	61	ePn	31 12.00 0.5
NPS	3.64	185	ePn	31 12.90 0.9
KKB	3.72	324	iPd	31 13.00 0.0
ELL	3.75	124	iPn	31 15.00 1.3
PGB	3.91	340	iPc	31 16.00 0.2
FNA	4.04	299	eP	31 17.56 -0.1
VTS	4.26	331	iPc	31 21.00 0.1
PVL	4.35	353	iPc	31 20.00 -1.9
IGT	4.46	280	eP	31 23.74 0.1
SKO	4.65	313	ePn	31 20.00 -6.3X
PSN	5.05	18	iPd	31 32.00 0.1
TLB	5.88	14	eP	31 43.00 -0.6
CMP	6.41	354	ePc	31 51.00 -0.1
MLR	6.59	360	eP	31 53.00 -0.7
VRI	6.99	4	ePd	31 54.00 -5.2X
NB2	24.01	342	P	35 29.30 -0.2
	0.8s	2.50nm		3.8mb
S.D. = 0.6 on 46 of 51 obs.				

\* MAY 14, 1991 06h 45m 25.39 ± 1.24s  
6.914 N ± 9.9km 74.496 W ± 8.1km  
DEPTH = 71.7 ± 13.6 km  
4.5mb ( 1 obs.)  
NORTHERN COLOMBIA ( 99 )

SDV	4.30	63	iPnc	46 31.60 1.6
			iSn	47 19.40
UPA	5.40	293	eP	46 44.60 -0.6
TOV	5.46	58	ePn	46 47.30 1.2
			iSn	47 47.50
CEOS	6.45	71	P	46 58.90 -1.1
			eS	48 08.50
MORO	7.26	57	iP	47 11.50 0.3
OLLA	8.21	67	iP	47 23.00 -1.3
			iS	48 52.40
CAR	8.29	64	iP	47 24.50 -0.9
ZOBO	23.88	165	eP	50 35.00 0.9
LPB	24.14	165	P	50 37.00 0.6
SIV	26.35	150	P	50 55.60 -1.2
GOL	42.82	324	P	53 19.00 0.8
YKA	62.71	340	eP	55 44.20 -0.6
	0.4s	1.70nm		4.5mb
INK	72.48	340	eP	56 46.00 0.1
GKN	139.86	29	PKP	04 48.00 0.0
GUN	140.53	28	PKP	04 40.20 -9.2X
WB2	149.16	242	ePKP	05 06.90 3.2X
	0.5s	1.80nm		e
				06 20.80
WRA	149.18	242	PKP	05 07.00 3.3X
	0.7s	1.10nm		
S.D. = 1.1 on 14 of 17 obs.				

? MAY 14, 1991 07h 46m 35.92 ± 0.71s  
10.210 N ± 14.3km 122.715 E ± 23.6km  
DEPTH = 33.0km (normal)  
4.4mb ( 4 obs.)

PANAY, PHILIPPINE ISLANDS (254)				
ASPA	35.40	162	iPd	53 31.50 0.5
	0.6s	8.30nm		4.8mb
GUN	38.81	302	P	54 00.00 -0.1
FORR	41.15	173	eP	54 23.50 4.7X
	0.4s	8.00nm		4.8mb
STK	45.59	157	eP	54 54.20 -0.6
	0.9s	1.70nm		4.0mb
FBA	80.62	26	(P)	58 46.00 -0.5
INK	85.62	21	eP	59 12.00 -0.1
YKA	95.21	23	eP	59 58.00 0.7
	0.8s	0.50nm		4.0mb
S.D. = 0.7 on 6 of 7 obs.				

\* MAY 14, 1991 07h 59m 08.22 ± 0.55s  
18.505 N ± 8.7km 120.965 E ± 10.3km  
DEPTH = 33.0km (normal)  
4.4mb ( 8 obs.)  
LUZON, PHILIPPINE ISLANDS (249)



14d 07h

BAG 2.11 190 eP 59 47.30 5.2X SKT 1.36 157 eP 03 20.91 -0.5  
 OZH 6.78 341 P 00 45.50 -2.4 eS 03 39.70  
 HKC 7.41 302 eP 00 54.50 -2.3 CUT 1.38 126 eP 03 22.25 0.7  
 OIZ 10.55 275 P 01 38.30 -2.0 S 03 42.06  
 GYA 15.40 303 P 02 45.00 0.1 HUR 1.40 99 eP 03 22.62 0.7  
 KMI 18.15 294 eP 03 23.00 3.3X eS 03 41.32  
 XAN 18.84 328 eP 03 28.40 0.5 TTA 1.56 260 ePd 03 24.10 -0.2  
 CD2 19.89 312 P 03 39.80 -0.1 BWN 1.70 55 eP 03 27.12 0.8  
 TIY 20.54 340 eP 03 47.70 1.1 eS 03 51.47  
 CHG 20.87 274 eP 03 51.90 1.9 RND 1.72 83 eP 03 26.78 0.1  
 BJI 21.86 350 eP 04 02.00 2.2 eS 03 50.20  
 LZH 23.14 323 eP 04 18.50 5.8X MCK 1.74 72 eP 03 28.78 1.9  
 2.0s 36.00nm 4.5mb S 03 51.48  
 pP 04 23.50 18kmX NCG 1.85 173 eP 03 28.20 -0.4  
 PP 04 42.50 eS 03 52.33  
 SNY 23.35 5 P 04 08.60 -5.9X BGL 1.98 176 eP 03 30.17 -0.3  
 0.9s 20.00nm 4.6mb SUA 1.99 153 eP 03 31.69 1.1  
 HHC 23.69 342 eP 04 21.30 3.4X CRP 1.99 173 eP 03 30.57 -0.1  
 CN2 25.50 8 eP 04 35.50 0.3 S 03 57.48  
 GUN 33.48 293 P 05 48.00 0.9 PWA 2.05 140 eP 03 33.13 1.9  
 KKN 33.99 292 P 05 53.20 1.8 CKL 2.05 176 eP 03 31.43 -0.1  
 GKN 34.58 293 P 05 57.20 0.8 NEA 2.08 48 eP 03 33.36 1.7  
 WRA 40.40 160 P 06 44.00 -1.1 S 04 01.71  
 0.5s 2.90nm 4.3mb SPU 2.08 172 eP 03 31.83 0.0  
 WB2 40.40 160 iPc 06 43.30 -1.8 eS 04 00.13  
 0.6s 2.90nm 4.2mb GH0 2.27 129 eP 03 33.91 -0.7  
 e 08 47.90 eS 04 04.59  
 ASPA 43.77 163 eP 07 13.00 0.4 PLRM 2.33 134 eP 03 35.15 -0.1  
 0.6s 7.40nm 4.6mb PMR 2.33 134 iPc 03 35.90 0.6  
 WARB 44.76 173 eP 07 21.00 0.4 WRH 2.37 56 eP 03 36.96 1.0  
 STK 53.86 158 eP 08 31.60 1.2 SML 2.46 124 eP 03 38.15 0.8  
 0.8s 1.60nm 4.1mb PMS 2.47 143 eP 03 37.93 0.6  
 FBA 73.95 26 P 10 41.20 -0.5 SVW 2.55 214 iPd 03 36.30 -2.2  
 INK 78.55 21 eP 11 06.70 -0.9 CCB 2.57 54 eP 03 38.10 -0.6  
 NB2 83.14 333 P 11 31.50 -0.5 MDM 2.60 46 eP 03 38.85 -0.4  
 0.7s 1.00nm 4.0mb RDT 2.67 177 eP 03 41.00 0.6  
 KSP 84.75 322 eP 11 40.80 0.5 KKN 2.68 131 eP 03 40.54 0.1  
 YKA 88.26 23 eP 11 56.90 -0.4 FBA 2.71 50 eP 03 42.26 1.5  
 0.7s 3.10nm 4.7mb HDA 2.79 63 eP 03 42.91 1.0  
 S.D. = 1.4 on 23 of 28 obs. IMA 2.88 352 eP 03 47.80 4.5  
 GLM 2.90 50 eP 03 44.50 0.9  
 TOA 3.20 108 ePd 03 49.30 1.6  
 KLU 3.59 116 eP 03 52.60 -0.7  
 33 obs. associated

MAY 14, 1991 08h 28m 11.39±0.80s  
 41.436 N ± 8.7km 22.304 E ± 5.2km  
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)  
 ML 2.5 (SKO), 2.3 (THE).

VAY 0.23 120 iPg 28 16.00 -0.3 iSg 28 19.80  
 GRG 0.48 171 iPg 28 21.28 0.0 eSg 28 28.28  
 KNT 0.52 121 iPg 28 21.41 -0.6 eSg 28 29.04  
 SKO 0.84 310 ePg 28 28.00 0.4 iSg 28 36.60  
 FNA 0.96 227 ePg 28 30.36 0.7 eSg 28 43.08  
 SOH 1.00 127 ePg 28 29.80 -0.6 eSg 28 44.76  
 SRS 1.02 108 ePg 28 31.16 0.4 eSg 28 47.70  
 OHR 1.18 255 ePg 28 32.20 -1.3 eSg 28 49.30  
 PAIG 1.83 145 ePb 28 44.40 1.2  
 S.D. = 0.9 on 9 of 9 obs.

? MAY 14, 1991 08h 54m 43.00±1.13s  
 39.155 N ± 10.0km 27.536 E ± 18.4km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 MD 2.7 (ISK).

IZM 0.79 196 ePg 54 58.30 0.0 iSg 55 09.80  
 DST 0.96 62 ePn 55 01.50 0.2 eSg 55 06.00  
 EDC 1.22 12 ePn 55 06.00 0.4 eSg 55 05.90  
 KCT 1.26 30 ePn 55 05.90 -0.6  
 S.D. = 0.7 on 4 of 4 obs.

& MAY 14, 1991 09h 02m 55.48s  
 63.236 N 152.652 W  
 DEPTH = 2.4km  
 CENTRAL ALASKA (1)  
 <AEIC>. ML 2.5 (AEIC).

TRF 1.09 78 eP 03 17.38 0.6 eS 03 32.18

MAY 14, 1991 09h 11m 35.70±0.57s  
 31.913 S ± 7.6km 70.081 W ± 8.2km  
 DEPTH = 125.2 ± 10.0 km  
 CHILE-ARGENTINA BORDER REGION (127)

JACH 0.88 209 iPd 11 57.70 0.2 iS 12 13.50  
 RTCB 1.17 69 iPd 12 00.10 -0.2 iS 12 01.80  
 ROCH 1.32 216 iPd 12 01.80 -0.2 iS 12 21.50  
 RTLL 1.49 67 iPd 12 03.90 0.1 iS 12 05.20  
 CFA 1.60 79 iPd 12 05.20 0.2 eS 12 26.30  
 SAN 1.61 198 iPd 12 05.90 0.7 iS 12 28.00  
 IHA 1.72 230 iPd 12 05.60 -0.8 iS 12 28.40  
 PCH 1.74 192 iPd 12 07.70 0.9 iS 12 32.20  
 RTRS 1.82 17 iPd 12 08.60 1.0 iS 12 09.40  
 LCCH 2.00 218 iPd 12 09.40 -0.5 iS 12 13.40  
 LNV 2.32 208 iPd 12 13.40 -0.5 iS 12 42.00  
 RFA 3.15 155 iPd 12 25.30 0.4 (S) 12 57.30  
 TCA 4.72 84 iPd 12 44.40 -1.6 (S) 13 35.20  
 LPB 15.42 7 eP 15 11.00 2.9X  
 ZOBO 15.68 7 P 15 12.00 0.5  
 SIV 17.85 29 P 15 36.00 -1.6  
 PPD 19.38 64 eP 15 55.70 1.5  
 S.D. = 1.0 on 16 of 17 obs.

% MAY 14, 1991 09h 19m 49.61±0.65s  
 40.407 N ± 5.6km 23.711 E ± 6.2km  
 DEPTH = 5.0km (geophysicist)  
 GREECE (364)  
 ML 1.8 (THE).

OUR 0.22 109 ePg 19 54.22 0.1 eSg 19 56.34  
 PAIG 0.48 183 ePg 19 58.82 -0.4

SOH 0.50 327 ePg 19 59.07 -0.5 eSg 20 03.30  
 - eSg 20 06.78  
 THE 0.61 292 ePg 20 01.66 -0.2 eSg 20 09.94  
 SRS 0.72 353 ePg 20 04.06 0.1 eSg 20 12.98  
 KNT 0.97 321 ePg 20 08.38 -0.2 eSg 20 21.14  
 GRG 1.14 299 ePg 20 11.18 -0.2 eSg 20 26.62  
 FNA 1.82 283 ePb 20 23.02 1.2  
 S.D. = 0.6 on 8 of 8 obs.

MAY 14, 1991 09h 25m 11.40±0.60s  
 41.488 N ± 7.6km 134.024 E ± 6.6km  
 DEPTH = 465.4 ± 7.0 km  
 4.3mb (7 obs.)  
 SEA OF JAPAN (660)

MDJ 4.51 315 iPc 26 32.30 -0.4 500.00nm  
 MAT 5.92 145 iPc 26 46.10 -0.3 25.00nm 4.3mb  
 1.0s eS 28 02.00  
 CN2 6.73 293 Pd 26 54.80 0.0 10.00nm 3.9mb  
 1.0s S 28 15.00  
 SNY 7.83 276 iPc 27 07.30 0.9  
 BJI 13.61 270 eP 28 07.00 -1.6  
 TIA 14.18 254 eP 28 14.70 0.1  
 NJ2 15.36 237 Pc 28 28.00 1.3  
 TIY 17.05 264 eP 28 44.60 0.9  
 XAN 21.15 258 P 29 23.20 0.0  
 LZH 24.06 267 eP 29 48.50 -1.5 42.00nm 4.7mb  
 1.5s CHG 37.45 244 eP 31 45.00 0.2  
 GUN 41.33 267 P 32 17.22 0.4 169.00nm 5.9mb X  
 0.4s KKN 41.84 267 Pd 32 21.00 0.3 33.00nm 5.1mb  
 0.5s PKI 41.86 266 Pd 32 21.14 0.1  
 DMN 42.07 267 Pd 32 22.94 0.4  
 GKN 42.21 268 P 32 23.66 0.1 57.00nm 5.4mb X  
 0.3s FBA 48.51 34 ePc 33 13.20 1.5  
 INK 53.08 28 ePc 33 45.30 0.0  
 GBA 56.19 258 Pd 34 07.60 -0.3 8.50nm 4.3mb  
 0.6s WB2 61.12 180 eP 34 40.20 -0.8 1.00nm 3.3mb X  
 1.0s WRA 61.12 180 P 34 41.00 0.0 0.90nm 3.2mb X  
 1.1s KAF 61.64 329 iP 34 43.60 -0.5 1.60nm 4.2mb  
 0.2s eS 34 43.90  
 YKA 62.78 29 eP 34 51.10 -0.3 1.00nm 3.5mb  
 0.6s NUR 63.24 328 eP 34 54.00 -0.4  
 S.D. = 0.8 on 24 of 24 obs.

& MAY 14, 1991 09h 26m 33.83s  
 59.956 N 151.480 W  
 DEPTH = 69.5km  
 KENAI PENINSULA, ALASKA (14)  
 <AEIC>.

NNL 0.13 47 iPc 26 44.93 2.3  
 BRK 0.36 122 iPc 26 45.20 -0.4 eS 26 54.11  
 CNPM 0.45 164 iPd 26 45.68 -0.7 eS 26 55.16  
 XLV 0.52 194 eP 26 45.84 -1.1 S 26 55.79  
 RDT 0.77 324 iPd 26 49.12 -0.7 eS 27 01.39  
 RED 0.80 306 ePd 26 49.52 -0.6 iS 27 01.91  
 NKA 0.80 9 iPd 26 51.45 1.4  
 RSO 0.81 309 iPd 26 49.93 -0.5 eS 27 02.48  
 RS2 0.82 309 iPd 26 49.97 -0.5 eS 27 02.49  
 SLKM 0.84 48 ePc 26 50.10 -0.5  
 RDN 0.85 312 iPd 26 50.09 -0.7 eS 27 02.82  
 SEW 1.03 81 iPc 26 51.77 -1.1



AUE	1.13	239	eP	26	53.61	-0.6
AUI	1.17	239	eP	26	54.16	-0.6
			eS	27	09.34	
SPU	1.26	347	iPd	26	55.57	-0.5
			eS	27	13.05	
CKL	1.31	342	iPd	26	56.38	-0.4
			eS	27	14.20	
CRP	1.36	346	eP	26	57.25	-0.2
PDB	1.38	264	iPc	26	55.95	-1.6
			eS	27	13.26	
BGL	1.39	341	ePd	26	57.54	-0.2
SYI	1.43	199	iPd	26	56.50	-1.7
NCG	1.49	347	iPd	26	59.06	-0.1
CDD	1.51	228	iPd	26	57.83	-1.5
			eS	27	16.50	
SUA	1.56	13	ePd	26	59.65	-0.4
PMS	1.60	35	iPd	27	00.24	-0.4
KNIM	1.91	77	iPc	27	02.78	-2.1
MTU	1.93	87	ePc	27	03.33	-1.7
PLRM	2.01	34	ePd	27	04.82	-1.3
PMR	2.01	34	ePd	27	05.30	-0.8
SKT	2.03	359	iPd	27	06.07	-0.4
KNK	2.09	44	ePd	27	05.96	-1.3
GHO	2.21	33	eP	27	07.96	-1.1
SVW	2.35	301	eP	27	10.40	-0.6
KLU	3.14	58	iPd	27	20.04	-1.9
TOA	3.36	48	eP	27	24.60	-0.5
34 obs. associated						

? MAY 14, 1991 09h 33m 36.45± 5.47s  
 39.768 N ± 39.3km 29.532 E ± 17.4km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.7 (ISK).

IZI	0.57	355	ePg	33	47.40	-0.7
YLV	0.81	351	iPn	33	51.60	-0.6
EYL	0.93	31	ePn	33	53.90	-0.4
KCT	1.02	298	ePn	33	55.90	0.1
HRT	1.06	6	ePn	33	57.90	1.5
S.D. = 1.3 on 5 of 5 obs.						

\* MAY 14, 1991 09h 36m 25.49± 0.74s  
 42.609 N ± 24.3km 43.579 E ± 9.4km  
 DEPTH = 10.0km (geophysicist)  
 3.8mb ( 3 obs.)  
 WESTERN CAUCASUS (362)

TAB	5.00	154	eP	37	54.00	11.6X
KAS	7.41	264	eP	38	15.00	-1.4
ISR	12.55	287	eP	39	29.00	2.1
MLR	13.01	289	eP	39	33.00	-0.1
OBN	13.31	342	eP	39	45.00	8.2X
Z	12s	0.40um				
		e	44	41.00		
SPC	17.49	300	eP	40	33.70	2.7X
GAR	20.53	91	eP	41	07.80	1.2
NUR	21.30	334	eP	41	18.00	3.9X
KAF	22.06	338	eP	41	24.60	2.8X
	0.6s	5.80nm				4.2mb
		eS	41	25.80		
CLL	22.47	303	eP	41	26.00	0.0
		i	41	30.70		
		e	41	42.00		
NB2	26.78	325	P	42	09.00	1.9
	0.9s	1.50nm				3.7mb
KEV	28.52	348	eP	42	39.00	16.3X
GKN	36.17	100	P	43	29.76	-0.4
DMN	36.74	100	P	43	35.78	0.8
KKN	36.76	100	P	43	35.62	0.5
PKI	36.98	100	P	43	36.04	-1.1
GUN	37.13	99	P	43	39.10	0.7
FBA	72.46	5	(P)	47	51.00	-2.5
YKA	73.79	350	eP	47	59.70	-1.6
	0.7s	0.50nm				3.7mb
STK	116.24	110	ePKP	55	28.20	17.6X
	0.8s	0.90nm				
S.D. = 1.5 on 13 of 20 obs.						

? MAY 14, 1991 10h 52m 41.83± 4.30s  
 1.105 N ± 31.1km 126.865 E ± 40.0km  
 DEPTH = 186.0 ± 38.0 km  
 5.0mb ( 6 obs.)  
 MOLUCCA PASSAGE (266)

TSM	9.31	290	ePc	54	53.50	0.3
WB2	22.17	161	iPd	57	20.70	-2.7

	0.4s	11.70nm	4.8mb			
		i	57	24.60		
		e	00	24.40		
		iS	01	22.80		
		e	03	15.60		
		e	04	39.20		
OIS	24.88	151	eP	57	49.00	-0.2
ASPA	25.56	165	iPc	57	56.20	0.8
	0.4s	30.10nm			5.3mb	
		iS	02	12.90		
STK	35.65	158	iPc	59	26.00	2.2X
	0.5s	30.60nm			5.2mb	
ADE	37.56	164	e(P)	59	41.20	1.4
	0.6s	60.00nm			5.4mb	
BFD	40.77	161	eP	00	07.00	0.8
LZH	40.83	331	e(P)	00	08.50	1.5
	1.0s	18.00nm			4.6mb	
TOO	42.17	158	eP	00	20.00	2.3X
GUN	47.40	308	P	00	58.40	-1.5
KKN	47.82	307	P	01	02.00	-0.9
GKN	48.43	307	P	01	06.60	-0.9
HYB	50.17	292	ePc	01	21.00	0.2
	1.0s	25.00nm			4.8mb	
GBA	50.45	287	P	01	24.00	1.1
S.D. = 1.5 on 12 of 14 obs.						

? MAY 14, 1991 11h 26m 46.94± 3.91s  
 42.300 N ± 35.1km 24.147 E ± 11.7km  
 DEPTH = 10.0km (geophysicist)  
 BULGARIA (359)  
 ML 2.5 (THE).

SRS	1.25	200	ePb	27	10.76	0.5
			eSb	27	32.48	
KNT	1.47	220	ePb	27	12.66	-0.9
			eSb	27	36.56	
SOH	1.59	202	ePb	27	15.04	-0.2
			eSb	27	41.88	
GRG	1.87	225	eP	27	20.20	0.8
			eS	27	46.68	
ALN	2.00	134	eP	27	21.24	0.1
PAIG	2.40	189	eP	27	26.40	-0.4
S.D. = 0.8 on 6 of 6 obs.						

? MAY 14, 1991 11h 27m 20.87± 1.06s  
 42.282 N ± 10.8km 24.224 E ± 13.4km  
 DEPTH = 10.0km (geophysicist)  
 BULGARIA (359)

SRS	1.26	202	eP	27	44.80	0.6
			eS	28	09.50	
GRG	1.90	227	eP	27	53.20	-0.5
ALN	1.94	135	eP	27	54.00	-0.2
ISR	3.31	30	eP	28	14.00	0.2
S.D. = 0.8 on 4 of 4 obs.						

\* MAY 14, 1991 12h 02m 23.66± 0.86s  
 39.063 N ± 6.6km 27.722 E ± 12.8km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.9 (ISK).

IZM	0.76	209	iPg	02	39.40	0.9
			iSg	02	51.80	
DST	0.89	52	ePn	02	42.40	1.7
KCT	1.28	22	ePn	02	46.80	-0.6
EDC	1.29	5	ePn	02	47.50	0.0
BNT	1.30	7	ePn	02	47.30	-0.4
KGT	1.42	347	ePn	02	49.40	-0.1
HOL	11.49	146	P	05	09.40	-1.4
S.D. = 1.3 on 7 of 7 obs.						

\* MAY 14, 1991 12h 41m 16.92± 0.87s  
 36.988 N ± 9.4km 29.551 E ± 6.6km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)

ELL	0.37	130	iPg	41	24.50	-0.1
			iSg	41	34.50	
BCK	0.95	60	ePn	41	35.50	0.4
YER	1.03	279	ePn	41	35.90	-0.4
CIN	1.32	298	eP	41	42.00	0.7
KHL	1.33	359	ePn	41	41.00	-0.6
S.D. = 0.8 on 5 of 5 obs.						

% MAY 14, 1991 12h 42m 37.59± 1.46s  
 40.365 N ± 14.4km 21.784 E ± 9.0km

DEPTH = 10.0km (geophysicist)  
 GREECE (364)

FNA	0.52	324	eP	42	47.99	-0.2
			eS	42	55.44	
LIT	0.60	116	eP	42	49.48	-0.3
			eS	43	00.16	
OHR	1.06	315	eP	42	57.80	0.3
KNT	1.16	46	eP	42	58.64	-0.7
SOH	1.28	69	eP	43	02.24	0.9
S.D. = 0.8 on 5 of 5 obs.						

MAY 14, 1991 13h 31m 54.39± 0.48s  
 40.406 N ± 5.4km 141.430 E ± 7.8km  
 DEPTH = 104.4 ± 5.2 km  
 4.5mb ( 15 obs.)  
 NEAR EAST COAST OF HONSHU, JAPAN(228)

AOMJ	0.82	281	iP+	32	13.00	-0.5
			S	32	26.70	
OFUJ	1.34	172	iPd	32	19.00	-0.3
			S	32	37.30	
MRRJ	2.04	353	eP	32	28.10	0.1
			S	32	52.10	
HOOJ	2.42	35	P	32	33.10	0.0
			eS	33	02.00	
YAMJ	2.48	206	P	32	34.60	0.6
KUSJ	3.64	41	P	32	47.90	-1.8
			S	33	27.50	
NIUJ	3.69	212	P	32	51.20	0.9
ASAJ	3.82	13	eP	32	51.00	-1.1
KAKJ	4.31	194	P	32	56.80	-2.1
MAT	4.61	214	iPd	33	04.00	0.9
			eS	33	55.00	
CHJJ	4.75	205	P	33	04.70	-0.3
MTMJ	4.76	218	eP	33	06.60	1.5
IIDJ	5.65	211	P	33	18.30	0.9
TSRJ	6.49	223	P	33	31.40	2.5
MDJ	9.70	300	Pc	34	13.50	0.9
TIA	19.51	265	eP	36	13.90	-1.9
NJ2	19.99	252	P	36	19.80	-0.9
XAN	26.56	267	eP	37	22.20	-2.0
GYA	31.95	255	P	38	11.20	-1.2
IMA	43.81	32	ePd	39	53.50	2.4
FBA	46.27	34	ePd	40	13.00	2.5
GUN	46.93	273	P	40	16.80	0.2
	0.3s	31.00nm			5.6mb	X
KKN	47.45	273	P	40	20.70	0.1
	0.7s	52.00nm			5.5mb	
PKI	47.46	272	P	40	20.44	-0.4
DMN	47.67	273	P	40	22.48	0.1
GKN	47.83	273	P	40	23.46	0.0
WB2	60.40	188	eP	41	53.20	-1.6
	0.4s	1.10nm			4.3mb	
WRA	60.40	188	P	41	53.00	-1.8
	0.5s	2.90nm			4.6mb	
YKA	60.90	31	eP	41	57.70	-0.1
	0.7s	0.40nm			3.6mb	
GBA	61.55	264	Pc	42	02.40	-0.4
	0.3s	1.70nm			4.5mb	
KAF	65.33	332	iP	42	26.40	-0.5
	0.5s	3.30nm			4.5mb	
		eS	42	26.70		
NUR	66.99	331	iP	42	37.10	-0.4
NB2	71.09	337	P	43	02.40	-0.4
	0.6s	1.80nm			4.1mb	
LOR	84.90	333	eP	44	18.60	0.1
	0.6s	3.60nm			4.5mb	
SSF	85.20	333	eP	44	20.40	0.4
	0.7s	2.20nm			4.2mb	
LPL	85.33	330	eP	44	21.40	0.4
	0.7s	4.40nm			4.5mb	
LPG	85.33	330	eP	44	21.50	0.4
	0.7s	4.95nm			4.6mb	
SMF	85.44	332	eP	44	21.60	0.4
	0.7s	4.40nm			4.5mb	
AVF	85.49	333	eP	44	22.00	0.6
	0.7s	3.85nm			4.5mb	
MAF	86.25	333	eP	44	26.20	0.9
	0.9s	5.75nm			4.6mb	
LSF	86.59	333	eP	44	27.60	0.7
	0.8s	6.05nm			4.7mb	
S. D. = 1.2 on 41 of 41 obs.						



14d 13h

## TURKEY (366)

MD 3.1 (ISK).				
HRT	0.10	339	ePg	35 42.80 -0.3
GBZT	0.21	286	ePg	35 45.30 0.3
			iSg	35 49.50
YLV	0.31	237	iPg	35 46.30 -0.5
			eSg	35 52.30
IZI	0.44	205	iPg	35 49.40 0.1
ISK	0.60	304	iPg	35 51.80 -0.7
			eSg	36 01.80
CTT	1.06	294	iPn	36 00.30 0.0
DST	1.40	217	ePn	36 06.00 0.0
DMK	1.83	307	iPn	36 12.90 0.7
KGT	1.86	262	ePn	36 13.00 0.5

S.D. = 0.5 on 9 of 9 obs.

? MAY 14, 1991 13h 57m 17.88± 2.70s  
 41.837 N ± 26.9km 24.318 E ± 8.6km  
 DEPTH = 10.0km (geophysicist)  
 GREECE-BULGARIA BORDER REGION (363)  
 ML 2.3 (THE).

SRS	0.90	217	ePg	57 35.00 -0.2
			eSg	57 51.72
SOH	1.25	216	ePb	57 40.92 -0.2
			eSb	58 01.76
KNT	1.26	238	ePb	57 40.68 -0.7
			eSb	58 01.00
ALN	1.60	125	ePb	57 46.12 -0.2
			eSb	58 09.28
GRG	1.69	239	ePb	57 48.32 0.7
			eSb	58 14.92
PAIG	1.97	194	eP	57 52.08 0.5

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

% MAY 14, 1991 14h 15m 03.47± 1.02s  
 37.712 N ± 9.4km 15.044 E ± 8.3km  
 DEPTH = 10.0km (geophysicist)  
 SICILY (398)

MNO	0.35	308	Pd	15 10.10 -0.7
			eSg	15 15.90
MEU	0.62	188	P	15 15.00 -1.0
			eSg	15 26.30
GIB	0.85	289	P	15 21.10 1.2
			eSg	15 32.00
SOI	0.88	66	P	15 20.90 0.6
			eSg	15 36.50
FAI	1.17	249	P	15 26.60 1.3
			eSn	15 43.00
USI	1.77	305	P	15 33.00 -1.4

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

& MAY 14, 1991 14h 25m 52.32s  
 57.167 N 142.101 W  
 DEPTH = 10.0km (geophysicist)  
 GULF OF ALASKA (15)  
 <AEIC>. ML 2.8 (AEIC).

YKU	2.70	27	eP	26 31.09 -5.4
HON	2.85	35	eP	26 33.22 -5.5
			S	27 05.26
PNL	2.88	28	eP	26 33.79 -5.4
BCPM	3.08	24	eP	26 36.46 -5.4
			eS	27 10.09
TGL	3.62	354	iP	26 43.85 -5.8
CRQM	3.64	352	eP	26 43.94 -6.1
SIT	3.70	89	eP	26 44.95 -5.7
CTGM	3.83	6	eP	26 47.13 -5.6
			eS	27 28.70
BALM	3.88	358	eP	26 47.63 -5.8
			eS	27 30.55
MTU	4.06	317	eP	26 49.58 -6.1
LTI	4.17	316	eP	26 53.26 -4.0
KNIM	4.33	320	eP	26 52.42 -7.3
			eS	27 39.82
GLB	4.38	349	eP	26 53.90 -6.5
			eS	27 41.40
GLI	4.53	327	eP	26 56.72 -5.7
VLZ	4.53	333	eP	26 57.84 -4.6
KLU	4.76	337	eP	26 58.87 -7.0
KNK	5.36	325	eP	27 08.62 -5.7
CNPM	5.36	300	eP	27 08.39 -5.9
TOA	5.37	339	eP	27 08.35 -6.1
SLKM	5.38	312	eP	27 08.18 -6.5
GHO	5.78	326	eP	27 14.42 -5.8

SUA	6.17	318	eP	27 19.01 -6.8
RDT	6.34	307	eP	27 21.77 -6.4
SPU	6.51	312	eP	27 23.54 -6.9
CKL	6.63	312	eP	27 25.72 -6.5
CUT	6.67	325	eP	27 27.04 -5.7
NCG	6.67	314	eP	27 26.89 -6.0
PDB	6.86	298	eP	27 29.36 -6.0

28 obs. associated

? MAY 14, 1991 14h 36m 52.75± 4.04s  
 5.406 S ± 46.6km 145.102 E ± 10.9km  
 DEPTH = 33.0km (normal)  
 4.0mb (2 obs.)

## EAST PAPUA NEW GUINEA REGION (207)

MNDI	1.62	243	eP	37 19.00 -0.5
LAT	2.26	123	eP	37 28.90 0.4
PMG	4.47	153	eP	37 59.50 -0.5
WB2	17.84	215	iPd	41 01.30 1.1
	0.9s	38.80nm		4.5mb
RMO	21.25	171	eP	41 38.00 -0.5
STK	26.54	187	eP	42 32.30 2.8X
	1.8s	1.80nm		3.4mb

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

MAY 14, 1991 15h 30m 43.64± 0.43s  
 44.950 N ± 4.8km 11.223 E ± 3.8km  
 DEPTH = 24.6 ± 5.1 km

NORTHERN ITALY (545)  
ML 3.2 (LDG). MD 2.9 (ROM). 2.9 (TRI).

SAL	0.82	323	P	31 00.50 1.4
			eSg	31 15.70
MME	0.84	206	P	30 59.70 0.0
			eSg	31 10.60
BDI	0.99	207	P	31 02.30 0.3
			eSg	31 15.80
SFI	1.12	156	P	31 02.10 -1.7
			eSn	31 18.60
PGD	1.13	161	P	31 03.30 -0.8
			eSg	31 19.20
CTI	1.14	15	Pc	31 04.50 0.4
			eSn	31 21.50
FIR	1.17	179	e(Pg)	31 05.00 0.5
			iSg	31 18.00
RSM	1.35	139	P	31 06.50 -0.5
CRE	1.42	158	P	31 07.30 -0.8
			eSn	31 27.00
ARV	1.91	139	P	31 15.00 -0.1
			eSn	31 38.50
TRI	1.95	66	ePg	31 16.90 1.3
			iSg	31 43.50
PCP	1.95	259	P	31 17.46 1.7
			S	31 43.62
FVI	1.97	33	P	31 17.20 1.2
			eSn	31 47.90
CKI	2.16	257	P	31 19.80 1.0
			eSn	31 48.10
VOY	2.17	59	ePn	31 16.90 -2.0
			ePg	31 21.20
			eSn	31 43.80
RIY	2.27	79	e(Pn)	31 21.90 1.6
FIN	2.28	252	P	31 19.31 -1.1
			S	31 45.93
ORX	2.39	288	P	31 23.46 1.4
			S	31 50.86
CEY	2.39	70	e(Pn)	31 23.20 1.1
			e	31 27.70
			eSn	31 57.50
ROB	2.48	256	P	31 24.08 0.7
			S	31 52.55
LJU	2.57	64	ePn	31 29.00 4.4X
			i	31 32.40
			iSn	32 03.40
MNS	2.77	157	P	31 27.20 -0.3
ENR	2.81	256	P	31 29.47 1.4
			S	32 03.94
BHB	2.82	269	P	31 30.08 2.0
RSP	2.82	275	P	31 31.31 3.1X
STV	2.87	257	P	31 29.16 0.3
VBY	2.90	78	ePn	31 30.40 1.2
			eSn	32 12.30
LSD	2.92	281	P	31 32.54 2.8
PZZ	2.97	263	P	31 32.39 2.0
RRL	3.15	271	P	31 32.24 -0.8
LPG	3.21	281	Pn	31 33.90 0.0

LPL	3.22	282	Pn	31 33.80 -0.2
			S	32 08.40
BNI	3.23	273	P	31 33.50 -0.5
PTJ	3.47	72	e(Pn)	31 36.80 -0.6
			eSn	32 23.40
BSF	4.21	315	Pn	31 46.80 -1.1
			S	32 32.80
CDF	4.40	323	Pn	31 49.30 -1.3
			S	32 37.70
KHC	4.48	20	Pn	32 05.20 13.5X
			Pg	32 10.20
			eSn	33 05.50
			eSg	33 15.00
HAU	4.55	314	Pn	31 51.40 -1.3
			S	32 41.40
GRF	4.74	360	ePg	32 14.00 18.6X
			eSg	33 16.50
SMF	5.43	291	Pn	32 03.00 -2.2
			S	33 02.30
LBF	5.45	295	Pn	32 03.20 -2.2
			S	33 02.30
PRU	5.52	23	eP	32 26.50 20.2X
			eSg	33 39.00
LOR	5.62	297	Pn	32 06.30 -1.5
			S	33 05.90
SSF	5.78	294	Pn	32 07.60 -2.4
			S	33 10.80

S.D. = 1.4 on 39 of 44 obs.

% MAY 14, 1991 15h 34m 23.32± 0.72s  
 37.817 N ± 7.8km 15.053 E ± 5.7km  
 DEPTH = 10.0km (geophysicist)  
 SICILY (398)

MNO	0.31	292	P	34 29.10 -0.7
			eSg	34 34.00
ATN	0.47	43	P	34 32.50 -0.4
			eSg	34 41.50
MEU	0.72	188	P	34 37.20 -0.4
			eSg	34 48.00
GIB	0.83	282	P	34 40.20 0.8
			eSg	34 52.00
SOI	0.83	72	P	34 39.90 0.5
			eSg	34 53.60
FAI	1.22	244	P	34 46.20 0.2

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

MAY 14, 1991 15h 48m 06.21± 0.73s  
 5.780 S ± 6.7km 154.709 E ± 6.9km  
 DEPTH = 211.1 ± 6.9 km  
 4.8mb (6 obs.)  
 SOLOMON ISLANDS (193)

RAB	2.98	302	eP	48 56.00 -0.6
			iS	49 29.00
VSG	6.04	125	eP	49 35.00 0.1
LAT	7.71	263	eP	49 57.30 0.6
PMG	8.31	244	eP	50 05.00 0.6
DZM	19.78	146	iPc	52 21.40 -0.8
QIS	20.75	224	eP	52 33.00 1.1
RMO	21.36	195	iPd	52 38.80 1.0
BRS	21.57	185	iPd	52 40.00 0.1
WB2	24.29	233	eP	53 05.40 -0.5
	0.6s	10.30nm		4.6mb
		i		54 05.80
ASPA	26.78	226	iPc	53 27.50 -1.2
	0.4s	9.10nm		4.8mb
		eS		57 45.80
STK	28.72	204	eP	53 46.40 0.4
	1.5s	1.60nm		3.5mb X
WARB	33.61	230	eP	54 28.00 -0.7
FORR	35.30	222	eP	54 42.00 -0.9
	0.3s	7.00nm		4.7mb
LZH	63.25	315	eP	58 14.50 -0.3
	1.0s	25.00nm		5.0mb
GUN	74.25	301	P	59 22.68 0.1
	0.6s	15.00nm		4.9mb
PKI	74.56	301	P	59 24.30 -0.1
KKN	74.73	301	P	59 25.02 -0.2
DMN	74.83	300	P	59 26.22 0.4
	0.5s	12.00nm		4.9mb
GKN	75.34	301	P	59 28.58 0.1
YKA	95.40	28	eP	01 08.30 0.9
	0.6s	0.30nm		3.7mb X

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



% MAY 14, 1991 15h 58m 31.06±0.77s  
37.809 N ± 7.9km 15.016 E ± 5.8km  
DEPTH = 10.0km (geophysicist)  
SICILY (398)

MNO 0.28 296 P 58 37.40 0.3  
eSg 58 42.40  
ATN 0.50 45 P 58 40.90 -0.3  
eSg 58 49.30  
MEU 0.71 186 P 58 45.10 0.0  
eSg 58 56.30  
GIB 0.80 283 P 58 46.40 -0.3  
SOI 0.86 72 P 58 47.90 0.3  
eSg 59 02.60  
S.D. = 0.4 on 5 of 5 obs.

MAY 14, 1991 16h 00m 57.30±0.54s  
40.388 N ± 6.3km 28.662 E ± 4.1km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 3.1 (ISK).

KCT 0.27 239 ePg 01 02.80 -0.2  
BNT 0.57 267 iPg 01 08.70 -0.1  
iSg 01 16.20  
YLV 0.57 72 iPg 01 07.80 -1.1  
EDC 0.61 266 ePg 01 09.00 -0.6  
eSg 01 17.00  
IZI 0.62 94 ePg 01 11.80 1.9  
eSg 01 18.60  
GBZT 0.72 56 ePg 01 11.00 -0.4  
iSg 01 21.60  
ISK 0.74 24 iPg 01 11.70 -0.1  
CTT 0.78 347 iPg 01 12.80 0.3  
HRT 0.88 60 ePg 01 13.20 -1.0  
eSg 01 26.20  
GPA 1.26 94 iPn 01 20.70 -0.1  
DMK 1.59 335 iPn 01 26.80 1.3  
ALT 1.74 140 ePn 01 28.00 0.2  
KHL 2.17 162 ePn 01 39.00 5.0X  
S.D. = 1.0 on 12 of 13 obs.

& MAY 14, 1991 16h 59m 13.43s  
59.900 N 153.254 W  
DEPTH = 117.3km  
3.0mb (1 obs.)  
SOUTHERN ALASKA (2)  
<AEIC>.

PDB 0.49 257 iPc 59 30.34 -0.9  
eS 59 43.50  
AUE 0.55 186 iPd 59 30.93 -0.7  
AUH 0.55 190 ePd 59 31.12 -0.6  
AUI 0.57 189 iPd 59 31.11 -0.7  
eS 59 44.41  
RED 0.57 25 iPc 59 31.14 -0.8  
eS 59 44.88  
RS2 0.62 24 iPc 59 31.65 -0.7  
RSO 0.62 24 iPc 59 31.59 -0.8  
RDN 0.66 21 iPc 59 31.96 -0.7  
XLV 0.90 119 ePd 59 33.55 -1.0  
eS 59 49.92  
MCNL 0.90 218 ePd 59 33.60 -1.0  
eS 59 49.40  
CDD 0.99 192 iPd 59 34.50 -1.0  
eS 59 50.91  
NNL 0.99 81 ePc 59 35.81 0.3  
CNPM 1.09 109 iPd 59 35.53 -0.9  
eS 59 52.53  
BRLK 1.20 95 eP 59 36.96 -0.8  
eS 59 54.71  
NKA 1.31 49 ePc 59 39.65 0.8  
SYI 1.37 161 ePd 59 38.44 -1.0  
CKL 1.38 19 iPc 59 39.17 -0.6  
eS 59 59.09  
SPU 1.42 24 iPc 59 39.28 -0.9  
BGL 1.43 17 ePc 59 39.93 -0.5  
CRP 1.48 21 iPc 59 40.44 -0.5  
NCG 1.60 19 eP 59 42.05 -0.4  
SLKM 1.63 67 eP 59 41.67 -1.0  
SVW 1.69 317 iPc 59 41.99 -1.4  
eS 00 05.45  
SEW 1.92 82 eP 59 45.22 -1.0  
SUA 2.00 37 ePc 59 46.48 -0.8  
SKT 2.25 21 ePc 59 49.56 -0.9  
PMS 2.27 52 eP 59 49.56 -1.2  
PWA 2.41 42 eP 59 51.64 -0.9

KNIM 2.80 78 ePc 59 55.10 -2.5  
KNK 2.81 55 eP 59 55.47 -2.3  
MTU 2.82 86 eP 59 56.66 -1.3  
GHO 2.83 47 eP 59 56.04 -2.1  
CUT 2.90 29 eP 59 57.97 -1.0  
SML 3.08 49 eP 59 58.93 -2.5  
GLI 3.21 70 eP 00 01.00 -2.2  
YKA 18.61 65 eP 03 28.20 4.2  
0.6s 0.50nm 3.0mb  
36 obs. associated

% MAY 14, 1991 17h 45m 49.54±0.78s  
37.809 N ± 8.0km 15.014 E ± 5.9km  
DEPTH = 10.0km (geophysicist)  
SICILY (398)

MNO 0.28 296 P 45 56.00 0.5  
eSg 46 01.00  
ATN 0.50 45 P 45 59.40 -0.3  
eSg 46 07.90  
MEU 0.71 185 P 46 03.60 0.0  
eSg 46 14.80  
GIB 0.80 283 P 46 04.70 -0.5  
eSg 46 17.20  
SOI 0.86 72 P 46 06.40 0.3  
eSg 46 20.60  
S.D. = 0.5 on 5 of 5 obs.

\* MAY 14, 1991 18h 22m 24.36±0.85s  
36.979 N ± 9.3km 29.497 E ± 6.2km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)

ELL 0.40 125 iPg 22 32.50 -0.1  
iSg 22 39.00  
YER 0.98 279 ePn 22 43.30 0.2  
BCK 1.00 61 iPn 22 43.50 0.2  
CIN 1.28 299 ePg 22 48.00 -0.2  
iSg 23 06.00  
KHL 1.34 1 ePn 22 49.00 -0.1  
S.D. = 0.3 on 5 of 5 obs.

? MAY 14, 1991 18h 39m 06.07±5.57s  
49.000 N ± 41.8km 6.853 E ± 11.1km  
DEPTH = 10.0km (geophysicist)  
GERMANY (543)  
MD 1.9 (STR).

CDF 0.65 154 Pg 39 18.41 -0.7  
WLS 0.68 150 Pg 39 18.91 -0.6  
ECH 0.81 165 Pg 39 22.02 0.2  
Sg 39 36.43  
VITF 0.97 217 Pg 39 24.23 -0.3  
Sg 39 39.12  
MOF 1.16 171 Pg 39 28.59 0.7  
FEL 1.36 145 Pg 39 31.78 0.5  
LOMF 1.65 181 Pn 39 35.49 0.2  
S.D. = 0.7 on 7 of 7 obs.

\* MAY 14, 1991 19h 00m 07.83±0.71s  
3.598 S ± 10.5km 128.746 E ± 14.1km  
DEPTH = 33.0km (normal)  
4.7mb (7 obs.)

CERAM (272)  
AAI 0.56 261 iPd 00 19.00 -0.3  
iS 00 23.00  
WB2 17.14 162 iPc 04 04.70 -1.9  
0.5s 10.30nm 4.2mb  
eS 07 12.80  
MBL 19.49 206 eP 04 36.00 0.8  
OIS 19.90 149 iPd 04 39.30 -0.3  
0.5s 22.00nm 4.7mb  
ASPA 20.56 166 iPc 04 47.00 0.4  
0.6s 38.20nm 4.9mb  
Z 23s 0.20um 3.4Mszx  
iS 08 32.20  
STK 30.62 158 eP 06 23.00 1.8  
0.6s 1.60nm 4.0mb  
CHG 36.83 308 eP 07 16.50 1.5  
LZH 45.84 332 eP 08 29.50 0.7  
2.0s 18.00nm 4.6mb  
pP 08 37.00 25kmX  
GUN 51.80 310 P 09 15.26 -0.2  
0.6s 16.00nm 5.1mb  
PKI 52.00 309 P 09 16.12 -0.8  
KKN 52.20 310 P 09 17.16 -1.1

DMN 52.25 309 P 09 18.48 -0.2  
GKN 52.80 309 P 09 22.38 -0.3  
0.7s 11.00nm 4.9mb  
S.D. = 1.1 on 13 of 13 obs.

\* MAY 14, 1991 19h 17m 53.84±0.47s  
57.715 S ± 9.2km 25.368 W ± 14.2km  
DEPTH = 51.5km (2 depth phases)  
5.1mb (4 obs.)

SOUTH SANDWICH ISLANDS REGION (153)

SNA 16.01 151 iPc 21 35.80 -0.9  
0.9s 168.07nm 5.2mb  
NVL 20.32 145 ePc 22 28.00 0.4  
e 22 50.00 117kmX  
SPA 32.46 180 iPd 24 22.00 1.0  
1.5s 38.64nm 5.0mb  
i 25 18.40 285kmX  
PDCR 46.29 341 eP 26 15.70 -0.2  
e 26 30.30 56km  
SIV 49.44 312 P 26 29.80 -10.7X  
ZOBO 52.16 304 P 27 02.00 0.1  
1.0s 22.50nm 5.2mb  
Z 24s 0.65um 4.6Mszx  
i 27 15.00 47km  
LR 10 10.00  
BUL 54.17 70 iPc 27 16.20 0.1  
1.1s 13.29nm 4.9mb  
KRI 57.47 68 iPKPc 27 39.40 -0.5  
LIC 65.83 22 P 28 37.20 1.5  
KIC 66.02 23 P 28 36.60 -0.4  
DMN 123.75 91 PKP 36 48.00 0.7  
GKN 123.81 90 PKP 36 46.20 -1.0  
PKI 123.88 91 PKP 36 47.80 0.2  
KKN 123.99 91 PKP 36 48.20 0.5  
GUN 124.40 91 PKP 36 49.00 0.4  
YKA 138.07 316 ePKP 37 11.30 -1.8  
0.8s 2.20nm  
SSE 144.86 125 PKPd 37 26.10 0.1  
1.0s 12.00nm  
Z 16s 0.40um 5.3Mszx  
sP 37 36.00  
INK 147.72 319 ePKPc 37 33.00 3.5X  
0.5s 13.00nm  
pP 37 47.00  
IRK 151.19 79 ePKP 37 42.10 6.7X  
e 37 51.80  
e 38 12.00  
S.D. = 0.9 on 16 of 19 obs.

? MAY 14, 1991 19h 24m 16.12±1.26s  
30.211 S ± 15.5km 69.264 W ± 12.9km  
DEPTH = 33.0km (normal)  
CHILE-ARGENTINA BORDER REGION (127)

RTRS 0.17 283 iPc 24 22.50 0.0  
RTLL 1.31 149 iPd 24 38.20 -0.1  
S 24 55.50  
RTCB 1.33 163 ePd 24 38.80 0.1  
eS 24 56.30  
ZON 1.42 159 eP 24 39.00 -0.9  
CFA 1.65 148 iPc 24 44.20 1.0  
eS 25 05.30  
MDZ 2.69 173 eP 25 11.60 13.6X  
iS 25 39.90  
TCA 4.18 107 ePc 25 19.00 -0.2  
(S) 26 21.50  
S.D. = 0.8 on 6 of 7 obs.

\* MAY 14, 1991 19h 53m 10.60±0.77s  
9.819 N ± 17.9km 83.578 W ± 12.8km  
DEPTH = 33.0km (normal)  
4.5mb (3 obs.)

COSTA RICA (78)  
MD 4.8 (SJR). Felt in Costa Rica  
and at Changuinola, Panama.

UPA 4.08 101 iPc 54 10.90 -1.3  
S 54 53.00  
SDV 12.81 93 eP 56 11.50 -1.9  
eS 58 30.50  
TOV 13.59 89 eP 56 24.10 0.6  
eS 58 47.50  
ZOBO 30.10 149 P 59 24.00 3.8X  
ANMO 32.59 324 P 59 42.20 0.7  
SIV 33.97 139 eP 59 56.00 2.5  
SCH 46.82 13 eP 01 40.00 1.0



14d 20h

VAO 48.46 133 (P) 01 53.00 0.7  
 YKA 57.17 343 eP 02 55.20 -1.2  
 0.8s 4.30nm 4.5mb  
 INK 66.85 342 eP 04 01.00 -0.1  
 LKO 76.69 82 P 04 59.12 -1.7  
 TIC 77.66 85 P 05 06.76 0.6  
 LIC 77.72 86 P 05 07.42 1.0  
 KIC 77.98 86 P 05 08.94 1.0  
 NB2 83.80 29 P 05 39.90 2.1  
 0.8s 1.40nm 4.2mb  
 CLL 86.50 39 ePd 05 56.00 4.6X  
 BRG 87.17 39 eP 05 59.60 4.9X  
 1.5s 13.00nm 4.9mb  
 KHC 87.30 41 P 06 00.50 5.1X  
 ASPA 141.70 244 ePKP 12 40.70 -0.7  
 1.0s 5.00nm  
 WB2 142.07 250 iPKPd 12 39.90 -2.2  
 0.8s 2.30nm  
 e 14 03.30  
 e 15 12.00  
 WRA 142.08 250 PKP 12 41.00 -1.1  
 0.8s 2.40nm  
 S.D. = 1.5 on 17 of 21 obs.

\* MAY 14, 1991 20h 05m 19.14± 1.01s  
 7.324 S ±11.8km 156.128 E ± 8.6km  
 DEPTH = 89.4 ± 11.4 km  
 4.1mb ( 4 obs.)

SOLOMON ISLANDS (193)

VSG 4.03 119 eP 06 19.00 -0.8  
 eS 07 17.00  
 SVO 4.08 117 eP 06 21.00 0.6  
 eS 07 20.00  
 HNR 4.32 119 eP 06 23.00 -0.8  
 eS 07 21.00  
 RAB 5.02 308 eP 06 36.00 2.5  
 iS 07 38.00  
 PMG 9.12 256 eP 07 28.00 -1.9  
 RMO 20.31 199 eP 09 52.00 1.7  
 WB2 24.56 237 iPd 10 31.50 -0.6  
 0.6s 4.60nm 4.1mb  
 i 10 38.70  
 i 11 01.90  
 ASPA 26.81 230 eP 10 59.40 6.4X  
 1.7s 8.80nm 4.0mb  
 MAT 46.76 340 eP 13 40.00 -1.3  
 CHG 62.06 296 eP 15 32.80 -0.1  
 GUN 76.25 301 P 17 00.06 -0.4  
 PKI 76.56 301 P 17 01.62 -0.5  
 KKN 76.73 301 P 17 02.62 -0.3  
 DMN 76.83 300 P 17 03.46 -0.1  
 GKN 77.33 301 P 17 05.82 -0.4  
 SPA 82.72 180 eP 17 36.00 1.8  
 1.0s 7.50nm 4.6mb  
 FBA 83.02 21 (P) 17 35.50 0.0  
 YKA 96.10 28 eP 18 38.40 0.8  
 0.7s 0.40nm 4.1mb  
 S.D. = 1.3 on 17 of 18 obs.

% MAY 14, 1991 21h 42m 21.91± 1.40s  
 40.708 N ± 6.6km 27.346 E ± 12.2km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 MD 2.7 (ISK).

KGT 0.26 187 iPg 42 27.10 -0.3  
 EDC 0.53 132 iPg 42 32.00 -0.7  
 iSg 42 39.00  
 BNT 0.56 129 iPg 42 31.60 -1.7  
 iSg 42 38.10  
 KCT 0.90 120 ePn 42 39.70 0.6  
 CTT 0.93 62 iPg 42 39.10 -0.6  
 iSg 42 51.60  
 DMK 1.16 15 iPn 42 43.30 -0.2  
 DST 1.48 138 ePn 42 50.00 1.4  
 YLV 1.55 95 ePn 42 50.10 0.5  
 IZI 1.66 102 ePn 42 52.30 1.0  
 S.D. = 1.1 on 9 of 9 obs.

\* MAY 14, 1991 22h 38m 03.40± 1.62s  
 36.515 N ± 15.4km 71.468 E ± 9.0km  
 DEPTH = 72.5 ± 20.2 km  
 3.9mb ( 4 obs.)

AFGHANISTAN-USSR BORDER REGION (717)

NDI 9.19 147 eP 40 20.00 4.5X

0.5s 15.49nm 5.1mb X  
 MAIO 9.66 272 eS 41 55.00  
 eS 42 00.00  
 GKN 14.00 124 P 41 19.64 -0.1  
 DMN 14.57 124 P 41 27.64 0.3  
 KKN 14.57 123 P 41 27.06 -0.2  
 PKI 14.79 123 P 41 30.48 0.2  
 GUN 14.90 121 P 41 31.48 -0.2  
 GBA 23.43 165 Pc 43 06.80 0.0  
 0.3s 2.40nm 4.1mb  
 BRG 42.91 308 e(P) 46 14.00 17.8X  
 HFS 43.29 322 eP 45 59.50 0.4  
 0.5s 1.20nm 4.0mb  
 NB2 44.60 323 P 46 09.20 -0.6  
 0.8s 1.70nm 3.9mb  
 YKA 81.21 3 eP 50 12.30 0.2  
 0.6s 0.60nm 3.7mb  
 S.D. = 0.4 on 10 of 12 obs.

% MAY 15, 1991 00h 33m 02.94± 1.00s  
 40.530 N ± 5.6km 23.612 E ± 9.7km  
 DEPTH = 5.0km (geophysicist)

GREECE (364)  
 ML 1.6 (THE).

SOH 0.35 326 ePg 33 09.98 0.0  
 eSg 33 14.94  
 THE 0.50 282 ePg 33 13.06 0.0  
 eSg 33 18.66  
 SRS 0.59 359 ePg 33 14.78 0.1  
 eSg 33 24.18  
 PAIG 0.60 175 ePg 33 15.02 0.0  
 eSg 33 23.06  
 KNT 0.83 320 ePg 33 19.30 -0.2  
 eSg 33 29.50  
 GRG 1.01 295 ePg 33 22.74 0.1  
 eSg 33 36.94  
 S.D. = 0.2 on 6 of 6 obs.

& MAY 15, 1991 00h 45m 44.88s  
 62.437 N 151.190 W  
 DEPTH = 88.9km  
 CENTRAL ALASKA ( 1)  
 <AEIC>.

CUT 0.43 94 iPc 45 58.65 -0.5  
 SKT 0.49 199 iPd 45 58.97 -0.7  
 eS 46 09.62  
 HUR 0.90 52 ePc 46 02.73 -0.9  
 eS 46 16.62  
 SUA 1.00 168 ePc 46 04.52 -0.4  
 eS 46 19.83  
 PWA 1.00 141 iPc 46 04.33 -0.5  
 eS 46 19.38  
 TRF 1.10 22 ePd 46 04.97 -1.2  
 eS 46 21.06  
 NCG 1.13 204 iPd 46 05.48 -1.0  
 S 46 22.43  
 GH0 1.26 121 iPc 46 07.45 -0.5  
 eS 46 25.48  
 CRP 1.26 202 iPd 46 07.23 -0.9  
 eS 46 24.99  
 PLRM 1.29 130 eP 46 07.32 -0.9  
 PMR 1.29 130 iPd 46 07.70 -0.6  
 BGL 1.31 206 ePd 46 07.88 -0.8  
 SPU 1.33 198 iPd 46 07.65 -1.2  
 eS 46 26.20  
 CKL 1.36 204 iPd 46 08.37 -0.9  
 eS 46 27.31  
 PMS 1.42 146 ePc 46 09.11 -0.9  
 eS 46 28.37  
 RND 1.45 47 ePd 46 09.15 -1.2  
 eS 46 27.88  
 SML 1.48 114 iPc 46 09.88 -0.9  
 KNK 1.65 127 ePc 46 11.81 -1.2  
 eS 46 33.22  
 MCK 1.66 37 ePd 46 11.87 -1.2  
 eS 46 33.11  
 BWN 1.91 23 eP 46 14.62 -1.7  
 SCM 1.91 107 eP 46 14.91 -1.6  
 RDT 1.96 198 eP 46 16.09 -1.0  
 SLKM 1.99 166 eP 46 16.59 -0.9  
 RDN 2.07 202 ePd 46 17.38 -1.3  
 RS2 2.12 201 eP 46 18.55 -0.8  
 RSO 2.12 201 ePd 46 18.39 -1.0  
 RED 2.16 201 ePd 46 18.98 -0.9

TTA 2.28 285 iPc 46 20.10 -1.3  
 NEA 2.35 23 eP 46 19.93 -2.4  
 TQA 2.37 96 iPd 46 22.10 -0.6  
 WRH 2.47 33 iPc 46 21.83 -2.1  
 SEW 2.49 159 eP 46 24.06 -0.1  
 SVW 2.49 240 iPd 46 23.00 -1.3  
 GLI 2.50 127 ePc 46 22.22 -2.2  
 VZW 2.60 120 ePc 46 23.70 -2.1  
 SDG 2.62 86 eP 46 25.02 -1.1  
 VLZ 2.65 117 eP 46 23.81 -2.6  
 KLU 2.66 109 ePc 46 24.16 -2.5  
 KNIM 2.67 140 iPc 46 23.34 -3.4  
 CCB 2.69 33 iPd 46 24.61 -2.3  
 PAX 2.69 76 ePd 46 26.00 -1.1  
 HDA 2.74 42 ePd 46 25.63 -2.1  
 MDM 2.85 26 iPd 46 27.06 -2.2  
 FBA 2.90 30 iPd 46 28.20 -1.6  
 CNPM 2.92 180 eP 46 30.37 0.2  
 MTU 2.99 144 eP 46 28.21 -2.9  
 PDB 3.03 210 ePd 46 30.08 -1.6  
 GLM 3.07 32 eP 46 29.92 -2.3  
 DOT 3.47 66 ePd 46 35.55 -2.1  
 IMA 3.80 345 ePd 46 40.60 -1.8  
 50 obs. associated

\* MAY 15, 1991 01h 01m 29.14± 1.37s  
 35.741 N ± 22.2km 26.981 E ± 11.8km  
 DEPTH = 33.0km (normal)

CRETE (370)  
 MD 3.6 (ATH).

NPS 1.21 247 ePb 01 49.50 -0.4  
 eSb 02 05.50  
 YER 1.74 37 ePn 01 55.40 -2.2  
 CIN 2.06 25 eP 02 03.00 0.9  
 ELL 2.57 66 iPn 02 09.50 0.0  
 BCK 3.37 58 ePn 02 22.00 1.2  
 VLI 3.41 288 ePn 02 21.80 0.5  
 S.D. = 1.6 on 6 of 6 obs.

& MAY 15, 1991 01h 05m 41.63s  
 55.276 N 159.799 W  
 DEPTH = 60.3km  
 ALASKA PENINSULA ( 12)  
 <PAL>. MD 3.1 (PAL).

SDN 0.40 280 iPc 05 52.50 -0.2  
 PDB 5.44 31 eP 07 02.00 0.0  
 TTA 7.92 13 eP 07 35.50 -1.1  
 3 obs. associated

\* MAY 15, 1991 01h 12m 58.84± 0.93s  
 31.514 S ± 13.3km 68.605 W ± 15.5km  
 DEPTH = 90.0km (geophysicist)

SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.07 244 iPd 13 12.00 0.0  
 RTCB 0.17 279 iPd 13 11.90 -0.4  
 RTLL 0.22 32 iPc 13 12.00 -0.4  
 CFA 0.33 107 iPc 13 13.90 1.2  
 eS 13 26.00  
 MDZ 1.38 189 iP 13 24.80 1.3  
 iS 13 41.40  
 RFA 3.25 178 iPc 13 47.30 -1.4  
 TCA 3.44 88 ePd 13 51.00 -0.3  
 (S) 14 24.50  
 S.D. = 1.2 on 7 of 7 obs.

% MAY 15, 1991 02h 29m 43.50± 1.59s  
 31.369 S ± 10.9km 68.597 W ± 13.9km  
 DEPTH = 112.2 ± 17.3 km

SAN JUAN PROVINCE, ARGENTINA (137)

RTLL 0.12 70 iPc 29 59.00 -0.5  
 RTCB 0.21 236 iPd 29 59.20 -0.6  
 S 30 26.10  
 CFA 0.39 128 iPc 30 00.80 0.6  
 eS 30 12.70  
 RTRS 1.41 328 iPc 30 09.90 0.2  
 MDZ 1.53 188 eP 30 12.40 1.2  
 iS 30 32.10  
 RFA 3.39 178 ePc 30 34.70 -1.0  
 TCA 3.43 91 ePc 30 36.20 0.1  
 (S) 31 13.80  
 S.D. = 1.1 on 7 of 7 obs.

? MAY 15, 1991 02h 47m 04.76± 0.89s



15d 02h

31.216 S  $\pm 20.2$ km 68.604 W  $\pm 29.4$ km  
 DEPTH = 90.0km (geophysicist)  
 SAN JUAN PROVINCE, ARGENTINA (137)

RTLL 0.16 135 iPc 47 18.00 -0.1  
 RTCB 0.32 212 iPd 47 18.30 -0.3  
 ZON 0.34 191 iPd 47 19.00 0.4  
 eS 47 31.00  
 CFA 0.50 141 ePc 47 19.80 0.0  
 eS 47 32.00  
 RTRS 1.28 324 eP 47 28.10 0.1  
 S 47 47.00  
 S.D. = 0.3 on 5 of 5 obs.

\* MAY 15, 1991 05h 13m 05.59  $\pm 2.56$ s  
 33.156 S  $\pm 7.6$ km 71.729 W  $\pm 23.6$ km  
 DEPTH = 10.0km (geophysicist)  
 NEAR COAST OF CENTRAL CHILE (135)

IHA 0.15 29 iPc 13 09.00 0.0  
 iS 13 11.80  
 LCCH 0.35 157 iP 13 13.60 0.9  
 iS 13 23.00  
 TACH 0.83 127 iPd 13 21.80 0.2  
 iS 13 38.50  
 LNV 0.84 162 iPc 13 20.50 -1.3  
 iS 13 35.50  
 SAN 0.94 109 eP 13 24.30 0.7  
 iS 13 43.00  
 JACH 1.07 64 iP 13 24.70 -1.0  
 i 13 43.00  
 iS 13 45.50  
 MDZ 2.43 84 iP 13 51.10 5.0X  
 iS 14 26.90  
 RTCB 2.99 57 ePd 13 55.30 1.4  
 S 14 41.80  
 ZON 3.04 59 eP 13 56.00 1.3  
 RFA 3.15 122 eP 13 56.70 0.4  
 RTLL 3.31 57 ePd 13 59.00 0.5  
 CFA 3.33 63 ePc 14 01.50 2.7X  
 TCA 6.31 75 eP 14 38.00 -3.1  
 S.D. = 1.5 on 11 of 13 obs.

\* MAY 15, 1991 05h 18m 50.98  $\pm 1.89$ s  
 32.978 S  $\pm 9.9$ km 72.169 W  $\pm 19.6$ km  
 DEPTH = 33.0km (normal)  
 OFF COAST OF CENTRAL CHILE (134)

IHA 0.45 96 iPc 19 00.10 -0.7  
 iS 19 07.10  
 LCCH 0.71 135 iPd 19 03.50 -1.0  
 ROCH 0.97 90 iPd 19 08.50 -0.1  
 LNV 1.16 147 iPc 19 10.60 -0.4  
 TACH 1.23 123 iPd 19 12.00 0.0  
 SAN 1.35 111 iPc 19 14.50 0.8  
 iS 19 33.00  
 JACH 1.36 78 iP 19 15.00 1.1  
 PCH 1.53 115 iPc 19 17.50 1.1  
 MDZ 2.79 89 iP 19 37.70 3.3X  
 i 19 40.20  
 iS 20 17.60  
 ZON 3.28 65 eP 19 48.00 6.6X  
 RFA 3.56 121 ePc 19 46.70 1.3  
 TCA 6.63 78 eP 20 28.00 -0.7  
 CCH 16.45 21 eP 22 46.00 4.7X  
 ARE 16.46 2 eP 22 48.00 6.7X  
 LPB 16.78 14 P 22 48.00 2.4  
 ZOBO 17.03 13 P 22 49.00 0.1  
 Z 17s 0.40um  
 LR 30 16.00  
 SIV 19.67 33 P 23 18.40 -1.9  
 PPD 21.43 65 eP 23 36.20 -2.2  
 S.D. = 1.4 on 14 of 18 obs.

\* MAY 15, 1991 05h 48m 15.11  $\pm 2.05$ s  
 33.057 S  $\pm 10.0$ km 72.262 W  $\pm 19.6$ km  
 DEPTH = 33.0km (normal)  
 OFF COAST OF CENTRAL CHILE (134)

IHA 0.52 87 iPc 48 24.40 -1.6  
 iS 48 31.20  
 LCCH 0.71 126 iPd 48 28.10 -0.6  
 ROCH 1.05 86 iPd 48 33.00 -0.8  
 LNV 1.14 142 iPc 48 35.00 0.2  
 iS 48 49.50  
 TACH 1.26 119 iPd 48 36.50 0.0  
 SAN 1.40 107 iPd 48 39.00 0.5

iS 48 56.00  
 i 48 58.00  
 JACH 1.45 76 iPc 48 39.10 -0.3  
 iS 48 56.50  
 PCH 1.57 112 iPc 48 41.70 0.6  
 MDZ 2.87 87 eP 49 03.50 3.8X  
 i 49 05.70  
 iS 49 42.90  
 RTCB 3.32 63 e(P) 49 08.00 1.9  
 ZON 3.39 65 eP 49 11.00 4.0X  
 RFA 3.59 119 ePc 49 11.30 1.4  
 RTLL 3.65 63 ePc 49 13.50 2.8X  
 RTRS 3.74 40 iPc 49 13.80 1.9  
 (S) 49 54.90  
 TCA 6.72 77 ePc 49 53.00 -1.2  
 (S) 51 14.30  
 CCH 16.55 21 P 52 10.00 3.3X  
 LPB 16.88 14 eP 52 12.00 1.1  
 ZOBO 17.13 14 P 52 14.00 -0.2  
 Z 17s 0.31um  
 LR 59 54.00  
 SIV 19.78 33 P 52 42.60 -3.0  
 PPD 21.54 65 eP 52 57.90 -5.7X  
 e 53 01.30  
 S.D. = 1.4 on 15 of 20 obs.

% MAY 15, 1991 05h 56m 12.22  $\pm 2.28$ s  
 40.418 N  $\pm 7.1$ km 23.874 E  $\pm 23.8$ km  
 DEPTH = 5.0km (geophysicist)  
 GREECE (364)  
 ML 1.7 (THE).

PAIG 0.51 197 ePg 56 22.40 -0.1  
 eSg 56 28.96  
 SOH 0.56 316 ePg 56 22.88 -0.7  
 eSg 56 29.56  
 SRS 0.73 343 ePg 56 27.20 0.4  
 eSg 56 36.72  
 KNT 1.05 315 ePg 56 31.92 -0.6  
 eSg 56 45.12  
 GRG 1.24 296 ePg 56 36.72 0.9  
 S.D. = 0.9 on 5 of 5 obs.

? MAY 15, 1991 06h 06m 59.09  $\pm 3.61$ s  
 33.125 S  $\pm 10.8$ km 72.220 W  $\pm 27.9$ km  
 DEPTH = 6.2  $\pm 7.0$  km  
 OFF COAST OF CENTRAL CHILE (134)

IHA 0.50 79 iPc 07 09.20 0.2  
 iS 07 15.70  
 LCCH 0.65 123 iPd 07 13.00 1.0  
 ROCH 1.03 82 iPd 07 17.60 -1.4  
 iS 07 32.40  
 LNV 1.07 141 iP 07 19.60 0.1  
 i 07 34.00  
 iS 07 35.00  
 TACH 1.19 116 iPd 07 21.00 -0.7  
 iS 07 38.00  
 SAN 1.35 104 iPc 07 24.00 -0.3  
 iS 07 42.50  
 i 07 43.00  
 JACH 1.44 73 iPd 07 23.60 -2.2  
 iS 07 42.00  
 PCH 1.51 110 iPc 07 26.50 -0.3  
 iS 07 47.50  
 MDZ 2.84 86 iP 07 49.70 3.8X  
 iS 08 28.20  
 RTCB 3.33 61 ePd 07 54.80 2.0  
 S 08 43.70  
 RTLL 3.65 62 ePd 07 58.50 1.2  
 (S) 08 48.00  
 CFA 3.69 67 ePd 08 00.10 2.2  
 S 08 47.90  
 RTRS 3.77 39 e(P) 07 57.30 -1.7  
 S.D. = 1.6 on 12 of 13 obs.

% MAY 15, 1991 06h 07m 44.11  $\pm 0.66$ s  
 40.384 N  $\pm 5.2$ km 23.689 E  $\pm 6.4$ km  
 DEPTH = 5.0km (geophysicist)  
 GREECE (364)  
 ML 2.2 (THE).

OUR 0.23 102 ePg 07 48.90 0.1  
 eSg 07 50.98  
 PAIG 0.46 181 ePg 07 53.85 0.6  
 eSg 08 00.54  
 SOH 0.51 330 ePg 07 54.30 0.0

THE 0.60 294 eSg 08 01.74  
 ePg 07 56.26 0.0  
 SRS 0.74 354 eSg 08 04.98  
 ePg 07 58.46 -0.4  
 eSg 08 08.02  
 KNT 0.98 323 ePg 08 02.90 -0.3  
 eSg 08 15.62  
 GRG 1.13 301 ePg 08 06.88 1.0  
 eSg 08 22.86  
 AGG 1.72 218 ePb 08 13.66 -1.2  
 S.D. = 0.8 on 8 of 8 obs.

& MAY 15, 1991 06h 35m 33.96s  
 61.840 N 150.045 W  
 DEPTH = 39.9km  
 SOUTHERN ALASKA (2)  
 <AEIC>. ML 2.5 (AEIC).

PWA 0.21 157 iPd 35 41.62 0.3  
 eS 35 47.75  
 PLRM 0.50 119 ePc 35 43.79 -0.9  
 eS 35 52.48  
 PMR 0.50 119 ePc 35 44.40 -0.3  
 SUA 0.50 222 iPd 35 44.60 -0.3  
 eS 35 53.42  
 GHG 0.54 97 iPc 35 44.69 -0.6  
 eS 35 53.45  
 CUT 0.58 350 iPc 35 45.10 -0.6  
 eS 35 53.87  
 PMS 0.64 159 iPd 35 45.97 -0.7  
 eS 35 55.68  
 SKT 0.72 282 iPc 35 46.84 -0.9  
 eS 35 56.66  
 SML 0.81 91 iPc 35 47.99 -1.1  
 KNK 0.87 119 iPc 35 49.13 -0.8  
 eS 36 01.63  
 NCG 1.10 247 eP 35 52.37 -0.8  
 HUR 1.16 9 ePc 35 53.40 -0.5  
 CRP 1.16 241 ePc 35 53.98 -0.2  
 S 36 10.30  
 SPU 1.17 236 iPc 35 53.67 -0.5  
 eS 36 09.79  
 NKA 1.24 208 ePc 35 56.84 1.7  
 BGL 1.26 244 ePc 35 55.34 -0.2  
 eS 36 12.05  
 CKL 1.27 241 ePc 35 55.56 -0.1  
 eS 36 12.74  
 SCM 1.29 89 iPc 35 55.41 -0.5  
 SLKM 1.34 184 ePc 35 55.88 -0.7  
 eS 36 13.33  
 TRF 1.62 356 eP 36 00.34 -0.3  
 RND 1.67 19 ePc 36 00.48 -0.7  
 RDT 1.71 223 iPc 36 01.51 -0.3  
 GLI 1.72 123 ePc 36 00.91 -1.0  
 SEW 1.77 170 eP 36 02.94 0.4  
 TOA 1.85 80 ePd 36 05.20 -1.4  
 VZW 1.85 114 eP 36 03.04 -0.8  
 KNIM 1.87 142 ePd 36 02.51 -1.6  
 RDN 1.87 226 eP 36 03.39 -0.9  
 NNL 1.90 199 eP 36 05.32 0.7  
 RSO 1.91 225 ePc 36 04.52 -0.3  
 RS2 1.91 225 eP 36 04.89 0.1  
 VLZ 1.92 110 ePc 36 03.60 -1.1  
 RED 1.95 224 ePc 36 04.91 -0.4  
 MCK 1.97 15 eP 36 05.34 -0.2  
 KLU 2.00 98 iPc 36 05.32 -0.7  
 TZL 2.19 83 eP 36 08.39 -0.4  
 MTU 2.20 147 eP 36 09.07 0.3  
 SDG 2.22 70 eP 36 09.04 -0.1  
 CNPM 2.39 195 eP 36 11.43 -0.2  
 PAX 2.41 60 eP 36 11.91 -0.1  
 SVW 2.78 257 ePc 36 16.10 -0.9  
 PDB 2.89 226 eP 36 17.35 -1.3  
 CCB 2.99 19 eP 36 18.64 -1.4  
 RDS 3.12 15 eP 36 20.46 -1.4  
 FBA 3.24 17 ePd 36 22.60 -0.9  
 MDM 3.24 14 eP 36 22.22 -1.3  
 46 obs. associated

? MAY 15, 1991 07h 07m 59.05  $\pm 2.09$ s  
 20.048 N  $\pm 10.9$ km 76.496 W  $\pm 61.9$ km  
 DEPTH = 33.0km (normal)  
 3.7mb (1 abs.)  
 CUBA REGION (85)  
 MD 3.4 (HOJ).  
 BBJ 1.81 204 iPd 08 28.55 0.1



15d 07h

STH 1.98 189 iPc 08 49.81 -0.5  
 S 08 30.51  
 iS 08 54.04  
 TT 09 42.72  
 HOJ 2.05 187 ePc 08 32.26 0.4  
 S 08 54.49  
 TT 09 55.60  
 PCJ 2.38 196 Pd 08 33.48 -3.1X  
 S 08 57.55  
 YKA 49.81 338 eP 16 50.50 0.0  
 0.5s 0.40nm 3.7mb  
 S.D. = 0.6 on 4 of 5 obs.

? MAY 15, 1991 07h 58m 59.00±2.55s  
 20.099 N ±12.7km 76.381 W ±72.5km  
 DEPTH = 33.0km (normol)  
 3.3mb (1 obs.)

CUBA REGION (85)

BBJ 1.90 206 Pc 59 29.93 0.2  
 S 59 49.85  
 STH 2.05 192 iPc 59 30.65 -1.3  
 iS 59 53.76  
 HOJ 2.12 190 iPc 59 33.86 1.1  
 S 59 56.23  
 TT 00 54.14  
 PCJ 2.46 198 iPc 59 33.81 -3.9X  
 YKA 49.81 338 eP 07 50.40 0.0  
 0.6s 0.20nm 3.3mb  
 S.D. = 1.7 on 4 of 5 obs.

\* MAY 15, 1991 08h 00m 51.84±1.62s  
 44.045 N ±8.2km 16.535 E ±17.4km  
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

MD 2.9 (TRI). ML 2.6 (LJU).

HVAR 0.87 184 iPg 01 09.20 0.7  
 iSg 01 22.30  
 VBY 1.72 328 iPnc 01 22.80 0.8  
 iSn 01 44.00  
 PTJ 1.90 348 ePn 01 22.30 -2.4  
 eSn 01 48.40  
 RIY 2.01 311 iPnc 01 27.50 1.4  
 iSn 01 53.20  
 CEY 2.26 319 e(Pn) 01 31.00 1.1  
 eSn 01 58.50  
 LJU 2.45 325 eP 01 40.00 7.5X  
 eSn 02 01.90  
 TRI 2.58 311 e(Pn) 01 38.00 3.7X  
 e(Sn) 02 04.20  
 iSg 02 10.20  
 ARV 2.66 259 P 01 34.60 -0.9  
 VOY 2.73 318 ePn 01 37.10 0.5  
 eSn 02 09.80  
 MNS 3.27 241 P 01 49.50 5.3X  
 CRE 3.34 264 P 01 44.50 -0.8  
 SFI 3.38 270 P 01 45.30 -0.4  
 S.D. = 1.4 on 9 of 12 obs.

\* MAY 15, 1991 08h 09m 08.75±1.38s  
 31.348 S ±9.8km 68.543 W ±12.3km  
 DEPTH = 108.1 ±14.5 km

SAN JUAN PROVINCE, ARGENTINA (137)

RTLL 0.07 74 iPc 09 23.70 -0.5  
 ZON 0.23 210 eP 09 25.00 0.5  
 RTCB 0.26 238 iPd 09 24.10 -0.6  
 CFA 0.37 135 iPc 09 25.10 0.2  
 eS 09 37.00  
 RTRS 1.41 326 iPc 09 34.90 0.1  
 S 09 53.40  
 MDZ 1.55 190 iP 09 37.50 0.9  
 iS 09 58.70  
 TCA 3.38 91 ePc 10 00.80 0.1  
 (S) 10 39.20  
 RFA 3.41 179 ePc 10 00.30 -0.8  
 S 10 31.40  
 S.D. = 0.8 on 8 of 8 obs.

% MAY 15, 1991 08h 12m 47.44±0.76s  
 39.378 N ±6.9km 141.919 E ±12.6km  
 DEPTH = 125.1 ±13.1 km

HONSHU, JAPAN (227)

OFUJ 0.36 213 iPd 13 05.90 0.5  
 S 13 17.40

AOMJ 1.67 315 P 13 17.30 -0.3  
 S 13 38.50  
 YAMJ 1.90 231 eP 13 20.10 -0.3  
 S 13 43.20  
 MRRJ 3.11 348 P 13 35.50 -0.4  
 S 14 10.40  
 NIJJ 3.13 228 P 13 36.30 0.0  
 HOOJ 3.18 19 eP 13 37.70 0.9  
 eS 14 14.40  
 KAKJ 3.46 204 iP+ 13 39.20 -1.4  
 CHJJ 4.05 216 P 13 48.40 -0.3  
 MAT 4.08 227 iPc 13 49.00 0.0  
 0.6s 75.33nm  
 eS 15 00.00

KUSJ 4.27 29 P 13 51.40 -0.1  
 S 14 38.50

MTMJ 4.28 231 iP+ 13 51.80 -0.1

ASAJ 4.77 6 P 13 57.90 -0.4

IIDJ 5.03 221 P 14 03.00 1.1

TSRJ 6.08 233 P 14 17.00 0.7

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

& MAY 15, 1991 08h 36m 53.20s

62.145 N 149.572 W

DEPTH = 58.2km

2.8mb (1 obs.)

CENTRAL ALASKA (1)

<AEIC>. Felt (III) at Skwentno.

CUT 0.42 309 iPc 37 03.82 -0.4  
 GHO 0.48 140 iPd 37 04.56 -0.5  
 eS 37 13.89  
 PWA 0.52 196 iPd 37 05.08 -0.2  
 PLRM 0.59 159 iPc 37 05.36 -0.8  
 PMR 0.59 159 iPc 37 05.90 -0.2  
 SML 0.68 119 iPc 37 06.51 -0.7  
 HUR 0.84 358 ePc 37 08.49 -0.7  
 eS 37 19.97  
 SUA 0.88 220 iPd 37 09.72 -0.1  
 PMS 0.90 180 iPc 37 09.59 -0.5  
 KNK 0.91 144 iPc 37 09.52 -0.6  
 eS 37 23.12  
 SKT 0.94 261 iPc 37 09.77 -0.7  
 eS 37 23.53  
 SCM 1.10 105 iPc 37 11.84 -1.0  
 eS 37 27.87  
 RND 1.31 14 iPd 37 14.68 -0.9  
 TRF 1.35 346 iPc 37 15.49 -0.8  
 NCG 1.44 240 ePd 37 16.58 -0.8  
 CRP 1.51 236 eP 37 18.00 -0.5  
 SPU 1.53 232 iPd 37 18.07 -0.6  
 TOA 1.60 90 iPc 37 19.80 0.2  
 BGL 1.61 238 eP 37 19.42 -0.4  
 NKA 1.62 210 eP 37 20.92 1.1  
 MCK 1.62 10 eP 37 19.22 -0.7  
 CKL 1.63 235 ePd 37 19.46 -0.6  
 SLKM 1.67 191 ePc 37 19.51 -1.1  
 GLI 1.74 136 iPc 37 20.30 -1.2  
 VZW 1.81 126 iPc 37 20.98 -1.5  
 VLZ 1.85 122 iPc 37 21.24 -1.8  
 KLU 1.85 109 iPc 37 21.74 -1.4  
 SDG 1.92 77 eP 37 23.10 -0.9  
 TZL 1.95 91 ePc 37 23.98 -0.5  
 KNIM 2.01 153 ePc 37 22.91 -2.4  
 BWN 2.04 1 eP 37 24.68 -1.0  
 SEW 2.05 178 eP 37 25.81 0.0  
 PAX 2.07 65 ePc 37 25.30 -1.0  
 eS 37 51.17  
 RDT 2.09 222 ePd 37 25.39 -1.0  
 THY 2.17 52 eP 37 27.75 0.2  
 >NNL 2.27 202 eP 37 29.33 0.4  
 RSO 2.28 224 ePc 37 28.32 -1.0  
 RS2 2.28 224 ePd 37 28.49 -0.8  
 HIN 2.30 138 ePc 37 27.52 -1.8  
 RED 2.32 223 eP 37 28.54 -1.2  
 MTU 2.36 156 eP 37 28.09 -2.1  
 DDM 2.36 44 eP 37 30.98 0.6  
 WRH 2.43 15 eP 37 29.81 -1.4  
 CVA 2.44 129 ePc 37 29.63 -1.7  
 NEA 2.45 5 ePc 37 29.77 -1.7  
 BRLL 2.47 196 eP 37 30.50 -1.3  
 HDA 2.56 26 eP 37 31.33 -1.7  
 CCB 2.63 17 ePd 37 32.19 -1.9  
 SGAM 2.67 126 ePc 37 32.45 -2.2  
 CNPM 2.75 198 eP 37 35.14 -0.7  
 GLB 2.83 102 ePc 37 34.85 -2.0  
 FBA 2.88 15 iPd 37 36.20 -1.4

MDM 2.89 11 ePd 37 35.61 -2.2  
 DOT 2.94 57 eP 37 38.17 -0.3  
 RAGM 2.95 125 eP 37 36.82 -1.8  
 GLM 3.02 18 ePd 37 37.53 -2.1  
 SVW 3.07 253 iPd 37 38.70 -1.7  
 TTA 3.09 288 iPd 37 39.20 -1.4  
 HMT 3.14 123 eP 37 39.10 -2.3  
 TMW 3.25 66 eP 37 40.80 -2.1  
 PDB 3.27 226 ePd 37 40.96 -2.1  
 AUE 3.36 215 eP 37 42.99 -1.4  
 CROM 3.39 111 eP 37 42.83 -2.1  
 AUI 3.40 216 eP 37 44.24 -0.6  
 TGL 3.52 110 eP 37 43.93 -2.9  
 BALM 3.63 105 iPc 37 45.44 -2.8  
 WAX 3.66 115 eP 37 45.88 -2.8  
 MCNL 3.78 220 ePd 37 49.43 -0.9  
 CDD 3.80 214 eP 37 48.98 -1.6  
 SYI 3.81 203 ePd 37 49.02 -1.7  
 CTGM 4.12 103 eP 37 52.77 -2.4  
 WRG 4.23 117 eP 37 54.55 -2.0  
 IMA 4.33 337 ePc 37 56.40 -1.7  
 ANM 7.50 296 iPd 38 40.90 -1.5  
 INK 9.12 40 P 39 03.00 -1.5

0.3s 1.00nm 4.3mb X

YKA 16.13 73 eP 40 36.20 -1.0

0.7s 0.50nm 2.8mb

76 obs. associated

? MAY 15, 1991 09h 06m 52.48±5.54s

23.193 S ±26.3km 114.323 E ±51.3km

DEPTH = 10.0km (geophysicist)

4.1mb (1 obs.)

WESTERN AUSTRALIA (590)

NANU 1.28 61 eP 07 18.00 1.8  
 eS 07 45.00  
 MBL 5.49 69 eP 08 14.10 -2.3  
 eS 09 20.00  
 BAL 7.68 164 eP 08 47.50 0.4  
 eS 10 21.00  
 KLB 8.91 161 eP 09 04.00 -0.1  
 eS 10 46.00  
 WARB 11.59 107 eP 09 41.20 0.2  
 eS 11 56.00  
 FORR 14.44 125 eP 10 19.00 0.0  
 eS 13 02.00  
 WB2 18.91 84 iPd 11 15.60 0.0  
 0.6s 7.10nm 4.1mb  
 S.D. = 1.5 on 7 of 7 obs.

\* MAY 15, 1991 10h 36m 45.34±1.25s  
 29.804 S ±11.4km 70.849 W ±15.4km  
 DEPTH = 116.8 ±30.1 km

CENTRAL CHILE (136)

RTRS 1.26 107 iPd 37 09.00 -1.1  
 ZON 2.55 133 eP 37 28.00 1.7  
 RTLL 2.55 127 iPc 37 26.50 0.1  
 CFA 2.88 129 iPc 37 31.00 0.4  
 eS 38 06.00  
 JACH 2.88 176 eP 37 31.00 0.3  
 MDZ 3.51 151 iP 37 40.90 1.7  
 iS 38 09.60  
 LCCH 3.71 189 iP 37 41.50 -0.3  
 TACH 3.84 181 eP 37 43.00 -0.6  
 iS 38 28.20  
 LNV 4.17 186 eP 37 47.00 -1.0  
 RFA 5.35 158 eP 38 03.80 -0.4  
 TCA 5.61 107 ePc 38 05.80 -2.0  
 (S) 39 06.00  
 LPB 13.45 11 (P) 40 11.00 18.0X  
 ZOBO 13.70 11 P 39 57.00 0.5  
 S.D. = 1.3 on 12 of 13 obs.

MAY 15, 1991 10h 46m 43.58±0.44s

31.847 S ±7.5km 70.085 W ±8.1km

DEPTH = 131.4 ±8.7 km

4.5mb (3 obs.)

CHILE-ARGENTINA BORDER REGION (127)

JACH 0.94 207 iPd 47 06.70 0.3  
 iS 47 23.50  
 ZON 1.24 76 iPc 47 09.50 0.2  
 MDZ 1.47 135 iP 47 13.50 1.6  
 iS 47 30.90  
 RTLL 1.47 70 iPc 47 11.70 -0.2  
 CFA 1.59 82 iPd 47 13.20 0.0



SAN	1.67	197	iPd	47 33.70	0.4
			iS	47 14.60	
			iS	47 38.30	
RTRS	1.76	18	iPd	47 16.00	0.9
IHA	1.76	228	iPc	47 14.40	-0.8
			iS	47 37.60	
TACH	1.94	202	iPd	47 17.10	-0.2
			iS	47 42.60	
LCCH	2.05	217	iPd	47 18.00	-0.7
			iS	47 43.00	
LNv	2.38	208	iPd	47 22.00	-0.8
			iS	47 50.00	
RFA	3.22	155	ePc	47 34.20	0.4
			(S)	47 45.30	
TCA	4.72	85	iPc	47 52.50	-1.4
			(S)	48 37.20	
CCH	14.84	15	(P)	50 12.00	3.7X
LPB	15.35	7	P	50 15.00	0.2
	1.0s	56.00nm		4.8mb	
ZOBO	15.61	7	Pd	50 18.20	0.0
	1.0s	23.75nm		4.4mb	
SIV	17.79	30	P	50 42.80	-1.7
RSCP	68.65	346	eP	57 34.00	-0.4
ANMO	74.72	330	eP	58 12.70	2.0
	0.7s	5.14nm		4.4mb	
	S.D. = 1.0	on 18 of 19 obs.			

? MAY 15, 1991 11h 40m 31.89± 9.51s  
42.809 N ±45.0km 128.262 W ±61.5km  
DEPTH = 10.0km (geophysicist)  
OFF COAST OF OREGON (30)

HBO	4.46	75	P	41 42.00	0.8
NLO	4.76	45	P	41 45.40	0.0
GT2	4.92	59	P	41 48.17	0.5
PGO	4.95	56	P	41 48.47	0.4
BMW	5.13	43	P	41 50.17	-0.5
RVW	5.17	48	P	41 50.97	-0.2
VLMM	5.24	57	P	41 51.53	-0.7
LVP	5.31	50	P	41 53.15	-0.1
VBEM	5.32	63	P	41 53.54	0.1
MTMW	5.40	51	P	41 54.19	-0.3
FL2	5.42	49	P	41 54.93	0.1
VLL	5.43	58	P	41 55.45	0.5
SHW	5.48	50	P	41 56.21	0.6
CZM	5.48	47	P	41 55.63	0.1
ERK	5.49	48	P	41 55.59	-0.2
HSR	5.50	50	P	41 56.23	0.3
JKL	5.50	51	P	41 55.76	-0.1
VFP	5.50	61	P	41 56.53	0.5
STD	5.51	49	P	41 56.11	0.0
CPW	5.53	39	P	41 55.94	-0.4
CDFW	5.54	51	P	41 56.28	-0.2
SOSW	5.56	50	P	41 57.19	0.4
TDL	5.58	49	P	41 57.00	-0.1
KOSW	5.67	48	P	41 58.36	0.2
CROR	5.69	65	P	41 57.79	-0.8
GULW	5.70	55	P	41 59.02	0.2
LMW	5.74	46	P	41 59.25	-0.1
VIPM	5.80	70	P	41 59.73	-0.5
ASR	5.82	53	P	42 00.53	0.1
LON	6.05	47	P	42 03.85	0.3
RVC	6.09	45	P	42 04.48	0.4
WPW	6.16	49	P	42 05.16	-0.1
GL2	6.19	57	P	42 05.18	-0.4
FMW	6.24	46	Pd	42 06.40	0.0
GSM	6.35	44	P	42 08.36	0.5
JBO	6.62	63	P	42 10.86	-0.8
HTW	6.77	40	P	42 13.59	-0.2
MXC	6.81	54	P	42 13.87	-0.5
JCW	6.98	37	P	42 16.93	0.2
RPW	7.36	38	P	42 21.88	-0.1
	S.D. = 0.4	on 40 of 40 obs.			

% MAY 15, 1991 11h 47m 19.19± 1.41s  
38.318 N ±13.3km 25.066 E ±13.1km  
DEPTH = 10.0km (geophysicist)  
AEGEAN SEA (365)  
ML 3.2 (ATH).

ATH	1.12	252	ePn	47 40.00	-0.1
			eSn	47 55.50	
PRK	1.32	45	ePb	47 45.00	1.4
VLI	2.33	227	ePn	47 58.00	-0.1
LIT	2.68	312	eP	48 03.20	0.1
ALN	2.68	16	eP	48 01.00	-2.2
RDO	2.85	7	ePn	48 05.00	-0.5

DST	3.06	64	ePn	48 16.00	7.5X
KNT	3.30	330	eP	48 13.30	1.4
	S.D. = 1.5	on 7 of 8 obs.			

MAY 15, 1991 12h 09m 57.10± 0.95s  
40.859 N ±10.1km 21.764 E ± 7.1km  
DEPTH = 10.0km (geophysicist)  
GREECE (364)  
ML 2.1 (THE). 1.5 (SKO).

FNA	0.30	256	iPgc	10 03.26	-0.2
			eSg	10 08.76	
GRG	0.49	78	ePgd	10 08.56	1.5
			eSg	10 17.60	
VAY	0.76	53	iPg	10 16.30	4.3X
			iSg	10 21.70	
KNT	0.91	70	ePg	10 13.92	-0.6
LIT	0.94	144	ePg	10 15.60	0.6
			eSg	10 29.52	
SKO	1.14	348	eP	10 19.00	0.6
SRS	1.41	79	ePb	10 20.92	-1.9
			eSb	10 41.40	
	S.D. = 1.5	on 6 of 7 obs.			

? MAY 15, 1991 12h 50m 06.85± 5.57s  
32.984 S ±15.5km 72.298 W ±39.5km  
DEPTH = 10.0km (geophysicist)  
OFF COAST OF CENTRAL CHILE (134)

IHA	0.55	94	iPc	50 18.30	0.2
			iS	50 25.10	
LCCH	0.78	129	iPd	50 22.50	0.4
			iS	50 32.10	
ROCH	1.08	90	iPd	50 26.70	-0.7
			iS	50 40.10	
LNv	1.22	143	iPc	50 29.10	-0.4
			iS	50 44.50	
TACH	1.32	121	iPd	50 31.00	-0.3
			iS	50 47.00	
SAN	1.45	109	iPd	50 33.50	0.4
			iS	50 52.00	
JACH	1.47	79	iPd	50 33.50	0.1
			iS	50 52.00	
PCH	1.62	114	iPc	50 36.00	0.3
			iS	50 56.90	
	S.D. = 0.5	on 8 of 8 obs.			

? MAY 15, 1991 13h 34m 38.55± 1.20s  
40.937 N ± 9.3km 29.397 E ± 9.2km  
DEPTH = 5.0km (geophysicist)  
TURKEY (366)  
MD 2.4 (ISK).

GBZT	0.15	166	ePg	34 41.20	-0.5
			iSg	34 42.00	
HRT	0.24	119	iPg	34 43.50	0.1
			iSg	34 47.00	
ISK	0.29	297	ePg	34 44.30	0.0
YLV	0.37	183	iPg	34 46.30	0.3
IZI	0.60	174	ePg	34 50.80	0.2
	S.D. = 0.5	on 5 of 5 obs.			

& MAY 15, 1991 14h 07m 55.39s  
58.184 N 142.730 W  
DEPTH = 10.0km (geophysicist)  
GULF OF ALASKA (15)  
<AEIC>. ML 2.7 (AEIC).

WRG	1.89	11	eP	08 23.40	-4.7
YKU	2.08	47	eP	08 26.18	-4.5
WAX	2.27	358	iP	08 28.40	-5.2
PNL	2.28	48	iP	08 28.52	-5.2
PNL	2.28	48	iP	08 28.57	-5.1
HMT	2.30	341	eP	08 28.76	-5.2
HON	2.37	56	eP	08 29.66	-5.3
			S	08 55.51	
BCPM	2.39	41	eP	08 30.01	-5.2
RAGM	2.42	337	eP	08 30.36	-5.4
TGL	2.58	359	iP	08 32.72	-5.3
CROM	2.59	356	iP	08 32.73	-5.5
SGAM	2.65	332	eP	08 33.95	-4.9
			eS	09 04.33	
CVA	2.83	328	eP	08 35.30	-6.1
			S	09 08.19	
BALM	2.87	4	iP	08 36.91	-5.2
CTGM	2.88	14	iP	08 37.12	-5.2
HIN	2.94	321	eP	08 37.85	-5.2

MTU	3.12	308	eP	08 39.32	-6.2
GLB	3.31	351	iP	08 42.69	-5.7
KNIM	3.36	312	iP	08 42.92	-6.1
VLZ	3.48	330	eP	08 44.67	-5.9
VZW	3.48	328	eP	08 44.66	-6.0
GLI	3.50	322	iP	08 44.67	-6.3
KLU	3.69	335	eP	08 47.80	-5.9
SEW	3.96	302	eP	08 52.87	-4.5
TOA	4.29	338	eP	08 57.05	-5.2
KNK	4.34	321	iP	08 57.55	-5.4
SML	4.60	325	eP	09 00.41	-6.1
	27 obs.	associated			

MAY 15, 1991 14h 28m 50.12± 0.23s  
42.565 N ± 5.2km 43.349 E ± 2.6km  
DEPTH = 14.0km (6 depth phases)  
4.9mb (50 obs.)  
WESTERN CAUCASUS (362)

A mudslide destroyed all 45 houses in the Khekheti area, causing casualties. Felt (V) in the Dzhoval area.

TAB	5.04	152	eP	30 13.00	5.9X
			i	30 21.00	
KVT	5.65	257	ePn	30 14.50	-1.3
KAS	7.24	264	iPd	30 37.10	-1.0
KER	8.71	159	e(P)	31 17.00	18.3X
EYL	10.09	263	eP	31 21.30	3.7X
HRT	10.38	265	eP	31 19.80	-1.8
BHL	10.55	217	P	31 24.00	0.1
			S	34 26.00	
HRI	11.05	215	eP	31 33.00	2.2
PSN	11.14	281	iPd	31 28.00	-4.0X
CFR	11.28	289	ePc	31 30.00	-3.8X
TLB	11.30	286	ePc	31 30.00	-4.0X
KHL	11.35	253	eP	31 33.00	-1.9
DST	11.50	260	eP	31 38.00	1.2
GLH	11.57	214	eP	31 40.00	2.3
JMB	12.38	275	iPc	31 45.00	-3.6X
VRI	12.38	291	ePc	31 48.00	-0.6
ISR	12.40	288	eP	31 46.50	-2.5
CVO	12.75	291	eP	31 52.00	-1.6
MLR	12.86	289	eP	31 52.50	-2.8
PVL	13.23	279	iPd	31 56.00	-4.0X
OBN	13.30	343	iPc	32 03.50	2.7X
	1.0s	*****nm		8.5mb X	
			iPP	32 15.00	
			eS	34 30.00	
			eSS	34 42.00	

KDZ	13.35	272	eP	32 00.00	-1.6
CMP	13.47	288	ePc	32 02.00	-1.3
MAIO	13.95	111	eP	32 07.00	-2.6
			eS	35 28.00	
PGB	14.14	276	eP	32 10.00	-2.1
MBH	14.47	211	eP	32 16.50	0.0
MMB	14.61	273	eP	32 20.00	1.9
SRS	14.80	271	eP	32 26.12	5.5X
VTS	14.84	277	iP	32 21.00	-0.3
BMR	14.90	297	ePd	32 30.00	8.1X
KKB	15.04	274	eP	32 22.00	-1.7
KNT	15.30	272	iPd	32 33.80	6.6X
VAY	15.51	272	eP	32 36.00	6.1X
GRG	15.71	271	eP	32 37.92	5.4X
LIT	15.86	268	eP	32 38.80	4.4X
SKO	16.23	275	ePd	32 40.80	1.7
AGG	16.30	265	eP	32 43.72	3.6X
FNA	16.51	271	eP	32 46.92	4.2X
BEO	16.70	286	iP	32 48.40	3.3X
OHR	16.86	273	eP	32 49.50	2.3
	1.3s	97.00nm			4.8mb
PHP	17.01	275	iPd	32 53.00	4.0X
PSZ	17.34	296	iP	32 53.00	-0.1
SPC	17.36	300	eP	32 51.90	-1.6
			i	32 54.40	
TIR	17.50	274	eP	32 59.20	4.1X
LACI	17.56	275	eP	32 58.00	2.2
IGT	17.61	268	eP	32 57.76	1.2
KRA	17.77	303	eP	32 57.10	-1.4
SRO	18.37	295	i(P)	33 07.50	1.6
			i	47 22.90	
ZST	19.23	296	eP	33 16.80	0.5
HVAR	19.70	281	iP	33 20.40	-1.4
VKA	19.76	296	eP	33 27.00	4.7X
PTJ	19.87	289	iPc	33 23.00	-0.7
KSP	20.23	303	eP	33 26.70	-0.6



	1.2s	43.00nm		4.7mb		0.7s	11.00nm		4.6mb	YAK	51.95	37 iPc	37 58.70	-1.5
		e	39 55.00			Z 21s	0.08um		3.2Msz	CHG	52.31	99 eP	38 02.50	-1.0
ORI	20.33	272 P	33 29.00	0.5	BNI	26.44	288 P	34 29.00	0.7	BJI	53.18	66 eP	38 10.00	0.3
VBY	20.37	288 eP	33 29.00	0.2	SOD	26.46	346 eP	34 28.00	0.0	BDT	53.35	100 eP	38 09.50	-1.7
GAR	20.70	91 iP	33 33.00	0.6	MEM	26.66	301 iPc	34 31.90	1.9	GYA	53.41	86 P	38 11.20	-0.5
		iS	37 23.00		FRF	26.70	285 eP	34 30.90	0.4	LKO	53.87	247 P	38 11.48	-3.5X
LJU	20.86	289 eP	33 34.00	0.1		0.8s	21.50nm		4.9mb	TIC	55.60	244 P	38 25.24	-2.4
CEY	20.94	289 eP	33 36.50	1.7	NB2	26.72	325 P	34 29.80	-0.7		1.2s	20.50nm		5.0mb
PRU	21.16	300 P	33 36.50	-0.4		0.7s	11.40nm		4.7mb	KIC	55.62	244 P	38 25.26	-2.6
Z	18s	0.40um		3.8Msz	ENN	26.72	301 eP	34 35.00	4.4X		1.3s	29.00nm		5.2mb
		e	34 11.50			0.9s	17.00nm		4.7mb	TIA	55.71	70 eP	38 27.10	-1.2
		e	35 29.60		LRG	26.92	285 eP	34 33.10	0.6	LIC	55.91	244 P	38 27.36	-2.6
NUR	21.26	334 iP	33 37.40	-0.4		0.8s	26.85nm		5.0mb		1.2s	25.50nm		5.1mb
	1.0s	38.00nm		4.7mb	DOU	27.55	299 Pd	34 39.90	1.8	WHN	56.75	77 eP	38 36.00	0.2
		i	33 44.90	27kmX	LBF	28.09	293 eP	34 42.20	-0.9	NJ2	59.14	73 Pd	38 52.50	0.0
VOY	21.31	289 eP	33 38.60	0.1		0.9s	13.10nm		4.7mb	FRB	61.24	332 eP	39 06.00	-0.5
DUI	21.41	277 P	33 40.10	0.5	LOR	28.14	293 eP	34 42.50	-1.1	SSE	61.32	73 eP	39 07.50	0.0
KHC	21.66	298 iP	33 42.80	0.8		1.1s	12.20nm		4.6mb			pP	39 11.00	11km
	1.0s	12.30nm		4.3mb	Z 21s	0.08um		34 43.70	-0.5	IPM	63.43	110 ePd	39 23.00	1.3
		e	33 47.60	17km		28.21	292 iPc	34 43.70	-0.5	BUL	63.86	195 iPd	39 23.20	-1.3
KBA	21.68	292 eP	33 41.00	-1.4		1.1s	24.40nm		4.9mb		1.0s	10.00nm		4.9mb
SDI	21.87	278 P	33 46.00	1.8	SSF	28.40	293 eP	34 45.00	-0.9	SCH	66.27	324 eP	39 39.00	-0.6
KAF	22.04	338 iP	33 46.60	1.0		0.9s	13.90nm		4.7mb	MAT	69.57	59 eP	40 00.00	-0.5
	0.8s	52.90nm		5.0mb	AVF	28.53	292 iPc	34 46.70	-0.4	FBA	72.52	5 P	40 18.70	0.9
		esP	33 49.90			0.9s	37.65nm		5.2mb	YKA	73.80	350 eP	40 24.50	-0.8
AQU	22.05	280 P	33 47.00	1.1	MAF	29.14	291 iPc	34 52.60	0.0		0.6s	4.40nm		4.7mb
FVI	22.07	291 P	33 47.10	1.1		1.0s	20.00nm		4.9mb	FFC	78.67	340 iPc	40 53.10	0.3
AZI	22.09	279 P	33 48.50	2.2	TCF	29.38	292 iPc	34 54.80	0.1		0.8s	15.00nm		5.1mb
WET	22.12	298 iPc	33 51.40	4.8X		1.1s	23.20nm		4.9mb	SES	84.75	344 ePc	41 23.90	-0.9
ARV	22.19	283 P	33 47.00	-0.3	CAF	29.69	289 eP	34 57.70	0.1	PNT	87.29	349 eP	41 40.00	2.7X
CLL	22.36	304 iPc	33 49.70	0.8		0.7s	8.80nm		4.7mb		0.7s	6.00nm		5.0mb
	1.3s	50.00nm		4.8mb	LSF	29.85	292 eP	34 58.60	-0.3	LRM	89.40	343 eP	41 48.50	0.7
RSM	22.49	284 P	33 52.30	2.1		0.8s	17.45nm		4.9mb		S.D. = 1.2 on 151 of 181 obs.			
MNS	22.57	280 P	33 53.00	1.9	RJF	30.01	290 eP	35 00.60	0.3		-----			
RMP	22.66	279 P	33 55.50	3.5X		1.1s	24.40nm		4.9mb		MAY 15, 1991 14h 34m 25.05± 0.24s			
RDP	22.67	278 P	33 55.00	2.9X	Z 19s	0.08um		35 05.60	-0.1		9.353 N ± 4.7km 82.176 W ± 4.2km			
CTI	22.87	290 P	33 55.10	1.0	LFF	30.61	289 eP	35 05.60	-0.1		DEPTH = 32.9km ( 17 depth phases)			
CRE	22.89	283 P	33 56.50	2.2	LDF	30.69	297 eP	35 05.70	-0.6		5.2mb ( 54 obs.) 4.5Msz ( 4 obs.)			
SFI	22.92	284 P	33 57.00	2.6	MFF	30.95	293 eP	35 07.70	-0.9		PANAMA-COSTA RICA BORDER REGION ( 80)			
GRF	23.25	299 iPc	33 59.70	2.0		1.0s	16.00nm		4.8mb		MD 5.2 (UPA), 4.9 (SJR). Felt			
	1.3s	33.00nm		4.7mb	GRR	31.20	296 eP	35 10.10	-0.6		(V) at Boquete, Changuinolo and			
FIR	23.36	284 eP	34 01.00	2.2		1.0s	22.00nm		5.0mb		Chiriqui Grande; (III) at David			
UPP	23.40	327 iP	34 00.70	1.7	LPF	31.36	296 eP	35 11.60	-0.6		Panama. Also felt in the Limon			
	1.0s	100.00nm		5.3mb		1.0s	24.00nm		5.0mb		area, Costa Rica.			
SAL	23.68	289 P	34 05.20	3.4X	WMO	32.07	72 P	35 19.20	0.6					
MME	23.71	285 P	34 05.50	3.1X		1.2s	20.00nm		4.9mb	DVD	0.95	197 iP	34 43.80	1.7
BDI	23.80	285 P	34 05.00	1.9	Z 16s	0.60um		35 22.00	0.1			S	34 52.80	
OSS	23.88	291 ePc	34 04.80	0.8	N 12s	0.50um		35 55.72	0.2	ECO	2.45	90 iPc	35 03.60	0.0
VDL	24.36	291 ePc	34 09.50	0.8	E 12s	0.50um		35 55.72	0.2			S	35 30.00	
LLS	24.66	292 ePc	34 11.70	0.1	EKA	32.47	309 P	35 55.72	0.2	UPA	2.63	98 iPc	35 06.10	-0.1
SLE	24.98	294 ePc	34 14.30	-0.2		0.8s	7.40nm		4.7mb			S	35 34.30	
ZLA	25.06	293 ePc	34 14.80	-0.4	TOL	35.39	282 eP	35 47.00	-0.2	SDV	11.41	91 eP	37 07.00	-2.0
PCP	25.19	286 P	34 16.67	0.1	GKN	36.33	100 P	35 55.72	0.2	TOV	12.22	87 eP	37 17.20	-2.7
HFS	25.20	324 eP	34 17.20	0.8		1.0s	54.00nm		5.4mb	NNA	21.85	166 iP	39 18.50	1.6
	0.7s	128.50nm		5.7mb	DMN	36.89	100 P	36 00.96	0.6		1.0s	15.00nm		4.4mb
Z	16s	0.18um		3.7MszX		1.0s	49.00nm		5.3mb	SGS	23.77	3 P	39 37.00	1.5
		e	34 20.40	11km	KKN	36.92	100 P	36 00.74	0.2	PRM	24.61	360 P	39 45.00	1.3
		e	34 24.20			0.7s	21.00nm		5.1mb	JSC	24.82	2 P	39 47.00	1.3
		e	34 46.00		PKI	37.14	100 P	36 02.80	0.3	LHS	25.04	3 P	39 48.60	0.9
		LR	43 26.00			1.0s	41.00nm		5.2mb	TKL	26.22	357 P	39 59.00	0.2
PGF	25.20	282 eP	34 18.70	2.0	GUN	37.29	99 P	36 03.62	-0.1	GBTN	26.26	356 P	39 59.20	0.1
	0.8s	25.50nm		4.9mb		1.1s	54.00nm		5.2mb	RSCP	26.31	354 P	39 59.50	-0.1
FEL	25.30	294 eP	34 16.96	-0.7	HYB	39.03	119 eP	36 18.30	0.2	ARE	27.74	158 eP	40 16.00	2.8X
CKI	25.39	286 P	34 19.50	1.1	GBA	41.20	124 Pd	36 36.00	0.1	BLA	27.78	3 P	40 14.00	1.0
MMK	25.43	290 ePc	34 18.60	-0.4		0.7s	7.00nm		4.5mb	CVL	28.70	6 P	40 22.00	0.7
ORX	25.46	289 P	34 17.39	-1.7	GTA	42.07	75 eP	36 44.00	1.0	ZOBO	29.01	151 P	40 26.00	1.1
FIN	25.48	286 P	34 18.52	-0.7		1.4s	10.00nm		4.4mb		1.1s	8.70nm		4.4mb
ROB	25.70	286 P	34 22.00	0.6	Z 16s	0.40um		36 47.60	12km		Z 20s	0.47um		4.1Msz
CDF	25.79	296 P	34 21.40	-0.7	E 12s	0.40um		36 52.80		LPB	29.25	151 (P)	40 18.00	-8.9X
DIX	25.81	290 ePc	34 22.30	-0.3		pP		36 47.50	0.3	MEQ	29.44	332 iPd	40 26.50	-1.5
RSP	26.02	288 P	34 22.11	-2.2		sP		36 47.50	0.3	CCH	30.93	149 (P)	40 41.50	-0.2
ENR	26.03	286 P	34 24.36	-0.1	DAG	42.66	343 iPd	36 47.50	0.3	SIV	32.72	140 P	40 56.40	-0.7
LSD	26.05	289 P	34 24.77	0.0		0.9s	10.92nm		4.6mb	ALO	33.79	323 ePc	41 05.90	-0.5
BHB	26.06	287 P	34 23.13	-1.4	LZH	46.38	77 eP	37 17.50	-0.3		1.0s	13.25nm		4.8mb
SBF	26.08	285 eP	34 25.60	0.7		1.5s	42.00nm		5.2mb			e	41 15.00	31km
STV	26.10	286 P	34 24.57	-0.5	Z 18s	0.29um		37 21.50	13km	ANMO	33.79	323 P	41 06.00	-0.4
BSF	26.12	294 eP	34 24.40	-0.9		pP		37 36.50	0.4		1.1s	67.25nm		5.5mb
EMS	26.14	290 ePc	34 25.20	-0.4	BTO	48.73	68 eP	37 36.50	0.4	RSNY	35.68	9 P	41 22.00	-0.3
PZZ	26.22	287 P	34 23.85	-2.4	CD2	48.85	83 P	37 37.60	0.5		0.8s	26.71nm		5.2mb
WTS	26.27	304 eP	34 31.50	5.1X	HHC	49.68	68 eP	37 44.60	1.2	GOL	36.62	329 P	41 30.00	-0.6
	0.9s	19.00nm		4.8mb		Z 14s	0.60um		4.7MszX		0.9s	30.49nm		5.2mb
LPG	26.33	289 iPc	34 27.50	0.1	XAN	51.01	77 P	37 54.00	0.5			pP	41 40.00	34km
	0.8s	22.15nm		4.9mb	KMI	51.28	90 eP	37 55.50	-0.4	GLA	38.23	313 P	41 44.90	1.0
LPL	26.34	289 iPc	34 27.60	0.2		2.5s	100.00nm		5.3mb	CBM	39.32	15 P	41 54.20	1.5
	1.0s	46.00nm		5.1mb			pP	38 01.00	18km	MSU	39.59	322 P	41 55.60	0.2
RRL	26.38	288 P	34 28.36	0.5	TIY	51.71	71 eP	37 59.70	0.9					
HAU	26.42	295 eP	34 27.40	-0.5	Z 16s	0.48um			4.6MszX					



FLM	39.86	312	eP	42 00.00	2.3			1.3s	34.30nm	5.2mb	GYA	143.38	347	PKP	53 55.00	-3.7X
GSC	40.79	315	eP	42 06.00	0.9	AVF	80.20	44 iPc	46 33.60	-0.2	KMI	145.40	352	PKPd	54 01.00	-1.3
			e	42 16.00	34km		1.1s	17.10nm	5.0mb		-			sPKP	54 11.00	
CLC	41.61	315	eP	42 12.00	0.2	SSF	80.29	44 iPc	46 34.00	-0.3				ePKP	54 16.50	
			e	42 22.00	34km		1.1s	17.10nm	5.0mb		HYB	147.29	36	ePKP	54 06.20	0.9
TNP	42.54	318	P	42 20.00	0.4	LOR	80.52	44 iPc	46 35.20	-0.3				e	54 16.00	
	1.0s	39.17nm			5.1mb		1.1s	23.20nm	5.1mb		GBA	149.51	42	PKPc	54 08.10	-0.7
		pP	42 30.00	34km		Z	20s	0.32um	4.7MsZ			0.6s	5.30nm			
PPD	43.46	136	(P)	42 25.00	-2.1	SMF	80.55	44 iPc	46 35.40	-0.3	CHG	151.99	358	ePKP	54 12.00	-0.5
FRI	43.67	315	eP	42 28.00	-0.5		0.8s	8.05nm	4.8mb					e	59 53.50	
		e	42 37.80	33km		LBF	80.62	44 iPc	46 35.60	-0.5		S.D. = 0.9 on 114 of 129 obs.				
PR1	43.94	313	e(P)	42 30.70	-0.2		0.9s	6.55nm	4.6mb			* MAY 15, 1991 14h 49m 17.06± 0.55s				
		e	42 40.50	33km		DOU	80.83	41 P	46 37.40	0.3		61.123 N ±11.5km	166.957 E ± 8.9km			
LRM	44.65	330	ePc	42 36.70	0.0	ENN	81.63	40 eP	46 41.50	0.3		DEPTH = 33.0km (normal)				
CMB	44.65	316	ePc	42 36.00	-0.6		0.8s	17.00nm	5.1mb			4.3mb ( 12 obs.)				
		e	42 46.20	35km		MEM	81.70	40 P	46 41.70	0.2		EASTERN SIBERIA (671)				
ORV	46.16	317	ePc	42 48.90	0.4	WTS	82.09	39 eP	46 44.00	0.5						
		e	42 58.60	32km			0.8s	31.00nm	5.4mb		SMY	9.27	152	P	51 34.00	2.7
SCH	46.97	12	ePc	42 54.30	-0.3	HAU	82.14	43 eP	46 44.30	0.3	YAK	17.60	289	eP	53 25.50	4.5X
	0.9s	37.00nm			5.4mb		1.1s	19.55nm	5.1mb		IMA	17.95	57	P	53 26.00	0.5
LBFM	47.33	319	P	42 56.30	-1.6	Z	20s	0.30um	4.7MsZ			1.0s	8.75nm			3.8mb
		pP	43 07.20	38km		BSF	82.46	43 eP	46 45.60	-0.2	PDB	19.02	77	P	53 38.00	-0.4
SES	47.37	335	eP	42 56.00	-1.9		1.1s	19.55nm	5.1mb		FBA	20.52	60	P	53 54.00	-0.7
		pP	43 06.00	33km		LPL	82.64	45 iPc	46 47.90	1.0		0.8s	8.62nm			4.2mb
FFC	47.92	345	iPc	43 00.90	-1.2		0.9s	7.35nm	4.8mb		KLU	22.25	68	P	54 11.60	-0.6
	0.7s	8.00nm			4.9mb	LPG	82.66	45 iPc	46 48.20	1.1	INK	25.43	48	eP	54 44.00	1.3
PDCR	47.98	116	eP	43 01.70	-1.4		1.1s	7.35nm	4.7mb		YKA	34.97	53	eP	56 06.60	-0.9
LON	50.22	325	P	43 18.90	-1.1	CDF	82.72	42 eP	46 47.10	0.0		0.7s	1.10nm			3.9mb
PNT	50.59	329	iPd	43 22.60	-0.1		1.1s	14.65nm	5.0mb		BJI	37.26	259	eP	56 27.50	0.4
FRB	55.17	7	eP	43 50.00	-6.5X	ABH	82.75	41 eP	46 47.51	0.4	PNT	41.26	72	eP	57 04.00	3.8X
YKA	58.01	343	eP	44 13.50	-3.3X	NB2	83.53	29 P	46 51.30	0.4		0.5s	3.00nm			4.3mb
	1.0s	8.60nm			4.8mb		0.9s	14.50nm	5.1mb		DAG	42.31	2	iPc	57 10.00	1.6
BALM	67.67	333	eP	45 19.90	-1.1	HFS	84.88	30 eP	46 57.20	-0.4		0.9s	4.20nm			4.2mb
INK	67.72	342	eP	45 20.00	-1.1		1.4s	40.50nm	5.4mb		SES	44.36	65	eP	57 24.00	-1.5
KLU	69.44	333	P	45 31.00	-0.9	Z	18s	0.13um	4.4MsZ		FFC	45.02	55	eP	57 30.00	-0.7
TOA	69.76	333	ePc	45 34.40	0.6			e	46 59.20	6kmX		1.3s	19.00nm			4.8mb
PMR	70.94	332	P	45 39.70	-1.2			e	47 03.70		LZH	46.33	267	Pd	57 42.00	0.5
SLKM	71.16	331	eP	45 41.10	-1.2			e	47 06.70			2.0s	36.00nm			5.0mb
		eP	45 51.20	32km		GRF	85.14	41 iPc	47 00.10	0.9	KMI	55.91	260	eP	58 53.50	-0.6
FBA	71.35	336	ePc	45 43.00	-0.4		1.1s	26.00nm	5.3mb		NB2	56.75	346	P	58 59.90	0.4
	0.8s	16.20nm			5.1mb	ADK	85.49	322 eP	47 01.00	0.1		0.7s	3.80nm			4.5mb
RSO	72.37	331	ePc	45 48.60	-1.2		0.9s	40.00nm	5.6mb		HFS	57.32	344	eP	59 02.40	-1.1
PDB	72.94	330	P	45 51.50	-1.3			eP	47 10.30	29km		0.5s	1.20nm			4.2mb
SVW	73.88	331	ePc	45 57.30	-1.0	CLL	86.00	39 iPc	47 03.90	0.5	LOE	62.99	257	eP	59 42.00	-0.7
	0.7s	20.10nm			5.2mb		1.1s	36.00nm	5.5mb		CLL	65.99	342	iPc	00 04.50	2.8
IMA	74.03	336	ePc	45 59.20	-0.1			i	47 14.00	32km		1.4s	14.00nm			4.9mb
	0.8s	10.90nm			4.9mb	WET	86.29	41 iPc	47 06.00	1.0	WB2	84.94	211	eP	01 48.00	-1.6
MAL	74.68	54	iPc	46 05.20	1.8		1.2s	60.00nm	5.7mb			0.8s	2.30nm			4.4mb
TOL	74.97	51	iPd	46 06.50	1.4	BRG	86.66	39 iP	47 07.20	0.5	WRA	84.94	211	P	01 48.00	-1.6
	1.1s	50.63nm			5.4mb		1.3s	34.00nm	5.4mb			1.3s	2.10nm			4.2mb
DAG	75.00	12	iPc	46 00.00	-4.5X			e	47 17.80	33km		S.D. = 1.4 on 19 of 21 obs.				
	1.0s	13.00nm			4.9mb	KHC	86.75	41 iPc	47 08.20	1.0		% MAY 15, 1991 14h 50m 48.59± 1.06s				
LKO	75.38	83	Pc	46 06.74	-1.1		1.0s	10.50nm	5.0mb			37.774 N ±12.4km	14.926 E ± 6.0km			
	0.8s	37.00nm			5.4mb	UPP	86.87	30 iP	47 06.70	-0.8		DEPTH = 10.0km (geophysicist)				
EKA	76.12	35	Pc	46 10.70	-0.5	KBA	86.96	43 e(P)	47 07.00	-1.5	SICILY					(398)
	1.2s	33.90nm			5.2mb	PRU	87.20	40 Pc	47 10.00	0.7	MNO	0.24	311	P	50 54.90	1.1
TIC	76.32	85	Pc	46 13.48	0.3			e	47 20.00	31km				eSg	50 59.40	
	0.9s	26.00nm			5.2mb	VOY	87.53	44 e(P)	47 11.50	0.4	ATN	0.57	48	P	51 00.60	0.4
LIC	76.37	86	Pc	46 13.96	0.5	KEV	87.79	19 iP	47 10.60	-1.2			eSg	51 09.80		
	0.7s	35.00nm			5.5mb	LJU	87.96	44 e(P)	47 16.00	2.9X	GIB	0.74	287	P	51 02.90	-0.3
KIC	76.63	86	Pc	46 15.48	0.5	KSP	88.13	39 ePc	47 14.20	0.4			eSg	51 14.00		
	0.9s	40.50nm			5.4mb	SOD	88.52	21 iP	47 14.20	-1.2	SOI	0.94	71	P	51 06.20	-0.3
LPF	77.19	43	iPc	46 17.60	0.3	ZST	89.22	41 eP	47 19.50	0.4			eSg	51 21.40		
	1.1s	39.05nm			5.4mb			e	00 20.60		FAI	1.11	244	P	51 09.90	0.5
GRR	77.31	42	iPc	46 18.40	0.4	NUR	90.06	28 eP	47 22.00	-0.7	USI	1.66	305	P	51 16.50	-1.4
	1.0s	58.00nm			5.6mb	KAF	90.26	26 eP	47 22.80	-0.8	TDS	2.18	30	P	51 25.50	0.1
FLN	77.56	42	iPc	46 20.00	0.6		0.8s	9.30nm	5.1mb				eSn	51 51.00		
	1.1s	43.95nm			5.4mb	KRA	90.58	39 eP	47 26.10	0.8	S.D. = 0.9 on 7 of 7 obs.					
LDF	77.80	42	iPc	46 21.20	0.5		0.9s	32.00nm	5.6mb			% MAY 15, 1991 15h 23m 42.46± 1.16s				
	0.7s	22.05nm			5.3mb	GKN	128.47	347 ePKP	53 30.40	-0.2		40.824 N ± 9.8km	29.537 E ± 8.8km			
MFF	77.80	44	iPc	46 21.30	0.5	KKN	140.73	19 PKP	53 47.12	-7.0X		DEPTH = 10.0km (geophysicist)				
	0.6s	12.65nm			5.1mb	GUN	141.13	18 PKP	53 47.26	-7.7X	TURKEY					(366)
EPF	78.23	48	iPc	46 24.30	1.0	DNN	141.19	17 PKP	53 47.90	-7.3X		MD 2.5 (ISK).				
	1.3s	43.30nm			5.3mb	PKI	141.25	18 PKP	53 46.10	-9.1X	GBZT	0.08	243	ePg	23 43.40	-1.5
LFF	78.46	46	iPc	46 25.00	0.6	ASPA	141.37	18 PKP	53 46.18	-9.3X			iSg	23 44.50		
	1.4s	61.00nm			5.4mb		1.1s	9.20nm	54 03.00		HRT	0.10	91	iPg	23 45.20	0.0
ANM	78.69	334	eP	46 26.50	1.2			i	54 05.30				eSg	23 48.20		
LPO	78.78	46	iPc	46 26.80	0.6	WB2	143.21	249 iPKPc	53 54.30	-4.2X	YLV	0.29	206	ePg	23 49.30	0.8
	1.2s	29.75nm			5.2mb	WRA	143.22	249 PKP	53 55.00	-3.5X	IZI	0.49	186	iPg	23 52.30	-0.1
LSF	78.97	45	eP	46 27.30	0.1		0.8s	14.70nm			CTT	0.90	291	ePa	24 00.30	0.6
RJF	78.99	46	iPc	46 27.70	0.3			i								
	1.3s	39.70nm			5.3mb											
CAF	79.40	46	eP	46 30.10	0.5											
	1.2s	29.75nm			5.2mb											
TCF	79.44	45	iPc	46 29.90	0.1											
	0.7s	9.35nm			4.9mb											
MAF	79.69	45	eP	46 31.40	0.3											



15d 15h

S.D. = 1.3 on 5 of 5 obs.  
 ? MAY 15, 1991 15h 52m 51.83 ± 0.85s  
 46.935 S ± 16.5km 33.115 E ± 25.2km  
 DEPTH = 10.0km (geophysicist)  
 4.3mb ( 8 obs.)

## PRINCE EDWARD ISLANDS REGION (431)

SLR 21.50 348 iPc 57 43.00 0.0  
 0.9s 16.81nm 4.4mb  
 BUL 26.98 351 eP 58 39.20 3.6X  
 SPA 43.26 180 iPc 00 54.80 0.0  
 1.0s 11.00nm 4.6mb  
 LKO 65.95 318 P 03 40.18 -0.1  
 0.7s 9.50nm 5.1mb  
 GBA 72.15 46 P 04 19.00 0.5  
 0.4s 1.20nm 4.3mb  
 STK 78.58 125 eP 04 57.30 2.2  
 1.6s 2.00nm 3.9mb  
 ASPA 80.03 114 eP 05 02.40 -0.7  
 0.9s 4.20nm 4.4mb  
 WRA 83.02 112 P 05 18.00 -0.8  
 1.3s 2.00nm 4.1mb  
 WB2 83.03 112 eP 05 17.60 -1.2  
 1.3s 2.30nm 4.2mb

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

MAY 15, 1991 16h 02m 43.41 ± 0.54s  
 13.644 N ± 7.8km 91.518 W ± 4.9km  
 DEPTH = 33.0km (normal)  
 4.5mb ( 7 obs.)

## NEAR COAST OF GUATEMALA (71)

PSG2 0.75 66 iPc 02 58.50 1.0  
 TER 1.04 51 iP 03 01.50 -0.3  
 OC2 1.12 325 iPc 02 51.50 -11.3X  
 SOG 1.13 357 iP 03 00.70 -2.6  
 IXG 1.16 63 P 03 03.00 -0.5  
 BVA 1.33 40 iPc 03 06.20 0.2  
 GCG 1.34 45 iPc 03 08.00 1.9  
 S 03 26.00  
 TPX 1.45 330 iP 03 06.29 -1.2  
 S 03 26.00  
 SBG 1.57 341 iPc 03 07.50 -2.1  
 SLP 1.62 47 iPc 03 11.00 0.8  
 S 03 32.50  
 YUP 1.76 71 iPc 03 12.00 -0.2  
 SCX 3.26 341 iP 03 37.50 4.1X  
 S 04 15.10  
 PBJ 4.67 307 iP 03 48.50 -5.0X  
 OXX 6.07 305 iP 04 13.89 0.4  
 S 05 21.00  
 VHO 6.17 306 (P) 04 16.00 1.2  
 PIO 6.95 294 iP 04 23.50 -2.1  
 S 05 39.00  
 LVVM 7.68 323 (P) 04 35.50 -0.3  
 IISM 7.74 314 iP 04 36.00 -0.6  
 S 05 59.00  
 IIT 8.43 310 (P) 04 50.00 3.5X  
 ACX 8.66 293 (P) 04 48.57 -1.0  
 PPM 8.70 309 (P) 04 52.00 1.6  
 S 06 30.00  
 IIA 8.77 310 (P) 04 56.75 5.8X  
 MRX 11.05 304 (P) 05 23.51 1.2  
 OLY 21.76 0 P 07 34.80 0.6  
 MEO 22.00 344 e(P) 07 34.00 -2.5  
 TUL 22.50 351 e(P) 07 41.50 0.0  
 JSC 22.55 23 P 07 42.40 0.4  
 pP 07 55.80 56kmX  
 LHS 22.90 23 P 07 45.70 0.3  
 TKL 23.00 16 P 07 46.80 0.4  
 pP 07 58.00 44kmX  
 ALO 25.14 330 eP 08 08.10 0.8  
 0.8s 9.70nm 4.5mb  
 ANMO 25.14 330 P 08 07.90 0.6  
 0.8s 35.45nm 5.0mb  
 GOL 28.68 337 P 08 40.50 0.7  
 0.8s 5.21nm 4.3mb  
 MSU 30.80 327 P 09 00.40 1.8  
 DAU 31.79 331 P 09 08.70 1.3  
 TNP 33.36 322 P 09 21.80 0.8  
 0.7s 2.22nm 4.2mb  
 BONR 33.94 320 P 09 27.00 0.8  
 FRI 34.26 318 ePc 09 32.50 3.9X  
 PRI 34.42 316 e(P) 09 36.00 5.9X  
 CMB 35.31 319 ePc 09 41.10 3.5X  
 LRM 36.63 335 eP 09 48.50 -0.4

ZOBO 37.66 141 iP 09 57.80 -0.3  
 Z 20s 0.18um 3.9Msz  
 LR 22 06.00

DPW 40.70 332 P 10 23.80 1.3  
 LON 41.64 329 P 10 32.20 2.0  
 SIV 42.11 133 P 10 33.40 -1.0  
 PNT 42.40 333 iPc 10 38.10 1.7  
 0.7s 41.00nm 5.3mb  
 GMW 42.67 329 P 10 39.20 0.6  
 MCW 43.45 330 P 10 46.30 1.3  
 PGC 43.73 330 eP 10 48.00 0.8  
 SCH 45.40 20 eP 10 58.00 -2.6  
 YKA 51.48 347 eP 11 45.40 -2.2  
 0.8s 5.80nm 4.6mb  
 FRB 52.55 13 eP 11 50.00 -5.6X  
 INK 60.91 343 eP 12 53.50 -1.5  
 KLU 61.50 334 P 12 58.10 -1.2  
 IMA 66.47 337 P 13 30.50 -1.2  
 0.8s 2.59nm 4.4mb  
 DAG 72.87 13 eP 14 06.50 -4.0X  
 STK 128.29 240 ePKP 21 50.60 1.9  
 0.9s 1.60nm  
 WB2 135.75 255 ePKP 22 01.70 -1.5  
 0.7s 3.40nm  
 WRA 135.76 255 PKP 22 02.00 -1.3  
 0.8s 3.30nm  
 GKN 138.43 5 PKP 22 07.80 -0.5  
 GUN 138.62 3 PKP 22 07.80 -1.1  
 KKN 138.70 4 PKP 22 08.20 -0.6  
 CHG 146.14 342 ePKP 22 21.50 -0.3  
 LOE 146.49 337 ePKP 22 23.00 0.7  
 BDT 147.60 341 ePKP 22 26.00 2.0  
 GBA 150.80 22 PKPc 22 34.00 4.9X  
 1.0s 13.00nm

S.D. = 1.3 on 54 of 65 obs.

% MAY 15, 1991 16h 41m 18.09s  
 58.386 N 155.101 W

DEPTH = 0.0km

## ALASKA PENINSULA (12)

&lt;AEIC&gt;. ML 2.6 (AEIC).

MCNL 0.90 26 eP 41 34.69 -1.3  
 S 41 48.60  
 CDD 0.94 54 eP 41 35.38 -1.4  
 eS 41 50.57  
 AUI 1.29 42 eP 41 42.03 -0.9  
 eS 42 00.71  
 AUE 1.33 42 eP 41 43.29 -0.2  
 SYI 1.44 80 eP 41 42.80 -2.6  
 PDB 1.48 18 eP 41 44.49 -1.6  
 eS 42 05.55  
 KDC 1.53 114 eP 41 44.20 -2.5  
 XLV 2.05 57 eP 41 52.62 -1.7  
 CNPM 2.31 59 eP 41 57.85 -0.1  
 RED 2.36 29 eP 41 57.27 -1.6  
 RSO 2.40 29 eP 42 00.39 0.8  
 RDN 2.45 28 eP 41 57.79 -2.3  
 RDT 2.59 31 eP 42 00.76 -1.3  
 SVW 2.74 355 eP 42 01.27 -3.0  
 CKL 3.15 25 eP 42 07.75 -2.2  
 BGL 3.19 24 eP 42 09.91 -0.7  
 SPU 3.20 27 eP 42 10.19 -0.5  
 NCG 3.37 25 eP 42 12.08 -1.1

18 obs. associated

% MAY 15, 1991 17h 19m 19.91 ± 0.83s  
 37.708 N ± 7.9km 14.932 E ± 6.7km

DEPTH = 10.0km (geophysicist)

## SICILY (398)

MNO 0.29 320 P 19 27.00 0.9  
 eSg 19 31.80  
 MEU 0.61 180 P 19 32.30 0.1  
 eSg 19 41.90  
 ATN 0.62 43 P 19 32.60 0.3  
 eSg 19 41.60  
 GIB 0.77 292 P 19 35.80 0.8  
 eSg 19 46.70  
 SOI 0.96 67 P 19 38.40 0.3  
 eSg 19 53.00  
 USI 1.70 306 P 19 48.00 -1.8  
 TDS 2.24 29 P 19 57.00 -0.5

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

% MAY 15, 1991 17h 27m 56.23 ± 0.78s  
 37.706 N ± 7.2km 14.985 E ± 6.4km

DEPTH = 10.0km (geophysicist)  
 SICILY (398)

MNO 0.32 314 P 28 03.00 0.0  
 eSg 28 09.00  
 ATN 0.59 40 P 28 08.10 -0.1  
 eSg 28 17.10  
 MEU 0.61 184 P 28 08.50 0.0  
 eSg 28 18.00  
 GIB 0.81 291 P 28 12.00 0.0  
 eSg 28 25.00  
 SOI 0.92 66 P 28 13.90 0.1  
 eSg 28 28.60

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

\* MAY 15, 1991 18h 32m 47.53 ± 0.83s  
 36.055 N ± 11.5km 30.429 E ± 15.0km  
 DEPTH = 33.0km (normal)

## TURKEY (366)

ELL 0.81 329 iPn 33 02.00 -0.6  
 BCK 1.41 5 iPn 33 12.50 1.3  
 PPCY 1.95 126 eP 33 19.00 0.1  
 YER 2.04 303 iPn 33 20.70 0.5  
 KHL 2.38 343 iPn 33 24.70 -0.4  
 CSS 2.61 114 eP 33 25.50 -2.8  
 ALT 3.01 355 iPn 33 35.00 1.0  
 DST 3.82 339 eP 33 44.00 -1.5  
 ADI 4.95 125 eP 34 03.00 1.5  
 ZNT 5.39 134 eP 34 08.50 0.8  
 eS 35 05.00  
 DSI 6.08 136 iPc 34 18.00 0.5  
 PRNI 6.86 145 iPc 34 28.00 -0.4

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

% MAY 15, 1991 18h 40m 32.97 ± 0.88s  
 40.011 N ± 6.9km 23.694 E ± 8.8km  
 DEPTH = 10.0km (geophysicist)

## GREECE (364)

PAIG 0.08 187 iPc 40 35.10 -0.4  
 eSg 40 37.18  
 OUR 0.39 34 ePg 40 39.78 -1.2  
 eSg 40 43.78  
 SOH 0.85 342 ePg 40 49.50 0.1  
 SRS 1.11 356 ePg 40 54.26 0.5  
 eSg 41 09.18  
 KNT 1.30 332 ePb 40 56.54 -0.5  
 eSb 41 15.70  
 GRG 1.37 314 ePb 40 58.42 0.4  
 eSb 41 19.02  
 ALN 2.00 63 ePc 41 08.22 1.1

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

? MAY 15, 1991 18h 42m 07.69 ± 0.91s  
 37.680 N ± 8.2km 14.930 E ± 8.2km  
 DEPTH = 10.0km (geophysicist)

## SICILY (398)

MNO 0.31 324 Pc 42 14.10 -0.2  
 eSg 42 19.20  
 MEU 0.58 180 P 42 19.40 -0.1  
 eSg 42 29.20  
 GIB 0.78 294 P 42 23.10 0.2  
 eSg 42 34.60  
 SOI 0.97 66 P 42 26.20 0.1  
 eSg 42 40.20

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

% MAY 15, 1991 20h 24m 59.92 ± 1.06s  
 40.989 N ± 10.9km 22.511 E ± 7.3km

DEPTH = 10.0km (geophysicist)

## GREECE (364)

ML 1.2 (THE).

GRG 0.09 249 ePg 25 02.56 0.0  
 eSg 25 05.00  
 KNT 0.34 59 iPgd 25 06.46 -0.5  
 eSg 25 11.28  
 THE 0.50 136 ePg 25 09.68 -0.3  
 eSg 25 18.30  
 SOH 0.66 104 ePg 25 13.28 0.2  
 eSg 25 21.56  
 SRS 0.83 81 ePg 25 16.52 0.6  
 eSg 25 26.48

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



% MAY 15, 1991 20h 25m 13.00±0.90s  
40.492 N ± 6.7km 23.454 E ±10.2km  
DEPTH = 10.0km (geophysicist)  
GREECE (364)  
ML 1.6 (THE).

SOH	0.34	347	ePg	25 20.12	0.1
			eSg	25 25.32	
THE	0.40	291	ePg	25 21.04	-0.1
			eSg	25 29.28	
PAIG	0.59	163	ePb	25 24.96	0.0
SRS	0.63	10	ePg	25 25.56	-0.2
			eSg	25 33.84	
KNT	0.79	328	ePg	25 28.48	0.1
			eSg	25 41.20	

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

? MAY 15, 1991 21h 53m 15.74±7.84s  
46.854 N ±51.9km 0.954 W ±71.7km  
DEPTH = 5.0km (geophysicist)

FRANCE (538)  
ML 2.0 (LDG).

MFF	0.61	114	Pg	53 27.40	-0.6
			Sg	53 33.60	
LPF	1.18	357	Pg	53 38.30	0.1
			Sg	53 51.60	
GRR	1.54	2	Pg	53 43.40	-0.4
			Sg	54 02.00	
LDF	1.83	18	Pg	53 47.80	-0.3
			Sg	54 08.40	
FLN	1.94	9	Pg	53 50.00	0.4
			Sg	54 12.40	
TCF	2.26	103	Pg	53 55.00	0.7
			Sg	54 20.00	

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

? MAY 15, 1991 22h 14m 33.93±4.57s  
45.158 N ±12.0km 6.542 E ±32.0km  
DEPTH = 10.0km (geophysicist)

FRANCE (538)  
ML 2.0 (GEN).

RRL	0.29	144	P	14 40.20	0.0
			S	14 44.61	
RSP	0.51	91	P	14 44.41	0.2
			S	14 51.17	
LSD	0.53	55	P	14 44.61	0.0
			S	14 51.69	
BHB	0.60	122	P	14 45.76	-0.3
			S	14 54.25	
PZZ	0.76	148	P	14 49.12	0.2
			S	14 59.89	

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

% MAY 15, 1991 22h 37m 26.01±0.83s  
42.023 N ± 6.5km 12.858 E ± 6.9km  
DEPTH = 10.0km (geophysicist)

CENTRAL ITALY (381)

RMP	0.24	209	Pd	37 30.80	-0.4
			eSg	37 34.30	
RDP	0.29	202	P	37 32.50	0.5
			eSg	37 36.60	
MNS	0.38	340	P	37 33.90	0.0
			eSg	37 40.40	
AZI	0.43	94	P	37 35.20	0.4
			eSg	37 42.80	
SDI	0.78	114	P	37 40.80	-0.5

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

? MAY 15, 1991 22h 41m 45.04±1.09s  
44.449 N ± 6.7km 7.346 E ±13.1km  
DEPTH = 5.0km (geophysicist)

NORTHERN ITALY (545)  
ML 1.6 (GEN).

PZZ	0.18	288	P	41 48.91	0.0
			S	41 51.31	
STV	0.20	184	P	41 49.18	-0.1
			S	41 51.83	
ENR	0.23	167	P	41 49.79	0.1
			S	41 52.83	
BHB	0.40	351	P	41 53.01	0.0
			S	41 58.23	

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

% MAY 15, 1991 23h 31m 56.36±1.75s  
45.634 N ±16.8km 7.577 E ± 9.1km  
DEPTH = 10.0km (geophysicist)  
NORTHERN ITALY (545)  
ML 2.3 (GEN).

ORX	0.28	90	P	32 02.39	0.0
			S	32 07.00	
LSD	0.34	239	P	32 03.42	-0.2
			S	32 08.82	
RSP	0.53	205	P	32 07.31	0.1
			S	32 15.82	
BHB	0.82	196	P	32 12.56	0.3
			S	32 25.55	
RRL	0.91	218	P	32 14.20	0.3
			S	32 28.09	
PZZ	1.18	197	P	32 17.86	-0.6
			S	32 34.22	

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

% MAY 15, 1991 23h 49m 50.10±0.71s  
40.578 N ± 4.7km 24.041 E ± 5.8km  
DEPTH = 5.0km (geophysicist)

AEGEAN SEA (365)  
ML 2.3 (THE).

OUR	0.25	191	ePg	49 55.60	0.5
			eSg	49 58.80	
SOH	0.58	295	ePg	50 01.88	0.2
			eSg	50 10.12	
SRS	0.64	328	ePg	50 02.40	-0.4
			eSg	50 10.56	
PAIG	0.71	203	ePg	50 03.40	-0.8
			eSg	50 13.60	
THE	0.82	274	ePg	50 06.40	-0.1
			eSg	50 17.88	
KNT	1.04	304	ePg	50 10.02	-0.3
			eSg	50 24.28	
LIT	1.28	249	ePb	50 14.48	0.2
GRG	1.30	287	ePb	50 15.24	0.6
ALN	1.56	78	ePb	50 18.60	0.1
			eSb	50 39.32	

S.D. = 0.5 on 9 of 9 obs.

% MAY 16, 1991 01h 11m 53.74±0.94s  
37.992 N ±10.4km 14.659 E ± 6.1km  
DEPTH = 10.0km (geophysicist)

SICILY (398)

MNO	0.07	155	P	11 56.10	-0.2
			eSg	11 58.40	
GIB	0.50	270	P	12 03.10	-0.8
			eSg	12 10.20	
ATN	0.66	75	P	12 07.20	0.4
			eSg	12 18.00	
MEU	0.92	166	P	12 10.60	-0.7
			eSn	12 26.00	
FAI	1.06	228	P	12 15.00	1.3
SOI	1.11	85	P	12 14.40	-0.1
			eSn	12 30.00	

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

MAY 16, 1991 01h 23m 36.02±0.66s  
49.114 N ± 5.4km 6.934 E ± 8.3km  
DEPTH = 10.0km (geophysicist)

GERMANY (543)  
MD 2.1 (STR).

GWF	0.47	106	Pg	23 45.45	-0.2
RUP	0.59	8	ePg	23 46.59	-1.5
CDF	0.74	162	Pg	23 50.54	0.0
			Sg	24 03.49	
WLS	0.75	158	Pg	23 50.50	-0.3
ECH	0.91	171	Pg	23 54.00	0.5
			Sg	24 08.34	
VITF	1.10	215	Pg	23 54.90	-1.7
			Sg	24 11.04	
MOF	1.27	174	Pg	24 00.60	0.9
FEL	1.43	150	Pg	24 03.42	1.3
MEM	1.61	339	iP	24 05.20	0.7
LOMF	1.77	182	Pn	24 05.85	-1.1
DOU	1.81	304	iP	24 08.90	1.4
			S	24 28.60	

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

% MAY 16, 1991 01h 42m 28.47±0.91s  
39.972 N ± 7.3km 22.607 E ± 5.4km

DEPTH = 5.0km (geophysicist)  
GREECE (364)  
ML 1.7 (THE).

LIT	0.16	325	ePg	42 30.95	-0.8
			eSg	42 34.34	
THE	0.71	22	ePg	42 42.90	0.2
			eSg	42 55.38	
PAIG	0.83	93	ePg	42 44.70	-0.2
			eSg	42 56.10	
GRG	1.00	351	ePg	42 48.34	0.5
			eSg	43 03.58	
SOH	1.02	34	ePg	42 48.22	-0.1
KNT	1.21	10	ePb	42 51.54	0.1
			eSb	43 08.82	
FNA	1.24	311	ePb	42 52.18	0.1
			eSb	43 09.86	
IGT	1.81	257	ePb	43 00.74	0.2

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

? MAY 16, 1991 01h 48m 18.53±0.99s  
42.891 N ±11.5km 18.659 E ± 7.7km  
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)  
ML 1.6 (TTG).

BRY	0.08	276	iPg	48 21.26	0.1
			iSg	48 23.91	
NKY	0.26	107	iPg	48 24.33	0.2
			iSg	48 29.80	
TTG	0.64	136	iPg	48 31.18	-0.2
			iSg	48 42.61	
PLE	0.69	51	iPg	48 32.26	-0.1
			iSg	48 41.26	

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

% MAY 16, 1991 01h 53m 51.68±0.59s  
40.247 N ± 4.9km 29.498 E ± 6.3km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)  
MD 2.7 (ISK).

GBZT	0.54	356	ePg	54 02.00	-0.6
			iSg	54 10.50	
GPA	0.62	86	iPg	54 05.00	0.8
			eSg	54 15.50	
ISK	0.88	338	ePg	54 08.50	-0.1
			eSg	54 21.50	
DST	0.93	227	iPg	54 09.30	-0.1
			iSg	54 22.30	
EDC	1.25	275	ePn	54 16.00	1.0
ALT	1.28	158	iPn	54 15.50	0.0
KHL	1.92	179	ePn	54 24.00	-0.8
DMK	2.05	321	ePn	54 26.50	-0.1

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

? MAY 16, 1991 02h 02m 45.67±1.13s  
25.509 S ± 8.7km 116.368 E ±15.4km  
DEPTH = 10.0km (geophysicist)

3.5mb (1 obs.)  
WESTERN AUSTRALIA (590)

MEKA	2.24	120	eP	03 29.00	5.7X
			eS	03 56.90	
NANU	3.03	345	eP	03 34.10	-0.5
			eS	04 08.00	
BAL	5.09	177	eP	04 05.50	1.7
			eS	05 05.00	
MBL	5.37	37	eP	04 09.00	1.1
			eS	05 09.50	
KLB	6.18	169	eP	04 18.40	-0.8
			eS	05 23.40	
MUN	6.45	181	eP	04 22.30	-0.7
			eS	05 31.50	
WARB	9.28	96	eP	05 03.70	1.1
	0.3s	1.00nm		4.8mb X	
		eS	06 43.00		
ASPA	16.06	87	eP	06 31.10	-2.1
	1.4s	5.80nm		3.5mb	

S.D. = 1.7 on 7 of 8 obs.

MAY 16, 1991 02h 06m 16.78±0.31s  
52.309 N ± 3.0km 7.649 E ± 2.7km  
DEPTH = 10.0km (geophysicist)

GERMANY (543)  
MD 4.7 (STR), 4.3 (UCC), ML 4.4 (BNS), 4.3 (LDG), 4.2 (GRF).



16d 02h

Slight damage in the Ibbenburen area.						LOR	5.61	207	iSg	09 23 50		SPC	8.58	106	eSn	09 47.90	
WTS	0.60	239	iPgc	06 31.60	2.6				Pn	07 41 40	-0.9				eP	08 24.20	0.2
	0.6s	398	00nm						Sn	08 43 20					e	10 37.70	
WIT	0.78	311	iPgc	06 35.60	3.6	LBF	5.84	206	Pn	07 44 20	-1.3	LFF	8.68	214	Pn	08 22.70	-2.5X
BNS	1.38	193	iPnd	06 43.65	1.6				Sn	08 48 40		NRA0	8.72	13	Pn	08 20.20	-5.5X
	0.6s	7100	00nm						Sg	09 23 00					Lg	09 58.50	
PLH	1.40	202	ePgd	06 43.90	1.6	OSS	5.86	163	ePd	07 46 70	0.8	LPO	8.75	212	Pn	08 23.40	-2.8X
			eSg	07 03.70		SSF	5.90	209	Pn	07 45 30	-1.0	FRF	8.78	185	Pn	08 25.50	-1.2
GSH	1.76	207	ePnd	06 49.00	1.5	VDL	5.95	168	ePc	07 48 40	1.2	DMU	8.91	286	eP	08 27.30	-1.0
			iPg	06 50.40		KMR	5.95	133	ePn	07 47 00	0.0				e	10 01.10	
			iSg	07 14.80					eSg	09 32 00		YKA	56.84	332	eP	16 02.80	-0.5
STB	1.79	197	iPnd	06 49.40	1.5	SMF	6.19	205	Pn	07 48 50	-1.9X		0.8s		0.40nm		3.5mb X
	0.7s	1070	00nm						i	09 37 60			S.D. = 1.0	on	74 of 91 obs.		
			Sg	07 14.60		AVF	6.19	209	Pn	07 49 10	-1.3	& MAY 16, 1991 02h 39m 49.35s					
KLL	1.86	207	iPnd	06 50.20	1.2				Sg	09 32 40		46.763 N 121.896 W					
ENN	1.88	216	iPn	06 50.30	1.1	LDF	6.20	236	Pn	07 49 60	-0.9	DEPTH = 11.3km					
	0.4s	7.00nm							Sn	08 56 40		WASHINGTON (29)					
			iPb	06 52.20		DIX	6.24	182	ePd	07 50 90	-0.4	<SEA>. MD 3.0 (SEA). Felt at Mt.					
			i	06 54.60		EMS	6.26	185	ePc	07 50 50	-1.2	Rainier National Park.					
KOE	1.89	178	iPnd	06 50.10	0.8	MMK	6.27	178	ePc	07 52 00	0.2	LON	0.06	102	Pc	39 51.52	-0.4
			iPg	06 52.70		FLN	6.28	239	Pn	07 50 70	-1.0	REMR	0.07	34	Pc	39 51.73	-0.3
			iSg	07 17.60					Sn	08 57 90		RVC	0.19	344	Pd	39 53.25	-0.4
MEM	1.99	212	iP	06 51.69	0.9	KBA	6.41	143	ePn	07 52 00	-1.6X	FMW	0.23	42	Pd	39 54.02	-0.5
			i	06 56.34					e	08 51 00		WPW	0.25	105	Pd	39 54.23	-0.6
			iS	07 22.40					eSn	08 57 50		LMW	0.29	251	Pc	39 55.26	-0.3
BGG	2.12	185	iPnd	06 52.90	0.3	BGF	6.55	210	Pn	07 54 20	-1.3				S	40 00.02	
			Sg	07 24.10					Sn	09 04 50		KOSW	0.36	214	Pd	39 56.29	-0.6
TNS	2.15	166	ePgd	06 53.90	0.7				Sg	09 45 60		GHW	0.38	317	Pd	39 56.24	-1.0
			iSg	06 59.80		FVI	6.63	148	P	07 55 10	-1.4	GSM	0.45	9	Pd	39 57.56	-1.0
ABH	2.43	182	ePg	06 57.58	0.4				eSn	09 15 00		TDL	0.47	208	Pd	39 57.84	-1.1
UCC	2.55	235	P	07 06.70	7.9X	GRR	6.71	238	Pn	07 56 50	-1.2	CZM	0.53	232	Pd	39 59.15	-1.0
RUP	2.64	188	ePg	07 00.38	0.2				Sn	09 09 00		ERK	0.55	214	Pd	39 59.26	-1.3
SNF	2.77	231	iPc	07 02.97	1.0	CTI	6.79	156	P	07 59 10	0.1	SOSW	0.55	198	Pd	39 59.16	-1.4
TOD	2.80	164	ePg	07 02.94	0.4	LPL	6.83	185	Pn	07 58 70	-0.9	STD	0.57	203	Pd	39 59.72	-1.2
WLF	2.81	200	iPc	07 03.11	0.6	PLDF	6.87	204	Pn	07 58 10	-2.0X	ESD	0.59	197	Pd	40 00.22	-1.1
			i	07 09.81		VKA	6.87	123	i(Pn)	08 03 90	3.9X	REMW	0.60	200	Pd	40 00.44	-1.0
			iS	07 45.34					e	08 37 00		SHW	0.62	203	Pd	40 00.63	-1.1
DOU	2.93	222	iP	07 05.60	1.3				i	09 29 00		HSR	0.62	199	Pd	40 00.74	-1.1
			i	07 13.00					i	09 55 00		JLK	0.64	196	Pd	40 00.95	-1.2
			e	08 14.00					LR	11 04 00		ASR	0.65	161	Pd	40 00.98	-1.3
MOX	2.99	122	iPn	07 05.50	0.4	AGO	6.93	207	Pn	08 00 90	0.1	FL2	0.65	209	Pd	40 00.92	-1.4
			ePg	07 16.00		MAF	6.94	211	Pn	07 59 10	-1.8X	CDFW	0.66	189	Pd	40 01.17	-1.2
			eSg	07 59.00					Sg	09 57 20		MEW	0.68	311	Pd	40 02.15	-0.5
KTD	3.01	175	ePg	07 06.02	0.7	TCF	7.00	213	Pn	08 00 20	-1.5	NAC	0.74	92	P	40 02.80	-0.9
HOF	3.32	125	iPnd	07 10.10	0.3				Sn	09 15 10		MTMW	0.77	197	Pd	40 03.18	-1.1
GWF	3.34	180	Pn	07 09.50	-0.6				Sg	09 57 30		LVP	0.78	207	Pd	40 03.38	-1.1
GRF	3.46	138	iPnd	07 12.40	0.7	ESY	7.03	305	eP	08 02 20	0.0				S	40 14.23	
			ePg	07 24.40		LPF	7.03	236	Pn	08 00 90	-1.3	TWW	0.80	62	P	40 04.24	-0.6
			eSg	08 10.50		EKA	7.08	300	Pc	08 02 10	-0.8	SPW	0.83	343	P	40 04.45	-0.7
CLL	3.47	105	iPnc	07 12.40	0.5				0.7s	17.70nm		RVW	0.85	224	Pd	40 04.23	-1.4
			iPg	07 24.30		EBL	7.19	303	eP	08 04 40	0.0	GULW	0.86	166	Pd	40 04.79	-1.2
			iSn	07 55.90		PYM	7.24	207	Pn	08 03 40	-1.8X	CPW	0.88	284	Pd	40 04.92	-1.2
CDF	3.91	184	Pn	07 17.80	-0.5	LSF	7.26	216	Pn	08 03 50	-2.0X	EBG	0.92	80	P	40 06.43	-0.5
			Pg	07 33.00					Sn	09 21 00		BMW	0.96	253	Pd	40 06.40	-1.2
			Sg	08 21.30					Sg	10 04 80		YAKW	0.97	104	P	40 07.65	-0.1
BRG	4.18	108	iPnd	07 22.20	0.2	BNI	7.29	185	P	08 11 00	5.0X	TBM	0.98	65	P	40 07.47	-0.4
			iPg	07 38.20		EDI	7.32	304	eP	08 06 40	0.1	GMW	0.99	323	Pd	40 06.38	-1.7
			iSn	08 09.60					0.9s	137.00nm		APM	1.04	172	P	40 07.72	-1.2
			i	08 20.00		ZST	7.33	120	iP	08 05 50	-0.8	HTW	1.04	5	P	40 07.32	-1.7
			iSg	08 32.10					i	10 21 10		BLH	1.08	355	P	40 08.01	-1.5
			i	08 39.40		EAU	7.43	303	eP	08 07 90	0.1	GL2	1.09	137	ePd	40 09.03	-0.8
			i	08 46.10					0.8s	117.00nm		MXC	1.12	99	P	40 09.75	-0.5
HAU	4.39	191	Pn	07 24.90	-0.1	EDR	7.50	312	eP	08 08 30	-0.5	SMW	1.13	300	Pd	40 09.40	-1.1
			Sg	08 37.10		EBH	7.63	306	eP	08 10 40	-0.2	PGW	1.16	336	Pd	40 09.80	-1.1
FEL	4.44	177	ePg	07 24.75	-1.1	MFF	7.64	225	Pn	08 09 10	-1.6X	HDW	1.19	319	Pd	40 09.58	-1.8
BSF	4.52	187	Pn	07 25.70	-1.2				Sn	09 29 80		VLM	1.23	185	P	40 10.84	-1.3
SLE	4.58	173	ePc	07 27.00	-0.7	EAB	8.02	304	eP	08 15 70	-0.4	NLO	1.27	238	Pd	40 11.76	-1.1
WET	4.59	132	iPnc	07 28.50	0.7				0.7s	118.00nm		ONR	1.29	276	P	40 12.34	-0.8
FUR	4.76	149	eP	07 30.40	0.2	KRA	8.05	101	eP	08 15 90	-0.5	VLL	1.31	173	Pd	40 12.42	-1.1
ZLA	4.86	174	ePd	07 31.30	-0.4				e	08 54 30		VTG	1.32	81	P	40 13.48	-0.2
PRU	4.92	115	Pn	07 32.50	0.0				e	10 40 40		BRVW	1.34	101	P	40 13.45	-0.5
			ePg	07 54.80		RJF	8.09	212	Pn	08 14 40	-2.7X	PGO	1.35	197	P	40 13.29	-0.8
			e	08 44.50					Sn	09 41 00		ETW	1.36	51	P	40 13.32	-1.0
			Sg	09 00.00					Sg	10 32 10		BVW	1.38	87	P	40 14.59	0.0
KHC	4.93	128	Pn	07 33.50	0.8	CAF	8.26	209	Pn	08 17 20	-2.3X	JCW	1.43	359	Pd	40 13.86	-1.4
			Pg	07 52.00													



OSD	1.62	311	P	40	17.17	-0.9
GT2	1.63	189	Pd	40	17.58	-0.5
RSW	1.63	102	P	40	17.47	-0.7
EPH	1.68	69	Pc	40	18.41	-0.4
GBL	1.69	95	P	40	18.85	0.0
NLW	1.69	38	P	40	19.04	0.0
LOCW	1.70	91	P	40	19.54	0.6
RC1	1.70	83	P	40	18.82	-0.2
RPW	1.71	9	P	40	18.35	-0.8
VBEM	1.72	173	P	40	19.50	0.1
MJ2	1.76	96	P	40	19.79	0.0
WIW	1.83	99	P	40	20.31	-0.6
STW	1.84	320	P	40	20.81	-0.2
CROR	1.89	160	P	40	21.30	-0.6
DHW2	1.89	49	P	40	22.99	1.1
MCW	2.02	342	P	40	23.12	-0.6
MBW	2.02	360	ePd	40	23.78	-0.1
ET3	2.05	94	P	40	24.46	0.4

81 obs. associated

MAY 16, 1991 04h 38m 13.15±0.75s  
 43.052 N ± 6.4km 12.839 E ± 11.6km  
 DEPTH = 10.0km (geophysicist)  
 CENTRAL ITALY (381)

ARV	0.45	10	P	38	21.70	-0.7
			eSg	38	29.50	
MNS	0.68	190	P	38	25.70	-0.9
			eSg	38	36.10	
AQU	0.81	149	P	38	30.00	1.1
CRE	0.87	312	P	38	29.90	0.0
SFI	1.13	321	P	38	35.00	0.8
			eSg	38	51.00	
SDI	1.53	151	P	38	40.30	-0.2

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

\* MAY 16, 1991 04h 50m 36.88±1.14s  
 23.134 N ± 14.3km 116.844 E ± 12.7km  
 DEPTH = 10.0km (geophysicist)  
 3.9mb (2 obs.)  
 NEAR SOUTHEASTERN COAST OF CHINA(242)  
 ML 3.8 (BJI).

OZH	2.41	41	ePn	51	23.50	6.6X
GZH	3.22	270	ePn	51	27.50	-1.0
			eSn	52	05.00	
SSE	8.82	25	Pd	52	46.50	-0.8
	0.7s	14.00nm				5.4mb X
Z	11s	0.90um				4.1msz
		pP	52	51.50		
NJ2	9.06	11	Pd	52	52.00	1.4
		S	54	36.00		
GYA	9.82	292	P	53	02.40	1.0
WRA	46.09	157	P	59	04.00	0.9
	0.8s	1.10nm				3.9mb
YKA	85.43	21	eP	03	14.10	-1.5
	0.7s	0.60nm				3.9mb

S.D. = 1.6 on 6 of 7 obs.

MAY 16, 1991 04h 51m 24.97±0.49s  
 41.162 N ± 4.8km 24.515 E ± 4.2km  
 DEPTH = 5.0km (geophysicist)  
 GREECE-BULGARIA BORDER REGION (363)  
 ML 3.0 (THE).

RZN	0.55	16	iPgc	51	36.00	0.0
SRS	0.70	267	ePgd	51	38.85	-0.1
			eSg	51	48.42	
MMB	0.73	306	ePgd	51	40.00	0.4
KDZ	0.84	54	iPgc	51	40.00	-1.6
OUR	0.92	206	ePg	51	43.02	0.0
			eSg	51	55.06	
SOH	0.94	249	ePg	51	43.14	-0.3
			eSS	51	56.10	
PLD	0.95	8	iPgc	51	44.00	0.4
DIM	1.17	40	ePg	51	48.00	0.7
ALN	1.19	102	ePbd	51	47.30	-0.3
			eSb	52	03.10	
KNT	1.22	271	ePb	51	48.41	0.2
			eSb	52	04.82	
KKB	1.29	304	iPd	51	49.00	-0.3
THE	1.29	246	ePb	51	49.34	0.0
			eSb	52	06.26	
PAIG	1.39	208	ePb	51	49.34	-1.6
			eSb	52	10.14	
PGB	1.41	349	iPd	51	51.00	-0.4
VAY	1.48	277	ePn	51	57.00	4.8X

GRG	1.61	263	ePb	51	55.22	1.0
			eSb	52	16.98	
VTS	1.73	326	eP	51	56.00	0.0
LIT	1.87	236	ePb	51	58.62	0.7
			eSb	52	23.22	
PVL	2.14	16	eP	52	00.00	-1.8
DMK	2.52	74	ePn	52	10.00	2.7

S.D. = 1.1 on 19 of 20 obs.

MAY 16, 1991 07h 36m 15.60±0.46s  
 40.419 N ± 4.0km 23.889 E ± 3.9km  
 DEPTH = 10.0km (geophysicist)  
 GREECE (364)  
 ML 3.0 (THE).

PAIG	0.52	198	iPgc	36	26.25	0.2
			eSg	36	32.04	
SOH	0.57	315	iPgc	36	26.69	-0.6
			eSS	36	33.96	
SRS	0.73	342	iPgc	36	30.16	0.2
			eSg	36	40.16	
THE	0.74	287	ePg	36	28.85	-1.2
			eSg	36	36.88	
KNT	1.06	315	iPgc	36	35.12	-0.4
			eSg	36	48.32	
LIT	1.12	254	ePgc	36	35.96	-0.6
			eSg	36	50.00	
MMB	1.18	354	iPgd	36	38.00	0.4
GRG	1.25	296	ePb	36	38.24	-0.7
			eSb	36	55.84	
VAY	1.35	312	iPn	36	40.60	0.2
	0.7s	385.00nm				
		i	37	17.60		
		iSg	38	02.60		
		Lg	38	03.40		
RZN	1.41	26	ePg	36	46.00	4.5X
KKB	1.57	337	iPc	36	44.00	0.4
		iPg	37	52.00		
KDZ	1.69	43	iPc	36	45.00	-0.3
		ePg	38	00.00		
PLD	1.79	20	iPg	36	52.00	5.2X
		iS	38	24.00		
AGG	1.84	221	ePbc	36	46.76	-0.8
		eSb	37	09.32		
FNA	1.95	282	ePb	36	48.92	-0.2
		eSb	37	13.32		
DIM	2.05	37	ePg	36	57.00	6.5X
PGB	2.14	6	iPgc	36	56.00	4.1X
VTS	2.23	347	iPg	36	54.00	0.7
		iSg	38	34.00		
SKO	2.41	311	ePn	36	50.50	-5.2X
		i	37	35.00		
OHR	2.45	287	ePn	37	00.20	3.9X
LSK	2.53	265	ePn	36	58.00	0.5
KGT	2.61	88	iPn	36	58.90	0.4
IGT	2.87	253	eP	37	02.96	0.7
		eS	37	35.92		
JMB	2.88	44	ePg	37	13.00	10.7X
PHP	2.90	297	ePn	37	10.00	7.4X
PVL	3.00	21	iPc	37	03.00	-0.9
		eSg	39	00.00		
TIR	3.19	288	e(Pn)	37	09.20	2.5
DMK	3.24	63	ePn	37	07.00	-0.5
CTT	3.52	77	ePn	37	05.00	-6.5X
MLR	5.29	16	eP	37	36.50	-0.2
BZS	5.46	343	ePc	37	38.00	-0.9
VRI	5.83	20	ePc	37	45.00	0.9

S.D. = 0.8 on 23 of 32 obs.

MAY 16, 1991 07h 37m 23.89±0.82s  
 40.398 N ± 5.7km 23.577 E ± 7.2km  
 DEPTH = 5.0km (geophysicist)  
 GREECE (364)  
 ML 2.8 (THE).

SOH	0.46	338	ePgc	37	33.04	0.0
			eSg	37	39.72	
PAIG	0.48	171	iPgc	37	32.64	-0.8
			eSg	37	39.36	
THE	0.52	297	ePg	37	34.76	0.4
			eSg	37	43.36	
SRS	0.72	1	ePg	37	38.00	-0.3
			eSg	37	46.72	
LIT	0.88	251	ePg	37	42.00	0.7
			eSg	37	56.56	
KNT	0.92	326	ePg	37	42.04	0.1
			eSg	37	54.60	

GRG	1.05	302	ePg	37	44.88	0.6
			eSg	38	00.72	
MMB	1.20	5	iPgd	37	45.00	-1.7
VAY	1.20	321	ePn	37	45.00	-1.7
PGB	2.20	11	iP	38	03.00	1.4
DIM	2.21	41	eP	38	03.00	1.2

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

MAY 16, 1991 07h 47m 37.39±0.53s  
 29.026 N ± 8.9km 130.307 E ± 7.3km  
 DEPTH = 29.5km (3 depth phases)  
 4.8mb (16 obs.) 4.1msz (3 obs.)  
 RYUKYU ISLANDS (238)

SSE	8.17	287	P	49	37.00	0.1
	0.6s	10.00nm				5.2mb
Z	20s	0.90um				
N	12s	0.30um				
E	14s	0.70um				
MAT	10.02	40	(P)	50	02.00	-0.4
NJ2	10.33	290	Pc	50	07.50	0.9
Z	16s	0.30um				
TIA	13.21	306	eP	50	50.60	5.1X
SNY	13.89	339	eP	51	00.80	6.4X
CN2	15.25	347	eP	51	19.00	6.8X
	0.7s	50.00nm				4.9mb
Z	15s	1.40um				4.6mszX
N	12s	0.30um				
E	12s	0.30um				
		epP	51	28.00		
BJI	15.99	317	eP	51	24.00	2.3
Z	16s	0.29um				
TIY	17.24	305	eP	51	41.00	3.4X
Z	20s	1.00um				
N	11s	0.20um				
E	13s	0.30um				
XAN	18.89	291	P	51	57.20	-0.9
HMC	19.33	313	eP	52	07.00	3.8X
Z	14s	0.70um				
BTO	20.22	310	eP	52	14.00	1.2
		ePP	52	40.00		
GYA	21.08	269	P	52	23.00	1.2
QIZ	21.15	246	eP	52	22.20	-0.1
CD2	23.06	281	P	52	41.60	0.2
LZH	23.35	294	eP	52	45.00	0.7
	1.5s	34.00nm				4.6mb
Z	20s	0.44um				3.9msz
		pP	52	54.50		35km
		PP	53	21.00		
GTA	27.14	300	eP	53	20.00	-0.1
	0.8s	10.00nm				4.5mb
Z	22s	0.85um				4.3msz
E	16s	0.65um				
		pP	53	26.60		23km
		sP	53	32.40		
CHG	30.34	257	eP	53	48.00	-0.8
GUN	38.90	279	P	55	02.58	-0.1
	0.4s	91.00nm				5.9mb X
PKI	39.38	279	P	55	06.14	-0.5
	0.4s	29.00nm				5.4mb
KKN	39.44	279	P	55	06.80	-0.2
	0.5s	34.00nm				5.4mb
DMN	39.63	279	P	55	08.32	-0.3
	0.3s	21.00nm				5.3mb
GKN	39.95	280	P	55	10.68	-0.5
	0.4s	28.00nm				5.4mb
WRA	48.84	175	P	56	22.00	-0.2
	0.8s	8.30nm				4.8mb
WB2	48.84	175	iPd	56	22.50	0.3
	0.8s	7.80nm				4.8mb
		i	56	31.70		31km
ASPA	52.50	176	eP	56	50.60	0.5
	0.6s	5.20nm				4.7mb
KEV	67.52	338	eP	58	30.00	-2.5



16d 08h

0.7s 7.00nm 5.0mb  
 CMB 86.13 48 eP 00 18.90 1.8  
 FRB 86.35 8 eP 00 19.00 1.5  
 ZOBO 158.81 57 ePKP 07 52.00 17.3X  
 SIV 163.32 41 PKP 07 35.20 -3.4X  
 S.D. = 1.2 on 29 of 36 obs.

% MAY 16, 1991 09h 42m 38.52 ± 1.18s  
 40.823 N ± 12.3km 29.652 E ± 8.3km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 MD 2.6 (ISK).

HRT 0.01 96 iPg 42 40.30 -0.2  
 GBZT 0.16 258 ePg 42 41.20 -1.0  
 iSg 42 43.50  
 YLV 0.33 220 iPg 42 45.80 0.4  
 iSg 42 50.30  
 ISK 0.51 299 ePg 42 48.00 -0.9  
 CTT 0.98 290 iPg 42 58.80 1.7  
 eSg 43 12.80  
 S.D. = 1.5 on 5 of 5 obs.

& MAY 16, 1991 09h 48m 34.03s  
 61.659 N 151.005 W  
 DEPTH = 63.5km  
 SOUTHERN ALASKA (2)  
 <AEIC>.

SUA 0.23 147 iPc 48 44.47 0.1  
 eS 48 52.81  
 SKT 0.41 323 iPc 48 44.77 -0.8  
 eS 48 53.58  
 PWA 0.54 90 iPc 48 46.57 -0.2  
 eS 48 56.96  
 NCG 0.61 246 ePd 48 47.15 -0.6  
 eS 48 57.80  
 CRP 0.68 235 iPd 48 48.21 -0.4  
 eS 48 59.26  
 SPU 0.70 227 iPd 48 48.13 -0.6  
 eS 48 59.40  
 BGL 0.77 240 ePd 48 48.98 -0.7  
 eS 49 02.08  
 CKL 0.79 235 iPd 48 49.15 -0.8  
 S 49 01.81  
 PMS 0.81 120 iPd 48 49.43 -0.6  
 eS 49 02.00  
 CUT 0.82 25 iPc 48 49.61 -0.6  
 iS 49 01.89  
 PLRM 0.90 93 ePd 48 50.12 -1.0  
 PMR 0.90 93 iPd 48 50.70 -0.4  
 NKA 0.93 187 eP 48 52.82 1.3  
 GHO 1.00 83 ePd 48 51.76 -0.8  
 eS 49 06.12  
 SLKM 1.22 161 ePc 48 54.66 -0.7  
 eS 49 11.06  
 KNK 1.25 100 iPd 48 54.83 -1.0  
 eS 49 11.65  
 SML 1.28 82 ePd 48 55.10 -1.2  
 RDT 1.28 213 iPd 48 55.56 -0.8  
 eS 49 13.23  
 RDN 1.43 217 iPd 48 57.57 -0.8  
 eS 49 16.36  
 HUR 1.47 25 ePd 48 58.50 -0.3  
 RS2 1.47 216 ePd 48 58.39 -0.6  
 RSO 1.47 216 ePd 48 58.42 -0.6  
 eS 49 18.13  
 RED 1.51 215 ePd 48 58.77 -0.7  
 eS 49 17.90  
 >NNL 1.63 185 ePc 49 01.42 0.4  
 SEW 1.74 153 eP 49 02.64 0.2  
 SCM 1.76 83 eP 49 01.38 -1.5  
 TRF 1.83 10 ePc 49 03.12 -0.8  
 RND 2.02 29 eP 49 05.44 -1.0  
 GLI 2.04 111 eP 49 04.20 -2.6  
 KNIM 2.07 128 ePc 49 03.98 -3.1  
 CNPM 2.14 183 eP 49 08.75 0.6  
 MCK 2.29 24 eP 49 08.81 -1.4  
 SVW 2.29 258 iPd 49 08.80 -1.4  
 VLZ 2.31 101 eP 49 07.89 -2.5  
 TOA 2.33 77 iPd 49 10.50 -0.3  
 KLU 2.44 92 ePd 49 09.82 -2.5  
 PDB 2.44 221 ePc 49 10.90 -1.4  
 TTA 2.66 301 iPc 49 14.30 -1.2  
 TZL 2.67 79 eP 49 14.08 -1.5  
 SDG 2.71 69 eP 49 15.03 -1.1  
 PAX 2.90 61 eP 49 17.30 -1.6

CDD 3.04 207 eP 49 19.58 -1.1  
 NEA 3.06 16 eP 49 18.27 -2.7  
 WRH 3.12 24 eP 49 20.02 -1.8  
 SYI 3.14 193 eP 49 20.71 -1.4  
 CCB 3.33 24 eP 49 22.44 -2.4  
 GLB 3.45 90 eP 49 25.21 -1.3  
 MDM 3.54 19 eP 49 25.62 -2.2  
 FBA 3.56 23 eP 49 26.10 -2.0  
 49 obs. associated

% MAY 16, 1991 09h 50m 55.74 ± 1.04s  
 40.504 N ± 9.9km 29.887 E ± 6.3km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 MD 2.6 (ISK).

EYL 0.21 73 iPg 51 00.50 0.0  
 HRT 0.36 332 iPg 51 02.80 -0.3  
 IZI 0.36 242 ePg 51 03.00 -0.1  
 eSg 51 07.50  
 YLV 0.40 279 ePg 51 03.80 -0.1  
 CTT 1.28 301 ePn 51 20.00 0.5  
 S.D. = 0.5 on 5 of 5 obs.

MAY 16, 1991 10h 44m 54.59 ± 0.47s  
 49.137 N ± 3.9km 6.890 E ± 7.7km  
 DEPTH = 10.0km (geophysicist)

GERMANY (543)  
 MD 2.9 (STR), 2.8 (UCC).

RUP 0.58 11 ePg 45 05.51 -0.8  
 WLF 0.71 318 iPd 45 08.20 -0.4  
 iS 45 17.67  
 CDF 0.77 160 Pg 45 09.14 -0.5  
 WLS 0.79 157 Pg 45 09.65 -0.3  
 Sg 45 20.73  
 ECH 0.94 169 Pg 45 12.54 0.0  
 Sg 45 26.33  
 VITF 1.10 213 Pg 45 14.93 -0.3  
 Sg 45 29.92  
 MOF 1.30 173 Pg 45 19.34 0.7  
 Sg 45 37.08  
 FEL 1.47 149 Pg 45 22.59 1.4  
 Sg 45 42.24  
 TNS 1.49 42 ePn 45 20.70 -0.7  
 MEM 1.58 339 iP 45 23.10 0.5  
 ENN 1.75 339 iPnc 45 26.90 1.8  
 0.4s 49.00nm  
 iSn 45 50.60  
 DOU 1.77 304 iP 45 25.00 -0.5  
 LOMF 1.79 181 Pn 45 25.06 -0.8  
 SNF 2.18 310 iP 45 38.80 7.5X  
 S.D. = 0.9 on 13 of 14 obs.

% MAY 16, 1991 10h 48m 15.02 ± 0.92s  
 39.160 N ± 7.1km 27.595 E ± 12.9km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 MD 2.7 (ISK).

IZM 0.80 199 iPg 48 30.60 -0.1  
 iSg 48 42.10  
 DST 0.92 61 ePn 48 32.80 0.2  
 EDC 1.20 10 ePn 48 37.50 0.1  
 BNT 1.22 12 ePn 48 37.00 -0.7  
 KGT 1.31 350 ePn 48 39.70 0.5  
 S.D. = 0.6 on 5 of 5 obs.

% MAY 16, 1991 13h 10m 51.32 ± 0.88s  
 39.108 N ± 7.5km 27.657 E ± 13.0km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 MD 2.6 (ISK).

IZM 0.77 204 iPg 11 06.40 0.0  
 eSg 11 18.20  
 DST 0.90 56 ePn 11 08.70 0.1  
 EDC 1.25 7 iPn 11 14.50 0.0  
 BNT 1.26 9 iPn 11 14.50 -0.3  
 KGT 1.37 349 ePn 11 16.60 0.2  
 S.D. = 0.2 on 5 of 5 obs.

MAY 16, 1991 13h 36m 32.36 ± 0.50s  
 41.339 N ± 6.4km 14.697 E ± 4.4km  
 DEPTH = 10.0km (geophysicist)

SOUTHERN ITALY (390)  
 ML 3.7 (THE).

DUI 0.37 331 Pd 36 39.00 -1.0  
 eSg 36 44.50  
 SDJ 0.76 299 P 36 46.50 -0.7  
 AZI 1.15 305 P 36 54.00 0.2  
 eSg 37 10.50  
 AQU 1.40 317 P 36 59.30 1.3  
 RDP 1.54 286 P 36 59.60 -0.4  
 RMP 1.57 288 P 37 01.00 0.7  
 BAI 1.65 97 P 37 02.00 0.5  
 MNS 1.83 305 P 37 05.60 1.4  
 ORI 1.84 133 P 37 04.00 -0.3  
 BRT 1.95 103 P 37 06.10 0.3  
 TDS 2.09 143 P 37 08.00 0.1  
 HVAR 2.25 35 i(Pn) 37 15.10 4.9X  
 iSn 37 41.50  
 iSg 37 45.80  
 ARV 2.52 330 P 37 13.60 -0.4  
 eSn 37 43.00  
 CRE 3.06 319 P 37 22.00 0.3  
 BRY 3.26 60 ePn 37 24.50 -0.2  
 eSn 38 02.00  
 SFI 3.33 322 P 37 26.00 0.6  
 TTG 3.58 71 ePn 37 29.00 0.0  
 eSn 38 10.00  
 PLE 4.01 59 ePn 37 35.50 0.2  
 eSn 38 22.00  
 RIY 4.01 357 iPnc 37 35.80 0.7  
 IVA 4.16 67 ePn 37 38.50 1.1  
 eSn 38 27.00  
 VBY 4.18 5 ePn 37 39.00 1.4  
 iSn 38 24.00  
 OHR 4.61 91 eP 37 44.20 0.5  
 PTJ 4.65 11 eP 37 47.20 2.9  
 IGT 4.66 111 ePc 37 45.84 1.4  
 eS 38 39.12  
 VOY 4.73 353 ePn 37 45.40 -0.1  
 eSn 38 39.40  
 FNA 5.08 94 eP 37 51.20 0.8  
 eS 38 46.48  
 CTI 5.20 336 P 37 50.10 -2.0  
 eSn 38 47.00  
 FVI 5.43 346 P 37 53.00 -2.3  
 KBA 5.82 351 eP 37 59.00 -1.9  
 e 38 30.00  
 e 39 02.00  
 GRG 5.83 91 eP 38 00.64 -0.3  
 LIT 6.05 99 eP 38 03.98 0.0  
 KNT 6.18 89 eP 38 05.88 0.0  
 eS 39 13.00  
 AGG 6.29 109 eP 38 07.60 0.2  
 eS 39 14.28  
 SOH 6.56 92 eP 38 09.68 -1.7  
 eS 39 22.04  
 SRS 6.71 89 eP 38 12.12 -1.3  
 PAIG 6.98 99 eP 38 15.00 -2.1  
 S.D. = 1.2 on 35 of 36 obs.

MAY 16, 1991 15h 21m 04.43 ± 0.81s  
 38.193 N ± 9.3km 20.669 E ± 5.2km  
 DEPTH = 15.8 ± 5.5 km  
 3.8mb (2 obs.)

GREECE (364)  
 ML 3.8 (THE), 3.7 (ATH).

VLS 0.06 256 ePg 21 07.00 -0.6  
 IGT 1.36 349 ePb 21 30.56 1.8  
 eSb 21 52.80  
 AGG 1.54 57 eP 21 30.98 -0.4  
 eS 21 55.32  
 KZN 2.28 22 ePn 21 44.00 2.0  
 VLI 2.33 129 ePn 21 45.70 3.0  
 LIT 2.37 36 eP 21 43.44 0.1  
 eS 22 18.56  
 ATH 2.42 94 ePn 21 43.00 -0.9  
 FNA 2.64 12 eP 21 48.52 1.3  
 PAIG 2.91 53 eP 21 50.42 -0.5  
 eS 22 28.84  
 LCI 3.00 316 P 21 53.20 1.0  
 THE 3.02 35 eP 21 52.68 0.3  
 GRG 3.07 25 eP 21 54.70 1.6  
 SOH 3.35 38 eP 21 57.64 0.5  
 eS 22 40.92  
 KNT 3.43 29 eP 21 58.20 0.0  
 VAY 3.45 25 ePn 22 02.60 4.1X  
 SOI 3.64 270 P 22 00.30 -1.0  
 eSn 22 41.30  
 TDS 3.68 295 P 22 03.00 1.1



SRS 3.69 37 eP 22 01.40 -0.6  
 ORI 3.78 301 P 22 05.00 1.7  
 BRT 3.79 316 P 22 03.80 0.4  
 eSn 22 45.60  
 KKB 4.11 26 eP 22 10.00 2.1  
 MMB 4.13 34 eP 22 08.00 -0.2  
 TTG 4.37 346 ePn 22 10.80 -0.7  
 eSn 23 02.00  
 RDO 4.78 50 ePn 22 18.00 0.6  
 ALN 4.96 55 eP 22 17.00 -2.9X  
 eS 23 17.28  
 KDZ 5.02 45 iPd 22 19.00 -1.9  
 DUI 5.90 308 P 22 33.00 -0.3  
 VBY 8.35 333 e(Pn) 23 08.60 1.1  
 e 23 18.70  
 e(Sn) 24 38.00  
 CEY 8.85 330 e(Pn) 23 14.00 -0.6  
 VOY 9.31 329 e(Pn) 23 18.90 -2.0  
 HFS 22.40 351 eP 26 01.00 -2.3  
 0.5s 1.70nm 3.8mb  
 e 26 04.50  
 e 26 08.50  
 NB2 23.63 348 P 26 13.60 -1.7  
 0.7s 2.10nm 3.8mb  
 S.D. = 1.4 on 30 of 32 obs.

& MAY 16, 1991 15h 43m 29.70s  
 31.920 N 115.410 W  
 DEPTH = 6.0km (geophysicist)  
 BAJA CALIFORNIA (48)  
 <PAS-P>. ML 3.5 (PAS).

IKP 0.94 321 eP 43 47.30 -0.7  
 iS 43 58.90  
 GLA 1.23 23 eP 43 51.70 -1.3  
 BAR 1.31 306 eP 43 53.30 -1.0  
 eS 44 10.00  
 PLM 1.88 320 eP 44 00.50 -2.4  
 PEC 2.46 324 eP 44 10.20 -0.8  
 ABL 4.32 314 eP 44 40.00 2.3  
 BCH 5.08 311 eP 44 58.20 9.9  
 7 obs. associated

? MAY 16, 1991 15h 44m 42.83±2.25s  
 31.303 N ±10.2km 7.576 W ±31.5km  
 DEPTH = 33.0km (normal)  
 MOROCCO (395)  
 MD 3.8 (RBA).

TIO 0.46 144 iPgD 44 53.00 0.0  
 AVE 1.99 4 iPnd 45 15.00 0.1  
 iSn 45 39.00  
 i 45 41.00  
 i 45 45.50  
 RBA 2.77 13 iPn 45 26.00 0.2  
 i 45 29.50  
 iSn 45 59.00  
 i 46 02.50  
 IFR 3.03 43 iPn 45 30.00 0.3  
 iSn 46 06.00  
 i 46 20.00  
 NKM 4.51 23 iPn 45 50.00 -0.6  
 iSn 46 38.00  
 i 46 49.50  
 S.D. = 0.5 on 5 of 5 obs.

MAY 16, 1991 17h 58m 24.33±0.53s  
 26.294 N ±6.1km 125.916 E ±8.0km  
 DEPTH = 25.3km (5 depth phases)  
 4.9mb (13 obs.)  
 NORTHEAST OF TAIWAN (245)

ANP 4.11 255 eP 59 40.00 12.8X  
 SSE 6.33 320 P 59 55.50 -3.0  
 Z 20s 5.60um  
 pP 00 01.80  
 QZH 6.75 260 eP 00 04.00 -0.3  
 Z 11s 2.20um  
 eS 01 21.00  
 NJ2 8.42 315 Pd 00 28.50 0.8  
 Z 16s 2.90um  
 E 10s 5.40um  
 S 02 04.00  
 BAG 11.02 208 eP 01 06.00 2.4  
 TIA 12.41 325 eP 01 20.80 -1.5  
 Z 16s 2.80um  
 N 13s 2.40um

E 13s 4.30um  
 MAT 14.63 43 (P) 01 35.00 -16.5X  
 1.0s 6.00nm  
 SNY 15.61 353 eP 02 04.80 0.5  
 1.4s 50.00nm 4.5mb  
 Z 13s 6.00um 3.8MsZ  
 N 13s 4.00um  
 E 11s 1.90um  
 pP 02 11.00  
 sP 02 16.60  
 eS 05 02.00

BJI 15.93 332 eP 02 09.00 0.6  
 1.1s 18.00nm 4.1mb  
 Z 18s 2.05um 4.1MsZ  
 N 12s 1.59um

TIY 16.12 318 eP 02 12.00 1.2  
 Z 14s 2.62um  
 N 13s 1.83um  
 pP 02 19.50  
 PP 02 26.50

OIZ 16.49 247 eP 02 15.00 -0.6  
 N 10s 1.20um  
 E 10s 0.90um  
 eS 05 22.00

XAN 16.59 302 eP 02 16.00 -0.8  
 N 10s 1.10um  
 E 12s 3.20um

Gya 17.26 275 P 02 30.00 4.7X  
 Z 14s 1.40um  
 N 12s 3.10um  
 E 12s 2.10um

CN2 17.47 359 eP 02 29.20 1.4  
 4.0s 600.00nm 5.1mb X  
 Z 13s 6.00um 4.7MsZ  
 N 12s 1.60um  
 E 12s 1.70um

MDJ 18.52 8 eP 02 45.00 4.2X  
 3.0s 420.00nm 5.1mb  
 Z 12s 1.30um 3.9MsZ  
 N 13s 1.70um  
 E 12s 4.50um

pP 02 48.50  
 sP 02 52.00  
 eS 06 05.00  
 sS 06 14.00

HHC 18.77 324 Pc 02 45.00 1.0  
 5.0s 500.00nm 5.0mb X  
 Z 16s 4.00um 4.3MsZ  
 N 14s 1.40um  
 E 13s 2.10um

pP 02 52.00  
 BTO 19.44 321 eP 02 52.00 0.1  
 N 14s 2.40um  
 E 14s 1.80um

CD2 19.98 288 P 02 57.60 -0.2  
 N 12s 7.68um  
 KMI 20.91 272 eP 03 09.00 1.3  
 2.0s 80.00nm 4.8mb  
 Z 15s 1.50um 4.5MsZ

pP 03 16.40 27km  
 sP 03 22.00  
 PP 03 28.00

LZH 21.21 303 Pc 03 10.50 -0.1  
 1.5s 59.00nm 4.8mb  
 Z 15s 3.13um 4.8MsZ  
 N 11s 2.04um

pP 03 17.50 26km  
 sP 03 21.50  
 PP 03 34.00

PJG 21.81 122 eP 03 24.50 8.0X  
 GUA 21.87 122 eP 03 24.80 7.6X  
 0.9s 168.07nm 5.5mb  
 GTA 25.43 307 eP 03 51.00 -0.7

3.5s 420.00nm 5.5mb X  
 Z 13s 2.40um 4.9MsZ  
 N 14s 1.80um

pP 04 00.00 32km  
 sP 04 06.00  
 CHG 25.96 259 eP 04 06.50 9.7X  
 IRK 30.63 334 eP 04 44.50 5.9X  
 e 12 08.00

WMO 35.46 309 P 05 20.60 -0.1  
 1.5s 30.00nm 5.0mb  
 Z 16s 1.69um 4.9MsZ  
 N 14s 1.39um

E 14s 2.24um  
 GUN 35.57 282 PKP 05 23.82 1.7  
 YAK 35.81 3 eP 05 24.80 1.5  
 e 05 39.00 55kmX  
 e 07 55.00

PKI 36.03 281 PKP 05 25.70 -0.3  
 KKN 36.11 282 PKP 05 25.98 -0.6  
 DMN 36.29 281 PKP 05 25.96 -2.1  
 GKN 36.65 282 PKP 05 26.78 -4.2X  
 WRA 46.68 169 P 06 52.00 -0.9

0.6s 15.60nm 5.2mb  
 WB2 46.69 169 iPd 06 52.40 -0.5  
 0.6s 15.20nm 5.2mb

i 06 58.60 21km  
 e 11 42.10  
 OIS 48.43 163 eP 07 06.00 -0.6  
 ASPA 50.26 170 iPc 07 20.60 -0.1

0.5s 9.60nm 5.1mb  
 MAIO 56.65 298 eP 08 10.00 2.1  
 STK 59.75 165 eP 08 32.20 2.8X  
 0.6s 2.30nm 4.5mb

INK 69.65 23 eP 09 38.00 4.8X  
 YKA 79.33 24 eP 10 27.70 -1.4  
 0.8s 1.60nm 4.1mb

SES 88.55 32 eP 11 15.00 -1.2  
 FFC 89.44 25 eP 11 20.00 -0.3  
 0.6s 5.00nm 5.0mb

TNP 92.84 45 (P) 11 37.20 0.7  
 e 11 44.00 21km  
 ZOBO 163.56 55 PKP 18 37.00 9.8X  
 Z 24s 0.10um

LR 18 36.00  
 SIV 167.86 34 PKP 18 38.60 8.6X  
 S.D. = 1.3 on 32 of 45 obs.

MAY 16, 1991 18h 27m 15.71±0.51s  
 36.730 N ±5.7km 31.180 E ±7.7km  
 DEPTH = 128.3 ±15.2 km  
 TURKEY (366)  
 MD 4.1 (HLW).

BCK 0.87 327 iPg 27 37.00 -0.6  
 iSg 27 46.40  
 ELL 1.02 271 iPg 27 41.00 1.9  
 iSg 27 50.50

KHL 2.06 321 iPn 27 49.50 -1.4  
 YER 2.36 281 iPn 27 54.90 0.3  
 ALT 2.47 340 iPn 27 55.00 -1.1  
 CSS 2.48 135 eP 27 54.80 -1.4

CIN 2.62 290 eP 27 58.00 0.1  
 BBTk 3.35 21 iPd 28 09.00 1.4  
 e 28 42.00  
 iS 28 46.00

DST 3.50 326 ePn 28 09.00 -0.6  
 IZM 3.53 299 ePn 28 10.00 0.0  
 IZI 3.84 340 ePn 28 14.70 0.5

EYL 3.91 349 ePn 28 15.50 0.3  
 BNT 4.43 326 ePn 28 22.00 -0.1  
 KGT 4.80 322 ePn 28 27.00 0.0

HRI 5.09 131 eP 28 32.00 0.9  
 ZNT 5.50 144 eP 28 36.00 -0.5  
 eS 29 35.00

DSI 6.21 145 eP 28 47.00 0.7  
 eS 29 53.00  
 KOT 6.80 175 ePn 28 54.00 -0.3  
 eSn 30 01.50

MBH 7.60 155 eP 29 05.00 -0.2  
 eS 30 25.00  
 S.D. = 1.0 on 19 of 19 obs.

\* MAY 16, 1991 18h 54m 31.91±1.79s  
 33.679 S ±7.9km 71.697 W ±14.7km  
 DEPTH = 20.8 ±9.2 km  
 NEAR COAST OF CENTRAL CHILE (135)

LCCH 0.23 28 iPd 54 38.10 0.5  
 iS 54 43.00  
 LNV 0.36 139 iP 54 39.00 -0.7  
 iS 54 45.00

TACH 0.63 88 iPd 54 44.50 0.3  
 iS 54 54.50  
 IHA 0.65 4 iPd 54 44.30 -0.2  
 iS 54 54.50

SAN 0.89 76 iPd 54 48.60 0.0  
 iS 55 02.50  
 ROCH 0.91 39 iPd 54 49.00 0.0  
 iS 55 03.50



16d 18h

PCH	0.99	87	iPd	55 05.50	-0.2
			iS	54 50.10	
JACH	1.36	43	eP	55 05.00	0.2
			i	54 56.00	
			iS	54 57.50	
MDZ	2.51	72	eP	55 16.00	4.6X
			iS	55 17.00	
RFA	2.89	113	ePd	55 53.10	1.3
RTCB	3.28	49	ePd	55 19.00	4.1X
			S	55 27.40	
ZON	3.32	51	eP	56 18.00	3.4X
CFA	3.57	56	eP	55 27.20	3.5X
			eS	55 31.00	
RTLL	3.59	50	ePd	56 22.90	2.6X
			S	55 30.40	
TCA	6.44	71	e(P)	56 31.20	-1.1
			(S)	56 07.00	
				57 24.00	

S.D. = 0.8 on 10 of 15 obs.

& MAY 16, 1991 20h 02m 47.23s  
63.127 N 150.476 W  
DEPTH = 111.8km  
CENTRAL ALASKA  
<AIC> (1)

TRF	0.34	15	iP	03 03.62	-0.2
			eS	03 15.82	
HUR	0.41	111	eP	03 03.63	-0.4
			eS	03 15.93	
CUT	0.73	172	iP	03 06.04	-0.2
RND	0.79	68	iP	03 06.44	-0.4
			eS	03 21.00	
MCK	0.92	48	iP	03 07.75	-0.3
			eS	03 22.22	
BWN	1.14	23	iP	03 10.26	-0.1
SKT	1.25	203	iP	03 10.93	-0.7
			eS	03 28.86	
GHO	1.54	151	eP	03 14.94	-0.1
NEA	1.58	22	iP	03 14.47	-1.0
PLRM	1.66	157	eP	03 15.90	-0.6
PMR	1.66	157	eP	03 17.70	1.2
SUA	1.67	184	eP	03 16.84	0.1
			eS	03 39.60	
WRH	1.72	37	iP	03 16.29	-0.9
NCG	1.90	205	eP	03 19.01	-0.6
CCB	1.93	37	eP	03 18.91	-0.9
PMS	1.94	167	eP	03 19.68	-0.3
SCM	1.96	130	eP	03 20.20	-0.1
KNK	1.96	150	eP	03 19.76	-0.6
RDS	1.99	30	eP	03 19.53	-1.2
HDA	2.02	49	eP	03 19.94	-1.1
CRP	2.03	204	eP	03 21.40	0.1
BGL	2.07	206	eP	03 22.10	0.3
MDM	2.09	27	iP	03 20.90	-1.0
SPU	2.09	201	eP	03 21.39	-0.6
CKL	2.13	205	eP	03 22.70	0.2
FBA	2.14	32	eP	03 22.00	-0.5
TOA	2.24	115	eP	03 24.30	0.4
PAX	2.29	92	eP	03 24.20	-0.4
GLM	2.31	35	iP	03 23.92	-0.9
SDG	2.34	103	eP	03 25.02	-0.2
SLKM	2.63	177	eP	03 28.12	-1.0
KLU	2.69	126	eP	03 28.32	-1.5
RDT	2.72	201	eP	03 30.44	0.1
DFR	2.75	203	eP	03 30.75	0.0
GLI	2.76	143	eP	03 28.60	-2.2
VZW	2.78	137	eP	03 31.23	0.2
VLZ	2.79	134	eP	03 30.88	-0.3
KNIM	3.08	154	eP	03 32.60	-2.4
SVW	3.15	232	ePd	03 35.70	-0.4
IMA	3.26	336	eP	03 36.70	-0.9

40 obs. associated

\* MAY 16, 1991 20h 21m 31.23±1.01s  
5.670 S ±13.5km 148.525 E ±9.0km  
DEPTH = 119.0 ±11.2 km  
5.0mb (7 obs.)  
NEW BRITAIN REGION (192)

LAT	1.80	237	iPd	22 03.10	0.5
			eS	22 29.60	
MDG	2.77	279	iPc	22 17.00	2.8
RAB	3.92	68	iPd	22 30.00	-0.5
PMG	3.96	200	iPc	22 29.40	-1.7
			eS	23 13.00	
MNDI	4.87	264	eP	22 41.50	-2.2

CTA	14.50	189	iPc	24 53.30	1.3
			0.9s	44.54nm	4.7mb
QIS	17.15	210	iPd	25 24.70	-0.3
			0.3s	22.00nm	4.9mb
			eS	28 26.00	
MTN	18.58	246	eP	25 41.00	-0.9
WBZ	19.78	223	iPd	25 53.40	-1.1
			0.7s	72.50nm	5.1mb
			iS	29 27.20	
RMO	20.70	179	iPc	26 04.00	0.1
			i	26 17.00	
QLP	21.20	191	iPd	26 09.00	0.2
BRS	21.98	170	iPc	26 16.00	-0.5
ASPA	22.77	217	iPc	26 25.40	1.1
			0.6s	104.30nm	5.4mb
			eS	30 29.30	
DZM	23.79	135	iPd	26 34.20	-0.1
STK	26.87	193	eP	27 05.30	2.6
			0.5s	9.30nm	4.6mb
			e	27 42.70	
WARB	29.21	223	eP	27 24.00	0.2
FORR	31.55	215	eP	27 43.30	-1.0
			0.3s	12.00nm	5.1mb
TOO	31.87	185	iPd	27 47.20	0.1
			0.8s	28.00nm	5.1mb
NANU	36.00	239	eP	28 22.00	-0.7
TAU	37.10	181	iPc	28 31.70	0.1

S.D. = 1.4 on 20 of 20 obs.

MAY 16, 1991 20h 31m 05.24±0.56s  
17.038 N ±7.4km 102.310 W ±4.0km  
DEPTH = 33.0km (normal)  
4.6mb (5 obs.)  
NEAR COAST OF MICHIOACAN, MEXICO (56)

ACX	2.35	94	iP	31 41.10	-1.3
			iS	32 08.31	
MRX	2.86	22	iP	31 49.06	-0.4
			iS	32 25.00	
CGX	2.87	338	iP	31 48.50	-1.3
			iS	32 23.00	
III	3.02	63	iP	31 52.00	0.0
			iS	32 31.00	
GUM2	3.73	346	eP	32 01.50	-0.5
			iS	32 43.00	
UNM	3.75	52	eP	32 02.50	0.1
TAC	3.78	51	iP	32 03.00	0.1
PPM	4.04	60	iP	32 07.08	0.2
IIA	4.06	58	iP	32 07.10	0.5
PIO	4.06	98	iP	32 07.00	0.4
IIIT	4.29	62	iP	32 09.69	-0.4
IISM	5.08	67	iP	32 21.64	0.5
OXX	5.34	89	iP	32 25.50	0.5
			(S)	33 23.38	
PBJ	6.64	94	iP	32 43.00	-0.1
ALO	18.21	349	eP	35 18.70	1.3
			1.0s	6.25nm	3.7mb
ANMO	18.22	349	P	35 18.50	1.1
GLA	19.54	327	eP	35 32.00	-1.1
TUL	19.67	16	eP	35 30.20	-4.3X
			0.8s	25.80nm	4.6mb
BAR	20.27	323	eP	35 40.00	-0.8
PLM	20.87	324	eP	35 47.00	-0.2
TPC	21.00	327	eP	35 48.00	-0.3
RVR	21.63	324	eP	35 55.00	0.3
MWC	22.19	323	eP	36 01.00	0.6
GSC	22.31	327	eP	36 02.00	0.4
SBB	22.39	325	eP	36 03.00	0.7
CLC	23.12	327	eP	36 11.00	1.6
ISA	23.47	325	eP	36 14.00	1.1
TNP	24.72	331	P	36 25.20	0.1
LRM	29.92	346	ePd	37 12.70	0.0
PNT	35.13	340	eP	37 58.00	0.3
			0.6s	5.00nm	4.6mb
FFC	37.61	0	eP	38 18.00	-0.5
			0.8s	12.00nm	4.8mb
YKA	46.22	352	eP	39 26.50	-2.2
			0.8s	6.70nm	4.6mb
SCH	46.52	28	eP	39 32.00	0.8
ZOBO	47.23	133	P	39 30.00	-8.0X
LPB	47.43	133	eP	39 27.00	-12.4X
SIV	52.25	127	P	40 16.20	0.3
INK	54.93	346	ePd	40 33.80	-1.1
WRA	126.41	258	PKP	50 07.00	-0.3
			1.0s	1.10nm	

S.D. = 0.8 on 35 of 38 obs.

? MAY 16, 1991 23h 51m 52.41±5.47s  
38.656 N ±16.4km 26.084 E ±46.9km  
-DEPTH = 10.0km (geophysicist)  
AEGEAN SEA (365)  
MD 3.4 (ISK).

IZM	0.96	105	iPg	52 11.00	0.3
			eSg	52 24.00	
CIN	1.90	123	eP	52 25.00	-0.1
EDC	2.18	39	iPn	52 29.50	0.3
DST	2.19	64	ePn	52 29.00	-0.5
YER	2.31	130	ePn	52 36.00	4.8X

S.D. = 0.7 on 4 of 5 obs.

\* MAY 17, 1991 01h 50m 28.78±1.18s  
41.163 N ±12.2km 20.506 E ±6.8km  
DEPTH = 10.0km (geophysicist)  
ALBANIA (391)  
ML 2.7 (SKO).

OHR	0.23	103	iPg	50 33.10	-0.6
			iSg	50 37.10	
TIR	0.52	291	ePg	50 39.50	0.3
			iSg	50 49.00	
PHP	0.53	355	iPg	50 38.30	-1.1
			iSg	50 46.80	
LACI	0.76	309	ePg	50 43.80	0.1
			iSg	50 56.50	
SKO	1.07	41	ePg	50 50.20	1.3
			0.5s	129.00nm	
			i	50 51.00	
			iSg	51 02.80	
			i	51 04.60	
			Lg	51 05.10	
VAY	1.56	84	ePn	50 56.70	0.1

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

? MAY 17, 1991 02h 26m 16.25±5.13s  
41.078 N ±13.1km 20.691 E ±41.6km  
DEPTH = 10.0km (geophysicist)  
ALBANIA (391)  
ML 2.3 (SKO), 1.9 (THE).

OHR	0.09	68	iPg	26 17.10	-1.8
			iSg	26 21.10	
FNA	0.60	119	iPg	26 26.82	-1.5
			eSg	26 37.86	
SKO	1.06	32	ePg	26 35.20	-0.9
			0.3s	111.00nm	
			iSg	26 48.30	
			Lg	26 49.10	
GRG	1.30	95	ePb	26 38.82	-1.5
			eSb	27 00.26	
VAY	1.44	80	ePn	26 46.30	4.0X
KNT	1.67	86	ePb	26 45.82	0.2
			eSb	27 11.26	
LIT	1.68	125	ePb	26 45.86	0.0
THE	1.78	104	ePb	26 47.70	0.4
SRS	2.19	88	eP	26 54.38	1.1
			eS	27 23.98	

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

MAY 17, 1991 02h 31m 25.70±0.13s  
4.390 S ±2.8km 142.715 E ±3.6km  
DEPTH = 59.0km (6 depth phases)  
5.8mb (39 obs.)  
PAPUA NEW GUINEA (202)

Ms 6.0 (BRK). Mo=4.0\*10\*\*18 Nm  
(PPT).  
FAULT PLANE SOLUTION: P-Waves  
NP1: Strike= 55 Dip=74 Slip= 23  
NP2: 318 68 163  
Principal Axes:

T P1g=27 Azm=278  
P 4 186  
Comment: The focal mechanism is moderately well controlled and corresponds to strike-slip faulting with a moderate reverse component. The preferred fault plane is not determined.  
RADIATED ENERGY  
No. of sta: 5 Focal mech. M  
Energy 5.5±1.3\*10\*\*13 Nm  
MOMENT TENSOR SOLUTION  
Dep 56 No. of sta: 7







				epPd	40	22.94	59km
				esPc	40	29.23	
				PP	42	01.00	
				eS	47	07.23	
				e	47	29.74	
CHG	48.88	300	iPc	40	08.00	0.2	
	1.0s	71.25nm				5.6mb	
			eS	47	10.00		
SNY	49.19	341	Pc	40	09.60	-0.2	
	5.0s	1500.00nm				6.3mb	X
Z	22s	7.80um				5.7Ms	z
E	12s	2.40um					
		iS	47	08.40			
		sS	47	35.00			
XAN	49.78	323	Pc	40	14.20	-0.4	
	5.0s	1800.00nm				6.4mb	X
N	13s	5.70um					
E	14s	3.80um					
		S	47	20.00			
MDJ	50.19	348	Pd	40	16.50	-0.9	
	5.0s	1370.00nm				6.2mb	X
Z	32s	18.30um				5.9Ms	z
N	14s	3.10um					
E	15s	5.10um					
		pP	40	32.00	59km		
		sP	40	39.50			
		iS	47	22.00			
		sS	47	49.00			
CN2	50.43	344	Pc	40	18.00	-1.3	
	6.0s	2400.00nm				6.4mb	X
Z	18s	23.00um				6.2Ms	z
N	13s	1.60um					
E	13s	6.30um					
		epP	40	33.00	57km		
		sP	40	38.00			
TIY	50.46	329	Pc	40	19.00	-0.7	
Z	24s	9.25um				5.7Ms	z
E	16s	10.30um					
		S	47	27.00			
BJI	50.50	334	eP	40	19.00	-0.8	
	5.0s	930.00nm				6.1mb	X
N	18s	10.80um					
E	17s	22.20um					
		esP	40	38.00			
		eS	47	28.00			
		esS	47	49.00			
CD2	51.13	316	P	40	25.50	0.6	
	1.0s	240.00nm				6.2mb	
Z	20s	7.80um				5.7Ms	z
E	14s	7.00um					
		S	47	40.00			
YSS	51.18	0	eP	40	27.00	2.1	
		eS	47	35.00			
HHC	53.29	331	Pc	40	41.00	0.1	
	1.2s	85.00nm				5.7mb	
Z	22s	17.40um				6.1Ms	z
N	17s	2.90um					
E	17s	3.00um					
		PP	42	39.00			
		S	48	11.00			
BTO	53.87	329	iPc	40	45.00	-0.2	
	6.0s	1200.00nm				6.1mb	X
N	15s	4.10um					
E	16s	7.50um					
		S	48	12.50			
		sS	48	41.00			
		esS	51	53.00			
LZH	54.25	321	ePc	40	48.26	0.1	
	5.0s	1460.00nm				6.3mb	X
Z	25s	16.40um				6.0Ms	z
E	15s	4.04um					
		PcP	41	48.00			
		PP	42	50.50			
		ScP	45	45.00			
		eS	48	24.05			
		esS	48	50.87			
		SS	52	03.00			
GTA	58.82	322	iPc	41	20.60	0.0	
	5.0s	1220.00nm				6.3mb	X

DRV	62.19	181	sS	49	52.00	
			P	41	42.90	0.0
			S	50	06.00	
SMY	62.79	21	ePc	41	48.20	1.1
	1.2s	681.82nm				6.6mb
Z	22s	21.51um				6.3MsZ
GUN	63.43	304	P	41	52.48	0.2
PKI	63.70	304	P	41	53.68	-0.4
KKN	63.88	304	P	41	55.14	0.0
DMN	63.96	303	P	41	55.96	0.3
GKN	64.49	304	P	41	58.98	0.0
IRK	65.15	335	eP	42	02.00	-0.6
			e	42	10.50	27kmX
			ePcP	42	27.00	
			e	42	40.50	
			e	43	06.00	
			ePP	44	41.00	
			eS	50	42.00	
			ePS	51	02.00	
			eScS	51	54.00	
			e	54	07.00	
			eSS	54	55.00	
CSY	65.75	194	eP	42	06.60	0.5
	0.1s	68.50nm				6.6mb
ADK	65.82	26	ePd	42	05.70	-1.1
KOD	66.58	283	eP	42	14.00	1.3
			iS	51	03.50	
HYB	66.90	291	ePc	42	14.00	-0.4
	1.0s	180.00nm				6.0mb
			e	42	39.00	99kmX
			eS	51	03.00	
YAK	66.97	353	iPd	42	13.50	-0.5
			iPp	42	29.00	56km
			ePP	44	48.00	
			iPPP	46	19.00	
			ePSP	48	52.00	
			eS	51	03.00	
			iPS	51	18.00	
			eScS	51	34.00	
			eSS	55	52.60	
			eSSS	58	24.00	
WMO	68.82	321	ePc	42	25.96	-0.1
	4.0s	1110.00nm				6.2mb X
Z	24s	3.16um				5.5MsZx
N	14s	3.27um				
E	14s	2.24um				
			ePcP	42	46.98	101kmX
			ed	42	51.62	
			PP	44	56.00	
			iS	51	27.09	
			esS	51	55.56	
PMO	68.98	104	iP	42	28.10	0.8
	1.0s	60.00nm				5.5mb
			iPP	42	49.90	84kmX
VAH	69.24	105	iP	42	29.60	0.7
	1.0s	55.00nm				5.4mb
			iPP	42	51.30	83kmX
TPT	69.24	104	iP	42	29.70	0.7
	1.0s	40.00nm				5.3mb
			iPP	42	51.50	84kmX
RUV	69.47	104	iP	42	31.10	0.7
	1.0s	45.00nm				5.4mb
			iPP	42	52.80	83kmX
NDI	70.91	302	iPc	42	38.00	-1.0
	0.9s	33.61nm				5.3mb
			iS	51	46.00	
POO	71.51	291	iPc	42	36.40	-6.4X
			iS	51	53.20	
SBA	74.50	175	iPd-	43	00.80	1.6
			iS	53	36.80	
KSH	75.12	313	P	43	06.00	2.4
	N 14s	7.20um				
			S	52	41.00	
TLG	75.40	317	eP	43	09.00	3.9X
			iS	52	45.00	
SDN	75.55	30	eP	43	05.40	-0.1
TIK	76.42	356	eP	43	09.00	-1.1
			eS	52	44.00	
ANM	78.64	20	eP	43	23.70	1.2
GAR	79.21	311	iP	43	26.00	-0.3
			PSP	43	48.00	
			PP	45	53.00	

QUE	79.96	302	eP	43	32.30	1.6
			eS	53	31.80	
SVW	80.60	26	eP	43	33.50	0.3
	1.2s					
		91.90nm				5.6mb
TTA	81.28	24	eP	43	38.40	1.6
RSO	81.58	27	eP	43	37.50	-1.0
MAW	82.09	202	iP	43	41.80	1.0
	1.0s	140.00nm				5.9mb
IMA	83.60	22	eP	43	48.90	0.1
	1.3s	41.40nm				5.3mb
PMR	83.65	27	eP	43	48.50	-0.4
	1.1s	38.20nm				5.3mb
BRW	85.06	16	eP	43	57.80	2.0
KLU	85.06	27	P	43	55.00	-1.1
TOA	85.14	27	ePc	43	58.10	1.6
	0.9s	46.00nm				5.6mb
COL	85.40	24	eP	43	56.28	-1.4
		ec	44	16.40		73kmX
		e	44	19.29		
		eSKS	54	20.47		
FBA	85.40	24	ePd	43	56.40	-1.2
	0.8s	19.10nm				5.3mb
SPA	85.64	180	iPd-	43	58.10	-1.0
	1.0s	112.50nm				6.0mb
Z	20s	20.27um				6.5Msz
		i	45	00.00		257kmX
		i	45	27.50		
BALM	86.58	28	eP	44	02.40	-1.3
		i	44	25.30		85kmX
MAIO	87.12	307	iPc+	44	00.00	1.2
		eS	54	24.00		
SIT	89.28	33	P	44	20.00	3.5X
Z	20s	7.50um				6.1Msz
INK	91.74	22	eP	44	27.00	-0.7
	1.0s	37.00nm				5.8mb
WDC	96.44	50	e(P)	44	52.80	3.0X
BRK	96.64	53	eP	44	53.10	2.3
Z	20s	6.00um				6.1Msz
		e	51	48.00		
		eS	56	11.00		
		e	58	43.00		
		eSS	02	58.00		
		eSSS	06	32.00		
		eP'P'	10	12.00		
		eLR	15	32.00		
MHC	97.13	53	e(P)	44	55.80	2.6
ORV	97.23	51	eP	44	56.00	2.5
PRS	97.34	54	e(P)	44	56.50	2.5
TAB	97.72	308	eP	44	56.00	0.1
PRI	97.91	54	e(P)	44	58.80	2.1
CMB	98.12	52	eP	45	00.20	2.7X
NVL	98.31	195	ePc	44	59.00	1.3
		e	45	04.00		16kmX
		e	45	15.00		
		e	45	30.00		
		e	45	39.00		
		e	45	52.00		
		e	45	56.50		
		e	46	21.00		
		ePP	49	11.00		
		e	49	19.00		
		e	50	12.00		
		eSKS	55	30.00		
		e	55	59.00		
		eS	56	17.00		
		e	57	14.00		
		ePS	57	46.00		
		e	58	06.00		
		ePPS	58	27.00		
		e	58	50.00		
PNT	98.31	41	eP	45	00.00	1.9
ISA	99.70	55	eP	45	10.00	5.2X
YKA	99.73	27	eP	45	02.70	-1.5
	1.0s	2.50nm				4.7mb X
NEW	100.03	42	e(Pdiff45	08.40		2.4
MWC	100.08	56	ePdiff45	23.00		16.2X
SBB	100.26	56	ePdiff45	13.00		



ANP	0.10	216	eP	23	59.30	0.1
			eS	24	06.70	
QZH	2.73	264	ePn	24	33.50	0.1
Z	11s		2.30um			
N	11s		1.90um			



PKY	87.80	243	eP	50	28.50	-7.2X
BUL	87.72	250	iPd	50	38.30	2.0X
	1.2s	17.19nm				5.2mb
KSR	88.29	244	iPd	50	39.90	0.9
	0.8s	6.25nm				5.0mb
OBN	94.19	325	eP	51	07.00	1.6
	1.2s	*****nm				8.4mb X
Z	24s	0.60um				5.0MsZX
N	20s	0.60um				
E	22s	0.60um				
		eSKS	01	40.00		
		LO	24	20.00		
SVW	96.02	29	eP	51	12.20	-1.6



IMA 97.61 24 ePd 51 21.50 0.5  
0.9s 7.55nm 5.3mb  
PMR 99.18 29 eP 51 27.20 -0.7  
1.0s 16.00nm 5.5mb  
FBA 99.96 26 eP 51 30.00 -1.5  
1.0s 8.50nm 5.2mb  
SOD 100.32 337 ePd 51 34.00 0.9  
KAF 100.34 332 iPd 51 35.30 2.0X  
0.4s 1.20nm 4.8mb  
esP 51 36.70  
NUR 101.11 330 iPd 51 40.00 3.3X  
0.8s 19.10nm 5.7mb  
BALM 102.45 30 ePd 51 42.00 -0.9  
INK 105.34 22 ePKP 56 10.00 0.8  
NB2 107.61 331 Pd 52 07.20 1.5  
1.1s 2.00nm 5.1mb  
YKA 114.73 25 ePd 52 52.30 15.0X  
0.4s 0.10nm  
YKA 114.73 25 ePKP 56 26.20 -1.1  
0.8s 4.80nm  
SSF 115.04 317 ePKP 56 29.40 1.0  
0.7s 4.40nm  
BGF 115.60 317 ePKP 56 30.70 1.2  
0.7s 8.80nm  
BMW 115.66 43 PKP 56 31.20 1.5  
GMW 115.70 42 PKP 56 30.70 1.0  
MAF 115.86 317 ePKP 56 31.00 1.0  
LON 116.54 43 PKP 56 32.00 0.7  
LDF 117.02 320 ePKP 56 33.30 1.2  
PNT 117.25 39 ePKP 56 33.00 0.4  
MFF 117.59 318 ePKP 56 34.50 1.3  
LPF 117.77 319 ePKP 56 34.70 1.2  
0.7s 8.80nm  
NEW 119.15 40 ePKP 56 36.30 0.1  
ISA 121.44 54 ePKP 56 42.00 1.0  
TNP 121.92 51 ePKPd 56 45.70 3.6X  
SES 122.01 36 ePKP 56 40.00 -1.6  
TOL 122.11 311 ePKP 56 47.50 5.4X  
ePP 58 48.00  
ePPS 09 44.00  
CLC 122.11 54 ePKP 56 43.00 0.7  
SBB 122.15 55 ePKP 56 44.00 1.6  
GSC 122.85 54 ePKP 56 45.00 1.3  
LRM 122.99 41 ePKP 56 44.30 0.4  
TPC 123.70 56 ePKP 56 47.00 1.6  
FFC 124.47 28 ePKP 56 47.00 0.8  
0.9s 16.00nm  
GLA 124.91 57 ePKP 57 00.10 12.3X  
ePP 00 21.20  
KIC 125.02 271 PKP 56 49.82 1.4  
LIC 125.28 271 PKP 56 50.22 1.3  
Z 20s 0.16um 4.7msz  
TIC 125.33 271 PKP 56 50.20 1.2  
MSU 125.64 49 PKP 56 50.60 1.3  
FRB 125.96 5 ePKP 56 48.00 -0.7  
LKO 126.21 275 PKP 56 50.56 -0.2  
RSSD 129.12 40 PKP 56 55.30 -0.4  
GOL 130.18 46 ePKPd 56 59.20 1.2  
ePP 00 20.00  
ALO 131.12 52 ePKP 57 02.00 2.2X  
e 00 24.50  
ANMO 131.12 52 PKP 57 01.30 1.5  
SCH 134.94 5 ePKP 57 08.00 1.8X  
TUL 138.65 46 ePKP 57 06.10 -7.6X  
1.0s 16.90nm  
FVM 141.07 39 ePKP 57 10.00 -8.0X  
e 57 18.10  
WVLY 143.83 23 PKP 57 20.50 -2.2  
VAO 144.78 201 ePKP 57 17.40 -7.6X  
e 57 31.50  
RSCP 145.59 38 ePKPd 57 25.00 -0.9  
e 01 04.90  
GBTN 146.35 37 PKP 57 27.30 0.1  
TBR 146.55 19 PKP 57 28.30 1.0  
TKL 146.61 36 PKP 57 27.90 0.3  
LVNJ 146.67 20 PKP 57 27.90 0.4  
PNJ 146.79 19 PKP 57 31.90 4.3X  
PPD 147.05 195 ePKP 57 31.20 2.5X  
e 57 36.40  
CVL 147.62 28 PKP 57 30.00 0.9  
NA2 147.82 26 PKP 57 30.20 0.8  
PRM 148.54 37 PKP 57 31.80 1.1  
JSC 149.05 35 PKP 57 32.50 1.0  
LHS 149.15 35 PKP 57 32.40 0.8  
PDCR 149.38 224 ePKP 57 36.90 4.4X  
e 57 43.70  
ARE 151.49 157 ePKP 57 43.00 7.0X

LPB 152.57 163 PKP 57 40.00 2.3X  
1.0s 80.00nm  
NNA 152.66 142 ePKP 57 40.00 2.6X  
1.0s 28.00nm  
ZOBO 152.81 163 PKP 57 40.00 1.8X  
1.1s 37.70nm  
Z 24s 0.18um 4.8mszX  
i 57 47.00  
LR 51 24.00  
SIV 154.22 178 PKP 57 41.40 1.9X  
S.D. = 1.1 on 103 of 150 obs.  
% MAY 17, 1991 06h 56m 59.37 ± 0.84s  
41.620 N ± 11.2km 6.975 W ± 12.6km  
DEPTH = 10.0km (geophysicist)  
PORTUGAL (376)  
mbLg 3.2 (MDD).  
ERUA 0.78 351 ePg 57 14.20 -0.4  
eSg 57 24.20  
EZAM 1.39 293 ePn 57 24.00 -0.8  
eSn 57 41.00  
EPLA 1.70 156 ePn 57 29.30 0.1  
eSn 57 54.10  
STS 1.72 318 ePn 57 30.70 1.2  
eSn 57 51.10  
GUD 2.34 114 ePn 57 38.60 -0.1  
eSn 58 08.50  
S.D. = 1.0 on 5 of 5 obs.  
MAY 17, 1991 07h 34m 15.72 ± 0.62s  
47.451 N ± 7.6km 115.788 W ± 6.0km  
DEPTH = 1.0km (geophysicist)  
MONTANA (456)  
MD 2.7 (BUT). Felt at Mullon,  
Idaho.  
EBI 0.65 200 iPd 34 29.00 0.2  
NEW 1.21 313 eP 34 39.00 -0.1  
DPW 1.69 285 eP 34 46.60 0.1  
HBMT 2.75 126 ePn 35 01.70 -0.3  
HRY 2.80 104 ePn 35 03.20 0.5  
LRM 2.82 124 ePn 35 03.60 0.6  
MCMT 3.33 141 ePn 35 09.80 -0.4  
BGMT 3.41 129 ePn 35 10.90 -0.5  
S.D. = 0.5 on 8 of 8 obs.  
\* MAY 17, 1991 08h 05m 18.97 ± 2.04s  
2.177 S ± 10.9km 79.833 W ± 26.5km  
DEPTH = 90.6 ± 21.8 km  
4.1mb ( 2 obs.)  
NEAR COAST OF ECUADOR (105)  
MD 4.4 (QUI).  
TUNG 1.58 62 P 05 47.30 0.8  
QUIL 1.68 33 P 05 47.10 -0.8  
S 06 06.90  
VC1 2.09 43 Pd 05 54.30 0.8  
GGP 2.34 32 P+ 05 57.30 0.4  
S 06 25.00  
OTO 2.35 34 eP 05 54.10 -2.7  
eS 06 22.70  
QUR 2.38 33 eP 05 57.30 0.0  
S 06 26.70  
YANA 2.41 32 Pd 05 57.90 0.2  
S 06 26.50  
ANGL 2.89 52 P 06 12.10 7.8X  
CAYA 2.91 40 P 06 05.00 0.4  
COTA 2.91 31 P 06 05.50 0.9  
NNA 10.19 163 eP 07 44.00 -0.3  
0.6s 6.00nm 4.7mb  
ZOBO 18.14 141 P 09 29.00 1.9X  
LPB 18.35 142 eP 09 24.00 -5.6X  
SIV 23.02 128 P 10 17.20 0.2  
ALQ 44.57 328 eP 13 25.00 1.0  
ANMO 44.57 328 (P) 13 25.00 1.0  
YKA 69.65 344 eP 16 18.40 -2.0  
0.5s 0.30nm 3.4mb  
S.D. = 1.3 on 14 of 17 obs.  
\* MAY 17, 1991 08h 42m 17.00 ± 1.41s  
45.316 N ± 7.9km 16.114 E ± 12.0km  
DEPTH = 11.7 ± 7.2 km  
YUGOSLAVIA (383)  
MD 2.8 (TRI). 2.6 (LJU).

ZAG 0.51 350 iPg 42 28.00 0.6  
iSg 42 37.00  
PTJ 0.59 349 ePg 42 27.50 -1.4  
e(Sg) 42 38.30  
VBY 0.63 288 iPg 42 28.50 -1.0  
iSg 42 39.60  
RIY 1.22 272 ePn 42 38.70 -0.8  
i 42 55.10  
iSn 42 57.10  
CEY 1.26 290 iPn 42 41.00 0.7  
eSg 42 59.50  
LJU 1.33 304 ePg 42 42.40 1.1  
i 42 43.60  
eSg 43 00.00  
TRI 1.70 284 ePg 42 46.40 -0.2  
iSg 43 11.00  
VOY 1.71 295 iPn 42 48.20 1.3  
eSn 43 08.50  
HVAR 2.15 173 iPn 42 53.40 0.2  
iSn 43 19.10  
S.D. = 1.2 on 9 of 9 obs.  
\* MAY 17, 1991 08h 55m 31.30s  
63.014 N 150.535 W  
DEPTH = 97.2km  
CENTRAL ALASKA (1)  
<AEIC>.  
HUR 0.41 95 iPc 55 46.22 -0.2  
eS 55 57.40  
TRF 0.45 14 ePd 55 46.81 -0.1  
eS 55 58.99  
CUT 0.62 169 iPc 55 47.88 -0.1  
RND 0.86 62 iPd 55 49.89 -0.5  
eS 56 04.93  
MCK 1.02 44 ePd 55 51.54 -0.5  
eS 56 07.30  
SKT 1.14 204 iPc 55 52.87 -0.5  
eS 56 09.60  
BWN 1.26 22 ePd 55 54.48 -0.3  
PWA 1.40 167 eP 55 56.41 -0.1  
eS 56 16.46  
GHO 1.45 148 iPc 55 57.11 -0.2  
eS 56 17.67  
SUA 1.56 184 ePc 55 59.04 0.4  
eS 56 21.14  
PLRM 1.57 155 eP 55 57.75 -0.9  
PMR 1.57 155 ePd 55 59.10 0.4  
SML 1.59 139 iPc 55 58.22 -0.7  
NEA 1.70 22 ePd 55 59.14 -1.2  
eS 56 20.32  
WRH 1.82 36 iPd 56 00.83 -1.1  
PMS 1.83 165 eP 56 01.54 -0.6  
eS 56 24.46  
KNK 1.88 148 ePc 56 01.61 -1.1  
SCM 1.91 127 eP 56 01.35 -1.8  
CRP 1.91 204 eP 56 03.49 0.2  
BGL 1.96 207 eP 56 04.09 0.2  
SPU 1.97 202 eP 56 04.06 0.1  
CKL 2.01 206 eP 56 04.61 0.1  
CCB 2.04 35 ePd 56 03.45 -1.3  
HDA 2.12 47 ePd 56 04.59 -1.3  
MDM 2.20 26 iPd 56 05.81 -1.2  
TOA 2.22 112 ePc 56 07.00 -0.2  
FBA 2.25 31 ePd 56 06.90 -0.7  
PAX 2.31 89 ePc 56 08.01 -0.5  
SDG 2.35 100 eP 56 08.45 -0.5  
GLM 2.42 34 iPd 56 08.76 -1.2  
TTA 2.50 271 eP 56 10.50 -0.6  
RDT 2.61 201 eP 56 12.69 0.2  
KLU 2.64 123 eP 56 10.94 -2.1  
VZV 2.71 135 eP 56 11.80 -2.1  
VLZ 2.74 132 eP 56 11.48 -2.6  
RDW 2.76 204 ePc 56 15.21 0.5  
SEW 2.97 169 eP 56 16.09 -1.2  
DOT 2.99 75 ePc 56 16.13 -1.5  
KNIM 2.99 152 ePc 56 14.70 -2.9  
CNPM 3.52 186 eP 56 23.84 -1.0  
GLB 3.52 114 ePc 56 22.95 -2.0  
CROM 4.17 120 eP 56 32.01 -2.0  
BALM 4.34 114 eP 56 32.55 -3.7  
43 obs. associated  
MAY 17, 1991 09h 08m 52.19 ± 1.39s  
10.409 N ± 6.3km 125.299 E ± 9.7km  
DEPTH = 51.5 ± 13.4 km  
4.8mb ( 16 obs.) 4.3msz ( 9 obs.)



17d 09h

## LEYTE, PHILIPPINE ISLANDS (256)

DAV	3.31	175	eP	09 44.00	1.2
BAG	7.53	323	eP	10 40.80	-1.4
	1.0s	68.00nm			5.4mb
OZH	15.80	337	eP	12 32.70	-0.1
N	14s	0.69um			
GZH	17.01	319	eP	12 50.00	1.8
	1.4s	90.00nm			4.7mb
N	14s	1.10um			
E	14s	0.90um			
OIZ	17.22	302	eP	12 50.70	-0.1
N	13s	1.20um			
SSE	20.94	350	Pc	13 31.50	-1.4
	1.2s	20.00nm			4.3mb
Z	20s	1.10um			4.2msz
E	14s	0.70um			
	sS			17 39.00	
NJ2	22.35	345	eP	13 48.00	1.0
Z	18s	0.60um			4.1msz
N	12s	0.50um			
E	12s	1.00um			
WHN	22.48	335	eP	13 49.50	1.2
E	17s	1.53um			
GYA	23.77	315	P	14 02.40	1.3
N	16s	1.00um			
E	16s	1.40um			
IPM	24.74	258	ePc	14 11.90	1.4
	0.9s	35.20nm			4.9mb
KMI	25.93	307	eP	14 23.00	1.2
	1.5s	50.00nm			4.8mb
TIA	26.74	345	eP	14 28.60	-0.2
Z	22s	0.70um			4.2msz
E	13s	0.80um			
CHG	26.81	291	eP	14 29.00	-0.7
XAN	27.90	330	P	14 38.00	-1.5
N	13s	0.60um			
CD2	28.57	319	P	14 45.00	-0.6
BJI	30.60	346	eP	15 03.00	-0.5
Z	20s	0.60um			4.2msz
SNY	31.33	358	eP	15 09.00	-0.9
Z	18s	0.80um			4.4msz
E	12s	0.50um			
WRA	31.45	164	P	15 30.00	18.9X
	0.9s	2.00nm			
WB2	31.45	164	eP	15 08.60	-2.6
	0.7s	4.50nm			4.4mb
LZH	32.12	326	eP	15 16.50	-0.6
	1.5s	57.00nm			5.2mb
Z	24s	1.03um			4.4mszX
N	17s	1.25um			
	sP			15 26.00	
	PP			16 22.50	
	eS			20 25.00	
	SS			22 18.00	
HHC	32.66	341	eP	15 22.60	1.0
Z	20s	1.25um			4.6msz
E	12s	0.40um			
BTO	32.97	338	eP	15 24.00	-0.3
N	14s	0.50um			
E	14s	0.40um			
OIS	33.84	155	eP	15 30.00	-1.9
MDJ	34.28	5	eP	15 39.80	4.3X
Z	20s	0.47um			4.2msz
ASPA	34.89	166	iPd	15 39.50	-1.5
	1.0s	9.40nm			4.7mb
Z	21s	0.60um			4.3msz
WARB	36.39	178	eP	15 53.00	-0.6
CTA	36.66	146	iP	15 56.80	0.9
	1.3s	25.96nm			5.0mb
GTA	36.73	326	eP	15 56.00	-0.5
	1.4s	30.00nm			5.0mb
Z	26s	1.30um			4.6mszX
N	24s	3.00um			
	pP			16 09.40	50kmX
	PcP			18 21.00	
LSA	37.17	306	eP	16 01.40	0.7
GUN	40.88	301	P	16 31.30	-0.1
PKI	41.18	300	P	16 33.10	-0.8
KKN	41.35	300	P	16 34.60	-0.6
	0.8s	34.00nm			5.1mb
DMN	41.44	300	P	16 35.50	-0.5
	1.0s	45.00nm			5.2mb
GKN	41.95	300	P	16 40.30	0.2
STK	44.85	160	eP	17 07.10	3.9X
	0.8s	3.90nm			4.3mb
	e			18 52.40	

IRK	45.09	342	eP	17 05.20	0.2
HYB	45.82	284	eP	17 12.00	0.8
WMO	46.53	323	P	17 16.70	0.2
	1.2s	10.00nm			4.6mb
Z	20s	0.88um			4.7msz
N	20s	1.86um			
E	20s	1.36um			

GBA	46.87	279	Pc	17 19.20	-0.3
	1.2s	21.20nm			4.9mb
ADE	46.88	165	eP	17 19.70	0.4
YAK	51.62	3	eP	17 53.60	-1.7
DZM	51.67	129	iPd	17 58.70	2.2
QUE	57.54	299	eP	18 32.00	-7.3X
MAIO	64.44	305	eP	19 25.00	-0.8
FBA	79.34	26	P	20 58.20	4.4X
INK	84.51	21	eP	21 23.00	2.5
YKA	94.02	24	eP	22 06.40	0.6
	0.8s	1.60nm			4.5mb
LPB	165.62	116	ePKP	28 55.00	1.6
ZOBO	165.70	115	PKP	28 58.20	4.5X
	S.D. = 1.2	on 43 of	49 obs.		

% MAY 17, 1991 09h 50m 20.75±0.88s  
 45.686 N ±12.1km 26.441 E ±14.6km  
 DEPTH = 120.0km (geophysicist)

## ROMANIA (358)

VRI	0.27	47	iPc	50 36.50	-0.7
MLR	0.40	241	iPc	50 38.50	-0.1
BRD	0.46	111	eP	50 44.00	5.3X
ISR	0.55	172	ePc	50 40.00	0.6
PPE	0.98	57	eP	50 44.00	1.2
CLI	1.04	34	eP	50 43.00	-0.5
CFR	1.31	112	ePc	50 46.00	-0.3
TLB	1.57	134	iPc	50 49.00	-0.4
	S.D. = 0.8	on 7 of	8 obs.		

? MAY 17, 1991 09h 51m 59.81±1.00s  
 39.190 N ±7.9km 27.622 E ±13.3km  
 DEPTH = 10.0km (geophysicist)

## TURKEY (366)

Izm	0.84	200	ePg	52 16.00	-0.1
			iSg	52 28.50	
DST	0.88	62	ePn	52 17.00	0.2
EDC	1.17	9	ePn	52 21.00	-0.7
KGT	1.28	349	ePn	52 24.10	0.5
	S.D. = 0.9	on 4 of	4 obs.		

\* MAY 17, 1991 10h 28m 15.63±1.38s  
 31.278 S ±9.9km 68.508 W ±12.1km  
 DEPTH = 106.9 ±14.6 km

## SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.06	147	iPc	28 30.50	-0.4
ZON	0.30	209	iPd	28 31.20	-0.1
			eS	28 43.20	
RTCB	0.32	230	iPd	28 31.30	-0.2
CTA	0.40	145	iPc	28 32.10	0.3
			eS	28 44.10	
RTRS	1.38	323	iPc	28 41.20	0.1
MDZ	1.63	190	iP	28 45.40	1.1
			iS	29 05.20	
TCA	3.35	92	ePd	29 07.30	0.1
			S	29 39.20	
RFA	3.48	179	iPc	29 08.00	-0.9
			S	29 41.30	
	S.D. = 0.8	on 8 of	8 obs.		

? MAY 17, 1991 10h 54m 26.76±1.36s  
 41.366 S ±38.8km 42.207 E ±28.0km  
 DEPTH = 10.0km (geophysicist)

## PRINCE EDWARD ISLANDS REGION (431)

PRY	18.83	315	eP	58 47.50	-1.5
SLR	19.39	319	iPd	58 57.00	1.1
	0.4s	8.47nm			4.4mb
KSR	19.99	316	iPd	59 03.30	0.9
	0.9s	15.38nm			4.3mb
GBA	63.64	39	P	05 00.00	-0.3
STK	76.02	120	eP	06 20.70	4.8X
	0.8s	1.60nm			4.2mb
WRA	78.65	106	P	06 31.00	0.4
	0.7s	1.10nm			4.0mb
WB2	78.65	106	iPc	06 31.00	0.3
	1.1s	2.00nm			4.1mb

INK	152.90	357	ePKP	14 28.00	11.2X
YKA	154.73	335	ePKP	14 29.20	9.7X
	0.7s	0.30nm			
FBA	155.73	10	(PKP)	14 20.00	-0.8
	S.D. = 1.1	on 7 of	10 obs.		

\* MAY 17, 1991 10h 56m 21.93±1.04s  
 11.819 N ±15.7km 87.344 W ±7.6km  
 DEPTH = 84.3km (2 depth phases)

## NEAR COAST OF NICARAGUA (74)

YUP	3.37	315	iPc	57 11.00	-2.5
IXG	3.83	308	iPd	57 18.50	-1.4
			S	57 59.00	
SLP	4.08	316	eP	57 25.00	1.6
TER	4.08	308	iP	57 22.30	-1.1
			S	58 02.00	
FUG	4.29	308	eP	57 26.00	-0.4
			S	58 12.00	
SBG	5.64	306	iP	57 46.00	0.6
TPX	5.68	303	iP	57 47.00	1.4
			iS	58 43.00	
UPA	8.18	109	eP	58 20.50	0.5
OXX	10.48	301	(P)	58 50.00	-1.5
PIO	11.40	295	(P)	59 05.50	1.8
IISM	12.01	308	(P)	59 11.50	-0.2
PPM	13.04	305	(P)	59 28.00	2.2
PRM	22.62	11	P	01 17.80	1.3
JSC	23.04	13	P	01 21.50	1.0
LHS	23.33	14	P	01 24.40	1.1
RSCP	23.73	4	P	01 27.30	0.0
GBTN	23.91	6	P	01 30.50	1.5
TKL	23.95	7	P	01 29.90	0.5
TUL	25.17	344	eP	01 38.80	-2.2
	1.2s	90.20nm			5.1mb
ALO	28.83	326	eP	02 14.90	0.3
	1.1s	5.38nm			4.1mb
		e		02 40.00	115kmX
ANMO	28.83	326	P	02 15.40	0.8
	1.0s	5.00nm			4.1mb
GOL	32.03	333	P	02 42.50	-0.3
		e		03 02.70	87km
ZOBO	33.77	145	P	03 08.00	9.5X
LPB	34.00	146	P	03 11.00	10.7X
MSU	34.59	325	P	03 05.50	0.6
TNP	37.35	320	P	03 29.20	1.0
	0.5s	2.15nm			4.3mb
SIV	37.94	136	P	03 41.00	7.9X
LRM	40.05	333	eP	03 51.10	0.4
FFC	44.33	348	ePc	04 24.00	-1.2
	0.6s	10.00nm			4.8mb
SCH	45.85	16	eP	04 36.00	-1.2
	0.5s	12.00nm			5.0mb
PNT	45.92	331	eP	04 38.00	0.1
	0.6s	4.00nm			4.5mb
FRB	53.52	10	eP	05 34.00	-1.7
YKA	54.24	345	eP	05 38.90	-2.1
	0.8s	1.70nm			4.1mb
INK	63.83	343	eP	06 47.00	-0.2
		pP		07 08.00	81km
WB2	139.18	253	iPKPc	15 47.50	5.8X
	0.7s	2.40nm			
		e		16 07.80	
WRA	139.19	253	PKP	15 41.00	-0.7
	1.0s	1.00nm			
S.D. = 1.3 on 32 of 36 obs.					
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MAY 17, 1991 11h 22m 51.99± 0.64s					
43.872 N ± 5.2km 7.538 E ± 5.7km					
DEPTH = 10.0km (geophysicist)					
NEAR SOUTH COAST OF FRANCE (379)					
ML 2.4 (LDG), 2.2 (GEN).					
SBF	0.07	264	Pg	22 54.00	-0.5
			Sg	22 56.00	
ENR	0.36	347	P	22 59.14	-0.4
			S	23 04.23	
STV	0.40	338	P	22 59.87	-0.4
			S	23 05.25	
ROB	0.49	29	P	23 01.50	-0.4
			S	23 07.97	
FIN	0.59	55	P	23 05.03	1.1
			S	23 13.81	
PZZ	0.71	334	P	23 05.35	-0.7
			S	23 14.48	
FRF	0.72	245	Pg	23 06.60	0.5



LMR 0.92 235 Sg 23 16.60  
 Sg 23 10.10 0.5  
 Sg 23 23.40  
 LRG 0.95 244 Pp 23 10.40 0.3  
 Sg 23 24.40  
 PCP 0.99 47 P 23 11.56 0.8  
 S 23 25.61  
 BHB 0.99 349 P 23 09.44 -1.3  
 S 23 22.58  
 PGF 1.70 141 Pn 23 20.40 -1.5  
 LPG 1.72 341 Pp 23 24.40 2.0  
 S.D. = 1.1 on 13 of 13 obs.

\* MAY 17, 1991 11h 23m 02.43 ± 1.16s  
 39.194 N ± 10.5km 114.960 W ± 7.2km  
 DEPTH = 5.0km (geophysicist)

NEVADA (37)  
 ML 3.2 (GS). Felt (IV) at Ely.  
 Felt (III) at East Ely and  
 McGill.

WRN 1.31 202 eP 23 27.20 0.0  
 SRG 1.31 184 eP 23 27.40 0.1  
 TPU 1.68 199 eP 23 32.60 -0.2  
 PRN 1.79 182 eP 23 34.40 0.1  
 TNP 2.09 239 eP 23 38.60 -0.1  
 MSU 2.28 106 eP 23 41.50 0.0  
 KVN 2.45 268 eP 23 44.00 0.1  
 ANMO 8.01 119 P 25 29.40 27.0X  
 S.D. = 0.1 on 7 of 8 obs.

\* MAY 17, 1991 11h 31m 20.78 ± 0.69s  
 37.742 N ± 6.8km 14.968 E ± 5.6km  
 DEPTH = 10.0km (geophysicist)

SICILY (398)

MNO 0.29 311 Pp 31 27.10 0.2  
 eSg 31 30.80  
 ATN 0.57 43 P 31 32.40 0.0  
 eSg 31 41.90  
 MEU 0.64 183 P 31 33.50 -0.2  
 eSg 31 42.30  
 GIB 0.78 289 P 31 35.50 -0.6  
 eSg 31 48.80  
 SOI 0.92 69 P 31 38.40 0.1  
 eSg 31 51.10  
 FAI 1.13 246 P 31 42.40 0.5  
 S.D. = 0.5 on 6 of 6 obs.

\* MAY 17, 1991 12h 34m 59.71 ± 0.85s  
 37.074 N ± 9.3km 29.432 E ± 6.4km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

ELL 0.50 130 iPg 35 09.50 -0.4  
 YER 0.92 274 iPg 35 17.60 0.3  
 iSg 35 31.10  
 BCK 1.00 67 ePn 35 19.50 0.8  
 CIN 1.19 296 eP 35 22.00 0.1  
 KHL 1.25 3 ePn 35 22.30 -0.7  
 S.D. = 0.8 on 5 of 5 obs.

\* MAY 17, 1991 14h 07m 16.57 ± 0.66s  
 45.859 N ± 5.1km 7.162 E ± 5.9km  
 DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)

ML 2.6 (LDG), 2.6 (GEN).

LSD 0.40 181 P 07 24.76 -0.1  
 S 07 29.88  
 LPL 0.46 221 Pp 07 26.00 0.1  
 Sg 07 31.80  
 ORX 0.62 111 P 07 29.06 0.0  
 S 07 37.18  
 RSP 0.71 175 P 07 30.50 -0.2  
 S 07 39.63  
 RRL 0.98 196 P 07 35.22 -0.1  
 S 07 47.32  
 BHB 1.02 176 P 07 36.12 0.2  
 S 07 48.82  
 PZZ 1.36 182 P 07 41.72 0.1  
 S 07 59.11  
 BSF 1.99 353 Pp 07 55.60 4.9X  
 Sg 08 21.80  
 SBF 2.01 174 Pp 07 57.00 6.1X  
 Sg 08 23.60  
 HAU 2.22 346 Pp 08 00.40 6.4X

FRF 2.33 189 Sg 08 28.40  
 Pp 08 01.00 5.5X  
 Sg 08 31.80  
 SMF 2.43 290 Pn 07 56.80 -0.2  
 Pp 08 03.60  
 Sg 08 32.80  
 LOR 2.68 303 Pn 08 01.00 0.5  
 Pp 08 08.00  
 Sg 08 40.60  
 AVF 2.80 291 Pp 08 10.20 8.0X  
 Sg 08 44.00  
 SSF 2.80 297 Pn 08 01.90 -0.3  
 Pp 08 09.80  
 Sg 08 43.60  
 BGF 3.08 285 Pp 08 15.00 8.9X  
 Sg 08 53.20  
 S.D. = 0.3 on 10 of 16 obs.

\* MAY 17, 1991 14h 25m 50.01 ± 0.28s  
 36.573 S ± 3.8km 70.591 W ± 6.1km  
 DEPTH = 141.8km (2 depth phases)

CHILE-ARGENTINA BORDER REGION (127)

RFA 2.50 45 iPd 26 34.00 2.8  
 LNV 2.70 345 iPd 26 33.50 -0.2  
 TACH 2.93 354 iPd 26 36.50 -0.2  
 i 27 09.50  
 PCH 2.95 1 iPd 26 37.50 0.5  
 iS 27 08.00  
 i 27 11.50  
 SAN 3.11 359 iPd 26 39.30 0.2  
 i 27 12.70  
 LCCH 3.19 345 iPd 26 39.50 -0.6  
 iS 27 11.00  
 PEL 3.42 359 iPd 26 42.60 -0.6  
 iS 27 17.00  
 ROCH 3.61 354 iPd 26 45.10 -0.7  
 iS 27 21.50  
 i 27 26.70  
 IHA 3.64 346 eP 26 45.20 -0.8  
 e(S) 27 19.00  
 JACH 3.88 360 iPd 26 39.50 -9.8X  
 iS 27 11.00  
 MDZ 3.95 22 e(P) 26 43.80 -6.4X  
 RTCB 5.29 17 ePd 27 08.80 0.7  
 CFA 5.32 22 ePd 27 08.90 0.3  
 eS 28 08.50  
 RTLL 5.52 19 iPd 27 11.00 -0.2  
 S 28 11.70  
 RTRS 6.46 9 iPd 27 23.80 0.0  
 TCA 7.22 45 iPd 27 34.30 0.0  
 ITB7 18.11 56 Pp 29 53.80 0.1  
 ITB1 18.29 54 Pp 29 55.20 -0.4  
 ITB 18.31 55 Pd 29 55.30 -0.5  
 ARE 20.05 357 iPd 30 16.00 1.7  
 0.5s 50.70nm 5.2mb  
 LPB 20.08 7 P 30 21.00 6.2X  
 e 30 02.00  
 ZOBO 20.34 7 Pp 30 18.00 0.4  
 1.0s 25.00nm 4.6mb  
 S 33 59.00  
 PPD 22.13 54 eP 30 33.90 -0.8  
 e 30 36.10 8kmX  
 SIV 22.18 25 P 30 34.60 -0.6  
 VAO 24.48 63 ePp 30 58.00 0.6  
 NNA 25.12 345 eP 31 02.50 -0.8  
 0.9s 23.53nm 4.7mb  
 BMA 26.71 66 eP 31 17.70 -0.2  
 e 31 21.90 15kmX  
 e 31 30.40  
 JFO 27.91 66 ePp 31 29.00 0.3  
 PDCR 37.03 58 eP 32 46.70 -0.9  
 e 35 05.50  
 SNA 48.76 155 iPd 34 23.20 1.5  
 1.0s 350.00nm 6.1mb  
 NVL 53.49 156 ePd 34 57.50 0.3  
 e 35 13.00 59kmX  
 e 35 31.00  
 e 36 02.00  
 SPA 53.61 180 iPd 34 59.00 0.6  
 1.0s 25.00nm 5.0mb  
 i 35 09.30 34kmX  
 MAW 70.38 163 iPd 36 50.20 0.4  
 0.8s 30.00nm 5.2mb  
 CER 70.97 118 iPd 36 53.00 -1.0  
 1.0s 70.00nm 5.4mb

LIC 74.50 70 Pp 37 15.04 0.3  
 0.7s 32.50nm 5.2mb  
 TIC 74.78 70 P 37 16.62 0.2  
 KIC 74.81 70 Pp 37 16.90 0.4  
 0.6s 51.00nm 5.4mb  
 WIN 75.15 107 iPd 37 19.50 0.8  
 1.0s 40.00nm 5.1mb  
 TUL 75.82 339 e(P) 37 04.80 -17.0X  
 LKO 76.24 67 Pp 37 23.36 -1.3  
 0.9s 45.50nm 5.2mb  
 ALO 78.60 331 eP 37 37.70 0.3  
 1.0s 7.50nm 4.4mb  
 e 38 13.00 141km  
 ANMO 78.60 331 P 37 38.00 0.6  
 pP 38 13.60 143km  
 KSR 80.63 115 iPd 37 47.10 -1.5  
 1.0s 20.00nm 4.8mb  
 SLR 81.71 116 iPd 37 53.20 -1.0  
 0.4s 33.90nm 5.4mb  
 BUL 85.29 111 iPd 38 13.10 0.7  
 1.0s 35.00nm 5.2mb  
 PRI 85.99 322 ePd 38 18.50 3.1X  
 CMR 87.34 323 ePd 38 23.50 1.7  
 KRI 88.05 109 iPd 38 29.00 3.2X  
 BRK 88.14 322 eP 38 19.20 -6.3X  
 ORV 89.07 323 eP 38 31.80 1.9  
 ASPA 115.78 205 ePKP 44 16.20 -1.2  
 0.8s 2.70nm  
 NB2 117.54 33 PKP 44 19.20 -0.5  
 0.7s 2.20nm  
 HFS 118.26 34 ePKP 44 19.40 -1.6  
 0.6s 5.20nm  
 WB2 119.05 207 iPKPd 44 22.90 -0.8  
 0.5s 7.20nm  
 WB2 119.05 207 ePd 44 45.30 0.3  
 0.9s 0.60nm  
 WRA 119.05 207 PKP 44 23.00 -0.7  
 0.5s 7.00nm  
 NUR 123.50 36 iPKP 44 30.50 -0.4  
 0.6s 8.80nm  
 KAF 124.68 35 iPKP 44 32.60 -0.6  
 0.5s 5.30nm  
 esP 44 33.50  
 SOD 125.89 28 iPKP 44 35.40 0.0  
 KEV 126.38 25 ePKP 44 36.00 -0.3  
 MAIO 140.21 75 ePKP 45 03.00 -0.5  
 GBA 143.38 120 PKP 45 05.60 -3.9X  
 0.6s 7.90nm  
 POO 143.98 110 iPKPd 45 08.20 -2.3  
 QUE 144.20 88 ePKP 45 10.50 -0.3  
 1.0s 400.00nm  
 PSI 144.93 162 ePKPp 45 17.50 5.3X  
 0.7s 15.10nm  
 KGM 145.16 169 ePKP 45 13.40 0.8  
 IPM 147.24 164 ePKPd 45 21.00 5.0X  
 0.7s 21.10nm  
 GAR 149.17 73 ePKP 45 23.80 5.3X  
 YAK 151.55 340 iPKPd 45 27.40 6.2X  
 e 46 06.00  
 NDI 151.87 97 iPKPp 45 29.80 7.1X  
 0.6s 23.33nm  
 GKN 157.43 105 PKP 45 30.60 0.2  
 DMN 157.60 107 PKP 45 32.40 1.6  
 PKI 157.82 107 PKP 45 32.60 1.5  
 KKN 157.82 106 PKP 45 31.20 0.2  
 S.D. = 0.9 on 61 of 74 obs.

\* MAY 17, 1991 14h 30m 21.38 ± 1.31s  
 44.473 N ± 13.2km 7.263 E ± 10.0km  
 DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)

ML 2.1 (GEN).

PZZ 0.12 286 P 30 24.51 0.0  
 S 30 26.46  
 STV 0.23 169 P 30 26.46 0.0  
 S 30 29.54  
 ENR 0.27 155 P 30 27.08 0.0  
 ROB 0.47 112 P 30 30.97 0.0  
 S 30 38.56  
 S.D. = 0.1 on 4 of 4 obs.

\* MAY 17, 1991 15h 03m 17.11 ± 0.45s  
 49.130 N ± 4.0km 6.898 E ± 6.4km  
 DEPTH = 10.0km (geophysicist)

GERMANY (543)

MD 2.6 (STR), 2.2 (UCC).



17d 15h

GWF 0.50 108 Pg 03 27.16 -0.1  
 RUP 0.58 10 ePg 03 27.93 -1.0  
 WLF 0.72 318 iPd 03 30.54 -0.8  
 S 03 40.10  
 CDF 0.76 161 Pg 03 31.41 -0.6  
 WLS 0.78 157 Pg 03 31.92 -0.4  
 Sg 03 42.24  
 ECH 0.93 169 Pg 03 34.99 0.1  
 VITF 1.10 214 Pg 03 37.30 -0.4  
 Sg 03 52.43  
 MOF 1.29 173 Pg 03 41.79 0.7  
 Sg 03 59.66  
 FEL 1.46 149 Pg 03 44.77 1.2  
 Sg 04 04.76  
 MEM 1.59 339 iPc 03 45.57 0.3  
 ENN 1.76 339 iPnc 03 49.10 1.4  
 eSn 04 13.50  
 LOMF 1.78 182 Pn 03 47.60 -0.6  
 DOU 1.78 304 iP 03 48.30 0.2  
 S.D. = 0.8 on 13 of 13 obs.

? MAY 17, 1991 17h 04m 31.63±0.95s  
 35.257 N ±23.3km 74.294 E ±26.0km  
 DEPTH = 33.0km (normal)  
 3.8mb ( 5 obs.)  
 NORTHWESTERN KASHMIR (720)

NDI 7.01 158 ePn 06 15.00 0.4  
 iSn 07 28.00  
 GKN 11.40 127 P 07 14.96 -0.3  
 KKN 11.96 125 P 07 22.44 -0.6  
 DMN 11.97 127 P 07 22.96 -0.2  
 PKI 12.19 126 P 07 25.44 -0.8  
 HFS 45.69 322 eP 12 51.70 0.9  
 0.8s 3.80nm 4.4mb  
 NB2 46.97 324 P 12 58.00 -3.0  
 0.9s 1.50nm 4.0mb  
 WRA 79.07 124 P 16 35.00 0.6  
 1.5s 1.10nm 3.6mb  
 WB2 79.08 124 eP 16 35.50 1.1  
 1.0s 1.10nm 3.8mb  
 YKA 82.33 4 eP 16 52.70 1.8  
 0.8s 0.50nm 3.6mb  
 S.D. = 1.5 on 10 of 10 obs.

MAY 17, 1991 17h 23m 20.91±0.36s  
 36.197 N ±9.0km 68.732 E ±5.3km  
 DEPTH = 33.0km (normal)  
 4.5mb ( 20 obs.)  
 HINDU KUSH REGION (718)

KSH 6.59 58 Pn 24 59.00 0.8  
 Sn 26 13.00  
 MAIO 7.46 274 ePn 25 09.00 -1.3  
 0.8s 16.47nm 5.1mb  
 eSn 26 32.00  
 NDI 10.36 134 eP 25 52.00 1.7  
 0.4s 21.19nm 5.7mb X  
 iS 27 48.00  
 GKN 15.75 117 P 27 00.48 -1.5  
 DMN 16.31 117 P 27 08.58 -0.7  
 KKN 16.33 116 P 27 07.58 -2.0  
 WMO 16.38 57 P 27 07.00 -2.9  
 1.0s 24.00nm 4.3mb  
 Z 12s 0.63um 4.0MsZ  
 pP 27 12.00  
 PKI 16.55 117 P 27 11.72 -0.7  
 LSA 19.88 103 P 27 55.10 2.4  
 HYB 20.63 152 eP 28 04.00 3.8X  
 GBA 23.82 159 P 28 39.00 7.2X  
 0.7s 2.60nm 3.9mb  
 GTA 24.71 73 eP 28 41.40 1.0  
 1.0s 10.00nm 4.3mb  
 Z 12s 0.70um 4.4MsZ  
 E 10s 0.50um  
 pP 28 51.80 39kmX  
 PP 29 12.00  
 LZH 28.27 80 eP 29 31.00 17.7X  
 1.5s 17.00nm  
 Z 15s 0.34um 4.1MsZ  
 QBN 28.97 321 eP 29 18.00 -1.2  
 1.2s \*\*\*\*\*nm 7.7mb X  
 e 29 41.00 103kmX  
 ePP 30 20.00  
 e 35 08.00  
 CD2 29.56 90 eP 29 25.60 0.7

IRK 29.76 46 eP 29 25.40 -1.0  
 CHG 31.72 115 eP 29 45.00 1.0  
 BTO 32.44 69 eP 29 51.00 0.8  
 XAN 32.78 82 P 29 54.40 1.2  
 VRI 32.80 300 eP 29 56.00 2.9X  
 MLR 33.33 300 eP 30 00.00 2.1  
 GYA 33.64 96 Pd 30 01.80 1.0  
 LOE 34.66 114 eP 30 10.00 0.5  
 KAF 36.90 328 eP 30 30.00 2.1  
 0.8s 2.50nm 4.1mb  
 esP 30 31.90  
 NUR 37.02 325 iP 30 28.60 -0.3  
 e 30 44.00 60kmX  
 KRA 37.53 307 iPc 30 33.90 0.5  
 WHN 38.24 85 eP 30 40.00 0.4  
 SOD 39.25 336 eP 30 50.00 2.4  
 UPP 40.19 323 iP 30 55.10 -0.3  
 PRU 41.01 307 eP 31 03.00 0.7  
 BRG 41.37 308 e(P) 31 06.40 1.1  
 KHC 41.68 306 eP 31 19.20 11.4X  
 HFS 42.18 322 eP 31 11.40 -0.4  
 0.7s 10.70nm 4.7mb  
 Z 17s 0.12um 3.8MsZ  
 e 31 13.70 8kmX  
 LR 48 33.00

IPM 43.26 129 ePd 31 26.60 5.5X  
 NB2 43.53 323 P 31 21.20 -1.6  
 0.7s 3.90nm 4.3mb  
 YAK 45.29 35 iPc 31 35.20 -1.7  
 BSF 46.30 305 eP 31 44.80 -0.4  
 0.7s 4.40nm 4.5mb  
 LPG 46.75 302 eP 31 49.00 0.0  
 0.7s 4.40nm 4.5mb  
 LPL 46.76 302 eP 31 49.30 0.3  
 SMF 48.50 304 eP 32 02.20 -0.2  
 0.8s 8.05nm 4.8mb  
 AVF 48.80 304 eP 32 04.40 -0.2  
 0.7s 4.95nm 4.6mb  
 BGF 49.19 304 eP 32 07.30 -0.3  
 MAF 49.45 303 eP 32 09.90 0.2  
 TCF 49.68 303 eP 32 11.60 0.2  
 0.8s 5.35nm 4.6mb  
 LSF 50.14 304 eP 32 14.60 -0.4  
 0.8s 6.70nm 4.7mb  
 LDF 50.70 307 eP 32 18.40 -0.7  
 0.5s 4.35nm 4.7mb  
 FLN 50.89 307 eP 32 19.90 -0.7  
 0.5s 4.35nm 4.7mb  
 Z 19s 0.08um 3.7MsZ  
 EKA 51.23 316 P 32 23.00 -0.1  
 0.6s 3.50nm 4.5mb  
 INK 74.49 8 eP 34 58.00 0.7  
 FBA 75.25 15 P 35 02.00 0.2  
 YKA 81.62 2 eP 35 35.70 -0.7  
 0.9s 2.60nm 4.2mb  
 WRA 83.40 120 P 35 46.00 -0.4  
 0.9s 3.10nm 4.4mb  
 WB2 83.41 120 eP 35 44.60 -1.8  
 0.8s 2.90nm 4.5mb  
 ASPA 85.60 123 eP 35 57.20 -0.2  
 0.8s 2.40nm 4.5mb  
 S.D. = 1.2 on 48 of 54 obs.

? MAY 17, 1991 18h 06m 04.96±0.99s  
 31.233 S ±20.0km 68.540 W ±29.5km  
 DEPTH = 90.0km (geophysicist)  
 4.4mb ( 1 obs.)  
 SAN JUAN PROVINCE, ARGENTINA (137)

RTLL 0.11 148 iPc 06 18.00 -0.2  
 ZON 0.33 201 iPc 06 19.20 0.4  
 eS 06 30.20  
 RTCB 0.34 221 iPd 06 18.60 -0.3  
 CFA 0.45 145 ePc 06 19.70 0.1  
 eS 06 30.80  
 RTRS 1.32 323 iPd 06 28.90 0.1  
 (S) 06 47.70  
 S.D. = 0.4 on 5 of 5 obs.

& MAY 17, 1991 18h 08m 47.00s  
 45.500 N 74.400 W  
 DEPTH = 18.0km (geophysicist)  
 4.4mb ( 1 obs.)  
 SOUTHERN ONTARIO (470)  
 <OTT-P>. mblg 3.2 (OTT). Felt at  
 Hawksbury, Ontario. Also felt at  
 Brownsburg and Lachute, Quebec.

BNH 2.41 111 eP 09 26.00 -0.2  
 WVLY 4.27 226 eP 09 54.00 1.4  
 LVNJ 4.70 183 e(P) 10 02.00 3.3  
 SCH 10.52 25 P 11 14.00 -5.9  
 0.6s 1.20nm 4.4mb  
 4 obs. associated

? MAY 17, 1991 21h 14m 05.80±1.66s  
 24.927 N ±25.6km 123.766 E ±49.3km  
 DEPTH = 33.0km (normal)  
 3.9mb ( 3 obs.)  
 SOUTHWESTERN RYUKYU ISLANDS (246)

SSE 6.55 340 eP 15 31.00 -11.4X  
 Z 20s 0.60um  
 N 12s 0.50um  
 E 12s 0.60um  
 Lg 17 27.20  
 TIY 15.99 326 eP 17 50.00 0.1  
 Z 13s 0.72um  
 N 12s 0.30um  
 BJI 16.36 339 eP 17 55.50 1.0  
 CD2 18.65 293 eP 18 32.50 9.4X  
 E 10s 0.73um  
 HHC 18.86 330 eP 18 31.40 5.6X  
 Z 18s 0.85um  
 E 10s 0.20um  
 BTO 19.40 327 eP 18 30.50 -1.6  
 N 13s 0.50um  
 E 13s 0.30um  
 LZH 20.41 308 eP 18 44.50 1.6  
 1.2s 18.00nm 4.3mb  
 Z 15s 0.48um 4.0MsZ  
 E 10s 0.30um  
 pP 18 50.00 20kmX  
 PP 19 09.50  
 GTA 24.79 311 eP 19 25.00 -1.2  
 Z 12s 0.40um 4.1MsZ  
 E 10s 0.35um  
 WRA 45.77 166 P 22 31.00 4.9X  
 0.9s 1.30nm 3.9mb  
 WB2 45.77 166 eP 22 26.30 0.1  
 1.2s 1.60nm 3.8mb  
 S.D. = 1.6 on 6 of 10 obs.

\* MAY 17, 1991 21h 16m 35.36±0.97s  
 80.610 N ±13.6km 2.279 W ±9.8km  
 DEPTH = 10.0km (geophysicist)  
 4.2mb ( 4 obs.)  
 NORTH OF SVALBARD (641)

KBS 3.05 117 iP 17 24.30 -0.1  
 eS 17 55.50  
 DAG 5.02 228 iPd 17 50.20 -2.1  
 0.5s 30.28nm 5.1mb X  
 e 18 45.50  
 KEV 12.94 131 eP 19 41.00 -0.7  
 SOD 15.16 134 iP 20 10.20 -0.5  
 NB2 20.04 161 P 21 12.00 1.1  
 0.8s 2.30nm 3.6mb  
 KAF 20.22 139 eP 21 13.40 0.8  
 1.0s 10.30nm 4.1mb  
 esP 21 17.50  
 HFS 21.09 157 eP 21 22.00 0.3  
 0.7s 10.00nm 4.3mb  
 Z 17s 0.10um 3.3MsZ  
 e 21 25.00  
 e 21 30.50  
 e 21 37.50  
 LR 26 52.00  
 NUR 21.62 143 eP 21 29.50 2.6X  
 1.3s 18.50nm 4.3mb  
 FRB 24.09 266 eP 21 53.00 1.8  
 INK 28.90 325 eP 22 42.00 6.3X  
 ZST 33.20 156 eP 23 23.20 9.4X  
 i 52 16.40  
 YAK 35.12 38 eP 23 28.80 -1.4  
 KKN 62.38 87 P 27 01.00 0.7  
 0.8s 20.00nm 5.4mb X  
 S.D. = 1.4 on 10 of 13 obs.

& MAY 17, 1991 21h 29m 11.97s  
 60.566 N 147.837 W  
 DEPTH = 13.7km  
 SOUTHERN ALASKA ( 2 )  
 <AEIC>. ML 2.8 (AEIC).



KNIM	0.22	167	iP	29	17.05	-0.6				pP	42	07.00	100km			LR	09	04.00				
GLI	0.48	49	iP	29	21.10	-0.6				PcP	43	57.60				LPB	148.34	99	PKP	54	13.20	5.2X
			eS	29	27.95					ScP	47	33.00					1.0s	80.00nm				
LTi	0.53	181	eP	29	21.65	-0.9	XAN	38.17	308	Pd	41	46.00	0.3			SIV	155.10	99	PKP	54	18.20	0.9
MTU	0.59	171	iP	29	23.47	-0.1	ASPA	38.46	196	eP	41	44.80	-3.4X			PDCR	176.26	74	(PKP)	54	29.00	-4.9X
KNK	0.90	341	eP	29	27.73	-1.2											S.D. = 1.1	on 76 of 86 obs.				
SEW	0.93	241	eP	29	27.82	-1.5																
			eS	29	40.21																	
VLZ	0.93	52	eP	29	28.21	-1.1										?	MAY 17, 1991	22h 03m	22.56± 2.11s			
			eS	29	40.57		HHC	39.58	320	P	41	58.60	1.2				43.328 N ±16.8km	147.063 E ±29.3km				
PMS	1.08	310	eP	29	31.01	-1.0	BTO	40.44	318	P	42	05.20	0.8				DEPTH = 178.6 ± 18.4 km					
			eS	29	45.10		KMI	40.94	293	eP	42	10.50	1.6				3.8mb ( 4 obs.)					
PLRM	1.21	329	eP	29	33.14	-0.9	CD2	41.25	302	P	42	11.40	0.3				KURIL ISLANDS					(221)
			eS	29	47.87																	
PMR	1.21	329	iPd	29	34.20	0.1	DZM	41.42	149	iPc	42	14.10	1.5			KUSJ	1.74	263	P	03	56.90	-0.1
SML	1.27	349	eP	29	34.46	-0.8	MBL	42.22	216	iPd	42	19.70	0.7									
SCM	1.30	11	eP	29	35.15	-0.5	LZH	42.79	309	Pd	42	24.50	0.6									
KLU	1.32	44	eP	29	34.51	-1.5										ASAJ	3.30	285	eP	04	15.50	0.2
			eS	29	52.23											MRRJ	4.49	260	eP	04	34.40	3.9X
GHO	1.32	337	eP	29	35.07	-1.0																
			eS	29	51.75																	
MID	1.37	146	iPc	29	36.90	0.3	WARB	43.20	204	iPc	42	28.30	1.3			YKA	56.19	34	eP	12	45.60	0.1
PWA	1.47	319	eP	29	36.85	-1.2																
SUA	1.68	304	eP	29	39.60	-1.6	SNG	43.65	266	eP	42	32.40	1.6			WB2	64.03	193	eP	13	39.10	0.1
			eS	30	01.50		IPM	43.85	262	ePc	42	35.80	3.3X									
NKA	1.68	278	iP	29	40.92	-0.2	CHG	44.03	283	eP	42	33.50	-0.4			NB2	69.97	339	P	14	15.90	0.0
TOA	1.74	27	ePd	29	43.30	1.3	STK	45.29	184	iPd	42	48.00	4.4X									
CRP	2.22	290	eP	29	46.95	-2.2	NANU	45.82	219	eP	42	48.00	0.0			HFS	70.05	337	eP	14	16.20	-0.1
			eS	30	14.67		GTA	46.96	312	iPd	42	57.40	0.4									
BGL	2.33	289	eP	29	48.34	-2.3																
SVW	3.85	282	eP	30	14.80	2.7	YAK	49.53	351	iPc	43	15.20	-1.1									
	22 obs.	associated					TOO	50.89	179	eP	43	28.50	1.5									
							BAL	51.46	211	eP	43	30.90	-0.6									
							LSA	51.74	297	Pd	43	34.80	0.6									
							MUN	52.83	210	eP	43	41.50	-0.1									
							PKI	56.63	294	P	44	08.40	-1.4									
							KKN	56.75	294	P	44	09.60	-0.9									
							DMN	56.90	294	P	44	10.80	-0.8									
							WMO	56.93	314	P	44	11.00	-0.4									
											</											



17d 22h

PEL	51.81	265	eP	58	08.50	0.4	CD2	43.67	340	eP	10	04.00	-0.5	OFUJ	4.53	19	P	03	05.60	-4.1X	
	1.0s	30.00nm			5.2mb		XAN	45.17	347	P	10	15.30	-1.3			S	03	55.10			
SIV	59.69	287	P	59	02.60	-2.4	GBA	48.29	298	Pc	10	39.70	-1.7	TKSJ	4.79	262	P	03	14.60	1.2	
LIC	61.37	356	P	59	16.80	0.5		0.5s	2.10nm			4.4mb		YONJ	5.18	276	P	03	20.00	1.3	
Z	20s	0.11um			4.0Msz		LZH	48.42	343	eP	10	44.00	1.7	SHK	5.84	269	iP	03	28.60	0.8	
KIC	61.49	357	P	59	17.28	0.1		1.5s	34.00nm			5.2mb			0.6s	333.33nm			5.7mb		
TIC	61.78	356	P	59	20.38	1.3	Z	15s	0.48um			4.6MszX		SHNJ	7.18	267	eP	03	47.50	1.5	
LPB	63.16	280	P	59	29.50	0.7	PKI	50.22	319	P	10	57.60	1.1	KUMJ	7.78	256	eP	03	55.70	1.4	
	1.0s	60.00nm			5.7mb		DMN	50.45	319	P	10	59.60	1.5	KAGJ	8.28	247	P	04	02.20	1.2	
Z	20s	2.84um			5.4Msz		KKN	50.46	319	P	10	57.90	-0.2	MDJ	12.53	324	Pc	04	57.60	0.3	
	LR		19	26.00			QUE	64.78	310	eP	12	39.30	0.2		1.0s	41.00nm			5.0mb		
ZOBO	63.39	280	P	59	30.20	-0.3	GAR	67.19	320	eP	12	53.00	-1.3	SNY	14.49	304	Pc	05	25.40	2.6X	
	1.0s	51.25nm			5.7mb		LPB	152.33	163	(PKP)	22	00.00	10.5X	SSE	16.02	262	P	05	42.00	-0.1	
Z	24s	1.59um			5.1MszX		ZOBO	152.58	163	PKP	22	02.00	12.0X	TIA	18.48	281	eP	06	07.90	-3.8X	
	S		08	10.00			SIV	154.01	178	ePKP	21	55.00	3.7X	WHN	21.79	266	eP	06	46.50	0.9	
	LR		19	12.00			S.D. = 1.4	on	18	of	22	obs.	TIY	22.20	285	eP	06	51.00	1.3		
LKO	64.68	356	P	59	36.64	-1.6								Z	20s	0.50um			3.9Msz		
NWAO	77.81	131	eP	00	56.40	-0.5	* MAY 18, 1991	00h	22m	08.60±	0.88s		BTO	24.16	293	eP	07	07.40	-1.4		
MUN	78.17	130	eP	00	58.50	-0.4		37.034	N	± 9.9km	29.396	E ± 6.4km	XAN	25.40	277	P	07	19.00	-1.4		
STK	87.64	149	iPc	01	52.10	4.5X		DEPTH =	10.0km	(geophysicist)			YAK	27.96	350	eP	07	42.00	-1.2		
ASPA	92.70	140	eP	02	17.70	6.2X	TURKEY				(366)		LZH	29.19	283	eP	07	49.50	-5.3X		
	1.0s	9.40nm			5.2mb									1.6s	23.00nm			4.6mb			
WB2	96.26	139	eP	02	37.70	9.8X	ELL	0.50	125	iPg	22	18.50	-0.3		pP		08	15.00	117km		
	1.5s	1.60nm			4.3mb			iSg			22	26.40		GYA	29.57	263	P	07	55.80	-2.4	
GTA	127.78	73	ePKP	08	03.00	-1.1	YER	0.90	277	ePn	22	26.50	0.7	CD2	30.39	273	P	08	03.20	-2.1	
XAN	128.62	84	PKP	08	06.40	-0.1	BCK	1.04	66	iPn	22	28.70	0.4	GTA	32.00	290	iPc	08	19.00	-0.4	
IRK	138.07	62	ePKP	08	24.50	0.7	CIN	1.19	299	eP	22	30.00	-0.7		0.8s	10.00nm			4.6mb		
CN2	144.66	86	ePKP	08	33.00	-2.7	KHL	1.29	4	ePn	22	32.50	-0.1	CHG	39.46	257	eP	09	21.60	-1.1	
YKA	146.10	310	ePKP	08	37.90	0.4	S.D. = 0.8	on	5	of	5	obs.	WMO	40.69	299	P	09	33.80	1.2		
	1.1s	9.00nm												1.0s	80.00nm			5.4mb			
MAT	146.99	108	ePKP	08	42.00	2.2	* MAY 18, 1991	00h	43m	10.19±	0.76s		PKI	46.58	277	P	10	19.80	-0.7		
MDJ	147.53	89	ePKP	08	41.80	1.5		3.526	S	± 10.2km	151.350	E ± 19.4km		0.6s	13.00nm			4.9mb			
YAK	154.39	55	ePKP	08	58.00	8.1X		DEPTH =	33.0km	(normal)			KKN	46.60	277	P	10	20.00	-0.5		
INK	154.60	320	ePKP	09	00.00	10.0X		4.4mb	( 7 obs.)	4.3Msz	( 1 obs.)			0.8s	50.00nm			5.3mb			
	pP		09	15.50			NEW IRELAND REGION				(190)		DMN	46.81	277	P	10	21.60	-0.7		
S.D. = 1.2	on	29	of	35	obs.									0.8s	40.00nm			5.2mb			
* MAY 17, 1991	22h	56m	34.90s				PMG	7.18	215	eP	44	54.50	-1.1	FBA	51.69	31	P	10	59.00	0.1	
	37.060	N		121.485	W		CTA	17.20	196	iPc	47	12.20	2.6	GAR	54.46	296	eP	11	19.00	-0.8	
DEPTH =	2.0km							1.7s	100.00nm			4.7mb	WB2	54.69	186	iPd	11	18.60	-2.8		
CENTRAL CALIFORNIA						( 39)	GUA	18.12	339	eP	47	21.80	0.7		0.6s	11.60nm			5.0mb		
<BRK>. ML 2.7 (BRK).								1.0s	152.00nm			5.1mb	WRA	54.70	186	P	11	19.00	-2.4		
ARN	0.29	353	iPc	56	40.80	0.1	QIS	20.43	213	eP	47	45.00	-2.5		0.7s	12.10nm			5.0mb		
SAO	0.30	174	iPd	56	41.47	0.6	RMQ	22.97	186	eP	48	06.00	-7.0X	HYB	56.81	269	iPd	11	35.60	-1.2	
MHC	0.31	336	iPc	56	41.20	0.1	WB2	23.26	224	iPd	48	15.00	-0.9		1.0s	30.00nm			5.2mb		
			iS	56	46.30			1.2s	7.70nm			4.1mb	INK	56.97	26	eP	11	37.00	-0.2		
GCC	0.41	266	iPc	56	43.02	-0.1						4.8	56.30		ASPA	58.42	186	iPd	11	46.60	-1.2
			iS	56	49.17							49	43.90			0.5s	11.90nm			5.2mb	
LLA	0.62	135	iPc	56	46.90	-0.4	DZM	23.55	143	iPc	48	17.80	-0.9		e		11	51.10	15kmX		
PRS	0.73	173	iPd	56	49.20	-0.3	ASPA	26.18	219	iPd	48	45.70	2.0		e		12	08.80			
			iS	57	00.21			1.0s	11.00nm			4.4mb	GBA	59.71	266	Pd	11	55.50	-1.4		
PCC	0.84	302	iPc	56	50.32	-1.3	STK	29.66	197	eP	49	15.80	0.7		0.6s	17.10nm			5.3mb		
BKS	1.01	324	iPc	56	54.20	-0.6		0.4s	0.90nm			3.9mb	QUE	60.34	288	eP	12	01.00	-0.2		
			iS	57	09.40		CHG	56.14	295	eP	52	52.50	3.2X	KOD	61.52	262	eP	12	08.80	-0.8	
CMB	1.31	42	eP	56	58.50	-1.4	LZH	59.31	316	eP	53	14.50	2.9X	MAIO	63.43	297	eP	12	22.00	0.4	
			iS	57	16.00			1.4s	19.00nm			5.0mb	KEV	65.04	339	eP	12	36.00	4.5X		
FRI	1.42	92	iPd	57	00.20	-1.6	Z	20s	0.24um			4.3Msz	STK	66.36	178	eP	12	43.00	2.7X		
	10 obs.	associated												0.8s	1.60nm			4.0mb			
							YAK	67.43	349	eP	54	03.60	-0.8		0.6s	29	P	12	39.00	-1.3	
							FBA	81.25	22	P	55	24.00	-0.1		0.8s	3.60nm			4.3mb		
							INK	87.79	21	eP	55	57.00	0.1	SOD	66.49	337	iP	12	40.80	0.0	
							YKA	94.98	28	eP	56	30.70	0.3	OBN	69.06	323	eP	12	56.70	-0.2	
								0.8s	0.70nm			4.1mb		1.0s	*****nm			7.9mb	X		
							PPD	146.29	140	ePKP	02	53.50	4.7X		e		13	24.00	108km		
							S.D. = 1.5	on	12	of	16	obs.		PNT	70.70	43	eP	13	07.00	-0.1	
															0.6s	7.00nm			4.7mb		
															71.27	332	iP	13	10.40	0.2	
															0.6s	9.10nm			4.8mb		
															73.48	52	eP	13	24.70	1.1	
															74.35	334	eP	13	27.00	-1.2	
															74.70	52	eP	13	31.00	0.3	
															75.11	54	eP	13	34.10	1.1	
															75.12	54	iPd	13	34.40	1.3	
															75.55	335	eP	13	35.00	-0.1	
															0.4s	3.20nm			4.5mb		
															Z	18s	0.06um			3.9Msz	
															e		13	43.20	26kmX		
															e		13	47.20			
															LR		46	56.00			
															NB2	75.71	337	P	13	36.20	0.1
															0.6s	2.60nm			4.2mb		
															76.26	53	eP	13	40.50	0.9	
															76.30	32	iPc	13	39.40	0.0	
															0.6s	8.00nm			4.7mb		
															76.54	55	eP	13	42.30	1.2	
															76.68	43	eP	13	42.90	0.8	
															FRI	77.29	54	eP	13	46.30	1.1



TNP	78.30	52 P	13 52.00	0.9
	1.0s	17.50nm		4.8mb
FRB	79.23	12 eP	13 56.00	0.7
KRA	80.17	325 eP	14 03.80	3.2X
CLL	82.34	330 eP	14 13.00	1.1
	0.9s	10.00nm		4.6mb
KHC	83.72	328 P	14 21.40	2.3X
CDP	86.93	331 eP	14 35.30	0.2
ANMO	87.05	49 ePc	14 36.70	0.7
	1.0s	4.25nm		4.4mb
ALO	87.05	49 eP	14 36.60	0.5
	1.1s	3.48nm		4.3mb
		e	15 07.00	117km
HAU	87.63	331 eP	14 39.00	0.6
Z	21s	0.08um		4.1msz
LPL	89.47	329 eP	14 47.70	0.3
LPG	89.47	329 eP	14 47.90	0.4
	0.6s	2.70nm		4.5mb
SSF	89.52	332 eP	14 48.00	0.6
FLN	89.57	335 eP	14 47.60	0.1
Z	21s	0.08um		4.1msz
LDF	89.59	335 eP	14 47.80	0.2
AVF	89.80	332 eP	14 48.90	0.2
	0.5s	1.80nm		4.4mb
GRR	90.02	335 eP	14 50.30	0.7
LFP	90.39	335 eP	14 52.00	0.7
	0.7s	5.50nm		4.8mb
LSF	90.96	332 eP	14 54.40	0.4
	0.8s	4.70nm		4.7mb
MFF	91.28	334 eP	14 56.40	0.9
CAF	91.85	331 eP	14 59.30	1.1
LF	92.36	332 eP	15 01.60	1.2
	0.9s	8.20nm		5.0mb
LPO	92.40	332 eP	15 01.60	0.9
ZOBO	148.95	61 PKP	21 40.00	5.3X
LPB	149.15	61 PKP	21 40.50	5.7X
S.D. = 1.1 on 78 of 88 obs.				

MAY 18, 1991 01h 44m 59.51 ± 0.43s  
 40.808 N ± 5.4km 20.826 E ± 4.3km  
 DEPTH = 10.0km (geophysicist)  
 GREECE-ALBANIA BORDER REGION (392)  
 ML 3.5 (TTG), 3.3 (THE).

FNA	0.42	93 iPgc	45 07.78	-0.3
GRG	1.20	82 ePb	45 21.50	-0.5
		eSb	45 40.10	
IGT	1.33	197 ePb	45 24.74	0.7
		eSb	45 45.62	
LIT	1.45	119 ePbc	45 26.06	0.2
		eSb	45 48.34	
KNT	1.61	77 ePbc	45 28.10	0.1
		eSb	45 50.58	
THE	1.63	95 ePb	45 27.86	-0.5
		eSb	45 51.62	
ULC	1.66	315 iPnc	45 28.58	-0.1
		iSn	45 52.71	
PVY	1.90	341 iPnc	45 33.34	1.0
		iSn	46 00.93	
SOH	1.92	89 ePb	45 33.02	0.4
		eSb	45 59.06	
TTG	2.00	325 iPnd	45 34.56	0.9
		iSn	46 02.39	
BDV	2.10	315 iPnc	45 35.43	0.2
		iSn	46 03.83	
SRS	2.12	81 eP	45 35.14	-0.3
		eS	46 02.98	
AGG	2.13	147 ePc	45 35.86	0.3
		eS	46 04.54	
IVA	2.18	342 iPnd	45 37.51	1.2
		iSn	46 07.91	
PAIG	2.35	111 ePc	45 38.30	-0.5
		eS	46 08.22	
HCV	2.39	314 iPnc	45 38.78	-0.6
		iSn	46 10.08	
NKY	2.43	326 iPnc	45 40.46	0.6
		iSn	46 12.06	
OUR	2.45	100 eP	45 40.26	0.1
BRY	2.70	322 iPnc	45 43.73	-0.1
		iSn	46 17.91	
PLE	2.74	338 iPnd	45 45.29	0.9
		iSn	46 21.51	
BEO	4.02	356 ePn	46 03.00	0.6
CEY	6.79	319 eP	46 39.50	-2.1
		eSn	47 57.00	
VOY	7.26	318 e(Pn)	46 46.00	-2.3
S.D. = 0.9 on 23 of 23 obs.				

MAY 18, 1991 02h 06m 10.06 ± 0.76s  
 40.877 N ± 5.6km 20.890 E ± 6.4km  
 DEPTH = 10.0km (geophysicist)  
 GREECE-ALBANIA BORDER REGION (392)  
 ML 2.5 (SKO), 2.4 (THE).

OHR	0.24	344 iPgd	06 14.40	-0.9
		iSg	06 19.60	
FNA	0.38	104 iPgc	06 17.18	-0.7
		eSg	06 24.96	
GRG	1.15	86 ePbc	06 31.25	-0.3
		eSb	06 49.08	
SKO	1.17	21 ePn	06 33.00	1.1
		iSn	06 49.50	
VAY	1.34	70 ePn	06 34.60	-0.2
IGT	1.41	198 ePb	06 35.96	0.2
		eSb	06 55.84	
LIT	1.45	122 ePb	06 36.40	0.1
		eSb	06 57.64	
KNT	1.55	79 ePb	06 37.64	0.0
		eSb	06 59.88	
THE	1.60	98 ePb	06 39.08	0.7
		eSb	07 00.04	
SOH	1.87	91 ePb	06 43.20	0.8
		eSb	07 08.40	
SRS	2.06	82 eP	06 44.80	-0.3
		eS	07 12.56	
PAIG	2.33	113 eP	06 48.64	-0.4
S.D. = 0.7 on 12 of 12 obs.				

MAY 18, 1991 02h 32m 24.36 ± 0.32s  
 43.672 N ± 3.9km 10.960 E ± 2.4km  
 DEPTH = 16.6 ± 3.6 km  
 CENTRAL ITALY (381)  
 ML 3.3 (LDG), MD 3.0 (ROM).

FIR	0.24	64 iPgc	32 29.00	-0.9
		iSg	32 33.00	
PII	0.32	279 Pc	32 31.30	0.1
		eSg	32 37.50	
BDI	0.47	326 Pc	32 33.90	0.0
		eSg	32 42.50	
MME	0.55	340 P	32 35.90	0.5
		eSg	32 44.40	
PGD	0.59	69 P	32 36.30	0.4
		eSg	32 44.40	
SFI	0.69	69 Pd	32 37.20	-0.4
		eSg	32 47.70	
CRE	0.72	93 P	32 37.90	-0.3
		eSg	32 49.00	
RSM	1.11	76 P	32 46.90	2.2
MAO	1.26	174 P	32 47.60	0.4
ASS	1.38	115 P	32 49.50	0.6
		eSg	33 08.50	
ARV	1.45	96 P	32 50.20	0.3
		eSg	33 10.00	
BOB	1.54	316 P	32 53.60	2.4
MNS	1.80	135 P	32 54.90	-0.1
PGF	1.82	233 Pn	32 55.00	-0.3
PCP	1.94	297 P	32 56.79	-0.3
		S	33 19.41	
SAL	1.96	351 P	32 58.50	1.3
FIN	2.06	286 P	32 57.78	-0.9
		S	33 20.30	
CKI	2.07	292 P	32 59.30	0.4
		eSn	33 26.00	
ROB	2.32	287 P	33 02.29	-0.1
		S	33 24.79	
CTI	2.43	11 P	33 04.80	0.8
		eSn	33 32.70	
SBF	2.56	276 Pn	33 06.00	0.1
ENR	2.62	283 P	33 07.42	0.7
		S	33 34.84	
STV	2.69	284 P	33 06.84	-0.9
		S	33 35.74	
SDI	2.88	132 P	33 10.10	-0.3
ORX	2.89	314 P	33 10.25	-0.4
BHB	2.90	295 P	33 11.21	0.5
		S	33 43.45	
PZZ	2.90	288 P	33 10.29	-0.5
		S	33 39.87	
RIY	2.97	55 eP	33 11.10	-0.4
RSP	3.04	300 P	33 12.23	-0.4
FRF	3.13	269 Pn	33 13.80	-0.1
FVI	3.19	23 P	33 14.50	-0.3
RRL	3.25	294 P	33 16.54	0.7

LSD	3.25	305 P	33 16.00	0.1
LMR	3.26	266 Pn	33 16.00	0.3
LRG	3.35	268 Pn	33 17.60	0.6
8NI	3.37	296 P	33 20.60	3.2X
RSL	3.69	305 P	33 24.55	2.5
KBA	3.80	25 e(Pn)	33 22.00	-1.6
		e	33 39.00	
		i	34 02.20	
		i	34 06.00	

PTJ	4.20	56 eP	33 35.10	5.9X
BSF	5.08	326 Pn	33 42.00	0.4
		Sn	34 37.60	
CDF	5.39	333 Pn	33 45.60	-0.4
		Sn	34 45.00	
HAU	5.40	325 Pn	33 46.20	0.1
		Sn	34 45.20	
KHC	5.75	17 ePg	33 50.10	-1.0
		Sg	34 56.00	
SMF	5.85	303 Pn	33 52.40	0.0
LBF	5.93	306 Pn	33 53.40	-0.2
		Sn	34 58.00	
LOR	6.15	308 Pn	33 55.60	-1.1
		Sn	35 04.00	
BGF	6.42	300 Pn	33 58.40	-2.2
S.D. = 0.9 on 45 of 47 obs.				

% MAY 18, 1991 02h 55m 29.88 ± 1.15s  
 39.841 N ± 23.1km 28.954 E ± 25.5km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.6 (ISK).

DST	0.34	227 ePg	55 37.00	0.0
IZI	0.64	39 ePn	55 41.50	-1.2
YLV	0.79	24 ePn	55 45.00	-0.3
HRT	1.12	29 ePn	55 52.00	1.1
EYL	1.17	51 iPn	55 52.30	0.5
S.D. = 1.2 on 5 of 5 obs.				

% MAY 18, 1991 03h 11m 03.53 ± 1.49s  
 43.627 N ± 14.9km 11.009 E ± 6.1km  
 DEPTH = 10.0km (geophysicist)  
 CENTRAL ITALY (381)  
 MD 2.3 (ROM).

FIR	0.23	50 ePg	11 07.50	-1.0
		iSg	11 13.00	
PII	0.36	285 Pc	11 10.70	-0.3
		eSg	11 15.30	
BDI	0.53	326 P	11 13.80	-0.4
		eSg	11 22.00	
MME	0.61	339 P	11 17.00	1.0
		eSg	11 23.40	
SFI	0.68	64 P	11 17.30	0.3
		eSg	11 26.30	
CRE	0.68	90 P	11 17.50	0.3
		eSg	11 27.40	
S.D. = 0.9 on 6 of 6 obs.				

% MAY 18, 1991 03h 19m 56.63 ± 2.43s  
 38.811 N ± 19.9km 22.574 E ± 8.2km  
 DEPTH = 5.0km (geophysicist)  
 GREECE (364)  
 ML 2.8 (THE).

AGG	0.28	318 ePg	20 02.71	0.3
		eSg	20 09.20	
LIT	1.29	357 ePb	20 21.44	0.4
		eSb	20 42.16	
PAIG	1.41	37 ePb	20 22.98	0.1
		eSb	20 42.96	
IGT	1.89	293 ePb	20 30.00	0.2
		eSb	20 55.28	
SOH	2.10	16 eP	20 33.76	0.9
		eS	21 02.28	
GRG	2.15	357 eP	20 33.00	-0.6
		eS	21 02.40	
FNA	2.18	335 eP	20 33.28	-0.8
		eS	21 04.44	
KNT	2.36	6 eP	20 36.36	-0.3
		eS	21 07.64	
SRS	2.43	18 eP	20 37.36	-0.3
S.D. = 0.6 on 9 of 9 obs.				

? MAY 18, 1991 03h 21m 23.34 ± 1.27s  
 43.686 N ± 16.9km 10.959 E ± 6.9km  
 DEPTH = 10.0km (geophysicist)



18d 03h

## CENTRAL ITALY (381)

PII	0.32	277	Pc	21	29.70	-0.2
			eSg	21	34.40	
BDI	0.46	325	P	21	33.00	0.3
			eSg	21	39.80	
SFI	0.69	70	P	21	36.30	-0.6
			eSg	21	46.50	
CRE	0.72	94	P	21	38.20	0.6
			S.D.	0.9	on 4 of 4 obs.	

% MAY 18, 1991 03h 26m 51.94 $\pm$ 0.75s  
 44.445 N  $\pm$  5.9km 7.322 E  $\pm$  7.5km  
 DEPTH = 5.0km (geophysicist)

NORTHERN ITALY (545)  
ML 1.4 (GEN).

PZZ	0.17	291	P	26	55.50	0.0
			S	26	57.98	
STV	0.20	180	P	26	56.08	0.0
			S	26	58.69	
ENR	0.23	162	P	26	56.61	0.0
			S	26	59.59	
BHB	0.40	354	P	26	59.95	0.0
			S	27	04.60	
ROB	0.42	111	P	27	00.41	0.0
			S.D.	0.0	on 5 of 5 obs.	

% MAY 18, 1991 03h 29m 50.67 $\pm$ 0.45s  
 43.703 N  $\pm$  4.7km 10.977 E  $\pm$  3.7km  
 DEPTH = 10.0km (geophysicist)

## CENTRAL ITALY (381)

FIR	0.22	70	e(Pg)	29	55.00	-0.3
			iSg	29	59.00	
PII	0.33	273	P	29	57.00	-0.5
			eSg	30	01.50	
BDI	0.45	323	P	29	59.50	-0.4
			eSg	30	07.00	
MME	0.53	338	P	30	00.80	-0.7
			eSg	30	12.00	
PGD	0.57	72	P	30	02.20	-0.1
			eSg	30	10.80	
SFI	0.67	71	P	30	04.00	0.0
			eSg	30	14.00	
CRE	0.71	96	P	30	05.00	0.2
MAO	1.29	174	P	30	14.00	-0.6
ASS	1.38	117	P	30	16.10	0.1
ARV	1.44	97	P	30	17.80	1.0
BOB	1.53	315	P	30	19.60	1.5
MNS	1.81	136	P	30	22.00	-0.2
CKI	2.07	291	P	30	26.50	0.6
CTI	2.39	11	P	30	31.40	0.8
			eSn	31	00.00	
FVI	3.16	23	P	30	40.00	-1.3
			S.D.	0.8	on 15 of 15 obs.	

% MAY 18, 1991 03h 31m 02.53 $\pm$ 1.71s  
 43.632 N  $\pm$  16.6km 10.977 E  $\pm$  5.4km  
 DEPTH = 10.0km (geophysicist)

## CENTRAL ITALY (381)

FIR	0.25	54	ePg	31	07.50	-0.3
			iSg	31	11.00	
PII	0.34	285	P	31	09.50	-0.1
			eSg	31	14.00	
BDI	0.51	328	P	31	12.60	-0.3
			eSg	31	20.20	
PGD	0.59	66	P	31	15.10	0.5
MME	0.60	340	P	31	15.00	0.3
SFI	0.70	65	P	31	15.90	-0.4
			eSg	31	25.90	
			S.D.	0.4	on 6 of 6 obs.	

? MAY 18, 1991 03h 35m 11.81 $\pm$ 3.10s  
 43.587 N  $\pm$  30.5km 10.988 E  $\pm$  6.9km  
 DEPTH = 10.0km (geophysicist)

CENTRAL ITALY (381)  
MD 2.3 (ROM).

FIR	0.27	46	e(Pg)	35	17.00	-0.5
			iSg	35	21.00	
PII	0.36	292	P	35	19.00	-0.3
			eSg	35	23.60	
BDI	0.55	329	P	35	23.00	-0.1
			eSg	35	29.00	
SFI	0.71	62	P	35	25.90	0.1

eSg 35 35 00  
 S.D. = 0.5 on 4 of 4 obs.

MAY 18, 1991 03h 43m 26.77 $\pm$ 1.27s  
 18.080 N  $\pm$  4.6km 146.622 E  $\pm$  8.2km  
 DEPTH = 76.9  $\pm$  11.8 km  
 4.9mb (18 obs.)

## MARIANA ISLANDS (216)

PJG	4.77	201	eP	44	38.50	0.7
GUA	4.81	200	eP	44	38.10	-0.2
	0.4s	155.93nm				
		eS	45	34.50		
IIDJ	18.98	338	P	47	44.00	-1.0
CHJJ	19.13	341	P	47	45.70	-0.9
TSRJ	19.79	334	P	47	53.30	-0.1
MAT	19.83	340 (P)		47	52.00	-2.0
	0.8s	18.66nm			4.5mb	
MTMJ	20.01	339	P	47	55.20	-0.7
NIJJ	20.23	342	P	47	59.80	1.8
YAMJ	20.83	345	P	48	05.30	1.1
PMG	27.32	179	eP	49	06.00	-0.3
	0.8s	29.85nm			4.9mb	
QIS	39.01	190	eP	50	47.00	-0.6
WB2	39.66	198	iPd	50	52.10	-0.9
	1.0s	11.30nm			4.7mb	
		i	51	23.00		
ASPA	43.31	197	iPd	51	22.50	-0.3
	0.5s	11.00nm			4.9mb	
Z	23s	0.10um			3.7MsZx	
		e	53	11.80		
YAK	45.47	349	eP	51	39.30	-0.3
GTA	45.62	308	eP	51	43.40	2.0
		PcP	53	19.70		
MBL	47.01	215	iPd	51	52.30	0.0
WARB	48.09	204	iPd	52	01.40	0.7
	0.5s	14.00nm			5.1mb	
STK	49.91	186	eP	52	19.00	4.5X
	1.6s	2.50nm			4.0mb	
NANU	50.56	218	iPd	52	20.20	0.6
WMO	55.38	311	P	52	57.50	2.2
PKI	56.73	291	P	53	05.60	0.0
	0.6s	11.00nm			5.1mb	
KKN	56.82	292	P	53	06.00	-0.1
DMN	56.99	292	P	53	07.20	-0.1
GKN	57.38	292	P	53	09.80	-0.1
	0.4s	9.00nm			5.2mb	
MUN	57.68	211	eP	53	11.60	0.0
NWAO	57.98	209	eP	53	13.40	-0.3
GBA	66.38	277	Pc	54	08.70	-1.3
	0.4s	2.40nm			4.5mb	
INK	69.60	23	eP	54	28.00	-1.2
YKA	78.12	28	eP	55	17.30	-1.4
	0.8s	3.50nm			4.3mb	
WDC	79.09	51	eP	55	25.20	0.7
MIN	79.84	51	eP	55	28.50	-0.2
ORV	80.12	52	eP	55	30.00	0.0
PRS	81.08	55	eP	55	35.80	0.6
CMB	81.37	53	eP	55	37.30	0.6
FRI	82.18	54	eP	55	41.30	0.5
KEV	82.79	342	iP	55	44.10	0.8
	0.7s	16.00nm			5.1mb	
SES	83.86	39	ePc	55	48.00	-1.3
SOD	84.24	340	iP	55	51.60	0.9
LRM	84.58	44	eP	55	53.70	0.5
DAG	84.94	357	ePc	55	56.00	1.9
	0.5s	5.63nm			4.8mb	
FFC	87.14	33	ePc	56	05.80	0.5
	1.0s	17.00nm			5.1mb	
KAF	87.34	336	iP	56	05.50	-0.6
	0.5s	6.00nm			5.0mb	
		eSP	56	06.30		
NUR	88.92	335	iP	56	13.10	-0.6
	0.7s	7.90nm			5.0mb	
UPP	92.05	337	iP	56	27.30	-0.9
ALO	92.96	52	eP	56	34.00	0.8
	0.9s	2.73nm			4.7mb	
HFS	93.28	338	eP	56	33.30	-0.6
	0.6s	5.00nm			5.1mb	
		e	56	39.00		
NB2	93.45	340	P	56	34.20	-0.6
	0.9s	5.60nm			5.0mb	
ZOBO	146.78	92	PKP	03	04.00	2.8X
LPB	146.84	93	PKP	03	04.00	2.9X
CCH	148.81	94	PKP	03	09.50	5.4X
			S.D.	1.0	on 46 of 50 obs.	

% MAY 18, 1991 04h 10m 50.61 $\pm$ 1.53s  
 41.974 N  $\pm$  12.8km 19.171 E  $\pm$  8.6km  
 DEPTH = 10.0km (geophysicist)

ALBANIA (391)  
ML 2.0 (TTG).

ULC	0.06	100	iPg	10	52.92	0.0
			iSg	10	54.52	
BDV	0.40	321	iPgc	10	59.02	0.2
			iSg	11	06.50	
TTG	0.46	8	iPg	10	59.48	-0.5
			iSg	11	06.73	
HCY	0.69	314	iPgc	11	03.49	-0.7
			iSg	11	15.75	
BRY	1.04	334	iPgc	11	11.17	0.9
			iSg	11	27.27	
IVA	1.05	31	iPg	11	10.53	0.1
			iSg	11	26.80	
			S.D.	0.7	on 6 of 6 obs.	

\* MAY 18, 1991 04h 17m 54.25 $\pm$ 1.51s  
 24.474 N  $\pm$  12.3km 122.689 E  $\pm$  14.6km  
 DEPTH = 33.0km (normal)  
 3.8mb (1 obs.)

## TAIWAN REGION (243)

TWC	0.78	280	iPd	18	08.70	0.0
			eS	18	16.70	
TWD	1.07	249	iPc	18	12.60	-0.4
TWZ	1.18	302	iPd	18	14.10	-0.5
			eS	18	26.70	
ANP	1.28	304	eP	18	16.50	0.5
			eS	18	29.70	
TWK	2.35	240	ePc	18	31.70	0.4
WB2	45.59	165	eP	26	13.10	0.0
	1.1s	1.30nm			3.8mb	
			S.D.	0.5	on 6 of 6 obs.	

MAY 18, 1991 04h 52m 19.07 $\pm$ 1.92s  
 31.654 N  $\pm$  6.3km 80.092 E  $\pm$  5.3km  
 DEPTH = 24.0  $\pm$  15.1 km  
 4.6mb (19 obs.)

TIBET (306)  
ML 4.7 (NDI).

NDI	3.87	221	iPnc	53	21.20	2.8
			iSn	54	20.00	
GKN	5.37	132	P	53	41.38	1.5
KKN	5.93	129	P	53	48.26	0.4
DMN	5.94	131	P	53	48.86	0.8
PKI	6.16	130	P	53	51.44	0.2
KSH	8.47	338	eP	54	22.00	-1.4
			S	56	00.00	
LSA	9.72	99	P	54	40.10	-0.8
			eS	56	30.00	
GAR	10.83	315	eP	54	55.00	-0.9
QUE	11.38	266	eP	55	01.60	-1.8
			e(S)	57	07.50	
WMO	13.55	24	P	55	33.20	1.0
HYB	14.24	186	iPd	55	39.00	-2.4
	1.0s	50.00nm			5.1mb	
			eS	58	08.00	
BOM	14.30	209	eP	56	07.50	25.4X
			eS	58	08.00	
GTA	17.80	59	eP	56	26.00	-0.9
	1.2s	10.00nm			3.8mb	
Z	14s	0.60um			3.7MsZx	
E	11s	0.40um				
GBA	18.13	188	Pc	56	25.80	-5.2X
	0.5s	2.50nm			3.6mb	
LZH	20.20	71	eP	56	57.00	2.0
	2.0s	18.00nm			4.1mb	
Z	20s	0.24um			3.5MsZ	
CD2	20.24	86	eP	56	56.60	1.3
KMI	20.94	102	eP	57	01.50	-1.3
	1.0s	40.00nm			4.8mb	
CHG	21.27	122	ePd	57	04.30	-1.7
	1.0s	12.50nm			4.3mb	
GYA	23.77	96	P	57	31.00	0.2
XAN	24.30	77	P	57	35.70	-0.1
WHN	29.29	83	eP	58	21.50	-0.2
OBN	38.47	321	eP	59	44.50	3.9X
VR1	43.19	305	eP	00	23.50	3.9X
MLR	43.74	304	eP	00	25.50	1.3
KAF	45.75	328	iP	00	39.30	-0.6
	0.9s	6.40nm			4.6mb	
			esP	00	44.10	



NUR 46.12 326 eP 00 43.00 0.2  
0.4s 2.50nm 4.5mb  
KEV 48.10 338 eP 00 58.00 -0.4  
HFS 51.46 324 eP 01 23.10 -1.1  
0.7s 3.40nm 4.4mb  
Z 16s 0.05um 3.6mszX

e 01 25.50  
e 01 28.30  
e 01 33.00  
e 01 54.60  
LR 21 24.00

BRG 51.50 312 e(P) 01 26.70 2.1  
NB2 52.72 325 P 01 32.20 -1.5  
0.7s 1.70nm 4.1mb

BSF 56.56 309 eP 02 03.10 1.1  
LPG 57.10 307 eP 02 07.40 1.3  
0.9s 4.90nm 4.5mb

LPL 57.11 307 eP 02 07.60 1.5  
1.0s 8.00nm 4.7mb  
LBF 58.62 309 eP 02 15.90 -0.5  
0.9s 3.30nm 4.4mb

SMF 58.79 309 eP 02 18.30 0.7  
1.0s 4.00nm 4.5mb  
EKA 60.93 320 P 02 35.00 2.9X  
1.6s 12.10nm 4.8mb

BUL 71.32 231 eP 03 38.80 -0.3  
WRA 73.04 127 P 03 48.00 -1.2  
0.7s 19.60nm 5.3mb

WB2 73.05 127 iPc 03 48.60 -0.6  
0.7s 19.20nm 5.2mb  
e 05 31.90

NWAO 73.19 148 eP 03 48.60 -1.1  
ASPA 75.33 130 iPd 04 02.30 -0.1  
0.8s 14.60nm 5.1mb

FBA 76.80 19 P 04 09.80 -0.2  
pP 04 14.20 14kmX  
INK 77.25 12 eP 04 12.00 -0.4

LKO 81.41 276 P 04 33.96 -1.9  
KIC 82.31 273 P 04 40.90 0.4  
TIC 82.40 273 P 04 40.80 -0.2

LIC 82.62 273 P 04 43.00 0.9  
STK 85.89 131 iPd 05 02.70 4.5X  
0.8s 3.20nm 4.6mb

ZOBO 147.32 290 ePKP 12 03.00 2.0  
LPB 147.44 290 (PKP) 12 15.00 14.0X  
S.D. = 1.3 on 43 of 50 obs.

MAY 18, 1991 05h 17m 46.10 ± 0.86s  
40.848 N ± 5.5km 20.820 E ± 7.8km  
DEPTH = 10.0km (geophysicist)

GREECE-ALBANIA BORDER REGION (392)  
ML 2.3 (SKO).

OHR 0.26 357 iPg 17 50.80 -0.9  
iSg 17 56.10

FNA 0.43 98 iPg 17 53.74 -1.1  
eSg 18 01.06

GRG 1.20 84 ePb 18 08.01 -0.5  
eSb 18 26.74

SKO 1.22 22 ePn 18 09.50 0.8  
iSn 18 26.00

IGT 1.37 196 ePb 18 10.96 -0.2  
eSb 18 30.98

VAY 1.40 70 ePn 18 12.30 0.6  
LIT 1.48 120 ePb 18 12.50 -0.3  
eSb 18 35.34

KNT 1.60 78 ePb 18 15.38 0.8  
eSb 18 36.18

SRS 2.12 82 eP 18 22.12 0.1  
AGG 2.16 147 eP 18 23.34 0.6  
S.D. = 0.8 on 10 of 10 obs.

MAY 18, 1991 05h 45m 11.06 ± 0.60s  
40.538 N ± 6.0km 24.331 E ± 5.1km  
DEPTH = 10.0km (geophysicist)

AEGEAN SEA (365)

OUR 0.34 233 iPg 45 18.50 0.5  
eSg 45 22.30

PAIG 0.79 219 ePg 45 26.14 -0.2  
eSg 45 36.26

SDH 0.80 291 ePg 45 26.25 -0.3  
eSg 45 35.54

SRS 0.81 316 ePg 45 26.22 -0.5  
eSg 45 35.86

THE 1.04 276 ePg 45 30.82 0.1  
eSg 45 43.50

MMB 1.15 337 iPg 45 42.00 9.5X  
RZN 1.19 14 iPc 45 33.00 -0.3  
KNT 1.25 300 ePbd 45 33.86 -0.5

eSb 45 50.14  
ALN 1.35 74 ePb 45 37.66 1.8  
eSb 45 57.10

KDZ 1.38 36 iPd 45 36.00 -0.3  
LIT 1.47 253 ePb 45 37.30 -0.4  
eSb 45 57.86

GRG 1.52 287 ePbc 45 37.94 -0.5  
eSb 45 59.82

VAY 1.55 301 ePn 45 40.60 1.9  
KKB 1.63 325 iP 45 41.00 1.1  
PGB 2.01 357 iPd 45 49.00 3.5X

AGG 2.16 226 eP 45 47.16 -0.5  
MFT 2.26 83 ePn 45 48.00 -1.1  
FNA 2.26 277 eP 45 48.20 -0.9

eS 46 18.46  
PVL 2.78 15 iPc 45 54.00 -2.4  
DMK 2.89 63 ePn 46 05.50 7.6X

IGT 3.23 253 eP 46 03.46 0.7  
eS 46 42.18  
MLR 5.09 13 eP 46 31.00 1.7  
S.D. = 1.1 on 19 of 22 obs.

\* MAY 18, 1991 06h 02m 30.12 ± 1.37s  
40.812 N ± 8.4km 20.686 E ± 11.4km  
DEPTH = 10.0km (geophysicist)

GREECE-ALBANIA BORDER REGION (392)  
ML 2.4 (THE), 2.3 (SKO).

OHR 0.31 16 iPg 02 36.20 -0.4  
iSg 02 41.50

FNA 0.52 93 iPg 02 39.22 -1.5  
eSg 02 47.42

IGT 1.31 192 ePb 02 53.82 -0.5  
GRG 1.31 83 ePbd 02 53.46 -0.9  
eSb 03 13.22

LIT 1.55 117 ePb 02 58.34 0.5  
eSb 03 21.02

KNT 1.71 77 ePb 03 00.78 0.6  
eSb 03 24.34

SRS 2.22 81 eP 03 09.26 1.7  
PAIG 2.45 110 eP 03 11.25 0.5  
S.D. = 1.2 on 8 of 8 obs.

% MAY 18, 1991 06h 11m 30.72 ± 1.00s  
39.345 N ± 8.9km 21.776 E ± 7.6km  
DEPTH = 10.0km (geophysicist)

GREECE (364)  
ML 2.0 (THE).

AGG 0.54 127 ePg 11 41.14 -0.5  
eSg 11 50.62

LIT 0.93 36 ePg 11 47.38 -1.2  
eSg 12 00.02

IGT 1.13 280 ePg 11 52.34 0.4  
eSg 12 08.94

FNA 1.47 348 ePb 11 56.01 -1.3  
eSb 12 15.30

GRG 1.68 16 ePb 12 00.14 -0.2  
KNT 2.01 25 ePb 12 06.26 1.2

SRS 2.25 38 eP 12 09.42 0.9  
ALN 3.62 63 eP 12 28.62 0.6  
S.D. = 1.1 on 8 of 8 obs.

? MAY 18, 1991 06h 26m 29.36 ± 2.69s  
10.060 N ± 17.9km 124.296 E ± 28.2km  
DEPTH = 100.2 ± 29.4 km  
4.4mb (3 obs.)

LEYTE, PHILIPPINE ISLANDS (256)

BAG 7.27 331 eP 28 15.00 0.1  
WB2 31.42 162 iPc 32 43.00 -0.2  
0.5s 3.90nm 4.4mb

i 32 46.20  
QIS 33.95 154 iPd 33 04.50 -0.7  
ASPA 34.81 164 eP 33 14.10 1.5

0.6s 6.90nm 4.7mb  
PKI 40.50 301 P 34 00.00 -0.5  
STK 44.87 159 eP 34 42.10 6.6X

0.6s 1.70nm 4.1mb  
DZM 52.23 128 iPc 35 31.90 -0.8  
INK 85.19 21 eP 38 56.00 0.6  
S.D. = 1.2 on 7 of 8 obs.

? MAY 18, 1991 06h 48m 11.83 ± 6.81s

31.785 S ± 65.6km 68.706 W ± 42.7km  
DEPTH = 117.5 ± 36.9 km  
SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.24 6 iPd 48 28.20 -0.6  
eS 48 40.20

RTCB 0.31 345 iPd 48 29.40 0.3  
CFA 0.44 66 iPc 48 30.00 0.6  
eS 48 42.20

RTLL 0.50 24 iPc 48 29.50 -0.3  
RTRS 1.74 338 iPc 48 42.40 0.1

TCA 3.54 84 ePd 49 06.00 -0.1  
(S) 49 42.30  
S.D. = 0.7 on 6 of 6 obs.

MAY 18, 1991 06h 57m 27.02 ± 0.27s  
39.972 S ± 5.6km 74.786 W ± 6.4km  
DEPTH = 20.6km (3 depth phases)

5.3mb (20 obs.) 4.5msz (2 obs.)  
OFF COAST OF CENTRAL CHILE (134)  
CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN  
L.P.B.: 12S, 21C  
Centroid Location:

Origin Time: 06:57:29.4 0.7  
Lat 40.59S 0.09 Lon 75.45W 0.12  
Dep 15.0 Fix Half-duration 1.9

Moment Tensor: Scale 10<sup>17</sup> Nm  
Mrr=-0.71 0.09 Mtt=-0.58 0.09  
Mff= 1.29 0.11 Mrt= 0.54 0.16

Mrf=-0.39 0.31 Mtf= 1.01 0.12  
Principal Axes:

T Val= 1.74 Plg= 3 Azm=113  
N -0.21 52 18  
P -1.53 38 206

Best Double Couple: Mo=1.6\*10<sup>17</sup>  
NP1: Strike=242 Dip=61 Slip=-27  
NP2: 346 67 -149

LNK 6.58 25 iPd 59 03.20 -1.9  
LCCH 6.98 23 eP 59 08.50 -2.1  
iS 00 27.70

TACH 7.02 27 ePd 59 12.20 0.9  
iS 00 35.50

PCH 7.20 30 ePd 59 12.20 -1.7  
iS 00 35.50

RFA 7.23 46 ePd 59 15.30 1.1  
SAN 7.30 28 ePd 59 13.50 -1.7  
iS 00 37.50

i 00 38.60  
IHA 7.38 21 eP 59 14.50 -1.7  
e(S) 00 38.00

PEL 7.57 27 iPc 59 17.20 -1.8  
0.7s 109.59nm 6.1mb  
iS 00 44.50

JACH 8.02 26 iPd 59 23.00 -2.4  
iS 00 55.00

MDZ 8.54 36 e(P) 59 32.60 0.1  
ZON 9.76 32 e(P) 59 48.20 -1.1

TCA 11.95 47 ePd 00 17.70 -1.5  
LPA 14.31 75 eP+ 00 52.00 1.6  
eS 03 44.00

ANT 16.63 14 eP 01 21.00 0.5  
ITB7 22.75 56 e(P) 02 30.50 1.5

ITB1 22.96 54 eP 02 32.70 1.7  
ITB 22.96 55 e(P) 02 34.00 2.9X

ARE 23.60 8 iPd 02 41.50 3.8X  
1.7s 215.38nm 5.4mb

CCH 23.73 21 P 02 44.30 5.4X  
LPB 24.07 16 P 02 46.20 3.8X  
1.2s 125.00nm 5.3mb

LR 07 20.00  
ZOBO 24.32 16 P 02 48.00 3.0X  
1.0s 57.50nm 5.1mb

Z 20s 0.79um 4.2msz  
LR 07 30.00

SIV 26.72 30 P 03 08.20 1.3  
PPD 26.79 55 eP 03 09.10 1.6  
e 03 11.60 9kmX

e 03 14.40  
NNA 27.93 356 e(P) 03 14.00 -4.0X  
0.8s 6.72nm 4.4mb

VAO 28.97 63 eP 03 29.40 2.1  
e 03 31.40 7kmX  
e 03 38.00

BMA 31.12 66 eP 03 47.90 1.5  
e 03 53.20 18km



NUR	46.10	326	iP	07	44.10	0.6
	0.7s		5.20nm			4.6mb
UPP	49.46	324	iP	08	08.70	-1.0
HFS	51.45	324	eP	08	24.30	-0.6
	0.5s		2.50nm			4.5mb
			e	08	27.70	
NB2	52.70	325	P	08	33.40	-1.0
	0.7s		1.30nm			4.0mb
WRA	73.05	127	P	10	49.00	-0.9
	0.8s		15.60nm			5.0mb
WB2	73.06	127	iPc	10	50.00	0.1
	0.8s		15.90nm			5.0mb
			i	10	54.30	
ASPA	75.34	130	iPd	11	03.20	0.1
	0.8s		11.90nm			4.9mb
FBA	76.78	19	ePc	11	10.40	-0.1
	0.7s		7.85nm			4.8mb
INK	77.23	12	eP	11	13.00	0.1
YKA	85.42	7	eP	11	55.60	-0.4
	0.6s		0.40nm			3.8mb
STK	85.90	131	iPd	12	03.90	5.1X
	0.7s		3.20nm			4.7mb
ZOBO	147.31	291	ePKP	19	04.00	2.5
LPB	147.43	290	(PKP)	19	05.00	3.5X
S.D. = 1.0 on 26 of 35 obs.						
<hr/>						
?	MAY 18, 1991	07h	25m	34.93±	1.04s	
	39.164 N ±	8.0km		27.528 E ±	14.3km	
	DEPTH =	10.0km	(geophysicist)			
TURKEY						(366)
IZM	0.79	195	iPg	25	50.30	-0.1
			iSg	26	02.30	
DST	0.96	62	ePn	25	53.50	0.3
BNT	1.23	14	ePn	25	57.00	-0.8
KGT	1.30	352	ePn	25	59.50	0.6
S.D. = 1.0 on 4 of 4 obs.						
<hr/>						
?	MAY 18, 1991	08h	05m	35.55±	2.97s	
	33.161 N ±	43.8km		48.597 E ±	20.1km	
	DEPTH =	33.0km	(normal)			
		3.9mb	(3 obs.)			
WESTERN IRAN						(347)
Felt in the Khorramabad area.						
TEH	3.45	41	eP	06	28.00	-0.4
MA10	9.50	68	eP	08	09.00	15.8X
MLR	21.33	312	eP	10	27.00	5.1X
OBN	23.50	343	eP	10	44.50	1.5
HFS	35.35	330	eP	12	28.00	-0.8
	0.4s		1.70nm			4.3mb
			e	12	31.50	
NB2	36.87	330	P	12	41.60	-0.9
	0.7s		0.70nm			3.6mb
FRB	71.49	335	eP	16	54.00	-0.5
FBA	81.42	7	P	17	51.00	0.9
YKA	83.72	352	eP	18	02.20	0.1
	0.8s		0.70nm			3.9mb
S.D. = 1.1 on 7 of 9 obs.						
<hr/>						
	MAY 18, 1991	08h	47m	47.64±	0.45s	
	5.549 S ±	6.3km		76.985 W ±	11.0km	
	DEPTH =	33.0km	(normal)			
		4.9mb	(6 obs.)			
NORTHERN PERU						(111)
NNA	6.40	179	iPd	49	21.30	-0.9
	0.8s		171.64nm			5.9mb
			iS	50	32.50	
HUA	6.65	166	iPc	49	27.70	1.6



FVM 45.08 345 e(P) 56 01.30 -1.2  
 ANMO 48.92 328 ePc 56 33.10 0.2  
 TNP 57.27 323 eP 57 34.60 -0.2  
 0.7s 3.33nm 4.5mb  
 MCMT 59.57 331 eP 57 50.50 -0.2  
 FCCF 63.57 344 eP 58 16.00 -1.2  
 1.3s 15.00nm 4.9mb  
 LKO 72.70 78 P 59 14.34 -0.6  
 TIC 72.84 81 P 59 16.40 0.7  
 KIC 73.07 82 P 59 18.00 0.9  
 YKA 73.68 343 eP 59 18.50 -1.2  
 0.6s 1.40nm 4.1mb  
 INK 83.40 342 eP 00 13.00 0.4  
 NVL 84.41 161 ePc 00 19.00 1.3  
 e 00 29.50  
 SPA 84.49 180 eP 00 19.00 0.6  
 1.0s 9.50nm 4.9mb  
 WB2 140.11 230 ePKP 07 16.70 1.1  
 0.7s 0.40nm  
 WRA 140.11 230 PKP 07 10.00 -5.6X  
 0.8s 1.30nm  
 LZH 149.60 359 ePKP 07 36.00 4.7X  
 1.2s 29.00nm  
 pP 07 42.00  
 GKN 151.66 36 PKP 07 40.80 6.2X  
 KKN 152.19 35 PKP 07 41.20 5.7X  
 DMN 152.23 36 PKP 07 43.20 7.6X  
 PKI 152.43 35 PKP 07 41.00 5.0X  
 S.D. = 1.2 on 23 of 31 obs.

% MAY 18, 1991 09h 09m 25.23 ± 0.88s  
 39.154 N ± 6.9km 27.618 E ± 12.3km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 IZM 0.80 200 ePg 09 40.90 0.0  
 eSg 09 52.40  
 DST 0.90 60 ePn 09 42.50 -0.1  
 EDC 1.21 9 ePn 09 48.00 0.3  
 BNT 1.22 11 ePn 09 47.90 -0.1  
 KGT 1.32 349 ePn 09 49.40 -0.2  
 S.D. = 0.3 on 5 of 5 obs.

% MAY 18, 1991 09h 13m 09.85 ± 0.76s  
 43.637 N ± 8.0km 11.008 E ± 4.4km  
 DEPTH = 10.0km (geophysicist)

CENTRAL ITALY (381)  
 MD 3.1 (ROM).

FIR 0.23 52 iPg 13 15.00 0.3  
 iSg 13 19.00  
 PII 0.36 284 Pd 13 16.80 -0.5  
 eSg 13 24.50  
 BDI 0.52 325 P 13 20.00 -0.4  
 PGD 0.57 65 P 13 20.40 -1.1  
 eSg 13 29.60  
 MME 0.60 338 P 13 23.00 0.9  
 eSn 13 31.60  
 SFI 0.67 65 P 13 23.00 -0.2  
 eSg 13 32.50  
 CRE 0.69 90 P 13 23.20 -0.3  
 eSg 13 33.60  
 ASS 1.33 115 P 13 35.00 0.5  
 ARV 1.41 95 P 13 36.00 0.4  
 BOB 1.59 316 P 13 38.00 -0.2  
 CTI 2.45 11 P 13 51.00 0.4  
 eSg 14 20.00  
 S.D. = 0.6 on 11 of 11 obs.

% MAY 18, 1991 09h 41m 14.41 ± 3.13s  
 39.621 N ± 23.2km 29.489 E ± 17.2km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 DST 0.66 269 ePg 41 27.00 -0.7  
 eSg 41 37.00  
 IZI 0.72 359 iPg 41 28.40 -0.2  
 YLV 0.95 355 ePn 41 31.90 -0.6  
 EYL 1.07 28 ePn 41 34.90 0.2  
 HRT 1.21 6 ePn 41 37.00 0.1  
 BNT 1.41 302 ePn 41 40.90 0.8  
 EDC 1.44 301 ePn 41 41.00 0.4  
 S.D. = 0.6 on 7 of 7 obs.

% MAY 18, 1991 09h 43m 59.07 ± 1.98s  
 39.814 N ± 18.7km 29.296 E ± 19.1km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 MD 2.6 (ISK).

IZI 0.54 15 iPg 44 10.90 0.9  
 DST 0.56 248 ePg 44 10.50 0.1  
 eSg 44 18.50  
 YLV 0.75 4 iPn 44 12.90 -1.0  
 EYL 1.00 41 ePn 44 17.90 -0.2  
 HRT 1.05 16 ePn 44 19.00 0.2  
 S.D. = 1.0 on 5 of 5 obs.

MAY 18, 1991 09h 52m 02.50 ± 0.61s  
 50.408 N ± 5.3km 5.951 E ± 5.1km  
 DEPTH = 10.0km (geophysicist)

BELGIUM (541)  
 MD 1.6 (UCC). ML 1.4 (BNS).

MEM 0.20 10 iPc 52 07.39 0.4  
 iS 52 10.10  
 KLL 0.33 44 iPg 52 09.50 0.1  
 0.1s \*\*\*\*\*nm  
 iSg 52 13.80  
 ENN 0.36 357 ePg 52 09.50 -0.4  
 0.4s 5.00nm  
 eSg 52 13.50  
 DOU 0.93 251 iP 52 20.40 0.2  
 iS 52 32.60  
 RUP 1.01 134 ePn 52 21.88 0.3  
 SNF 1.07 276 iP 52 22.40 -0.2  
 ABH 1.15 117 ePn 52 23.64 -0.5  
 S.D. = 0.4 on 7 of 7 obs.

% MAY 18, 1991 10h 08m 24.79 ± 0.95s  
 38.652 N ± 9.9km 15.372 E ± 12.7km  
 DEPTH = 33.0km (normal)

SICILY (398)  
 ATN 0.50 172 Pd 08 36.20 0.8  
 eSg 08 46.00  
 SOI 0.79 137 Pd 08 38.50 -0.9  
 eSg 08 49.80  
 MNO 0.89 217 P 08 41.50 0.3  
 eSg 08 54.00  
 GIB 1.25 238 P 08 45.60 -0.5  
 TDS 1.26 36 P 08 47.90 1.8  
 eSn 09 06.00  
 MEU 1.59 193 P 08 46.90 -4.1X  
 eSn 09 04.10  
 BRT 2.63 32 P 09 04.40 -1.5  
 eSn 09 35.20  
 S.D. = 1.6 on 6 of 7 obs.

% MAY 18, 1991 10h 36m 14.69s  
 63.244 N 150.309 W  
 DEPTH = 114.8km

CENTRAL ALASKA (1)  
 <AEIC>.

TRF 0.21 3 ePc 36 31.11 1.7  
 eS 36 43.26  
 HUR 0.41 131 ePc 36 31.30 -0.5  
 eS 36 43.73  
 RND 0.68 75 iPd 36 33.32 -0.4  
 eS 36 47.72  
 MCK 0.79 51 iPd 36 34.45 -0.1  
 eS 36 48.76  
 CUT 0.84 179 iPc 36 34.59 -0.4  
 BWN 1.00 22 iPd 36 36.89 0.3  
 eS 36 52.69  
 SKT 1.39 205 iPc 36 40.12 -0.8  
 eS 36 59.31  
 NEA 1.45 22 ePd 36 40.89 -0.6  
 eS 36 59.75  
 WRH 1.58 38 iPd 36 42.65 -0.4  
 GH0 1.61 156 iPc 36 43.13 -0.5  
 eS 37 05.23  
 PWA 1.61 173 ePc 36 42.98 -0.5  
 SML 1.71 147 ePc 36 43.97 -0.8  
 eS 37 07.02  
 PLRM 1.75 161 iPc 36 44.18 -1.0  
 eS 37 06.82  
 PMR 1.75 161 iPc 36 44.70 -0.4  
 CCB 1.79 37 iPd 36 45.14 -0.6  
 SUA 1.80 187 ePc 36 45.65 -0.3  
 HDA 1.89 50 iPd 36 46.28 -0.7  
 MDM 1.95 27 ePd 36 47.22 -0.5  
 SCM 1.98 134 ePc 36 47.25 -0.9

FBA 2.00 33 ePc 36 48.40 0.1  
 KNK 2.03 154 ePc 36 47.90 -0.9  
 eS 37 13.77  
 PMS 2.04 170 ePc 36 48.05 -0.8  
 eS 37 13.26  
 THY 2.06 83 eP 36 49.48 0.3  
 DDM 2.07 73 eP 36 48.74 -0.5  
 CRP 2.16 204 eP 36 49.97 -0.7  
 GLM 2.17 35 iPd 36 50.19 -0.4  
 BGL 2.21 207 eP 36 51.00 -0.2  
 PAX 2.22 95 ePd 36 50.72 -0.5  
 eS 37 18.25  
 TOA 2.22 119 iPd 36 51.50 0.2  
 SPU 2.23 202 ePc 36 50.59 -0.7  
 CKL 2.26 206 ePc 36 51.37 -0.5  
 SDG 2.30 106 ePd 36 51.49 -0.8  
 NKA 2.55 190 eP 36 57.68 2.2  
 TZL 2.56 116 eP 36 55.04 -0.6  
 TTA 2.61 266 iPd 36 56.00 -0.4  
 KLU 2.70 129 ePc 36 55.89 -1.7  
 SLKM 2.75 179 eP 36 57.23 -0.9  
 VZW 2.81 140 eP 36 56.95 -2.1  
 GLI 2.81 146 ePc 36 57.14 -1.9  
 VLZ 2.82 137 ePc 36 56.93 -2.2  
 eS 37 30.15  
 DOT 2.84 79 ePd 36 58.12 -1.2  
 RDT 2.86 201 eP 37 00.35 0.7  
 DFR 2.89 204 ePc 37 00.50 0.4  
 NCT 2.96 206 eP 37 01.47 0.3  
 RDN 2.98 204 eP 37 01.40 0.1  
 RDW 3.01 204 eP 37 02.15 0.3  
 RS2 3.02 204 eP 37 02.59 0.6  
 RSO 3.02 204 eP 37 02.58 0.6  
 RED 3.07 203 eP 37 02.79 0.3  
 KNIM 3.15 156 eP 37 01.25 -2.3  
 SEW 3.18 172 eP 37 02.29 -1.6  
 IMA 3.18 334 eP 37 03.90 -0.2  
 SVW 3.29 232 eP 37 05.50 0.1  
 TMW 3.30 85 eP 37 04.02 -1.6  
 HIN 3.38 146 eP 37 06.12 -0.5  
 CVA 3.46 139 eP 37 06.11 -1.6  
 MTU 3.51 158 ePc 37 06.21 -2.1  
 GLB 3.53 118 iPd 37 07.25 -1.4  
 SGAM 3.66 136 eP 37 08.41 -2.0  
 CNPM 3.76 187 eP 37 10.52 -1.2  
 FYU 3.97 31 eP 37 13.94 -0.7  
 HMT 4.09 133 eP 37 14.41 -1.9  
 CROM 4.20 123 eP 37 16.12 -1.8  
 TGL 4.32 122 eP 37 16.94 -2.5  
 BALM 4.34 117 ePd 37 17.56 -2.3  
 WAX 4.51 125 eP 37 19.88 -2.2  
 CTGM 4.80 114 eP 37 24.78 -1.2  
 INK 8.55 46 eP 38 15.50 -1.5  
 68 obs. associated

% MAY 18, 1991 11h 00m 48.37 ± 1.06s  
 40.224 N ± 9.8km 29.306 E ± 8.8km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 MD 2.7 (ISK).

IZI 0.17 49 iPg 00 52.40 0.1  
 YLV 0.35 9 iPg 00 55.40 -0.1  
 DST 0.81 220 ePn 01 04.00 -0.1  
 BNT 1.07 278 ePn 01 08.80 0.3  
 EDC 1.11 277 ePn 01 09.00 -0.2  
 S.D. = 0.3 on 5 of 5 obs.

% MAY 18, 1991 11h 15m 39.47 ± 1.05s  
 51.587 N ± 6.4km 16.221 E ± 12.1km  
 DEPTH = 10.0km (geophysicist)

3.6mb (1 obs.)  
 POLAND (548)  
 ML 3.5 (VKA).

KSP 0.75 176 iP 15 54.20 0.1  
 0.3s 139.00nm  
 iS 16 02.50  
 iLR 16 08.50  
 BRG 1.60 244 iPn 16 08.20 0.4  
 iPg 16 09.70  
 iSg 16 29.40  
 PRU 1.92 214 Pn 16 13.00 0.5  
 0.3s 59.00nm  
 Pg 16 14.50  
 e 16 16.30  
 eSn 16 31.00



CLL	2.03	263	Sg	16	37.00		DZM	23.40	143	iPc	32	43.70		TURKEY					(366)	
			iPn	16	14.90	0.8	OLP	23.85	196	eP	32	13.10	0.8	GBZT	0.02	291	iPg	58	16.50	-1.5
			ePg	16	18.00		ASPA	26.16	219	eP	32	17.70	1.2				iSg	58	17.30	
			iSg	16	44.00			0.8s	8.80nm			4.4mb		HRT	0.15	75	iPg	58	19.30	-0.4
KRA	2.81	122	eP	16	35.10	9.8X	CHG	56.27	295	eP	36	49.00	3.6X	YLV	0.23	199	iPg	58	21.10	0.1
			iS	17	15.00		YAK	67.55	349	eP	37	59.60	-0.7				eSg	58	26.10	
KHC	2.98	216	iPn	16	27.50	-0.2	FBA	81.31	22	P	39	20.50	1.0	ISK	0.42	312	ePg	58	23.80	-0.9
			iPg	16	34.30		INK	87.85	21	eP	40	03.00	10.8X				eSg	58	30.80	
			Sn	17	06.50		YKA	95.03	28	eP	40	29.70	4.1X	IZI	0.44	180	iPg	58	25.30	0.2
			Sg	17	15.60			1.0s	0.80nm			4.1mb		DMK	1.66	309	ePn	58	47.50	2.2
HOF	3.03	247	ePn	16	28.70	0.4		S.D. = 1.4	on	9 of	13 obs.				S.D. = 1.6	on	6 of	6 obs.		
MOX	3.05	254	ePn	16	29.50	0.9														
			ePg	16	37.00															
			eSg	17	17.00															
WET	3.25	222	iPnc	16	31.50	0.0		? MAY 18, 1991	13h 57m	32.25±1.00s					MAY 18, 1991	15h 06m	22.45±0.61s			
VKA	3.33	179	iPg	16	42.00	9.4X			39.128 N ± 8.8km	27.601 E ± 16.3km						40.886 N ± 5.3km	20.790 E ± 5.5km			
			iSg	17	26.30				DEPTH = 10.0km	(geophysicist)						DEPTH = 10.0km	(geophysicist)			
ZST	3.44	170	e(Pn)	16	43.30	9.1X		TURKEY			(366)				GREECE-ALBANIA BORDER REGION		(392)			
			e	17	12.60				MD 2.7 (ISK).							ML 2.7 (SKO).				
			e	17	27.10															
SPC	3.52	131	eP	16	45.90	10.4X	IZM	0.78	200	iPg	57	47.40	0.0	OHR	0.23	2	iPg	06	27.50	0.2
			e	17	29.70				iSg	57	57.90						iSg	06	32.80	
KBA	4.89	204	e(Pn)	16	52.00	-2.9	DST	0.93	59	iPn	57	50.00	0.0	FNA	0.46	103	ePg	06	30.68	-1.1
			e(Sn)	17	33.00		EDC	1.23	9	iPn	57	55.00	-0.2				eSg	06	38.16	
FVI	5.48	206	P	17	05.00	1.9	BNT	1.25	11	iPn	57	55.70	0.2	TIR	0.84	304	ePg	06	38.00	-0.6
			eSn	18	35.00			S.D. = 0.3	on	4 of	4 obs.						iSg	06	55.00	
ABH	5.77	256	ePg	17	06.20	-0.9											iPg	06	38.20	-0.5
RUP	6.13	256	ePg	17	10.89	-1.3											iSg	06	57.70	
CTI	6.31	210	P	17	15.00	0.1		? MAY 18, 1991	14h 41m	13.66±6.68s							ePn	06	46.10	2.9X
			eSn	19	04.00				18.049 S ± 31.4km	176.898 W ± 29.5km							iSn	07	02.10	
HFS	8.68	352	eP	17	48.50	0.5			DEPTH = 137.6 ± 55.7 km								ePn	06	45.00	0.4
	0.7s	2.70nm			4.7mb	X			4.3mb ( 6 obs.)								i	06	46.50	
			e	17	56.20												iSn	07	02.00	
			eS	19	38.70		DZM	16.15	253	iPc	44	56.00	1.7	GRG	1.22	86	ePg	06	44.96	-0.3
NRA0	9.53	346	Pn	17	58.00	-1.7	CTA	34.84	261	iPd	47	53.10	-0.4	IGT	1.40	195	ePb	06	49.24	1.3
			Sn	19	44.90			0.9s	12.18nm			4.7mb					eSb	07	08.36	
YKA	59.82	336	eP	25	48.20	1.5			iS	53	36.00						ePn	06	48.50	0.3
	0.8s	0.40nm			3.6mb		STK	39.83	242	eP	48	43.70	8.6X	LIT	1.41	71	ePb	06	49.46	-0.2
	S.D. = 1.3	on	16 of	20 obs.				1.0s	0.70nm			3.4mb		THE	1.67	98	ePb	06	53.32	1.5
% MAY 18, 1991	11h 50m	27.42±0.89s					WB2	46.01	259	eP	49	17.30	-7.9X				eSb	07	14.56	
39.158 N ± 6.9km	27.626 E ± 12.3km							0.5s	0.60nm			3.5mb		SOH	1.95	91	ePb	06	56.28	0.4
DEPTH = 10.0km	(geophysicist)													SRS	2.13	83	eP	06	59.40	0.8
TURKEY		(366)															eS	07	25.84	
IZM	0.81	201	iPg	50	43.20	0.0											eP	06	58.76	-0.9
			iSg	50	54.80		WRA	46.02	259	P	51	28.20		AGG	2.21	147	eP	06	58.76	
DST	0.90	60	ePn	50	44.50	-0.1		1.2s	5.90nm			4.1mb					eS	07	26.12	
EDC	1.20	9	ePn	50	50.00	0.2	ASPA	46.14	254	iPc	49	24.90	-1.3	PAIG	2.41	113	eP	07	01.28	-1.2
BNT	1.22	11	ePn	50	50.30	0.2		0.9s	20.50nm			4.8mb					eS	07	30.76	
KGT	1.32	349	ePn	50	51.40	-0.3	SPA	72.06	180	iPc	52	23.80	-0.6		S.D. = 0.9	on	14 of	15 obs.		
	S.D. = 0.3	on	5 of	5 obs.				1.0s	11.00nm			4.6mb								
? MAY 18, 1991	13h 03m	09.33±1.93s					TNP	79.05	44	P	53	02.60	-1.8	% MAY 18, 1991	16h 10m	05.83s				
23.466 S ± 19.3km	68.115 W ± 16.2km						FBA	85.64	12	P	53	36.00	-1.4		61.596 N	151.035 W				
DEPTH = 97.9 ± 17.7 km							YKA	93.86	24	eP	54	27.70	11.7X		DEPTH = 4.8km					
4.1mb ( 1 obs.)								0.8s	0.30nm						SOUTHERN ALASKA		( 2 )			
NORTHERN CHILE		(123)													<AEIC>. ML 3.5 (AEIC). Felt					
ANT	2.12	263	iP	03	44.00	0.0	KRA	145.33	341	ePKP	00	37.50	1.0		(11) at Skwentno.					
			iS	04	05.50		KSP	145.63	345	ePKP	00	36.50	-0.5	SUA	0.19	133	iPc	10	10.97	1.1
LPB	6.90	0	eP	04	53.00	3.0X	CLL	145.89	349	iPKPd	00	38.80	1.4				eS	10	13.90	
ZOBO	7.16	360	P	04	54.00	0.3			1.7s	18.00nm				SKT	0.45	329	iPc	10	15.10	0.2
			i	05	21.70		SPC	145.98	340	ePKP	00	37.60	-0.3				eS	10	21.41	
ARE	7.66	335	e(P)	05	00.00	-0.2	BRG	146.13	348	ePKP	00	39.50	1.7	PWA	0.56	84	iPd	10	16.93	0.0
SIV	9.96	43	P	05	31.20	-0.1		1.5s	15.00nm					CRP	0.63	239	iPd	10	18.49	0.0
VAO	19.44	93	(P)	07	38.00	7.2X	MLR	146.68	330	ePKP	00	40.00	1.0	SPU	0.64	230	iPd	10	18.70	0.0
YKA	93.28	340	eP	16	13.60	0.0	MOX	146.77	350	ePKP	00	40.00	1.1	BGL	0.73	243	iPd	10	20.06	-0.4
	0.7s	0.60nm			4.1mb		PRU	146.84	346	ePKP	00	39.50	0.5	CKL	0.74	238	iPd	10	20.49	-0.2
	S.D. = 0.4	on	5 of	7 obs.			SRO	147.81	341	ePKP	00	45.40	4.8X	PMS	0.79	116	iPd	10	21.18	-0.5
* MAY 18, 1991	13h 27m	05.24±0.96s					ZST	147.83	342	e(PKP)	00	35.80	-4.8X	NKA	0.86	187	eP	10	24.73	1.9
3.632 S ± 13.6km	151.451 E ± 14.0km						KHC	147.86	347	PKP	00	45.30	4.6X	CUT	0.89	24	iPd	10	22.81	-0.5
DEPTH = 33.0km	(normol)							S.D. = 1.5	on	15 of	21 obs.		PLRM	0.91	89	iPd	10	22.71	-1.0	
4.2mb ( 4 obs.)																	eS	10	35.56	
NEW IRELAND REGION		(190)					% MAY 18, 1991	14h 48m	41.97±1.13s				PMR	0.91	89	iPd	10	23.20	-0.5	
RA8	0.91	128	iPd	27	20.00	-1.6		41.180 N ± 9.7km	29.027 E ± 7.3km				GHO	1.02	79	iPd	10	24.70	-1.0	
			iS	27	32.00			DEPTH = 10.0km	(geophysicist)								eS	10	39.06	
CTA	17.12	197	iPc	31	08.50	4.7X		TURKEY		(366)				SLKM	1.16	160	ePc	10	27.07	-1.0
	1.3s	38.46nm			4.4mb		ISK	0.12	168	ePg	48	43.80	-1.1	RDT	1.22	214	iPd	10	28.04	-1.1
OIS	20.40	213	eP	31	41.00	-1.3	HRT	0.60	126	iPg	48	54.30	0.1				eS	10	44.31	
RMO	22.87	186	eP	32	09.00	1.9	YLV	0.67	157	iPg	48	54.80	-0.5	KNK	1.25	97	iPd	10	29.05	-0.5
			i	32	14.00												eS	10	45.52	
WB2	23.26	224	iPd	32	09.90	-1.0	IZI	0.91	158	ePn	48	59.80	0.4	DFR	1.29	219	iPd	10	29.25	-1.0
	1.0s	3.60nm			3.8mb		DMK	1.15	304	iPn	49	03.50	0.0	SML	1.31	79	iPd	10	29.30	-1.2
			i	32	14.30		BNT	1.18	226	ePn	49	04.00	0.1	RDN	1.37	218	iPd	10	30.42	-1.3
							EDC	1.21	227	ePn	49	04.00	-0.6	NCT	1.39	222	iPd	10	30.91	-1.0
							KGT	1.50	242	ePn	49	08.80	-0.1				eS	10	49.04	
							DST	1.60	191	ePn	49	12.00	1.6	RDW	1.41	218	iPd	10	31.43	-1.0
								S.D. = 0.9	on	9 of	9 obs.			RSO	1.41	217	iPd	10	31.37	-1.1
							% MAY 18, 1991	14h 58m	16.06±0.97s					RS2	1.41	217	iPd	10	31.40	-1.0



LTl	1.59	186	eP	33	25.99	0.2
MTU	1.63	183	eP	33	27.04	0.6
PAX	1.66	34	ePd	33	25.81	-1.2
HUR	1.70	325	ePc	33	26.53	-0.8
			eS	33	48.82	
SLKM	1.72	231	eP	33	28.12	0.3
GLB	1.78	94	ePc	33	27.83	-0.8
			eS	33	50.36	
SEW	1.79	213	eP	33	28.40	-0.3
RND	1.91	341	ePc	33	29.73	-0.8
			eS	33	54.73	
SKT	1.95	283	ePc	33	30.65	-0.4
			eS	33	55.87	
NKA	2.01	246	eP	33	33.64	1.8
MCK	2.23	343	ePc	33	34.91	-0.1
SPU	2.23	261	ePd	33	34.50	-0.6
TRF	2.25	326	eP	33	34.76	-0.7
CRP	2.26	263	eP	33	35.26	-0.4
CROM	2.28	110	eP	33	36.33	0.4
DDM	2.31	18	eP	33	36.92	0.7
CKL	2.36	262	ePd	33	36.26	-0.8
BGL	2.37	264	eP	33	36.57	-0.6
TGL	2.42	109	eP	33	37.56	-0.3
BALM	2.55	101	ePc	33	38.36	-1.4
DOT	2.59	36	eP	33	40.44	0.2
RDT	2.60	249	ePc	33	39.28	-1.1
DFR	2.72	250	eP	33	41.30	-0.7
BWN	2.72	342	eP	33	40.97	-1.0
RDN	2.78	249	ePd	33	41.56	-1.4
CNPM	2.79	223	eP	33	42.22	-0.7
RSO	2.80	248	eP	33	42.44	-0.9
RS2	2.80	248	eP	33	42.93	-0.4
HDA	2.82	5	eP	33	43.50	0.2
RDW	2.82	249	eP	33	43.10	-0.4
RED	2.83	247	eP	33	42.71	-0.9
NCT	2.84	251	eP	33	42.81	-0.9
WRH	2.88	355	ePc	33	43.04	-1.2
CTGM	3.05	100	eP	33	46.39	-0.4
CCB	3.05	358	eP	33	45.59	-1.1
NEA	3.06	347	eP	33	45.44	-1.4
RDS	3.24	355	eP	33	48.13	-1.2
FBA	3.30	358	eP	33	49.55	-0.7
MDM	3.38	355	eP	33	49.94	-1.4
GLM	3.39	1	eP	33	50.45	-1.1
PDB	3.76	244	eP	33	55.55	-1.2
SVW	3.94	266	eP	33	57.60	-1.7
TTA	4.19	292	eP	34	01.70	-1.2

IMA	5.24 331 ePd	34 16.60	-1.2
	62 obs. associated		
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? MAY	18, 1991	16h 39m	23.39± 2.90s

DEPTH = 33.0 km (normal)  
NEAR COAST OF CENTRAL CHILE (135)

IHA	1.33	171	eP	39	45.50	-0.2
			eS	40	07.80	

ROCH	1.40	130	iPc	39	47.50	-0.4
			iS	40	09.20	
JACH	1.46	132	iPc	39	47.00	-0.8
			i	39	47.70	
			S	40	06.50	
PEL	1.75	145	iPd	39	51.50	-0.5
			iS	40	16.00	
LCCH	1.78	171	iPd	39	52.00	-0.3
			i	39	53.50	
			iS	40	20.50	
SAN	2.02	150	iPc	39	56.50	0.6
			iS	40	24.50	
TACH	2.10	158	iPc	39	56.90	0.0
			iS	40	28.00	
			i	40	30.50	
PCH	2.23	149	iPd	39	58.60	-0.2
			i	40	33.50	
LNv	2.27	170	iP	40	00.20	0.9
			i	40	03.00	
			e	40	37.00	
RTCB	2.65	86	e(P)	40	05.00	0.2
			S	40	41.00	
ZON	2.74	87	eP	40	06.20	0.1
MDZ	2.83	115	eP	40	08.60	1.3
			iS	40	46.20	
RTLL	2.94	83	e(P)	40	08.40	-0.6
			S	40	47.80	
CFA	3.11	89	ePc	40	11.20	-0.2
			eS	40	51.00	
RFA	4.19	138	ePd	40	26.50	-0.1

		i		40	37.20
		(S)		41	33.80
TCA	6.24	88	eP	40	51.80 -3.9X
		(S)		42	03.00
S.D. = 0.6 on 15 of 16 obs.					
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MAY 18, 1991		17h	14m	58.53±	0.26s
21.832 S		± 7.6km	139.014 W	± 8.0km	
DEPTH = 0.7 km (geophysicist)					
5.1mb ( 16 obs.)					
TUAMOTU ARCHIPELAGO REGION					(631)
DZM	50.35	259	iPd	24	00.80 1.1
PRS	60.21	16	ePc	25	11.80 1.1
PRI	60.21	17	e(P)	25	12.50 1.6
SAO	60.59	16	eP	25	13.90 0.5
GCC	60.71	16	ePc	25	15.00 0.9
PCC	61.06	15	e(P)	25	17.20 0.8
MHC	61.09	16	ePc	25	18.00 1.1
FRI	61.28	18	ePc	25	18.50 0.5
CMB	62.07	17	ePc	25	24.00 0.6
BONR	62.58	18	P	25	27.50 0.4
TNP	63.02	19	P	25	30.00 0.1
ORV	63.22	15	ePc	25	31.30 0.4
ARE	63.58	98	eP	25	35.00 0.8
WDC	63.96	14	ePc	25	36.10 0.3
ALQ	64.37	29	ePc	25	38.70 -0.1
	1.0s	13.00nm			5.1mb
ANMO	64.37	29	P	25	38.30 -0.5
	1.0s	47.50nm			5.7mb
MSU	65.10	23	P	25	44.00 0.5
RMQ	65.28	250	eP	25	45.70 0.9
TOO	65.83	237	iPd	25	48.80 0.6
LPB	66.68	99	eP	25	53.00 -1.3
ZOBO	66.73	99	P	25	55.00 0.1
	1.0s	21.25nm			5.3mb
GOL	68.80	27	P	26	06.70 -0.3
	0.8s	6.70nm			4.9mb
CTA	69.13	256	iPc	26	09.40 0.2
	1.0s	30.00nm			5.5mb
BMW	69.47	12	P	26	10.00 -0.7
LON	70.01	12	P	26	13.00 -1.0
STK	70.13	243	iPc	26	19.70 4.5X
	0.8s	1.90nm			4.3mb
TUL	70.50	36	eP	26	15.90 -1.3
	0.8s	20.00nm			5.3mb
LRM	71.53	19	eP	26	24.30 0.8
OLY	72.66	39	P	26	29.50 -0.6
PNT	72.91	13	eP	26	32.00 0.7
	0.9s	18.00nm			5.2mb
RSSD	73.03	26	P	26	31.50 -0.9
SIV	73.27	101	P	26	34.00 -0.1
FVM	74.99	38	P	26	43.00 -0.6
SES	76.05	18	eP	26	49.00 -0.5
TKL	77.48	43	P	26	57.00 -0.7
JSC	78.28	46	P	27	02.20 0.1
ASPA	78.99	249	eP	27	06.00 -0.4
	1.2s	7.30nm			4.6mb
WB2	79.82	253	eP	27	08.80 -2.1
	1.0s	4.50nm			4.4mb
WRA	79.83	253	P	27	10.00 -1.0
	1.0s	4.50nm			4.4mb
BLA	80.57	44	P	27	15.00 0.5
PDB	82.27	352	P	27	22.00 -0.8
CVL	82.28	44	P	27	23.50 0.2
FFC	82.58	21	eP	27	24.00 -0.6
	1.0s	10.00nm			5.0mb
KLU	83.22	357	P	27	27.00 -0.8
PMR	83.53	355	P	27	28.80 -0.4
	0.9s	22.92nm			5.4mb
NVL	85.42	171	ePc	27	40.00 1.2
TTA	85.54	352	P	27	39.50 0.0
	1.0s	26.25nm			5.4mb
LVNJ	86.23	43	P	27	42.50 -0.8
YKA	86.25	11	eP	27	41.70 -1.2
	1.1s	18.90nm			5.2mb
FBA	86.72	356	P	27	44.40 -0.7
	1.0s	15.00nm			5.1mb
TBR	86.76	43	P	27	45.00 -0.8
IMA	88.33	354	P	27	52.50 -



18d 17h

CLL 143.40 30 iPKP 34 34.20 -2.3  
 1.4s 11.00nm  
 BRG 144.13 29 iPKPc 34 36.20 -1.6  
 1.0s 19.00nm  
 HYB 144.40 270 ePKP 34 38.00 -1.3  
 WET 144.79 32 ePKP 34 37.80 -1.2  
 1.2s 46.00nm  
 PRU 145.02 30 PKPc 34 38.60 -0.7  
 0.8s 47.00nm  
 KHC 145.14 32 iPKP 34 39.20 -0.4  
 1.0s 21.00nm  
 CTI 146.04 38 PKPc 34 42.20 0.9  
 FVI 146.35 36 PKP 34 42.60 1.0  
 MME 146.51 41 PKP 34 42.70 0.4  
 OBN 146.62 5 iPKPd 34 42.80 1.0  
 1.0s \*\*\*\*\*nm  
 VOY 147.30 36 ePKPc 34 45.60 2.3  
 KRA 147.31 25 ePKP 34 44.10 1.0  
 1.0s 94.00nm

SFI 147.36 41 PKP 34 44.40 1.1  
 TRI 147.43 37 iPKPc 34 45.90 2.5X  
 ZST 147.48 30 ePKP 34 43.70 0.3  
 i 34 46.30  
 LJU 147.64 35 ePKPc 34 46.60 2.8X  
 e 34 47.40  
 CEY 147.78 36 ePKP 34 47.40 3.4X  
 SPC 148.12 26 ePKP 34 47.80 3.1X  
 ARV 148.25 41 PKP 34 47.30 2.5X  
 ASS 148.31 41 PKP 34 47.90 2.9X  
 SRO 148.32 30 ePKP 34 48.90 4.2X  
 VBY 148.37 36 ePKP 34 48.50 3.6X  
 PTJ 148.49 34 e(PKP) 34 46.00 0.8  
 GAR 149.65 311 ePKP 34 47.00 -0.3  
 HVAR 150.50 38 ePKP 34 53.50 5.2X  
 BZS 151.47 29 ePKP 34 53.50 3.9X  
 MLR 153.38 24 ePKP 34 52.50 -0.1

S.D. = 0.9 on 71 of 84 obs.

MAY 18, 1991 17h 17m 15.13 ± 0.99s

43.915 N ± 3.3km 127.990 W ± 8.8km

DEPTH = 10.0km (geophysicist)

3.8mb (3 obs.)

OFF COAST OF OREGON (30)

DBO 3.54 101 P 18 09.37 -2.0  
 HSO 3.57 95 P 18 10.24 -1.6  
 KMOR 3.64 60 P 18 12.23 -0.5  
 NLO 3.88 54 P 18 16.03 -0.2  
 ONR 4.20 44 P 18 20.40 -0.1  
 BMW 4.23 51 P 18 20.49 -0.6  
 GT2 4.27 71 P 18 21.79 0.0  
 RVW 4.34 57 P 18 22.55 -0.1  
 OBH 4.47 39 P 18 24.62 0.1  
 LVP 4.51 60 P 18 25.19 0.1  
 VLMM 4.54 67 P 18 25.79 0.2  
 CPW 4.58 46 P 18 25.42 -0.7  
 FL2 4.60 58 P 18 26.83 0.4  
 MTMW 4.61 61 P 18 26.85 0.3  
 CZM 4.62 55 P 18 26.20 -0.5  
 OOW 4.65 33 P 18 26.92 -0.2  
 ERK 4.66 57 P 18 26.92 -0.4  
 SHW 4.67 59 P 18 28.06 0.6  
 HSR 4.69 59 P 18 28.34 0.5  
 STD 4.70 58 P 18 28.06 0.2  
 JLK 4.70 60 P 18 28.17 0.3  
 REMW 4.71 59 P 18 28.59 0.5  
 SMW 4.71 42 P 18 27.57 -0.5  
 VBEM 4.72 74 P 18 28.20 -0.1  
 ESD 4.73 59 P 18 28.73 0.4  
 SOSW 4.75 59 P 18 28.96 0.3  
 CDFW 4.75 60 P 18 28.95 0.4  
 TDL 4.76 57 P 18 29.01 0.3  
 VLL 4.76 69 P 18 28.97 0.3  
 KOSW 4.83 56 P 18 29.40 -0.2  
 APM 4.84 66 P 18 30.20 0.3  
 VFP 4.87 71 P 18 30.12 -0.1  
 LMW 4.87 54 P 18 30.09 -0.2  
 OTR 4.88 30 P 18 31.33 1.0  
 OSD 4.92 36 P 18 30.73 -0.3  
 GULW 4.97 64 P 18 32.24 0.6  
 ASR 5.06 62 P 18 33.12 0.2  
 HDW 5.08 41 P 18 33.37 0.1  
 GHW 5.09 50 P 18 33.33 0.1  
 GMW 5.14 43 P 18 33.67 -0.4  
 LON 5.20 55 P 18 34.74 -0.1  
 RVC 5.21 52 P 18 35.03 0.0

WDC 5.24 128 e(P) 18 36.80 1.4  
 WPW 5.33 56 P 18 37.10 0.3  
 VIPM 5.33 81 P 18 35.35 -1.5  
 FMW 5.37 54 P 18 37.18 -0.3  
 BLN 5.38 39 P 18 37.79 0.3  
 VGB 5.38 70 P 18 36.89 -0.6  
 GSM 5.45 51 P 18 38.50 0.0  
 VTHM 5.46 74 P 18 37.81 -0.7  
 GL2 5.48 66 P 18 39.05 0.1  
 PGC 5.69 32 eP 18 43.00 1.4  
 NAC 5.78 58 P 18 43.51 0.4  
 OHW 5.82 39 P 18 43.72 0.3  
 HTW 5.83 46 P 18 43.57 -0.2  
 MIN 5.94 125 eP 18 45.70 0.4  
 JCW 6.01 42 P 18 46.48 0.3  
 JBO 6.01 72 P 18 45.61 -0.7  
 EBG 6.02 58 P 18 46.93 0.5  
 MXC 6.05 61 P 18 46.70 -0.1  
 TBM 6.13 55 P 18 48.27 0.3  
 RPW 6.38 42 P 18 51.50 -0.1  
 RSW 6.44 64 P 18 52.53 0.2  
 MBW 6.44 39 P 18 52.83 0.4  
 ETW 6.50 53 P 18 53.26 -0.1  
 ORV 6.52 130 ePc 18 53.30 -0.2  
 WIW 6.65 65 P 18 55.86 0.7  
 LOCW 6.65 62 P 18 55.57 0.3  
 CRF 6.72 61 P 18 56.09 -0.2  
 RC1 6.74 60 P 18 56.30 -0.2  
 EPH 6.81 57 P 18 57.38 -0.2  
 WG3 6.81 69 P 18 56.42 -1.2  
 ET3 6.92 64 P 18 58.76 -0.3  
 BRK 7.43 142 e(P) 18 55.60 -10.6X  
 PNT 7.90 44 eP 19 13.00 0.3  
 0.6s 13.00nm 5.3mb X  
 MHC 8.15 142 e(P) 19 07.60 -8.7X  
 CMB 8.22 133 e(P) 19 12.30 -5.0X  
 FRI 9.36 135 eP 19 32.20 -0.8  
 BONR 9.44 126 e(P) 19 35.00 0.6  
 TNP 10.01 122 e(P) 19 45.00 2.8X  
 GOL 17.37 96 e(P) 21 22.00 2.7  
 ALO 18.85 111 eP 21 38.00 0.4  
 0.9s 2.52nm 3.4mb  
 FFC 19.99 48 eP 21 50.00 -0.3  
 0.8s 10.00nm 4.2mb  
 YKA 20.19 18 eP 21 50.10 -2.2  
 0.9s 4.30nm 3.8mb  
 S.D. = 0.7 on 80 of 84 obs.

MAY 18, 1991 17h 32m 54.15 ± 0.31s  
 42.715 N ± 4.7km 146.593 E ± 4.9km  
 DEPTH = 35.9km (3 depth phases)  
 4.8mb (42 obs.)  
 OFF COAST OF HOKKAIDO, JAPAN (225)

KUSJ 1.44 286 P 33 17.30 -0.8  
 eS 33 35.20  
 HOOJ 2.47 263 eP 33 35.00 2.2  
 eS 34 11.60  
 ASAJ 3.20 297 eP 33 44.70 1.4  
 MRRJ 4.09 268 P 33 56.80 1.0  
 eS 34 45.50  
 AOMJ 5.13 247 P 34 11.10 0.4  
 OFUJ 5.21 227 iP+ 34 11.40 -0.3  
 eS 35 07.70  
 YAMJ 6.75 230 eP 34 32.80 -0.6  
 S 35 47.20  
 NIUJ 7.99 229 eP 34 50.20 -0.5  
 KAKJ 8.18 219 P 34 51.80 -1.5  
 S 36 16.40  
 CHJJ 8.88 224 P 35 01.30 -1.7  
 S 36 35.50  
 MAT 8.93 229 eP 35 03.00 -0.8  
 0.6s 5.33nm 4.9mb  
 (S) 36 35.00  
 MTMJ 9.13 231 P 35 06.20 -0.4  
 IIOJ 9.88 226 P 35 16.70 -0.2  
 eS 37 04.80  
 TSRJ 10.92 232 eP 35 50.90 -0.1  
 MDJ 12.46 285 eP 35 51.00 -0.8  
 1.0s 19.00nm 5.1mb  
 CN2 15.44 281 Pd 36 28.60 -2.3  
 Z 16s 0.90um  
 epP 36 33.00  
 SNY 17.05 275 eP 36 50.60 -0.7  
 1.0s 21.00nm 4.2mb  
 YAK 21.78 338 eP 37 38.20 -6.1X  
 BJI 22.92 274 eP 37 55.50 -0.3

1.2s 36.00nm 4.7mb  
 TIA 23.58 264 eP 38 02.90 0.6  
 NJ2 24.37 253 P 38 11.50 1.5  
 sP 38 26.00  
 HHC 26.08 278 Pd 38 28.40 2.2  
 1.0s 47.00nm 5.0mb  
 TIY 26.44 271 eP 38 30.60 1.1  
 BTO 27.28 278 P 38 36.80 -0.3  
 XAN 30.57 266 eP 39 06.70 0.0  
 LZH 33.41 273 eP 39 31.00 -0.6  
 1.0s 18.00nm 4.9mb  
 Z 19s 0.24um 3.9msz  
 pP 39 41.50 37km  
 sP 39 48.50  
 GTA 35.08 281 P 39 46.00 0.1  
 0.6s 10.00nm 4.9mb  
 Z 16s 0.40um 4.3mszX  
 E 10s 0.20um  
 pP 39 50.00 14kmX  
 sP 39 56.40  
 CDY 35.90 265 P 39 53.00 0.1  
 GYA 36.28 257 P 39 57.40 1.3  
 WMO 42.11 292 P 40 45.00 0.7  
 1.0s 20.00nm 4.8mb  
 Z 16s 0.56um 4.5mszX  
 LSA 45.82 272 P 41 15.50 0.6  
 CHG 46.61 254 eP 41 22.00 1.3  
 INK 47.50 30 ePc 41 27.30 0.2  
 0.6s 15.00nm 5.2mb  
 pP 41 41.00 51kmX  
 YKA 56.89 33 eP 42 36.40 -1.0  
 0.8s 2.00nm 4.2mb  
 KEV 59.54 339 eP 42 54.00 -1.8  
 SOD 61.26 338 iP 43 06.30 -1.3  
 PNT 61.37 48 eP 43 09.00 0.4  
 HYB 62.34 269 eP 43 08.50 -7.0X  
 WB2 63.36 193 iPd 43 22.60 0.6  
 0.8s 2.10nm 4.3mb  
 i 43 31.20 28km  
 e 43 35.30  
 e 44 09.00  
 WRA 63.36 193 P 43 22.00 0.0  
 0.9s 2.00nm 4.2mb  
 KAF 65.06 333 iP 43 31.00 -1.6  
 0.7s 12.70nm 5.1mb  
 esP 43 31.60  
 GBA 65.61 266 P 43 35.00 -1.8  
 0.8s 11.20nm 5.0mb  
 OBN 65.90 324 eP 43 37.00 -1.2  
 1.0s \*\*\*\*\*nm 8.2mb X  
 NUR 66.77 333 iP 43 42.30 -1.3  
 0.5s 13.20nm 5.3mb  
 FFC 66.78 36 eP 43 44.00 0.2  
 0.7s 6.00nm 4.8mb  
 ASPA 67.08 193 eP 43 47.80 1.8  
 0.9s 3.60nm 4.5mb  
 i 44 00.30 43km  
 LRM 67.35 48 ePd 43 48.80 0.9  
 UPP 69.54 335 iP 43 59.80 -1.0  
 FRB 70.29 16 eP 44 04.00 -1.3  
 HFS 70.49 337 eP 44 05.20 -1.4  
 0.6s 18.30nm 5.3mb  
 Z 19s 0.07um 3.9msz  
 e 44 11.50 20kmX  
 e 44 24.70  
 LR 15 08.00  
 KRA 76.52 328 eP 44 42.20 0.3  
 KSP 77.26 330 eP 44 46.00 -0.1  
 MLR 77.52 322 eP 44 48.00 0.2  
 CLL 78.04 332 iPc 44 50.00 -0.3  
 0.7s 14.00nm 5.1mb  
 PRU 78.60 331 P 44 53.50 0.1  
 EKA 79.00 343 Pd 44 55.20 -0.3  
 0.7s 6.70nm 4.7mb  
 WTS 79.44 336 eP 44 58.50 0.6  
 0.7s 11.00nm 5.0mb  
 KHC 79.67 331 eP 45 00.00 0.7  
 ENN 80.79 336 eP 45 05.00 -0.1  
 0.9s 8.00nm 4.7mb  
 CDF 82.44 334 eP 45 13.80 -0.1  
 0.7s 4.40nm 4.6mb  
 HAU 83.09 334 eP 45 16.90 -0.4  
 BSF 83.10 334 eP 45 16.90 -0.5  
 FLN 84.41 339 eP 45 23.80 -0.1  
 0.5s 3.65nm 4.8mb  
 LDF 84.47 339 eP 45 24.60 0.4  
 0.5s 2.90nm 4.7mb



LOR 84.52 336 eP 45 24.20 -0.3  
0.7s 4.40nm 4.7mb  
LBF 84.74 335 eP 45 25.40 -0.2  
0.7s 4.95nm 4.8mb  
SSF 84.81 336 eP 45 25.80 -0.1  
0.6s 2.25nm 4.5mb  
GRR 84.85 339 eP 45 26.30 0.2  
0.5s 4.35nm 4.9mb  
SMF 85.08 335 eP 45 27.40 0.1  
0.7s 7.15nm 5.0mb  
AVF 85.10 336 eP 45 27.60 0.2  
0.7s 5.50nm 4.9mb  
LPL 85.16 333 eP 45 28.30 0.3  
0.6s 1.80nm 4.4mb  
LPG 85.17 333 eP 45 28.40 0.3  
0.6s 2.25nm 4.5mb  
LPF 85.23 339 eP 45 28.40 0.4  
0.7s 5.50nm 4.9mb  
BGF 85.47 336 eP 45 29.80 0.6  
0.5s 1.80nm 4.5mb  
MAF 85.85 336 eP 45 31.80 0.6  
1.0s 10.00nm 5.0mb  
TCF 85.90 336 eP 45 31.90 0.5  
0.8s 4.05nm 4.7mb  
LSF 86.14 337 eP 45 32.90 0.3  
0.7s 8.80nm 5.1mb  
MFF 86.30 338 eP 45 33.90 0.6  
0.6s 5.40nm 5.0mb  
SBF 86.37 332 eP 45 34.00 0.2  
0.6s 7.20nm 5.1mb  
RJF 87.00 336 eP 45 37.30 0.5  
Z 22s 0.08um 4.1msz  
CAF 87.18 336 eP 45 38.80 1.1  
0.8s 7.40nm 5.0mb  
LFF 87.56 336 eP 45 40.40 0.9  
LPO 87.66 336 eP 45 40.90 0.9  
0.7s 4.40nm 4.8mb  
SIV 144.38 50 PKP 52 28.00 -0.4  
PDCR 149.52 11 (PKP) 52 40.00 3.2X  
S.D. = 0.9 on 82 of 85 obs.

& MAY 18, 1991 19h 35m 59.63s  
59.783 N 151.823 W  
DEPTH = 62.6km  
KENAI PENINSULA, ALASKA (14)  
<AEIC>.

HOM 0.15 144 iPc 36 08.92 1.2  
eS 36 15.74  
XLV 0.33 171 ePc 36 09.49 -0.9  
eS 36 17.53  
CNPM 0.39 131 iPc 36 10.54 -0.4  
eS 36 19.01  
RED 0.80 324 iPd 36 14.70 -0.8  
eS 36 26.42  
RSO 0.83 326 iPd 36 15.28 -0.7  
RS2 0.83 326 iPd 36 15.34 -0.7  
RDT 0.85 340 iPd 36 15.25 -0.9  
eS 36 27.58  
RDW 0.86 325 iPd 36 15.65 -0.8  
eS 36 28.41  
RDN 0.87 328 iPd 36 15.69 -0.8  
eS 36 27.72  
AUE 0.90 242 eP 36 15.84 -0.8  
eS 36 29.50  
DFR 0.92 332 iPd 36 16.13 -1.0  
AUI 0.93 242 eP 36 16.55 -0.6  
eS 36 29.39  
NCT 0.96 325 iPd 36 16.94 -0.6  
eS 36 30.54  
NKA 1.01 17 eP 36 19.57 1.5  
SLKM 1.08 47 eP 36 18.66 -0.5  
PDB 1.20 271 iPc 36 19.56 -1.1  
eS 36 35.17  
SYI 1.21 194 ePc 36 20.24 -0.6  
SEW 1.24 74 ePc 36 21.48 0.3  
CDD 1.27 228 iPc 36 20.84 -0.8  
SPU 1.41 355 ePd 36 23.04 -0.5  
eS 36 41.92  
MCNL 1.42 246 eP 36 22.21 -1.4  
eS 36 39.75  
CKL 1.44 350 ePd 36 23.62 -0.5  
CRP 1.50 354 ePd 36 24.77 -0.2  
BGL 1.51 350 ePd 36 24.92 -0.1  
SUA 1.77 17 ePc 36 28.96 0.3  
PMS 1.84 36 ePc 36 29.81 0.2  
PWA 2.10 26 eP 36 33.43 0.3

SKT 2.21 4 eP 36 35.37 0.7  
KNK 2.33 44 eP 36 35.68 -0.7  
GHO 2.45 34 eP 36 37.21 -0.9  
CUT 2.74 15 eP 36 42.00 0.0  
KLU 3.38 57 eP 36 49.43 -1.7  
32 obs. associated

% MAY 18, 1991 20h 15m 25.45 ± 1.15s  
39.933 N ± 9.1km 28.031 E ± 7.1km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)

KCT 0.40 38 iPg 15 33.20 -0.5  
iSg 15 38.20  
BNT 0.43 349 iPg 15 33.50 -0.7  
iSg 15 39.00  
EDC 0.43 343 iPg 15 34.00 -0.3  
iSg 15 39.00  
DST 0.56 125 iPg 15 36.40 -0.5  
iSg 15 44.40  
KGT 0.76 313 iPn 15 40.10 -0.2  
MFT 1.03 326 ePg 15 46.00 1.1  
IZI 1.18 70 ePn 15 48.60 1.1  
YLV 1.21 58 ePn 15 48.00 0.0  
S.D. = 0.9 on 8 of 8 obs.

% MAY 18, 1991 21h 27m 45.93 ± 0.71s  
44.365 N ± 5.1km 11.902 E ± 9.6km  
DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)

SFI 0.45 185 P 27 54.70 -0.3  
eSg 28 02.00  
PGD 0.51 195 P 27 55.60 -0.6  
eSg 28 03.80  
CRE 0.74 177 P 28 00.30 -0.2  
eSg 28 11.30  
ARV 1.15 139 P 28 08.00 0.6  
eSg 28 24.90  
PII 1.18 238 P 28 08.90 0.9  
eSg 28 25.80  
CTI 1.69 354 P 28 15.00 -0.8  
eSn 28 37.70  
FVI 2.31 15 P 28 25.00 0.4  
S.D. = 0.8 on 7 of 7 obs.

\* MAY 18, 1991 21h 46m 48.41 ± 1.01s  
31.414 S ± 10.8km 179.811 W ± 19.8km  
DEPTH = 392.4 ± 10.9 km  
4.1mb (3 obs.)

KERMADEC ISLANDS REGION (177)

HBZ 6.36 194 eP 48 27.80 2.5  
PUZ 6.83 193 eP 48 31.60 1.0  
S 49 55.20  
NOZ 7.40 193 eP 48 37.10 0.1  
PGZ 9.72 198 eP 49 03.70 -0.2  
MNG 9.94 201 eP 49 04.80 -1.8  
S 50 59.00  
MTW 10.43 200 eP 49 12.40 0.0  
CAW 10.52 202 eP 49 13.60 0.2  
MRW 10.75 203 eP 49 14.90 -1.1  
eS 51 14.20  
TCW 10.88 204 eP 49 17.30 -0.2  
eS 51 18.20  
THZ 11.87 207 eP 49 30.30 0.8  
KHZ 12.20 204 eP 49 31.90 -1.3  
S 51 46.80  
LTZ 12.98 207 eP 49 43.00 1.3  
DZM 15.39 304 iPc 50 09.90 2.3  
STK 32.75 259 eP 52 55.90 7.9X  
0.4s 3.10nm 4.0mb  
WB2 42.59 274 eP 54 08.30 -1.1  
0.9s 9.90nm 4.1mb  
i 55 38.40  
i 56 21.80  
WRA 42.60 274 P 54 08.00 -1.4  
0.8s 10.90nm 4.2mb  
TNP 90.46 44 P 59 08.00 0.3  
YKA 107.03 26 ePKP 04 27.70 -1.1  
0.5s 0.10nm  
KAF 144.96 339 iPKP 05 38.60 -1.4  
0.5s 11.80nm  
eS 05 39.40  
NUR 146.70 338 iPKP 05 44.40 1.5  
0.4s 6.50nm  
UPP 149.25 343 iPKP 05 55.70 8.8X

NB2 149.49 349 PKP 05 51.10 3.7X  
0.7s 3.90nm  
HFS 149.89 347 ePKP 05 52.00 4.1X  
0.9s 5.40nm  
e 05 58.20  
S.D. = 1.4 on 19 of 23 obs.

MAY 18, 1991 21h 54m 28.12 ± 0.18s  
3.59B S ± 3.7km 128.390 E ± 5.3km  
DEPTH = 113.6km (6 depth phases)  
5.2mb (26 obs.)

CERAM (272)

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 155, 26C

Centroid Location:

Origin Time 21:54:29.3 1.0

Lat 3.26S 0.18 Lon 127.79E 0.20

Dep 78.3 9.5 Half-duration 1.5

Moment Tensor: Scale 10\*\*16 Nm

Mrr= 2.64 0.52 Mtt= 0.95 0.78

Mff=-3.59 1.12 Mrt=-3.19 0.57

Mrf=-2.35 0.54 Mtf=-2.10 0.57

Principal Axes:

T Val= 5.14 Plg=54 Azm=172

N 0.69 26 40

P -5.84 23 298

Best Double Couple: Mo=5.5\*10\*\*16

NP1: Strike=349 Dip=32 Slip= 34

NP2: 229 73 117

KUPT 8.06 216 eP 56 38.50 14.5X  
MKS 9.04 259 iPc 56 39.00 1.7  
MTN 9.58 164 eP 56 45.70 1.2  
KNA 12.08 178 iPd 57 18.30 0.6  
0.3s 119.00nm 6.0mb  
e 57 28.00

TSM 12.91 307 eP 57 31.00 2.5  
WB2 17.26 161 iPd 58 21.40 -2.2  
0.4s 231.90nm 5.8mb  
i 06 25.10  
e 10 09.60

MBL 19.34 205 iPc 58 46.10 -1.1  
PMG 19.51 108 eP 58 50.00 1.0  
QIS 20.09 148 iPc 58 54.40 -0.6  
i 02 31.70

ASPA 20.65 166 iPc 59 00.90 0.2  
0.4s 1559.70nm 6.7mb X  
Z 21s 0.40um 3.8msz  
eS 02 41.60

BAG 21.33 339 eP 59 07.60 -0.1  
e 59 31.50 120km  
WARB 22.52 184 eP 59 20.10 0.9  
NANU 22.60 212 eP 59 19.50 -0.4  
0.3s 20.00nm 5.0mb

CTA 23.92 135 iPd 59 34.90 2.1  
0.8s 67.16nm 5.1mb  
iS 03 47.00

MEKA 24.76 201 eP 59 40.00 -0.7  
0.4s 52.00nm 5.3mb  
KGM 25.67 282 eP 59 51.50 2.2

FORR 27.11 181 eP 00 01.00 -1.2  
0.3s 55.00nm 5.6mb  
QLP 27.44 148 iPc 00 05.20 0.0

COOL 27.99 193 eP 00 09.90 -0.3  
0.3s 17.00nm 5.2mb  
IPM 28.52 286 ePd 00 18.20 3.0X  
0.8s 103.70nm 5.5mb

BAL 29.04 201 eP 00 18.80 -0.9  
KLB 29.59 199 eP 00 23.70 -0.8  
RMO 29.98 141 eP 00 28.00 0.0  
e 01 03.00 168kmX  
i 01 39.00  
i 03 29.40

MUN 30.46 201 eP 00 30.50 -1.7  
STK 30.75 158 iPc 00 39.70 5.0X  
0.4s 37.20nm 5.5mb  
i 03 34.70  
i 07 06.70

NWAO 30.99 198 eP 00 36.00 -0.8  
0.6s 70.00nm 5.6mb  
i 07 06.70

RKG 32.12 198 eP 00 51.20 4.5X  
CMS 32.23 151 iPc 00 48.70 1.0  
ADE 32.65 164 iPc 00 51.60 0.3  
0.4s 296.61nm 6.4mb X

BRS 33.20 138 iPc 00 55.00 -1.2  
LOE 33.58 309 iPd 00 59.80 0.2



[illegible]



KLU 3.71 336 eP 18 19.74 -5.7  
 SCM 4.35 330 eP 18 28.74 -5.7  
 KNK 4.36 321 eP 18 27.99 -6.6  
 GHO 4.77 322 eP 18 35.45 -5.1  
 CUT 5.67 322 eP 18 47.54 -5.6  
 CKL 5.74 306 eP 18 49.27 -4.9

14 obs. associated

MAY 19, 1991 00h 03m 23.58±0.48s  
 9.323 N ± 8.8km 82.814 W ± 8.2km  
 DEPTH = 16.8km ( 7 depth phases)  
 4.8mb ( 17 obs.) 4.2Msz ( 1 obs.)  
 PANAMA-COSTA RICA BORDER REGION ( 80)  
 MD 4.9 (UPA). Felt (IV) at David  
 and Remedios and (II) in many  
 parts of western Panama.

UPA 3.26 96 iPd 04 14.90 0.0  
 S 04 49.50  
 SDV 12.04 91 eP 06 15.50 -2.1  
 eS 08 25.90  
 TOV 12.85 87 eP 06 28.00 -0.4  
 eS 08 43.30  
 TRN 21.13 85 P 08 12.70 2.6  
 NNA 21.99 164 eP 08 20.50 1.7  
 1.3s 57.69nm 4.8mb  
 JSC 24.88 3 P 08 48.30 1.5  
 LHS 25.10 4 P 08 50.80 1.8  
 TKL 26.23 358 P 09 04.80 5.3X  
 GBTN 26.25 357 P 09 04.00 4.3X  
 ELC 28.44 349 P 09 19.70 0.2  
 pP 09 24.00 15km  
 ZOBO 29.29 150 P 09 33.00 4.9X  
 Z 24s 0.23um 3.7MszX  
 LR 19 24.00  
 FVM 29.35 348 P 09 26.80 -1.0  
 pP 09 32.50 20km  
 LPB 29.53 150 eP 09 31.00 0.9  
 CCH 31.23 148 eP 09 45.00 0.0  
 SIV 33.11 139 P 10 00.40 -0.7  
 ALQ 33.43 323 eP 10 03.00 -1.0  
 0.8s 1.68nm 4.0mb  
 ANMO 33.44 323 P 10 03.00 -1.0  
 GOL 36.33 330 P 10 28.00 0.0  
 0.8s 4.46nm 4.4mb  
 pP 10 33.30 15km  
 RSSD 39.26 336 P 10 55.00 1.7  
 1.5s 21.60nm 4.6mb  
 pP 10 59.30 15km  
 TNP 42.14 318 P 11 19.00 1.9  
 0.9s 3.91nm 4.1mb  
 LBFM 46.94 319 P 11 59.30 3.8X  
 SES 47.14 336 eP 11 57.00 0.2  
 FFC 47.79 345 ePc 12 01.30 -0.5  
 0.8s 12.00nm 5.0mb  
 YKA 57.86 343 eP 13 14.80 -1.7  
 1.0s 18.30nm 5.1mb  
 BALM 67.41 333 P 14 26.00 5.8X  
 INK 67.55 342 eP 14 21.00 0.2  
 1.2s 71.00nm 5.7mb  
 PMR 70.67 332 P 14 51.00 10.9X  
 FBA 71.12 336 P 14 42.40 -0.4  
 0.8s 13.79nm 5.1mb  
 pP 14 47.60 17km  
 SVW 73.60 331 P 14 57.70 0.1  
 0.6s 10.34nm 5.0mb  
 pP 15 03.20 18km  
 TOL 75.48 51 eP 15 09.50 0.6  
 iPP 17 58.00  
 ePPP 20 02.00  
 i 23 45.00  
 iPPS 29 02.00  
 ISS 33 50.00  
 TIC 76.95 85 P 15 17.80 0.2  
 LIC 77.00 86 P 15 18.00 0.1  
 KIC 77.27 86 P 15 19.70 0.4  
 LPF 77.64 43 eP 15 19.90 -0.8  
 1.1s 17.10nm 5.0mb  
 GRR 77.76 42 eP 15 20.90 -0.5  
 0.9s 11.45nm 4.9mb  
 FLN 78.01 42 eP 15 22.40 -0.3  
 1.0s 10.00nm 4.8mb  
 Z 21s 0.13um 4.2Msz  
 LDF 78.25 42 eP 15 23.60 -0.4  
 0.9s 8.20nm 4.8mb  
 MFF 78.26 44 eP 15 23.70 -0.5  
 ANM 78.44 334 P 15 25.20 0.4

EPF 78.71 48 eP 15 31.20 19km  
 0.9s 4.90nm 4.5mb  
 NB2 83.87 29 P 15 53.40 -0.1  
 0.9s 2.60nm 4.5mb  
 CLL 86.42 39 eP 16 06.00 -0.4  
 1.3s 11.00nm 4.9mb  
 STK 133.19 235 ePKP 22 43.40 2.7X  
 1.2s 0.90nm  
 WB2 142.61 249 iPKPc 22 55.40 -3.0  
 1.4s 4.40nm  
 WRA 142.62 249 PKP 22 55.00 -3.4X  
 2.1s 5.00nm  
 S.D. = 1.2 on 37 of 45 obs.

MAY 19, 1991 00h 58m 01.73±0.14s  
 1.156 N ± 3.2km 122.957 E ± 4.1km  
 DEPTH = 33.0km (normal)  
 6.0mb ( 58 obs.) 6.8Msz ( 34 obs.)  
 MINAHASSA PENINSULA (265)  
 Ms 6.9 (BRK). Mo=3.0\*10\*\*19 Nm  
 (PPT). Felt (III) in the Monodo  
 areo. Two events about 4.5  
 seconds apart.  
 FAULT PLANE SOLUTION: P-Waves  
 NP1:Strike=250 Dip=85 Slip= 142  
 NP2: 344 52 6  
 Principal Axes:  
 T P1g=30 Azm=200  
 P 22 303  
 Comment: The focal mechanism is  
 moderately well controlled and  
 corresponds to strike-slip  
 faulting with a large reverse  
 component. The preferred fault  
 plane is not determined.  
 RADIATED ENERGY  
 No. of sta: 10 Focal mech. F  
 Energy 1.2±0.2\*10\*\*14 Nm  
 MOMENT TENSOR SOLUTION  
 Dep 37 No. of sta: 11  
 Moment Tensor: Scale 10\*\*19 Nm  
 Mrr= 1.50 Mtt=-0.66  
 Mff=-0.84 Mrt=-2.55  
 Mrf=-0.64 Mtf=-1.17  
 Principal axes:  
 T Val= 3.19 P1g=56 Azm=183  
 N -0.06 18 65  
 P -3.13 28 325  
 Best Double Couple: Mo=3.2\*10\*\*19  
 NP1:Strike= 17 Dip=23 Slip= 40  
 NP2: 250 75 108  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 20S, 57C M.W.: 16S, 41C  
 Centroid Location:  
 Origin Time 00:58:13.0 0.1  
 Lat 1.57N 0.01 Lon 123.21E 0.02  
 Dep 32.6 0.7 Half-duration 11.0  
 Moment Tensor: Scale 10\*\*19 Nm  
 Mrr= 1.77 0.02 Mtt=-1.75 0.02  
 Mff=-0.02 0.02 Mrt=-1.54 0.06  
 Mrf= 0.74 0.05 Mtf= 0.36 0.02  
 Principal Axes:  
 T Val= 2.48 P1g=67 Azm=215  
 N 0.00 7 108  
 P -2.48 22 15  
 Best Double Couple: Mo=2.5\*10\*\*19  
 NP1:Strike= 92 Dip=24 Slip= 72  
 NP2: 291 67 98

MNI 1.90 81 ePd 58 31.50 -1.0  
 eS 58 52.50  
 TSM 5.75 302 iPd 59 28.20 1.1  
 0.2s 514.20nm 6.8mb  
 e 00 33.00  
 DAV 6.44 24 iPc+ 59 35.80 -1.0  
 1.3s \*\*\*\*\*nm 7.5mb X  
 BK82 6.52 248 iPc 59 41.70 3.8X  
 eS 01 14.10  
 AAI 7.11 133 eP 59 51.10 5.0X  
 eS 02 24.10  
 MKS 7.23 209 iPc 59 52.00 4.2X  
 iS 01 20.30  
 KKM 8.30 306 ePc 00 02.00 -0.8  
 0.3s 100.80nm 6.4mb  
 i 00 31.50

QCP 13.52 352 eP 01 22.00 8.3X  
 TRT 13.54 229 iPc 01 09.20 -4.8X  
 1.1s 176.78nm 5.9mb  
 BAG 15.34 351 ePd- 01 37.00 -0.7  
 MTN 16.10 150 eP 01 48.00 0.6  
 KNA 17.75 161 eP 02 08.50 0.4  
 0.7s 934.00nm 6.0mb  
 KGM 19.65 273 ePc 02 31.20 0.3  
 e 02 56.00 149kmX  
 KLM 21.38 276 eP 02 49.00 0.2  
 MNDI 21.91 110 eP 02 45.00 -9.3X  
 QIZ 21.93 325 Pd 02 54.00 -0.2  
 1.1s 500.00nm 5.9mb  
 N 15s 108.00um  
 E 17s 80.70um  
 IPM 22.16 279 ePd 03 03.20 6.6X  
 1.1s 217.10nm 5.5mb  
 e 04 02.20  
 HKC 22.69 338 iP 03 02.00 0.2  
 iS 07 14.00  
 MCO 22.76 337 eP 03 03.00 1.3  
 SNG 23.06 286 eP 03 06.60 1.2  
 1.2s 268.75nm 5.6mb  
 eS 07 19.00  
 MDG 23.67 106 eP 03 13.80 2.5  
 GZH 23.71 338 iPd 03 12.00 0.3  
 6.0s 7700.00nm 6.4mb X  
 Z 18s 155.00um 6.5Msz  
 N 17s 148.00um  
 E 18s 169.00um  
 WRA 23.76 153 P 03 12.60 0.4  
 ANP 23.93 357 iPd 03 14.00 0.1  
 eS 07 24.00  
 QZH 24.02 350 Pd 03 14.00 -0.7  
 4.0s 8500.00nm 6.6mb X  
 Z 20s 220.00um 6.6Msz  
 N 20s 247.00um  
 pP 03 26.00 48kmX  
 PSI 24.07 274 eP 03 22.50 7.3X  
 NANU 24.66 197 iPc 03 20.20 -0.7  
 PJG 24.96 59 eP 03 26.00 2.2  
 GUA 24.97 59 eP 03 25.70 1.7  
 1.1s 881.01nm 6.3mb  
 pP 03 34.80 32kmX  
 PMG 26.29 114 eP 03 35.90 -0.3  
 1.2s 986.25nm 6.3mb  
 LOE 26.39 309 eP 03 37.00 -0.2  
 NST 26.74 304 eP 03 44.20 3.8X  
 ASPA 26.87 157 iPc 03 40.40 -1.2  
 1.2s 102.60nm 5.3mb  
 Z 22s 225.80um 6.7Msz  
 eS 08 32.00  
 QIS 27.05 144 iPc 03 42.80 -0.4  
 e 10 33.00  
 WARB 27.41 173 eP 03 46.00 -0.5  
 0.4s 56.00nm 5.6mb  
 MEKA 27.94 188 eP 03 49.00 -2.2  
 BSI 27.94 280 eP 03 50.00 -1.4  
 BDT 28.47 306 eP 04 02.00 5.9X  
 0.8s 51.90nm 5.3mb  
 CHG 29.37 308 ePd 04 04.40 0.2  
 1.1s 22.15nm 4.8mb X  
 eS 09 10.00  
 GYA 29.64 329 P 04 07.00 0.3  
 Z 20s 67.50um 6.3Msz  
 N 13s 49.30um  
 E 13s 70.10um  
 PP 05 06.00  
 SSE 29.82 357 Pd 04 07.00 -1.1  
 1.5s 150.00nm 5.6mb  
 N 17s 73.10um  
 E 17s 25.80um  
 S 09 03.00  
 WHN 30.35 345 eP 04 13.00 0.3  
 6.0s 1400.00nm 5.9mb X  
 Z 16s 96.20um 6.5MszX  
 E 16s 77.70um  
 pP 04 22.00 31kmX  
 KAGJ 30.80 13 eP 04 22.60 5.9X  
 KMI 30.80 322 eP 04 18.00 0.9  
 6.0s 2300.00nm 6.2mb X  
 N 16s 14.90um  
 E 16s 49.00um  
 ed 04 22.31  
 pP 04 30.00 46kmX  
 ec 04 34.89



19d 01h

KMI	30.80	322	sP	04	35.00	4.9X	5.8mb	E	15s	79.60um	16kmX
			ec	04	39.52						
			PP	05	20.00						
			eS	09	27.36						
			eSS	11	23.90						
			P+	04	22.00						
			Pd	04	30.00						
			sP	04	35.00						
			PP	05	20.00						
			S	09	23.00						
NJ2	30.97	353	iS	09	25.00	-0.7	6.2MszX	Z	28s	78.30um	18kmX
			Pd	04	17.50						
			ec	04	31.17						
			e	04	36.63						
			eP	04	25.30						
			eP	04	26.30						
			e	04	32.50						
			e	04	27.00						
			e	04	18.92						
			ic	04	24.05						
CTA	31.10	134	iPc+	04	19.30	-0.2	5.7mb	N	17s	47.30um	22kmX
			Pc+	04	19.30						
			iS	09	28.00						
			eP	04	18.92						
			ec	04	24.05						
			e	04	31.17						
			e	04	36.63						
			eP	04	25.30						
			eP	04	26.30						
			e	04	32.50						
CTAO	31.10	134	eP	04	18.92	-0.6	6.2mb	Z	22s	101.00um	6.6Msz
			ec	04	24.05						
			e	04	31.17						
			e	04	36.63						
			eP	04	25.30						
			eP	04	26.30						
			e	04	32.50						
			e	04	27.00						
			e	04	18.92						
			ic	04	24.05						
KUMJ	32.08	13	eP	04	25.30	-2.7	6.4mb	Z	22s	101.00um	6.6Msz
			eP	04	26.30						
			e	04	32.50						
			e	04	27.00						
			e	04	18.92						
			ic	04	24.05						
			e	04	31.17						
			e	04	36.63						
			eP	04	25.30						
			eP	04	26.30						
BAL	32.14	190	eP	04	26.30	-2.2	6.4mb	Z	22s	101.00um	6.6Msz
			eP	04	26.30						
			e	04	32.50						
			e	04	27.00						
			e	04	18.92						
			ic	04	24.05						
			e	04	31.17						
			e	04	36.63						
			eP	04	25.30						
			eP	04	26.30						
FORR	32.20	172	eP	04	32.50	22kmX	6.2mb	Z	22s	101.00um	6.6Msz
			eP	04	27.00						
			e	04	32.50						
			e	04	27.00						
			e	04	18.92						
			ic	04	24.05						
			e	04	31.17						
			e	04	36.63						
			eP	04	25.30						
			eP	04	26.30						
KLB	32.94	188	eP	04	33.00	-2.5	6.5Msz	Z	20s	91.20um	6.5Msz
			eP	04	39.00						
			e	04	39.00						
			e	04	39.00						
			e	04	39.00						
			e	04	39.00						
			e	04	39.00						
			e	04	39.00						
			e	04	39.00						
			e	04	39.00						
MUN	33.57	190	eP	04	39.00	-1.9	6.5Msz	Z	20s	91.20um	6.5Msz
			eP	04	39.00						
			e	04	39.00						
			e	04	39.00						
			e	04	39.00						
			e	04	39.00						
			e	04	39.00						
			e	04	39.00						
			e	04	39.00						
			e	04	39.00						
SHNJ	33.67	12	P	04	39.30	-2.5	6.7mb X	Z	28s	78.30um	18kmX
			Pc	04	45.71						
			ec	04	50.84						
			e	04	59.12						
			e	05	03.09						
			ePP	06	00.58						
			iPd	04	48.00						
			i	04	56.00						
			eP	04	45.70						
			P	04	50.20						
NWA0	34.33	189	ePc	04	45.71	-1.8	6.6MszX	Z	14s	79.90um	6.6MszX
			ec	04	50.84						
			e	04	59.12						
			e	05	03.09						
			ePP	06	00.58						
			iPd	04	48.00						
			i	04	56.00						
			eP	04	45.70						
			P	04	50.20						
			S	10	20.00						
QLP	34.38	145	iPd	04	48.00	0.0	6.6MszX	Z	14s	79.90um	6.6MszX
			i	04	56.00						
			eP	04	45.70						
			P	04	50.20						
			S	10	20.00						
			Pd	04	54.50						
			S	10	20.00						
			Pd	04	54.50						
			S	10	20.00						
			Pd	04	54.50						
SHK	34.42	14	eP	04	45.70	-2.6	6.6MszX	Z	14s	79.90um	6.6MszX
			eP	04	45.70						
			P	04	50.20						
			S	10	20.00						
			Pd	04	54.50						
			S	10	20.00						
			Pd	04	54.50						
			S	10	20.00						
			Pd	04	54.50						
			S	10	20.00						
CD2	34.74	330	P	04	50.20	-0.9	6.6MszX	Z	14s	79.90um	6.6MszX
			P	04	50.20						
			S	10	20.00						
			Pd	04	54.50						
			S	10	20.00						
			Pd	04	54.50						
			S	10	20.00						
			Pd	04	54.50						
			S	10	20.00						
			Pd	04	54.50						
XAN	35.25	340	Pd	04	54.50	-1.0	6.7mb X	Z	6.0s	6600.00nm	6.7mb X
			Pd	04	54.50						
			S	10	20.00						
			Pd	04	54.50						
			S	10	20.00						
			Pd	04	54.50						
			S	10	20.00						
			Pd	04	54.50						
			S	10	20.00						
			Pd	04	54.50						
TIA	35.30	352	Pd	04	54.60	-1.1	5.6mb	Z	1.4s	100.00nm	5.6mb
			Pd	04	54.60						
			S	10	30.50						
			Pd	04	54.60						
			S	10	30.50						
			Pd	04	54.60						
			S	10	30.50						
			Pd	04	54.60						
			S	10	30.50						
			Pd	04	54.60						
RKG	35.97	188	eP	05	01.20	-0.3	6.7mb X	Z	18s	178.00um	7.0Msz
			eP	05	11.00						
			i	05	21.00						
			i	06	41.50						
			iPc	05	17.60						
			eP	05	01.20						
			eP	05	11.00						
			i	05	21.00						
			i	06	41.50						
			iPc	05	17.60						
RMQ	37.08	140	Pd	05	11.00	0.1	6.7mb X	Z	18s	178.00um	7.0Msz
			Pd	05	11.00						
			i	05	21.00						
			i	06	41.50						
			iPc	05	17.60						
			eP	05	01.20						
			eP	05	11.00						
			i	05	21.00						
			i	06	41.50						
			iPc	05	17.60						
STK	37.30	153	iPc	05	17.60	4.9X	5.4mb	Z	1.0s	65.20nm	5.4mb
			iPc	05	17.60						
			eP	07	05.00						
			eS	11	18.30						
			Pd	05	14.00						
			S	10	24.00						
			eP	05	01.20						
			eP	05	11.00						
			i	05	21.00						
			i	06	41.50						
DL2	37.59	358	Pd	05	14.00	-1.0	6.3mb	Z	1.6s	800.00nm	6.3mb
			Pd	05	14.00						
			S	10	30.50						
			Pd	05	14.00						
			S	10	30.50						
			Pd	05	14.00						
			S	10	30.50						
			Pd	05	14.00						
			S	10	30.50						
			Pd	05	14.00						
TIY	37.65	346	iPd	05	15.10	-0.5	5.6mb	Z	1.0s	94.00nm	5.6mb
			iPd	05	15.10						
			ePP	07	05.00						
			eS	11	18.30						
			Pd	05	14.00						
			S	10	24.00						
			eP	05	01.20						
			eP	05	11.00						
			i	05	21.00						
			i	06	41.50						
MAJO	37.94	20	eP	05	15.60	-2.4	6.6Msz	Z	20s	88.70um	6.6Msz
			eP	05	15.60						
			ed	05	20.57						
			e	05	33.81						
			eS	11	24.31						
			eSS	13	26.81						
			iPd	05	15.50						
			P	05	27.00						
			PP	06	49.00						
			eP	05	15.60						
MAT	37.94	20	iPd	05	15.50	-2.5	6.6Msz	Z	20s	88.70um	6.6Msz
			iPd	05	15.50						
			P	05	27.00						
			PP	06	49.00						
			eP	05	15.60						
			ed	05	20.57						
			e	05	33.81						
			eS	11	24.31						
			eSS	13	26.81						
			iPd	05	15.50						
SVO	38.12	106	eS	11	07.00	3.2X	6.5mb X	Z	9.0s	7000.00nm	6.4mb X
			eS	11	07.00						
			eP	05	23.00						
			eP	05	23.00						
			eP	05	21.00						
			iPc+	05	25.80						
			eP	05	27.61						
			ed	05	32.24						
			e	05	45.73						
			PP	07	02.00						
HNR	38.31	107	eP	05	21.00	-0.4	6.5mb X	Z	16s	43.50um	14kmX
			eP	05	21.00						
			eP	05	21.00						
			iPc+	05	25.80						
			eP	05	27.61						
			ed	05	32.24						
			e	05	45.73						
			PP	07	02.00						
			PcP	07	33.00						
			eS	11	31.41						
ADE	38.84	159	iPc+	05	25.80	0.1	6.5mb X	Z	16s	43.50um	14kmX
			iPc+	05	25.80						
			eP	05	27.61						
			ed	05	32.24						
			e	05	45.73						
			PP	07	02.00						
			PcP	07	33.00						
			eS	11	31.41						
			eSS	14	07.67						
			ScS	15	35.00						
LZH	39.02	335	eP	05	27.61	0.4	6.5mb X	Z	16s	43.50um	14kmX
			eP	05	27.61						
			ed	05	32.24						
			e	05	45.73						
			PP	07	02.00						
			PcP	07	33.00						
			eS	11	31.41						
			eSS	14	07.67						
			ScS	15	35.00						
			iPc	05	28.00						
CMS	39.05	148	iPc	05	28.00	0.6	6.5mb X	Z	22s	101.00um	6.6Msz
			iPc	05	28.00						
			i	05	34.00						
			eP	05	27.90						
			ed	05	32.12						
			e	05	46.03						
			ec	05	49.34						
			eScS	15	38.00						
			iPd	05	37.00						
			iPd	05	38.00						
BJI	39.19	352	eP	05	27.90	-0.5	6.5mb X	Z	8.0s	8200.00nm	6.5mb X
			eP	05	27.90						
			ed	05	32.12						
			e	05	46.03						
			ec	05	49.34						
			eScS	15	38.00						
			iPd	05	37.00						
			iPd	05	38.00						
			ed	05	32.12						
			e	05	46.03						
BRS	40.35	137	iPd	05	37.00	-1.2	6.5mb X	Z	22s	101.00um	6.6Msz
			iPd	05	37.00						
			iPd	05	38.00						
			ed	05	32.12						
			e	05	46.03						
			ec	05	49.34						
			eScS	15	38.00						
			iPd	05	37.00						
			iPd	05	38.00						
			ed	05	32.12						
SNY	40.49	1	iPd	05	38.00	-1.1	6.5mb X	Z	8.0s	6900.00nm	6.5mb X
			iPd	05	38.00						
			ed	05	32.12						
			e	05	46.03						
			ec	05	49.34						
			eScS	15	38.00						
			iPd	05	37.00						
			iPd	05	38.00						
			ed	05	32.12						
			e	05	46.03						
HHC	40.84	347	Pd	05	42.00	0.5	6.5mb X	Z	28s	136.00um	6.7MszX
			Pd	05	42.00						
			S	11	56.00						
			P	05	47.00						
			P	05	42.00						
			S	11	56.00						
			P	05	47.00						
			P	05	42.00						
			S	11	56.00						
			P	05	47.00						
BTO	40.98	345	P	05	42.00	-1.3	6.5mb X	Z	18s	130.00um	6.7MszX
			P	05							



			iPP	10	15.50		OBN	86.97	325	eP	10	43.00	-1.7			e	17	20.00			
			ePPP	11	49.00			1.8s	516.00nm				6.5mb			e	21	42.00			
			iPcP	13	01.00		Z	20s	37.00um				6.8Msz			e	22	16.00			
			i	14	36.00		N	26s	22.00um							e	28	38.00			
			iS	16	35.50		E	20s	27.00um							LR	56	12.00			
			iScS	17	48.00				ePP	14	18.00				VRI	93.53	316	ePd	11	20.00	4.3X
			iSS	20	39.00				ePPP	15	44.00				KRI	93.53	253	iPd	11	17.30	0.9
			iSSS	23	02.00				i	17	36.00						i	16	05.90		
THZ	62.09	140	P	08	21.80	-0.1			iSKS	21	10.00				INK	93.92	21	ePd	11	16.80	-0.2
LTZ	62.20	141	P	08	22.70	0.1			iPS	22	16.00					1.2s	98.00nm				6.1mb
TCW	62.72	138	eP	08	24.30	-1.6			iSS	27	01.00				BUC	94.11	314	iPc	11	23.00	4.7X
			e	09	28.80	286kmX			iSSS	30	44.00				MLR	94.11	316	eP	11	19.00	0.5
KHZ	62.83	140	P	08	26.10	-0.5			i	33	54.00				BUL	94.47	250	iPd	11	20.10	-0.6
			e	09	29.80	282kmX			iSKKS	40	56.00					1.1s	322.78nm				6.7mb
KIW	62.98	138	eP	08	26.60	-1.1	HRI	87.04	303	iPd	10	46.40	0.7				iPP	11	39.50	69kmX	
			e	09	30.20	281kmX	KFNJ	87.08	302	Pc	10	45.90	0.1		SLR	94.71	244	ePc	11	19.81	-1.9
MRW	63.02	138	eP	08	26.70	-1.1	MKRJ	87.11	301	Pc	10	46.00	-0.1			1.1s	17.72nm				5.4mb
			e	09	30.80	283kmX	BHL	87.12	304	P	10	45.50	-0.6		Z	20s	23.40um				6.6Msz
WEL	63.08	138	Pd+	08	27.40	-0.9			PP	14	02.00						ec	11	24.44	14kmX	
	1.3s	****nm				8.7mb X			S	21	10.50						ec	11	27.50		
			pP	08	37.20	32kmX	JVI	87.36	302	iPd	10	47.80	0.6				e	11	32.64		
			PP	10	48.00		ATZ	87.43	303	iPd	10	48.40	0.9				ePP	14	56.23		
			PPP	12	12.00		HQL	87.61	299	P	10	49.30	0.9				i	33	11.50		
			S	16	54.00		PRNI	87.66	300	iPd	10	49.40	0.7		CMP	94.77	315	ePc	11	25.00	3.6X
			(ScS)	17	56.00		RMN	87.98	300	iPd	10	50.70	0.4		TNR	95.26	316	ePc	11	29.00	5.4X
			SS	21	42.00		PMR	87.99	29	eP	10	52.00	2.5		PRY	95.41	243	iPc	11	26.00	1.1
			SSS	24	12.00			1.1s	43.30nm				5.7mb				e	33	15.00		
CAW	63.20	138	P	08	27.70	-1.4	PPN	88.06	107	iP	10	54.90	4.2X		BMR	95.53	318	ePd	11	30.00	5.2X
			e	09	31.80	283kmX		1.5s	185.00nm				6.2mb		UZH	96.18	319	eP	11	33.00	5.2X
MNG	63.25	137	P	08	28.00	-1.5	TBI	88.23	113	eP	10	54.00	2.6		UPP	96.67	331	eP	11	34.00	4.3X
			e	09	31.90	282kmX		1.5s	245.00nm				6.3mb				iPP	15	32.40		
MTW	63.51	138	P	08	30.10	-1.1	TVO	88.24	108	iP	10	55.90	4.2X				iSKS	22	06.00		
BLW	63.59	138	P	08	30.90	-0.8		1.5s	310.00nm				6.4mb				iS	22	40.00		
PGZ	63.79	137	P	08	32.20	-0.8	COL	88.64	25	ePc	10	55.34	2.7X		VAY	97.04	312	eP	11	34.00	2.2
	0.8s	382.00nm				6.6mb			eS	21	26.02			BZS	97.11	316	eP	11	32.00	0.0	
HBZ	63.93	133	P	08	33.90	-0.1			ePS	22	38.52			TIM	97.36	316	iPd	11	30.00	-3.1X	
	0.6s	125.00nm				6.2mb	FBA	88.64	25	e(P)	10	52.20	-0.4		KRA	97.46	321	eP	11	34.60	1.1
PUZ	64.09	134	P	08	34.50	-0.6		0.7s	30.52nm				5.7mb			1.2s	57.00nm				6.0mb
NOZ	64.16	134	P	08	35.20	-0.2	CSS	89.04	305	eP	10	55.00	-0.2				e	11	38.00	11kmX	
SMY	66.59	31	eP	08	52.80	2.0	TOA	89.40	28	P	10	56.80	0.5				e	11	45.50		
CSY	67.88	185	iPc	08	59.00	0.3	BBTK	89.42	310	eP	10	57.00	0.0				e	12	09.00		
	0.8s	30.40nm				5.4mb			i	11	00.00	9kmX		SKO	97.79	312	eP	11	36.00	0.8	
MAIO	68.12	309	iPc	09	00.80	-0.2	PMO	89.47	105	iP	11	01.60	4.2X		Z	23s	17.14um				6.5MszX
			eS	18	04.00			1.5s	825.00nm				6.8mb		N	24s	15.00um				
DRV	68.75	173	iPc	09	04.80	0.7	KLU	89.53	29	P	10	58.30	1.3		E	23s	21.43um				
			S	18	42.00		VAH	89.73	105	iP	11	02.60	4.0X				LR	31	23.00		
			SS	22	30.00			1.5s	340.00nm				6.4mb		BEO	98.05	315	eP	11	36.50	0.3
			SSS	26	17.00		TPT	89.74	105	iP	11	02.90	4.2X		OHR	98.39	312	eP	11	32.80	-5.2X
TIK	70.47	2	eP	09	13.00	-1.5		1.5s	495.00nm				6.6mb		HFS	98.50	331	(P)	11	36.20	-1.7
			eS	18	21.00		PPCY	89.85	305	eP	10	57.00	-1.9			2.0s	70.10nm				5.8mb
ADK	71.20	35	eP	09	24.70	5.3X	RUV	89.97	105	iP	11	04.00	4.2X		Z	21s	19.50um				6.6Msz
DHR	74.10	297	P	09	35.00	-1.9		1.5s	280.00nm				6.3mb				e	11	47.70	37kmX	
TEH	74.41	307	eP	09	40.00	1.2	PUL	90.35	330	eP	11	03.00	2.4				LR	37	41.00		
RYD	77.12	295	P	09	53.00	-1.2			eS	21	54.00			SRO	98.95	319	e(PKP)	11	42.70	2.5	
			S	19	36.00		KEV	90.99	340	eP	11	03.00	-0.5				e	16	00.60		
KER	77.68	305	eP	09	56.00	-1.2	Z	18s	43.60um				6.9Msz				e	28	38.70		
CRZF	77.90	222	iPc	10	09.00	11.0X			e	11	10.00	22kmX		DAG	99.28	352	eP-	11	40.00	-1.3	
			ePP	12	24.00				e	12	40.00				0.7s	48.63nm					6.1mb
			eS	19	33.00				e	15	06.00			Z	22s	37.04um					6.8Msz
			eSS	25	03.00				e	21	32.00			N	22s	47.41um					
RAR	78.56	112	P	10	08.00	5.9X			LR	55	12.00			BSD	99.30	326	eP	11	41.20	-0.5	
			S	20	04.00		SPA	91.15	180	iPc+	11	04.20	-0.3			1.0s	104.00nm				6.3mb
KMSA	78.78	290	P	10	02.00	-1.4		1.0s	265.00nm				6.6mb		TTG	99.31	313	e(P)	11	49.00	7.0X
TDD	80.03	282	ePd	10	11.00	0.8	Z	20s	49.55um				6.9Msz				e(S)	21	08.00		
MAW	80.06	200	iPd	10	09.80	0.5			i	11	06.50	7kmX		NB2	99.37	333	P	11	40.00	-2.0	
	1.1s	355.00nm				6.3mb			i	21	34.20				1.0s	17.90nm					5.6mb
Z	22s	62.00um				6.9Msz	BCK	91.19	307	eP	11	04.00	-1.2		KSP	99.57	322	eP	11	42.50	-0.6
			i	31	59.80		BALM	91.28	29	ePc	11	04.80	-0.3				e	11	47.30	15kmX	
			e	35	59.00				ePP	14	39.40						i	11	55.00		
ARO	80.08	281	ePd	10	11.40	0.9	SOD	91.38	337	iP	11	05.30	0.0				e	16	08.00		
ABHA	80.34	288	P	10	14.70	2.6			i	11	11.80	20kmX		ZST	99.66	319	e(PKP)	11	45.00	1.5	
DAF	80.39	282	ePd	10	13.00	0.9	EYL	91.39	310	eP	11	10.00	3.9X		Z	16s	37.50um				7.0MszX
ANM	81.15	25	eP	10	17.70	2.5	HRT	91.75	311	eP	11	06.00	-1.6				e	14	36.50		
MHA	81.29	70	P	10	33.00	16.3X	ELL	91.76	307	eP	11	07.00	-0.9				e	15	31.90		
SDN	81.41	34	eP	10	18.10	1.5	KAF	92.11	332	eP	11	06.80	-1.9				e	28	06.40		
	0.8s	300.20nm				6.4mb		1.0s	55.30nm				5.9mb				e	32	24.50		
SBA	82.34	171	iPd-	10	23.40	2.3			esP	11	19.80			VKA	100.16	319	ePd	11	47.00	1.2	
			iS	21	41.20		ISK	92.19	311	eP	11	06.00	-3.6X		Z	19s	12.10um				6.4Msz
AAE	84.08	279	eP	10	34.00	2.3	ITU	92.22	311	eP	11	12.00	2.3				i	15	03.60		
NPA	84.22	255	iP	10	26.00	-5.9X	CFR	92.58	315	eP	11	17.00	5.7X				iPP	15	54.90		
TTA	84.89	27	eP	10	37.90	3.5X	KBS	92.85	350	eP	11	28.30	16.3X				i	16	12.20		



				e	12	00.00	
				e	13	18.00	
				PP	15	40.00	
				SKS	22	28.00	
PTJ	100.94	317		ePdiff11	55.00		5.6X
ZAG	100.94	317		ePdiff11	43.00		-6.3X
BRG	101.00	322		ePdiff11	53.60		4.1X
	1.7s			28.00nm			5.5mb
Z	17s			31.00um			6.9Msz
N	17s			14.00um			
E	17s			15.50um			
				i	12	01.40	
				eSKS	22	28.00	
				eS	23	35.00	
				ePKKP	28	17.00	
				eP'P'	37	50.00	
CLL	101.45	323		ePdiff11	51.00		-0.4
	1.8s			41.00nm			5.7mb
				eSKS	22	29.00	
				eS	23	30.00	
				PKKP	28	24.90	
VBY	101.51	317		ePdiff11	57.40		5.6X
KMR	101.63	320		iPdiff11	57.40		5.1X
				e	15	27.00	
				i	16	24.60	
KHC	101.70	321		Pdiff	11	57.50	4.8X
Z	20s			25.30um			6.7Msz
N	20s			22.00um			
E	20s			14.00um			
				e	12	44.50	
				e	16	14.00	
LJU	101.87	318		ePdiff11	57.50		4.0X
				e	15	48.00	
				e	16	21.50	
				eS	22	32.00	
				eLR	49	30.00	
CEY	102.02	317		ePdiff11	58.00		3.8X
VOY	102.31	318		ePdiff12	00.80		5.3X
KBA	102.40	319		ePdiff12	09.00		13.0X
				e	15	23.00	
				e(PP)	16	17.00	
TRI	102.48	317		ePdiff12	00.00		3.9X
				e	16	12.00	
				e	22	34.00	
				i	24	16.00	
				i	25	08.00	
				i	30	48.00	
MOX	102.49	323		ePdiff11	56.00		-0.1
	2.2s			88.00nm			6.1mb
Z	16s			21.90um			6.8Msz
N	17s			13.00um			
E	18s			20.30um			
				eSKS	22	35.00	
				iS	23	42.00	
FVI	102.90	318		Pdiff	12	12.00	14.0X
YKA	103.37	24		ePdiff11	59.90		0.2
	0.9s			3.00nm			5.1mb
CTI	103.81	318		Pdiff	12	10.00	7.8X
WIT	104.65	326		ePdiff12	12.00		6.4X
WTS	104.87	325		ePdiff12	13.00		6.4X
				ePP	16	36.00	
BNS	105.04	324		ePdiff12	18.80		11.4X
Z	22s			43.00um			6.9Msz
WIN	105.08	247		ePdiff12	06.00		-2.5
	1.0s			20.00nm			6.0mb
Z	20s			55.32um			7.1Msz
				i	32	35.00	
ENN	105.85	324		ePdiff12	15.50		4.5X
	1.8s			24.00nm			5.9mb
				ePP	16	43.00	
MEM	105.86	324		Pdiff12	14.60		3.6X
				e	15	39.10	
				e	16	39.60	
				PKKP	27	44.50	
COR	105.88	43		ePdiff12	21.25		10.0X
				eSKS	22	59.20	
				eSDIF	24		

				PKKP	27	54.00	
				SS	32	00.00	
LPG	107.23	319		ePKP	16	17.80	-9.1X
LPL	107.24	319		ePKP	16	17.70	-9.1X
	0.9s						
				5.75nm			
WDC	107.63	47		ePKP	16	42.70	15.3X
				ePP	17	07.50	
				eSPP	27	53.20	
BRK	108.63	49		ePdiff	12	32.80	9.1X
	Z	20s					7.0Msz
				38.00um			
				ePP	16	50.80	
				ePS	26	10.00	
				ePPS	27	31.80	
				e(SS)	29	54.00	
				eSPSP	32	40.00	
				eSSS	35	20.00	
				eLO	39	52.00	
				eLR	46	20.00	
CMB	109.99	49		ePKP	16	43.20	11.2X
				eSPP	27	52.40	
FRI	110.83	50		ePKP	16	48.20	14.7X
SES	111.15	34		ePdiff	12	47.00	12.3X
SES	111.15	34		ePKP	16	18.00	-15.8X
ESEL	111.92	314		ePKP	16	44.00	8.5X
LRM	112.50	39		ePdiff	12	50.40	9.3X
CLC	112.82	50		ePKP	16	39.00	1.6
PAS	112.90	52		ePdiff	12	49.93	7.1X
				eSKS	23	25.61	
MWC	112.97	52		ePKP	16	51.00	13.1X
SBB	113.01	51		ePKP	16	50.00	12.2X
FFC	113.22	26		ePKP	16	43.00	5.5X
	0.6s			70.00nm			
GSC	113.60	50		ePKP	16	44.00	5.0X
VAL	114.08	330		Pdiff	12	56.00	8.4X
TPC	114.58	51		ePKP	16	43.00	2.1
FRB	114.69	6		ePKP	16	52.00	11.9X
MSU	115.85	46		PKP	16	44.30	0.9
GUD	116.49	317		ePKP	16	50.90	6.5X
TOL	116.76	317		ePKP	16	40.00	-4.8X
				iPP	17	50.00	
				iPPP	20	02.00	
				iSKS	23	45.00	
				iPS	27	35.00	
				iPPS	29	02.00	
				iSS	33	50.00	
TOL	116.76	317		ePdiff	13	09.15	9.2X
				eSKS	23	43.01	
				eSKKS	24	54.07	
				eSDIF	25	42.63	
				ePS	27	29.26	
				ePS	27	37.21	
EPLA	118.06	318		ePKP	17	05.90	18.6X
RSSD	118.51	37		PKP	16	47.60	-0.7
	Z	20s		27.12um			6.9Msz
PTO	119.20	320		ePKP	16	55.10	5.7X
EJIF	119.28	314		ePKP	16	53.00	3.3X
NKM	119.68	313		ePKP	16	57.50	7.0X
GOL	120.01	42		ePKPd	16	50.90	-0.4
	Z	22s		27.65um			6.9Msz
GLD	120.08	42		ePKP	16	51.00	-0.4
	Z	22s		32.44um			6.9Msz
IFR	120.28	310		iPKPd	16	53.00	1.1
ANMO	121.53	47		ePdiff	13	30.83	9.4X
				eHPP	18	25.65	
				ePP	18	26.81	
				eSKS	24	02.40	
				eHSKKS	25	30.69	
				eSKKS	25	34.27	
				iSDIF	26	23.04	
				ePS	28	36.11	
ANMO	121.53	47		ePKPd	16	54.00	-0.3
	Z	20s</					

	Z	20s	20.98um		6.8Msz
			LR	00 01.20	
FVM	130.35	35	ePKPc	17 10.30	-0.6
PNJ	135.33	18	PKP	17 20.30	0.1
CBN	136.57	23	e(PKP)	17 21.00	-1.7
			e	20 21.00	
MBO	137.41	293	ePKP	17 30.40	5.5X
LNv	144.71	159	ePKP	17 36.00	-1.3
RFA	144.90	164	ePKPc	17 37.00	-0.7
LCCH	145.08	159	ePKPd	17 37.50	-0.5
TACH	145.15	159	ePKPd	17 39.00	0.9
PCH	145.32	160	ePKPd	17 39.00	0.5
SAN	145.42	160	ePKP	17 38.00	-0.6
IHA	145.46	158	ePKP	17 39.50	0.9
PEL	145.70	159	ePKPc	17 39.20	0.1
	1.8s	1190.91nm			
ROCH	145.73	159	ePKP	17 40.50	1.1
JACH	146.15	159	ePKP	17 41.00	1.0
LPA	146.41	179	ePKP+	17 40.00	-0.1
	0.8s	716.42nm			
MDZ	146.54	162	iPKP	17 41.70	1.2
			i	17 43.70	
			i	18 14.60	
			i	18 52.50	
ZON	147.83	161	ePKP	17 45.20	2.6
RTCB	147.85	161	ePKPd	17 43.80	1.1
CFA	147.92	162	ePKPc	17 43.10	0.4
RTLL	148.10	161	e(PKP)	17 43.30	0.3
TCA	149.14	167	ePKP	17 45.30	0.6
ANT	154.11	151	ePKP	17 49.50	-2.5
BMA	155.19	209	ePKP	18 02.20	8.6X
			e	18 18.10	
			e	18 25.80	
UPA	155.43	65	iPKP+	17 58.90	4.9X
Z	20s	16.31um			6.8Msz
UPA	155.43	65	ePKPc	17 55.00	1.0
Z	20s	13.12um			6.8Msz
			i	18 28.50	
NNA	157.61	120	ePKP	17 58.00	1.1
	1.1s	29.11nm			
Z	20s	15.96um			6.8Msz
PPD	158.51	195	ePKP	17 58.90	1.2
			e	18 32.70	
PDcR	158.95	237	ePKP	17 59.10	0.7
			e	18 13.90	
			e	18 41.00	
ARE	159.17	138	ePKP	18 02.00	3.1X
PSO	159.59	84	ePKP	18 01.00	1.3
LPB	161.24	145	PKP	18 03.00	1.8
			i	22 34.00	
			eLR	36 12.00	
ZOBO	161.43	145	ePKPc	18 02.41	0.8
			ec	18 07.04	
			ec	18 10.36	
			eHPP	22 35.85	
			ePP	22 36.51	
CCH	161.56	151	PKP	18 03.20	1.8
BMG	162.04	63	iPKP	18 03.00	1.2
BOG	162.05	71	ePKP	18 07.00	4.9X
FUO	162.07	68	ePKP	18 05.00	2.9X
SDV	163.18	53	ePKP	18 03.90	0.9
TOV	163.29	49	ePKP	18 03.20	0.3
CAR	164.80	40	ePKP	18 06.00	1.6
TRN	167.50	20	ePKPc	18 07.00	0.6
Z	21s	24.99um			
S.D. = 1.2 on 228 of 325 obs.					
* MAY 19, 1991 01h 16m 39.14±0.64s					
1.467 N ±0.1km 123.366 E ±11.8km					
DEPTH = 33.0km (normal)					
5.0mb ( 9 obs.)					
MINAHASSA PENINSULA (265)					
MNI	1.47	91	eP	17 02.50	-1.1
			eS	17 22.50	
MKS	7.70	210	iPc	18 33.00	1.2
SNG	23.37	28			



XAN	35.11	339	P	23	32.30	0.7	TIA	35.13	352	eP	26	43.00	-0.5	JVI	87.31	302	iPd	32	36.80	0.7	
STK	37.40	154	eP	23	57.90	7.0X	RKG	35.66	189	eP	26	51.50	3.5X	MBH	87.72	300	eP	32	39.00	0.8	
	0.6s	10.60nm				4.9mb	RMO	37.18	140	iPc	27	00.90	0.1	FBA	88.46	25	P	32	40.00	-0.9	
		i		24	40.70				e		28	18.00		KEV	90.84	340	eP	32	49.00	-2.9	
TIY	37.45	346	eP	23	58.50	7.2X	STK	37.44	154	iPc	27	08.40	5.5X	SOD	91.24	337	iP	32	52.30	-1.5	
HHC	40.63	346	eP	24	26.00	8.1X	TIY	37.49	346	Pd	27	03.70	0.3	KAF	91.98	332	iP	32	55.50	-1.8	
PKI	44.65	309	P	24	50.60	-0.5	MAT	37.75	20	eP	27	07.00	1.4		0.7s	8.90nm			5.3mb		
	0.6s	14.00nm				5.0mb		1.6s	76.67nm						esP		32	56.20			
KKN	44.85	309	P	24	52.20	-0.4	LZH	38.88	335	eP	27	17.60	2.4	NUR	92.97	331	eP	32	55.00	-6.8X	
	0.6s	18.00nm				5.1mb		1.4s	30.00nm					VRI	93.44	316	ePd	33	04.00	-0.4	
DMN	44.90	309	P	24	52.80	-0.3	ADE	38.99	159	iPc	27	16.80	0.8	KRI	93.63	253	iPc	33	07.00	1.1	
	0.8s	30.00nm				5.2mb		0.9s	420.17nm					INK	93.74	21	eP	33	04.00	-1.3	
HYB	46.79	293	eP	25	07.00	-0.9	BJI	39.03	352	eP	27	16.50	0.4	MLR	94.02	316	eP	33	07.00	-0.2	
GBA	47.00	287	Pc	25	07.70	-1.7		1.0s	34.00nm					BUL	94.58	250	Pc	33	09.50	-0.8	
	0.6s	10.10nm				5.0mb	CMS	39.17	148	iPc	27	18.30	0.8		1.1s	70.25nm			6.0mb		
QUE	60.56	304	eP	26	47.90	-1.4	SNY	40.32	1	eP	27	24.80	-2.0	HFS	98.37	331	eP	33	23.90	-2.6	
CSY	68.23	186	eP	27	38.40	0.1		1.1s	100.00nm						1.0s	2.10nm			4.6mb		
	0.8s	47.30nm				5.6mb X	BRS	40.44	137	iPd	27	27.80	-0.3			e		33	27.00		
KAF	92.02	332	iP	29	44.80	-1.0	HHC	40.68	347	eP	27	29.60	-0.4			e		33	31.00		
	0.7s	3.20nm				4.9mb	BTO	40.82	345	eP	27	32.20	1.1	NB2	99.23	333	P	33	28.20	-2.3	
		esP		29	45.90		COO	41.99	141	iPd	27	42.40	1.6		1.2s	7.80nm			5.1mb		
INK	93.48	21	eP	30	06.00	13.6X		0.9s	39.00nm					KSP	99.46	322	eP	33	30.40	-1.3	
	S.D. = 1.5	on 17 of 23 obs.							i		29	32.70		PRU	100.76	321	ePd	33	32.00	-5.5X	
							CN2	42.34	3	Pc	27	43.00	-0.4	BRG	100.89	322	iPd	33	37.70	-0.4	
							BFD	42.38	157	eP	27	45.00	1.2		1.2s	12.00nm			5.3mb		
									e		29	21.60		CLL	101.34	323	ePd	33	39.00	-1.1	
							GTA	43.41	334	iPd	27	53.40	1.1		1.9s	22.00nm			5.4mb		
								1.2s	110.00nm					FFC	113.04	26	ePKP	38	26.00	-0.3	
							Z	18s	14.60um						0.8s	6.00nm					
							E	15s	9.30um					ANMO	121.37	47	ePKP	38	43.10	0.0	
DAV	6.26	24	eP	21	23.00	-0.4	MDJ	43.49	7	Pc	27	53.50	0.7		0.9s	9.45nm					
BKB2	6.63	247	iPc	21	34.10	5.5X		1.4s	52.00nm					ALO	121.37	47	ePKP	38	43.20	0.1	
AAI	7.19	134	eP	21	37.00	0.5			pP		28	05.00	41km	SCH	123.46	7	ePKP	38	46.00	-0.2	
		eS		23	09.00				PP		29	32.80		KIC	127.29	279	PKP	38	54.50	-0.4	
MKS	7.40	208	iPc	21	44.50	5.1X	TOO	43.95	154	iPc	27	57.80	1.2	TIC	127.53	279	PKP	38	55.00	-0.3	
KKM	8.24	305	eP	21	44.50	-6.7X		1.0s	69.00nm					LIC	127.58	279	PKP	38	55.00	-0.4	
BAG	15.17	351	eP	23	25.00	0.3	CNB	44.00	148	iPd	27	58.40	1.3	TUL	128.24	40	ePKP	38	55.40	-0.7	
MTN	16.23	150	eP	23	39.00	0.9		1.0s	100.00nm						1.2s	21.30nm					
KNA	17.90	162	eP	24	00.00	0.9	PKI	44.46	309	P	28	01.00	-0.3	LVN	144.85	159	ePKP	39	25.50	-1.2	
	0.7s	163.00nm				5.3mb	KKN	44.66	310	P	28	02.80	0.0	LCCH	145.22	158	ePKP	39	31.00	3.7X	
KGM	19.69	272	ePc	24	21.10	0.6	DMN	44.71	309	P	28	03.20	0.0	TACH	145.29	159	iPKPd	39	27.50	0.0	
KLM	21.42	275	eP	24	39.00	0.7	HYB	46.52	293	iPc	28	17.50	0.1	PCH	145.47	160	ePKP	39	28.50	0.6	
OIZ	21.81	325	Pd	24	43.00	0.8		1.0s	110.00nm					PEL	145.84	159	iPKPc	39	29.30	0.8	
IPM	22.19	279	ePd	24	48.00	2.0	GBA	46.70	287	Pd	28	19.00	0.2		1.5s	186.39nm					
	1.2s	148.00nm				5.3mb		1.7s	197.40nm					ROCH	145.88	159	ePKP	39	30.00	1.2	
MBL	22.57	188	iPc	24	49.20	-0.5	DZM	48.34	121	iPd	28	32.10	0.4	JACH	146.29	159	ePKP	39	31.00	1.7	
	0.7s	214.00nm				5.7mb	TAU	49.18	156	eP	28	38.00	0.3	MDZ	146.69	162	i(PKP)	39	31.20	1.3	
SNG	23.06	285	eP	24	55.40	0.8	NDI	51.43	306	iPc	28	54.00	-1.2	LPB	161.35	145	PKP	39	51.00	0.5	
	1.1s	412.66nm				5.8mb		0.6s	23.33nm					ZOBO	161.54	144	PKP	39	51.00	0.1	
GZH	23.57	337	P	25	00.40	0.9	WMO	52.67	328	P	29	05.00	0.6	CCH	161.69	151	PKP	39	52.80	2.1	
QZH	23.86	350	Pd	25	03.30	1.1		1.0s	40.00nm												
	1.5s	110.00nm				5.2mb	Z	16s	11.20um												
WRA	23.89	153	P	25	03.00	0.4	N	14s	11.80um												
	0.7s	80.30nm				5.4mb	E	12s	5.30um												
WB2	23.89	153	iPd	25	01.70	-1.0			PcP		30	12.00									
	0.7s	91.40nm				5.4mb	IRK	53.12	346	eP	29	06.70	-0.8								
NANU	24.84	197	eP	25	11.00	-0.8			e		29	40.80									
	0.6s	66.00nm				5.4mb	QUE	60.34	304	eP	29	58.40	-1.1								
LAT	25.23	109	eP	25	16.40	0.9	YAK	60.74	4	iPd	30	00.10	-1.3								
PMG	26.31	114	eP	25	25.00	-0.6			e		37	40.00									
ASPA	27.01	158	iPc	25	31.40	-0.6	GAR	60.88	315	iP	30	02.00	-0.9								
	0.9s	45.90nm				5.1mb			ePcS		35	01.00									
OIS	27.16	144	iPc	25	33.50	0.2			eS		38	09.00									
		e		29	31.00				iScS		39	33.00									
WARB	27.58	173	eP	25	36.70	-0.4			eSS		41	34.00									
	0.6s	21.00nm				5.0mb			eSSS		44	42.00									
BSI	27.97	279	eP	25	40.00	-0.7	THZ	62.19	140	eP	30	11.60	-0.1								
GYA	29.52	329	P	25	56.00	1.3	LTZ	62.31	141	P	30	12.40	0.0								
SSE	29.65	357	P	25	55.60	-0.1	WEL	63.18	138	P	30	17.00	-1.1								
	1.5s	61.00nm				5.1mb		1.0s	*****nm												
WHN	30.19	345	eP	26	02.00	1.5	MAIO	68.05	309	iPc	30	49.30	-0.4								
	1.0s	30.00nm				5.0mb		1.0s	12.50nm												
NJ2	30.80	353	Pc	26	06.00	0.1	CSY	68.06	185	iPd	30	49.20	0.2								
CTA	31.19	134	iPc	26	09.30	-0.1		0.7s	102.00nm												
	1.2s	95.31nm				5.5mb	KER	77.62	305	eP	31	45.00	-1.0								
BAL	32.32	190	iPc	26	17.30	-1.9	TDD	80.04	282	eP+	32	00.23	0.9								
	0.6s	116.00nm				6.0mb	ARO	80.10	281	eP+	32	00.46	0.7								
FORR	32.37	172	eP	26	18.00	-1.6	SGH	80.30	281	eP+	32	01.53	0.7								
KLB	33.12	188	eP	26	24.40	-1.8	DAF	80.41	281	eP+	32	02.33	1.0								
MUN	33.75	190	eP	26	30.00	-1.6	KSU	80.49	281	eP+	32	02.89	1.1								
OLP	34.49	145	iPc	26	38.00	-0.1	HLD	80.50	281	ePd	32	02.80	1.0								
NWAO	34.51	189	iPc	26	36.60	-1.6	NAI	86.24	269	iPd	32	32.00	0.5								
	0.6s	143.00nm				6.1mb	OBN	86.85													



19d 01h

0.8s 18.30nm 5.2mb  
S.D. = 1.6 on 15 of 21 obs.

MAY 19, 1991 01h 41m 51.66 ± 0.99s  
1.248 N ± 5.1km 122.916 E ± 6.6km  
DEPTH = 44.9 ± 10.0 km  
4.8mb ( 10 obs.)

MINAHASSA PENINSULA (265)

MNI 1.93 84 iPd 42 23.50 0.8  
eS 42 45.00  
TSM 5.67 302 iPd 43 15.00 -0.6  
0.2s 124.10nm 6.0mb X  
MKS 7.29 208 iPc 43 41.00 2.7  
iS 45 10.50  
KKM 8.21 306 iPc 43 49.00 -2.2  
BAG 15.24 351 eP 45 25.05 -0.7  
MTN 16.20 150 eP 45 38.20 0.3  
KNA 17.85 161 eP 45 59.00 0.5  
KGM 19.60 272 eP 46 20.50 1.2  
OIZ 21.83 325 eP 46 41.70 -0.4  
IPM 22.11 279 ePd 46 47.00 2.1  
SNG 23.00 285 eP 46 55.70 2.1  
WB2 23.86 153 iPd 47 01.30 -0.7  
0.5s 54.80nm 5.3mb  
PSI 24.02 274 ePd 47 10.50 6.9X  
NANU 24.74 196 eP 47 09.30 -1.1  
0.4s 15.00nm 4.9mb  
PMG 26.36 114 eP 47 25.00 -0.7  
ASPA 26.97 157 iPc 47 30.60 -0.6  
1.1s 13.60nm 4.5mb  
OIS 27.14 144 iPc 47 32.00 -0.8  
WARB 27.51 173 eP 47 35.00 -1.1  
GYA 28.02 188 eP 47 39.00 -1.7  
BAL 29.54 329 P 47 54.40 -0.1  
FORR 32.22 190 eP 48 16.00 -2.0  
CD2 32.30 172 eP 48 16.50 -2.1  
XAN 34.64 330 P 48 37.80 -1.1  
STK 35.15 340 P 48 42.20 -1.1  
0.9s 7.90nm 4.6mb  
ePcP 50 41.60  
eScP 54 50.20  
TIY 37.55 346 eP 49 03.70 0.2  
MAT 37.86 20 eP 49 08.00 1.9  
2.0s 94.12nm 5.4mb  
ADE 38.94 159 iPc 49 15.80 0.6  
0.9s 105.88nm 5.7mb  
BJI 39.10 352 eP 49 16.00 -0.3  
1.0s 11.00nm 4.6mb  
SNY 40.40 1 P 49 26.00 -1.0  
HHC 40.74 347 eP 49 30.80 0.8  
BFD 42.34 157 eP 49 44.00 0.9  
GTA 43.44 334 eP 49 53.00 0.9  
1.0s 10.00nm 4.5mb  
TOO 43.91 154 eP 49 57.00 1.1  
PKI 44.44 309 P 50 01.04 0.4  
KKN 44.65 310 P 50 02.44 0.2  
DMN 44.69 309 P 50 02.46 -0.2  
GKN 45.25 310 P 50 06.62 -0.3  
HYB 46.46 293 eP 50 16.50 0.0  
GBA 46.64 288 P 50 16.80 -1.0  
1.4s 16.10nm 4.8mb  
QUE 60.31 304 eP 52 08.90 10.2X  
GAR 60.87 315 eP 52 02.00 -0.3  
i 00 33.00  
i 01 47.00  
i 04 32.00  
e 10 10.00  
i 12 01.00  
e 13 22.00  
e 15 21.00  
i 18 50.00  
i 21 15.00

MAIO 68.03 309 eP 52 52.00 3.0X  
YKA 103.30 24 ePd 55 54.70 6.8X  
0.7s 0.20nm 4.0mb  
ANMO 121.50 47 (PKP) 00 43.50 0.9  
ALO 121.50 47 ePKP 00 43.00 0.3  
TACH 145.25 159 ePKP 01 26.00 -0.7  
PCH 145.42 160 ePKPd 01 28.00 0.9  
PEL 145.80 159 ePKP 01 28.50 0.8  
LPB 161.34 145 ePKP 02 05.00 15.3X  
e 02 36.00  
ZOBO 161.53 145 PKP 01 51.50 1.4  
0.9s 8.65nm  
i 02 37.50

S.D. = 1.2 on 45 of 51 obs.

? MAY 19, 1991 02h 02m 58.77 ± 10.25s  
19.118 N ± 86.8km 66.517 W ± 13.3km  
DEPTH = 33.0km (normal)

PUERTO RICO REGION ( 90)

APR 0.69 197 P 03 12.20 0.1  
LRS 0.88 201 P 03 14.40 -0.3  
S 03 24.40  
LPR 1.01 143 P 03 16.70 0.0  
S 03 29.50  
CLLP 1.03 183 P 03 17.20 0.2  
S 03 31.20  
SJG 1.06 161 i(P) 03 17.00 -0.4  
CPD 1.22 152 P 03 19.70 0.2  
MGP 1.23 206 P 03 19.80 0.1  
S 03 36.60

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

MAY 19, 1991 02h 18m 20.32 ± 0.73s  
50.922 N ± 6.5km 6.626 E ± 5.9km  
DEPTH = 10.0km (geophysicist)

GERMANY (543)  
MD 2.3 (UCC).

ENN 0.47 251 ePg 18 29.50 -0.4  
0.6s 5.00nm  
eSg 18 37.00  
MEM 0.50 232 iPd 18 30.05 -0.4  
iS 18 37.83  
WTS 1.08 6 ePg 18 40.50 -0.1  
0.5s 15.00nm  
eSg 18 57.50  
ABH 1.20 150 ePg 18 42.65 0.0  
RUP 1.25 167 ePg 18 43.50 -0.2  
TNS 1.36 120 ePn 18 45.30 0.0  
eSn 19 04.70  
DOU 1.54 238 P 18 48.90 1.1  
iS 19 09.80

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

% MAY 19, 1991 02h 19m 05.21 ± 2.12s  
40.739 N ± 20.3km 25.633 E ± 15.8km  
DEPTH = 10.0km (geophysicist)

AEGEAN SEA (365)  
MD 3.2 (ISK).

KDZ 0.92 350 iPg 19 22.00 -0.9  
RZN 1.17 324 iPc 19 28.00 0.7  
MFT 1.25 87 iPn 19 29.60 1.0  
EDC 1.74 102 ePn 19 35.00 -0.7  
BNT 1.78 102 ePn 19 36.00 -0.3  
DMK 1.93 55 iPn 19 38.50 0.1  
DST 2.56 115 ePn 19 53.00 5.5X

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

& MAY 19, 1991 02h 41m 31.71s  
58.132 N 142.752 W  
DEPTH = 10.0km (geophysicist)  
3.2mb ( 1 obs.)

GULF OF ALASKA ( 15)  
<AEIC>. ML 2.8 (AEIC).

YKU 2.12 47 eP 42 02.70 -4.9  
PNL 2.33 47 eP 42 04.81 -5.8  
TGL 2.63 359 eP 42 09.68 -5.4  
eS 42 38.60  
CROM 2.64 356 eP 42 09.72 -5.5  
eS 42 41.07  
BALM 2.92 4 eP 42 13.86 -5.3  
eS 42 46.85  
CTGM 2.93 14 eP 42 13.89 -5.5  
eS 42 47.42  
MTU 3.14 308 eP 42 15.60 -6.5  
GLB 3.36 351 eP 42 19.86 -5.5  
eS 42 57.46  
KNIM 3.39 313 eP 42 19.99 -5.7  
eS 42 58.09  
VLZ 3.52 330 eP 42 21.73 -5.7  
VZV 3.51 328 eP 42 21.94 -5.6  
GLI 3.53 323 eP 42 21.80 -5.9  
KLU 3.73 336 eP 42 25.29 -5.4  
SEW 3.98 303 eP 42 26.81 -7.2  
KNK 4.37 321 eP 42 34.53 -5.2  
CNPM 4.63 291 eP 42 38.85 -4.4  
PLRM 4.73 320 eP 42 39.84 -4.9

GHO 4.79 322 eP 42 41.40 -4.3  
RDT 5.51 300 eP 42 51.04 -4.8  
CUT 5.69 322 eP 42 53.65 -4.6  
CKL 5.75 306 eP 42 53.39 -5.8  
CDD 5.76 283 eP 42 55.46 -3.9  
SKT 5.85 315 eP 42 56.15 -4.4  
PDB 6.15 290 eP 43 00.29 -4.4  
YKA 14.54 61 eP 45 01.60 2.4  
0.5s 0.30nm 3.2mb  
25 obs. associated

MAY 19, 1991 02h 55m 26.24 ± 0.36s  
25.347 S ± 5.3km 64.662 W ± 5.9km  
DEPTH = 33.0km (normal)

4.9mb ( 6 obs.)  
SALTA PROVINCE, ARGENTINA (129)  
Damage in the Rio Piedros-  
Virgilio Tedin area. Also felt  
in Jujuy and Tucuman Provinces.

ANT 5.49 286 eP 56 48.50 0.7  
0.7s 47.95nm 5.1mb  
TCA 5.97 179 iPd 56 54.20 -0.5  
RTLL 6.84 209 eP 57 08.00 1.1  
CFA 6.99 206 ePc 57 09.00 0.1  
ZON 7.12 209 eP 57 11.20 0.4  
RTCB 7.12 210 ePd 57 11.10 0.3  
CCH 8.04 350 P 57 23.80 -0.2  
MDZ 8.35 205 e(P) 57 32.40 4.3X  
LPB 9.34 339 P 57 41.00 -1.0  
1.0s 100.00nm 6.0mb X  
i 57 45.30  
ITB1 9.35 88 eP 57 42.00 0.3  
ITB 9.49 89 eP 57 44.00 0.2  
ITB7 9.50 91 eP 57 41.50 -2.3  
ZOBO 9.59 340 P 57 44.00 -1.7  
IHA 9.78 217 eP 57 58.00 10.3X  
e(S) 00 17.50  
RFA 9.95 198 ePd 57 47.10 -3.0  
ARE 10.90 323 eP 58 06.00 2.7X  
PPD 12.67 78 eP 58 26.10 -0.8  
NNA 17.58 317 eP 59 30.50 0.0  
1.0s 33.00nm 4.4mb  
BMA 18.92 86 eP 59 52.10 5.2X  
PDCR 27.25 67 eP 01 11.60 2.1  
KIC 66.18 70 P 06 13.80 0.6  
TUL 67.66 333 e(P) 06 20.60 -1.5  
ALO 71.85 325 eP 06 48.20 0.1  
1.0s 5.25nm 4.5mb  
ANMO 71.86 325 P 06 48.50 0.4  
LRM 83.06 329 eP 07 51.20 1.2  
SES 85.85 332 eP 08 02.00 -1.6  
FFC 85.95 339 ePd 08 04.70 0.8  
1.1s 13.00nm 5.1mb  
TOL 86.00 42 eP 08 06.50 1.9  
KRI 86.68 107 P 08 13.30 4.7X  
PNT 88.96 328 iPd 08 20.00 1.4  
0.7s 9.00nm 5.2mb  
YKA 96.13 339 eP 08 51.00 -0.3  
0.7s 2.10nm 4.7mb  
FBA 109.81 333 Pd 09 52.00 -0.6  
ASPA 128.06 202 ePKP 14 31.80 0.6  
0.9s 3.70nm  
WRA 131.34 204 PKP 14 37.00 -0.4  
0.5s 1.50nm  
HYB 144.94 96 iPKPc 15 02.50 0.1  
1.0s 50.00nm  
NDI 145.97 76 iPKPc 15 05.50 1.7  
1.0s 55.00nm

S.D. = 1.2 on 31 of 36 obs.

\* MAY 19, 1991 02h 58m 05.15 ± 2.10s  
14.830 N ± 11.2km 147.074 E ± 12.1km  
DEPTH = 42.9 ± 18.2 km  
4.6mb ( 5 obs.)

MARIANA ISLANDS REGION (215)

GUA 2.46 239 eP 58 43.50 -0.2  
eS 59 19.20  
PJG 2.47 240 eP 58 44.00 0.1  
WB2 36.75 200 iPd 05 09.90 -0.6  
0.8s 7.60nm 4.7mb  
XAN 39.35 306 eP 05 32.00 -0.3  
N 16s 1.90um  
E 14s 0.70um  
GYA 39.39 294 P 05 34.60 1.8  
HHC 40.28 317 P 05 40.00 0.1



ASPA 40.37 199 iPc 05 41.30 0.6  
0.7s 5.50nm 4.4mb  
BTO 41.19 316 P 05 48.00 0.6  
CD2 42.71 300 P 05 59.60 -0.3  
LZH 43.95 307 eP 06 10.50 0.4  
1.5s 42.00nm 5.0mb  
GTA 47.99 310 eP 06 42.40 0.4  
1.2s 10.00nm 4.7mb  
WMO 57.86 313 P 07 55.00 -0.1  
PKI 58.36 293 P 07 58.40 -0.8  
KKN 58.47 294 P 07 59.30 -0.5  
DMN 58.63 293 P 08 00.48 -0.5  
GKN 59.04 294 P 08 03.12 -0.6  
FBA 66.20 25 (P) 08 52.40 2.0  
INK 72.41 23 eP 09 26.00 -2.5  
YKA 80.78 28 eP 10 15.10 -0.3  
0.8s 1.40nm 4.0mb  
SES 86.10 39 eP 10 42.00 -0.9  
LRM 86.63 44 eP 10 46.60 0.7  
KIC 145.01 305 PKP 17 40.40 0.0  
ZOB0 146.08 97 PKP 17 44.00 1.1  
LPB 146.12 98 PKP 17 57.00 14.3X  
S.D. = 1.0 on 23 of 24 obs.

MAY 19, 1991 03h 22m 11.48 ± 0.54s  
50.306 N ± 6.5km 12.318 E ± 4.6km  
DEPTH = 14.4 ± 4.4 km  
GERMANY (543)  
ML 3.3 (LDG).

HOF 0.28 272 iPg 22 18.60 0.9  
MOX 0.56 307 iPg 22 23.00 0.4  
iSg 22 30.50  
CLL 1.09 23 iPg 22 31.10 -0.5  
iSg 22 44.60  
BRG 1.18 61 iPg 22 32.10 -1.0  
iSg 22 47.60  
WET 1.22 162 iPg 22 35.20 1.4  
KHC 1.43 145 iPn 22 37.50 0.5  
Sg 22 58.50  
PRU 1.47 102 Pn 22 37.80 0.4  
0.4s 172.00nm  
Pg 22 39.00  
e 22 55.50  
Sg 22 56.50  
TOD 2.38 254 ePn 22 50.68 0.1  
TNS 2.48 270 ePnc 22 54.10 2.0  
eSn 23 30.20  
KSP 2.59 77 ePn 22 53.20 -0.4  
0.7s 105.00nm  
iPg 22 57.80  
iS 23 30.00  
i 23 31.10  
KTD 2.91 252 ePn 23 07.65 9.5X  
ABH 3.10 264 ePn 23 02.22 1.4  
KBA 3.30 168 e(Pn) 23 02.00 -1.9  
e 23 49.00  
VKA 3.32 126 e(Pn) 23 06.00 2.0  
i 23 16.70  
e 23 31.00  
i 23 47.50  
i(Sg) 23 57.50  
RUP 3.45 262 ePn 23 06.88 1.1  
FEL 3.73 231 ePn 23 08.68 -1.2  
CDF 3.80 242 Pn 23 11.30 0.4  
Sg 24 14.00  
WTS 3.86 298 e(Pn) 23 11.00 -0.5  
e(S) 24 18.00  
MEM 4.04 277 iP 23 14.50 0.4  
ENN 4.11 279 e(Pn) 23 06.00 -9.0X  
0.5s 2.00nm  
CTI 4.29 186 P 23 22.00 4.2X  
BSF 4.40 238 Pn 23 17.60 -1.7  
Pg 23 34.80  
Sn 24 08.00  
Sg 24 30.20  
HAU 4.54 242 Pn 23 21.00 -0.3  
Pg 23 37.00  
Sg 24 36.40  
LOR 6.36 245 Pn 23 45.30 -1.7  
Pg 24 11.00  
Sg 25 34.00  
LBF 6.45 242 Pn 23 46.80 -1.4  
SMF 6.72 240 Pg 24 17.40 25.4X  
AVF 6.91 243 Pg 24 22.00 27.3X  
S.D. = 1.3 on 22 of 27 obs.

MAY 19, 1991 03h 40m 27.49 ± 0.26s  
1.315 N ± 4.8km 123.027 E ± 6.0km  
DEPTH = 35.0km (3 depth phases)  
4.9mb (16 obs.) 4.9msz (3 obs.)  
MINAHASSA PENINSULA (265)

MNI 1.82 86 ePd 40 55.50 -1.4  
eS 41 18.50  
TSM 5.73 300 iPc 41 52.80 0.3  
DAV 6.27 24 eP 42 01.00 0.9  
AAI 7.17 134 eP 42 14.00 1.3  
MKS 7.40 209 iPc 42 22.00 6.1X  
KKM 8.26 305 eP 42 34.20 6.1X  
KGM 19.71 272 eP 44 55.00 -2.2  
IPM 22.21 279 ePd 45 24.90 2.2  
MBL 22.55 188 eP 45 25.00 -1.0  
SNG 23.09 285 eP 45 32.90 1.6  
WRA 23.86 153 P 45 39.00 0.2  
0.8s 16.00nm 4.6mb  
WB2 23.87 153 iPd 45 38.60 -0.3  
0.7s 16.10nm 4.7mb  
PSI 24.13 274 ePc 45 49.50 8.1X  
NANU 24.83 197 eP 45 47.00 -1.1  
ASPA 26.99 158 iPc 46 07.50 -0.7  
0.8s 7.20nm 4.4mb  
OIS 27.13 144 eP 46 09.00 -0.5  
WARB 27.56 173 eP 46 12.00 -1.4  
MEKA 28.10 189 eP 46 16.60 -1.7  
CHG 29.32 308 eP 46 29.20 -0.2  
GYA 29.54 329 P 46 36.00 4.7X  
Z 20s 1.80um 4.7msz  
N 16s 1.40um  
E 16s 0.80um  
WHN 30.21 345 eP 46 37.50 0.4  
KMI 30.72 322 eP 46 43.00 1.0  
BAL 32.31 190 eP 46 54.30 -1.2  
CD2 34.64 330 P 47 15.50 -0.3  
XAN 35.13 339 P 47 19.20 -0.8  
S 52 51.00  
STK 37.41 154 eP 47 45.40 6.2X  
0.8s 4.70nm 4.4mb  
TIY 37.51 346 eP 47 38.80 -1.2  
LZH 38.90 335 eP 47 52.00 0.1  
1.6s 20.00nm 4.6mb  
Z 20s 1.94um 4.9msz  
N 15s 0.89um  
E 17s 1.13um  
pP 47 59.50 25km  
PP 49 20.00  
eS 53 47.00  
sS 54 04.00  
ADE 38.97 159 e(P) 47 58.00 5.8X  
0.9s 50.42nm 5.3mb  
BJI 39.05 352 eP 47 52.50 -0.2  
SNY 40.33 1 P 48 02.40 -0.9  
BRS 40.42 137 iPc 48 05.00 0.7  
HHC 40.70 347 P 48 06.80 0.2  
LSA 41.42 316 P 48 14.80 1.8  
GTA 43.43 334 P 48 29.40 0.5  
1.2s 20.00nm 4.7mb  
Z 22s 3.90um 5.3msz  
E 17s 1.50um  
pP 48 40.00 37km  
PP 50 12.40  
MDJ 43.51 7 eP 48 29.50 0.2  
TOO 43.92 154 eP 48 35.00 2.2  
CNB 43.98 148 iPd 48 36.50 3.2X  
PKI 44.48 309 P 48 37.48 -0.4  
0.9s 30.00nm 5.1mb  
KKN 44.69 310 P 48 39.14 -0.3  
0.8s 39.00nm 5.3mb  
DMN 44.74 309 P 48 39.70 -0.2  
0.9s 56.00nm 5.4mb  
GKN 45.29 309 P 48 43.90 -0.2  
0.9s 70.00nm 5.6mb  
HYB 46.54 293 eP 48 54.00 0.0  
G8A 46.72 287 P 48 55.20 -0.2  
0.8s 9.10nm 4.8mb  
WMO 52.69 328 P 49 41.80 0.8  
QUE 60.36 304 eP 50 34.00 -2.1  
YAK 60.76 4 iPc 50 36.40 -1.5  
GAR 60.91 315 eP 50 39.00 -0.5  
CSY 68.05 185 eP 51 25.60 0.4  
0.7s 22.30nm 5.4mb  
MAIO 68.08 309 eP 51 26.00 -0.2  
OBN 86.88 325 eP 53 09.00 -0.8  
e 53 22.00 43km

SOD 91.27 337 eP 53 43.00 12.7X  
SPA 91.31 180 eP 53 33.00 2.3  
1.0s 10.00nm 5.2mb  
KAF 92.00 332 iP 53 32.30 -1.5  
0.7s 4.60nm 5.0mb  
eS 53 32.70  
KRI 93.64 253 iPd 53 43.90 1.5  
INK 93.74 21 eP 53 41.00 -0.7  
YKA 103.20 24 ePd 54 24.40 0.0  
0.9s 0.40nm 4.2mb  
GOL 119.84 42 PKP 59 16.50 0.0  
ANMO 121.37 47 PKP 59 20.00 0.5  
ALO 121.37 47 ePKP 59 19.00 -0.5  
TACH 145.27 159 ePKP 00 04.20 0.4  
PCH 145.45 160 ePKP 00 05.50 1.3  
PEL 145.82 159 ePKP 00 06.20 1.4  
ZOB0 161.52 144 PKP 00 29.00 1.8  
S.D. = 1.1 on 56 of 64 obs.

\* MAY 19, 1991 04h 30m 40.69 ± 2.82s  
15.724 N ± 9.9km 60.406 W ± 27.3km  
DEPTH = 33.0km (normal)  
LEEWARD ISLANDS (92)  
MD 2.6 (TRN).

DEG 0.86 313 eP 30 56.11 -0.3  
S 31 07.30  
MGG 0.90 283 eP 30 56.90 0.0  
S 31 08.30  
BBL 1.05 259 eP 30 58.85 -0.3  
FDF 1.22 216 eP 31 01.63 0.1  
0.1s 1.00nm  
S 31 16.70  
SEG 1.25 303 eP 31 02.30 0.3  
S 31 17.60  
MVM 1.25 202 eP 31 02.02 0.0  
S 31 17.40  
PAG 1.26 284 eP 31 02.46 0.3  
S 31 18.00  
BPA 1.92 314 eP 31 18.40 6.8X  
S.D. = 0.3 on 7 of 8 obs.

% MAY 19, 1991 04h 31m 54.01 ± 1.18s  
40.204 N ± 8.5km 29.610 E ± 9.1km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)

IZI 0.17 322 iPg 31 58.40 0.5  
iSg 32 01.40  
YLV 0.40 333 iPg 32 01.90 -0.4  
iSg 32 06.90  
EYL 0.55 49 ePg 32 05.40 0.1  
HRT 0.62 4 ePg 32 06.40 -0.1  
DST 0.96 232 ePg 32 12.30 -0.1  
S.D. = 0.5 on 5 of 5 obs.

% MAY 19, 1991 04h 33m 04.63 ± 1.13s  
40.248 N ± 8.8km 29.608 E ± 8.5km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)

IZI 0.14 311 iPg 33 08.40 0.5  
iSg 33 11.40  
YLV 0.37 331 iPg 33 12.10 -0.1  
iSg 33 17.10  
EYL 0.53 53 ePg 33 15.50 0.2  
HRT 0.57 5 ePg 33 15.90 -0.4  
DST 0.99 230 ePg 33 23.30 -0.1  
S.D. = 0.5 on 5 of 5 obs.

\* MAY 19, 1991 05h 47m 37.30 ± 0.50s  
1.223 N ± 7.3km 123.199 E ± 10.9km  
DEPTH = 35.0km (3 depth phases)  
4.9mb (12 obs.) 4.3msz (1 obs.)  
MINAHASSA PENINSULA (265)

TSM 5.92 300 iPd 49 05.00 -0.1  
0.2s 81.60nm 6.0mb X  
MKS 7.40 210 iPc 49 27.50 1.7  
IPM 22.39 279 ePc 52 37.90 3.6X  
SNG 23.28 285 eP 52 43.20 0.3  
WB2 23.71 153 eP 52 46.70 -0.4  
0.4s 12.20nm 4.8mb  
eS 57 10.70  
PSI 24.30 274 ePc 52 59.50 6.6X  
ASPA 26.84 158 eP 53 18.10 1.4  
0.8s 5.60nm 4.2mb



19d 05h

OIS	26.96	144	eP	53	18.60	0.8
MEKA	28.04	189	eP	53	25.00	-2.5
CHG	29.52	308	eP	53	41.10	0.2
CD2	34.80	330	P	54	27.50	0.5
XAN	35.28	339	P	54	31.00	0.0
STK	37.26	154	eP	54	53.60	6.0X
	0.5s	2.60nm			4.4mb	
TIY	37.64	346	Pc	54	51.80	0.9
Z	22s	0.50um			4.3msz	
MAT	37.79	20	(P)	54	43.00	-9.1X
	1.2s	20.31nm			4.9mb	
LZH	39.06	335	eP	55	04.50	1.5
	2.0s	43.00nm			4.9mb	
Z	23s	0.41um			4.2mszX	
		pP		55	14.50	34km
BJI	39.16	351	P	55	03.50	0.0
	1.2s	16.00nm			4.7mb	
HHC	40.83	346	P	55	18.40	1.0
GTA	43.59	334	Pd	55	41.20	1.2
	1.2s	40.00nm			5.1mb	
Z	13s	0.30um			4.4mszX	
		pP		55	52.00	38km
PKI	44.67	309	P	55	48.50	-0.8
KKN	44.88	310	P	55	50.20	-0.6
	1.0s	42.00nm			5.3mb	
DMN	44.93	309	P	55	50.72	-0.5
	1.0s	50.00nm			5.3mb	
GKN	45.48	309	P	55	54.94	-0.5
	1.0s	57.00nm			5.4mb	
HYB	46.73	293	iPc	56	05.30	0.0
	1.0s	30.00nm			5.2mb	
		e		56	30.10	105kmX
GBA	46.91	287	Pc	56	05.90	-0.8
	1.0s	7.90nm			4.7mb	
WMO	52.86	328	P	56	53.00	1.0
QUE	60.56	304	eP	57	45.90	-1.3
YAK	60.84	4	iPc	57	47.80	-0.4
		i		57	58.00	33km
INK	93.77	21	eP	00	49.00	-2.6
	S.D. = 1.2	on		25	of	29 obs.

& MAY 19, 1991 09h 17m 14.71s  
63.503 N 151.377 W  
DEPTH = 8.1km  
CENTRAL ALASKA (1)  
<AEIC>. ML 2.8 (AEIC).

TRF	0.49	96	iP	17	24.21	-0.5
			iS	17	30.88	
HUR	0.95	123	eP	17	32.03	-0.9
			eS	17	46.69	
BWN	1.08	51	eP	17	35.87	0.7
			eS	17	51.08	
MCK	1.11	77	eP	17	35.39	-0.4
			eS	17	51.47	
RND	1.14	94	eP	17	35.67	-0.6
			S	17	52.89	
CUT	1.21	155	eP	17	36.96	-0.5
			eS	17	54.10	
NEA	1.48	42	eP	17	40.09	-1.5
			eS	18	01.39	
SKT	1.53	183	iP	17	42.22	-0.1
			eS	18	02.03	
WRH	1.75	55	eP	17	43.92	-1.5
			eS	18	09.15	
CCB	1.94	52	eP	17	46.62	-1.7
			eS	18	14.20	
PWA	1.98	159	eP	17	48.41	-0.5
MDM	2.01	42	eP	17	47.60	-1.7
			eS	18	16.66	
SUA	2.07	172	eP	17	49.92	-0.3
			eS	18	18.01	
GHO	2.07	146	eP	17	49.46	-0.8
			eS	18	16.52	
FBA	2.10	47	eP	17	49.80	-0.8
HDA	2.15	63	eP	17	50.90	-0.5
TTA	2.18	257	eP	17	55.50	3.7
PLRM	2.18	151	eP	17	51.09	-0.7
PMR	2.18	151	iPc	17	51.80	0.1
SML	2.21	139	iP	17	51.31	-0.9
CRP	2.27	190	eP	17	53.37	0.1
GLM	2.29	48	eP	17	51.64	-1.8
			eS	18	25.78	
BGL	2.30	192	eP	17	53.65	0.1
SPU	2.35	188	eP	17	54.28	0.0
CKL	2.36	191	eP	17	55.05	0.6
PMS	2.42	159	eP	17	54.85	-0.4

KNK	2.50	146	eP	17	56.05	-0.3
SCM	2.51	130	eP	17	55.37	-1.1
PAX	2.73	99	eP	18	00.46	0.8
IMA	2.76	340	iPd	18	00.00	-0.1
TOA	2.77	118	eP	18	00.90	0.6
SDG	2.83	108	eP	18	01.36	0.2
RDT	2.98	190	eP	18	04.72	1.5
DFR	2.99	193	eP	18	04.72	1.4
TZL	3.10	115	eP	18	02.48	-2.3
SVW	3.12	221	eP	18	11.10	6.1
KLU	3.24	126	eP	18	07.03	0.2
GLI	3.31	141	eP	18	07.38	-0.4
VZV	3.33	135	eP	18	07.99	-0.2
VLZ	3.35	133	eP	18	07.35	-1.0
MTU	3.95	152	eP	18	17.30	0.5
CNPM	3.99	179	eP	18	18.94	1.4
GLB	4.08	117	eP	18	19.35	0.7
BALM	4.89	116	eP	18	29.94	-0.4

44 obs. associated  
& MAY 19, 1991 09h 45m 08.64s  
63.231 N 150.901 W  
DEPTH = 13.8km  
CENTRAL ALASKA (1)  
<AEIC>. ML 2.6 (AEIC).

TRF	0.35	51	iP	45	15.81	-0.5
HUR	0.63	113	eP	45	21.12	0.2
			eS	45	29.89	
CUT	0.88	160	iP	45	25.52	0.4
			eS	45	37.28	
RND	0.94	78	iP	45	26.38	0.1
			eS	45	40.10	
MCK	1.02	59	eP	45	27.71	0.2
			eS	45	41.86	
BWN	1.14	33	eP	45	29.90	0.3
			eS	45	46.42	
SKT	1.29	193	iP	45	31.47	-0.7
NEA	1.57	30	eP	45	36.63	0.5
			eS	45	57.68	
PWA	1.66	163	eP	45	37.19	-0.2
			eS	45	59.81	
GHO	1.73	147	eP	45	38.77	0.3
			eS	46	01.70	
WRH	1.76	44	eP	45	38.53	-0.4
SUA	1.78	178	eP	45	39.62	0.4
			eS	46	04.81	
PLRM	1.84	153	eP	45	40.36	0.4
			eS	46	04.78	
SML	1.86	139	eP	45	40.75	0.4
			eS	46	05.35	
CCB	1.97	43	eP	45	40.36	-1.6
			eS	46	09.34	
CRP	2.06	197	eP	45	43.58	0.2
			eS	46	11.02	
PMS	2.09	162	eP	45	44.50	0.8
BGL	2.09	200	eP	45	44.04	0.2
			S	46	12.69	
MDM	2.09	33	eP	45	41.97	-1.8
			S	46	09.22	
HDA	2.11	54	eP	45	45.65	1.7
SPU	2.13	195	eP	45	44.11	-0.2
CKL	2.15	199	eP	45	45.10	0.4
			eS	46	13.14	
KNK	2.15	147	eP	45	45.96	1.3
			S	46	13.76	
FBA	2.16	38	eP	45	45.67	1.0
			S	46	15.58	
GLM	2.34	40	eP	45	48.57	1.2
TTA	2.35	265	eP	45	48.22	0.8
TOA	2.46	115	eP	45	49.38	0.4
PAX	2.48	94	eP	45	50.09	0.7
SDG	2.55	104	eP	45	51.13	0.8
RDT	2.76	196	eP	45	54.93	1.6
DFR	2.78	198	eP	45	55.12	1.5
NCT	2.85	201	eP	45	54.58	0.0
RDN	2.87	199	eP	45	55.29	0.4
RDW	2.90	199	eP	45	56.98	1.6
KLU	2.90	125	eP	45	54.42	-0.9
RS2	2.91	198	eP	45	58.40	2.8
RSO	2.91	198	eP	45	57.40	1.8
RED	2.96	198	eP	45	56.86	0.8
GLI	2.96	141	eP	45	57.20	1.1
VLZ	3.00	132	eP	45	54.56	-2.0
SVW	3.07	228	eP	46	01.39	3.7
IMA	3.09	338	eP	45	55.67	-2.3
BALM	4.58	115	eP	46	18.99	-0.2

43 obs. associated  
? MAY 19, 1991 10h 01m 28.56±1.43s  
39.044 N ±12.3km 20.940 E ±17.2km  
DEPTH = 10.0km (geophysicist)  
GREECE-ALBANIA BORDER REGION (392)  
MD 3.0 (ATH).

VLS	0.91	198	ePb	01	46.00	0.1
			eSb	02	00.50	
AGG	1.08	91	eP	01	48.50	-0.4
			eS	02	02.00	
KZN	1.41	27	ePb	01	53.50	-0.9
LIT	1.60	48	eP	01	58.20	1.3
			eS	02	20.70	
FNA	1.77	11	eP	02	04.30	4.8X
	S.D. = 1.6	on		4	of	5 obs.

\* MAY 19, 1991 10h 08m 11.63±1.94s  
39.112 N ±16.4km 23.032 E ±11.4km  
DEPTH = 10.0km (geophysicist)  
AEGEAN SEA (365)  
ML 2.5 (THE).

AGG	0.55	261	ePgc	08	21.88	-1.0
			iSg	08	29.04	
PAIG	0.96	31	ePg	08	29.06	-0.8
			eSg	08	43.28	
LIT	1.07	337	iPgc	08	31.17	-0.7
			eSg	08	46.68	
OUR	1.42	31	ePb	08	37.44	-0.1
THE	1.52	358	ePb	08	37.88	-0.9
			eSb	08	59.44	
SOH	1.73	8	ePbc	08	43.12	1.2
			eSb	09	04.56	
GRG	1.91	345	ePb	08	44.36	-0.1
			eSb	09	10.16	
SRS	2.05	12	eP	08	47.20	0.7
			eS	09	12.52	
FNA	2.10	323	eP	08	47.44	0.1
IGT	2.14	282	eP	08	49.16	1.4
			eS	09	16.08	
OHR	2.63	320	e(Pn)	09	03.50	8.6X
	S.D. = 1.0	on		10	of	11 obs.

MAY 19, 1991 14h 53m 25.42±1.15s  
39.726 N ±7.9km 77.983 E ±6.1km  
DEPTH = 38.6 ±13.0 km  
4.5mb (16 obs.) 3.9msz (1 obs.)  
SOUTHERN XINJIANG, CHINA (321)

KSH	1.57	261	Pg	53	53.00	1.6
			Sg	54	15.50	
WMO	8.33	57	P	55	26.50	-0.2
			S	57	00.00	
NDI	11.03	184	eP	56	05.00	1.2
			eS	58	05.00	
GKN	12.93	153	P	56	28.80	-0.6
QUE	13.12	227	e(P)	56	30.60	-1.3
KKN	13.36	151	P	56	33.20	-1.9
	0.4s	7.00nm			4.9mb	
PKI	13.60	151	P	56	32.80	-5.6X
MAIO	14.97	263	eP	56	50.00	-6.1X
			eS	59	33.00	
GTA	16.84	84	eP	57	20.40	0.5
Z	18s	0.40um				
E	10s	0.40um				
HYB	22.24	179	eP	58	40.00	19.7X
CD2	22.74	105	eP	58	31.80	6.6X
NUR	38.64	321	eP</			



AVF 1.0s 4.00nm 4.4mb  
52.92 304 eP 02 39.40 -0.4  
0.7s 6.05nm 4.7mb  
DAG 53.23 343 ePc 02 41.00 -0.7  
0.9s 7.56nm 4.7mb  
MAF 53.63 303 eP 02 45.20 0.2  
1.0s 6.00nm 4.6mb  
TCF 53.84 304 eP 02 46.40 -0.1  
1.0s 6.00nm 4.6mb  
INK 69.73 12 eP 04 33.00 0.1  
YKA 77.62 6 eP 05 19.20 0.4  
1.2s 1.30nm 3.8mb  
WRA 79.28 127 P 05 32.00 3.5X  
1.5s 1.20nm 3.6mb  
WB2 79.28 127 eP 05 31.20 2.7  
1.0s 1.70nm 4.0mb  
ASPA 81.83 130 iPd 05 45.60 3.7X  
0.9s 4.20nm 4.5mb  
S.D. = 1.0 on 24 of 31 obs.

\* MAY 19, 1991 15h 31m 47.64 ± 1.93s  
6.060 S ± 14.7km 112.339 E ± 13.1km  
DEPTH = 140.1 ± 18.4 km  
4.6mb ( 6 obs.)

JAVA (277)

TRT 1.66 170 iPc 32 05.40 -13.2X  
eS 32 43.60  
BKB2 6.59 44 iPc 33 24.10 0.8  
iS 34 50.00  
MKS 7.15 84 iPc 33 32.50 1.6  
KGM 12.06 311 ePc 34 33.80 -2.3  
IPM 15.47 313 ePd 35 20.00 0.4  
0.5s 15.30nm 4.6mb  
SNG 17.60 318 eP 35 43.80 -1.9  
e 39 11.80  
DAV 18.57 46 eP 35 52.00 -4.6X  
KNA 18.77 122 eP 35 53.50 -5.2X  
MEKA 21.28 165 eP 36 30.00 5.8X  
WARB 24.23 147 eP 36 56.00 3.1X  
WB2 25.46 125 iPd 37 01.80 -2.6  
1.0s 55.40nm 5.1mb

LOE 25.56 336 eP 37 05.50 0.2  
ASPA 27.14 132 iPc 37 19.70 -0.1  
1.9s 32.30nm 4.6mb  
Z 18s 0.50um 4.1msz

CHG 28.02 332 eP 37 28.30 0.7  
QIS 30.12 121 eP 37 44.00 -2.4  
STK 37.51 137 eP 38 56.30 6.7X  
1.0s 17.90nm 4.8mb  
ADE 37.67 143 e(P) 38 53.00 2.1  
CD2 37.67 348 P 38 49.50 -1.4  
XAN 40.01 356 P 39 09.30 -1.0  
RMO 40.20 124 eP 39 13.00 1.0  
e 40 51.00

CMS 40.26 133 eP 39 15.00 2.6X  
LSA 40.97 331 P 39 20.40 1.7  
GUN 42.35 324 P 39 32.70 2.8X  
PKI 42.37 323 P 39 31.66 1.6  
DMN 42.58 323 P 39 33.40 1.7  
KKK 42.61 323 P 39 33.12 1.2  
LZH 42.67 350 eP 39 31.50 -0.7  
1.5s 17.00nm 4.5mb  
Z 15s 0.67um 4.7msz  
N 13s 0.64um

GKN 43.15 323 P 39 37.02 0.8  
TOO 43.51 141 eP 39 44.00 5.1X  
TIY 43.55 0 eP 39 35.00 -4.1X  
Z 18s 0.49um 4.5msz  
N 15s 0.40um

HHC 46.68 359 eP 40 05.00 1.0  
pP 40 18.00 48kmX  
GTA 46.70 347 eP 40 04.20 -0.1  
1.0s 10.00nm 4.4mb  
Z 22s 0.50um 4.4msz  
E 14s 0.70um

S 40 13.80  
S 46 46.00  
SNY 48.75 11 eP 40 15.10 -4.8X  
MAT 48.82 28 (P) 40 30.00 9.4X  
CN2 51.02 12 eP 40 36.00 -1.2  
Z 20s 0.40um 4.4msz

eP 40 42.00 20kmX  
eS 47 40.00  
WMO 54.41 338 P 41 02.50 0.0

MAIO 64.95 315 eP 42 16.00 1.4  
YAK 69.19 9 eP 42 38.10 -2.5  
OBN 86.85 326 iPd 44 20.80 3.5X  
1.4s \*\*\*\*\*nm 8.3mb X  
S.D. = 1.6 on 26 of 39 obs.

\* MAY 19, 1991 16h 06m 46.09 ± 0.93s  
62.950 N ± 12.2km 151.402 W ± 8.6km  
DEPTH = 33.0km (normal)  
CENTRAL ALASKA ( 1)

PMR 1.73 141 ePd 07 13.00 -1.2  
TTA 2.11 272 eP 07 19.20 -0.6  
FBA 2.52 38 eP 07 25.60 -0.1  
TOA 2.57 107 eP 07 27.30 1.0  
SVW 2.71 229 eP 07 29.30 0.9  
IMA 3.28 344 ePd 07 29.00 -7.5X  
S.D. = 1.4 on 5 of 6 obs.

% MAY 19, 1991 16h 35m 59.39 ± 2.25s  
43.789 N ± 17.8km 5.853 E ± 11.0km  
DEPTH = 10.0km (geophysicist)  
NEAR SOUTH COAST OF FRANCE (379)  
ML 2.1 (LDG).

CDR 0.13 209 ePg 36 02.50 0.0  
eSg 36 04.70  
LRG 0.50 132 Pg 36 09.60 0.1  
Sg 36 17.60  
FRF 0.62 111 Pg 36 11.20 -0.7  
Sg 36 20.40  
LMR 0.66 133 Pg 36 12.80 0.3  
Sg 36 22.40  
SBF 1.15 86 Pg 36 21.20 0.3  
Sg 36 37.20  
S.D. = 0.6 on 5 of 5 obs.

MAY 19, 1991 17h 19m 45.38 ± 0.58s  
40.795 N ± 5.3km 20.761 E ± 5.8km  
DEPTH = 10.0km (geophysicist)  
GREECE-ALBANIA BORDER REGION (392)  
ML 3.0 (SKO).

OHR 0.32 5 iPg 19 50.90 -1.1  
iSg 19 56.20  
LSK 0.66 191 ePg 19 57.40 -1.1  
iSg 20 06.80  
TPE 0.76 229 ePg 20 01.00 0.8  
iSg 20 15.00  
PHP 0.92 345 ePg 20 02.70 -0.3  
iSg 20 16.20  
LACI 1.16 317 ePg 20 07.50 0.5  
iSg 20 25.80  
SKO 1.28 23 iPg 20 09.50 0.4  
0.8s 96.00nm iSg 20 25.80  
Lg 20 32.50

VAY 1.47 68 ePn 20 11.40 -0.4  
KKB 2.05 58 eP 20 20.00 -0.3  
MMB 2.38 70 eP 20 25.00 0.0  
VTS 2.56 45 eP 20 28.00 0.2  
RZN 3.11 72 iPc 20 37.00 1.4  
S.D. = 0.9 on 11 of 11 obs.

MAY 19, 1991 17h 21m 53.40 ± 0.70s  
38.361 N ± 6.8km 21.794 E ± 5.0km  
DEPTH = 15.5 ± 4.9 km  
3.7mb ( 8 obs.)  
GREECE (364)  
ML 3.6 (ATH), 3.5 (THE).

AGG 0.78 32 ePg 22 05.86 -2.3  
eSg 22 17.96  
VLS 0.97 259 ePn 22 10.70 -0.6  
ATH 1.56 104 ePn 22 20.70 0.1  
eSn 22 40.70  
IGT 1.63 316 ePb 22 23.82 2.2  
LIT 1.82 17 ePbc 22 24.22 -0.1  
eSb 22 47.02

VLI 1.87 151 ePn 22 26.00 0.9  
KZN 1.94 359 ePn 22 27.00 0.8  
LSK 2.01 333 ePn 22 30.40 3.2X  
iSn 23 06.30  
PAIG 2.14 43 ePb 22 27.72 -1.3  
eSb 22 55.38  
TPE 2.38 325 ePn 22 33.90 1.6  
iSn 23 14.50

FNA 2.44 353 ePnc 22 34.46 1.2  
eS 23 05.50  
THE 2.44 21 eP 22 33.22 0.0  
eS 23 03.40

OUR 2.60 40 eP 22 36.50 1.0  
GRG 2.63 10 eP 22 37.30 1.2  
eS 23 08.46  
SOH 2.74 26 eP 22 36.90 -0.6  
OHR 2.85 345 iPn 22 42.10 3.0

1.2s 364.00nm iSn 23 17.20  
Lg 23 33.80  
VAY 3.02 11 ePn 22 41.40 0.0  
SRS 3.08 26 eP 22 42.06 -0.3  
eS 23 17.98

TIR 3.33 334 ePn 22 56.50 10.6X  
PHP 3.48 343 ePn 22 50.70 2.7  
iSn 23 35.70  
MMB 3.55 24 eP 22 49.00 0.0  
LCI 3.57 305 P 22 48.50 -0.8  
eSn 23 31.00

PRK 3.61 74 ePn 22 52.20 2.4  
SKO 3.62 356 ePn 22 49.00 -1.0  
1.0s 96.00nm i 23 31.00

Lg 23 48.20  
KKB 3.64 15 eP 22 52.00 1.7  
LACI 3.64 335 ePn 22 53.00 2.7  
iSn 23 49.50

RDO 4.01 45 ePn 22 55.60 0.2  
ALN 4.15 51 eP 22 57.30 -0.1  
BRT 4.35 307 P 23 00.00 -0.3  
NPS 4.35 134 ePn 23 01.00 0.6  
VTS 4.36 14 eP 23 01.00 0.4  
TDS 4.44 289 P 23 03.00 1.3  
TTG 4.50 335 ePn 23 03.60 1.2  
eSn 23 59.00

KGT 4.75 62 eP 23 05.00 -1.1  
SDI 6.97 301 P 23 37.00 -0.5  
eSn 24 52.50  
MNS 8.03 303 P 23 53.00 0.7  
VRI 8.35 24 ePd 23 57.00 0.4  
ASS 8.38 307 P 23 57.00 -0.1

PTJ 8.69 332 eP 24 03.60 2.2  
CEY 9.18 326 e(Pn) 24 05.50 -2.6  
e(Sn) 25 52.50  
LJU 9.37 327 eP 24 08.00 -2.8  
e(Sn) 25 50.50  
VOY 9.65 325 ePn 24 11.80 -2.8  
eSn 25 57.60

SMF 15.59 308 eP 25 37.40 3.4X  
0.7s 3.85nm 3.8mb  
AVF 15.96 308 eP 25 42.00 3.3X  
0.8s 3.35nm 3.5mb

SSF 15.98 309 eP 25 42.10 3.1X  
0.8s 4.05nm 3.6mb  
BGF 16.18 306 eP 25 44.90 3.4X  
0.9s 6.55nm 3.8mb  
NUR 22.24 4 eP 26 51.00 0.3  
HFS 22.39 349 e(P) 26 49.00 -3.2X  
0.4s 1.40nm 3.8mb

e 26 56.70  
e 27 11.70  
NB2 23.65 347 P 27 02.80 -1.8  
0.6s 1.30nm 3.7mb

EKA 23.87 323 Pc 27 06.60 0.0  
0.9s 5.40nm 4.1mb  
YKA 73.56 340 eP 33 25.10 -1.9  
0.6s 0.30nm 3.5mb  
S.D. = 1.5 on 44 of 51 obs.

MAY 19, 1991 18h 24m 33.55 ± 1.13s  
43.856 N ± 6.1km 128.414 W ± 9.2km  
DEPTH = 10.0km (geophysicist)  
4.3mb ( 3 obs.) 3.7msz ( 1 obs.)  
OFF COAST OF OREGON ( 30)

DBO 3.83 99 P 25 32.52 -1.5  
HSO 3.88 93 P 25 33.13 -1.4  
KMOR 3.93 61 P 25 34.37 -1.0  
NLO 4.17 56 P 25 38.84 0.2  
HBO 4.41 88 P 25 42.35 0.2  
BMW 4.51 53 P 25 43.07 -0.4  
PGO 4.55 67 P 25 44.85 0.9  
GT2 4.58 71 P 25 44.36 -0.2  
RVW 4.63 58 P 25 43.64 -1.5  
LVP 4.80 60 P 25 47.65 -0.1



19d 18h

VLMM 4.85 67 P 25 48.26 -0.1  
 FL2 4.89 59 P 25 49.41 0.4  
 MTMW 4.91 62 P 25 48.99 -0.2  
 CZM 4.91 56 P 25 48.47 -0.7  
 ERK 4.95 58 P 25 49.95 0.2  
 SHW 4.96 60 P 25 50.27 0.3  
 SMW 4.97 44 P 25 49.73 -0.2  
 HSR 4.99 60 P 25 51.30 0.9  
 STD 4.99 59 P 25 50.34 0.0  
 JLK 5.00 61 P 25 50.99 0.6  
 REMW 5.00 60 P 25 50.97 0.4  
 ESD 5.02 60 P 25 51.65 0.8  
 VBEM 5.03 74 P 25 49.24 -1.8  
 SOSW 5.04 60 P 25 51.50 0.4  
 TDL 5.05 58 P 25 51.01 -0.2  
 CDFW 5.05 61 P 25 51.57 0.4  
 VLL 5.07 69 P 25 51.88 0.4  
 KOSW 5.11 57 P 25 52.46 0.4  
 LMW 5.16 55 P 25 52.80 0.1  
 VFP 5.17 71 P 25 53.22 0.2  
 GULW 5.27 65 P 25 54.82 0.5  
 HDW 5.33 43 P 25 55.86 0.7  
 ASR 5.35 62 P 25 55.35 -0.2  
 LON 5.48 56 P 25 57.38 0.1  
 RVC 5.49 54 P 25 57.58 0.2  
 WPW 5.62 57 P 25 59.28 0.0  
 FMW 5.66 55 P 25 59.39 -0.5  
 GSM 5.73 52 P 26 00.70 -0.1  
 GL2 5.79 66 P 26 05.12 3.5X  
 JCW 6.26 44 P 26 08.72 0.5  
 EBG 6.31 58 P 26 09.56 0.6  
 RPW 6.64 44 P 26 13.76 0.2  
 MBW 6.68 40 P 26 14.74 0.5  
 ORV 6.72 127 eP 26 16.30 1.6  
 PNT 8.15 45 eP 26 38.00 3.2X  
 ALO 19.12 110 e(P) 29 01.00 1.7  
 FFC 20.26 48 ePd 29 11.30 -0.3  
 0.8s 15.00nm 4.4mb  
 YKA 20.34 19 eP 29 11.10 -1.2  
 1.1s 8.60nm 4.0mb  
 INK 24.66 355 eP 29 55.50 0.4  
 TUL 26.13 96 e(P) 30 07.40 -2.0  
 1.2s 8.10nm 4.3mb  
 Z 20s 0.23um 3.7msz  
 LR 39 02.70  
 S.D. = 0.8 on 48 of 50 obs.

\* MAY 19, 1991 18h 59m 24.90 ± 0.68s  
 6.358 S ± 7.8km 132.918 E ± 11.7km  
 DEPTH = 56.0km ( 2 depth phases)  
 4.5mb ( 6 obs.)

TANIMBAR ISLANDS REGION (281)

AAI 5.40 299 eP 00 43.80 -1.1  
 MTN 6.68 195 iPc 01 02.50 -0.3  
 0.3s 333.00nm 6.4mb X  
 KNA 10.18 203 iPc 01 49.60 -1.5  
 0.4s 79.00nm 6.2mb X  
 eS 03 42.00  
 WB2 13.58 174 eP 02 27.70 -8.8X  
 0.3s 2.10nm 4.4mb  
 i 02 33.60  
 e 07 17.60  
 e 10 16.80  
 e 15 12.30  
 PMG 14.42 103 eP 02 55.00 7.4X  
 QIS 15.53 156 iPc 02 56.60 -5.4X  
 e 03 08.00  
 iS 05 41.80  
 e 07 31.00  
 ASPA 17.24 177 eP 03 21.10 -2.3  
 0.5s 24.30nm 4.6mb  
 iS 06 31.90  
 CTA 18.81 138 iPd 03 42.00 -0.8  
 0.9s 38.66nm 4.6mb  
 eS 09 32.00  
 MBL 19.42 219 eP 03 50.10 0.5  
 WARB 20.60 196 eP 04 02.50 0.5  
 0.3s 6.00nm 4.4mb  
 QLP 22.82 153 eP 04 25.00 1.0  
 e 04 38.00 54km  
 e 09 30.00  
 NANU 23.26 224 eP 04 31.00 2.7  
 FORR 24.78 190 eP 04 43.30 0.4  
 RMO 25.07 145 eP 04 47.00 1.2  
 e 05 01.00 58km  
 e 12 45.00

STK 26.66 163 eP 05 06.30 5.9X  
 0.4s 1.30nm 3.9mb  
 CHG 41.80 307 eP 07 11.00 0.1  
 LZH 50.27 329 eP 08 27.50 9.6X  
 1.5s 14.00nm 4.8mb  
 sP 08 40.50  
 PKI 56.95 309 P 09 07.68 0.1  
 KKN 57.16 309 P 09 08.70 -0.2  
 DMN 57.21 309 P 09 09.30 0.0  
 GKN 57.76 309 P 09 13.00 0.0  
 YAK 68.22 358 eP 10 20.90 -0.4  
 e 15 17.00  
 S.D. = 1.2 on 17 of 22 obs.

? MAY 19, 1991 19h 48m 18.78 ± 1.69s  
 16.508 S ± 20.9km 167.340 E ± 18.4km  
 DEPTH = 33.0km (normol)  
 4.4mb ( 1 obs.)

VANUATU ISLANDS (186)

BKM 1.44 143 iP 48 42.80 0.0  
 iS 49 00.10  
 PVC 1.54 143 iP 48 44.20 0.0  
 iS 49 02.50  
 DZM 5.60 189 iPc 49 42.00 0.0  
 iS 50 44.90  
 ASPA 32.15 252 iPd 54 49.60 3.8X  
 0.6s 2.90nm 4.4mb  
 AAI 40.49 284 eP 55 56.50 0.0  
 S.D. = 0.0 on 4 of 5 obs.

MAY 19, 1991 19h 50m 32.85 ± 0.25s  
 37.787 N ± 6.0km 72.065 E ± 6.0km  
 DEPTH = 33.0km (normol)  
 4.5mb ( 10 obs.)

TAJIK SSR (715)

QUE 8.69 211 eP 52 39.40 0.0  
 eS 54 10.10  
 NDI 10.05 153 iPc 52 59.00 1.0  
 eS 54 39.00  
 MAIO 10.16 265 eP 53 06.00 6.4X  
 eS 54 48.00  
 GKN 14.36 129 P 53 55.90 -0.1  
 KKN 14.91 128 P 54 02.76 -0.4  
 DMN 14.93 129 P 54 02.94 -0.6  
 0.4s 16.00nm 4.6mb  
 PKI 15.15 128 P 54 06.26 -0.1  
 HYB 21.08 163 eP 55 16.90 0.2  
 HFS 42.59 321 eP 58 20.20 1.2  
 0.4s 4.80nm 4.6mb  
 e 58 34.00  
 NB2 43.88 322 P 58 38.50 1.0  
 0.5s 1.80nm 4.1mb  
 BSF 47.61 304 eP 59 07.80 0.3  
 0.7s 4.40nm 4.6mb  
 HAU 47.86 304 eP 59 09.80 0.4  
 LOR 49.68 304 eP 59 23.00 -0.3  
 SMF 49.85 303 eP 59 24.60 -0.1  
 0.7s 4.40nm 4.6mb  
 SSF 49.96 304 eP 59 25.40 -0.1  
 AVF 50.14 303 eP 59 26.80 0.0  
 0.6s 3.15nm 4.5mb  
 MAF 50.82 303 eP 59 32.20 0.2  
 0.9s 6.55nm 4.6mb  
 TCF 51.04 303 eP 59 33.80 0.1  
 0.7s 2.75nm 4.3mb  
 LSF 51.50 303 eP 59 36.60 -0.6  
 CAF 51.54 302 eP 59 37.70 0.1  
 LDF 51.89 307 eP 59 39.60 -0.5  
 FLN 52.07 307 eP 59 40.80 -0.7  
 LPO 52.21 301 eP 59 42.30 -0.3  
 GRR 52.42 306 eP 59 43.40 -0.7  
 0.7s 5.50nm 4.6mb  
 LFF 52.43 302 eP 59 44.10 -0.1  
 MKS 61.38 123 iPc 00 52.00 3.9X  
 FBA 73.00 17 P 02 01.50 0.9  
 YKA 79.92 3 eP 02 38.90 -0.5  
 0.5s 1.80nm 4.3mb  
 S.D. = 0.6 on 26 of 28 obs.

MAY 19, 1991 20h 09m 00.88 ± 1.19s  
 1.200 N ± 4.3km 122.958 E ± 7.4km  
 DEPTH = 38.2 ± 11.4 km  
 4.7mb ( 12 obs.) 4.5msz ( 5 obs.)

MINAHASSA PENINSULA (265)

TSM 5.73 302 iPd 10 25.50 -0.3  
 0.2s 97.90nm 6.0mb X  
 DAV 6.40 24 ePc+ 10 35.00 -0.3  
 1.0s 1120.00nm 6.5mb X  
 AAI 7.14 133 eP 10 55.00 9.4X  
 eS 12 23.60  
 KKM 8.27 306 ePc 11 01.50 0.0  
 KNA 17.79 161 eP 13 09.00 1.6  
 KGM 19.65 273 eP 13 30.00 0.4  
 IPM 22.16 279 ePc 14 02.50 7.3X  
 1.0s 33.90nm 4.7mb  
 MBL 22.43 188 eP 13 57.00 -0.9  
 SNG 23.05 286 eP 13 57.10 -6.9X  
 e 18 17.10  
 GZH 23.67 337 P 14 09.40 -0.6  
 WB2 23.80 153 iPd 14 11.50 0.2  
 0.7s 37.50nm 5.0mb  
 e 17 54.20  
 eS 18 35.10  
 PSI 24.06 274 ePc 14 20.70 6.8X  
 NANU 24.70 197 eP 14 19.60 -0.4  
 0.4s 13.00nm 4.8mb  
 LOE 26.36 309 eP 14 37.00 1.4  
 NST 26.71 304 eP 14 49.50 10.7X  
 ASPA 26.91 157 iPc 14 40.80 0.2  
 1.5s 13.70nm 4.4mb  
 eS 19 35.40  
 QIS 27.08 144 iPc 14 42.40 0.3  
 WARB 27.46 173 eP 14 45.50 0.0  
 MEKA 27.98 188 eP 14 49.00 -1.2  
 CHG 29.34 308 eP 15 02.00 -0.6  
 GYA 29.60 329 P 15 05.40 0.4  
 N 15s 0.40um  
 E 15s 0.60um  
 SSE 29.78 357 eP 15 18.00 11.7X  
 1.0s 12.00nm  
 Z 20s 0.60um 4.2msz  
 e 16 10.00  
 S 20 00.00  
 KMI 30.77 322 Pc 15 16.50 1.1  
 NJ2 30.93 353 eP 15 16.00 -0.4  
 S 20 18.00  
 BAL 32.19 190 eP 15 26.20 -1.3  
 FORR 32.25 172 eP 15 27.00 -1.0  
 NWA0 34.37 189 eP 15 45.50 -1.0  
 CD2 34.70 330 eP 15 48.50 -0.9  
 eS 21 10.00  
 XAN 35.21 340 P 15 52.50 -1.2  
 S 21 24.00  
 TIA 35.25 352 eP 15 53.00 -1.0  
 Z 18s 0.60um 4.4msz  
 S 21 26.00  
 RKG 35.53 189 eP 16 00.00 3.7X  
 STK 37.34 153 iPc 16 18.50 6.9X  
 0.6s 8.30nm 4.8mb  
 TIY 37.60 346 Pc 16 14.00 0.1  
 Z 20s 0.75um 4.5msz  
 N 20s 1.36um  
 S 22 06.00  
 MAT 37.89 20 (P) 16 16.00 -0.2  
 1.1s 12.66nm 4.7mb  
 eS 22 01.00  
 ADE 38.88 159 iPc 16 26.00 1.4  
 0.8s 59.70nm 5.4mb  
 LZH 38.98 335 eP 16 26.50 1.0  
 2.0s 18.00nm 4.5mb  
 Z 24s 0.56um 4.3msz X  
 sP 16 40.00  
 BJ1 39.15 352 eP 16 26.50 -0.1  
 1.0s 9.00nm 4.5mb  
 HHC 40.79 347 eP 16 41.00 0.6  
 Z 19s 0.70um 4.5msz  
 LSA 41.45 316 P 16 48.20 1.8  
 CN2 42.47 3 eP 16 54.50 0.6  
 Z 20s 0.70um 4.5msz  
 eP 17 01.00 22kmX  
 eS 23 10.00  
 GTA 43.50 334 Pd 17 03.20 0.6  
 0.9s 10.00nm 4.6mb  
 Z 27s 0.70um 4.4msz X  
 N 17s 0.40um  
 sP 17 14.00  
 S 23 30.00  
 TOO 43.85 154 eP 17 07.80 2.5X  
 PKI 44.50 309 P 17 10.80 -0.3  
 KKN 44.71 310 P 17 12.34 -0.3  
 DMN 44.75 309 P 17 12.00 -1.1



GKN	45.31	310	P	17	17.20	-0.1	MAIO	68.34	309	eP	43	19.00	-0.8	0.5s	52.50nm	08	24.90	5.3mb			
HYB	46.52	293	eP	17	27.00	0.1	MAW	80.28	200	iPd	44	28.80	0.8	0.3s	22.00nm	03	10.20	-1.1			
GBA	46.69	288	P	17	30.00	1.8	0.9s	22.00nm	5.2mb	FORR	49.66	244	iPc	08	24.90	5.1mb	-0.6				
	0.8s	6.20nm	4.6mb				08N	87.09	325	eP	45	11.50	8.7X	0.3s	22.00nm	03	20.00	-0.3			
WMO	52.75	328	P	18	18.00	3.6X	S.D. = 1.4	on	36	of	43	obs.	WAB8	50.92	250	iPc	05	10.00	-0.3		
IRK	53.24	346	eP	18	17.60	-0.2	% MAY 19, 1991	21h	04m	49.86	± 1.82s	MAT	67.32	324	eP	06	09.00	1.1			
YAK	60.88	4	eP	19	11.80	0.1	43.052 N ± 18.8km	0.947 W ± 10.8km				MDJ	77.32	310	Pd	06	10.30	1.1			
GAR	60.94	315	eP	19	11.00	-1.7	DEPTH = 10.0km	(geophysicist)				0.8s	21.00nm	06	46.00	0.4	-1.4				
CSY	67.93	185	eP	19	59.20	1.7	PYRENEES	(378)				TIY	84.65	312	eP	06	51.50	1.1			
	0.5s	7.80nm	5.0mb				MD 1.0 (STR).					FBA	85.58	13	P	07	17.00	-0.8			
MAIO	68.09	309	eP	20	05.00	5.7X	BOH	0.07	317	Pg	04	52.33	0.0	XAN	85.64	308	P	07	27.70	-1.9	
LNV	144.75	159	ePKP	28	33.00	-2.8	ISSF	0.11	102	Pg	04	52.90	0.0	INK	91.68	15	eP	07	27.70	-1.9	
TACH	145.19	159	ePKP	28	37.00	0.3						0.7s	1.30nm	13	35.80	-4.3X					
PCH	145.36	160	ePKP	28	38.00	0.9	ELYF	0.12	344	Pg	04	52.92	0.0	EKA	142.15	4	PKPd	13	35.80	-4.3X	
SAN	145.46	160	ePKP	28	39.50	2.3X						0.9s	3.30nm	13	43.00	-0.7					
PEL	145.74	159	ePKP	28	39.00	1.3	MADF	0.13	45	Pg	04	53.13	0.1	KRA	144.20	339	iPKP	13	44.50	0.3	
LPB	161.27	145	ePKP	29	06.00	6.3X						0.4	WIT	144.54	354	ePKP	13	44.50	-0.2		
S.D. = 1.0	on	47	of	60	obs.		ATE	0.18	79	Pg	04	53.89	-0.1	KSP	144.63	343	iPKPc	13	44.70	-0.4	
												0.4	SPC	144.82	338	ePKP	13	44.70	-0.3		
MAY 19, 1991	20h	32m	19.22	± 0.46s			S.D. = 0.1	on	5	of	5	obs.	CLL	145.01	347	iPKPc	13	44.70	-0.3		
1.259 N ± 6.0km	123.319 E ± 9.3km																				
DEPTH = 33.0km	(normal)																				
4.8mb ( 9 obs.)	4.3Msz ( 3 obs.)																				
MINAHASSA PENINSULA	(265)																				
TSM	6.01	299	eP	33	46.00	-2.2	? MAY 19, 1991	21h	42m	27.03	± 3.72s	MLR	145.27	329	ePKP	13	46.00	0.1			
DAV	6.21	21	eP	33	52.70	1.6	36.686 N ± 35.6km	29.027 E ± 16.8km				WTS	145.34	354	ePKP	13	46.00	0.5			
	1.1s	698.73nm	6.3mb X				DEPTH = 10.0km	(geophysicist)													
AAI	6.92	135	eP	34	10.70	9.7X	TURKEY	(366)													
MKS	7.50	211	iPc	34	11.50	2.5	MD 3.2 (ISK).														
KKM	8.53	304	eP	34	26.50	2.9	ELL	0.71	85	iPg	42	41.40	0.3	PRU	145.87	344	PKP	13	46.50	-0.1	
KGM	20.01	272	eP	36	52.00	-0.1	YER	0.75	307	ePg	42	52.00	10.3X	MOX	145.92	348	ePKP	13	49.90	2.2X	
OIZ	22.05	324	eP	37	07.80	-5.2X								ENN	146.64	354	ePKP	13	49.90	2.2X	
IPM	22.50	279	ePd	37	19.20	1.7	CIN	1.18	321	ePg	42	49.00	-0.1		0.8s	11.00nm	13	52.30	1.5		
MBL	22.54	189	eP	37	16.80	-1.0								SRO	146.67	339	ePKP	13	49.30	0.9	
SNG	23.38	285	eP	37	26.40	0.3	BCK	1.47	58	iPh	42	53.10	-0.5	MEM	146.79	354	PKP	13	49.00	1.1	
WRA	23.68	153	P	37	48.00	19.0X	KHL	1.68	13	ePh	42	57.00	0.3	KHC	146.91	345	PKP	13	50.50	2.2X	
	0.8s	10.10nm					S.D. = 0.7	on	4	of	5	obs.									
WB2	23.69	153	iPd	37	29.30	0.3	? MAY 19, 1991	21h	50m	18.73	± 4.14s	ABH	147.33	352	ePKP	13	51.43	2.5X			
	0.7s	19.10nm	4.7mb				17.002 N ± 32.4km	61.231 W ± 31.4km				DOU	147.41	356	PKPc	13	51.80	2.8X			
							DEPTH = 33.0km	(normal)													
GZH	23.76	337	P	37	29.60	-0.1	LEEWARD ISLANDS	(92)				CDF	148.81	352	ePKP	13	55.00	3.6X			
PSI	24.42	274	ePc	37	41.50	5.3X	ML 2.5 (FDF).														
NANU	24.87	197	eP	37	39.00	-1.4	BPA	0.60	274	eP	50	30.82	0.0	FLN	148.85	2	iPKPc	13	55.00	3.7X	
	0.5s	28.00nm	5.1mb																		
ASPA	26.83	158	iPd	37	58.30	-0.4	DEG	0.70	166	eP	50	32.13	-0.1	LDF	149.03	2	iPKPc	13	55.20	3.7X	
	1.0s	9.30nm	4.4mb																		
OIS	26.92	145	e(P)	38	03.00	3.5X	SFG	0.75	177	eP	50	32.40	-0.4	GRR	149.21	2	iPKPc	13	55.90	4.1X	
							PAG	1.06	204	eP	50	37.00	-0.3	HAU	149.32	353	ePKP	13	56.30	4.2X	
WARD	27.47	174	eP	38	04.00	-0.5															
CHG	29.59	308	eP	38	25.50	1.8	MGG	1.08	184	eP	50	38.40	0.8	BSF	149.44	352	ePKP	13	56.60	4.2X	
BAL	32.31	191	eP	38	45.30	-2.2	S.D. = 0.7	on	5	of	5	obs.									
CD2	34.83	330	eP	39	10.20	0.8	* MAY 19, 1991	22h	43m	58.11	± 2.38s	LPF	149.56	3	iPKPc	13	56.80	4.5X			
XAN	35.29	339	P	39	12.20	-1.0	39.997 N ± 8.4km	19.939 E ± 25.2km													
TIY	37.64	346	Pc	39	32.80	-0.2	DEPTH = 5.0km	(geophysicist)				SKO	150.06	329	ePKP	13	58.00	4.7X			
	Z 22s	0.50um	4.3Msz				GREECE-ALBANIA BORDER REGION	(392)				LOR	150.28	356	iPKPc	13	58.50	5.0X			
	N 15s	0.30um																			
MAT	37.72	20	eP	39	32.00	-1.6	SRN	0.13	158	ePg	44	00.50	-0.2	SSF	150.51	357	iPKPc	13	59.20	5.4X	
	0.8s	4.48nm	4.4mb																		
ADE	38.81	160	iPc	39	44.20	1.3	TPE	0.30	10	ePg	44	03.00	-1.2	LBF	150.55	356	iPKPc	13	59.10	5.1X	
	0.8s	55.22nm	5.4mb				FNA	1.35	54	eP	44	22.90	-0.7	AVF	150.78	357	iPKPc	13	59.40	5.2X	
LZH	39.08	335	eP	39	45.50	0.2	LIT	1.96	86	eP	44	32.40	0.0	MFF	151.02	2	iPKPc	14	00.20	5.6X	
	1.5s	28.00nm	4.8mb				GRG	2.11	62	eP	44	34.60	0.1	BGF	151.04	357	iPKPc	14	00.30	5.6X	
	Z 20s	0.49um	4.3Msz				SKO	2.28	29	ePn	44	39.00	2.1		0.7s	7.70nm	14	00.90	5.8X		
							S.D. = 1.4	on	6	of	6	obs.									
BJI	39.14	351	eP	39	45.00	-0.5	* MAY 19, 1991	22h	55m	04.37	± 1.20s	LSF	151.38	359	iPKPc	14	00.60	5.4X			
SNY	40.39	0	eP	39	55.20	-0.5	17.555 S ± 20.2km	178.946 W ± 14.5km													
LSA	41.66	316	P	40	08.20	1.2	DEPTH = 502.4 ± 14.2 km					MAF	151.39	358	ePKP	14	01.40	6.2X			
CN2	42.40	2	eP	40	14.50	2.3	4.5mb ( 8 obs.)														
GTA	43.61	333	iPd	40	23.00	0.7	FIJI ISLANDS REGION	(181)				LPL	151.72	352	ePKP	14	02.70	6.7X			
	0.7s	10.00nm	4.7mb									LPG	151.74	352	ePKP	14	02.70	6.6X			
	Z 22s	0.60um	4.5Msz				AFI	7.80	63	eP	57	00.00	0.1		0.6s	2.70nm	14	03.00	6.4X		
	E 17s	0.40um					DZM	14.46	250	iPc	58	11.50	2.0	RJF	152.33	359	ePKP	14	03.00	6.4X	
							RMO	31.16	248	iPd	00	44.00	1.0	CAF	152.70	358	ePKP	14	04.20	7.1X	
TOO	43.75	154	eP	40	25.00	1.6	CMS	34.75	240	iPd	01	13.90	0.7	LPO	152.95	360	ePKP	14	04.60	7.2X	
PKI	44.74	309	P	40	30.78	-1.2	TAU	38.16	221	eP	01	41.00	-0.1		S.D. = 1.2	on	30	of	58	obs.	
KKN	44.95	309	P	40	32.48	-1.0	STK	38.36	241	iPd	01	50.10	7.2X		? MAY 19, 1991	22h	58m	43.49	± 16.13s		
DMN	45.00	309	P	40	33.76	-0.1									48.846 N ± 66.4km	1.618 W ± 94.3km					
GKN	45.55	309	P	40	36.74	-1.4	WB2	44.18	259	eP	02	26.80	-2.8		DEPTH = 10.0km	(geophysicist)					
HYB	46.83	293	eP	40	47.30	-0.9															
GBA	47.02	287	Pc	40	48.40	-1.3															
	0.9s	8.40nm	4.7mb																		
YAK	60.80	3	eP	42	28.50	-1.6	WRA	44.19	259	P	02	28.00	-1.7		FRANCE	(538)					
GAR	61.15	315	eP	42	30.00	-3.1X									ML 2.2 (LDG).						
							ASPA	44.40	254	iPc	02	30.90	-0.4								



19d 22h

GRR 0.68 132 Pg 58 56.80 -0.2  
 Sg 59 05.80  
 FLN 0.76 96 Pg 58 58.00 -0.3  
 Sg 59 08.00  
 LPF 0.90 155 Pg 59 00.80 0.1  
 Sg 59 12.20  
 LDF 1.02 104 Pg 59 03.20 0.4  
 Sg 59 16.20  
 S.D. = 0.5 on 4 of 4 obs.

MAY 19, 1991 23h 24m 19.18 ± 0.35s  
 28.874 N ± 6.9km 52.186 E ± 4.3km  
 DEPTH = 33.0km (normol)  
 4.4mb ( 13 obs.)

SOUTHERN IRAN (353)

DHR 3.14 216 P 25 20.00 12.5X  
 RYD 6.48 232 P 25 56.00 1.3  
 S 27 09.00  
 KER 6.97 323 eP 26 04.00 2.3  
 MAIO 9.63 38 eP 26 39.00 0.3  
 KMSA 10.98 221 P 26 48.00 -8.2X  
 QUE 12.92 81 eP 27 25.90 2.5  
 BHL 14.98 294 P 27 57.00 6.7X  
 HOL 14.99 276 P 28 00.00 9.7X  
 NDI 21.93 84 eP 29 11.50 -0.1  
 DMN 28.98 84 P 30 17.10 -1.2  
 KKN 29.10 84 P 30 18.32 -1.0  
 PKI 29.25 84 P 30 19.62 -1.2  
 KHC 35.67 315 eP 31 16.60 0.4  
 NUR 36.65 337 eP 31 24.00 -0.2  
 KAF 37.34 340 iP 31 29.80 -0.2  
 0.4s 3.30nm 4.5mb  
 esP 31 31.10  
 UPP 38.81 333 iP 31 41.80 -0.5  
 LPG 39.25 308 eP 31 46.10 -0.5  
 0.7s 3.30nm 4.2mb  
 LPL 39.27 308 eP 31 46.30 -0.4  
 BSF 39.65 311 eP 31 49.00 -0.7  
 HFS 40.58 331 eP 31 56.90 -0.1  
 0.6s 7.80nm 4.6mb  
 e 32 02.20  
 e 32 08.00  
 SMF 41.43 309 eP 32 03.80 -0.3  
 0.8s 6.05nm 4.4mb  
 SOD 41.48 345 iP 32 05.30 1.0  
 LOR 41.50 310 eP 32 04.10 -0.7  
 0.7s 2.75nm 4.1mb  
 SSF 41.71 309 eP 32 06.30 -0.2  
 0.7s 2.75nm 4.1mb  
 NB2 42.10 332 P 32 08.70 -0.8  
 0.7s 2.40nm 4.0mb  
 TCF 42.50 308 eP 32 13.00 0.0  
 KEV 43.40 348 eP 32 20.00 0.1  
 LFF 43.41 306 eP 32 20.20 -0.2  
 CHG 43.69 93 eP 32 22.70 -0.2  
 LDF 44.34 311 eP 32 27.10 -0.7  
 FLN 44.59 311 eP 32 29.20 -0.7  
 0.6s 4.50nm 4.5mb  
 GRR 44.80 311 eP 32 31.10 -0.4  
 LPF 44.89 310 eP 32 31.50 -0.7  
 EKA 47.22 320 Pd 32 50.40 -0.2  
 0.8s 3.50nm 4.4mb  
 KIC 58.09 259 P 34 12.30 0.3  
 TIC 58.19 259 P 34 12.90 0.2  
 LIC 58.41 259 P 34 14.30 0.1  
 0.6s 5.50nm 4.8mb  
 SCH 81.61 329 eP 36 36.00 1.0  
 FBA 85.24 8 P 36 54.00 0.6  
 YKA 88.34 354 eP 37 09.20 0.7  
 0.6s 2.20nm 4.6mb  
 WRA 92.88 111 P 37 31.00 0.8  
 0.5s 0.80nm 4.4mb  
 WB2 92.89 111 eP 37 29.60 -0.7  
 0.6s 0.90nm 4.4mb  
 S.D. = 0.9 on 38 of 42 obs.

MAY 19, 1991 23h 27m 30.03 ± 0.62s  
 45.819 N ± 5.1km 26.826 E ± 5.1km  
 DEPTH = 107.9 ± 8.3 km  
 3.7mb ( 1 obs.)

ROMANIA (358)

MLR 0.70 242 ePd 27 48.50 -0.1  
 ISR 0.71 196 ePd 27 49.00 0.4  
 CFR 1.13 124 iPc 27 52.00 -0.7  
 PTT 1.16 345 iPd 27 51.50 -1.6

CMP 1.37 247 ePc 27 58.00 2.4  
 MTUR 1.37 245 ePc 27 55.50 -0.2  
 TLB 1.50 145 iPc 27 57.50 0.5  
 TNR 1.80 266 ePd 28 00.00 -0.8  
 COZ 1.81 255 iPd 28 01.00 -0.2  
 PSN 2.34 155 iPc 28 09.00 1.1  
 PVL 2.81 203 iPd 28 15.00 0.9  
 GZR 2.87 263 iPc 28 14.50 -0.6  
 JMB 3.36 183 iPg 28 22.00 0.5  
 PGB 3.79 211 iPc 28 28.00 0.6  
 DIM 3.88 194 eP 28 38.00 9.3X  
 PLD 4.02 203 eP 28 31.00 0.5  
 DMK 4.05 170 iPn 28 31.00 0.0  
 VTS 4.14 220 iP 28 32.00 -0.4  
 KDZ 4.29 194 iP 28 35.00 0.7  
 MMB 4.79 209 ePc 28 42.00 0.9  
 KKB 4.79 216 iPd 28 41.00 -0.1  
 ALN 4.95 187 eP 28 42.84 -0.5  
 es 29 35.64

ISK 5.02 160 ePn 28 43.80 -0.5  
 MFT 5.04 176 ePn 28 44.50 -0.2  
 SRS 5.26 208 eP 28 46.88 -0.7  
 es 29 43.32  
 KGT 5.38 176 iPn 28 48.60 -0.6  
 HRT 5.41 156 iPn 28 50.50 0.8  
 VAY 5.46 216 ePn 28 50.00 -0.3  
 SKO 5.47 227 ePn 28 42.50 -8.0X  
 e 28 57.50  
 YLV 5.57 160 ePn 28 50.90 -1.1  
 SOH 5.60 208 eP 28 51.52 -0.8  
 es 29 50.16  
 GRG 5.83 215 eP 28 54.92 -0.6  
 es 29 56.68  
 THE 5.90 210 eP 28 55.96 -0.4  
 es 29 58.60  
 PAIG 6.32 203 eP 29 01.50 -0.7  
 es 30 07.64  
 HFS 16.32 336 eP 31 15.40 1.6  
 0.6s 3.00nm 3.7mb  
 S.D. = 0.9 on 33 of 35 obs.

\* MAY 19, 1991 23h 52m 56.98 ± 0.99s  
 38.376 N ± 8.9km 21.924 E ± 9.8km  
 DEPTH = 10.0km (geophysicist)

GREECE (364)

MD 3.1 (ATH). ML 3.0 (THE).

AGG 0.72 26 iPg 53 09.84 -1.3  
 es 53 21.36  
 VLS 1.07 260 ePb 53 15.00 -2.1  
 IGT 1.69 313 ePb 53 28.08 1.3  
 LIT 1.78 14 ePb 53 27.80 -0.2  
 es 53 51.12  
 VLI 1.84 154 ePn 53 30.10 1.2  
 KZN 1.93 357 ePb 53 20.90 -9.3X  
 PAIG 2.06 41 eP 53 31.21 -0.9  
 es 53 57.24  
 FNA 2.44 350 ePc 53 38.28 0.7  
 es 54 08.20  
 GRG 2.60 8 eP 53 39.48 -0.4  
 es 54 12.06  
 SOH 2.68 24 eP 53 40.16 -0.8  
 es 54 14.20  
 OHR 2.87 343 ePn 53 47.30 3.7X  
 SRS 3.02 25 eP 53 45.72 0.0  
 SKO 3.61 354 ePn 53 56.50 2.4  
 S.D. = 1.5 on 11 of 13 obs.

? MAY 20, 1991 00h 13m 47.80 ± 2.27s  
 47.749 N ± 23.1km 7.766 E ± 9.4km  
 DEPTH = 10.0km (geophysicist)

SWITZERLAND (544)

ML 2.1 (LDG).

FEL 0.21 53 ePg 13 52.46 0.0  
 BSF 0.66 278 Pg 14 00.70 -0.4  
 Sg 14 09.60  
 CDF 0.74 334 Pg 14 02.30 -0.1  
 Sg 14 13.00  
 HAU 0.99 286 Pg 14 07.00 0.4  
 Sg 14 20.00  
 S.D. = 0.6 on 4 of 4 obs.

MAY 20, 1991 00h 20m 39.92 ± 0.31s  
 30.985 N ± 6.9km 86.774 E ± 4.5km  
 DEPTH = 33.0km (normol)  
 4.6mb ( 20 obs.) 4.0Msz ( 1 obs.)

TIBET (306)

LSA 3.99 108 Pnc 21 45.20 4.4X  
 pP 21 49.00  
 NDI 8.61 257 iP 22 45.00 -0.2  
 0.6s 33.33nm 5.7mb X  
 es 24 20.50

KSH 12.21 317 P 23 33.00 -1.5  
 WMO 12.83 3 P 23 41.50 -1.3  
 Z 16s 0.84um  
 N 12s 1.00um  
 E 12s 0.90um  
 PP 23 53.00

GTA 13.57 48 eP 23 48.00 -4.5X  
 Z 10s 1.28um

CD2 14.58 86 eP 24 04.80 -0.9  
 N 10s 2.40um

LZH 15.11 66 eP 24 17.50 4.7X  
 1.6s 29.00nm 4.3mb  
 Z 12s 1.25um 3.3Msz X  
 N 10s 1.95um

KMI 15.25 109 eP 24 13.50 -1.2  
 HYB 15.44 211 iPd 24 15.50 -1.5  
 1.0s 50.00nm 4.7mb

CHG 16.38 135 eP 24 28.00 -0.9  
 1.0s 25.00nm 4.3mb

QUE 17.09 272 eP 24 39.20 1.1  
 GYA 18.01 100 P 24 49.00 -0.5

N 10s 0.50um  
 E 10s 2.20um

XAN 18.92 75 P 24 57.40 -3.1X  
 N 11s 0.90um  
 E 10s 0.90um

GBA 19.32 208 Pc 25 09.00 3.7X  
 1.2s 43.80nm 4.6mb

NST 19.54 138 eP 25 08.50 0.8  
 BTO 21.10 57 eP 25 23.00 -1.0

N 11s 0.40um  
 E 13s 0.60um

TIY 22.18 65 eP 29 17.50  
 N 11s 1.57um 25 36.20 1.4

HHC 22.30 57 eP 25 35.00 -0.9  
 Z 16s 1.30um 4.4Msz X  
 N 16s 1.10um  
 E 15s 1.00um

MAIO 23.28 290 ePd 25 48.00 2.4  
 1.0s 15.00nm 4.5mb

WHN 23.68 84 eP 25 51.00 1.6  
 N 12s 0.80um  
 E 10s 0.65um

BJI 25.49 61 eP 26 08.00 1.3  
 0.9s 11.00nm 4.5mb  
 E 14s 1.15um

SSE 29.42 81 eP 26 45.00 2.4  
 Z 14s 0.70um 4.4Msz X  
 N 10s 0.40um

CN2 32.99 56 eP 27 13.50 -0.3  
 Z 14s 1.50um 4.9Msz X  
 N 14s 0.90um  
 E 14s 0.40um

epP 27 26.00 48km X  
 OBN 42.66 319 eP 28 36.00 1.2  
 1.5s \*\*\*\*\*nm 7.9mb X

VRI 48.24 306 ePd 29 21.50 2.1  
 BUC1 48.85 304 eP 29 23.00 -1.1  
 SOD 58.37 334 eP 29 29.00 -6.5X  
 e 29 36.00

SKO 52.51 301 eP 29 52.00 0.0  
 SRO 53.78 309 eP 30 02.80 1.6  
 KSP 54.68 313 eP 30 09.50 1.6

HFS 55.35 324 eP 30 11.80 -0.8  
 1.1s 11.70nm 4.8mb  
 Z 16s 0.17um 4.2Msz X

e 30 17.30  
 LR 53 38.00

PRU 55.91 312 eP 30 17.50 0.7  
 NB2 56.51 326 P 30 20.40 -0.6  
 1.1s 6.10nm 4.5mb

CLL 56.67 314 e(P) 30 14.00 -8.2X  
 KHC 56.68 311 P 30 25.50 3.2X

MOX 57.65 313 eP 30 30.00 0.9  
 CDF 60.90 311 eP 30 51.30 -0.4



BSF 61.37 311 eP 30 54.30 -0.6  
 LPG 62.04 308 eP 30 59.40 -0.3  
 0.8s 5.35nm 4.7mb  
 LPL 62.05 308 eP 30 59.30 -0.4  
 LBF 63.44 311 eP 31 07.50 -1.1  
 0.9s 4.10nm 4.5mb  
 SMF 63.63 310 eP 31 09.20 -0.7  
 0.9s 4.90nm 4.6mb  
 SSF 63.73 311 eP 31 09.50 -1.0  
 0.8s 4.70nm 4.6mb  
 AVF 63.91 311 eP 31 11.00 -0.6  
 0.8s 3.35nm 4.5mb  
 MAF 64.61 310 eP 31 16.10 -0.1  
 TCF 64.82 310 eP 31 17.30 -0.3  
 1.1s 9.75nm 4.8mb  
 LSF 65.28 310 eP 31 20.20 -0.4  
 1.0s 5.00nm 4.6mb  
 LDF 65.55 313 eP 31 21.70 -0.5  
 RJF 65.60 309 eP 31 22.70 0.0  
 1.0s 8.00nm 4.8mb  
 Z 21s 0.10um 4.0msz  
 WRA 68.20 132 P 31 39.00 -0.4  
 1.0s 4.80nm 4.5mb  
 WB2 68.20 132 iPd 31 39.50 0.1  
 1.0s 4.60nm 4.5mb  
 ASPA 70.65 135 iPc 31 55.50 1.0  
 1.0s 8.30nm 4.8mb  
 YKA 85.27 10 eP 33 13.80 -0.4  
 0.9s 1.00nm 4.0mb  
 S.D. = 1.1 on 45 of 53 obs.

\* MAY 20, 1991 01h 02m 14.76s  
 61.830 N 152.076 W  
 DEPTH = 100.9km  
 3.4mb ( 1 obs.)  
 SOUTHERN ALASKA ( 2 )  
 <AEIC>. Felt (III) at Skwentno.

SKT 0.30 59 iPc 02 30.08 0.4  
 eS 02 42.10  
 NCG 0.43 185 eP 02 31.27 0.7  
 CRP 0.57 184 iPd 02 32.10 0.5  
 BGL 0.59 195 iPd 02 32.18 0.5  
 CKL 0.65 191 iPd 02 32.55 0.4  
 SPU 0.65 179 iPd 02 32.27 0.1  
 eS 02 46.54  
 SUA 0.73 119 iPc 02 33.59 0.6  
 eS 02 48.09  
 CUT 1.03 55 iPc 02 35.87 0.1  
 PWA 1.06 99 iPc 02 36.43 0.3  
 NKA 1.16 159 ePd 02 39.00 1.7  
 RDT 1.27 187 iPd 02 38.82 0.1  
 eS 02 57.92  
 DFR 1.28 194 iPd 02 38.93 0.1  
 NCT 1.34 198 iPd 02 39.76 0.2  
 PMS 1.34 115 iPc 02 39.24 -0.3  
 RDN 1.36 194 iPd 02 40.02 0.1  
 RDW 1.40 195 iPd 02 40.77 0.4  
 RS2 1.41 194 iPd 02 40.83 0.3  
 RSO 1.41 194 iPd 02 40.83 0.3  
 PLRM 1.42 98 iPc 02 39.47 -1.0  
 PMR 1.42 98 iPc 02 39.90 -0.5  
 RED 1.46 194 iPd 02 41.15 0.2  
 eS 03 02.17  
 GH0 1.50 91 iPc 02 40.57 -0.9  
 eS 03 02.21  
 SLKM 1.60 145 eP 02 42.35 -0.4  
 HUR 1.62 44 ePc 02 42.36 -0.6  
 eS 03 03.44  
 SML 1.78 89 iPc 02 43.76 -1.2  
 KNK 1.78 102 iPc 02 43.94 -1.1  
 eS 03 07.40  
 TRF 1.82 26 iPd 02 45.07 -0.7  
 SVW 1.85 249 iPd 02 45.40 -0.6  
 TTA 2.14 303 iPc 02 48.80 -1.0  
 BRK 2.15 164 eP 02 48.98 -0.9  
 SEW 2.15 142 eP 02 48.72 -1.1  
 RND 2.17 42 ePc 02 48.92 -1.3  
 HOM 2.19 174 eP 02 49.77 -0.6  
 SCM 2.25 88 iPc 02 49.82 -1.5  
 eS 03 18.24  
 PDB 2.30 208 iPd 02 51.55 -0.2  
 eS 03 19.57  
 CNPM 2.35 169 ePd 02 51.10 -1.4  
 XLV 2.39 176 eP 02 51.79 -1.3  
 MCK 2.39 36 ePd 02 51.84 -1.3

AUE 2.56 195 iPd 02 54.92 -0.4  
 AUH 2.56 196 ePd 02 55.32 -0.1  
 KNIM 2.58 123 iPc 02 52.70 -2.9  
 eS 03 23.78  
 GLI 2.58 109 ePc 02 53.13 -2.5  
 AUI 2.59 196 ePd 02 55.27 -0.5  
 BWN 2.64 26 ePd 02 55.08 -1.3  
 LTI 2.73 129 iPc 02 55.24 -2.4  
 VZW 2.76 104 iPc 02 55.80 -2.3  
 TOA 2.80 82 iPc 02 58.00 -0.7  
 VLZ 2.84 102 iPc 02 56.67 -2.4  
 MCNL 2.88 204 iPd 02 59.36 -0.3  
 KLU 2.96 94 iPc 02 58.66 -2.1  
 eS 03 34.01  
 CDD 3.01 196 ePd 03 00.32 -1.2  
 HIN 3.06 116 ePc 02 59.26 -2.9  
 NEA 3.07 25 ePd 02 59.85 -2.4  
 SDG 3.14 74 eP 03 01.66 -1.6  
 TZL 3.15 83 eP 03 02.14 -1.2  
 WRH 3.21 33 ePd 03 01.89 -2.2  
 SYI 3.23 183 ePc 02 02.82 -1.6  
 PAX 3.28 67 ePc 03 03.78 -1.4  
 CVA 3.32 110 ePc 03 02.78 -2.9  
 THY 3.33 59 eP 03 06.01 0.2  
 CC8 3.42 32 ePd 03 04.65 -2.4  
 DDM 3.46 53 eP 03 06.81 -0.9  
 HDA 3.48 40 ePd 03 05.64 -2.2  
 SGAM 3.58 109 iPc 03 06.13 -3.1  
 MDM 3.59 27 iPd 03 07.06 -2.3  
 FBA 3.64 30 ePd 03 08.20 -1.8  
 MID 3.71 128 ePd 03 11.00 0.0  
 GLM 3.81 32 ePd 03 10.06 -2.3  
 RAGM 3.87 109 eP 03 10.00 -3.3  
 GLB 3.96 92 iPc 03 11.99 -2.5  
 HMT 4.08 108 eP 03 12.79 -3.3  
 DOT 4.11 60 ePc 03 14.44 -2.1  
 IMA 4.31 351 ePd 03 17.60 -1.8  
 CRQM 4.44 100 eP 03 18.93 -2.3  
 TMW 4.46 66 eP 03 19.16 -2.1  
 TGL 4.59 99 eP 03 20.56 -2.6  
 WAX 4.68 103 ePc 03 21.28 -3.1  
 BALM 4.74 95 eP 03 22.19 -3.1  
 WRG 5.22 106 eP 03 29.51 -2.3  
 CTGM 5.24 95 eP 03 30.16 -2.0  
 FYU 5.61 29 ePd 03 34.53 -2.7  
 YKU 6.48 105 eP 03 47.39 -1.7  
 PNL 6.58 104 eP 03 48.33 -2.2  
 SDN 7.85 218 eP 04 07.11 -0.7  
 INK 10.14 42 P 04 35.00 -3.8  
 0.3s 2.10nm 4.5mb X  
 YKA 17.36 71 eP 06 08.60 -3.0  
 0.9s 2.30nm 3.4mb  
 86 obs. associated

? MAY 20, 1991 01h 13m 29.70 ± 0.97s  
 27.196 S ± 6.1km 70.616 W ± 18.1km  
 DEPTH = 33.0km (normal)  
 NEAR COAST OF NORTHERN CHILE (122)

ANT 3.48 3 iP 14 22.70 -0.2  
 RTLL 4.53 156 e(P) 14 37.70 -0.1  
 ZON 4.65 159 e(P) 14 36.20 -3.3X  
 CFA 4.86 155 ePd 14 42.00 -0.4  
 MDZ 5.87 165 e(P) 15 02.70 5.9X  
 PEL 5.93 181 eP 14 58.50 0.9  
 i 16 05.00  
 PCH 6.40 179 iPd 15 06.20 1.9  
 TCA 6.69 130 eP 15 07.20 -1.1  
 LNV 6.77 186 eP 15 07.00 -2.3  
 LPB 10.87 13 eP 16 07.00 0.6  
 ZOBO 11.12 13 P 16 09.70 -0.3  
 SIV 14.24 40 (P) 16 50.00 -1.1  
 VAO 21.81 84 eP 18 23.00 2.0  
 S.D. = 1.5 on 11 of 13 obs.

\* MAY 20, 1991 01h 38m 39.04 ± 0.61s  
 14.904 N ± 10.3km 123.950 E ± 12.2km  
 DEPTH = 33.0km (normal)  
 4.4mb ( 8 obs.)

LUZON, PHILIPPINE ISLANDS (249)  
 QCP 2.79 265 eP 39 13.50 -8.8X  
 WHN 17.89 332 eP 42 46.50 -0.5  
 GYA 19.81 308 P 43 09.60 -0.4  
 TIA 22.08 345 eP 43 31.70 -1.2  
 KMI 22.34 300 Pd 43 37.50 1.6  
 2.0s 60.00nm 4.7mb

XAN 23.40 327 P 43 46.00 0.1  
 CHG 24.24 283 eP 43 54.90 0.7  
 1.1s 16.46nm 4.5mb  
 CD2 24.42 314 P 43 56.80 0.9  
 TIY 24.91 338 eP 44 00.80 0.2  
 Z 12s 0.36um 4.1mszX  
 LZH 27.72 323 eP 44 24.50 -2.1  
 1.2s 13.00nm 4.5mb  
 Z 16s 0.24um 3.9mszX  
 WB2 36.11 163 iPd 45 39.30 -0.7  
 0.9s 3.00nm 4.2mb  
 PKI 37.91 296 P 45 54.80 -0.8  
 KKN 38.07 296 P 45 56.10 -0.7  
 DMN 38.18 296 P 45 57.20 -0.6  
 ASPA 39.55 166 eP 46 09.00 0.1  
 1.0s 4.80nm 4.2mb  
 WMO 42.21 320 P 46 32.80 2.2  
 STK 49.50 160 eP 47 35.60 7.1X  
 0.5s 1.20nm 4.2mb  
 MAIO 60.83 303 eP 48 51.00 0.2  
 FBA 75.89 26 P 50 25.00 1.2  
 SOD 79.16 337 eP 50 51.00 9.2X  
 INK 80.83 22 eP 50 51.00 0.3  
 pP 51 04.00 44kmX  
 HFS 86.92 332 eP 51 21.20 -0.5  
 0.6s 1.80nm 4.5mb  
 e 51 26.00  
 e 51 36.00  
 YKA 90.45 23 eP 51 38.50 0.1  
 0.7s 1.00nm 4.2mb  
 S.D. = 1.1 on 20 of 23 obs.

\* MAY 20, 1991 04h 09m 15.65 ± 2.27s  
 32.402 S ± 17.9km 71.214 W ± 16.2km  
 DEPTH = 33.0km (normal)  
 NEAR COAST OF CENTRAL CHILE (135)

ROCH 0.59 163 iPd 09 28.50 0.7  
 iS 09 36.20  
 JACH 0.59 118 iPd 09 30.50 2.8  
 iS 09 39.00  
 IHA 0.72 210 iPd 09 30.70 1.4  
 iS 09 39.40  
 PEL 0.86 149 iPd 09 31.50 0.1  
 iS 09 40.00  
 LCCH 1.11 196 iPc 09 35.00 0.1  
 iS 09 47.00  
 SAN 1.15 156 iPd 09 34.70 -0.8  
 iS 09 45.60  
 TACH 1.27 170 iPd 09 36.10 -1.1  
 PCH 1.35 154 iPd 09 37.20 -1.2  
 iS 09 49.00  
 LNV 1.56 186 iPc 09 40.50 -0.8  
 iS 09 56.50  
 MDZ 2.05 104 i(P) 09 53.40 4.8X  
 ZDN 2.32 69 e(P) 09 51.20 -1.1  
 S.D. = 1.5 on 10 of 11 obs.

% MAY 20, 1991 04h 14m 17.91 ± 0.70s  
 44.589 N ± 5.4km 7.458 E ± 7.0km  
 DEPTH = 10.0km (geophysicist)  
 NORTHERN ITALY (545)  
 ML 2.1 (GEN).

PZZ 0.27 252 P 14 24.33 0.7  
 S 14 28.33  
 BHB 0.29 331 P 14 25.36 1.4  
 S 14 29.87  
 STV 0.36 196 P 14 24.85 -0.5  
 S 14 29.25  
 ENR 0.36 184 P 14 25.05 -0.4  
 S 14 29.56  
 ROB 0.42 135 P 14 27.20 0.8  
 S 14 32.84  
 RSP 0.58 346 P 14 28.54 -1.2  
 S 14 36.53  
 RRL 0.58 305 P 14 29.25 -0.6  
 S 14 37.36  
 FIN 0.66 125 P 14 30.90 -0.2  
 S 14 39.20  
 S.D. = 1.0 on 8 of 8 obs.

? MAY 20, 1991 06h 59m 19.91 ± 1.17s  
 40.130 N ± 11.0km 27.792 E ± 10.7km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)



20d 06h

BNT 0.25 23 iPg 59 25.10 0.0  
 eSg 59 29.60  
 KGT 0.49 311 iPg 59 29.80 -0.1  
 eSg 59 37.10  
 MFT 0.76 329 ePg 59 35.00 0.1  
 eSg 59 46.50  
 DST 0.83 129 ePg 59 36.00 0.0  
 S.D. = 0.2 on 4 of 4 obs.

\* MAY 20, 1991 07h 15m 04.04 ± 1.52s  
 13.264 S ± 19.6km 76.149 W ± 19.9km  
 DEPTH = 96.7 ± 14.6 km  
 3.5mb ( 1 obs.)  
 NEAR COAST OF PERU (115)  
 Felt (IV) at Chincho, (III) at  
 Conete and (II) at Lima.

NNA 1.44 332 iPd 15 29.60 -0.2  
 0.4s 406.78nm  
 eS 15 48.50  
 HUA 1.46 34 iPc 15 30.60 0.1  
 iS 15 54.50  
 ARE 5.51 126 eP 16 26.00 0.5  
 iS 17 48.00  
 ZOBO 8.32 112 iPd 17 04.70 0.4  
 1.0s 25.00nm 4.9mb X  
 i 18 30.00  
 LPB 8.43 114 P 17 05.90 0.2  
 CCH 10.48 114 P 17 32.20 -1.2  
 SIV 14.84 102 P 18 26.60 -3.6X  
 YKA 81.25 343 eP 27 10.50 0.2  
 1.0s 0.70nm 3.5mb  
 S.D. = 0.8 on 7 of 8 obs.

? MAY 20, 1991 08h 00m 23.25 ± 3.93s  
 34.132 S ± 20.9km 179.982 E ± 31.7km  
 DEPTH = 100.9 ± 30.0 km  
 4.9mb ( 4 obs.)  
 SOUTH OF KERMADEC ISLANDS (179)

PUZ 4.17 199 eP 01 27.50 1.6  
 eS 02 25.10  
 NOZ 4.74 199 eP 01 34.80 1.1  
 WLZ 5.14 223 eP 01 44.70 5.6X  
 NGZ 6.14 214 eP 01 55.70 2.5  
 MNG 7.40 208 eP 02 08.30 -2.0  
 eS 03 39.00  
 KIW 7.83 209 eP 02 14.20 -2.0  
 MRW 8.23 209 eP 02 20.40 -1.1  
 eS 03 59.00  
 LTZ 10.54 213 eP 02 51.20 -1.6  
 DZM 16.92 312 iPd 04 14.80 -0.4  
 RMO 27.94 277 eP 06 10.00 4.0X  
 ASPA 41.37 272 iPc 08 02.40 1.5  
 0.6s 10.40nm 4.8mb  
 WB2 42.69 277 iPd 08 12.30 0.6  
 0.4s 7.60nm 4.9mb  
 i 08 27.00  
 WRA 42.70 277 P 08 12.00 0.2  
 0.4s 8.00nm 4.9mb  
 SPA 56.05 180 iPc 09 55.00 1.3  
 1.6s 34.72nm 5.1mb  
 KAF 147.41 337 iPKP 19 50.60 -2.6  
 0.6s 4.10nm  
 eSP 19 53.70  
 NUR 149.13 336 iPKP 19 56.00 0.0  
 0.8s 14.70nm  
 i 20 11.80  
 LIC 151.85 169 PKP 20 08.30 6.8X  
 NB2 152.11 348 PKP 20 02.70 2.2X  
 0.9s 5.00nm  
 HFS 152.48 345 ePKP 20 01.80 0.8  
 0.7s 5.00nm  
 e 20 14.20  
 S.D. = 1.7 on 15 of 19 obs.

& MAY 20, 1991 08h 39m 58.07s  
 60.710 N 151.657 W  
 DEPTH = 70.4km  
 KENAI PENINSULA, ALASKA (14)  
 <AEIC>.

NKA 0.21 81 iPc 40 10.22 1.3  
 RDT 0.39 250 iPd 40 09.45 -0.8  
 iS 40 19.19  
 SPU 0.51 338 iPc 40 10.62 -0.7  
 eS 40 21.25

DFR 0.52 257 iPd 40 10.68 -0.7  
 eS 40 21.24  
 RDN 0.58 251 iPd 40 11.20 -0.9  
 CKL 0.59 326 iPc 40 11.54 -0.6  
 RSO 0.60 246 iPd 40 11.60 -0.7  
 eS 40 22.73  
 RS2 0.60 246 iPd 40 11.66 -0.7  
 eS 40 22.51  
 CRP 0.61 337 iPc 40 11.99 -0.4  
 eS 40 22.91  
 RDW 0.61 249 iPd 40 11.77 -0.7  
 eS 40 22.46  
 RED 0.62 243 iPd 40 11.66 -0.8  
 eS 40 22.84  
 CGLM 0.62 344 eP 40 12.20 -0.3  
 eS 40 23.74  
 NCT 0.64 257 eP 40 11.73 -1.0  
 eS 40 22.96  
 BGL 0.66 328 iPc 40 12.36 -0.5  
 eS 40 23.66  
 NCG 0.74 341 iPc 40 13.23 -0.5  
 SLKM 0.74 105 ePc 40 12.97 -0.7  
 eS 40 24.93  
 SUA 0.88 30 iPc 40 15.08 -0.4  
 eS 40 28.28  
 BRLK 1.02 158 iPd 40 16.15 -1.0  
 eS 40 30.60  
 HOM 1.06 180 ePd 40 16.86 -0.7  
 eS 40 32.90  
 PMS 1.15 61 iPc 40 18.48 -0.4  
 eS 40 33.69  
 CNPM 1.21 170 iPd 40 18.47 -1.1  
 eS 40 34.09  
 SEW 1.25 118 eP 40 19.13 -1.0  
 SKT 1.28 3 iPd 40 19.71 -0.8  
 eS 40 36.89  
 PWA 1.28 42 ePc 40 20.62 0.2  
 eS 40 36.09  
 PLRM 1.51 53 eP 40 22.55 -1.0  
 PMR 1.51 53 eP 40 23.40 -0.2  
 PDB 1.57 235 ePd 40 22.55 -1.8  
 eS 40 41.89  
 AUE 1.61 213 eP 40 23.74 -1.1  
 AUI 1.64 214 eP 40 24.87 -0.5  
 GHO 1.70 50 eP 40 25.21 -1.0  
 KNK 1.71 64 ePc 40 25.09 -1.2  
 CUT 1.83 21 eP 40 27.17 -0.7  
 SML 1.95 54 eP 40 28.42 -1.2  
 KNIM 1.97 99 ePc 40 26.91 -3.0  
 SVW 1.98 283 eP 40 28.70 -1.3  
 LTI 2.00 108 ePc 40 27.67 -2.7  
 CDD 2.05 210 eP 40 29.68 -1.3  
 SYI 2.14 190 eP 40 30.92 -1.3  
 GLI 2.24 84 eP 40 30.53 -3.2  
 SCM 2.38 60 eP 40 34.67 -0.9  
 VZW 2.52 80 eP 40 35.04 -2.5  
 VLZ 2.63 78 eP 40 36.58 -2.5  
 TRF 2.83 13 eP 40 39.85 -2.1  
 KLU 2.89 72 eP 40 40.29 -2.5  
 TOA 2.99 60 eP 40 43.49 -0.6  
 RND 3.01 25 eP 40 43.35 -1.1  
 TTA 3.04 319 eP 40 43.70 -1.1  
 WRH 4.12 22 eP 40 56.65 -3.3  
 HDA 4.30 28 eP 41 00.87 -1.6  
 CCB 4.33 23 eP 41 00.93 -2.0  
 MDM 4.54 19 eP 41 03.00 -2.1  
 BALM 4.56 82 eP 41 04.23 -2.0  
 FBA 4.56 21 ePd 41 05.20 -0.9  
 IMA 5.46 351 ePd 41 17.30 -1.5  
 54 obs. associated

\* MAY 20, 1991 08h 45m 44.16 ± 0.97s  
 29.231 S ± 10.0km 71.587 W ± 14.8km  
 DEPTH = 136.7 ± 38.3 km  
 NEAR COAST OF CENTRAL CHILE (135)

RTRS 2.07 117 iPd 46 19.00 -0.8  
 ZON 3.41 133 eP 46 37.20 0.1  
 RTLL 3.41 129 iPd 46 37.90 0.8  
 S 47 22.80  
 CFA 3.74 130 ePd 46 42.30 0.9  
 eS 47 26.00  
 ROCH 3.76 173 eP 46 41.50 -0.4  
 i 47 39.50  
 i 47 47.30  
 IHA 3.78 181 eP 46 41.00 -0.9  
 e(S) 47 24.50

PEL 3.98 169 iPc 46 46.00 1.4  
 i 47 39.50  
 iS 47 47.50  
 SAN 4.28 170 eP 46 50.50 1.8  
 i 47 50.00  
 MDZ 4.33 148 eP 46 53.20 3.8X  
 i(S) 47 52.80  
 TACH 4.44 173 eP 46 50.50 -0.3  
 PCH 4.47 168 eP 46 51.50 0.2  
 i 47 01.00  
 i 47 04.00  
 LNV 4.71 178 eP 46 52.50 -1.9  
 iS 48 04.00  
 ANT 5.60 11 eP 46 58.50 -7.9X  
 eS 48 25.50  
 RFA 6.13 155 eP 47 13.70 0.1  
 S 48 39.20  
 TCA 6.40 111 ePc 47 15.80 -1.6  
 (S) 48 30.30  
 ARE 12.71 0 e(P) 48 41.00 -0.4  
 LPB 13.04 15 P 48 46.00 0.2  
 ZOBO 13.29 15 P 48 49.70 0.5  
 S.D. = 1.1 on 16 of 18 obs.

% MAY 20, 1991 08h 58m 22.22 ± 1.19s  
 34.806 N ± 7.7km 5.352 W ± 16.6km  
 DEPTH = 10.0km (geophysicist)  
 MOROCCO (395)  
 MD 3.7 (RBA).

NKM 0.64 356 iPg 58 35.00 -0.1  
 iSg 58 44.50  
 i 58 46.50  
 IFR 1.30 172 iPnc 58 47.00 0.6  
 i 58 48.50  
 iSn 59 06.00  
 i 59 08.00  
 RBA 1.47 238 iPn 58 49.30 0.6  
 iSn 59 08.50  
 AVE 2.28 229 ePn 59 00.50 0.0  
 iSn 59 29.50  
 i 59 31.50  
 TIO 4.19 203 iPnd 59 26.50 -1.2  
 iSn 00 15.00  
 S.D. = 1.1 on 5 of 5 obs.

& MAY 20, 1991 09h 27m 36.76s  
 60.279 N 151.572 W  
 DEPTH = 59.1km  
 KENAI PENINSULA, ALASKA (14)  
 <AEIC>.

NKA 0.49 19 iPc 27 49.87 1.2  
 RDT 0.51 306 iPd 27 48.24 -0.7  
 eS 27 57.48  
 RED 0.61 284 iPd 27 49.42 -0.7  
 eS 27 59.69  
 RSO 0.62 288 iPd 27 49.58 -0.7  
 RS2 0.62 288 iPd 27 49.62 -0.7  
 BRLK 0.62 146 iPc 27 49.54 -0.6  
 eS 27 59.61  
 DFR 0.64 300 iPd 27 49.53 -0.9  
 RDN 0.64 292 iPd 27 49.57 -0.9  
 eS 27 59.94  
 RDW 0.65 289 iPd 27 49.86 -0.8  
 eS 28 00.52  
 SLKM 0.71 71 eP 27 50.28 -0.9  
 NCT 0.73 293 iPd 27 50.86 -0.7  
 eS 28 02.27  
 CNPM 0.77 167 ePc 27 51.42 -0.6  
 eS 28 02.98  
 SPU 0.94 346 iPd 27 53.59 -0.5  
 eS 28 07.07  
 CKL 0.99 338 iPd 27 54.46 -0.5  
 eS 28 08.75  
 CRP 1.03 344 ePd 27 55.29 -0.2  
 BGL 1.07 338 iPd 27 55.64 -0.3  
 SEW 1.07 98 iPc 27 55.09 -0.8  
 eS 28 11.97  
 SUA 1.26 18 ePd 27 57.90 -0.6  
 AUE 1.30 225 eP 27 58.51 -0.4  
 AUH 1.32 227 eP 27 58.82 -0.5  
 PMS 1.38 45 ePd 27 59.97 -0.2  
 PDB 1.40 251 ePd 27 59.39 -1.0  
 eS 28 17.62  
 PWA 1.61 30 eP 28 03.36 0.2  
 SKT 1.71 1 eP 28 05.00 0.3



[illegible]



		0.9s	173.00nm				
KAS	143.95	317	ePKP	08 59.50	-0.1		
ETA	144.88	8	ePKP	09 00.60	-0.1		
WIT	145.07	355	ePKP	09 02.00	1.0		
ECB	145.13	9	ePKP	09 01.30	0.2		
KSP	145.22	344	iPKPc	09 02.20	0.8		
	1.0s		49.00nm				
			i	09 11.80			
			e	11 18.00			
			ic	11 47.70			
ECP	145.37	9	ePKP	09 02.10	0.6		
	0.8s		145.00nm				
SPC	145.44	338	ePKP	09 03.40	1.4		
CLL	145.58	347	iPKPc	09 02.70	0.8		
	0.9s		51.00nm				
			i	09 12.30			
			ip	11 48.70			
CSTJ	145.65	299	PKPd	09 04.25	1.5		
BHL	145.70	304	PKP	09 02.50	-0.3		
BRG	145.78	346	iPKPc	09 03.60	1.4		
	1.1s		30.00nm				
			e	11 25.00			
HRI	145.83	303	iPKPd	09 04.60	1.6		
WTS	145.86	354	ePKP	09 03.50	1.2		
	1.0s		67.00nm				
MDSJ	145.87	300	PKP	09 04.86	1.7		
MLR	145.92	329	ePKP	09 04.00	1.2		
GHZJ	146.07	298	PKP	09 05.75	2.2		
SALJ	146.24	301	PKP	09 05.48	1.8		
KFNJ	146.29	301	PKP	09 06.29	2.7X		
MML	146.34	302	iPKPd	09 06.10	2.3		
MKRJ	146.40	300	PKP	09 06.00	2.0		
PRU	146.46	345	PKPc	09 05.50	2.1		
	1.1s		19.90nm				
			e	09 08.30			
			e	09 30.50			
			ePP	11 21.00			
MOX	146.49	348	ePKP	09 06.00	2.6		
	1.4s		25.00nm				
LISJ	146.61	300	PKP	09 07.12	3.0X		
EYL	146.69	318	iPKP	09 06.60	2.4		
BNS	146.84	353	iPKPc	09 12.00	8.1X		
	0.9s		69.00nm				
ENN	147.16	355	ePKPc	09 07.00	2.6		
	0.7s		20.00nm				
				09 10.00			
UCC	147.24	357	PKP	09 08.00	3.4X		
MEM	147.31	355	iPKPc	09 07.60	2.9X		
ZST	147.35	341	iPKP	09 07.60	2.7X		
MBH	147.48	297	iPKPd	09 08.90	3.1X		
KHC	147.49	345	iPKP	09 08.50	3.4X		
SNF	147.53	357	iPKPc	09 08.07	3.0X		
ABH	147.87	353	ePKP	09 08.97	3.3X		
DOU	147.93	356	PKPc	09 09.30	3.6X		
WLF	148.23	354	iPKPc	09 10.52	4.4X		
GWf	148.75	352	PKP	09 11.55	4.5X		
FLN	149.31	3	iPKPc	09 12.40	4.5X		
	0.9s		45.85nm				
WLS	149.34	352	PKP	09 12.67	4.7X		
CDF	149.35	352	PKP	09 12.73	4.7X		
KBA	149.45	344	e(PKP)	09 08.00	-0.4		
			i	09 09.30			
			i	09 17.00			
LDF	149.49	2	iPKPc	09 12.70	4.5X		
	1.1s		43.95nm				
ECH	149.55	353	PKP	09 12.82	4.5X		
GRR	149.67	3	iPKPc	09 13.40	5.0X		
	0.7s		26.45nm				
VITF	149.68	354	PKP	09 13.50	5.1X		
PTJ							

GRC	150.79	358	PKP	09	16.55	6.4X					
SSF	151.01	357	iPKPc	09	16.80	6.3X					
	0.8s	27.55nm									
LBF	151.06	357	iPKPc	09	16.60	6.0X					
	0.8s	16.80nm									
AVF	151.29	357	iPKPc	09	16.90	6.0X					
	0.7s	6.60nm									
SMF	151.41	357	ePKP	09	17.20	6.1X					
	0.9s	6.55nm									
MFF	151.48	2	iPKPc	09	17.50	6.3X					
	0.7s	22.05nm									
BGF	151.54	358	iPKPc	09	17.80	6.5X					
	0.7s	18.75nm									
OHR	151.68	328	ePKP	09	18.00	6.3X					
TCF	151.82	359	iPKPc	09	18.30	6.6X					
	0.8s	14.80nm									
LSF	151.87	0	iPKPc	09	18.20	6.4X					
	0.8s	22.85nm									
MAF	151.88	358	iPKPc	09	18.70	6.9X					
	0.7s	8.80nm									
AGO	152.03	358	PKP	09	18.87	6.8X					
PLDF	152.09	357	PKP	09	19.33	7.1X					
LPL	152.26	352	iPKPc	09	20.20	7.6X					
	0.9s	8.20nm									
LPG	152.28	352	iPKPc	09	20.30	7.5X					
	0.7s	4.40nm									
PYM	152.34	358	PKP	09	19.90	7.4X					
RUF	152.81	0	ePKP	09	20.50	7.4X					
	0.7s	7.70nm									
LBL	152.85	357	PKP	09	21.23	8.1X					
LFF	153.17	1	ePKP	09	21.40	7.8X					
CAF	153.19	359	ePKP	09	21.70	8.0X					
	0.8s	6.05nm									
LPO	153.43	1	ePKP	09	22.00	8.0X					
S.D. = 1.2 on 178 of 241 obs.											
-----											
* MAY 20, 1991	11h	13m	17.24±0.98s								
38.505 N ±10.3km		21.629 E ±12.3km									
DEPTH = 10.0km (geophysicist)											
GREECE				(364)							
MD 3.0 (ATH).											
-----											
AGG	0.75	47	ePg	13	41.22	9.2X					
			eSg	13	44.10						
VLS	0.88	248	ePb	13	34.00	-0.2					
IGT	1.44	316	ePb	13	59.94	16.6X					
			eSb	14	15.98						
LIT	1.73	22	ePg	13	45.46	-2.0					
			eSg	13	52.70						
KZN	1.80	3	ePn	13	51.50	2.9X					
VLI	2.06	149	ePn	13	52.50	0.1					
PAIG	2.13	48	ePg	13	52.90	-0.5					
FNA	2.28	355	ePb	13	59.94	4.3X					
			eSb	14	26.78						
GRG	2.52	13	ePb	14	00.18	1.3					
SOH	2.67	29	ePb	14	02.26	1.2					
			eSb	14	21.86						
S.D. = 1.6 on 6 of 10 obs.											
-----											
* MAY 20, 1991	11h	33m	56.56±2.00s								
15.876 N ± 8.2km		60.644 W ±21.1km									
DEPTH = 31.9 ± 7.9 km											
LEEWARD ISLANDS				( 92)							
ML 2.7 (FDF).											
-----											
DEG	0.59	317	ePd	34	09.09	0.5					



DST 0.65 266 ePg 10 01.00 0.0  
 eSg 10 11.00  
 IZI 0.68 1 iPg 10 01.00 -0.5  
 YLV 0.91 356 iPn 10 06.00 0.5  
 EYL 1.05 30 ePn 10 08.00 0.1  
 S.D. = 0.7 on 4 of 4 obs.

? MAY 20, 1991 12h 32m 30.89 ± 4.61s  
 41.339 N ± 28.9km 29.860 E ± 18.1km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 3.0 (ISK).

HRT 0.54 196 iPg 32 41.50 -0.3  
 ISK 0.66 246 ePg 32 44.00 -0.1  
 EYL 0.80 164 iPg 32 46.50 -0.1  
 YLV 0.86 206 iPg 32 47.50 0.1  
 IZI 1.04 196 iPg 32 51.00 0.4  
 S.D. = 0.3 on 5 of 5 obs.

% MAY 20, 1991 13h 11m 15.15 ± 1.17s  
 39.395 N ± 9.3km 22.822 E ± 11.0km  
 DEPTH = 10.0km (geophysicist)  
 GREECE (364)  
 ML 1.7 (THE).

AGG 0.53 226 ePg 11 25.66 -0.3  
 eSg 11 33.70  
 LIT 0.75 340 ePg 11 29.58 -0.3  
 eSg 11 40.98  
 PAIG 0.85 51 ePg 11 32.02 0.5  
 THE 1.24 5 ePb 11 37.66 -0.5  
 SOH 1.48 16 ePb 11 41.86 0.0  
 GRG 1.59 348 ePb 11 42.34 -1.1  
 FNA 1.78 322 ePb 11 47.86 1.7  
 S.D. = 1.1 on 7 of 7 obs.

% MAY 20, 1991 13h 36m 54.30 ± 0.71s  
 34.042 S ± 7.8km 148.737 E ± 8.5km  
 DEPTH = 10.0km (geophysicist)  
 3.4mb ( 2 obs.)  
 NEW SOUTH WALES, AUSTRALIA (601)  
 ML 3.6 (BFD).

CNB 1.37 158 iPc 37 18.70 -0.8  
 eS 37 36.60  
 RIV 2.02 85 iPc 37 29.40 0.6  
 iS 37 56.30  
 COO 4.37 39 e(P) 38 03.00 0.8  
 e 38 14.60  
 iS 38 45.60  
 TOO 4.40 216 eP 38 02.50 -0.2  
 iS 38 55.60  
 BFD 5.93 236 iPd 38 24.90 0.6  
 iS 39 31.00  
 STK 6.38 288 ePn 38 36.10 5.5X  
 0.3s 8.30nm 5.1mb X  
 eSn 39 47.30  
 eSg 40 24.50  
 RMO 7.53 0 iPg 38 45.50 -1.3  
 e 39 16.00  
 eS 40 32.00  
 ASPA 16.59 305 iPc 40 50.20 1.7  
 0.8s 3.70nm 3.6mb  
 WB2 18.98 314 iPc 41 16.90 -1.4  
 0.6s 0.90nm 3.2mb  
 S.D. = 1.3 on 8 of 9 obs.

MAY 20, 1991 14h 34m 14.36 ± 0.60s  
 40.134 N ± 6.1km 21.295 E ± 4.8km  
 DEPTH = 10.0km (geophysicist)  
 GREECE (364)  
 ML 2.7 (THE).

LSK 0.53 272 ePg 34 24.30 -0.9  
 iSg 34 36.00  
 FNA 0.65 5 iPg 34 26.91 -0.5  
 eSg 34 36.32  
 LIT 0.92 92 ePg 34 31.27 -0.6  
 eSg 34 44.00  
 IGT 0.95 231 ePg 34 33.32 0.8  
 eSg 34 48.60  
 TPE 1.00 280 ePg 34 35.50 2.3X  
 OHR 1.05 339 iPg 34 34.40 0.3  
 0.6s 224.00nm  
 iSg 34 50.50  
 Lg 34 54.80

GRG 1.18 45 ePg 34 35.72 -0.6  
 eSg 34 52.32  
 AGG 1.37 144 ePb 34 39.89 0.4  
 eSb 34 57.84  
 THE 1.37 68 ePb 34 39.04 -0.4  
 VAY 1.53 39 ePn 34 41.00 -0.7  
 TIR 1.63 319 eP 34 41.00 -2.1  
 PHP 1.68 338 ePg 34 45.70 1.8  
 SOH 1.71 66 ePb 34 45.28 0.8  
 eSb 35 06.96  
 SKO 1.84 3 ePn 34 48.00 1.8  
 0.8s 77.00nm  
 i 35 13.00  
 Lg 35 17.90

PAIG 1.84 96 ePb 34 45.84 -0.4  
 SRS 2.01 60 ePb 34 49.16 0.5  
 eSb 35 14.20  
 S.D. = 1.1 on 15 of 16 obs.

& MAY 20, 1991 15h 00m 53.40s  
 33.780 N 116.930 W  
 DEPTH = 13.0km  
 SOUTHERN CALIFORNIA ( 43)  
 <PAS-P>. ML 3.7 (PAS). Felt (IV)  
 at Idyllwild, Mountain Center  
 and Nuevo. Also felt in the  
 Hemet and Palm Springs areas.

PEC 0.22 300 iPd 00 58.00 -0.5  
 PLM 0.43 172 iPd 01 02.00 -0.3  
 TPC 0.80 66 iPc 01 08.20 -0.5  
 CPE 0.91 189 iPd 01 09.30 -1.2  
 MWC 1.04 296 iPc 01 11.90 -0.9  
 BAR 1.12 169 iPd 01 13.10 -1.0  
 SBB 1.17 321 iPc 01 14.40 -0.6  
 IKP 1.32 148 iPc 01 16.50 -1.1  
 GSC 1.52 4 iPd 01 20.20 -0.2  
 SCI 1.57 240 iPc 01 20.00 -1.0  
 GLA 1.90 112 eP 01 24.00 -1.9  
 ABL 2.18 300 eP 01 29.10 -0.9  
 BCH 2.96 299 eP 01 40.10 -0.9  
 TNP 4.30 357 eP 01 59.60 -0.6  
 BONR 4.31 345 eP 02 00.40 0.0  
 15 obs. associated

& MAY 20, 1991 15h 04m 10.00s  
 33.780 N 116.930 W  
 DEPTH = 12.0km  
 SOUTHERN CALIFORNIA ( 43)  
 <PAS-P>. ML 3.5 (PAS). Felt (IV)  
 at Idyllwild, Mountain Center  
 and Nuevo. Also felt in the  
 Hemet and Palm Springs areas.

PEC 0.22 300 iPd 04 14.60 -0.4  
 PLM 0.43 172 iPd 04 18.60 -0.3  
 TPC 0.80 66 iPc 04 24.80 -0.6  
 MWC 1.04 296 iPc 04 28.40 -1.1  
 BAR 1.12 169 iPd 04 29.70 -1.1  
 SBB 1.17 321 iPc 04 31.10 -0.6  
 CIS 1.28 254 iPd 04 32.40 -1.3  
 GSC 1.52 4 iPd 04 36.70 -0.4  
 GLA 1.90 112 eP 04 40.70 -1.9  
 ABL 2.18 300 eP 04 45.70 -1.0  
 BCH 2.96 299 eP 04 56.50 -1.2  
 TNP 4.30 357 eP 05 15.00 -1.9  
 12 obs. associated

MAY 20, 1991 15h 08m 43.43 ± 0.58s  
 45.465 N ± 5.3km 26.212 E ± 6.5km  
 DEPTH = 145.9 ± 7.1 km  
 3.3mb ( 1 obs.)  
 ROMANIA (358)

MLR 0.19 278 iPc 09 03.50 0.6  
 CVO 0.36 356 iPc 09 03.60 0.3  
 ISR 0.40 144 iPc 09 03.80 0.3  
 VRI 0.54 41 iPc 09 04.50 -0.3  
 CLI 1.32 34 ePc 09 11.50 0.4  
 TNR 1.37 279 ePc 09 18.00 -1.7  
 CFR 1.40 101 iPc 09 11.20 -0.7  
 PTT 1.47 5 eP 09 13.00 0.3  
 TLB 1.56 124 iPd 09 13.30 -0.3  
 DRA 1.59 241 eP 09 35.00 21.0X  
 IAS 1.97 28 eP 09 46.00 27.7X  
 PVL 2.33 196 iPd 09 24.00 1.3  
 DEV 2.36 281 iPd 09 24.00 1.0

JMB 3.01 175 iP 09 31.00 -0.3  
 BZS 3.23 274 eP 09 33.50 -0.7  
 VTS 3.60 218 eP 09 43.00 3.9X  
 DMK 3.81 162 ePn 09 41.50 -0.3  
 KDZ 3.86 189 eP 09 43.00 0.6  
 RZN 3.93 197 iP 09 43.00 -0.5  
 KKB 4.25 213 eP 10 04.00 16.4X  
 YKA 67.92 342 eP 19 27.80 0.2  
 0.4s 0.20nm 3.3mb  
 S.D. = 0.8 on 17 of 21 obs.

MAY 20, 1991 15h 48m 48.68 ± 0.79s  
 38.892 N ± 7.5km 26.087 E ± 4.8km  
 DEPTH = 9.7 ± 3.1 km  
 AEGEAN SEA (365)  
 ML 3.4 (ATH).

PRK 0.38 22 ePg 48 58.00 1.5  
 EDC 2.00 43 ePn 49 23.00 0.1  
 ALN 2.00 359 ePb 49 22.66 -0.3  
 eSb 49 48.40  
 BNT 2.04 43 ePn 49 22.00 -1.4  
 ATH 2.08 244 ePn 49 30.00 6.0X  
 DST 2.10 69 ePn 49 24.00 -0.4  
 MFT 2.10 26 ePn 49 24.00 -0.5  
 PAIG 2.13 300 ePb 49 24.92 0.1  
 eSb 49 52.68  
 RDO 2.29 350 ePn 49 26.50 -0.6  
 YER 2.47 135 ePn 49 29.00 -0.7  
 KDZ 2.80 350 iPc 49 34.00 -0.4  
 SOH 2.85 313 eP 49 34.64 -0.5  
 AGG 2.93 274 eP 49 38.52 2.3  
 SRS 2.93 320 eP 49 35.16 -1.1  
 eS 50 08.96  
 RZN 2.98 340 iPc 49 38.00 0.9  
 LIT 3.03 295 eP 49 36.96 -0.7  
 YLV 3.04 56 eP 49 39.40 1.7  
 DMK 3.19 23 iP 49 39.50 -0.4  
 MMB 3.24 327 iPg 49 42.00 1.3  
 PLD 3.38 342 eP 49 52.00 9.5X  
 GRG 3.50 307 eP 49 43.76 -0.6  
 GPA 3.55 66 eP 49 55.50 10.5X  
 EYL 3.56 61 eP 49 59.40 14.2X  
 JMB 3.59 6 eP 49 56.00 10.5X  
 VAY 3.63 313 ePn 49 58.30 12.2X  
 KKB 3.75 323 eP 49 47.00 -0.9  
 VTS 4.29 330 iPd 49 55.00 -0.7  
 PVL 4.36 353 eP 49 55.00 -1.4  
 MLR 6.60 359 eP 50 28.50 0.3  
 e 52 11.00  
 e 09 12.00  
 VRI 6.99 4 eP 50 35.00 1.4  
 S.D. = 1.1 on 24 of 30 obs.

\* MAY 20, 1991 15h 58m 45.84 ± 0.49s  
 5.067 S ± 10.7km 68.756 E ± 10.4km  
 DEPTH = 10.0km (geophysicist)  
 4.6mb ( 13 obs.) 4.7msz ( 5 obs.)  
 CHAGOS ARCHIPELAGO REGION (426)

HYB 24.35 23 eP 04 06.00 0.9  
 e 04 14.50  
 eS 08 36.00  
 NDI 34.53 13 eP 05 37.00 0.4  
 QUE 35.10 357 eP 05 43.20 1.6  
 DMN 36.12 25 P 05 50.76 0.3  
 PKI 36.21 26 P 05 51.44 0.1  
 GKN 36.27 24 P 05 51.10 -0.5  
 1.1s 61.00nm 5.4mb  
 KKN 36.35 25 P 05 51.62 -0.7  
 CHG 38.05 51 eP 06 07.40 0.9  
 LSA 40.70 31 P 06 27.80 -1.1  
 BUL 41.80 245 iPc 06 37.40 -0.3  
 MAIO 42.05 349 eP 06 41.00 1.5  
 eS 13 02.00  
 SLR 43.83 238 iPd 06 52.50 -1.8  
 1.0s 15.00nm 4.8mb  
 GAR 43.87 2 eP 06 53.00 -1.3  
 GYA 48.26 48 P 07 30.00 0.6  
 CD2 48.97 41 P 07 34.20 -0.4  
 WMQ 51.58 17 P 07 57.00 2.6  
 1.5s 20.00nm 4.8mb  
 Z 16s 0.60um 4.7mszX  
 N 14s 0.70um  
 E 14s 0.50um  
 PcP 09 05.00  
 eS 15 16.00



20d 16h

LZH	52.50	36	eP	08 03.00	1.4
	2.0s	21.00nm			4.7mb
Z	25s	0.52um			4.5MsZX
GTA	52.73	30	eP	08 02.40	-0.8
	1.0s	10.00nm			4.7mb
Z	16s	0.35um			4.5MsZX
N	11s	0.22um			
		pP	08 08.60		20kmX
		S	15 28.00		
XAN	54.32	41	eP	08 13.30	-1.6
TIY	58.81	40	Pc	08 46.40	-0.6
Z	18s	0.49um			4.7MsZ
BTO	59.12	36	eP	08 47.60	-1.5
NJ2	60.25	49	eP	08 55.00	-1.8
Z	20s	0.40um			4.6MsZ
SSE	61.58	51	eP	09 05.70	-0.3
Z	20s	0.60um			4.7MsZ
VRI	62.99	328	eP	09 14.00	-1.1
SKO	63.57	322	eP	09 21.00	2.0
IRK	64.61	23	eP	09 29.00	3.3X
ASPA	65.23	114	iPd	09 42.60	12.3X
	1.0s	4.00nm			
Z	18s	0.60um			4.8MsZ
WRA	65.35	110	P	09 32.00	1.0
	1.4s	4.00nm			4.4mb
WB2	65.36	110	eP	09 31.80	0.7
	1.4s	4.10nm			4.4mb
CN2	70.39	40	eP	09 58.00	-4.1X
Z	17s	0.60um			4.9MsZX
		ePP	10 06.00		26kmX
		eS	19 14.00		
STK	72.77	122	eP	10 27.90	11.2X
	1.6s	0.90nm			
MDJ	73.42	41	eP	10 21.00	0.8
CLL	73.53	327	eP	10 26.00	5.4X
KIC	74.24	278	P	10 25.40	-0.1
LIC	74.51	278	P	10 27.10	0.0
Z	20s	0.15um			4.3MsZ
LPG	74.54	320	eP	10 33.50	6.4X
	1.0s	5.00nm			4.5mb
LPL	74.56	320	eP	10 32.80	5.7X
	0.9s	4.90nm			4.5mb
NVL	74.76	197	eP	10 30.00	2.5
		e	10 45.00		
BSF	75.48	322	eP	10 37.80	5.6X
MAT	76.73	51	(P)	10 38.00	-1.3
		eS	20 28.00		
SSF	77.23	320	eP	10 48.40	6.5X
	0.9s	4.10nm			4.5mb
BGF	77.46	320	eP	10 50.10	6.9X
	0.9s	8.20nm			4.8mb
MAF	77.52	319	eP	10 50.50	7.0X
	0.9s	3.30nm			4.4mb
HFS	77.90	335	eP	10 44.50	-0.8
	0.6s	3.40nm			4.6mb
		e	10 52.90		
YKA	122.64	2	ePKP	17 42.40	-0.6
	0.5s	0.30nm			
ZOBO	132.37	243	PKP	18 03.00	-0.8
WDC	143.21	14	ePKP	18 33.20	10.9X
GOL	145.12	352	(PKP)	18 23.00	-3.0X
CMB	146.14	13	ePKP	18 33.30	5.8X
TNP	146.69	9	(PKP)	18 30.00	1.4
FRI	147.29	13	ePKP	18 36.30	7.1X
ANMO	149.94	352	PKP	18 32.00	-1.5
ALQ	149.94	352	e(PKP)	18 38.00	4.3X
S.D. = 1.3 on 37 of 53 obs.					

? MAY 20, 1991 16h 16m 23.10± 5.27s  
39.817 N ±36.9km 26.397 E ±23.0km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 3.2 (ISK).

ALN	1.11	346	ePd	16	43.80	-0.1
MFT	1.18	35	iPn	16	46.10	0.9
EDC	1.24	64	iPn	16	46.00	-0.2
BNT	1.29	65	iPn	16	46.00	-1.0
DMK	2.25	27	ePn	17	00.50	-0.5
YLV	2.40	71	ePn	17	04.00	0.9

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

\* MAY 20, 1991 16h 28m 34.14 ± 1.98s  
10.584 N ± 12.5km 125.688 E ± 21.7km  
DEPTH = 78.9 ± 19.3 km  
4.2mb ( 5 obs.)  
LEYTE, PHILIPPINE ISLANDS (256)

DAV	3.48	182 eP	29	27.00	0.0
OCP	6.04	312 eP	30	27.00	24.2
SSE	20.83	349 eP	37	11.20	-0.2
WB2	31.51	164 iPd	34	50.30	-0.6
	0.6 s	2.40 nm			4.1 mb
LZH	32.19	326 eP	34	57.50	0.6
	2.0 s	18.00 nm			4.5 mb
Z	25 s	0.36 um			4.0 MSx
ASPA	34.97	167 eP	35	21.50	0.6
	0.5 s	7.10 nm			4.9 mb
PKI	41.42	300 P	36	14.30	-0.7
KKN	41.59	300 P	36	16.30	0.0
DMN	41.69	300 P	36	17.20	0.1
GKN	42.20	300 P	36	21.40	0.2
STK	44.89	161 eP	36	51.10	8.5 x
	0.6 s	1.60 nm			4.0 mb
YKA	93.70	24 eP	41	49.40	6.4 x
	0.7 s	0.30 nm			3.8 mb

S.D. = 0.6 on 9 of 12 obs.

MAY 20, 1991 16h 35m 09.01 ± 0.39s  
4.945 N ± 7.2km 94.397 E ± 4.6km  
DEPTH = 36.6km ( 4 depth phases)  
4.9mb ( 25 obs.) 4.3Msz ( 7 obs.)  
OFF W COAST OF NORTHERN SUMATRA (705)

BSI	1.05	58	eP	35	28.50	1.1
SNG	6.57	70	eP	36	48.20	2.4
			e	38	06.00	
IPM	6.62	93	ePc	36	48.00	1.6
	0.4s	15.10nm				5.1mb
		e		38	09.90	
KGM	9.37	108	ePd	37	23.40	-1.3
LOE	14.32	30	eP	38	41.20	9.9X
CHG	14.48	17	eP	38	35.00	1.5
	1.0s	25.50nm				4.7mb
GBA	18.81	298	Pc	39	27.80	-0.4
	1.0s	1.50nm				3.2mb X
HYB	19.86	310	eP	39	39.00	-1.1
	1.0s	40.00nm				4.7mb
		eS		43	24.00	
QIZ	20.57	46	eP	39	52.00	4.6X
	N	12s	2.50um			
	E	12s	1.80um			
KMI	21.60	21	eP	39	57.50	-0.7
	1.8s	80.00nm				4.8mb
	Z	10s	1.10um			4.6MsZx
PKI	24.07	340	P	40	21.70	-0.8
POO	24.19	306	eP	40	26.00	2.6
DMN	24.21	340	P	40	24.68	0.9
KKN	24.32	340	P	40	23.54	-1.3
GYA	24.40	27	P	40	27.00	1.6

	N	14s	0.70um			
	E	14s	1.10um			
GKN		24.74	339 P	40	27.92	-0.8
LSA		24.81	353 P	40	28.00	-1.8
CD2		27.29	18 P	40	51.40	-0.9
	Z	11s	1.00um			4.6MsZX
	E	10s	0.90um			
NDI		28.69	327 eP	41	04.00	-0.9
WHN		31.65	34 eP	41	31.50	0.4
	Z	12s	3.10um			5.2MsZX
	N	12s	0.80um			
	E	12s	1.10um			

XAN 31.94 23 P 41 31.50 -2.2  
N 10s 0.40um

		S	46	40.00	
LZH	32.19	14 eP	41	34.00	-2.0
	1.0s	20.00nm			5.0mb
Z	19s	0.73um			4.4msz
		sP	41	41.50	196kmX

GTA	34.66	7 P	41 56.00	-1.3
	1.0s	10.00nm		4.7mb
Z	20s	0.59um		4.3Ms z
N	10s	0.52um		

			pr	42	05.40	1.0
			sP	42	05.40	
NJ2		37	Pc	42	05.50	0.1
	Z	15s	0.90um			4.6mszx
	N	12s	1.50um			
	E	13s	1.80um			
QUE		36.06	317 eP	42	10.40	1.0
TIY		36.54	24 eP	42	13.00	0.6
	Z	12s	1.45um			5.0mszx

	N	12s	0.90um			
TIA		37.48	31 eP	42	21.30	0.3
BTO		38.17	19 eP	42	25.00	-2.0
	N	14s	0.60um			
	E	14s	0.70um			
HHC		38.93	21 eP	42	33.50	0.2
	Z	19s	0.80um			4.6Msz
	E	13s	0.70um			
WMO		39.17	352 Pc	42	36.00	0.8
		6.0s	400.00nm			5.4mb X
	Z	18s	0.30um			4.2Msz
	N	12s	0.30um			
	E	12s	0.40um			
			S	48	36.00	
BJI		40.08	26 eP	42	44.00	1.4
		1.2s	12.00nm			4.5mb
GAR		40.32	331 eP	42	43.00	-1.8
DL2		41.86	32 eP	43	02.50	5.2X
	Z	16s	0.50um			4.5MszX
	E	10s	0.60um			
			eS	49	17.00	
MA10		44.72	319 iPc	43	20.90	0.2
SNY		45.01	31 eP	43	22.20	-0.6
WB2		46.41	123 iPd	43	33.10	-1.2
		0.7s	36.20nm			5.4mb
CN2		47.38	30 eP	43	42.00	0.4
		1.0s	10.00nm			4.8mb
	Z	14s	1.20um			5.0MszX
	N	14s	0.50um			
	E	14s	0.30um			
			eP	43	51.00	30km
ASPA		47.88	128 iPd	43	43.90	-1.9
		0.4s	12.00nm			5.3mb
IRK		47.88	8 P	43	44.40	-1.0
MDJ		50.10	32 eP	44	03.00	0.4
	Z	15s	0.44um			4.6MszX
	N	14s	0.42um			
	E	14s	0.87um			
QIS		51.10	121 iPd	44	09.60	-1.0
STK		57.93	133 eP	45	05.60	5.4X
		0.5s	1.50nm			4.3mb
YAK		62.68	18 iPc	45	30.80	-1.4
OBN		67.96	328 iPd	46	05.50	-0.8
		1.5s	*****nm			8.5mb X
VR1		70.99	317 eP	46	25.00	-0.1
MLR		71.44	316 eP	46	27.20	-0.8
KAF		75.50	333 iP	46	50.70	-0.4
		1.0s	19.20nm			5.0mb
			eSP	46	55.20	
NUR		75.81	331 iP	46	57.30	4.4X
SPC		75.93	319 eP	46	54.00	-0.1
KRA		76.26	320 eP	46	54.70	-1.0
			e	47	06.70	40km
SOD		77.01	338 iP	46	52.30	-7.2X
			i	47	03.80	38km
ZST		77.86	318 eP	47	04.60	0.0
KSP		78.67	321 eP	47	09.40	0.4
PRU		79.71	320 eP	47	15.00	0.4
BRG		80.16	321 iP	47	17.60	0.6
		1.0s	10.00nm			4.8mb
			i	47	20.40	9kmX
KHC		80.27	319 P	47	18.70	1.0
CLL		80.78	321 eP	47	20.00	-0.3
HFS		81.10	330 eP	47	21.50	-0.3
		0.7s	2.70nm			4.3mb
			e	47	33.20	38km
			e	47	45.50	
MOX		81.62	320 e(P)	47	25.60	0.9
		1.5s	15.00nm			4.8mb
CDF		84.42	318 eP	47	39.30	0.0
LPG		84.86	315 eP	47	42.10	0.3
		1.1s	8.55nm			4.8mb
LPL		84.87	315 eP	47	42.10	0.4
		1.1s	17.10nm			5.1mb
HAU		85.05	318 eP	47	42.	



AVF 87.15 317 eP 47 53.10 0.5  
 BGF 87.51 316 eP 47 55.10 0.7  
 1.1s 11.00nm 5.0mb  
 MAF 87.73 316 eP 47 56.10 0.6  
 1.0s 5.00nm 4.7mb  
 TCF 87.98 316 eP 47 57.20 0.5  
 LPO 88.84 315 eP 48 01.90 1.1  
 LDF 89.32 319 eP 48 03.70 0.7  
 FLN 89.53 319 eP 48 04.60 0.6  
 1.2s 17.85nm 5.2mb  
 Z 21s 0.13um 4.3msz  
 MFF 89.56 317 eP 48 04.90 0.7  
 GRR 89.83 318 eP 48 06.20 0.8  
 LPF 89.99 318 eP 48 07.10 1.0  
 1.3s 21.65nm 5.3mb  
 S.D. = 1.1 on 71 of 79 obs.

\* MAY 20, 1991 16h 41m 45.39±0.92s  
 4.731 S ±14.1km 69.034 E ±17.3km  
 DEPTH = 10.0km (geophysicist)  
 4.8mb ( 11 obs.) 4.8msz ( 1 obs.)  
 CHAGOS ARCHIPELAGO REGION (426)

GBA 20.03 25 Pd 46 21.70 0.2  
 0.8s 10.90nm 4.2mb  
 HYB 23.93 23 iPc 47 01.50 0.9  
 1.0s 45.00nm 5.0mb  
 QUE 34.78 357 eP 48 39.50 1.1  
 DMN 35.70 25 P 48 47.28 0.8  
 PKI 35.79 25 P 48 47.72 0.4  
 GKN 35.85 24 P 48 48.30 0.7  
 KKN 35.93 25 P 48 49.00 0.7  
 CHG 37.62 51 ePc 49 04.10 1.7  
 0.9s 15.97nm 4.8mb  
 LSA 40.27 30 P 49 26.80 1.8  
 MAIO 41.78 348 eP 49 36.00 -0.8  
 GAR 43.53 1 eP 49 49.00 -2.0  
 GYA 47.83 48 P 50 25.60 0.0  
 CD2 48.53 41 P 50 31.00 0.1  
 1.2s 37.00nm 5.3mb  
 WMO 51.17 17 P 50 52.00 1.1  
 LZH 52.06 36 eP 50 56.00 -1.9  
 2.0s 36.00nm 5.0mb  
 Z 15s 0.48um 4.7mszX

pp 51 04.00 27kmX  
 GTA 52.30 30 eP 50 59.00 -0.6  
 1.6s 20.00nm 4.8mb  
 XAN 53.89 41 P 51 10.40 -0.9  
 TIY 58.37 40 Pc 51 42.40 -1.1  
 HHC 59.75 36 eP 51 51.80 -1.2  
 NJ2 59.82 49 Pc 51 53.00 -0.5  
 TIA 60.65 44 eP 51 57.40 -1.7  
 E 11s 0.50um  
 SSE 61.15 51 P 52 02.20 -0.4  
 1.0s 15.00nm 5.1mb  
 Z 20s 0.70um 4.8msz  
 N 13s 1.20um  
 E 12s 0.60um

BJI 62.10 40 eP 52 09.00 0.2  
 Z 16s 0.64um 4.9mszX  
 ASPA 65.11 114 iPc 52 34.60 5.6X  
 1.0s 4.70nm 4.6mb  
 WRA 65.20 110 P 52 29.00 -0.6  
 1.7s 5.80nm 4.5mb  
 WB2 65.21 110 iPd 52 29.60 -0.1  
 0.7s 6.10nm 4.9mb  
 KAF 74.22 341 iP 53 22.30 -1.7  
 0.7s 6.60nm 4.8mb

esP 53 23.00  
 MAT 76.30 51 eP 53 32.00 -4.5X  
 YKA 122.30 2 ePKP 00 40.50 -1.4  
 0.9s 1.00nm  
 CMB 145.76 13 ePKP 01 27.50 1.1  
 TNP 146.32 9 PKP 01 30.00 2.5  
 1.0s 11.25nm  
 FRI 146.91 13 ePKP 01 30.70 2.5  
 ALQ 149.65 353 e(PKP)01 32.00 -0.9

S.D. = 1.3 on 31 of 33 obs.  
 \* MAY 20, 1991 16h 56m 13.64±1.19s  
 24.959 N ± 9.8km 121.220 E ±15.1km  
 DEPTH = 10.0km (geophysicist)  
 3.9mb ( 4 obs.)  
 TAIWAN (244)

TWZ 0.35 67 ePc 56 31.30 10.4X  
 eS 56 41.10

ANP 0.35 50 eP 56 20.00 -1.0  
 eS 56 33.20  
 TWC 0.67 121 ePc 56 28.10 1.2  
 eS 56 35.30  
 SSE 6.11 360 eP 57 47.20 1.0  
 E 10s 0.70um  
 Lg 59 39.70  
 WRA 46.42 163 P 04 43.00 0.6  
 0.7s 0.70nm 3.8mb  
 WB2 46.43 163 eP 04 40.70 -1.7  
 0.7s 1.10nm 4.0mb  
 i 04 47.80  
 ASPA 49.88 165 iPc 05 16.40 7.1X  
 0.8s 3.10nm 4.3mb  
 YKA 82.25 23 eP 08 36.00 -0.2  
 0.7s 0.30nm 3.5mb  
 S.D. = 1.5 on 6 of 8 obs.

? MAY 20, 1991 17h 11m 05.04±1.21s  
 31.521 S ±33.0km 68.570 W ±39.1km  
 DEPTH = 90.0km (geophysicist)  
 SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.10 255 iPd 11 18.20 0.0  
 eS 11 29.20  
 RTLL 0.21 24 iPc 11 18.30 -0.3  
 S 11 26.80  
 CFA 0.30 107 iPc 11 18.90 0.2  
 eS 11 30.10  
 RTRS 1.55 330 iPc 11 31.90 0.1  
 S.D. = 0.4 on 4 of 4 obs.

\* MAY 20, 1991 17h 52m 43.14±0.94s  
 3.933 S ±10.2km 134.314 E ±18.6km  
 DEPTH = 33.0km (normal)  
 4.5mb ( 3 obs.)  
 WEST IRIAN REGION (196)

MTN 9.40 199 eP 54 59.70 0.3  
 0.3s 91.00nm 6.5mb X  
 KNA 12.95 205 eP 55 46.50 -1.1  
 WB2 15.91 180 eP 56 20.40 -6.0X  
 1.2s 2.00nm 3.1mb X  
 eS 59 12.10  
 i 00 30.70  
 i 01 05.40

OIS 17.31 163 eP 56 45.00 1.0  
 eS 59 35.00  
 ASPA 19.62 181 iPc 57 12.60 0.5  
 0.8s 57.80nm 4.9mb  
 iS 00 38.90  
 CTA 19.83 145 iPc 57 13.30 -0.9  
 1.3s 57.69nm 4.7mb

STK 28.63 167 eP 58 44.80 6.0X  
 0.7s 0.60nm 3.4mb  
 CHG 41.52 304 eP 00 30.90 1.6  
 PKI 56.58 307 P 02 26.10 0.3  
 KKN 56.78 307 P 02 26.24 -0.8  
 DMN 56.84 307 P 02 27.76 0.2  
 GKN 57.38 307 P 02 29.90 -1.3  
 S.D. = 1.1 on 10 of 12 obs.

% MAY 20, 1991 18h 32m 27.62±0.52s  
 38.641 N ± 5.7km 14.077 E ± 4.0km  
 DEPTH = 10.0km (geophysicist)  
 SICILY (398)  
 MD 3.5 (ROM).

GIB 0.65 184 P 32 40.60 -0.1  
 USI 0.71 276 P 32 42.30 0.7  
 MNO 0.86 145 P 32 44.90 0.6  
 eSg 32 57.00  
 ATN 1.19 113 P 32 49.30 -0.5  
 eSg 33 07.30  
 ERC 1.32 243 P 32 51.60 -0.4  
 CVT 1.40 227 P 32 53.70 0.6  
 FAI 1.40 193 P 32 54.00 0.9  
 LVI 1.52 245 P 32 53.10 -1.7  
 SOI 1.66 109 P 32 56.30 -0.5  
 MEU 1.68 156 P 32 57.30 0.1  
 PZI 1.74 157 P 32 58.11 0.0  
 GRI 1.84 84 P 32 59.11 -0.4  
 TDS 2.03 59 P 33 02.50 0.2  
 ORI 2.32 52 P 33 07.00 0.5  
 S.D. = 0.7 on 14 of 14 obs.

% MAY 20, 1991 18h 35m 05.65±0.91s

38.497 N ± 9.9km 13.792 E ± 8.4km  
 DEPTH = 10.0km (geophysicist)  
 SICILY (398)

USI 0.52 294 P 35 16.40 0.1  
 GIB 0.54 160 P 35 16.00 -0.6  
 eSg 35 25.00  
 MNO 0.91 128 P 35 24.40 1.2  
 ATN 1.36 104 P 35 30.00 -0.6  
 TDS 2.30 59 P 35 44.00 -0.2  
 S.D. = 1.1 on 5 of 5 obs.

% MAY 20, 1991 20h 48m 57.74±0.88s  
 38.691 N ±11.4km 14.107 E ± 6.9km  
 DEPTH = 10.0km (geophysicist)  
 SICILY (398)

USI 0.73 272 P 49 12.00 0.0  
 eSn 49 21.00  
 MNO 0.89 148 P 49 15.00 0.1  
 ATN 1.19 116 P 49 20.00 0.1  
 (Sn) 49 36.90  
 SOI 1.65 111 P 49 26.60 -0.2  
 eSn 49 49.00  
 TDS 1.99 60 P 49 31.80 0.1  
 S.D. = 0.2 on 5 of 5 obs.

MAY 20, 1991 20h 54m 04.03±0.51s  
 27.666 N ±11.1km 56.379 E ± 4.2km  
 DEPTH = 33.0km (normal)  
 4.5mb ( 20 obs.)  
 SOUTHERN IRAN (353)

QUE 9.60 72 eP 56 23.50 0.4  
 KER 10.37 312 eP 56 34.00 0.3  
 GAR 16.21 42 eP 57 50.00 -1.0  
 HSHJ 18.29 281 Pd 58 19.70 2.7  
 MKRJ 18.44 287 Pd 58 18.60 -0.2  
 KFNJ 18.45 288 Pd 58 17.90 -0.9  
 HRI 18.64 292 eP 58 22.00 0.8  
 JVI 18.73 288 eP 58 23.00 0.6  
 RMN 19.22 284 eP 58 29.00 0.8  
 HYB 22.84 112 eP 59 09.50 4.0X  
 GBA 24.11 121 P 59 25.00 7.2X  
 0.3s 0.90nm 3.8mb

KHL 24.82 302 eP 59 26.00 1.3  
 GKN 24.97 83 P 59 26.80 0.5  
 DMN 25.43 83 P 59 31.34 0.6  
 KKN 25.56 83 P 59 32.42 0.5  
 0.6s 35.00nm 5.1mb  
 PKI 25.70 83 P 59 33.26 -0.1  
 0.6s 14.00nm 4.7mb  
 OBN 30.95 338 iPd 00 21.00 1.1  
 1.0s \*\*\*\*\*nm 8.1mb X  
 QHR 32.05 304 eP 00 28.00 -1.9  
 SRO 35.72 315 iP 01 01.50 0.1  
 ZST 36.62 315 eP 01 08.60 -0.4  
 KHC 39.13 315 P 01 30.20 0.1  
 NUR 39.23 336 eP 01 30.90 0.3  
 KAF 39.78 338 eP 01 35.50 0.3  
 0.4s 2.80nm 4.4mb

esP 01 36.70  
 UPP 41.60 332 iP 01 50.00 -0.1  
 LPL 42.93 308 eP 02 00.60 -1.0  
 0.8s 5.35nm 4.3mb  
 BSF 43.22 311 eP 02 02.80 -1.0  
 0.8s 6.70nm 4.4mb

HAU 43.54 312 eP 02 05.30 -1.0  
 SOD 43.62 344 iP 02 08.00 1.4  
 MEM 44.24 315 P 02 12.60 0.8  
 ENN 44.32 316 eP 02 14.00 1.5  
 0.8s 9.00nm 4.7mb

e 02 20.50  
 NB2 44.94 331 P 02 17.00 -0.4  
 0.8s 6.10nm 4.5mb  
 DOU 45.03 314 P 02 19.00 0.8  
 SMF 45.05 309 eP 02 17.70 -0.8  
 0.9s 9.85nm 4.7mb

LOR 45.11 310 eP 02 18.00 -0.9  
 0.8s 5.35nm 4.5mb  
 SSF 45.33 310 eP 02 19.90 -0.7  
 0.9s 9.00nm 4.7mb

AVF 45.40 310 eP 02 20.50 -0.7  
 0.8s 4.05nm 4.4mb  
 KEV 45.41 346 eP 02 22.00 1.1  
 BGF 45.73 309 eP 02 23.10 -0.7  
 0.7s 5.50nm 4.6mb



20d 21h

MAF 45.89 309 eP 02 24.80 -0.3  
 TCF 46.15 309 eP 02 26.60 -0.5  
 0.7s 3.30nm 4.4mb  
 CAF 46.16 307 eP 02 27.10 -0.2  
 0.9s 8.20nm 4.7mb  
 RJF 46.57 307 eP 02 30.40 -0.1  
 0.9s 8.20nm 4.7mb  
 LFF 47.10 307 eP 02 34.60 -0.1  
 LDF 47.90 312 eP 02 39.80 -1.1  
 FLN 48.15 312 eP 02 41.80 -1.1  
 0.9s 13.10nm 5.0mb  
 FRB 79.17 338 eP 06 07.00 0.3  
 WRA 89.00 113 P 06 57.00 -0.2  
 1.2s 1.40nm 4.2mb  
 WB2 89.01 113 iPd 06 56.40 -0.8  
 0.8s 1.60nm 4.4mb  
 YKA 89.87 356 eP 07 00.60 0.0  
 0.8s 2.20nm 4.5mb  
 S.D. = 0.9 on 47 of 49 obs.

? MAY 20, 1991 21h 16m 48.13 ± 1.05s  
 37.064 N ± 12.2km 71.411 E ± 10.2km  
 DEPTH = 120.0km (geophysicist)  
 4.1mb ( 2 obs.)  
 AFGHANISTAN-USSR BORDER REGION (717)

QUE 7.80 210 eP 18 40.50 -0.1  
 eS 20 01.10  
 NDI 9.68 148 iPd 19 05.80 0.2  
 GKN 14.34 125 P 20 07.02 0.2  
 0.4s 24.00nm 4.8mb  
 KKN 14.91 124 P 20 13.76 -0.3  
 DMN 14.91 125 P 20 14.66 0.5  
 PKI 15.14 125 P 20 16.66 -0.4  
 YKA 80.67 3 eP 28 48.50 0.1  
 0.6s 0.40nm 3.4mb  
 S.D. = 0.4 on 7 of 7 obs.

\* MAY 20, 1991 21h 29m 06.89 ± 1.68s  
 44.810 N ± 14.1km 114.026 W ± 10.3km  
 DEPTH = 5.0km (geophysicist)  
 WESTERN IDAHO ( 33)  
 ML 3.3 (BUT).

MCMT 0.84 88 iPd 29 23.40 -0.4  
 LTMT 1.40 101 ePn 29 33.40 0.1  
 HBMT 1.40 45 iPd 29 33.50 0.1  
 BGMT 1.47 73 ePnc 29 34.50 0.2  
 LRM 1.50 47 iPd 29 34.80 0.0  
 BUT 1.58 40 ePg 29 35.80 0.0  
 eSn 29 58.80  
 eSg 30 00.60  
 MEMT 2.30 69 ePn 29 46.60 0.3  
 SXM 2.39 55 ePn 29 47.30 -0.3  
 NEW 4.06 329 eP 30 11.00 0.0  
 S.D. = 0.2 on 9 of 9 obs.

\* MAY 20, 1991 21h 40m 24.45s  
 63.375 N 145.566 W  
 DEPTH = 1.9km  
 CENTRAL ALASKA ( 1)  
 <AEIC>. ML 2.B (AEIC).

THY 0.09 297 ePc 40 26.43 0.0  
 PAX 0.41 174 iPd 40 32.26 -0.3  
 eS 40 38.05  
 DDM 0.43 342 iPd 40 32.87 -0.3  
 eS 40 39.72  
 DOT 0.73 67 iPc 40 38.33 -0.7  
 SDG 0.85 179 iPd 40 40.43 -1.1  
 TMW 1.16 91 ePc 40 46.26 -0.6  
 HDA 1.20 330 ePd 40 46.76 -0.9  
 eS 41 04.50  
 TOA 1.31 193 iPd 40 49.40 0.0  
 TZL 1.34 177 iPd 40 49.64 -0.3  
 RND 1.48 273 ePd 40 51.82 -0.4  
 eS 41 11.03  
 MCK 1.55 285 eP 40 53.03 -0.1  
 WRH 1.57 316 ePd 40 52.34 -1.0  
 CCB 1.61 323 eP 40 52.41 -1.6  
 eS 41 14.00  
 SCM 1.75 209 ePd 40 55.63 -0.4  
 GLM 1.81 335 ePd 40 55.21 -1.7  
 FBA 1.82 328 ePd 40 56.60 -0.4  
 RDS 1.85 323 eP 40 55.93 -1.5  
 KLU 1.90 185 iPd 40 58.30 0.1  
 eS 41 23.11

BWN 1.91 297 eP 40 57.14 -1.2  
 NEA 1.96 309 eP 40 57.69 -1.4  
 MDM 1.97 325 eP 40 57.62 -1.6  
 SML 2.03 220 ePc 41 00.02 -0.1  
 eS 41 25.75  
 GLB 2.11 156 eP 41 01.18 0.0  
 TRF 2.13 274 eP 41 03.09 1.5  
 GH0 2.24 226 eP 41 03.38 0.2  
 VLZ 2.28 189 eP 41 03.77 0.1  
 CUT 2.36 248 eP 41 05.40 0.5  
 VZW 2.37 192 eP 41 03.97 -1.1  
 KNK 2.39 216 ePc 41 05.63 0.4  
 PMR 2.44 224 iPd 41 07.00 1.1  
 GLI 2.61 197 eP 41 09.15 0.8  
 PWA 2.64 231 eP 41 08.86 0.0  
 BALM 2.79 146 eP 41 12.28 1.2  
 DWY 2.81 73 P 41 10.40 -0.9  
 PMS 2.84 223 eP 41 12.82 1.1  
 CVA 2.84 182 eP 41 11.42 -0.2  
 SGAM 2.89 176 ePd 41 12.92 0.5  
 TGL 2.93 153 eP 41 13.87 0.9  
 HIN 3.02 189 eP 41 15.09 0.8  
 RAGM 3.03 172 eP 41 15.68 1.3  
 SUA 3.08 234 eP 41 16.85 1.7  
 SKT 3.09 246 eP 41 16.02 0.9  
 HMT 3.11 168 eP 41 16.61 1.1  
 CTGM 3.13 139 eP 41 16.60 0.7  
 WAX 3.20 155 eP 41 18.03 1.2  
 KNIM 3.21 200 eP 41 17.13 0.3  
 FYU 3.21 2 ePc 41 16.41 -0.4  
 SLKM 3.62 219 eP 41 25.72 3.0  
 NCG 3.65 240 eP 41 25.47 2.2  
 CRP 3.73 238 eP 41 27.25 2.8  
 CKL 3.84 238 eP 41 28.78 2.7  
 RDT 4.28 232 eP 41 33.19 1.1  
 DFR 4.37 233 eP 41 34.74 1.3  
 IMA 4.40 311 eP 41 32.60 -1.4  
 TTA 4.76 269 ePd 41 42.10 3.1  
 55 obs. associated

MAY 20, 1991 22h 02m 29.28 ± 1.00s  
 0.995 N ± 4.8km 126.150 E ± 7.2km  
 DEPTH = 77.5 ± 9.7 km  
 5.0mb ( 17 obs.)  
 MOLUCCA PASSAGE (266)

MNI 1.38 289 ePd 02 52.50 -0.9  
 iS 03 14.00  
 AAI 5.08 156 eP 03 44.40 -0.2  
 eS 04 36.80  
 DAV 6.08 355 eP 04 04.50 6.0X  
 TSM 8.68 292 ePd 04 36.00 1.6  
 MKS 9.09 227 iPd 04 40.80 0.9  
 KKM 11.11 297 ePd 05 10.50 3.1X  
 WB2 22.31 159 iPd 07 20.50 -1.0  
 0.4s 48.10nm 5.3mb  
 i 07 25.40  
 MBL 22.87 195 eP 07 27.00 0.0  
 KLM 24.58 275 eP 07 46.00 2.4  
 OIS 25.15 149 eP 07 49.00 0.1  
 0.8s 38.00nm 4.9mb  
 NANU 25.60 203 eP 07 53.00 -0.1  
 ASPA 25.65 163 iPd 07 53.00 -0.5  
 0.5s 30.90nm 5.1mb  
 WARB 27.02 179 eP 08 07.50 1.4  
 0.4s 5.00nm 4.4mb  
 MEKA 28.41 194 eP 08 10.00 -0.7  
 WHN 31.45 340 eP 08 46.50 1.0  
 GYA 31.50 325 P 08 46.20 0.0  
 PcP 11 39.60  
 FORR 31.72 177 eP 08 47.00 -0.9  
 CHG 32.02 305 eP 08 49.90 -0.8  
 STK 35.82 157 iPd 09 30.10 6.9X  
 0.5s 5.30nm 4.7mb  
 IIDJ 36.01 16 P 09 25.30 0.4  
 CD2 36.55 327 P 09 28.50 -0.9  
 1.2s 37.00nm 5.2mb  
 XAN 36.62 336 P 09 28.50 -1.4  
 CHJJ 36.86 17 P 09 31.10 -0.8  
 MTMJ 37.02 16 P 09 33.20 -0.2  
 MAT 37.09 16 eP 09 33.00 -0.9  
 1.2s 15.63nm 4.8mb  
 DL2 37.96 354 P 09 41.80 0.8  
 1.4s 160.00nm 5.8mb  
 TIY 38.66 342 Pd 09 46.80 -0.3  
 BJI 39.91 348 eP 09 56.50 -0.8

OFUJ 40.48 19 eP 10 03.50 1.6  
 LZH 40.59 332 eP 10 02.50 -0.6  
 1.8s 54.00nm 5.1mb  
 sP 10 21.00  
 PcP 12 04.50  
 SNY 40.71 357 iPd 10 04.60 0.8  
 1.4s 47.00nm 5.2mb  
 HHC 41.82 343 eP 10 12.00 -1.1  
 MDJ 43.54 4 Pc 10 28.20 1.3  
 0.8s 32.00nm 5.2mb  
 pP 10 40.00 42kmX  
 LSA 43.85 314 P 10 30.00 -0.3  
 GTA 45.16 331 P 10 39.80 -0.4  
 0.6s 10.00nm 4.8mb  
 pP 10 52.00 44kmX  
 sP 10 58.00  
 PcP 12 21.00  
 PKI 47.12 308 P 10 55.04 -1.1  
 KKN 47.32 308 P 10 56.20 -1.4  
 DMN 47.38 308 P 10 57.70 -0.4  
 GKN 47.93 308 P 11 00.78 -1.4  
 HYB 49.55 292 eP 11 13.50 -1.2  
 1.0s 30.00nm 5.3mb  
 GBA 49.80 207 Pd 11 17.30 0.8  
 0.8s 8.10nm 4.8mb  
 WMO 54.64 326 P 11 52.40 -0.1  
 1.2s 20.00nm 5.0mb  
 pP 12 03.50 38kmX  
 YAK 60.93 2 iPd 12 36.80 0.8  
 OUE 63.13 304 eP 12 52.20 0.6  
 GAR 63.36 314 eP 12 52.00 -0.9  
 MAIO 70.72 308 eP 13 40.00 0.7  
 OBN 88.93 325 eP 15 17.00 0.7  
 SOD 92.76 338 eP 15 36.00 2.2  
 INK 92.90 21 eP 15 36.00 1.5  
 KAF 93.74 332 iPd 15 43.70 5.3X  
 0.4s 3.40nm 5.1mb  
 esP 15 44.10  
 YKA 102.21 24 ePd 16 16.20 -0.5  
 0.7s 0.30nm 4.1mb  
 S.D. = 1.0 on 47 of 51 obs.

MAY 20, 1991 23h 40m 30.78 ± 0.80s  
 38.304 N ± 6.9km 22.275 E ± 7.7km  
 DEPTH = 10.0km (geophysicist)  
 GREECE (364)  
 ML 3.1 (THE), 3.0 (ATH).

AGG 0.72 3 ePg 40 43.10 -1.8  
 eSg 40 53.62  
 ATH 1.18 106 ePn 40 54.00 1.1  
 VLS 1.33 265 ePn 40 53.50 -1.9  
 VLI 1.67 161 ePn 40 59.80 -0.4  
 LIT 1.80 5 ePb 41 02.10 0.0  
 eSb 41 26.90  
 IGT 1.95 310 eP 41 06.66 2.4  
 eS 41 33.06  
 PAIG 1.95 34 ePb 41 03.86 -0.4  
 eSb 41 29.62  
 KZN 2.04 349 ePn 41 05.50 -0.1  
 THE 2.39 13 eP 41 10.26 -0.2  
 FNA 2.57 345 eP 41 12.93 -0.3  
 eS 41 46.26  
 SQH 2.65 18 ePd 41 13.90 -0.4  
 eS 41 47.42  
 GRG 2.65 2 eP 41 14.30 0.0  
 eS 41 48.30  
 KNT 2.89 9 eP 41 17.30 -0.4  
 SRS 2.99 19 eP 41 18.38 -0.7  
 eS 41 54.62  
 VAY 3.02 4 ePn 41 20.30 0.8  
 OHR 3.03 338 ePn 41 22.00 2.4  
 SKO 3.72 350 ePn 41 37.00 7.5X  
 S.D. = 1.3 on 16 of 17 obs.

? MAY 20, 1991 23h 45m 24.28 ± 0.60s  
 13.973 S ± 29.2km 179.094 E ± 16.9km  
 DEPTH = 33.0km (normal)  
 4.4mb ( 7 obs.) 5.0msz ( 5 obs.)  
 FIJI ISLANDS REGION (181)

STK 38.62 236 eP 52 51.60 5.3X  
 0.8s 2.20nm 4.0mb  
 WB2 43.11 256 iPd 53 22.00 -1.4  
 0.7s 4.10nm 4.3mb  
 WRA 43.12 256 P 53 22.00 -1.5  
 0.7s 4.60nm 4.3mb



ASPA	43.69	250	eP	53	27.00	-1.2	CAF	149.05	356	ePKP	05	11.30	4.7X	TPE	1.05	328	iSg	38	45.00	
	0.9s	9.10nm			4.6mb			1.5s	20.90nm								iSg	38	37.00	-0.9
MAT	63.33	324	eP	55	53.00	0.5	LFF	149.10	358	ePKP	05	11.00	4.4X				iSg	38	56.00	
	1.1s	12.66nm			5.0mb		LPO	149.34	357	ePKP	05	11.60	4.6X	KZN	1.20	41	ePb	38	40.00	-0.6
		eS	04	34.00				1.5s	36.55nm					VLS	1.23	185	ePb	38	40.50	-0.4
PRS	75.17	46	ePc	57	05.50	0.1	SBF	149.37	348	ePKP	05	11.30	4.2X	AGG	1.29	107	ePg	38	40.50	-1.6
MHC	75.49	45	eP	57	06.60	-0.8		1.2s	23.80nm					FNA	1.47	19	ePb	38	44.40	-0.3
PRJ	75.57	47	ePc	57	08.20	0.4	FRF	149.81	349	ePKP	05	12.70	5.0X				eSb	39	06.60	
FRI	76.66	46	e(P)	57	12.20	-1.6	LRG	149.96	349	ePKP	05	13.20	5.3X	LIT	1.52	62	ePb	38	45.80	0.3
CMB	76.70	45	ePc	57	13.00	-1.1		1.5s	52.25nm								eSb	39	04.30	
ORV	76.72	43	ePc	57	13.70	-0.4	Z	19s	0.35um			5.2Msz	OHR	1.71	2	iPn	38	50.30	2.1X	
MIN	77.05	42	e(P)	57	15.60	-0.5	LMR	150.05	349	ePKP	05	13.30	5.3X		0.6s	103.00nm				
TNP	78.92	46	P	57	25.20	-1.3	PGF	150.27	345	ePKP	05	13.80	5.3X				iSg	39	14.00	
FBA	82.54	14	P	57	44.40	-0.4		S.D. = 1.1	on 51 of 75 obs.								Lg	39	20.20	
LRM	85.54	41	eP	58	00.10	-0.6							GRG	2.01	39	ePn	38	52.60	0.1	
LZH	86.59	308	eP	58	06.00	0.0							THE	2.11	54	ePn	38	54.60	0.7	
	1.6s	32.00nm			5.3mb		% MAY 20, 1991	23h	53m	55.06±0.86s			PHP	2.30	354	ePn	38	58.80	2.2X	
SES	88.31	37	eP	58	12.00	-1.8		41.693 N ± 8.3km	13.250 E ± 4.3km				LACI	2.37	341	ePn	38	57.10	-0.5	
YKA	91.80	25	eP	58	30.00	0.3		DEPTH = 10.0km	(geophysicist)				VAY	2.37	36	ePn	38	58.30	0.5	
	1.4s	1.80nm			4.3mb		SOUTHERN ITALY		(390)				SOH	2.46	54	ePn	38	58.80	-0.2	
KDZ	144.19	325	iPKPc	04	58.00	-0.7	AZI	0.33	25	P	54	01.80	0.0				eSn	39	30.90	
PLD	144.27	327	iPKPc	04	58.00	-0.7			eSg	54	07.00			SKO	2.62	12	ePn	39	03.60	2.3X
BEO	144.29	334	ePKP	04	57.50	-1.2	RDP	0.40	279	Pc	54	03.60	0.2	SRS	2.78	51	ePn	39	03.70	0.2
GWF	144.39	350	PKP	04	57.28	-1.5			eSg	54	09.70		BRT	3.08	300	P	39	17.00	9.2X	
RZN	144.55	326	iPKPc	04	59.00	-0.5	SDI	0.42	88	P	54	03.30	-0.4	VLI	3.19	146	ePn	39	09.00	-0.4
VTS	144.70	329	iPKP	04	59.00	-0.7			eSg	54	09.80		ORI	3.37	283	P	39	12.60	0.6	
KBA	144.91	343	e(PKP)	04	54.00	-5.9X	RMP	0.43	286	Pc	54	03.90	0.1	SDI	5.75	296	P	39	46.00	0.3
WLS	144.99	350	PKP	04	59.36	-0.5			eSg	54	10.00			S.D. = 0.8	on 17 of 21 obs.					
CDF	145.00	350	PKP	04	59.32	-0.6	AQU	0.67	10	P	54	09.10	0.7							
ZAG	145.20	339	ePKP	05	01.00	0.8	MNS	0.81	329	P	54	09.70	-1.1	& MAY 21, 1991	00h	50m	20.88s			
ECH	145.21	351	PKP	05	00.00	-0.2			eSg	54	23.50			60.273 N		152.638 W				
KKB	145.29	328	ePKP	05	01.00	0.5	DUI	0.91	92	P	54	12.70	0.2		DEPTH = 108.1km					
FLN	145.31	360	ePKP	04	59.80	-0.5	ASS	1.44	343	P	54	21.20	-0.1		3.9mb ( 1 obs.)					
	1.1s	22.00nm					ARV	1.82	353	P	54	27.00	0.4	SOUTHERN ALASKA					( 2 )	
Z	20s	0.20um			4.9Msz			S.D. = 0.6	on 9 of 9 obs.					<AIC>						
VITF	145.38	352	PKP	05	00.66	0.3	? MAY 21, 1991	00h	17m	32.82±5.73s			RED	0.16	336	iPc	50	35.46	0.8	
FEL	145.39	349	ePKP	05	00.50	-0.2		17.272 N ± 37.9km	61.188 W ± 29.9km						eS	50	46.72			
LDF	145.47	359	ePKP	05	00.40	-0.2		DEPTH = 10.0km	(geophysicist)				RSO	0.20	343	iPc	50	35.75	0.8	
LJU	145.48	341	ePKP	05	01.00	0.3		LEEWARD ISLANDS	( 92 )			RS2	0.20	343	iPc	50	35.78	0.8		
		e	05	02.50			ML 2.7 (FDF).					RDN	0.25	346	iPc	50	35.82	0.8		
HAU	145.54	351	ePKP	05	01.30	0.5						RDT	0.32	21	iPc	50	36.10	-0.7		
	1.5s	52.25nm					BPA	0.68	251	eP	17	46.00	-0.3			eS	50	48.23		
Z	20s	0.22um			4.9Msz				S	17	58.00		HOM	0.79	141	ePc	50	39.69	-0.4	
MOF	145.57	350	PKP	05	01.09	0.2	DEG	0.96	173	eP	17	51.00	-0.1			eS	50	54.19		
BSF	145.64	351	ePKP	05	01.40	0.3			S	18	08.00		NKA	0.84	55	iPc	50	41.52	1.0	
	1.5s	41.80nm					PAG	1.32	201	eP	17	58.00	0.7	PDB	0.92	239	iPd	50	40.45	-0.9
GRR	145.69	360	ePKP	05	01.30	0.3	NEV	1.33	264	eP	17	58.00	0.7			iS	50	55.62		
	1.4s	43.55nm							S	18	19.00		CKL	0.94	9	iPc	50	40.98	-0.7	
VOY	145.69	342	ePKP	05	01.10	-0.1	MGG	1.35	185	eP	17	58.00	0.3	XLV	0.94	150	ePc	50	40.52	-1.1
VBY	145.72	340	ePKP	05	02.60	1.5		S.D. = 0.6	on 5 of 5 obs.						eS	50	56.58			
CEY	145.79	341	ePKP	05	02.50	1.2							AUE	0.99	202	iPd	50	41.06	-1.0	
BBS	145.88	350	PKP	05	00.38	-1.0		MAY 21, 1991	00h	29m	56.95±0.77s		AUH	1.00	204	iPd	50	41.48	-0.8	
TRI	146.02	341	PKP	05	03.20	1.6		39.382 N ± 6.9km	20.778 E ± 6.8km			BGL	1.00	7	iPc	50	41.81	-0.5		
SKO	146.04	330	ePKP	05	02.50	0.7		DEPTH = 5.0km	(geophysicist)			BRK	1.02	119	iPc	50	41.11	-1.3		
LPF	146.04	0	ePKP	05	02.50	0.9		GREECE-ALBANIA BORDER REGION	(392)			AUI	1.02	203	iPd	50	41.40	-1.0		
	1.4s	52.30nm					MD 3.0 (ATH), 2.8 (THE).							eS	50	57.31				
LOMF	146.10	351	PKP	05	01.30	-0.5	IGT	0.38	294	ePg	30	03.90	-0.6	CRP	1.03	13	iPc	50	42.07	-0.6
CTI	146.32	344	PKP	05	03.30	1.0			eSg	30	10.70		CNPM	1.03	136	iPc	50	41.60	-1.0	
LOR	146.57	354	ePKP	05	04.20	1.7			eS	30	19.00	-0.8			eS	50	58.14			
	1.3s	14.45nm					KZN	1.20	39	eP	30	19.00		NCG	1.16	12	eP	50	43.48	-0.6
Z	21s	0.25um			5.0Msz				eS	30	39.00		SLKM	1.22	78	ePc	50	43.30	-1.4	
SSF	146.81	354	ePKP	05	04.90	2.1			eS	30	41.00		MCNL	1.39	219	iPd	50	45.40	-1.2	
	1.5s	36.55nm					VLS	1.21	187	eP	30	20.50	0.5			eS	51	04.97		
LBF	146.84	354	ePKP	05	04.80	1.8			eSg	30	19.00	-1.0	CDD	1.44	201	iPd	50	45.76	-1.5	
	1.4s	21.80nm					AGG	1.26	106	ePg	30	39.00		SUA	1.51	37	iPc	50	47.61	-0.6
OHR	147.00	329	ePKP	05	05.70	2.3			eSg	30	39.00				iS	51	08.52			
AVF	147.09	355	ePKP	05	05.50	2.2	FNA	1.47	18	ePb	30	23.00	-1.2	SEW	1.60	95	ePc	50	47.16	-2.0
	1.4s	17.45nm							eSb	30	45.10		SYI	1.67	176	iPd	50	48.73	-1.3	
SMF	147.19	354	ePKP	05	05.90	2.4X	LIT	1.50	61	ePb	30	24.70	0.1			eS	51	10.80		
	1.5s	41.80nm							eSb	30	44.60		SVW	1.69	301	iPd	50	49.30	-1.1	
BGF	147.37	355	ePKP	05	06.40	2.6X	OHR	1.73	1	ePn	30	29.00	1.1	SKT	1.80	17	ePd	50	50.54	-1.1
	1.5s	26.10nm					GRG	2.01	38	ePn	30	32.90	1.0	PMS	1.80	56	iPd	50	50.51	-1.2
MFF	147.47	359	ePKP	05	06.50	2.6X			eSn	30	59.00		PWA	1.93	43	iPd	50	52.13	-1.2	
TCF	147.68	356	ePKP	05	07.00	2.7X	SOH	2.44	53	ePn	30	39.10	0.9	PLRM	2.16	51	ePd	50	54.19	-2.2
MAF	147.72	355	ePKP	05	07.50	3.1X			eSn	31	09.00		PMR	2.16	51	iPd	50	54.70	-1.7	
	1.4s	21.80nm					SKO	2.64	11	ePn	30	44.50	3.6X	KNK	2.35	59	iPd	50	56.61	-2.2
LSF	147.76	357	ePKP	05	07.10	2.7X		S.D. = 1.1	on 9 of 10 obs.						eS	51	24.61			
LPL	147.90	350	ePKP	05	08.70	3.7X							GHO	2.35	49	iPd	50	56.89	-2.1	
LPG	147.92	350	ePKP	05	09.10	4.0X							LTJ	2.40	93	eP	50	57.99	-1.6	
	1.5s	31.35nm											CUT	2.42	27	ePd	50	58.51	-1.3	
SFI	148.22	342	PKP	05	08.50	3.4X		MAY 21, 1991	00h	38m	17.73±0.48s		KNIM	2.44	86	ePc				



21d 00h

HUR	3.07	27	eP	51	07.33	-1.2
VZW	3.10	73	ePd	51	05.66	-3.3
TA	3.12	330	iPd	51	07.00	-1.4
VLZ	3.22	72	eP	51	07.56	-2.9
MID	3.29	102	ePd	51	10.20	-1.2
TRF	3.38	18	eP	51	10.85	-2.0
CVA	3.43	82	eP	51	11.59	-1.7
KLU	3.50	67	iPd	51	11.63	-2.8
RND	3.62	28	ePd	51	13.95	-2.1
TOA	3.63	57	iPd	51	14.60	-1.6
SGAM	3.70	83	eP	51	13.87	-3.1
MCK	3.89	25	ePd	51	18.32	-1.3
RAGM	3.96	85	eP	51	18.30	-2.4
SDG	4.09	53	ePd	51	20.15	-2.3
HMT	4.17	85	eP	51	21.34	-2.1
BWN	4.19	19	eP	51	21.76	-1.9
PAX	4.36	49	ePd	51	24.05	-2.1
GLB	4.47	71	ePd	51	24.47	-3.2
NEA	4.63	19	eP	51	27.07	-2.6
WRH	4.71	25	eP	51	28.36	-2.6
DDM	4.75	39	ePd	51	30.76	-0.8
WAX	4.86	84	ePd	51	29.75	-3.3
TGL	4.87	80	eP	51	31.03	-2.2
HDA	4.92	30	ePd	51	31.45	-2.3
CCB	4.93	25	eP	51	30.85	-3.0
BALM	5.12	77	ePd	51	33.31	-3.4
MDM	5.12	21	eP	51	33.10	-3.5
FBA	5.15	24	iPd	51	34.90	-2.1
DOT	5.27	46	eP	51	36.01	-2.7
WRG	5.30	88	eP	51	37.52	-1.6
GLM	5.31	25	ePd	51	36.56	-2.7
CTGM	5.61	78	ePd	51	41.38	-2.0
IMA	5.84	356	ePd	51	44.40	-2.1
PNL	6.68	89	eP	51	54.85	-3.1
FYU	7.13	25	eP	52	00.74	-3.3
SIT	9.57	102	ePc	52	35.30	-1.8
INK	11.51	38	eP	52	59.00	-3.9
ADK	15.75	248	eP	53	55.70	-1.8
YKA	18.18	67	eP	54	23.90	-3.3

0.6s 4.60nm 3.9mb  
79 obs. associated

\* MAY 21, 1991 00h 57m 56.21 ± 1.42s  
39.366 N ± 12.8km 20.736 E ± 7.0km  
DEPTH = 5.0km (geophysicist)  
GREECE-ALBANIA BORDER REGION (392)  
MD 3.0 (THE).

IGT	0.35	298	ePgc	58	03.90	0.6
LSK	0.79	352	iPgc	58	10.40	-1.7
TPE	1.08	329	iPgd	58	17.00	0.0
AGG	1.29	105	iPgc	58	19.70	-0.8
FNA	1.50	19	ePb	58	23.00	0.0
LIT	1.54	61	ePb	58	24.20	-0.2
OHR	1.74	2	iPn	58	29.10	1.8X
GRG	2.04	38	ePn	58	31.30	-0.3
THE	2.13	53	ePn	58	33.70	0.8
PHP	2.33	355	ePn	58	38.40	2.6X
LACI	2.40	341	ePn	58	41.80	5.1X
VAY	2.40	35	ePn	58	37.00	0.2
KNT	2.44	42	ePn	58	38.80	1.4

S.D. = 1.0 on 10 of 13 obs.

? MAY 21, 1991 01h 09m 57.69 ± 6.52s  
45.063 N ± 25.7km 2.728 E ± 46.1km  
DEPTH = 10.0km (geophysicist)  
FRANCE (538)  
ML 1.9 (LDG).

CAF	0.49	254	Pg	10	07.60	0.0
RJF	0.89	286	Pg	10	14.80	0.0
LPO	1.16	251	Pg	10	19.40	0.0

LSF 1.45 325 Pg 10 24.00 0.0  
Sg 10 44.00  
S.D. = 0.1 on 4 of 4 obs.

& MAY 21, 1991 03h 01m 23.92s  
62.963 N 149.750 W  
DEPTH = 83.2km  
2.8mb (1 obs.)  
CENTRAL ALASKA (1)  
<AEIC>.

HUR	0.05	74	ePc	01	35.68	1.5
TRF	0.55	334	iPc	01	38.81	0.0
RND	0.60	42	iPd	01	38.82	-0.4
CUT	0.61	203	iPc	01	38.95	-0.2
MCK	0.86	25	iPc	01	41.67	-0.1
BWN	1.22	6	iPc	01	45.91	-0.2
GHO	1.26	162	ePc	01	46.45	-0.2
SKT	1.29	221	iPd	01	46.63	-0.4
PWA	1.32	183	iPc	01	47.49	0.1
SML	1.33	150	ePc	01	47.30	-0.3
PLRM	1.41	168	ePc	01	48.42	-0.1
PMR	1.41	168	iPc	01	49.00	0.5
SUA	1.58	198	ePc	01	51.05	0.2
SCM	1.60	134	ePc	01	51.09	-0.1
NEA	1.65	10	iPc	01	50.80	-0.9
KNK	1.67	158	ePc	01	52.04	0.0
WRH	1.69	25	iPd	01	51.44	-0.8
PMS	1.73	177	ePc	01	52.74	-0.1
THY	1.87	74	eP	01	56.00	1.3
TOA	1.87	116	eP	01	56.00	1.3
CCB	1.90	26	iPc	01	54.13	-0.9
HDA	1.91	39	ePd	01	54.36	-0.9
NCG	1.93	217	ePd	01	55.22	-0.4
DDM	1.94	63	ePd	01	55.53	-0.1
PAX	1.96	88	ePd	01	55.76	-0.2
SDG	1.99	101	ePc	01	55.99	-0.3
CRP	2.04	215	eP	01	56.92	-0.3
BGL	2.11	217	eP	01	58.48	0.4
MDM	2.11	18	eP	01	57.08	-0.9
FBA	2.13	23	iPc	01	57.90	-0.3
CKL	2.15	216	eP	01	58.68	0.1
TZL	2.21	113	eP	01	59.73	0.4
GLM	2.28	26	iPc	01	59.52	-0.8
KLU	2.32	128	eP	02	00.00	-0.9
VZW	2.43	140	eP	02	01.03	-1.4
GLI	2.44	148	ePc	02	01.16	-1.3
VLZ	2.44	137	eP	02	01.10	-1.4
SLKM	2.47	185	ePc	02	03.45	0.5
DOT	2.66	72	eP	02	04.65	-0.8
RDT	2.71	209	eP	02	06.82	0.6
KNIM	2.79	159	eP	02	05.81	-1.5
TTA	2.86	272	iPd	02	08.20	-0.1
SEW	2.87	177	eP	02	08.22	-0.2
RS2	2.89	211	eP	02	09.50	0.7
RSO	2.89	211	eP	02	09.19	0.4
RED	2.93	211	eP	02	09.99	0.7
HIN	3.00	148	ePc	02	08.78	-1.5
CVA	3.08	140	eP	02	10.22	-1.0
TMW	3.09	80	eP	02	10.37	-1.0
GLB	3.17	116	eP	02	11.51	-1.1
SGAM	3.28	137	ePc	02	12.60	-1.5
SVW	3.33	239	iPd	02	14.60	-0.2
CNPM	3.52	192	ePc	02	16.97	-0.5
RAGM	3.54	135	eP	02	16.76	-0.9
IMA	3.55	333	iPd	02	18.00	0.1
HMT	3.71	133	eP	02	18.41	-1.7
PDB	3.84	216	eP	02	21.73	0.0
TGL	3.96	121	eP	02	20.51	-3.0
BALM	3.99	116	eP	02	22.19	-1.9
WAX	4.14	124	eP	02	24.40	-1.7
CTGM	4.45	113	eP	02	29.53	-1.0
CDD	4.47	207	eP	02	30.17	-0.5

SYI 4.56 198 eP 02 31.09 -0.7  
INK 8.57 44 P 03 24.00 -3.1  
YKA 16.00 76 eP 05 02.00 -2.9  
0.4s 0.30nm 2.8mb  
65 obs. associated

% MAY 21, 1991 03h 53m 29.97 ± 1.51s  
43.616 N ± 14.8km 11.032 E ± 6.0km  
DEPTH = 10.0km (geophysicist)  
CENTRAL ITALY (381)  
MD 2.3 (ROM).

FIR	0.23	45	ePg	53	35.00	0.1
PII	0.38	286	iSg	53	37.70	-0.1
BDI	0.55	325	Pd	53	42.70	-0.6
MME	0.63	338	eSg	53	46.10	1.0
CRE	0.67	89	P	53	43.80	0.5
SFI	0.67	63	P	53	42.40	-0.8
			eSg	53	52.10	

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

& MAY 21, 1991 04h 04m 32.53s  
58.302 N 142.845 W  
DEPTH = 10.0km (geophysicist)  
GULF OF ALASKA (15)  
<AEIC>. ML 2.8 (AEIC).

WRG	1.79	13	eP	04	59.07	-4.6
			eS	05	18.91	
MID	2.14	303	eP	05	03.21	-5.5
WAX	2.15	360	iP	05	03.88	-5.2
HMT	2.17	341	eP	05	03.90	-5.3
PNL	2.25	51	eP	05	04.91	-5.5
			eS	05	29.31	
RAGM	2.29	337	eP	05	05.68	-5.3
TGL	2.46	0	iP	05	08.18	-5.3
SGAM	2.52	332	eP	05	08.93	-5.2
			eS	05	38.42	
CVA	2.70	328	eP	05	11.82	-4.9
			eS	05	42.37	
BALM	2.75	5	iP	05	12.43	-5.2
			eS	05	44.59	
CTGM	2.78	15	eP	05	12.82	-5.2
HIN	2.81	320	eP	05	13.00	-5.4
GLB	3.19	352	eP	05	18.06	-5.6
KNIM	3.24	311	eP	05	17.42	-7.0
VLZ	3.34	330	eP	05	21.52	-4.3
VZW	3.34	327	eP	05	19.49	-6.5
KLU	3.56	335	eP	05	22.88	-6.1
SLKM	4.37	304	eP	05	34.86	-5.6
SYI	5.02	278	eP	05	43.75	-5.9

19 obs. associated

MAY 21, 1991 04h 24m 15.51 ± 0.43s  
33.363 S ± 7.9km 70.327 W ± 6.8km  
DEPTH = 98.5 ± 3.7 km  
4.7mb (12 obs.)

CHILE-ARGENTINA BORDER REGION (127)  
Felt (IV) at Santiago and (III)  
at Los Andes, La Calera, La  
Ligua and San Jose de Maipo,  
Chile.

SAN	0.29	252	iPc	24	30.10	0.0
PCH	0.30	211	iPc	24	30.50	0.3
PEL	0.37	306	iPc	24	30.40	-0.2
ROCH	0.69	304	iPc	24	32.70	-0.5
JACH	0.71	342	iPd	24	33.40	0.1
LCCH	1.05	263	iPc	24	36.00	-0.6
LNV	1.08	237	iPc	24	36.10	-0.9
MDZ	1.33	69	iP	24	41.70	1.7
ZON	2.29	38	iPc	24	54.20	1.8
CCH	16.35	14	P	28	03.70	2.9X
ARE	16.86	356	eP	28	11.00	3.9X
LPB	16.88	7	P	28	07.00	-0.5
	1.0s	40.00nm			4.6mb	
ZOBO	17.14	7	Pc	28	10.00	-0.8
	1.0s	12.50nm			4.1mb	
Z	24s	0.11um			4.1msz	
		LR	34	48.00		
SIV	19.21	28	iPc	28	32.60	-1.9
PPD	20.23	61	ePc	28	43.90	-1.1
VAO	22.98	69	eP	29	11.70	-0.6



BAO 26.82 54 ePd 29 16.50  
 SPA 56.81 180 iPd 33 52.20 0.5  
 1.0s 25.00nm 5.2mb  
 BLA 70.84 351 eP 35 24.00 0.7  
 1.0s 8.00nm 4.5mb  
 LIC 73.22 71 Pc 35 37.80 0.0  
 0.8s 9.50nm 4.7mb  
 FVM 73.41 344 eP 35 38.50 0.1  
 1.0s 12.00nm 4.7mb  
 TIC 73.48 70 P 35 39.20 -0.1  
 KIC 73.53 71 P 35 39.80 0.2  
 0.7s 11.00nm 4.8mb  
 LKO 74.80 68 P 35 45.56 -1.5  
 0.8s 18.50nm 5.0mb  
 ALQ 75.92 330 eP 35 53.20 0.0  
 1.0s 4.50nm 4.3mb  
 ANMO 75.93 330 eP 35 53.20 0.0  
 1.1s 4.75nm 4.2mb  
 GOL 79.61 333 iP 36 18.00  
 0.9s 10.61nm 4.7mb  
 36 38.00  
 PEC 80.07 322 eP 36 16.00 0.3  
 TNP 83.39 325 iP 36 34.80 1.7  
 1.0s 11.25nm 4.8mb  
 36 59.00  
 LRM 87.55 332 eP 36 54.70 1.2  
 S.D. = 1.0 on 28 of 30 obs.

& MAY 21, 1991 04h 27m 39.01s  
 60.229 N 153.151 W  
 DEPTH = 136.7km  
 SOUTHERN ALASKA  
 <AEIC>.

RED 0.27 45 eP 27 57.40 0.8  
 RS2 0.31 40 eP 27 57.65 0.8  
 RSO 0.31 40 eP 27 57.71 0.8  
 RDT 0.51 47 iP 27 58.27 -0.9  
 PDB 0.69 230 eP 27 59.18 -1.0  
 28 15.17  
 AUE 0.88 187 eP 28 00.91 -0.8  
 AUH 0.88 190 eP 28 01.44 -0.4  
 AUI 0.91 189 eP 28 01.26 -0.7  
 28 18.46  
 HOM 0.95 126 eP 28 02.42 0.1  
 28 20.30  
 CKL 1.05 22 iP 28 02.56 -0.8  
 28 21.59  
 XLV 1.06 136 eP 28 02.61 -0.8  
 NKA 1.08 61 eP 28 04.09 0.6  
 BGL 1.10 19 iP 28 03.38 -0.5  
 CRP 1.15 25 iP 28 03.70 -0.7  
 CNPM 1.20 125 eP 28 04.97 -0.6  
 28 23.42  
 BRLK 1.23 111 eP 28 04.69 -0.4  
 28 23.52  
 NCG 1.28 22 eP 28 04.98 -0.7  
 CDD 1.33 191 eP 28 04.94 -1.1  
 SLKM 1.48 78 eP 28 06.33 -1.4  
 SVW 1.50 307 eP 28 06.40 -1.6  
 SYI 1.67 166 eP 28 08.37 -1.4  
 SUA 1.71 43 eP 28 09.23 -1.2  
 28 33.21  
 SEW 1.85 92 eP 28 10.56 -1.4  
 SKT 1.93 23 eP 28 12.14 -0.7  
 PMS 2.04 58 eP 28 12.46 -1.8  
 28 39.21  
 PLRM 2.39 53 eP 28 15.84 -2.8  
 GHO 2.58 51 eP 28 18.29 -2.8  
 28 49.56  
 CUT 2.59 31 eP 28 19.92 -1.2  
 KNK 2.59 61 eP 28 18.38 -2.8  
 LTI 2.66 92 eP 28 20.23 -1.8  
 KNIM 2.70 85 eP 28 19.32 -3.2  
 GLI 3.06 75 eP 28 24.32 -2.9  
 VZW 3.35 73 eP 28 29.06 -2.1  
 VLZ 3.47 72 eP 28 30.25 -2.4  
 KLU 3.76 67 eP 28 33.59 -2.9  
 TOA 3.87 58 eP 28 34.27 -3.7  
 CCB 5.08 27 eP 28 50.93 -3.2  
 BALM 5.38 77 eP 28 56.30 -2.0  
 CTGM 5.87 78 eP 29 01.82 -3.2

39 obs. associated

17.143 N  $\pm$  5.2km 99.217 W  $\pm$  5.1km  
 DEPTH = 44.5km ( 3 depth phases)  
 4.9mb ( 21 obs.) 4.1msz ( 1 obs.)  
 GUERRERO, MEXICO  
 Felt at Acapulca.

ACX 0.67 246 iP 58 37.90 -0.8  
 58 45.94  
 III 1.25 349 iP 58 48.28 1.3  
 (S) 59 07.00  
 PIO 1.28 125 iP 58 49.00 1.8  
 PPM 1.99 16 iP 58 58.50 0.7  
 IIT 2.06 25 iP 58 59.00 0.5  
 59 28.00  
 IIA 2.06 15 iP 58 59.68 1.4  
 UNM 2.18 1 iP 59 01.00 0.8  
 (S) 59 31.00  
 TAC 2.25 1 iP 59 03.00 1.8  
 CRX 2.29 349 iP 59 04.00 2.1  
 OXX 2.39 91 iP 59 06.50 3.4X  
 59 37.50  
 IISM 2.54 43 iP 59 06.50 1.5  
 59 39.50  
 MRX 3.16 324 iP 59 14.50 0.5  
 59 49.50  
 LVVM 3.68 45 (P) 59 20.50 -0.8  
 PBJ 3.72 100 iP 59 23.50 1.7  
 CGX 4.77 303 (P) 59 42.20 5.4X  
 ALQ 18.87 341 iPd 02 43.90 -1.0  
 0.9s 14.92nm 4.2mb  
 ANMO 18.87 341 iPd 02 43.70 -1.3  
 1.0s 20.50nm 4.3mb  
 03 07.00  
 TUL 18.94 9 iPd 02 43.40 -2.1  
 1.2s 95.40nm 4.9mb  
 20s 0.19um 4.5mszX  
 LR 08 36.00  
 GLA 21.19 321 eP 03 10.00 0.6  
 RSCP 22.03 31 iP 03 15.80 -2.0  
 1.0s 113.88nm 5.3mb  
 BAR 22.08 318 eP 03 19.00 0.6  
 FVM 22.15 19 P 03 15.30 -3.7X  
 0.7s 27.21nm 4.8mb  
 PLM 22.64 319 eP 03 26.00 1.9  
 TPC 22.65 321 eP 03 25.00 1.0  
 PV09 22.98 340 P 03 26.50 -1.0  
 GOL 23.10 348 ePd 03 27.90 -0.7  
 1.0s 17.50nm 4.5mb  
 epP 03 40.00 49km  
 GLD 23.12 348 P 03 28.60 -0.1  
 0.8s 23.53nm 4.7mb  
 PEC 23.18 319 ePc 03 30.00 0.8  
 03 44.20 60kmX  
 RVR 23.38 319 eP 03 32.00 0.9  
 GSC 23.93 322 eP 03 38.00 1.5  
 MWC 23.96 319 eP 03 39.00 2.1  
 PAS 23.99 318 eP 03 39.00 2.1  
 SBB 24.12 320 eP 03 39.00 0.7  
 CLC 24.75 322 eP 03 45.00 0.6  
 ISA 25.17 321 eP 03 49.00 0.7  
 BLA 25.97 36 P 03 55.00 -0.7  
 0.8s 87.25nm 5.4mb  
 TNP 26.17 326 ePc 03 57.20 -0.6  
 0.7s 4.22nm 4.1mb  
 e 04 13.50 70kmX  
 FRI 26.80 322 eP 04 03.20 -0.1  
 PRI 26.83 319 eP 04 04.00 0.3  
 CMB 27.90 322 eP 04 12.30 -1.0  
 MHC 28.19 320 eP 04 07.30 -8.8X  
 GCC 28.22 319 eP 04 04.00 -12.2X  
 CBN 28.41 38 eP 04 17.00 -0.8  
 BRK 28.91 320 eP 04 04.40 -18.0X  
 LRM 30.65 342 ePd 04 37.90 -0.2  
 NEW 34.32 339 P 05 08.00 -1.8  
 1.0s 16.50nm 4.9mb  
 SES 34.51 347 ePd 05 09.60 -1.8  
 PNT 36.10 337 eP 05 25.00 0.1  
 1.2s 49.00nm 5.3mb  
 FFC 37.57 357 iPd 05 36.20 -0.9  
 0.6s 15.00nm 5.1mb  
 SCH 45.09 26 ePd 06 37.70 -1.2  
 ZOBO 45.18 136 P 06 41.80 1.1  
 LPB 45.39 136 P 06 41.50 -0.7  
 YKA 46.57 350 eP 06 48.10 -2.3  
 0.8s 12.60nm 4.9mb  
 CCH 47.31 135 P 06 57.60 0.4  
 SIV 49.98 129 P 07 17.20 -0.4

FRB 51.09 17 eP 07 25.00 -0.3  
 INK 55.56 345 eP 07 57.00 -1.3  
 pP 08 09.00 42km  
 PMR 56.51 334 P 08 04.60 -0.7  
 FBA 57.67 338 ePd 08 12.20 -1.3  
 epP 08 24.50 43km  
 08 21.80 -2.0  
 SVW 59.13 332 P 08 21.80 -2.0  
 0.7s 10.47nm 5.1mb  
 BAO 60.10 120 e(P) 08 32.00 0.9  
 DAG 71.24 14 eP 09 41.00 -0.5  
 EKA 79.47 35 Pc 10 29.00 0.3  
 1.5s 20.00nm 4.8mb  
 LPF 82.77 42 eP 10 46.00 -0.1  
 1.1s 14.65nm 4.9mb  
 LPO 85.29 45 eP 10 59.20 0.2  
 1.3s 18.05nm 5.1mb  
 RJF 85.30 44 eP 10 59.00 -0.1  
 1.3s 28.90nm 5.3mb  
 Z 21s 0.08um 4.1msz  
 TCF 85.43 43 eP 10 59.50 -0.2  
 1.1s 8.55nm 4.8mb  
 MAF 85.68 43 eP 11 00.80 -0.2  
 1.1s 12.20nm 5.0mb  
 SSF 86.00 42 eP 11 02.00 -0.5  
 LOR 86.15 42 eP 11 02.90 -0.3  
 1.2s 11.90nm 5.0mb  
 STK 123.41 243 ePKP 17 27.00 7.2X  
 0.8s 1.10nm  
 WB2 129.31 258 iPKPd 17 30.90 -0.6  
 0.8s 1.90nm  
 WRA 129.32 258 PKP 17 31.00 -0.5  
 0.9s 1.80nm  
 S.D. = 1.2 on 66 of 73 obs.

MAY 21, 1991 06h 15m 57.02  $\pm$  0.36s  
 41.465 N  $\pm$  4.4km 20.445 E  $\pm$  3.9km  
 DEPTH = 5.0km (geophysicist)  
 ALBANIA (391)  
 ML 3.1 (SKO), 3.1 (TTG).  
 OHR 0.44 143 iPgC 16 05.80 -0.1  
 0.7s 545.00nm  
 iSg 16 14.10  
 Lg 16 16.20  
 LACI 0.58 287 iPgD 16 08.00 -0.6  
 iSg 16 16.90  
 SKO 0.90 55 iPg 16 12.40 -2.3X  
 0.5s 209.00nm  
 i 16 25.40  
 i 16 26.40  
 Lg 16 28.80  
 BCI 0.94 343 iPgD 16 15.50 0.1  
 iSg 16 28.60  
 FNA 0.98 134 ePgC 16 15.30 -0.8  
 eSg 16 30.00  
 ULC 1.02 299 iPgD 16 16.03 -0.8  
 iSg 16 32.55  
 PVY 1.18 343 iPgC 16 18.23 -1.4  
 iSg 16 37.06  
 TPE 1.21 196 ePg 16 21.00 0.9  
 TTG 1.31 318 iPgD 16 21.10 -0.6  
 iSg 16 42.61  
 BDV 1.46 305 iPgD 16 23.86 -0.2  
 iSg 16 47.70  
 IVA 1.46 344 iPgC 16 24.58 0.4  
 iSg 16 47.00  
 GRG 1.56 108 ePb 16 24.40 -1.1  
 eSb 16 49.20  
 VAY 1.60 94 ePn 16 26.00 -0.1  
 NKY 1.72 322 iPnd 16 28.21 0.3  
 iSn 16 54.50  
 HCY 1.75 305 iPnc 16 28.83 0.6  
 iSn 16 54.38  
 KNT 1.87 98 ePn 16 30.80 0.8  
 BRY 2.01 316 iPnd 16 33.56 1.4  
 iSn 17 02.05  
 KKB 2.02 78 iPd 16 33.00 0.9  
 PLE 2.02 338 iPnc 16 32.86 0.6  
 iSn 17 01.23  
 LIT 2.07 131 ePn 16 32.50 -0.3  
 VTS 2.35 60 iPc 16 37.00 0.0  
 S.D. = 0.8 on 20 of 21 obs.

\* MAY 21, 1991 07h 51m 56.23  $\pm$  1.81s  
 10.360 N  $\pm$  10.1km 125.346 E  $\pm$  19.6km  
 DEPTH = 72.0  $\pm$  18.4 km



21d 07h

4.6mb ( 8 obs.)  
LEYTE, PHILIPPINE ISLANDS (256)

DAV	3.26	176	eP	52	47.10	1.1
BAG	7.59	323	eP	53	45.60	-1.1
SSE	20.99	350	eP	56	35.00	-0.7
Z	16s	0.30um			3.8mszx	
E	10s	0.20um				
WHN	22.54	335	eP	56	53.00	1.9
GYA	23.83	315	P	57	05.40	1.5
N	16s	0.40um				
E	16s	0.50um				
XAN	27.96	330	P	57	40.30	-1.8
CD2	28.64	319	eP	57	46.00	-2.2
BJI	30.66	346	eP	58	05.50	-0.5
SNY	31.38	357	Pd	58	12.80	0.5
	1.2s	20.00nm			4.8mb	
WRA	31.39	164	P	58	22.00	9.4X
	0.7s	1.60nm			3.9mb	
WB2	31.39	164	iPc	58	09.40	-3.2X
	0.5s	4.60nm			4.5mb	
LZH	32.19	326	eP	58	19.50	-0.2
	1.5s	48.00nm			5.1mb	
Z	16s	0.29um			4.1mszx	
E	10s	0.22um				
HHC	32.72	340	eP	58	25.00	0.8
ASPA	34.84	166	iPd	58	40.60	-1.9
	0.5s	10.00nm			5.0mb	
WARB	36.35	178	eP	58	54.00	-1.2
GTA	36.79	326	eP	58	59.00	0.0
	1.8s	30.00nm			4.9mb	
Z	22s	0.40um			4.1mszx	
N	22s	0.90um				
ADE	46.82	165	e(P)	00	20.90	0.2
GBA	46.92	279	Pc	00	23.60	1.8
	0.9s	4.40nm			4.4mb	
DZM	51.61	129	iPd	00	58.30	0.5
INK	84.54	21	eP	04	23.00	0.7
YKA	94.04	24	eP	05	07.90	0.4
	0.7s	0.50nm			4.1mb	
LCCB	152.24	149	iPKP	11	21.50	-17.1X
					12 06.00	
S.D. = 1.3 an 19 of 22 obs.						

? MAY 21, 1991 08h 17m 54.32±2.11s  
36.645 N ±64.8km 71.878 E ±64.1km  
DEPTH = 33.0km (normal)  
3.9mb ( 2 obs.)

AFGHANISTAN-USSR BORDER REGION (717)

GKN	13.80	125	P	21	10.20	0.2
	0.4s	9.00nm			4.9mb X	
KKN	14.36	124	P	21	17.20	-0.3
DMN	14.37	125	P	21	17.60	0.0
NB2	44.69	323	P	26	05.60	0.0
	0.4s	1.00nm			4.0mb	
YKA	81.07	3	eP	30	07.00	0.0
	0.7s	0.70nm			3.8mb	
S.D. = 0.2 an 5 of 5 obs.						

& MAY 21, 1991 08h 25m 40.81s  
59.889 N 151.535 W  
DEPTH = 73.8km  
KENAI PENINSULA, ALASKA ( 14)  
<AEIC>.

HOM	0.24	193	iPc	25	51.82	-0.4
			eS	26	00.51	
BRLK	0.35	111	ePd	25	52.43	-0.5
			iS	26	01.22	
CNPM	0.39	157	iPd	25	52.60	-0.7
			iS	26	01.63	
XLV	0.45	192	ePc	25	52.54	-1.1
			eS	26	02.01	
RDT	0.81	328	iPd	25	56.74	-0.8
			eS	26	08.93	
RED	0.82	311	iPc	25	56.82	-0.8
RSO	0.84	314	iPc	25	57.30	-0.7
			eS	26	09.99	
RS2	0.84	314	iPc	25	57.36	-0.7
NKA	0.87	10	eP	25	59.57	1.4
RDN	0.88	316	iPd	25	57.60	-0.8
			eS	26	10.40	
SLKM	0.90	46	ePd	25	58.15	-0.5
SEW	1.07	77	ePc	25	59.84	-0.8
AUE	1.07	241	iPc	25	59.96	-0.7
			eS	26	15.25	

AUI	1.11	241	eP	26	00.35	-0.8
			eS	26	15.49	
PDB	1.35	267	iPc	26	02.92	-1.3
			eS	26	19.78	
SYI	1.36	199	ePc	26	03.39	-1.0
			eS	26	20.19	
CKL	1.37	344	iPd	26	04.22	-0.5
CRP	1.42	348	ePd	26	05.18	-0.2
BGL	1.44	343	ePd	26	05.39	-0.2
CDD	1.45	229	iPc	26	04.49	-1.1
			eS	26	22.69	
NCG	1.55	349	iPd	26	07.01	-0.1
SUA	1.63	14	ePd	26	07.93	-0.2
PMS	1.67	35	iPd	26	08.73	0.0
LTI	1.86	84	eP	26	11.01	-0.1
PWA	1.95	24	eP	26	12.50	0.2
KNIM	1.96	75	ePd	26	10.94	-1.6
PLRM	2.08	34	eP	26	13.33	-0.8
SKT	2.10	0	ePd	26	14.36	-0.1
KNK	2.15	43	eP	26	14.56	-0.7
GHO	2.28	33	eP	26	17.09	0.0
SVW	2.36	303	ePd	26	16.32	-1.9
GLI	2.42	64	eP	26	16.85	-2.1
CUT	2.60	13	eP	26	21.23	-0.1
VZW	2.73	62	eP	26	21.89	-1.4
KLU	3.20	57	ePc	26	28.43	-1.4
35 obs. associated						

? MAY 21, 1991 08h 51m 26.29±12.12s  
23.296 N ±40.2km 119.952 E ±72.9km  
DEPTH = 10.0km (geophysicist)

TAIWAN REGION (243)

TWK	0.49	93	iPd	51	36.40	0.1
			eS	51	44.00	
TWM1	0.64	137	ePc	51	39.20	0.1
TWG	1.14	114	iPc	51	47.40	-0.1
			eS	52	02.20	
TWF1	1.24	87	iPd	51	49.30	0.0
S.D. = 0.2 an 4 of 4 obs.						

& MAY 21, 1991 09h 14m 53.75s  
62.558 N 148.179 W  
DEPTH = 62.6km  
CENTRAL ALASKA ( 1)  
<AEIC>.

SML	0.76	186	eP	15	08.67	-0.4
HUR	0.79	303	iPd	15	09.28	-0.2
			iS	15	21.47	
SCM	0.83	151	iPc	15	09.46	-0.6
			eS	15	22.72	
GHO	0.86	204	iPc	15	10.10	-0.4
			eS	15	22.89	
RND	0.91	340	iPc	15	10.74	-0.3
CUT	0.98	262	iPd	15	11.71	-0.2
TOA	1.04	115	iPc	15	13.40	0.6
PLRM	1.07	205	iPc	15	12.62	-0.4
PMR	1.07	205	iPc	15	13.10	0.1
KNK	1.16	187	iPc	15	14.29	0.0
			eS	15	30.40	
PWA	1.21	222	iPc	15	15.41	0.5
SDG	1.22	90	iPc	15	14.97	-0.2
			eS	15	30.74	
MCK	1.23	344	iPc	15	15.35	0.1
			eS	15	31.98	
PAX	1.31	70	iPd	15	16.09	-0.4
			eS	15	33.60	
TRF	1.31	314	eP	15	16.19	-0.4
TZL	1.39	111	iPc	15	17.60	0.2
THY	1.40	51	eP	15	18.01	0.4
PMS	1.47	207	iPc	15	18.76	0.2
			eS	15	38.17	
KLU	1.51	134	iPc	15	18.33	-0.8
			eS	15	38.05	
DDM	1.62	39	ePc	15	21.63	1.0
SUA	1.63	229	ePd	15	21.64	0.8
			eS	15	43.97	
SKT	1.67	251	ePd	15	21.50	0.2
			eS	15	44.18	
VLZ	1.68	148	iPc	15	20.06	-1.3
			iS	15	40.48	
VZW	1.69	152	iPc	15	20.53	-1.1
			eS	15	42.11	
BWN	1.72	341	ePc	15	21.38	-0.6
			eS	15	43.07	
GLI	1.76	162	iPc	15	21.51	-1.0

WRH	1.92	1	iPc	15	23.94	-0.8
HDA	1.94	16	iPc	15	24.78	-0.2
NEA	2.07	349	iPc	15	25.65	-1.1
CCB	2.10	4	iPc	15	26.31	-1.0
DOT	2.17	58	ePd	15	27.54	-0.7
NCG	2.21	240	eP	15	28.98	0.1
KNIM	2.23	174	ePd	15	27.36	-1.7
			eS	15	55.53	
SLKM	2.28	206	eP	15	30.89	1.1
CRP	2.28	237	eP	15	30.66	0.7
HIN	2.31	159	ePc	15	28.99	-1.3
CVA	2.33	149	ePc	15	29.22	-1.2
NKA	2.33	220	eP	15	31.90	1.4
GLB	2.35	117	eP	15	31.48	0.7
FBA	2.36	4	iPc	15	30.50	-0.3
BGL	2.38	239	eP	15	31.94	0.7
CKL	2.40	237	eP	15	31.89	0.4
MDM	2.41	359	iPc	15	30.71	-0.9
GLM	2.46	8	iPc	15	31.54	-0.9
TMW	2.49	70	eP	15	31.85	-0.9
SGAM	2.51	144	eP	15	31.05	-1.9
RAGM	2.75	141	eP	15	34.97	-1.5
RDT	2.84	227	ePc	15	37.51	-0.2
HMT	2.92	138	eP	15	37.01	-1.7
RDN	3.00	229	eP	15	39.98	-0.1
RS2	3.04	228	eP	15	40.83	0.2
RSO	3.04	228	eP	15	40.75	0.1
RED	3.08	228	eP	15	40.88	-0.2
TGL	3.13	123	eP	15	40.24	-1.6
BALM	3.16	116	eP	15	40.57	-1.7
WAX	3.32	127	eP	15	42.56	-1.8
CNPM	3.39	207	eP	15	44.80	-0.5
TTA	3.62	279	iPc	15	48.00	-0.7
CTGM	3.62	113	eP	15	47.74	-1.1
SVW	3.82	251	eP	15	50.70	-0.7
WRG	3.90	128	eP	15	52.13	-0.4
PDB	4.02	229	eP	15	53.78	-0.5
FYU	4.22	16	ePc	15	56.25	-0.8
IMA	4.26	328	ePc	15	56.50	-1.2
CDD	4.52	219	eP	16	00.33	-1.0
INK	8.38	40	eP	16	52.00	-2.9
YKA	15.40	75	eP	18	26.70	-1.5
	0.7s	0.20nm			2.4mb	
67 obs. associated						

MAY 21, 1991 11h 00m 19.08±0.48s  
7.517 S ±2.9km 126.539 E ±3.5km  
DEPTH = 18.4 ± 3.4 km  
6.2mb ( 58 obs.) 6.3msz ( 26 obs.)  
BANDA SEA (280)  
Mo=8.0\*10\*\*18 Nm (PPT). Complex  
event observed on broadband  
displacement seismograms.  
FAULT PLANE SOLUTION: P-Waves  
NP1:Strike=275 Dip=68 Slip= 90  
NP2: 95 22 90  
Principal Axes:  
T P1g=67 Azm=185  
P 23 5  
Comment: The focal mechanism is  
poorly controlled and  
corresponds to reverse  
faulting. The preferred fault  
plane is NP2.  
RADIATED ENERGY  
No. of sta: 10 Focal mech. F  
Energy 1.9±0.4\*10\*\*14 Nm  
CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 22S, 62C M.W.: 15S, 35C  
Centroid Location:  
Origin Time 11:00:25.5 0.1  
Lat 7.27S 0.01 Lon 126.55E 0.01  
Dep 35.3 0.7 Half-duration 7.8  
Moment Tensor: Scale 10\*\*18 Nm  
Mrr= 6.83 0.07 Mtt=-8.44 0.08  
Mff= 1.61 0.10 Mrt=-3.68 0.20  
Mrf= 1.71 0.15 Mtf=-0.07 0.07  
Principal Axes:  
T Val= 8.10 P1g=71 Azm=230  
N 1.19 14 95  
P -9.29 13 2  
Best Double Couple: Mo=8.7\*10\*\*18  
NP1:Strike= 74 Dip=34 Slip= 65



[illegible]



21d 11h

Z	36s	37.90um	6.2MsZx	e	13	25.00	NPA	85.47	255	iP	12	52.90	-4.7X
N	15s	8.10um		ePPP	14	40.00		1.0s	400.00nm				6.6mb
E	16s	13.40um		eS	19	02.00	KER	85.56	305	iPc	12	57.60	-0.3
		ec	09	ePS	19	29.00	ABHA	86.47	289	iPc	13	05.30	2.4X
		ed	09	eScS	20	07.00	SDN	86.60	33	ePc	13	02.60	0.3
		PP	11	esS	20	38.00		0.8s	97.70nm				6.1mb
		eS	16	eSS	23	15.00	TAB	86.95	309	iPc	13	06.00	1.3
		eSS	20	iPc	11	09.00	ANM	87.56	24	ePc	13	07.60	0.7
		S	20	iS	19	57.00	GRO	88.51	314	iPc	13	12.00	0.2
SAP	52.10	14	eP	09	31.00	0.8			iS	23	59.00		
		eS	16	48.00			AAE	88.98	279	eP	13	16.50	1.4
MHZ	52.57	143	P	09	34.50	0.6	PYA	90.51	314	iP	13	22.00	0.7
GUN	52.76	314	Pc	09	35.48	-0.4			iS	24	16.00		
GTA	52.85	334	iPc	09	36.80	0.8	SVW	90.70	28	ePc	13	22.90	1.1
	8.0s	*****nm					NVL	90.84	198	eP	13	23.50	1.2
Z	24s	31.20um	6.3MsZx						ePcP	13	30.00		
E	15s	17.50um							e	13	35.00		
		S	16	56.00					e	13	48.00		
PKI	52.91	313	Pc	09	36.30	-0.6	FRU	68.79	322	iPc	11	26.00	1.7
	0.5s	529.00nm	6.7mb						iS	20	30.00		
GBA	53.07	293	P	09	38.00	0.1	YAK	69.37	2	iPc+	11	28.00	0.7
	1.5s	453.00nm	6.2mb						iPcP	11	54.00		
KKN	53.12	313	Pc	09	37.92	-0.5			iPP	14	14.00		
	0.7s	737.00nm	6.7mb						iPPP	15	38.00		
DMN	53.15	313	Pc	09	38.22	-0.4			iScP	15	54.00		
	1.0s	1958.00nm	7.0mb						iPcS	16	03.00		
THZ	53.27	137	P	09	39.30	0.3			ePSP	18	33.00		
LTZ	53.31	139	P	09	39.70	0.4			iS	20	32.00		
HYB	53.49	298	iPc	09	39.50	-1.5			iPS	21	08.00		
	1.2s	571.40nm	6.4mb						iScS	21	26.00		
		iS	17	10.00					iSS	24	54.00		
WLZ	53.57	132	P	09	42.70	1.5	GAR	69.63	316	iP	11	29.00	-0.6
GKN	53.71	313	Pc	09	42.20	-0.4			iPP	14	13.00		
	1.1s	2392.00nm	7.1mb						PPP	15	47.00		
TCW	53.96	136	P	09	44.10	0.1			e	17	49.00		
KHZ	53.98	138	P	09	44.30	0.2			iS	20	35.00		
KIW	54.25	136	P	09	45.60	-0.6			iSS	25	04.00		
MRW	54.26	136	P	09	45.80	-0.4			iSSS	28	17.00		
		e	09	56.20			DSH	70.49	315	iPc	11	35.00	0.2
WEL	54.32	136	P+	09	45.00	-1.7			iS	20	43.00		
		PP	11	26.00			TAS	71.42	318	iPc	11	41.00	0.6
		PPP	13	20.00					iS	20	58.00		
		S	17	20.00			RAR	72.15	110	P	11	44.00	-1.0
CAW	54.46	136	P	09	47.30	-0.4	SMY	72.32	28	ePd	11	47.70	2.3
MNG	54.55	135	P	09	47.60	-0.8		0.9s	447.00nm				6.5mb
PGZ	55.10	135	P	09	52.60	0.2	MAW	73.23	201	iPc	11	51.80	1.3
HBZ	55.50	131	P	09	55.40	0.0		0.8s	129.00nm				6.0mb
PUZ	55.62	131	P	09	55.70	-0.6			e	22	44.00		
NOZ	55.64	132	eP	09	55.50	-0.9	SBA	73.30	172	iPc+	11	52.80	2.0
YSS	56.16	13	iPd	10	01.00	1.1			iS	21	29.20		
		iS	17	46.00			CRZF	74.03	224	iPc	12	02.00	6.4X
POO	58.05	297	iPc	10	13.50	-0.3			eS	21	50.00		
	0.8s	83.58nm	5.8mb				MAIO	76.36	310	iPc+	12	09.60	0.3
		iS	18	11.00				2.0s	697.67nm				6.4mb
BOM	59.10	297	iPc	10	19.80	-1.2			eS	22	00.00		
		iS	18	23.30			ADK	76.42	32	P	12	08.80	-0.3
NDI	59.62	309	iPc	10	22.80	-1.7		1.5s	351.35nm				6.2mb
	0.8s	343.28nm	6.5mb				TIK	79.00	1	iPc	12	24.00	1.1
CSY	59.72	187	iPc	10	26.20	1.6			iS	22	19.00		
	0.7s	256.50nm	6.5mb				KIP	79.34	67	ePc	12	32.57	6.8X
		iS	15	36.80					eS	22	28.75		
DRV	59.78	174	iPc	10	25.80	0.8	AFR	81.78	107	iP	12	40.30	1.6
		S	18	53.00				1.5s	185.00nm				5.9mb
		SS	22	35.00			PAE	81.95	107	iP	12	41.30	1.7
		SSS	25	18.00				1.5s	310.00nm				6.1mb
AFI	60.81	102	eP	10	28.00	-5.0X	PPT	81.97	107	iP	12	41.80	2.1
		e(S)	18	48.00				1.5s	225.00nm				6.0mb
AFI	60.81	102	ePc	10	32.59	-0.4	PPN	82.11	107	iP	12	42.40	2.0
		eS	18	49.24				1.5s	145.00nm				5.8mb
ZAK	61.09	343	iPc	10	34.70	0.5	TVO	82.25	107	iP	12	43.20	1.9
		eS	18	52.00				1.5s	435.00nm				6.3mb
WMO	62.01	329	iPc	10	40.92	0.3	SPA	82.53	180	iPc	12	42.10	0.1
Z	28s	21.10um	6.2MsZx					1.0s	275.00nm				6.3mb
N	12s	6.50um					Z	20s	45.04um				6.8MsZ
E	12s	3.40um					PMO	83.83	104	iP	12	51.00	1.7
		ec	10	42.00				1.5s	270.00nm				6.2mb
		ed	10	44.32					iP	13	29.20	152kmX	
		ScP	15	12.00			VAH	84.06	105	iP	12	52.20	1.7
		S	19	04.00				1.5s	185.00nm				6.1mb
		iS	19	04.09					iP	13	30.40	152kmX	
		eScS	20	31.07			TPT	84.09	104	iP	12	52.50	1.8
IRK	62.52	345	ePc	10	44.00	0.2		1.5s	225.00nm				6.2mb
		ePcP	10	55.90					iP	13	30.50	151kmX	
		e	11	06.20			RUV	84.30	105	iP	12	53.30	1.6
		epP	11	22.90	165kmX			1.5s	115.00nm				5.9mb
		esP	11	37.70			ILT	84.48	18	iP	12	53.00	1.4
		ePP	12	58.00					iS	23	13.00		



			e	14	40.00				PRU	109.82	320	ePdiff14	49.50	1.3	LPG	116.03	317	ePKP	19	03.90	0.7		
			e	18	20.00				Z	20s		6.40um		6.2Msz		1.7s		40.45nm					
			e	20	24.00				N	22s		6.80um					116.04	317	ePKP	19	03.80	0.7	
			e	24	44.00				E	18s		3.20um					116.11	37	ePKP	19	01.00	-1.8	
			e	25	34.00							e	18	13.80			116.28	57	ePKP	19	04.00	0.1	
			e	27	04.00							ePP	19	14.00			116.53	57	ePKP	19	04.00	-0.2	
ITU	100.56	310	iPdiff14	06.00	-1.2				BRG	109.99	322	iPdiff14	49.30	0.3	FRF	116.65	315	ePKP	19	02.70	-1.3		
INK	100.62	22	ePdiff14	06.20	-0.6							i	15	03.40			116.75	42	ePKP	19	02.60	-1.9	
SIT	100.69	33	Pdiff	14	20.00	12.6X				2.5s		80.00nm					116.80	315	ePKP	19	03.00	-1.3	
	Z	20s		11.50um		6.4Msz						e	15	22.40			116.83	56	ePKP	19	05.00	0.3	
SOD	100.71	337	iPdiff14	06.20	-1.1							e	18	14.80			116.87	315	ePKP	19	03.30	-1.1	
KAF	101.39	332	ePdiff14	08.90	-1.5				BRG	109.99	322	iPKP	18	42.20	-8.8X			117.37	320	ePKP	19	03.60	-1.7
	0.9s			10.00nm		5.4mb			Z	20s		8.50um		6.3Msz			1.6s		31.10nm				
			eSP	14	10.50				N	20s		7.00um					117.39	319	ePKP	19	03.80	-1.6	
VR1	102.18	315	ePdiff14	15.00	0.6				E	20s		4.00um					1.6s		37.30nm				
CVO	102.57	315	ePdiff14	35.00	18.9X							i	18	57.80			117.60	319	ePKP	19	04.00	-1.7	
BUC	102.68	314	iPdiff14	18.00	1.5							iSDIF	27	04.00			117.67	320	ePKP	19	04.40	-1.4	
			i	17	34.00							iPKKP	30	05.00			1.6s		34.20nm				
BUC1	102.73	314	iPdiff14	16.00	-0.7				VBY	110.21	316	e(Pdiff14	51.50	1.4	AVF	117.86	319	ePKP	19	04.40	-1.8		
MLR	102.75	315	ePdiff14	17.00	0.0				CLL	110.47	322	Pdiff	14	52.00	1.0	BGF	118.27	319	ePKP	19	05.80	-1.2	
UZH	105.01	318	iPdiff14	28.00	1.2					2.3s		81.00nm					1.6s		62.20nm				
VAY	105.41	311	ePdiff14	27.70	-1.1				CLL	110.47	322	e(PKP)	18	38.00	-13.9X	MAF	118.57	319	ePKP	19	06.20	-1.4	
UPP	105.93	330	ePdiff14	35.00	4.4X				Z	17s		6.00um		6.2MszX		TCF	118.78	319	ePKP	19	06.70	-1.3	
			iPP	18	50.40							SDIF	27	06.00			1.6s		24.90nm				
			iSKS	25	09.00				KMR	110.48	319	iPdiff14	51.90	0.7	FFC	119.13	30	ePKPc	19	07.20	-1.2		
			iS	26	24.00				KMR	110.48	319	iPKP	18	50.60	-1.5		1.6s		139.00nm				
SKO	106.21	311	ePdiff14	30.00	-2.4X							iPP	19	32.20		LSF	119.23	319	ePKP	19	07.40	-1.5	
	Z	22s		6.45um		6.1Msz			LJU	110.61	316	ePdiff14	51.50	-0.3	CAF	119.35	318	ePKP	19	08.20	-1.0		
	N	21s		4.80um					WDC	110.72	50	ePKP	18	51.00	-1.8		1.7s		44.10nm				
	E	22s		8.06um					CEY	110.74	316	ePdiff14	53.00	0.5	LDF	119.36	322	ePKP	19	07.80	-1.2		
			e	17	34.00				VOY	111.05	316	ePdiff14	52.50	-1.4	FLN	119.50	323	ePKP	19	08.00	-1.3		
			i	18	53.60							i	19	36.00			1.5s		31.35nm				
			i	18	56.50							e	17	56.00			1.7s		51.45nm				
			i	21	12.00				TRI	111.20	316	ePdiff14	54.00	-0.4	RJF	119.58	318	ePKP	19	08.50	-1.0		
			i	25	00.00							iPP	19	28.00		GRR	119.89	322	ePKP	19	08.60	-1.4	
			i	28	17.50							iSP	29	00.00		LPO	120.02	318	ePKP	19	09.60	-0.8	
			i	28	55.50							iSPP	30	10.00			1.7s		66.15nm				
			i	29	18.00							iSS	35	28.00		LPF	120.15	322	ePKP	19	09.30	-1.2	
			i	30	13.50							iLR	55	24.00		MFF	120.17	320	ePKP	19	09.40	-1.2	
			i	33	52.50				KBA	111.21	318	ePKP	18	40.00	-13.7X	LFF	120.23	318	ePKP	19	09.90	-0.8	
			i	38	24.50							e	19	04.00		EPF	121.18	316	ePKP	19	11.20	-1.5	
			i	41	19.00							i	19	35.20			1.7s		29.40nm				
SPC	106.30	319	ePdiff14	33.30	0.5				MOX	111.48	322	ePdiff14	57.00	1.4	PV09	121.28	49	ePKPc	19	12.70	-0.7		
			e	18	51.60					2.6s		110.00nm			BTH	121.52	317	ePKPc	19	05.00	-8.3X		
			i	19	05.80				Z	22s		9.20um		6.3Msz			e	19	13.50				
KRA	106.38	320	ePdiff14	33.70	0.8				N	24s		8.20um					e	19	32.00				
			e	14	48.00				E	24s		4.20um					e	20	35.00				
BEO	106.67	314	e(PKP)	18	45.00	0.1			GRF	111.97	321	iPdiff14	58.40	0.6			iPP	20	45.50				
PSZ	106.69	318	ePdiff14	34.10	-0.3					5.5s		625.00nm					pPP	20	54.50				
SRO	107.76	318	ePdiff14	38.50	-0.6				Z	22s		7.20um		6.2Msz			PPP	23	05.00				
			e	18	03.40				PRS	112.19	54	ePKP	18	57.20	1.5		e	25	37.00				
			e	19	13.60				LLA	112.50	54	ePKP	18	58.00	1.7		e	26	08.00				
			e	31	25.70				CMB	112.74	52	ePKP	18	50.80	-5.9X		e	27	46.00				
HFS	107.77	331	ePdiff14	37.70	-1.1				FIR	113.35	314	ePKP	19	15.00	17.4X		e	27	46.00				
	0.6s			3.50nm		5.6mb			FRI	113.43	53	ePKP	18	57.80	-0.2		PKKP	29	13.00				
	Z	18s		6.29um		6.2Msz			SBC	113.78	56	ePdiff15	08.78	2.6X		(SP)	30	18.50					
			ePcP	14	40.50							eSKS	25	46.63		(PS)	30	45.00					
			e	14	47.70							iSDIF	27	41.51		e(PKKS)	32	44.00					
			e	14	59.60							ePS	29	18.93		e	34	07.50					
DAG	108.31	352	ePdiff14	41.00	0.1				BNS	114.09	323	ePdiff15	12.00	4.8X		e	40	38.00					
	0.7s			15.07nm		6.3mb			Z	20s		6.00um		6.2Msz		e	42	48.00					
ZST	108.50	318	ePdiff14	41.30	-1.1				ISA	114.61	54	ePKP	19	01.00	0.5	FRB	122.83	8	ePKP	19	14.00	-1.1	
			e	18	03.50				ISA	114.61	54	ePdiff15	12.51	2.5X		pP	20	55.00					
			e	19	02.00							eSKS	25	50.07		GOL	123.68	47	PKP	19	15.00	-3.0X	
			i	19	17.20							iSDIF	27	37.09		Z	20s		7.50um		6.3Msz		
			e	30	12.40				DBN	114.87	325	ePdiff15	12.00	1.4	GLD	123.77	47	ePKPc	19	17.70	-0.3		
KSP	108.54	321	ePdiff14	43.20	0.7				MEM	114.90	323	PKPd	19	02.80	2.4X		Z	18s		7.82um		6.4Msz	
			e	17	56.80							e	19	47.00		ALO	124.36	53	iPKPc	19	19.00	-0.3	
			e	19	12.70				PAS	115.08	56	ePdiff15	14.60	2.6X		Z	19s		9.55um		6.5Msz		
NB2	108.66	332	Pdiff	14	41.60	-1.2						eSKS	25	50.08		ANMO	124.36	53	iPKPc	19	19.00	-0.3	
	1.0s			7.00nm		5.8mb						e	26	51.00		Z	19s		8.85um		6.4Msz		
COR	109.58	45	ePdiff14	48.22	1.0X				MWC	115.16	56	ePKP	19	02.00	0.2	ANMO	124.36	53	ePdiff16	03.15		9.5X	
			eSKS	25	25.74				TNP	115.20	51	ePKPc	19	01.20	-0.5		eSKS	26	24.06				
			eSKS	25	25.77				SBB	115.28	55	ePKP	19	02.00	0.2		eHSKKS	28	02.83				
			eSDIF	27	06.13				CLC	115.29	54	ePKP	19	02.00	0.2		i	29	10.92				
			ePS	28	36.82				BSF	115.31	320	ePKP	18	59.40	-2.1								
COP	109.66	327	iPdiff14	51.00	3.7X				RVR	115.76	56	ePKP	19	02.00	-0.6	TOL	125.41	314	iPKP+	19	21.00	0.1	
	Z	21s		0.79um		5.3MszX			DOU	115.93	323	Pdiff	15	17.00	1.6		iPP	21	08.00				
			i	19	31.00							PP	20	17.00			iPP	23	50.00				
			i	21	47.00							S	27	58.00			eSKS	26	42.00				
			i	28	45.00							SP	29	48.00			iPS	31	10.00				
YKA	109.71	26	ePdiff15	04.70	17.3X				PEC	115.95	56	ePK											



21d 11h

AVE	130.34	308	i PKP	19 30.50	-0.1
			i	20 14.00	
SCH	131.64	10	ePKP	19 32.00	-0.4
KIC	131.64	272	PKP	19 33.00	-0.6
LIC	131.92	272	PKP	19 33.40	-0.7
Z	20s	9.80um		6.5msz	
TIC	131.94	272	PKP	19 33.20	-0.9
TUL	132.14	47	ePKPd	19 34.00	0.1
	1.7s	223.30nm			
Z	20s	5.10um		6.2msz	
MRX	132.21	70	(PKP)	19 35.20	0.8
LKO	132.64	276	PKP	19 26.18	-9.3X
III	134.00	72	(PKP)	19 39.00	0.8
CCM	134.30	43	ePKPc	19 36.16	-1.8
		ed	19 39.97		
PPM	134.70	71	(PKP)	19 40.70	0.8
FVM	134.88	42	ePKPc	19 37.50	-1.5
IISM	135.88	71	(PKP)	19 42.50	1.1
PEL	136.37	159	ePKP	19 33.50	-8.6X
LVVM	136.62	69	(PKP)	19 43.00	0.2
MDZ	137.24	161	e(PKP)	19 35.20	-8.6X
LPA	137.59	175	ePKP+	19 44.00	-0.3
Z	20s	17.02um		6.8msz	
		ePP	22 24.00		
WVLY	138.74	28	PKP	19 44.00	-2.2
CBM	138.77	15	PKP	19 44.00	-2.0
RSCP	139.44	42	PKP	19 50.00	2.3X
Z	22s	13.23um		6.6msz	
PDA	140.76	324	ePKP	19 44.00	-5.9X
BLA	141.61	36	ePKPc	19 45.50	-6.1X
TXNY	141.74	26	iPKP	19 46.60	-5.0X
TBR	141.76	26	PKP	19 46.00	-5.6X
LVNJ	141.79	26	PKP	19 46.00	-5.7X
PNJ	141.98	26	PKP	19 48.00	-4.0X
CBN	142.57	32	ePKP	19 48.00	-5.1X
MBO	143.55	284	iPKPd	19 52.30	-3.1X
ITB7	147.55	179	ePKP	20 06.00	4.2X
ITB	147.88	179	ePKP	20 08.50	6.1X
ITB1	148.02	178	ePKP	20 07.20	4.7X
VAO	149.01	192	ePKP	20 04.50	0.2
		e	20 08.70		
		e	20 14.60		
NNA	149.73	130	iPKPc	20 04.70	-0.8
	1.5s	294.44nm			
Z	20s	12.23um		6.7msz	
ARE	150.23	143	ePKP	20 07.00	0.4
PPD	150.56	184	ePKP	20 07.10	0.5
		e	20 13.30		
LPB	152.06	149	PKPc	20 08.00	-1.4
	1.5s	833.33nm			
Z	22s	14.81um		6.8msz	
		SS	43 37.00		
		LR	13 10.00		
ZOBO	152.27	149	iPKPc	20 10.00	0.1
	1.9s	196.50nm			
		eLR	13 00.00		
CCH	152.27	153	ePKP	20 10.00	0.4
UPA	154.16	85	ePKPc+	20 11.00	-0.9
		i	20 19.50		
PSO	155.40	104	ePKP	20 14.50	0.4
SIV	155.46	162	iPKPc	20 13.20	-0.4
BAO	156.37	193	ePKP	20 14.90	-0.1
BOG	159.31	97	iPKPc	20 20.00	1.2
		iPP	22 22.00		
FUO	159.75	95	ePKP	20 18.00	-1.3
BMC	160.54	90	iPKPd	20 20.00	0.2
SDV	162.95	84	ePKP	20 22.10	-0.2
TOV	163.70	81	ePKP	20 22.80	-0.1
TRN	171.56	68	PKP	20 20.80	-7.4X
	1.5s	187.50nm			
Z	22s	15.38um			
S.D. = 1.1 on 290 of 347 obs.					
MAY 21, 1991 11h 29m 32.00±0.40s					
7.506 S ± 6.6km 126.548 E ±11.5km					
DEPTH = 33.0km (normal)					
5.1mb ( 14 obs.)					
BANDA SEA (280)					
AAI	4.13	23	ePd	30 33.40	-1.0
KNA	8.48	165	eP	31 33.00	-2.5
WB2	14.50	149	iPd	32 52.40	-4.4X
	0.9s	16.20nm		4.5mb	
ASPA	17.55	157	eP	33 35.20	-0.7
	1.1s	50.60nm		4.6mb	
		eS	36 36.00		

OIS	18.11	137	eP	33 40.00	-2.9X
		i	33 51.30		
		e	36 52.00		
WARB	18.58	180	eP	33 50.00	1.5
QLP	25.35	141	eP	34 59.00	1.3
STK	28.01	152	iPc	35 30.00	7.9X
	0.6s	8.20nm		4.6mb	
		i	35 33.90		
		eS	40 56.80		
PSI	29.37	289	ePd	35 41.10	6.6X
CMS	29.88	146	eP	35 39.00	0.0
BFD	32.92	156	eP	36 07.00	1.5
TOO	34.51	153	eP	36 22.00	2.6X
SSE	38.72	353	eP	36 54.00	-0.8
XAN	44.57	339	P	37 42.80	0.0
MAT	45.16	13	eP	37 48.00	0.5
	0.8s	5.22nm		4.5mb	
LZH	48.33	335	iPc	38 13.60	1.0
	1.5s	40.00nm		5.2mb	
		pP	38 22.80	31kmX	
SNY	49.17	357	eP	38 21.80	3.1X
	1.0s	10.00nm		4.8mb	
MDJ	51.95	3	eP	38 41.00	1.1
	1.0s	20.00nm		5.0mb	
GUN	52.76	314	P	38 46.84	0.1
	0.7s	96.00nm		5.9mb	
GTA	52.84	334	P	38 47.70	0.8
	0.9s	10.00nm		4.8mb	
		pP	38 56.00	27kmX	
PKI	52.90	313	P	38 47.08	-0.7
	0.5s	41.00nm		5.6mb	
GBA	53.08	293	Pc	38 47.90	-0.9
	1.3s	19.90nm		4.9mb	
KKN	53.12	313	P	38 49.30	0.0
	0.8s	55.00nm		5.6mb	
DMN	53.15	313	P	38 49.68	0.2
	0.8s	74.00nm		5.7mb	
HYB	53.50	298	eP	38 51.00	-0.9
GKN	53.71	313	P	38 53.62	0.1
	0.5s	50.00nm		5.8mb	
IRK	62.51	345	eP	39 45.00	-9.6X
		e	39 54.20		
MAIO	76.36	310	eP	41 21.00	0.9
YKA	109.70	26	ePKP	47 59.40	-1.4
	0.6s	0.30nm			
LPB	152.06	149	ePKP	49 15.00	-5.1X
S.D. = 1.1 on 22 of 30 obs.					
MAY 21, 1991 12h 05m 29.42±0.48s					
7.504 S ± 6.1km 126.705 E ±12.1km					
DEPTH = 33.0km (normal)					
5.2mb ( 7 obs.)					
BANDA SEA (280)					
AAI	4.07	21	eP	06 30.00	-1.0
MTN	6.87	141	eP	07 02.00	-8.4X
KNA	8.44	166	eP	07 30.80	-1.6
		eS	08 56.00		
WRA	14.41	150	P	09 11.00	17.9X
	0.8s	20.30nm			
WB2	14.42	150	iPd	08 48.80	-4.4X
	0.6s	27.20nm		5.0mb X	
MBL	15.11	205	eP	09 00.00	-2.3
		eS	11 40.00		
ASPA	17.49	158	eP	09 31.40	-1.2
	0.7s	34.10nm		4.6mb	
		eS	12 32.60		
OIS	18.01	137	eP	09 36.00	-3.0X
		eS	12 44.00		
WARB	18.58	180	eP	09 46.00	0.0
PMG	20.31	97	eP	10 14.00	8.5X
BAL	24.82	201	eP	10 50.90	0.8
QLP	25.25	141	eP	10 55.80	1.6
KLB	25.38	198	eP	10 56.50	1.1
NWAO	26.78	198	eP	11 09.00	0.7
STK	27.94	152	eP	11 27.20	8.3X
	0.7s	6.30nm		4.4mb	
		eS	16 55.10		
PSI	29.51	289	ePd	11 39.50	6.3X
BFD	32.86	156	e(P)	12 04.00	1.6
		e	12 08.00		
TOO	34.45	153	eP	12 21.00	4.8X
CHG	37.86	314	eP	12 45.40	0.2
MAT	45.12	13	eP	13 43.00	-1.6
GUN	52.87	313	P	14 45.02	0.0
	0.7s	38.00nm		5.5mb	
PKI	53.02	313	P	14 46.74	0.7

	0.6s	17.00nm		5.2mb	
KKN	53.24	313 P	14 47.68	0.2	
	0.7s	22.00nm		5.2mb	
DMN	53.26	313 P	14 47.80	0.1	
	0.8s	32.00nm		5.4mb	
GKN	53.82	313 P	14 51.72	0.0	
	0.8s	36.00nm		5.5mb	
NDI	59.74	309 iP	15 32.00	-1.6	
QUE	68.44	306 eP	16 30.70	-0.1	
YAK	69.35	2 iPd	16 37.00	1.5	
MAIO	76.48	310 eP	17 19.00	0.9	
ZOBO	152.19	148 ePKP	25 20.00	2.1X	
		i	25 34.00		
S.D. = 1.2 on 21 of 30 obs.					
* MAY 21, 1991 12h 43m 35.87±1.05s					
7.251 S ± 8.4km 129.434 E ±18.3km					
DEPTH = 157.7 ± 13.8 km					
5.0mb ( 9 obs.)					
BANDA SEA (280)					
AAI	3.75	341 ePd	44 34.40	0.7	
MTN	5.81	163 eP	45 00.40	-0.5	
KNA	8.47	184 eP	45 34.40	-2.2	
		eS	46 58.00		
WB2	13.49	160 iPc	46 39.00	-3.2X	
	0.8s	35.70nm		4.8mb	
		i	47 10.20		
OIS	16.49	144 eP	47 21.00	1.4	
		eS	50 13.00		
MBL	16.65	213 eP	47 23.00	1.4	
ASPA	16.88	166 eP	47 23.90	-0.4	
	0.5s	36.10nm		5.0mb	
		eS	50 18.50		
WARB	19.02	188 eP	47 49.00	0.9	
NANU	20.28	220 eP	48 01.60	0.6	
STK	27.00	157 eP	49 14.40	9.5X	
	0.6s	3.20nm		4.1mb	
		eS	54 24.80		
CHG	39.68	311 ePd	50 55.40	1.1	
	1.0s	15.00nm		4.7mb	
GUN	54.70	312 P	52 50.90	-0.6	
	0.7s	61.00nm		5.5mb	
PKI	54.86	311 P	52 52.16	-0.5	
	0.6s	19.00nm		5.1mb	
KKN	55.08	311 P	52 53.74	-0.3	
	0.6s	26.00nm		5.3mb	
DMN	55.11	311 P	52 53.66	-0.7	
	0.6s	18.00nm		5.0mb	
GKN	55.67	311 P	52 57.54	-0.7	
	0.6s	33.00nm		5.4mb	
S.D. = 1.2 on 14 of 16 obs.					
* MAY 21, 1991 13h 02m 55.57±0.88s					
14.258 N ±12.6km 92.746 W ± 7.8km					
DEPTH = 33.0km (normal)					
4.4mb ( 7 obs.)					
NEAR COAST OF CHIAPAS, MEXICO ( 69)					
SCX	2.47	2 iP	03 39.72	5.4X	
		iS	04 14.44		
PBJ	3.36	311 eP	03 42.00	-5.0X	
		iS	04 20.00		
OXX	4.75	307 eP	04 06.58	-0.3	
		iS	05 02.00		
PIO	5.61	293 iP	04 14.25	-4.6X	
		iS	05 18.50		
IISM	6.47	317 (P)	04 34.25	3.3X	
		iS	05 46.52		
LVVM	6.50	327 iP	04 30.00	-1.4	
IIT	7.13	312 (P)	04 45.53	5.0X	
ACX	7.33	292 iP	04 42.50	-0.6	
PPM	7.39	311 iP	04 45.00	0.6	
		iS	06 10.00		
IIA	7.47	311 iP	04 45.76	0.8	
III	7.64	303 iP	04 47.00	-0.7	
MRX	9.73	305 iP	05 16.00	-0.3	
TUL	21.73	353 eP	07 47.20	1.2	
	0.7s	6.90nm		4.2mb	
RSCP	22.21	16 eP	07 50.50	-0.3	
	1.1s	31.06nm		4.7mb	
ALO	24.02	331 eP	08 09.00	0.3	
	1.0s	5.25nm		4.0mb	
ANMO	24.02	331 eP	08 09.70	1.0	
BLA	25.36	23 eP	08 21.00	-0.3	
GOL	27.67	339 iP	08 43.00	0.2	
	1.1s	19.23nm		4.7mb	



TNP 32.14 322 eP 09 23.80 1.2  
1.0s 3.25nm 4.2mb  
LRM 35.58 336 eP 09 53.00 0.8  
SES 38.99 341 eP 10 20.00 -0.6  
FFC 41.02 352 eP 10 36.00 -1.1  
1.0s 10.00nm 4.5mb  
PNT 41.32 333 eP 10 41.00 1.3  
SIV 43.39 133 P 10 57.00 0.0  
YKA 50.61 347 eP 11 52.00 -1.1  
0.9s 8.90nm 4.8mb  
INK 59.99 344 eP 13 00.30 -0.6  
FBA 62.72 337 eP 13 08.60 -10.8X  
1.0s 5.00nm  
HYB 147.38 16 ePKP 22 38.50 2.6X  
S.D. = 0.9 on 21 of 28 obs.

MAY 21, 1991 13h 06m 11.75±0.61s  
49.136 N ± 4.9km 6.935 E ± 8.1km  
DEPTH = 14.6 ± 5.0 km

GERMANY (543)  
MD 2.8 (STR), 2.4 (UCC).

GWf 0.48 109 Pg 06 21.42 0.0  
CDF 0.76 163 Pg 06 26.04 -0.2  
WLS 0.77 159 Pg 06 26.46 0.0  
ECH 0.93 171 Pg 06 29.29 0.2  
VITF 1.12 215 Pg 06 31.18 -1.0  
MOF 1.29 174 Pg 06 34.99 -0.3  
Sg 06 53.68  
BSF 1.31 184 Pg 06 36.24 0.7  
FEL 1.45 150 Pg 06 38.98 1.4  
Sg 06 58.87  
TNS 1.47 42 ePn 06 35.90 -1.8  
MEM 1.59 338 iP 06 39.90 0.5  
iS 07 01.80  
ENN 1.76 339 iPnc 06 43.50 1.7  
0.8s 30.00nm eSn 07 02.00  
LOMF 1.79 182 Pn 06 41.95 -0.4  
DOU 1.80 303 iP 06 41.70 -0.8  
S.D. = 1.1 on 13 of 13 obs.

% MAY 21, 1991 13h 45m 16.35±1.08s  
41.148 N ± 16.0km 28.543 E ± 13.7km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)  
MD 2.6 (ISK).

ISK 0.40 102 iPg 45 24.30 -0.2  
iSg 45 30.80  
YLV 0.86 132 ePg 45 32.20 -0.7  
DMK 0.90 319 iPg 45 33.50 0.0  
eSg 45 45.00  
HRT 0.91 111 iPg 45 34.30 0.5  
IZI 1.07 139 iPn 45 37.10 0.5  
S.D. = 0.7 on 5 of 5 obs.

? MAY 21, 1991 14h 16m 02.83±3.49s  
12.206 N ± 35.7km 89.852 W ± 20.9km  
DEPTH = 33.0km (normal)  
4.0mb (1 obs.)

OFF COAST OF CENTRAL AMERICA (76)  
Felt (II) at San Salvador, El Salvador.

OZA 1.55 32 iPc 16 27.50 -1.0  
LFU 1.69 25 iPc 16 31.00 0.4  
TME 1.86 15 iPc 16 33.30 0.3  
VSM 1.96 52 iPd 16 35.00 0.4  
YKA 53.25 346 eP 25 20.20 0.0  
0.5s 0.80nm 4.0mb  
S.D. = 0.8 on 5 of 5 obs.

\* MAY 21, 1991 15h 20m 09.78±0.79s  
30.901 N ± 11.1km 68.077 E ± 7.6km  
DEPTH = 10.0km (geophysicist)  
3.9mb (1 obs.)

PAKISTAN (710)

QUE 1.20 234 eP 20 32.20 -0.1  
eS 20 48.90  
NDI 8.24 103 e(P) 22 12.00 -0.2  
GAR 8.29 12 eP 22 12.70 -0.3  
MAIO 8.95 309 eP 22 53.00 30.8X  
eS 24 44.00  
GKN 14.71 97 P 23 40.02 0.1  
DMN 15.22 98 P 23 48.16 1.5

KKN 15.32 97 P 23 47.58 -0.3  
PKI 15.49 98 P 23 50.98 0.7  
GUN 15.80 96 P 23 52.44 -1.8  
HYB 16.46 142 eP 24 08.00 5.5X  
YKA 86.91 1 eP 32 56.20 0.5  
0.8s 0.60nm 3.9mb  
S.D. = 1.1 on 9 of 11 obs.

% MAY 21, 1991 15h 23m 19.42±0.80s  
37.723 N ± 7.8km 14.959 E ± 6.5km  
DEPTH = 10.0km (geophysicist)

SICILY (398)

MNO 0.29 315 P 23 25.40 -0.3  
eSg 23 29.50  
ATN 0.59 42 P 23 31.20 -0.2  
eSg 23 39.90  
MEU 0.62 182 P 23 31.10 -0.9  
eSg 23 41.20  
GIB 0.78 290 P 23 34.10 -0.7  
eSg 23 44.50  
SOI 0.93 68 P 23 37.80 0.6  
eSg 23 52.30  
FAI 1.11 247 P 23 41.70 1.4  
S.D. = 1.1 on 6 of 6 obs.

% MAY 21, 1991 15h 24m 32.63±0.74s  
37.761 N ± 7.5km 14.969 E ± 5.9km  
DEPTH = 10.0km (geophysicist)

SICILY (398)

MNO 0.28 308 P 24 38.50 0.0  
eSg 24 43.20  
ATN 0.56 44 P 24 44.40 0.4  
eSg 24 52.40  
MEU 0.66 183 P 24 45.40 -0.4  
eSg 24 55.60  
GIB 0.78 287 P 24 47.10 -0.8  
eSg 24 59.10  
SOI 0.91 70 P 24 49.90 -0.2  
eSg 25 05.60  
FAI 1.14 245 P 24 54.90 1.0  
S.D. = 0.8 on 6 of 6 obs.

% MAY 21, 1991 15h 44m 58.09±0.70s  
37.772 N ± 7.1km 14.942 E ± 5.6km  
DEPTH = 10.0km (geophysicist)

SICILY (398)

MNO 0.25 309 P 45 03.70 0.2  
eSg 45 07.90  
ATN 0.57 47 P 45 09.40 -0.2  
eSg 45 19.80  
MEU 0.67 181 P 45 11.10 -0.4  
eSg 45 19.40  
GIB 0.76 287 P 45 12.30 -0.6  
eSg 45 24.10  
SOI 0.93 71 P 45 16.10 0.3  
eSg 45 32.10  
FAI 1.12 244 P 45 19.80 0.7  
eSg 45 35.80  
USI 1.67 304 P 45 25.10 -2.4X  
S.D. = 0.6 on 6 of 7 obs.

% MAY 21, 1991 15h 47m 12.71±0.85s  
37.699 N ± 8.0km 14.963 E ± 7.0km  
DEPTH = 10.0km (geophysicist)

SICILY (398)

MNO 0.31 318 P 47 18.90 -0.4  
eSg 47 24.90  
MEU 0.60 183 P 47 23.80 -1.0  
eSg 47 36.00  
ATN 0.61 40 P 47 24.80 -0.2  
eSg 47 33.00  
GIB 0.80 292 P 47 27.60 -0.6  
eSg 47 38.90  
SOI 0.94 66 P 47 31.30 0.7  
eSg 47 46.50  
FAI 1.11 248 P 47 35.10 1.6  
S.D. = 1.3 on 6 of 6 obs.

? MAY 21, 1991 15h 47m 55.63±0.96s  
37.768 N ± 8.2km 14.954 E ± 8.4km  
DEPTH = 10.0km (geophysicist)

SICILY (398)

MNO 0.26 309 P 48 01.50 0.2  
eSg 48 04.50  
ATN 0.56 46 P 48 07.00 0.0  
eSg 48 16.50  
MEU 0.67 182 P 48 09.00 0.1  
eSg 48 19.00  
GIB 0.77 287 P 48 10.40 -0.3  
S.D. = 0.4 on 4 of 4 obs.

? MAY 21, 1991 16h 49m 11.79±1.41s  
50.355 N ± 25.1km 18.939 E ± 11.0km  
DEPTH = 10.0km (geophysicist)

POLAND (548)

ML 2.6 (KRA).

KRA 0.71 115 iPg 49 25.70 -0.1  
iSg 49 35.30  
SPC 1.44 144 iPn 49 38.20 0.1  
i(Sg) 49 56.40  
KSP 1.76 287 ePn 49 42.50 0.1  
iPg 49 45.00  
iS 50 08.50  
ZST 2.47 210 eP 50 27.80 35.1X  
SRO 2.58 189 eP 50 45.10 50.9X  
PRU 2.85 264 ePn 50 04.50 6.4X  
Pg 50 07.50  
e 50 30.50  
eSg 50 40.50  
BRG 3.22 281 iPg 50 13.00 9.6X  
iSg 50 55.00  
KHC 3.69 253 ePn 50 10.00 -0.1  
Pg 50 19.60  
eSn 51 02.70  
eSg 51 12.50  
S.D. = 0.1 on 4 of 8 obs.

MAY 21, 1991 17h 37m 38.85±0.34s  
42.867 N ± 7.5km 48.028 E ± 4.3km  
DEPTH = 10.0km (geophysicist)  
5.0mb (13 obs.)

CASPIAN SEA (338)

TAB 4.97 196 eP 38 55.00 -0.4  
MAIO 11.01 123 iPc 40 20.20 0.7  
0.8s 9.15nm 5.2mb  
eS 42 06.00  
BBTK 11.87 260 iPd 40 31.00 -0.1  
OBN 14.33 333 iPd 41 04.50 0.9  
1.0s 105.00nm 5.5mb  
e 41 09.00  
ePP 41 19.00  
i 41 42.20  
iS 43 39.50  
iSS 43 54.00  
ELL 15.20 252 iP 41 17.40 2.2  
VRI 15.52 288 ePc 41 18.00 -1.3  
ISR 15.62 286 eP 41 26.50 5.9X  
MLR 16.05 287 eP 41 26.20 -0.1  
PVL 16.59 279 iPc 41 34.00 1.1  
DIM 16.62 275 eP 41 34.00 0.7  
GAR 17.27 95 eP 41 44.00 2.3  
RZN 17.29 274 eP 41 41.00 -0.9  
VAY 18.94 274 eP 42 02.00 -0.1  
SKO 19.63 276 eP 42 07.40 -3.0X  
QUE 19.73 124 eP 42 10.90 -0.8  
OHR 20.29 274 eP 42 13.50 -3.9X  
1.3s 78.00nm 4.9mb  
KRA 20.56 300 eP 42 18.50 -1.5  
e 42 37.40  
SRO 21.39 294 iP 42 28.10 -0.5  
ZST 22.22 295 eP 42 36.80 -0.1  
NUR 22.64 329 iP 42 40.90 0.1  
0.7s 42.70nm 5.0mb  
i 42 57.20  
PTJ 23.04 289 eP 42 45.50 0.4  
KAF 23.16 334 iP 42 46.70 0.7  
0.5s 53.20nm 5.3mb  
eSP 42 54.80  
PRU 24.00 299 eP 42 55.50 1.2  
e 43 07.50  
e 43 14.00  
BRG 24.46 301 e(P) 43 01.00 2.3  
e 43 24.00  
e 43 30.00  
e 43 37.00  
KHC 24.59 297 eP 43 02.00 2.0  
KBA 24.77 292 eP 42 58.00 -4.0X



21d 17h

UPP 25.15 323 iP 43 04.00 -1.2  
HFS 27.04 322 eP 43 21.20 -1.6  
0.4s 12.40nm 5.0mb  
e 43 24.20  
e 43 25.90  
e 43 42.20  
SOD 27.14 342 iP 43 25.40 1.8  
i 43 30.80  
NB2 28.52 322 P 43 34.10 -2.2  
0.5s 4.70nm 4.5mb  
WMO 28.68 74 P 43 39.00 1.1  
1.0s 20.00nm 4.9mb  
KEV 29.03 345 eP 43 41.00 0.3  
i 44 09.00  
GKN 33.03 105 P 44 15.52 -1.0  
0.3s 17.00nm 5.5mb  
DMN 33.59 105 P 44 20.80 -0.8  
0.4s 25.00nm 5.5mb  
KKK 33.61 104 P 44 20.58 -1.1  
0.5s 13.00nm 5.1mb  
PKI 33.83 105 P 44 22.58 -1.1  
GUN 33.97 104 P 44 24.12 -0.8  
EKA 34.96 309 Pc 44 31.80 -0.9  
0.5s 2.70nm 4.4mb  
HYB 36.26 125 eP 45 02.50 18.3X  
LSA 36.77 97 P 44 49.30 0.4  
GTA 38.65 77 eP 45 05.40 1.2  
Z 24s 0.60um 4.3mszX  
N 20s 0.70um  
LZH 42.94 80 eP 45 40.50 0.9  
DAG 43.42 342 eP 45 42.50 -0.3  
HHC 46.35 70 eP 46 08.20 1.3  
XAN 47.57 79 P 46 16.50 0.0  
TIY 48.34 73 eP 46 22.80 0.4  
CHG 48.98 103 eP 46 26.00 -1.5  
LIC 59.18 248 P 47 35.40 -7.0X  
FRB 62.56 333 eP 48 03.00 -1.7  
YKA 74.07 352 eP 49 13.90 -2.3  
0.6s 1.40nm 4.2mb  
S.D. = 1.2 on 44 of 50 obs.  
% MAY 21, 1991 18h 20m 51.45±0.71s  
37.791 N ± 7.4km 14.954 E ± 5.9km  
DEPTH = 10.0km (geophysicist)  
SICILY (398)  
MNO 0.25 304 P 20 57.30 0.5  
eSg 21 00.30  
ATN 0.55 47 Pc 21 03.00 0.5  
eSg 21 11.10  
MEU 0.69 182 P 21 04.60 -0.6  
eSg 21 14.90  
GIB 0.76 285 P 21 05.80 -0.6  
eSg 21 16.20  
SOI 0.92 72 P 21 09.60 0.7  
eSg 21 22.90  
FAI 1.14 244 P 21 13.50 0.7  
USI 1.67 304 P 21 18.20 -2.6X  
TDS 2.16 30 P 21 26.60 -1.3  
eSn 22 34.80  
S.D. = 1.0 on 7 of 8 obs.  
% MAY 21, 1991 18h 21m 59.87±0.56s  
37.801 N ± 6.2km 14.947 E ± 5.2km  
DEPTH = 18.6 ± 8.2 km  
SICILY (398)  
MNO 0.24 303 P 22 05.40 -0.3  
eSg 22 08.20  
ATN 0.54 48 P 22 11.10 0.5  
eSg 22 19.90  
MEU 0.70 181 P 22 12.70 -0.6  
eSg 22 22.50  
GIB 0.75 285 P 22 14.10 -0.1  
eSg 22 25.70  
SOI 0.92 72 P 22 17.30 0.4  
eSg 22 32.80  
FAI 1.14 243 P 22 21.50 0.8  
eSg 22 36.00  
USI 1.66 304 P 22 26.20 -2.0X  
TDS 2.15 30 P 22 35.50 0.2  
ORI 2.55 27 P 22 41.10 0.1  
LCI 3.45 42 P 22 53.50 -0.2  
BRT 3.54 29 P 22 54.20 -0.8  
S.D. = 0.6 on 10 of 11 obs.  
% MAY 21, 1991 18h 26m 00.63±0.98s

37.746 N ± 8.1km 14.922 E ± 8.7km  
DEPTH = 10.0km (geophysicist)  
SICILY (398)  
MNO 0.26 316 Pd 26 06.30 0.1  
eSg 26 10.70  
ATN 0.59 46 P 26 12.10 -0.6  
eSg 26 19.80  
MEU 0.64 179 P 26 13.50 -0.1  
eSg 26 24.00  
SOI 0.95 70 P 26 19.30 0.5  
eSg 26 33.20  
S.D. = 0.8 on 4 of 4 obs.  
& MAY 21, 1991 18h 30m 18.60s  
33.780 N 116.930 W  
DEPTH = 13.0km  
SOUTHERN CALIFORNIA (43)  
<PAS-P>. ML 3.0 (PAS).  
PEC 0.22 300 iPd 30 23.20 -0.5  
PLM 0.43 172 iPd 30 27.20 -0.3  
TPC 0.80 66 iPd 30 33.40 -0.5  
3 obs. associated  
& MAY 21, 1991 19h 02m 59.78s  
59.147 N 153.688 W  
DEPTH = 106.1km  
SOUTHERN ALASKA (2)  
<AEIC>.  
CDD 0.22 174 iPd 03 14.26 0.8  
AUI 0.23 35 iPd 03 14.32 0.9  
iS 03 25.41  
AUH 0.25 30 iPd 03 14.60 1.0  
eS 03 27.59  
AUE 0.27 37 iPd 03 14.66 1.1  
MCNL 0.34 277 iPd 03 14.69 -0.8  
eS 03 25.78  
PDB 0.69 338 ePd 03 16.91 -1.0  
SYI 0.86 128 ePd 03 18.51 -1.0  
eS 03 32.96  
XLV 1.05 72 ePd 03 20.50 -1.0  
eS 03 36.52  
HOM 1.16 63 ePd 03 21.81 -0.9  
CNPM 1.31 72 iPd 03 23.20 -1.3  
eS 03 41.16  
RED 1.36 20 iPd 03 23.80 -1.3  
eS 03 42.93  
RSO 1.40 19 iPd 03 24.59 -1.2  
RS2 1.40 19 iPd 03 24.60 -1.2  
RDN 1.45 18 iPd 03 25.07 -1.2  
KDC 1.54 155 ePd 03 25.66 -1.5  
eS 03 45.32  
RDT 1.57 24 iPd 03 26.17 -1.5  
eS 03 46.72  
NKA 2.02 37 ePd 03 33.32 0.0  
CKL 2.16 18 iPd 03 34.03 -1.3  
SVW 2.19 335 ePd 03 34.18 -1.5  
eS 04 01.88  
BGL 2.22 16 iPd 03 34.96 -1.1  
SLKM 2.22 51 ePd 03 34.10 -1.9  
CRP 2.26 19 iPd 03 35.34 -1.3  
SEW 2.36 64 ePd 03 35.60 -2.1  
SUA 2.75 31 ePd 03 41.40 -1.7  
PMS 2.95 43 ePd 03 43.76 -2.0  
SKT 3.04 20 ePd 03 44.87 -2.1  
LTI 3.10 71 ePd 03 46.56 -1.2  
PWA 3.14 35 ePd 03 46.74 -1.6  
KNIM 3.24 66 iPd 03 46.64 -3.1  
PLRM 3.34 41 ePd 03 48.16 -2.8  
KNK 3.46 47 ePd 03 49.74 -2.9  
eS 04 28.45  
GHO 3.54 40 ePd 03 50.57 -3.2  
eS 04 29.97  
CUT 3.67 26 ePd 03 53.29 -2.2  
GLI 3.74 59 ePd 03 52.64 -3.8  
eS 04 33.18  
SML 3.76 43 ePd 03 53.86 -3.0  
MID 3.78 83 ePd 03 54.53 -2.5  
HIN 3.84 68 ePd 03 54.95 -3.0  
TTA 3.96 344 ePd 03 57.53 -2.0  
VZW 4.05 59 ePd 03 57.46 -3.4  
SCM 4.14 47 ePd 03 59.16 -2.9  
VLZ 4.18 58 ePd 03 59.47 -3.0  
CVA 4.24 67 ePd 04 00.05 -3.3  
SGAM 4.49 69 ePd 04 03.46 -3.3

KLU 4.52 55 ePd 04 03.91 -3.3  
eS 04 52.84  
TRF 4.62 19 ePd 04 06.48 -2.2  
RAGM 4.72 71 ePd 04 07.00 -3.0  
TOA 4.74 48 ePd 04 07.34 -2.9  
RND 4.87 27 ePd 04 09.08 -2.9  
HMT 4.92 72 ePd 04 10.07 -2.6  
MCK 5.13 24 ePd 04 13.36 -2.3  
SDG 5.23 46 ePd 04 13.48 -3.5  
GLB 5.42 61 ePd 04 16.43 -3.2  
PAX 5.53 43 ePd 04 18.27 -3.0  
WAX 5.63 72 iPd 04 19.59 -2.9  
TGL 5.69 69 ePd 04 19.81 -3.6  
WRH 5.96 24 ePd 04 22.99 -4.0  
BALM 5.98 67 ePd 04 24.08 -3.3  
WRG 5.99 76 ePd 04 25.26 -2.1  
HDA 6.17 28 ePd 04 26.04 -3.8  
CCB 6.18 24 ePd 04 25.89 -4.1  
RDS 6.27 22 ePd 04 27.92 -3.3  
MDM 6.37 21 ePd 04 28.80 -3.8  
CTGM 6.45 68 ePd 04 31.09 -2.8  
DOT 6.46 42 ePd 04 31.16 -2.7  
GLM 6.56 24 ePd 04 31.00 -4.3  
PNL 7.31 80 ePd 04 42.44 -3.1  
66 obs. associated  
\* MAY 21, 1991 19h 04m 08.56±1.97s  
18.975 N ± 7.0km 145.877 E ± 29.3km  
DEPTH = 146.2 ± 19.6 km  
4.5mb ( 7 obs.)  
MARIANA ISLANDS (216)  
GUA 5.48 190 ePd 05 29.50 0.2  
0.6s 122.67nm 5.3mb  
eS 06 29.30  
CHJJ 18.06 342 P 08 10.60 -0.8  
MAT 18.76 340 ePd 08 18.00 -0.9  
0.6s 3.33nm 3.8mb  
MTMJ 18.93 340 P 08 20.70 0.0  
NIIJ 19.17 343 P 08 23.60 0.5  
YAMJ 19.80 346 P 08 31.20 1.6  
LAT 25.49 177 ePd 09 14.90 -10.1X  
WB2 40.29 197 iPd 11 31.80 -1.2  
0.7s 9.10nm 4.6mb  
e 12 03.30  
WRA 40.30 197 P 11 52.00 19.0X  
0.5s 1.40nm  
ASPA 43.96 196 ePd 12 02.70 -0.2  
0.6s 7.10nm 4.5mb  
YAK 44.46 349 iPd 12 06.60 0.2  
e 12 38.00  
WARB 48.62 203 ePd 12 40.10 0.7  
0.4s 12.00nm 5.0mb  
STK 50.73 185 ePd 13 01.20 5.8X  
1.0s 1.00nm 3.5mb  
INK 69.05 23 ePd 14 59.00 -0.9  
YKA 77.67 28 ePd 15 49.50 -0.5  
0.6s 4.20nm 4.4mb  
ZOBO 147.51 91 PKP 23 37.00 1.4  
S.D. = 1.0 on 13 of 16 obs.  
\* MAY 21, 1991 19h 22m 16.48±0.46s  
7.693 S ± 11.7km 126.250 E ± 15.2km  
DEPTH = 33.0km (normal)  
4.6mb ( 5 obs.)  
BANDA SEA (280)  
MTN 7.02 137 ePd 24 00.00 0.4  
WB2 14.49 148 iPd 25 36.90 -4.3X  
0.6s 8.80nm 4.5mb  
eS 28 11.00  
ASPA 17.50 156 ePd 26 19.30 -0.4  
0.5s 18.30nm 4.5mb  
eS 29 17.70  
STK 27.99 151 ePd 28 17.00 10.6X  
0.5s 3.80nm  
MAT 45.41 14 ePd 30 34.00 0.1  
0.9s 4.20nm 4.4mb  
LZH 48.38 336 ePd 30 57.00 -0.5  
1.2s 16.00nm 4.9mb  
GUN 52.68 314 P 31 31.90 1.3  
PKI 52.82 313 P 31 31.16 -0.5  
KKK 53.04 313 P 31 32.88 -0.2  
0.6s 8.00nm 4.9mb  
DMN 53.06 313 P 31 33.26 0.0  
GKN 53.62 313 P 31 37.10 -0.2  
QUE 68.19 307 ePd 33 16.50 0.2



YAK 69.55 2 eP 33 23.60 -0.1  
LRM 117.07 42 ePdiff 37 02.40 -13.8X  
S.D. = 0.6 on 11 of 14 obs.

MAY 21, 1991 19h 30m 47.55 ± 0.94s  
10.272 S ± 5.8km 161.272 E ± 11.1km  
DEPTH = 83.6 ± 7.2 km  
4.4mb ( 4 obs.)

SOLOMON ISLANDS (193)  
Felt (1) at Honiara.

HNR 1.55 302 iP 31 13.50 -0.5  
SVO 1.82 308 iP 31 18.50 0.9  
VSG 1.84 303 iP 31 17.50 -0.5  
DZM 12.74 158 iPc 33 46.90 -0.1  
RMO 20.00 215 eP 35 17.00 1.0  
CMS 25.51 212 eP 36 10.00 0.2  
WB2 27.67 247 iPd 36 28.80 -1.0  
WRA 27.68 247 P 36 54.00 24.1X  
STK 28.18 217 eP 36 42.00 7.8X  
ASPA 29.30 239 eP 37 02.50 18.1X  
IIDJ 50.58 335 P 39 39.90 0.1  
CHJJ 50.63 337 P 39 39.90 -0.3  
TSRJ 51.45 334 P 39 46.90 0.6  
MTMJ 51.57 336 P 39 47.20 -0.2  
YAMJ 52.12 339 P 39 52.20 0.8  
OFUJ 52.38 341 P 39 53.80 0.5  
LZJ 71.02 314 e(P) 41 57.50 -1.2  
YAK 76.15 345 iPc 42 27.80 0.0  
SPA 79.80 180 iPd 42 47.80 -0.2  
PKI 82.42 300 P 43 02.80 0.1  
KKN 82.59 300 P 43 00.60 -2.9X  
DMN 82.69 300 P 43 04.40 0.4  
GKN 83.20 300 P 43 06.60 0.1  
YKA 96.32 28 eP 44 07.00 -0.7  
S.D. = 0.6 on 20 of 24 obs.

& MAY 21, 1991 19h 43m 26.72s  
60.579 N 151.552 W  
DEPTH = 56.5km  
KENAI PENINSULA, ALASKA ( 14)  
<AEIC>.

NKA 0.23 43 iPc 43 37.73 1.7  
RDT 0.42 270 iPd 43 37.20 -0.6  
RDN 0.60 264 iPd 43 39.03 -0.8  
RSO 0.61 259 iPd 43 39.32 -0.6  
RS2 0.61 259 iPd 43 39.35 -0.6  
RED 0.62 256 iPd 43 39.27 -0.8  
SLKM 0.66 96 ePc 43 39.71 -0.7  
CKL 0.73 329 iPd 43 40.82 -0.5  
CRP 0.75 337 ePd 43 41.30 -0.4  
BGL 0.80 330 eP 43 41.91 -0.3  
BRLK 0.88 158 eP 43 42.61 -0.6  
HOM 0.92 183 iPd 43 43.33 -0.4  
SUA 0.97 24 iPd 43 44.05 -0.5  
CNPM 1.07 171 iPd 43 44.74 -1.0  
XLV 1.13 184 ePd 43 45.31 -1.3  
SEW 1.15 114 eP 43 45.77 -1.0  
PMS 1.18 55 eP 43 46.20 -1.1  
SKT 1.41 0 ePd 44 02.10 -0.8  
AUE 1.53 218 eP 43 50.76 -1.3

PDB 1.54 240 eP 43 50.85 -1.4  
AUH 1.55 219 eP 43 51.90 -0.5  
AUI 1.56 218 eP 43 51.94 -0.6  
KNK 1.73 60 ePd 43 53.34 -1.5  
GHO 1.75 46 eP 43 53.69 -1.5  
KNIM 1.90 95 iPc 43 54.29 -3.0  
CUT 1.93 18 eP 43 56.60 -1.1  
CDD 1.96 214 ePd 43 56.89 -1.3  
MCNL 1.98 226 eP 43 57.69 -0.7  
SML 1.99 50 eP 43 56.80 -1.7  
SYI 2.02 193 eP 43 57.70 -1.2  
GLI 2.21 80 eP 43 58.16 -3.5  
VZW 2.50 77 eP 44 03.04 -2.7  
VLZ 2.61 75 eP 44 04.48 -2.8  
KLU 2.89 69 ePc 44 08.63 -2.7  
TRF 2.94 11 eP 44 12.16 -0.1  
TOA 3.01 57 eP 44 11.36 -1.7  
PAX 3.76 48 eP 44 21.41 -2.2  
DDM 4.18 37 eP 44 29.09 -0.4  
HDA 4.39 27 eP 44 30.38 -2.0  
BALM 4.53 80 eP 44 31.51 -3.0  
MDM 4.65 18 eP 44 33.77 -2.3  
41 obs. associated

\* MAY 21, 1991 19h 44m 56.02 ± 0.50s  
1.715 S ± 9.0km 77.874 W ± 21.1km  
DEPTH = 139.1 ± 10.5 km  
4.1mb ( 1 obs.)  
ECUADOR (107)

TUNG 0.64 297 P 45 17.40 -0.2  
VC1 1.19 334 P+ 45 23.00 0.5  
QUIL 1.42 312 P 45 23.90 -0.8  
GGP 1.69 335 Pd 45 27.80 -0.1  
YANA 1.74 336 P+ 45 28.10 -0.2  
CAYA 1.79 356 P 45 29.50 0.6  
COTA 2.09 347 P 45 32.70 0.2  
NNA 10.26 174 eP 47 22.00 1.1  
ZOBO 17.36 147 P 48 51.00 -0.9  
LPB 17.59 147 eP 48 45.00 -9.5X  
CCH 19.37 144 P 49 13.60 -0.2  
WB2 141.76 234 ePKP 04 05.70 -8.0X  
WRA 141.77 234 PKP 04 11.00 -2.7X  
LZH 145.76 358 ePKP 04 20.40 0.1  
GKN 148.97 31 PKP 04 28.40 2.8X  
KKN 149.47 30 PKP 04 30.00 3.5X  
DMN 149.53 31 PKP 04 30.20 3.6X  
GUN 149.67 29 PKP 04 31.00 4.1X  
PKI 149.71 30 PKP 04 30.40 3.4X  
S.D. = 0.7 on 11 of 19 obs.

& MAY 21, 1991 19h 48m 28.38s  
62.789 N 148.898 W  
DEPTH = 60.3km  
CENTRAL ALASKA ( 1)  
<AEIC>.

MUR 0.39 300 iPd 48 39.38 0.0  
RND 0.62 2 iPd 48 41.66 -0.2  
CUT 0.74 239 iPd 48 43.06 -0.2  
TRF 0.92 317 ePc 48 45.54 -0.1  
MCK 0.95 359 ePd 48 45.93 0.0  
SML 1.02 165 ePd 48 46.19 -0.7  
GHO 1.02 181 ePd 48 46.42 -0.5  
PLRM 1.21 185 ePd 48 49.28 0.0  
PMR 1.21 185 eP 48 49.60 0.3  
SCM 1.21 142 ePc 48 48.73 -0.7  
PWA 1.23 202 ePd 48 50.02 0.3  
KNK 1.40 171 ePd 48 51.82 -0.2

TOA 1.44 117 ePc 48 53.50 0.8  
SKT 1.47 238 iPd 48 52.87 -0.1  
THY 1.56 65 eP 48 54.78 0.5  
SDG 1.57 98 iPc 48 54.74 0.3  
PMS 1.58 192 ePd 48 54.73 0.2  
PAX 1.58 82 ePd 48 54.53 -0.1  
SUA 1.59 214 ePd 48 55.23 0.5  
DDM 1.70 52 iPd 48 56.93 0.7  
WRH 1.73 12 iPd 48 55.61 -0.9  
TZL 1.78 113 ePc 48 58.20 0.9  
NEA 1.80 358 ePc 48 56.41 -1.1  
HDA 1.84 27 iPd 48 57.22 -0.9  
KLU 1.91 132 ePc 48 58.60 -0.6  
CCB 1.93 14 ePd 48 58.14 -1.2  
VLZ 2.06 143 ePc 49 00.09 -1.0  
VZW 2.06 146 ePc 49 00.42 -0.8  
RDS 2.07 9 ePd 49 00.43 -1.0  
GLI 2.10 155 iPc 49 00.87 -0.9  
CRP 2.17 227 ePc 49 03.43 0.6  
FBA 2.18 13 eP 49 02.30 -0.5  
MDM 2.20 7 ePd 49 02.26 -0.9  
BGL 2.25 229 eP 49 04.33 0.4  
CKL 2.28 227 ePc 49 04.46 0.1  
GLM 2.31 16 eP 49 03.74 -1.0  
NKA 2.34 209 eP 49 08.42 3.4  
DOT 2.35 66 eP 49 05.58 0.2  
SLKM 2.37 196 eP 49 07.13 1.5  
KNIM 2.51 167 eP 49 06.90 -0.6  
HIN 2.66 153 ePc 49 08.45 -1.2  
CVA 2.71 145 eP 49 09.57 -0.7  
SEW 2.71 186 eP 49 10.93 0.7  
GLB 2.75 117 eP 49 10.38 -0.5  
RDT 2.78 219 eP 49 11.28 -0.2  
SGAM 2.89 141 ePc 49 11.16 -1.8  
RDN 2.93 221 eP 49 13.10 -0.6  
RSO 2.97 220 eP 49 14.21 -0.1  
RS2 2.97 220 eP 49 14.20 -0.1  
RED 3.01 220 eP 49 14.55 -0.2  
RAGM 3.14 138 eP 49 15.01 -1.6  
BRLK 3.18 198 eP 49 15.48 -1.6  
TTA 3.26 276 eP 49 17.90 -0.4  
HMT 3.31 136 eP 49 17.64 -1.3  
CNPM 3.47 200 eP 49 20.62 -0.4  
TGL 3.53 123 eP 49 20.65 -1.4  
BALM 3.56 117 ePc 49 20.83 -1.7  
WAX 3.72 126 eP 49 23.40 -1.3  
IMA 3.89 330 ePd 49 26.20 -0.9  
CTGM 4.02 114 eP 49 27.52 -1.5  
WRG 4.30 127 eP 49 32.73 0.0  
CDD 4.51 213 eP 49 34.24 -1.5  
62 obs. associated

MAY 21, 1991 20h 09m 44.54 ± 0.92s  
32.766 S ± 5.9km 71.464 W ± 8.1km  
DEPTH = 10.0km (geophysicist)  
NEAR COAST OF CENTRAL CHILE (135)

IHA 0.30 210 iPd 09 51.40 0.6  
ROCH 0.43 118 iPd 09 54.50 1.1  
LCCH 0.71 187 iPd 09 58.50 -0.1  
JACH 0.74 84 iPd 09 58.00 -1.1  
TACH 0.99 154 iPd 10 03.10 -0.2  
PCH 1.17 137 iP 10 05.80 -0.6  
LNV 1.19 178 iPc 10 06.00 -0.7  
MDZ 2.20 94 e(P) 10 24.30 2.5X  
ZON 2.66 64 eP 10 29.50 1.3  
RTLL 2.92 61 ePd 10 31.50 -0.4  
CFA 2.97 68 ePd 10 33.10 0.5



21d 20h

RTRS 3.10 34 S 11 15.10  
 RFA 3.20 130 eP 10 33.80 -0.6  
 TCA 6.01 78 eP 11 11.60 -4.1X  
 (S) 12 22.80  
 S.D. = 0.8 on 12 of 14 obs.

% MAY 21, 1991 20h 20m 11.72± 0.97s  
 37.819 N ±13.3km 14.935 E ± 6.0km  
 DEPTH = 10.0km (geophysicist)  
 SICILY (398)

MNO 0.22 301 Pc 20 16.90 0.3  
 eSg 20 21.00  
 ATN 0.54 51 P 20 22.70 0.1  
 eSg 20 32.20  
 GIB 0.74 284 P 20 25.80 -0.5  
 eSg 20 36.20  
 SOI 0.92 74 P 20 29.20 -0.1  
 eSg 20 45.40  
 FAI 1.14 242 P 20 33.20 0.2  
 S.D. = 0.4 on 5 of 5 obs.

? MAY 21, 1991 20h 46m 47.98± 0.93s  
 40.527 N ±11.6km 27.565 E ± 8.1km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)

KGT 0.21 249 iPg 46 52.60 0.0  
 eSg 46 54.60  
 EDC 0.29 128 iPg 46 54.20 0.1  
 iSg 46 58.20  
 BNT 0.32 122 iPg 46 54.50 -0.1  
 iSg 46 58.50  
 MFT 0.34 320 ePg 46 55.00 0.0  
 eSg 46 58.60  
 S.D. = 0.2 on 4 of 4 obs.

\* MAY 21, 1991 23h 15m 56.91± 3.24s  
 51.487 N ±26.7km 15.746 E ±15.7km  
 DEPTH = 10.0km (geophysicist)  
 POLAND (548)  
 ML 3.9 (GRF), 3.3 (VKA).

KSP 0.73 152 iP 16 11.70 0.4  
 0.5s 66.00nm  
 iS 16 17.60  
 i 16 22.00  
 eLR 16 23.50  
 BRG 1.29 242 iPg 16 22.10 1.3  
 iSg 16 42.00  
 PRU 1.68 207 Pn 16 26.20 -0.3  
 ePg 16 27.50  
 eSn 16 44.50  
 Sg 16 51.50  
 CLL 1.73 265 iPn 16 27.00 -0.1  
 iPg 16 30.00  
 eSg 16 57.00  
 HOF 2.72 246 ePn 16 41.20 -0.2  
 KHC 2.74 211 Pn 16 41.00 -0.7  
 Pg 16 47.00  
 Sn 17 16.00  
 Sg 17 29.50  
 MOX 2.74 254 ePg 16 50.00 8.3X  
 iSg 17 29.00  
 VKA 3.25 173 ePg 16 54.00 5.1X  
 iSg 17 40.10  
 GRF 3.40 240 ePn 16 50.70 -0.3  
 ePg 17 00.80  
 eSg 17 48.90  
 ZST 3.41 165 eP 17 42.80 51.6X  
 KBA 4.68 201 eP 17 04.00 -5.5X  
 e 18 22.00  
 S.D. = 0.8 on 7 of 11 obs.

\* MAY 22, 1991 00h 50m 06.91± 1.42s  
 6.378 S ± 6.9km 147.491 E ±13.7km  
 DEPTH = 88.6 ± 11.0 km  
 4.6mb ( 8 obs.)  
 EAST PAPUA NEW GUINEA REGION (207)

MDG 2.04 303 eP 50 41.50 1.4  
 PMG 3.03 186 iPd 50 51.90 -1.8  
 eS 51 34.00  
 MNDI 3.82 273 eP 50 59.00 -5.8X  
 OIS 16.04 208 eP 53 48.00 -0.6  
 WB2 18.57 222 iPd 54 18.30 -1.4

RMO 0.8s 16.50nm 54 35.80 0.5  
 0.8s 54.00nm 4.9mb  
 OLP 20.33 188 iPc 54 38.50 0.2  
 ASPA 21.59 216 iPd 54 51.40 0.3  
 0.3s 24.40nm 5.0mb  
 iS 58 49.90

COO 24.43 171 eP 55 20.00 1.3  
 CMS 25.03 183 eP 55 25.00 0.7  
 STK 25.96 192 iPc 55 40.00 7.9X  
 0.7s 10.20nm 4.5mb  
 WARB 27.99 223 eP 55 52.50 1.0  
 0.4s 6.00nm 4.6mb  
 FORR 30.39 214 eP 56 12.00 -0.8  
 MBL 30.54 239 eP 56 15.00 0.8  
 COOL 34.71 222 eP 56 50.40 0.0  
 KLB 37.44 224 eP 57 13.70 0.4  
 NWA0 38.58 223 eP 57 24.00 1.1  
 SSE 44.96 327 Pc 58 14.00 -1.0  
 0.7s 10.00nm 4.8mb  
 eS 04 48.00  
 PSI 49.32 279 ePd 58 35.80 -13.6X  
 GUN 68.48 303 P 01 00.00 -2.5  
 GBA 72.31 286 Pd 01 26.50 1.2  
 0.4s 2.60nm 4.5mb  
 YKA 99.28 28 eP 03 41.40 1.6  
 1.1s 0.50nm 4.0mb

BSF 126.85 328 ePKP 09 01.40 -0.8  
 0.6s 2.70nm  
 HAU 126.98 328 ePKP 09 00.90 -1.4  
 0.6s 1.80nm  
 SSF 129.06 329 ePKP 09 06.60 0.3  
 0.7s 2.20nm  
 SMF 129.16 328 ePKP 09 06.90 0.4  
 BGF 129.73 329 ePKP 09 07.30 -0.3  
 TCF 130.24 329 ePKP 09 08.40 -0.2  
 0.7s 2.75nm  
 LPF 130.60 333 ePKP 09 08.90 -0.2  
 LPO 131.85 328 ePKP 09 11.90 0.3  
 0.7s 1.10nm  
 EPF 133.42 327 ePKP 09 14.20 -0.6  
 0.8s 1.35nm

CNCB 138.04 124 PKP 09 17.80 -7.1X  
 LPB 138.08 123 PKP 09 22.00 -2.8X  
 ZOBO 138.19 123 PKP 09 19.00 -6.2X  
 IFR 142.94 320 iPKPd 09 45.00 12.3X  
 KIC 152.40 272 PKPd 09 56.30 8.2X  
 0.7s 11.00nm  
 LIC 152.69 271 PKPd 09 57.00 8.6X  
 0.6s 13.00nm  
 TIC 152.69 272 PKPd 09 56.90 8.4X  
 LKO 153.16 278 PKP 09 55.54 6.4X  
 BAO 153.29 145 ePKP 09 58.40 9.0X  
 S.D. = 1.1 on 28 of 40 obs.

MAY 22, 1991 00h 57m 02.57± 0.96s  
 18.254 N ± 7.9km 103.253 W ± 6.6km  
 DEPTH = 44.7 ± 6.7 km  
 5.0mb ( 44 obs.) 4.6msz ( 6 obs.)  
 NEAR COAST OF MICHUACAN, MEXICO ( 56)

CGX 1.45 352 iP 57 27.00 0.0  
 iS 57 43.80  
 MRX 2.43 53 iP 57 41.50 0.9  
 iS 58 11.00  
 ACX 3.52 113 iP 57 56.80 0.6  
 iS 58 34.70  
 III 3.60 87 iP 57 56.50 -1.0  
 iS 58 39.00  
 UNM 4.00 74 (P) 58 06.50 3.2X  
 iS 58 47.50  
 TAC 4.01 73 (P) 58 09.00 5.6X  
 IIA 4.44 78 (P) 58 13.04 3.8X  
 PPM 4.46 79 iP 58 10.55 0.6  
 iS 59 01.54  
 IIT 4.75 80 iP 58 16.00 2.2  
 (S) 59 12.50  
 PIO 5.23 110 iP 58 18.75 -1.6  
 (S) 59 12.00  
 IISM 5.62 82 iP 58 26.56 0.7  
 iS 59 29.50  
 OXX 6.33 100 iP 58 36.05 0.0  
 iS 59 49.23  
 LVVM 6.60 76 (P) 58 44.00 4.4X  
 PBJ 7.71 102 iP 58 54.00 -1.1  
 ALO 16.86 351 ePc 00 57.90 0.7  
 1.0s 20.50nm 4.2mb

ANMO 16.87 351 P 00 58.10 0.8  
 1.0s 24.00nm 4.3mb  
 GLA 18.03 327 eP 01 20.00 8.4X  
 BAR 18.76 323 eP 01 23.00 2.4  
 TUL 18.79 19 eP 01 18.00 -2.8  
 1.2s 111.40nm 4.9mb  
 Z 18s 0.66um 4.4mszX  
 eS 05 03.00  
 LR 07 52.00

PLM 19.36 324 eP 01 29.00 1.3  
 TPC 19.49 327 eP 01 28.00 -0.9  
 PEC 19.93 324 P 01 33.60 0.0  
 RVR 20.12 324 eP 01 35.00 -0.6  
 MWC 20.68 323 eP 01 42.00 0.5  
 PAS 20.69 323 eP 01 41.00 -0.4  
 GSC 20.81 327 eP 01 43.00 0.3  
 PV09 20.81 347 P 01 41.40 -1.6  
 SBB 20.89 324 eP 01 46.00 2.5X  
 GOL 21.45 356 P 01 48.00 -1.4  
 0.7s 8.25nm 4.2mb  
 GLD 21.49 356 P 01 49.80 0.1  
 1.5s 115.63nm 5.0mb  
 SYP 22.02 321 eP 01 57.00 2.1X  
 FVM 22.63 27 P 01 57.00 -3.8X  
 1.2s 63.24nm 4.9mb  
 TNP 23.22 331 P 02 07.50 0.7  
 0.8s 8.09nm 4.2mb

RSCP 23.32 39 P 02 05.00 -2.6  
 PRI 23.54 323 ePc 02 11.60 1.8  
 eP 02 20.10 30kmX  
 FRI 23.62 326 ePc 02 11.30 0.9  
 eP 02 19.30 28kmX  
 PRS 24.08 322 eP 02 15.50 0.6  
 SAO 24.42 323 eP 02 19.00 0.7  
 CMB 24.75 326 ePc 02 21.80 0.3  
 GCC 24.93 322 eP 02 16.00 -7.0X  
 MHC 24.94 323 ePc 02 24.50 1.2  
 ORV 26.46 327 eP 02 38.50 1.2  
 BLA 27.54 42 P 02 43.60 -3.6X  
 WDC 27.76 327 eP 02 47.50 -1.6  
 LRM 28.53 346 eP 02 55.40 -0.9  
 NEW 31.99 342 P 03 25.00 -1.8  
 0.8s 14.58nm 4.9mb  
 SES 32.67 351 eP 03 31.00 -1.6  
 PNT 33.69 341 eP 03 41.00 -0.4  
 0.6s 7.00nm 4.7mb  
 FFC 36.42 1 iPc 04 02.80 -1.8  
 0.8s 26.00nm 5.2mb  
 YKA 44.90 353 eP 05 12.10 -2.3  
 1.3s 3.70nm 4.1mb

SCH 45.88 29 eP 05 20.00 -2.2X  
 ZOBO 48.71 133 P 05 45.20 -0.4  
 Z 18s 0.24um 4.2msz  
 S 13 00.00  
 LR 20 16.00  
 LPB 48.91 133 P 05 46.50 -0.4  
 CNCB 49.18 133 P 05 49.20 0.0  
 CCH 50.86 132 P 06 01.00 -0.7  
 TOA 52.98 336 eP 06 18.10 1.3  
 INK 53.55 347 eP 06 19.00 -1.7  
 SIV 53.70 127 P 06 21.00 -1.6  
 PMR 53.86 335 eP 06 23.30 0.2  
 0.8s 35.00nm 5.4mb  
 RSO 54.81 333 P 06 28.60 -1.9  
 FBA 55.21 339 eP 06 32.70 -0.4  
 SVW 56.36 332 eP 06 40.80 -0.6  
 TTA 57.32 334 eP 06 47.30 -0.9  
 IMA 57.91 338 eP 06 51.20 -1.2  
 1.1s 12.10nm 4.9mb  
 ANM 61.79 334 eP 07 19.00 0.1  
 PPD 64.69 126 eP 07 37.50 -1.1  
 e 09 40.80  
 DAG 71.09 14 ePd 08 16.10 -1.7  
 DMU 79.12 37 eP 09 03.80 -0.1  
 0.9s 52.00nm 5.5mb  
 ECB 79.62 38 eP 09 09.00 2.4  
 ECP 79.91 38 eP 09 11.00 2.8  
 EKA 80.77 35 P 09 13.00 0.3  
 0.9s 10.50nm 4.8mb  
 EPLA 83.77 50 eP 09 29.10 0.5  
 GRR 84.48 41 iPc 09 32.80 0.8  
 1.0s 48.00nm 5.6mb  
 LPF 84.50 41 iPc 09 32.70 0.7  
 1.0s 56.00nm 5.6mb  
 FLN 84.58 40 iPc 09 33.50 1.0  
 1.0s 80.00nm 5.8mb  
 Z 18s 0.28um 4.7msz



LDF	84.87	40 iPc	09 34.80	0.9	36.447 N	120.627 W	DAG	9.04	222 iPd	46 38.00	-4.8X	
	1.0s	36.00nm		5.5mb	DEPTH = 20.0km			1.1s	64.56nm		5.9mb X	
GUD	84.97	49 iPd	09 36.10	1.3	CENTRAL CALIFORNIA	( 39 )	TRO	15.49	166 eP	48 07.80	-1.3X	
TOL	85.30	50 eP	09 37.70	1.4	<BRK>. ML 2.9 (BRK).		KEV	15.61	155 iP	48 07.20	-3.4X	
NB2	85.39	26 P	09 36.60	0.3				0.6s	20.90nm		4.6mb	
	0.9s	7.80nm		4.9mb	LLA	0.31 304 ePd	19 05.15	SOD	17.98	157 iP	48 34.60	-5.9X
ECRI	85.46	47 eP	09 38.30	1.2		iS	19 09.97		i	48 39.20		
KEV	85.52	15 iP	09 38.00	1.2	PRI	0.31 186 iPd	19 05.29	KAF	23.23	158 iP	49 37.40	0.4
MFF	85.59	42 iPc	09 38.50	1.0	PKEM	0.57 132 eP	19 10.00		0.6s	9.70nm		4.5mb
	1.0s	16.00nm		5.2mb	PRS	0.61 259 iPc	19 10.56		esP	49 40.70		
ETOR	86.41	48 iPd	09 43.10	1.2	PHAM	0.64 163 eP	19 10.70	NB2	24.01	176 P	49 44.40	-0.2
ECOG	86.55	52 eP	09 44.60	2.0	SAO	0.73 296 eP	19 12.56		0.8s	5.60nm		4.2mb
AFC	86.57	52 eP	09 44.00	1.2	FRI	0.92 53 iPd	19 14.59	NUR	24.78	160 iP	49 53.20	1.2
LFF	86.79	44 eP	09 43.90	0.4		iS	19 26.07	HFS	24.94	173 eP	49 53.60	0.1
	0.9s	29.50nm		5.5mb	ARN	1.16 321 eP	19 19.00		0.9s	11.80nm		4.6mb
LSF	86.80	42 iPc	09 43.00	-0.5	MHC	1.21 318 eP	19 20.70	Z	18s	0.48um		4.0Msz
	0.8s	9.40nm		5.1mb	GCC	1.24 298 iPd	19 20.44		LR	56 37.00		
HFS	86.91	27 eP	09 43.00	-0.7	CMB	1.60 7 eP	19 25.10	INK	26.03	328 eP	50 04.00	0.3
	0.6s	0.90nm		4.2mb	BKS	1.92 318 eP	19 31.20	IMA	28.99	345 eP	51 07.80	37.0X
SOD	87.06	17 iP	09 44.00	-0.4	ABL	1.96 144 eP	19 29.40		0.6s	3.60nm		
RJF	87.16	43 eP	09 45.30	0.0	BONR	2.39 50 eP	19 38.00	FBA	30.00	340 e(P)	50 41.40	1.7
	1.0s	28.00nm		5.5mb	TNP	3.17 58 eP	19 48.50	OBN	30.66	147 eP	50 51.00	5.4X
Z	22s	0.22um		4.5Msz		15 obs. associated			1.4s	*****nm		8.0mb X
LPO	87.18	44 eP	09 45.30	-0.1					e	51 11.00		
	0.9s	16.40nm		5.3mb	& MAY 22, 1991 01h 39m 24.90s				e	51 50.00		
TCF	87.21	42 iPc	09 45.20	-0.4	58.765 N	155.936 W	ANM	30.68	354 eP	50 47.80	2.1	
	0.9s	6.55nm		4.9mb	DEPTH = 157.2km		YAK	31.11	51 eP	50 49.30	-0.2	
EPF	87.25	46 eP	09 45.90	0.0	ALASKA PENINSULA	( 12 )	BALM	33.67	334 P	51 15.00	3.0X	
	0.9s	16.40nm		5.3mb	<AEIC>.		CLL	33.77	174 e(P)	51 15.00	2.2X	
MAF	87.47	42 eP	09 46.30	-0.5	MCNL	0.93 62 eP	39 49.12	SVW	34.00	346 eP	51 16.30	1.5
	0.9s	9.00nm		5.0mb	CDD	1.20 81 iP	39 51.19	BRG	34.22	173 e(P)	51 17.40	0.7
BGF	87.51	42 eP	09 46.40	-0.5		eS	40 11.48	MOX	34.43	176 eP	51 19.00	0.5
	0.9s	9.85nm		5.1mb	PDB	1.36 40 iP	39 53.00		e	51 26.00		
WTS	87.53	36 eP	09 48.00	1.1	AUI	1.42 65 eP	39 53.50	PRU	35.11	173 eP	51 24.00	-0.3
	0.9s	10.00nm		5.1mb	AUH	1.42 64 eP	39 53.85	KHC	35.96	174 P	51 33.00	1.4
ENN	87.58	37 eP	09 47.00	-0.1	SYI	1.86 93 eP	39 58.13	LDF	36.53	189 eP	51 35.90	-0.4
	1.0s	19.00nm		5.3mb		eS	40 24.25		0.5s	1.45nm		4.0mb
CAF	87.66	43 eP	09 47.40	-0.4	KDC	2.09 118 eP	39 58.30	GRR	36.75	190 eP	51 37.80	-0.3
	0.9s	4.90nm		4.8mb		eS	40 29.11		0.5s	2.90nm		4.3mb
MEM	87.69	37 P	09 46.70	-1.0	RED	2.31 43 eP	40 03.20	ZST	36.94	170 eP	51 40.70	0.9
SSF	87.72	41 iPc	09 47.40	-0.5	RS2	2.35 42 eP	40 03.08	LOR	37.81	185 eP	51 46.70	-0.4
	0.9s	6.55nm		4.9mb	RSO	2.35 42 eP	40 03.09		0.5s	3.65nm		4.4mb
AVF	87.73	41 eP	09 47.30	-0.7	SVW	2.36 4 iP	40 03.09	Z	20s	0.13um		3.7Msz
	0.9s	5.75nm		4.8mb	RDN	2.38 41 eP	40 04.37	SSF	38.02	185 eP	51 48.60	-0.3
LOR	87.85	41 iPc	09 48.20	-0.4	HOM	2.38 66 eP	40 05.50		0.7s	3.30nm		4.2mb
	0.8s	8.05nm		5.0mb	CNPM	2.54 71 eP	40 05.97	LBF	38.10	185 eP	51 49.20	-0.4
Z	18s	0.22um		4.6Msz	RDT	2.55 43 eP	40 06.02		0.8s	4.05nm		4.2mb
LBF	88.04	41 iPc	09 48.90	-0.6	BRLK	2.78 67 eP	40 08.82	AVF	38.30	185 eP	51 51.30	0.1
	0.9s	8.20nm		5.0mb		eS	40 44.32		0.7s	3.30nm		4.2mb
HAU	89.05	39 eP	09 54.10	-0.2	CKL	3.04 35 eP	40 12.20	SMF	38.44	185 eP	51 52.50	0.1
	0.9s	4.90nm		4.8mb	BGL	3.07 34 eP	40 12.91	BGF	38.53	186 eP	51 53.20	0.0
Z	18s	0.40um		4.9Msz	CRP	3.15 35 eP	40 13.61		0.6s	8.10nm		4.6mb
BSF	89.39	39 eP	09 55.50	-0.6	SLKM	3.39 57 eP	40 15.70	TCF	38.81	187 eP	51 55.20	-0.3
	0.9s	6.55nm		5.0mb	SEW	3.57 65 eP	40 18.01		0.6s	1.80nm		3.9mb
LPG	90.42	41 eP	10 00.20	-0.9		eS	41 00.93	LSF	38.85	187 eP	51 55.60	-0.3
	0.9s	4.10nm		4.8mb	SUA	3.75 42 eP	40 20.47		0.5s	1.45nm		3.9mb
MOX	90.82	35 e(P)	10 04.00	1.5		eS	41 06.13	MAF	38.87	186 eP	51 55.80	-0.2
NUR	91.05	23 eP	10 04.00	0.7	PMS	4.05 49 eP	40 23.53		0.6s	2.70nm		4.1mb
GRF	91.09	36 iPc	10 04.70	1.0		eS	41 11.23	LPL	39.55	182 eP	52 02.90	0.9
	1.9s	32.00nm		5.4mb	KNIM	4.46 66 iP	40 28.39	LPG	39.57	182 eP	52 03.10	0.9
Z	21s	0.20um		4.5Msz	KNK	4.59 51 eP	40 29.84		0.8s	4.05nm		4.1mb
FRF	91.22	43 eP	10 03.50	-1.0	GHO	4.61 46 eP	40 29.50	RJF	39.80	187 eP	52 03.60	-0.1
	0.6s	2.70nm		4.8mb		eS	41 22.84		0.6s	8.10nm		4.6mb
CLL	91.23	34 eP	10 04.00	-0.3	GLI	4.94 61 eP	40 33.92	Z	20s	0.08um		3.5Msz
LMR	91.24	43 eP	10 04.20	-0.3		eS	41 29.54	CAF	40.17	187 eP	52 06.80	-0.1
	0.9s	6.55nm		5.0mb	VZW	5.25 60 eP	40 38.81	EPF	42.09	189 eP	52 22.30	-0.3
SBF	91.60	43 eP	10 05.80	-0.5		eS	41 37.93		0.5s	1.45nm		4.0mb
BRG	91.97	34 eP	10 17.60	9.9X	SCM	5.27 51 eP	40 39.79	SES	42.49	304 eP	52 25.00	-0.8
	1.2s	11.00nm		5.2mb	VLZ	5.38 60 eP	40 40.73	OHR	44.09	166 eP	52 34.00	-4.9X
KHC	92.69	36 P	10 12.50	1.3	KLU	5.70 57 eP	40 44.65	NEW	45.04	310 P	52 47.00	0.4
PRU	92.77	35 eP	10 12.50	1.1	TOA	5.88 51 eP	40 47.92		0.8s	12.50nm		4.9mb
SRO	96.05	35 iP	10 27.90	1.4		eS	41 55.02	WMO	45.66	96 P	52 53.20	1.7
WRA	125.78	258 PKP	16 01.00	-0.9	SDG	6.35 49 eP	40 52.95	MDJ	48.41	55 eP	53 13.20	0.2
	0.8s	1.60nm			GLB	6.63 61 eP	40 57.00		1.0s	20.00nm		5.1mb
HYB	144.51	357 ePKPc	16 34.50	-2.1	TGL	6.91 68 eP	41 01.34	CN2	48.91	59 eP	53 16.00	-0.8
	0.8s	26.90nm			BALM	7.20 66 eP	41 05.21	GAR	48.95	114 eP	53 17.00	-0.4
	e		16 41.50		PNL	8.53 77 eP	41 23.41	SNY	50.73	61 Pd	53 30.60	-0.1
SNG	145.45	315 ePKP	16 39.70	1.4					1.4s	20.00nm		4.9mb
	1.1s	101.27nm				37 obs. associated		TNP	55.18	308 P	54 03.60	-0.7
IPM	147.02	311 ePKPc	16 45.70	4.8X					0.8s	4.12nm		4.5mb
	0.9s	37.10nm			MAY 22, 1991 02h 44m 29.47 ± 0.25s			TIA	55.79	68 eP	54 07.10	-1.3
GBA	148.34	359 PKPc	16 46.20	3.3X	84.908 N ± 3.9km	8.123 E ± 6.0km	ANMO	57.49	298 P	54 19.20	-1.6	
	0.8s	10.40nm			DEPTH = 10.0km (geophysicist)				0.8s	2.80nm		4.3mb
KOD	151.69	359 ePKP	16 55.00	6.6X	4.4mb ( 24 obs.)	3.7Msz ( 3 obs.)	ALO	57.50	298 eP	54 19.20	-1.7	
	S.D. = 1.2	on 108 of 123 obs.			NORTH OF SVALBARD	(641)			1.0s	2.50nm		4.2mb
& MAY 22, 1991 01h 18m 58.60s					KBS	6.05 173 iP	45 56.30	GUN	61.28	100 P	54 46.52	-0.7
								KKN	61.35	100 P	54 46.78	-0.7



22d 02h

PKI 61.57 100 P 54 48.14 -1.1  
 HYB 71.04 108 eP 55 48.00 -1.2  
 GBA 74.72 109 Pc 56 10.70 0.0  
 0.7s 5.50nm 4.7mb  
 LKO 75.54 194 P 56 12.70 -2.8X  
 KIC 78.69 193 (P) 56 32.60 -0.3  
 S.D. = 0.9 on 47 of 58 obs.

? MAY 22, 1991 02h 46m 25.45±1.56s  
 39.091 N ±15.9km 21.641 E ± 8.3km  
 DEPTH = 10.0km (geophysicist)  
 GREECE (364)  
 MD 2.3 (THE).

AGG 0.54 97 iPg 46 36.50 0.1  
 eSg 46 45.80  
 IGT 1.11 294 ePg 46 46.00 -0.2  
 eSg 47 02.30  
 LIT 1.20 33 ePg 46 47.40 -0.5  
 eSg 47 06.70  
 FNA 1.70 353 ePb 46 56.00 0.6  
 S.D. = 0.8 on 4 of 4 obs.

MAY 22, 1991 03h 31m 24.25±0.38s  
 28.120 N ± 9.0km 54.214 E ± 3.7km  
 DEPTH = 23.2km ( 7 depth phases)  
 4.5mb ( 27 obs.) 4.7Msz ( 5 obs.)  
 SOUTHERN IRAN (353)  
 Felt at Khonj.

DHR 4.06 244 P 32 32.00 5.6X  
 S 33 18.00  
 RYD 7.61 245 iP 33 16.50 -0.1  
 S 34 37.90  
 MAIO 9.30 27 eP 33 48.00 8.0X  
 eS 35 42.00  
 KMSA 11.75 231 P 34 09.30 -4.2X  
 TAB 11.92 328 eP 34 30.00 14.2X  
 ABHA 14.40 229 P 34 51.30 2.4X  
 HRI 16.69 292 eP 35 23.00 4.7X  
 JVI 16.77 288 eP 35 24.00 4.7X  
 HOL 16.86 278 P 35 24.60 4.3X  
 BHL 16.92 295 P 35 22.00 0.9  
 S 38 42.00

MBH 17.01 280 eP 35 26.00 3.7X  
 GAR 17.23 47 eP 35 23.50 -1.6  
 iS 38 25.00  
 CSS 19.04 296 eP 35 48.50 1.1  
 HLW 20.08 280 eP 35 58.00 -0.9  
 eS 39 44.00

NDI 20.24 83 eP 36 03.00 2.4  
 BBTk 21.23 309 iPd 36 12.00 1.1  
 KAS 21.31 314 eP 36 12.50 0.9  
 ALN 26.36 306 iPd 37 03.90 3.6X  
 TLB 26.57 315 eP 37 24.00 21.8X  
 CFR 26.79 316 eP 37 13.00 8.7X  
 GKN 26.82 83 P 37 04.60 -0.3  
 KKN 27.41 83 P 37 09.36 -1.0  
 PKI 27.55 84 P 37 11.66 -0.2  
 ISR 27.76 315 eP 37 24.00 10.8X  
 GUN 27.92 83 P 37 14.78 -0.4  
 VRI 28.01 317 eP 37 25.00 9.6X  
 SRS 28.18 305 iPd 37 17.90 0.9  
 SOH 28.27 305 ePd 37 19.00 1.2  
 MLR 28.30 315 eP 37 22.00 3.8X  
 KNT 28.70 305 eP 37 28.70 7.1X  
 LIT 28.71 303 eP 37 22.60 0.9  
 GRG 29.00 305 eP 37 27.60 3.2X  
 FNA 29.70 304 iPd 37 31.00 0.2  
 OBN 29.83 340 eP 37 35.00 3.4X  
 e 38 06.00 146kmX  
 ePP 38 33.00  
 ePPP 39 00.00  
 eS 42 34.00  
 e 42 55.00  
 eSSS 44 52.00

SKO 29.98 306 iP 37 33.50 0.3  
 OHR 30.21 304 eP 37 30.00 -5.3X  
 WMO 31.05 51 P 37 47.30 4.7X  
 0.7s 4.00nm 4.4mb  
 Z 16s 1.40um 4.7MszX  
 N 10s 1.10um  
 E 10s 1.00um

KRA 34.01 320 eP 38 10.70 2.4X  
 e 38 28.70 75kmX  
 SRO 34.04 315 iP 38 08.40 -0.2  
 PTJ 34.92 311 eP 38 15.60 -0.7

ZST 34.94 315 eP 38 16.00 -0.3  
 VBY 35.28 310 e(P) 38 19.70 0.5  
 CEY 35.90 310 e(P) 38 25.00 0.4  
 VOY 36.34 310 e(P) 38 28.00 -0.3  
 ARV 36.42 306 P 38 29.50 0.6  
 KSP 36.45 319 eP 38 28.30 -0.8  
 ASS 36.54 305 P 38 35.20 5.2X  
 KBA 36.99 312 e(P) 38 29.00 -4.9X  
 e 38 37.00 27km

CRE 37.15 306 Pc 38 38.50 3.3X  
 PRU 37.16 317 eP 38 38.00 3.0  
 SFI 37.28 306 Pd 38 37.90 1.9  
 PGD 37.36 306 P 38 37.80 0.8  
 KHC 37.46 315 eP 38 37.50 -0.1  
 e 38 46.00 29km

FIR 37.68 306 eP 38 44.00 4.6X  
 BRG 37.84 318 e(P) 38 40.00 -0.7  
 CTI 37.86 310 P 38 41.70 0.6  
 NUR 38.04 337 iP 38 42.00 -0.2  
 e 38 50.00 27km

MME 38.14 307 P 38 45.50 1.8  
 BDI 38.19 306 P 38 55.60 11.7X  
 CLL 38.55 318 eP 38 47.00 0.3

1.6s 27.00nm 4.8mb  
 KAF 38.67 339 eP 38 53.50 6.0X  
 GRF 39.09 315 eP 38 50.90 -0.4  
 1.3s 10.00nm 4.4mb  
 Z 18s 0.20um 4.0Msz

GTA 39.17 61 eP 38 52.40 0.1  
 0.9s 10.00nm 4.5mb  
 SBF 40.42 306 eP 39 01.90 -0.5  
 0.6s 9.00nm 4.7mb

BNI 41.12 307 P 39 06.90 -1.3  
 LPG 41.12 308 eP 39 08.00 -0.4  
 0.6s 5.40nm 4.5mb

LPL 41.14 308 eP 39 08.10 -0.4  
 0.7s 12.15nm 4.7mb  
 BSF 41.49 311 eP 39 09.90 -1.2

CHG 41.87 93 eP 39 15.00 0.5  
 1.1s 15.82nm 4.7mb  
 HFS 42.10 331 eP 39 15.00 -0.8

0.5s 14.00nm 4.9mb  
 Z 15s 0.43um 4.5MszX  
 e 39 20.00 17km  
 e 39 23.30  
 e 39 31.80

LR 56 01.00  
 WTS 42.43 318 eP 39 20.00 1.4  
 0.5s 7.00nm 4.6mb

e 39 27.00 24km  
 MEM 42.57 315 P 39 33.80 14.0X  
 ENN 42.66 316 eP 39 21.50 1.0  
 0.7s 4.00nm 4.3mb

SOD 42.67 345 eP 39 22.00 1.6  
 e 39 35.00 48kmX  
 CD2 42.92 74 eP 39 22.10 -1.0

LBF 43.24 310 eP 39 24.20 -1.2  
 0.5s 2.20nm 4.2mb  
 SMF 43.29 309 eP 39 24.80 -1.0

0.9s 9.00nm 4.5mb  
 DOU 43.35 314 P 39 41.00 14.8X  
 LOR 43.35 310 eP 39 25.20 -1.1

0.7s 4.95nm 4.4mb  
 SSF 43.57 310 eP 39 27.10 -0.9  
 1.2s 14.90nm 4.7mb

NB2 43.62 331 P 39 27.80 -0.4  
 0.7s 3.00nm 4.2mb  
 AVF 43.64 309 eP 39 27.60 -1.0

BGF 43.96 309 eP 39 30.20 -1.0  
 0.6s 5.40nm 4.5mb  
 MAF 44.11 309 eP 39 31.60 -0.9

0.6s 4.05nm 4.4mb  
 CAF 44.36 307 eP 39 34.00 -0.5  
 0.8s 5.35nm 4.5mb

TCF 44.37 309 eP 39 33.80 -0.7  
 0.7s 4.40nm 4.4mb  
 KEV 44.52 347 eP 39 20.00 -15.4X

e 39 56.00 63kmX  
 RJF 44.77 307 eP 39 37.40 -0.4  
 0.7s 6.60nm 4.7mb

LPO 44.97 306 eP 39 39.00 -0.4  
 LFF 45.30 307 eP 39 41.50 -0.5  
 0.6s 9.00nm 4.9mb

EBR 45.42 301 eP 39 47.00 4.1X  
 EROO 45.48 301 eP 39 44.00 0.5  
 MFF 46.02 309 eP 39 47.30 -0.3

FLN 46.43 312 eP 39 49.60 -1.2

0.8s 6.70nm 4.7mb  
 LPF 46.73 311 eP 39 52.90 -0.3  
 XAN 46.76 68 P 39 52.40 -1.4  
 HHC 48.16 59 eP 40 05.00 0.2  
 Z 20s 0.60um 4.6Msz

TOL 48.93 300 eP 40 11.00 0.4  
 eS 46 15.00  
 GUD 48.95 301 eP 40 11.00 0.1  
 TIY 49.12 63 eP 40 12.50 0.4

N 14s 0.52um  
 E 18s 0.85um

ECP 50.46 316 eP 40 36.00 13.9X  
 IFR 50.66 292 iP 40 20.00 -4.1X  
 i 40 25.00 17km

DMU 50.92 318 eP 40 39.00 13.4X  
 TIA 53.05 64 eP 40 41.20 -0.7  
 CN2 58.05 54 eP 41 17.00 -0.7

Z 18s 2.00um 5.3Msz  
 N 10s 0.20um  
 E 10s 0.30um

epP 41 24.00 23km  
 YAK 58.82 32 eP 41 23.30 0.4  
 LKO 58.97 264 P 41 20.72 -4.0X

0.8s 7.00nm 4.8mb  
 KIC 59.71 260 P 41 28.00 -1.7  
 LIC 60.03 260 P 41 30.40 -1.5

Z 20s 0.26um 4.4Msz  
 SCH 83.16 330 eP 43 50.00 0.4  
 INK 83.69 3 eP 43 53.00 1.0

YKA 89.26 355 eP 44 19.20 -0.2  
 0.8s 2.40nm 4.5mb  
 WRA 90.95 112 P 44 30.00 2.1

0.6s 0.80nm 4.2mb  
 WB2 90.95 112 iPd 44 30.10 2.2  
 1.4s 1.40nm 4.1mb

ZO80 125.76 270 PKP 50 26.50 -0.6  
 Z 18s 0.45um 5.2Msz  
 LR 40 28.00

CNCB 125.84 269 PKP 50 30.00 2.8X  
 S.D. = 1.0 on 80 of 116 obs.

MAY 22, 1991 04h 03m 12.19±0.36s  
 41.683 N ± 5.8km 13.995 E ± 3.6km  
 DEPTH = 10.0km (geophysicist)  
 SOUTHERN ITALY (390)

SDI 0.14 280 P 03 15.40 -0.1  
 eSg 03 17.00  
 DUI 0.35 93 Pc 03 18.60 -0.8

eSg 03 25.50  
 AZI 0.52 306 P 03 22.00 -0.7  
 eSg 03 30.00

AQU 0.80 327 P 03 27.50 -0.3  
 eSg 03 41.50  
 RDP 0.96 275 P 03 30.90 0.4

eSg 03 43.30  
 RMP 0.98 278 P 03 30.20 -0.5  
 eSg 03 45.10

MNS 1.20 306 P 03 34.90 0.2  
 eSg 03 52.50  
 ASS 1.70 325 P 03 43.60 1.5

ARV 1.97 337 P 03 46.10 0.1  
 BAI 2.23 104 P 03 51.00 1.3  
 HVAR 2.35 50 iPn 03 51.20 -0.3

CRE 2.46 323 P 03 53.90 0.8  
 ORI 2.47 130 P 03 53.00 -0.1  
 BRT 2.55 107 P 03 53.90 -0.3

eSn 04 22.80  
 TDS 2.70 138 P 03 56.50 0.1  
 SFI 2.74 326 P 03 55.60 -1.3

PGD 2.76 323 P 03 57.90 0.5  
 FIR 2.91 317 eP 04 07.00 7.7X  
 LCI 3.28 113 P 04 05.00 0.3

PGF 3.82 285 Pn 04 11.90 -0.5  
 PTJ 4.45 18 eP 04 15.50 -5.8X  
 OHR 5.15 94 ePn 04 30.80 -0.4

S.D. = 0.7 on 20 of 22 obs.

& MAY 22, 1991 05h 06m 15.20s  
 40.513 N 123.682 W  
 DEPTH = 3.0km  
 NORTHERN CALIFORNIA (36)  
 <BRK>. ML 3.0 (BRK).

FOX 0.24 272 iPd 06 20.44 0.5  
 FHC 0.37 321 eP 06 22.10 -0.5  
 WDC 0.87 85 iPc 06 32.22 -0.4



				epP	06	24.00	43kmX
GYA	92.08	301	P		06	17.40	5.6X
TIY	95.13	312	eP		06	26.00	0.5
ALO	96.74	52	e(P)		06	38.00	5.0X
	1.3s			5.77nm			4.9mb
Z	20s			0.53um			5.0MsZ
ANMO	96.74	52	P		06	38.70	5.7X
CNCB	97.74	116	P		06	50.00	11.5X
LPB	97.83	116	P		06	54.00	15.3X
			eLR		39	06.00	
ZOBO	97.97	116	eP		06	49.00	9.5X
			SKS		17	20.00	
			LR		39	04.00	
PMR	98.23	14	P		06	37.60	-1.2X
CCH	98.75	118	eP		06	56.00	13.3X
FBA	101.48	13	Pdiff		06	49.70	-3.8X
	0.9s			9.17nm			5.4mb
INK	107.42	16	ePKP		11	24.00	-4.1X
YKA	109.09	26	ePKP		11	29.30	-2.2
	0.8s			1.00nm			
BUL	119.99	211	iPKPd		11	53.50	-0.3
	0.9s			20.59nm			
KRI	122.46	214	iPKPd		11	58.50	0.0
SCH	129.68	44	ePKP		12	11.00	-0.2
MAIO	132.21	291	ePKP		12	15.00	-1.7
DAG	136.06	6	iPKPc		12	20.90	-1.7
	0.9s			12.60nm			
			e		15	49.00	
KEV	141.10	346	ePKP		12	31.00	-1.1
			e		12	47.00	
SOD	143.10	343	ePKP		12	24.00	-11.6X
			e		12	34.00	
AKU	146.20	14	iPKPc		12	42.30	1.4
	1.1s			131.65nm			
REY	146.67	18	iPKP		12	43.50	1.8
OBN	147.07	321	iPKPd		12	41.90	-0.7
	1.0s		*****nm				
Z	22s			0.50um			5.3MsZ
			i		12	58.00	
KAF	147.23	338	iPKP		12	42.70	0.0
	0.6s			22.50nm			
			eSP		12	46.80	
NUR	148.96	337	iPKP		12	45.10	-0.3
	0.8s			24.90nm			
			i		12	49.20	
RGS	150.08	351	ePKP		12	51.00	3.9X
PRNI	150.56	273	iPKPc		12	55.36	6.5X
GLH	150.58	278	ePKP		12	54.00	5.2X
MML	150.72	277	ePKP		12	54.00	4.9X
BHL	150.80	280	PKP		12	54.00	4.8X
UPP	151.57	342	iPKP		12	53.80	4.4X
	1.0s			100.00nm			
NB2	151.86	349	PKP		12	55.40	5.5X
	0.9s			59.30nm			
LIC	152.10	168	PKP		12	55.70	4.1X
Z	20s			0.14um			4.8MsZ
HFS	152.25	346	ePKP		12	49.00	-1.4
	0.7s			35.30nm			
Z	18s			0.39um			5.3MsZ
			e		12	55.20	
			e		12	58.80	
			e		13	00.50	
			e		13	11.10	
			LR		10	35.00	
KIC	152.28	169	PKP		12	55.84	4.0X
TIC	152.51	168	PKP		12	56.24	4.1X
KAS	152.62	296	ePKP		13	00.00	8.4X
LKO	155.24	166	PKP		12	58.68	2.8X
VR1	156.58	309	ePKP		13	09.00	12.2X
MLR	157.23	308	ePKP		12	58.00	0.2
KRA	158.31	324	ePKP		12	5	



22d 07h

OHR	162.26	300	ePKP	13 02.00	-1.2
ENN	162.57	348	ePKP	13 03.00	-0.1
	1.0s	12.00nm			
			e	13 52.00	
VBY	163.67	320	ePKP	13 03.00	-0.6
LJU	163.69	323	ePKP	13 03.00	-1.4
CEY	163.95	322	ePKP	13 04.50	-0.2
VOY	164.02	324	ePKP	13 04.20	-0.6
FLN	165.04	2	ePKP	13 04.70	-0.8
	1.0s	18.00nm			
Z	20s	0.30um			
BSF	165.18	343	ePKP	13 04.60	-1.2
	1.2s	14.90nm			
LDF	165.22	1	ePKP	13 04.80	-0.9
	1.2s	23.80nm			
GRR	165.40	3	ePKP	13 05.20	-0.6
	1.3s	25.25nm			
LPF	165.74	4	ePKP	13 05.60	-0.5
LOR	166.30	350	ePKP	13 06.00	-0.6
	1.3s	18.05nm			
Z	21s	0.40um			
SSF	166.55	351	ePKP	13 06.30	-0.5
	1.2s	16.35nm			
AVF	166.83	351	ePKP	13 06.30	-0.7
	1.4s	13.05nm			
SMF	166.91	349	ePKP	13 06.30	-0.8
	1.3s	21.65nm			
BGF	167.12	352	ePKP	13 06.80	-0.5
MFF	167.21	2	ePKP	13 06.70	-0.6
	1.1s	17.10nm			
TCF	167.45	354	ePKP	13 06.50	-1.1
	1.3s	14.45nm			
LSF	167.54	356	ePKP	13 07.10	-0.5
RJF	168.48	356	ePKP	13 08.30	0.1
	1.0s	28.00nm			
Z	22s	0.40um			
SBF	168.56	333	ePKP	13 07.50	-0.9
	1.0s	28.00nm			
CAF	168.82	354	ePKP	13 08.50	0.0
	1.3s	21.65nm			
PGF	168.96	325	ePKP	13 07.90	-0.8
	1.3s	43.30nm			
FRF	169.10	335	ePKP	13 07.80	-0.8
	1.0s	16.00nm			
LPO	169.12	357	ePKP	13 08.90	0.3
LRG	169.30	336	ePKP	13 08.10	-0.6
	1.0s	28.90nm			
Z	21s	0.47um			
LMR	169.35	335	ePKP	13 08.20	-0.6
EPF	170.79	0	ePKP	13 10.30	0.6
	1.3s	28.90nm			
EPLA	171.88	38	ePKP	13 15.00	4.8X
GUD	172.27	27	iPKPd	13 12.50	2.1
ETOR	172.73	15	ePKP	13 12.00	1.4
TOL	172.96	29	ePKP	13 13.00	2.4
		ePKK	14 40.00		
		ePP	18 35.00		
		eSKKS	25 30.00		
		eSS	39 20.00		
	S.D. = 1.1	on 104 of 173 obs.			
? MAY 22, 1991 07h 36m 41.30 ± 5.70s					
43.064 N ± 17.2km 0.228 W ± 35.3km					
DEPTH = 10.0km (geophysicist)					
PYRENEES (378)					
MD 1.0 (STR).					
JAU	0.11	256	Pg	36 44.26	0.0
OGE	0.21	300	Pg	36 45.82	0.0
ESCF	0.25	273	Pg	36 46.58	-0.1
ATE	0.35	274	Pg	36 48.75	0.2
		Sg	36 53.08		
ISSF	0.42	265	Pg	36 49.76	-0.1
		Sg	36 55.68		
MADF	0.44	281	Pg	36 50.24	-0.1
		Sg	36 57.02		
	S.D. = 0.2	on 6 of 6 obs.			
* MAY 22, 1991 08h 04m 42.00s					
36.342 N 121.892 W					
DEPTH = 10.0km					
CENTRAL CALIFORNIA (39)					
<BRK>. ML 3.1 (BRK).					
PRS	0.42	91	iPd	04 50.19	-0.4
		iS	04 55.77		
SAO	0.55	40	iPd	04 52.54	-0.7
GCC	0.69	353	iPd	04 54.28	-1.4

LLA	0.81	70	iPd	04 57.82	0.1
PR1	1.01	101	iPd	05 00.69	-0.5
		eS	05 14.16		
MHC	1.02	11	eP	05 00.40	-0.9
ARN	1.05	16	eP	05 00.80	-1.0
PCC	1.22	341	eP	05 03.20	-1.5
PHAM	1.31	112	eP	05 03.90	-2.4
BKS	1.56	350	ePc	05 10.10	0.4
		e	05 31.80		
BCH	1.87	128	eP	05 11.80	-2.6
FRI	1.87	69	ePd	05 13.42	-0.9
CMB	2.07	35	eP	05 15.89	-1.4
BONR	3.29	60	eP	05 35.50	0.6
	14 obs.	associated			
MAY 22, 1991 08h 10m 23.07 ± 0.95s					
30.320 S ± 8.2km 69.168 W ± 7.1km					
DEPTH = 10.0km (geophysicist)					
CHILE-ARGENTINA BORDER REGION (127)					
RTRS	0.29	301	iPd	10 29.10	-0.1
RTLL	1.17	149	iPc	10 41.20	-3.8X
ZON	1.29	161	iPc	10 46.50	-0.6
		eS	11 04.50		
CFA	1.51	148	iPc	10 50.40	0.2
		eS	11 10.30		
MDZ	2.57	174	eP	11 09.40	3.9X
		iS	11 42.40		
JACH	2.65	207	ePd	11 08.00	1.3
		i	11 42.00		
		iS	11 45.20		
ROCH	3.08	210	iPd	11 12.60	-0.2
		iS	11 54.00		
PEL	3.10	204	eP	11 13.00	0.1
		i	11 15.10		
		iS	11 55.50		
SAN	3.37	202	eP	11 17.00	0.1
		i	11 37.40		
PCH	3.48	199	iPd	11 19.00	0.5
		iS	12 03.50		
TCA	4.07	106	ePd	11 26.80	0.1
		S	12 29.50		
LNV	4.09	207	iP	11 25.50	-1.5
	S.D. = 0.8	on 10 of 12 obs.			
? MAY 22, 1991 08h 15m 26.41 ± 4.14s					
45.528 N ± 56.1km 26.250 E ± 15.2km					
DEPTH = 162.9 ± 43.0 km					
ROMANIA (358)					
MLR	0.22	261	iPc	15 48.00	0.0
CVO	0.30	350	iPd	15 48.00	-0.1
VRI	0.48	44	iPc	15 49.00	-0.4
CFR	1.38	104	iPd	15 56.00	-0.1
GZR	2.45	268	ePd	16 08.00	-0.1
	S.D. = 0.3	on 5 of 5 obs.			
* MAY 22, 1991 08h 21m 27.58 ± 0.80s					
2.647 N ± 13.5km 122.120 E ± 15.6km					
DEPTH = 584.6 ± 11.0 km					
5.0mb (6 obs.)					
CELEBES SEA (262)					
TSM	4.33	291	iPd	22 54.80	0.0
	0.5s	625.60nm			
MTN	17.80	150	eP	25 03.60	0.6
WB2	25.46	152	iPd	26 11.30	-1.2
	0.4s	35.20nm			5.3mb
		i	29 24.40		
CHG	27.80	307	ePd	26 33.00	0.1
	0.9s	21.43nm			4.8mb
ASPA	28.56	157	iPc	26 39.30	-0.2
	0.3s	14.10nm			5.1mb
		iS	30 46.50		
OIS	28.74	144	iPc	26 41.10	0.1
WARB	28.99	172	iPc	26 43.70	0.6
	0.3s	13.00nm			5.0mb
STK	39.00	153	eP	28 15.60	9.3X
	0.4s	10.90nm			4.8mb
GUN	42.75	310	P	28 36.88	0.3
PKI	42.94	309	P	28 37.98	-0.2
KKN	43.15	309	P	28 39.58	-0.1
DMN	43.20	309	P	28 40.14	0.1
GKN	43.75	309	P	28 44.12	-0.1
KOD	44.96	282	eP	28 53.90	0.0
HYB	45.20	292	iPd	28 55.30	-0.1

	0.8s	53.90nm		5.1mb	
INK	92.84	21	ePc	33 39.30	0.1
	S.D. = 0.5	on	15 of	16 obs.	
-----					
? MAY 22, 1991	08h	38m	52.58±	1.29s	
39.153 N	±10.4km	27.595 E	±38.7km		
DEPTH = 10.0km (geophysicist)					
TURKEY					(366)
MD 2.6 (ISK).					
IZM	0.80	199	ePg	39 08.10	0.0
			iSg	39 19.60	
EDC	1.21	10	ePn	39 15.00	-0.1
BNT	1.23	12	ePn	39 15.50	0.1
KGT	1.32	350	ePn	39 16.90	0.0
	S.D. = 0.1	on	4 of	4 obs.	
-----					
* MAY 22, 1991	08h	47m	39.69±	1.13s	
22.843 N	±14.2km	121.621 E	±11.2km		
DEPTH = 23.3 ± 12.6 km					
4.0mb ( 2 obs..)					
TAIWAN REGION					(243)
TWG	0.51	268	iPc	47 49.60	-0.3
			eS	47 54.60	
TWF1	0.59	330	iPc	47 51.80	0.5
			eS	47 57.40	
TWM1	1.10	269	ePd	48 00.80	1.1
TKW	1.13	292	iPd	48 00.10	0.0
TWC	1.77	7	ePc	48 09.60	0.4
ANP	2.33	358	eP	48 17.00	-0.4
HKC	6.91	267	iP	49 21.00	-1.1
SSE	8.23	357	eP	49 19.00	-21.5X
Z	16s		0.30um		
			e	49 46.50	
			eLg	51 48.50	
WB2	44.30	163	eP	55 48.40	-1.3
	0.4s		0.80nm		3.9mb
ASPA	47.75	165	eP	56 18.50	1.5
	1.5s		2.50nm		4.0mb
	S.D. = 1.2	on	9 of	10 obs.	
-----					
* MAY 22, 1991	09h	50m	48.30±	1.27s	
31.011 S	±14.5km	65.528 W	±14.6km		
DEPTH = 200.8 ± 18.1 km					
CORDOBA PROVINCE, ARGENTINA					(141)
TCA	0.87	112	iPc	51 17.60	-0.1
			S	51 37.50	
CFA	2.40	255	iPd	51 31.40	-0.1
			eS	52 02.50	
RTLL	2.54	262	iPd	51 33.00	-0.1
			(S)	52 04.80	
MDZ	3.39	236	eP	51 43.60	0.5
			iS	52 25.20	
PEL	4.87	243	eP	52 02.00	0.3
			iS	52 59.00	
PCH	4.96	237	iPd	52 03.20	0.3
			eS	53 02.80	
ROCH	5.05	246	iPd	52 04.20	0.0
			eS	53 02.00	
LNV	5.77	238	iP	52 12.50	-0.8
CNCB	14.31	350	P	54 04.70	0.9
			i	54 09.80	
LPB	14.60	350	P	54 07.00	-0.2
ZOBO	14.86	350	P	54 10.00	-0.6
	S.D. = 0.6	on	11 of	11 obs.	
-----					
? MAY 22, 1991	10h	44m	49.55±	3.88s	
39.658 N	±28.8km	29.511 E	±18.2km		
DEPTH = 10.0km (geophysicist)					
TURKEY					(366)
MD 2.8 (ISK).					
IZI	0.68	358	iPg	45 02.40	-0.7
YLV	0.91	353	iPn	45 06.90	-0.2
EYL	1.03	28	ePn	45 08.90	-0.2
HRT	1.17	6	iPn	45 12.40	1.0
BNT	1.41	300	ePn	45 15.90	0.7
EDC	1.44	299	ePn	45 15.00	-0.7
KGT	1.87	296	ePn	45 21.90	0.0
	S.D. = 0.8	on	7 of	7 obs.	
-----					
MAY 22, 1991	11h	50m	09.20±	0.58s	
35.187 N	± 8.9km	28.918 E	± 7.2km		
DEPTH = 10.0km (geophysicist)					
EASTERN MEDITERRANEAN SEA					(371)



## MD 3.5 (ATH).

ARG	1.21	328	ePg	50	32.00	0.2
CIN	2.50	345	eP	50	50.00	-0.5
NPS	2.71	273	iPnc	50	55.00	1.4
			eSn	51	25.00	
PPCY	2.83	95	eP	50	56.70	1.5
CSS	3.63	92	eP	51	07.20	0.6
VLI	5.09	289	iPnc	51	26.00	-1.3
			eSn	52	19.00	
KOT	5.79	154	ePn	51	37.50	0.4
			eSn	52	38.50	
HRI	5.97	107	eP	51	39.00	-0.8
			eS	52	43.00	
DSI	6.50	122	eP	51	46.00	-1.2
MBH	7.38	135	eP	51	59.00	-0.7
HQL	7.86	137	P	52	06.60	0.3
			S	52	28.70	

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

\* MAY 22, 1991 12h 00m 03.30±3.24s  
 40.809 N ±12.2km 30.252 E ±22.9km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

## MD 2.9 (ISK).

EYL	0.25	197	iPg	00	08.60	-0.1
HRT	0.44	272	iPg	00	12.40	0.0
			iSg	00	20.90	
YLV	0.71	250	iPg	00	16.90	-0.5
IZI	0.76	232	iPg	00	18.70	0.5
DMK	2.13	299	ePn	00	39.50	0.0
CIN	3.62	208	ePg	01	13.00	12.4X
			iSg	01	17.00	

S.D. = 0.5 on 5 of 6 obs.

? MAY 22, 1991 12h 27m 37.34±1.28s  
 30.129 N ±16.3km 69.649 E ±21.1km  
 DEPTH = 33.0km (normol)

4.2mb ( 3 obs.)

PAKISTAN (710)

NDI	6.76	100	iPc	29	17.00	0.2
	0.4s	169.49nm			6.3mb	X
			iS	30	53.00	
GAR	8.87	3	eP	29	46.00	-0.3
POO	12.16	161	eP	30	38.50	7.3X
GKN	13.28	95	P	30	49.30	3.1X
KKN	13.88	96	P	30	50.06	-4.2X
GUN	14.37	95	P	30	55.50	-5.3X
HYB	15.04	145	eP	31	13.50	4.3X
			eS	34	33.50	
WRA	79.68	120	P	39	43.00	-0.5
	0.8s	2.20nm			4.2mb	
WB2	79.69	120	iPc	39	43.50	-0.1
	0.9s	2.20nm			4.2mb	
			e	40	34.70	
INK	80.36	9	eP	39	46.00	-0.3
YKA	87.64	2	eP	40	24.20	1.0
	1.1s	1.30nm			4.1mb	

S.D. = 0.7 on 6 of 11 obs.

\* MAY 22, 1991 12h 37m 35.46±0.51s  
 10.976 S ±9.5km 162.007 E ±8.6km  
 DEPTH = 35.4km ( 9 depth phases)

4.7mb ( 8 obs.) 4.5msz ( 2 obs.)

SOLOMON ISLANDS (193)

HNR	2.54	307	iP	38	15.00	-0.2
			iS	38	43.00	
SVO	2.82	310	iP	38	20.00	0.8
			iS	38	48.00	
VSG	2.83	307	iP	38	20.00	0.6
			iS	38	48.50	
DZM	11.82	159	iPc	40	28.90	4.1X
			iS	42	39.50	
PMG	14.70	275	eP	41	00.00	-2.8X
RMO	19.86	217	iPc	42	09.80	3.2X
			i	42	12.40	10kmX
COO	21.65	204	eP	42	28.00	3.0X
QIS	23.54	243	eP	42	44.00	0.4
CMS	25.31	214	eP	43	03.00	2.5
WB2	28.07	248	iPc	43	24.80	-1.2
	0.5s	8.30nm			4.7mb	
			e	43	37.60	51kmX
			i	47	19.70	
STK	28.08	219	eP	43	37.90	12.0X

ASPA	0.8s	1.90nm				
	29.58	241	eP	43	38.20	-1.4
	0.5s	4.30nm			4.5mb	
Z	19s	1.60um			4.7msz	
KNA	32.66	258	eP	44	05.40	-1.3
WARB	36.63	241	eP	44	40.60	0.0
MBL	41.66	251	eP	45	22.00	-0.4
MAT	52.31	336	(P)	46	47.00	1.0
	0.8s	7.46nm			4.7mb	
		eS	54	12.00		
SSE	57.30	318	Pc	47	30.00	7.7X
	1.0s	15.00nm			5.0mb	
Z	20s	0.30um			4.4msz	
NJ2	59.44	318	Pd	47	46.50	9.2X
MDJ	62.64	334	eP	48	06.50	7.8X
TIA	63.16	320	eP	48	09.30	7.0X
CN2	63.86	331	eP	48	13.00	6.3X
BJI	66.17	323	eP	48	15.50	-6.2X
CHG	68.86	295	eP	48	47.30	8.2X
HHC	69.44	321	P	48	50.20	7.8X
CD2	69.67	309	eP	48	51.00	7.1X
BTO	70.26	320	eP	48	54.00	6.6X
GTA	76.39	315	P	49	32.00	8.6X
	1.4s	40.00nm			5.2mb	
YAK	77.01	345	iPc	49	35.00	8.9X
SVW	79.22	19	eP	49	38.80	0.4
	1.0s	21.70nm			5.1mb	
		i	49	50.80	40km	
ANM	79.25	14	eP	49	39.40	1.0
		e	49	49.70	33km	
RSO	79.73	21	P	49	39.70	-1.6
		pP	49	50.20	33km	
SLKM	80.67	22	P	49	45.00	-1.1
		pP	49	56.40	37km	
PMR	81.79	21	e(P)	49	54.00	2.2
		e	50	02.90	28km	
TOA	83.19	22	eP	49	59.90	0.7
MAW	83.40	202	eP	50	01.00	0.8
IMA	83.46	17	eP	50	00.70	0.1
		e	50	11.80	36km	
BALM	84.00	24	P	50	02.80	-0.6
		pP	50	14.30	37km	
GKN	84.17	300	P	50	00.00	-5.1X
FBA	84.43	19	eP	50	04.40	-1.0
		e	50	15.40	35km	
WMO	86.46	316	P	50	24.00	8.0X
GBA	87.36	284	P	50	34.00	13.3X
	0.3s	1.30nm				
PLM	88.67	56	P	50	28.00	1.0
TNP	89.54	51	P	50	30.60	-0.5
	0.7s	2.22nm			4.6mb	
		pP	50	42.60	39km	
PNT	90.78	40	eP	50	49.00	12.7X
INK	91.05	20	eP	50	44.00	6.9X
YKA	96.61	28	eP	51	00.80	-1.9
	0.4s	0.60nm			4.5mb	

S.D. = 1.2 on 24 of 46 obs.

% MAY 22, 1991 13h 04m 46.21±1.06s						
41.121 N ±13.3km					29.010 E ±10.3km	
DEPTH = 10.0km (geophysicist)						
TURKEY (366)						
MD 2.5 (ISK).						
ISK	0.07	146	iPg	04	47.90	-0.6
HRT	0.58	121	iPg	04	58.40	0.4
IZI	0.86	156	ePg	05	02.80	0.0
DMK	1.17	307	iPn	05	08.00	-0.1
KGT	1.46	243	ePn	05	12.80	0.2

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

* MAY 22, 1991 13h 14m 39.85±0.95s						
36.735 N ±10.7km					103.857 E ±10.9km	
DEPTH = 33.0km (normol)						
3.2mb ( 1 obs.)						
GANSU PROVINCE, CHINA (322)						
LZH	0.65	181	iPg	14	52.50	-0.2
			Sg	15	04.00	
GTA	4.16	311	Pn	15	41.90	-0.8
Z	13s	0.40um				
		Pg	15	51.60		
		Sn	16	28.20		
		Sg	16	42.40		
XAN	4.93	122	ePn	15	53.50	-0.2
N	10s	0.70um				
E	10s	0.40um				

S.D. = 0.5 on 28 of 30 obs.

CD2	5.81	181	ePg	16	08.00	24.6X
			Sg	17	12.00	
BTO	6.17	49	ePn	16	10.40	-0.8
			Sg	17	46.00	
TIY	6.91	79	ePn	16	21.40	-0.2
			Pg	16	41.80	
			Sn	17	38.80	
HHC	7.29	53	Pg	16	50.20	23.4X
			Sg	18	20.80	
GYA	10.52	166	eP	17	20.00	8.5X
YKA	76.39	17	eP	26	29.30	2.2
	0.4s	0.10nm			3.2mb	
S.D. = 1.4 on 6 of 9 obs.						
* MAY 22, 1991 13h 31m 57.31±1.60s						
36.810 N ±19.0km					28.942 E ±7.9km	
DEPTH = 10.0km (geophysicist)						
DODECANESE ISLANDS (369)						
MD 3.5 (ISK).						
YER	0.62	302	iPg	32	10.00	0.2
			iSg	32	21.00	
ELL	0.78	94	iPn	32	12.50	-0.1
CIN	1.04	319	ePg	32	17.00	0.0
			iSg	32	33.00	
BCK	1.47	63	iPn	32	24.00	0.1
KHL	1.58	17	ePn	32	25.50	0.0
IZM	2.07	320	ePn	32	32.30	-0.3

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

MAY 22, 1991 13h 41m 11.56±0.24s  
 46.362 N ±2.7km 1.802 E ±2.2km  
 DEPTH = 18.7 ± 3.0 km

FRANCE (538)

ML 3.6 (LDG). MD 3.3 (STR).

ML 3.6 (LDG). MD 3.3 (STR).						
LSF	0.22	240	iPgc	41	17.10	0.2
TCF	0.29	104	Pgc	41	18.00	-0.1
MAF	0.55	105	Pgc	41	22.40	0.0
BGF	0.75	74	Pgc	41	26.10	0.3
AGO	0.97	108	Pg	41	30.00	0.4
			Sg	41	42.89	
PYM	1.04	126	Pgd	41	31.30	0.5
HYF	1.07	32	Pgc	41	32.00	0.7
RJF	1.08	191	Pgd	41	31.70	0.3
AVF	1.15	68	Pnc	41	32.90	0.3
			Pg	41	33.20	
GRC	1.28	43	Pnc	41	34.90	0.5
			Pg	41	35.80	
PLDF	1.32	107	Pg	41	35.12	0.0
			Sg	41	53.00	
SSF	1.37	59	Pnc	41	35.90	0.2
			Pg	41	37.10	
MFF	1.37	281	Pnc	41	36.40	0.7
			Pg	41	37.60	
SMF	1.44	78	Pnc	41	36.90	0.2
CAF	1.45	173	Pnd	41	36.70	-0.2
LBL	1.52	138	Pnd	41	38.10	0.3
			Pg	41	39.70	
LFF	1.61	208	Pnc	41	39.20	0.1
LBF	1.62	67	Pnc	41	39.30	-0.1
			Pg	41	41.60	
LOR	1.68	57	Pnc	41	40.10	-0.1
			Pg	41	42.50	
LPO	1.73	195	Pn	41	40.60	-0.4
			Pg	41	44.50	
			Sg	42	06.50	
SSB	2.20	118	Pn	41	46.70	-1.1
LPF	2.56	312	Pnc	41	52.80	0.0
LDF	2.59	330	Pn	41	53.10	-0.1
			Sg	42	33.20	
GRR	2.72	319	Pn	41	54.60	-0.5
			Sg	42	36.20	
FLN	2.86	328	Pn	41	56.40	-0.6
			Sg	42	40.70	
HAU	3.51	60	Pn	42	05.50	-0.8
			Sg	43	01.20	
LPL	3.54	102	Pn	42	06.60	-0.4
LPG	3.56	102	Pn	42	06.80	-0.5
BSF	3.71	65	Pg	42	19.60	10.3X
			Sn	42	47.80	
			Sg	43	06.60	
CDF	4.25	59	Pg	42	30.60	13.7X
			Sg	43	23.80	
S.D. = 0.5 on 28 of 30 obs.						



% MAY 22, 1991 13h 45m 05.07±0.55s  
46.346 N ± 6.5km 1.852 E ± 4.6km  
DEPTH = 10.0km (geophysicist)  
FRANCE (538)  
ML 2.5 (LDG).

LSF	0.24	247	Pg	45	10.50	0.2
			Sg	45	13.70	
TCF	0.25	103	Pg	45	11.30	0.8
			Sg	45	15.20	
MAF	0.51	104	Pg	45	15.70	0.3
			Sg	45	22.90	
BGF	0.72	73	Pg	45	19.40	0.2
			Sg	45	29.20	
RJF	1.07	193	Pg	45	25.40	0.2
			Sg	45	38.80	
AVF	1.13	66	Pg	45	26.40	0.2
			Sg	45	40.40	
SSF	1.34	57	Pn	45	29.20	-0.6
			Pg	45	30.40	
			Sg	45	47.20	
MFF	1.40	281	Pg	45	31.00	0.3
			Sg	45	48.40	
SMF	1.41	77	Pn	45	30.00	-0.7
			Pg	45	31.60	
			Sg	45	49.50	
CAF	1.43	174	Pn	45	30.00	-1.1
			Sg	45	50.60	
LBF	1.60	66	Pg	45	34.60	1.1
			Sg	45	55.20	
LOR	1.66	55	Pn	45	33.40	-0.9
			Pg	45	35.80	
			Sg	45	56.80	

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

? MAY 22, 1991 14h 18m 37.03±4.30s  
36.743 N ± 31.9km 71.329 E ± 35.8km  
DEPTH = 180.3 ± 34.9 km  
3.5mb ( 3 obs.)  
AFGHANISTAN-USSR BORDER REGION (717)

NDI	9.44	147	eP	20	50.00	-0.1
			eS	22	29.00	
GKN	14.22	124	P	21	52.08	0.5
KKN	14.78	123	P	21	59.66	0.9
DMN	14.79	124	P	21	59.52	0.7
PKI	15.01	124	P	22	01.62	-0.1
GUN	15.11	121	P	22	01.18	-1.8
HYB	20.28	160	eP	23	36.00	35.7X
			eS	27	03.00	
YKA	80.99	3	eP	30	32.20	0.0
			0.6s	0.40nm		3.3mb
WRA	81.90	122	P	30	38.00	0.4
			0.6s	0.60nm		3.5mb
WB2	81.91	122	eP	30	37.20	-0.4
			0.5s	0.60nm		3.6mb
ASPA	84.17	125	iPd	31	10.00	20.9X
			0.7s	3.40nm		

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

? MAY 22, 1991 14h 31m 26.36±3.44s  
42.760 N ± 10.2km 13.246 E ± 27.3km  
DEPTH = 5.0km (geophysicist)  
CENTRAL ITALY (381)

ASS	0.53	306	P	31	36.50	-0.5
			eSg	31	43.50	
MNS	0.56	228	P	31	37.50	-0.1
			eSg	31	45.00	
ARV	0.77	343	P	31	41.50	-0.3
			eSg	31	52.00	
CRE	1.28	313	P	31	51.50	0.8
			eSg	32	07.00	

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

MAY 22, 1991 14h 32m 32.57±1.28s  
1.514 N ± 7.2km 127.329 E ± 9.3km  
DEPTH = 157.1 ± 13.8 km  
4.8mb ( 10 obs.)  
HALMAHERA (267)

AAI	5.24	171	ePd	33	49.00	-1.1
			eS	34	39.00	
TSM	9.63	286	ePd	34	50.00	1.4
MKS	10.31	230	ePd	34	57.50	-0.1
WB2	22.41	162	iPd	37	19.10	0.3

	0.4s	27.80nm		5.1mb		
		i	37	25.00		
		e	37	44.30		
		eS	41	16.70		
OIZ	24.42	317	P	37	38.20	0.0
OZH	24.77	341	Pc	37	42.00	0.6
OIS	25.02	152	eP	37	44.00	0.3
	0.4s	21.00nm		5.0mb		
		i	42	06.00		
ASPA	25.83	166	iPc	37	50.70	-0.5
	0.5s	12.40nm		4.8mb		
		i	38	19.90		
		eS	42	20.00		
NJ2	31.41	346	Pd	38	43.50	2.7X
GYA	31.78	323	P	38	44.80	0.6
CHG	32.70	304	eP	38	51.50	-0.8
STK	35.86	159	iPc	39	27.80	8.8X
	0.5s	5.60nm		4.5mb		
MAT	36.28	15	eP	39	21.00	-1.5
XAN	36.65	334	Pd	39	25.50	-0.2
CD2	36.78	325	eP	39	26.50	-0.3
TIY	38.54	341	Pc	39	41.60	0.1
COO	39.57	146	iPd	39	51.90	1.9
BJI	39.67	347	eP	39	50.00	-0.6
SNY	40.27	356	Pd	39	55.60	0.0
	1.0s	10.00nm		4.4mb		
LZH	40.71	330	iPd	40	00.80	1.4
	1.5s	42.00nm		4.9mb		
GTA	45.30	330	Pd	40	36.80	0.4
	1.0s	10.00nm		4.4mb		
GUN	47.52	307	P	40	54.60	0.2
	0.6s	41.00nm		5.3mb		
PKI	47.75	307	P	40	55.62	-0.5
KKN	47.95	307	P	40	57.02	-0.5
DMN	48.01	307	P	40	58.12	0.1
GKN	48.55	307	P	41	01.68	-0.4
HYB	50.45	291	eP	41	16.30	-0.3
	1.0s	25.00nm		4.9mb		
GBA	50.78	286	Pd	41	17.80	-1.2
	0.9s	6.20nm		4.3mb		
WMO	54.88	326	P	41	49.50	0.5

S.D. = 0.8 on 27 of 29 obs.

MAY 22, 1991 16h 29m 02.36±0.13s  
27.406 N ± 2.9km 55.787 E ± 1.7km  
DEPTH = 24.6km ( 20 depth phases)  
5.7mb ( 87 obs.) 5.0Msz ( 26 obs.)  
SOUTHERN IRAN (353)

Felt in the Bondar-e Abbas area.

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 17S, 35C

Centroid Location:

Origin Time 16:29: 8.7 0.7

Lat 27.04N 0.07 Lon 55.43E 0.07

Dep 15.0N FIX Half-duration 1.8

Moment Tensor: Scale 10\*\*17 Nm

Mrr= 1.20 0.06 Mtt=-0.89 0.07

Mff=-0.30 0.08 Mrt= 0.19 0.25

Mrf= 0.44 0.24 Mtl= 0.33 0.06

Principal Axes:

T Val= 1.35 Plg=72 Azm=293

N -0.30 18 115

P -1.04 0 25

Best Double Couple: Mp=1.2\*10\*\*17

NP1: Strike= 98 Dip= 47 Slip= 66

NP2: 311 48 114

DHR	5.16	259	iPd	30	22.00	1.9
			S	30	50.00	
RYD	8.67	254	iPd	31	07.00	-2.4X
			S	33	34.00	
TEH	9.11	337	eP	31	09.00	-6.5X
MAIO	9.41	19	iPc	31	21.80	2.3
	1.8s	352.11nm		6.3mb		
		eS	33	16.00		
KER	10.17	315	eP	31	29.00	-1.1
TAB	13.27	326	eP	32	12.00	0.1
ABHA	15.07	236	iPd	32	32.70	-3.0X
GAR	16.75	43	iP	32	55.50	-1.6
			iS	36	14.50	
HITJ	17.68	282	Pd	33	06.80	-1.9
BOM	17.79	115	iPd	33	12.40	2.5
			iS	36	34.60	
MSHJ	17.82	282	P	33	13.10	2.6X
MKRJ	18.02	288	Pc	33	12.00	-0.8
DSI	18.24	288	iP	33	15.90	0.4

HQL	18.35	281	iP	33	18.00	1.1
MML	18.35	291	iP	33	17.70	0.8
YTIR	18.43	287	iP	33	18.70	0.7
PRNI	18.44	284	iP	33	18.60	0.6
BHL	18.48	295	Pd	33	18.00	-0.5
			S	36	50.00	
ATZ	18.54	292	iPd	33	20.50	1.2
SAGI	18.72	284	iPd	33	22.10	0.6
			eS	36	40.40	
POO	18.81	114	iPd	33	22.50	-0.2
	0.8s	33.58nm		4.6mb		
		iS	37	13.00		
NDI	18.96	81	iPc	33	22.00	-2.3
	1.0s	122.00nm		5.1mb		
		iS	37	04.00		
OBO	19.30	220	eP+	33	28.16	-0.4
TDD	19.67	220	eP+	33	32.17	-0.5
ARO	19.93	220	eP+	33	36.41	0.9
DAF	20.05	221	eP+	33	36.28	-0.4
FAM	20.09	297	eP	33	37.50	0.6
HLI	20.11	221	eP+	33	36.60	-0.7
SGH	20.12	220	eP+	33	37.03	-0.5
KSU	20.17	221	eP+	33	37.09	-0.9
CSG	20.61	297	eP	33	42.50	0.1
KSH	20.65	49	eP	33	40.00	-2.9X
			E 11s	15.50um		
AKSR	20.88	265	iPd	33	45.30	0.1
AMAN	20.88	266	iPd	33	45.50	0.3
ASW	20.89	266	eP	33	46.00	0.7
			eS	37	40.00	
AGRW	21.06	265	iPd	33	47.90	0.8
KOT	21.16	282	eP	33	48.00	0.0
ANAL	21.24	264	iPd	33	49.50	0.6
AGMR	21.33	265	iPd	33	51.50	1.7
PPCY	21.37	296	eP	33	51.30	1.2
HLW	21.59	282	eP+	33	53.00	0.7
			eS	37	48.50	
BBTK	22.76	309	iP	34	08.00	3.9X
KAS	22.81	313	iPd	34	06.30	1.8
HYB	23.24	111	ePc	34	10.00	1.2
	1.2s	171.40nm		5.5mb		
		eS	38	22.00		
AAE	24.35	225	eP	34	22.00	2.1
GBA	24.43	120	Pd	34	22.20	1.9
	0.8s	29.30nm		4.9mb		
ARG	25.03	297	iPc	34	27.50	1.6
GBZT	25.46	308	iPc	34	30.00	0.0
G						



LIT	30.26	303	iPc	35	13.30	-0.3			1.2s	249.00nm	6.0mb		1.2s	160.00nm	5.6mb			
KKB	30.32	307	iPd	35	14.00	-0.1					36 04.20	19km		iP	36 40.20	31km		
WMO	30.44	49	P	35	15.20	0.0					36 08.00			iScP	42 27.10			
	8.0s	1100.00nm					SRO	35.53	315	iP	35 59.80	0.5		eS	42 29.60			
Z	20s	7.30um				5.3msz	MEU	35.65	296	P	36 02.20	1.7	CTI	39.38	310	P	36 30.00	-1.8
N	10s	2.40um					PZI	35.66	296	P	36 01.23	0.7	WET	39.38	315	iPc	36 31.40	-0.3
E	10s	1.90um						0.9s	153.40nm	5.9mb			1.2s	210.00nm	5.7mb			
		PP	36	13.50			MNO	35.90	298	P	36 03.50	0.8	WTTA	39.67	312	iPc	36 33.90	-0.4
VTS	30.47	308	iPc	35	15.00	-0.5	ZAG	36.40	311	iPc	36 07.00	0.4		1.0s	330.00nm	6.0mb		
DRA	30.52	313	eP	35	17.00	1.2	GIB	36.43	298	P	36 06.70	-0.4			i	36 47.30	51kmX	
VAY	30.53	306	iPc	35	16.30	0.4	ZST	36.43	315	iP	36 06.80	0.0			i	42 33.30		
	1.2s	75.00nm				5.4mb	PTJ	36.44	311	iPc	36 07.00	-0.1			i	42 43.30		
GRG	30.55	305	iPc	35	16.40	0.2	DUI	36.54	304	P	36 08.40	0.4	MME	39.69	307	P	36 35.20	0.7
COZ	30.73	314	eP	35	18.50	0.6	VBY	36.80	310	iPc	36 10.70	0.7	PII	39.73	306	P	36 33.93	-0.6
KZN	30.85	303	iPc	35	19.00	0.2	RFI	36.83	303	P	36 11.00	0.7		0.4s	48.30nm	5.6mb		
TNR	30.91	314	ePc	35	20.00	0.7	VKA	36.94	315	iPc	36 11.00	-0.2	BDI	39.74	307	P	36 32.50	-2.2
OBN	30.99	338	iPc+	35	20.00	0.2		1.5s	280.00nm	5.9mb		KAF	39.83	339	iP	36 35.10	0.0	
	1.2s	240.00nm				5.9mb			i	36 47.00	163kmX		0.5s	6.20nm	4.6mb	X		
Z	15s	1.80um				4.9mszX	SDI	37.02	304	P	36 10.40	-1.6	CLL	40.01	318	iPc	36 37.10	0.4
N	15s	1.20um					USI	37.15	299	P	36 13.70	0.7		1.4s	280.00nm	5.8mb		
E	15s	1.40um					RIY	37.35	310	eP	36 14.40	-0.2			iP	36 46.80	33km	
		e	35	28.00		28km	CVT	37.38	297	P	36 17.10	2.2			i(ScP)	42 29.80		
		e	35	42.00			CEY	37.43	310	ePc	36 15.50	0.2			iS	42 40.30		
		ePP	36	12.00			AQU	37.43	305	P	36 16.70	1.3	SAL	40.06	309	P	36 38.20	1.0
		eS	40	24.00			LJU	37.43	311	ePc	36 16.10	0.8	HOF	40.36	317	eP	36 39.90	0.2
		i	40	40.00					e	36 17.00	3kmX		1.0s	71.00nm	5.4mb			
		e	40	42.00					eS	42 04.00		CHG	40.44	93	ePc	36 41.70	1.0	
		eSS	42	08.00					eLR	55 20.00			1.4s	87.21nm	5.3mb			
		e	43	00.00			RDP	37.84	304	P	36 19.50	0.6	GRF	40.58	316	iPc	36 42.10	0.6
MDB	31.06	315	iPd	35	22.00	1.5		1.1s	290.70nm	6.0mb			1.3s	480.00nm	6.1mb			
LSA	31.07	77	eP	35	22.40	1.0	VOY	37.86	311	iPc	36 19.20	0.2	Z	18s	1.30um	4.8msz		
	N	13s	1.50um				RMP	37.86	304	P	36 19.80	0.8			e(S)	42 54.00		
		S	40	26.00			TRI	37.87	310	P	36 18.00	-0.9	MOX	40.62	317	iPc	36 42.00	0.2
FNA	31.26	304	iPc	35	22.80	0.4	KSP	37.91	319	iPc	36 19.30	0.1		1.4s	110.00nm	5.4mb		
VLS	31.31	299	iPc	35	22.50	-0.3		1.3s	150.00nm	5.7mb		Z	20s	0.90um	4.6msz			
SKO	31.53	306	iPc	35	24.80	0.1	MNS	37.97	305	P	36 20.37	0.5	N	21s	1.30um			
	1.0s	372.00nm				6.2mb			i	37 52.50	520kmX	E	24s	0.80um				
Z	16s	5.01um				5.3mszX	ARV	37.97	309	00nm	5.6mb	MDI	40.65	309	P	36 42.10	0.0	
N	16s	5.77um					ASS	38.09	306	P	36 21.68	0.7	PGF	40.69	304	iPc	36 42.40	-0.2
E	16s	4.94um						1.3s	373.40nm	6.0mb			1.0s	66.00nm	5.3mb			
		iS	40	31.00			GTA	38.31	60	iPc	36 23.60	0.7	BDT	41.06	95	eP	36 47.90	2.2
		i	41	17.00				4.0s	1410.00nm	6.1mb	X	PCP	41.27	307	P	36 45.92	-1.3	
LSK	31.68	303	eP	35	25.00	-1.2	Z	14s	2.30um	5.1mszX		LZH	41.43	66	iPc	36 49.50	0.7	
IGT	31.75	302	iPc	35	25.90	-0.8	E	11s	1.60um				4.0s	450.00nm	5.6mb	X		
OHR	31.76	305	iPc	35	26.90	0.1			pP	36 29.00	18km	Z	20s	2.43um	5.1msz			
	1.2s	987.00nm				6.6mb			sP	36 33.00		E	11s	1.13um				
		i	35	34.50		26km			PP	37 53.00				pP	36 57.00	25km		
		iS	40	33.20					S	42 16.00				eS	43 00.00			
GZR	31.77	313	iPc	35	26.00	-0.9			ScP	42 23.30		CKI	41.44	307	P	36 46.40	-2.2	
DEV	31.88	314	ePc	35	28.00	0.2			sS	42 29.00		FIN	41.46	307	P	36 47.66	-1.1	
TPE	32.15	303	iPc	35	29.50	-0.7			SS	44 54.00		UPP	41.58	332	iPc	36 48.80	-0.6	
PHP	32.17	306	iPc	35	29.20	-1.1			ScS	46 32.00			1.0s	200.00nm	5.8mb			
BMR	32.29	317	ePd	35	31.00	-0.3	KBA	38.50	312	iPc	36 24.60	0.1	ROB	41.71	307	P	36 49.71	-1.2
SHL	32.29	85	iP	35	30.50	-1.3		1.0s	190.00nm	5.8mb		CD2	41.79	73	eP	36 51.50	-0.2	
		iS	40	44.00					i	36 34.10	32km	Z	18s	1.80um	5.0msz			
TIR	32.50	305	iPd	35	33.00	-0.2			i	36 39.30		N	13s	2.00um				
LACI	32.68	305	iPc	35	34.00	-0.8			i	42 17.40				PP	38 31.00			
PVY	32.74	307	iPc	35	35.18	-0.3			i	42 31.80				eS	43 07.50			
IYA	32.87	307	iPc	35	35.80	-0.7	PRU	38.63	317	Pc	36 25.20	-0.1	ORX	41.82	309	P	36 50.02	-1.9
TIM	32.91	313	iPc	35	17.50	-19.2X		1.5s	89.30nm	5.3mb		SBF	41.97	306	iPc	36 52.90	-0.1	
CEI	32.92	317	eP	35	41.00	4.2X	Z	15s	1.40um	4.9mszX		KMI	41.98	82	iP+	36 55.00	1.5	
BEO	33.09	311	eP	35	37.50	-0.8	N	16s	1.30um				1.5s	670.00nm	6.1mb			
ULC	33.10	306	iPc	35	37.50	-0.9	E	17s	1.10um			Z	14s	1.30um	5.0mszX			
TTG	33.21	306	iPc	35	38.27	-1.0			ePP	37 55.00		E	13s	0.50um				
PLE	33.26	308	iPc	35	40.47	-0.3			S	42 25.00				pP	37 01.50	22km		
BDV	33.48	306	iPc	35	40.45	-1.3	CRE	38.70	306	P	36 25.30	-0.8			S	43 14.00		
NKY	33.49	307	iPc	35	41.15	-0.8	FVI	38.75	311	P	36 25.30	-1.0	ENR	42.02	307	P	36 52.68	-0.8
LCI	33.70	302	P	35	41.00	-2.7X	SFI	38.82	307	P	36 25.60	-1.3	STV	42.09	307	P	36 52.89	-1.2
HCY	33.76	306	iPc	35	42.72	-1.4	PGD	38.91	307	P	36 27.30	-0.6	DOI	42.18	307	P	36 51.40	-3.4X
BRY	33.84	307	iPc	35	43.88	-1.1	KHC	38.94	315	iPc	36 28.00	0.0	FEL	42.20	312	P	36 53.94	-1.0
BRT	34.37	303	P	35	48.95	-0.5		1.2s	265.00nm	5.8mb		BHB	42.21	308	P	36 52.99	-2.0	
	0.9s	148.40nm				5.9mb	N	18s	0.50um			RSP	42.26	308	P	36 52.79	-2.7X	
PSZ	34.59	316	iP	35	51.40	0.1	E	16s	1.30um			PZZ	42.28	307	P	36 53.81	-1.9	
GRI	34.64	299	P	35	52.81	1.0			e	36 32.00	14kmX	LSD	42.37	308	P	36 55.55	-1.0	
	1.0s	234.70nm				6.1mb			S	42 30.80		TNS	42.45	316	ePc	36 56.90	0.0	
ORI	34.79	302	P	35	54.40	1.3	MAO	39.09	304	P	36 30.00	0.7	BBS	42.46	311	P	36 55.81	-1.1
TDS	34.82	301	Pc	35	54.00	0.7	FIR	39.22	307	eP	36 31.00	0.7	SURF	42.49	307	P	36 57.38	0.0
SOI	34.84	298	Pc	35	54.20	0.7			iPP	37 30.00		FRF	42.51	306	eP	36 57.00	-0.4	
SPC	34.90	318	eP	35	54.40	0.3			iS	42 30.00			1.2s	65.45nm	5.2mb			
UZD	34.93	313	iPd	35	54.50	0.4	NUR	39.25	336	iPc	36 30.40	0.1	RRL	42.56	308	P	36 57.19	-0.9
BUD	34.96	315	eP	35	54.00	-0.4		0.9s	116.60nm	5.6mb		LMR	42.58	305	eP	36 57.70	-0.3	
GMB	35.00	298	P	35	56.20	1.2			e	42 36.00		BNI	42.65	308	Pc	36 57.90	-0.8	
ATN	35.31	298	P	35	58.50	0.9			e	46 08.00		LPG	42.66	308	iPc	36 58.10	-0.8	
HVAR	35.40	307	eP	35	57.50	-0.7			e	48 36.00			0.7s	86.15nm	5.6mb			
KRA	35.46	319	iPc	35	58.70	0.1	BRG	39.30	318	iPc	36 30.90	0.0	NST	42.66	97	eP	37 00.20	1.3



LPL	42.68	308	iPc	36	58.20	-0.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												</
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[illegible]



22d 18h

ASPA 25.92 220 eP 23 00.70 3.5X  
1.2s 34.30nm 4.8mb  
STK 29.10 198 eP 23 38.20 12.4X  
0.8s 8.40nm  
GUN 71.05 301 P 28 49.50 7.9X  
KKN 71.53 301 P 28 45.30 1.0  
0.6s 13.00nm 4.9mb  
DMN 71.63 301 P 28 44.50 -0.5  
GKN 72.14 301 P 28 47.20 -0.6  
YKA 95.40 28 eP 31 18.30 32.8X  
0.8s 0.70nm  
S.D. = 1.1 on 7 of 11 obs.

? MAY 22, 1991 18h 36m 29.63±1.20s  
39.017 N ±10.9km 28.874 E ±12.2km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 2.7 (ISK).

KHL 0.86 144 ePg 36 46.10 -0.1  
eSg 36 56.60  
ALT 0.96 87 ePn 36 48.30 0.3  
IZI 1.40 19 iPn 36 54.90 -0.3  
KGT 1.88 320 ePn 37 02.20 0.2  
S.D. = 0.5 on 4 of 4 obs.

& MAY 22, 1991 18h 36m 48.59s  
63.967 N 148.915 W  
DEPTH = 127.0km  
3.5mb (1 obs.)  
CENTRAL ALASKA (1)  
<AEIC>.

MCK 0.24 182 iPc 37 06.20 1.6  
eS 37 19.75  
BWN 0.32 311 ePc 37 06.35 1.5  
RND 0.56 177 iPc 37 07.50 -0.6  
eS 37 21.65  
NEA 0.62 353 iPc 37 07.78 -0.5  
eS 37 22.31  
WRH 0.62 35 iPc 37 08.08 -0.3  
TRF 0.80 230 iPd 37 09.52 -0.4  
eS 37 25.80  
CCB 0.84 35 iPc 37 09.60 -0.4  
eS 37 25.40  
RDS 0.93 21 iPc 37 10.39 -0.4  
eS 37 27.07  
HDA 0.97 62 iPc 37 10.74 -0.5  
eS 37 27.99  
MDM 1.04 16 iPc 37 11.44 -0.5  
eS 37 28.81  
HUR 1.04 198 ePc 37 11.45 -0.5  
FBA 1.06 27 iPc 37 11.90 -0.1  
GLM 1.22 32 iPc 37 13.19 -0.6  
eS 37 32.15  
DDM 1.36 96 ePc 37 14.99 -0.4  
THY 1.51 110 eP 37 17.11 0.1  
CUT 1.68 202 ePc 37 18.27 -0.7  
PAX 1.84 121 ePc 37 20.09 -0.9  
eS 37 45.07  
SDG 2.10 132 ePc 37 23.02 -1.1  
DOT 2.18 96 ePd 37 23.59 -1.5  
SML 2.18 173 eP 37 24.00 -1.2  
GHO 2.20 180 ePc 37 24.29 -1.2  
TOA 2.25 145 ePc 37 25.50 -0.5  
SCM 2.26 161 ePc 37 24.87 -1.4  
SKT 2.32 212 ePd 37 25.42 -1.5  
eS 37 54.56  
PWA 2.37 191 eP 37 26.59 -0.9  
PLRM 2.39 182 eP 37 26.30 -1.4  
PMR 2.39 182 eP 37 26.40 -1.3  
TZL 2.50 139 eP 37 29.15 -0.1  
KNK 2.57 175 ePc 37 28.90 -1.3  
SUA 2.65 199 eP 37 30.57 -0.7  
PMS 2.75 187 eP 37 31.45 -1.0  
KLU 2.84 150 ePc 37 31.78 -1.9  
IMA 2.92 318 ePc 37 33.90 -0.9  
NCG 2.98 212 eP 37 34.92 -0.6  
FYU 3.03 29 ePd 37 35.26 -0.9  
VLZ 3.09 156 eP 37 34.45 -2.4  
CRP 3.10 210 eP 37 36.52 -0.6  
VZW 3.12 158 ePc 37 35.02 -2.3  
BGL 3.15 212 eP 37 37.30 -0.6  
CKL 3.20 211 eP 37 37.44 -1.1  
GLI 3.21 164 iPc 37 36.22 -2.3  
TTA 3.35 255 iPd 37 39.20 -1.3

NKA 3.41 200 iPd 37 42.05 0.9  
GLB 3.46 135 eP 37 40.47 -1.4  
SLKM 3.53 191 eP 37 41.26 -1.5  
KNIM 3.67 171 ePc 37 42.02 -2.7  
CVA 3.74 155 eP 37 41.74 -3.8  
HIN 3.76 161 ePc 37 43.47 -2.4  
RDT 3.78 207 eP 37 44.80 -1.3  
SEW 3.89 184 eP 37 45.63 -1.9  
SGAM 3.89 152 eP 37 45.68 -1.9  
RS2 3.95 209 eP 37 47.46 -1.2  
RSO 3.95 209 eP 37 47.21 -1.4  
RED 3.99 209 eP 37 47.58 -1.5  
MTU 4.04 171 eP 37 47.28 -2.3  
RAGM 4.11 149 eP 37 48.54 -2.0  
SVW 4.23 230 eP 37 50.60 -1.6  
BALM 4.23 131 ePc 37 50.99 -1.4  
HMT 4.25 147 eP 37 50.12 -2.3  
TGL 4.29 136 eP 37 50.84 -2.3  
BRLK 4.32 193 eP 37 51.61 -1.8  
WAX 4.53 138 eP 37 54.11 -2.2  
CNPM 4.59 195 ePc 37 54.87 -2.2  
CTGM 4.63 127 eP 37 56.26 -1.5  
PDB 4.88 213 eP 37 59.04 -1.9  
ANM 7.19 282 e(P) 38 29.10 -3.3  
INK 7.60 48 eP 38 35.50 -2.4  
YKA 15.42 80 eP 40 19.80 -0.2  
0.4s 1.00nm 3.5mb  
68 obs. associated

? MAY 22, 1991 19h 21m 34.47±4.57s  
5.953 S ±41.3km 147.78 E ±38.0km  
DEPTH = 150.1 ±10.2 km  
4.7mb (3 obs.)

EAST PAPUA NEW GUINEA REGION (207)

LAT 1.05 228 iPd 22 00.10 0.2  
PMG 3.49 190 iPc 22 28.20 -0.5  
eS 23 13.00  
QIS 16.55 208 eP 25 20.00 0.7  
0.5s 9.00nm 4.4mb  
WB2 19.08 222 iPd 25 47.00 -1.0  
0.8s 53.00nm 4.9mb  
RMO 20.44 178 eP 26 02.00 0.1  
i 26 04.40  
ASPA 22.11 216 iPc 26 19.20 0.8  
0.7s 24.00nm 4.7mb  
WARB 28.50 223 eP 27 17.50 -0.4  
SIV 144.06 128 PKP 40 48.20 -6.6X  
S.D. = 0.9 on 7 of 8 obs.

MAY 22, 1991 21h 05m 22.53±0.19s  
51.770 N ±4.6km 175.883 E ±2.3km  
DEPTH = 33.0km (normal)  
5.5mb (94 obs.) 4.9msz (24 obs.)

RAT ISLANDS, ALEUTIAN ISLANDS (6)  
ML 5.4 (PMR). Ms 5.0 (BRK).  
Mrf=0.03±0.17 Nm (PPT). Felt  
(11) on Shemya.

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 17S, 37C

Centroid Location:

Origin Time 21:05:23.4 0.5

Lat 52.15N 0.06 Lon 175.86E 0.11

Dep 25.6 5.1 Half-duration 2.0

Moment Tensor: Scale 10<sup>17</sup> Nm

Mrr=1.20 0.06 Mtt=-1.11 0.09

Mrf=-0.10 0.07 Mrl=1.16 0.30

Mrr=-0.03 0.20 Mtl=0.03 0.08

Principal Axes:

T Val=1.68 Plg=67 Azm=1

N -0.09 0 92

P -1.59 23 182

Best Double Couple: Mo=1.6×10<sup>17</sup>

NP1: Strike=272 Dip=22 Slip=90

NP2: 92 68 90

SMY 1.46 312 iPd 05 47.30 0.5  
ADK 4.61 86 eP 06 34.30 2.6  
SDN 14.46 66 eP 08 48.00 1.5  
ANM 16.10 30 eP 09 11.30 3.7X  
SVW 18.17 48 iPc 09 36.30 2.7  
PDB 18.51 53 eP 09 38.70 1.0  
TTA 18.66 42 iPc 09 41.30 1.7  
KDC 19.08 59 eP 09 42.80 -1.8

IMA 20.95 35 iPc 10 05.00 0.3  
FBA 22.75 41 eP 10 23.00 0.5  
TOA 22.79 48 eP 10 24.00 0.9  
BRW 23.13 22 eP 10 27.20 1.1  
YAK 26.64 311 iPc+ 10 57.80 -1.7  
ePPP 11 50.00  
ePcP 14 34.00  
eS 15 11.00  
eSS 15 57.00  
eSSS 16 45.00  
iScP 17 58.00  
iPcS 18 14.00  
INK 29.08 36 ePc 11 20.60 -0.9  
0.8s 23.00nm 4.9mb  
MDJ 31.23 275 iPc 11 39.80 -1.1  
1.5s 160.00nm 5.6mb  
Z 24s 1.50um 4.6msz  
N 12s 0.51um  
E 14s 0.52um  
CN2 34.21 277 Pc 12 05.00 -1.8  
5.0s 300.00nm 5.5mb X  
Z 20s 3.00um 5.0msz  
N 12s 0.50um  
E 12s 0.30um  
epP 12 14.00 31kmX  
eS 17 27.00  
SNY 36.44 275 iPc 12 25.00 -0.7  
5.0s 500.00nm 5.7mb X  
Z 22s 1.50um 4.7msz  
pP 12 37.00 44kmX  
PP 13 50.00  
PcP 14 49.40  
eS 18 00.00  
ScS 22 38.00  
SHNJ 36.54 259 eP 12 27.70 1.1  
YKA 37.35 46 eP 12 32.70 -0.5  
0.9s 18.00nm 4.9mb  
KUMJ 37.80 257 eP 12 38.40 1.1  
KAGJ 38.71 256 eP 12 46.70 1.8  
DL2 39.35 273 Pc 12 49.00 -1.2  
4.0s 700.00nm 5.8mb X  
Z 20s 0.60um 4.4msz  
N 16s 1.00um  
S 18 47.00  
LON 39.88 72 eP 12 55.00 0.5  
NEW 41.83 67 eP 13 09.70 -0.8  
0.8s 14.17nm 4.7mb  
FHC 41.85 81 eP 13 09.50 -1.3  
BJI 42.04 278 eP 13 12.50 0.3  
4.0s 470.00nm 5.6mb X  
Z 20s 0.90um 4.6msz  
N 12s 0.44um  
epP 13 26.00 51kmX  
ePP 14 53.00  
ePcP 15 05.00  
eS 19 30.00  
eScS 23 09.00  
IRK 42.37 300 ePc 13 14.00 -0.9  
e 13 25.50  
e 14 54.00  
e 15 07.70  
e 19 48.00  
LBFM 42.81 79 eP 13 20.00 1.2  
WDC 42.86 80 ePd 13 19.80 0.8  
eScP 18 57.70  
MIN 43.58 80 eP 13 25.10 0.1  
TIA 43.82 273 Pc 13 27.00 0.1  
1.2s 70.00nm 5.3mb  
Z 21s 0.80um 4.6msz  
N 14s 0.50um  
S 19 56.00  
ORV 44.12 80 ePd 13 29.10 -0.1  
eScP 19 02.10  
SES 44.13 62 eP 13 27.00 -2.2  
pP 13 39.00 43kmX  
HHC 44.38 282 P 13 30.40 -1.0  
Z 20s 1.20um 4.8msz  
N 19s 1.20um  
E 17s 0.90um  
sP 13 43.00  
PcP 15 14.00  
S 20 03.00  
BKS 44.70 83 iPd 13 35.50 1.5  
0.8s 47.00nm 5.4mb  
Z 20s 1.80um 5.0msz  
E 20s 1.70um



SSE	44.71	264	eLO	24	40.00		ANMO	56.23	75	eP	15	01.30	-0.6	EAB	72.41	0	ePc	16	47.30	0.6
			eLR	26	36.00			0.9s	15.23nm				5.0mb	ESY	72.67	359	ePc	16	48.60	0.3
			Pc	13	35.00	1.0	ALO	56.23	75	eP	15	01.20	-0.7	EAU	72.75	360	ePc	16	49.60	0.8
	4.0s	600.00nm						0.9s	3.36nm				4.4mb X		0.9s	120.00nm			5.9mb	
Z	20s	0.90um						Z	20s	0.71um			4.8Msz	NDI	73.03	295	iPc	16	50.00	-0.8
N	14s	0.40um					WMO	56.30	300	iPc	15	01.00	-1.2		0.7s	27.40nm			5.4mb	
			pP	13	46.00	38kmX		4.0s	700.00nm				6.0mb X	EKA	73.26	359	Pc	16	51.10	-0.6
			sP	13	50.00			Z	20s	1.80um			5.2Msz		0.9s	48.40nm			5.5mb	
			ePP	15	22.00			N	14s	1.00um				DMU	74.68	2	iPc	16	59.90	-0.1
			S	20	10.00			E	14s	0.60um					0.9s	130.00nm			5.9mb	
			sS	20	28.00										75.40	353	eP	17	05.50	1.4
			SS	23	20.00										75.89	1	eP	17	06.90	0.0
MHC	45.41	83	ePd	13	39.50	-0.2								MAIO	76.19	312	iPc+	17	09.50	0.5
BTO	45.46	283	iPc	13	41.00	0.9	KEV	56.68	348	iP	15	02.00	-2.4			eS	27	44.00		
	N	18s	1.40um					0.7s	25.40nm				5.4mb	WTS	76.20	353	iPc	17	08.90	0.3
	E	18s	1.30um				GYA	56.99	272	iPc	14	48.00	-19.3X		0.8s	31.00nm			5.4mb	
			pP	13	52.00	38kmX		1.2s	100.00nm							e	18	44.00		
			ePP	15	28.00			N	20s	0.70um				ECB	76.22	2	iPc	17	08.70	0.0
			S	20	20.50			E	20s	1.00um					0.9s	61.00nm			5.6mb	
			eSS	23	37.00									CLL	76.28	349	iPc	17	08.10	-1.0
ARN	45.47	83	eP	13	40.00	-0.1	SOD	58.95	347	iP	15	18.40	-2.0		2.0s	61.00nm			5.3mb	
NJ2	45.50	267	P	13	42.00	1.7	KMI	60.39	274	Pc	15	17.00	-14.0X			i	17	13.90		
	Z	22s	0.40um					1.2s	60.00nm					KSP	76.31	347	iPc	17	08.80	-0.5
	E	14s	0.70um											ECP	76.41	1	iPc	17	09.70	-0.1
			S	20	20.00		SCH	61.72	36	ePd	15	38.10	-1.4		0.9s	125.00nm			5.9mb	
CMB	45.74	81	eP	13	42.80	0.5		0.9s	85.00nm				5.9mb	KRA	76.51	344	iPc	17	10.10	-0.3
	1.0s	13.33nm					TUL	61.82	67	eP	15	39.00	-1.4		1.0s	37.00nm			5.4mb	
TIY	45.77	278	Pc	13	43.00	0.5		1.0s	12.70nm				5.0mb			e	17	23.20		
	Z	20s	1.00um				AKU	62.38	6	iP	15	44.20	0.5	VAL	76.54	4	iP	17	10.50	0.0
	N	13s	0.44um					0.9s	60.50nm				5.7mb	BRG	76.59	348	iPc	17	10.00	-0.9
			pP	13	54.50	41kmX	FVM	63.35	62	eP	15	48.50	-2.0		1.2s	26.00nm			5.1mb	
LRM	45.83	68	eP	13	40.70	-2.5	KAF	63.93	345	iP	15	52.20	-1.7	IPM	77.06	261	ePc	17	15.30	1.3
PRS	46.22	84	e(P)	13	46.00	0.0		0.7s	60.30nm				5.8mb		0.9s	33.40nm			5.4mb	
FFC	46.57	52	iPc	13	47.70	-0.8								MOX	77.09	350	iP	17	13.80	0.1
	0.7s	12.00nm					LSA	64.16	286	Pd	15	55.60	-0.9		1.5s	44.00nm			5.3mb	
PRI	46.77	84	eP	13	50.80	0.3	ELC	64.51	62	eP	15	56.60	-1.5	SPC	77.30	344	iP	17	14.90	-0.2
FRI	46.82	82	ePd	13	51.00	0.3	OLY	64.56	64	eP	15	56.20	-2.2	PRU	77.39	348	eP	17	15.50	0.2
			eScP	19	13.90		CLE	65.46	54	iP	16	03.80	-0.3		1.3s	27.10nm			5.1mb	
BONR	47.07	80	eP	13	53.00	-0.1	NUR	65.71	345	iP	16	03.00	-2.4		Z	21s	0.80um			5.0Msz
TNP	47.65	79	eP	13	57.00	-0.6		0.9s	62.50nm				5.7mb		N	20s	0.70um			
	0.6s	5.56nm					WVLY	66.18	51	eP	16	07.60	-1.2		E	21s	0.40um			
BCH	47.76	84	eP	13	59.00	0.7	SHL	66.74	282	iP	16	10.00	-2.7	ENN	77.49	353	iPc	17	15.80	0.0
ISA	48.44	83	eP	14	03.00	-0.5							25.00.00		0.9s	83.00nm			5.8mb	
ABL	48.51	84	eP	14	05.00	0.7	NB2	66.87	352	P	16	11.70	-1.2			ic	18	51.50		
KBS	49.22	356	eP	14	08.40	-0.5		0.8s	95.50nm				5.9mb	UCC	77.56	355	Pc	17	16.30	0.1
WHN	49.33	269	Pc	14	10.70	0.4	UPP	67.35	348	iPc	16	14.30	-1.5	KLL	77.58	353	ePc	17	16.00	-0.4
	1.0s	100.00nm						1.0s	200.00nm				6.2mb			id	18	51.70		
SBB	49.48	83	eP	14	11.00	-0.5	CHG	67.41	272	eP	16	09.80	-7.1X	MEM	77.64	353	iPc	17	16.52	-0.1
PAS	49.62	84	eP	14	13.00	0.5		1.1s	40.82nm				5.4mb			e	18	51.80		
MWC	49.64	84	eP	14	14.00	1.1	HFS	67.53	350	eP	16	15.00	-2.0	IAS	77.74	338	eP	17	19.00	1.7
GSC	49.70	82	eP	14	13.00	-0.3		0.7s	31.90nm				5.5mb	SNF	77.85	355	iPc	17	17.70	-0.1
RVR	50.22	83	eP	14	17.00	-0.1	Z	19s	0.79um				5.0Msz	GRF	78.08	350	iPc	17	19.40	0.3
MSU	50.43	75	eP	14	19.00	0.0							16 18.00		1.8s	79.00nm			5.4mb	
QZH	50.70	261	Pc	14	21.00	0.2							16 26.70		Z	22s	0.70um			4.9Msz
TPC	50.96	82	eP	14	23.00	0.2							39 36.00							
PLM	50.96	84	eP	14	23.00	0.0	OBN	68.26	336	iPc	16	20.50	-1.1	BMR	78.15	341	ePd	17	20.00	0.5
BAR	51.54	84	eP	14	27.00	-0.2		1.1s	120.00nm				5.9mb	DOU	78.24	354	Pd	17	20.30	0.3
LZH	52.07	282	iPd	14	15.60	-15.8X		Z	18s	3.00um			5.6Msz		0.9s	75.00nm			5.7mb	
	5.0s	730.00nm						N	18s	1.90um				KHC	78.35	348	iPc	17	21.00	0.3
	Z	22s	0.78um					E	18s	1.20um					1.2s	25.00nm			5.1mb	
	N	15s	0.71um											WET	78.42	349	eP	17	21.00	-0.1
			pP	14	26.00	35kmX										i	17	50.20		
			sP	14	31.50									PSZ	78.58	344	eP	17	23.00	1.0
			iPc	14	31.50	0.1								OIS	78.70	214	eP	17	22.50	-0.3
LZH	52.07	282	iPc	14	31.50	0.1								ZST	78.77	346	iP	17	23.50	0.6
	1.6s	170.00nm												VKA	78.82	346	eP	17	23.00	-0.2
GTA	52.32	288	Pd	14	23.00	-10.1X	GBTN	68.42	60	eP	16	21.90	-1.1	SRO	78.95	345	iP	17	25.00	1.1
	1.2s	10.00nm												GW	79.13	352	P	17	24.95	0.0
GTA	52.32	288	iPc	14	32.80	-0.3	GUN	68.61	288	P	16	24.34	-0.3	VRI	79.18	339	ePc	17	25.00	-0.2
	5.0s	490.00nm					TKL	68.66	59	eP	16	23.50	-1.0	MLR	79.71	339	ePd	17	30.00	1.7
	Z	22s	1.80um											WLS	79.72	352	P	17	27.60	-0.5
	E	16s	1.00um				GAR	68.83	306	iP	16	25.00	-0.6	CDF	79.72	352	P	17	27.91	-0.3
			pP	14	39.00	21kmX								FLN	79.80	358	iPc	17	28.40	-0.1
			sP	14	44.00										1.0s	94.00nm			5.7mb	
			PcP	15	43.80		KKN	69.05	288	P	16	26.72	-0.5		Z	20s	0.40um			4.8Msz
			PP	16	33.00		PKI	69.14	288	P	16	27.32	-0.5	PSI	79.82	261	ePd	17	34.50	5.4X
			ScP	19	35.00		BLA	69.25	56	eP	16	27.10	-1.0	ECH	79.93	352	P	17	28.83	-0.4
			S	21	55.00		DMN	69.29	288	P	16	28.40	-0.3	LDF	79.96	357	iPc	17	29.20	-0.1
			sS	22	08.00		PNJ	69.50	50	iP	16	28.80	-0.6		0.9s	68.80nm			5.7mb	
			ScS	24	17.40		CVL	69.66	54	eP	16	29.50	-1.0	VITF	80.02	353	P	17	29.78	0.2
GLA	52.42	82	eP	14	34.00	0.1	JSC	71.05	59	eP	16	37.70	-1.3	GRR	80.18	358	iPc	17	30.60	0.1
GOL	53.70	70	eP	14	42.60	-0.9									0.9s	88.45nm			5.8mb	
	0.8s	8.56nm					EDR	71.67	359	eP	16	42.40	0.1	FEL	80.19	352	P	17	30.19	-0.6
FRB	54.38	30	eP	14	46.00	-1.8		0.9s	75.00nm				5.7mb	HAU	80.20	353	eP	17	31.80	



22d 21h

BST	80.31	360 P	17	31.11	-0.1	0.8s	27.00nm	5.4mb	BAO	129.90	61 ePKPd	24	30.80	0.4			
BSF	80.34	353 eP	17	31.60	0.1	PZZ	83.62	352 P	17	47.98	-0.7	PPD	133.16	69 ePKP	24	36.90	0.6
	1.1s	43.95nm			5.4mb	ASPA	83.64	218 iPc	17	49.40	0.6	MTD	135.09	308 iPKPd	24	40.70	0.5
KBA	80.40	348 iPc	17	32.80	0.8		0.9s	12.00nm	5.0mb					i	28	07.00	
	0.8s	88.90nm			5.8mb	SURF	83.67	352 P	17	58.50		KRI	136.09	310 iPKPd	24	41.60	-0.6
		i	17	49.20		SFI	83.69	348 P	17	50.33	1.3			i	28	11.00	
		i	19	00.40			1.4s	486.10nm	6.5mb	SPA	141.58	180 ePKP	24	53.00	2.3		
WTTA	80.42	349 iPc	17	32.50	0.4	BDI	83.70	349 P	17	49.47	0.4	MAW	144.76	218 iPKPd	24	55.40	-0.5
	1.1s	90.80nm			5.7mb		0.8s	103.70nm	6.0mb		0.8s	10.00nm					
		i	17	47.30		PGD	83.75	349 P	17	51.04	1.6	KSR	145.06	306 iPKPd	24	54.40	-3.6X
		i	19	01.80		ROB	83.76	351 P	17	48.90	-0.4		1.0s	60.00nm			
GZR	80.48	341 iPc	17	32.50	0.2	HVAR	83.77	345 iPc	17	49.40	0.1	AIA	147.23	138 ePKP	25	09.10	9.0X
LPF	80.54	358 iPc	17	32.60	0.2	KKB	83.79	340 iPd	17	50.00	0.5	BLF	148.07	303 iPKPd	25	06.70	3.9X
	1.1s	70.80nm			5.6mb	FIN	83.81	351 P	17	48.60	-0.9		0.7s	60.00nm			
BBS	80.64	352 P	17	33.00	-0.1	LPO	83.82	356 iPc	17	50.00	0.5	FRS	149.03	304 iPKPd	25	08.40	4.3X
LOMF	80.81	352 P	17	34.19	0.2		0.7s	18.75nm	5.4mb		0.8s	59.70nm					
HYB	80.94	286 iPc	17	35.00	-0.1	STV	83.86	352 P	17	48.60	-1.2	S.D. = 0.9 on 265 of 282 obs.					
	1.0s	125.00nm			5.9mb	ENR	83.87	352 P	17	48.70	-1.2	MAY 22, 1991 21h 06m 52.58± 0.58s					
FVI	80.95	348 P	17	34.79	0.2	FIR	83.91	349 eP	17	51.00	1.1	47.325 N ±10.5km 154.280 E ± 9.7km					
	0.6s	9.80nm			5.0mb	MMB	83.92	339 iPc	17	51.00	0.9	DEPTH = 33.0km (normal)					
LOR	81.11	355 iPc	17	35.40	-0.1	ARV	83.97	348 P	17	50.70	0.4	5.2mb ( 32 obs.) 4.3Msz ( 3 obs.)					
	1.1s	53.70nm			5.5mb		1.5s	256.30nm	6.2mb			KURIL ISLANDS (221)					
GRC	81.12	355 P	17	35.92	0.4	CRE	83.97	348 P	17	51.34	0.9	KUSJ	7.97	241 eP	08	47.90	-1.0
PTJ	81.19	346 iPc	17	36.50	0.5	SKO	84.03	341 iPc	17	51.10	0.4		eS		10	14.60	
LJU	81.25	347 eP	17	35.00	-1.2			i	28	14.00		ASAJ	8.75	253 eP	09	03.90	4.2X
ZAG	81.26	346 iPc	17	37.00	0.7			i	28	30.00		HOIJ	9.24	242 eP	09	06.70	0.3
SSF	81.33	355 iPc	17	36.90	0.3	PII	84.05	349 P	17	50.75	0.1		eS		10	48.40	
	1.0s	42.00nm			5.4mb	SBF	84.22	352 iPc	17	52.10	0.4	MRRJ	10.57	247 eP	09	24.60	-0.2
VOY	81.35	347 eP	17	36.20	-0.7		0.9s	57.35nm	5.7mb				eS		11	25.60	
LBF	81.38	354 iPc	17	36.80	-0.1	VAY	84.42	340 eP	17	53.20	0.6	OFUJ	12.34	233 P	09	45.70	-3.0X
	1.1s	24.40nm			5.1mb	ASS	84.43	348 P	17	53.52	0.8	YAMJ	13.88	234 P	10	07.30	-1.8
BEO	81.48	343 eP	17	37.00	-0.4		1.0s	132.50nm	6.1mb			NIJJ	15.12	234 P	10	24.10	-1.2
KAS	81.56	332 iPc	17	39.20	1.2	PHP	84.50	342 iPd	17	53.30	0.3	CHJJ	16.01	231 P	10	37.40	0.6X
CEY	81.57	347 ePc	17	37.80	-0.1	GBA	84.59	285 Pc	17	53.30	-0.4	MAT	16.06	234 eP	10	37.00	-0.5
AVF	81.61	355 iPc	17	38.30	0.2		0.8s	29.00nm	5.5mb			1.0s	14.00nm			4.0mb X	
	1.2s	68.45nm			5.5mb	FRF	84.59	352 iPc	17	54.10	0.7		eS		14	05.00	
VBY	81.68	346 ePc	17	38.60	0.2		1.2s	56.55nm	5.6mb	MTMJ	16.25	235 P	10	41.40	1.4X		
TRI	81.69	347 P	17	38.47	0.0	LACI	84.69	342 eP	17	53.90	0.0	MDJ	17.36	270 Pc	10	57.50	3.8X
	0.2s	63.89nm			6.3mb	LRG	84.72	352 iPc	17	54.90	0.9		0.9s	30.00nm		4.4mb	
SMF	81.73	354 iPc	17	38.80	0.1		1.3s	61.35nm	5.6mb			Z	14s	1.00um		4.3Msz	
	1.3s	90.25nm			5.6mb	Z	22s	0.95um	5.1Msz			N	12s	0.31um			
BGF	81.87	355 iPc	17	39.60	0.2	LMR	84.83	352 iPc	17	55.40	0.8		E	12s	0.79um		
	1.2s	59.50nm			5.5mb		1.4s	74.05nm	5.7mb			TSRJ	18.03	236 P	11	03.90	1.8X
MFF	81.95	357 iPc	17	40.40	0.6	OHR	84.99	341 eP	17	55.30	-0.2	CN2	20.44	271 eP	11	27.00	-2.6
	1.2s	62.50nm			5.5mb		1.3s	64.00nm	5.7mb				1.0s	20.00nm		4.4mb	
MDI	82.11	350 P	17	40.59	0.0	MNS	85.10	348 P	17	56.20	0.2	SNY	22.46	267 eP	11	49.40	-0.6
	0.9s	31.40nm			5.3mb		1.1s	33.80nm	5.5mb			Z	20s	1.20um		4.3Msz	
TCF	82.17	356 iPc	17	41.40	0.4	EPF	85.50	357 iPc	17	58.10	0.0		E	15s	0.80um		
	1.0s	29.00nm			5.3mb		1.0s	34.00nm	5.5mb			DL2	25.13	262 eP	12	17.00	1.2
MAF	82.22	355 iPc	17	41.80	0.5	SDI	85.61	347 P	17	58.72	0.1		1.0s	50.00nm		5.1mb	
	1.0s	37.00nm			5.4mb		0.5s	11.90nm	5.4mb			BJI	28.28	269 (P)	12	48.50	3.8X
LSF	82.24	356 iPc	17	41.70	0.3	TPE	85.93	342 eP	17	57.00	-3.2X	SSE	30.05	249 Pc	13	02.80	2.1
	0.8s	23.50nm			5.3mb	RFI	85.98	346 P	18	01.72	1.4		1.0s	25.00nm		5.0mb	
AGO	82.36	355 P	17	42.84	0.8		1.4s	341.00nm	6.4mb			NJ2	30.93	253 Pc	13	10.00	1.6
PLDF	82.41	355 P	17	43.18	0.8	ORI	86.80	344 P	18	05.46	1.0		Z	22s	0.40um		4.0Msz
ORX	82.42	351 P	17	41.93	-0.5		0.8s	*****nm	8.7mb X			E	14s	0.70um			
RSL	82.48	352 P	17	43.54	0.7	KOD	87.20	283 eP	18	07.10	0.0	HHC	31.05	274 P	13	10.40	0.8
LPL	82.64	352 iPc	17	44.90	1.1	EBR	87.70	356 eP	18	09.00	0.3		Z	20s	1.20um		4.6Msz
	1.3s	59.55nm			5.5mb	GRI	88.02	344 P	18	10.14	-0.3		N	19s	1.20um		
LPG	82.66	352 iPc	17	45.00	1.0		0.8s	43.30nm	5.8mb			E	17s	0.90um			
	1.1s	73.25nm			5.7mb	STK	88.57	209 eP	18	22.50	9.7X	TIY	31.97	268 Pd	13	18.80	1.2
LSD	82.67	352 P	17	45.11	1.2		1.6s	1.50nm	4.1mb X	WHN	34.85	256 eP	13	44.00	1.5		
PYM	82.67	355 P	17	44.27	0.6	TOL	88.73	360 eP	18	13.50	-0.2	FBA	35.21	39 iP	13	46.00	0.7
POO	82.84	291 iP	17	44.50	-0.5			ePP	21	48.00			1.0s	40.50nm		5.3mb	
	0.8s	59.70nm			5.7mb			eS	28	55.00		XAN	36.36	265 P	13	55.40	0.1
RSP	82.96	352 P	17	45.21	-0.1			ePS	30	22.00			N	14s	0.60um		
GRN	82.99	353 P	17	46.33	0.9	SOI	88.81	344 P	18	13.27	-0.8		E	15s	0.50um		
SSB	83.04	354 P	17	46.21	0.6		0.6s	13.60nm	5.4mb	INK	40.74	33 eP	14	28.00	-3.3X		
VTS	83.07	340 iPc	17	45.00	-1.0	WARB	88.81	223 eP	18	25.00	10.9X	FFC	59.78	41 eP	16	56.00	-0.4



BRC	76.39	335 iP	18 39.00	-0.9		iSg	36 52.20		4.3mb ( 2 obs.)		(280)			
	0.9s	14.00nm		5.0mb	IZI	1.29	357 iPh	36 50.20 -0.6	BANDA SEA					
PRU	77.02	335 P	19 53.80		EYL	1.59	17 iPh	36 56.20 1.0	KUG	4.10	227 eP 16 43.50 0.2			
MOX	77.24	337 iP	18 44.50	-0.2	HRT	1.78	3 ePh	36 58.00 0.2	MTN	7.01	141 eP 17 26.00 1.6			
	1.5s	36.00nm		5.2mb	KGT	2.23	310 ePh	37 04.00 -0.3			eS 18 44.00			
KHC	78.06	335 iP	18 49.00	-0.2	S.D. = 0.8 on 6 of 6 obs.									
GRF	78.22	337 iPc	18 50.20	0.2	& MAY 22, 1991 23h 01m 43.67s									
	0.8s	35.00nm		5.4mb	65.097 N 150.573 W									
CDF	80.42	338 eP	19 01.80	-0.3	DEPTH = 26.8km									
	1.0s	30.00nm		5.2mb	ALASKA (676)									
HAU	81.03	339 eP	19 05.00	-0.2	<AEIC>. ML 2.6 (AEIC).									
	0.8s	10.75nm		4.9mb	NEA	0.83	129 eP	01 58.71 -0.6	ASPA	17.64	158 eP 19 46.70 0.3			
BSF	81.08	338 eP	19 05.20	-0.4	MDM	1.00	97 eP	02 01.36 -0.6		0.5s	22.90nm 4.6mb			
	1.0s	20.00nm		5.1mb			eS	02 14.61	i		19 50.00			
FLN	81.82	343 eP	19 09.10	-0.1	BWN	1.04	152 eP	02 02.51 0.0	OIS	18.15	138 eP 19 51.40 -1.3			
LDF	81.91	343 eP	19 09.40	-0.3	RDS	1.07	104 eP	02 02.62 -0.3	STK	28.09	152 eP 21 43.10 11.0X			
GRR	82.25	344 eP	19 11.60	0.1			eS	02 16.22	0.6s	2.30nm				
LOR	82.31	340 eP	19 11.20	-0.7	FBA	1.20	98 eP	02 04.65 -0.1	S.D. = 1.6 on 5 of 7 obs.					
	0.9s	20.45nm		5.2mb			eS	02 20.13	& MAY 23, 1991 03h 50m 34.18s					
LBF	82.55	340 eP	19 12.80	-0.4	WRH	1.24	119 eP	02 04.51 -0.7	60.002 N 152.802 W					
	0.8s	12.75nm		5.0mb	CCB	1.27	110 eP	02 05.05 -0.6	DEPTH = 99.3km					
SSF	82.59	340 eP	19 13.30	0.0			eS	02 21.68	SOUTHERN ALASKA ( 2 )					
	0.9s	9.85nm		4.9mb	GLM	1.36	93 eP	02 06.73 -0.3	<AEIC>.					
LPF	82.62	344 eP	19 13.20	-0.3	MCK	1.54	152 eP	02 09.92 0.2	RED	0.42	2 iP 50 49.01 -0.7			
	1.0s	26.00nm		5.3mb	IMA	1.62	308 eP	02 10.94 0.1			eS 51 00.45			
HRI	82.65	312 iPc	19 14.40	0.4			eS	02 31.13	RSO	0.46	3 iP 50 49.47 -0.6			
OHR	82.74	326 eP	19 13.80	-0.5	TRF	1.66	176 eP	02 11.33 -0.2	RS2	0.46	3 iP 50 49.51 -0.6			
	0.8s	58.00nm		5.7mb			eS	02 33.34			eS 51 01.88			
AVF	82.88	340 eP	19 14.90	0.1	HDA	1.70	112 eP	02 11.74 -0.2	RDN	0.51	2 iP 50 49.77 -0.6			
	0.8s	21.50nm		5.3mb			eS	02 33.93	RDT	0.61	19 iP 50 50.22 -0.8			
SMF	82.90	340 eP	19 15.10	0.1	SKT	3.16	188 eP	02 31.59 -1.2			eS 51 03.30			
	1.0s	42.00nm		5.5mb	GHO	3.42	167 eP	02 36.07 -0.5	HOM	0.68	120 eP 50 51.43 -0.1			
BGF	83.21	341 eP	19 16.50	-0.1	SML	3.45	162 eP	02 35.96 -1.0			eS 51 04.83			
LPL	83.25	338 eP	19 17.70	0.6	KLU	4.18	148 eP	02 48.19 0.8	AUH	0.72	207 eP 50 51.00 -1.0			
LPG	83.26	338 eP	19 18.00	0.8	16 obs. associated							PDB	0.73	254 iP 50 51.29 -0.8
	0.7s	24.25nm		5.4mb										eS 51 04.45
MAF	83.60	341 eP	19 19.20	0.7	? MAY 22, 1991 23h 19m 38.71± 1.74s							AUI	0.74	206 eP 50 51.46 -0.7
	0.9s	40.95nm		5.6mb	5.380 S ±21.0km 129.141 E ±33.8km									eS 51 04.56
TCF	83.61	341 eP	19 18.70	0.1	DEPTH = 33.0km (normol)							XLV	0.78	135 eP 50 51.60 -0.9
	0.8s	12.10nm		5.1mb	4.4mb ( 2 obs.)									eS 51 05.80
MDSJ	83.69	311 Pd	19 20.25	0.9	BANDA SEA (280)							NKA	1.08	46 iP 50 56.67 1.0
LSFJ	83.80	341 eP	19 19.90	0.3	MTN	7.67	165 iPc	21 33.20 2.2	CDD	1.16	202 eP 50 55.67 -1.0			
	0.9s	26.20nm		5.4mb	KNA	10.31	182 eP	22 06.90 -0.6	CKL	1.22	11 iP 50 56.78 -0.7			
KFNJ	83.81	311 P	19 20.70	0.9			eS 23 39.00	6.2mb X			eS 51 14.54			
MFF	83.82	343 eP	19 20.00	0.4	WB2	15.34	161 iPc	23 10.50 -4.0X	BGL	1.28	9 iP 50 57.66 -0.6			
MASJ	83.89	311 P	19 20.91	0.6			0.8s 15.80nm	4.3mb	CRP	1.31	14 eP 50 58.02 -0.6			
JVI	83.92	312 iPc	19 21.00	0.5	OIS	18.19	147 eP	23 50.00 -0.5	SLKM	1.38	67 eP 50 58.57 -0.8			
MKRJ	84.07	311 Pd	19 21.88	0.6			eS 26 48.00		SYI	1.41	171 eP 50 58.78 -0.9			
SBF	84.60	337 eP	19 23.60	-0.1	ASPA	18.75	166 iPc	23 56.30 -1.1	NCG	1.44	12 eP 50 59.46 -0.7			
CAF	84.94	341 eP	19 25.90	0.6			0.6s 24.60nm	4.6mb	SEW	1.69	85 eP 51 01.76 -1.3			
	0.6s	6.30nm		5.0mb	WARB	20.82	186 eP	24 20.00 -0.1	SVW	1.78	310 iP 51 02.89 -1.5			
LFF	85.22	341 eP	19 27.10	0.4	KKN	53.64	310 P	29 00.00 0.2	SUA	1.78	34 iP 51 03.90 -0.6			
	0.5s	8.00nm		5.2mb	S.D. = 1.5 on 6 of 7 obs.							PMS	2.03	51 eP 51 06.70 -0.9
LRG	85.27	337 eP	19 27.50	0.6	* MAY 23, 1991 00h 10m 46.30± 1.15s							SKT	2.08	17 eP 51 07.20 -1.1
	0.7s	24.25nm		5.5mb	16.560 S ±16.0km 176.876 E ± 8.9km							PWA	2.19	40 eP 51 08.92 -0.8
LMR	85.34	337 eP	19 27.70	0.4	DEPTH = 33.0km (normol)							PLRM	2.41	47 eP 51 10.99 -1.6
LPO	85.36	341 eP	19 27.90	0.5	3.5mb ( 1 obs.)							KNIM	2.56	80 eP 51 11.91 -2.7
PRNI	85.37	311 iPc	19 28.30	0.6	FIJI ISLANDS REGION (181)							KNK	2.56	55 eP 51 12.98 -1.8
BMA	151.30	37 ePKP	26 45.50	7.5X	SGE	1.43	136 iPc	11 10.00 -0.3	GHO	2.60	45 eP 51 13.39 -1.9			
S.D. = 0.9 on 61 of 70 obs.					MBU	1.81	103 ePc	11 15.70 -0.1	CUT	2.70	26 eP 51 15.93 -0.7			
? MAY 22, 1991 21h 44m 26.15± 2.45s					VUN	2.09	134 iPc	11 20.20 0.5	SML	2.84	48 eP 51 16.68 -1.8			
40.423 N ± 7.8km 23.856 E ±32.0km					OVA	2.14	122 eP	11 20.30 -0.2	GLI	2.96	70 eP 51 17.08 -3.1			
DEPTH = 10.0km (geophysicist)					SVA	2.16	136 iPc	11 21.00 0.3	VZW	3.26	68 eP 51 21.72 -2.6			
GREECE (364)					NDE	2.34	91 eP	11 24.00 0.6	VLZ	3.39	68 eP 51 23.43 -2.5			
MD 1.8 (THE).					KRO	2.52	108 eP	11 25.10 -0.8	KLU	3.69	63 eP 51 27.51 -2.7			
PAIG	0.51	195 iPgc	44 36.40	-0.1	34 obs. associated							& MAY 23, 1991 04h 08m 41.20s		
		eSg	44 43.30									40.737 N 125.047 W		
SOH	0.55	316 ePg	44 36.80	-0.6								DEPTH = 16.0km		
		eSg	44 44.10									OFF COAST OF NORTHERN CALIFORNIA( 34 )		
SRS	0.72	344 ePg	44 40.30	-0.1								<BRK>. ML 3.7 (BRK).		
		eSg	44 50.00									FHC	0.81	85 iPc 08 55.76 -0.7
KNT	1.04	316 ePg	44 46.20	0.5								FOX	0.83	105 iPc 08 56.53 -0.3
		eSg	44 58.10											eS 09 04.52
S.D. = 0.8 on 4 of 4 obs.												WDC	1.91	94 iPc 09 11.49 -2.0
% MAY 22, 1991 22h 36m 26.80± 0.82s												LBFM	2.46	75 eP 09 20.00 -1.5
39.044 N ± 6.7km 29.550 E ± 8.6km												MIN	2.65	97 iPc 09 21.79 -2.4
DEPTH = 10.0km (geophysicist)														eS 09 52.90
TURKEY (366)												NWRM	2.82	143 eP 09 24.20 -2.2
MD 2.7 (ISK).														
ALT	0.44	88 iPg	36 35.30	-0.4										
		iSg	36 43.30											
KHL	0.72	182 iPg	36 41.20	0.2										



23d 04h

ORV	2.96	112	eP	09 25.70	-2.7
BRK	3.58	142	e(P)	09 35.20	-2.1
BKS	3.59	142	eP	09 35.00	-2.4
MHC	4.30	141	eP	09 45.30	-2.3
ARN	4.35	140	eP	09 45.70	-2.5
CMB	4.51	125	eP	09 48.80	-1.6
SAO	4.86	143	eP	09 51.30	-4.1
VIPM	4.99	39	P	09 57.18	-0.1
VBEM	5.01	29	P	09 57.37	-0.2
KMOR	5.03	13	P	09 58.29	0.5
PGO	5.09	21	P	09 58.84	0.2
VFP	5.28	29	P	10 01.97	0.6
VLLM	5.28	24	P	10 01.60	0.2
VLL	5.33	26	P	10 01.61	-0.5
NLO	5.47	12	P	10 04.09	0.0
FRI	5.60	130	iPd	10 04.50	-1.3
RVW	5.66	16	P	10 05.80	-0.9
LVP	5.66	19	P	10 05.71	-1.1
MTMW	5.68	20	P	10 05.97	-1.0
FL2	5.80	19	P	10 07.84	-0.8
CDFW	5.80	21	P	10 07.83	-0.8
ESD	5.85	20	P	10 09.84	0.4
STD	5.87	20	P	10 08.92	-0.7
BMW	5.89	12	P	10 08.70	-1.1
ERK	5.90	19	P	10 08.96	-1.2
BONR	5.92	116	eP	10 08.00	-2.6
ASR	5.97	24	P	10 10.45	-0.6
TDL	5.98	19	P	10 10.39	-0.8
CZM	5.99	17	P	10 10.57	-0.7
GL2	6.06	29	P	10 12.02	-0.3
KOSW	6.09	19	P	10 12.20	-0.4
LMW	6.26	18	P	10 15.26	0.1
CPW	6.39	12	P	10 16.89	0.0
LON	6.45	20	P	10 16.59	-1.3
RVC	6.59	19	P	10 19.11	-0.7
TNP	6.62	111	eP	10 17.50	-2.9
OBH	6.64	7	P	10 19.15	-1.3
FMW	6.66	20	P	10 19.91	-0.9
SMW	6.69	10	P	10 20.37	-0.9
EBG	6.97	26	P	10 25.95	0.9
HDW	7.06	11	P	10 24.71	-1.6
LOCW	7.23	32	P	10 28.11	-0.5
BLN	7.42	11	P	10 30.98	-0.4
HTW	7.45	17	P	10 30.91	-0.9
JCW	7.78	16	P	10 35.18	-1.2
RPW	8.11	17	P	10 40.29	-0.8
MBW	8.35	14	P	10 43.28	-1.3
MSU	10.18	98	eP	11 08.00	-1.9

54 obs. associated

& MAY 23, 1991 04h 31m 56.70s  
 40.393 N 125.347 W  
 DEPTH = 8.0km  
 3.7mb ( 2 obs.)  
 OFF COAST OF NORTHERN CALIFORNIA (34)  
 <BRK>. ML 3.4 (BRK).

FOX	1.04	83	iPc	32 15.89	-0.6
FHC	1.11	68	iPc	32 16.40	-1.4
			iS	32 30.14	
WDC	2.15	84	iPc	32 31.10	-2.2
			iS	32 56.80	
LBFM	2.79	69	eP	32 41.00	-1.7
MIN	2.86	90	ePc	32 41.00	-2.6
			eS	33 15.70	
ORV	3.07	105	eP	32 44.30	-2.1
ZSP	3.43	135	iPd	32 48.21	-3.3
BRK	3.48	135	e(P)	32 49.30	-2.9
BKS	3.49	135	iPd	32 49.80	-2.5
PCC	3.70	140	ePd	32 52.80	-2.6
MHC	4.20	135	e(P)	32 59.80	-2.8
ARN	4.25	134	eP	33 00.30	-3.0
CMB	4.52	120	ePc	33 05.80	-1.2
SAO	4.74	139	eP	33 05.90	-4.3
FRI	5.57	126	ePd	33 20.40	-1.4
BONR	5.99	112	eP	33 27.00	-1.1
BMW	6.27	14	eP	33 29.30	-2.5
LON	6.85	21	eP	33 40.00	0.0
MSU	10.36	96	eP	34 28.00	-0.9
FFC	21.17	40	eP	36 41.00	-3.5
	1.3s		15.00nm		4.2mb
YKA	23.06	13	eP	37 11.30	8.1
	0.6s		0.40nm		3.1mb

21 obs. associated

MAY 23, 1991 06h 02m 33.43±0.75s  
 49.106 N ± 6.1km 6.900 E ± 13.0km

DEPTH = 10.0km (geophysicist)  
 GERMANY (543)  
 MD 2.5 (STR)

CDF	0.74	160	Pg	02 46.96	-1.0
WLS	0.76	156	Pg	02 47.32	-0.9
ECH	0.91	169	Pg	02 50.87	0.0
VITF	1.08	215	Pg	02 52.96	-0.7
			Sg	03 08.98	
MOF	1.27	173	Pg	02 57.11	0.1
			Sg	03 15.02	
BSF	1.28	183	Pg	02 57.35	0.1
			Sg	03 15.55	
FEL	1.44	149	Pg	03 00.33	0.7
			Sg	03 19.93	
MEM	1.61	339	iP	03 01.40	-0.5
LOMF	1.76	182	Pg	03 06.05	1.8
ENN	1.78	340	iPn	03 04.80	0.4
	0.5s		17.00nm		
DOU	1.80	304	iP	03 19.20	14.5X
	S.D. = 1.0	on	10 of	11 obs.	

? MAY 23, 1991 06h 33m 38.10±4.80s  
 7.874 S ± 48.9km 126.764 E ± 12.6km  
 DEPTH = 33.0km (normal)  
 4.6mb ( 3 obs.)

BANDA SEA (280)

KUG	3.87	234	eP	34 37.00	0.2
MTN	6.55	139	eP	35 16.00	1.4
KNA	8.07	166	eP	35 35.50	-0.5
			eS	37 09.00	
WB2	14.07	149	iPd	36 54.30	-3.1X
	0.8s		10.60nm		4.6mb
ASPA	17.13	157	eP	37 36.90	0.2
	0.7s		53.00nm		4.8mb
			iS	40 43.00	
OIS	17.70	137	eP	37 42.70	-1.1
			i	37 53.80	
			iS	40 55.50	
WARB	18.21	180	eP	37 50.00	-0.1
STK	27.59	152	eP	39 33.30	8.9X
	0.4s		4.60nm		4.5mb

S.D. = 1.1 on 6 of 8 obs.

MAY 23, 1991 06h 44m 21.40±1.03s  
 14.940 S ± 5.2km 166.845 E ± 4.5km  
 DEPTH = 62.9 ± 9.0 km  
 5.4mb ( 29 obs.)

VANUATU ISLANDS (186)

CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 12S, 22C  
 Centroid Location:  
 Origin Time 06:44:20.4 0.9  
 Lat 15.33S 0.11 Lon 166.92E 0.10  
 Dep 57.3 8.2 Half-duration 1.5  
 Moment Tensor: Scale 10\*\*16 Nm  
 Mrr= 4.80 0.43 Mtr= 1.74 1.22  
 Mff=-6.55 1.24 Mrt=-0.22 0.77  
 Mrf=-1.90 0.87 Mtt=-0.78 0.58  
 Principal Axes:  
 T Val= 5.11 Plg=81 Azm= 90  
 N 1.82 1 185  
 P -0.93 9 275  
 Best Double Couple: M=6.0\*10\*\*16  
 NP1: Strike= 6 Dip=36 Slip= 91  
 NP2: 185 54 89

BKM	3.03	154	iP	45 09.30	1.3
PVC	3.12	153	iPc	45 09.00	-0.2
DZM	7.10	183	iPc	46 00.80	-4.3X
			iS	47 19.70	
SVO	8.96	309	eP	46 31.00	0.3
			eS	48 10.00	
PMG	20.01	284	eP	48 51.50	-0.2
RMQ	20.42	233	iPd	48 55.80	-0.2
COO	20.76	219	eP	49 00.00	0.6
			i	49 04.00	
CMS	25.31	226	eP	49 45.00	1.2
NOZ	25.57	159	eP	49 44.70	-1.4
CNB	25.65	215	eP	49 49.00	2.0
OIS	26.52	254	eP	49 54.00	-1.1
MNG	26.67	165	P	49 54.60	-1.7
PGZ	26.87	164	eP	49 55.60	-2.5
LTZ	28.14	172	P	50 08.50	-1.1

STK	28.55	229	eP	50 21.50	8.1X
	0.6s		2.30nm		4.0mb X
			ePcP	53 32.40	
			eS	55 20.80	
			eScP	57 14.80	
WB2	31.36	256	iPd	50 36.20	-2.3
	1.2s		4.80nm		4.1mb X
			i	50 43.00	
			i	53 30.50	
ASPA	32.22	249	iPc	50 44.40	-1.6
	1.0s		18.40nm		4.9mb
			iPcP	53 22.90	
AFR	41.66	100	iP	52 05.40	-0.2
	1.3s		180.00nm		5.7mb
PAE	41.84	100	iP	52 07.00	0.0
	1.3s		180.00nm		5.7mb
PPT	41.85	100	iP	52 07.40	0.2
	1.3s		250.00nm		5.8mb
PPN	41.99	100	iP	52 08.40	0.1
	1.3s		95.00nm		5.4mb
TVO	42.15	100	iP	52 09.60	-0.1
	1.3s		250.00nm		5.8mb
PMO	43.66	96	iP	52 22.90	1.0
	1.3s		185.00nm		5.7mb
VAH	43.89	97	iP	52 24.40	0.6
	1.3s		110.00nm		5.5mb
TPT	43.93	96	iP	52 25.00	0.9
	1.3s		125.00nm		5.5mb
RUV	44.14	97	iP	52 26.40	0.7
	1.3s		165.00nm		5.7mb
CHJJ	57.14	333	P	54 02.50	-1.5
IIDJ	57.15	332	P	54 03.50	-0.6
MAT	57.90	333	(P)	54 08.00	-1.3
	0.7s		15.75nm		5.2mb
			eS	02 25.00	
MTMJ	58.12	333	P	54 08.90	-2.0
YAMJ	58.51	335	eP	54 13.80	0.3
OFUJ	58.66	337	P	54 14.10	-0.5
ASAJ	62.79	341	P	54 43.00	0.5
SBA	62.93	180	iPc	54 43.80	0.8
SSE	63.39	317	eP	54 46.00	-0.6
	1.4s		26.00nm		5.1mb
Z	20s		0.30um		4.5msz
NJ2	65.54	316	Pc	55 00.00	-0.6
WHN	67.78	312	P	55 15.00	0.1
IPM	68.01	281	ePc	55 18.50	1.8
ADK	68.07	11	P	55 15.70	-0.5
	1.0s		88.00nm		5.7mb
DL2	68.22	323	P	55 17.20	-0.2
	1.4s		200.00nm		5.9mb
MDJ	68.27	332	eP	55 17.80	0.1
	1.0s		70.00nm		5.6mb
			pP	55 22.00	14kmX
SNG	69.22	284	eP	55 24.90	0.9
TIA	69.22	319	eP	55 23.20	-0.5
CN2	69.61	329	Pc	55 25.60	-0.3
	3.0s		200.00nm		5.5mb
Z	20s		0.30um		4.5msz
GYA	71.50	305	P	55 38.00	0.1
BJI	72.17	321	eP	55 41.60	0.2
	1.0s		20.00nm		5.0mb
TIY	73.14	318	Pd	55 48.40	1.1
	1.0s		40.00nm		5.3mb
XAN	73.53	313	Pc	55 49.70	0.1
BSI	73.73	280	eP	55 51.00	-20.0X
CHG	74.79	295	ePc	55 56.40	-0.7
	1.1s		18.99nm		4.9mb
SPA	75.16	180	iPc	55 58.20	-0.4
	1.0s		25.00nm		5.1mb
HHC	75.48	320	eP	56 01.80	1.0
CD2	75.81	308	eP	56 02.60	-0.2
BTO	76.31	319	eP	56 06.00	0.5
LZH	78.16	312	iPc	56 17.50	1.6
	1.0s		53.00nm		5.5mb
Z	25s		0.31um		4.5mszX
			pP	56 21.50	13kmX
			sP	56 26.00	
SVW	81.47	17	P	56 32.80	-0.1
	0.8s		13.79nm		5.0mb
MAW	81.54	202	eP	56 34.00	0.9
	1.0s		18.00nm		5.0mb
ANM	82.05	12	eP	56 36.80	1.0
YAK	82.09	343	eP	56 36.00	0.0
GTA	82.52	314	iPc	56 40.40	1.5
	3.5s		210.00nm		5.5mb X
			pP	56 48.40	25kmX
SLKM	82.67	20	P	56 38.00	-1.1



TTA	82.83	16	eP	56	41.00	1.0	MMK	144.27	335	iPKPd	03	51.50	-0.8	EBR	151.61	338	ePKP	04	11.00	7.3X
PMR	83.83	20	P	56	44.30	-0.7	ASS	144.29	327	PKP	03	50.90	-1.3	EROO	151.64	338	ePKP	04	11.00	7.2X
	0.7s	26.16nm			5.4mb		TDS	144.33	319	PKP	03	51.80	-0.4	ETOR	152.46	342	iPKPd	04	13.00	7.9X
BRK	84.62	49	ePKPc	56	51.80	2.4X	AQU	144.38	325	PKP	03	52.13	-0.2	GUD	153.22	345	iPKPd	04	15.00	8.8X
BKS	84.64	49	ePKPc	56	53.50	4.0X		0.2s	3.40nm					TOL	153.90	344	ePKP	04	16.00	8.9X
		e		23	56.00		AQU	144.38	325	PKP	03	47.20	-5.1	LKO	170.87	235	PKP	04	24.30	0.2
PRS	84.67	50	ePKPc	56	50.60	0.8	DIX	144.48	335	ePKPd	03	52.00	-0.7		1.1s	22.00nm				
PRI	85.12	51	ePKPc	56	52.00	-0.2	MME	144.48	330	PKP	03	52.30	-0.4		S.D. = 1.1	on 161 of 200 obs.				
TOA	85.18	20	eP	56	52.10	0.3	FIR	144.51	329	ePKP	03	52.00	-0.4							
WDC	85.51	46	ePKPc	56	53.50	-0.3	SDI	144.58	324	PKP	03	51.60	-1.1	& MAY 23, 1991	07h 38m 40.57s					
BALM	85.78	22	P	56	53.70	-1.2	ORX	144.60	334	PKP	03	51.01	-1.7		39.298 N	111.149 W				
ORV	85.83	47	ePKPc	56	54.90	-0.6	BDI	144.62	330	PKP	03	51.10	-1.6		DEPTH = 12.4km					
IMA	85.96	15	eP	56	56.50	0.8	EMS	144.68	336	ePKPd	03	52.40	-0.5		3.5mb ( 1 obs.)					
CMB	86.05	49	ePKPc	56	56.10	-0.5	FLN	144.70	345	ePKP	03	52.30	-0.3	UTAH						(478)
MIN	86.07	47	ePKPc	56	56.60	-0.2		0.8s	38.95nm						<SLC-P>. ML 2.8 (SLC), 3.6 (GS).					
FRI	86.16	50	ePKPc	56	56.50	-0.6	MNS	144.75	326	PKP	03	51.47	-1.5		Felt (III) at Ephraim. Also felt					
ISA	86.60	52	eP	57	01.00	1.6		0.8s	23.00nm						at the Utah Power and Light					
FBA	86.68	18	eP	56	57.90	-1.2	GRI	144.75	318	PKP	03	53.20	0.2		Cottonwood Creek Mine.					
SBF	86.76	53	eP	57	01.00	0.8		0.8s	93.00nm											
RVR	86.86	54	eP	57	01.00	0.4	LDF	144.77	345	ePKP	03	52.60	-0.1	SNO	0.30	273	P	38	47.00	-0.1
PEC	87.00	54	P	57	00.80	-0.5		0.8s	29.55nm					SGU	0.40	253	P	38	48.70	-0.3
PLM	87.05	55	eP	57	02.00	0.2	LDF	144.77	345	iPKPc	03	53.10	0.4	SRU	0.52	111	P	38	50.60	-0.6
CLC	87.32	52	eP	57	02.00	-0.9		1.0s	61.00nm					DAU	1.12	356	eP	39	01.50	0.0
GSC	87.75	53	eP	57	04.00	-1.0	LOR	144.79	340	iPKPc	03	52.40	-0.4	MSU	1.12	226	eP	39	01.30	-0.2
TPC	87.94	54	eP	57	05.00	-0.9		1.1s	67.15nm					PV09	1.76	116	eP	39	13.00	1.7
TNP	88.39	50	P	57	07.00	-1.2	PII	144.91	330	PKP	03	51.90	-1.2	GOL	4.49	83	eP	39	51.00	0.9
GLA	88.56	55	eP	57	10.00	1.1	LSD	145.09	335	PKP	03	53.98	0.3	GLD	4.61	82	eP	39	52.50	0.8
PNT	90.83	39	eP	57	19.00	0.0	SSF	145.09	340	iPKPc	03	53.40	0.1	TNP	4.90	258	eP	39	56.50	0.6
	0.8s	11.00nm			5.3mb		RSL	145.12	335	PKP	03	53.44	-0.2	ANMO	5.74	138	eP	40	07.40	-0.3
NEW	91.99	40	P	57	23.20	-1.3	GRR	145.14	346	ePKP	03	53.20	-0.1	ALO	5.74	138	e(P)	40	06.00	-1.8
	0.7s	11.20nm			5.4mb			0.7s	78.25nm					GSC	6.02	230	eP	40	20.00	8.4
WMO	92.58	315	P	57	28.00	0.7	RDP	145.16	325	PKPc	03	53.80	0.1	CLC	6.19	238	eP	40	40.00	26.1
	1.2s	10.00nm			5.1mb		LPL	145.21	335	iPKPc	03	54.40	0.5	TPC	6.51	219	eP	40	45.00	26.5
HYB	92.79	287	eP	57	29.50	0.8		0.8s	48.35nm					LRM	6.59	352	P	40	40.40	20.6
INK	93.22	19	eP	57	31.00	1.4	PCP	145.22	332	PKP	03	52.96	-0.7	ISA	6.86	240	eP	40	51.00	27.6
ALO	95.76	56	eP	57	41.50	-0.8	LPG	145.22	335	iPKPc	03	54.40	0.4	GLA	6.90	207	eP	40	14.00	-10.0
	0.9s	1.47nm			4.5mb		RSP	145.29	334	PKP	03	52.75	-1.1	BAR	7.98	216	eP	40	23.00	-16.0
YKA	97.92	27	eP	57	48.90	-2.2	SMF	145.34	339	iPKPc	03	54.00	0.2	YKA	23.32	356	eP	43	50.50	1.6
	0.8s	2.80nm			4.8mb		AVF	145.38	340	iPKPc	03	54.10	0.3		0.9s	1.50nm			3.5mb	
ZOBO	117.49	118	PKP	02	57.00	-6.3X	SOI	145.41	317	PKP	03	54.50	0.4		19 abs. associated					
KEV	119.82	345	ePKP	03	08.00	2.6X	CKI	145.43	333	PKPc	03	53.70	-0.3	? MAY 23, 1991	08h 04m 27.67±1.16s					
SIV	123.57	121	PKP	03	13.40	-0.8	GMB	145.48	318	PKP	03	55.00	0.6		40.444 N ±10.1km	23.495 E ±20.6km				
QBN	124.65	328	ePKP	03	16.00	0.9	LPF	145.51	346	ePKP	03	54.60	0.6		DEPTH = 10.0km (geophysicist)					
KAF	125.24	339	iPKP	03	18.10	2.1	BHB	145.54	334	PKP	03	52.85	-1.3	GREECE						(364)
	0.5s	4.10nm					MAO	145.54	327	PKPc	03	54.60	0.4	SOH	0.39	344	ePg	04	35.80	0.1
		eP		03	19.90		BNI	145.61	335	PKPc	03	56.00	1.5	PAIG	0.54	165	ePg	04	38.50	0.0
MTD	125.75	236	ePKP	03	21.90	3.3X	FIN	145.63	332	PKP	03	54.08	-0.3	KNT	0.85	328	ePg	04	43.90	-0.1
BUL	126.14	231	ePKP	03	22.40	3.1X	RRL	145.68	335	PKP	03	55.42	0.7		eSg			04	54.50	
NUR	126.91	338	iPKP	03	22.40	3.1X	ROB	145.71	333	PKP	03	54.29	-0.3	GRG	0.98	302	ePg	04	46.30	0.1
	0.8s	19.10nm					ATN	145.74	310	PKP	03	54.30	-0.4		S.D. = 0.2	on 4 of 4 obs.				
PPD	127.57	134	ePKP	03	21.40	-0.4	BGF	145.75	340	iPKPc	03	55.50	1.0	* MAY 23, 1991	08h 18m 58.38±0.58s					
NB2	130.72	345	PKP	03	26.80	0.2	DOI	145.82	334	PKPc	03	54.00	-0.8		27.917 S ± 7.4km	66.922 W ±10.5km				
	0.6s	3.40nm					PZZ	145.88	334	PKP	03	54.29	-0.6		DEPTH = 207.5 ± 25.0 km					
HFS	130.80	343	ePKP	03	27.70	0.9	BST	145.89	349	PKP	03	50.13	-4.5X	CATAMARCA PROVINCE, ARGENTINA						(130)
	0.5s	1.30nm					ENR	145.96	333	PKP	03	54.19	-0.8	RTRS	3.16	224	iPc	19	51.70	1.0
Z	19s	0.09um			4.5Msz		STV	145.99	333	PKP	03	54.08	-1.0	RTLL	3.66	201	iPd	19	56.80	0.0
		e		03	33.80		SURF	146.02	334	PKP	03	56.87	1.6		S			20	39.90	
		ePP		06	57.60		MAF	146.14	340	iPKPc	03	56.70	1.6	CFA	3.85	197	iPd	19	59.10	-0.1
		LR		50	52.00			0.9s	42.60nm						eS			20	43.00	
BRG	138.02	334	ePKP	03	41.80	1.0	TCF	146.20	341	iPKPc	03	56.90	1.7	ZON	3.93	202	iPc	20	01.10	1.0
	1.4s	14.00nm						0.9s	44.20nm						eS			20	46.10	
CLL	138.07	336	ePKP	03	43.00	2.2	SBF	146.25	333	ePKP	03	56.80	1.4	TCA	3.97	150	iPd	19	59.50	-1.1
	1.1s	14.00nm					MNO	146.37	318	PKP	03	58.10	2.1		S			20	39.20	
PRU	138.43	333	ePKP	03	40.50	-1.0	LSF	146.44	341	iPKPc	03	57.50	1.9	ANT	5.24	322	eP	20	16.50	-0.2
ZST	138.51	329	ePKP	03	42.60	0.9	PGF	146.53	330	ePKP	03	57.90	1.9	PEL	6.14	211	eP	20	28.00	-0.3
KHC	139.48	333	ePKP	03	43.50	0.0		0.9s	114.65nm						i			21	30.00	
		e		03	49.00		MFF	146.61	344	ePKP	03	58.10	2.3	ROCH	6.15	214	iPd	20	28.00	-0.6
WTS	139.74	341	ePKPc	03	47.00	3.2X	USI	146.86	321	PKP	03	58.60	2.2		eS			21	36.50	
	1.0s	13.00nm					LRG	147.04	333	ePKP	03	59.40	2.8X	PCH	6.47	208	iPc	20	33.10	0.5
OHR	140.68	318	ePKP	03	34.20	-11.8X		1.0s	78.00nm						e			21	31.50	
DMU	140.82	354	ePKP	03	47.00	1.3	LMR	147.07	333	ePKP	03	59.30	2.6X	TACH	6.68	210	iPd	20	34.70	-0.5
ENN	141.08	341	ePKP	03	50.50	4.3X		1.0s	98.00nm						eS			21	47.00	
	1.0s	16.00nm					CDR	147.12	334	ePKPc	03	59.40	2.7X	RFA	6.96	191	ePd	20	38.60	-0.3
ETA	141.93	353	ePKP	03	45.00	-2.7X	RJF	147.29	341	ePKP	04	00.10	3.1X		(S)			21	45.70	
ECB	142.32	354	ePKP	03	46.00	-2.4X		1.0s	58.00nm					SIV	13.05	26	P	21	56.40	-0.9
ECP	142.46	353	ePKP	03	45.00	-3.6X	CAF	147.45	340	ePKP	04	00.70	3.4X	PPD	15.32	71	eP	22	26.80	1.4
CDF	142																			



23d 08h

## WESTERN CAUCASUS (362)

KAS 7.10 264 eP 43 21.00 1.9  
 ISR 12.27 288 eP 44 28.00 -2.3  
 MLR 12.74 289 eP 44 35.00 -1.6  
 e 47 58.00  
 e 53 17.00  
 OBN 13.27 343 eP 44 59.00 15.5X  
 1.0s \*\*\*\*\*nm  
 e 48 45.00  
 OHR 16.72 273 eP 45 36.20 7.7X  
 SPC 17.25 301 eP 45 34.80 -0.4  
 GAR 20.84 91 eP 46 16.50 -0.5  
 NUR 21.22 334 iP 46 21.60 1.2  
 KAF 22.00 339 iP 46 29.20 0.8  
 0.8s 9.70nm 4.3mb  
 esP 46 33.10  
 CLL 22.25 304 i(P) 46 44.80 13.9X  
 OSS 23.76 291 ePd 46 47.70 1.7  
 VDL 24.23 291 ePd 46 52.20 1.6  
 LLS 24.54 292 ePd 46 54.40 0.8  
 HFS 25.13 325 eP 46 59.60 0.7  
 0.8s 18.00nm 4.8mb  
 Z 18s 0.13um 3.5msz  
 LR 56 10.00

MMK 25.30 290 iPd 47 01.40 0.5  
 DIX 25.68 290 ePd 47 05.20 0.7  
 EMS 26.02 290 ePc 47 07.80 0.2  
 LPG 26.20 289 eP 47 09.30 -0.1  
 0.9s 8.20nm 4.4mb  
 LPL 26.21 289 eP 47 10.10 0.7  
 0.8s 8.05nm 4.5mb  
 HAU 26.29 295 eP 47 09.10 -0.8  
 NB2 26.65 325 P 47 13.30 0.3  
 0.8s 2.80nm 4.0mb  
 LBF 27.96 293 eP 47 24.90 -0.2  
 0.9s 5.75nm 4.4mb  
 LOR 28.02 293 eP 47 24.40 -1.2  
 SSF 28.28 293 eP 47 26.90 -1.0  
 AVF 28.41 292 eP 47 28.50 -0.6  
 0.9s 8.20nm 4.5mb  
 MAF 29.02 291 eP 47 35.00 0.4  
 1.0s 7.00nm 4.4mb  
 TCF 29.25 292 eP 47 36.60 -0.1  
 GRR 31.08 296 eP 47 51.80 -1.0  
 1.1s 12.20nm 4.7mb  
 LPF 31.24 296 eP 47 53.50 -0.7  
 GKN 36.47 100 P 48 39.76 0.0  
 0.9s 16.00nm 4.9mb  
 GUN 37.42 99 P 48 48.04 0.0  
 YKA 73.79 349 eP 53 07.50 -0.9  
 0.8s 0.60nm 3.7mb  
 SIV 111.05 267 PKP 59 46.40 -21.8X  
 S.D. = 1.0 on 29 of 33 obs.

? MAY 23, 1991 08h 54m 55.05 ± 1.13s  
 39.116 N ± 10.2km 27.525 E ± 39.3km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.7 (ISK).

Izm 0.75 196 ePg 55 09.70 0.0  
 eSg 55 21.20  
 EDC 1.26 12 iPn 55 18.30 -0.1  
 BNT 1.28 14 iPn 55 18.80 0.1  
 KGT 1.34 353 iPn 55 19.80 0.0  
 S.D. = 0.1 on 4 of 4 obs.

? MAY 23, 1991 09h 02m 32.21 ± 2.04s  
 5.039 S ± 43.2km 149.852 E ± 31.8km  
 DEPTH = 33.0km (normal)  
 4.2mb (3 obs.)  
 NEW BRITAIN REGION (192)

RAB 2.46 70 iPd 03 10.80 -0.1  
 iS 03 45.00  
 PMG 5.10 211 eP 03 48.00 -0.4  
 eS 04 50.00  
 WB2 21.14 224 iPd 07 16.90 0.0  
 0.8s 8.70nm 4.2mb  
 RMO 21.36 183 iPc 07 08.40 -10.6X  
 0.9s 32.00nm  
 ASPA 24.07 218 iPd 07 45.80 0.1  
 0.5s 10.50nm 4.6mb  
 STK 27.80 195 eP 08 20.80 0.4  
 1.2s 1.40nm 3.5mb  
 S.D. = 0.4 on 5 of 6 obs.

% MAY 23, 1991 09h 12m 57.46 ± 2.02s  
 40.208 N ± 26.4km 29.281 E ± 9.5km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.7 (ISK).

IZI 0.20 49 iPg 13 01.80 0.0  
 iSg 13 06.30  
 HRT 0.68 26 ePg 13 11.00 0.0  
 EYL 0.76 62 ePg 13 12.40 0.0  
 BNT 1.05 279 iPn 13 17.30 0.0  
 EDC 1.09 278 ePn 13 18.00 0.0  
 S.D. = 0.0 on 5 of 5 obs.

\* MAY 23, 1991 09h 19m 59.44 ± 1.49s  
 10.412 N ± 7.3km 125.409 E ± 11.5km  
 DEPTH = 54.5 ± 14.5 km  
 4.7mb (8 obs.) 4.1msz (4 obs.)  
 LEYTE, PHILIPPINE ISLANDS (256)

DAV 3.31 177 eP 20 50.40 0.4  
 OCP 5.96 315 eP 21 39.00 11.7X  
 BAG 7.59 322 eP 21 49.30 -0.9  
 QIZ 17.31 301 eP 24 00.20 1.2  
 N 14s 0.70um  
 SSE 20.95 350 eP 24 38.00 -2.1  
 Z 20s 0.50um 3.9msz  
 E 11s 0.50um  
 sP 24 55.50  
 sS 28 47.00  
 NJ2 22.37 345 Pd 24 58.00 3.8X  
 Z 18s 0.40um 3.9msz  
 WHN 22.52 334 eP 24 55.50 -0.2  
 GYA 23.84 315 P 25 11.00 2.2  
 N 15s 0.70um  
 E 15s 0.40um  
 IPM 24.85 258 ePd 25 19.50 1.0  
 0.7s 21.10nm 4.8mb  
 XAN 27.95 330 eP 25 46.00 -0.9  
 CD2 28.64 319 eP 25 52.20 -0.9  
 E 13s 0.50um  
 eS 30 53.00  
 SNY 31.33 357 eP 26 16.50 -0.3  
 Z 20s 0.60um 4.3msz  
 WB2 31.42 164 iPd 26 16.50 -1.4  
 0.8s 2.80nm 4.1mb  
 e 29 09.80  
 LZH 32.18 326 eP 26 25.00 0.4  
 2.0s 36.00nm 4.9mb  
 Z 15s 0.58um 4.4mszx  
 N 15s 0.44um  
 pP 26 32.00 24kmx  
 CN2 33.26 0 eP 26 36.00 2.4  
 Z 18s 0.60um 4.3msz  
 ASPA 34.87 166 iPd 26 47.40 -0.4  
 0.5s 7.50nm 4.9mb  
 WARB 36.39 178 eP 27 01.00 0.4  
 GTA 36.79 326 eP 27 04.60 0.7  
 1.2s 10.00nm 4.6mb  
 N 20s 1.30um  
 E 21s 0.90um

GUN 40.97 301 P 27 39.00 -0.1  
 0.8s 31.00nm 5.1mb  
 PKI 41.27 300 P 27 40.80 -0.8  
 KKN 41.44 300 P 27 42.40 -0.4  
 DMN 41.54 300 P 27 43.20 -0.5  
 GKN 42.04 300 P 27 47.00 -0.7  
 STK 44.82 160 eP 28 18.20 8.3X  
 1.8s 1.20nm 3.4mbx  
 HYB 45.92 284 eP 28 19.00 0.1  
 GBA 46.97 279 P 28 26.50 -0.7  
 1.1s 11.60nm 4.7mb  
 INK 84.47 22 eP 32 28.00 0.8  
 YKA 93.97 24 eP 33 12.90 0.5  
 0.9s 1.20nm 4.3mb  
 S.D. = 1.1 on 25 of 28 obs.

MAY 23, 1991 10h 03m 19.81 ± 0.45s  
 41.134 N ± 8.1km 69.142 E ± 7.6km  
 DEPTH = 33.0km (normal)  
 4.4mb (9 obs.)  
 KIRGHIZ SSR (716)  
 Felt (IV) at Toshkent.

MAIO 8.95 240 eP 05 30.00 0.1  
 eS 06 05.00

NDI 14.07 149 eP 06 39.00 0.1  
 GKN 18.25 131 P 07 31.60 -0.7  
 0.5s 27.00nm 4.7mb  
 KKN 18.78 130 P 07 39.40 0.5  
 0.6s 14.00nm 4.3mb  
 DMN 18.82 131 P 07 39.80 0.4  
 0.6s 13.00nm 4.3mb  
 PKI 19.02 130 P 07 41.80 -0.1  
 0.6s 15.00nm 4.4mb  
 GUN 19.04 129 P 07 41.60 -0.5  
 0.8s 24.00nm 4.5mb  
 HYB 24.99 158 eP 08 46.00 4.0X  
 HFS 38.58 319 eP 10 40.70 -0.2  
 0.6s 3.60nm 4.4mb  
 e 10 44.50  
 e 11 01.70

NB2 39.86 320 P 10 51.20 -0.4  
 0.8s 2.40nm 4.0mb  
 INK 69.56 9 ePc 14 27.30 0.4  
 YKA 76.68 2 eP 15 08.80 0.2  
 0.7s 1.20nm 4.0mb  
 WRA 85.65 121 P 15 59.00 2.6X  
 0.7s 2.40nm 4.5mb  
 S.D. = 0.5 on 11 of 13 obs.

MAY 23, 1991 10h 27m 17.81 ± 0.25s  
 50.090 N ± 7.4km 28.937 W ± 2.6km  
 DEPTH = 19.4km (9 depth phases)  
 5.0mb (50 obs.) 4.5msz (10 obs.)  
 NORTH ATLANTIC RIDGE (403)

DMU 14.08 66 eP 30 36.20 -2.0  
 EKA 16.43 61 P 31 06.30 -2.3  
 1.4s 90.30nm 4.7mb  
 LPF 18.36 86 eP 31 32.20 -0.5  
 1.3s 72.20nm 4.7mb  
 GRR 18.37 84 eP 31 32.60 -0.3  
 FLN 18.51 83 eP 31 33.80 -0.8  
 Z 21s 2.22um

EPLA 18.93 113 eP 31 41.00 1.2  
 MFF 19.40 89 eP 31 43.60 -1.7  
 GUD 19.73 109 eP 31 49.70 0.4  
 TOL 20.26 111 iPc 31 55.30 0.7  
 ePP 32 31.60  
 eS 35 50.60

LSF 20.60 89 eP 31 57.40 -0.7  
 1.5s 151.45nm 5.2mb  
 LFF 20.62 93 eP 31 57.50 -0.8  
 RJF 20.97 91 eP 32 01.30 -0.6  
 1.1s 90.35nm 5.1mb  
 LPO 21.01 93 eP 32 01.70 -0.7  
 TCF 21.03 88 iPc 32 02.00 -0.5  
 1.4s 132.85nm 5.2mb

UCC 21.12 75 P 32 01.00 -2.4  
 SNF 21.13 76 iP 32 02.26 -1.2  
 GRC 21.23 85 P 32 03.65 -0.8  
 MAF 21.28 88 eP 32 04.40 -0.7  
 1.5s 151.45nm 5.2mb  
 BGF 21.34 87 iPc 32 05.00 -0.6  
 DOU 21.41 77 P 32 06.00 -0.3  
 0.7s 63.30nm 5.1mb  
 i 32 08.90 11km  
 S 36 06.00

CAF 21.48 92 eP 32 06.50 -0.6  
 1.3s 54.15nm 4.8mb  
 AVF 21.58 86 iPc 32 07.50 -0.6  
 1.2s 68.45nm 4.9mb  
 SSF 21.59 86 iPc 32 07.50 -0.6  
 1.7s 172.80nm 5.2mb  
 AGO 21.71 88 P 32 09.01 -0.4  
 LOR 21.74 85 eP 32 09.10 -0.6  
 1.6s 167.90nm 5.2mb  
 Z 19s 3.50um 4.8msz

PYM 21.75 89 P 32 09.45 -0.4  
 LBF 21.91 85 iPc 32 10.90 -0.6  
 1.2s 75.85nm 5.0mb  
 SMF 21.95 86 eP 32 11.50 -0.3  
 1.5s 159.30nm 5.2mb

PLDF 22.06 88 P 32 12.72 -0.2  
 ENN 22.10 75 eP 32 12.50 -0.7  
 1.2s 52.00nm 4.8mb  
 LBL 22.11 90 P 32 13.39 0.1  
 MEM 22.19 75 iPc 32 13.34 -0.7  
 WIT 22.22 69 eP 32 19.00 4.7X  
 KLL 22.37 75 ePc 32 15.30 -0.6  
 WTS 22.42 71 eP 32 17.00 0.7  
 1.2s 73.00nm 5.0mb

MAY 23, 1991 10h 03m 19.81 ± 0.45s  
 41.134 N ± 8.1km 69.142 E ± 7.6km  
 DEPTH = 33.0km (normal)  
 4.4mb (9 obs.)  
 KIRGHIZ SSR (716)  
 Felt (IV) at Toshkent.

MAIO 8.95 240 eP 05 30.00 0.1  
 eS 06 05.00

NDI 14.07 149 eP 06 39.00 0.1  
 GKN 18.25 131 P 07 31.60 -0.7  
 0.5s 27.00nm 4.7mb  
 KKN 18.78 130 P 07 39.40 0.5  
 0.6s 14.00nm 4.3mb  
 DMN 18.82 131 P 07 39.80 0.4  
 0.6s 13.00nm 4.3mb  
 PKI 19.02 130 P 07 41.80 -0.1  
 0.6s 15.00nm 4.4mb  
 GUN 19.04 129 P 07 41.60 -0.5  
 0.8s 24.00nm 4.5mb  
 HYB 24.99 158 eP 08 46.00 4.0X  
 HFS 38.58 319 eP 10 40.70 -0.2  
 0.6s 3.60nm 4.4mb  
 e 10 44.50  
 e 11 01.70

NB2 39.86 320 P 10 51.20 -0.4  
 0.8s 2.40nm 4.0mb  
 INK 69.56 9 ePc 14 27.30 0.4  
 YKA 76.68 2 eP 15 08.80 0.2  
 0.7s 1.20nm 4.0mb  
 WRA 85.65 121 P 15 59.00 2.6X  
 0.7s 2.40nm 4.5mb  
 S.D. = 0.5 on 11 of 13 obs.

MAY 23, 1991 10h 27m 17.81 ± 0.25s  
 50.090 N ± 7.4km 28.937 W ± 2.6km  
 DEPTH = 19.4km (9 depth phases)  
 5.0mb (50 obs.) 4.5msz (10 obs.)  
 NORTH ATLANTIC RIDGE (403)

DMU 14.08 66 eP 30 36.20 -2.0  
 EKA 16.43 61 P 31 06.30 -2.3  
 1.4s 90.30nm 4.7mb  
 LPF 18.36 86 eP 31 32.20 -0.5  
 1.3s 72.20nm 4.7mb  
 GRR 18.37 84 eP 31 32.60 -0.3  
 FLN 18.51 83 eP 31 33.80 -0.8  
 Z 21s 2.22um

EPLA 18.93 113 eP 31 41.00 1.2  
 MFF 19.40 89 eP 31 43.60 -1.7  
 GUD 19.73 109 eP 31 49.70 0.4  
 TOL 20.26 111 iPc 31 55.30 0.7  
 ePP 32 31.60  
 eS 35 50.60

LSF 20.60 89 eP 31 57.40 -0.7  
 1.5s 151.45nm 5.2mb  
 LFF 20.62 93 eP 31 57.50 -0.8  
 RJF 20.97 91 eP 32 01.30 -0.6  
 1.1s 90.35nm 5.1mb  
 LPO 21.01 93 eP 32 01.70 -0.7  
 TCF 21.03 88 iPc 32 02.00 -0.5  
 1.4s 132.85nm 5.2mb

UCC 21.12 75 P 32 01.00 -2.4  
 SNF 21.13 76 iP 32 02.26 -1.2  
 GRC 21.23 85 P 32 03.65 -0.8  
 MAF 21.28 88 eP 32 04.40 -0.7  
 1.5s 151.45nm 5.2mb  
 BGF 21.34 87 iPc 32 05.00 -0.6  
 DOU 21.41 77 P 32 06.00 -0.3  
 0.7s 63.30nm 5.1mb  
 i 32 08.90 11km  
 S 36 06.00

CAF 21.48 92 eP 32 06.50 -0.6  
 1.3s 54.15nm 4.8mb  
 AVF 21.58 86 iPc 32 07.50 -0.6  
 1.2s 68.45nm 4.9mb  
 SSF 21.59 86 iPc 32 07.50 -0.6  
 1.7s 172.80nm 5.2mb  
 AGO 21.71 88 P 32 09.01 -0.4  
 LOR 21.74 85 eP 32 09.10 -0.6  
 1.6s 167.90nm 5.2mb  
 Z 19s 3.50um 4.8msz

PYM 21.75 89 P 32 09.45 -0.4  
 LBF 21.91 85 iPc 32 10.90 -0.6  
 1.2s 75.85nm 5.0mb  
 SMF 21.95 86 eP 32 11.50 -0.3  
 1.5s 159.30nm 5.2mb

PLDF 22.06 88 P 32 12.72 -0.2  
 ENN 22.10 75 eP 32 12.50 -0.7  
 1.2s 52.00nm 4.8mb  
 LBL 22.11 90 P 32 13.39 0.1  
 MEM 22.19 75 iPc 32 13.34 -0.7  
 WIT 22.22 69 eP 32 19.00 4.7X  
 KLL 22.37 75 ePc 32 15.30 -0.6  
 WTS 22.42 71 eP 32 17.00 0.7  
 1.2s 73.00nm 5.0mb



VIT	22.79	81 P	32 19.73	-0.3	FFC	42.94	305 eP	35 17.00	0.4	LPR	1.34	176 iP	24 24.90	0.0	
BNS	22.84	74 ePd	32 22.10	1.6		1.3s	25.00nm		4.8mb	APR	1.40	211 iP	24 25.90	0.3	
	1.3s	67.00nm		5.0mb	FVM	44.62	279 P	35 29.90	-0.6	SJG	1.54	187 iP	24 27.60	-0.1	
HAU	23.09	82 eP	32 23.20	0.1		1.0s	33.00nm		5.2mb			S	24 41.60		
	0.7s	31.95nm		5.0mb			pP	35 36.30	21km	LRS	1.59	212 iP	24 28.10	-0.3	
Z	21s	1.25um		4.3MsZ	YKA	45.57	320 eP	35 36.60	-1.1			S	24 42.30		
SCH	23.34	296 eP	32 25.00	-0.4		0.9s	2.90nm		4.2mb	CPD	1.60	178 iP	24 28.70	0.1	
BSF	23.43	82 eP	32 27.10	0.7	TUL	49.29	280 ePc	36 06.30	-0.9	CLLP	1.67	200 P	24 29.50	0.0	
	0.9s	39.30nm		4.9mb		1.0s	15.70nm		5.0mb	MGP	1.95	213 iP	24 33.70	0.1	
ECH	23.54	81 P	32 27.92	0.5	INK	49.47	332 ePd	36 07.00	-1.1			S	24 53.70		
CDF	23.56	80 P	32 27.80	0.2	SES	49.88	304 eP	36 10.00	-1.6	S.D. = 0.2 on 7 of 7 obs.					
WLS	23.61	80 P	32 28.35	0.3	GLD	52.78	290 P	36 33.80	0.0	% MAY 23, 1991	11h	38m	26.82±1.93s		
GWF	23.61	79 P	32 28.56	0.5		0.8s	47.06nm		5.5mb	16.663 N ±11.6km 61.196 W ±16.4km					
LOMF	23.61	83 P	32 28.43	0.2	GOL	52.90	290 P	36 34.10	-0.7	DEPTH = 10.0km (geophysicist)					
MOF	23.64	81 P	32 29.03	0.6		0.7s	4.49nm		4.5mb	LEEWARD ISLANDS (92)					
RSL	24.10	87 P	32 34.03	1.0			pP	36 39.80	19km	ML 1.9 (FDF).					
IFR	24.12	124 iP	32 38.00	4.7X	LRM	53.30	300 eP	36 37.00	-0.7	DEG	0.37	159 eP	38 34.51	0.0	
EMS	24.15	86 ePc	32 34.40	0.9	NEW	54.36	305 P	36 44.00	-1.2			S	38 40.20		
FEL	24.19	81 P	32 33.19	-0.7		0.8s	17.08nm		5.1mb	SFG	0.41	180 eP	38 35.00	-0.1	
LPL	24.24	87 eP	32 34.30	-0.1			pP	36 49.80	19km	BPA	0.74	301 eP	38 41.30	0.0	
	0.9s	9.00nm		4.3mb	PNT	55.01	307 eP	36 49.00	-0.9	MGG	0.75	189 eP	38 41.90	0.4	
DIX	24.45	85 ePc	32 37.90	1.4		0.9s	14.00nm		5.0mb	PAG	0.78	216 eP	38 42.20	0.1	
SLE	24.54	81 ePc	32 37.30	0.2	PV09	55.93	291 P	36 55.80	-1.2			S	38 56.50		
ZLA	24.57	82 ePc	32 37.90	0.5	FBA	56.00	333 eP	36 56.60	-0.2	BBL	1.17	193 eP	38 48.20	-0.4	
NAO	24.58	49 P	32 38.50	1.2	ANMO	56.60	286 P	37 01.00	-0.7	S.D. = 0.4 on 6 of 6 obs.					
	0.9s	9.10nm		4.4mb		1.1s	17.41nm		5.0mb	% MAY 23, 1991	12h	14m	42.68±1.18s		
MMK	24.82	85 ePc	32 41.50	1.4			pP	37 07.20	20km	39.132 N ± 7.3km 27.637 E ±14.8km					
LRG	24.90	92 eP	32 40.40	-0.1	ALQ	56.60	286 eP	37 01.00	-0.8	DEPTH = 10.0km (geophysicist)					
	1.4s	61.00nm		5.1mb		1.3s	19.23nm		5.0mb	TURKEY (366)					
Z	22s	0.95um		4.3MsZ	Z	18s	0.62um		4.7MsZ	IZM	0.79	202 ePg	14 58.00	-0.1	
LMR	25.05	92 eP	32 41.20	-0.8			e	37 07.80	22km			eSg	15 09.80		
	1.2s	26.80nm		4.8mb	IMA	56.73	336 eP	37 02.20	0.0	EDC	1.23	8 ePn	15 05.50	0.0	
FRB	25.07	318 eP	32 43.00	1.1	TOA	57.56	330 eP	37 07.90	-0.1	EZN	1.23	305 ePn	15 05.80	0.3	
LLS	25.17	83 ePc	32 44.30	0.9	TNP	60.98	296 P	37 30.80	-1.4	BNT	1.24	10 ePn	15 06.20	0.4	
SBF	25.40	90 eP	32 44.20	-1.2		1.0s	12.50nm		5.0mb	KGT	1.34	349 iPn	15 06.70	-0.7	
	1.3s	32.50nm		4.8mb	GSC	62.64	293 eP	37 43.00	-0.2	S.D. = 0.6 on 5 of 5 obs.					
MOX	25.65	73 ePd	32 48.00	0.4	CLC	62.75	294 eP	37 44.00	0.1	& MAY 23, 1991	13h	43m	28.31s		
	1.5s	51.00nm		5.0mb	TPC	63.01	292 eP	37 46.00	0.4	63.116 N 149.740 W					
Z	19s	1.00um		4.4MsZ	ISA	63.37	294 eP	37 48.00	0.0	DEPTH = 92.6km					
GRF	25.66	75 iPc	32 48.20	0.5	SBB	63.66	293 eP	37 55.00	5.1X	CENTRAL ALASKA (1)					
	1.2s	37.00nm		4.9mb	BAR	64.37	291 eP	37 55.00	0.5	<AEIC>.					
Z	21s	0.90um		4.3MsZ	GAR	66.50	57 eP	38 10.50	2.3	HUR	0.15	161 ePc	43 41.39	1.5	
HFS	25.92	51 eP	32 49.60	-0.4	WMQ	71.41	43 P	38 39.60	1.2			eS	43 51.30		
	1.1s	15.60nm		4.6mb	Z	16s	0.40um		4.8MsZ X	TRF	0.42	324 ePd	43 43.29	0.1	
Z	16s	1.08um		4.5MsZ X	SIV	71.63	213 P	38 40.20	0.3			eS	43 54.92		
		e	32 55.50	21km	ZOBO	74.54	219 P	38 57.80	0.2	RND	0.50	54 iPc	43 43.47	-0.1	
		LR	39 27.00		Z	22s	0.16um		4.3MsZ	MCK	0.72	30 ePd	43 45.32	-0.2	
OSS	25.97	82 ePc	32 51.60	0.8	LPB	74.77	219 eP	39 04.00	5.3X			eS	43 58.06		
CLL	26.34	71 eP	32 52.00	-1.9	CNCB	74.97	219 P	39 00.20	0.2	CUT	0.75	199 iPd	43 45.52	-0.3	
	1.3s	26.00nm		4.7mb	NDI	78.01	60 eP	39 19.00	2.6X	BWN	1.07	6 iPd	43 49.01	-0.2	
WTTA	26.71	80 iPc	32 58.00	0.4	GTA	80.14	38 eP	39 29.00	1.1	GHO	1.40	164 ePc	43 53.39	0.0	
	1.3s	54.00nm		5.0mb		1.2s	10.00nm		4.7mb			eS	44 12.30		
BRG	27.02	72 iP	32 59.90	-0.3	Z	23s	0.50um		4.8MsZ X	SKT	1.41	217 iPd	43 52.78	-0.7	
	1.2s	20.00nm		4.6mb	N	11s	0.20um					eS	44 11.77		
KHC	27.30	75 P	33 03.00	0.2	GKN	82.56	55 P	39 42.40	1.5	SML	1.47	153 ePc	43 54.07	-0.1	
	1.1s	6.00nm		4.2mb		0.8s	27.00nm		5.4mb	PWA	1.47	183 ePd	43 54.16	0.0	
N	16s	0.50um			BTO	82.77	30 eP	39 43.00	1.4	NEA	1.50	11 iPd	43 53.74	-0.8	
E	16s	1.00um			KKN	83.07	54 P	39 45.40	1.8	WRH	1.55	28 iPd	43 54.51	-0.6	
PRU	27.63	73 eP	33 05.70	-0.1		1.0s	38.00nm		5.5mb			eS	44 13.31		
	2.0s	39.10nm		4.8mb	DMN	83.12	55 P	39 45.80	1.9	PLRM	1.56	169 ePc	43 55.16	-0.1	
Z	18s	1.30um		4.6MsZ	GUN	83.29	54 P	39 47.00	2.1	SCM	1.71	138 ePc	43 56.96	-0.4	
N	16s	0.50um				1.0s	44.00nm		5.6mb	SUA	1.72	196 ePd	43 57.23	-0.4	
E	18s	1.00um			PKI	83.31	55 P	39 47.60	2.6			eS	44 22.19		
		e	33 09.70	14km		0.8s	15.00nm		5.2mb	CCB	1.76	28 iPd	43 57.06	-0.9	
KBA	27.86	80 iPc	33 08.00	-0.1	MDJ	83.84	15 eP	39 47.30	0.4	HDA	1.79	42 iPd	43 57.76	-0.6	
	1.1s	7.10nm		4.3mb		1.0s	10.00nm		5.0mb	KNK	1.81	160 ePc	43 58.42	-0.2	
KSP	28.46	71 eP	33 13.20	-0.1	CN2	83.86	18 eP	39 47.60	0.6	THY	1.83	79 eP	43 59.98	1.1	
VOY	28.62	81 eP	33 14.40	-0.4			eP	39 56.40	28km	RDS	1.86	22 iPd	43 58.54	-0.7	
LJU	29.02	81 eP	33 18.00	-0.3	LZH	84.60	37 eP	39 52.00	0.9	DDM	1.87	67 ePd	43 59.40	0.0	
CEY	29.08	82 eP	33 18.50	-0.4	Z	20s	0.29um		4.7MsZ	PMS	1.88	177 eP	43 59.52	-0.1	
VBY	29.70	82 e(P)	33 14.00	-10.5X	BJI	85.15	26 eP	39 55.00	1.5	TOA	1.94	120 iPc	44 00.73	0.4	
SRO	30.71	76 eP	33 33.60	0.3	TIY	86.17	30 Pd	39 59.40	0.6	PAX	1.95	92 eP	44 00.82	0.2	
NUR	31.36	50 iP	33 40.20	1.3	Z	20s	0.29um		4.7MsZ			eS	44 25.85		
	0.8s	17.60nm		5.0mb	WRA	147.11	30 PKP	47 00.00	1.3	MDM	1.97	19 iPd	44 00.00	-0.7	
SPC	31.40	72 eP	33 39.80	0.1		2.8s	3.30nm			FBA	1.99	25 ePd	44 00.23	-0.7	
SOD	32.19	37 eP	33 29.00	-17.1X	WB2	147.11	30 iPKPd	47 00.70	2.0	SDG	2.02	105 ePc	44 01.31	-0.1	
SKO	35.32	84 e(P)	34 12.80	-0.6		0.9s	4.20nm			NCG	2.06	214 iPd	44 01.33	-0.7	
Z	16s	1.83um		4.9MsZ X	ASPA	150.41	33 iPKPd	47 08.60	4.8X	GLM	2.14	28 iPd	44 02.33	-0.8	
N	16s	1.20um				1.2s	6.90nm			CRP	2.17	212 eP	44 03.06	-0.6	
E	14s	1.16um								BGL	2.24	215 eP	44 04.23	-0.2	
		LR	49 37.10		S.D. = 1.0 on 123 of 131 obs.										
OHR	35.35	85 eP	34 14.00	0.2	? MAY 23, 1991	11h	24m	00.15±12.51s		MDM	1.97	19 iPd	44 00.00	-0.7	
MLR	36.45	76 eP	34 22.50	-0.6		19.651 N ±90.9km	65.963 W ±42.1km			FBA	1.99	25 ePd	44 00.23	-0.7	
VRI	36.77	75 ePd	34 25.00	-0.6	DEPTH = 10.0km (geophysicist)						SDG	2.02	105 ePc	44 01.31	-0.1
OBN	38.81	57 eP	34 42.00	-0.6	PUERTO RICO REGION (90)						NCG	2.06	214 iPd	44 01.33	-0.7
	1.0s	*****nm		8.0mb X						GLM	2.14	28 iPd	44 02.33	-0.8	



23d 13h

TZL	2.27	116	eP	44	04.76	0.0
CKL	2.28	213	ePd	44	04.41	-0.6
KLU	2.42	131	eP	44	05.56	-1.2
NKA	2.48	197	eP	44	10.44	2.8
VZW	2.55	143	eP	44	07.39	-1.2
VLZ	2.56	140	ePc	44	06.71	-1.9
GLI	2.57	150	ePc	44	07.18	-1.6
DOT	2.61	76	eP	44	08.90	-0.5
SLKM	2.63	185	ePd	44	09.71	0.1
RDT	2.85	208	eP	44	11.49	-1.2
TTA	2.87	269	ePd	44	11.91	-1.0
KNIM	2.94	160	eP	44	12.25	-1.6
RDN	2.98	210	eP	44	14.01	-0.5
RS2	3.02	210	eP	44	14.96	-0.3
RSO	3.02	210	eP	44	15.04	-0.2
SEW	3.03	177	eP	44	14.27	-0.7
TMW	3.06	83	eP	44	14.93	-0.6
RED	3.07	209	eP	44	15.15	-0.5
GLB	3.24	119	iPc	44	17.03	-1.0
HOM	3.59	196	eP	44	21.47	-1.3
RAGM	3.65	136	eP	44	22.78	-0.8
CNPM	3.67	192	eP	44	22.82	-1.2
HMT	3.82	134	eP	44	24.33	-1.6
CROM	3.92	124	eP	44	26.14	-1.3
PDB	3.96	215	eP	44	27.39	-0.6
TGL	4.03	123	eP	44	27.10	-1.9
BALM	4.06	118	ePd	44	27.65	-1.7
WAX	4.22	126	eP	44	29.85	-1.8
CDD	4.61	206	eP	44	35.57	-1.4

60 obs. associated

\* MAY 23, 1991 14h 24m 24.53± 0.91s  
 31.583 S ± 15.9km 66.500 W ± 8.9km  
 DEPTH = 120.0km (geophysicist)  
 LA RIOJA PROVINCE, ARGENTINA (138)

CFA	1.48	269	iPd	24	52.70	0.5
			eS	25	13.80	
TCA	1.65	82	iPc	24	54.20	0.0
			S	25	15.80	
RTLL	1.70	278	iPd	24	54.50	-0.3
			(S)	25	22.10	
ZON	1.86	271	iPc	24	56.60	-0.2
			eS	25	19.60	
RFA	3.58	207	iPd	25	19.30	-0.1
			(S)	25	55.00	

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

MAY 23, 1991 14h 43m 56.79± 0.72s  
 34.034 S ± 6.9km 70.441 W ± 5.0km  
 DEPTH = 10.0km (geophysicist)  
 CHILE-ARGENTINA BORDER REGION (127)

PCH	0.42	352	iPd	44	05.10	-0.2
			iS	44	12.00	
TACH	0.56	312	iPd	44	08.50	0.3
			iS	44	17.50	
SAN	0.61	342	iPd	44	06.80	-2.3X
			iS	44	18.00	
LNW	0.81	275	iPd	44	12.30	-0.2
			iS	44	24.50	
PEL	0.91	347	iPd	44	14.40	0.1
			iS	44	27.50	
LCCH	1.09	300	iPd	44	17.40	0.1
			iS	44	33.50	
ROCH	1.16	336	iPd	44	18.00	-0.7
			iS	44	35.00	
JACH	1.35	355	iP	44	21.50	-0.3
			iS	44	40.00	
IHA	1.42	315	eP	44	22.50	-0.1
			iS	44	43.60	
RFA	1.79	115	ePc	44	28.00	0.0
			(S)	44	51.00	
CFA	3.05	38	ePc	44	49.50	3.5X
RTLL	3.17	32	ePd	44	52.50	4.8X
			(S)	45	38.80	
TCA	5.62	63	ePc	45	22.20	-0.3
CNCB	17.29	8	P	48	03.00	2.5X
LPB	17.55	7	eP	48	10.00	6.4X
ZOBO	17.81	7	P	48	08.00	1.0

S.D. = 0.5 on 11 of 16 obs.

& MAY 23, 1991 16h 36m 23.28s  
 60.471 N 151.039 W  
 DEPTH = 45.3km  
 KENAI PENINSULA, ALASKA (14)  
 <AEIC>. ML 3.3 (AEIC).

NKA	0.29	340	iPd	36	33.42	1.5
SLKM	0.41	84	iPd	36	32.76	-0.5
RDT	0.68	279	iPd	36	36.04	-0.8
			eS	36	46.51	
BRK	0.71	174	iPc	36	36.36	-0.8
			eS	36	46.85	
RSO	0.85	270	iPc	36	38.41	-0.8
RS2	0.85	270	iPc	36	38.43	-0.8
RDN	0.85	274	iPc	36	38.14	-1.1
RED	0.86	267	iPc	36	38.27	-1.0
			eS	36	50.51	
HOM	0.87	201	ePc	36	39.25	0.0
			eS	36	51.27	
SEW	0.87	114	eP	36	38.27	-1.0
			eS	36	51.55	
CNPM	0.95	186	iPc	36	39.57	-0.9
			eS	36	52.25	
CGLM	0.96	331	eP	36	40.39	-0.3
CKL	0.97	319	iPd	36	40.00	-0.7
CRP	0.97	326	iPd	36	40.30	-0.5
SUA	1.01	8	ePd	36	40.76	-0.6
			eS	36	54.85	
BGL	1.03	321	iPd	36	41.08	-0.6
PMS	1.06	42	ePc	36	41.27	-0.7
XLV	1.08	199	ePd	36	41.05	-1.1
NGC	1.08	330	iPd	36	41.91	-0.5
			eS	36	56.98	
PWA	1.31	25	ePc	36	45.40	-0.1
PLRM	1.46	39	iPc	36	46.76	-0.8
			eS	37	03.42	
SKT	1.53	351	iPd	36	48.50	-0.1
KNK	1.58	52	iPc	36	48.41	-0.8
AUE	1.62	228	ePc	36	49.09	-0.7
AUH	1.64	229	eP	36	49.77	-0.5
KNIM	1.64	93	iPc	36	47.91	-2.3
AUI	1.66	228	eP	36	49.69	-0.7
			eS	37	10.65	
GHO	1.66	37	iPc	36	49.67	-0.8
PDB	1.72	248	iPc	36	50.52	-0.7
MTU	1.76	105	iPc	36	50.06	-1.7
SML	1.88	43	ePc	36	52.59	-0.9
CUT	1.98	10	eP	36	54.15	-0.7
GLI	1.98	76	iPc	36	52.40	-2.6
			eS	37	16.06	
SYI	1.99	201	eP	36	54.63	-0.4
CDD	2.03	222	iPc	36	55.25	-0.5
MCNL	2.11	234	eP	36	56.18	-0.6
			eS	37	16.09	
HIN	2.25	90	iPc	36	56.01	-2.8
SCM	2.26	51	ePc	36	57.69	-1.3
VZW	2.28	73	iPc	36	57.00	-2.2
SVW	2.34	288	ePd	36	58.26	-1.8
VLZ	2.40	72	ePc	36	58.64	-2.2
HUR	2.60	14	eP	37	04.05	0.2
KLU	2.70	65	iPc	37	03.35	-1.9
			eS	37	33.90	
KDC	2.83	196	ePd	37	04.50	-2.6
TOA	2.86	53	ePc	37	06.48	-1.2
SGAM	2.89	87	iPc	37	04.38	-3.5
TRF	3.01	6	eP	37	10.51	0.7
RND	3.12	18	eP	37	11.35	0.0
TZL	3.14	57	eP	37	10.12	-1.4
RAGM	3.16	89	eP	37	07.86	-3.9
SDG	3.35	50	eP	37	12.76	-1.7
HMT	3.37	89	eP	37	10.85	-3.8
MCK	3.42	16	eP	37	15.94	0.5
TTA	3.42	318	eP	37	14.25	-1.2
PAX	3.65	44	eP	37	17.39	-1.3
GLB	3.66	71	iPc	37	15.94	-2.9
BWN	3.79	10	eP	37	20.46	-0.1
CROM	3.90	82	eP	37	18.63	-3.9
WAX	4.05	87	ePc	37	20.10	-4.4
TGL	4.06	82	eP	37	20.95	-3.6
DDM	4.12	34	eP	37	25.53	0.1
WRH	4.24	18	eP	37	25.78	-1.3
BALM	4.30	79	eP	37	24.31	-3.7
HDA	4.38	24	eP	37	27.91	-1.1
CCB	4.45	18	ePd	37	28.57	-1.4
RDS	4.57	16	eP	37	30.14	-1.6
DOT	4.57	43	eP	37	29.90	-1.9
MDM	4.69	15	ePc	37	31.79	-1.5
FBA	4.69	17	eP	37	31.60	-1.7
CTGM	4.79	80	eP	37	32.02	-2.9
GLM	4.83	19	eP	37	33.82	-1.6

71 obs. associated

? MAY 23, 1991 17h 21m 41.48± 6.24s

38.063 N ± 50.9km 22.046 E ± 16.4km  
 DEPTH = 10.0km (geophysicist)  
 GREECE (364)  
 MD 2.7 (THE).

AGG	0.98	13	ePg	21	59.00	-1.2
			eSg	22	10.00	
IGT	1.99	318	ePb	22	14.30	-1.2
			eSb	22	40.70	
LIT	2.06	10	ePb	22	17.10	0.5
			eSb	22	42.40	
PAIG	2.25	34	ePn	22	19.50	0.1
FNA	2.77	349	ePn	22	26.90	0.2
KNT	3.16	12	ePn	22	31.90	-0.3
OHR	3.19	343	ePn	22	34.50	1.8
VAY	3.28	7	ePn	22	41.00	7.1X

S.D. = 1.3 on 7 of 8 obs.

\* MAY 23, 1991 17h 55m 39.49± 2.34s  
 11.525 S ± 12.9km 166.016 E ± 20.7km  
 DEPTH = 82.2 ± 15.1 km  
 4.3mb (3 obs.)  
 SANTA CRUZ ISLANDS (184)

SVO	6.54	291	eP	57	15.00	0.0
VSG	6.60	289	eP	57	16.00	0.1
			eS	58	33.00	
DZM	10.50	178	iPc	58	09.00	-0.2
			iS	00	00.00	
RMO	22.05	225	eP	00	30.00	1.3
STK	30.29	224	eP	01	54.70	9.6X
	0.7s		2.50nm			4.1mb
WB2	31.56	251	iPd	01	56.00	-0.4
	1.0s		5.70nm			4.3mb
			e	02	09.00	
WRA	31.57	251	P	02	15.00	18.5X
	0.7s		1.70nm			
ASPA	32.82	244	iPc	02	06.40	-1.0
	0.7s		8.30nm			4.7mb
GUN	86.78	299	PKP	08	17.00	0.3
PKI	87.10	299	PKP	08	18.00	-0.2
KKN	87.26	299	PKP	08	19.40	0.6
DMN	87.37	299	PKP	08	19.40	0.0
GKN	87.87	299	PKP	08	21.20	-0.4

S.D. = 0.7 on 11 of 13 obs.

& MAY 23, 1991 18h 11m 13.85s  
 60.265 N 153.105 W  
 DEPTH = 141.5km  
 SOUTHERN ALASKA (2)  
 <AEIC>.

RED	0.23	47	iP	11	32.46	0.6
			eS	11	46.78	
RS2	0.26	41	iP	11	32.81	0.7
RSO	0.26	41	eP	11	32.81	0.7
RDN	0.30	34	iP	11	32.75	0.6
RDT	0.47	48	iP	11	33.35	-1.0
PDB	0.73	229	iP	11	34.90	-1.0
			eS	11	51.31	
AUE	0.92	189	eP	11	36.76	-0.6
AUH	0.92	191	eP	11	36.93	-0.6
AUI	0.95	190	eP	11	36.90	-0.7
			eS	11	54.71	
HOM	0.95	129	eP	11	37.32	-0.3
			eS	11	55.35	
CKL	1.01	22	iP	11	37.35	-1.0
			eS	11	56.10	
NKA	1.04	62	eP	11	38.80	0.4
BGL	1.06	19	eP	11	38.12	-0.7
CRP	1.11	24	iP	11	38.33	-1.0
CNPM	1.20	127	eP	11	39.34	-0.7
			eS	11	58.65	
BRLK	1.22	113	eP	11	39.18	-1.1
NCG	1.23	22	eP	11	39.44	-1.0
MCNL	1.25	210	iP	11	39.48	-1.0
CDD	1.37	192	iP	11	40.61	-1.1
			eS	12	01.72	
SLKM	1.45	79	eP	11	40.86	-1.8
			eS	12	02.31	
SUA	1.67	43	eP	11	43.71	-1.4
			eS	12	07.19	
SYI	1.70	167	eP	11	44.05	-1.3
SEW	1.83	93	eP	11	45.26	-1.6
SKT	1.88	23	eP	11	46.15	-1.4
			eS	12	11.58	
PMS	2.00	59	eP	11	46.99	-1.9



PWA	2.10	47	eP	11	48.19	-1.9
PLRM	2.35	54	eP	11	50.38	-2.8
GHO	2.54	52	eP	11	52.71	-2.9
			eS	12	23.83	
CUT	2.55	31	eP	11	54.15	-1.4
KNK	2.55	61	eP	11	52.82	-2.9
KNIM	2.67	86	eP	11	54.05	-3.2
MTU	2.74	93	eP	11	56.34	-1.8
SML	2.79	54	eP	11	55.35	-3.4
GLI	3.03	76	eP	11	58.71	-3.1
SCM	3.22	58	eP	12	01.54	-2.9
VZW	3.32	73	eP	12	02.59	-3.1
VLZ	3.44	72	eP	12	03.22	-3.9
KLU	3.72	68	eP	12	07.83	-3.2
RND	3.74	31	eP	12	09.63	-1.6
TOA	3.83	58	eP	12	10.01	-2.4
SDG	4.29	55	eP	12	16.28	-2.1
GLB	4.70	71	eP	12	21.40	-2.6
CCB	5.04	27	eP	12	25.38	-3.1
TGL	5.10	80	eP	12	27.32	-2.1
MDM	5.22	23	eP	12	28.31	-2.6
FBA	5.26	26	eP	12	29.83	-1.6
BALM	5.35	77	iP	12	30.99	-1.8
CTGM	5.84	78	iP	12	38.03	-1.4
YKU	6.77	90	eP	12	46.55	-5.3
PNL	6.91	89	eP	12	51.71	-2.1

50 obs. associated

% MAY 23, 1991 18h 16m 11.95 ± 0.57s  
 44.770 N ± 4.6km 7.281 E ± 7.3km  
 DEPTH = 10.0km (geophysicist)  
 NORTHERN ITALY (545)  
 ML 1.9 (GEN).

BHB	0.07	350	P	16	15.00	0.6
			S	16	16.54	
PZZ	0.29	206	P	16	19.07	0.9
			S	16	22.92	
RSP	0.38	358	P	16	19.46	-0.4
			S	16	24.15	
RRL	0.38	293	P	16	19.35	-0.5
			S	16	24.00	
ENR	0.55	170	P	16	22.23	-1.0
			S	16	29.53	
ROB	0.64	138	P	16	24.99	0.2
			S	16	33.84	
LSD	0.69	353	P	16	26.02	0.2
			S	16	33.61	
FIN	0.87	130	P	16	28.69	0.0

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

% MAY 23, 1991 18h 25m 09.88 ± 0.72s  
 38.981 N ± 6.6km 29.559 E ± 7.1km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.5 (ISK).

ALT	0.44	80	iPg	25	18.70	-0.1
			iSg	25	25.70	
KHL	0.66	182	iPg	25	23.10	0.1
			eSg	25	32.10	
IZI	1.36	357	ePn	25	35.20	0.3
EYL	1.65	16	ePn	25	39.00	-0.1
BNT	1.87	318	ePn	25	42.00	-0.2
KGT	2.28	311	ePn	25	48.00	-0.1

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

MAY 23, 1991 18h 38m 09.26 ± 0.47s  
 31.411 N ± 7.0km 86.755 E ± 6.1km  
 DEPTH = 33.0km (normol)  
 4.3mb (10 obs.) 4.3msz (2 obs.)  
 TIBET (306)

GUN	3.57	193	P	39	04.40	0.4
KKN	3.83	200	P	39	07.82	0.3
GKN	3.86	209	P	39	08.88	0.9
PKI	4.00	197	P	39	10.20	0.1
LSA	4.16	113	Pn	39	14.60	2.2
			Pg	39	22.00	
			Sn	40	00.00	
NDI	8.70	254	iPc	40	14.60	-1.2
	0.8s		33.58nm			5.5mb X
WMO	12.41	3	P	41	10.80	4.3X
			12s		0.60um	
			N 10s		0.40um	
			E 10s		0.60um	
			eS	43	20.00	

GTA	13.30	50	eP	41	18.40	0.1
			13s		0.60um	
			PP	41	30.00	
CD2	14.57	88	eP	41	35.00	0.0
KMI	15.41	110	eP	41	49.60	3.5X
GAR	15.41	304	eP	41	45.00	-1.0
HYB	15.80	210	eP	41	45.50	-5.4X
			1.0s		25.00nm	4.3mb
			eS	44	31.00	
CHG	16.69	136	ePc	42	02.00	-0.2
			1.0s		10.50nm	3.9mb
QUE	17.06	271	eP	42	05.00	-2.1
			eS	45	11.50	
GYA	18.11	101	P	42	18.80	-1.2
			N 12s		0.40um	
			E 12s		0.40um	
XAN	18.83	76	P	42	27.00	-1.8
GBA	19.68	208	Pd	42	38.10	-0.6
			1.0s		18.30nm	4.3mb
BTO	20.89	58	eP	42	51.00	-0.1
TIY	22.03	66	eP	43	00.70	-1.9
			N 10s		0.65um	
			E 10s		0.76um	
KOD	22.77	204	eP	43	12.10	1.8
MAIO	23.12	290	eP	43	17.00	3.6X
			0.9s		12.36nm	4.4mb
WHN	23.66	85	eP	43	22.50	4.0X
			E 10s		0.40um	
BJI	25.30	62	eP	43	35.00	0.8
TIA	25.63	71	eP	43	40.70	3.3X
			Z 22s		0.50um	4.0msz
			N 12s		0.40um	
CN2	32.76	57	eP	44	42.60	1.4
			Z 18s		0.90um	4.5msz
			N 14s		0.30um	
			E 14s		0.10um	
			eP	44	52.00	32kmX
MLR	48.55	305	eP	46	55.00	3.6X
HFS	54.99	324	eP	47	41.20	1.8
			0.6s		3.80nm	4.6mb
			Z 16s		0.06um	3.8mszX
			e	47	44.00	
			e	47	46.70	
			e	47	56.20	
			e	48	01.70	
			LR	14	06.00	
NB2	56.15	325	P	47	49.70	1.9
			0.7s		1.80nm	4.2mb
WRA	68.49	132	P	49	09.00	-1.6
			0.9s		3.00nm	4.4mb
WB2	68.50	132	iPc	49	09.20	-1.4
			0.9s		3.00nm	4.4mb
ASPA	70.96	135	iPc	49	25.20	-0.5
			0.9s		4.20nm	4.5mb
YKA	84.86	10	eP	50	43.20	1.7
			0.8s		1.30nm	4.2mb

S.D. = 1.4 on 25 of 32 obs.

% MAY 23, 1991 18h 45m 49.04 ± 1.02s  
 38.949 N ± 7.4km 26.991 E ± 15.3km  
 DEPTH = 10.0km (geophysicist)  
 AEGEAN SEA (365)  
 MD 2.9 (ISK).

IZM	0.59	159	iPg	46	01.00	0.0
			iSg	46	09.50	
EZN	1.02	330	iPg	46	08.30	0.1
			eSg	46	22.30	
KGT	1.52	9	iPn	46	16.00	-0.3
EDC	1.55	25	ePn	46	17.00	0.3
BNT	1.58	27	ePn	46	17.00	-0.1

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

MAY 23, 1991 18h 52m 34.16 ± 0.61s  
 29.030 N ± 5.7km 142.583 E ± 9.3km  
 DEPTH = 33.0km (normol)  
 4.6mb (14 obs.) 4.4msz (4 obs.)  
 SOUTH OF HONSHU, JAPAN (211)

KAKJ	7.44	345	P	54	21.80	-1.3
			S	55	42.90	
IIOJ	7.55	330	P	54	27.00	2.3
CHJJ	7.62	338	P	54	25.30	-0.4
			S	55	48.20	
MAT	8.35	335	iPc	54	35.40	-0.4
			0.7s		19.18nm	5.3mb
			eS	56	06.00	

MTMJ	8.54	333	P	54	40.00	1.4
NIIJ	8.72	341	P	54	39.40	-1.5
YAMJ	9.36	348	P	54	47.70	-2.1
			eS	56	26.60	
OFUJ	10.05	356	eP	54	54.50	-4.8X
			eS	56	39.80	
SSE	18.63	282	eP	56	52.50	1.3
			1.5s		30.00nm	4.3mb
			Z 16s		0.40um	4.0msz
			N 11s		0.30um	
MDJ	18.67	330	eP	56	52.50	0.9
			1.0s		22.00nm	4.3mb
DL2	19.94	305	eP	57	05.50	-0.5
SNY	20.02	315	Pc	57	06.20	-0.7
CN2	20.13	322	eP	57	07.40	-0.6
			Z 16s		1.50um	4.4mszX
			N 14s		0.70um	
			E 14s		0.50um	
			eP	57	15.00	29kmX
NJ2	20.65	284	Pd	57	12.80	-0.7
			Z 17s		0.40um	3.9mszX
			S	00	57.00	
TIA	22.57	295	eP	57	32.70	-0.1
BJI	24.28	304	eP	57	49.00	-0.4
			1.2s		12.00nm	4.3mb
			Z 20s		0.90um	4.3msz
			eS	02	00.00	
WHN	24.53	281	eP	57	53.00	1.1
TIY	26.54	297	eP	58	10.80	0.0
			Z 16s		0.72um	4.3mszX
			N 12s		0.26um	
HMC	27.88	303	eP	58	21.40	-1.7
			Z 20s		2.10um	4.7msz
BTO	28.96	302	eP	58	33.00	0.2
			N 15s		0.30um	
			E 15s		0.50um	
XAN	29.04	289	P	58	32.80	-0.7
GYA	31.82	274	P	58	58.00	-0.2
CD2	33.57	283	eP	59	12.40	-1.0
IRK	36.55	320	eP	59	40.20	1.7
			e	59	52.10	
			e	00	02.50	
GTA	36.55	298	eP	59	38.40	-0.4
			1.6s		20.00nm	4.8mb
			Z 22s		0.40um	4.2msz
			N 16s		0.60um	
			sP	59	50.00	
CHG	40.97	266	eP	00	15.50	-0.2
WMO	45.76	304	P	00	55.40	1.1
			1.5s		20.00nm	4.8mb
			Z 20s		0.60um	4.5msz
			pP	01	07.00	41kmX
			eS	07	40.00	
WB2	49.33	190	iPd	01	21.80	-0.5
			0.8s		11.80nm	5.0mb
			e	01	33.80	
WRA	49.33	190	P	01	21.00	-1.3
			0.8s		11.10nm	4.9mb
GUN	49.44	283	P	01	23.80	0.2
			0.8s		28.00nm	5.3mb
PKI	49.93	283	P	01	27.20	-0.2
KKN	49.98	283	P	01	27.80	0.2
DMN	50.18	283	P	01	29.20	0.0
GKN	50.47	284	P	01	31.40	0.1
ASPA	53.05	190	iPc	01	50.60	0.2
			1.1s		5.10nm	4.4mb
INK	61.13	25	eP	02	51.00	3.8X
KOD	63.39	267	eP	03	03.80	0.4
YKA	70.28	29	eP	03	47.20	1.4
			0.6s		1.80nm	4.3mb
PNT	73.31	43	eP	04	18.0	



% MAY 23, 1991 19h 23m 59.12±3.98s  
43.128 N ±15.5km 18.215 E ±25.3km  
DEPTH = 10.0km (geophysicist)  
YUGOSLAVIA (383)  
ML 2.0 (TTG).

BRY 0.33 133 iPg 24 06.20 0.2  
iSg 24 10.99  
NKY 0.66 118 iPg 24 11.82 -0.4  
iSg 24 21.99  
HCY 0.71 163 iPg 24 13.10 0.0  
iSg 24 24.15  
PLE 0.89 76 iPg 24 16.25 0.1  
iSg 24 28.97  
BDV 0.96 152 iPg 24 17.35 0.0  
iSg 24 31.97  
TTG 1.04 132 iPg 24 18.90 0.2  
IVA 1.26 101 iPg 24 22.67 0.1  
S.D. = 0.3 on 7 of 7 obs.

\* MAY 23, 1991 19h 42m 56.05±2.18s  
51.416 N ±16.8km 15.850 E ±12.0km  
DEPTH = 10.0km (geophysicist)  
3.7mb (1 obs.)  
POLAND (548)  
ML 4.1 (GRF), 4.0 (VKA), 4.0 (KBA).

KSP 0.64 154 iP 43 06.80 -2.1  
0.3s 169.00nm  
iS 43 16.70  
iLR 43 24.50  
BRG 1.32 246 iPn 43 20.60 0.2  
iPg 43 22.50  
iSg 43 42.20  
PRU 1.65 211 Pn 43 25.80 0.6  
0.4s 308.20nm  
Pg 43 27.80  
iS 43 31.00  
Sn 43 44.50  
Sg 43 50.50  
e 43 59.00  
CLL 1.79 268 iPn 43 27.10 0.0  
iPg 43 30.90  
iSg 43 56.20  
KHC 2.71 213 Pn 43 40.50 0.0  
Pg 43 46.50  
eSn 44 19.50  
eSg 44 26.00  
HOF 2.75 248 iPnd 43 41.20 0.2  
MOX 2.78 256 ePn 43 42.00 0.5  
iPg 43 50.00  
iSg 44 30.00  
KRA 2.93 116 eP 43 48.00 4.5X  
iS 44 26.70  
WET 2.97 221 ePn 43 44.50 0.5  
VKA 3.17 174 ePn 43 45.50 -1.4  
iPg 43 55.30  
iSg 44 38.70  
ZST 3.32 165 e(Pn) 43 52.20 3.1X  
e 43 56.60  
i 44 37.50  
i(Sg) 44 41.50  
GRF 3.42 241 iPnc 43 50.80 0.3  
e(Pg) 44 07.20  
eSg 44 49.20  
KMR 3.54 199 e(Pn) 43 53.00 0.8  
iSg 44 52.20  
SPC 3.59 127 e(Pn) 44 00.80 7.7X  
e 44 06.50  
i 44 46.30  
SRO 3.95 155 eP 44 01.00 3.1  
e 44 32.00  
i 44 50.60  
KBA 4.64 202 iPnc 44 07.00 -1.0  
i 44 23.30  
i 44 28.10  
iSn 45 01.20  
i 45 06.10  
iSg 45 24.40  
TNS 4.84 259 ePnc 44 09.70 -1.0  
eSn 45 32.90  
WTTA 4.99 215 iPnc 44 12.80 0.0  
i 45 16.10  
i 45 25.00  
iSg 45 41.70

SCE 5.15 213 ePn 44 15.10 -0.1  
FVI 5.23 204 P 44 16.00 -0.1  
eSn 45 44.00  
CTI 6.05 209 P 44 27.90 0.2  
MEM 6.27 266 P 44 30.10 -0.6  
ENN 6.29 268 e(Pn) 45 22.50 51.5X  
0.6s 36.00nm  
e(Sg) 46 20.00  
DOU 7.26 264 eP 44 56.90 12.2X  
GUN 56.47 86 P 53 00.00 19.2X  
YKA 59.88 336 eP 52 59.80 -3.9X  
0.7s 0.40nm 3.7mb  
S.D. = 1.1 on 19 of 26 obs.

\* MAY 23, 1991 20h 42m 02.45±0.80s  
37.138 N ±8.5km 29.489 E ±6.4km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 3.4 (ISK).

ELL 0.51 139 iPg 42 12.50 -0.4  
iSg 42 21.50  
BCK 0.93 69 ePn 42 21.00 0.7  
YER 0.96 270 ePn 42 21.10 0.3  
KHL 1.18 1 ePn 42 24.00 -0.6  
CIN 1.21 293 eP 42 25.00 0.0  
S.D. = 0.7 on 5 of 5 obs.

\* MAY 23, 1991 20h 47m 17.46±1.03s  
40.103 N ±10.3km 78.949 E ±14.8km  
DEPTH = 33.0km (normol)  
3.9mb (1 obs.)  
SOUTHERN XINJIANG, CHINA (321)

KKN 13.35 155 P 50 27.88 0.5  
GUN 13.44 153 P 50 29.20 0.5  
DMN 13.47 156 P 50 28.20 -0.7  
PKI 13.60 155 P 50 29.86 -0.8  
QUE 13.92 228 eP 50 35.50 0.7  
IRK 21.24 47 eP 52 04.00 1.4  
YKA 77.17 6 eP 59 07.40 -1.6  
1.0s 1.30nm 3.9mb  
S.D. = 1.3 on 7 of 7 obs.

\* MAY 23, 1991 21h 22m 43.22±0.57s  
51.124 N ±14.4km 178.242 W ±9.2km  
DEPTH = 33.0km (normol)  
4.2mb (6 obs.)  
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK 1.24 51 iPd 23 04.90 0.7  
SMY 5.00 292 eP 24 04.40 6.5X  
SVW 16.01 43 eP 26 30.70 3.5X  
TTA 16.80 37 eP 26 40.90 3.6X  
IMA 19.49 31 eP 27 09.50 -0.6  
1.0s 6.20nm 3.8mb  
TOA 20.55 45 eP 27 22.80 1.5  
LON 36.55 74 eP 29 48.00 0.6  
NEW 38.65 70 eP 30 04.50 -0.5  
ALO 52.81 78 e(P) 31 57.00 -0.6  
HFS 68.68 354 eP 33 45.20 -1.6  
0.6s 1.40nm 4.2mb  
e 33 48.90  
e 34 01.40  
GUN 72.28 292 P 34 07.80 0.2  
0.4s 20.00nm 5.5mb X  
72.72 293 P 34 11.00 1.0  
PKI 72.81 293 P 34 11.20 0.5  
DMN 72.95 293 P 34 12.40 1.0  
FLN 80.48 2 eP 34 52.10 -0.7  
LDF 80.65 1 eP 34 53.10 -0.6  
0.4s 2.85nm 4.6mb  
GRR 80.84 2 eP 34 54.40 -0.3  
0.5s 2.90nm 4.5mb  
WB2 82.07 224 iPd 35 01.30 -0.1  
0.5s 1.10nm 4.1mb  
WRA 82.07 224 P 35 01.00 -0.4  
1.2s 0.70nm 3.6mb  
S.D. = 0.9 on 16 of 19 obs.

MAY 23, 1991 21h 59m 37.98±0.63s  
49.088 N ±5.3km 6.926 E ±6.5km  
DEPTH = 10.0km (geophysicist)  
GERMANY (543)  
MD 2.3 (STR), 2.1 (UCC).  
GWF 0.47 103 Pg 59 47.31 -0.3

CDF 0.71 161 Pg 59 51.99 -0.1  
WLS 0.73 157 Pg 59 52.36 0.0  
ECH 0.89 170 Pg 59 55.27 0.3  
VITF 1.07 216 Pg 59 57.36 -0.8  
MOF 1.24 174 Pg 00 02.04 0.9  
Sg 00 19.88  
FEL 1.41 149 Pg 00 05.61 1.8X  
Sg 00 25.20  
MEM 1.64 339 iP 00 06.70 -0.1  
LOMF 1.74 182 Pn 00 08.31 -0.2  
DOU 1.82 305 iP 00 10.00 0.4  
S.D. = 0.5 on 9 of 10 obs.

? MAY 23, 1991 22h 51m 19.47±3.27s  
41.576 N ±34.6km 13.081 E ±9.9km  
DEPTH = 5.0km (geophysicist)  
SOUTHERN ITALY (390)

RDP 0.33 304 P 51 26.00 -0.1  
eSg 51 32.40  
RMP 0.37 310 P 51 27.00 0.1  
eSg 51 33.00  
SDI 0.57 77 P 51 30.80 0.0  
eSg 51 39.10  
MNS 0.86 340 P 51 36.50 0.0  
eSg 51 49.50  
S.D. = 0.2 on 4 of 4 obs.

? MAY 23, 1991 23h 29m 18.74±1.00s  
40.642 N ±14.5km 29.005 E ±6.0km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 2.6 (ISK).

IZI 0.47 130 iPg 29 28.40 0.1  
iSg 29 34.80  
HRT 0.54 70 iPg 29 29.50 -0.1  
BNT 0.88 251 ePg 29 35.00 -0.6  
KGT 1.31 262 ePn 29 43.50 0.5  
S.D. = 0.8 on 4 of 4 obs.

\* MAY 24, 1991 00h 18m 08.44±1.09s  
30.340 S ±9.4km 71.620 W ±12.6km  
DEPTH = 75.7 ±22.9 km  
NEAR COAST OF CENTRAL CHILE (135)

JACH 2.49 160 iPd 18 48.00 0.3  
iS 19 18.00  
ROCH 2.67 169 eP 18 50.50 0.2  
i 19 07.00  
i 19 21.50  
IHA 2.68 180 eP 18 50.00 -0.1  
i(S) 19 24.40  
ZON 2.80 116 iPc 18 51.70 -0.2  
eS 19 18.70  
PEL 2.91 164 iPd 18 53.50 0.1  
i 19 10.50  
iS 19 27.50  
LCCH 3.13 179 iPd 18 56.20 -0.2  
i 19 28.50  
iS 19 35.50  
SAN 3.21 166 eP 18 58.00 0.4  
i 19 15.50  
iS 19 35.50  
TACH 3.35 170 iPd 18 59.50 -0.1  
i 19 18.50  
i 19 38.00  
PCH 3.40 164 iP 19 00.00 -0.4  
i 19 19.00  
iS 19 40.60  
LNV 3.61 177 iP 19 03.00 -0.1  
iS 19 46.00  
ZOB0 14.37 14 eP 21 30.00 0.0  
SIV 17.25 36 P 22 09.50 3.6X  
PPD 19.99 70 eP 22 37.40 0.0  
S.D. = 0.3 on 12 of 13 obs.

% MAY 24, 1991 00h 31m 22.91±1.01s  
40.534 N ±6.8km 23.546 E ±10.0km  
DEPTH = 10.0km (geophysicist)  
GREECE (364)  
MD 1.8 (THE).

SOH 0.32 333 ePg 31 30.00 0.4  
eSg 31 34.30  
THE 0.45 283 ePg 31 31.30 -0.8  
eSg 31 40.00



SRS 0.58 3 iPg 31 34.20 -0.5  
eSg 31 42.40  
PAIG 0.62 170 ePg 31 35.40 0.1  
KNT 0.80 322 ePg 31 38.60 0.2  
eSg 31 52.30  
GRG 0.97 296 ePg 31 42.00 0.7  
eSg 31 57.80  
S.D. = 0.7 on 6 of 6 obs.

\* MAY 24, 1991 01h 47m 47.14 ± 1.41s  
24.364 N ± 9.0km 122.509 E ± 12.9km  
DEPTH = 10.0km (geophysicist)  
4.2mb ( 4 obs.)

## TAIWAN REGION (243)

TWC 0.65 292 iPd 48 00.20 0.1  
eS 48 04.90  
TWD 0.88 251 ePc 48 02.50 -1.5  
eS 48 10.20  
TWZ 1.12 311 iPc 48 09.30 1.2  
eS 48 21.20  
ANP 1.22 313 iP 48 11.50 1.7  
eS 48 25.00  
TWF1 1.50 228 eP 48 15.20 1.1  
TWK 2.15 240 ePd 48 23.60 0.0  
SSE 6.81 350 P 49 29.50 0.0  
0.8s 20.00nm 5.2mb  
Z 16s 0.40um 3.3mszx  
NJ2 0.31 338 eP 49 48.50 -2.0  
S 51 23.00  
GYA 14.47 282 P 51 14.00 -0.1  
LZH 19.88 310 eP 52 20.50 -1.1  
2.0s 29.00nm 4.2mb  
pP 52 28.50 31kmX  
GTA 24.33 313 eP 53 05.80 -0.3  
1.4s 10.00nm 4.2mb  
YKA 82.33 23 eP 00 11.10 1.0  
0.6s 0.20nm 3.4mb  
S.D. = 1.3 on 12 of 12 obs.

% MAY 24, 1991 01h 49m 02.36 ± 0.69s  
38.940 N ± 7.2km 28.645 E ± 6.2km  
DEPTH = 10.0km (geophysicist)

## TURKEY (366)

MD 2.8 (ISK).

KHL 0.92 132 iPg 49 20.00 -0.1  
iSg 49 32.50  
ALT 1.15 84 ePn 49 23.90 0.0  
IZM 1.21 244 ePn 49 25.00 0.1  
IZI 1.53 24 iPn 49 29.60 -0.3  
KGT 1.83 326 ePn 49 34.00 -0.1  
EYL 2.00 35 ePn 49 37.00 0.4  
S.D. = 0.3 on 6 of 6 obs.

? MAY 24, 1991 02h 30m 36.98 ± 17.21s  
18.988 N ± 50.6km 65.319 W ± 125.0km  
DEPTH = 10.0km (geophysicist)

## PUERTO RICO REGION (90)

LPR 0.85 218 iP 30 53.90 0.4  
CPD 1.10 211 iP 30 57.50 -0.2  
SJJ 1.17 222 iP 30 58.70 -0.2  
S 32 22.20  
APR 1.44 248 iP 31 03.40 0.3  
LRS 1.60 245 iP 31 05.10 -0.4  
MGP 1.94 240 iP 31 10.40 0.1  
S.D. = 0.4 on 6 of 6 obs.

\* MAY 24, 1991 03h 04m 23.00s  
39.483 N 122.957 W  
DEPTH = 11.0km

## NORTHERN CALIFORNIA (36)

&lt;BRK&gt;. ML 3.2 (BRK).

NWRM 1.03 177 eP 04 41.30 -1.0  
ORV 1.13 86 eP 04 42.00 -2.1  
FOX 1.31 323 iPc 04 45.74 -1.3  
MIN 1.35 50 ePc 04 46.24 -1.6  
FHC 1.53 329 eP 04 48.50 -1.9  
ZSP 1.63 160 iPd 04 50.08 -1.6  
BRK 1.70 161 ePd 04 54.30 1.6  
BKS 1.70 160 ePc 04 51.00 -1.7  
PCC 2.03 167 eP 04 55.35 -2.2  
LBFM 2.03 23 eP 04 57.00 -0.7  
MHC 2.37 154 ePd 05 02.10 -0.5  
ARN 2.41 152 eP 05 01.60 -1.4

CMB 2.48 125 eP 05 03.00 -1.0  
FRI 3.57 133 iPd 05 20.60 1.2  
BONR 3.95 111 eP 05 24.70 -0.4  
TNP 4.70 106 eP 05 34.40 -1.3  
16 obs. associated

\* MAY 24, 1991 03h 06m 22.07 ± 0.62s  
2.587 N ± 10.8km 122.119 E ± 11.7km  
DEPTH = 576.9 ± 8.6 km  
4.9mb ( 9 obs.)

## CELEBES SEA (262)

TSM 4.35 292 iPd 07 48.80 -0.2  
0.6s 296.20nm  
BKB2 6.47 234 e(P) 08 07.40 0.6  
0.8s 692.50nm 5.8mb X  
AAI 8.70 136 ePc 08 27.60 -0.5  
CHG 27.84 307 ePd 11 28.10 0.0  
1.0s 30.00nm 4.9mb  
ASPA 28.51 157 iPd 11 33.80 -0.1  
0.2s 5.60nm 4.8mb  
eS 15 40.50  
QIS 28.69 144 iPd 11 35.60 0.2  
0.4s 10.00nm 4.8mb  
FORR 33.74 171 eP 12 18.30 0.4  
LZH 37.38 335 e(P) 12 49.00 0.9  
1.5s 17.00nm 4.4mb  
GUN 42.78 310 Pd 13 32.04 0.2  
0.7s 119.00nm 5.5mb  
PKI 42.98 309 Pd 13 33.18 -0.2  
KKN 43.19 309 Pd 13 34.84 -0.1  
0.6s 39.00nm 5.1mb  
DMN 43.24 309 Pd 13 35.40 0.1  
GKN 43.79 309 Pd 13 39.38 -0.1  
0.7s 76.00nm 5.3mb  
KOD 44.97 282 eP 13 49.00 0.0  
HYB 45.22 292 iPd 13 50.50 0.0  
0.8s 42.30nm 5.0mb  
GBA 45.48 286 Pc 13 51.50 -1.0  
0.8s 18.60nm 4.7mb  
S.D. = 0.5 on 16 of 16 obs.

MAY 24, 1991 06h 40m 49.99 ± 0.49s  
46.376 N ± 5.1km 1.841 E ± 3.8km  
DEPTH = 13.7 ± 3.1 km

## FRANCE (538)

ML 3.0 (LDG).

LSF 0.25 240 Pg 40 55.40 -0.2  
Sg 40 58.60  
TCF 0.27 109 Pg 40 56.30 0.3  
Sg 41 00.20  
MAF 0.53 107 Pg 41 00.70 0.2  
Sg 41 07.70  
BGF 0.72 75 Pg 41 04.20 0.4  
Sg 41 14.00  
AGO 0.95 109 Pg 41 08.36 0.6  
Sg 41 20.29  
PYM 1.03 127 Pg 41 09.62 0.5  
Sg 41 22.63  
RJF 1.10 192 Pg 41 10.20 0.0  
Sg 41 23.90  
AVF 1.12 68 Pn 41 11.00 0.3  
Pg 41 11.40  
Sg 41 25.20  
PLDF 1.30 108 Pg 41 14.61 0.8  
Sg 41 31.42  
SSF 1.34 58 Pn 41 14.10 -0.1  
Pg 41 15.20  
Sg 41 32.00  
MFF 1.39 280 Pg 41 15.80 0.9  
Sg 41 33.10  
SMF 1.41 78 Pn 41 15.00 -0.2  
Pg 41 16.60  
Sg 41 34.40  
CAF 1.46 174 Pn 41 14.80 -1.1  
Pg 41 17.80  
Sg 41 35.20  
LBL 1.51 139 Pn 41 16.31 -0.2  
Sg 41 37.89  
LBF 1.59 67 Pn 41 18.00 0.1  
Pg 41 20.00  
Sg 41 40.00  
LFF 1.63 209 Pn 41 18.00 -0.4  
Pg 41 20.00  
Sg 41 40.40  
LOR 1.65 56 Pn 41 18.40 -0.3

Pg 41 20.50  
Sg 41 41.80  
LPO 1.75 195 Pg 41 22.00 1.8  
Sg 41 44.20

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

? MAY 24, 1991 06h 58m 00.26 ± 3.99s  
21.162 S ± 29.5km 178.763 W ± 30.3km  
DEPTH = 620.8 ± 41.3 km  
4.8mb ( 3 obs.)

## FIJI ISLANDS REGION (181)

DZM 13.79 264 iPc 00 56.40 0.0  
NOZ 17.61 188 eP 01 33.90 1.3  
MNG 20.00 193 eP 01 50.90 -3.8X  
LTZ 22.83 197 eP 02 18.40 -1.8  
BRS 26.64 251 iPd 02 55.00 1.2  
PMG 34.81 284 eP 04 02.00 -0.8  
ASPA 43.68 257 iPd 05 14.40 0.4  
0.6s 26.50nm 4.9mb  
WRA 43.80 263 P 05 14.00 -1.0  
0.4s 14.00nm 4.8mb  
FORR 48.34 247 eP 05 49.40 0.1  
0.4s 15.00nm 4.8mb  
WARB 49.95 253 eP 06 01.10 -0.2  
CHG 89.80 290 eP 09 56.50 1.0  
EKA 145.72 4 PKP 16 30.00 -0.2  
1.6s 12.90nm  
CLL 148.53 346 iPKPc 16 37.80 3.0X  
0.8s 13.00nm  
GRF 150.45 347 ePKP 16 43.10 5.3X  
S.D. = 1.2 on 11 of 14 obs.

% MAY 24, 1991 07h 01m 37.77 ± 0.80s  
44.765 N ± 6.0km 7.635 E ± 6.3km  
DEPTH = 10.0km (geophysicist)

## NORTHERN ITALY (545)

BHB 0.28 286 P 01 44.41 0.8  
S 01 49.23  
PZZ 0.46 236 P 01 47.07 -0.1  
S 01 54.04  
RSP 0.47 325 P 01 46.87 -0.5  
S 01 53.53  
ROB 0.50 160 P 01 48.51 0.6  
S 01 56.40  
ENR 0.56 196 P 01 48.92 -0.3  
S 01 56.92  
STV 0.57 203 P 01 48.81 -0.5  
S 01 56.61  
PCP 0.69 109 P 01 51.38 0.0  
S 02 00.71  
S.D. = 0.6 on 7 of 7 obs.

? MAY 24, 1991 07h 26m 48.77 ± 2.28s  
7.948 S ± 15.3km 148.306 E ± 29.6km  
DEPTH = 33.0km (normal)  
4.0mb ( 1 obs.)

## EAST PAPUA NEW GUINEA REGION (207)

LAT 1.83 315 iPd 27 17.50 -0.9  
PMG 1.84 218 eP 27 19.50 0.9  
eS 28 42.00  
YYYY 2.87 306 eP 27 34.60 1.2  
eS 28 09.30  
MDG 3.67 317 eP 27 46.90 2.3X  
BRS 19.80 168 iPd 31 20.00 0.5  
ASPA 20.86 220 eP 31 28.60 -1.9  
0.6s 4.30nm 4.0mb  
S.D. = 1.8 on 5 of 6 obs.

\* MAY 24, 1991 07h 29m 01.46s  
59.643 N 153.926 W  
DEPTH = 132.9km

## SOUTHERN ALASKA (2)

&lt;AEIC&gt;.

PDB 0.20 317 iPc 29 18.96 0.7  
eS 29 32.86  
AUH 0.37 138 iPc 29 19.86 0.9  
AUI 0.40 140 ePc 29 19.71 -0.9  
AUE 0.40 135 iPc 29 19.83 -0.7  
MCNL 0.51 205 iPc 29 20.16 -1.0  
eS 29 34.96  
CDD 0.73 168 iPc 29 21.56 -1.1  
eS 29 37.44  
RED 0.97 36 iPc 29 23.83 -0.9



24d 07h

RS2	1.01	35	eS	29 41.11	
RSO	1.01	35	iPc	29 24.33	-0.9
			eS	29 42.01	
RDN	1.05	33	iPc	29 24.66	-0.9
			eS	29 42.77	
XLV	1.14	99	eP	29 24.81	-1.4
			eS	29 43.70	
HOM	1.16	88	iPc	29 25.40	-1.0
			eS	29 44.24	
RDT	1.20	39	iPc	29 26.02	-1.0
			eS	29 44.83	
SYI	1.30	142	ePd	29 26.46	-1.5
			eS	29 45.06	
CNPM	1.37	94	iPc	29 27.20	-1.5
			eS	29 46.81	
BRLK	1.55	84	eP	29 29.87	-0.8
			eS	29 49.86	
SVW	1.69	331	iPd	29 31.82	-0.6
			eS	29 55.95	
NKA	1.74	49	eP	29 33.07	0.3
CKL	1.75	26	iPd	29 32.35	-0.7
BGL	1.80	24	eP	29 33.26	-0.4
CRP	1.85	28	iPd	29 33.78	-0.6
NCG	1.97	26	ePd	29 35.18	-0.6
KDC	2.04	158	eP	29 33.70	-2.8
SLKM	2.05	63	ePc	29 35.09	-1.6
			eS	30 01.28	
SEW	2.30	77	eP	29 37.63	-2.1
			eS	30 06.68	
SUA	2.41	39	iPd	29 40.24	-1.0
			eS	30 09.93	
SKT	2.62	26	iPd	29 42.98	-0.9
			eS	30 15.45	
PMS	2.69	52	ePc	29 43.11	-1.7
			eS	30 13.98	
PLRM	3.07	48	eP	29 47.05	-2.6
PMR	3.07	48	eP	29 45.70	-3.9
LTI	3.09	80	eP	29 48.16	-1.8
MTU	3.19	81	iPc	29 49.18	-2.1
			eS	30 24.92	
KNIM	3.19	75	iPc	29 48.38	-2.9
			eS	30 24.04	
KNK	3.23	54	ePc	29 49.00	-2.9
GHO	3.26	47	eP	29 49.79	-2.5
CUT	3.29	31	eP	29 51.18	-1.4
TTA	3.45	344	eP	29 51.00	-3.8
SML	3.50	49	ePc	29 52.65	-2.8
GLI	3.62	67	eP	29 53.83	-3.2
MID	3.87	90	eP	29 57.91	-2.4
SCM	3.91	53	eP	29 58.17	-2.8
VZW	3.93	66	eP	29 57.96	-3.2
HUR	3.93	30	eP	29 57.46	-3.7
VLZ	4.05	65	eP	29 59.51	-3.2
TRF	4.20	23	eP	30 02.97	-1.9
KLU	4.36	61	eP	30 03.96	-3.1
RND	4.49	31	eP	30 06.21	-2.5
TOA	4.52	54	eP	30 06.70	-2.4
MCK	4.74	28	eP	30 10.11	-1.9
TZL	4.81	56	eP	30 10.21	-2.7
SDG	4.99	51	eP	30 13.63	-1.8
PAX	5.27	47	eP	30 16.52	-2.7
GLB	5.31	66	eP	30 16.56	-3.2
NEA	5.45	23	eP	30 18.85	-2.7
CROM	5.50	74	ePc	30 19.74	-2.7
WRH	5.57	27	ePd	30 20.13	-3.0
SDN	5.58	222	eP	30 21.71	-1.6
TGL	5.65	74	eP	30 21.82	-2.6
DDM	5.65	39	eP	30 23.31	-1.1
CCB	5.78	27	ePd	30 22.86	-3.2
HDA	5.80	31	eP	30 23.07	-3.2
RDS	5.86	25	eP	30 23.91	-3.3
BALM	5.92	71	eP	30 25.82	-2.3
MDM	5.96	24	ePd	30 25.43	-3.1
FBA	6.00	26	eP	30 25.90	-3.2
GLM	6.17	27	eP	30 28.33	-3.1
CTGM	6.40	73	eP	30 33.37	-1.3
TMW	6.40	50	eP	30 35.11	0.5
YKU	7.21	85	eP	30 44.88	-0.6
PNL	7.36	84	eP	30 44.71	-2.9
INK	12.41	37	eP	31 51.00	-3.3

71 obs. associated

\* MAY 24, 1991 07h 59m 38.83±0.82s  
42.679 N ±10.6km 42.908 E ±11.7km  
DEPTH = 10.0km (geophysicist)  
3.9mb ( 3 obs.)

## WESTERN CAUCASUS (362)

TAB	5.29	149	eP	01 00.00	0.0
KAS	6.93	262	eP	01 23.00	0.0
MLR	12.52	289	eP	02 40.00	0.1
NUR	21.02	334	eP	04 24.00	-0.6
KAF	21.82	339	eP	04 33.70	1.0
	0.7s		8.00nm		4.3mb
			eS	04 36.60	
CLL	22.02	303	eP	04 35.00	0.1
NB2	26.44	325	P	05 16.70	-0.6
	0.9s		2.30nm		3.9mb
YKA	73.63	349	eP	11 08.50	-5.2X
	0.8s		0.60nm		3.7mb
	S.D. = 0.7	on 7 of			8 obs.

\* MAY 24, 1991 09h 04m 30.66±2.92s  
40.055 N ±20.4km 27.585 E ±11.2km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 2.7 (ISK).

EDC	0.36	36	ePg	04 38.00	-0.1
BNT	0.40	40	ePg	04 38.20	-0.6
			eSg	04 48.20	
KGT	0.45	332	ePg	04 39.70	-0.1
			iSg	04 49.20	
CTT	1.27	30	ePn	04 55.00	0.8
GBZT	1.60	62	ePg	04 59.20	0.2
HRT	1.76	64	iPg	05 01.20	-0.3
CIN	2.48	171	eP	05 16.00	4.3X
	S.D. = 0.6	on 6 of			7 obs.

? MAY 24, 1991 10h 05m 08.10±15.23s  
44.556 N ±41.3km 8.585 E ±98.3km  
DEPTH = 10.0km (geophysicist)  
NORTHERN ITALY (545)  
ML 2.0 (GEN).

PCP	0.03	243	P	05 10.16	0.0
			S	05 13.75	
FIN	0.44	218	P	05 17.12	0.1
			S	05 26.56	
ROB	0.57	243	P	05 19.48	-0.3
			S	05 30.15	
ENR	0.90	249	P	05 25.63	0.3
			S	05 41.32	
	S.D. = 0.4	on 4 of			4 obs.

? MAY 24, 1991 10h 33m 57.92±2.85s  
41.012 N ±20.0km 21.703 E ±12.1km  
DEPTH = 10.0km (geophysicist)  
YUGOSLAVIA (383)  
MD 2.6 (THE).

FNA	0.34	227	ePg	34 04.80	-0.1
GRG	0.53	96	ePg	34 07.60	-1.1
LIT	1.09	146	ePg	34 18.50	0.1
			eSg	34 32.20	
SOH	1.27	98	ePg	34 22.60	1.1
	S.D. = 1.6	on 4 of			4 obs.

\* MAY 24, 1991 10h 49m 26.09±0.62s  
38.541 N ±10.2km 70.071 E ±9.3km  
DEPTH = 33.0km (normal)  
3.9mb ( 2 obs.)

## AFGHANISTAN-USSR BORDER REGION (717)

MAIO	8.71	258	ePn	51 33.00	0.2
			eSn	52 11.00	
QUE	8.72	198	eP	51 32.90	-0.2
			eS	53 15.40	
GKN	16.07	127	P	53 11.80	0.5
KKN	16.62	126	P	53 18.22	-0.2
DMN	16.64	126	P	53 18.32	-0.3
PKI	16.86	126	P	53 20.50	-0.9
GUN	16.93	124	P	53 21.70	-0.6
HYB	22.32	158	eP	54 26.00	3.7X
NUR	35.75	323	eP	56 33.00	9.6X
SOD	37.58	334	eP	56 39.00	0.3
KEV	38.64	338	eP	56 45.00	-2.6
INK	72.01	9	eP	00 49.00	1.0
YKA	79.24	2	eP	01 29.80	0.8
	0.7s		0.60nm		3.7mb
WRA	83.69	121	P	01 55.00	2.0
	1.0s		1.60nm		4.1mb
	S.D. = 1.3	on 12 of			14 obs.

\* MAY 24, 1991 10h 56m 37.67±1.15s  
31.325 S ±13.5km 67.903 W ±6.7km  
DEPTH = 10.0km (geophysicist)  
SAN JUAN PROVINCE, ARGENTINA (137)

CFA	0.40	226	iPc	56 46.20	0.3
			eS	56 52.00	
RTLL	0.49	269	iPc	56 47.30	-0.2
ZON	0.70	251	iPc	56 51.70	0.2
			eS	57 00.70	
TCA	2.83	91	eP	57 24.00	0.1
RFA	3.47	188	ePd	57 32.50	-0.3
			i	57 41.00	
			(S)	58 26.50	
	S.D. = 0.4	on 5 of			5 obs.

? MAY 24, 1991 11h 07m 38.13±1.33s  
43.164 N ±16.5km 0.921 W ±8.2km  
DEPTH = 10.0km (geophysicist)  
PYRENEES (378)  
MD 1.0 (STR).

ELYF	0.05	276	Pg	07 40.42	0.1
			Sg	07 42.05	
MADF	0.08	104	Pg	07 40.57	0.0
			Sg	07 42.37	
BOH	0.09	227	Pg	07 40.83	0.0
			Sg	07 42.91	
ISSF	0.16	146	Pg	07 41.98	0.0
	S.D. = 0.1	on 4 of			4 obs.

MAY 24, 1991 12h 49m 25.38±0.47s  
50.749 N ±4.7km 130.111 W ±6.0km  
DEPTH = 10.0km (geophysicist)  
4.0mb ( 5 obs.)  
VANCOUVER ISLAND REGION ( 25)

SJB	1.32	335	P	49 48.00	-0.9
			S	50 05.30	
PHC	1.70	90	Pc	49 56.01	0.8
			S	50 17.25	
BBB	1.90	40	P	50 00.10	2.0
BNB	2.10	331	P	50 00.00	-1.0
			S	50 26.20	
EDB	2.11	113	P	49 59.66	-1.5
CWB	2.68	335	P	50 08.90	-0.5
ETB	2.68	119	P	50 07.53	-1.8
VIB	2.92	330	P	50 12.10	-0.7
CBB	3.12	101	Pc	50 15.77	0.3
BTB	3.22	112	Pc	50 16.15	-1.0
OZB	3.48	119	P	50 19.04	-1.7
ALB	3.71	111	P	50 23.04	-0.9
MGB	3.92	114	P	50 25.47	-1.5
SHB	4.17	104	P	50 30.31	-0.2
OSP	4.36	122	P	50 32.97	-0.2
OTR	4.61	123	P	50 36.74	0.0
OBC	4.79	122	P	50 39.20	-0.1
STW	4.94	119	P	50 40.81	-0.6
OSD	5.12	122	P	50 43.71	-0.3
MCW	5.16	111	P	50 45.13	0.7
OBH	5.35	127	P	50 47.10	0.0
BLN	5.41	118	P	50 47.68	-0.4
HDW	5.57	121	P	50 50.17	-0.2
SMW	5.62	125	P	50 51.04	0.0
MBW	5.67	107	P	50 52.47	0.6
JCW	5.91	112	P	50 54.88	-0.2
CPW	5.95	127	P	50 54.90	-0.8
BLH	6.03	116	P	50 56.93	0.2
RPW	6.05	109	P	50 57.30	0.3
HTW	6.20	115	P	50 59.30	0.1
GSM	6.52	120	P	51 04.06	0.2
RVC	6.58	122	P	51 04.88	0.2
LMW	6.59	125	P	51 06.14	1.4
CZM	6.64	128	P	51 05.84	0.5
RVW	6.72	130	P	51 06.60	0.1
FMW	6.75	121	P	51 07.36	0.2
KOSW	6.78	126	P	51 07.69	0.3
LON	6.79	123	P	51 07.64	0.1
ERK	6.81	128	P	51 07.60	-0.2
TDL	6.84	127	P	51 08.41	0.1
FL2	6.88	128	P	51 08.93	0.1
PNT	6.91	98	P	51 10.00	0.8
	0.9s		2.00nm		4.2mb
NLW	6.91	109	P	51 09.27	0.0
STD	6.92	128	P	51 09.56	0.2
SHW	6.94	128	P	51 09.99	0.3



LVP	6.94	129	P	51	10.05	0.4	Z	16s	0.70um	4.2mszx	CRP	1.48	21	ePd	57	27.05	-0.6	
SOSW	6.96	127	P	51	10.17	0.2	N	14s	0.70um		NCG	1.60	19	eP	57	28.49	-0.6	
WPW	6.96	122	P	51	10.45	0.5	E	14s	0.50um		SLKM	1.64	67	eP	57	28.01	-1.4	
ESD	6.98	128	P	51	11.11	0.9				04 22.00	SEW	1.93	82	eP	57	31.46	-1.5	
MTMW	7.07	129	P	51	12.09	0.6				iPP 04 51.00	SUA	2.00	37	ePd	57	32.94	-1.0	
CDFW	7.09	128	P	51	11.87	0.2				ePPP 05 11.00	SKT	2.25	21	ePd	57	35.68	-1.4	
ETW	7.14	112	P	51	12.45	0.0				eS 08 32.00	PMS	2.27	52	ePc	57	35.84	-1.5	
TBM	7.21	116	P	51	13.51	0.1				LO 12 12.00	PWA	2.42	42	eP	57	37.89	-1.3	
ASR	7.30	126	P	51	15.15	0.5	GKN	23.70	105	P	04 18.26	PLRM	2.65	48	eP	57	40.72	-1.4
DHW2	7.30	108	P	51	14.66	0.1	DMN	24.25	105	P	04 25.40	KNIM	2.80	78	ePc	57	41.53	-2.7
WTV	7.32	111	P	51	14.98	0.1	KKN	24.30	105	P	04 25.90	KNK	2.81	55	ePc	57	41.85	-2.5
NAC	7.34	120	P	51	15.27	0.2	PKI	24.51	105	P	04 27.30	MTU	2.83	86	ePc	57	43.03	-1.5
EBG	7.38	118	P	51	15.83	0.1	GUN	24.71	104	P	04 29.18	GHO	2.84	47	eP	57	42.39	-2.4
SAW	7.65	109	P	51	18.85	-0.6	VRI	25.30	300	ePd	04 34.00	CUT	2.90	29	eP	57	43.87	-1.6
EPH	7.70	112	P	51	19.65	-0.5	ISR	25.32	299	eP	04 31.00	GLI	3.22	70	eP	57	47.28	-2.5
MDW	8.00	117	P	51	23.35	-1.0	MLR	25.78	299	eP	04 41.00	VLZ	3.64	67	eP	57	53.28	-2.1
RC1	8.01	114	P	51	22.87	-1.6	HYB	26.34	133	eP	04 43.50	KLU	3.95	63	iPc	57	56.86	-2.8
GBL	8.18	116	P	51	26.62	-0.3	KAF	32.03	332	eP	05 36.20	WRH	5.19	26	ePd	58	13.43	-2.9
OD2	8.21	110	P	51	26.31	-1.0		0.9s	10.20nm			CCB	5.40	26	ePd	58	16.07	-3.2
NEW	8.81	101	eP	51	35.00	-0.7				esP 05 40.60	RDS	5.49	24	eP	58	17.56	-2.9	
SES	12.13	84	eP	52	21.00	-0.1	ZST	32.11	304	eP	05 43.30	BALM	5.52	73	eP	58	19.20	-1.8
TOA	14.38	328	eP	53	03.10	12.3X	KSP	32.93	308	eP	05 42.50	MDM	5.59	23	ePd	58	18.73	-3.1
YKA	14.48	30	eP	52	51.90	-0.2	BRG	34.41	308	eP	05 54.90	FBA	5.62	25	eP	58	19.04	-3.3
	0.9s	3.40nm			4.0mb		KHC	34.50	305	eP	06 00.60	GLM	5.79	26	eP	58	21.86	-2.8
PMR	15.10	323	eP	53	13.80	13.7X	CLL	35.04	309	e(P)	06 00.00	PNL	7.01	86	eP	58	39.05	-2.2
	1.2s	13.30nm								e 07 23.00	YKA	18.62	65	eP	01	06.50	-3.5	
BONR	15.30	142	eP	53	09.60	6.4X	SOD	35.30	339	iP	06 03.20		0.5s	0.20nm		2.7mb		
TNP	15.63	139	eP	53	08.00	0.6	MOX	35.86	307	eP	06 09.00		45 obs.	associated				
FBA	16.93	334	eP	53	32.60	9.1X	LZH	36.10	78	e(P)	06 16.00							
FFC	17.44	66	eP	53	34.00	4.0X		Z	22s	0.62um	4.3msz							
	0.6s	6.00nm			3.9mb		N	16s	0.82um									
MSU	17.62	127	eP	53	34.00	1.3	KEV	36.87	342	eP	06 17.00							
INK	17.69	356	eP	53	35.00	2.0		0.6s	7.80nm		0.9							
IMA	19.50	331	eP	53	59.70	4.4X	NB2	37.99	324	P	06 24.90							
	1.4s	11.10nm			3.9mb			0.7s	8.90nm		-0.8							
ANMO	23.31	124	eP	54	36.00	1.6	CHG	39.68	106	eP	06 40.90							
ALO	23.31	124	eP	54	35.90	1.5	SMF	41.13	301	eP	06 50.40							
	1.2s	5.08nm			3.9mb		AVF	41.45	301	eP	06 53.00							
S.D. = 0.8 on 72 of 78 obs.							EKA	44.84	314	Pd	07 21.60							
								1.0s	7.20nm		-0.4							
MAY 24, 1991 12h 54m 57.06±0.51s							LKO	63.73	262	P	09 37.90							
40.705 N ± 5.5km 29.179 E ± 4.4km							TIC	65.02	259	P	09 47.50							
DEPTH = 10.0km (geophysicist)							LIC	65.28	259	P	09 49.30							
TURKEY (366)							INK	74.54	5	eP	10 45.00							
MD 2.8 (ISK).							YKA	80.62	357	eP	11 19.20							
								0.9s	1.10nm		-0.8							
YLV	0.20	133	iPg	55	01.30	-0.2	WRA	91.06	114	P	12 14.00							
			eSg	55	05.30			0.6s	0.70nm		1.8							
ISK	0.37	346	iPg	55	04.70	0.0	SES	92.42	353	eP	12 22.00							
			iSg	55	10.10			S.D. = 1.1 on 34 of 47 obs.			3.7X							
HRT	0.39	72	iPg	55	05.60	0.5												
			eSg	55	11.10													
IZI	0.43	149	iPg	55	05.60	-0.3	& MAY 24, 1991 13h 56m 59.81s											
CTT	0.72	308	iPg	55	10.10	-1.1	59.900 N 153.267 W											
			iSg	55	20.10		DEPTH = 122.6km											
EYL	0.76	100	ePg	55	11.80	-0.2	2.7mb ( 1 obs.)											
BNT	1.02	250	ePg	55	16.60	0.2	SOUTHERN ALASKA											
KGT	1.45	261	ePn	55	24.00	0.7	<AEIC>.											
DMK	1.55	317	ePn	55	25.00	0.3												
S.D. = 0.6 on 9 of 9 obs.							PDB	0.48	257	ePd	57 17.30							
											-0.9							
MAY 24, 1991 12h 59m 06.21±0.31s							AUE	0.55	186	ePd	57 17.82							
37.079 N ± 6.8km 58.578 E ± 5.0km							AUH	0.55	190	eP	57 18.37							
DEPTH = 10.0km (geophysicist)							AUI	0.57	188	eP	57 18.04							
4.5mb ( 6 obs.) 4.3msz ( 1 obs.)											-0.7							
IRAN-USSR BORDER REGION (341)							RED	0.58	25	iPc	57 18.08							
Felt at Moshod and Ouchon, Iran.											-0.8							
							RS2	0.62	24	ePc	57 18.57							
MAIO	1.07	136	iPnc	59	25.00	-1.4	RSO	0.62	24	iPc	57 18.52							
			eSn	59	38.00						-0.8							
TEH	5.95	259	eP	00	40.00	3.4X	RDN	0.67	22	iPc	57 18.81							
GAR	9.46	75	eP	01	21.10	-4.5X	RDT	0.80	32	iPc	57 19.72							
KER	9.72	257	eP	01	51.00	21.8X	HOM	0.86	106	ePc	57 20.48							
TAB	9.78	279	eP	01	29.00	-1.0	MCNL	0.90	218	iPd	57 20.38							
QUE	9.79	132	eP	01	30.20	0.0	XLV	0.90	119	eP	57 20.31							
			eS	04	12.00						-1.1							
RYD	16.02	223	P	02	55.00	1.8	CDD	0.99	191	iPd	57 21.27							
NDI	17.73	113	eP	03	12.00	-2.7X					-1.0							
KAS	19.67	290	eP	03	38.50	0.2	CNPM	1.10	109	iPc	57 22.37							
DSI	19.91	261	eP	03	41.00	0.2					-1.0							
BBTK	20.38	286	iP	03	56.00	10.1X	BRLK	1.21	95	iPc	57 23.59							
KMSA	20.69	220	P	03	49.90	0.8					-1.0							
PRNI	20.71	258	eP	03	49.00	-0.2	NKA	1.32	49	iPc	57 26.40							
MBH	21.05	257	eP	03	53.00	0.3	SYI	1.37	160	eP	57 25.32							
HOL	21.14	255	P	04	00.00	6.4X					-0.9							
OBN	23.43	327	iPc	04	17.00	0.9	CKL	1.38	19	iPd	57 25.78							
	0.8s	*****nm			7.9mb X		BGL	1.44	17	eP	57 26.57							
											-0.6							



24d 16h

WLS 0.76 155 Pg 14 32.89 -0.1  
 ECH 0.90 167 Pg 14 35.94 0.5  
 Sg 14 49.66  
 VITF 1.06 214 Pg 14 37.65 -0.4  
 MOF 1.26 172 Pg 14 42.51 0.9  
 Sg 15 00.40  
 FEL 1.44 148 Pg 14 45.74 1.4X  
 MEM 1.61 340 iP 14 46.80 0.2  
 LOMF 1.75 181 Pn 14 48.29 -0.5  
 ENN 1.78 340 iPgc 14 50.00 0.9  
 0.3s 38.00nm  
 e 15 16.00  
 DOU 1.78 305 P 14 48.20 -1.0  
 S.D. = 0.7 on 10 of 11 obs.

\* MAY 24, 1991 16h 26m 22.46±0.90s  
 37.163 N ±14.1km 58.631 E ±14.3km  
 DEPTH = 10.0km (geophysicist)  
 4.0mb (1 obs.)

IRAN-USSR BORDER REGION (341)

MAIO 1.11 141 iPnc 26 43.30 0.0  
 eSn 26 57.00  
 TEH 6.01 258 eP 28 00.00 6.3X  
 GAR 9.40 75 eP 28 42.10 1.1  
 QUE 9.82 133 eP 28 48.10 1.2  
 e(S) 31 26.60  
 OBN 23.39 327 eP 31 32.00 0.1  
 e 31 42.00  
 e 32 34.00  
 GKN 23.68 105 P 31 37.64 2.4X  
 DMN 24.24 105 P 31 40.82 0.1  
 KKN 24.28 105 P 31 41.06 0.0  
 PKI 24.49 105 P 31 42.56 -0.7  
 GUN 24.69 104 P 31 43.08 -2.1  
 SOD 35.23 339 eP 33 18.00 -0.6  
 NB2 37.95 324 P 33 42.40 0.8  
 0.7s 2.00nm 4.0mb  
 S.D. = 1.1 on 10 of 12 obs.

? MAY 24, 1991 16h 37m 37.03±7.61s  
 29.382 S ±79.8km 67.166 W ±15.7km  
 DEPTH = 120.0km (geophysicist)

LA RIOJA PROVINCE, ARGENTINA (138)

ZON 2.52 211 eP 38 19.70 2.0  
 TCA 2.96 132 iPd 38 23.50 0.0  
 JACH 4.41 221 eP 38 45.00 1.8  
 PEL 4.81 218 eP 38 48.00 -0.5  
 i 39 45.00  
 PCH 5.10 213 eP 38 53.60 1.1  
 iS 39 54.70  
 TACH 5.34 216 eP 38 55.20 -0.5  
 RFA 5.49 191 ePd 38 57.30 -0.4  
 LCCH 5.55 222 iP 38 57.50 -1.1  
 iS 40 01.00  
 LNV 5.82 217 eP 39 00.00 -2.3  
 S.D. = 1.6 on 9 of 9 obs.

& MAY 24, 1991 17h 27m 39.58s  
 59.711 N 153.058 W  
 DEPTH = 100.3km  
 SOUTHERN ALASKA (2)  
 <AEIC>.

AUE 0.39 205 iP 27 54.06 -0.8  
 AUH 0.40 210 eP 27 54.34 -0.7  
 AUI 0.42 207 eP 27 54.24 -0.8  
 eS 28 05.70  
 PDB 0.58 278 iP 27 55.30 -0.9  
 eS 28 07.61  
 HOM 0.72 94 eP 27 56.94 -0.5  
 RED 0.72 11 iP 27 56.79 -0.8  
 eS 28 10.06  
 XLV 0.73 110 iP 27 56.96 -0.6  
 eS 28 10.22  
 RS2 0.77 11 iP 27 57.49 -0.7  
 eS 28 11.22  
 RSO 0.77 11 iP 27 57.46 -0.7  
 RDN 0.82 10 iP 27 57.91 -0.6  
 eS 28 12.12  
 CDD 0.84 201 iP 27 57.61 -1.0  
 eS 28 12.35  
 MCNL 0.84 232 eP 27 57.59 -1.0  
 RDT 0.93 20 iP 27 58.67 -0.9  
 eS 28 13.37  
 CNPM 0.94 101 eP 27 58.76 -1.0

BRLK 1.10 86 eP 28 00.34 -1.1  
 eS 28 16.29  
 SYI 1.16 162 eP 28 01.54 -0.5  
 NKA 1.38 40 eP 28 05.42 0.7  
 CKL 1.53 13 iP 28 05.96 -0.8  
 BGL 1.59 12 iP 28 06.90 -0.6  
 CRP 1.62 16 eP 28 06.91 -1.1  
 SLKM 1.63 59 eP 28 07.06 -0.9  
 NCG 1.76 14 eP 28 08.77 -0.8  
 SEW 1.86 76 eP 28 09.61 -1.2  
 SUA 2.10 32 eP 28 13.34 -0.7  
 PMS 2.32 47 eP 28 15.71 -1.2  
 SKT 2.40 18 eP 28 16.69 -1.3  
 PWA 2.50 37 eP 28 18.29 -1.0  
 PLRM 2.70 44 eP 28 19.80 -2.2  
 KNIM 2.75 74 iP 28 20.24 -2.4  
 KNK 2.84 51 eP 28 21.97 -2.0  
 GHO 2.90 43 eP 28 22.59 -2.2  
 GLI 3.19 66 eP 28 25.86 -2.9  
 32 obs. associated

& MAY 24, 1991 18h 08m 33.60s  
 33.040 N 116.020 W  
 DEPTH = 6.0km  
 SOUTHERN CALIFORNIA (43)  
 <PAS-P>. ML 3.4 (PAS).

IKP 0.40 191 iPc 08 41.00 -0.6  
 eS 08 46.70  
 BAR 0.66 237 iPd 08 45.50 -1.2  
 PLM 0.77 294 iPc 08 48.40 -0.7  
 CPE 0.92 260 ePd 08 50.20 -1.4  
 GLA 1.00 89 iPc 08 51.00 -2.0  
 TPC 1.06 359 iPc 08 52.30 -1.7  
 PEC 1.28 312 eP 08 55.20 -2.5  
 7 obs. associated

MAY 24, 1991 18h 28m 34.75±0.21s  
 60.306 S ±6.8km 43.821 W ±7.5km  
 DEPTH = 10.0km (geophysicist)  
 5.5mb (17 obs.) 5.5Msz (15 obs.)  
 SCOTIA SEA (150)

CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 15S, 29C  
 Centroid Location:  
 Origin Time 18:28:41.4 0.3  
 Lat 60.38S 0.03 Lon 44.39W 0.08  
 Dep 15.0 FIX Half-duration 2.9  
 Moment Tensor: Scale 10<sup>17</sup> Nm  
 Mrr=1.97 0.09 Mtt=0.02 0.08  
 Mff=-1.99 0.11 Mrt=-0.20 0.22  
 Mrf=3.90 0.25 Mtf=2.86 0.10  
 Principal Axes:  
 T Val=4.80 Plg=50 Azm=299  
 N 0.78 29 167  
 P -5.58 25 62  
 Best Double Couple: Mb=5.2×10<sup>17</sup>  
 NP1:Strike=107 Dip=33 Slip=26  
 NP2: 355 76 120

AIA 10.57 233 e(P) 31 18.00 8.9X  
 SNA 19.56 138 iPd 33 05.20 0.1  
 1.0s 302.00nm 5.5mb  
 SPA 29.86 180 iPd 34 43.30 -0.9  
 1.5s 84.09nm 5.3mb  
 Z 20s 3.15um 4.9Msz  
 PCH 31.88 315 iP 35 02.00 -0.1  
 LNV 31.90 313 eP 35 01.00 -1.1  
 TACH 32.01 314 iP 35 02.10 -1.0  
 SAN 32.09 315 eP 35 02.50 -1.3  
 PEL 32.38 315 iPc 35 05.50 -0.9  
 1.1s 98.73nm 5.7mb  
 LCCH 32.39 313 iPc 35 05.50 -0.9  
 ROCH 32.65 315 eP 35 08.50 -0.4  
 JACH 32.76 315 eP 35 09.50 -0.3  
 VAO 37.34 355 eP 35 46.70 -2.2  
 e 35 52.00  
 BMA 37.58 359 eP 35 31.90 -19.0X  
 e 35 53.20  
 PPD 38.61 349 eP 35 59.40 -0.1  
 SBA 40.82 189 iPc 36 17.90 0.7  
 iS 45 43.20  
 MAW 41.73 147 eP 36 25.40 0.7  
 0.9s 26.00nm 5.0mb  
 CCH 45.79 330 P 37 01.00 2.5

SIV 45.99 337 iPc 37 00.00 0.3  
 CNCB 46.81 327 iPc 37 08.20 1.3  
 LPB 47.11 327 P 37 11.00 2.0  
 1.0s 120.00nm 5.9mb  
 Z 19s 5.56um 5.5Msz  
 LR 52 53.00  
 ZOBO 47.37 328 iPc 37 11.90 0.6  
 Z 24s 1.79um 5.0MszX  
 S 44 14.00  
 LR 53 04.00  
 ARE 48.14 323 iPc 37 18.00 1.0  
 0.8s 33.58nm 5.5mb  
 CRZF 53.68 121 eP 38 14.00 15.6X  
 eS 45 41.00  
 HVD 53.78 89 iPc 38 10.70 11.3X  
 1.5s 111.11nm  
 NNA 54.02 319 iP 38 00.00 -1.2  
 1.1s 44.30nm 5.4mb  
 FRS 54.39 88 iPd 38 03.50 -0.2  
 1.0s 65.00nm 5.6mb  
 BLF 55.34 89 iPd 38 11.30 0.4  
 0.7s 25.00nm 5.4mb  
 BUL 64.02 85 iPd 39 10.40 -0.3  
 1.0s 22.50nm 5.3mb  
 i 39 39.60  
 KRI 67.33 84 iPd 39 32.00 0.0  
 MTD 68.34 86 iPc 39 39.30 1.0  
 SDV 72.18 332 eP 40 01.80 0.2  
 TOV 72.86 333 eP 40 05.70 0.2  
 LIC 73.00 41 Pc 40 08.96 2.7X  
 0.7s 27.50nm 5.4mb  
 Z 20s 2.00um 5.4Msz  
 S 49 33.00  
 KIC 73.22 41 Pc 40 10.14 2.6X  
 TIC 73.40 41 P 40 11.20 2.6X  
 SNZO 73.93 209 P 40 16.00 4.7X  
 PP 43 08.00  
 S 50 08.00  
 SS 54 48.00  
 UPA 74.64 323 iP+ 40 16.00 0.3  
 Z 20s 1.24um 5.2Msz  
 LKO 75.94 39 P 40 24.50 1.3  
 0.9s 36.50nm 5.5mb  
 TOO 82.17 187 eP 40 56.00 -0.8  
 BFD 82.73 185 eP 41 00.00 0.4  
 RUV 83.51 251 iP 41 04.40 0.6  
 1.1s 60.00nm 5.7mb  
 VAH 83.58 251 iP 41 04.40 0.2  
 1.1s 35.00nm 5.5mb  
 TPT 83.80 251 iP 41 06.20 0.9  
 1.1s 70.00nm 5.8mb  
 PMO 83.91 251 iP 41 06.60 0.7  
 1.1s 30.00nm 5.4mb  
 NAI 84.25 82 eP+ 41 15.60 7.7X  
 eSKS 51 37.60  
 ePS 52 43.60  
 STK 88.04 185 P 41 36.00 9.9X  
 COO 88.53 194 eP 41 29.00 0.4  
 ASPA 96.31 178 eP 42 02.70 -2.0  
 0.7s 4.30nm 5.1mb  
 WRA 100.03 178 Pdfff 42 35.00 13.7X  
 1.0s 1.50nm  
 ALO 107.85 310 e(PKP) 47 05.00 1.5  
 Z 18s 1.65um 5.6Msz  
 ANMO 107.85 310 PKP 47 10.00 6.6X  
 Z 22s 1.11um 5.4Msz  
 MSU 113.19 308 PKP 47 12.00 -1.5  
 TNP 114.86 304 PKP 47 16.50 -0.3  
 BONR 115.20 303 PKP 47 18.00 0.5  
 CMB 116.15 301 PKP 47 18.50 -0.5  
 KHC 118.54 39 ePKP 47 33.50 10.4X  
 Z 20s 1.60um 5.6Msz  
 N 20s 0.80um  
 E 20s 0.70um  
 LRM 119.54 312 ePKP 47 26.10 0.6  
 PRU 119.59 39 ePKP 47 38.00 12.9X  
 Z 18s 0.90um 5.4Msz  
 N 18s 0.40um  
 E 18s 0.50um  
 BRG 120.18 38 e(PKP) 47 26.00 -0.1  
 CLL 120.27 37 e(PKP) 47 33.00 6.7X  
 SPC 120.77 43 ePKP 47 27.30 -0.3  
 e 48 55.00  
 KSP 120.89 40 ePKP 47 27.60 0.1  
 KRA 121.41 43 ePKP 47 29.00 0.5  
 SES 122.89 315 ePKP 47 29.00 -2.4X  
 FFC 123.64 324 ePKP 47 32.00 -0.7



0.8s 7.00nm  
 LON 123.95 306 PKP 47 33.00 -0.6  
 BMW 124.30 305 PKP 47 34.00 -0.3  
 FRB 125.14 347 ePKP 47 34.00 -1.2  
 PNT 125.16 309 ePKP 47 36.00 0.2  
 0.7s 10.00nm  
 QUE 125.93 91 ePKP 47 39.00 0.8  
 MAIO 127.14 80 ePKP 47 40.00 -0.2  
 NB2 128.22 31 PKP 47 41.10 -0.3  
 1.3s 23.10nm  
 UPP 128.95 35 iPKP 47 41.60 -1.1  
 CHG 130.80 131 ePKP 47 46.20 -1.3  
 OBN 131.46 49 iPKPc 47 47.00 -0.6  
 1.5s \*\*\*\*\*nm  
 Z 20s 1.10um 5.6MsZ  
 N 20s 0.60um  
 E 20s 0.60um  
 e 48 51.00  
 ePP 50 16.00  
 iPKS 51 10.00  
 e 51 52.00  
 eSS 07 46.00  
 LR 37 06.00  
 NUR 131.55 38 ePKP 47 48.00 0.4  
 DMN 132.64 110 PKP 47 49.20 -1.9  
 PKI 132.75 111 PKP 47 51.00 -0.4  
 GKN 132.75 109 PKP 47 49.20 -2.0  
 KKN 132.88 110 PKP 47 49.40 -2.1  
 GUN 133.26 111 PKP 47 49.60 -2.8X  
 KAF 133.30 37 iPKP 47 50.40 -0.5  
 0.7s 7.70nm  
 esP 47 56.30  
 YKA 133.79 323 ePKP 47 35.20 -16.6X  
 0.9s 0.70nm  
 LSA 137.19 115 ePKP 48 01.40 1.4  
 SOD 137.32 33 iPKP 47 56.80 -1.6  
 KEV 139.12 30 ePKP 48 04.00 2.4  
 GYA 140.60 136 PKP 48 05.00 -0.8  
 INK 143.52 321 ePKP 48 06.00 -3.4X  
 CD2 143.56 129 ePKP 48 06.80 -4.0X  
 KLU 144.19 307 PKP 48 08.30 -2.6X  
 TOA 144.63 307 ePKPc 48 11.60 0.0  
 KDC 144.83 298 ePKP 48 10.80 -1.1  
 SLKM 145.41 303 ePKP 48 10.30 -2.6X  
 i 48 12.50  
 PMR 145.54 305 iPKPc 48 13.60 0.5  
 1.0s 99.80nm  
 RSO 146.44 302 ePKPd 48 15.20 0.3  
 FBA 146.69 311 ePKPc 48 16.70 1.8  
 0.8s 103.30nm  
 PDB 146.70 300 PKP 48 15.40 0.4  
 WMO 146.85 98 PKP 48 19.00 3.1X  
 Z 24s 0.60um 5.3MsZ  
 N 14s 0.40um  
 WHN 146.85 144 PKP 48 18.00 1.8  
 SDN 147.09 290 ePKP 48 17.70 2.0  
 SVW 147.98 302 ePKPc 48 19.80 2.7X  
 LZH 148.14 125 ePKP 48 18.00 -0.3  
 PP 51 50.00  
 SKKS 58 36.00  
 LZH 148.14 125 PKP 48 24.00 5.7X  
 Z 22s 0.68um 5.4MsZ  
 E 18s 0.67um  
 pPKP 48 34.00  
 i 48 54.00  
 i 49 40.00  
 PP 51 50.00  
 SKKS 58 36.00  
 SS 10 50.00  
 XAN 148.29 134 PKP 48 19.60 1.1  
 TTA 149.00 305 iPKPc 48 23.90 5.1X  
 0.9s 42.20nm  
 SSE 149.12 154 PKP 48 23.50 3.7X  
 Z 20s 0.90um 5.6MsZ  
 SS 11 08.00  
 GTA 149.20 116 ePKP 48 19.40 -0.5  
 Z 20s 0.50um 5.3MsZ  
 N 13s 0.40um  
 IMA 149.41 311 ePKPc 48 24.80 5.4X  
 0.8s 54.80nm  
 NJ2 149.50 150 PKPc 48 23.50 3.2X  
 Z 20s 0.80um 5.5MsZ  
 BRW 152.06 321 ePKPc 48 30.70 7.7X  
 ADK 152.93 273 ePKP 48 31.50 6.8X  
 0.7s 85.70nm  
 ANM 153.47 305 ePKPc 48 33.80 8.7X

BTO 154.48 129 ePKP 48 21.50 -5.9X  
 N 18s 0.70um  
 E 18s 0.70um  
 HHC 155.29 131 ePKP 48 30.00 1.5  
 Z 22s 1.00um 5.6MsZ  
 PP 52 29.00  
 MAT 156.18 184 (PKP) 48 40.00 10.3X  
 8JI 156.19 139 ePKP 48 24.00 -5.6X  
 Z 22s 0.74um 5.5MsZ  
 CN2 162.24 154 ePKP 48 33.00 -3.2X  
 Z 20s 1.80um  
 N 20s 0.90um  
 E 20s 0.40um  
 e 49 21.00  
 ePP 53 08.00  
 eSKKS 59 51.00  
 SS 13 26.00  
 S.D. = 1.1 on 81 of 117 obs.

? MAY 24, 1991 19h 55m 00.14 ± 1.20s  
 40.376 N ± 9.9km 27.887 E ± 11.4km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.4 (ISK).

BNT 0.03 128 iPg 55 02.40 0.2  
 EDC 0.03 212 iPg 55 02.00 -0.2  
 iSg 55 05.00  
 CTT 0.87 28 ePg 55 17.00 0.1  
 iSg 55 29.40  
 IZI 1.21 91 ePn 55 22.50 -0.3  
 S.D. = 0.4 on 4 of 4 obs.

& MAY 24, 1991 20h 04m 29.93s  
 60.525 N 152.696 W  
 DEPTH = 6.7km  
 SOUTHERN ALASKA (2)  
 <AEIC>. ML 2.5 (AEIC).

RDN 0.03 251 iP 04 31.57 0.0  
 DFR 0.07 4 eP 04 32.16 0.2  
 RS2 0.07 206 iP 04 32.30 0.3  
 RSO 0.07 204 iP 04 32.26 0.2  
 RDW 0.07 233 eP 04 32.08 0.1  
 RED 0.11 199 iP 04 32.74 0.2  
 eS 04 34.56  
 NCT 0.12 288 eP 04 32.19 -0.5  
 RDT 0.15 71 iP 04 33.92 0.7  
 eS 04 36.40  
 CKL 0.70 14 eP 04 42.88 -1.0  
 eS 04 52.21  
 NKA 0.75 72 eP 04 46.54 1.7  
 BGL 0.76 11 iP 04 44.15 -0.9  
 CRP 0.79 19 eP 04 44.75 -1.0  
 eS 04 55.90  
 CGLM 0.85 23 eP 04 46.13 -0.6  
 NCC 0.92 16 eP 04 46.89 -1.0  
 PDB 1.05 226 eP 04 49.05 -1.0  
 XLV 1.18 155 eP 04 51.83 -0.4  
 eS 05 08.23  
 BRK 1.18 129 eP 04 52.64 0.3  
 CNPM 1.24 143 eP 04 52.89 -0.4  
 eS 05 09.54  
 AUI 1.25 197 eP 04 51.96 -1.5  
 SUA 1.34 44 eP 04 54.14 -0.9  
 SKT 1.57 21 eP 04 58.14 -0.1  
 SEW 1.67 103 eP 04 58.49 -1.2  
 CDD 1.67 197 eP 04 57.28 -2.5  
 PMS 1.69 63 eP 05 00.03 -0.1  
 PWA 1.77 49 eP 05 01.18 -0.1  
 25 abs. associated

MAY 24, 1991 20h 50m 55.84 ± 0.10s  
 16.506 S ± 2.5km 70.701 W ± 2.5km  
 DEPTH = 127.7km (geophysicist)  
 6.3mb (65 abs.)  
 SOUTHERN PERU (117)  
 Mo=3.0\*10\*\*19 Nm (PPT). Slight  
 damage (VI) at Tacna. Felt (V)  
 at Ilo and Arequipa. Also felt  
 (III) at La Paz, Bolivia. Depth  
 from broadband displacement  
 seismograms.  
 FAULT PLANE SOLUTION: P-Waves  
 NP1:Strike=320 Dip=70 Slip=-100  
 NP2: 167 22 -64  
 Principal Axes:

T P1g=24 Azm=58  
 P 64 214  
 Comment: The focal mechanism is  
 moderately well controlled and  
 corresponds to left-lateral  
 strike-slip faulting with a  
 small right-lateral strike-  
 slip component. The preferred  
 fault plane is NP1.  
 RADIATED ENERGY  
 No. of sta: 8 Focal mech. F  
 Energy 7.8±2.7\*10\*\*14 Nm  
 MOMENT TENSOR SOLUTION  
 Dep 127 No. of sta: 14  
 Moment Tensor: Scale 10\*\*19 Nm  
 Mrr=-1.53 Mtt=-0.02  
 Mff=1.55 Mtf=0.89  
 Mrf=-2.20 Mtf=-0.79  
 Principal axes:  
 T Val= 3.10 P1g=27 Azm= 68  
 N -0.35 0 158  
 P -2.75 63 249  
 Best Double Couple:Mo=2.9\*10\*\*19  
 NP1:Strike=156 Dip=18 Slip=-92  
 NP2: 338 72 -90  
 Comment:  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 23S, 69C M.W.: 17S, 38C  
 Centroid Location:  
 Origin Time 20:51: 3.0 0.2  
 Lat 16.69S 0.02 Lon 70.68W 0.03  
 Dep 126.9 0.8 Half-duration 6.0  
 Moment Tensor: Scale 10\*\*19 Nm  
 Mrr=-1.93 0.03 Mtt= 0.81 0.02  
 Mff= 1.13 0.03 Mrt= 0.16 0.02  
 Mrf=-0.96 0.03 Mtf=-0.87 0.03  
 Principal Axes:  
 T Val= 2.03 P1g=12 Azm= 53  
 N 0.18 11 146  
 P -2.21 73 276  
 Best Double Couple:Mo=2.1\*10\*\*19  
 NP1:Strike=129 Dip=34 Slip=-110  
 NP2: 333 58 -77  
 ARE 0.76 273 iPd 51 15.00 -2.1  
 i(S) 51 30.00  
 ZOBO 2.48 85 iPc 51 41.20 4.3X  
 LPB 2.50 91 iPc 51 41.30 4.4X  
 i 06 19.00  
 CNCB 2.63 97 iPc 51 43.00 4.3X  
 CCH 4.45 102 iPc 52 05.50 2.7X  
 HUA 6.31 314 iPd 52 33.50 5.3X  
 i 52 52.00  
 iS 55 39.50  
 ANT 7.17 17B iPc 52 34.00 -5.4X  
 iS 53 46.20  
 NNA 7.46 306 iPd 52 39.60 -3.8X  
 0.1s 800.00nm 7.2mb  
 eS 54 46.00  
 SIV 9.26 88 iPc 53 06.00 -1.7  
 ZON 15.09 173 eP 54 21.70 -1.9  
 TCA 15.78 160 ePc 54 27.00 -5.3X  
 JACH 16.11 180 eP 54 34.50 -1.9  
 IHA 16.47 183 eP 54 38.50 -2.2  
 i(S) 57 33.50  
 PEL 16.57 180 eP 57 37.50 -4.5X  
 iS 57 32.50  
 SAN 16.88 180 ePd 54 42.50 -3.3X  
 iS 57 53.80  
 LCCH 16.92 182 iPd 54 44.00 -2.2  
 ITB1 17.28 121 e(P) 54 49.00 -1.7  
 LNV 17.39 182 iP 54 49.50 -2.4X  
 i 55 28.50  
 ITB 17.49 121 e(P) 54 51.20 -2.1  
 ITB7 17.65 122 e(P) 54 53.80 -1.5  
 RFA 18.30 174 iPd 55 00.30 -2.5X  
 CUMC 18.74 337 iPd 55 09.11 0.9  
 PSO 18.76 339 iPd 55 09.00 0.8  
 PPD 19.11 110 iPc 55 09.60 -1.8  
 PURC 19.52 343 ePc 55 16.65 0.3  
 SILC 19.87 343 iPc 55 19.79 0.0  
 HOQC 20.69 343 ePc 55 26.91 -1.1  
 ANCC 20.80 342 iPc 55 29.03 0.2  
 BUGC 21.00 344 iPc 55 30.37 -0.5  
 CLMC 21.07 344 iPc 55 30.59 -1.0  
 BOG 21.25 351 iPc 55 34.00 0.3



24d 20h																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
			iPP	59 23.00					eS	07 31.00		RVR	67.06	319	iPd	01 37.00	-0.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					



ARN	71.80	319	P	02	07.30	0.9	TIO	77.04	52	iPc	02	38.00	1.3	EGRA	87.11	44	iPd	03	30.96	2.6X
MHC	71.87	319	iPd	02	07.40	0.5			i	03	23.90	189kmX	ISSF	87.15	44	P	03	29.31	0.6	
GCC	71.90	319	iPd	02	07.56	0.7			i	05	07.00		MADF	87.18	43	P	03	28.75	0.0	
NVL	72.08	160	iPc	02	07.00	-0.5			i	29	39.90		LHE	87.22	44	P	03	29.76	0.7	
			ePcP	02	25.00		COR	77.36	324	iPd	02	39.42	1.5	ATE	87.24	44	P	03	29.50	0.5
			e	02	36.00				ed	02	41.08		ESCF	87.32	44	P	03	29.96	0.5	
			epP	02	51.00	183kmX			epPc	03	10.88	124kmX	OGE	87.42	44	P	03	30.07	0.2	
			e	03	14.00				esPc	03	24.62		JAU	87.44	44	P	03	30.96	0.8	
			ePP	04	04.00				ePP	05	38.02		BST	87.49	38	P	03	29.25	-0.8	
			e	05	30.00				iS	12	20.47		BTH	87.58	44	Pc	03	32.00	1.4	
			ePPP	06	24.00				isS	13	17.86				iPcP	03	37.00			
			e	07	16.00		SHW	77.79	326	P	02	41.20	0.7			iPP	04	03.00	119kmX	
			e	09	34.00		LON	77.93	327	P	02	41.20	0.1			sP	04	17.00		
			iS	11	20.00		AVE	78.06	50	iPd	02	43.50	1.4			iSKS	13	50.00		
			eScS	11	59.00				i	03	21.00	151kmX			S	13	58.00			
			e	12	02.00				i	07	01.50				ePS	15	30.00			
			iPS	12	12.00				i	12	21.50				ePKKP	21	10.00			
			ePS	12	26.00		BMW	78.50	326	P	02	45.20	0.9	EPF	87.90	44	eP	03	32.40	0.1
			e	12	47.00		PNT	78.52	330	iPd	02	45.50	1.2		0.8s	209.90nm			6.2mb	
			e	12	57.00		RBA	78.82	49	eP	02	46.00	-0.2	BLF	87.94	120	iPd	03	32.60	-0.4
			e	13	17.00				i	02	48.00	6kmX		0.7s	200.00nm				6.3mb	
			e	14	14.00		GMW	78.95	327	P	02	46.80	0.1	ECB	87.96	33	eP	03	31.60	-0.6
			eSS	15	29.00		LIS	79.54	44	iPc	02	51.60	1.6	ECP	88.09	34	iPd	03	32.30	-0.5
PCC	72.43	319	iPd	02	10.46	0.4	MCW	79.70	328	P	02	51.40	0.7		0.7s	438.00nm			6.6mb	
BKS	72.57	320	iPd	02	11.65	0.8	IFR	79.85	51	iPc	02	51.00	-1.0	DCN	88.20	32	eP	03	33.20	-0.1
	1.1s	1631.00nm			6.7mb				i	02	53.50	8kmX	ESEL	88.34	48	eP	03	34.74	0.4	
Z	20s	19.00um			6.4Msz				i	03	32.00		MLS	88.37	44	P	03	34.69	0.2	
N	20s	24.00um							i	21	38.50		ETA	88.43	33	eP	03	34.00	-0.4	
E	20s	26.00um							i	29	33.00			0.7s	235.00nm				6.3mb	
			iPcP	02	40.80		PGC	79.99	328	iPd	02	53.10	1.0	REY	88.66	19	iP	03	36.60	1.3
			iP	02	52.00	166kmX		1.2s	2406.00nm			6.8mb	DMU	88.67	32	eP	03	34.80	-0.8	
			isP	03	25.20		FRB	80.01	1	ePd	02	51.00	-0.9		0.7s	159.00nm			6.2mb	
			iPP	04	52.40			0.6s	337.00nm			6.3mb	LFF	88.96	42	eP	03	36.60	-0.6	
			ipPP	05	24.00		SBA	80.41	190	iPd	02	54.90	0.9	MFF	89.10	41	eP	03	37.20	-0.6
			isPPd	05	53.60				iS	12	13.80		LPO	89.15	43	eP	03	37.50	-0.6	
			ipPPd	07	12.40		NKM	80.54	49	iPc	02	56.00	0.6	LPF	89.17	39	eP	03	37.00	-1.1
			iS	10	22.00				i	02	57.00	3kmX	ETER	89.31	45	eP	03	39.36	0.5	
			iScS	11	17.60		PLAT	80.60	48	eP	02	58.50	2.7X	GRR	89.43	39	eP	03	38.30	-1.0
			esS	11	54.00		EVAL	80.61	46	eP	02	56.68	1.0	MAW	89.58	164	iPd	03	39.80	0.0
			esPS	13	04.00		EJIF	80.97	48	eP	02	59.63	2.0		0.9s	425.00nm			6.5mb	
			eSS	14	33.20		CER	81.11	122	iPd	02	57.50	-1.0	RJF	89.61	42	eP	03	39.30	-0.9
			esSS	16	00.40			1.0s	220.00nm			5.9mb		Z	21s	50.00um			6.9Msz	
			esSS	18	37.20		LIJA	81.22	47	eP	02	59.00	0.0	PRY	89.69	118	iPc	03	41.00	-0.3
			eLO	18	49.20		EPRU	81.38	47	eP	03	01.42	1.7		1.2s	450.00nm			6.4mb	
			ePKKP	20	49.20		EZAM	81.60	42	eP	03	01.41	0.6	CAF	89.82	43	eP	03	40.60	-0.6
BRK	72.58	319	iPd	02	11.30	0.4	EHOR	81.77	47	eP	03	02.50	0.8	FLN	89.82	39	eP	03	40.40	-0.7
			iPcPc	02	44.00		MAL	81.85	48	iPd	03	03.50	1.4		1.0s	328.15nm			6.4mb	
			iPc	03	22.00				i	03	34.00	119kmX		Z	18s	30.00um			6.8Msz	
			iPPd	04	58.00				iS	13	04.00		LDF	89.96	39	eP	03	40.80	-1.0	
			iPPd	05	50.40		STS	82.07	41	eP	03	03.86	0.7	LSF	90.01	41	eP	03	41.30	-0.7
			iPPd	06	45.60		EMEL	82.25	50	eP	03	06.53	2.2	PFH	90.17	290	P	03	43.00	-0.3
			ipPPd	07	16.80		EPLA	82.27	44	iPd	03	05.27	0.9	HIL	90.36	290	P	03	45.00	0.9
			iS	10	16.00		EGUA	82.50	48	eP	03	05.93	0.3	TCF	90.46	42	eP	03	43.20	-0.9
			iScS	11	16.80		AFC	82.71	48	iPc	03	07.75	0.9	HPO	90.60	290	P	03	46.00	0.8
			iS	12	10.40		ERUA	82.72	42	eP	03	07.89	1.3	MAF	90.66	42	eP	03	44.20	-0.8
			esS	15	08.00		EBAN	82.95	47	iPd	03	08.91	1.0	SIT	90.68	330	eP	03	45.60	0.8
			esSS	15	28.00		EMON	83.12	41	eP	03	09.35	0.7		1.2s	192.50nm			6.1mb	
			e	17	20.00		RAR	83.34	250	P	03	10.00	-0.1		Z	22s	21.50um			6.5Msz
			eLO	21	00.00				S	13	27.00		SLR	90.75	117	ePd	03	45.39	-0.8	
ZSP	72.62	320	iPd	02	11.83	0.7	ENIJ	83.54	49	iPc	03	10.95	0.1			iPcP	04	17.17	122kmX	
LRM	72.62	331	iPd	02	11.40	0.1	TOL	83.56	45	iPd	03	12.50	1.6	AKU	90.90	19	iPd	03	47.70	2.0
ORV	73.16	321	iPd	02	15.08	0.8		1.1s	2531.65nm			7.0mb		1.5s	366.67nm				6.3mb	
RUV	73.33	259	iP	02	15.70	0.0			iPP	03	38.00	96kmX			i	07	21.10			
VAH	73.55	259	iP	02	17.00	0.0			iPP	07	02.00		BGF	90.97	41	eP	03	45.50	-0.9	
TBI	73.55	250	iP	02	17.00	0.1			iS	13	26.00		CWF	91.08	35	P	04	04.07	17.3X	
	1.3s	990.00nm			6.4mb				iPS	14	40.00		EAB	91.09	31	eP	03	47.20	0.5	
TPT	73.60	259	iP	02	17.50	0.3			iSS	19	06.00		KKH	91.17	290	P	03	48.00	0.1	
SPA	73.60	180	iPd	02	15.00	-1.7	EHUE	83.63	48	eP	03	11.14	-0.3	ESK	91.25	32	ePd	03	45.00	-2.5X
	1.0s	282.50nm			6.0mb		GUD	83.84	45	eP	03	13.35	0.9		0.8s	66.00nm			5.9mb	
Z	20s	7.88um			6.0Msz		EVIA	84.06	47	eP	03	14.45	0.9	EKA	91.28	32	P	03	47.00	-0.6
			e	29	20.00		EALH	84.49	48	eP	03	16.10	0.5		0.8s	24.80nm			5.4mb	
MIN	73.72	322	iPd	02	17.00	-0.7	ETOR	85.34	45	eP	03	20.98	1.1	AVF	91.38	41	eP	03	47.30	-1.0
PMO	73.85	259	iP	02	18.90	0.2	ACU	85.48	48	eP	03	22.08	1.5	EBH	91.53	31	eP	03	49.30	0.5
TVO	74.51	256	iP	02	22.60	0.0	ECHE	85.55	47	eP	03	21.86	0.9		0.8s	67.00nm			5.9mb	
PPN	74.73	256	iP	02	23.80	0.0	ECRI	85.83	43	eP	03	22.94	0.7	ELO	91.53	31	eP	03	49.50	0.7
	1.3s	260.00nm			5.8mb		VAL	85.92	33	iP	03	22.30	0.0		0.9s	182.00nm			6.3mb	
PAE	74.84	256	iP	02	24.50	0.1			S	13	36.00		EBL	91.54	32	eP	03	49.20	0.4	
PPT	74.85	256	iP	02	25.00	0.5	YKA	85.94	341	eP	03	20.80	-1.5	SSB	91.57	43	P	03	49.54	0.2
AFR	75.05	256	iP	02	25.60	0.0		1.3s	983.30nm			6.6mb	SSF	91.58	41	eP	03	48.00	-1.2	
FOX	75.26	321	iPd	02	27.79	1.4	HVD	86.92	121	iPc	03	39.60	11.5X	SMF	91.63	42	eP	03	48.60	-0.9
FHC	75.43	321	iPd	02	28.40	1.0		0.8s	186.57nm				HKL	91.70	291	P	03	51.00	0.2	
SES	75.46	335	eP	02	26.00	-1.4	FRS	87.03	120	iPd	03	28.00	-0.4	CDR	91.80	45	eP	03	50.40	0.1
	0.9s	1009.00nm			6.6mb			0.9s	126.05nm			5.9mb								



24d 21h

	0.9s	76.80nm	5.9mb				ePP	07 44.00				epP	04 50.00	123kmX	
Z	21s	20.00um	6.5msz				iSKS	14 29.00				eSKS	14 50.00		
EDU	91.91	31 eP	03 51.60	1.1			eP	16 16.00				ePKKP	21 00.00		
	0.9s	178.00nm	6.3mb		WLS	94.49	41 P	04 02.03	-0.6			eP'P'	29 02.00		
LRC	92.13	45 eP	03 52.00	0.2	LVI	94.66	52 P	04 04.60	1.0	TRI	97.85	45	ePd	04 20.40	2.5X
	1.1s	305.25nm	6.4mb		BOB	94.66	45 P	04 00.60	-3.0X			iPp	04 48.00	104kmX	
LMR	92.18	45 eP	03 52.10	0.0	FEL	94.73	41 P	04 03.29	-0.6			iPP	08 16.00		
FRF	92.36	45 eP	03 52.80	-0.1	KRI	94.78	109 iPd	04 05.20	0.4			iPPP	08 40.00		
CALN	92.59	45 P	03 53.94	-0.2			i	15 10.60				eSKS	14 45.00		
MVIF	92.82	45 P	03 55.52	0.3	ZLA	94.84	42 ePd	04 04.30	0.0			esSKS	15 34.00		
BUL	92.82	112 iPd	03 55.80	0.0	CVT	94.91	52 P	04 08.10	3.4X			iSP	16 52.00		
	1.1s	367.09nm	6.6mb		SLE	95.00	42 iPd	04 04.70	-0.3			iSS	22 30.00		
		iPP	04 28.20	124kmX	LLS	95.03	43 ePd	04 05.50	0.1			iLR	36 00.00		
		iPP	08 07.10		PII	95.07	46 P	04 05.10	-0.2	KBA	97.94	43	ePd	04 18.00	-0.5
		i	14 21.60		MAO	95.11	47 P	04 05.90	0.3		1.2s	82.50nm		6.1mb	
		i	15 49.20		MDI	95.16	44 P	04 04.90	-0.8			ic	04 18.40	1kmX	
		iPKKP	21 06.70		VDL	95.22	43 iPd	04 06.10	-0.2			i	04 23.80		
BNI	92.90	44 P	03 56.20	0.7	BDI	95.22	46 P	04 05.60	-0.6			i	04 28.70		
		ePP	07 34.00		BNS	95.24	38 iPd	04 06.10	0.1	VOY	98.02	44	ePd	04 18.70	-0.1
		eS	14 35.00			1.5s	112.00nm	6.0mb		TDS	98.12	51 P	04 20.50	1.3	
REVF	92.91	45 P	03 55.81	0.3		Z	20s	23.00um	6.6msz	RIY	98.18	45	eP	04 22.50	3.2X
TOUF	92.92	45 P	03 55.96	0.2	WIT	95.57	37 eP	04 08.50	1.1	ORI	98.30	51 P	04 21.63	1.6	
RRL	92.92	44 P	03 55.95	0.2			e(pP)	04 42.00	129kmX		0.9s	*****nm		9.0mb X	
AURF	92.93	45 P	03 55.81	0.1			eP'P'	29 07.00		CEY	98.31	45	eP	04 21.00	1.0
PZZ	92.99	44 P	03 56.56	0.6	FIR	95.59	46 eP	04 09.00	1.3			i	04 23.90	9kmX	
SBF	93.00	45 eP	03 55.90	0.0			iPP	08 07.00				eS	14 48.50		
AUTN	93.04	45 P	03 56.37	0.0			iS	14 30.00		LJU	98.46	45	iP	04 21.30	0.7
STV	93.05	45 P	03 54.82	-1.4	PUZ	95.65	228 P	04 09.10	0.8			e	04 53.60	124kmX	
DOI	93.09	44 P	03 57.00	0.6			e	04 41.20	123kmX			ePP	08 21.20		
LPL	93.10	43 eP	03 56.70	0.1			e	04 52.10				e	12 45.20		
LPG	93.10	43 eP	03 56.90	0.2	INK	95.69	341 iPd	04 07.20	-0.5			eSKS	14 41.20		
	1.2s	17.85nm	5.2mb X			1.1s	360.00nm	6.7mb				e	17 00.80		
ENR	93.11	45 P	03 54.51	-2.0			pP	04 40.00	126kmX	KHC	98.63	41	iPd	04 21.50	0.1
SAOF	93.12	45 P	03 56.50	0.0	BALM	95.72	332 iPd	04 07.10	-1.0		1.1s	20.00nm		5.6mb	
BHB	93.22	44 P	03 56.15	-0.7			epP	04 41.20	132kmX		Z	17s	12.50um	6.5mszX	
DHH	93.25	291 P	03 58.00	0.6	OSS	95.72	43 ePd	04 08.40	-0.1		N	17s	4.30um		
RSP	93.32	44 P	03 57.69	0.2	TNS	95.76	39 ePd	04 08.40	-0.1		E	17s	9.20um		
LSD	93.36	44 P	03 58.41	0.6	HBZ	95.82	228 P	04 09.30	0.2					05 19.50	237kmX
SNF	93.36	38 Pd	03 56.80	-0.5		1.3s	979.00nm	7.1mb				e	S	14 52.00	
DOU	93.39	39 Pc	03 57.90	0.4			e	04 42.20	126kmX	KMR	98.71	43	iP-	04 22.00	0.3
	0.8s	113.30nm	6.2mb				e	04 54.50				iPp	04 54.40	124kmX	
		pP+	04 27.00	110kmX	GIB	95.94	52 P	04 12.00	2.4			i	08 15.20		
		PP	07 43.00		PGD	95.94	46 P	04 09.15	-0.4			iPP	08 36.00		
		e	13 38.10		CRE	96.03	46 P	04 11.22	1.3			iSKS	14 54.30		
		iSKS	14 22.00		RDP	96.03	48 P	04 10.50	0.6			i	17 05.70		
		e	15 23.00		RMP	96.04	48 P	04 10.30	0.5	VBV	98.81	45	eP	04 22.90	0.7
EMS	93.42	43 iPd	03 58.10	0.1	SFI	96.05	46 P	04 11.60	1.8	CRZF	98.81	144	ePd	04 28.00	5.6X
ROB	93.44	45 P	03 57.38	-0.6	ASS	96.37	47 P	04 11.06	-0.3			ePP	08 36.00		
HON	93.44	291 P	03 58.00	-0.3		1.3s	198.30nm	6.4mb				eS	17 22.00		
KIP	93.48	291 ePc	03 57.57	-0.9	MEU	96.38	53 P	04 14.40	2.8X			eSS	22 19.00		
		esPc	04 43.26		MNO	96.43	52 P	04 13.60	1.6			iPd	04 23.10	0.9	
UCC	93.51	38 Pd-	03 58.00	0.0	MTD	96.58	110 iPc	04 13.40	0.5	CLL	98.85	39	iPd	04 23.10	0.9
		pP+	04 29.00	118kmX			i	04 25.90	41kmX		1.3s	81.00nm		6.1mb	
		PP	07 45.00				i	08 04.70	175kmX		Z	20s	11.50um	6.4msz	
		iSKS	14 23.00		WEL	96.58	224 P-	04 14.00	1.6			epP	04 53.00	113kmX	
		e	15 22.00				pP	04 58.00				iSKS	14 51.80		
		SP	16 10.00				PP	07 58.00				eS	15 37.00		
OPA	93.55	291 P	03 59.00	0.2			pPP	08 36.00				PKKP	21 15.00		
VITF	93.56	41 P	03 57.87	-0.4			S	14 38.00				P'P'	29 04.30		
FIN	93.64	45 P	03 57.90	-0.9			PS	15 30.00		PMR	98.97	332	ePd	04 21.90	-0.7
PGF	93.64	47 P	03 58.88	-0.1			i	16 10.00			1.1s	74.60nm		6.2mb	
HAU	93.72	41 eP	03 58.30	-0.8			i	17 04.00			Z	22s	16.70um	6.5msz	
	0.9s	58.95nm	5.9mb		ARV	96.68	47 P	04 12.30	-0.4	HVAR	99.07	48	iP	04 23.40	-0.1
Z	18s	22.50um	6.7msz		AQU	96.69	48 P	04 13.80	1.0	SLKM	99.15	330	ePc	04 21.90	-1.6
DIX	93.74	43 iPd	03 59.70	0.2	SDI	96.81	49 P	04 13.47	0.1			ePKKP	20 42.00		
CKI	93.76	45 P	03 59.00	-0.3		1.0s	166.30nm	6.5mb		BRG	99.31	40	iPd	04 24.60	0.2
LOMF	93.79	42 P	03 59.24	-0.3	WTTA	96.87	43 iPd	04 13.50	-0.2		1.4s	90.00nm		6.2mb	
BSF	93.94	41 eP	03 59.60	-0.6		1.3s	278.00nm	6.6mb			Z	17s	11.50um	6.4mszX	
	1.0s	60.00nm	5.9mb		ATN	97.07	52 P	04 18.50	3.9X		N	17s	2.50um		
ORX	93.96	44 P	04 00.97	0.6	DUI	97.26	49 P	04 17.70	2.3		E	17s	13.00um		
PCP	93.98	45 P	03 59.84	-0.6	GRFO	97.30	40 ePd	04 14.63	-0.7			epP	04 57.00	124kmX	
DRV	93.99	192 P	04 00.00	-0.1	GRF	97.31	40 iPd	04 15.70	0.3			iSKS	14 50.00		
		PP	07 44.00			1.1s	152.00nm	6.4mb				iS	15 46.00		
		S	15 38.00				i(pP)c	04 46.60	118kmX			ePKKP	20 42.00		
		SP	21 20.00				e	05 14.10				eP'P'	29 00.00		
MMK	94.09	43 iPd	04 01.60	0.5			eSKS	14 46.00		ZAG	99.38	45	eP	04 24.00	-0.8
MOF	94.16	41 P	04 00.54	-0.7	GMB	97.38	53 P	04 16.78	0.6			iS	14 55.00		
BBS	94.27	42 P	04 00.94	-0.7		0.8s	43.20nm	6.0mb		PTJ	99.38	45	iP	04 23.50	-1.5
ECH	94.30	41 P	04 01.47	-0.3	FVI	97.43	44 P	04 16.30	0.4	COL	99.44	335	iPd	04 24.10	-0.6
MEM	94.42	38 iPd	04 01.79	-0.4	LTZ	97.46	221 P	04 15.90	-0.6			ed	04 25.92		
ENN	94.43	38 eP	04 01.50	-0.7			e	04 47.80	122kmX			iPc	04 56.55	124kmX	
	1.0s	96.00nm	6.1mb		TOA	97.82	333 ePd	04 17.80	0.3			esPc	05 09.96		
		eP'P'	29 08.50		MOX	97.82	40 iPd	04 18.00	0.3			iS	15 38.11		
CDF	94.44	41 P	04 01.91	-0.6		1.7s	100.00nm	6.1mb		FBA	99.44	335	ePd	04 24.20	-0.5
DBN	94.47	37 eP	04 03.00	0.7		Z	20s	14.50um	6.5msz		1.3s	398.00nm		6.8mb	
		iPp	04 34.00	118kmX		N	22s	8.60um				epP	04 59.60	137kmX	
		iSP	04 52.00			E	22s	1.00um		PRU	99.46	41	ePd	04 25.50	0.4



[illegible]



24d 21h

TLG	141.97	39	iPKP	10	10.70	-3.8X
KNA	142.63	212	ePKP	10	09.60	-6.7X
KSH	143.07	45	iPKPd	10	13.00	-3.6X
	E 12s	17.30um				
		pPKP	10	47.00		
		ePP	13	28.00		
		eSKKS	20	03.00		
MTN	143.72	218	ePKP	10	14.00	-4.2X
	0.4s	279.00nm				
IRK	144.10	5	iPKP-	10	14.00	-3.8X
		e	10	36.00		
		ePcP	10	42.00		
		e	10	50.00		
		e	11	02.00		
		ePP	11	13.50		
		epPcP	11	40.00		
		e	12	00.00		
		esP	12	09.00		
		ePP	13	50.00		
		e	14	46.00		
		iS	20	12.00		
		eScS	20	43.00		
		e	21	16.00		
		e	22	04.00		
		e	23	34.00		
		eSS	25	52.00		
BOM	145.20	81	iPKP	10	19.80	-0.8
		eS	20	18.80		
GUA	145.51	270	ePKP-	10	19.00	-2.2
		pP	19	53.70		
POO	146.17	81	iPKPd	10	20.70	-1.6
		iS	20	26.00		
MDJ	147.17	333	iPKPd	10	23.03	0.0
	Z 60s	43.00um				6.8MsZX
	N 22s	8.50um				
	E 20s	6.90um				
		ed	10	25.34		
		epPKPc10	56.63			
		esPKP	11	17.49		
		SKS	17	18.00		
		SKKS	20	30.00		
		SS	32	42.00		
WMO	147.18	29	ePKPd	10	24.24	1.0
	Z 30s	14.50um				6.6MsZX
	N 22s	5.70um				
	E 20s	6.90um				
		ed	10	26.39		
		ipPKPc10	58.18			
		ePP	14	20.36		
		eHPP	14	21.02		
		SKKS	20	32.00		
MAJO	147.53	314	ePKPd	10	24.07	0.1
		ed	10	27.05		
		epPKPc10	59.33			
		esPKPc11	10.75			
		e	13	48.57		
MAT	147.53	314	iPKPd	10	23.60	-0.4
NDI	148.10	62	iPKPd	10	26.00	0.9
		eS	20	36.00		
KOD	148.44	97	ePKP	10	27.00	0.6
GBA	149.11	91	PKPc	10	28.00	1.0
	1.0s	1193.40nm				
CN2	149.54	337	PKP	10	26.00	-0.8
	7.0s	5600.00nm				
	Z 22s	29.00um				7.0MsZX
		e	10	36.00		
HYB	150.59	84	iPKPd	10	29.00	-0.2
	1.0s	930.00nm				
SNY	151.93	337	iPKPd	10	30.50	0.0
	7.0s	4300.00nm				
	Z 32s	21.80um				6.8MsZX
	N 18s	4.10um				
	E 16s	2.70um				
		e	10	47.00		
		sPKP	11	12.00		
		PP	14	17.00		
SHK	152.41	315	iPKPd	10	31.80	0.4
	1.1s	405.06nm				
AAI	152.59	225	ePKPc	10	31.60	-0.6
GKN	154.52	59	PKP	10	34.42	-0.3
DMN	155.05	60	PKP	10	35.26	-0.3
	1.3s	561.00nm				
KKN	155.13	59	PKP	10	35.22	-0.4
	1.3s	536.00nm				

				i	11	00.00	
				sPKP	11	18.00	
PKI	155.32	59	PKPd	10	35.40	-0.6	
	1.2s		441.00nm				
GUN	155.58	58	PKP	10	35.72	-0.7	
	1.2s		526.00nm				
HHC	155.66	356	iPKPd	10	37.00	1.2	
Z	30s		19.40um			6.7Mszx	
N	20s		7.90um				
E	23s		10.00um				
			PP	14	38.00		
			SKKS	21	10.00		
TRT	155.72	188	ePKPd	10	31.00	-5.5X	
GTA	155.72	18	iPKPd	10	36.30	0.3	
	9.0s		4800.00nm				
Z	22s		16.80um			6.8Msz	
N	20s		10.80um				
			i	11	06.00		
			sPKP	11	19.00		
			SKS	17	25.00		
			SKKS	21	17.00		
			SS	34	18.00		
BJI	155.80	347	iPKPd	10	36.92	1.1	
Z	44s		29.90um			6.8Mszx	
E	28s		17.60um				
			ePKPab	11	01.91		
			ePP	14	34.10		
			eHPP	14	37.91		
			e	15	10.02		
BTO	155.98	359	iPKPd	10	37.00	0.7	
N	18s		5.80um				
E	18s		5.70um				
			SKKS	21	12.00		
MKS	156.19	206	iPKPc	10	38.50	1.4	
TIY	158.69	353	iPKP	10	39.00	-0.6	
			PP	14	54.00		
			SKKS	21	34.00		
LSA	158.80	49	iPKPd	10	41.20	0.8	
TIA	159.18	342	PKP	10	40.80	0.8	
	9.0s		6600.00nm				
			e	11	13.50		
			sPKP	11	21.00		
			PP	14	58.00		
			SS	34	45.00		
LZH	159.90	13	iPKPd	10	42.81	1.7	
Z	31s		17.10um			6.7Mszx	
E	22s		8.39um				
			iPKPc	11	15.91		
			ePKPab	11	51.67		
			eSKP	14	19.75		
			i	15	35.07		
			SKKS	21	33.00		
DAV	161.54	241	ePKP+	10	43.00	-0.1	
SSE	161.88	325	iPKPc	10	44.00	1.1	
	9.0s		*****nm				
Z	20s		15.60um				
N	19s		8.90um				
E	16s		2.80um				
			pPKP	11	18.00		
			PP	15	12.00		
			SKKS	21	50.00		
			SS	35	16.00		
NJ2	162.26	332	iPKPd	10	43.50	0.2	
Z	28s		8.10um				
N	17s		2.30um				
E	18s		3.20um				
			sPKP	11	30.00		
			iPP	15	14.00		
XAN	162.54	1	iPKPd	10	44.50	0.9	
N	18s		11.60um				
E	18s		2.70um				
			i	11	36.00		
			PP	15	15.00		
			SKKS	21	50.00		
TSI	163.32	140	ePKP	10	46.00	1.1	
KGM	164.44	157	ePKPd	10	46.30	0.3	
			e	11	41.50		
			e	15	23.50		
KLM	164.70	150	ePKP	10	45.5		

Z	54 s	25.20um			
E	24 s	34.40um			
		i	11	18.00	
		pPKP	11	20.00	
		i	11	43.70	
		PP	15	29.20	
		SKKS	22	04.00	
165.63	145	ePKPd	10	49.00	2.0
1.3 s	419.30nm				
		e	11	36.30	
		e	15	46.50	
167.43	137	ePKP	10	48.40	0.1
1.2 s	415.63nm				
		e	15	36.00	
167.59	214	ePKPd	10	49.30	0.7
1.4 s	513.40nm				
167.92	316	iPKPd	10	49.00	0.7
		i	11	54.00	
		PP	15	49.00	
169.18	271	ePKPd	10	49.20	-0.3
169.46	34	iPKPd	10	50.58	1.0
Z	50 s	53.70um			
		epPKPc	11	23.69	
169.80	13	iPKPd	10	50.00	0.4
Z	40 s	21.80um			
N	23 s	10.20um			
E	23 s	5.80um			
		pPKP	11	28.00	
		i	12	05.00	
		PP	15	53.00	
		SKKS	22	26.00	
169.87	75	ePKP	10	49.70	0.0
170.12	84	ePKP	10	50.00	0.2
1.0 s	260.80nm				
171.15	94	iPKPd	10	51.00	0.7
172.43	330	PKP	10	52.00	1.3
Z	56 s	50.10um			
		pPKP	11	27.00	
		PP	16	08.00	
172.62	322	iPKP	10	52.00	1.2
177.44	348	iPKPd	10	53.50	1.3
		pPKP	11	40.00	
		i	12	36.00	
		PP	16	29.00	
S.D. = 1.0 on 526 of 605 obs.					
AY	24, 1991	20h	59m	01.50 ± 0.47s	
	2.711 N ± 4.0km		18.667 E ± 4.2km		
EPTH = 10.0km (geophysicist)					
OSLAVIA					(383)
ML 2.9 (TTC).					
0.21	335	iPg	59	06.53	0.4
		iSg	59	10.23	
0.26	67	iPg	59	06.97	-0.2
		iSg	59	11.93	
0.29	205	iPg	59	06.98	-0.6
		iSg	59	12.08	
0.44	164	iPg	59	09.82	-0.7
		iSg	59	17.65	
0.52	122	iPg	59	10.45	-1.6
		iSg	59	20.00	
0.82	40	iPg	59	17.00	-0.4
		iSg	59	30.67	
0.86	150	iPg	59	17.07	-1.0
		iSg	59	30.05	
0.92	80	iPg	59	18.38	-0.8
		iSg	59	34.67	
0.97	96	iPg	59	19.93	-0.1
		iSg	59	35.77	
1.09	108	ePg	59	23.00	1.0
		iSg	59	39.90	
1.32	144	eP	59	27.50	1.6
		iSg	59	45.50	
1.70	287	iPn	59	31.60	0.3
		iSg	59	55.00	
2.13	211	P	59	37.50	-0.1
		eSg	00	01.10	
2.18	109	iPn	59	40.00	1.6
2.25	134	ePn	59	43.00	3.5x
2.48	31	ePn	59	41.50	-1.0
1.5 s	0.11nm				
		e(Sg)	00	26.00	
2.80	133	eP	59	47.70	0.6
		eS	00	23.20	
3.29	121	eP	59	55.00	0.8
		eS			



VBY 3.72 320 ePn 00 04.40 4.2X  
 eSn 00 47.50  
 GZR 4.00 46 ePd 00 16.00 11.9X  
 VOY 4.77 316 ePn 00 15.30 0.1  
 eSn 01 12.20

S.D. = 1.0 on 18 of 21 obs.

MAY 24, 1991 22h 24m 05.82 ± 1.06s  
 5.976 S ± 4.8km 154.625 E ± 7.1km

DEPTH = 170.8 ± 10.0 km

5.0mb ( 14 obs.)

SOLOMON ISLANDS (193)

RAB 3.02 306 e(P) 24 54.00 -0.8  
 PMG 8.15 245 eP 26 04.00 1.8  
 0.9s 84.03nm 5.2mb

DZM 19.66 146 iPd 28 23.00 -0.8

QIS 20.56 224 iPc 28 33.20 0.5

RMQ 21.15 195 iPd 28 40.00 1.4

0.5s 25.00nm 4.9mb

QLP 22.76 205 iPc 28 55.70 1.4

0.5s 70.00nm 5.4mb

COO 24.61 186 eP 29 13.00 1.1

ASPA 26.59 226 iPc 29 29.60 -0.5

0.4s 9.50nm 4.8mb

WARB 33.42 230 eP 30 30.00 -0.4

FORR 35.10 222 eP 30 44.00 -0.6

THZ 39.18 158 P 31 18.00 -0.6

MNG 39.23 155 P 31 18.50 -0.5

TCW 39.23 156 P 31 18.90 -0.1

MRW 39.42 156 eP 31 19.90 -0.6

CAW 39.47 155 P 31 20.30 -0.6

PGZ 39.57 154 P 31 21.40 -0.4

0.4s 30.00nm 5.3mb

MTW 39.69 155 P 31 21.90 -0.8

LTZ 39.84 160 P 31 23.50 -0.5

KHZ 39.98 158 P 31 24.00 -1.1

CN2 56.12 335 eP 33 28.00 -1.6

TIY 58.57 321 Pd 33 46.30 -0.7

XAN 58.72 316 P 33 46.90 -1.1

CHG 60.13 296 eP 33 58.10 0.2

1.4s 49.42nm 5.2mb

BTO 61.83 323 eP 34 08.60 -0.4

LZH 63.34 315 iPd 34 19.50 0.3

1.5s 42.00nm 5.1mb

GTA 67.75 317 Pc 34 47.40 0.2

1.2s 20.00nm 4.8mb

LSA 70.40 304 eP 35 04.20 0.2

GUN 74.28 301 P 35 26.46 -0.3

0.6s 13.00nm 4.9mb

PKI 74.59 301 P 35 27.84 -0.7

KKN 74.76 301 P 35 28.86 -0.5

DMN 74.86 301 P 35 29.60 -0.4

GKN 75.36 301 P 35 32.20 -0.5

ANM 76.36 17 eP 35 38.30 0.9

SVW 77.19 22 eP 35 43.40 1.3

WMO 77.83 317 P 35 46.40 0.4

1.2s 100.00nm 5.4mb

PMR 80.01 24 eP 35 57.10 -0.1

IMA 80.96 19 ePc 36 03.00 0.6

1.3s 19.80nm 4.7mb

TOA 81.47 24 eP 36 05.80 0.8

FBA 82.30 21 eP 36 08.60 -0.6

1.3s 36.00nm 5.0mb

SPA 84.06 180 iPd 36 17.50 -0.8

1.0s 15.00nm 4.7mb

MAW 85.19 203 eP 36 24.40 0.7

PEC 91.81 56 eP 36 57.20 1.4

PLM 92.01 57 eP 36 59.00 2.1

YKA 95.61 28 eP 37 12.10 -0.5

1.0s 2.30nm 4.5mb

ZOBO 132.28 118 PKP 43 03.90 1.1

IFR 146.77 328 iPKPd 43 31.00 3.1X

S.D. = 0.9 on 45 of 46 obs.

% MAY 25, 1991 01h 20m 20.26 ± 0.77s

34.721 N ± 8.3km 105.143 E ± 9.4km

DEPTH = 33.0km (normal)

GANSU PROVINCE, CHINA (322)

ML 4.0 (BJI).

LZH 1.73 322 Pg 20 49.50 0.9

Sg 21 12.00

XAN 3.20 101 Pn 21 09.30 -0.1

Pg 21 17.00

CD2 3.97 197 ePn 21 58.00  
 Sg 21 21.40 0.9  
 Sg 22 23.10  
 GTA 6.33 319 Pn 21 52.60 -1.2

Z 12s 0.30um  
 E 10s 0.40um

Pg 22 13.00

Sn 23 02.80

Sg 23 35.50

TIY 6.61 61 ePn 21 58.00 0.3

Pg 22 20.00

BTO 7.03 32 ePn 22 07.90 4.4X

ePg 22 27.70

HHC 7.95 38 Pg 22 45.60 29.1X

GYA 8.34 171 P 22 21.00 -0.9

S 23 51.00

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

& MAY 25, 1991 02h 31m 42.60s

34.110 N 118.310 W

DEPTH = 6.0km

SOUTHERN CALIFORNIA (43)

<PAS-P>. ML 2.0 (PAS). Felt at

Hollywood and Los Angeles.

MWC 0.24 61 ePd 31 47.50 0.0

eS 31 51.10

SBB 0.70 35 ePd 31 55.60 -1.1

PEC 0.98 103 eP 32 00.30 -1.3

ABL 1.05 315 eP 32 02.00 -1.0

PLM 1.42 122 eP 32 07.30 -1.9

BCH 1.81 307 eP 32 14.00 -0.7

6 obs. associated

\* MAY 25, 1991 02h 59m 58.10 ± 0.99s

24.288 N ± 10.6km 123.271 E ± 9.9km

DEPTH = 10.0km (geophysicist)

4.3mb ( 3 obs.)

SOUTHWESTERN RYUKYU ISLANDS (246)

TWC 1.33 284 iPd 00 21.70 -1.0

eS 00 35.90

TWD 1.54 263 ePc 00 25.10 -0.6

eS 00 42.40

TWZ 1.74 298 eP 00 29.20 0.7

TKW 2.74 249 eP 00 44.00 1.0

SSE 7.03 345 Pc 01 44.00 0.5

0.6s 12.00nm 5.2mb

Z 16s 0.30um 4.0mszX

WB2 45.27 165 iPd 08 17.80 0.0

0.4s 1.50nm 4.3mb

YKA 82.13 23 eP 12 19.40 -0.6

0.5s 0.30nm 3.7mb

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

& MAY 25, 1991 03h 34m 42.69s

60.242 N 152.553 W

DEPTH = 100.3km

SOUTHERN ALASKA (2)

<AEIC>.

RED 0.21 329 iPc 34 56.52 0.9

eS 35 07.26

RSO 0.24 336 iPc 34 56.83 0.9

eS 35 07.47

RS2 0.24 335 ePc 34 56.87 0.9

RDW 0.27 332 ePc 34 56.73 0.7

RDN 0.29 339 iPc 34 57.15 -0.5

eS 35 08.10

RDT 0.34 12 iPc 34 57.16 -0.7

eS 35 08.47

DFR 0.36 349 ePc 34 57.21 -0.7

eS 35 08.59

NCT 0.37 330 eP 34 57.47 -0.6

eS 35 08.94

HOM 0.74 142 eP 34 58.96 -1.8

NKA 0.82 52 iPc 35 02.55 1.0

XLV 0.89 152 eP 35 01.07 -1.2

eS 35 15.95

PDB 0.94 242 ePc 35 01.75 -1.0

eS 35 16.50

CKL 0.96 6 ePd 35 02.39 -0.8

eS 35 18.11

AUE 0.98 205 eP 35 02.22 -0.9

CNPM 0.98 137 iPc 35 02.24 -1.0

eS 35 17.70

AUH 0.99 207 ePd 35 02.49 -0.9  
 eS 35 18.47  
 AUI 1.01 206 eP 35 02.53 -1.0  
 eS 35 17.53

BGL 1.03 4 eP 35 03.34 -0.5  
 CRP 1.05 11 eP 35 03.21 -0.9  
 eS 35 19.21

SLKM 1.19 76 eP 35 04.32 -1.3

MCNL 1.39 221 ePd 35 06.66 -1.4

eS 35 25.12

CDD 1.43 203 ePd 35 06.89 -1.6

eS 35 26.70

SUA 1.51 35 ePc 35 09.11 -0.5

iS 35 29.69

SEW 1.56 94 eP 35 08.07 -1.9

eS 35 28.40

SYI 1.64 177 iPd 35 09.74 -1.3

eS 35 31.14

SVW 1.74 301 iPd 35 10.90 -1.6

eS 35 32.99

PMS 1.78 54 ePc 35 11.98 -1.0

eS 35 34.61

SKT 1.81 15 ePc 35 12.34 -1.0

eS 35 35.74

PWA 1.92 42 eP 35 13.99 -0.8

eS 35 37.65

PLRM 2.15 49 ePc 35 16.22 -1.5

eS 35 42.15

KNK 2.33 58 ePc 35 17.99 -2.1

eS 35 45.67

GHO 2.34 47 ePc 35 18.43 -2.0

eS 35 46.59

KNIM 2.40 85 iPc 35 17.97 -3.1

CUT 2.43 26 ePc 35 21.03 -0.5

MTU 2.47 94 iPc 35 19.89 -2.1

eS 35 49.24

KDC 2.50 179 eP 35 19.29 -3.1

SML 2.59 51 eP 35 22.27 -1.4

GLI 2.77 74 eP 35 22.78 -3.3

SCM 3.00 56 eP 35 27.21 -2.1

VZW 3.07 72 ePc 35 27.10 -3.1

TTA 3.16 330 eP 35 29.79 -1.7

VLZ 3.19 71 eP 35 28.82 -2.9

TRF 3.39 17 eP 35 34.56 -0.2

KLU 3.48 66 iPc 35 32.95 -2.9

TOA 3.61 56 ePc 35 35.74 -1.9

GLB 4.44 71 eP 35 46.11 -2.9

TGL 4.84 80 eP 35 51.81 -2.7

CCB 4.94 24 eP 35 52.76 -3.0

BALM 5.09 77 eP 35 55.55 -2.5

49 obs. associated

& MAY 25, 1991 03h 51m 22.39s

58.757 N 153.315 W

DEPTH = 4.0km

KODIAK ISLAND REGION (13)

<AEIC>. ML 2.7 (AEIC).

CDD 0.24 316 iP 51 27.41 0.1

SYI 0.50 107 iP 51 32.60 0.1

eS 51 40.00

AUI 0.58 354 eP 51 34.00 0.0

eS 51 41.95

AUE 0.60 357 iP 51 34.84 0.4

eS 51 43.14

AUH 0.61 354 iP 51 34.85 0.2

eS 51 43.84

MCNL 0



25d 03h

DFR 1.87 10 eP 51 54.59 -0.9  
eS 52 17.90  
RDT 1.88 14 eP 51 54.66 -1.0  
eS 52 18.94  
SEW 2.39 54 eP 52 03.61 0.6  
CKL 2.50 11 eP 52 04.67 0.1  
CRP 2.58 13 eP 52 06.39 0.5  
SVW 2.63 335 eP 52 10.12 3.7  
SUA 3.01 24 eP 52 12.31 0.5  
PMS 3.13 35 eP 52 14.66 1.2  
SKT 3.35 15 eP 52 17.46 0.8  
VZW 4.11 53 eP 52 26.57 -0.8  
27 obs. associated

? MAY 25, 1991 06h 13m 39.40 ± 8.65s  
45.194 N ± 20.4km 6.555 E ± 66.8km  
DEPTH = 10.0km (geophysicist)

FRANCE (538)

ML 1.9 (GEN).

RRL 0.32 149 P 13 45.39 -0.7  
S 13 49.18  
LSD 0.50 58 P 13 49.49 -0.1  
S 13 57.28  
BHB 0.61 125 P 13 52.05 0.3  
S 13 59.33  
PZZ 0.79 150 P 13 55.43 0.5  
S 14 04.35  
S.D. = 0.9 on 4 of 4 obs.

MAY 25, 1991 06h 27m 49.23 ± 0.93s  
7.495 S ± 9.3km 119.423 E ± 8.5km  
DEPTH = 272.4 ± 12.5 km  
4.5mb (9 obs.)

FLORES SEA (279)

KUG 4.90 123 ePc 29 04.60 -0.4  
TRT 6.73 268 ePd 29 28.30 0.8  
eS 30 48.00  
KNA 12.29 133 eP 30 35.80 -1.2  
0.3s 46.00nm 5.2mb X  
eS 32 50.00  
MTN 12.69 116 eP 30 42.00 0.1  
0.3s 387.00nm 6.2mb X  
eS 32 53.00  
MBL 13.59 178 eP 30 53.00 0.0  
eS 33 25.00  
NANU 15.44 194 iPc 31 15.50 0.1  
0.4s 7.00nm 4.4mb  
eS 34 09.00  
WB2 19.04 132 iPd 31 52.80 -0.5  
0.7s 32.30nm 4.9mb  
i 32 08.60  
i 35 10.60  
WARB 19.82 161 eP 32 01.70 0.7  
ASPA 21.25 141 iPd 32 16.30 1.2  
0.4s 11.40nm 4.7mb  
QIS 23.45 126 eP 32 36.00 -0.2  
i 33 09.30  
STK 31.86 143 eP 34 02.00 10.8X  
0.3s 3.10nm  
CHG 33.03 323 ePc 34 03.70 2.3  
1.0s 12.00nm 4.4mb  
BRS 37.27 126 eP 34 37.60 0.5  
i 35 33.00  
i 35 40.50  
XAN 42.49 347 P 35 20.00 0.3  
TIY 45.44 352 eP 35 39.60 -3.6X  
LZH 45.76 342 eP 35 46.50 0.7  
2.0s 32.00nm 4.3mb  
GBA 46.66 297 Pd 35 50.80 -2.1  
0.4s 4.30nm 4.1mb  
GUN 47.85 319 Pc 36 01.92 -0.5  
0.5s 45.00nm 5.0mb  
PKI 47.94 318 Pc 36 02.12 -0.9  
DMN 48.16 318 Pc 36 03.94 -0.7  
KKN 48.17 318 Pc 36 03.82 -0.8  
GKN 48.73 318 Pc 36 08.08 -0.8  
0.3s 69.00nm 5.4mb  
GTA 50.08 340 Pc 36 20.00 1.0  
1.0s 10.00nm 4.2mb  
WMO 58.60 334 P 37 20.40 0.3  
NB2 105.31 331 PKP 45 53.90 13.3X  
0.9s 1.30nm  
MOX 107.04 321 ePKP 46 02.00 17.8X  
S.D. = 1.0 on 22 of 26 obs.

% MAY 25, 1991 07h 39m 12.22 ± 0.57s  
39.585 N ± 5.2km 28.928 E ± 5.6km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 2.8 (ISK).

IZI 0.86 29 iPg 39 28.50 -0.3  
ALT 1.06 120 ePg 39 32.00 -0.2  
eSg 39 46.00  
BNT 1.09 315 ePn 39 32.00 -0.7  
EDC 1.12 313 ePn 39 33.00 -0.2  
KHL 1.34 160 ePn 39 37.10 0.1  
HRT 1.36 24 ePn 39 37.20 0.0  
EYL 1.36 44 ePn 39 37.60 0.3  
ISK 1.48 4 ePn 39 39.00 0.1  
KGT 1.52 305 ePn 39 40.00 0.6  
CTT 1.61 346 iPn 39 41.10 0.4  
S.D. = 0.4 on 10 of 10 obs.

\* MAY 25, 1991 07h 59m 05.53 ± 1.08s  
28.786 S ± 8.1km 70.856 W ± 21.2km  
DEPTH = 110.6 ± 21.5 km  
3.7mb (1 obs.)

CENTRAL CHILE (136)

ZON 3.33 146 eP 00 03.70 6.8X  
JACH 3.89 177 eP 00 03.00 -1.5  
ROCH 4.17 182 eP 00 11.50 3.0X  
PEL 4.35 178 eP 00 10.50 -0.1  
iS 01 10.20  
SAN 4.66 178 eP 00 15.00 0.2  
e 01 14.50  
LCCH 4.71 187 eP 00 16.00 0.4X  
PCH 4.83 177 eP 00 18.50 1.2  
TACH 4.85 181 iP 00 14.60 -2.9X  
ANT 5.08 5 eP 00 22.00 1.4  
eS 01 27.50  
i 01 35.50  
LNV 5.18 185 eP 00 17.00 -4.9X  
TCA 6.00 117 ePc 00 33.80 0.5  
S 01 37.30  
RFA 6.30 162 ePd 00 37.30 -0.2  
ZOBO 12.71 12 P 02 02.00 -1.9  
YKA 97.46 341 eP 12 27.70 0.5  
0.4s 0.10nm 3.7mb  
S.D. = 1.4 on 9 of 14 obs.

MAY 25, 1991 09h 25m 36.87 ± 0.37s  
31.664 S ± 4.7km 69.318 W ± 5.7km  
DEPTH = 114.0 ± 4.0 km  
4.7mb (11 obs.)

SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.56 78 iPc 25 55.70 0.8  
JACH 1.48 226 iPd 26 04.90 0.7  
iS 26 26.00  
PEL 1.87 218 iPd 26 09.30 0.3  
iS 26 33.80  
ROCH 1.94 227 iPd 26 09.70 -0.3  
iS 26 34.50  
SAN 2.11 212 iPd 26 12.70 0.7  
PCH 2.20 207 eP 26 14.00 0.8  
iS 26 43.00  
IHA 2.39 235 eP 26 14.50 -1.1  
iS 26 41.50  
TACH 2.41 214 iPc 26 15.70 -0.1  
iS 26 45.60  
LCCH 2.62 226 iP 26 18.00 -0.6  
iS 26 47.50  
LNV 2.89 217 iP 26 20.50 -1.6  
iS 26 51.00  
ANT 7.99 353 eP 27 30.50 -1.2  
CCH 14.51 12 P 29 02.70 4.5X  
CNCB 14.84 5 Pc 29 04.00 1.4  
S 32 00.00  
LPB 15.11 4 P 29 07.00 1.1  
S 32 05.00  
ARE 15.26 352 iPd 29 08.00 0.3  
1.0s 37.00nm 4.6mb  
ZOBO 15.36 4 P 29 09.00 -0.3  
1.0s 20.00nm 4.3mb  
S 32 09.00  
SIV 17.32 28 P 29 31.30 -1.7  
PPD 18.69 64 eP 29 48.80 -0.2  
VAO 21.62 72 eP 30 19.70 0.7  
e 30 20.60  
e 30 26.90

BMA 24.06 74 (P) 30 43.00 0.3  
BAO 25.15 56 eP 30 52.00 -1.1  
NVL 57.57 157 ePd 35 17.00 0.7  
SGS 65.37 350 P 36 08.30 -0.6  
JSC 66.55 349 P 36 15.40 -1.0  
LHS 66.67 350 P 36 16.00 -1.2  
TKL 68.33 347 P 36 26.20 -1.4  
CVL 69.81 352 P 36 36.40 -0.2  
OLY 69.98 341 P 36 36.80 -0.9  
ELC 71.07 343 P 36 43.00 -1.3  
MEO 71.60 335 iPd 36 46.50 -1.0  
TUL 71.66 338 iPd 36 48.40 0.5  
1.0s 30.00nm 5.1mb  
e 36 53.80  
e 37 15.90

LIC 71.85 71 P 36 49.00 -0.4  
FVM 72.03 343 P 36 49.00 -1.0  
TIC 72.10 70 P 36 50.90 0.0  
KIC 72.16 71 P 36 51.00 -0.3  
LVNJ 72.29 356 P 36 51.30 -0.1  
WVLY 74.26 353 P 37 02.70 -0.2  
ALO 74.89 329 eP 37 07.60 0.6  
1.0s 13.00nm 4.7mb  
ANMO 74.90 329 P 37 07.50 0.6  
1.0s 48.75nm 5.3mb

GLA 77.39 322 P 37 21.60 0.8  
GLD 78.47 333 P 37 27.50 0.7  
0.9s 19.74nm 4.9mb  
GOL 78.49 332 P 37 27.10 0.1  
0.9s 6.63nm 4.4mb  
PLM 78.70 321 P 37 28.90 0.8  
PEC 79.27 321 P 37 32.00 1.0  
MSU 80.42 327 P 37 38.00 0.7  
ABL 81.11 320 P 37 42.00 1.0  
DAU 81.55 329 P 37 43.90 0.7  
DUG 82.07 328 P 37 46.40 0.7  
TNP 82.51 324 P 37 48.90 0.7  
0.8s 6.62nm 4.5mb

BONR 82.97 323 P 37 51.90 1.3  
CMB 84.11 322 P 37 57.00 0.9  
0.8s 6.00nm 4.5mb  
TIO 85.63 50 iP 38 05.40 1.5  
SCH 86.15 1 eP 38 06.00 0.2  
LRM 86.46 331 ePd 38 08.60 0.8  
LBFM 87.34 323 P 38 12.50 0.4  
SES 89.66 335 eP 38 21.00 -1.7  
FFC 90.52 342 iPc 38 26.70 0.2  
1.0s 17.00nm 5.2mb

YKA 100.61 340 ePd 39 11.30 -1.1  
1.0s 1.10nm 4.4mb  
WB2 123.89 287 iPKPd 44 22.60 -0.8  
1.0s 3.10nm  
WRA 123.89 207 PKP 44 22.00 -1.4  
0.9s 2.80nm  
OBN 124.19 42 ePKP 44 22.00 -0.9  
0.9s \*\*\*\*\*nm  
GBA 144.63 113 PKPd 45 01.00 -1.1  
0.8s 16.90nm  
GAR 146.48 66 ePKP 45 05.50 0.8  
YAK 147.23 343 iPKPd 45 06.90 1.9  
e 45 37.00  
i 45 52.00

HYB 147.65 108 ePKPc 45 10.70 3.7X  
1.0s 35.00nm  
S.D. = 0.9 on 63 of 65 obs.

\* MAY 25, 1991 09h 54m 07.40s  
37.508 N 121.693 W  
DEPTH = 7.0km  
CENTRAL CALIFORNIA (39)  
<BRK>. ML 2.6 (BRK).

MHC 0.17 166 iPc 54 11.05 -0.1  
iS 54 14.05  
ARN 0.20 141 iPd 54 11.50 -0.2  
BKS 0.57 311 iPc 54 18.50 -0.3  
eS 54 27.00  
i 54 27.70  
iS 54 28.60  
ZSP 0.62 314 iPd 54 19.90 0.0  
iS 54 30.70  
SAO 0.77 165 ePc 54 23.00 0.3  
CMB 1.16 63 eP 54 28.30 -1.1  
eS 54 42.90  
BONR 2.73 80 eP 54 53.00 0.3  
7 obs. associated



25d 10h

\* MAY 25, 1991 10h 40m 24.28± 2.49s  
35.246 N ±25.7km 27.685 E ±15.0km  
DEPTH = 10.0km (geophysicist)  
DODECANESE ISLANDS (369)  
MD 3.7 (ATH).

ARG	1.03	20	ePb	40	44.00	0.2
NPS	1.70	271	ePb	40	55.00	0.9
YER	1.95	14	ePn	40	59.10	1.4
ELL	2.34	50	iPn	41	03.00	-0.6
CIN	2.37	8	eP	41	03.00	-0.8
KHL	3.41	25	ePn	41	21.00	2.4X
VLI	4.12	292	ePn	41	27.50	-1.1

S.D. = 1.3 on 6 of 7 obs.

& MAY 25, 1991 11h 16m 17.74s  
60.149 N 152.618 W  
DEPTH = 97.5km  
SOUTHERN ALASKA ( 2 )  
<AEIC>.

RED	0.28	344	iPc	16	31.53	-0.7
			eS	16	42.69	
RSO	0.32	348	ePc	16	31.92	-0.7
			eS	16	43.43	
RS2	0.32	348	iPc	16	31.99	-0.6
			eS	16	43.73	
RDW	0.35	344	ePc	16	32.08	-0.7
RDN	0.37	349	ePc	16	32.12	-0.7
RDT	0.44	14	iPc	16	32.37	-0.8
			eS	16	44.19	
NCT	0.44	340	eP	16	32.29	-0.9
DFR	0.45	356	eP	16	32.47	-0.7
HOM	0.70	135	ePc	16	34.58	-0.5
			eS	16	47.84	
PDB	0.87	246	iPd	16	35.89	-1.0
			eS	16	50.31	
AUE	0.88	206	eP	16	35.82	-1.1
AUH	0.89	208	ePc	16	36.31	-0.8
NKA	0.91	48	ePc	16	38.30	1.1
AUI	0.91	207	eP	16	36.43	-0.9
			eS	16	50.71	
CNPM	0.94	131	ePc	16	36.55	-1.0
			eS	16	51.64	
CKL	1.06	7	iPd	16	38.27	-0.8
			eS	16	55.04	
BGL	1.12	6	ePd	16	39.17	-0.6
CRP	1.14	11	ePd	16	39.45	-0.6
			eS	16	56.35	
SLKM	1.25	72	eP	16	39.78	-1.4
NCG	1.28	10	eP	16	40.98	-0.7
MCNL	1.30	223	iPd	16	40.40	-1.4
CDD	1.33	204	ePd	16	40.46	-1.7
SYI	1.55	176	ePd	16	43.43	-1.4
SEW	1.59	90	eP	16	43.37	-1.9
SUA	1.61	34	ePd	16	45.00	-0.7
PMS	1.86	53	ePc	16	47.72	-1.2
SKT	1.91	16	eP	16	48.23	-1.4
			eS	17	13.64	
PWA	2.02	40	ePc	16	49.95	-1.0
PLRM	2.24	48	eP	16	51.66	-2.2
KNK	2.40	56	eP	16	53.73	-2.4
GHO	2.43	46	ePc	16	54.34	-2.2
KNIM	2.44	83	eP	16	53.29	-3.4
MTU	2.50	92	eP	16	55.03	-2.3
CUT	2.53	26	eP	16	56.96	-0.9
TRF	3.49	17	eP	17	10.51	-0.6
RND	3.73	27	eP	17	12.09	-2.1

36 obs. associated

% MAY 25, 1991 11h 30m 02.92± 1.56s  
18.064 N ±14.1km 67.088 W ±16.1km  
DEPTH = 33.0km (normal)  
MONA PASSAGE ( 89 )

MGP	0.06	181	iP	30	08.40	-0.1
			S	30	25.90	
LRS	0.32	45	iP	30	11.50	0.5
APR	0.51	41	iP	30	13.60	-0.1
SJG	0.89	87	i(P)	30	19.50	0.4
CPD	1.12	91	iP	30	22.80	0.5
LPR	1.18	78	iP	30	22.20	-1.1

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

MAY 25, 1991 11h 31m 19.47± 0.39s  
43.070 N ± 5.0km 18.340 E ± 4.6km  
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)  
ML 3.0 (TTG).

BRY	0.23	138	iPgc	31	24.60	0.2
			iSg	31	29.50	
NKY	0.55	118	iPgd	31	30.00	-0.6
			iSg	31	40.50	
HCY	0.63	169	iPgd	31	31.50	-0.7
			iSg	31	43.00	
PLE	0.81	71	iPgd	31	34.60	-0.7
			iSg	31	47.60	
BDV	0.86	155	iPgd	31	35.80	-0.3
			iSg	31	51.00	
TTG	0.93	133	iPgd	31	36.40	-0.8
			iSg	31	53.00	
IVA	1.16	99	iPgd	31	41.20	0.0
			iSg	31	59.60	
PVY	1.29	111	ePg	31	43.40	-0.1
			eSg	32	03.70	
ULC	1.29	148	ePg	31	43.00	-0.5
			eSg	32	03.00	
HVAR	1.39	275	iPg	31	43.80	-1.1
			iSg	31	59.30	
			i	32	02.80	
LACI	1.76	144	ePn	31	50.80	0.7
			iSn	32	23.30	
TIR	2.06	146	ePn	31	55.50	1.0
			iSn	32	24.70	
BEO	2.32	40	ePn	32	03.00	4.7X
	1.0s		0.05nm			
			eSg	32	35.50	
SKO	2.54	115	ePn	32	02.00	0.6
OHR	2.68	136	ePn	32	05.00	1.5
VBY	3.29	319	ePn	32	12.30	0.2
			eSn	32	51.90	
PTJ	3.30	330	iPc	32	12.10	-0.2
LSK	3.37	149	ePn	32	22.00	8.7X
BZS	3.47	42	eP	32	19.00	4.5X
CEY	3.87	315	e(Pn)	32	32.50	12.2X
			e(Sn)	33	26.50	
LJU	4.03	319	eP	32	31.00	8.5X
			e(Sn)	33	33.00	
TRI	4.21	310	eP	32	33.30	8.2X
			i	33	13.00	
			i	33	33.50	
VOY	4.34	315	ePn	32	27.40	0.3
			eSn	33	18.80	
			eSg	33	38.60	
FVI	5.29	314	P	32	31.00	-9.5X
CTI	5.63	304	P	32	46.00	0.6
			eSn	33	22.00	

S.D. = 0.7 on 18 of 25 obs.

MAY 25, 1991 12h 11m 47.29± 0.55s  
45.770 N ± 4.9km 26.770 E ± 5.2km  
DEPTH = 93.7 ± 6.9 km  
3.5mb ( 2 obs.)

ROMANIA (358)

Felt (II) in the epicentral area.

VRI	0.10	343	iPc	12	00.00	0.0
BRD	0.32	142	iPc	12	02.00	0.5
CVO	0.42	277	iPc	12	01.50	-0.6
MLR	0.64	245	iPc	12	04.00	0.0
PPE	0.74	53	iPd	12	05.70	0.9
BAC	0.80	6	iP	12	04.00	-1.4
CFR	1.14	121	iPd	12	09.00	-0.1
PTT	1.20	347	iPd	12	10.00	0.2
CMP	1.32	248	iPc	12	12.00	0.7
TLB	1.48	142	iPd	12	13.50	0.2
BUC1	1.52	200	iP	12	13.20	-0.6
TNR	1.75	267	ePc	12	06.00	-10.9X
COZ	1.76	256	iPc	12	17.70	0.5
PSN	2.32	154	eP	12	24.00	-0.4
DEV	2.71	274	ePc	12	31.00	1.3
PVL	2.75	202	iPd	12	31.00	0.7
GZR	2.83	264	iPd	12	32.00	0.6
JMB	3.31	182	iPd	12	37.00	-0.9
BZS	3.61	269	eP	12	40.00	-2.1
PLD	3.96	203	eP	12	44.00	-2.8X
VTS	4.08	220	eP	12	48.00	-0.7
KDZ	4.23	194	iP	12	51.00	0.3
MMB	4.73	209	eP	12	58.00	0.5
VAY	5.39	216	ePn	13	48.00	41.2X
HFS	16.35	336	eP	15	28.20	-4.0X
	0.4s		1.70nm			3.6mb

Z 16s 0.05um 4.2msz  
e 15 31.20  
ePP 15 40.00  
LR 22 48.00  
YKA 67.75 342 eP 22 36.50 0.2  
0.6s 0.30nm 3.4mb  
S.D. = 0.9 on 22 of 26 obs.

% MAY 25, 1991 12h 12m 42.60± 0.98s  
41.624 N ± 6.8km 27.726 E ±13.5km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)

DMK	0.20	7	iPn	12	47.00	0.0
CTT	0.71	132	iPn	12	56.40	-0.2
MFT	0.90	202	ePn	13	00.40	0.5
KGT	1.21	195	iPn	13	04.20	-1.0
BNT	1.28	173	ePn	13	07.00	0.7

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

\* MAY 25, 1991 12h 47m 51.13± 0.70s  
16.402 S ±15.5km 174.264 W ±15.4km  
DEPTH = 33.0km (normal)  
4.9mb ( 4 obs.)

TONGA ISLANDS (173)

AFI	3.45	44	iPd	48	44.00	0.0
			eS	49	15.00	
MNG	25.72	198	eP	53	16.50	-3.6X
	0.3s		2.00nm			4.2mb
THZ	27.58	201	eP	53	36.80	-0.5
LTZ	28.70	201	eP	53	47.70	0.3
COO	33.95	239	iPc	54	34.40	0.7
STK	42.82	241	eP	55	59.00	11.2X
	1.1s		1.30nm			
WB2	48.80	258	iPc	56	35.50	0.1
	0.3s		3.70nm			4.9mb
WRA	48.81	258	P	56	35.00	-0.5
	0.3s		3.60nm			4.9mb
ASPA	49.02	253	iPc	56	37.00	-0.1
	0.5s		24.50nm			5.5mb

S.D. = 0.5 on 7 of 9 obs.

% MAY 25, 1991 12h 55m 25.58± 2.01s  
39.972 N ±16.3km 28.033 E ± 7.6km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.8 (ISK).

BNT	0.39	347	ePg	55	33.50	-0.1
EDC	0.40	341	ePg	55	34.00	0.3
KGT	0.74	311	ePn	55	40.00	0.0
MFT	1.00	325	ePn	55	44.40	-0.1
IZI	1.16	71	ePn	55	47.20	-0.2
CTT	1.21	14	ePn	55	48.00	-0.2
HRT	1.51	55	ePn	55	53.00	0.3

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

& MAY 25, 1991 13h 28m 10.55s  
58.780 N 153.319 W  
DEPTH = 2.0km

KODIAK ISLAND REGION ( 13 )  
<AEIC>. ML 2.6 (AEIC).

CDD	0.23	312	iP	28	15.44	0.4
SYI	0.51	109	iP	28	20.65	-0.2
			eS	28	27.98	
AUI	0.56	354	eP	28	22.01	0.3
			eS	28	30.20	
AUE	0.58	357	iP	28	22.84	0.7
AUH	0.59	354	iP	28	22.82	0.5
MCNL	0.67	308	iP	28	23.78	-0.1
PDB	1.11	336	iP	28	30.81	-1.2
			eS	28	44.96	
HOM	1.23	44	eP	28	33.04	-1.1
CNPM	1.31	54	eP	28	34.47	-1.0
RED	1.67	9	eP	28	40.17	-0.8
			eS	29	01.97	
RS2	1.71	9	eP	28	40.86	-0.9
RSO	1.71	9	eP	28	40.87	-0.9
RDW	1.73	8	eP	28	41.11	-0.8
			eS	29	03	



25d 13h

NKA 2.23 27 eP 28 50.71 1.6  
 SLKM 2.34 41 eP 28 50.17 -0.5  
 SEW 2.38 54 eP 28 50.84 -0.4  
 CKL 2.47 11 eP 28 52.73 0.1  
 NCG 2.70 12 eP 28 56.37 0.5  
 SUA 2.99 24 eP 29 01.66 1.7  
 PMS 3.11 36 eP 29 02.37 0.8  
 VZW 4.10 53 eP 29 14.31 -1.3  
 25 obs. associated

MAY 25, 1991 14h 45m 19.17±0.83s  
 38.360 N ± 7.2km 21.747 E ± 8.0km  
 DEPTH = 5.0km (geophysicist)  
 GREECE (364)  
 ML 3.2 (ATH).

AGG 0.80 34 ePg 45 33.90 -1.4  
 eSg 45 46.50  
 VLS 0.93 259 ePg 45 35.00 -2.4  
 ATH 1.60 103 ePb 45 48.50 0.3  
 LIT 1.83 18 iPbd 45 51.20 -0.4  
 eSb 46 17.70  
 VLI 1.89 150 ePn 45 54.00 1.6  
 KZN 1.94 1 ePn 45 54.00 0.8  
 LSK 2.00 334 ePn 45 55.50 1.5  
 PAIG 2.17 43 ePn 45 55.00 -1.4  
 FNA 2.44 353 iPnd 46 01.20 0.9  
 GRG 2.64 11 ePnd 46 03.00 -0.2  
 SOH 2.75 26 ePn 46 04.10 -0.7  
 eSn 46 38.00  
 OHR 2.84 345 ePn 46 07.30 1.2  
 VAY 3.02 12 ePn 46 09.00 0.4  
 SRS 3.10 27 ePn 46 08.50 -1.1  
 PHP 3.47 344 ePn 46 22.40 7.5X  
 SKO 3.62 356 ePn 46 18.00 1.0  
 LACI 3.63 335 ePn 46 28.30 11.2X  
 S.D. = 1.3 on 15 of 17 obs.

? MAY 25, 1991 15h 27m 37.31±2.45s  
 6.438 S ±28.5km 147.111 E ±22.9km  
 DEPTH = 90.4 ± 12.1 km  
 4.4mb ( 2 obs.)

EAST PAPUA NEW GUINEA REGION (207)

LAT 0.24 207 iPc 27 50.90 -1.0  
 YYYY 1.15 280 eP 28 00.40 1.1  
 eS 28 19.30  
 MDG 1.77 312 ePd 29 03.10 56.1X  
 PMG 2.95 179 iPd 28 23.20 0.2  
 eS 29 05.00  
 OIS 15.81 207 iPd 31 18.00 1.9  
 WB2 18.27 222 iPc 31 44.20 -2.3  
 0.6s 7.90nm 4.1mb  
 RMO 20.00 176 eP 32 03.20 0.3  
 i 32 05.50  
 OLP 20.22 187 iPc 32 07.50 0.1  
 ASPA 21.33 215 iPd 32 18.00 -0.7  
 0.4s 11.40nm 4.6mb  
 BRS 21.52 166 iPd 32 20.00 -0.6  
 COO 24.43 170 eP 32 50.00 1.1  
 STK 25.83 191 iPc 33 12.20 10.2X  
 0.4s 2.90nm  
 S.D. = 1.5 on 10 of 12 obs.

? MAY 25, 1991 16h 03m 56.29±2.81s  
 40.305 N ±28.4km 27.515 E ±10.4km  
 DEPTH = 10.0km (geophysicist)

TURKEY (366)  
 MD 2.5 (ISK).

KGT 0.22 312 ePn 04 01.00 0.0  
 EDC 0.27 81 iPg 04 02.00 0.0  
 iSg 04 06.50  
 BNT 0.31 80 iPg 04 02.80 0.0  
 iSg 04 07.80  
 CTT 1.09 39 iPn 04 16.80 0.0  
 S.D. = 0.0 on 4 of 4 obs.

\* MAY 25, 1991 17h 07m 34.19±1.56s  
 25.263 N ±13.9km 95.170 E ±12.4km  
 DEPTH = 85.8 ± 15.9 km  
 4.6mb ( 7 obs.)

BURMA-INDIA BORDER REGION (294)

CHG 7.31 151 iPd 09 21.50 1.2  
 1.0s 47.50nm 5.1mb

GUN 8.72 290 P 09 40.36 0.4  
 BDT 8.74 155 eP 09 40.00 0.2  
 PKI 9.05 287 P 09 43.54 -0.8  
 KKN 9.21 288 P 09 46.14 -0.3  
 DMN 9.32 287 P 09 47.06 -0.9  
 0.3s 15.00nm 5.3mb  
 GKN 9.81 288 P 09 54.28 -0.3  
 HYB 17.32 246 eP 11 33.00 1.0  
 eS 14 29.00

GBA 20.32 239 Pc 12 05.80 0.1  
 0.9s 9.10nm 4.1mb  
 WRA 58.90 136 P 17 25.00 -1.7  
 0.3s 1.80nm 4.7mb

WB2 58.91 136 iPd 17 25.40 -1.4  
 0.3s 1.50nm 4.6mb  
 UPP 62.29 326 iP 17 50.20 1.0  
 HFS 64.24 327 eP 18 03.00 1.0  
 0.5s 3.30nm 4.5mb

18 07.50  
 e 18 28.00  
 NB2 65.34 328 P 18 09.80 0.6  
 0.6s 1.50nm 4.1mb

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

MAY 25, 1991 17h 13m 03.17±0.54s  
 44.988 N ± 3.7km 7.161 E ± 6.9km  
 DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)  
 ML 2.4 (GEN), 2.0 (LDG).

BHB 0.16 154 P 13 07.46 0.5  
 S 13 09.92

RSP 0.18 22 P 13 07.47 0.2  
 S 13 09.93

RRL 0.28 256 P 13 09.42 0.3  
 S 13 13.01

LSD 0.47 360 P 13 12.80 0.0  
 S 13 18.54

PZZ 0.48 185 P 13 13.01 0.0  
 S 13 18.95

LPG 0.59 331 Pg 13 15.10 -0.2  
 Sg 13 22.20

LPL 0.61 330 Pg 13 15.40 -0.2  
 Sg 13 23.00

ENR 0.78 166 P 13 17.81 -0.7  
 FRF 1.47 195 Pg 13 31.60 1.8X  
 Sg 13 53.20

LRG 1.64 201 Pg 13 36.00 3.9X  
 Sg 13 58.50

LMR 1.72 196 Pg 13 56.40 3.1X  
 Sg 13 59.80  
 S.D. = 0.4 on 8 of 11 obs.

\* MAY 25, 1991 18h 03m 36.99±0.45s  
 19.912 N ± 9.4km 46.101 W ± 10.1km  
 DEPTH = 10.0km (geophysicist)

4.5mb ( 8 obs.) 4.7msz ( 1 obs.)  
 NORTH ATLANTIC RIDGE (403)

SIV 38.59 203 P 11 01.60 -0.5  
 ZOBO 41.97 213 iPc 11 31.10 0.5  
 1.5s 16.13nm 4.5mb  
 Z 18s 0.87um 4.7msz

eLR 27 00.00  
 LPB 42.18 212 P 11 32.00 -0.1  
 MFF 45.87 44 eP 12 01.70 0.5  
 1.2s 5.95nm 4.4mb

LDF 46.58 41 eP 12 06.90 0.1  
 LSF 46.86 45 eP 12 09.00 0.0  
 TCF 47.32 45 eP 12 12.80 0.1  
 1.1s 6.10nm 4.6mb

AVF 48.22 44 eP 12 19.50 -0.2  
 1.6s 18.65nm 4.9mb  
 SSF 48.40 44 eP 12 20.80 -0.3  
 SMF 48.50 45 eP 12 21.80 -0.1  
 FFC 54.41 324 eP 13 06.00 -0.4  
 0.8s 9.00nm 4.9mb

ZST 57.63 45 eP 13 33.60 4.0X  
 SES 58.99 317 eP 13 39.00 -0.2  
 YKA 62.62 331 eP 14 01.80 -1.7  
 0.7s 1.40nm 4.3mb

MLR 63.60 48 eP 14 05.00 -5.5X  
 e 42 05.00  
 PNT 64.49 316 eP 14 17.00 0.9  
 INK 70.73 337 eP 14 54.00 -0.9  
 FBA 77.00 335 eP 15 32.20 0.8  
 0.9s 4.90nm 4.6mb

IMA 78.86 337 eP 15 43.40 1.6  
 0.8s 2.10nm 4.2mb  
 S.D. = 0.8 on 17 of 19 obs.

? MAY 25, 1991 18h 59m 23.28±4.91s  
 42.956 N ±45.2km 147.589 E ±87.2km  
 DEPTH = 33.0km (normal)

4.8mb ( 5 obs.)  
 OFF COAST OF HOKKAIDO, JAPAN (225)

MAT 9.65 232 eP 01 43.00 0.1  
 0.7s 18.49nm 5.4mb

YAK 21.83 337 iPc 04 14.60 0.3  
 KEV 59.57 340 iP 09 28.50 3.0X  
 SOD 61.32 338 iP 09 38.20 0.7  
 KAF 65.17 334 iP 10 01.50 -1.3  
 0.5s 2.80nm 4.6mb

NUR 66.89 333 iP 10 12.40 -1.4  
 0.3s 2.70nm 4.8mb  
 NB2 70.46 339 P 10 38.50 2.5X  
 1.5s 9.40nm 4.6mb

HFS 70.55 338 eP 10 38.00 1.6  
 0.3s 3.70nm 4.9mb  
 Z 17s 0.02um 3.5mszX

e 10 41.00  
 e 10 43.50  
 LR 37 03.00  
 S.D. = 1.5 on 6 of 8 obs.

? MAY 25, 1991 19h 09m 25.28±4.55s  
 30.895 N ±99.6km 141.170 E ±45.9km  
 DEPTH = 33.0km (normal)

3.9mb ( 3 obs.)  
 SOUTH OF HONSHU, JAPAN (211)

GUN 47.85 281 P 18 02.68 0.2  
 PKI 48.35 281 P 18 06.36 0.1  
 KKN 48.39 281 P 18 06.34 -0.1  
 DMN 48.59 281 P 18 07.98 -0.1  
 GKN 48.87 282 P 18 09.96 -0.1  
 YKA 69.24 29 eP 20 30.60 0.0  
 0.7s 0.90nm 3.9mb

HFS 79.60 336 (P) 21 30.00 -0.3  
 0.4s 0.90nm 4.1mb  
 e 21 36.70

NB2 79.77 338 P 21 31.60 0.3  
 0.6s 0.60nm 3.8mb  
 S.D. = 0.2 on 8 of 8 obs.

? MAY 25, 1991 19h 14m 15.53±0.87s  
 7.484 N ±13.9km 126.716 E ±21.6km  
 DEPTH = 70.0km (geophysicist)

4.2mb ( 5 obs.)  
 MINDANAO, PHILIPPINE ISLANDS (259)

MTN 20.67 168 eP 18 52.00 0.0  
 WB2 28.27 165 iPc 20 03.50 -0.9  
 0.6s 2.50nm 4.0mb

OIS 30.61 156 iPc 20 25.00 -0.3  
 0.4s 14.00nm 5.0mb  
 ASPA 31.75 167 eP 20 35.60 0.4  
 1.0s 4.40nm 4.2mb

WARB 33.47 180 eP 20 51.00 0.9  
 FORR 38.14 178 eP 21 29.70 0.1  
 STK 41.64 161 eP 22 10.40 11.8X  
 0.5s 2.30nm  
 e 24 02.60

GBA 48.76 281 Pc 22 55.30 -0.3  
 0.6s 2.40nm 4.4mb  
 YKA 96.11 24 eP 27 36.70 0.2  
 0.9s 0.60nm 4.1mb

S.D. = 0.6 on 0 of 9 obs.

\* MAY 25, 1991 20h 15m 46.75±1.91s  
 45.539 N ±11.7km 3.652 E ±13.8km  
 DEPTH = 10.0km (geophysicist)

FRANCE (538)  
 ML 1.9 (LDG).

MAF 1.02 312 Pg 16 06.20 0.1  
 Sg 16 19.20

SMF 1.11 7 Pg 16 06.60 -1.1  
 Sg 16 20.40

BGF 1.16 331 Pg 16 08.20 -0.3  
 Sg 16 23.20

TCF 1.25 307 Pg 16 10.40 0.3  
 Sg 16 26.60



AVF 1.27 351 Pg 16 09.60 -0.7  
Sg 16 25.60  
CAF 1.28 242 Pg 16 10.20 -0.3  
Sg 16 28.40  
SSF 1.53 356 Pg 16 15.00 0.9  
Sg 16 33.20  
LOR 1.74 5 Pg 16 18.00 0.9  
Sg 16 40.00  
S.D. = 0.8 on 8 of 8 obs.

MAY 25, 1991 20h 57m 30.38±0.67s  
43.923 N ± 5.1km 13.144 E ± 6.7km  
DEPTH = 10.0km (geophysicist)

CENTRAL ITALY (381)  
ML 3.0 (KBA). MD 2.9 (TRI).

ARV 0.45 199 P 57 39.20 -0.3  
eSg 57 46.50  
CRE 0.91 252 P 57 48.00 0.1  
eSg 58 02.00  
ASS 0.92 203 P 57 47.90 -0.1  
eSg 58 03.10  
SFI 0.93 270 P 57 48.00 -0.2  
eSg 58 02.30  
PGD 1.03 268 P 57 50.30 0.4  
eSg 58 07.90  
FIR 1.37 265 e(Pg) 58 06.50 11.0X  
i(Sg) 58 18.00  
RIY 1.67 32 iPnc 58 08.70 0.9  
iSn 58 23.40  
MME 1.78 280 P 58 01.50 -0.2  
eSg 58 25.50  
TRI 1.84 14 ePn 58 02.10 -0.1  
iSg 58 26.50  
BDI 1.84 275 P 58 02.40 0.0  
eSn 58 27.40  
PII 1.91 265 P 58 03.90 0.7  
eSn 58 27.40  
CTI 2.37 334 P 58 10.00 -0.1  
eSn 58 38.00  
FVI 2.68 355 P 58 12.50 -1.8  
eSn 58 43.80  
PTJ 2.81 44 eP 58 23.60 7.3X  
KBA 3.16 2 iPnc 58 22.00 0.8  
iPg 58 30.30  
i 58 36.30  
iSn 59 00.00  
i 59 12.00  
i 59 14.30  
S.D. = 0.7 on 13 of 15 obs.

% MAY 25, 1991 22h 17m 40.53±1.45s  
40.656 N ± 11.6km 30.097 E ± 12.3km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 3.0 (ISK).

EYL 0.10 153 iPg 17 42.30 -1.1  
HRT 0.37 297 ePg 17 47.70 -0.4  
eSg 17 52.70  
GBZT 0.51 285 ePg 17 49.90 -1.0  
iSg 17 58.80  
IZI 0.57 236 iPg 17 51.40 -0.8  
eSg 18 00.30  
CTT 1.36 292 iPn 18 05.20 -0.2  
ALT 1.60 180 ePn 18 09.80 0.8  
BNT 1.69 260 ePn 18 11.00 0.8  
EDC 1.73 260 ePn 18 12.00 1.2  
DMK 2.11 304 ePn 18 17.00 0.6  
S.D. = 1.0 on 9 of 9 obs.

\* MAY 25, 1991 22h 25m 10.30±0.56s  
5.812 S ± 11.5km 77.086 W ± 17.9km  
DEPTH = 33.0km (normol)  
4.5mb (4 obs.)  
NORTHERN PERU (111)

NNA 6.14 178 iPc 26 40.80 -0.4  
0.4s 45.76nm 5.5mb  
eS 27 47.50  
HUA 6.43 164 iPd 26 54.50 8.9X  
iS 28 09.40  
ZOBO 13.61 141 P 28 24.70 0.7  
Z 20s 0.23um  
LR 34 20.00  
LPB 13.82 141 eP 28 37.00 10.3X

CNCB 14.10 142 eP 28 35.00 4.5X  
i 28 40.20  
SIV 18.68 124 P 29 27.60 -0.6  
TUL 45.07 338 eP 33 25.90 0.9  
0.7s 5.90nm 4.6mb  
ALQ 49.08 328 eP 33 56.20 -0.6  
0.9s 3.78nm 4.4mb  
FRB 69.67 4 eP 36 12.00 -6.3X  
YKA 73.90 343 eP 36 42.30 -1.3  
0.5s 1.60nm 4.3mb  
INK 83.62 342 eP 37 37.00 0.6  
WB2 139.86 230 ePKP 44 38.40 0.6  
0.5s 1.20nm  
WRA 139.87 230 PKP 44 38.00 0.2  
2.8s 0.80nm  
GKN 151.93 36 PKP 45 04.40 6.7X  
KKN 152.46 35 PKP 45 05.60 7.1X  
S.D. = 0.9 on 9 of 15 obs.

? MAY 25, 1991 23h 07m 24.64±0.85s  
39.294 N ± 35.9km 74.086 E ± 44.9km  
DEPTH = 33.0km (normol)  
4.1mb (5 obs.)

SOUTHERN XINJIANG, CHINA (321)

GKN 14.27 139 P 10 45.60 -0.9  
KKN 14.77 138 P 10 53.00 -0.2  
DMN 14.83 138 P 10 53.20 -0.8  
GUN 15.00 136 P 10 56.80 0.6  
PKI 15.02 138 P 10 56.40 -0.1  
HFS 42.44 320 eP 15 17.20 -0.4  
0.6s 2.50nm 4.1mb  
e 15 20.70  
e 15 26.20  
e 15 30.00  
NB2 43.68 321 P 15 27.90 0.2  
0.7s 1.80nm 4.0mb  
YKA 78.32 4 eP 19 21.60 -0.9  
0.6s 0.90nm 4.0mb  
WRA 81.47 124 P 19 41.00 1.0  
0.7s 2.20nm 4.3mb  
WB2 81.48 124 iPc 19 41.60 1.5  
0.6s 3.10nm 4.5mb  
S.D. = 0.9 on 10 of 10 obs.

\* MAY 26, 1991 00h 22m 44.27±0.84s  
37.038 N ± 9.4km 29.380 E ± 6.1km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 3.5 (ISK).

ELL 0.51 124 iPg 22 54.50 -0.2  
iSg 23 04.00  
YER 0.88 277 ePn 23 01.50 0.2  
BCK 1.05 66 iPn 23 04.50 0.3  
CIN 1.17 299 ePn 23 06.00 -0.2  
iSg 23 37.00  
KHL 1.29 5 iPn 23 08.00 -0.2  
S.D. = 0.4 on 5 of 5 obs.

? MAY 26, 1991 01h 59m 29.40±1.00s  
37.709 N ± 7.8km 15.016 E ± 9.0km  
DEPTH = 10.0km (geophysicist)

SICILY (398)

MNO 0.34 311 P 59 36.50 0.0  
eSg 59 42.00  
ATN 0.57 38 P 59 41.00 0.0  
eSg 59 50.00  
MEU 0.61 186 P 59 41.80 0.0  
eSg 59 51.60  
GIB 0.83 290 P 59 45.50 0.0  
eSg 59 59.00  
S.D. = 0.1 on 4 of 4 obs.

\* MAY 26, 1991 02h 08m 18.95±0.66s  
28.976 N ± 8.2km 142.534 E ± 11.9km  
DEPTH = 41.9km (2 depth phases)  
4.2mb (4 obs.)

BONIN ISLANDS REGION (212)

KAKJ 7.48 345 eP 10 07.40 -0.8  
eS 11 28.80  
CHJJ 7.66 338 P 10 09.60 -1.2  
S 11 33.10  
MAT 8.38 335 eP 10 20.00 -0.7  
eS 11 52.00

MTMJ 8.57 334 eP 10 24.90 1.5  
NIJ 8.76 341 eP 10 25.90 -0.1  
OFUJ 10.10 356 eP 10 39.40 -5.1X  
eS 12 25.50  
CHG 40.92 266 eP 16 37.50 38.4X  
WB2 49.27 190 iPd 17 04.00 -1.6  
0.9s 11.70nm 4.9mb

WRA 49.27 190 P 17 18.00 12.3X  
0.7s 8.60nm  
GUN 49.41 283 P 17 07.60 0.4  
PKI 49.90 283 P 17 11.52 0.6  
KKN 49.95 283 P 17 11.14 -0.1  
DMN 50.15 283 P 17 12.46 -0.3  
GKN 50.44 284 P 17 14.62 -0.2  
INK 61.20 25 eP 18 31.50 0.1  
pP 18 44.00 44km  
YKA 70.35 29 eP 19 29.20 -0.8  
0.7s 1.70nm 4.2mb

SES 77.78 39 eP 20 13.00 -0.3  
pP 20 25.00 40km  
HFS 81.82 337 eP 20 35.30 0.6  
1.2s 3.10nm 4.2mb  
Z 16s 0.03um 3.7mszX

e 20 39.00  
e 20 41.80  
e 20 47.00  
LR 56 20.00  
NB2 81.98 338 P 20 37.00 1.4  
1.0s 1.80nm 4.1mb  
ZOBO 149.10 73 PKP 28 08.90 7.6X  
LPB 149.25 73 ePKP 28 03.00 1.7  
CNCB 149.49 73 PKP 28 09.00 7.1X  
S.D. = 1.0 on 17 of 22 obs.

% MAY 26, 1991 03h 06m 26.21±0.94s  
46.260 N ± 11.9km 8.769 E ± 7.2km  
DEPTH = 10.0km (geophysicist)  
SWITZERLAND (544)

VDL 0.54 65 iP 06 36.90 -0.2  
MMK 0.60 250 iP 06 38.00 -0.4  
LLS 0.63 14 iP 06 38.30 -0.7  
DIX 0.96 260 iP 06 45.00 0.3  
OSS 1.04 65 iP 06 46.40 0.4  
SLE 1.52 353 iP 06 54.10 0.6  
S.D. = 0.7 on 6 of 6 obs.

MAY 26, 1991 03h 22m 02.33±1.23s  
38.011 N ± 10.9km 20.142 E ± 6.9km  
DEPTH = 10.0km (geophysicist)  
3.7mb (1 obs.)  
GREECE (364)  
MD 3.6 (ATH). ML 3.5 (THE).

VLS 0.39 65 ePb 22 10.00 -0.3  
IGT 1.53 6 ePb 22 30.20 0.5  
eSb 22 51.40  
AGG 1.99 59 ePb 22 35.40 -1.0  
eSb 22 59.80  
LSK 2.17 9 ePn 22 43.50 4.5X  
iSn 23 16.00  
VLI 2.57 119 ePn 22 45.50 0.8  
KZN 2.62 28 ePn 22 46.00 0.5  
BERA 2.69 357 iPnd 22 54.30 7.9X  
iSn 23 26.40

LIT 2.77 40 ePn 22 49.20 1.6  
eS 23 22.00  
LCI 2.88 324 P 22 50.40 1.4  
eSn 23 27.60  
FNA 2.93 19 ePn 22 49.70 -0.1  
eSn 23 24.30  
OHR 3.14 9 ePn 22 52.70 -0.1  
SOI 3.23 272 P 22 47.80 -6.2X  
TIR 3.34 356 ePn 22 56.30 0.7  
TDS 3.40 300 P 22 55.00 -1.4  
LACI 3.64 355 ePn 23 05.30 5.5X  
BRT 3.66 322 P 23 00.00 -0.1  
PHP 3.68 3 ePn 22 58.50 -1.9  
ATN 3.69 274 P 22 56.00 -4.7X  
SOH 3.75 41 ePn 23 01.20 -0.3  
eSn 23 43.50

KNT 3.80 33 ePn 23 01.40 -0.8  
SKO 4.08 14 ePn 23 08.00 1.9  
i 23 21.00  
SRS 4.09 40 ePn 23 05.00 -1.2  
MEU 4.24 259 P 22 59.90 -8.6X  
eSn 23 46.90



26d 03h

VBY 8.33 336 e(Pn) 24 11.20 5.3X  
 HFS 22.52 352 eP 27 00.00 -3.3X  
 0.5s 1.30nm 3.7mb  
 Z 15s 0.03um 2.9mszX  
 S.D. = 1.2 on 17 of 25 obs.

MAY 26, 1991 03h 54m 48.19 ± 0.20s  
 22.341 S ± 5.0km 174.264 E ± 5.1km  
 DEPTH = 33.0km (normol)  
 5.2mb (23 obs.) 5.1msz (4 obs.)  
 LOYALTY ISLANDS REGION (189)  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 165, 29C  
 Centroid Location:  
 Origin Time 03:54:52.8 1.1  
 Lot 22.095 0.14 Lon 174.31E 0.10  
 Dep 15.0 FLX Half-duration 2.0  
 Moment Tensor: Scale 10\*\*17 Nm  
 Mrr= 0.35 0.06 Mtt=-0.73 0.09  
 Mff= 0.39 0.09 Mrt= 1.02 0.23  
 Mrf=-0.94 0.16 Mtf= 0.19 0.06  
 Principal Axes:  
 T Vol= 1.48 Plg=49 Azm= 63  
 N 0.10 20 309  
 P -1.58 34 204  
 Best Double Couple: Mo=1.5\*10\*\*17  
 NP1: Strike=241 Dip=22 Slip= 21  
 NP2: 132 82 110

PVC 7.23 308 iPc 56 40.00 5.8X  
 DZM 7.25 271 iPd 56 33.00 -1.7  
 58 06.00  
 MNG 18.25 177 P 59 00.70 0.1  
 PGZ 18.30 175 eP 59 00.10 -1.1  
 WEL 18.89 179 Pc 59 09.30 0.9  
 1.4s 114.23nm 4.9mb

THZ 19.40 183 P 59 14.40 -0.1  
 BRS 20.13 251 iPd 59 22.50 0.2  
 LTZ 20.45 184 eP 59 23.90 -1.7  
 59 32.50  
 COO 21.62 243 eP 59 38.00 0.4  
 RIV 23.32 236 eP 59 56.00 1.8  
 RMO 23.58 255 iPc 59 58.50 1.7  
 00 09.20  
 CNB 25.28 234 eP 00 14.00 0.8  
 00 24.80  
 CTA 26.19 270 eP 00 23.00 1.2  
 1.3s 88.46nm 5.2mb

CMS 26.88 244 eP 00 26.00 -2.0  
 OLP 27.63 255 eP 00 34.00 -0.8  
 TOO 29.04 232 eP 00 47.00 -0.5  
 TAU 30.37 221 eP 00 59.00 -0.3  
 STK 30.50 245 eP 01 10.80 10.3X  
 0.6s 2.20nm

BFD 31.08 234 eP 01 05.00 -0.6  
 ADE 33.46 240 eP 01 11.50 -15.0X  
 ASPA 37.09 260 eP 01 54.60 -2.9X  
 0.7s 16.70nm 5.0mb

WB2 37.23 266 iPc 01 55.70 -2.9X  
 0.9s 7.40nm 4.5mb  
 WRA 37.24 266 P 01 54.00 -4.7X  
 0.5s 5.40nm 4.7mb

WARB 43.40 255 eP 02 48.00 -1.6  
 GUA 45.82 318 eP 03 09.50 0.5  
 0.8s 107.46nm 5.8mb

MBL 50.33 260 eP 03 41.00 -3.2X  
 CHJJ 66.97 329 P 05 39.00 -0.8  
 IUDJ 67.03 328 iP+ 05 39.30 -1.0  
 MAT 67.74 329 eP 05 43.00 -1.7  
 1.4s 51.16nm 5.4mb

SPA 67.79 180 iPd 05 44.00 -0.9  
 1.7s 40.63nm 5.2mb  
 MTMJ 67.97 329 P 05 45.60 -0.6  
 TSRJ 68.03 327 P 05 46.10 -0.4  
 ADK 74.33 6 eP 06 20.80 -3.1X  
 1.7s 304.10nm 6.0mb

NJ2 75.71 314 Pc 06 33.50 1.2  
 IPM 76.34 281 ePc 06 39.90 3.6X  
 WHN 77.92 310 eP 06 47.20 2.6X  
 MDJ 78.13 329 eP 06 44.00 -1.5  
 1.5s 40.00nm 5.2mb  
 TIA 79.40 316 eP 06 52.90 0.3  
 CN2 79.59 326 eP 06 51.20 -2.3

GYA 81.44 303 P 07 07.80 4.0X  
 BJI 82.32 319 eP 07 08.00 0.1  
 1.5s 18.00nm 4.9mb  
 TIY 83.31 315 eP 07 14.00 0.8  
 Z 26s 0.57um 4.8mszX

XAN 83.67 311 P 07 16.00 0.9  
 GCC 84.19 46 ePc 07 17.90 0.3  
 CHG 84.20 293 eP 07 20.90 2.9  
 PRS 84.23 47 ePc 07 18.10 0.3  
 KDC 84.48 17 eP 07 18.30 -0.2  
 BKS 84.50 45 iPd 07 19.90 0.8

1.3s 110.00nm 5.9mb  
 Z 20s 1.10um 5.2msz  
 N 20s 0.70um  
 E 20s 1.00um

MHC 84.60 46 ePc 07 20.60 0.8  
 PRI 84.61 48 eP 07 20.40 0.6  
 LLA 84.67 47 ePc 07 20.60 0.6  
 ABL 84.92 49 P 07 21.50 -0.1  
 MWC 85.42 50 eP 07 24.00 -0.1  
 HHC 85.65 317 P 07 26.40 1.5

FRI 85.71 47 ePc 07 25.10 -0.1  
 RVR 85.79 51 eP 07 26.00 0.3  
 CMB 85.81 46 ePc 07 25.90 0.2  
 SBB 85.83 50 eP 07 26.00 0.1  
 PLM 85.84 52 eP 07 26.00 -0.2  
 CD2 85.85 306 P 07 27.00 0.9

ORV 85.90 44 eP 07 26.10 0.0  
 MIN 86.27 44 ePc 07 27.80 -0.3  
 BTO 86.48 317 eP 07 30.00 1.0  
 LBFM 86.64 43 P 07 30.00 0.0  
 TPC 86.80 51 eP 07 31.00 0.3  
 GSC 86.86 50 eP 07 31.00 0.0  
 GLA 87.18 53 eP 07 33.00 0.5

TNP 87.97 47 P 07 36.00 -0.4  
 1.0s 12.08nm 5.1mb  
 LZH 88.30 310 eP 07 38.50 0.5  
 1.5s 17.00nm 5.1mb  
 Z 25s 0.31um 4.6mszX

PMR 88.65 17 eP 07 37.50 -1.4  
 1.2s 16.50nm 5.2mb  
 BMW 88.73 38 P 07 40.00 0.3  
 GMW 89.58 37 P 07 43.70 0.1  
 LON 89.69 38 P 07 43.50 -0.7  
 TOA 89.88 17 eP 07 44.30 -0.5

YAK 91.26 341 eP 07 49.10 -1.9  
 IMA 91.43 13 ePc 07 50.90 -1.0  
 1.8s 22.70nm 5.3mb  
 MSU 91.65 49 P 07 54.00 0.3  
 FBA 91.74 15 eP 07 51.70 -1.5

1.1s 32.80nm 5.7mb  
 PNT 92.32 37 eP 07 56.00 -0.2  
 0.7s 5.00nm 5.1mb  
 GTA 92.68 312 eP 07 58.00 -0.2  
 1.4s 20.00nm 5.4mb

ALQ 94.24 54 ePc 08 05.20 -0.4  
 1.1s 13.61nm 5.3mb  
 Z 18s 0.52um 5.0msz  
 ANMO 94.24 54 P 08 05.20 -0.4  
 1.0s 43.75nm 5.8mb

GOL 96.94 50 P 08 17.50 -0.4  
 0.9s 3.08nm 4.8mb  
 YKA 101.29 27 ePd if 08 34.80 -1.9  
 1.0s 1.20nm 4.4mb

NUR 136.35 339 ePKP 14 12.00 4.3X  
 NB2 139.57 347 PKP 14 14.90 1.2  
 1.3s 4.20nm  
 HFS 139.83 345 (PKP) 14 04.80 -9.4X  
 0.6s 1.70nm

Z 11s 0.02um 4.0mszX  
 e 14 09.00  
 e 14 12.30  
 e 14 18.10  
 e 14 21.10

MLR 145.37 319 ePKP 14 27.00 2.5X  
 KRA 145.77 330 ePKP 14 23.50 -1.3  
 1.3s 55.00nm  
 SPC 146.23 329 ePKP 14 24.60 -1.3  
 KSP 146.76 334 ePKP 14 25.50 0.1  
 1.2s 34.00nm

i 14 38.00  
 EKA 147.00 357 PKPd 14 25.10 -0.5  
 1.6s 31.20nm

PSZ 147.26 327 ePKP 14 29.00 1.6  
 GZR 147.29 322 ePKPd 14 28.00 0.5  
 CLL 147.62 338 iPKPc 14 28.40 0.7  
 1.1s 17.00nm

e 14 38.00  
 BRG 147.64 337 iPKP 14 28.80 1.0  
 1.3s 14.00nm  
 e 14 37.50

SRO 148.11 329 ePKP 14 34.10 5.5X  
 WIT 148.12 346 ePKP 14 33.00 4.5X  
 PRU 148.13 335 PKPc 14 30.00 1.4  
 e 14 41.00  
 e 14 50.00

ZST 148.40 330 ePKP 14 33.30 4.2X  
 DMU 148.48 1 ePKP 14 31.00 2.0  
 MOX 148.66 339 ePKP 14 32.00 2.5X  
 WTS 148.85 345 ePKP 14 33.00 3.4X  
 0.9s 16.00nm

DCN 149.02 2 ePKP 14 32.00 2.1  
 KHC 149.19 335 PKPc 14 33.00 2.6X  
 1.4s 22.00nm  
 GRF 149.60 338 iPKPc 14 33.80 2.9X  
 Z 21s 0.10um 4.6msz

e 14 51.10  
 ETA 149.69 1 ePKP 14 39.40 8.5X  
 SKO 150.00 317 ePKP 14 35.50 3.7X  
 i 14 39.00  
 EC8 150.02 1 ePKP 14 40.70 9.3X

ENN 150.20 345 ePKP 14 36.00 4.3X  
 0.9s 21.00nm  
 ECP 150.21 1 ePKP 14 35.20 3.5X  
 VAL 150.25 6 ePKP 14 35.00 3.2X  
 MEM 150.32 345 PKP 14 39.80 7.9X

ec 14 46.90  
 SNF 150.81 347 PKP 14 41.30 8.6X  
 OHR 150.86 316 ePKP 14 38.00 4.8X  
 KBA 150.91 333 iPKPd 14 34.00 0.8  
 0.8s 8.00nm

i 14 37.20  
 DOU 151.13 346 PKP 14 43.10 9.9X  
 LJU 151.18 330 ePKP 14 37.50 4.1X  
 VBY 151.23 328 ePKP 14 40.50 7.0X

GWf 151.38 341 PKP 14 39.31 5.7X  
 CEY 151.45 330 ePKP 14 42.00 8.1X  
 VOY 151.48 331 ePKP 14 38.10 4.1X  
 WLS 151.96 341 PKP 14 40.54 6.0X

CDf 151.99 341 PKP 14 40.41 5.8X  
 ECH 152.20 341 PKP 14 44.60 9.7X  
 FEL 152.24 340 PKP 14 46.23 11.1X  
 VITF 152.53 343 PKP 14 41.70 6.5X

BSF 152.65 341 PKP 14 45.01 9.4X  
 LOMF 153.07 341 PKP 14 40.06 3.9X  
 LOR 153.95 345 ePKP 14 48.40 11.0X  
 0.6s 2.70nm

Z 20s 0.30um 5.1msz  
 LBF 154.19 345 ePKP 14 49.10 11.4X  
 0.8s 4.05nm  
 SSF 154.23 345 ePKP 14 49.70 12.0X  
 0.8s 4.05nm

AVF 154.52 345 ePKP 14 50.60 12.6X  
 0.8s 4.05nm  
 SMF 154.54 345 ePKP 14 50.60 12.5X  
 0.8s 6.70nm

LPG 154.75 339 ePKP 14 55.10 16.3X  
 0.8s 4.05nm  
 TCF 155.25 347 ePKP 14 51.20 12.1X  
 0.8s 4.05nm  
 LSF 155.43 348 ePKP 14 51.40 12.1X  
 0.8s 4.05nm

CAF 156.58 346 ePKP 14 49.90 8.9X  
 1.0s 6.00nm  
 S.D. = 1.0 on 86 of 138 obs.

\* MAY 26, 1991 04h 32m 18.10 ± 1.25s  
 1.008 S ± 16.0km 76.321 W ± 14.0km  
 DEPTH = 10.0km (geophysicist)  
 ECUADOR (107)

VC1 2.12 280 eP+ 32 55.60 1.1  
 TUNG 2.16 259 P 32 54.10 -0.9  
 QTO 2.35 290 eP 33 06.80 9.0X  
 eS 33 39.40

OUR 2.36 291 iPd 33 08.00 10.1X  
 COTA 2.42 303 eP 32 58.70 -0.1  
 YANA 2.42 292 P+ 32 58.80 0.0  
 GGP 2.42 290 Pd 32 58.80 -0.1  
 NNA 10.92 183 eP 34 57.30 -0.3



0.6s 4.67nm 5.0mb  
 ZOBO 17.18 152 P 36 47.70 1.5  
 S 40 00.00  
 LR 45 32.00  
 SIV 21.16 136 P 37 04.80 -1.2  
 S.D. = 1.1 on 8 of 10 obs.

? MAY 26, 1991 05h 12m 37.80 ± 4.86s  
 35.257 S ± 37.6km 71.117 W ± 28.1km  
 DEPTH = 33.0km (normal)  
 CENTRAL CHILE (136)

LNV 1.32 349 iPc 13 01.00 1.0  
 iS 13 18.50  
 TACH 1.61 5 iPc 13 04.40 0.2  
 iS 13 24.60  
 PCH 1.71 17 iPd 13 06.50 0.7  
 iS 13 29.00  
 PEL 2.14 10 iPc 13 11.70 -0.2  
 iS 13 34.50  
 i 13 37.40  
 RFA 2.23 78 iPd 13 13.20 0.0  
 S 13 39.60  
 IHA 2.27 349 eP 13 13.00 -0.7  
 e(S) 13 34.50  
 ROCH 2.28 2 iPd 13 13.80 -0.3  
 iS 13 40.50  
 JACH 2.60 10 iP 13 18.00 -0.6  
 i 13 40.50  
 i 13 48.60  
 S.D. = 0.7 on 8 of 8 obs.

MAY 26, 1991 05h 29m 14.87 ± 1.00s  
 29.340 N ± 6.8km 80.332 E ± 5.4km  
 DEPTH = 64.9 ± 10.8 km  
 4.5mb (19 obs.)  
 NEPAL-INDIA BORDER REGION (309)

NDI 2.81 257 iPd 29 59.00 0.7  
 eSn 30 33.80  
 LSA 9.43 85 eP 31 28.60 -2.4  
 QUE 11.66 277 eP 32 01.40 0.5  
 eS 34 02.20  
 HYB 11.98 188 eP 32 03.00 -2.0  
 POO 12.28 210 eP 32 09.00 0.1  
 iS 34 19.20  
 BOM 12.45 215 eP 32 13.20 2.0  
 eS 34 30.50  
 WMO 15.60 20 P 32 53.40 1.2  
 1.0s 50.00nm 4.6mb  
 Z 12s 0.30um 3.3MsZ  
 N 12s 0.30um

GBA 15.89 190 Pc 32 55.10 -0.8  
 KOD 19.20 189 eP 33 45.20 8.4X  
 GYA 23.43 91 P 34 21.00 1.8  
 XAN 24.73 72 P 34 32.00 0.4  
 BTO 26.67 57 eP 34 50.00 0.4  
 HFS 53.46 325 eP 38 29.10 -1.1  
 0.4s 1.20nm 4.3mb  
 Z 16s 0.14um 4.1MsZ

BSF 58.20 311 eP 39 04.30 -0.3  
 0.6s 3.60nm 4.7mb

HAU 58.47 311 eP 39 06.10 -0.2  
 0.6s 2.70nm 4.6mb

LPG 58.66 308 eP 39 08.20 0.2  
 0.7s 7.70nm 4.9mb

LPL 58.67 308 eP 39 08.30 0.3  
 0.6s 9.90nm 5.1mb

LBF 60.24 310 eP 39 17.90 -0.6  
 0.6s 2.70nm 4.6mb

LOR 60.26 310 eP 39 17.90 -0.7  
 0.6s 1.80nm 4.4mb

SMF 60.41 310 eP 39 19.20 -0.4  
 0.6s 3.60nm 4.7mb

SSF 60.54 310 eP 39 20.10 -0.4  
 0.5s 2.20nm 4.5mb

AVF 60.70 310 eP 39 21.30 -0.3  
 0.5s 1.45nm 4.4mb

BGF 61.09 310 eP 39 23.90 -0.4  
 0.6s 2.70nm 4.6mb

MAF 61.36 309 eP 39 26.10 0.0  
 0.6s 3.15nm 4.6mb

TCF 61.59 310 eP 39 27.90 0.2  
 0.6s 2.25nm 4.5mb

LSF 62.05 310 eP 39 30.40 -0.4  
 0.6s 2.70nm 4.6mb  
 WRA 71.49 127 P 40 32.00 1.2  
 0.5s 1.40nm 4.1mb  
 WB2 71.50 127 iPd 40 31.60 0.7  
 0.5s 1.40nm 4.1mb  
 FBA 78.91 19 ePd 41 12.90 0.5  
 0.8s 8.97nm 4.8mb  
 INK 79.46 12 eP 41 15.50 0.3  
 YKA 87.71 7 eP 41 56.70 -0.6  
 0.8s 0.70nm 3.9mb  
 S.D. = 1.0 on 30 of 31 obs.

MAY 26, 1991 06h 12m 34.79 ± 0.28s  
 59.683 S ± 9.8km 26.005 W ± 9.9km  
 DEPTH = 33.0km (normal)  
 5.1mb (8 obs.)  
 SOUTH SANDWICH ISLANDS REGION (153)

SNA 14.49 147 iPc 15 57.30 -1.7  
 0.9s 152.94nm 5.5mb  
 SPA 30.49 180 iPc 18 47.80 1.2  
 1.5s 54.55nm 5.1mb  
 PCH 39.03 292 eP 20 00.00 0.1  
 LNV 39.18 290 eP 20 00.50 -0.4  
 TACH 39.20 291 iPd 20 01.10 -0.1  
 PEL 39.50 292 ePc 20 03.50 -0.3  
 1.3s 96.15nm 5.4mb  
 PPD 41.67 323 eP 20 21.90 0.3  
 SIV 50.56 314 P 21 31.00 -1.0  
 CNCB 52.49 306 P 21 47.80 0.6  
 LPB 52.79 306 P 21 52.00 2.7X  
 ZOBO 53.03 306 P 21 51.00 -0.3  
 1.0s 13.75nm 4.9mb  
 S 29 44.00  
 LR 38 36.00

ARE 54.27 303 eP 22 00.00 0.0  
 NNA 60.57 299 iPc 22 44.00 -0.3  
 0.8s 12.69nm 5.1mb  
 TAU 77.62 175 eP 24 29.00 0.2  
 STK 88.20 169 eP 25 36.10 12.7X  
 1.6s 1.90nm

ASPA 95.33 162 ePKP 25 56.80 0.1  
 0.5s 6.00nm 5.3mb

WRA 99.05 161 P 26 14.00 0.5  
 0.9s 0.80nm 4.2mb

WB2 99.05 161 eP 26 13.30 -0.2  
 0.7s 1.40nm 4.6mb

HFS 123.41 23 ePKP 31 24.80 -3.6X  
 0.4s 0.40nm

Z 14s 0.03um 4.1MsZ  
 NB2 123.79 21 PKP 31 29.40 0.1  
 0.9s 1.70nm

UPP 123.96 25 iPKP 31 47.00 17.5X  
 DMN 124.01 93 PKP 31 31.42 0.4

GKN 124.10 92 PKP 31 31.12 0.1  
 0.5s 11.00nm

PKI 124.14 93 PKP 31 31.48 0.1  
 KKN 124.25 93 PKP 31 31.58 0.1

GUN 124.65 93 PKP 31 32.86 0.5  
 0.7s 17.00nm

FRB 127.27 338 ePKP 31 36.00 0.2  
 YKA 139.24 315 ePKP 31 54.80 -3.7X  
 0.7s 2.30nm

GTA 140.80 96 ePKP 32 05.60 3.4X  
 TIY 145.69 111 ePKP 32 11.00 0.4

TIA 146.63 118 ePKP 32 14.90 2.8X  
 BTO 146.78 105 ePKP 32 15.00 2.6X

HHC 147.73 107 ePKP 32 18.50 4.6X  
 INK 148.95 317 ePKP 32 18.00 3.2X

BJI 149.30 113 ePKP 32 15.50 -0.7  
 FBA 153.31 306 ePKP 32 26.60 5.3X  
 0.7s 7.27nm

S.D. = 0.6 on 25 of 36 obs.

\* MAY 26, 1991 07h 02m 33.51 ± 0.62s  
 6.113 N ± 10.3km 117.168 E ± 12.1km  
 DEPTH = 33.0km (normal)  
 4.6mb (13 obs.) 4.2MsZ (1 obs.)  
 KALIMANTAN (261)  
 Felt at Koto Kinabalu, Malaysia.

TSM 2.08 154 ePd 03 06.80 0.0  
 1.0s 3329.70nm

QIZ 14.69 332 eP 06 04.40 3.6X  
 IPM 16.14 265 ePc 06 22.50 2.8  
 0.9s 34.60nm 4.5mb

SNG 16.47 275 eP 06 24.70 0.8  
 PSI 18.50 260 ePc 06 53.20 4.1X  
 CHG 21.79 307 eP 07 24.50 -0.2  
 0.9s 10.92nm 4.3mb

GYA 22.58 335 P 07 34.40 1.8  
 KMI 23.42 325 Pc 07 44.00 3.1X  
 1.6s 70.00nm 4.9mb

CD2 27.69 335 P 08 20.00 -0.8  
 WB2 30.92 147 iPd 08 48.30 -1.4  
 0.7s 5.40nm 4.5mb

TIY 31.75 353 eP 09 00.30 3.4X  
 Z 20s 0.50um 4.2MsZ

BJI 33.79 359 eP 09 17.00 2.5  
 1.0s 12.00nm 4.8mb

Z 16s 0.35um 4.2MsZ  
 ASPA 33.81 152 eP 09 16.10 1.2  
 1.3s 6.10nm 4.4mb

SNG 36.02 8 eP 09 34.90 1.4  
 GTA 36.66 337 eP 09 39.40 0.2  
 1.0s 10.00nm 4.7mb

GUN 36.75 310 P 09 39.78 -0.5  
 0.8s 59.00nm 5.5mb

PKI 36.94 309 P 09 40.84 -1.1  
 KKN 37.15 309 P 09 42.48 -1.0

DMN 37.19 309 P 09 43.04 -0.9  
 0.9s 33.00nm 5.2mb

GKN 37.75 309 P 09 47.66 -0.8  
 0.9s 52.00nm 5.4mb

HYB 39.35 290 eP 10 00.50 -1.4  
 STK 44.38 150 iPd 10 55.40 12.6X  
 0.7s 3.20nm

WMO 45.60 330 eP 10 51.40 -1.1  
 GAR 53.40 315 eP 11 51.50 -1.1

OBV 79.62 325 eP 14 38.00 -0.9  
 14 44.00

IMA 84.11 24 ePc 15 07.10 4.7X  
 0.8s 4.50nm 4.7mb

MLR 86.55 315 eP 15 15.50 0.6  
 HFS 91.40 331 eP 15 41.70 4.4X  
 0.5s 0.70nm 4.3mb

Z 13s 0.01um 3.6MsZ  
 YKA 101.07 22 ePd diff 16 24.60 3.4X  
 0.8s 1.20nm 4.5mb

S.D. = 1.4 on 21 of 29 obs.

% MAY 26, 1991 07h 18m 37.09 ± 0.71s  
 42.106 N ± 5.2km 20.009 E ± 6.0km  
 DEPTH = 10.0km (geophysicist)  
 YUGOSLAVIA (383)  
 ML 2.0 (TTG).

PVY 0.49 357 iPd 18 46.77 -0.3  
 iSg 18 56.09

ULC 0.58 256 iPc 18 48.77 -0.2  
 iSg 18 59.09

TTG 0.64 300 iPc 18 49.49 -0.5  
 iSg 19 01.64

IVA 0.77 354 iPd 18 52.27 0.1  
 iSg 19 04.52

BDV 0.90 282 iPd 18 54.34 0.1  
 iSg 19 10.47

NKY 1.03 314 iPc 18 57.12 0.5  
 iSg 19 14.65

OHR 1.16 149 ePg 18 58.80 0.0  
 eSg 19 13.00

HCV 1.17 287 iPc 18 59.05 0.1  
 iSg 19 18.70

BRY 1.34 307 iPd 19 01.97 0.0  
 iSg 19 22.77

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

? MAY 26, 1991 07h 39m 40.91 ± 2.53s  
 1.391 N ± 27.3km 126.902 E ± 33.0km  
 DEPTH = 163.8 ± 21.2 km  
 MOLUCCA PASSAGE (266)

MNI 2.06 271 ePd 40 18.00 0.0  
 eS 40 47.10

WB2 22.43 161 iPd 44 26.00 0.0  
 0.4s 52.90nm 5.4mb X

OIS 25.11 151 eP 44 52.00 -0.3  
 ASPA 25.82 165 iPc 44 58.00 0.0  
 0.4s 24.40nm 5.2mb X

eS 49 02.70

FORR 32.08 178 eP 45 54.30 0.0  
 STK 35.90 158 iPc 46 39.40 12.4X  
 0.6s 6.40nm



26d 07h

BRS 37.93 141 iPc 46 43.50 -0.7  
 COO 39.71 145 eP 47 00.00 1.1  
 GUN 47.26 308 P 48 00.00 0.0  
 S.D. = 0.7 on 8 of 9 obs.

\* MAY 26, 1991 08h 00m 19.81 ± 2.41s  
 43.370 N ± 14.2km 126.410 W ± 14.7km  
 DEPTH = 10.0km (geophysicist)  
 2.8mb (1 obs.)  
 OFF COAST OF OREGON (30)

HBO	3.01	80	P	01	08.17	-0.4
			S	01	47.65	
KMOR	3.08	42	P	01	08.51	-1.0
GT2	3.47	58	P	01	15.40	0.4
VLMW	3.81	54	P	01	20.12	0.3
RVW	3.81	42	P	01	19.67	-0.2
VBEM	3.86	62	P	01	20.88	0.3
LVP	3.93	45	P	01	21.54	0.0
VLL	3.98	57	P	01	22.95	0.6
MTMW	4.00	47	P	01	22.38	-0.2
FL2	4.04	44	P	01	23.35	0.2
VFP	4.05	60	P	01	23.98	0.7
GMO	4.08	73	P	01	23.22	-0.6
SHW	4.10	45	P	01	24.32	0.4
JLK	4.11	46	P	01	24.11	0.0
HSR	4.11	46	P	01	24.58	0.4
ERK	4.12	43	P	01	24.16	-0.1
APM	4.13	53	P	01	24.62	0.3
REMW	4.13	45	P	01	24.80	0.3
CZM	4.13	41	P	01	24.55	0.2
STD	4.13	45	P	01	24.74	0.3
ESD	4.15	46	P	01	24.90	0.2
CDFW	4.15	47	P	01	24.53	0.0
SOSW	4.18	45	P	01	25.78	0.7
TDL	4.22	44	P	01	25.58	-0.1
GULW	4.28	52	P	01	26.93	0.4
KOSW	4.30	43	P	01	26.87	0.0
VIPM	4.33	73	P	01	26.48	-0.9
LMW	4.40	40	P	01	28.21	-0.1
ASR	4.42	49	P	01	28.57	0.1
			S	02	25.30	
VGB	4.57	60	P	01	30.59	0.0
ODW	4.64	19	P	01	30.18	-1.4
LON	4.69	42	P	01	32.50	0.1
REMR	4.73	42	P	01	32.91	-0.1
GL2	4.75	55	P	01	33.11	-0.2
RVC	4.76	40	P	01	33.22	-0.1
			S	02	33.19	
WPW	4.79	44	P	01	33.95	0.1
FMW	4.89	42	P	01	35.09	-0.2
JBO	5.15	64	P	01	38.31	-0.5
MXC	5.40	51	P	01	41.97	-0.3
EBG	5.44	47	P	01	43.47	0.5
HTW	5.50	35	P	01	42.39	-1.4
TBM	5.59	45	P	01	45.40	0.3
CRF	6.05	53	P	01	51.27	-0.2
YKA	20.37	16	eP	05	00.00	1.1
	0.6s			0.30nm		2.8mb
S.D.	= 0.5 on 44 of 44 obs.					

MAY 26, 1991 08h 02m 42.56 ± 0.31s  
 40.898 N ± 7.4km 94.577 E ± 6.5km  
 DEPTH = 33.0km (normal)  
 4.5mb (15 obs.)

GANSU PROVINCE, CHINA (322)

GTA	4.28	109	Pn	03	47.40	0.2
			Pg	03	59.00	
WMO	5.87	302	Pn	04	10.60	0.9
	Z	10s		0.70um		
			Sn	05	14.00	
LZH	8.71	121	eP	04	49.50	0.1
	Z	10s		0.27um		
			S	06	25.50	
TIY	14.19	97	eP	06	12.10	8.9X
KKN	15.15	213	P	06	16.28	0.3
GYA	17.54	141	P	06	46.20	0.0
GAR	18.69	272	eP	06	55.10	-5.2X
SOD	44.64	329	iP	10	54.50	1.3
KAF	44.96	322	eP	10	56.70	0.8
	0.4s			1.40nm		4.2mb
				esP	10	57.30
NUR	45.93	320	iP	11	04.30	0.8
	0.8s			8.90nm		4.7mb
UPP	49.50	320	iP	11	31.60	0.2
HFS	51.34	321	eP	11	44.70	-0.7

	0.4s		1.50nm		4.3mb	
Z	17s		0.05um		3.6mszX	
			e	11	50.10	
			e	11	51.80	
			e	12	29.20	
			LR	31	42.00	
NB2	52.24	322	P	11	51.80	-0.5
	0.6s		1.60nm		4.2mb	
CDF	59.33	309	eP	12	42.90	-0.7
LPG	61.06	307	eP	12	55.80	0.1
	0.6s		2.70nm		4.6mb	
LPL	61.07	307	eP	12	55.10	-0.5
	0.6s		2.25nm		4.5mb	
SMF	62.22	309	eP	13	02.40	-0.8
	0.6s		2.70nm		4.6mb	
MAF	63.20	309	eP	13	09.40	-0.2
	0.6s		3.60nm		4.7mb	
TCF	63.37	309	eP	13	10.40	-0.4
	0.6s		1.80nm		4.4mb	
LDF	63.48	312	eP	13	10.90	-0.5
	0.6s		2.70nm		4.5mb	
GRR	64.00	312	eP	13	14.50	-0.3
	0.6s		4.50nm		4.7mb	
MFF	64.57	310	eP	13	18.50	-0.1
	0.6s		3.60nm		4.6mb	
LAT	67.41	121	iPc	13	19.80	-17.2X
WRA	70.91	140	P	14	02.00	3.5X
	0.8s		0.90nm		3.9mb	
WB2	70.92	140	iPd	14	02.00	3.5X
	0.8s		1.00nm		3.9mb	
ASPA	73.90	143	eP	14	20.30	4.3X
	0.7s		3.90nm		4.5mb	
YKA	74.32	14	eP	14	17.90	-0.1
	0.4s		0.10nm		3.2mb X	
S.D.	= 0.6 on 21 of 27 obs.					

% MAY 26, 1991 09h 00m 16.22 ± 0.73s  
 59.814 N ± 6.7km 6.064 E ± 5.5km  
 DEPTH = 10.0km (geophysicist)  
 SOUTHERN NORWAY (535)  
 MD 2.6 (BER).

ODD1	0.30	71	iPd	00	23.37	0.9
EGD	0.62	318	eP	00	27.99	-0.7
			eS	00	36.03	
BER	0.68	328	iP	00	29.61	0.0
			eS	00	37.55	
KMY	0.73	215	iPc	00	30.85	0.3
			eS	00	40.41	
ASK	0.80	327	iP	00	31.26	-0.5
			iS	00	41.35	
HYA	1.36	3	iP	00	41.08	0.0
			iS	00	58.91	
SUE	1.40	333	eP	00	41.28	-0.5
			eS	00	58.50	
FOO	1.86	345	eP	00	50.36	2.0
			eS	01	12.17	
FRO	2.03	344	eP	00	51.44	0.6
			eS	01	16.11	
MOL	2.86	14	eP	01	01.87	-0.8
NRA0	2.88	69	Pn	01	02.50	-0.5
			Sn	01	36.40	
			Lg	01	45.10	
HFS	3.85	82	eP	01	16.00	-0.7
	0.3s		0.80nm			
Z	13s		0.02um			
			eS	01	55.50	
S.D.	= 0.9 on 12 of 12 obs.					

MAY 26, 1991 10h 04m 25.46 ± 0.77s  
 20.003 S ± 9.3km 133.817 E ± 7.2km  
 DEPTH = 5.0km (geophysicist)  
 NORTHERN TERRITORY, AUSTRALIA (591)  
 ML 3.0 (OIS).

WB2	0.51	83	iPc	04	36.40	0.8
	0.1s		113.60nm			
ASPA	3.65	179	iPc	05	28.80	5.0X
	0.2s		30.20nm			
			iS	06	07.20	
OIS	5.46	97	eP	05	49.00	-0.6
			eS	06	38.00	
KNA	6.40	311	eP	06	03.90	1.1
			eS	07	11.00	
MTN	7.57	340	eP	06	18.00	-1.2
			eS	07	41.00	
WARB	9.02	226	eP	06	40.00	0.6

FORR 11.97 204 eS 08 21.00  
 S.D. = 1.2 on 6 of 7 obs.

MAY 26, 1991 10h 12m 14.79 ± 0.48s  
 7.499 S ± 3.3km 128.141 E ± 5.4km  
 DEPTH = 129.5 ± 4.7 km  
 5.4mb (35 obs.)

BANDA SEA (280)

AAI	3.79	1	iPd	13	15.20	2.7
MTN	6.07	151	eP	13	40.10	-3.4X
KNA	8.22	176	eP	14	09.20	-3.5X
			eS	15	33.00	
BKB2	12.81	298	iPc	15	26.10	12.8X
WB2	13.76	155	iPc	15	20.00	-5.6X
	0.4s		43.10nm			5.1mb
			iS	15	30.10	
DAV	14.71	350	eP	15	44.00	6.2X
TRT	15.37	268	ePd	15	44.40	-1.6
TSM	15.38	319	ePc	15	54.00	7.9X
MBL	15.78	210	eP	15	49.20	-1.9
	0.3s		24.00nm			5.0mb
			eS	18	31.00	
ASPA	17.00	162	iPd	16	02.50	-3.7X
	0.6s		281.70nm			5.7mb
			eS	18	58.00	
			iScS	28	13.20	
OIS	17.08	141	iPd	16	04.40	-2.8
			eS	18	56.00	
WARB	18.64	184	eP	16	25.00	-0.3
	0.3s		20.00nm			5.0mb
			eS	19	42.00	
PMG	18.90	97	eP	16	29.00	0.9
	1.2s		165.63nm			5.2mb
NANU	19.28	218	eP	16	32.00	0.0
	0.3s		18.00nm			4.9mb
			eS	19	59.00	
MEKA	21.09	205	eP	16	50.50	0.1
	0.4s		33.00nm			5.1mb
			eS	20	36.00	
CTA	21.56	127	iPd	16	56.00	0.9
	1.0s		74.00nm			5.0mb
			iS	20	47.80	
FORR	23.23	180	eP	17	11.80	0.6
	0.3s		34.00nm			5.2mb
			eS	21	26.00	
COOL	24.17	195	eP	17	20.70	0.3
OLP	24.38	143	iPc	17	22.50	0.1
	0.4s		86.00nm			5.6mb
			iS	21	53.00	
BAG	24.91	343	P	17	28.00	0.4
BAL	25.36	204	eP	17	31.70	0.2
KLB	25.86	201	eP	17	36.00	0.0
			eS	22	26.00	
KCM	26.51	290	eP	17	36.00	-6.1X
MUN	26.77	203	eP	17	44.00	-0.4
			eS	22	47.00	
RMO	27.22	136	e(P)	17	44.00	-4.5X
			e	18	11.00	
			eS	22	07.00	
NWAO	27.25	200	eP	17	48.70	0.0
			eS	23	00.00	
STK	27.31	154	iPc	18	00.80	11.6X
	0.5s		31.30nm			
			eS	23	13.30	
RKG	28.37	200	eP	18	04.00	5.2X
ADE	29.01	162	iPc	18	05.00	0.4
	0.6s		50.67nm			5.4mb
CMS	29.02	148	iPc	18	04.40	-0.2
	0.4s		15.00nm			5.0mb



CNB	33.85	148	iPd	18 47.80	0.9	LBF	118.41	320	ePKP	30 48.10	-0.6	YKA	93.06	24	eP	43 52.90	0.7
			e	25 53.00			0.6s		1.80nm				0.7s		0.40nm		4.0mb
KHT	36.72	307	iPd	19 12.80	1.5	BGF	119.29	320	ePKP	30 50.00	-0.3	S.D. = 0.8 on 31 of 34 obs.					
BDT	37.87	311	eP	19 21.90	1.0	TCF	119.80	320	ePKP	30 51.10	-0.2	* MAY 26, 1991 10h 39m 45.55±2.06s					
CHG	38.89	313	ePc	19 30.50	1.0		0.6s		1.80nm			47.833 N ±12.5km 153.387 E ±15.8km					
	1.0s	27.00nm		5.0mb		LPF	121.10	323	ePKP	30 51.40	-2.3X	DEPTH = 108.6 ± 19.6 km					
SSE	38.95	350	iPc	19 30.00	0.3		0.6s		3.60nm			4.3mb ( 11 obs.)					
	1.0s	49.00nm		5.2mb		MFF	121.17	321	ePKP	30 53.50	-0.4	KURIL ISLANDS (221)					
GYA	39.67	329	P	19 37.00	1.1		0.6s		3.60nm								
	1.4s	100.00nm		5.4mb		FRB	122.58	9	ePKP	30 56.00	0.0	KUSJ	7.72	235	P	41 35.60	-1.1
WHN	40.07	341	iPd	19 40.50	1.5	ALQ	123.08	53	ePKP	30 58.20	0.0				eS	42 57.70	
	1.0s	100.00nm		5.5mb		ANMO	123.08	53	ePKP	30 58.60	0.4	ASAJ	8.35	248	P	41 50.00	4.6X
NJ2	40.31	348	Pc	19 41.50	0.6	TUL	130.95	48	ePKP	31 13.70	0.7	HOQJ	8.98	236	eP	41 53.60	-0.2
	1.2s	100.00nm		5.4mb			1.1s		6.90nm						eS	43 30.50	
KMI	40.78	323	Pc	19 47.00	1.8	NNA	148.50	128	iPKPc	31 49.00	4.0X	MRRJ	10.24	243	eP	42 12.20	1.4
	1.5s	150.00nm		5.5mb			0.9s		21.01nm			OFUJ	12.20	228	eP	42 33.90	-2.7X
		pP	20 04.00	68kmX		BMA	149.06	194	ePKP	31 51.30	5.6X				eS	44 40.70	
TOKSJ	41.63	7	eP	19 52.20	0.5	ARE	149.27	141	ePKP	31 52.00	5.5X	ANM	27.72	38	e(P)	45 26.70	1.7
YONJ	42.75	6	eP	20 00.30	-0.6	VAO	149.31	189	ePKP	31 51.80	5.7X	SVW	31.58	46	eP	45 59.20	-0.2
TSRJ	43.44	9	eP	20 06.50	0.1	PPD	150.65	181	ePKP	31 54.10	6.1X				0.6s	5.91nm	4.5mb
IIDJ	43.73	12	eP	20 08.20	-0.6	CNCB	151.06	147	PKP	31 51.00	1.5	RSO	32.99	47	e(P)	45 57.70	-14.2X
CHJJ	44.50	13	eP	20 13.70	-1.3				i	31 57.00		FBA	35.20	39	ePc	46 29.90	-0.6
TIA	44.69	347	eP	20 15.60	-0.9	LPB	151.22	146	PKP	31 56.30	6.8X				0.7s	16.57nm	5.0mb
CD2	44.77	330	eP	20 17.30	0.1				i	32 06.00		INK	40.64	33	eP	47 16.00	0.3
	1.0s	100.00nm		5.5mb		ZOBO	151.42	146	PKP	31 51.60	1.6	KAF	62.54	335	eP	49 58.60	-0.8
MTMJ	44.78	11	eP	20 15.90	-1.4	SIV	154.94	159	PKP	32 03.70	9.5X				0.3s	1.00nm	4.3mb
MAT	44.81	12	eP	20 15.00	-2.5				i	32 19.40					eS	49 58.90	
	1.0s	30.00nm		5.0mb		S.D. = 1.0 on 86 of 107 obs.											
XAN	45.15	337	P	20 19.50	-0.7	MAY 26, 1991 10h 30m 44.83±1.15s											
	1.0s	100.00nm		5.5mb		11.342 N ± 6.0km 125.570 E ± 9.5km											
NIIJ	45.65	12	eP	20 22.70	-1.3	DEPTH = 66.4 ± 11.1 km											
YAMJ	46.77	13	eP	20 33.00	0.1	4.8mb ( 14 obs.)											
TIY	47.31	343	iPd	20 36.80	-0.4	SAMAR, PHILIPPINE ISLANDS (251)											
	1.0s	60.00nm		5.3mb		DAV	4.23	180	eP	31 49.00	0.7	HFS	67.51	339	eP	50 31.00	-0.3
Z	20s	0.38um		4.4Msz		BAG	6.99	317	eP	32 26.10	-0.9				0.4s	12.10nm	5.2mb
OFUJ	48.01	14	eP	20 42.20	-0.3	SSE	20.07	349	Pc	35 15.00	-0.4	Z	14s		0.04um	3.8MszX	
BJI	48.58	348	eP	20 46.00	-0.8		1.0s	49.00nm		4.8mb		WB2	69.60	199	eP	50 44.00	-0.6
	1.4s	120.00nm		5.5mb			Z	20s	0.50um		3.9Msz				1.0s	1.50nm	3.8mb
LZH	49.00	334	iPc	20 51.00	0.6	NJ2	21.52	344	Pd	35 31.00	0.9	WRA	69.60	199	P	50 44.00	-0.6
	1.0s	140.00nm		5.7mb		WHN	21.76	333	eP	35 33.00	0.5				1.6s	0.90nm	3.4mb
Z	26s	0.47um		4.4MszX			1.0s	30.00nm		4.7mb		ASPA	73.29	199	eP	51 08.10	1.5
N	15s	0.53um				GYA	23.32	313	P	35 50.40	2.4	LOR	81.63	340	eP	51 54.50	2.1
		sP	21 23.50			MTN	24.66	167	eP	36 00.50	-0.3	SSF	81.90	340	eP	51 54.80	1.0
SNY	49.26	355	iPd	20 52.00	-0.1	IPM	25.20	257	ePd	36 10.00	3.9X				0.6s	2.70nm	4.2mb
	1.2s	100.00nm		5.5mb			0.8s	32.80nm		4.9mb		ZOBO	133.66	62	PKP	58 45.00	-6.7X
HHC	50.47	344	P	21 02.00	0.5	TIA	25.91	344	eP	36 11.60	-0.9	Z	22s		0.11um	4.5Msz	
BTO	50.69	342	eP	21 02.20	-0.9	CHG	26.74	289	eP	36 20.10	-0.1				LR	45 12.00	
CN2	51.12	357	P	21 05.00	-1.1	XAN	27.24	329	P	36 23.70	-1.0	LPB	133.88	62	ePKP	58 50.00	-1.9
LSA	51.31	318	eP	21 09.30	0.9	TIY	28.78	338	eP	36 38.40	-0.2	CNCB	134.16	62	ePKP	58 54.00	1.3
MDJ	51.89	1	eP	21 11.70	-0.3	SNY	30.42	357	iPd	36 52.70	-0.3	S.D. = 1.2 on 20 of 24 obs.					
	1.5s	70.00nm		5.3mb		WB2	32.27	164	iPd	37 06.80	-2.6X	MAY 26, 1991 10h 59m 38.82±0.90s					
GTA	53.54	333	iPc	21 24.60	0.2		0.4s		1.70nm		4.2mb	38.326 N ± 8.0km 21.800 E ± 8.5km					
	1.0s	40.00nm		5.3mb		ASPA	35.73	167	eP	37 38.60	-0.7	DEPTH = 10.0km (geophysicist)					
		sP	21 53.60				0.4s		4.30nm		4.7mb	GREECE (364)					
GUN	53.91	313	P	21 27.18	-0.4				eS	43 04.20		ML 3.2 (THE), 3.2 (ATH).					
	0.8s	160.00nm		6.0mb		GTA	36.11	325	P	37 43.00	0.6	AGG	0.81	31	ePg	59 53.00	-1.5
PKI	54.07	312	P	21 28.14	-0.6		1.0s	10.00nm		4.7mb					eS	00 05.80	
	0.9s	100.00nm		5.7mb		WARB	37.31	178	eP	37 53.00	0.5	VLS	0.96	262	ePg	59 54.60	-2.6
KKN	54.28	312	P	21 29.42	-0.8	GUN	40.64	300	P	38 20.62	0.0	ATH	1.55	103	ePb	00 07.00	0.5
	0.9s	123.00nm		5.8mb			0.8s	57.00nm		5.5mb		IGT	1.66	317	ePb	00 09.60	1.5
DMN	54.31	312	P	21 29.96	-0.5	PKI	40.95	299	P	38 22.60	-0.5				eSb	00 34.80	
	1.0s	156.00nm		5.9mb			0.6s	20.00nm		5.1mb		VLI	1.84	150	ePn	00 12.00	1.3
GKN	54.87	312	P	21 33.88	-0.5	KKN	41.12	299	P	38 24.08	-0.3	LIT	1.85	17	iPbd	00 10.00	-0.9
HYB	54.89	297	ePd	21 33.00	-1.5		0.9s	41.00nm		5.2mb					eSb	00 36.60	
	1.0s	45.00nm		5.3mb		DMN	41.22	299	P	38 25.12	-0.1	KZN	1.98	359	ePb	00 14.00	1.2
WMO	62.82	328	P	22 28.20	-0.7	GKN	41.72	299	P	38 28.98	-0.3	PAIG	2.17	42	ePn	00 13.80	-1.6
	1.2s	100.00nm		5.6mb		STK	45.63	161	iPc	39 12.00	11.5X	FNA	2.48	353	ePn	00 21.00	1.1
YAK	69.32	1	iPc	23 09.00	-0.6		0.4s		5.10nm						eSn	00 51.60	
GAR	70.72	316	eP	23 18.10	-0.8	WMO	45.96	322	P	39 04.50	1.4	GRG	2.67	10	ePn	00 21.80	-0.8
MAIO	77.57	310	iPc	23 49.00	-9.3X	NDI	48.25	298	iPd	39 20.00	-1.2	SOH	2.77	25	ePn	00 23.90	-0.1
HFS	108.52	331	ePKP	30 29.20	-0.1		0.5s	14.08nm		5.2mb					eSn	00 59.50	
	0.4s	0.30nm		4.0MszX		YAK	50.68	3	eP	39 38.80	-0.4	OHR	2.89	345	ePn	00 27.50	1.8
Z	14s	0.03um				DZM	52.06	130	iPc	39 49.50	-0.9	VAY	3.05	11	ePn	00 28.50	0.6
YKA	109.00	26	ePd iff	26 27.20	1.1	GAR	56.08	310	eP	40 19.10	-0.7	SRS	3.11	26	ePn	00 28.50	-0.3
	0.7s	0.20nm				SOD	83.04	337	iP	43 05.10	1.1	SKO	3.65	356	ePn	00 43.00	6.4X
YKA	109.00	26	ePKP	30 29.50	-0.7	INK	83.55	22	eP	43 07.00	0.4	S.D. = 1.5 on 14 of 15 obs.					
	0.6s	1.30nm				KAF	84.36	332	eP	43 10.90	0.1	MAY 26, 1991 10h 59m 48.95±0.21s					
GRB5	112.83	320	ePKP	30 37.70	-0.2		1.0s	11.10nm		4.9mb		5.865 N ± 3.6km 116.746 E ± 5.2km					
BSF	116.32	320	ePKP	30 44.10	-0.7	NUR	85.53	331	eP	43 16.60	0.0	DEPTH = 33.0km (normol)					
	0.6s	3.60nm					0.6s		3.60nm		4.6mb	5.1mb ( 28 obs.) 4.5Msz ( 4 obs.)					
LPG	117.09	318	ePKP	30 46.20	-0.4	HFS	90.79	332	eP	43 41.50	-0.3	KALIMANTAN (261)					
	0.6s	1.80nm					0.4s		0.60nm		4.3mb						
LPL	117.10	318	ePKP	30 46.00	-0.5	Z	13s		0.04um		4.0MszX						
	0.6s	2.70nm															
LOR	118.38	320	ePKP	30 48.10	-0.5												
	0.8s	2.70nm															



26d 10h

One person died from shock and slight damage at Ronau, Malaysia. Felt at Melapap, Kota Kinabulu, Papar and along ports of the west coast of Sabah, Malaysia.

KKM 0.56 289 ePc 59 29.90 -30.6X  
TSM 2.10 141 ePd 00 20.00 -2.5  
e 00 49.70  
eS 01 00.00  
BKB2 7.08 179 ePd 01 49.50 16.6X  
DAV 8.86 82 eP 02 02.00 4.3X  
1.2s 800.00nm 6.8mb X  
QCP 9.70 26 eP 02 28.00 18.6X  
BAG 11.13 19 eP 02 30.00 0.8  
KGM 13.93 255 eP 03 06.00 -0.3  
TRT 14.09 197 ePc 03 10.10 1.7  
1.3s 47.20nm 5.0mb  
QIZ 14.71 333 Pd 03 17.00 0.4  
N 16s 2.10um  
E 15s 1.10um  
KLM 15.30 260 eP 03 30.80 6.5X  
IPM 15.71 266 ePc 03 32.90 3.3X  
1.0s 80.30nm 4.9mb  
SNG 16.08 276 eP 03 35.40 1.1  
1.3s 230.77nm 5.1mb  
eS 07 15.20  
e 18 22.10  
HKC 16.53 352 eP 03 42.00 2.0  
GZH 17.43 349 eP 03 52.00 0.7  
Z 18s 3.00um  
N 16s 1.90um  
E 16s 2.20um  
PSI 18.05 261 eP 04 06.50 7.5X  
NST 18.99 302 eP 04 12.00 1.4  
QZH 19.05 5 P 04 10.50 -0.7  
1.2s 40.00nm 4.5mb  
Z 15s 2.40um 4.7MsZ  
N 14s 1.50um  
ANP 19.75 13 eP 04 24.00 4.7X  
KHT 19.92 298 iPd 04 21.50 0.5  
BDT 20.71 305 eP 04 29.00 -0.2  
0.8s 150.60nm 5.4mb  
CHG 21.60 308 ePd 04 39.00 0.7  
1.9s 269.74nm 5.3mb  
eS 08 50.00  
GYA 22.63 336 P 04 49.00 0.5  
1.4s 100.00nm 5.1mb  
Z 30s 1.70um 4.3MsZ  
N 15s 2.00um  
E 15s 1.30um  
KMI 23.39 326 Pd 04 57.50 1.5  
4.0s 900.00nm 5.6mb X  
Z 14s 1.50um 4.6MsZ  
pP 05 04.00 23kmX  
WHN 24.65 355 eP 05 08.50 0.5  
Z 16s 1.80um 4.7MsZ  
N 16s 1.50um  
E 14s 1.20um  
PP 05 40.00  
SSE 25.44 9 eP 05 14.00 -1.5  
Z 18s 1.30um 4.5MsZ  
N 14s 1.10um  
E 14s 1.10um  
eS 09 40.00  
NJ2 26.13 4 Pc 05 22.00 0.2  
Z 18s 1.20um 4.5MsZ  
N 18s 1.40um  
E 16s 1.90um  
MBL 27.03 174 eP 05 30.00 -0.2  
e 06 03.00  
CD2 27.74 335 P 05 34.40 -2.3  
Z 16s 1.30um 4.6MsZ  
N 17s 1.30um  
XAN 28.96 346 eP 05 46.70 -0.9  
N 15s 4.90um  
E 13s 2.70um  
S 10 38.00  
TIA 30.20 1 eP 05 58.90 0.2  
Z 15s 3.40um 5.1MsZ  
N 14s 2.40um  
E 13s 1.00um  
S 10 59.00  
WB2 30.95 146 iPd 06 02.60 -2.8X  
0.9s 18.00nm 4.9mb

TIY 31.94 354 eP 08 59.80  
Z 17s 1.40um  
N 14s 1.20um  
LZH 32.33 340 eP 06 13.00 -4.5X  
2.0s 32.00nm 4.9mb  
Z 17s 2.56um 5.0MsZ  
N 12s 1.19um  
sP 06 27.50  
MEKA 32.33 177 eP 06 15.50 -1.9  
WARB 33.27 164 eP 06 25.00 -0.7  
ASPA 33.79 151 iPc 06 28.50 -1.7  
0.8s 9.10nm 4.7mb  
eS 11 43.30  
BJI 34.03 359 eP 06 31.50 -0.5  
1.5s 110.00nm 5.6mb  
Z 16s 2.90um 5.1MsZ  
N 16s 2.38um  
E 16s 1.34um  
eS 11 58.00  
OIS 34.55 140 iPd 06 35.40 -1.4  
BTO 35.10 351 P 06 40.00 -1.4  
N 15s 0.90um  
E 13s 0.70um  
eS 12 08.00  
HHC 35.14 353 P 06 41.20 -0.5  
Z 20s 1.10um 4.6MsZ  
N 15s 0.90um  
E 14s 1.00um  
eS 12 13.00  
BAL 36.26 180 eP 06 50.00 -1.2  
MAT 36.31 30 eP 06 51.00 -0.6  
SNY 36.32 9 Pc 06 50.50 -1.0  
1.6s 100.00nm 5.5mb  
Z 14s 1.50um 4.9MsZ  
E 17s 1.20um  
PP 08 16.00  
S 12 30.00  
GUN 36.58 310 P 06 54.24 -0.2  
GTA 36.73 338 Pd 06 54.00 -1.2  
0.8s 10.00nm 4.7mb  
Z 18s 1.50um 4.8MsZ  
E 13s 1.00um  
pP 07 03.80 33kmX  
sP 07 07.80  
PP 08 24.00  
PKI 36.77 310 Pd 06 55.32 -0.6  
KKN 36.98 310 P 06 57.16 -0.4  
DMN 37.02 309 P 06 57.66 -0.3  
0.9s 86.00nm 5.6mb  
GKN 37.58 310 P 07 02.14 -0.4  
FORR 38.09 164 eP 07 06.00 -0.5  
CN2 38.55 10 eP 07 09.30 -1.0  
1.0s 10.00nm 4.6mb  
Z 17s 1.80um 5.0MsZ  
N 14s 0.70um  
E 14s 0.30um  
pP 07 16.80 25kmX  
eS 13 01.00  
NWAO 38.58 179 eP 07 10.50 -0.1  
HYB 39.04 290 eP 07 15.00 0.2  
1.0s 35.00nm 5.1mb  
KOD 39.11 279 eP 07 16.70 1.0  
GBA 39.45 284 Pd 07 18.00 -0.1  
0.9s 15.40nm 4.8mb  
RKG 39.72 180 eP 07 25.00 4.9X  
MDJ 40.20 14 Pc 07 23.70 -0.3  
1.2s 60.00nm 5.2mb  
Z 30s 0.69um 4.3MsZ  
N 16s 0.58um  
E 16s 0.73um  
QLP 41.83 142 eP 07 38.00 0.5  
e 08 08.00  
POD 43.65 291 eP 07 49.50 -3.1X  
NDI 43.73 306 iPd 07 52.00 -1.0  
STK 44.39 149 iPd 08 10.00 11.7X  
1.1s 10.30nm  
e 08 45.90  
BOM 44.68 291 eP 07 57.00 -3.8X  
eS 14 49.00  
RMQ 44.68 138 e(P) 08 03.00 2.2  
e 09 46.00  
ADE 45.59 155 eP 08 08.00 0.1  
WMQ 45.61 331 P 08 07.20 -0.8  
6.0s 400.00nm 5.5mb X  
Z 16s 0.80um 4.8MsZ  
N 12s 0.50um

E 12s 0.50um  
pP 08 13.00 19kmX  
sP 08 24.00  
ScS 18 03.50  
CMS 46.37 145 eP 08 14.00 0.0  
BFD 49.13 153 iPd 08 35.30 -0.2  
0.8s 15.00nm 5.1mb  
COO 49.44 139 eP 08 39.00 0.9  
KSH 49.64 318 eP 08 40.00 0.4  
TOO 50.84 150 eP 08 49.00 0.3  
e 10 47.00  
CNB 51.18 146 eP 08 52.00 0.7  
QUE 52.64 304 iPd 09 01.60 -1.0  
ePP 09 33.20  
GAR 53.28 315 eP 09 06.00 -1.1  
TAU 55.91 153 eP 09 26.00 0.0  
YAK 56.85 7 iPc 09 32.00 -0.5  
MAIO 60.36 309 iPd 09 57.20 -0.3  
e 10 28.00  
ANM 79.53 25 eP 11 54.30 0.5  
OBN 79.58 325 iPc 11 53.00 -1.2  
1.3s \*\*\*\*\*nm 8.4mb X  
E 20s 0.40um  
e 11 59.00  
e 12 07.00  
i 12 25.00  
e 22 32.00  
e 23 12.00  
LQ 39 10.00  
LR 44 28.00  
HQL 79.93 299 P 11 57.30 0.7  
MAW 82.47 198 eP 12 10.40 1.3  
0.9s 16.00nm 5.1mb  
BRW 83.36 19 eP 12 15.20 1.5  
SVW 83.76 29 eP 12 17.70 1.7  
KEV 84.45 340 iP 12 18.80 -0.4  
e 12 50.00  
IMA 84.51 24 ePd 12 21.00 1.2  
1.1s 22.50nm 5.3mb  
SOD 84.67 337 iP 12 19.90 -0.5  
i 12 51.60  
KAF 85.07 332 iP 12 21.50 -0.9  
0.9s 36.70nm 5.6mb  
eS 12 22.40  
VRI 85.85 316 ePc 12 25.00 -1.7  
NUR 85.97 330 iP 12 26.10 -0.9  
1.0s 32.00nm 5.5mb  
i 12 58.00  
MLR 86.43 315 eP 12 30.00 0.3  
e 19 48.00  
SLKM 86.44 30 eP 12 29.80 0.5  
PMR 86.85 29 eP 12 31.90 0.7  
0.9s 10.90nm 5.1mb  
FBA 87.05 25 eP 12 34.60 2.4  
TOA 88.17 28 eP 12 39.20 1.5  
BALM 90.17 29 eP 12 47.80 0.5  
HFS 91.41 331 eP 12 50.20 -2.6X  
0.4s 0.60nm 4.3mb  
Z 13s 0.02um 3.7MsZ  
INK 91.76 20 eP 12 55.00 0.7  
KSP 92.06 321 ePc 12 56.20 0.2  
e 13 27.20  
NB2 92.35 332 P 12 55.30 -1.9  
1.2s 3.80nm 4.7mb  
PRU 93.34 321 eP 13 02.00 0.1  
e 13 33.50  
BRG 93.50 322 iPc 13 02.70 0.1  
1.4s 17.00nm 5.3mb  
e 13 34.00  
YKA 101.45 22 ePd i f 13 36.60 -1.8X  
0.8s 0.60nm 4.2mb  
ALQ 122.54 42 ePKP 18 45.00 1.6  
CNCB 168.18 157 PKP 19 57.00 2.3  
ZOBO 168.61 156 PKP 19 57.00 2.0  
S.D. = 1.1 on 88 of 104 abs.  
? MAY 26, 1991 11h 04m 53.22±6.20s  
15.653 N ±14.6km 59.910 W ±54.0km  
DEPTH = 33.0km (normal)  
LEEWARD ISLANDS (92)  
ML 3.0 (FDF).  
DEG 1.29 301 eP 05 15.00 0.0  
S 05 28.50  
MGG 1.38 281 eP 05 16.30 0.0  
S 05 32.00  
MVM 1.45 221 eP 05 17.16 -0.2



FDF 1.51 233 iPd 05 18.65 0.4  
0.1s 1.20nm  
S 05 35.40  
BBL 1.52 265 eP 05 18.00 -0.4  
S 05 36.00  
BIM 1.59 225 eP 05 19.44 0.0  
S 05 36.80  
PAG 1.74 283 eP 05 22.00 0.3  
S 05 42.00  
S.D. = 0.3 on 7 of 7 obs.

\* MAY 26, 1991 11h 14m 31.05±0.44s  
5.718 N ±11.0km 116.748 E ±14.8km  
DEPTH = 33.0km (normol)  
4.7mb ( 5 obs.)

KALIMANTAN (261)  
Felt at Koto Kinabulu, Melapop,  
Popor and Ronou, Maloysia.

KKM 0.62 301 ePc 14 13.10 -30.4X  
TSM 1.99 138 iPc 15 03.50 0.5  
0.9s 5247.20nm  
CHG 21.70 308 eP 19 21.90 0.6  
GYA 22.76 336 P 19 33.40 1.5  
KMI 23.51 327 Pc 19 41.00 1.7  
1.4s 30.00nm 4.6mb  
WB2 30.82 146 iPd 20 45.40 -1.0  
0.9s 5.50nm 4.4mb  
WARB 33.13 164 eP 21 07.50 1.0  
e 23 37.00  
ASPA 33.66 151 eP 21 10.40 -0.8  
1.1s 3.90nm 4.2mb  
BJI 34.17 359 eP 21 15.50 0.1  
OIS 34.44 140 iPd 21 17.80 -0.1  
GUN 36.68 311 P 21 36.92 -0.4  
0.6s 29.00nm 5.2mb  
PKI 36.87 310 P 21 37.72 -1.1  
KKN 37.07 310 P 21 39.76 -0.7  
DMN 37.12 310 P 21 40.44 -0.4  
GKN 37.67 310 P 21 44.68 -0.7  
0.9s 21.00nm 5.0mb  
FORR 37.95 164 eP 21 48.20 0.8  
MDJ 40.34 14 eP 22 06.20 -1.0  
STK 44.26 149 iPc 22 52.00 12.7X  
0.6s 4.90nm  
S.D. = 1.0 on 16 of 18 obs.

MAY 26, 1991 11h 16m 59.11±0.24s  
5.869 N ±4.2km 116.815 E ±6.1km  
DEPTH = 18.0km ( 6 depth phases)  
5.1mb ( 23 obs.) 4.7MsZ ( 6 obs.)

KALIMANTAN (261)

Felt at Ranau, Melapop, Popor  
and Kato Kinabulu and along  
parts of the west coast of  
Sabah, Maloysia.

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 13S, 22C

Centroid Location:

Origin Time 11:17: 3.0 1.7

Lat 6.13N 0.08 Lon 117.20E 0.15

Dep 15.0 FIX Hori-duration 1.6

Moment Tensor: Scale 10<sup>17</sup> Nm

Mrr=-1.00 0.08 Mtt=-0.20 0.08

Mff= 1.20 0.12 Mrt=-0.87 0.23

Mrf=-0.29 0.27 Mtf= 0.26 0.08

Principal Axes:

T Val= 1.35 Plg=13 Azm=107

N 0.21 29 204

P -1.56 58 356

Best Double Couple: Mo=1.5\*10<sup>17</sup>

NP1:Strike=164 Dip=41 Slip=-138

NP2: 40 64 -57

KKM 0.62 286 eP 16 43.00 -28.2X  
TSM 2.06 142 ePd 17 33.80 0.5  
eS 18 02.20  
BKB2 7.08 179 iPd 19 09.70 25.3X  
DAV 8.79 82 eP 19 14.00 5.7X  
BAG 11.11 19 eP 19 42.00 1.7  
KGM 14.00 255 eP 20 06.00 -12.8X  
TRT 14.11 197 ePc 20 21.90 1.6  
QIZ 14.74 333 P 20 29.30 0.7  
N 13s 2.70um  
E 14s 1.90um  
eS 23 14.00

KLM 15.37 260 eP 20 43.00 6.2X  
IPM 15.78 266 ePd 20 45.70 3.6X  
1.1s 75.20nm 4.8mb  
SNG 16.15 276 eP 20 48.60 1.8  
1.2s 131.25nm 4.9mb  
GZH 17.44 349 Pc 21 06.80 3.6X  
8.0s 2600.00nm 5.4mb X  
Z 16s 3.60um 3.6MsZ X  
N 15s 2.00um  
E 13s 3.40um  
PSI 18.12 261 ePc 21 20.60 9.0X  
QZH 19.04 5 P 21 22.50 -0.4  
6.0s 1400.00nm 5.4mb X  
Z 16s 3.50um 4.4MsZ X  
N 14s 2.60um  
NST 19.05 302 eP 21 25.00 2.0  
KHT 19.98 298 iPd 21 34.20 0.6  
CHG 21.65 308 ePd 21 51.90 1.1  
1.2s 62.50nm 4.9mb  
GYA 22.65 336 P 22 01.60 0.8  
4.0s 1900.00nm 5.9mb X  
Z 30s 2.00um 4.4MsZ X  
N 14s 2.20um  
E 14s 1.70um  
KMI 23.42 326 Pd 22 10.00 1.6  
6.0s 2500.00nm 5.9mb X  
Z 16s 2.40um 4.7MsZ X  
pP 22 15.50 20km  
S 26 18.00  
sS 26 28.00  
WHN 24.65 355 eP 22 21.00 1.0  
SSE 25.43 9 Pc 22 30.00 2.6  
7.0s 1000.00nm 5.6mb X  
Z 20s 2.30um 4.7MsZ  
N 18s 1.50um  
E 18s 1.60um  
NJ2 26.12 4 Pd 22 33.50 -0.3  
8.0s 800.00nm 5.4mb X  
Z 20s 1.80um 4.6MsZ  
N 17s 2.10um  
E 17s 3.00um  
S 27 07.00  
MBL 27.02 174 eP 22 42.00 -0.2  
0.6s 51.00nm 5.4mb  
CD2 27.77 335 P 22 47.10 -1.9  
Z 16s 2.10um 4.8MsZ X  
N 12s 1.20um  
XAN 28.97 346 eP 23 01.00 1.2  
N 15s 6.20um  
E 13s 4.90um  
TIA 30.20 0 eP 23 10.00 -0.7  
Z 15s 3.40um 5.1MsZ X  
N 15s 2.80um  
E 14s 1.30um  
eS 28 10.50  
WB2 30.91 147 iPd 23 15.20 -2.0  
0.6s 9.80nm 4.8mb  
TIY 31.95 353 eP 23 26.00 -0.2  
Z 19s 1.80um 4.8MsZ  
N 14s 1.40um  
MEKA 32.33 177 eP 23 28.50 -1.1  
LZH 32.35 340 eP 23 27.50 -2.3  
1.5s 17.00nm 4.8mb  
Z 18s 3.15um 5.0MsZ  
N 13s 1.81um  
sP 23 42.50  
DL2 33.18 7 eP 23 42.00 5.2X  
Z 20s 1.50um 4.7MsZ  
E 14s 2.30um  
ASPA 33.76 151 eP 23 40.70 -1.4  
1.0s 6.20nm 4.5mb  
eS 28 42.90  
LSA 33.88 317 eP 23 43.60 0.0  
BJI 34.03 359 eP 23 44.00 -0.1  
1.5s 70.00nm 5.4mb  
Z 16s 3.25um 5.2MsZ X  
N 15s 2.51um  
eS 29 14.00  
OIS 34.51 140 iPd 23 48.00 -0.6  
i 23 52.70 16km  
BTO 35.11 351 eP 23 52.00 -1.6  
HHC 35.15 353 P 23 53.60 -0.3  
Z 16s 1.80um 4.9MsZ X  
N 14s 0.70um  
E 13s 0.70um  
BAL 36.27 180 eP 24 02.00 -1.4  
MAT 36.28 30 eP 24 04.00 0.6

SNY 36.31 9 Pc 24 02.30 -1.3  
1.4s 100.00nm 5.5mb  
Z 14s 1.80um 5.0MsZ X  
E 14s 0.70um  
S 29 39.00  
GUN 36.63 310 Pd 24 06.80 -0.2  
GTA 36.75 338 eP 24 06.60 -0.9  
5.0s 410.00nm 5.5mb X  
Z 18s 1.60um 4.8MsZ  
E 12s 1.10um  
pP 24 16.60 34kmX  
sP 24 19.60  
PP 25 39.00  
eS 29 50.00  
PKI 36.82 309 Pd 24 08.00 -0.5  
KKN 37.03 310 Pd 24 09.80 -0.3  
DMN 37.07 309 Pd 24 10.28 -0.3  
1.1s 152.00nm 5.7mb  
GKN 37.63 310 Pd 24 14.72 -0.4  
1.1s 206.00nm 5.9mb  
FORR 38.07 164 eP 24 18.00 -0.5  
CN2 38.54 10 eP 24 22.20 -0.1  
Z 17s 3.00um 5.2MsZ X  
N 14s 1.00um  
E 14s 0.30um  
eP 24 27.70 19km  
eS 30 14.00  
NWA0 38.58 179 eP 24 22.70 -0.1  
HYB 39.11 290 eP 24 27.50 0.0  
1.0s 75.00nm 5.3mb  
KOD 39.18 279 eP 24 29.00 0.6  
GBA 39.52 284 Pc 24 31.20 0.4  
0.9s 18.50nm 4.8mb  
RKG 39.72 180 eP 24 37.00 4.7X  
MDJ 40.18 14 eP 24 36.20 0.2  
6.0s 400.00nm 5.3mb X  
Z 15s 0.71um 4.6MsZ X  
E 18s 1.10um  
eS 30 37.00  
OLP 41.79 142 eP 24 50.00 0.6  
POO 43.71 291 eP 25 02.50 -2.8X  
NDI 43.78 306 iPd 25 04.80 -0.8  
STK 44.35 149 iPd 25 22.50 12.3X  
0.7s 5.10nm  
e 27 08.40 599kmX  
RMO 44.64 138 e(P) 25 06.00 -6.6X  
e 26 59.00 664kmX  
BOM 44.75 291 eP 25 07.00 -6.5X  
eS 31 54.50  
ADE 45.56 155 eP 25 20.50 0.6  
WMO 45.64 330 P 25 20.40 0.0  
4.0s 700.00nm 6.0mb X  
Z 16s 1.10um 4.9MsZ X  
N 12s 1.00um  
E 12s 0.80um  
pP 25 27.80 25km  
sP 25 34.20  
CMS 46.33 145 eP 25 27.00 1.0  
IRK 47.39 350 eP 25 33.80 -0.3  
COO 49.40 139 eP 25 52.00 2.0  
KSH 49.68 318 P 25 54.00 1.8  
PP 27 52.00  
TOO 50.81 151 e(P) 26 05.00 4.3X  
e 28 04.00 675kmX  
CNB 51.14 146 eP 26 04.00 0.7  
QUE 52.70 304 iPd 26 14.10 -1.2  
ePP 28 21.60  
GAR 53.32 315 P 26 18.60 -1.1  
e 46 43.00  
e 49 29.00  
e 51 42.00  
TAU 55.89 153 eP 26 34.00 -4.1X  
YAK 56.84 7 eP 26 43.00 -1.7  
MAIO 60.41 309 iPd 27 09.30 -0.8  
1.0s 12.50nm 5.0mb  
OBN 79.61 325 iP 29 06.00 -0.7  
1.3s \*\*\*\*\*nm 8.2mb X  
E 20s 0.70um  
i 29 10.90 16km  
i 29 15.50  
i 29 44.50  
e 39 10.00  
e 40 00.00  
LR 02 24.00  
HOL 79.98 299 P 29 09.90 0.6  
MAW 82.50 198 eP 29 22.80 1.2  
0.8s 32.00nm 5.5mb



26d 11h

BRW 83.33 19 eP 29 27.00 1.1  
 SVW 83.72 29 eP 29 30.00 1.8  
 KEV 84.47 340 iP 29 31.00 -0.7  
 IMA 84.48 24 eP 29 33.10 1.1  
 0.8s 4.50nm 4.8mb  
 SOD 84.70 337 iP 29 32.20 -0.7  
 KAF 85.10 332 iP 29 34.00 -0.9  
 0.7s 22.20nm 5.5mb  
 esP 29 39.60  
 RSO 85.15 30 e(P) 29 30.10 -5.4X  
 VRI 85.90 316 ePc 29 38.00 -1.3  
 NUR 86.00 330 iP 29 38.50 -1.0  
 1.3s 60.70nm 5.6mb  
 PMR 86.81 29 eP 29 45.60 2.2  
 1.3s 18.00nm 5.1mb  
 FBA 87.02 25 eP 29 43.90 -0.5  
 0.8s 6.90nm 4.9mb  
 VAY 89.35 311 eP 29 54.40 -1.6  
 KRA 89.95 320 eP 30 03.00 4.3X  
 BALM 90.13 29 e(P) 29 56.50 -3.0X  
 HFS 91.44 331 eP 30 05.70 0.4  
 0.4s 0.90nm 4.5mb  
 Z 15s 0.06um 4.2MsZ  
 INK 91.73 21 eP 30 07.00 0.5  
 NB2 92.38 332 P 30 07.20 -2.5  
 1.1s 4.00nm 4.7mb  
 PRU 93.38 321 eP 30 15.00 0.5  
 16s 0.50um 5.1MsZ  
 N 15s 0.20um  
 E 15s 0.30um  
 BRG 93.54 322 eP 30 15.50 0.3  
 1.3s 12.00nm 5.2mb  
 e 30 19.90 14km  
 CLL 94.01 322 eP 30 21.00 3.6X  
 YKA 101.42 22 ePdiff 31 08.60 18.0X  
 0.6s 0.20nm  
 ALO 122.49 42 ePKP 36 04.00 8.2X  
 CNCB 168.16 157 ePKP 37 06.00 -1.1  
 LPB 168.36 156 ePKP 37 06.00 -1.1  
 ZOBO 168.59 155 ePKP 37 09.00 1.6  
 1.2s 8.45nm  
 S.D. = 1.2 on 79 of 101 obs.

MAY 26, 1991 11h 21m 38.43 ± 0.44s  
 44.021 N ± 3.4km 7.834 E ± 3.4km  
 DEPTH = 10.0km (geophysicist)  
 NORTHERN ITALY (545)  
 ML 2.5 (LDG), 2.5 (GEN).

SAOF 0.20 260 Pg 21 42.56 -0.4  
 Sg 21 45.27  
 ROB 0.27 5 P 21 44.12 -0.1  
 S 21 48.22  
 AUTN 0.29 265 Pg 21 44.58 -0.1  
 FIN 0.33 55 P 21 45.35 0.1  
 S 21 50.27  
 SBF 0.33 241 Pg 21 45.40 0.1  
 Sg 21 50.00  
 ENR 0.36 305 P 21 45.46 -0.5  
 S 21 50.28  
 AURF 0.39 250 Pg 21 46.35 -0.1  
 Sg 21 51.49  
 TOUF 0.42 269 Pg 21 46.70 -0.4  
 STV 0.43 301 P 21 46.38 -0.8  
 S 21 51.40  
 REVF 0.44 230 Pg 21 47.74 0.3  
 MVIF 0.51 256 Pg 21 48.35 -0.4  
 CKI 0.52 38 P 21 48.50 -0.4  
 eSg 21 55.60  
 DOI 0.64 319 P 21 52.80 1.4  
 eSg 21 57.40  
 PZZ 0.72 313 P 21 51.91 -0.7  
 S 22 00.83  
 PCP 0.73 44 P 21 53.66 0.9  
 Sg 22 03.71  
 CALN 0.73 249 Pg 21 52.96 0.0  
 BHB 0.92 334 P 21 54.79 -1.2  
 Sg 22 05.66  
 FRF 0.98 242 Pg 21 57.20 0.2  
 Sg 22 10.00  
 LMR 1.18 235 Pg 22 00.90 0.4  
 Sg 22 16.00  
 RSP 1.20 340 P 22 00.74 -0.2  
 LRG 1.21 243 Pg 22 01.70 0.8  
 Sg 22 17.90  
 CDR 1.54 258 ePn 22 06.40 0.5  
 eSn 22 26.00

LPG 1.67 333 Pg 22 09.60 1.5  
 PGF 1.70 150 Pn 22 07.09 -1.3  
 S.D. = 0.7 on 24 of 24 obs.

MAY 26, 1991 11h 55m 05.30 ± 0.22s  
 4.130 N ± 3.5km 125.592 E ± 5.6km  
 DEPTH = 20.5km (4 depth phases)  
 5.4mb (29 obs.) 4.4MsZ (4 obs.)  
 TALAUD ISLANDS (263)

MNI 2.77 196 ePc 55 50.70 1.2  
 eS 56 23.00  
 DAV 2.94 360 eP 55 55.50 3.7X  
 TSM 7.50 271 eP 56 58.00 1.7  
 AAI 8.19 161 ePc 57 06.50 0.6  
 e(S) 58 36.00  
 BAG 13.16 338 eP 58 19.00 5.1X  
 TRT 17.47 228 iPd 59 11.20 1.7  
 MTN 17.74 162 iPd 59 11.70 -1.2  
 0.3s 80.00nm 5.4mb  
 KNA 20.00 171 eP 59 38.40 -1.3  
 HKC 21.19 330 eP 59 51.70 -0.2  
 QIZ 21.35 315 Pd 59 53.40 -0.2  
 eS 03 42.00  
 QZH 21.76 343 eP 59 57.80 0.1  
 GZH 22.26 329 eP 00 02.40 -0.2  
 KGM 22.34 265 eP 00 05.50 2.0  
 LAT 23.91 117 iPd 00 21.00 2.2  
 IPM 24.50 272 ePd 00 28.90 4.3X  
 0.9s 36.50nm 5.0mb  
 SNG 25.03 278 eP 00 32.90 3.2X  
 PMG 25.35 122 eP 00 33.50 0.8  
 0.8s 56.72nm 5.3mb  
 WB2 25.43 161 iPd 00 32.60 -0.8  
 0.7s 134.60nm 5.7mb  
 e 04 10.80  
 eS 04 55.00  
 MBL 25.76 192 iPd 00 36.00 -0.5  
 NST 27.54 296 eP 00 55.50 2.6X  
 QIS 28.13 151 iPc 00 58.00 -0.2  
 GYA 28.66 323 P 01 03.60 0.5  
 ASPA 28.79 164 iPc 01 03.10 -1.1  
 0.7s 48.90nm 5.4mb  
 eS 05 40.10  
 CHG 29.84 301 ePc 01 14.00 0.3  
 1.0s 52.25nm 5.3mb  
 WARB 30.15 178 eP 01 15.70 -0.6  
 0.3s 21.00nm 5.4mb  
 KMI 30.30 316 Pd 01 19.00 1.1  
 2.0s 140.00nm 5.5mb  
 eP 01 32.50  
 MEKA 31.32 192 eP 01 25.00 -1.6  
 WKYJ 31.35 16 eP 01 26.00 -0.8  
 YONJ 31.75 12 P 01 29.80 -0.5  
 TSRJ 32.70 16 P 01 37.90 -0.6  
 IIDJ 33.21 19 P 01 43.30 0.2  
 XAN 33.56 334 P 01 43.70 -2.4  
 CD2 33.66 325 P 01 49.10 2.1  
 CHJJ 34.08 20 P 01 48.00 -1.8  
 MTMJ 34.20 18 P 01 50.90 -0.8  
 MAT 34.28 18 iPc 01 50.40 -1.9  
 0.8s 38.81nm 5.4mb  
 FORR 34.86 176 eP 01 55.80 -1.5  
 0.3s 42.00nm 5.8mb  
 COOL 35.07 187 eP 01 57.00 -2.2  
 NIJJ 35.17 19 P 01 59.50 -0.4  
 TIY 35.53 342 eP 02 00.80 -2.2  
 Z 21s 0.50um 4.3MsZ  
 N 15s 0.50um  
 BAL 35.57 193 eP 02 01.80 -1.6  
 KLB 36.30 191 eP 02 08.00 -1.5  
 YAMJ 36.36 19 iP+ 02 09.90 0.0  
 BJJ 36.75 348 eP 02 11.50 -1.6  
 1.0s 70.00nm 5.5mb  
 MUN 37.00 193 eP 02 14.10 -1.3  
 0.5s 42.00nm 5.5mb  
 SNY 37.58 358 Pd 02 20.30 0.2  
 LZH 37.59 331 eP 02 20.00 -0.5  
 1.4s 50.00nm 5.1mb  
 Z 20s 0.53um 4.3MsZ  
 N 12s 0.28um  
 E 13s 0.29um  
 pP 02 30.50 37kmX  
 ePP 03 22.50  
 NWA0 37.70 192 eP 02 20.20 -1.0  
 OFUJ 37.73 21 eP 02 21.70 0.3  
 RMO 37.80 145 eP 02 22.00 -0.2

HHC 38.67 343 eP 02 29.80 0.3  
 RKG 38.85 191 iPd 02 35.20 4.3X  
 0.4s 24.00nm 5.3mb  
 STK 38.91 158 iPc 02 43.40 11.9X  
 0.7s 37.50nm  
 i 02 50.40 24km  
 i 05 00.90  
 eS 08 38.50  
 MDJ 40.47 4 Pd 02 44.20 0.0  
 1.0s 30.00nm 5.0mb  
 pP 02 55.00 38kmX  
 MRRJ 40.55 18 eP 02 45.40 0.6  
 ADE 40.80 163 iPc 02 48.00 0.9  
 0.5s 152.11nm 6.0mb  
 e 02 53.80 20km  
 BRS 40.87 142 iPc 02 47.00 -0.7  
 e 03 17.00 133kmX  
 e 04 32.00  
 HOOJ 41.23 20 eP 02 52.00 1.6  
 GTA 42.18 330 eP 02 57.20 -1.2  
 1.2s 10.00nm 4.4mb  
 Z 18s 0.50um 4.4MsZ  
 sP 03 14.00  
 KUSJ 42.35 21 P 03 00.50 0.9  
 ASAJ 42.57 18 P 03 02.20 0.8  
 COO 42.70 146 eP 03 03.00 0.3  
 BFD 44.03 160 iPd 03 09.50 -3.8X  
 0.3s 8.00nm 5.0mb  
 GUN 44.57 306 P 03 18.38 0.0  
 0.6s 54.00nm 5.6mb  
 PKI 44.81 306 P 03 20.58 0.3  
 KKN 45.01 306 P 03 22.16 0.4  
 DMN 45.08 306 P 03 22.72 0.4  
 TOO 45.43 158 iPc 03 26.60 1.9  
 i 03 32.40 19km  
 GKN 45.61 306 P 03 26.82 0.4  
 DZM 47.69 125 iPc 03 47.20 4.4X  
 HYB 47.91 290 iPd 03 45.00 0.4  
 1.2s 121.40nm 5.8mb  
 KOD 48.09 280 eP 03 46.90 0.6  
 GBA 48.42 284 P 03 48.50 0.1  
 1.0s 48.00nm 5.5mb  
 TAU 50.79 159 eP 04 08.00 1.8  
 WMO 51.75 326 P 04 12.00 -1.6  
 1.0s 10.00nm 4.7mb  
 POO 52.51 290 iP 04 17.20 -2.5  
 0.8s 37.31nm 5.4mb  
 YAK 57.84 2 iPc 04 55.50 -2.0  
 GAR 60.82 313 eP 05 21.69 3.0X  
 ADK 67.28 35 eP 06 01.50 1.0  
 0.5s 21.49nm 5.6mb  
 e 06 07.60 20km  
 MAIO 68.37 307 eP 06 07.00 -0.9  
 SDN 77.49 34 ePc 07 02.50 1.6  
 0.7s 75.58nm 5.9mb  
 SVW 80.98 29 eP 07 20.80 1.0  
 BRW 82.16 19 eP 07 26.90 1.2  
 IMA 82.48 24 ePc 07 28.50 0.8  
 0.8s 5.70nm 4.7mb  
 MAW 83.74 200 eP 07 34.20 0.4  
 PMR 84.14 29 eP 07 35.90 -0.1  
 1.2s 29.00nm 5.4mb  
 FBA 84.85 25 eP 07 41.80 2.3  
 OBN 86.06 325 iPd 07 47.00 1.3  
 1.0s \*\*\*\*\*nm 8.2mb X  
 e 07 58.00 35kmX  
 e 08 44.00  
 INK 90.21 21 eP 08 04.00 -1.3  
 SPA 94.10 180 eP 08 23.00 -0.5  
 1.0s 17.50nm 5.4mb  
 Z 18s 4.71um 6.0MsZ  
 e 30 24.00  
 NB2 97.92 333 P 08 37.10 -3.8X  
 0.8s 2.10nm 4.5mb  
 YKA 99.60 24 eP 08 47.20 -1.2  
 0.8s 0.80nm 4.3mb X  
 ALO 117.59 47 ePKP 13 52.00 -0.3  
 0.9s 3.78nm  
 Z 19s 1.04um 5.5MsZ  
 LNV 146.37 154 ePKPd 14 48.00 2.4  
 TACH 146.83 154 ePKP 14 48.00 1.6  
 PCH 147.04 155 iPKPc 14 49.50 2.7X  
 PEL 147.38 154 iPKPd 14 50.10 2.8X  
 0.6s 26.67nm  
 TCA 151.29 162 ePKPc 14 59.60 6.2X  
 UPA 151.77 62 ePKP 15 07.50 13.0X



CNCB 161.67 134 ePKP 15 09.00 1.7  
 LPB 161.76 133 ePKP 15 15.00 7.8X  
 ZOBO 161.92 133 PKP 15 08.00 0.4  
 SIV 166.52 151 PKP 15 11.20 0.1  
 i 16 13.80

S.D. = 1.2 on 87 of 103 obs.

\* MAY 26, 1991 12h 24m 28.72±0.59s  
 62.661 S ±14.0km 164.368 W ±12.2km  
 DEPTH = 10.0km (geophysicist)  
 5.0mb ( 4 obs.)

# SOUTH PACIFIC CORDILLERA (691)

SBA 17.72 200 P 28 36.50 -0.1  
 S 32 08.40  
 WEL 24.74 320 P 30 08.00 16.8X  
 S 34 32.00  
 TAU 34.17 282 eP 31 22.00 6.3X  
 TOO 39.31 286 e(P) 32 03.00 3.8X  
 i 32 07.70  
 COO 42.55 298 eP 32 32.00 6.1X  
 BRS 45.02 301 iPc 32 50.50 4.6X  
 MAW 45.64 203 eP 32 52.00 1.7  
 STK 45.82 286 eP 33 07.80 15.6X

0.9s 2.30nm  
 SNA 46.71 172 iPc 32 56.90 -1.8  
 1.1s 131.65nm 5.9mb X  
 NVL 46.82 178 eP 32 50.90 -8.7X  
 e 33 08.00  
 e 33 14.00  
 e 33 47.00  
 ePP 34 57.00  
 e 35 01.00  
 eS 39 47.00  
 e 40 05.00  
 e 40 53.00  
 eSSS 43 45.00  
 e 45 20.00

ASPA 56.32 284 iPc 34 11.80 0.0  
 1.0s 13.10nm 4.9mb  
 WB2 59.37 287 iPd 34 32.80 -0.4  
 1.1s 14.50nm 5.0mb  
 i 34 37.50  
 WRA 59.37 286 P 34 33.00 -0.3  
 1.0s 15.10nm 5.1mb  
 CNCB 78.13 103 P 36 31.50 1.5  
 LPB 78.32 103 P 36 32.80 1.9X  
 ZOBO 78.54 103 P 36 31.00 -1.3  
 1.0s 17.50nm 5.1mb  
 LR 01 40.00

PPD 80.62 120 (P) 36 43.00 0.2  
 VAO 81.44 124 eP 36 41.70 -5.5X  
 e 37 02.10  
 SIV 81.91 109 P 36 49.50 -0.1  
 ALQ 107.71 47 ePdiff 38 56.00 6.6X  
 YKA 130.33 28 ePKP 43 47.60 8.5X  
 1.0s 0.70nm  
 MAIO 142.35 246 ePKP 44 07.00 4.5X  
 TIO 145.00 144 iPKP 44 07.00 -0.2  
 i 44 22.40  
 IFR 148.01 146 iPKP 44 13.00 0.9  
 i 44 18.00  
 i 44 27.00  
 TOL 154.29 143 ePKP 44 21.00 0.0  
 ePKKP 44 42.00

S.D. = 1.1 on 13 of 25 obs.

MAY 26, 1991 12h 26m 00.27±0.23s  
 40.730 N ±2.2km 15.765 E ±1.4km  
 DEPTH = 8.1 ± 1.6 km  
 5.1mb ( 17 obs.) 4.8msz ( 5 obs.)  
 SOUTHERN ITALY (390)  
 ML 5.2 (ZAG), 5.0 (TTG). A few  
 people injured and minor damage  
 in the Potenza area. Felt in the  
 Avellino-Motero-Naples area.  
 Also felt at Salerno and Bari.

ORI 0.85 142 Pd 26 16.80 0.0  
 BAI 0.92 65 P 26 18.50 0.5  
 BRT 1.10 82 P 26 20.70 -0.4  
 eSg 26 36.00  
 TDS 1.16 158 Pc 26 21.90 -0.2  
 eSg 26 38.00  
 LCI 1.71 103 P 26 32.30 1.8  
 eSg 26 54.60  
 SDI 1.76 304 P 26 32.10 0.8

AZI 2.16 306 P 26 38.50 1.5  
 AQU 2.40 313 P 26 41.40 0.8  
 HVAR 2.50 12 iPn 26 42.70 0.9  
 RDP 2.52 295 P 26 42.80 0.6  
 eSn 27 15.50

RMP 2.55 296 P 26 43.10 0.5  
 ATN 2.58 185 P 26 42.20 -0.8  
 eSn 27 12.50  
 SOI 2.66 175 P 26 44.40 0.2  
 HCY 2.67 49 iPnc 26 44.14 -0.2  
 iSn 27 32.72

BDV 2.77 55 iPnc 26 46.85 1.0  
 iSn 27 34.00  
 USI 2.84 225 P 26 45.90 -0.8  
 MNS 2.84 307 Pd 26 47.80 1.0  
 eSn 27 23.00

VLO 2.85 94 iPn 26 48.00 1.1  
 iSn 27 31.00  
 ULC 2.90 64 iPnd 26 47.97 0.4  
 iSn 27 35.62  
 MNO 2.92 197 P 26 48.00 0.0  
 eSn 27 22.50

BRY 3.00 43 iPnc 26 49.30 0.2  
 iSn 27 41.24  
 GIB 3.05 207 P 26 49.90 0.1  
 SDA 3.09 64 iPnc 26 51.00 0.8  
 iSn 27 31.30

LACI 3.11 72 iPnd 26 51.40 0.9  
 TTG 3.12 56 iPnc 26 50.87 0.2  
 iSn 27 41.60  
 TIR 3.16 77 iPnd 26 52.00 0.7  
 iSn 27 41.50

BERA 3.18 89 ePn 26 51.80 0.3  
 NKY 3.19 48 iPnc 26 51.92 0.2  
 iSn 27 44.49  
 ASS 3.29 316 P 26 55.40 2.2  
 SRN 3.35 103 iPnd 26 54.50 0.6  
 iSn 27 32.50

PUK 3.37 66 iPnc 26 52.90 -1.3  
 iSn 27 34.40  
 ARV 3.47 324 P 26 56.20 0.5  
 BCI 3.62 62 iPnc 26 59.20 1.5  
 iSn 27 37.20

PVY 3.66 58 iPnc 26 59.50 1.0  
 iSn 27 53.80  
 MEU 3.68 190 P 26 59.00 0.2  
 eSn 27 38.00  
 IGT 3.70 107 iPnd 26 59.40 0.4  
 LSK 3.74 97 iPnc 27 00.20 0.7  
 iSn 27 59.00

KKS 3.74 67 iPn 27 01.50 1.9  
 iSn 27 52.50  
 PLE 3.75 45 iPnc 27 01.07 1.3  
 iSn 27 57.84  
 IVA 3.76 54 iPnc 27 01.07 1.2  
 iSn 27 58.14

LVI 3.82 225 P 27 00.50 -0.1  
 OHR 3.83 83 iPnc 27 01.20 0.3  
 i 28 01.40  
 LR 28 25.00  
 MAO 3.85 297 P 27 01.20 0.1  
 RSM 4.03 324 P 27 04.50 1.0  
 CRE 4.05 317 P 27 05.30 1.3  
 FNA 4.26 87 ePn 27 07.30 0.3  
 SFI 4.31 319 P 27 09.30 1.8  
 PGD 4.34 318 P 27 08.70 0.5  
 SKO 4.45 72 iPnc 27 09.80 0.3  
 iPg 27 25.60  
 i 27 58.50  
 iSn 28 01.20  
 i 28 07.70  
 iSg 28 21.50  
 i 28 25.50

VLS 4.52 123 eP 27 10.20 -0.4  
 FIR 4.52 314 ePn 27 14.00 3.4X  
 iPg 27 43.00  
 iSn 28 24.00  
 iSg 28 53.00  
 KZN 4.60 93 eP 27 13.00 1.3  
 RIY 4.72 348 iPnc 27 13.30 -0.1  
 i(Sn) 28 08.50

VBY 4.79 356 ePn 27 14.40 0.1  
 iSg 28 13.50  
 PII 4.91 309 P 27 17.50 1.5  
 GRG 5.04 85 ePnd 27 17.80 -0.1  
 eSn 28 02.20  
 BDI 5.07 313 P 27 19.00 0.6

ZAG 5.09 2 iPnc 27 18.60 0.1  
 iSn 28 15.50  
 iSg 28 41.00  
 MME 5.10 314 P 27 20.70 1.7  
 CEY 5.10 349 ePn 27 19.00 0.2  
 eSn 28 22.00

PTJ 5.17 1 iPc 27 19.10 -0.7  
 eSn 28 15.20  
 LIT 5.17 95 iPnc 27 19.70 -0.1  
 VAY 5.18 81 iPn 27 19.30 -0.6  
 i 28 28.80  
 i 29 03.50

TRI 5.19 344 iPnd 27 19.50 -0.4  
 iPg 27 43.00  
 iSn 28 21.90  
 iSb 28 46.00  
 iSg 28 55.00  
 iLQ 29 07.50

AGG 5.33 107 iPnd 27 21.70 -0.4  
 BEO 5.35 39 iPn 27 20.70 -1.6  
 iPg 27 53.00  
 iSn 28 50.50  
 Pn 27 22.40 -0.5  
 LJU 5.39 351 iPnc 27 22.60 -0.2  
 eSn 28 23.60

KNT 5.42 83 ePn 27 23.30 0.0  
 VOY 5.47 346 ePn 27 23.40 -0.7  
 eSn 28 30.50  
 eSg 29 11.10  
 THE 5.48 89 ePn 27 23.50 -0.6  
 eSn 28 12.10

KKB 5.63 76 iPc 27 27.00 0.7  
 SOH 5.76 87 ePn 27 27.80 -0.4  
 eSn 28 19.60  
 VTS 5.88 69 iPc 27 43.00 13.1X  
 SRS 5.94 84 ePn 27 30.30 -0.4  
 MMB 6.07 79 iPc 27 32.00 -0.5  
 CTI 6.10 332 P 27 31.60 -1.3  
 eSn 28 40.70

PAIG 6.10 95 ePn 27 31.80 -1.1  
 BOB 6.16 313 P 27 35.00 1.3  
 SAL 6.20 324 P 27 34.00 -0.2  
 UZD 6.21 18 e(Pn) 27 35.00 0.7  
 FVI 6.25 341 P 27 33.50 -1.4  
 OUR 6.27 91 ePn 27 35.20 -0.1  
 eSn 28 30.20

TIM 6.40 37 ePd 27 41.00 4.0X  
 BZS 6.49 39 ePc 27 37.50 -0.9  
 PCP 6.55 308 P 27 41.65 2.4X  
 FIN 6.58 304 P 27 42.89 3.2X  
 KBA 6.58 345 iPnc 27 40.40 0.6  
 iPgPg 28 11.00  
 iSn 28 52.60  
 i 28 55.90

CKI 6.64 306 P 27 39.50 -1.1  
 MDI 6.70 321 P 27 40.30 -1.1  
 ATH 6.75 112 eP 27 40.50 -1.5  
 RZN 6.82 79 iPd 27 43.00 -0.2  
 ROB 6.83 304 P 27 44.14 0.8  
 PLD 6.86 76 iPc 27 43.00 -0.6  
 VLI 6.89 123 eP 27 43.00 -1.0  
 SAOF 6.90 301 P 27 43.41 -0.7  
 REVV 6.92 299 P 27 43.63 -0.9  
 SBF 6.92 300 Pn 27 44.00 -0.6  
 SCE 6.95 336 ePn 27 44.50 -0.5

AUTN 6.98 301 P 27 45.34 -0.2  
 AURF 7.00 300 P 27 44.82 -0.9  
 ENR 7.09 302 P 27 47.38 0.5  
 TOUF 7.11 300 P 27 46.56 -0.7  
 MVIF 7.12 299 P 27 47.05 -0.4  
 BUD 7.15 18 e(P) 27 46.00 -1.5  
 STV 7.16 302 P 27 48.77 0.9  
 WTTA 7.18 337 iPnc 27 48.30 0.1  
 i 27 49.70  
 iSn 29 09.80  
 i 29 16.40

OSS 7.21 328 ePd 27 48.50 -0.2  
 VAI 7.24 318 P 27 48.70 -0.1  
 CALN 7.24 298 P 27 47.99 -1.1  
 DEV 7.32 43 iPd 27 51.00 1.0  
 DOI 7.33 304 P 27 51.90 1.7  
 KDZ 7.34 80 iPd 27 49.00 -1.3  
 FRF 7.34 296 Pn 27 49.00 -1.4  
 VDL 7.34 324 ePc 27 49.40 -1.1  
 LMR 7.37 294 Pn 27 49.40 -1.3  
 RDO 7.41 84 eP 27 50.00 -1.3  
 KMR 7.42 351 iPn- 27 51.40 0.0



26d 12h

		iSn	29 15.80		PYM	10.57 303 P	28 30.46	-4.7X	KIC	38.83 214 P	33 29.50	2.0
		iSgSg	30 11.30		AGO	10.62 304 P	28 35.26	-0.5	LIC	39.07 214 P	33 30.00	0.5
PZZ	7.42 303 P		27 52.08	0.5	ARG	10.69 111 eP	28 35.50	-1.1	GAR	41.34 74 eP	33 49.50	1.3
DIM	7.46 77 iP		27 54.00	2.0	CLL	10.75 351 iP	28 35.80	-1.7	QUE	42.47 88 eP	34 02.00	4.4X
BHB	7.48 306 P		27 53.27	1.0		1.3s 27.00nm		5.5mb X	KSH	45.28 71 P	34 22.00	1.8
ORO	7.50 313 P		27 51.00	-1.7			32 04.00		WMO	51.75 61 P	35 10.60	0.4
LRG	7.51 294 Pn		27 51.70	-0.9	LOR	10.78 311 Pn	28 37.00	-0.9		1.0s 10.00nm		4.7mb
ORX	7.51 313 P		27 51.17	-1.6	TNS	10.79 334 eP	28 36.80	-1.2	Z	18s 0.70um		4.7msz
ZST	7.53 7 iPn		27 51.40	-1.4		eS	30 33.40		N	14s 1.40um		
	i		27 54.90			e	32 04.20		E	14s 1.10um		
	i		28 06.20		CAF	10.90 297 Pn	28 38.50	-1.1		pP	35 15.40	16kmX
	i		28 12.50		BGF	11.02 306 Pn	28 40.40	-0.8		sP	35 22.00	
	i		28 20.60		MAF	11.05 304 Pn	28 41.00	-0.6		PcP	36 27.50	
	i		28 40.30		TCF	11.30 304 Pn	28 44.80	-0.2	FRB	52.00 326 eP	35 14.00	2.3
	e		29 09.70		EBR	11.58 275 (P)	28 52.00	3.1X	GKN	56.92 80 P	35 46.88	-1.6
	i(Sg)		29 42.30		BNS	11.85 333 eP	28 53.00	0.7		0.9s 105.00nm		5.9mb
VKA	7.54 3 ePn		27 52.50	-0.6		Z 15s 7.50um			DMN	57.48 80 P	35 51.16	-1.4
	i		27 58.90		MEM	12.00 329 P	28 53.50	-0.8		1.1s 136.00nm		5.9mb
	iSn		29 24.10		ENN	12.15 329 eP	28 56.50	0.0	KKN	57.52 80 P	35 51.24	-1.5
	LR		31 16.00			1.0s 19.00nm		5.3mb X		0.7s 24.00nm		5.3mb
PVL	7.55 68 eP		27 55.00	1.8		e	31 12.50		PKI	57.73 80 P	35 52.76	-1.6
RSP	7.65 308 P		27 54.96	0.2	DOU	12.21 324 P	29 04.00	6.8X		0.7s 20.00nm		5.3mb
PSZ	7.77 21 iPn		27 56.10	-0.3		0.7s 14.40nm		5.4mb X	GUN	57.90 79 P	35 54.08	-1.5
MMK	7.78 316 ePd		27 58.10	1.4		e	29 12.50			0.8s 105.00nm		5.9mb
ALN	7.80 85 ePn		27 55.40	-1.4		S	31 05.10		HYB	58.32 94 eP	35 55.00	-3.2X
RRL	7.82 305 P		27 57.97	0.8	SNF	12.64 325 P	29 05.00	2.0	IRK	58.36 46 eP	36 02.00	4.0X
LLS	7.85 324 iPd		27 56.90	-0.7	WTS	12.84 334 eP	29 07.50	1.9	GTA	61.83 61 P	36 22.00	-0.3
LSD	7.87 310 P		27 56.95	-1.1		1.0s 7.00nm		4.8mb X		0.8s 10.00nm		5.1mb
TNR	7.92 49 ePc		27 59.00	0.5	MFF	12.92 302 Pn	29 07.50	0.7	Z	20s 0.70um		4.8msz
BNI	7.95 306 P		28 01.80	2.8X	BBTK	13.01 88 eP	29 12.00	3.8X	N	12s 0.60um		
CDR	7.98 295 eP		27 59.30	-0.1	DBN	13.50 331 eP	29 19.00	4.7X		pP	36 27.00	16kmX
DIX	8.10 314 iPd		28 01.50	0.4		eS	33 37.00		YAK	64.68 28 eP	36 39.60	-0.9
FUR	8.10 338 eP		27 59.20	-1.7		e(P)	29 20.00	4.5X		e	47 08.00	
LPG	8.13 309 Pn		28 02.00	0.3	WIT	13.58 336 e(P)	29 20.00	4.5X		e	47 51.00	
CMP	8.17 53 iPd		28 04.00	2.1	KAS	13.61 81 eP	29 17.00	1.0	LZH	66.31 62 Pc	36 56.20	4.7X
JMB	8.29 74 eP		28 02.00	-1.6	TOL	15.14 273 eP	29 43.70	7.6X		1.4s 80.00nm		5.7mb
RSL	8.31 310 P		28 06.25	2.2		eS	32 49.70		Z	20s 0.53um		4.7msz
EMS	8.35 313 ePd		28 05.00	0.3	HLW	16.69 126 eP	29 48.00	-7.9X	E	13s 0.29um		
BUC1	8.40 61 ePd		28 06.50	1.4		eS	32 42.50		BTO	67.76 55 eP	37 05.60	5.0X
CEI	8.45 32 eP		28 33.00	27.2X	BHL	17.21 107 P	30 02.00	-0.6	HHC	68.58 54 P	37 10.40	4.7X
KHC	8.54 350 P		28 04.50	-2.6X		S	37 04.00			1.2s 50.00nm		5.6mb
	iS		29 12.70		ADI	17.32 110 eP	30 03.00	-0.9	Z	20s 0.90um		5.0msz
ZLA	8.58 324 ePd		28 05.60	-2.1	ZNT	17.63 113 eP	30 09.00	1.2	CD2	69.20 67 P	37 09.30	-0.3
SLE	8.75 326 iPd		28 08.00	-2.0	IFR	18.13 253 iP	30 15.00	0.9		1.4s 70.00nm		5.7mb
GRC1	8.79 341 iPnc		28 08.40	-2.2		i	30 21.00		YKA	69.69 338 eP	37 11.40	-0.6
	e(Sg)		30 57.00		PTO	18.41 279 eP	30 21.00	3.7X		0.7s 1.60nm		4.3mb
SPC	9.03 19 ePn		28 13.10	-0.9	MBH	19.02 119 eP	30 22.00	-3.0X	XAN	70.89 61 P	37 19.50	-0.4
FEL	9.05 325 P		28 10.56	-3.6X	UPP	19.19 3 eP	30 22.20	-4.5X	TIY	70.98 56 Pc	37 24.90	4.5X
CVO	9.14 53 ePd		28 15.50	0.1	EKA	19.23 326 Pc	30 27.10	-0.2	Z	20s 0.62um		4.9msz
LOMF	9.23 319 P		28 13.78	-2.8X		0.7s 4.80nm		3.9mb X	N	14s 0.60um		
PRU	9.30 355 eP		28 15.00	-2.5X	HQL	19.46 120 P	30 27.30	-2.0	E	15s 0.65um		
	Z 16s 5.90um				HFS	19.47 357 eP	30 28.20	-2.0	BJI	71.88 53 eP	37 26.00	0.4
	N 14s 4.80um					Z 17s 2.06um		6.5mszX	Z	16s 0.87um		5.1mszX
	E 15s 18.30um					e	30 34.20		N	17s 1.13um		
	e		28 21.20			e	30 39.10		KMI	71.89 72 eP	37 30.20	4.0X
	eS		29 55.00			e	30 43.20		CHG	72.91 80 eP	37 32.00	0.0
SSB	9.39 303 P		28 19.49	0.6		LR	36 34.00		GYA	73.90 69 P	37 42.00	4.2X
MOF	9.43 322 P		28 16.81	-2.6X	OBN	19.93 37 iPd	30 32.30	-2.8X	FBA	73.92 353 eP	37 37.50	0.4
VRI	9.50 54 ePd		28 19.50	-0.8		1.0s *****nm		7.9mb X		1.0s 5.00nm		4.5mb
BSF	9.58 321 Pn		28 18.60	-2.9X		Z 12s 2.00um		6.6msz	CN2	74.75 45 eP	37 47.60	5.2X
	Sn		30 02.60			N 12s 1.00um			Z	16s 1.50um		5.4mszX
	P		30 02.60			E 12s 2.10um			N	15s 0.60um		
ECH	9.68 323 P		28 19.43	-3.4X		ePP	31 00.00		E	15s 0.40um		
WLS	9.74 325 P		28 20.02	-3.7X		eS	34 12.00		TIA	74.86 55 eP	37 47.70	4.6X
CDF	9.78 325 P		28 20.72	-3.5X		eSS	34 29.00		MDJ	76.37 42 eP	37 58.00	6.5X
KRA	9.78 16 eP		28 24.50	0.4		LQ	36 48.00		SES	78.00 328 eP	38 01.00	0.5
	e		28 31.70			LR	38 34.00		NJ2	78.63 58 Pc	38 09.00	4.8X
	e		28 46.00		DCN	20.03 317 eP	30 38.00	1.7	TUL	81.21 310 eP	38 23.00	5.0X
PTT	9.86 48 eP		28 27.00	1.7	DMU	20.13 318 eP	30 38.00	0.7		0.8s 4.30nm		4.5mb
HAU	9.91 320 Pn		28 23.40	-2.6X	NB2	20.53 354 P	30 40.40	-1.0	PNT	82.10 332 eP	38 39.00	16.6X
	Sn		30 11.00			0.7s 9.00nm		4.2mb	LRM	82.19 326 eP	38 28.70	5.4X
GWF	10.06 328 P		28 25.68	-2.4X	NUR	20.55 13 iP	30 40.40	-1.2	PSI	83.06 92 ePc	38 39.50	11.6X
KSP	10.12 2 eP		28 31.30	2.5X		1.0s 56.20nm		4.9mb	GOL	83.66 318 eP	38 32.00	1.0
	i		30 05.00		TIO	21.03 250 iP	30 46.40	-0.5		1.0s 6.00nm		4.8mb
	iS		30 32.20			i	31 11.00		MAT	86.73 43 (PKP)	38 48.00	2.0
LBL	10.21 300 P		28 30.23	0.1	VAL	21.05 311 eP	30 49.00	2.2	WRA	124.22 88 PKP	45 05.00	3.6X
BRG	10.22 353 iP		28 27.80	-2.4X	AGMR	22.20 135 iPd	30 59.00	0.5		0.9s 0.60nm		
	1.0s 11.00nm			5.3mb X	KAF	22.34 13 iP	30 58.70	-1.0	WB2	124.23 88 ePKP	45 04.90	3.5X
	e		30 43.00			1.0s 57.10nm		5.0mb		0.9s 0.80nm		
	e		31 44.00		ANAL	22.37 135 eP	31 03.00	2.7X	S.D. = 1.1 on 207 of 263 obs.			
VITF	10.23 320 P		28 27.27	-3.1X	AKSR	22.38 134 eP	31 05.00	4.7X	& MAY 26, 1991 12h 30m 34.34s			
PLDF	10.27 305 P		28 31.82	0.7	TAB	23.71 86 eP	31 15.00	1.5	60.259 N 153.107 W			
MOX	10.33 345 ePn		28 30.00	-1.7		e	44 23.00		DEPTH = 132.7km			
	Z 20s 3.10um				KER	25.57 94 eP	31 37.00	5.7X	SOUTHERN ALASKA			
	N 19s 9.50um				SOD	27.36 9 eP	31 48.00	0.7	<AEIC>.			
	E 18s 15.90um				MAIO	34.24 83 eP	32 50.00	1.4				( 2 )
SMF	10.46 308 Pn		28 33.00	-0.6								



RED	0.23	46	iPc	30 52.00	0.7	BALM	5.35	77	eP	31 52.18	-1.1	SLKM	1.19	52	iPc	03 22.19	-0.8
			eS	31 06.09		GLM	5.43	27	ePd	31 51.69	-2.5	SYI	1.19	187	iPd	03 22.06	-0.9
RDW	0.27	33	iPc	30 52.32	0.7	DOT	5.46	48	eP	31 52.28	-2.3				eS	03 28.15	
RS2	0.27	40	iPc	30 52.32	0.7	WRG	5.54	87	eP	31 54.47	-1.2	MCNL	1.28	243	iPc	03 22.49	-1.6
RSO	0.27	41	iPc	30 52.31	0.7	IMA	5.84	358	ePd	31 58.40	-1.5				eS	03 38.75	
RDN	0.31	34	iPc	30 52.31	0.7	CTGM	5.84	78	eP	31 56.48	-3.5	SEW	1.38	76	iPc	03 23.62	-1.8
NCT	0.32	16	iPc	30 52.44	0.8	YKU	6.77	90	eP	32 16.80	4.4	CKL	1.41	356	iPd	03 25.64	-0.4
			eS	31 06.44		PNL	6.91	89	eP	32 11.90	-2.5	CRP	1.48	359	iPd	03 26.75	-0.2
DFR	0.39	32	iPc	30 52.52	-1.0	INK	11.67	38	P	33 15.00	-2.5	BGL	1.48	355	iPd	03 26.56	-0.4
			eS	31 07.26			0.2s	1.20nm		4.2mb X		NCG	1.62	359	iPd	03 28.44	-0.4
RDT	0.47	47	iPc	30 53.01	-0.9	YKA	18.40	66	eP	34 33.00	-8.4	SUA	1.81	22	iPd	03 31.03	-0.4
PDB	0.72	230	iPd	30 54.38	-1.0		0.8s	0.50nm		2.9mb		PMS	1.93	40	ePd	03 32.16	-0.9
AUE	0.91	189	ePd	30 56.08	-0.9		82 obs. associated					KDC	2.06	185	iPd	03 33.00	-1.7
AUH	0.91	191	eP	30 56.38	-0.7							PWA	2.17	30	ePd	03 35.57	-0.7
AUI	0.94	190	eP	30 56.22	-1.0	& MAY 26, 1991 12h 50m 58.10s						SVW	2.18	309	iPc	03 35.10	-1.4
			eS	31 13.56		34.000 N 118.300 W						SKT	2.22	7	iPd	03 36.14	-0.8
HOM	0.95	129	iPc	30 56.65	-0.6	DEPTH = 6.0km (geophysicist)								eS	04 03.92		
			eS	31 13.73		SOUTHERN CALIFORNIA ( 43)						MTU	2.26	83	ePc	03 35.29	-2.3
CKL	1.01	22	iPc	30 57.44	-0.6	<PAS>P>. ML 2.7 (PAS). Felt						KNIM	2.27	74	ePc	03 35.05	-2.7
NKA	1.04	61	iPc	30 58.82	0.7	(III) at Inglewood. Also felt in						PLRM	2.33	38	ePd	03 37.04	-1.5
BGL	1.07	19	iPc	30 58.17	-0.4	the Los Angeles area.						PMR	2.33	38	ePd	03 37.60	-0.9
XLV	1.07	138	iPc	30 57.23	-1.2							KNK	2.43	46	ePd	03 38.23	-1.8
			eS	31 15.43		PEC	0.95	96	eP	51 15.20	-1.5	GHO	2.53	37	ePd	03 39.99	-1.5
CRP	1.11	24	iPc	30 58.47	-0.6	ABL	1.14	318	eP	51 17.70	-2.3	GLI	2.73	64	iPc	03 41.06	-3.1
			eS	31 17.75		PLM	1.36	118	eP	51 21.60	-2.2	SML	2.75	41	ePd	03 42.84	-1.6
CNPM	1.20	127	iPc	30 58.70	-1.0	BLP	1.83	288	eP	51 27.70	-2.6	CUT	2.77	18	ePc	03 43.40	-1.3
			eS	31 17.80		BCH	1.89	309	eP	51 29.80	-1.5	HIN	2.88	75	iPc	03 43.41	-2.9
NCG	1.24	22	ePc	30 59.64	-0.6	TNP	4.17	12	eP	52 03.20	-0.6	MID	2.96	95	ePd	03 45.70	-1.7
MCNL	1.24	211	iPd	30 59.06	-1.1		6 obs. associated					VZW	3.04	63	iPc	03 45.75	-2.8
			eS	31 18.28								SCM	3.12	47	ePc	03 48.30	-1.4
CDD	1.36	192	iPd	31 00.17	-1.3	* MAY 26, 1991 12h 55m 33.86±1.21s						VLZ	3.17	62	ePc	03 47.66	-2.6
			eS	31 20.83		2.881 S ± 8.6km 136.342 E ±24.2km								eS	04 22.61		
SLKM	1.45	79	iPc	31 00.95	-1.6	DEPTH = 33.0km (normal)						CVA	3.28	74	iPc	03 48.44	-3.3
SVW	1.50	306	iPd	31 02.00	-1.1	5.0mb ( 1 obs.)						HUR	3.41	19	eP	03 52.92	-0.8
SUA	1.67	43	iPc	31 04.20	-0.9	WEST IRIAN REGION (196)						KLU	3.50	58	iPc	03 52.64	-2.4
			eS	31 27.79								SCAM	3.53	75	iPc	03 51.95	-3.4
SYI	1.69	167	ePd	31 03.74	-1.4	MTN	11.16	207	eP	58 14.80	0.5	TTA	3.66	331	eP	03 56.00	-1.3
			eS	31 27.18		0.2s 128.00nm 6.8mb X						TOA	3.72	49	eP	03 56.90	-1.1
SEW	1.83	93	eP	31 04.97	-1.9							TRF	3.78	13	eP	03 56.83	-2.1
SKT	1.89	23	eP	31 06.66	-0.9	KNA	14.80	210	eP	59 02.90	0.2	RAGM	3.78	78	ePc	03 55.25	-3.6
PMS	2.00	59	ePc	31 07.25	-1.7	WB2	17.07	186	eP	59 30.20	-1.5	RND	3.95	22	eP	03 59.66	-1.6
PWA	2.11	47	ePc	31 08.43	-1.7		0.9s 8.80nm 3.9mb X					TZL	3.98	52	eP	03 59.80	-1.8
PLRM	2.36	54	ePc	31 10.59	-2.7							HMT	3.98	79	eP	03 58.10	-3.6
PMR	2.36	54	ePc	31 11.20	-2.1	QIS	17.86	170	iPc	59 42.50	1.0	SDG	4.21	46	eP	04 03.01	-1.9
KDC	2.54	173	ePd	31 13.20	-2.4							MCK	4.24	20	eP	04 03.52	-1.8
GHO	2.54	51	ePc	31 13.29	-2.5	ASPA	20.80	186	iPc	00 14.90	-0.1	GLB	4.42	64	iPc	04 04.65	-3.3
CUT	2.55	31	ePd	31 14.68	-1.1		0.7s 45.70nm 5.0mb							eS	04 52.55		
KNK	2.55	61	ePc	31 13.21	-2.7							PAX	4.52	42	eP	04 07.34	-2.0
KNIM	2.68	86	iPc	31 14.19	-3.2	GUN	57.36	306	P	05 22.40	0.4	BWN	4.57	15	eP	04 08.12	-1.9
			eS	31 46.03		PKI	57.60	305	P	05 23.00	-0.7	CROM	4.58	74	eP	04 06.29	-4.0
MTU	2.74	93	ePc	31 16.42	-1.9	KKN	57.79	305	P	05 24.80	-0.1	WAX	4.69	78	eP	04 06.44	-5.2
SML	2.80	54	ePc	31 16.42	-2.6	DMN	57.86	305	P	05 25.70	0.3	TGL	4.73	74	eP	04 08.47	-3.8
TTA	3.02	334	iPd	31 20.70	-1.3	GKN	58.40	305	P	05 29.20	0.1	DDM	4.99	34	eP	04 14.77	-1.1
GLI	3.03	76	ePc	31 18.25	-3.8		S.D. = 0.8 on 10 of 10 obs.					BALM	5.01	71	eP	04 12.17	-4.0
HUR	3.19	30	eP	31 22.84	-1.4	& MAY 26, 1991 14h 03m 01.77s						NEA	5.01	15	eP	04 12.85	-3.3
SCM	3.22	58	ePc	31 22.07	-2.6	59.792 N 152.127 W						WRH	5.06	20	eP	04 14.20	-2.7
HIN	3.29	85	eP	31 22.24	-3.2	DEPTH = 68.1km						WRG	5.09	83	eP	04 14.81	-2.4
VZW	3.32	73	ePc	31 22.65	-3.3	3.5mb ( 1 obs.)						HDA	5.23	25	eP	04 16.88	-2.3
VLZ	3.44	72	ePc	31 24.44	-3.0	SOUTHERN ALASKA ( 2)						CCB	5.27	21	eP	04 16.69	-3.1
			eS	32 04.99		<AEIC>.						RDS	5.38	18	eP	04 18.33	-3.0
TRF	3.47	21	ePc	31 26.48	-1.6	HOM	0.28	118	iPc	03 12.52	-0.2	CTGM	5.48	73	eP	04 20.22	-2.7
MID	3.52	101	eP	31 27.00	-1.4	XLV	0.40	148	iPc	03 12.80	-0.8	MDM	5.49	18	eP	04 19.86	-3.0
CVA	3.66	82	iPc	31 28.46	-1.9							FBA	5.51	20	eP	04 21.10	-2.0
KLU	3.73	67	ePc	31 28.33	-3.0	CNPM	0.53	120	iPc	03 14.33	-0.5	GLM	5.66	21	eP	04 22.32	-2.9
RND	3.75	31	eP	31 29.96	-1.7							YKU	6.29	87	eP	04 32.50	-1.4
TOA	3.83	58	eP	31 31.20	-1.6							IMA	6.34	354	eP	04 32.80	-2.0
SCAM	3.93	83	eP	31 31.65	-2.3							PNL	6.44	86	iPc	04 32.85	-3.2
MCK	4.00	28	eP	31 33.91	-1.1	RED	0.71	333	iPd	03 16.27	-0.7	ANM	7.82	313	eP	04 53.00	-2.1
TZL	4.13	61	eP	31 33.59	-3.1							INK	11.75	36	P	05 46.00	-2.4
RAGM	4.20	85	ePc	31 35.49	-2.1									0.2s 1.00nm 4.4mb X			
BWN	4.28	22	eP	31 37.00	-1.7	RSO	0.74	335	iPd	03 16.88	-0.6	YKA	18.14	65	eP	07 07.30	-2.8
SDG	4.29	55	eP	31 36.74	-2.1	RS2	0.74	335	iPd	03 16.94	-0.5		0.6s 1.90nm 3.5mb				
HMT	4.40	85	eP	31 38.06	-2.3	AUE	0.77	236	iPc	03 16.86	-0.7		82 obs. associated				
PAX	4.55	50	eP	31 40.31	-2.1	RDW	0.77	334	iPd	03 17.17	-0.6						
GLB	4.70	71	eP	31 41.60	-2.8	RDN	0.79	337	iPd	03 17.35	-0.6						
			eS	32 34.24		AUH	0.80	238	iPc	03 17.34	-0.6						
NEA	4.72	22	eP	31 42.24	-2.4												
WRH	4.83	27	ePc	31 43.64	-2.4	RDT	0.80	350	iPd	03 17.23	-0.7						
DDM	4.91	41	eP	31 46.60	-0.7												
CROM	4.95	80	eP	31 45.74	-2.2	AUI	0.81	236	iPc	03 17.21	-0.8						
CCB	5.04	27	ePd	31 46.55	-2.4												
HDA	5.05	32	ePd	31 46.83	-2.3	DFR	0.85	341	iPd	03 17.91	-0.7						
WAX	5.10	83	eP	31 46.25	-3.5	NCT	0.87	333	iPd	03 18.18	-0.7						
TGL	5.10	80	eP	31 47.22	-2.7												
RDS	5.13	24	eP	31 47.24	-2.9												
MDM	5.23	23	ePd	31 49.03	-2.4												
FBA	5.26	26	eP	31 50.00	-1.9	NKA	1.05	25	iPd	03 22.18	1.1						
						CDD	1.16	223	iPd	03 21.49	-1.1						
</																	



26d 14h

	0.3s	6.00nm	4.5mb	
	eS	17 51.00		
ASPA	15.63 157 eP	15 50.10	0.0	
	0.4s	15.30nm	4.6mb	
	iS	18 39.80		
OIS	16.32 135 iPd	15 58.30	-0.5	
	i	16 06.00		
	eS	18 51.00		
WARB	16.82 182 eP	16 06.50	1.6	
NANU	17.37 219 eP	16 15.50	3.9X	
	0.4s	5.00nm	4.1mb	
	eS	19 21.00		
STK	26.10 151 eP	17 59.40	19.3X	
	0.6s	3.30nm		
	e	22 15.60		
RMO	26.56 133 eP	17 55.00	10.6X	
COO	31.22 136 eP	18 34.00	8.0X	
CHG	39.52 315 eP	19 37.50	0.9	
LZH	50.25 335 eP	21 02.00	0.0	
	1.0s	15.00nm	4.9mb	
LSA	52.09 319 eP	21 16.40	0.0	
GUN	54.52 314 P	21 34.26	0.0	
	0.7s	16.00nm	5.1mb	
PKI	54.66 313 P	21 34.48	-0.7	
GTA	54.76 334 eP	21 35.80	0.3	
	0.8s	10.00nm	4.9mb	
KKN	54.88 314 P	21 36.48	-0.2	
DMN	54.90 313 P	21 37.66	0.8	
GKN	55.46 313 P	21 40.60	-0.2	
	0.4s	6.00nm	4.9mb	
WMO	63.91 329 P	22 39.00	0.8	
YAK	71.11 1 eP	23 21.20	-1.6	
CNCB	149.99 150 PKP	32 04.00	13.6X	
LPB	150.16 149 ePKP	32 03.00	12.5X	
ZOBO	150.37 149 PKP	32 05.00	14.0X	
S.D. = 0.9 on 17 of 25 obs.				

% MAY 26, 1991 15h 10m 32.19±1.00s  
41.125 N ±17.9km 28.476 E ±12.3km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 2.7 (ISK).

CTT	0.04 303 iPg	10 33.30	-1.0
ISK	0.44 97 iPg	10 41.30	0.1
DMK	0.88 322 iPg	10 50.00	0.9
	iSg	11 02.50	
HRT	0.95 108 ePn	10 50.30	-0.1
IZI	1.09 136 iPn	10 53.30	0.5
S.D. = 1.0 on 5 of 5 obs.			

& MAY 26, 1991 16h 59m 53.40s  
38.360 N 119.440 W  
DEPTH = 6.0km  
CALIFORNIA-NEVADA BORDER REGION (40)  
<BRK>. ML 3.1 (BRK).

CMB	0.81 247 iPc	00 08.30	-1.3
	iS	00 19.70	
	i	00 27.30	
BONR	0.98 114 eP	00 11.50	-1.2
KVN	1.26 56 eP	00 16.00	-1.2
FRI	1.38 189 iPd	00 18.40	-0.8
	iS	00 36.50	
TNP	1.77 98 eP	00 23.50	-1.5
ARN	1.94 239 eP	00 28.00	0.7
ORV	2.00 307 eP	00 28.70	0.6
	eSg	00 54.70	
MHC	2.02 240 eP	00 30.40	1.9
	eSg	00 58.20	
LLA	2.11 215 e(P)	00 31.20	1.5
SAO	2.25 226 ePd	00 32.50	0.7
BKS	2.26 259 eP	00 33.50	1.7
PRI	2.42 204 ePd	00 37.40	3.1
12 obs. associated			

? MAY 26, 1991 17h 13m 49.19±1.14s  
42.361 N ±11.1km 13.202 E ±16.3km  
DEPTH = 10.0km (geophysicist)  
CENTRAL ITALY (381)

AQU	0.15 93 P	13 52.50	-0.2
	eSg	13 59.00	
AZI	0.41 155 P	13 57.00	-0.6
	eSg	14 04.00	
SDI	0.80 145 P	14 05.50	0.8
ASS	0.81 331 P	14 05.00	0.0

eSg 14 17.00  
S.D. = 1.0 on 4 of 4 obs.

\* MAY 26, 1991 17h 28m 01.39±0.66s  
27.054 N ±14.8km 99.745 E ±6.3km  
DEPTH = 33.0km (normol)  
5.0mb (6 obs.)  
YUNNAN PROVINCE, CHINA (318)

KMI	3.31 125 ePg	29 05.00	12.7X
CD2	5.21 42 Pg	29 20.00	0.9
	Sg	30 23.20	
GYA	6.21 94 ePn	29 31.40	-2.0
	N 10s	0.60um	
	E 10s	0.60um	
	Sn	30 39.00	
LSA	8.02 291 eP	29 58.80	-0.1
CHG	8.23 185 eP	30 51.00	49.5X
	e	32 46.00	
LZH	9.66 20 eP	30 52.00	30.7X
	1.6s	18.00nm	
GUN	12.34 277 P	30 58.00	0.0
	0.4s	14.00nm	5.5mb
PKI	12.76 276 P	31 02.68	-0.9
	0.4s	9.00nm	5.2mb
KKN	12.87 277 P	31 05.10	0.2
	0.4s	14.00nm	5.4mb
GKN	13.44 277 P	31 12.46	0.0
	0.3s	5.00nm	4.9mb
WRA	57.50 141 P	37 51.00	1.0
	0.7s	1.10nm	4.0mb
WB2	57.51 141 iPc	37 50.80	0.8
	0.7s	1.30nm	4.1mb
S.D. = 1.1 on 9 of 12 obs.			

MAY 26, 1991 17h 45m 30.47±0.43s  
41.077 N ±4.2km 22.455 E ±3.6km  
DEPTH = 10.0km (geophysicist)  
YUGOSLAVIA (383)  
ML 2.6 (THE). 2.5 (SKO).

GRG	0.13 199 iPg	45 33.80	0.2
	eSg	45 38.00	
VAY	0.26 20 iPg	45 36.00	0.1
	iSg	45 36.60	
KNT	0.34 76 iPg	45 38.00	0.4
	eSg	45 43.20	
THE	0.59 139 ePg	45 41.50	-0.9
	eSg	45 49.40	
SDH	0.73 110 ePg	45 44.60	-0.2
	eSg	45 53.90	
SRS	0.86 87 ePg	45 47.00	0.0
	eSg	45 58.90	
FNA	0.87 251 ePg	45 47.20	0.0
	eSg	45 59.70	
LIT	0.98 178 ePg	45 49.10	0.1
	eSg	46 02.70	
SKO	1.18 320 iPn	45 52.00	-0.4
OHR	1.25 272 ePn	45 54.00	0.2
PAIG	1.48 141 ePb	45 57.70	0.6
	eSb	46 16.50	
S.D. = 0.4 on 11 of 11 obs.			

? MAY 26, 1991 18h 44m 04.80±2.40s  
18.329 N ±17.0km 65.721 W ±19.8km  
DEPTH = 33.0km (normol)  
PUERTO RICO REGION (90)

LPR	0.14 262 P	44 11.20	0.3
CPD	0.34 213 P	44 12.00	-0.3
SJG	0.46 242 iP	44 15.30	0.4
CLLP	0.85 253 P	44 20.00	0.5
APR	0.97 277 P	44 21.90	-0.1
LRS	1.07 268 P	44 23.30	-0.2
MGP	1.34 256 P	44 26.90	-0.4
S.D. = 0.5 on 7 of 7 obs.			

MAY 26, 1991 19h 37m 26.56±0.61s  
44.806 N ±4.1km 111.818 W ±8.4km  
DEPTH = 5.0km (geophysicist)  
HEBGEN LAKE REGION (458)  
ML 3.7 (BUT).

LTMT	0.35 217 iPc	37 34.10	0.4
BGMT	0.46 340 iPc	37 36.00	0.3
MEMT	1.00 37 iPc	37 46.00	-0.1
LRM	1.11 336 iPnc	37 47.70	-0.3

HBM	1.13 331 iPnc	37 48.30	-0.1
BUT	1.32 337 ePg	37 52.50	1.0X
	eSn	38 08.80	
	iSg	38 10.00	
SXM	1.41 17 iPnc	37 53.40	0.3
HPI	1.43 220 eP	37 53.20	-0.3
HRY	1.91 360 iPnd	38 00.20	0.1
PTI	1.98 192 eP	38 01.00	-0.2
NEW	5.03 315 e(P)	38 59.00	14.4X
S.D. = 0.3 on 9 of 11 obs.			

\* MAY 26, 1991 20h 48m 34.16±1.14s  
23.945 N ±12.4km 123.582 E ±12.4km  
DEPTH = 33.0km (normol)  
3.8mb (3 obs.)  
SOUTHWESTERN RYUKYU ISLANDS (246)

TWC	1.71 293 iPc	49 03.20	1.1
	eS	49 25.20	
TWD	1.82 275 iPc	49 03.60	-0.1
TWF1	2.18 255 iPc	49 08.20	-0.6
	eS	49 34.30	
TWG	2.56 245 iPd	49 13.60	-0.7
SSE	7.43 344 eP	50 21.20	-1.8
	Z 20s	0.40um	
WRA	44.87 166 P	56 53.00	5.7X
	0.9s	1.10nm	3.7mb
WB2	44.87 166 iPc	56 46.90	-0.5
	0.7s	1.40nm	4.0mb
QUE	50.38 290 eP	57 32.40	1.7
YKA	82.33 23 eP	00 54.50	0.9
	0.6s	0.50nm	3.7mb
S.D. = 1.4 on 8 of 9 obs.			

? MAY 26, 1991 20h 58m 11.30±15.54s  
43.064 N ±63.5km 128.312 W ±107.7km  
DEPTH = 10.0km (geophysicist)  
OFF COAST OF OREGON (30)

HBO	4.43 78 P	59 20.87	0.6
NLO	4.60 47 P	59 22.59	0.0
GT2	4.83 62 P	59 25.69	-0.1
BMW	4.97 45 P	59 27.09	-0.7
RVW	5.03 50 P	59 28.38	-0.2
VLMM	5.14 59 P	59 29.96	-0.2
LVP	5.18 53 P	59 30.59	-0.2
VBEM	5.24 65 P	59 31.61	-0.1
MTMW	5.27 54 P	59 31.86	-0.2
VLL	5.33 61 P	59 32.77	-0.2
CZM	5.33 49 P	59 32.53	-0.4
SHW	5.35 52 P	59 33.41	0.2
ERK	5.35 51 P	59 32.99	-0.2
HSR	5.37 53 P	59 33.72	0.2
STD	5.38 52 P	59 33.58	-0.1
REMW	5.38 52 P	59 34.58	0.8
ESD	5.40 52 P	59 34.82	0.9
VFP	5.41 63 P	59 34.36	0.2
CDFW	5.41 54 P	59 33.79	-0.3
TDL	5.45 51 P	59 34.45	-0.2
KOSW	5.52 50 P	59 35.76	0.1
GULW	5.59 57 P	59 37.13	0.5
LMW	5.59 48 P	59 36.48	-0.2
ASR	5.70 55 P	59 38.07	-0.1
VIPM	5.75 73 P	59 38.19	-0.8
LON	5.91 49 P	59 41.06	0.1
RVC	5.94 47 P	59 41.68	0.3
WPW	6.02 51 P	59 43.06	0.4
GL2	6.09 59 P	59 42.99	-0.6
FMW	6.09 48 P	59 43.62	-0.1
GSM	6.19 46 P	59 45.08	0.0
NAC	6.46 53 P	59 52.59	3.8X
MXC	6.70 56 P	59 51.95	-0.2
S.D. = 0.4 on 32 of 33 obs.			

% MAY 26, 1991 21h 06m 22.02±0.66s  
42.264 N ±5.2km 12.972 E ±6.2km  
DEPTH = 10.0km (geophysicist)  
CENTRAL ITALY (381)

MNS	0.25 299 P	06 29.00	1.7
AQU	0.33 74 P	06 28.90	0.0
	eSg	06 33.90	
AZI	0.44 128 P	06 31.00	0.0
RMP	0.50 204 P	06 31.10	-1.0
	eSg	06 38.10	
RDP	0.54 201 P	06 32.70	-0.3
	eSg	06 40.50	



ASS 0.84 344 P 06 37.50 -0.7  
 SDI 0.84 131 P 06 50.10  
 ARV 1.23 359 P 06 39.40 1.1  
 eSg 06 51.80  
 eSg 06 44.20 -0.8  
 eSg 07 02.40  
 S.D. = 1.1 on 8 of 8 obs.

\* MAY 26, 1991 21h 11m 00.41 ± 1.24s  
 31.837 S ± 18.8km 69.359 W ± 12.7km  
 DEPTH = 100.0km (geophysicist)  
 SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.65 64 iPd 11 18.90 1.2  
 JACH 1.34 231 iPd 11 39.20  
 PEL 1.72 220 iPd 11 26.00 0.8  
 iS 11 47.00  
 ROCH 1.72 220 iPd 11 30.50 0.6  
 iS 11 54.20  
 PCH 1.80 231 iPd 11 30.50 -0.6  
 iS 11 55.50  
 TACH 2.03 208 iPd 11 35.00 1.1  
 iS 12 02.70  
 LNV 2.25 216 iPd 11 36.00 -0.8  
 iS 12 05.50  
 RFA 2.73 219 iPd 11 41.50 -1.7  
 iS 12 15.00  
 TCA 3.02 166 iPd 11 48.00 0.7  
 S 12 21.50  
 ePc 12 00.70 -1.4  
 S 12 37.40  
 S.D. = 1.3 on 9 of 9 obs.

MAY 26, 1991 21h 38m 56.42 ± 0.39s  
 7.650 S ± 3.8km 127.538 E ± 8.0km  
 DEPTH = 181.9 ± 3.9 km  
 5.0mb (15 obs.)  
 BANDA SEA (280)

AAI 3.99 9 eP 40 00.00 1.9  
 MTN 6.26 146 eP 40 27.00 -0.6  
 KNA 8.14 172 iPd 40 51.20 -1.3  
 0.4s 118.00nm 5.6mb  
 eS 42 16.00  
 WB2 13.89 152 iPd 42 03.40 -3.5X  
 0.7s 17.30nm 4.6mb  
 e 44 30.50  
 i 44 47.80  
 MBL 15.36 208 iPd 42 24.60 -0.5  
 ASPA 17.06 160 iPd 42 44.10 -1.7  
 0.7s 40.90nm 4.9mb  
 eS 45 42.50

QIS 17.35 139 eP 42 49.00 -0.2  
 i 42 56.00  
 iS 45 53.70  
 WARB 18.45 183 eP 43 01.50 0.5  
 NANU 18.80 217 eP 43 05.00 0.5  
 0.4s 19.00nm 4.9mb  
 MEKA 20.71 203 eP 43 25.00 1.1  
 0.3s 28.00nm 5.2mb  
 FORR 23.09 179 eP 43 48.00 1.0  
 COOL 23.88 194 eP 43 55.00 0.3  
 BAL 24.99 203 eP 44 05.50 0.5  
 KLB 25.51 200 eP 44 10.00 0.2  
 MUN 26.41 202 eP 44 18.00 0.1  
 NWAQ 26.91 199 eP 44 23.00 0.5  
 STK 27.44 153 iPd 44 40.20 13.0X  
 0.5s 4.80nm  
 e 47 53.70

IPM 29.11 294 ePd 44 44.10 1.7  
 1.0s 28.40nm 5.0mb  
 CHG 38.56 313 eP 46 03.40 0.2  
 0.7s 7.02nm 4.4mb  
 GYA 39.50 330 P 46 11.60 0.6  
 Pcp 48 16.60  
 CD2 44.60 330 P 46 52.00 -0.3  
 XAN 45.06 338 P 46 55.00 -0.9  
 LZH 48.88 334 eP 47 25.50 -0.3  
 1.2s 21.00nm 4.6mb  
 LSA 51.02 318 eP 47 42.40 -0.2  
 GUN 53.57 313 P 48 00.46 -0.9  
 0.5s 37.00nm 5.4mb  
 PKI 53.72 312 P 48 01.20 -1.3  
 0.4s 14.00nm 5.0mb  
 KKN 53.94 313 P 48 02.98 -0.9  
 0.4s 19.00nm 5.1mb  
 DMN 53.97 312 P 48 03.22 -1.0

GKN 0.6s 19.00nm 4.9mb  
 54.53 312 P 48 06.96 -1.2  
 0.3s 44.00nm 5.6mb  
 NDI 60.47 309 eP 48 47.00 -2.4X  
 0.5s 21.13nm 5.2mb  
 WMO 62.64 329 P 49 03.20 -0.5  
 1.0s 20.00nm 4.9mb  
 QUE 69.19 306 eP 49 45.30 -0.4  
 MAIO 77.21 310 iPd 50 33.00 0.9  
 NB2 109.24 332 PKP 57 05.50 -0.5  
 0.7s 0.80nm  
 YKA 109.40 26 ePKP 57 06.10 0.0  
 0.5s 1.40nm  
 GRF 112.70 321 ePKP 57 12.60 -0.3  
 BSF 116.05 320 ePKP 57 18.90 -0.6  
 0.6s 5.40nm  
 HAU 116.28 320 ePKP 57 19.60 -0.2  
 LPG 116.80 317 ePKP 57 21.10 -0.1  
 0.6s 3.15nm  
 LOR 118.11 320 ePKP 57 22.90 -0.4  
 0.7s 3.30nm  
 LBF 118.14 320 ePKP 57 23.10 -0.3  
 0.5s 2.55nm  
 SSF 118.41 320 ePKP 57 23.80 -0.1  
 0.6s 5.40nm  
 AVF 118.60 320 ePKP 57 24.00 -0.2  
 BGF 119.01 320 ePKP 57 25.30 0.3  
 0.6s 9.45nm  
 MAF 119.32 319 ePKP 57 25.50 -0.1  
 TCF 119.52 319 ePKP 57 26.20 0.2  
 CAF 120.11 318 ePKP 57 27.80 0.6  
 0.9s 7.35nm  
 LPO 120.78 318 ePKP 57 29.10 0.6  
 0.7s 6.60nm  
 LPF 120.86 322 ePKP 57 28.60 0.2  
 0.7s 7.70nm  
 MFF 120.90 321 ePKP 57 28.80 0.2  
 0.8s 8.05nm  
 LFF 120.98 318 ePKP 57 29.50 0.7  
 EPF 121.96 316 ePKP 57 31.10 0.3  
 0.7s 3.30nm  
 LKO 133.64 276 PKP 57 52.86 -1.1  
 0.4s 4.50nm  
 VAO 149.07 190 ePKP 58 27.30 6.4X  
 CNCB 151.26 148 iPKPc 58 33.80 8.8X  
 LPB 151.42 147 PKP 58 33.00 8.0X  
 ZOBO 151.62 147 PKP 58 27.00 1.5  
 i 58 34.00  
 SIV 155.01 160 ePKP 58 31.00 1.5  
 S.D. = 0.8 on 52 of 58 obs.

? MAY 26, 1991 21h 55m 48.14 ± 4.01s  
 36.406 N ± 38.0km 28.849 E ± 12.9km  
 DEPTH = 33.0km (normal)  
 DODECANESE ISLANDS (369)  
 MD 3.6 (ISK).

YER 0.86 328 iPg 56 02.70 -1.2  
 iSg 56 11.70  
 ELL 0.92 68 iPn 56 04.00 -0.8  
 CIN 1.34 333 ePg 56 11.00 0.4  
 iSg 56 26.00  
 BCK 1.75 52 iPn 56 18.00 1.3  
 KHL 1.99 15 ePn 56 19.40 -0.8  
 IZM 2.36 328 iPn 56 26.40 1.0  
 ALT 2.83 20 ePn 56 32.00 0.0  
 S.D. = 1.2 on 7 of 7 obs.

MAY 26, 1991 22h 30m 07.98 ± 0.98s  
 6.154 S ± 5.5km 150.997 E ± 8.5km  
 DEPTH = 16.6 ± 6.9 km  
 5.1mb (11 obs.) 4.3Msz (1 obs.)  
 NEW BRITAIN REGION (192)

RAB 2.27 31 iPd 30 46.00 0.6  
 0.5s 1239.44nm  
 iS 31 21.00  
 LAT 4.00 263 eP 31 24.10 14.2X  
 PMG 5.00 229 eP 31 18.00 -6.0X  
 eS 32 27.00  
 YYYY 5.00 269 eP 31 43.70 19.5X  
 RMQ 20.34 186 iPd 34 46.00 -0.3  
 0.9s 103.00nm 5.2mb  
 GUA 20.48 343 eP 34 48.30 0.5  
 1.0s 288.00nm 5.6mb  
 BRS 21.19 176 iPd 34 53.50 -1.6  
 i 35 17.00 118kmX

WB2 21.20 228 iPd 34 55.70 0.5  
 0.9s 44.30nm 4.9mb  
 OLP 21.32 197 iPd 34 56.80 0.5  
 0.7s 76.00nm 5.2mb  
 DZM 21.75 138 iPd 34 58.90 -2.0  
 ASPA 23.95 222 iPd 35 24.00 1.6  
 0.6s 101.80nm 5.6mb  
 iS 39 45.80  
 ePcS 43 00.50  
 STK 27.06 198 eP 36 03.40 11.8X  
 1.0s 5.60nm  
 TIA 52.77 326 eP 39 23.80 -0.7  
 BJI 56.05 328 (P) 39 47.50 -0.9  
 XAN 56.39 318 P 39 50.00 -1.0  
 TIY 56.51 324 eP 39 49.80 -2.1  
 LZH 60.97 317 eP 40 22.20 -0.8  
 1.4s 19.00nm 5.0mb  
 pP 40 29.50 24kmX  
 GUN 71.30 302 P 41 28.60 -0.9  
 PKI 71.59 302 P 41 31.60 0.4  
 KKN 71.77 302 P 41 31.10 -1.0  
 DMN 71.86 302 P 41 32.90 0.2  
 GKN 72.37 302 P 41 34.60 -1.0  
 WMO 75.53 318 eP 41 49.80 -3.7X  
 SVW 78.76 23 eP 42 12.00 0.9  
 PMR 81.65 25 eP 42 26.00 -0.4  
 0.9s 11.70nm 4.9mb  
 IMA 82.33 20 ePc 42 30.60 0.6  
 0.9s 6.90nm 4.8mb  
 KLU 82.96 26 P 42 33.50 0.2  
 TOA 83.13 25 eP 42 35.10 0.9  
 FBA 83.80 22 eP 42 36.70 -0.8  
 0.8s 19.10nm 5.4mb  
 INK 90.35 21 eP 43 09.00 -0.2  
 TNP 95.15 52 P 43 32.50 0.3  
 0.8s 1.96nm 4.6mb  
 YKA 97.45 28 eP 43 40.90 -0.9  
 0.8s 2.70nm 4.9mb  
 HFS 117.25 338 ePKP 48 52.70 -1.1  
 0.4s 0.50nm  
 Z 17s 0.05um 4.2MszX  
 e 49 00.50  
 LR 39 21.00  
 NB2 117.55 339 PKP 48 52.00 -2.4X  
 1.0s 2.80nm  
 ZST 122.71 325 ePKP 49 04.40 -0.1  
 SKO 122.90 317 ePKP 49 05.20 0.1  
 BRG 122.92 329 ePKP 49 05.30 0.4  
 e 49 17.60  
 CLL 123.14 330 ePKP 49 05.00 -0.3  
 KHC 124.14 328 PKP 49 07.50 0.1  
 MOX 124.24 330 ePKP 49 08.30 0.8  
 EKA 126.78 342 PKP 49 12.00 -0.2  
 1.0s 5.20nm  
 BSF 128.47 330 ePKP 49 16.30 0.4  
 1.0s 12.00nm  
 HAU 128.57 330 ePKP 49 16.50 0.6  
 1.4s 21.80nm  
 Z 22s 0.08um 4.3MszX  
 LPG 130.03 328 ePKP 49 20.00 0.8  
 LBF 130.44 331 ePKP 49 20.20 0.6  
 SSF 130.62 331 ePKP 49 20.70 0.9  
 1.0s 7.00nm  
 SMF 130.75 330 ePKP 49 20.90 0.8  
 1.0s 6.00nm  
 GRR 131.59 335 ePKP 49 21.90 0.3  
 TCF 131.79 331 ePKP 49 23.30 1.2  
 1.0s 6.00nm  
 LPF 131.94 335 ePKP 49 22.80 0.5  
 1.0s 10.00nm  
 ZOBO 135.34 120 PKP 49 16.00 -14.4X  
 SIV 141.37 125 PKP 49 35.80 -5.0X  
 PPD 144.47 143 (PKP) 49 52.00 6.0X  
 BAO 151.32 139 ePKP 50 03.00 5.8X  
 S.D. = 0.9 on 44 of 54 obs.

\* MAY 27, 1991 00h 05m 43.13 ± 0.94s  
 37.745 N ± 22.0km 69.237 E ± 10.7km  
 DEPTH = 33.0km (normal)  
 4.8mb (4 obs.)  
 AFGHANISTAN-USSR BORDER REGION (717)

MAIO 7.93 262 eP 07 39.00 0.0  
 GKN 16.16 122 P 09 29.86 0.4  
 0.7s 54.00nm 4.8mb  
 KKN 16.73 122 P 09 35.86 -0.9



27d 00h

DMN 0.6s 90.00nm 5.1mb  
 16.73 123 P 09 38.06 1.3  
 PKI 16.96 122 P 09 40.02 0.3  
 0.8s 43.00nm 4.6mb  
 GUN 17.06 120 P 09 40.00 -1.0  
 0.8s 56.00nm 4.7mb  
 YKA 80.06 2 eP 17 50.50 0.1  
 0.8s 0.40nm 3.5mb X  
 S.D. = 1.0 on 7 of 7 obs.

\* MAY 27, 1991 00h 33m 29.49±2.15s  
 36.733 N ±21.3km 70.743 E ±9.9km  
 DEPTH = 194.6 ±23.4 km  
 4.5mb ( 8 obs.)

HINDU KUSH REGION (718)

QUE 7.26 207 iPc 35 14.10 0.0  
 eS 36 32.50  
 GKN 14.60 123 P 36 47.38 -1.0  
 0.4s 17.00nm 4.9mb  
 DMN 15.17 123 P 36 55.78 0.3  
 0.4s 16.00nm 4.7mb  
 KKN 15.18 122 P 36 55.02 -0.4  
 0.5s 18.00nm 4.7mb  
 PKI 15.40 122 P 36 58.72 0.3  
 0.6s 21.00nm 4.8mb  
 GUN 15.51 120 P 37 00.48 0.7  
 0.3s 7.00nm 4.5mb  
 NB2 44.07 323 P 41 19.40 0.0  
 0.7s 1.80nm 3.7mb  
 YKA 81.02 3 eP 45 27.70 4.5X  
 0.4s 0.20nm 3.2mb X  
 WRA 82.29 122 P 45 30.00 -0.5  
 0.4s 1.00nm 3.9mb  
 WB2 82.30 122 iPc 45 31.00 0.5  
 0.4s 1.40nm 4.0mb  
 S.D. = 0.7 on 9 of 10 obs.

MAY 27, 1991 01h 14m 07.40±0.25s  
 34.135 N ±4.8km 139.131 E ±3.3km  
 DEPTH = 19.1km ( 7 depth phases)  
 5.0mb ( 33 obs.) 4.2MsZ ( 1 obs.)  
 NEAR S. COAST OF HONSHU, JAPAN (230)

IIDJ 1.68 324 iP+ 14 35.80 -0.2  
 S 14 57.10  
 CHJJ 1.91 357 iPd 14 39.30 -0.1  
 KAKJ 2.23 22 iP+ 14 42.80 -1.2  
 MAT 2.52 343 iPd 14 48.30 0.3  
 eS 15 20.00  
 MTMJ 2.67 336 P 14 51.10 0.7  
 WKYJ 2.93 273 P 14 53.70 -0.3  
 eS 15 26.90  
 TSRJ 2.94 299 eP 14 53.80 -0.2  
 NIJJ 3.10 358 P 14 55.90 -0.4  
 SHK 5.35 276 eP 15 26.90 -1.4  
 CN2 14.35 316 eP 17 35.00 3.6X

Z 14s 5.00um  
 N 14s 2.40um  
 E 14s 1.50um  
 epP 17 41.00  
 eS 20 18.00  
 SNY 14.46 307 Pc 17 33.00 0.1  
 1.8s 90.00nm 5.1mb  
 Z 15s 1.90um 4.3MsZ  
 N 12s 2.50um  
 E 12s 0.80um

pP 17 39.50  
 DL2 14.85 294 eP 17 44.50 6.5X  
 1.0s 100.00nm 5.2mb  
 Z 12s 2.50um 3.6MsZ  
 N 12s 3.70um  
 E 12s 3.30um

sP 17 53.00  
 SSE 15.42 264 eP 17 28.00 -17.5X  
 Z 12s 8.10um  
 N 10s 2.30um  
 E 10s 3.90um

PP 17 44.00  
 eS 21 02.00  
 NJ2 17.12 269 Pc 18 10.50 3.4X  
 Z 15s 1.40um  
 N 10s 2.00um  
 E 10s 1.10um

BJI 19.22 295 eP 18 32.00 -0.9  
 N 14s 2.13um  
 eS 22 08.00

WHN 21.23 267 eP 18 55.50 1.1  
 1.0s 100.00nm 5.2mb  
 E 12s 1.30um  
 eS 22 54.00  
 TIY 21.89 287 eP 19 03.00 2.0  
 Z 13s 4.10um 5.0MsZ  
 E 13s 3.00um  
 pP 19 08.00 18km  
 HHC 22.82 295 eP 19 12.00 1.7  
 Z 14s 2.20um 4.8MsZ  
 N 11s 0.50um  
 E 12s 1.50um

S 23 18.00  
 SS 24 00.00  
 BTO 23.95 294 eP 19 20.00 -1.3  
 N 14s 2.50um  
 E 14s 0.80um  
 esP 19 27.00

BAG 24.28 228 eP 19 26.00 1.3  
 XAN 24.98 278 P 19 31.50 0.2  
 QCP 25.36 224 eP 19 46.00 11.1X  
 YAK 28.54 351 eP 20 01.90 -1.7  
 e 25 03.00  
 LZH 28.84 284 eP 20 06.20 -0.6  
 2.0s 43.00nm 4.9mb  
 Z 16s 2.84um 5.0MsZ  
 E 13s 1.87um  
 pP 20 14.50 29km  
 ePP 21 05.00  
 eS 25 00.00

GYA 28.97 263 iPd 20 07.60 -0.4  
 1.4s 100.00nm 5.4mb  
 Z 16s 1.80um 4.8MsZ  
 N 12s 1.20um  
 E 12s 2.30um  
 S 25 03.00

CD2 29.91 274 iPd 20 15.40 -0.9  
 Z 14s 3.30um 5.1MsZ  
 N 13s 3.00um  
 eS 25 08.00  
 GTA 31.75 291 Pd 20 32.00 -0.6  
 1.4s 100.00nm 5.5mb  
 Z 13s 1.80um 4.9MsZ  
 E 12s 1.80um

pP 20 39.00 24km  
 S 25 44.00  
 KMI 32.74 264 Pd 20 41.00 -0.5  
 2.0s 110.00nm 5.4mb  
 Z 14s 2.90um 5.1MsZ  
 pP 20 53.00 45kmX  
 sS 26 04.00

CHG 38.81 257 eP 21 14.00 -18.8X  
 WMQ 40.56 300 P 21 48.60 1.4  
 1.5s 30.00nm 4.8mb  
 Z 14s 0.70um 4.7MsZ  
 N 12s 0.80um  
 E 12s 0.50um

pP 21 57.00 28km  
 LSA 40.68 277 eP 21 50.60 1.8  
 GUN 45.63 277 P 22 29.18 0.3  
 1.4s 110.00nm 5.6mb

PKI 46.14 277 P 22 32.48 -0.4  
 1.0s 21.00nm 5.0mb  
 KKN 46.17 277 P 22 32.96 0.0  
 0.9s 32.00nm 5.3mb  
 GKN 46.62 278 P 22 36.42 0.0  
 1.3s 85.00nm 5.6mb

SVW 48.93 36 ePc 22 55.20 1.2  
 BRW 49.80 22 ePc 23 01.10 0.7  
 IMA 50.12 29 ePc 23 03.30 0.2  
 1.1s 8.20nm 4.6mb  
 RSO 50.33 37 ePc 23 04.50 -0.4  
 PMR 52.06 35 eP 23 17.00 -0.7  
 1.0s 29.60nm 5.2mb

F8A 52.54 31 eP 23 21.80 0.5  
 0.8s 13.60nm 4.9mb  
 TOA 53.42 34 eP 23 28.60 0.6  
 KLU 53.60 35 P 23 28.80 -0.5  
 WB2 53.97 186 eP 23 31.00 -1.2  
 0.4s 1.10nm 4.2mb

WRA 53.97 186 P 23 30.00 -2.2  
 0.7s 4.60nm 4.6mb  
 BALM 55.37 35 ePd 23 41.00 -1.3  
 HYB 56.28 269 eP 23 48.50 -0.8  
 ASPA 57.70 186 eP 23 59.50 0.4  
 1.4s 5.40nm 4.4mb

INK 57.81 26 ePc 23 58.20 -1.2

MAIO 63.27 297 eP 24 38.00 0.8  
 KEV 65.49 339 eP 24 53.00 2.0  
 SOD 66.91 337 iP 24 59.30 -0.8  
 YKA 67.24 29 eP 25 00.60 -1.7  
 0.9s 6.40nm 4.8mb  
 OBN 69.29 323 eP 25 17.00 1.9  
 Z 16s 0.70um 5.0MsZ  
 N 18s 0.60um  
 E 15s 0.60um

e 25 27.00 32kmX  
 e 26 23.00  
 LO 49 20.00  
 LR 56 48.00  
 KAF 70.02 333 iP 25 18.30 -1.1  
 0.7s 5.10nm 4.8mb  
 esP 25 18.90

GMW 70.62 45 P 25 24.00 0.6  
 BMW 70.88 46 P 25 25.00 -0.1  
 PNT 71.55 43 eP 25 29.00 0.0  
 0.9s 14.00nm 5.0mb  
 LON 71.59 46 P 25 29.00 -0.4  
 NUR 71.62 332 iP 25 28.30 -0.8  
 0.6s 5.30nm 4.8mb

NEW 73.51 43 ePd 25 40.30 -0.3  
 1.0s 25.00nm 5.2mb  
 LBFM 74.33 51 P 25 46.50 0.8  
 ORV 75.53 52 ePd 25 52.50 0.1  
 SES 75.58 38 eP 25 51.00 -1.5  
 BKS 75.94 54 ePd 25 55.40 0.7  
 HFS 75.94 335 eP 25 53.20 -1.1

0.7s 4.60nm 4.6mb  
 Z 17s 0.25um 4.6MsZ  
 e 25 57.70 14km  
 ePcP 26 04.70  
 LR 56 49.00

NB2 76.12 337 P 25 54.40 -1.0  
 0.9s 7.50nm 4.7mb  
 CMB 77.08 53 ePd 26 01.80 0.6  
 FFC 77.14 31 eP 26 01.00 -0.1  
 1.0s 16.00nm 5.0mb

LLA 77.49 54 ePd 26 03.40 0.0  
 LRM 77.53 43 eP 26 04.10 0.4  
 FRI 78.11 53 ePd 26 07.20 0.5  
 TNP 79.13 51 ePd 26 12.80 0.2  
 0.7s 5.56nm 4.7mb

FRB 80.00 12 eP 26 17.00 0.5  
 KRA 80.43 325 eP 26 19.00 0.0  
 DUG 80.67 48 ePc 26 20.90 0.2  
 DAU 81.48 47 P 26 26.00 0.8  
 KSP 81.56 327 eP 26 25.00 0.0  
 MSU 82.08 49 P 26 29.00 0.8

BRG 82.57 329 eP 26 33.60 3.4X  
 1.8s 20.00nm 4.9mb  
 CLL 82.65 329 eP 26 30.00 -0.6  
 PRU 82.95 328 eP 26 33.00 0.8  
 Z 16s 0.50um 5.0MsZ  
 N 15s 0.40um  
 E 16s 0.30um

pP 21 57.00 28km  
 ZST 83.06 325 e(P) 26 32.20 -0.6  
 MOX 83.73 329 eP 26 36.80 0.6  
 PV09 83.96 47 ePd 26 39.00 1.0  
 KHC 84.01 327 P 26 38.00 0.3  
 i 26 41.00 9km

GRF 84.62 329 eP 26 41.20 0.5  
 1.0s 7.00nm 4.8mb  
 Z 20s 0.10um 4.2MsZ  
 e 26 44.50 10km  
 GOL 85.42 44 ePc 26 45.30 0.0  
 0.7s 2.43nm 4.5mb

GLD 85.47 44 ePc 26 46.00 0.6  
 1.2s 26.26nm 5.3mb  
 ANMO 87.89 48 P 26 57.50 0.2  
 0.9s 12.60nm 5.2mb  
 ALQ 87.89 48 eP 26 57.20 -0.1  
 1.0s 2.50nm 4.5mb

ARE 147.37 65 ePKP 33 53.00 3.2  
 ZOBO 149.74 61 PKP 33 56.20 2.4  
 1.0s 12.50nm  
 Z 24s 0.10um 4.5MsZ  
 LR 24 28.00

LPB 149.93 61 ePKP 33 58.00 4.1X  
 SIV 154.37 50 PKP 33 57.20 -2.6X  
 S.D. = 0.9 on 84 of 95 obs.

\* MAY 27, 1991 01h 19m 49.55±1.25s  
 24.027 N ±10.0km 122.598 E ±12.4km  
 DEPTH = 10.0km (geophysicist)



3.5mb ( 1 obs.)  
TAIWAN REGION (243)

TWC 0.90 310 iPd 20 07.50 0.8  
TWD 0.92 274 iPd 20 07.10 0.0  
eS 20 17.10  
TWF1 1.37 241 iPd 20 14.00 -0.7  
eS 20 30.20  
TWZ 1.41 319 ePd 20 17.20 1.9X  
SSE 7.15 350 Pd 21 36.00 -0.7  
0.7s 28.00nm 5.5mb X  
WRA 45.18 164 P 28 09.00 0.5  
1.7s 1.10nm 3.5mb  
S.D. = 1.0 on 5 of 6 obs.

MAY 27, 1991 01h 24m 50.48±0.37s  
31.892 N ± 5.9km 141.588 E ± 6.6km  
DEPTH = 33.0km (normol)  
5.0mb ( 8 obs.)

SOUTH OF HONSHU, JAPAN (211)

MAT 5.42 330 eP 26 11.00 -0.1  
0.9s 36.97nm 4.9mb  
eS 27 11.00  
SNY 17.46 310 eP 28 53.00 0.0  
TIY 24.58 292 eP 30 09.20 0.5  
BTO 26.79 298 eP 30 28.60 -0.8  
GUN 48.02 280 P 33 29.20 0.3  
GUN 48.02 280 Pd 33 29.24 0.3  
0.7s 27.00nm 5.4mb  
PK1 48.52 280 P 33 32.52 -0.3  
KKN 48.56 280 P 33 32.60 -0.3  
KKN 48.56 280 P 33 33.02 0.1  
0.8s 25.00nm 5.3mb  
GKN 49.02 281 Pd 33 36.56 0.1  
0.8s 18.00nm 5.2mb  
GKN 49.02 281 P 33 36.60 0.2  
WB2 52.00 189 iPd 33 58.30 -0.6  
0.4s 1.90nm 4.4mb  
WRA 52.01 189 P 33 59.00 0.1  
0.5s 6.90nm 4.9mb  
ASPA 55.73 189 eP 34 26.50 0.2  
0.5s 9.90nm 5.1mb  
INK 58.92 26 eP 34 48.00 -0.3  
YKA 68.20 29 eP 35 49.10 -0.3  
0.8s 0.40nm 3.6mb X  
LRM 77.75 43 eP 36 46.70 0.7  
HFS 78.83 336 eP 36 50.90 -0.5  
0.4s 0.40nm 3.8mb X  
Z 12s 0.03um 3.8mszX  
NB2 78.98 338 P 36 52.20 0.0  
0.9s 4.10nm 4.4mb  
KSP 84.55 329 eP 37 22.00 0.6  
e 37 35.30  
ZOBO 148.87 67 PKP 44 40.00 6.5X  
S.D. = 0.4 on 20 of 21 obs.

MAY 27, 1991 02h 48m 18.06±0.27s  
12.953 N ± 4.7km 144.541 E ± 6.6km  
DEPTH = 36.6km ( 3 depth phases)  
5.0mb ( 21 obs.) 4.5msz ( 3 obs.)

SOUTH OF MARIANA ISLANDS (210)

GUA 0.68 32 iPd 48 33.70 2.4  
eS 48 41.90  
LAT 19.63 173 eP 52 45.10 -1.6  
PMG 22.37 173 eP 53 14.00 -0.6  
MAT 24.17 347 eP 53 33.00 1.0  
0.8s 22.39nm 4.8mb  
Z 20s 1.42um 4.4msz  
eS 57 59.00  
OIS 33.65 188 iPd 54 58.00 0.3  
WB2 34.19 197 iPd 55 02.10 -0.3  
0.7s 33.60nm 5.4mb  
BJ1 36.75 322 eP 55 23.50 -0.3  
Z 24s 0.57um 4.3mszX  
TIY 37.76 317 eP 55 32.00 -0.5  
Z 16s 0.95um 4.7mszX  
E 16s 0.64um  
ASPA 37.85 196 eP 55 32.80 -0.6  
0.8s 13.50nm 4.9mb  
GYA 37.95 297 P 55 37.20 2.8X  
N 20s 0.30um  
E 20s 0.80um  
OLP 39.30 180 iPd 55 45.00 -0.4  
BTO 40.89 319 eP 55 58.00 -0.5  
DZM 40.90 148 iPd 55 59.70 0.9

KM1 41.16 293 Pd 56 03.00 1.9  
2.0s 50.00nm 4.9mb  
pP 56 14.00 39km  
sP 56 19.00  
CD2 41.56 302 iPd 56 04.50 0.4  
MBL 41.69 216 eP 56 06.10 1.0  
0.4s 10.00nm 4.9mb  
WARB 42.62 204 eP 56 14.00 1.3  
LZH 43.17 309 eP 56 18.00 0.6  
6.0s 290.00nm 5.2mb X  
Z 20s 0.53um 4.4msz  
STK 44.67 184 eP 56 41.50 12.3X  
0.6s 5.10nm  
GTA 47.36 312 P 56 50.80 0.1  
0.8s 10.00nm 4.9mb  
Z 12s 0.60um 4.8mszX  
YAK 50.14 351 eP 57 24.50 12.9X  
BAL 50.92 211 eP 57 18.30 0.4  
SHL 50.97 292 eP 57 19.00 0.2  
MUN 52.28 211 eP 57 29.00 0.8  
GUN 56.47 295 P 57 58.88 -0.6  
PK1 56.87 295 P 58 01.82 -0.5  
0.8s 20.00nm 5.2mb  
KKN 56.99 295 P 58 02.86 -0.2  
0.8s 16.00nm 5.1mb  
DMN 57.14 295 P 58 04.20 0.0  
WMO 57.34 314 P 58 05.00 -0.1  
Z 20s 0.40um 4.5msz  
pP 58 16.50 39km  
GKN 57.57 295 P 58 06.12 -0.9  
0.8s 35.00nm 5.5mb  
HYB 63.58 283 iPd 58 47.60 -0.3  
0.6s 23.30nm 5.5mb  
SVW 64.37 28 eP 58 52.30 -0.1  
0.9s 25.00nm 5.3mb  
GBA 65.11 279 P 58 59.00 1.1  
0.5s 2.60nm 4.6mb  
PMR 67.49 28 eP 59 10.70 -1.6  
1.0s 40.00nm 5.5mb  
POO 67.90 285 iPd 59 12.50 -3.2X  
FBA 68.93 25 eP 59 20.00 -1.2  
INK 75.07 22 eP 59 56.00 -1.6  
YKA 83.57 27 eP 00 42.60 -1.0  
0.7s 7.00nm 4.9mb  
NEW 85.92 42 iPd 00 56.10 0.4  
1.0s 13.00nm 5.1mb  
SOD 88.35 340 iPd 01 06.80 -0.3  
TNP 88.48 51 eP 01 10.00 1.4  
0.9s 4.88nm 4.8mb  
SES 89.10 38 eP 01 10.00 -1.0  
LRM 89.67 43 eP 01 14.80 0.7  
DUG 91.16 48 eP 01 21.20 0.2  
KAF 91.16 336 eP 01 19.40 -0.9  
0.5s 1.70nm 4.7mb  
esP 01 19.80  
FFC 92.52 32 eP 01 27.00 0.3  
0.8s 6.00nm 5.1mb  
NUR 92.68 335 eP 01 27.00 -0.3  
0.4s 1.90nm 4.9mb  
HFS 97.26 338 ePKP 01 43.10 -5.2X  
1.0s 3.40nm 4.8mb  
Z 13s 0.02um 3.8mszX  
e 01 53.30 32km  
NB2 97.53 339 P 01 48.20 -1.4  
0.7s 0.70nm 4.3mb  
KIC 143.95 300 PKP 07 49.80 -2.6X  
TIC 144.03 301 PKP 07 49.90 -2.6X  
LIC 144.26 300 PKP 07 50.60 -2.3X  
ZOBO 148.24 100 PKP 08 01.30 1.2  
0.9s 14.06nm  
Z 24s 0.11um 4.5mszX  
i 08 04.80  
LR 56 48.00  
LPB 148.26 100 PKP 08 05.00 5.1X  
CCH 150.08 102 PKP 08 09.40 6.9X  
S.D. = 1.0 on 45 of 55 obs.

MAY 27, 1991 03h 24m 55.86±1.08s  
54.407 N ± 24.7km 166.384 W ± 12.4km  
DEPTH = 33.0km (normol)  
4.1mb ( 3 obs.)

FOX ISLANDS, ALEUTIAN ISLANDS ( 9)

SDN 3.53 72 eP 25 50.00 0.4  
ADK 6.69 252 eP 26 34.00 -0.3  
KLU 12.94 49 eP 27 59.50 -0.4  
INK 20.65 35 eP 29 34.00 -0.8

YKA 27.56 52 eP 30 41.20 -0.1  
0.5s 0.40nm 3.3mb  
NB2 64.88 1 P 35 34.20 0.7  
0.9s 1.50nm 4.1mb  
HFS 65.81 360 eP 35 39.80 0.5  
0.4s 3.10nm 4.8mb  
Z 15s 0.03um 3.5mszX  
e 35 43.50  
S.D. = 0.7 on 7 of 7 obs.

? MAY 27, 1991 03h 40m 45.58±1.38s  
42.337 N ± 15.2km 45.862 E ± 42.0km  
DEPTH = 10.0km (geophysicist)  
3.7mb ( 3 obs.)  
EASTERN CAUCASUS (337)  
Felt (III) at Tbilisi, USSR.

TAB 4.28 175 eP 41 52.00 -0.4  
OBN 14.14 338 eP 44 06.00 -1.8  
e 44 10.00  
KSP 21.91 303 eP 45 40.00 -0.5  
NUR 22.31 332 eP 45 44.60 0.2  
KAF 22.97 336 eP 45 50.70 -0.1  
0.4s 0.90nm 3.6mb  
esP 45 51.90  
HFS 26.48 323 eP 46 26.60 2.2  
0.7s 2.30nm 4.0mb  
Z 16s 0.05um 3.2mszX  
e 46 35.30  
e 46 40.80  
SOD 27.17 344 iPd 46 35.00 4.4X  
YKA 74.34 351 eP 52 25.10 0.5  
0.9s 0.60nm 3.6mb  
S.D. = 1.5 on 7 of 8 obs.

% MAY 27, 1991 04h 38m 21.26±0.77s  
42.857 N ± 6.6km 18.706 E ± 6.1km  
DEPTH = 10.0km (geophysicist)  
YUGOSLAVIA (383)  
ML 1.5 (TTG).

BRY 0.13 290 iPd 38 24.86 0.4  
iSg 38 28.06  
NKY 0.22 101 iPd 38 27.15 1.1  
iSg 38 31.75  
HCY 0.44 201 iPd 38 29.81 -0.4  
iSg 38 37.83  
BDV 0.58 171 iPd 38 33.10 0.1  
iSg 38 42.36  
TTG 0.59 136 iPd 38 32.93 -0.3  
iSg 38 42.80  
PLE 0.69 47 iPd 38 34.48 -0.5  
iSg 38 45.58  
IVA 0.88 89 iPd 38 37.78 -0.4  
S.D. = 0.7 on 7 of 7 obs.

\* MAY 27, 1991 05h 33m 45.46s  
58.216 N 143.122 W  
DEPTH = 10.0km (geophysicist)  
GULF OF ALASKA ( 15)  
<AEIC>. ML 3.1 (AEIC).

WRG 1.91 17 eP 34 13.56 -4.8  
eS 34 35.29  
MID 2.07 307 iPd 34 15.55 -5.0  
HMT 2.21 345 iPd 34 17.64 -5.0  
S 34 42.88  
YKU 2.21 51 eP 34 17.89 -4.8  
S 34 43.48  
WAX 2.25 3 iPd 34 17.98 -5.3  
eS 34 44.09  
RAGM 2.32 341 iPd 34 19.16 -5.2  
PNL 2.42 51 iPd 34 20.07 -5.6  
SGAM 2.53 336 eP 34 22.35 -4.9  
eS 34 51.93  
CROM 2.55 360 iPd 34 22.20 -5.5  
TGL 2.55 3 iPd 34 22.28 -5.4  
iS 34 51.00  
CVA 2.70 331 eP 34 23.88 -5.7  
HIN 2.79 323 eP 34 25.81 -5.2  
BALM 2.86 8 iPd 34 26.62 -5.4  
iS 34 59.18  
CTGM 2.90 17 eP 34 27.52 -5.2  
S 34 59.38  
MTU 2.94 309 iPd 34 27.28 -5.7  
eS 35 00.08  
KNIM 3.19 314 eP 34 30.46 -6.2



GLB	3.26	354	iP	34	31.83	-5.8	KKN	53.19	313	P	58	30.16	0.1	pP	38	25.00	37km					
			eS	35	06.05			0.9s	38.00nm			5.4mb		PP	38	52.00						
VZW	3.34	330	eP	34	32.68	-6.2	DMN	53.22	313	P	58	30.42	0.1	S	42	28.00						
VLZ	3.35	332	iP	34	32.74	-6.1	GKN	53.78	313	P	58	34.12	-0.2	SS	43	18.00						
			S	35	09.48			0.9s	71.00nm			5.7mb		eP	38	22.40	0.4					
GLI	3.35	325	eP	34	32.66	-6.2	WMO	62.08	329	P	59	32.30	0.0	e	42	45.00						
KLU	3.58	338	iP	34	36.38	-5.8			sP	59	53.00			ePd	38	23.90	0.4					
SEW	3.77	303	eP	34	38.15	-6.7	QUE	68.38	307	eP	00	12.70	-0.6	0.7s	64.30nm		5.3mb					
TZL	4.01	344	eP	34	43.04	-5.2	YAK	69.43	2	eP	00	19.00	0.2	TKSJ	24.80	17	P	38	24.50	0.9		
KNK	4.19	322	eP	34	45.11	-5.7	CNCB	151.81	149	PKP	09	09.00	8.7X	WKYJ	25.51	20	P	38	31.40	1.1		
TOA	4.19	340	iP	34	45.23	-5.6	LPB	151.99	149	ePKP	09	06.00	5.7X	YONJ	25.77	15	eP	38	35.00	2.3		
SCM	4.20	332	eP	34	44.76	-6.2	SIV	155.39	162	(PKP)	09	22.00	17.5X	KMI	25.96	307	eP	38	35.00	0.1		
SLKM	4.30	305	eP	34	46.47	-5.9		S.D. = 0.9	on 24 of 29 obs.					2.5s	200.00nm		5.3mb					
SIT	4.35	102	eP	34	45.93	-7.1								Z	16s	1.90um		4.7MsZ				
CNPM	4.41	291	eP	34	48.88	-5.1									PP	39	12.00					
SML	4.45	326	eP	34	48.12	-6.4									sS	43	16.00					
PMS	4.45	316	eP	34	48.34	-6.2								BDT	26.43	288	eP	38	40.00	1.0		
SDG	4.49	346	eP	34	50.35	-4.7								TIA	26.75	345	eP	38	40.00	-1.0		
PLRM	4.54	321	eP	34	49.38	-6.3									Z	16s	1.60um		4.7MsZ			
GHO	4.60	323	iP	34	51.32	-5.5									N	13s	1.00um					
XLV	4.64	289	eP	34	51.54	-5.6									E	13s	2.10um					
PWA	4.84	318	eP	34	54.91	-5.1								CHG	26.84	291	ePd	38	42.70	0.0		
NKA	4.85	305	eP	34	56.08	-4.1									1.4s	35.47nm		4.8mb				
PAX	4.91	347	eP	34	54.69	-6.4								PSI	27.30	256	ePd	38	52.20	5.2X		
KDC	5.01	269	eP	34	56.70	-5.7								MAT	28.52	22	(P)	38	55.00	-2.8		
SUA	5.04	314	eP	34	56.47	-6.4										eS	43	34.00				
RDT	5.30	300	eP	35	00.58	-6.0								DL2	28.58	354	eP	38	58.00	-0.3		
RED	5.41	298	eP	35	01.36	-6.9									1.0s	100.00nm		5.5mb				
RSO	5.42	299	eP	35	02.77	-5.7									Z	12s	1.30um		4.8MsZ			
RS2	5.42	299	eP	35	03.37	-5.1									E	13s	1.50um					
DFR	5.44	300	eP	35	02.10	-6.5										S	43	46.00				
RDN	5.44	299	eP	35	02.64	-6.0								CD2	28.60	319	P	38	57.60	-1.0		
RDW	5.45	299	eP	35	03.05	-5.8									0.9s	100.00nm		5.5mb				
CRP	5.50	308	eP	35	03.41	-6.1									N	11s	2.00um					
CUT	5.50	323	eP	35	03.79	-5.6										eS	43	44.00				
NCT	5.54	299	eP	35	04.06	-5.9								PMG	29.31	131	eP	39	03.00	-2.1		
CKL	5.54	307	eP	35	02.53	-7.5								TIY	29.57	339	Pd	39	07.10	-0.2		
CDD	5.55	282	eP	35	05.58	-4.6									Z	18s	1.70um		4.7MsZ			
NCG	5.57	309	eP	35	04.74	-5.7									N	14s	1.70um					
BGL	5.59	307	eP	35	04.19	-6.6									E	14s	1.90um					
SKT	5.65	315	eP	35	04.98	-6.5								BJI	30.62	346	eP	39	16.00	-0.5		
HUR	5.75	329	eP	35	07.90	-5.0									1.5s	53.00nm		5.1mb				
RND	5.91	334	eP	35	08.32	-6.9									Z	18s	1.46um		4.7MsZ			
	57 abs. associated														N	12s	1.02um					
														SNY	31.34	357	iPc	39	22.70	-0.1		
															1.0s	100.00nm		5.6mb				
															Z	20s	2.00um		4.8MsZ			
															N	12s	1.10um					
															E	12s	1.50um					
																pP	39	30.40	27km			
														LZH	32.15	326	Pc	39	30.00	-0.2		
															4.0s	380.00nm		5.7mb X				
															Z	24s	2.58um		4.8MsZ			
															N	11s	1.38um					
																pP	39	40.00	36km			
																sP	39	44.00				
																ePP	40	40.00				
																eS	44	40.00				
																sS	44	56.00				
																SS	46	30.00				
														HHC	32.68	340	Pc	39	34.80	0.1		
															1.0s	70.00nm		5.5mb				
															N	12s	0.80um					
															E	17s	4.50um					
																pP	39	41.00	21km			
																S	44	48.00				
														BTO	32.99	338	P	39	36.50	-0.9		
															N	13s	1.10um					
															E	13s	0.90um					
																epP	39	46.50	35km			
														CN2	33.28	0	P	39	39.00	-0.7		
															Z	12s	3.30um		5.3MsZ			
															N	12s	0.90um					
															E	12s	0.60um					
																epP	39	46.00	24km			
														MDJ	34.29	5	eP	39	48.80	0.3		
															1.5s	60.00nm		5.3mb				
															N	12s	1.00um					
															E	13s	1.50um					
																sP	40	04.00				
																eS	45	11.00				
																sS	45	26.00				
																PcS	46	10.00				
														ASPA	34.88	166	eP	39	52.30	-1.5		
															0.6s	34.80nm		5.5mb				
																PcS	40	06.70	0.2			
														WARB	36.38	178	eP	40	06.70	0.2		



	0.6 s	45.00nm		5.5mb			0.8 s	10.30nm		5.1mb		Z 12s	4.90um		3.2MsZ X	
CTA	36.64	146 iPd	40 10.80	2.1		NUR	86.23	331 eP	45 36.20			N 10s	5.00um	sP	17 15.00	
	1.0s	26.00nm		5.1mb		SBA	91.09	172 iPd	46 07.10	1.9				PP	17 18.00	
GTA	36.75	326 P	40 09.20	-0.4		HFS	91.50	332 eP	46 08.50	1.0				eS	19 58.00	
	3.5s	420.00nm		5.7mb X			0.3s	0.80nm		4.6mb				sS	20 07.00	
Z	24s	2.30um		4.9MsZ X		Z	13s	0.05um		4.1MsZ X		KSH	16.71	240 P	17 30.00 1.9	
N	29s	12.70um				NB2	92.23	334 P	46 08.40	-2.6		TIY	17.36	126 Pc	17 36.00 -0.1	
		pP	40 18.40	31km			0.9s	2.30nm		4.6mb			Z 12s	2.20um		
		sP	40 23.00			YKA	94.02	24 eP	46 18.90	-0.2		BJI	17.86	114 eP	17 42.00 -0.2	
		PcP	42 30.00				0.8s	2.70nm		4.7mb			8.0s	360.00nm	4.6mb X	
LSA	37.20	306 eP	40 14.20	0.3		MOX	96.52	324 e(P)	46 31.00	0.2		Z 11s	2.22um	4.0MsZ		
GUN	40.90	301 Pc	40 44.44	-0.2		NEW	99.83	37 eP	46 53.00	7.1X		CD2	19.79	157 eP	18 05.20 -0.2	
	0.7s	99.00nm		5.6mb		UPA	148.65	53 ePKP	52 47.00	1.2			1.2s	100.00nm	5.0mb	
FORR	41.10	176 eP	40 44.00	-1.6		CNCB	165.59	118 PKP	53 09.00	2.0		Z 12s	3.80um	4.6MsZ X		
PKI	41.20	300 Pc	40 46.36	-0.7		LBP	165.60	116 PKP	53 10.00	3.2X		N 10s	4.50um			
	0.8s	35.00nm		5.1mb		ZOBO	165.67	115 PKP	53 06.00	-1.1			eS	21 45.00		
KKN	41.37	300 Pc	40 47.68	-0.6			1.1s	8.12nm				LSA	19.98	189 eP	18 07.80 -0.1	
	0.9s	47.00nm		5.2mb				LR	50 44.00		GAR	20.33	248 eP	18 10.50 -0.7		
DMN	41.47	300 P	40 48.64	-0.5		SIV	171.65	132 PKP	53 09.20	-0.9			iS	21 57.00		
	0.9s	70.00nm		5.4mb			S.D. = 1.1	on 81 of 88 obs.					i	24 09.00		
GKN	41.98	300 Pc	40 52.48	-0.7			* MAY 27, 1991 06h 49m 19.44±0.51s				TIA	21.01	121 eP	18 18.10 0.1		
	1.1s	67.00nm		5.3mb			51.892 N ±11.2km 166.266 W ± 7.2km				Z 13s	1.30um			4.5MsZ X	
NWAO	43.77	190 eP	41 07.00	-0.4			DEPTH = 33.0km (normal)				N 11s	0.70um				
	Z 20s	0.60um		4.5MsZ			4.3mb ( 8 obs.)				E 11s	0.60um				
	N 20s	0.40um				ALEUTIAN ISLANDS REGION	( 16)				SNY	21.46	100 iPc	18 21.60 -0.9		
	E 20s	0.40um										1.0s	100.00nm	5.2mb		
STK	44.83	160 eP	41 28.70	12.6X		SDN	4.87	43 eP	50 30.50	-1.7		Z 10s	2.40um	4.9MsZ X		
	0.7s	8.50nm				ADK	6.45	274 eP	50 55.00	0.5			S	22 18.00		
		eP	43 13.10	583kmX		IMA	15.58	19 eP	53 03.00	5.0X		CN2	21.73	94 Pc	18 24.50 -0.7	
		eS	47 56.90			INK	22.73	31 eP	54 19.50	0.4			3.0s	300.00nm	5.2mb	
IRK	45.11	342 eP	41 17.00	-1.1		YKA	29.12	48 eP	55 19.20	0.3		Z 10s	4.00um	5.1MsZ X		
		e	41 30.00	48kmX			0.7s	0.60nm		3.4mb		N 10s	1.80um			
		e	41 55.80			BONR	36.03	93 eP	56 20.00	0.3		E 10s	1.90um			
HYB	45.84	284 iPd	41 24.70	0.3		TNP	36.62	92 eP	56 24.90	0.4			eP	18 30.50	22km	
	1.0s	50.00nm		5.4mb		MSU	39.48	88 eP	56 49.00	0.5		DL2	21.87	109 eP	18 30.00 3.3X	
BRS	46.04	145 iPc	41 24.00	-1.7		KAF	65.91	354 eP	00 03.40	-0.1			1.5s	100.00nm	5.0mb	
		e(PP)	43 15.00				0.7s	4.00nm		4.6mb		Z 11s	1.00um	4.5MsZ X		
WMO	46.55	323 P	41 30.00	0.3				eS	00 04.60			N 10s	0.90um			
	1.4s	100.00nm		5.6mb		NB2	67.40	1 P	00 13.30	0.2		E 10s	0.90um			
	Z 18s	2.00um		5.1MsZ			0.7s	1.60nm		4.2mb		GUN	22.63	201 P	18 34.00 -0.7	
	N 16s	2.90um				NUR	67.61	354 eP	00 14.90	0.5			1.0s	157.00nm	5.5mb	
	E 16s	1.40um					0.3s	2.90nm		4.9mb		GKN	22.85	204 P	18 35.96 -0.6	
		pP	41 36.20	21km		HFS	68.33	0 eP	00 18.70	-0.2			1.0s	144.00nm	5.4mb	
		PcP	43 03.00				0.4s	1.90nm		4.5mb		KKN	22.89	202 P	18 36.18 -0.9	
		eS	48 20.00			Z	17s	0.67um		4.9MsZ X			0.6s	130.00nm	5.7mb	
ADE	46.86	165 iPd	41 33.20	1.0				e	00 22.10		YAK	22.97	44 iP	18 36.70 -0.6		
	1.0s	72.00nm		5.6mb				e	00 24.50				e	19 26.00		
NDI	48.49	299 eP	41 42.00	-3.0X				e	00 28.20				i	20 24.00		
BFD	50.01	162 eP	41 56.00	-0.5		EKA	72.23	10 Pc	00 43.80	1.2			i	23 03.00		
TOO	51.33	159 eP	42 07.00	0.4			0.8s	1.50nm		4.0mb			i	23 59.00		
YAK	51.63	3 eP	42 07.50	-0.9		BRG	77.61	360 e(P)	01 18.60	5.2X			i	24 58.00		
		eP	42 32.00	102kmX		WB2	88.23	234 eP	02 07.20	-1.2		PKI	23.07	202 P	18 38.52 -0.4	
		ePcP	43 18.00				0.9s	1.40nm		4.3mb			0.8s	121.00nm	5.5mb	
		eS	49 26.00			WRA	88.24	234 P	02 08.00	-0.4		DMN	23.10	202 P	18 38.72 -0.5	
		ePS	49 40.00				0.9s	1.10nm		4.2mb			1.0s	95.00nm	5.3mb	
		eSS	52 22.70			WRA	88.24	234 P	02 17.00	8.6X		SHL	24.02	186 iP	18 48.50 0.5	
		eSS	52 27.00				1.0s	1.00nm		4.1mb X			eS	23 12.00		
		eSS	55 45.00			BSI	90.91	280 eP	02 20.50	-0.6		WHN	24.04	135 eP	18 49.00 1.0	
DZM	51.65	129 iPc	42 10.00	0.7			S.D. = 0.8	on 15 of 18 obs.					eS	23 03.00		
GAR	56.50	310 eP	42 43.00	-1.8			MAY 27, 1991 09h 13m 33.38±0.18s				MDJ	24.09	88 eP	18 49.20 0.9		
		eS	50 09.50				49.519 N ± 3.5km 94.759 E ± 3.6km					1.5s	70.00nm	5.0mb		
		eSS	54 45.00				DEPTH = 18.9km ( 7 depth phases)				N 10s	2.80um				
		eSS	56 57.00				5.1mb ( 42 obs.) 4.4MsZ ( 1 obs.)						pP	18 55.60	23km	
QUE	57.56	299 eP	42 51.80	-0.8		USSR-MONGOLIA BORDER REGION	(333)						sP	19 00.00		
MAIO	64.46	305 eP	43 38.00	-1.1		IRK	6.64	62 ePc	15 31.60	19.2X				eS	18 56.00	1.1
		eS	52 20.00					eS	16 18.00		GYA	24.80	154 P	18 56.00 0.5		
ANM	71.83	25 eP	44 33.60	9.2X				e	16 57.20			Z 14s	0.90um	4.4MsZ X		
SVW	75.67	29 eP	44 48.70	1.9				iSg	17 02.00			N 12s	1.20um			
BRW	76.34	19 eP	44 51.50	1.1		WMO	7.49	223 Pn	15 24.20	-0.1		E 12s	0.90um			
IMA	76.91	24 eP	44 54.20	0.4				Pg	15 49.50				pP	19 06.00	37kmX	
	0.7s	8.60nm		4.9mb		GTA	10.73	158 eP	16 06.80	-2.4			S	23 19.00		
RSO	77.04	30 e(P)	44 54.70	0.0			Z 12s	7.90um			NJ2	25.07	125 Pd	18 58.40 0.4		
PMR	78.81	29 eP	45 04.40	0.3			N 10s	5.70um				N 10s	0.70um			
	0.7s	12.60nm		5.0mb		BTO	13.97	124 eP	16 11.00			E 11s	0.80um			
FBA	79.34	26 eP	45 06.80	-0.2			N 11s	1.50um			KMI	25.14	163 eP	18 59.50 0.6		
	0.7s	4.50nm		4.6mb			E 11s	1.80um				2.0s	190.00nm	5.4mb		
TOA	80.19	28 eP	45 12.50	0.8		HMC	14.66	120 P	17 01.20	-0.3			pP	19 10.00	39kmX	
OBN	80.83	324 eP	45 16.00	0.9			Z 10s	5.10um					eS	23 26.00		
	Z 16s	0.50um		5.0MsZ X		LZH	14.97	150 eP	17 08.00	2.3			sS	23 32.00		
	E 16s	0.40um					1.5s	180.00nm		5.2mb		SSE	27.07	123 Pc	19 16.50 0.0	
		e	45 32.00	57kmX				S	19 46.60				1.0s	10.00nm	4.4mb	
BALM	82.12	29 e(P)	45 17.20	-4.7X								Z 16s	1.00um	4.5MsZ X		
SOD	83.81	337 iP	45 30.20	-0.2								N 12s	0.50um			
INK	84.51	21 eP	45 33.00	-0.8												
KAF	85.08	332 iP	45 35.50	-1.3												



27d 09h

E	14s	0.50um					RSP	56.22	302	P	23	12.24	-2.2		eS	32	50.27						
QUE	28.53	238	eP	19	32.63	2.7	FIN	56.27	300	P	23	12.47	-2.3		CKL	0.99	248	iP	32	35.84	-0.9		
MAIO	28.73	256	eP	19	33.00	1.5	BHB	56.41	301	P	23	12.91	-2.8x		SML	1.03	76	iP	32	36.21	-1.1		
			eS	24	39.00		ROB	56.41	301	P	23	14.62	-1.1		SLKM	1.08	174	eP	32	36.88	-1.1		
BDT	32.38	172	eP	20	04.00	0.2	RRL	56.63	302	P	23	17.08	-0.4		HUR	1.45	15	eP	32	42.12	-1.0		
HYB	34.60	208	ePc	20	25.00	1.8	ENR	56.71	301	P	23	14.31	-3.6x		DFR	1.47	229	iP	32	42.45	-1.0		
	1.0s	30.00nm			5.2mb		PZZ	56.71	301	P	23	15.39	-2.6					eS	33	01.51			
OBN	35.09	302	iP	20	26.50	-0.4	STV	56.75	301	P	23	15.85	-2.4		SCM	1.51	79	eP	32	43.01	-0.9		
	0.7s	*****nm			8.2mb	X	INK	57.12	19	eP	23	19.00	-1.4		SEW	1.56	161	eP	32	43.80	-0.8		
Z	12s	0.80um			4.7msz	X	DMU	57.77	317	eP	23	25.00	-0.1		NCT	1.58	231	iP	32	44.11	-0.9		
E	12s	0.50um						0.9s	58.00nm				5.6mb					eS	33	04.59			
			e	20	49.00	95km	TOA	58.64	29	eP	23	31.70	0.5		RSO	1.59	226	eP	32	44.19	-1.0		
			ePP	21	31.00		YKA	65.92	14	eP	24	17.70	-1.9					eS	33	04.68			
			e	22	07.00			0.8s	5.30nm				4.7mb		RS2	1.59	226	iP	32	44.40	-0.8		
KEV	37.16	328	eP	20	44.00	-0.3	TOL	65.95	304	eP	24	24.00	3.8x		RDW	1.59	227	eP	32	44.30	-0.9		
	0.6s	10.40nm			4.8mb		FRB	66.32	352	eP	24	21.00	-1.1					eS	33	05.14			
			i	20	50.20	21km	SCH	74.89	349	eP	25	13.00	-1.2		RED	1.63	225	iP	32	44.57	-1.0		
SOD	37.50	324	iP	20	48.10	0.9	FFC	75.18	10	iPc	25	15.30	-0.5					eS	33	04.88			
GBA	38.54	208	Pd	20	53.80	-2.5		0.9s	24.00nm				5.2mb		GLI	1.77	112	iP	32	45.24	-2.3		
	0.3s	1.90nm			4.3mb		PNT	77.20	22	eP	25	27.00	-0.3		KNIM	1.81	132	eP	32	45.12	-3.0		
KAF	38.56	315	iP	20	56.30	0.2		0.8s	8.00nm				4.8mb		VLZ	2.03	101	eP	32	48.99	-2.2		
	0.6s	9.20nm			4.7mb		WRA	77.56	142	P	25	28.00	-1.5		TOA	2.10	74	iP	32	51.58	-0.6		
			eSP	20	57.20			0.8s	20.90nm				5.2mb		CNPM	2.10	191	eP	32	52.26	0.0		
NUR	39.75	313	eP	21	06.20	0.2	WB2	77.57	142	iPd	25	28.60	-1.0		KLU	2.17	90	eP	32	51.09	-2.2		
	0.4s	16.60nm			5.1mb			0.8s	20.90nm				5.2mb		TZL	2.43	77	eP	32	55.88	-1.0		
KAS	42.50	283	iPd	21	31.50	2.6							14km		SDG	2.50	66	eP	32	57.28	-0.6		
UPP	43.28	314	iP	21	34.80	-0.1	GMW	78.00	25	P	25	33.00	1.3		32 obs. associated								
MLR	45.19	292	eP	21	51.00	0.3	SES	78.04	17	ePc	25	30.50	-1.4		% MAY 27, 1991 09h 58m 40.45± 2.45s								
RGS	45.22	320	eP	21	50.30	-0.2	BMW	78.86	26	P	25	37.50	1.0		14.457 N ± 28.7km 93.395 W ± 8.5km								
NB2	45.72	318	P	21	53.70	-0.9	LON	79.00	25	P	25	38.00	0.7		DEPTH = 33.0km (normal)								
	0.8s	30.90nm			5.3mb		ASPA	80.75	144	iPc	25	45.90	-0.9		NEAR COAST OF CHIAPAS, MEXICO ( 69)								
GLH	46.36	272	eP	22	02.00	2.0	LRM	82.13	19	eP	25	55.00	0.9		Felt in the Oaxaca-Chiapas								
MKT	47.83	270	iPd	22	13.00	1.4	MIN	84.95	27	ePd	26	09.70	1.2		border area.								
KSP	48.00	303	ePc	22	12.60	-0.1	CMB	87.45	27	eP	26	22.30	1.6		TPX	1.18	68	iPd	59	01.06	0.3		
SRO	48.45	299	eP	22	16.60	0.4	BONR	88.12	26	P	26	25.50	1.3				iS	59	15.16				
MBH	48.77	269	iPd	22	20.00	1.0	TNP	88.30	25	P	26	26.00	1.0		SCX	2.38	18	eP	59	17.35	-0.6		
ZST	48.94	300	eP	22	20.00	0.1		0.7s	1.85nm				4.5mb					iS	59	43.94			
BRG	49.25	304	iP	22	22.30	0.0	FRI	88.61	27	ePd	26	27.50	1.3		PBJ	2.76	316	iP	59	20.00	-3.4x		
	1.2s	22.00nm			5.1mb		MSU	89.17	21	P	26	30.70	1.5				(S)	59	46.50				
BRW	49.36	24	eP	22	23.40	0.6	GOL	89.40	15	P	26	30.80	0.5		OXX	4.13	310	iP	59	43.50	0.4		
PRU	49.40	303	Pc	22	24.00	0.6		0.8s	3.35nm				4.7mb					iS	00	31.00			
	1.2s	16.50nm			4.9mb		LKO	89.46	284	P	26	27.80	-2.7				iS	00	31.00				
Z	13s	0.50um			4.7msz	X	STK	91.11	142	eP	26	49.10	11.5x		PIO	4.95	294	iP	59	53.50	-1.1		
			e	22	28.00	13km		1.3s	1.90nm						IISM	5.90	320	eP	00	07.81	-0.1		
			e	22	54.50		KIC	91.34	281	(P)	26	38.00	-1.2				iS	01	12.48				
CLL	49.53	305	eP	22	24.00	-0.4	CVL	92.67	355	P	26	45.50	0.5		IIT	6.54	315	(P)	00	23.50	6.4x		
	1.0s	32.00nm			5.3mb		ANMO	93.82	17	P	26	52.00	1.4		PPM	6.79	313	eP	00	22.00	1.1		
SKO	49.85	291	eP	22	27.00	0.0		0.8s	18.66nm				5.5mb					iS	01	36.48			
KHC	50.39	303	iPd	22	31.30	0.2	ALO	93.82	17	eP	26	51.60	0.9		S.D. = 1.0 on 6 of 8 obs.								
	1.2s	10.00nm			4.7mb		TUL	94.43	9	eP	26	53.50	0.3		? MAY 27, 1991 10h 26m 40.68± 4.25s								
			e	22	35.50	14km		0.9s	4.30nm				4.9mb		36.505 N ± 42.1km 29.025 E ± 11.8km								
ANM	50.52	33	eP	22	33.20	1.4	ZOBO	144.04	331	PKP	33	06.00	-4.1x		DEPTH = 10.0km (geophysicist)								
MOX	50.62	305	iP	22	33.50	0.7	LPB	144.28	331	PKP	33	07.00	-3.3x		TURKEY (366)								
	1.4s	37.00nm			5.2mb		CNCB	144.50	331	PKP	33	09.00	-1.8		MD 3.6 (ISK).								
Z	14s	0.60um			4.8msz	X	ARE	145.19	336	ePKP	33	12.00	0.3		S.D. = 1.1 on 113 of 122 obs.								
N	14s	0.20um												& MAY 27, 1991 09h 32m 18.84s									
E	13s	0.40um												61.582 N 150.449 W									
GRF	51.36	304	iPc	22	38.90	0.4								DEPTH = 49.2km									
	1.2s	28.00nm			5.1mb									SOUTHERN ALASKA									
Z	18s	0.30um			4.4msz									<AEIC>. ML 2.5 (AEIC).									
KBA	51.67	301	iPd	22	41.90	0.9	SUA	0.18	230	iP	32	27.33	0.1										
	1.2s	50.40nm			5.3mb																		
			i	22	49.80	26km																	
			e	24	41.00		PWA	0.28	76	eP	32	27.67	-0.1										
WTS	52.37	309	eP	22	46.50	0.5																	
	0.8s	13.00nm			4.9mb																		
IMA	53.50	28	eP	22	54.30	-0.1																	
	1.9s	60.30nm			5.3mb																		
MEM	53.59	308	Pc	22	54.30	-0.7	PMS	0.55	128	iP	32	30.27	-0.5										
OSS	53.69	302	ePd	22	56.20	0.2																	
STR	53.86	305	P	23																			



RED 0.89 204 eP 58 05.92 -1.0  
GLI 2.44 96 eP 58 22.40 -2.3  
KLU 2.96 82 eP 58 30.80 -0.8  
eS 59 06.00  
BALM 4.71 88 eP 58 55.20 0.1  
13 obs. associated

\* MAY 27, 1991 11h 30m 13.12 ± 0.88s  
15.805 N ± 6.6km 61.034 W ± 19.2km  
DEPTH = 104.9 ± 7.1 km  
3.7mb ( 1 obs.)

LEEWARD ISLANDS ( 92)

MGG 0.29 292 iPd 30 28.00 -0.4  
S 30 38.40  
SFG 0.47 341 eP 30 29.73 0.3  
DEG 0.51 357 iPd 30 29.74 0.0  
S 30 40.50  
BBL 0.51 237 ePc 30 28.60 -1.1  
S 30 39.10  
PAG 0.66 290 ePd 30 30.65 -0.3  
S 30 42.30  
SEG 0.75 323 iPd 30 32.13 0.5  
S 30 42.00  
BPA 1.46 327 iPd 30 39.89 0.3  
S 30 58.50  
CPB 1.98 338 eP 30 45.74 -0.3  
eS 31 10.66  
NEV 1.98 312 iPd 30 47.01 0.9  
SVV 2.48 184 eP 30 53.00 0.3  
eS 31 20.00  
FCV 2.64 184 eP 30 55.50 0.6  
eS 31 24.00  
YKA 59.66 334 eP 40 07.70 -0.6  
0.6s 0.40nm 3.7mb  
S.D. = 0.7 on 12 of 12 obs.

\* MAY 27, 1991 11h 35m 45.15 ± 0.94s  
5.331 S ± 8.8km 131.195 E ± 18.3km  
DEPTH = 33.0km (normol)  
4.7mb ( 2 obs.)

BANDA SEA (280)

MTN 7.47 180 eP 37 36.00 1.4  
0.3s 285.00nm 6.8mb X  
eS 38 58.00  
KNA 10.62 193 eP 38 16.30 -1.9  
0.2s 30.00nm 6.2mb X  
eS 40 12.00  
WB2 14.85 168 eP 39 10.40 -4.2X  
0.3s 11.70nm 4.7mb  
OIS 17.20 152 iPd 39 44.30 -0.3  
eS 42 42.00  
ASPA 18.41 172 eP 39 59.40 -0.3  
0.5s 27.80nm 4.7mb  
eS 43 11.80  
MBL 19.21 214 eP 40 09.30 0.0  
FORR 25.55 186 eP 41 13.00 0.3  
STK 28.15 161 eP 41 50.40 13.9X  
0.3s 1.30nm  
eS 47 22.60  
BAL 28.60 207 eP 41 41.00 0.4  
KLB 29.00 204 eP 41 44.90 0.7  
NWA0 30.39 204 eP 42 00.00 3.5X  
GUN 54.78 310 P 45 14.40 -0.4  
KKN 55.18 309 P 45 17.60 0.0  
DMN 55.23 309 P 45 18.00 0.1  
GKN 55.78 309 P 45 21.80 0.0  
S.D. = 0.9 on 12 of 15 obs.

? MAY 27, 1991 12h 02m 25.71 ± 1.49s  
32.924 N ± 22.5km 56.328 E ± 14.1km  
DEPTH = 33.0km (normol)  
4.6mb ( 3 obs.)

IRAN (348)

MAIO 4.26 37 iPd 03 30.00 0.0  
0.8s 21.96nm  
eSn 04 15.00  
TEH 4.96 306 eP 03 40.00 0.0  
GKN 24.85 94 P 07 45.20 -1.6  
PKI 25.64 94 P 07 54.46 0.1  
1.0s 21.00nm 4.7mb  
GUN 25.92 93 P 07 58.58 1.5  
1.1s 49.00nm 5.0mb  
YKA 84.64 356 eP 14 59.70 2.9X  
0.4s 0.20nm 3.7mb

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

% MAY 27, 1991 12h 10m 20.64 ± 0.85s  
42.844 N ± 6.8km 18.632 E ± 7.8km  
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

ML 1.7 (TTG).

BRY 0.09 311 iPg 10 23.68 0.4  
iSg 10 26.78  
NKY 0.27 96 iPg 10 26.97 0.6  
iSg 10 31.97  
HCY 0.41 194 iPg 10 28.67 -0.3  
iSg 10 36.77  
BDV 0.58 165 iPg 10 32.42 0.1  
iSg 10 42.47  
PLE 0.74 49 iPg 10 34.58 -0.7  
iSg 10 46.37

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

% MAY 27, 1991 12h 19m 52.73 ± 1.82s  
43.235 N ± 15.4km 0.856 W ± 5.6km  
DEPTH = 10.0km (geophysicist)

PYRENEES (378)

MD 1.2 (STR).

MADF 0.09 164 Pg 19 55.96 0.6  
Sg 19 58.67  
ELYF 0.12 237 Pg 19 55.76 0.0  
BOH 0.17 221 Pg 19 56.56 -0.2  
Sg 19 59.66  
ATE 0.19 143 Pg 19 56.95 0.1  
Sg 20 00.49  
ISSF 0.21 168 Pg 19 57.28 -0.1  
Sg 20 01.51  
ESCF 0.26 127 Pg 19 57.86 -0.4  
OGE 0.29 103 Pg 19 58.82 0.1  
Sg 20 03.69

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

% MAY 27, 1991 13h 11m 34.63 ± 1.95s  
18.384 N ± 14.3km 65.925 W ± 10.6km  
DEPTH = 10.0km (geophysicist)

PUERTO RICO REGION ( 90)

LPR 0.09 145 P 11 37.70 0.4  
CPD 0.34 179 P 11 41.00 -0.7  
SJJ 0.35 218 iP 11 42.00 0.2  
CLLP 0.69 244 P 11 49.00 0.7  
APR 0.77 275 P 11 49.10 -0.5  
LRS 0.88 264 P 11 51.40 -0.1

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

MAY 27, 1991 14h 23m 02.97 ± 0.53s  
49.099 N ± 4.7km 6.848 E ± 6.6km  
DEPTH = 5.0km (geophysicist)

GERMANY (543)

MD 2.6 (STR), 2.3 (UCC).

GWF 0.52 103 Pg 23 13.08 -0.4  
CDF 0.74 157 Pg 23 17.16 -0.7  
Sg 23 28.49  
WLS 0.76 154 Pg 23 17.75 -0.6  
ECH 0.91 167 Pg 23 20.83 0.0  
Sg 23 33.99  
VITF 1.05 213 Pg 23 23.30 0.1  
Sg 23 38.26  
MOF 1.26 171 Pg 23 27.54 0.6  
FEL 1.45 147 Pg 23 30.95 1.0  
Sg 23 50.86  
MEM 1.61 341 iP 23 32.20 0.2  
LOMF 1.75 180 Pn 23 34.48 0.2  
DOU 1.77 305 P 23 33.40 -1.1  
ENN 1.77 341 iPnc 23 35.20 0.7  
0.6s 20.00nm  
eSn 23 59.00

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

MAY 27, 1991 15h 38m 29.55 ± 0.65s  
40.662 N ± 7.5km 15.707 E ± 6.0km  
DEPTH = 10.0km (geophysicist)

SOUTHERN ITALY (390)

SGO 0.32 251 P 38 36.20 0.0  
eSg 38 42.00  
ORI 0.82 136 P 38 44.80 -0.7  
eSg 38 58.10

TDS 1.11 154 P 38 50.80 0.4  
eSn 39 06.50  
BRT 1.16 79 P 38 49.50 -1.7  
eSg 39 05.80  
DUI 1.37 317 P 38 55.20 0.4  
LCI 1.74 100 P 39 00.40 0.4  
eSn 39 22.70  
SDI 1.77 307 P 39 00.00 -0.4  
HVAR 2.57 12 e(Pn) 39 18.20 6.3X  
iSn 39 48.90  
LACI 3.17 71 ePn 39 31.09 10.6X  
TIR 3.22 76 ePn 39 28.80 7.6X  
PHP 3.72 72 ePn 39 37.70 9.5X  
SKO 4.51 71 ePn 39 41.50 2.0  
PTJ 5.24 2 eP 39 49.40 -0.4

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

& MAY 27, 1991 16h 46m 05.16s  
59.961 N 152.772 W  
DEPTH = 89.7km

SOUTHERN ALASKA ( 2)

<AEIC>.

RED 0.46 0 iP 46 19.05 -0.8  
eS 46 30.11  
RSO 0.50 1 iP 46 19.71 -0.7  
RS2 0.50 1 iP 46 19.74 -0.6  
RDW 0.52 358 iP 46 19.80 -0.7  
RDN 0.55 0 iP 46 20.05 -0.7  
eS 46 31.18  
NCT 0.61 353 iP 46 20.42 -0.7  
eS 46 32.04  
DFR 0.63 4 iP 46 20.68 -0.7  
eS 46 32.56  
HOM 0.65 118 eP 46 20.77 -0.6  
eS 46 32.63  
AUE 0.68 207 eP 46 20.95 -0.7  
AUI 0.71 208 eP 46 21.61 -0.4  
eS 46 32.90  
XLV 0.74 133 eP 46 21.22 -1.0  
eS 46 34.00  
CNPM 0.89 119 iP 46 22.92 -1.0  
eS 46 36.90  
NKA 1.09 44 eP 46 27.19 1.0  
CDD 1.13 204 eP 46 25.42 -1.2  
eS 46 41.16  
CKL 1.26 10 eP 46 27.32 -1.0  
eS 46 45.66  
BGL 1.32 8 iP 46 28.73 -0.4  
CRP 1.35 13 eP 46 28.84 -0.7  
S 46 47.92  
SYI 1.37 172 eP 46 28.90 -0.7  
SLKM 1.39 66 eP 46 29.03 -0.8  
SEW 1.67 84 eP 46 32.28 -1.2  
SUA 1.81 33 eP 46 35.30 -0.1  
eS 46 57.38  
PMS 2.04 49 iP 46 37.83 -0.7  
PWA 2.21 39 eP 46 40.17 -0.5  
PLRM 2.42 46 eP 46 41.94 -1.6  
KNIM 2.55 79 iP 46 42.43 -2.9  
GHO 2.62 44 iP 46 44.87 -1.5  
CUT 2.74 25 eP 46 47.08 -0.8  
SML 2.85 48 eP 46 47.28 -2.3  
SCM 3.26 52 eP 46 53.19 -1.9  
KLU 3.70 63 eP 46 58.44 -2.8

30 obs. associated

% MAY 27, 1991 17h 13m 17.48 ± 0.78s  
40.691 N ± 8.4km 15.797 E ± 6.0km  
DEPTH = 5.0km (geophysicist)

SOUTHERN ITALY (390)

SGO 0.39 251 P 13 24.80 -0.6  
eSg 13 31.10  
ORI 0.80 141 P 13 33.00 -0.5  
eSg 13 47.20  
BAI 0.92 62 P 13 36.00 0.6  
eSg 13 49.00  
BRT 1.08 80 P 13 37.40 -0.9  
eSg 13 52.80  
TDS\ 1.11 158 P 13 39.80 1.0  
SDI 1.81 305 P 13 50.00 0.5

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

\* MAY 27, 1991 17h 24m 18.50 ± 0.44s  
20.515 S ± 10.0km 68.064 E ± 8.1km  
DEPTH = 10.0km (geophysicist)







CLL 86.22 39 eP 53 11.00 0.1  
1.7s 24.00nm 5.1mb  
BRG 86.88 39 eP 53 14.40 0.2  
1.3s 15.00nm 5.1mb  
KHC 86.98 41 P 53 15.00 0.2  
1.4s 7.00nm 4.7mb  
KBA 87.22 43 iPc 53 15.70 -0.5  
1.6s 27.00nm 5.3mb  
i 53 21.90  
i 53 32.60  
PRU 87.43 40 eP 53 18.50 1.6  
Z 18s 0.60um 5.0msz  
N 18s 0.20um  
E 18s 0.30um  
ZST 89.47 41 eP 53 26.40 -0.2  
SRO 90.35 41 e(P) 53 30.70 0.0  
ASPA 142.33 243 ePKP 59 59.30 -4.2X  
1.2s 8.10nm  
WB2 142.77 250 iPKPc 00 00.10 -4.2X  
1.5s 13.00nm  
WRA 142.78 250 PKP 00 02.00 -2.3  
1.6s 6.50nm  
GYA 143.14 346 PKP 00 06.20 1.3  
SHL 144.77 9 ePKP 00 05.00 -2.8X  
KMI 145.20 351 PKPc 00 06.50 -2.1  
HYB 147.48 35 ePKP 00 14.00 1.8  
GBA 149.75 41 PKP 00 21.00 5.3X  
1.3s 11.50nm  
S.D. = 1.1 on 53 of 61 obs.

% MAY 27, 1991 19h 10m 41.84 ± 1.46s  
39.934 N ± 13.0km 23.264 E ± 7.6km  
DEPTH = 10.0km (geophysicist)  
AEGEAN SEA (365)

PAIG 0.32 91 ePg 10 48.60 0.1  
eSg 10 53.50  
LIT 0.62 286 ePg 10 53.90 -0.4  
eSg 11 03.40  
SOH 0.89 4 ePg 10 58.20 -0.7  
eSg 11 10.00  
SRS 1.21 12 ePg 11 04.40 0.1  
eSg 11 20.90  
GRG 1.22 327 ePg 11 05.40 0.9  
eSg 11 21.60  
S.D. = 0.9 on 5 of 5 obs.

MAY 27, 1991 19h 14m 35.64 ± 0.39s  
41.294 N ± 3.2km 22.489 E ± 2.9km  
DEPTH = 11.6 ± 3.4 km  
YUGOSLAVIA (383)  
ML 3.2 (SKO). MD 3.2 (THE).

VAY 0.07 66 iPg 14 38.40 0.2  
i 14 39.80  
i 14 40.60  
KNT 0.34 113 iPg 14 42.90 0.2  
eSg 14 48.10  
GRG 0.34 191 iPg 14 43.10 0.3  
eSg 14 47.70  
KKB 0.73 38 iPd 14 50.00 0.2  
eS 14 59.00  
THE 0.75 151 ePg 14 49.40 -0.8  
eSg 15 00.20  
SOH 0.81 126 iPg 14 51.20 0.0  
eSg 15 02.30  
SRS 0.85 102 ePg 14 51.90 0.0  
eSg 15 03.30  
MMB 0.98 72 iPg 14 54.00 -0.1  
iSg 15 06.00  
FNA 0.98 239 iPg 14 54.50 0.3  
SKO 1.04 311 iPn 14 55.30 0.2  
0.5s 531.00nm  
i 14 57.50  
iSg 15 07.80  
i 15 09.00  
iSn 15 10.20  
KZN 1.13 209 eP 14 56.60 -0.1  
eS 15 14.90  
VTS 1.40 22 iPc 15 01.00 -0.2  
iSg 15 20.00  
PHP 1.59 285 iPnc 15 03.80 0.2  
iSn 15 25.30  
RZN 1.72 76 ePc 15 06.00 0.2  
iSg 15 32.00  
PGB 1.77 44 eP 15 06.00 -0.4  
iS 15 30.00

PLD 1.85 63 iPc 15 08.00 0.6  
iSg 15 37.00  
TIR 1.98 272 ePn 15 14.90 5.6X  
LACI 2.12 280 ePn 15 14.90 3.6X  
iSn 15 44.00  
KDZ 2.23 80 iP 15 14.00 1.0  
iS 15 42.00  
RDO 2.30 93 eP 15 14.00 0.0  
eS 15 49.50  
PVL 2.85 47 iPd 15 25.00 3.2X  
iS 16 03.00  
BZS 4.37 352 eP 15 40.00 -3.3X  
DEV 4.60 4 iPc 16 02.00 15.4X  
MLR 4.89 30 eP 15 50.00 -0.9  
VRI 5.51 33 eP 15 54.00 -5.5X  
S.D. = 0.5 on 19 of 25 obs.

MAY 27, 1991 19h 20m 49.48 ± 0.51s  
43.069 N ± 5.9km 0.781 W ± 4.0km  
DEPTH = 10.0km (geophysicist)  
PYRENEES (378)  
MD 1.4 (STR).

ISSF 0.04 195 Pg 20 51.24 -0.5  
Sg 20 52.41  
ATE 0.06 73 Pg 20 51.30 -0.5  
Sg 20 52.36  
MADF 0.08 340 Pg 20 51.71 -0.3  
Sg 20 53.21  
ESCF 0.15 86 Pg 20 52.67 -0.4  
BOH 0.17 281 Pg 20 53.90 0.4  
ELYF 0.18 303 Pg 20 53.69 0.1  
Sg 20 56.44  
LHE 0.19 143 Pg 20 53.95 0.1  
Sg 20 57.39  
OGE 0.25 66 Pg 20 54.86 0.1  
EPF 0.82 92 Pg 21 06.20 0.8  
Sg 21 17.60  
S.D. = 0.5 on 9 of 9 obs.

? MAY 27, 1991 19h 22m 31.44 ± 6.20s  
51.402 N ± 38.7km 16.221 E ± 40.2km  
DEPTH = 10.0km (geophysicist)  
POLAND (548)

KSP 0.56 175 iPd 22 42.80 0.0  
0.4s 38.00nm  
iS 22 51.50  
BRG 1.53 251 iPg 22 58.60 -0.2  
iSg 23 18.90  
PRU 1.77 218 ePn 23 03.10 0.8  
ePg 23 05.30  
e 23 08.00  
iSn 23 21.90  
Sg 23 29.20  
CLL 2.02 269 ePn 23 06.00 0.1  
ePg 23 09.00  
eSg 23 33.00  
KHC 2.84 218 Pn 23 17.00 -0.6  
Pg 23 23.00  
iSn 23 52.00  
Sg 24 02.00  
MOX 3.00 257 ePg 23 26.50 6.6X  
iSg 24 07.00  
VKA 3.14 179 iP 23 31.10 9.2X  
i 24 16.60  
S.D. = 0.7 on 5 of 7 obs.

% MAY 27, 1991 19h 41m 48.69 ± 1.33s  
46.882 N ± 11.5km 0.435 W ± 17.5km  
DEPTH = 10.0km (geophysicist)  
FRANCE (538)  
ML 2.0 (LDG).

MFF 0.34 145 Pg 41 55.90 0.1  
Sg 42 00.50  
LPF 1.22 341 Pg 42 11.20 -0.2  
Sg 42 26.00  
LSF 1.50 114 Pg 42 15.20 -0.4  
Sg 42 33.00  
GRR 1.53 349 Pg 42 16.00 -0.1  
Sg 42 36.00  
LDF 1.73 7 Pg 42 18.60 -0.3  
Sg 42 40.60  
FLN 1.88 359 Pg 42 21.80 0.6  
Sg 42 45.20  
TCF 1.92 107 Pg 42 21.60 -0.1

Sg 42 44.00  
MAF 2.17 107 Pg 42 25.80 0.4  
S.D. = 0.4 on 8 of 8 obs.

& MAY 27, 1991 20h 04m 30.50s  
36.902 N 121.667 W  
DEPTH = 9.0km  
CENTRAL CALIFORNIA (39)  
<BRK>. ML 2.7 (BRK).

SAO 0.22 127 iPd 04 34.80 -0.5  
GCC 0.29 296 iPc 04 36.36 -0.2  
eS 04 40.71  
MHC 0.44 3 iPd 04 39.70 0.2  
iS 04 46.10  
ARN 0.46 13 iP 04 40.00 0.2  
PRS 0.62 157 iPd 04 42.10 -0.8  
iS 04 52.26  
LLA 0.65 116 iPc 04 42.81 -0.7  
PCC 0.83 317 iPd 04 45.83 -0.7  
eS 04 59.00  
BKS 1.07 335 eP 04 50.60 -0.2  
BRK 1.08 334 eP 04 50.60 -0.3  
PRI 1.11 133 iPd 04 51.05 -0.4  
ZSP 1.14 336 iPc 04 51.92 0.0  
PHAM 1.48 136 eP 04 55.70 -1.6  
CMB 1.52 42 e(P) 04 57.30 -0.7  
eS 05 15.20  
FRI 1.57 86 iPc 04 57.32 -1.3  
14 obs. associated

? MAY 27, 1991 20h 37m 21.45 ± 0.60s  
56.772 S ± 23.4km 140.441 W ± 12.6km  
DEPTH = 10.0km (geophysicist)  
4.8mb (5 obs.)  
SOUTH PACIFIC CORDILLERA (691)

SPA 33.41 180 iPc 44 01.90 -0.1  
0.8s 12.50nm 4.9mb  
CNCB 66.49 85 iPc 48 15.00 1.1  
LPB 66.66 85 P 48 14.90 0.1  
ZOB0 66.86 84 iPc 48 16.80 0.5  
1.1s 31.90nm 5.4mb  
Z 24s 0.22um 4.3mszX  
LR 09 08.00  
ASPA 68.20 260 iPc 48 23.50 -0.5  
1.5s 13.90nm 4.9mb  
WB2 70.95 263 iPd 48 40.90 0.0  
1.2s 5.30nm 4.5mb  
SIV 70.96 90 P 48 39.00 -2.0  
WRA 70.96 263 P 48 41.00 0.1  
1.1s 4.70nm 4.5mb  
UPA 82.24 61 eP 49 33.00 -11.0X  
INK 124.87 3 ePKP 56 21.00 -0.4  
TOL 147.13 102 iPKPc 57 05.50 2.3X  
1.1s 63.29nm  
ePKKP 58 15.00  
ePKS 01 40.00  
QUE 147.24 227 ePKP 57 06.40 2.5X  
MAIO 155.53 222 ePKP 57 17.00 1.2  
S.D. = 1.0 on 10 of 13 obs.

MAY 27, 1991 21h 06m 57.36 ± 0.78s  
29.349 N ± 6.1km 80.304 E ± 3.7km  
DEPTH = 52.6 ± 8.6 km  
4.6mb (19 obs.) 4.3msz (1 obs.)  
NEPAL-INDIA BORDER REGION (309)

NDI 2.78 257 ePn 07 42.70 2.2  
eSn 08 16.20  
eSg 08 25.20  
GKN 4.04 108 P 07 59.06 0.8  
0.2s 307.00nm  
DMN 4.57 111 P 08 06.52 0.7  
0.2s 170.00nm  
KKN 4.64 108 P 08 07.04 0.2  
0.2s 294.00nm  
PKI 4.83 110 P 08 10.14 0.5  
0.2s 218.00nm  
GUN 5.11 105 P 08 13.84 0.3  
0.2s 420.00nm 6.3mb X  
LSA 9.46 85 eP 09 12.20 -1.9  
S 10 57.60  
SHL 10.95 107 iP 09 30.00 -4.2X  
iS 11 25.50  
HYB 11.99 188 ePd 09 46.00 -2.0  
1.0s 90.00nm 5.7mb X



POO	12.27	210	eS	11 55.00		GRF	0.7s	1.80nm	4.2mb	DSI	8.30	110	eP	51 49.00	-0.8		
			iPc	09 48.00	-3.9X		55.02	312	eP	16 26.70	1.0		eS	53 20.00			
BOM	12.45	215	iS	13 38.00			0.9s	6.00nm	4.6mb	KFNJ	8.41	107	Pd	51 50.20	-1.2		
			iPd	09 53.60	-0.5	SFI	55.34	305	P	16 29.40	1.5	MKRJ	8.51	109	Pd	51 52.00	-0.8
			eS	12 02.90		OSS	56.11	309	ePc	16 33.60	-0.1	MBH	8.85	122	eP	51 59.00	1.6
GAR	12.68	322	eP	09 51.00	-6.3X	BDI	56.21	306	P	16 33.90	-0.4	HOL	9.27	124	ePc	52 04.00	0.9
			eS	11 42.00		PII	56.32	305	P	16 33.30	-1.7			S	53 40.00		
WMO	15.60	20	P	10 36.50	1.1	BOB	56.89	307	P	16 39.00	-0.2	HSNJ	9.44	120	P	52 05.20	-0.5
	1.2s		100.00nm		4.9mb	PCP	57.57	306	P	16 42.74	-1.2	TIC	40.13	233	P	57 24.70	0.2
Z	14s		0.80um		4.8MsZ	MMK	57.70	308	ePc	16 45.60	0.5	KIC	40.16	232	P	57 24.90	0.2
N	10s		0.90um			ORX	57.76	308	P	16 42.74	-2.6X		0.6s		7.00nm		4.5mb
E	10s		0.60um			FIN	57.87	306	P	16 45.30	-0.7	LIC	40.45	233	P	57 27.20	0.1
			pP	10 46.00		DIX	58.07	308	ePc	16 48.10	0.4	YKA	78.11	343	eP	01 45.40	-1.7
GBA	15.89	190	P	10 38.00	-1.1	ROB	58.09	306	P	16 47.97	0.4		0.5s		0.40nm		3.8mb
	0.3s		4.70nm		4.1mb	RSP	58.35	307	P	16 48.69	-0.8		S.D. = 1.0		on 18 of 19 obs.		
GTA	18.94	53	eP	11 11.30	-5.6X	LSD	58.36	308	P	16 50.22	0.5						
	1.6s		20.00nm		4.1mb	EMS	58.40	308	ePc	16 50.50	0.6						
Z	10s		0.50um		5.1MsZ	BHB	58.41	307	P	16 48.48	-1.3						
			pP	11 21.60		ENR	58.42	306	P	16 48.99	-1.0						
			sP	11 27.00		STV	58.49	306	P	16 49.61	-0.8						
CHG	19.96	118	eP	11 28.70	0.7	PZZ	58.59	307	P	16 50.02	-1.2						
CD2	20.34	80	P	11 30.10	-1.8	RRL	58.73	307	P	16 51.86	-0.4						
			0.60um		4.2MsZ	BNI	58.78	307	P	16 52.50	0.0						
Z	12s		0.70um			EKA	62.81	320	Pd	17 19.30	-0.2						
E	10s		0.70um				0.6s		2.00nm		4.4mb						
KMI	20.38	97	Pc	11 31.20	-1.3	WRA	71.52	127	P	18 15.00	0.1						
	1.5s		160.00nm		5.1mb		0.8s		4.30nm		4.4mb						
LZH	20.89	65	eP	11 35.50	-2.1	WB2	71.53	127	iPd	18 16.00	1.0						
	8.0s		300.00nm		4.7mb X		0.7s		3.90nm		4.4mb						
Z	12s		1.79um		4.7MsZ	BRW	72.04	17	eP	18 17.70	0.5						
E	11s		1.39um			ASPA	73.71	130	eP	18 29.00	1.2						
			pP	11 41.00	20kmX		0.7s		4.70nm		4.5mb						
			eS	15 20.00		IMA	76.36	20	ePc	18 43.10	0.7						
			sS	15 30.00			0.8s		11.00nm		4.9mb						
BDT	20.94	121	eP	11 39.00	1.0	FBA	78.91	19	ePc	18 57.30	1.0						
GYA	23.46	91	P	12 04.00	1.0		0.8s		15.10nm		5.0mb						
	N 16s		0.20um			INK	79.46	12	eP	18 59.00	-0.1						
	E 16s		0.40um			PMR	80.98	22	eP	19 00.00	1.4						
			sS	16 29.00			0.8s		12.00nm		4.9mb						
XAN	24.75	72	P	12 15.50	0.1	YKA	87.70	7	eP	19 41.00	-0.2						
BT0	26.69	57	eP	12 33.50	0.1		0.8s		2.40nm		4.5mb						
	N 12s		0.30um			ZOBO	148.23	287	PKP	26 40.00	3.0						
	E 14s		0.30um				S.D. = 1.0		on 66 of 73 obs.								
			eSP	12 42.00													
			eS	17 10.00													
HHC	27.89	57	P	12 44.80	0.5												
	Z 13s		0.70um		4.4MsZ												
	E 11s		0.40um														
TIY	27.95	64	eP	12 44.00	-0.9												
	Z 16s		1.10um		4.5MsZ												
	E 11s		0.63um														
BJI	31.17	60	eP	13 14.00	0.5												
	1.4s		29.00nm		4.8mb												
	Z 18s		0.59um		4.3MsZ												
	N 12s		0.32um														
SNY	36.96	58	Pd	14 03.20	0.0												
CN2	38.54	55	eP	14 15.80	-0.6												
OBN	40.38	322	iPc	14 32.00	0.5												
	0.5s		*****nm		8.3mb X												
			e	14 37.00													
			e	17 09.00													
			e	32 00.00													
VR1	44.68	307	ePd	15 08.00	1.2												
MLR	45.22	306	ePd	15 14.00	2.8X												
YAK	45.74	30	eP	15 11.40	-3.4X												
			e	21 48.00													
			e	22 01.00													
KAF	47.80	329	iP	15 31.10	0.0												
	0.6s		4.80nm		4.7mb												
			eSP	15 31.90													
NUR	48.13	327	eP	15 33.40	-0.2												
	0.7s		5.10nm		4.7mb												
SOD	49.48	336	iP	15 43.70	-0.2												
KEV	50.30	339	eP	15 50.00	-0.2												
	0.6s		9.10nm		5.0mb												
PRU	52.86	312	eP	16 09.00	-0.8												
			e	16 10.50													
BRG	53.20	314	e(P)	16 12.60	0.4												
HFS	53.44	325	eP	16 13.20	-0.7												
	0.7s		6.30nm		4.8mb												
Z	16s		0.20um		4.3MsZ												
			e	16 16.70													
			ePP	16 24.40	38kmX												
			eSP	16 28.20													
			LR	38 56.00													
ARV	54.62	305	P	16 23.40	0.6												
NB2	54.72	326	P	16 22.20	-1.1												

GRF	0.7s	1.80nm	4.2mb	DSI	8.30	110	eP	51 49.00	-0.8		
	55.02	312	eP				eS	53 20.00			
	0.9s	6.00nm	4.6mb	KFNJ	8.41	107	Pd	51 50.20	-1.2		
SFI	55.34	305	P				Pd	51 52.00	-0.8		
OSS	56.11	309	ePc				eP	51 59.00	1.6		
BDI	56.21	306	P				ePc	52 04.00	0.9		
PII	56.32	305	P				S	53 40.00			
BOB	56.89	307	P				P	52 05.20	-0.5		
PCP	57.57	306	P				P	57 24.70	0.2		
MMK	57.70	308	ePc				P	57 24.90	0.2		
ORX	57.76	308	P				0.6s		7.00nm	4.5mb	
FIN	57.87	306	P				40.45	233	P	57 27.20	0.1
DIX	58.07	308	ePc				40.16	232	P	57 24.90	0.2
ROB	58.09	306	P				78.11	343	eP	01 45.40	-1.7
RSP	58.35	307	P				0.5s		0.40nm		3.8mb
LSD	58.36	308	P				S.D. = 1.0		on 18 of 19 obs.		
EMS	58.40	308	ePc								
BHB	58.41	307	P								
ENR	58.42	306	P								
STV	58.49	306	P								
PZZ	58.59	307	P								
RRL	58.73	307	P								
BNI	58.78	307	P								
EKA	62.81	320	Pd								
	0.6s	2.00nm	4.4mb								
WRA	71.52	127	P								
	0.8s	4.30nm	4.4mb								
WB2	71.53	127	iPd								
	0.7s	3.90nm	4.4mb								
BRW	72.04	17	eP								
ASPA	73.71	130	eP								
	0.7s	4.70nm	4.5mb								
IMA	76.36	20	ePc								
	0.8s	11.00nm	4.9mb								
FBA	78.91	19	ePc								
	0.8s	15.10nm	5.0mb								
INK	79.46	12	eP								
PMR	80.98	22	eP								
	0.8s	12.00nm	4.9mb								
YKA	87.70	7	eP								



MTN 130.94 268 ePKP 15 33.70 -14.3X  
0.3s 366.00nm  
HYB 145.75 3 ePKPc 16 13.50 -1.5  
1.0s 25.00nm

S.D. = 1.2 on 26 of 35 obs.

MAY 28, 1991 01h 16m 42.70 ± 0.46s  
38.988 N ± 3.8km 29.806 E ± 5.3km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)  
MD 3.4 (ISK).

ALT 0.25 74 iPg 16 47.40 -0.6  
KHL 0.70 199 iPg 16 54.90 -1.7  
GPA 1.36 16 iPn 17 07.40 -0.2  
IZI 1.37 349 iPn 17 08.10 0.2  
EYL 1.60 10 iPn 17 11.10 -0.1  
BCK 1.64 158 iPn 17 13.00 1.2  
GBZT 1.82 351 ePn 17 16.00 1.7

HRT 1.83 357 iPn 17 14.40 -0.1  
CIN 1.94 225 eP 17 17.00 1.0  
BNT 2.00 314 iPn 17 17.30 0.4  
EDC 2.02 313 ePn 17 17.00 -0.2  
IZM 2.08 254 ePn 17 18.50 0.5  
ISK 2.15 345 ePn 17 19.00 -0.1  
YER 2.21 213 ePn 17 19.00 -0.1  
CTT 2.40 334 ePn 17 22.00 -0.7  
BBTK 2.44 69 eP 17 30.00 6.6X

MFT 2.65 314 ePn 17 26.00 -0.2  
EZM 2.82 288 ePn 17 28.00 -0.7  
DMK 3.23 332 ePn 17 34.00 -0.5  
S.D. = 0.8 on 18 of 19 obs.

\* MAY 28, 1991 01h 54m 54.56 ± 0.58s  
53.835 N ± 9.5km 164.123 W ± 7.8km  
DEPTH = 33.0km (normal)  
4.7mb (21 obs.) 3.9MsZ (2 obs.)

UNIMAK ISLAND REGION (10)  
ML 4.8 (PMR).

SDN 2.59 53 eP 55 36.90 1.8  
ADK 7.85 261 eP 56 54.10 4.9X  
SVW 8.60 29 eP 57 00.50 0.8  
RSO 9.06 38 P 57 09.00 2.8X  
TTA 10.06 22 eP 57 20.50 0.7  
ANM 10.78 357 eP 57 31.60 2.0  
PMR 11.14 40 eP 57 33.50 -1.0  
TOA 12.59 42 eP 57 52.00 -2.0  
IMA 13.31 19 eP 58 05.60 2.0  
FBA 13.81 30 eP 58 07.90 -2.1  
INK 20.39 33 eP 59 27.00 -3.7X  
YKA 26.87 51 eP 00 37.00 3.3X

SES 32.14 74 eP 01 20.00 -0.9  
BONR 34.93 98 eP 01 47.50 2.0  
TNP 35.49 97 eP 01 51.00 1.0  
0.7s 5.56nm 4.6mb

MAT 42.88 270 (P) 03 12.00 20.7X  
1.0s 10.00nm

ANMO 43.97 91 eP 03 00.00 -0.3  
1.0s 4.50nm 4.2mb

ALO 43.97 91 e(P) 03 00.00 -0.4  
1.0s 2.50nm 4.0mb

FRB 45.91 38 ePc 03 15.00 -0.2  
SCH 52.20 47 eP 04 03.00 -0.9  
KEV 56.45 355 eP 04 37.00 2.2

SOD 58.85 355 eP 04 50.00 -1.6  
KAF 64.10 355 iP 05 25.20 -1.8  
0.5s 4.70nm 4.8mb

NB2 65.41 2 P 05 25.90  
0.9s 4.00nm 4.5mb

NUR 65.79 355 iP 05 36.50 -1.4  
0.4s 4.00nm 4.9mb

HFS 66.37 1 eP 05 39.80 -1.8  
0.4s 8.70nm 5.2mb  
Z 18s 0.06um 3.8MsZ

EKA 70.07 11 Pd 06 04.60 -0.1  
0.6s 1.90nm 4.3mb

MOX 75.83 3 e(P) 06 39.00 0.4

GUN 78.72 302 P 06 55.78 0.3  
1.1s 65.00nm 5.6mb

LOR 78.76 8 eP 06 55.10 0.2  
0.8s 5.35nm 4.6mb  
Z 20s 0.08um 4.0MsZ

SSF 78.93 9 eP 06 56.00 0.2  
0.8s 4.70nm 4.5mb

LBF 79.05 8 eP 06 56.30 -0.2  
0.6s 3.60nm 4.5mb

KKN 79.12 302 P 06 57.68 0.2  
1.1s 59.00nm 5.5mb

AVF 79.19 9 eP 06 57.40 0.2  
0.5s 2.90nm 4.5mb

PKI 79.23 302 P 06 58.06 -0.2  
1.2s 51.00nm 5.4mb

GKN 79.26 303 P 06 58.36 0.2  
1.1s 68.00nm 5.6mb

DMN 79.35 302 P 06 59.06 0.3  
SMF 79.37 8 eP 06 58.40 0.1  
0.6s 2.70nm 4.4mb

KBA 79.44 2 iPc 06 59.50 0.7  
1.2s 5.70nm 4.4mb

LFF 80.76 11 eP 07 06.10 0.5  
0.6s 6.30nm 4.8mb

OHR 85.33 356 eP 07 29.50 0.3  
HYB 91.15 302 eP 07 58.00 0.6  
1.0s 25.00nm 5.5mb

BUL 144.98 339 iPKPc 14 29.40 -0.5  
1.0s 21.00nm

S.D. = 1.2 on 38 of 43 obs.

\* MAY 28, 1991 02h 10m 41.95 ± 1.63s  
40.749 N ± 16.1km 21.342 E ± 7.1km  
DEPTH = 10.0km (geophysicist)

GREECE (364)  
OHR 0.55 312 iPg 10 53.00 -0.1  
iSg 11 04.80

BERA 1.06 268 ePg 11 02.00 0.1  
VAY 1.09 58 ePn 11 02.40 0.0  
PHP 1.16 324 ePn 11 03.80 0.2

SKO 1.22 3 iPn 11 08.50 3.8X  
i 11 30.00

TIR 1.27 299 ePn 11 05.20 -0.3  
S.D. = 0.3 on 5 of 6 obs.

? MAY 28, 1991 02h 52m 20.49 ± 8.80s  
40.200 N ± 62.8km 19.895 E ± 55.1km  
DEPTH = 10.0km (geophysicist)

ALBANIA (391)  
MG 2.6 (TIR).

LSK 0.54 95 iPg 52 31.60 0.1  
iSg 52 43.50

TIR 1.15 359 ePg 52 42.50 0.6  
LACI 1.44 354 ePn 52 46.50 -0.1

PHP 1.54 15 ePn 52 47.40 -0.6  
S.D. = 0.9 on 4 of 4 obs.

MAY 28, 1991 03h 22m 23.54 ± 0.36s  
5.808 S ± 6.6km 77.057 W ± 9.1km  
DEPTH = 33.0km (normal)

4.8mb (26 obs.) 4.3MsZ (3 obs.)  
NORTHERN PERU (111)

ANGL 5.40 355 P 23 45.20 0.9  
OUR 5.79 345 eP 23 51.80 2.0

YANA 5.85 345 P 23 36.50 -14.3X  
CAYA 5.92 351 P 23 37.70 -14.1X  
NNA 6.14 178 iPd 23 55.60 1.1

0.7s 136.99nm 5.7mb X  
eS 24 55.00  
HUA 6.42 165 iP 25 01.80 63.0X  
i 25 10.50

ARE 11.91 153 eP 25 24.00 9.6X  
ZOB0 13.59 141 P 25 35.00 -2.0  
0.9s 15.14nm 4.9mb

Z 20s 1.81um 3.5MsZ X  
LR 31 08.00  
LPB 13.81 141 P 25 49.00 9.3X  
1.0s 80.00nm 5.5mb

Z 18s 3.57um 4.0MsZ  
LR 31 36.00  
CNCB 14.09 142 P 25 43.00 -0.6  
i 25 53.00

CCH 15.69 138 eP 26 07.00 2.8X  
SDV 15.94 24 eP 26 08.00 0.7

TOV 17.10 25 eP 26 20.20 -1.6  
SIV 18.66 124 P 26 39.60 -1.5

PPD 29.66 125 eP 28 27.90 -0.7  
BLA 42.91 356 P 30 20.00 -0.8

TUL 45.07 338 eP 30 38.50 0.2  
1.0s 5.70nm 4.4mb  
Z 20s 0.14um 3.9MsZ

LR 46 00.00  
MEO 45.19 335 iPc 30 39.70 0.4  
FVM 45.31 345 P 30 37.70 -2.5

0.6s 17.56nm 5.1mb  
ALO 49.10 328 ePc 31 10.30 0.2  
0.9s 7.98nm 4.7mb

ANMO 49.10 328 P 31 10.40 0.3  
0.8s 7.09nm 4.7mb  
GOL 52.28 332 P 31 33.00 -1.4

0.7s 2.43nm 4.3mb  
DUG 56.37 327 P 32 03.70 -0.5  
TNP 57.43 323 P 32 11.30 -0.5

0.6s 2.50nm 4.4mb  
ORV 60.96 322 P 32 34.90 -1.0  
SCH 61.01 7 eP 32 35.00 -1.0

SES 63.21 336 ePc 32 49.00 -1.8  
FFC 63.80 344 eP 32 53.00 -1.6  
1.0s 12.00nm 5.0mb

NEW 64.28 331 P 32 57.30 -0.6  
0.7s 11.20nm 5.1mb  
PNT 66.20 331 eP 33 11.00 0.8

0.7s 6.00nm 4.8mb  
FRB 69.66 4 eP 33 31.00 -0.5  
LKO 72.82 78 P 33 49.94 -1.6

LIC 72.88 82 P 33 51.96 0.1  
0.9s 9.00nm 4.8mb  
Z 20s 0.26um 4.5MsZ

TIC 72.95 81 P 33 52.54 0.3  
1.0s 25.50nm 5.2mb  
KIC 73.18 82 P 33 53.98 0.4

0.8s 13.50nm 5.0mb  
YKA 73.90 343 eP 33 54.50 -2.4  
0.6s 2.70nm 4.4mb

TOL 80.82 48 P 34 37.00 1.3  
INK 83.62 342 ePc 34 49.20 -0.4  
pP 35 06.00 60kmX

EBR 84.41 48 eP 34 56.00 1.9  
EPF 84.79 46 eP 34 57.50 1.4  
1.0s 8.00nm 4.9mb

MFF 85.26 42 eP 34 59.10 0.8  
0.6s 3.60nm 4.8mb  
LFF 85.49 44 eP 35 00.20 0.7

1.0s 12.00nm 5.1mb  
LPO 85.75 44 eP 35 01.40 0.6  
0.8s 8.05nm 5.0mb

RJF 86.11 44 eP 35 02.90 0.3  
0.8s 5.35nm 4.8mb  
Z 20s 0.13um 4.3MsZ

FBA 87.19 336 eP 35 07.60 0.2  
1.0s 4.50nm 4.7mb  
AVF 87.66 43 eP 35 09.70 -0.3

0.8s 4.05nm 4.7mb  
SMF 87.96 43 eP 35 11.60 0.1  
0.8s 1.55nm 4.4mb

RSO 88.02 331 P 35 10.00 -1.7  
SVW 89.55 332 eP 35 19.10 0.3  
0.7s 10.47nm 5.2mb

LPL 89.76 44 eP 35 21.20 0.8  
0.8s 4.05nm 4.8mb  
IMA 89.88 337 ePc 35 21.00 0.6

1.2s 10.20nm 5.0mb  
GTA 146.43 4 ePKP 42 02.40 0.4  
pPKP 42 12.80

sPKP 42 17.00  
KNA 146.64 230 ePKP 42 04.00 1.2  
TIA 147.06 339 ePKP 42 03.30 0.3

TIY 147.09 346 ePKP 42 03.80 0.8  
POO 148.94 63 ePKP 42 08.50 2.0  
SSE 149.57 328 PKPd 42 11.20 4.2X

LZH 149.85 359 iPKPc 42 13.00 5.4X  
NJ2 149.95 332 PKPd 42 12.10 4.5X  
XAN 151.37 350 PKP 42 05.70 -4.0X

GKN 151.91 36 PKP 42 10.94 0.1  
0.9s 81.00nm  
KKN 152.44 36 PKP 42 14.10 2.4X

0.8s 27.00nm  
DMN 152.48 36 PKP 42 13.10 1.3  
0.8s 24.00nm

PKI 152.68 36 PKP 42 14.14 1.9  
1.2s 41.00nm



28d 03h

GUN 152.69 34 PKP 42 19.74 7.5X  
1.1s 56.00nm  
HYB 153.51 62 ePKP 42 14.00 0.8  
GBA 153.71 71 PKPd 42 21.90 8.4X  
0.6s 2.80nm  
S.D. = 1.2 on 54 of 67 obs.

MAY 28, 1991 03h 52m 46.51 ± 1.11s  
51.616 N ± 4.7km 16.302 E ± 11.5km  
DEPTH = 6.6 ± 5.5 km  
4.2mb ( 3 obs.)

POLAND (548)  
ML 3.7 (GRF), 3.7 (VKA), 3.6 (KBA).

KSP 0.77 180 iPd 53 01.80 -0.1  
0.5s 300.00nm  
BRG 1.66 244 iPnd 53 11.10 -0.1  
iPg 53 16.00  
iSg 53 17.90  
iSg 53 38.00  
PRU 1.98 215 Pn 53 20.70 -0.1  
1.0s 88.20nm  
Pg 53 22.80  
e 53 26.00  
Sn 53 39.00  
Sg 53 44.00  
CLL 2.09 263 iPn 53 22.90 0.5  
iPg 53 25.40  
iSg 53 51.80  
KRA 2.79 123 eP 53 43.00 10.6X  
iS 54 21.00  
KHC 3.04 216 Pn 53 35.50 -0.5  
Pg 53 41.50  
Sn 54 10.00  
Sg 54 21.00  
MOX 3.11 254 ePn 53 37.00 0.1  
iPg 53 45.00  
iSg 54 25.00  
VKA 3.36 180 iPgnd 53 49.90 9.4X  
iSg 54 33.70  
ZST 3.46 171 iPn 53 51.70 9.7X  
e 54 20.80  
i 54 34.30  
Lg 54 44.00  
BSD 3.60 347 iPc 53 46.40 2.6  
0.4s 8.40nm  
GRF 3.76 241 iPnc 53 46.40 0.1  
ePg 54 00.60  
eSg 54 44.30  
KMR 3.83 202 ePn 53 47.00 -0.2  
iSg 54 46.70  
SRO 4.02 160 eP 54 29.00 39.1X  
e 55 04.80  
PSZ 4.37 146 eP 54 06.80 11.8X  
KBA 4.94 204 iPnc 54 02.70 -0.4  
i 54 11.70  
i 54 21.90  
iSn 55 00.70  
i 55 10.90  
i 55 23.60  
i (Sg) 55 31.90  
TNS 5.16 257 ePnc 54 05.50 -0.6  
eSn 55 30.60  
WTTA 5.31 217 iPnd 54 08.70 0.3  
SCE 5.48 215 ePn 54 10.30 -0.4  
FVI 5.53 206 P 54 12.00 0.7  
eSn 55 39.00  
CTI 6.36 211 P 54 23.00 -0.1  
HFS 8.66 351 eP 54 54.80 -0.4  
0.3s 1.50nm 4.8mb  
e 55 03.80  
eSn 56 34.80  
NRA0 9.52 346 Pn 55 05.60 -1.3  
Sn 56 47.10  
NB2 9.86 345 P 55 09.50 -2.2  
0.4s 0.30nm 4.1mb  
YKA 9.81 336 eP 02 55.90 1.6  
0.6s 0.50nm 3.8mb  
S.D. = 1.1 on 19 of 24 obs.

\* MAY 28, 1991 03h 59m 05.72 ± 2.62s  
38.639 N ± 18.3km 26.652 E ± 22.1km  
DEPTH = 10.0km (geophysicist)  
AEGEAN SEA (365)  
MD 3.4 (ISK).

IZM 0.54 117 iPg 59 16.60 0.0  
eSg 59 24.60  
EZN 1.21 348 iPn 59 28.60 0.3  
EDC 1.95 28 ePn 59 39.00 -0.1  
BNT 1.98 29 ePn 59 40.20 0.6  
YER 1.98 139 ePn 59 49.00 9.3X  
MFT 2.20 13 ePn 59 47.00 4.1X  
KHL 2.28 97 ePn 59 48.00 4.0X  
ALN 2.30 348 eP 59 44.20 -0.1  
CTT 2.85 28 ePn 59 57.00 4.9X  
DMK 3.29 15 ePn 59 57.50 -0.8  
S.D. = 0.6 on 6 of 10 obs.

MAY 28, 1991 04h 31m 22.69 ± 0.65s  
36.627 N ± 6.0km 5.472 W ± 6.5km  
DEPTH = 10.0km (geophysicist)  
STRAIT OF GIBRALTAR (385)  
mbLg 3.0 (MDD).

ALJ 0.12 294 eP 31 25.00 -0.7  
EJIF 0.18 179 ePg 31 24.00 -2.6  
eSg 31 26.00  
LIJA 0.28 10 eP 31 27.00 -1.5  
EPRU 0.39 30 iPgnd 31 30.90 0.2  
eSg 31 37.00  
CNIL 0.53 241 eP 31 35.00 1.5  
PLAT 0.56 205 eP 31 35.00 1.0  
MAL 0.86 83 ePn 31 40.50 1.3  
iSg 35 18.00  
EHOR 1.21 8 iPd 31 45.59 0.4  
eSn 32 03.00  
EVAL 1.40 314 ePn 31 48.21 0.0  
eSn 32 06.40  
EGUA 1.55 82 ePn 31 50.46 0.2  
eSn 32 10.40  
AFC 1.67 67 ePn 31 52.41 0.2  
eSn 32 14.60  
TOL 3.44 19 ePg 32 32.00 14.6X  
eSg 33 15.00  
S.D. = 1.4 on 11 of 12 obs.

& MAY 28, 1991 04h 39m 10.73s  
60.137 N 152.535 W  
DEPTH = 88.8km  
SOUTHERN ALASKA ( 2 )  
<AEIC>.

RED 0.31 337 iPd 39 23.67 -0.7  
eS 39 34.15  
RSO 0.34 342 iPd 39 24.10 -0.6  
eS 39 34.63  
RS2 0.35 341 iPd 39 24.16 -0.6  
eS 39 34.62  
RDW 0.37 339 iPd 39 24.20 -0.7  
eS 39 35.02  
RDN 0.39 343 iPd 39 24.35 -0.6  
eS 39 34.85  
RDT 0.44 8 iPc 39 24.41 -0.8  
iS 39 25.45  
DFR 0.46 351 iPd 39 24.72 -0.7  
iS 39 35.77  
NCT 0.47 335 eP 39 24.57 -0.9  
eS 39 35.40  
HOM 0.66 137 iPc 39 26.38 -0.6  
eS 39 38.68  
NKA 0.89 46 iPc 39 30.19 0.9  
AUE 0.89 209 eP 39 28.42 -0.9  
CNPM 0.90 133 ePc 39 28.47 -1.0  
iS 39 42.63  
AUH 0.90 211 ePc 39 28.85 -0.7  
PDB 0.90 248 ePc 39 28.58 -1.0  
eS 39 42.54  
AUI 0.92 210 eP 39 28.84 -0.9  
eS 39 43.59  
CKL 1.07 5 iPd 39 30.85 -0.7  
iS 39 46.74  
BGL 1.13 4 iPd 39 31.76 -0.6  
eS 39 48.29  
CRP 1.15 9 ePd 39 32.04 -0.5  
eS 39 47.68  
SLKM 1.21 71 eP 39 31.94 -1.3  
NCG 1.28 8 ePd 39 33.55 -0.7  
CDD 1.34 205 ePd 39 33.30 -1.5  
SYI 1.53 177 iPd 39 36.12 -1.1  
SEW 1.55 90 ePc 39 35.32 -2.0  
SUA 1.60 33 ePd 39 37.73 -0.5  
SVW 1.81 304 iPd 39 39.45 -1.5

PMS 1.84 51 ePc 39 40.22 -1.1  
SKT 1.91 14 ePd 39 41.13 -1.2  
PLRM 2.21 47 eP 39 44.45 -1.8  
KNK 2.38 56 ePc 39 46.37 -2.2  
KNIM 2.40 83 ePc 39 45.52 -3.4  
GHO 2.41 45 eP 39 46.93 -2.1  
MTU 2.45 91 ePc 39 47.16 -2.4  
SCM 3.06 54 eP 39 55.87 -2.0  
KLU 3.51 64 ePc 40 01.08 -3.2  
34 obs. associated

MAY 28, 1991 04h 54m 45.26 ± 0.52s  
40.116 S ± 6.3km 72.789 W ± 10.1km  
DEPTH = 47.6km ( 4 depth phases )  
4.9mb ( 8 obs.) 3.4msz ( 1 obs.)  
CENTRAL CHILE (136)

Felt (V) at Valdivia, Osorno and  
Paillico; (IV) at Futrono and  
Lanco; (III) at Purrenque,  
Puerto Montt, Corral and Los  
Lagos.

LNK 6.25 11 iP 56 17.00 -0.2  
i 57 29.00  
i 57 45.00  
RFA 6.35 34 ePc 56 22.70 4.0X  
TACH 6.62 14 iPd 56 22.00 -0.5  
i 57 37.00  
LCCH 6.70 9 iP 56 23.50 -0.1  
i 57 49.50  
PCH 6.73 16 iPd 56 24.00 -0.1  
iS 57 44.30  
IHA 7.14 8 eP 56 36.50 6.8X  
i(S) 58 21.70  
PEL 7.16 14 iPc 56 29.10 -1.0  
i 56 45.50  
iS 57 52.00  
ROCH 7.27 12 iPd 56 31.00 -0.8  
i 57 53.30  
RTCB 9.20 22 ePc 56 58.50 0.2  
CFA 9.26 25 ePc 56 59.00 -0.1  
S 58 45.30  
RTLL 9.44 23 ePc 57 00.30 -1.3  
TCA 11.00 40 ePc 57 22.70 -0.2  
ITB7 21.60 52 eP 59 32.20 -0.8  
ITB 21.82 51 eP 59 35.60 0.4  
ITB1 21.83 51 eP 59 35.00 -0.2  
CCH 23.37 16 P 59 54.00 3.2X  
ARE 23.60 3 iPd 59 56.00 3.1X  
CNCB 23.60 12 P 59 57.00 3.8X  
LPB 23.85 11 P 59 58.00 2.5  
ZOBO 24.11 11 P 00 00.50 2.3  
Z 20s 0.12um 3.4msz  
S 04 40.00  
LR 07 32.00  
PPD 25.64 52 eP 00 12.80 0.6  
e 00 16.50 13kmX  
SIV 26.11 26 P 00 17.00 0.4  
BMA 29.80 63 (P) 00 51.00 1.1  
NVL 51.00 155 ePd 03 47.00 3.2X  
e 03 56.00 30kmX  
e 04 02.00  
MAW 67.50 163 eP 05 37.00 -0.9  
HVD 76.71 119 eP 06 32.60 -0.8  
1.0s 20.00nm 5.1mb  
LIC 77.32 71 P 06 37.50 0.8  
0.5s 6.50nm 4.9mb  
KIC 77.62 71 P 06 39.00 0.7  
0.6s 5.00nm 4.7mb  
MEO 78.24 339 e(P) 06 40.50 -0.8  
LKO 79.20 68 P 06 46.36 -0.6  
FVM 79.39 346 P 06 46.00 -1.4  
0.5s 14.00nm 5.2mb  
ALO 80.89 333 ePd 06 56.00 0.3  
1.0s 12.50nm 4.8mb  
ANMO 80.89 333 P 06 56.20 0.5  
0.8s 9.33nm 4.8mb  
pP 07 09.80 47km  
SLR 81.70 117 iPd 06 58.60 -1.7  
0.9s 21.01nm 5.1mb  
PV09 85.02 332 P 07 17.00 0.8  
TNP 87.82 326 P 07 30.80 0.2  
0.8s 7.35nm 5.0mb  
pP 07 44.60 47km  
DUG 87.87 330 P 07 30.20 -0.5  
pP 07 44.70 49km



NB2 121.44 35 PKP 13 48.00 14.0X  
 0.6s 0.70nm  
 HFS 122.15 36 ePKP 13 33.80 -1.4  
 0.4s 0.70nm  
 e 13 48.50  
 e 13 51.80  
 QUE 145.87 94 ePKP 14 22.10 1.5  
 HYB 146.45 124 ePKP 14 23.50 1.9  
 e 14 37.00  
 SNG 146.67 168 ePKP 14 36.90 14.9X  
 S.D. = 1.1 an 34 af 42 abs.

\* MAY 28, 1991 05h 09m 46.92±1.43s  
 23.330 S ±13.8km 68.423 W ±14.3km  
 DEPTH = 90.4 ± 19.1 km  
 3.8mb ( 1 abs.)

## NORTHERN CHILE (123)

ANT 1.87 258 iPc 10 17.70 -0.2  
 iS 10 37.70  
 CNCB 6.50 4 eP 11 22.00 -0.3  
 LPB 6.77 3 (P) 11 27.00 1.1  
 e 11 48.00  
 ZOBO 7.03 2 P 11 30.00 0.4  
 SIV 10.06 45 P 12 09.00 -1.5  
 VAO 19.73 93 (P) 14 13.00 1.0  
 YKA 93.05 340 eP 22 50.50 -0.5  
 0.6s 0.30nm 3.8mb  
 S.D. = 1.3 an 7 af 7 abs.

\* MAY 28, 1991 05h 44m 31.86±0.42s  
 15.209 S ±13.4km 173.353 W ±15.3km  
 DEPTH = 5.0km (geophysicist)  
 4.8mb ( 11 abs.) 4.8Msz ( 1 abs.)

## TONGA ISLANDS (173)

AFI 2.00 50 iPc 45 04.00 -2.7  
 DZM 20.31 247 iPc 49 11.30 -0.5  
 MNG 27.12 199 eP 50 16.10 -1.6  
 LTZ 30.13 201 eP 50 43.50 -1.4  
 STK 44.18 240 eP 52 56.30 12.7X  
 0.7s 1.90nm  
 ASPA 50.22 252 iPd 53 29.60 -1.6  
 0.8s 25.00nm 5.2mb  
 SBA 63.44 185 iPc 55 06.90 2.4  
 PLM 72.34 47 P 56 10.70 9.6X  
 PEC 72.41 46 P 56 05.10 3.8X  
 TNP 74.67 43 P 56 14.00 0.2  
 0.8s 4.85nm 4.6mb  
 RSO 77.21 10 P 56 27.50 -1.0  
 SVW 77.37 9 eP 56 29.30 0.1  
 DUG 78.69 43 P 56 36.00 -0.2  
 PMR 78.92 12 eP 56 36.40 -1.2  
 1.3s 31.20nm 5.2mb  
 TTA 79.06 8 eP 56 39.50 1.0  
 1.2s 33.90nm 5.2mb  
 PNT 79.83 32 iP 56 43.00 0.2  
 PV09 80.34 46 P 56 46.80 0.6  
 NEW 80.53 34 P 56 46.00 -0.6  
 0.7s 9.20nm 4.9mb  
 ALO 80.64 50 eP 56 48.00 0.3  
 1.0s 4.25nm 4.4mb  
 ANMO 80.64 50 P 56 48.30 0.6  
 0.8s 3.73nm 4.4mb  
 LRM 81.84 38 eP 56 54.30 0.5  
 FBA 82.20 11 ePd 56 55.30 0.4  
 0.8s 33.60nm 5.5mb  
 IMA 82.37 8 ePd 56 57.00 1.0  
 1.1s 6.60nm 4.7mb  
 GOL 83.49 46 P 57 03.10 0.6  
 0.7s 4.85nm 4.8mb  
 SES 85.02 35 eP 57 09.00 -0.7  
 MEO 86.52 53 iPc 57 18.30 0.9  
 INK 88.07 14 eP 57 24.00 -0.1  
 YKA 89.90 23 eP 57 32.00 -1.0  
 0.8s 2.50nm 4.5mb  
 KHC 145.70 352 iPKP 04 14.50 1.3  
 e 04 22.00  
 MLR 145.71 336 ePKPd 04 15.00 1.6  
 ZST 145.99 347 e(PKP) 04 15.50 1.9X  
 LPF 146.66 9 ePKP 04 15.70 1.0  
 1.1s 24.40nm  
 CDF 146.89 359 ePKP 04 17.00 1.8X  
 0.9s 8.20nm  
 LOR 147.95 4 ePKP 04 19.70 2.9X  
 Z 21s 0.17um 4.8Msz  
 SSF 148.13 4 ePKP 04 20.40 3.3X

0.8s 5.35nm  
 LBF 148.24 3 ePKP 04 20.70 3.4X  
 AVF 148.39 4 ePKP 04 20.80 3.3X  
 0.9s 4.90nm  
 SMF 148.57 4 ePKP 04 22.00 4.2X  
 MAF 148.89 5 ePKP 04 21.20 2.9X  
 1.2s 13.40nm  
 LPL 149.79 360 ePKP 04 27.50 7.5X  
 LPG 149.81 360 ePKP 04 28.00 7.9X  
 0.9s 5.75nm  
 S.D. = 1.2 an 28 af 41 abs.

? MAY 28, 1991 06h 00m 46.91±1.41s  
 16.806 S ±50.4km 173.647 W ±39.9km  
 DEPTH = 33.0km (normal)  
 4.5mb ( 5 abs.)

## TONGA ISLANDS (173)

AFI 3.40 32 e(P) 01 39.00 0.0  
 WB2 49.29 258 iPc 09 34.50 -0.5  
 0.5s 3.30nm 4.6mb  
 WRA 49.30 258 P 09 34.00 -1.1  
 0.5s 3.00nm 4.6mb  
 ASPA 49.47 253 iPc 09 36.30 0.0  
 0.5s 14.60nm 5.3mb  
 ALO 81.88 50 eP 13 03.00 -1.9  
 0.9s 1.68nm 4.1mb  
 SES 86.49 35 eP 13 26.00 -1.6  
 YKA 91.47 23 eP 13 51.30 0.5  
 1.0s 1.20nm 4.2mb  
 KSP 145.12 349 iPKPc 20 24.40 1.9  
 BRG 145.47 352 iPKPc 20 25.10 2.0  
 1.1s 18.00nm  
 e 20 35.40  
 MOX 145.98 354 e(PKP) 20 26.00 2.0  
 CDF 148.47 359 ePKP 20 32.60 4.4X  
 HAU 148.89 0 ePKP 20 33.60 4.8X  
 SSF 149.74 4 ePKP 20 28.80 -1.2  
 1.1s 8.55nm  
 LBF 149.84 3 ePKP 20 32.60 2.3X  
 1.0s 8.00nm  
 SMF 150.17 3 ePKP 20 36.40 5.7X  
 0.9s 65.70nm  
 S.D. = 1.6 on 11 of 15 obs.

\* MAY 28, 1991 06h 25m 07.81±0.91s  
 28.004 S ±6.0km 66.965 W ±20.3km  
 DEPTH = 225.2 ± 40.1 km

## CATAMARCA PROVINCE, ARGENTINA (130)

ANT 5.29 323 iPd 26 27.90 0.8  
 PEL 6.04 211 ePd 26 37.40 0.7  
 i 26 37.80  
 i(S) 27 47.50  
 LCCH 6.74 215 iP 26 46.00 0.4  
 LNV 7.05 212 iPc 26 48.00 -1.5  
 i 28 05.00  
 CCH 10.60 4 P 27 35.50 -0.1  
 CNCB 11.18 355 P 27 44.00 0.8  
 e 29 42.00  
 LPB 11.46 355 P 27 46.00 -0.7  
 ZOBO 11.73 355 P 27 50.00 -0.2  
 SIV 13.14 26 P 28 06.20 -1.2  
 PPD 15.38 71 eP 28 35.20 0.3  
 VAO 18.72 79 eP 29 12.00 0.1  
 e 29 16.10  
 BMA 21.27 81 eP 29 37.90 0.6  
 S.D. = 0.9 on 12 of 12 obs.

\* MAY 28, 1991 07h 32m 06.98±1.96s  
 24.082 N ±10.0km 122.507 E ±16.1km  
 DEPTH = 37.9 ± 13.8 km  
 4.1mb ( 4 obs.)

## TAIWAN REGION (243)

TWC 0.80 311 iPd 32 21.70 -0.1  
 eS 32 32.80  
 TWD 0.83 270 iPc 32 21.50 -0.8  
 eS 32 31.50  
 TWZ 1.32 320 eP 32 30.90 1.7  
 TWF1 1.33 237 eP 32 29.40 0.1  
 ANP 1.42 321 iP 32 33.50 2.8X  
 eS 32 54.00  
 TWK 2.02 247 eP 32 40.20 0.8  
 QZH 3.67 284 iPnc 33 01.80 -0.9  
 E 10s 0.80um  
 Sn 33 42.90

SSE 7.08 351 iPc 33 50.00 -0.8  
 N 12s 0.80um  
 E 10s 0.50um  
 GZH 8.46 265 eP 34 20.00 9.9X  
 NJ2 8.57 339 Pd 34 10.50 -1.0  
 Z 14s 0.90um  
 N 12s 0.90um  
 E 12s 0.70um  
 S 35 43.00  
 WHN 9.69 313 eP 34 23.50 -3.6X  
 Z 12s 0.60um  
 N 10s 0.70um  
 E 10s 0.80um

OIZ 12.81 249 eP 35 19.20 9.9X  
 GYA 14.53 283 P 35 32.80 0.8  
 N 12s 0.40um  
 E 12s 0.70um

pP 35 39.40  
 XAN 15.46 313 P 35 49.50 5.4X  
 TIY 16.09 330 eP 35 53.20 1.2  
 Z 12s 1.20um  
 SNY 17.72 3 eP 36 15.40 3.0X  
 Z 13s 0.80um  
 pP 36 22.00  
 CD2 17.96 296 eP 36 14.50 -1.0  
 BTO 19.52 330 eP 36 38.50 4.3X  
 N 13s 0.80um  
 E 13s 0.60um  
 CN2 19.82 6 eP 36 38.00 0.8  
 Z 14s 1.80um  
 N 12s 0.40um  
 E 12s 0.30um

sP 36 47.00  
 eS 40 15.00  
 LZH 20.06 311 eP 36 39.50 -0.5  
 2.0s 29.00nm 4.3mb  
 Z 17s 0.68um 4.1MszX  
 N 10s 0.24um  
 sP 36 51.00  
 GTA 24.52 314 eP 37 25.20 0.9  
 0.8s 10.00nm 4.4mb  
 Z 16s 0.60um 4.2MszX  
 E 13s 0.40um  
 pP 37 33.00 28kmX  
 sP 37 38.00  
 INK 72.87 22 eP 43 37.00 3.5X  
 NB2 78.88 332 P 44 06.80 -0.9  
 0.8s 1.40nm 4.0mb  
 YKA 82.59 23 eP 44 27.10 -0.1  
 0.8s 0.40nm 3.5mb  
 S.D. = 1.0 an 16 af 24 abs.

\* MAY 28, 1991 07h 55m 33.64s  
 60.545 N 152.779 W

DEPTH = 6.7km

## SOUTHERN ALASKA ( 2 )

<AEIC>. ML 2.6 (AEIC).

RDN 0.03 166 iPd 55 35.41 0.2  
 RDW 0.06 194 iPc 55 35.89 0.2  
 DFR 0.07 44 iPd 55 35.94 0.3  
 eS 55 36.92  
 NCT 0.08 283 iPc 55 36.11 0.4  
 iS 55 37.17  
 RS2 0.08 173 iPd 55 36.15 0.2  
 RSO 0.08 171 iPd 55 36.13 0.2  
 RED 0.13 178 iPd 55 36.62 0.1  
 iS 55 38.45  
 CKL 0.69 18 iPc 55 46.78 -0.7  
 eS 55 57.50  
 BGL 0.75 15 iPc 55 47.96 -0.6  
 eS 55 59.56  
 NKA 0.78 75 ePc 55 50.39 1.2  
 CRP 0.79 23 ePc 55 48.69 -0.7  
 S 56 00.15  
 NCG 0.91 19 ePc 55 50.74 -0.8  
 eS 56 02.98  
 PDB 1.04 224 eP 55 52.81 -0.7  
 eS 56 06.06  
 HOM 1.06 147 eP 55 53.81 0.0  
 eS 56 07.28  
 SLKM 1.27 91 iPc 55 56.34 -1.1  
 CNPM 1.28 142 ePc 55 56.71 -1.0  
 eS 56 13.56  
 SUA 1.35 46 eP 55 58.28 -0.7  
 eS 56 15.85  
 SVW 1.50 293 eP 56 00.74 -0.4



28d 07h

SKT	1.56	22	eS	56	20.73	
			ePc	56	01.94	0.0
			S	56	22.04	
CDD	1.68	195	eP	56	04.02	0.4
SEW	1.71	104	eP	56	04.01	-0.1
PMS	1.72	65	eP	56	03.92	-0.3
PWA	1.79	51	eP	56	05.70	0.5
PLRM	2.06	58	eP	56	08.72	-0.4
CUT	2.22	32	eP	56	12.77	1.3
GHO	2.24	55	eP	56	12.39	0.6
KNK	2.28	66	eP	56	11.95	-0.4
SML	2.50	58	eP	56	16.71	1.3
KNIM	2.51	92	eP	56	15.28	-0.2
MTU	2.62	100	eP	56	17.25	0.2
VZW	3.09	78	eP	56	24.37	0.5
VLZ	3.21	77	eP	56	25.86	0.4
KLU	3.47	71	eP	56	29.54	0.3
33 obs. associated						

% MAY 28, 1991 08h 23m 13.82 ± 0.62s  
 42.394 N ± 5.2km 19.186 E ± 5.1km  
 DEPTH = 10.0km (geophysicist)  
 YUGOSLAVIA (383)  
 ML 1.2 (TTG).

TTG	0.07	57	iPgd	23	16.55	0.4
			iSg	23	17.99	
BDV	0.29	247	iPgd	23	19.97	0.1
			iSg	23	24.29	
ULC	0.43	174	iPgd	23	22.50	-0.2
			iSg	23	29.27	
NKY	0.44	342	iPgc	23	22.69	-0.1
			iSg	23	29.54	
HCY	0.51	276	iPgd	23	24.24	0.1
			iSg	23	32.14	
BRY	0.69	317	iPgd	23	27.57	-0.1
IVA	0.71	48	iPgd	23	27.64	-0.2
S.D. = 0.3 on 7 of 7 obs.						

? MAY 28, 1991 08h 44m 35.41 ± 9.69s  
 30.235 N ± 15.8km 80.379 E ± 8.1km  
 DEPTH = 33.0km (normal)  
 TIBET-INDIA BORDER REGION (305)

NDI	3.16	242	ePn	45	24.00	0.0
			eSn	46	03.50	
GKN	4.34	120	P	45	40.60	-0.3
DMN	4.90	121	P	45	49.46	0.5
KKN	4.94	118	P	45	49.92	0.5
PKI	5.15	120	P	45	51.72	-0.8
GUN	5.34	114	P	45	55.24	0.0
S.D. = 0.6 on 6 of 6 obs.						

MAY 28, 1991 08h 52m 43.99 ± 2.20s  
 1.751 N ± 5.4km 128.511 E ± 7.5km  
 DEPTH = 62.4 ± 20.8 km  
 5.0mb (16 obs.)  
 MALMAHERA (267)

TSM	10.71	283	ePc	55	19.50	2.4
TRT	18.41	239	ePd	56	56.10	-0.5
WB2	22.31	165	iPd	57	36.50	-1.1
			0.6s	20.90nm		4.7mb
OIS	24.69	154	iPc	58	01.00	0.3
OZH	24.97	338	eP	58	03.50	0.3
OIZ	25.09	314	P	58	04.40	0.0
			eS	02	31.00	
ASPA	25.80	169	iPc	58	10.10	-1.0
			0.4s	11.80nm		4.8mb
WARB	27.83	184	eP	58	29.80	0.2
PSI	29.58	272	ePd	58	51.50	6.0X
GYA	32.31	321	iPc	59	10.40	0.9
			PP	59	26.60	
CHG	33.57	302	eP	59	20.00	-0.4
KMI	34.03	315	Pc	59	25.00	0.5
			1.5s	70.00nm		5.4mb
			pP	59	41.00	65kmX
TSRJ	34.32	11	P	59	26.30	-0.3
JIDJ	34.68	14	P	59	29.30	-0.4
CHJJ	35.48	15	P	59	34.20	-2.3
STK	35.68	161	iPc	59	51.00	12.8X
			0.5s	6.50nm		
MTMJ	35.71	13	P	59	37.40	-1.2
MAT	35.76	13	iPc	59	36.90	-2.0
			0.8s	70.15nm		5.6mb
KAKJ	35.94	16	P	59	37.90	-2.5
NIIJ	36.62	14	P	59	44.30	-1.7

XAN	36.98	332	P	59	48.50	-0.7
CD2	37.28	324	iPc	59	52.10	0.3
ADE	37.76	166	eP	59	56.00	0.3
YAMJ	37.76	15	P	59	55.80	0.2
TIY	38.72	339	Pd	00	03.80	0.0
OFUJ	39.05	16	P	00	06.10	-0.3
BJI	39.73	345	eP	00	11.50	-0.5
			1.0s	13.00nm		4.8mb
SNY	40.14	354	eP	00	14.80	-0.6
BFD	40.86	163	eP	00	22.00	0.6
LZH	41.10	329	iPc	00	29.60	6.0X
			1.0s	88.00nm		5.5mb
			pP	00	40.00	36kmX
			sP	00	46.00	
			eS	06	35.00	
HHC	41.83	341	eP	00	29.80	0.3
CN2	41.96	357	eP	00	32.00	1.7
SHL	42.48	307	iP	00	35.30	0.2
			eS	12	24.50	
HOOJ	42.57	16	eP	00	36.60	1.3
MDJ	42.69	1	eP	00	36.00	-0.3
KUSJ	43.64	17	eP	00	44.40	0.5
ASAJ	44.01	15	eP	00	47.50	0.5
LSA	45.07	312	eP	00	57.80	1.5
GTA	45.70	329	iPc	01	01.20	0.5
			1.0s	30.00nm		5.1mb
GUN	48.32	307	P	01	21.50	-0.3
PKI	48.56	306	P	01	21.90	-1.7
KKN	48.75	306	P	01	24.60	-0.4
DMN	48.82	306	P	01	25.40	-0.1
GKN	49.36	306	P	01	29.10	-0.5
HYB	51.47	291	iPc	01	45.00	-0.6
			1.0s	75.00nm		5.7mb
			e	01	59.00	
GBA	51.85	286	Pc	01	46.90	-1.5
			0.5s	9.60nm		5.1mb
WMQ	55.35	325	P	02	14.00	0.1
			1.0s	40.00nm		5.4mb
			sP	02	29.00	

POO	56.07	291	iP	02	14.50	-5.0X
YAK	60.12	1	eP	02	44.10	-2.8X
QUE	64.70	303	eP	03	17.10	-1.2
ADK	67.61	33	eP	03	36.20	0.1
SDN	77.82	34	ePc	04	36.50	0.4
ANM	78.34	24	eP	04	39.30	0.5
SVW	81.66	28	eP	04	58.80	2.2
TTA	81.86	27	eP	04	59.10	1.4
			0.8s	8.10nm		4.7mb
IMA	83.46	24	ePc	05	07.40	1.4
			1.3s	24.00nm		5.0mb
BRW	83.48	18	eP	05	07.70	1.9
PMR	84.82	28	ePc	05	13.40	0.7
			0.9s	25.50nm		5.3mb
FBA	85.74	25	eP	05	19.10	1.8
TOA	86.26	28	eP	05	21.70	1.7
INK	91.34	22	eP	05	43.00	-0.8
YKA	100.54	25	ePd	06	25.00	-0.8
			0.6s	0.60nm		4.4mb
HFS	100.58	332	ePd	06	23.80	-2.2X
			0.5s	0.70nm		4.5mb
Z	16s		0.05um			4.1mszX
			e	06	50.30	
			LR	48	22.00	
NB2	101.34	334	Pdiff	06	27.00	-2.4X
			0.7s	1.50nm		4.7mb
ALO	117.00	49	ePKP	11	24.00	-0.2
ZOBO	158.17	132	PKP	12	36.00	-0.7
			i	13	11.00	
S.D. = 1.1 on 59 of 66 obs.						

\* MAY 28, 1991 09h 27m 40.95 ± 1.81s  
 34.256 N ± 21.7km 26.304 E ± 11.3km  
 DEPTH = 52.2 ± 15.7 km  
 4.0mb (4 obs.) 3.1msz (1 obs.)  
 CRETE (370)  
 MD 4.0 (ATH).

NPS	1.15	331	ePb	28	00.50	-0.6
ARG	2.46	37	ePn	28	20.20	0.8
VLJ	3.69	313	ePn	28	37.30	0.5
CSS	5.84	81	eP	29	05.50	-1.6
JVI	7.94	104	eP	29	37.40	1.0
CDF	20.03	321	eP	32	12.00	-0.1
			0.7s	9.90nm		4.3mb
HAU	20.28	319	eP	32	14.30	-0.4
LBF	21.10	314	eP	32	22.70	-0.4
			0.9s	5.75nm		3.9mb

LOR	21.31	314	eP	32	24.60	-0.6
Z	20s		0.08um			3.1msz
SSF	21.42	313	eP	32	26.30	0.0
			1.0s	8.00nm		4.0mb
MEM	22.06	324	P	32	33.80	1.3
YKA	28.60	343	eP	39	42.60	4.4X
			0.6s	0.30nm		3.4mb
S.D. = 1.0 on 11 of 12 obs.						

MAY 28, 1991 09h 34m 07.04 ± 0.65s  
 37.033 N ± 5.9km 3.648 W ± 6.3km  
 DEPTH = 10.0km (geophysicist)  
 SPAIN (377)  
 mbLg 3.1 (MDD).

EGUA	0.21	162	ePg	34	11.80	0.2
			eSg	35	10.60	
AFC	0.24	20	eP	34	11.00	-1.2
			eS	34	14.20	
ECOG	0.25	15	ePg	34	12.00	-0.4
MAL	0.68	244	ePn	34	18.50	-2.1
			iSg	34	29.00	
EBAN	1.13	355	ePg	34	28.60	0.3
			eSg	34	44.50	
ENIJ	1.16	93	ePg	34	29.00	0.3
LIJA	1.42	265	eP	34	34.50	1.5
EHOR	1.50	302	ePn	34	34.80	0.8
			eSn	34	54.00	
EJIF	1.57	249	ePn	34	35.00	0.0
			eSn	34	55.80	
EVIA	1.84	29	ePn	34	39.50	0.5
			eSn	35	02.30	
TOL	2.86	354	ePg	35	12.00	18.4X
			eSg	35	38.00	
S.D. = 1.2 on 10 of 11 obs.						

? MAY 28, 1991 09h 57m 50.35 ± 3.77s  
 39.822 N ± 28.5km 29.350 E ± 13.3km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 2.7 (ISK).

IZI	0.52	10	iPg	58	00.70	-0.3
YLV	0.74	1	iPg	58	05.30	0.3
			eSg	58	20.30	
EYL	0.97	40	ePn	58	08.80	0.0
BNT	1.22	296	ePn	58	13.00	-0.1
S.D. = 0.4 on 4 of 4 obs.						

? MAY 28, 1991 10h 18m 21.14 ± 1.71s  
 5.953 S ± 12.7km 147.273 E ± 23.2km  
 DEPTH = 125.8 ± 16.3 km  
 4.7mb (3 obs.)  
 EAST PAPUA NEW GUINEA REGION (207)

YYYY	1.33	257	iPc	18	48.50	0.9
			eS	19	17.10	
MDG	1.64	295	eP	18	50.20	-0.8
PMG	3.44	182	iPd	19	09.20	-4.9X
MNDI	3.60	267	eP	19	11.00	-5.5X
OIS	16.31	206	eP	22	03.00	-1.3
WB2	18.74	221	iPc	22	31.60	-1.4
	0.8s	34.40nm				4.7mb
RMQ	20.47	176	eP	22	51.00	0.1
		i		23	02.40	
QLP	20.72	188	iPd	22	54.00	0.7
ASPA	21.81	215	iPd	23	05.20	0.9
	0.3s	30.00nm				5.2mb
		eS		27	04.00	
BRS	21.95	167	iPd	23	05.50	-0.1
WARB	28.16	222	eP	24	05.00	1.3
YKA	99.00	28	eP	31	49.10	0.7
	0.8s	0.40nm				4.0mb
SIV	144.47	128	PKP	37	44.00	-1.1
S.D. = 1.2 on 11 of 13 obs.						



EHOR 1.25 7 eSg 32 30.30  
ePn 32 40.80 0.6  
eSn 32 58.80  
EVAL 1.45 314 ePn 32 45.00 1.6X  
eSn 33 04.00

S.D. = 0.5 on 5 of 6 obs.

MAY 28, 1991 10h 46m 17.92± 0.52s  
36.594 N ± 4.5km 5.417 W ± 5.0km  
DEPTH = 5.0km (geophysicist)  
STRAIT OF GIBRALTAR (385)  
mbLg 3.0 (MDD). Felt (III) in  
the epicentral area.

EJIF 0.15 196 ePg 46 19.50 -1.5  
eSg 46 21.50  
ALJ 0.17 298 eP 46 21.90 0.4  
LIJA 0.30 1 eP 46 23.70 -0.4  
MOMI 0.37 222 eP 46 28.20 2.9X  
EPRU 0.40 22 iPgd 46 26.00 0.0  
eSg 46 31.50

PLAT 0.55 210 eP 46 30.00 1.1  
CNIL 0.56 247 eP 46 29.00 -0.1  
MAL 0.82 80 iPnc 46 39.50 5.2X  
EHOR 1.23 6 ePn 46 41.00 -0.3  
eSn 46 58.50

EVAL 1.45 313 ePn 46 44.00 -0.8  
eSn 47 04.00  
EGUA 1.51 80 eP 46 46.00 0.4  
eSn 47 07.20

ECOG 1.63 65 ePn 46 48.00 0.5  
eSn 47 09.00  
AFC 1.64 66 ePn 46 47.00 -0.6  
eSn 47 09.00  
TOL 3.45 18 ePg 47 38.00 24.5X  
eSn 48 10.00

S.D. = 0.8 on 11 of 14 obs.

MAY 28, 1991 10h 49m 11.48± 0.73s  
49.078 N ± 5.4km 6.887 E ± 6.5km  
DEPTH = 5.0km (geophysicist)  
GERMANY (543)  
MD 2.5 (STR).

GWf 0.49 101 Pg 49 21.06 -0.3  
CDF 0.71 159 Pg 49 25.69 -0.1  
Sg 49 36.31  
WLS 0.73 155 Pg 49 26.07 -0.1  
ECH 0.88 168 Pg 49 29.05 0.2  
VITF 1.05 215 Pg 49 31.41 -0.3  
MOF 1.24 172 Pg 49 35.40 0.4  
Sg 49 52.85

FEL 1.42 148 Pg 49 38.54 0.5  
Sg 49 58.54  
LOMF 1.73 181 Pn 49 42.09 -0.4  
ENN 1.80 340 ePnc 49 43.50 0.1  
0.5s 18.00nm  
eSn 50 03.00

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

% MAY 28, 1991 11h 19m 51.40± 0.62s  
40.660 N ± 6.3km 15.850 E ± 5.1km  
DEPTH = 10.0km (geophysicist)  
SOUTHERN ITALY (390)

SGO 0.42 256 P 19 59.90 -0.2  
eSg 20 06.60  
ORI 0.75 142 P 20 06.30 0.2  
eSg 20 18.70  
BAI 0.90 59 P 20 08.50 -0.1  
eSg 20 21.50

BRT 1.05 78 P 20 10.50 -0.7  
eSg 20 25.20  
TDS 1.07 159 P 20 12.00 0.5  
eSg 20 28.30  
DUI 1.45 314 P 20 18.10 0.4  
eSn 20 37.60

LCI 1.64 101 P 20 21.00 0.7  
SOI 2.59 176 P 20 33.20 -0.8  
S.D. = 0.6 on 8 of 8 obs.

& MAY 28, 1991 11h 58m 47.10s  
35.757 N 121.317 W  
DEPTH = 6.0km  
CENTRAL CALIFORNIA (39)  
<BRK>. ML 3.7 (BRK). Felt (IV)  
at Son Simeon.

PRS 0.58 356 iPd 58 58.23 -0.4  
PRI 0.65 54 iPd 59 00.03 -0.2  
PHAM 0.75 84 iP 59 01.70 -0.4  
LLA 0.91 19 iPd 59 04.63 -0.3  
iS 59 18.09

SAO 1.01 354 iPc 59 05.75 -0.9  
iS 59 20.05

PKEM 1.03 72 eP 59 07.00 0.1  
BCH 1.16 119 eP 59 08.00 -1.2  
GCC 1.38 337 e(P) 59 10.80 -2.1  
BLP 1.41 148 eP 59 12.20 -1.1  
ARN 1.60 354 eP 59 14.20 -1.8  
MHC 1.60 351 ePc 59 14.60 -1.5  
eS 59 38.35

FRI 1.79 46 iPc 59 17.61 -1.1  
iS 59 39.18  
ABL 1.94 117 eP 59 19.00 -2.1  
PCC 1.94 334 e(P) 59 18.80 -2.1  
BKS 2.24 341 iPc 59 23.30 -2.0  
eS 59 51.90

BRK 2.24 341 eP 59 22.80 -2.5  
ZSP 2.31 341 eP 59 23.40 -2.9  
CMB 2.39 18 ePc 59 26.30 -1.2  
BONR 3.27 47 eP 59 39.00 -1.1  
ORV 3.79 358 eP 59 46.60 -0.8

PEC 3.89 117 eP 59 45.40 -3.4  
TNP 4.02 54 eP 59 49.20 -1.6  
PLM 4.39 122 eP 59 52.70 -3.3  
FFC 23.21 29 eP 03 55.00 -0.5  
0.8s 6.00nm 4.2mb

24 obs. associated

& MAY 28, 1991 12h 19m 59.90s  
35.763 N 121.317 W  
DEPTH = 6.0km  
CENTRAL CALIFORNIA (39)  
<BRK>. ML 2.9 (BRK).

PRS 0.57 356 iPd 20 10.90 -0.4  
iS 20 18.90  
PRI 0.65 54 iPd 20 12.80 -0.1  
iS 20 22.60  
PHAM 0.75 84 iP 20 14.50 -0.4  
LLA 0.90 19 ePd 20 17.30 -0.3  
iS 20 31.54

SAO 1.01 354 iPc 20 18.40 -0.9  
PKEM 1.02 73 eP 20 20.00 0.4  
BCH 1.16 119 eP 20 20.70 -1.3  
GCC 1.38 337 ePc 20 25.50 -0.1  
MHC 1.60 351 eP 20 27.40 -1.5  
FRI 1.79 46 eP 20 30.20 -1.3  
eS 20 52.30

ABL 1.94 117 eP 20 31.70 -2.3  
BKS 2.23 341 e(P) 20 42.60 4.6  
CMB 2.39 18 ePc 20 39.80 -0.4  
eS 21 07.20  
13 obs. associated

MAY 28, 1991 12h 40m 16.62± 0.56s  
5.729 S ± 3.2km 130.895 E ± 5.1km  
DEPTH = 87.8 ± 5.4 km  
5.0mb (26 obs.)  
BANDA SEA (280)

MTN 7.08 178 eP 41 59.60 0.1  
KUPT 8.45 238 ePd 42 19.00 0.7  
e(S) 43 51.60  
KNA 10.18 192 eP 42 40.50 -1.3  
0.3s 184.00nm 6.5mb X  
eS 44 26.00

WB2 14.52 167 iPc 43 34.20 -4.9X  
0.5s 182.50nm 5.6mb  
e 53 02.20  
TSM 16.18 307 eP 44 05.00 4.9X  
PMG 16.53 104 iPc 44 05.00 0.6  
QIS 16.99 151 iPc 44 08.00 -2.3  
iS 47 05.00

ASPA 18.07 171 iPd 44 21.70 -1.8  
0.4s 146.30nm 5.6mb  
eS 47 31.40  
MBL 18.72 214 iPc 44 31.20 0.0  
0.4s 44.00nm 5.1mb  
eS 47 45.00

CTA 20.65 135 iPd 44 52.30 0.8  
0.9s 40.34nm 4.8mb  
WARB 20.74 191 iPd 44 54.00 1.7

0.3s 13.00nm 4.8mb  
eS 48 35.00  
NANU 22.37 220 eP 45 09.50 1.1  
0.4s 29.00nm 5.0mb  
eS 49 19.00

OLP 24.33 150 eP 45 29.60 2.1  
i 45 39.00

FORR 25.13 186 eP 45 35.00 0.1  
0.3s 22.00nm 5.1mb

COOL 26.65 199 eP 45 49.00 0.0  
RMO 26.77 142 eP 45 50.00 -0.2  
i 46 17.00

MRWA 27.28 209 iPd 45 55.10 0.3  
0.3s 16.00nm 5.1mb  
eS 51 06.00

STK 27.88 160 iPd 46 04.90 4.8X  
0.3s 8.40nm 4.8mb  
eS 51 23.80

BAL 28.12 207 iPc 46 02.30 0.0  
0.3s 19.00nm 5.2mb

KLB 28.52 204 eP 46 06.10 0.2  
0.3s 27.00nm 5.4mb

CMS 29.20 153 e(P) 46 12.00 0.0  
e 46 41.00  
e 53 09.00

MUN 29.51 206 eP 46 14.80 0.0  
e 46 14.80

NWAO 29.91 203 eP 46 18.80 0.5  
e 46 18.80

ADE 29.98 167 eP 46 20.00 1.0  
RKG 31.00 203 eP 46 32.00 4.1X  
e 46 32.00

OIZ 32.18 320 Pd 46 38.90 0.6  
BFD 33.06 163 eP 46 47.00 1.2  
e 47 16.00  
i 47 56.10  
e 53 26.00

TOO 34.38 159 eP 46 59.00 1.8  
e 47 28.00

SSE 37.77 346 Pd 47 26.50 0.6  
0.6s 10.00nm 4.9mb

DZM 38.00 119 iPc 47 26.90 -1.2  
NJZ 39.28 344 Pd 47 39.90 1.4

WHN 39.39 337 eP 47 41.00 1.6  
0.5s 30.00nm 5.4mb

GVA 39.69 325 P 47 42.80 0.7  
PcP 49 48.00

CHG 39.83 308 ePc 47 44.70 1.5  
0.9s 22.06nm 5.0mb

MAT 42.60 9 iPc 48 04.90 -0.8  
0.9s 24.37nm 5.0mb

TIA 43.67 344 eP 48 13.50 -0.9  
YAMJ 44.50 10 eP 48 21.90 0.9

XAN 44.68 334 P 48 22.00 -0.6  
CD2 44.73 326 P 48 23.10 0.1

OFUJ 45.68 12 eP 48 30.70 0.3  
TIY 46.52 340 Pc 48 37.20 0.1

BJI 47.52 345 eP 48 45.00 0.2  
1.0s 16.00nm 4.9mb

SNY 47.80 353 Pc 48 46.90 0.0  
1.0s 20.00nm 4.9mb

LZH 48.72 331 eP 48 54.50 0.1  
1.5s 28.00nm 5.0mb

HOOJ 49.19 12 eP 48 58.60 0.9  
CN2 49.54 355 P 49 00.00 -0.4  
0.8s 10.00nm 4.9mb

eP 49 18.00 71kmX  
PcP 50 20.20

MDJ 50.13 359 eP 49 05.00 0.2  
1.0s 10.00nm 4.8mb

ASAJ 50.74 11 eP 49 09.40 -0.1  
LSA 51.92 315 Pc 49 20.00 0.8

GTA 53.31 330 Pc 49 29.50 0.6  
1.0s 10.00nm 4.8mb  
sP 50 00.20  
PcP 50 36.40

GUN 54.81 310 P 49 40.28 -0.2  
PKI 55.00 309 P 49 41.24 -0.5

KKN 55.20 310 P 49 42.86 -0.3  
DMN 55.25 309 P 49 43.34 -0.2

GKN 55.80 309 P 49 47.14 -0.2  
GBA 56.43 290 Pc 49 50.50 -1.4  
0.6s 3.30nm 4.6mb

HYB 56.57 295 eP 49 51.50 -1.4  
POO 61.17 295 eP 50 23.50 -1.2

NDI 61.93 307 iPc 50 28.00 -1.6  
0.5s 28.17nm 5.6mb

WMO 62.83 326 P 50 36.00 0.6  
1.0s 70.00nm 5.6mb  
sP 51 08.00



28d 12h

YAK	67.55	359	iPc	51	04.40	-0.9
QUE	70.80	305	eP	51	27.10	0.9
SPA	84.31	180	iPc	52	38.00	-1.9
	0.8s	22.08nm			5.2mb	
INK	97.36	22	eP	53	40.00	-0.8
YKA	106.23	26	ePdiff	54	20.10	-0.5
	0.8s	0.40nm			4.5mb	
YKA	106.23	26	ePKP	58	31.10	-0.8
	0.6s	0.60nm				
WTTA	113.82	319	iPKPc	58	46.80	-0.3
	0.6s	14.40nm				
BSF	116.69	321	ePKP	58	51.70	-0.8
	0.8s	8.05nm				
PGF	117.09	315	ePKP	58	53.00	-0.4
	0.5s	5.85nm				
LPG	117.60	319	ePKP	58	54.20	-0.3
	0.6s	7.20nm				
LPL	117.61	319	ePKP	58	54.20	-0.3
	0.6s	9.45nm				
LOR	118.74	322	ePKP	58	56.00	-0.3
	0.6s	3.60nm				
LBF	118.78	321	ePKP	58	56.20	-0.2
	0.8s	5.35nm				
SSF	119.04	322	ePKP	58	56.80	0.0
	0.8s	7.40nm				
AVF	119.25	321	ePKP	58	56.80	-0.4
	0.8s	5.35nm				
TCF	120.18	321	ePKP	58	59.00	-0.1
	0.8s	6.70nm				
CAF	120.87	320	ePKP	59	00.80	0.4
	0.8s	16.10nm				
MFF	121.49	322	ePKP	59	01.50	0.0
	0.4s	6.85nm				
LPO	121.53	320	ePKP	59	02.10	0.5
	0.6s	5.40nm				
EPF	122.81	318	ePKP	59	04.10	-0.1
	0.8s	5.35nm				
TUL	127.74	48	ePKP	59	14.50	0.6
	0.7s	5.20nm				
KIC	135.89	273	(PKP)	59	29.70	-0.3
LKO	136.73	278	PKP	59	29.92	-1.7
CNCB	150.85	140	PKP	00	00.00	3.8X
			i	00	04.00	
LPB	150.98	140	PKP	00	03.60	7.4X
ZOBO	151.16	140	PKP	00	00.00	3.3X
	1.0s	25.00nm				
			i	00	04.00	
PPD	152.33	176	ePKP	00	04.90	7.4X
			e	00	15.40	
			e	00	39.40	
SIV	155.38	151	PKP	00	02.60	0.8
			S.D. = 0.9	on	80 of 88 obs.	
%						
MAY 28, 1991 12h 43m 22.01 ± 0.84s						
34.205 N ± 11.0km 26.469 E ± 9.6km						
DEPTH = 33.0km (normal)						
3.5mb ( 1 obs.)						
CRETE (370)						
ML 3.2 (LDG).						
NPS	1.27	326	ePn	43	43.70	0.2
ARG	2.42	34	ePn	44	00.10	0.0
VLI	3.82	312	ePn	44	19.80	-0.1
CSS	5.71	80	eP	44	46.50	-0.2
KOT	6.23	132	ePn	44	53.30	-0.8
HQL	8.81	122	iPc	45	31.00	1.0
			S	47	00.00	
YKA	78.68	343	eP	55	22.00	0.0
	0.6s	0.30nm			3.5mb	
			S.D. = 0.7	on	7 of 7 obs.	
%						
MAY 28, 1991 13h 18m 46.57 ± 0.79s						
41.145 N ± 13.6km 28.485 E ± 8.7km						
DEPTH = 10.0km (geophysicist)						
TURKEY (366)						
MD 2.6 (ISK).						
CTT	0.04	273	iPg	18	47.90	-0.8
ISK	0.44	100	iPg	18	54.70	-0.9
DMK	0.87	321	iPg	19	04.00	0.7
			eSg	19	15.50	
YLV	0.89	130	ePg	19	04.20	0.5
HRT	0.95	109	iPg	19	05.40	0.7
IZI	1.10	137	iPn	19	07.90	0.6
			S.D. = 1.0	on	6 of 6 obs.	
%						
MAY 28, 1991 13h 33m 51.99 ± 1.37s						

40.391 N ± 11.2km 21.032 E ± 11.7km						
DEPTH = 10.0km (geophysicist)						
GREECE (364)						
MG 2.7 (TIR).						
LSK	0.41	234	ePg	34	00.10	-0.3
			iSg	34	07.70	
OHR	0.74	346	iPg	34	05.20	-1.3
			iSg	34	16.30	
TIR	1.30	318	ePg	34	17.30	1.3
PHP	1.37	341	ePg	34	13.00	-4.1X
VAY	1.49	51	ePn	34	19.20	0.4
SKO	1.61	11	ePn	34	20.50	0.0
			eSn	34	41.60	
S.D. = 1.3 on 5 of 6 obs.						
?						
MAY 28, 1991 14h 55m 20.36 ± 4.75s						
21.606 S ± 80.9km 114.342 W ± 69.6km						
DEPTH = 10.0km (geophysicist)						
4.8mb ( 3 obs.) 4.9MsZ ( 1 obs.)						
EASTER ISLAND CORDILLERA (684)						
LPB	43.88	92	P	03	29.90	0.4
Z	22s	1.48um			4.9MsZ	
		LR	16	32.00		
ZOBO	43.92	91	iPc	03	29.90	-0.1
	1.0s	20.00nm			4.9mb	
Z	24s	0.74um			4.5MsZ	
		S	10	12.00		
		LR	16	22.00		
CNCB	43.92	92	Pc	03	31.00	1.0
SIV	50.54	93	P	04	20.00	-1.4
MEO	50.04	15	iPc	05	15.50	-0.4
FFC	76.75	7	eP	07	14.00	0.7
	1.7s	35.00nm			5.2mb	
YKA	83.81	360	eP	07	50.50	-0.2
	1.3s	2.10nm			4.2mb	
WRA	101.19	243	Pdiff	09	39.00	26.0X
	1.2s	1.20nm				
LZH	143.82	302	ePKP	14	40.00	-18.0X
CHG	148.67	271	ePKP	15	12.00	5.7X
			S.D. = 1.0	on	7 of 10 obs.	
?						
MAY 28, 1991 16h 34m 25.14 ± 4.36s						
23.135 N ± 12.8km 120.312 E ± 34.5km						
DEPTH = 10.0km (geophysicist)						
TAIWAN (244)						
TWK	0.21	51	iPd	34	29.90	0.2
			eS	34	36.90	
TWM1	0.32	161	eP	34	31.80	-0.1
TWG	0.77	114	iPd	34	40.40	0.3
			eS	34	54.60	
TWF1	0.93	76	ePd	34	42.50	-0.4
			eS	34	58.70	
			S.D. = 0.6	on	4 of 4 obs.	
%						
MAY 28, 1991 17h 10m 40.78 ± 0.53s						
40.504 N ± 5.5km 26.394 E ± 4.4km						
DEPTH = 10.0km (geophysicist)						
TURKEY (366)						
MD 3.2 (ISK).						
ALN	0.47	326	iPd	10	50.30	-0.1
			eS	10	57.00	
EZN	0.68	184	iPg	10	54.20	0.0
			eSg	11	02.70	
MFT	0.73	67	iPg	10	55.60	0.4
EDC	1.13	97	ePn	11	02.00	0.0
BNT	1.17	97	iPn	11	02.80	0.1
KDZ	1.36	327	eP	11	06.00	0.2
			iS	11	25.00	
DMK	1.67	38	ePn	11	10.00	-0.2
CTT	1.67	67	iPn	11	09.80	-0.4
RZN	1.73	314	iPd	11	11.00	-0.3
			eS	11	33.00	
PLD	2.05	322	eP	11	16.00	0.4
			eS	11	23.00	
			S.D. = 0.3	on	10 of 10 obs.	
%						
MAY 28, 1991 17h 12m 36.87s						
63.501 N 151.350 W						
DEPTH = 14.7km						
CENTRAL ALASKA ( 1)						
<AEIC>. ML 2.7 (AEIC). 3.0 (PMR).						

TRF	0.48	96	eP	12	46.47	-0.2
			eS	12	53.55	
HUR	0.94	123	eP	12	54.09	-0.2
BWN	1.07	50	eP	12	57.80	1.2
			S	13	13.40	
MCK	1.10	77	eP	12	58.08	0.9
			eS	13	12.89	
RND	1.13	94	eP	12	57.81	0.2
			S	13	12.88	
CUT	1.21	155	iP	12	58.76	-0.1
			eS	13	14.97	
NEA	1.47	42	eP	13	02.91	0.1
SKT	1.53	183	iP	13	03.39	-0.3
			eS	13	22.85	
WRH	1.74	54	eP	13	05.71	-0.9
			S	13	30.73	
CCB	1.94	52	eP	13	08.39	-1.1
			S	13	34.29	
PWA	1.98	159	eP	13	10.32	0.2
			eS	13	36.41	
MDM	2.00	42	eP	13	09.41	-1.1
SUA	2.06	172	eP	13	11.74	0.2
GHO	2.07	146	eP	13	11.17	-0.3
FBA	2.10	46	eP	13	13.60	1.7
			S	13	42.00	
NCG	2.14	190	eP	13	12.13	-0.5
			S	13	40.50	
HDA	2.14	63	eP	13	13.03	0.5
PMR	2.17	151	eP	13	12.70	-0.3
PLRM	2.17	151	eP	13	12.32	-0.7
			S	13	41.78	
TTA	2.19	257	eP	13	14.50	1.2
SML	2.20	139	eP	13	12.63	-0.8
CRP	2.27	190	eP	13	14.39	-0.2
			S	13	42.82	
GLM	2.28	47	eP	13	14.78	0.1
BGL	2.30	193	eP	13	15.08	0.2
			S	13	43.76	
CKL	2.36	192	eP	13	16.41	0.7
PMS	2.41	159	eP	13	17.79	1.4
DDM	2.47	81	eP	13	17.94	0.8
KNK	2.49	146	eP	13	18.13	0.6
SCM	2.50	130	eP	13	19.00	1.3
TOA	2.76	118	eP	13	22.80	1.4
IMA	2.76	340	eP	13	21.10	-0.4
SDG	2.82	108	eP	13	23.15	0.9
SVW	3.12	222	eP	13	33.30	6.8
KLU	3.23	126	eP	13	28.52	0.5
GLI	3.30	141	eP	13	29.68	0.7
VZW	3.32	135	eP	13	29.86	0.5
VLZ	3.34	133	eP	13	29.43	0.0
37 obs. associated						
<hr/>						
%	MAY	28,	1991	17h	31m	03.58±1.58s
	16.115	N	±7.4km		61.061	W ±15.3km
DEPTH						= 28.6 ± 8.5 km
LEEWARD ISLANDS						( 92 )
ML 2.3 (FDF).						
SFG	0.19	317	eP	31	09.41	-0.1
DEG	0.20	0	iPc	31	09.67	0.0
			S	31	11.30	
MGG	0.31	231	iPd	31	11.18	0.1
			S	31	14.80	
SEG	0.51	304	eP	31	14.30	0.2
			S	31	20.50	
PAG	0.60	262	eP	31	15.47	-0.1
			S	31	22.90	
BBL	0.71	214	eP	31	17.42	0.0
			S	31	26.00	
BPA	1.20	321	eP	31	24.50	0.0
S.D. = 0.1				an 7 of 7 obs.		
<hr/>						
*	MAY	28,	1991	17h	46m	32.28±2.21s
	13.984	N	±5.9km		60.461	W ±42.7km
DEPTH						= 76.6 ± 16.2 km
3.7mb ( 1 obs.)						
WINDWARD ISLANDS						( 95 )
MD 3.6 (TRN).						
SLW	0.46	274	eP	46	45.41	-0.2
			eS	46	57.44	
MVM	0.71	323	iPd	46	47.15	-0.8
			S	47	00.80	
BIM	0.79	312	iPd	46	49.28	0.3
			S	47	03.00	
SVV	0.99	228	eP	46	49.50	-1.8



FDF	1.00 318 eS 47 07.00 0.1s 2.30nm 46 51.70 0.3	SKO	4.02 293 ePn 27 54.00 2.0 1.1s 372.00nm iPb 28 02.30 i 28 05.40	HFS	21.19 342 eP 31 34.90 -1.0 1.4s 19.80nm e 31 46.00 e 31 54.50
FCV	1.12 223 iP 46 53.00 0.1 eS 47 11.98	OHR	4.30 280 iPn 27 56.20 0.3	KAF	21.64 360 eP 31 39.90 -0.5 0.6s 3.10nm esP 31 44.10
BBL	1.82 327 eP 47 04.00 1.8	BCK	4.45 132 iPn 27 58.50 0.3	NB2	22.58 341 P 31 49.20 -0.7 0.9s 3.10nm 3.8mb
MGG	2.09 337 eP 47 06.00 0.1	LSK	4.46 267 ePn 27 57.90 -0.3	TOL	23.22 278 eP 31 59.50 3.2X
PAG	2.35 330 eP 47 10.00 0.5 S 47 37.00	DRA	4.46 340 ePd 27 58.00 -0.1	EKA	24.51 317 P 32 08.00 -0.6 0.7s 3.70nm 4.1mb
DEG	2.39 346 eP 47 09.00 -1.0	ARG	4.49 162 ePn 27 58.40 -0.2	MAIO	26.17 89 eP 32 26.00 1.4
TRN	3.44 196 eP 47 26.24 1.6	ELL	4.65 143 iPn 28 02.50 1.6	SOD	26.92 0 eP 32 50.00 19.0X
TCE	3.50 201 eP 47 25.41 -0.1	PHP	4.66 287 ePn 28 04.70 3.7X e(Sn) 29 13.20	GKN	48.91 86 P 35 36.42 0.0
YKA	61.53 335 eP 56 42.50 -0.8 0.6s 0.40nm 3.7mb	CFR	4.85 15 eP 28 04.00 0.5	DMN	49.47 86 P 35 41.00 0.2
S.D. = 1.1 on 13 of 13 obs.		BBTK	4.91 96 ePn 28 04.00 -0.6 iPg 28 22.00 iSg 29 30.00	KKN	49.51 86 P 35 40.98 -0.1 0.6s 5.00nm 4.8mb
MAY 28, 1991 18h 26m 50.58 ± 0.19s 40.507 N ± 2.5km 26.411 E ± 1.8km DEPTH = 26.9 ± 1.9 km 4.0mb ( 12 obs.)		MLR	4.99 356 ePd 28 06.50 0.7 e 01 00.00	GUN	49.90 85 P 35 44.38 0.1
TURKEY (366) MD 4.4 (ISK). ML 4.2 (ATH). Felt in the Canakkale area.		TIR	5.03 282 ePn 28 08.00 1.8 iSn 29 32.50	YKA	72.67 342 eP 38 21.10 3.8X 1.0s 0.90nm 3.7mb
		LACI	5.19 285 ePn 28 11.50 3.1X iSn 29 41.20	S.D. = 0.9 on 78 of 108 obs.	
		VRI	5.37 2 ePd 28 11.00 0.1	? MAY 28, 1991 18h 28m 29.08 ± 1.55s 63.633 N ± 12.3km 9.047 E ± 13.3km DEPTH = 10.0km (geophysicist)	
		TNR	5.38 344 eP 28 10.00 -1.1	SOUTHERN NORWAY (535) MD 2.5 (BER).	
		IYA	5.42 298 ePn 28 11.50 -0.3 eSn 29 47.00	RGS	0.88 134 iP 28 45.50 -0.4 eSg 28 57.80
		ULC	5.59 287 ePn 28 15.50 1.3 eSn 29 55.00	MOL	1.27 213 iP 28 52.39 -0.2 eSg 29 09.88
		KAS	5.64 79 eP 28 16.50 1.6	NSS	1.57 54 eP 28 56.98 0.0 eSg 29 19.18
		TTG	5.70 292 ePn 28 16.60 0.9 eSn 29 57.00	NRA0	3.14 157 Pn 29 20.00 0.6 Pg 29 25.60 Lg 30 09.90
		MDB	5.82 346 iPd 28 18.00 0.6	S.D. = 0.7 on 4 of 4 obs.	
		DEV	5.95 336 ePc 28 18.00 -1.2	% MAY 28, 1991 18h 37m 31.66 ± 0.83s 40.513 N ± 6.7km 26.377 E ± 6.9km DEPTH = 10.0km (geophysicist)	
		BEO	6.15 316 ePn 28 19.70 -2.3X e(Sn) 28 43.80	TURKEY (366) MD 3.0 (ISK).	
		BZS	6.20 327 ePc 28 19.50 -3.1X	ALN	0.46 327 iPd 37 41.40 0.4 eS 37 58.50
		PTT	6.43 360 eP 28 25.00 -0.9	EZN	0.69 183 iPg 37 45.00 -0.2 iSg 37 53.70
		TIM	6.46 326 eP 29 02.00 35.7X	MFT	0.74 68 iPg 37 46.30 0.1
		KVT	7.33 82 ePn 28 46.00 7.3X	EDC	1.15 98 ePn 37 54.00 0.9
		BMR	7.46 345 ePd 28 39.00 -1.4	BNT	1.19 97 ePn 37 53.80 0.0
		UZD	8.32 320 eP 28 49.70 -2.7X	DMK	1.67 38 ePn 38 00.50 -0.6
		PSZ	8.76 330 eP 28 55.40 -3.1X	CTT	1.68 67 iPn 38 00.80 -0.5
		ZAG	9.28 308 eP 29 50.70 45.1X	S.D. = 0.6 on 7 of 7 obs.	
		VBY	9.57 305 eP 29 13.00 3.3X	MAY 28, 1991 18h 45m 24.35 ± 0.80s 19.021 N ± 5.3km 61.269 W ± 5.1km DEPTH = 27.8 ± 5.5 km 4.8mb ( 7 obs.)	
		ZST	10.17 322 iP 29 14.30 -3.5X	LEEWARD ISLANDS ( 92) ML 4.6 (FDF). MD 4.9 (TRN).	
		CEY	10.20 305 e(P) 29 25.50 7.2X	CPB	1.47 201 iP 45 49.68 0.5
		ADI	10.24 134 eP 29 16.30 -2.6X	BPA	2.04 196 iPc 45 57.43 -0.1 S 46 23.20
		VKA	10.59 320 eP 29 23.00 -0.6	NEV	2.25 214 iPc 46 02.02 1.6
		VOY	10.66 305 eP 29 25.50 0.8	SEG	2.61 185 eP 46 06.11 0.5
		JVI	11.19 137 eP 29 28.80 -3.1X	DEG	2.70 176 eP 46 06.31 -0.6 S 46 34.40
		KOT	11.44 156 ePn 29 31.30 -3.9X	SFG	2.75 179 eP 46 07.20 -0.4
		KBA	11.50 309 iPc 29 38.10 2.0 1.3s 13.00nm 5.0mb	PAG	3.00 188 ePc 46 11.73 0.5 S 46 44.00
			i 29 46.50	MGG	3.09 181 iPc 46 12.71 0.4
			i 30 23.80	BBL	3.48 183 eP 46 17.98 -0.1 S 46 55.00
			e 31 53.00	FDF	4.27 178 eP 46 27.93 -1.2 0.2s 1.85nm
		RMN	12.02 144 eP 29 42.30 -0.8	LPR	4.42 262 P 46 30.38 -1.1 S 47 20.00
		KSP	12.51 329 e(P) 29 47.00 -2.6X	MVM	4.46 175 iPc 46 30.66 -1.2
		KHC	12.53 318 P 29 48.50 -1.4 1.0s 3.50nm 4.5mb	BIM	4.48 178 eP 46 31.21 -1.1
			e 29 55.00	CPD	4.52 258 P 46 33.00 0.3
			e 34 12.00	SJG	4.72 260 iP 46 35.20 -0.4 S 47 26.20
		PRU	12.63 323 eP 29 50.00 -1.1		
		Z 10s 0.60um			
		N 10s 0.50um			
		E 14s 0.40um			
			e 33 55.00		
			e 34 19.50		
		BRG	13.52 324 eP 30 17.60 14.7X		
		CLL	14.25 324 e(P) 30 23.00 10.5X e 30 41.00		
		0NI	15.18 294 P 30 36.70 11.8X		
		LPG	15.21 296 eP 30 26.70 1.2 0.8s 5.35nm 3.9mb		
		LPL	15.23 296 eP 30 27.80 2.2 0.8s 5.35nm 3.9mb		
		CDF	15.76 306 eP 30 38.30 6.1X 0.8s 5.35nm 3.8mb		
		OBN	16.10 22 eP 30 30.00 -6.4X 1.2s *****nm 7.5mb X		
			(S) 32 45.00		
		LOR	17.57 300 eP 30 50.20 -4.9X 1.2s 8.95nm 3.8mb		
		Z 21s 0.13um			
		NUR	20.06 357 eP 31 26.90 2.6X		
		UPP	20.14 347 eP 31 29.00 3.9X		



28d 18h

CLLP	5.12	260	P	46	40.80	-0.4
APR	5.21	265	P	46	42.10	-0.3
LRS	5.34	263	P	46	43.60	-0.7
			S	47	40.10	
SVV	5.67	179	iP	46	48.16	-0.8
			eS	47	47.80	
FCV	5.83	180	iP	46	49.90	-1.4
			eS	47	52.59	
TCE	8.29	183	eP	47	25.80	0.1
			eS	48	55.00	
TRN	8.33	181	eP	47	27.50	1.3
			eS	48	58.00	
TBH	8.49	179	eP	47	30.74	2.2
UPA	20.32	243	eP	50	02.80	1.7
SIV	34.79	180	P	52	15.00	0.1
LKO	54.59	92	P	54	51.58	-1.4
	0.7s		14.50nm		5.1mb	
TIC	55.99	95	P	55	03.08	-0.1
	0.8s		13.00nm		5.0mb	
LIC	56.11	95	Pd	55	04.10	0.1
	0.6s		19.00nm		5.3mb	
KIC	56.34	95	Pd	55	05.86	0.2
	0.6s		17.50nm		5.3mb	
EPF	56.62	51	eP	55	08.70	1.3
	0.6s		2.25nm		4.4mb	
YKA	56.69	334	eP	55	07.00	-0.5
	0.6s		0.70nm		3.9mb	
LSF	57.77	47	eP	55	31.40	16.0X
	0.8s		5.35nm			
TCF	58.24	47	eP	55	34.80	16.1X
	0.8s		4.05nm			
AVF	59.07	46	eP	55	40.80	16.4X
	0.8s		3.35nm			
SSF	59.20	46	eP	55	41.80	16.5X
	0.6s		2.70nm			
LOR	59.45	46	eP	55	42.60	15.5X
	0.8s		6.05nm			
LBF	59.51	46	eP	55	43.20	15.6X
	0.6s		1.80nm			
NB2	65.06	31	P	56	02.90	-1.4
	0.9s		2.20nm		4.3mb	
INK	65.92	337	eP	56	15.00	5.4X
GKN	122.78	36	PKP	04	20.70	0.7
KKN	123.30	36	PKP	04	21.80	0.7
DMN	123.35	36	PKP	04	22.20	0.9
PKI	123.55	36	PKP	04	22.20	0.4

S.D. = 1.0 on 36 of 43 obs.

MAY 28, 1991 18h 58m 46.23±1.20s  
 36.811 N ± 8.0km 22.368 E ± 4.9km  
 DEPTH = 26.8 ± 11.4 km  
 4.1mb ( 12 obs.)  
 SOUTHERN GREECE (368)  
 ML 3.9 (ATH).

VLI	0.47	101	iPbd	58	56.60	0.7
ATH	1.58	42	ePb	59	10.00	-2.7X
VLS	1.97	314	ePn	59	20.10	1.7
KZN	3.52	353	ePb	59	46.70	6.1X
LSK	3.61	338	iPnc	59	42.00	0.2
OHR	4.47	345	ePn	59	52.00	-1.9
VAY	4.51	2	ePn	59	52.30	-2.2
ARG	4.68	96	ePn	59	58.20	1.3
TIR	4.93	338	ePn	00	02.00	1.6
LCI	4.93	317	P	00	01.50	1.1
PHP	5.10	344	ePn	00	01.20	-1.5
GRI	5.12	295	P	00	04.05	0.9
SKO	5.20	352	ePn	00	02.80	-1.5
LACI	5.24	338	ePn	00	12.00	7.2X
GMB	5.35	287	P	00	06.92	0.4
TDS	5.53	303	P	00	09.40	0.4
ATN	5.65	286	P	00	10.30	-0.4
			eSn	01	15.50	
ORI	5.67	307	P	00	11.20	0.3
BRT	5.72	317	P	00	12.00	0.4
MEU	5.96	275	P	00	14.80	-0.3
			eSn	01	23.00	
PZI	5.98	274	P	00	13.75	-1.5
MNO	6.21	283	P	00	18.40	-0.4
SGO	6.67	306	P	00	25.50	0.6
GIB	6.74	283	P	00	26.50	0.4
FAI	6.97	276	P	00	29.00	-0.1
USI	7.52	287	P	00	34.90	-2.0
DUI	7.82	311	P	00	41.00	-0.1
SDI	8.24	309	P	00	47.30	0.3
VRI	9.62	19	ePd	01	10.50	4.5X
PTJ	10.28	334	eP	01	12.50	-2.5

KBA	12.25	330	i(P)	01	45.50	3.5X
	0.7s		2.50nm		4.5mb	
			i	01	52.70	
			i	01	59.00	
HOL	13.02	122	eP	01	50.00	-2.1
KHC	13.88	335	P	02	05.00	1.6
			e	02	10.50	
PRU	14.34	339	eP	02	14.00	4.7X
GRF	15.20	331	ePn	02	24.60	4.0X
BRG	15.30	339	e(P)	02	25.00	3.2X
CLL	15.96	338	iPd	02	32.60	2.2
	1.2s		23.00nm		4.2mb	
LBF	17.01	312	eP	02	49.80	6.0X
	0.6s		2.70nm		3.6mb	
LOR	17.23	313	eP	02	50.00	3.6X
	1.0s		4.00nm		3.5mb	
Z	20s		0.08um		4.3Mszx	
SSF	17.33	312	eP	02	49.30	1.6
	0.8s		5.35nm		3.7mb	
TOL	20.92	287	eP	03	32.00	2.9X
NUR	23.76	3	eP	03	54.70	-2.3X
	0.5s		2.80nm		4.0mb	
HFS	24.00	349	eP	03	57.00	-2.3X
	0.6s		17.40nm		4.8mb	
			e	04	00.50	
NB2	25.26	347	P	04	08.60	-2.9X
	0.6s		7.30nm		4.5mb	
EKA	25.39	325	P	04	12.00	-0.7
	0.8s		4.90nm		4.2mb	
KAF	25.45	4	eP	04	10.20	-2.9X
	0.4s		2.30nm		4.2mb	
			eSP	04	13.00	
GKN	52.49	81	P	08	00.34	1.0
DMN	53.04	81	P	08	04.36	0.8
KKN	53.10	81	P	08	04.82	0.9
PKI	53.30	81	P	08	06.34	0.8
GUN	53.52	80	P	08	05.14	-2.0
YKA	75.17	341	eP	10	18.70	-8.8X
	0.8s		0.70nm		3.7mb	
FFC	77.10	331	eP	10	38.50	0.0
	1.0s		11.00nm		4.8mb	

S.D. = 1.3 on 37 of 53 obs.

? MAY 28, 1991 19h 02m 08.40±1.58s  
 63.640 N ± 12.5km 9.051 E ± 13.5km  
 DEPTH = 10.0km (geophysicist)  
 SOUTHERN NORWAY (535)  
 MD 2.3 (BER).

RGS	0.88	134	iP	02	24.80	-0.5
			eSg	02	37.00	
MOL	1.27	213	eP	02	31.79	-0.2
			eSg	02	48.53	
NSS	1.56	54	eP	02	36.21	0.0
			eSg	02	57.58	
NRA0	3.14	157	Pn	02	59.50	0.7
			Lg	03	48.80	

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

? MAY 28, 1991 19h 18m 49.20±6.60s  
 9.078 S ± 60.7km 120.625 E ± 30.2km  
 DEPTH = 217.2 ± 27.6 km  
 4.5mb ( 4 obs.)

SUMBA ISLAND REGION (287)

KNA	10.35	131	eP	21	13.90	0.2
MTN	10.97	111	eP	21	21.50	-0.1
	0.3s		102.00nm		5.6mb X	
			eS	23	26.00	
MBL	12.04	184	eP	21	31.00	-4.1X
			eS	23	43.00	
NANU	14.27	199	eP	22	03.00	0.0
	0.4s		3.00nm		4.1mb	
			eS	24	33.00	
WB2	17.11	131	iPc	22	36.20	-0.8
	0.4s		8.30nm		4.5mb	
WARB	17.95	162	iPd	22	46.00	0.1
OIS	21.58	124	iPd	23	23.30	0.8
	0.5s		18.00nm		4.9mb	
STK	29.89	142	iPd	24	42.90	4.2X
	0.5s		5.60nm		4.5mb	
BRS	35.39	125	iPd	25	26.00	-0.2
YKA	113.60	25	ePKP	36	32.00	-30.7X
	0.6s		2.20nm			
CNCB	152.91	162	ePKP	38	04.00	-11.9X
LPB	153.13	161	PKP	38	02.00	-14.0X
ZOB0	153.37	161	PKP	38	05.20	-11.3X

S.D. = 0.7 on 7 of 13 obs.

? MAY 28, 1991 19h 26m 05.73±1.18s  
 7.090 N ± 17.7km 72.156 W ± 15.3km  
 DEPTH = 33.0km (normal)  
 4.2mb ( 1 obs.)

NORTHERN COLOMBIA (99)

BMG	0.91	269	eP	26	22.30	0.0
FUO	2.25	224	eP	26	45.50	3.8X
BOG	3.10	218	eP	27	02.00	8.2X
			eS	27	40.00	
UPA	7.54	285	eP	27	46.00	-10.2X
ZOBO	23.55	170	P	31	14.00	-0.8
LPB	23.81	170	P	31	22.00	4.8X
CNCB	24.10	170	P	31	21.00	0.8
SIV	25.42	154	P	31	29.60	-2.6X
NB2	80.63	29	P	38	16.50	0.0
	0.9s		2.50nm		4.2mb	
WB2	151.29	241	iPKPc	45	56.90	4.8X
	0.9s		1.80nm			
WRA	151.30	241	PKP	45	56.00	3.9X
	0.7s		1.40nm			

S.D. = 1.2 on 4 of 11 obs.

MAY 28, 1991 19h 43m 40.79±0.69s  
 14.894 N ± 3.5km 60.128 W ± 7.2km  
 DEPTH = 51.8 ± 6.7 km  
 4.6mb ( 6 obs.)

WINDWARD ISLANDS (95)

MD 4.7 (TRN). Felt (III) on Martinique.

CRM	0.77	260	iPd	43	55.28	-0.4
MVM	0.82	246	iPd	43	56.03	-0.2
BIM	0.99	248	iPd	43	58.52	-0.1
FDF	1.00	261	iPd	43	58.69	-0.1
			S	44	11.70	
PCM	1.05	266	eP	43	58.50	-0.9
SLW	1.17	222	eP	44	00.38	-0.7
			eS	44	18.38	
DSVT	1.24	286	eP	44	02.50	0.4
BBL	1.45	296	eP	44	05.17	0.2
			S	44	23.70	
MGG	1.53	312	iPd	44	06.31	0.1
			S	44	25.30	
DEG	1.67	328	ePd	44	08.14	0.0
SFG	1.70	323	ePd	44	08.77	0.3
PAG	1.87	307	iPd	44	11.46	0.4
			S	44	34.10	
SVV	1.89	214	eP	44	10.86	-0.3
			eS	44	53.52	
SEG	2.00	319	ePd	44	13.60	0.8
SVT	2.03	212	eP	44	02.50	-10.6X
FCV	2.04	212	eP	44	12.48	-0.8
			eS	44	56.04	
BPA	2.71	322	eP	44	26.90	4.1X
			eS	45	05.59	
BPA	2.71	322	eP	44	23.60	0.8
CPB	3.18	329	eP	44	32.49	3.0X
			eS	45	12.59	
NEV	3.24	314	eP	44	31.40	1.0
TPR	3.74	190	eP	44	37.13	-0.3
			eS	45	27.69	
BOT	3.75	189	eP	44	40.24	2.7X
PIG	3.77	191	eP			



ZOBO 31.95 195 P 50 05.20 0.4  
Z 24s 0.30um 3.9mszX  
S 55 40.00  
LR 00 32.00  
LPB 32.20 194 P 50 08.00 1.2  
CNCB 32.44 194 P 50 09.50 0.5  
CCH 32.61 191 eP 50 14.00 3.8X  
ARE 33.11 200 eP 50 14.00 -0.6  
SCH 40.17 354 eP 51 15.00 1.5  
ANMO 46.05 304 iP 52 01.80 0.3  
1.0s 4.50nm 4.4mb  
FRB 49.15 355 eP 52 26.00 1.0  
LRM 53.43 316 eP 52 59.40 1.4  
LKO 53.47 89 P 52 56.50 -2.0  
0.6s 8.50nm 5.0mb  
LIC 54.73 93 P 53 07.40 -0.3  
KIC 54.97 93 P 53 09.20 -0.3  
TNP 55.15 306 eP 53 11.80 1.1  
0.9s 6.05nm 4.6mb  
NEW 57.18 318 iP 53 25.10 0.2  
1.0s 13.75nm 5.0mb  
ORV 58.66 307 eP 53 36.30 1.0  
YKA 60.85 334 eP 53 48.60 -1.4  
0.5s 1.90nm 4.5mb  
CLL 67.98 40 e(P) 54 43.00 6.5X  
NB2 68.06 30 P 54 37.30 0.4  
0.8s 2.10nm 4.2mb  
INK 70.13 338 eP 54 47.00 -2.4  
NUR 74.60 31 eP 55 25.00 9.0X  
SOD 75.13 24 eP 55 16.00 -2.9X  
KEV 75.15 21 eP 55 20.00 1.0  
MLR 76.81 46 eP 55 26.50 -2.5  
S.D. = 1.0 on 51 of 59 obs.

% MAY 28, 1991 19h 46m 42.17 ± 0.78s  
40.504 N ± 6.4km 26.394 E ± 6.5km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)  
MD 2.9 (ISK).

ALN 0.47 326 iPd 46 51.80 0.0  
eS 46 58.60  
EZN 0.68 184 iPg 46 55.70 0.1  
iSg 47 04.70  
MFT 0.73 67 iPg 46 57.20 0.6  
eSg 47 08.20  
EDC 1.13 98 ePn 47 03.50 0.1  
BNT 1.17 97 ePn 47 03.80 -0.3  
DMK 1.67 38 ePn 47 11.50 -0.1  
CTT 1.67 67 iPn 47 11.20 -0.4  
S.D. = 0.4 on 7 of 7 obs.

? MAY 28, 1991 20h 04m 50.01 ± 3.11s  
24.649 N ± 81.3km 94.364 E ± 61.1km  
DEPTH = 142.3 ± 21.1 km  
4.7mb ( 5 obs.)

BURMA-INDIA BORDER REGION (294)

SHL 2.43 293 eP 05 30.50 0.0  
eS 10 00.50  
CHG 7.20 143 eP 06 34.00 0.0  
GUN 8.28 295 P 06 48.80 0.0  
0.2s 7.00nm 4.9mb  
PKI 8.56 292 P 06 52.48 0.0  
KKN 8.74 293 P 06 54.76 0.0  
0.2s 11.00nm 5.2mb  
DMN 8.83 291 P 06 55.82 -0.2  
GKN 9.34 293 P 07 02.92 0.2  
0.4s 19.00nm 5.1mb  
WRA 58.98 135 P 14 37.00 0.1  
0.3s 0.80nm 4.2mb  
WB2 58.99 135 iPc 14 36.90 -0.1  
0.5s 1.30nm 4.1mb  
S.D. = 0.1 on 9 of 9 obs.

MAY 28, 1991 20h 20m 03.55 ± 1.81s  
42.883 N ± 18.9km 0.165 E ± 6.8km  
DEPTH = 20.3 ± 5.3 km

PYRENEES (378)  
ML 3.1 (LDG). Felt (1) in the  
Bigorre area, France.

EPF 0.20 41 Pg 20 08.40 -0.4  
Sg 20 12.60  
JAU 0.42 292 Pg 20 11.89 -0.5  
Sg 20 17.34  
OGE 0.55 302 Pg 20 13.91 -0.5

ESCF 0.58 290 Pg 20 14.66 -0.2  
Sg 20 21.62  
LHE 0.58 273 Pg 20 15.14 0.2  
Sg 20 22.36  
ATE 0.67 288 Pg 20 16.77 0.3  
Sg 20 24.91  
ISSF 0.72 282 Pg 20 17.65 0.3  
Sg 20 26.63  
MADF 0.77 290 Pg 20 18.22 0.1  
Sg 20 28.64  
LPO 1.95 22 Pn 20 37.00 1.1  
Pg 20 39.50  
Sg 21 02.40  
LFF 2.10 11 Pg 20 42.20 4.1X  
Sg 21 07.60  
CAF 2.46 33 Pn 20 43.00 -0.3  
Pg 20 49.00  
Sg 21 17.60  
RJF 2.61 21 Pn 20 45.90 0.5  
Pg 20 52.00  
Sg 21 22.00  
LSF 3.50 16 Pg 21 07.40 -9.3X  
Sg 21 50.40  
TCF 3.70 23 Pn 21 00.40 -0.6  
Pg 21 12.40  
Sg 21 58.00  
MFF 3.73 357 Pn 21 01.20 0.0  
Pg 21 12.00  
Sg 21 57.20  
MAF 3.75 26 Pn 21 01.60 0.0  
Sg 21 58.00  
BGF 4.14 27 Pn 21 07.00 -0.1  
Pg 21 20.60  
Sg 22 11.20  
SMF 4.58 34 Pn 21 13.60 0.2  
Sg 22 25.00  
S.D. = 0.5 on 16 of 18 obs.

& MAY 28, 1991 20h 37m 14.50s  
36.568 N 121.207 W  
DEPTH = 1.0km  
CENTRAL CALIFORNIA ( 39)  
<BRK>. ML 2.5 (BRK).

LLA 0.22 77 iPc 37 18.79 -0.1  
iS 37 21.95  
PRS 0.27 209 iPd 37 20.07 0.2  
SAO 0.27 316 iPc 37 19.80 -0.2  
iS 37 24.50  
PRI 0.61 134 iPc 37 26.61 -0.1  
iS 37 41.39  
GCC 0.78 306 iPd 37 29.27 -0.9  
iS 37 41.82  
ARN 0.82 342 eP 37 30.60 -0.3  
MHC 0.85 336 ePd 37 31.55 0.1  
iS 37 44.15  
PHAM 0.98 138 eP 37 32.00 -2.0  
PKEM 1.02 119 eP 37 34.50 -0.1  
FRI 1.28 70 iPc 37 37.03 -1.9  
iS 37 53.73  
PCC 1.32 315 iPc 37 39.04 -0.7  
CMB 1.60 24 eP 37 42.90 -1.2  
BCH 1.65 146 eP 37 42.30 -2.6  
BONR 2.70 58 eP 38 01.50 1.4  
14 obs. associated

% MAY 28, 1991 22h 08m 42.48 ± 0.94s  
40.510 N ± 7.7km 26.397 E ± 8.8km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)  
MD 2.8 (ISK).

ALN 0.47 325 iPd 08 52.30 0.3  
eS 08 59.00  
EZN 0.69 185 ePg 08 56.00 0.0  
eSg 09 05.90  
MFT 0.73 67 iPg 08 57.70 0.9  
eSg 09 08.70  
DMK 1.66 38 ePn 09 11.00 -0.8  
CTT 1.67 67 ePn 09 11.60 -0.3  
S.D. = 0.9 on 5 of 5 obs.

? MAY 28, 1991 23h 21m 53.09 ± 7.09s  
17.843 N ± 48.9km 67.268 W ± 46.7km  
DEPTH = 33.0km (normal)  
MONA PASSAGE ( 89)

MGP 0.24 46 P 22 00.00 -0.1  
LRS 0.60 42 P 22 05.30 0.1  
CLLP 0.70 70 P 22 06.60 0.1  
APR 0.79 40 P 22 16.00 8.2X  
SJC 1.10 76 iP 22 12.70 0.5  
CPD 1.30 81 iP 22 12.70 -2.4X  
LPR 1.41 71 P 22 16.00 -0.7  
S.D. = 0.6 on 5 of 7 obs.

& MAY 28, 1991 23h 28m 22.47s  
66.135 N 149.099 W  
DEPTH = 5.6km  
ALASKA (676)  
<AEIC>. ML 2.6 (AEIC).

MDM 1.24 163 eP 28 45.55 -0.3  
FBA 1.35 156 eP 28 47.84 0.0  
eS 29 06.84  
GLM 1.35 148 iP 28 47.43 -0.5  
eS 29 06.70  
RDS 1.37 163 eP 28 47.53 -0.7  
S 29 07.39  
NEA 1.56 180 eP 28 50.02 -0.9  
CC8 1.59 159 iP 28 50.54 -0.7  
eS 29 13.16  
FYU 1.62 73 eP 28 51.19 -0.4  
S 29 13.48  
WRH 1.72 165 eP 28 52.30 -0.9  
IMA 1.87 270 eP 28 54.72 -0.7  
eS 29 20.86  
HDA 1.96 152 eP 28 55.69 -0.9  
BWN 1.98 185 eP 28 55.81 -1.1  
S 29 22.64  
MCK 2.41 178 eP 29 04.19 1.0  
DDM 2.73 148 eP 29 08.80 1.1  
13 obs. associated

MAY 28, 1991 23h 57m 20.99 ± 0.47s  
38.275 N ± 3.6km 30.626 E ± 5.8km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)  
MD 3.8 (ISK).

BCK 0.81 182 iPg 57 36.00 -0.8  
KHL 0.87 274 iPg 57 36.80 -1.0  
eSg 57 49.30  
ALT 0.88 333 iPg 57 36.40 -1.5  
iSg 57 49.40  
ELL 1.63 201 iPn 57 50.00 0.1  
YER 2.18 239 ePn 57 58.60 0.7  
BBTK 2.28 46 eP 57 59.00 -0.4  
EYL 2.32 351 iPn 57 59.80 -0.1  
YLV 2.49 337 ePn 58 01.80 -0.4  
HRT 2.65 344 ePn 58 04.00 -0.5  
GBZT 2.67 340 ePn 58 06.00 1.2  
BNT 2.95 316 ePn 58 08.60 -0.2  
EDC 2.98 315 ePn 58 09.50 0.4  
ISK 3.04 337 ePn 58 10.00 0.1  
CTT 3.33 330 ePn 58 14.00 -0.2  
MFT 3.60 315 ePn 58 18.00 -0.1  
EZN 3.69 296 ePn 58 19.80 0.5  
KAS 3.93 37 ePn 58 31.00 8.3X  
iSg 59 33.50  
CSS 3.96 146 eP 58 23.50 0.4  
DMK 4.17 329 ePn 58 26.50 0.5  
MLR 8.01 336 eP 59 21.50 1.2  
S.D. = 0.7 on 19 of 20 obs.

? MAY 29, 1991 00h 04m 22.33 ± 1.88s  
42.848 N ± 9.2km 12.097 E ± 15.0km  
DEPTH = 5.0km (geophysicist)  
CENTRAL ITALY (381)

ASS 0.47 62 P 04 31.40 -0.4  
eSg 04 42.10  
MNS 0.63 137 P 04 35.00 0.0  
eSg 04 43.50  
CRE 0.79 352 P 04 38.00 -0.2  
ARV 0.90 43 P 04 40.50 0.5  
eSg 04 55.80  
S.D. = 0.6 on 4 of 4 obs.

MAY 29, 1991 00h 55m 23.62 ± 0.51s  
41.607 N ± 5.0km 141.995 E ± 5.6km  
DEPTH = 73.2 ± 4.9 km  
4.5mb ( 29 obs.)  
HOKKAIDO, JAPAN REGION (224)



29d 00h

MRRJ	1.07	320	P	55	43.00	-0.4
			eS	55	57.80	
HO0J	1.24	51	eP	55	45.30	-0.2
			eS	56	02.10	
SAP	1.53	341	eP	55	49.00	-0.5
			eS	56	10.00	
AOMJ	1.61	230	P	55	50.70	0.1
KUSJ	2.50	53	P	56	01.20	-1.7
			eS	56	29.40	
OFUJ	2.54	186	P	56	02.20	-1.1
ASAJ	2.55	11	eP	56	04.00	0.4
			eS	56	35.20	
YAMJ	3.75	204	P	56	20.60	0.4
NI1J	4.94	209	P	56	37.90	1.0
KAKJ	5.58	195	P	56	43.10	-2.8X
MAT	5.85	211	(P)	56	52.00	2.3
	0.5s	19.72nm				4.7mb
			eS	58	25.00	
MTMJ	5.98	214	P	56	52.50	0.9
CHJJ	6.02	204	P	56	49.90	-2.2
TSRJ	7.67	220	P	57	19.80	4.9X
MDJ	9.56	292	eP	57	42.50	1.8
CN2	12.37	286	eP	58	20.00	1.6
	Z	16s	2.50um			
	N	14s	0.30um			
	E	14s	0.30um			
			pP	58	32.00	
			eS	59	37.00	
BJ1	19.58	274	eP	59	46.50	-1.8
	1.0s	16.00nm				4.3mb
SSE	19.72	245	Pd	59	49.00	-0.8
	0.8s	10.00nm				4.2mb
	Z	20s	0.50um			4.4MsZ
	N	14s	0.40um			
TIA	20.06	263	eP	59	50.10	-3.2X
	Z	28s	0.80um			3.9MsZ
	N	10s	0.20um			
			eS	03	24.00	
NJ2	20.78	250	Pc	00	03.50	2.8
	Z	18s	0.40um			3.8MsZ
YAK	21.73	344	eP	00	01.60	-8.4X
			e	00	50.00	
			eS	04	01.00	
			e	04	49.00	
			i	05	34.00	
TIY	23.03	270	eP	00	21.40	-1.7
	Z	20s	0.50um			4.0MsZ
BTO	24.05	278	eP	00	32.00	-0.9
	N	12s	0.20um			
	E	14s	0.30um			
			eS	04	44.50	
XAN	27.07	265	P	00	59.20	-1.9
LZH	30.05	272	e(P)	01	26.50	-1.4
	Z	25s	0.36um			3.9MsZ
GTA	31.92	280	eP	01	43.20	-1.1
	1.0s	10.00nm				4.6mb
	Z	24s	0.60um			4.2MsZ
GYA	32.69	254	P	01	50.00	-1.1
WMO	39.36	292	P	02	48.40	1.0
	1.0s	10.00nm				4.7mb
	Z	16s	0.60um			4.5MsZ
			pP	03	06.00	71kmX
			S	03	11.00	
			S	08	48.00	
			sS	09	12.00	
SVW	41.66	40	eP	03	07.70	1.7
BRW	42.06	25	eP	03	10.60	1.6
IMA	42.57	33	eP	03	13.80	0.3
	0.6s	2.80nm				4.3mb
CHG	43.02	251	eP	03	19.50	2.0
PMR	44.75	39	eP	03	31.80	0.8
FBA	45.04	35	ePc	03	34.40	1.1
	1.1s	32.10nm				5.1mb
GUN	47.31	272	P	03	52.40	0.3
KKN	47.82	272	P	03	55.82	-0.1
	0.9s	29.00nm				5.2mb
PKI	47.84	272	P	03	56.76	0.5
	0.7s	13.00nm				5.0mb
DMN	48.05	272	P	03	57.50	-0.3

QUE	60.10	285	eP	05	23.90	-1.8
SOD	60.94	336	eP	05	30.00	-0.7
WB2	61.65	188	eP	05	37.20	1.3
	0.5s		1.50nm			4.4mb
			i	06	07.70	
WRA	61.65	188	P	05	33.00	-2.9
	0.5s		3.10nm			4.7mb
GBA	62.11	263	Pc	05	38.30	-0.9
	0.8s		4.70nm			4.7mb
KAF	64.47	332	iP	05	52.90	-1.2
	0.4s		2.20nm			4.4mb
			esP	05	54.50	
OBN	64.73	322	eP	06	10.00	14.1X
ASPA	65.37	188	eP	05	59.40	-0.9
	0.8s		4.70nm			4.5mb
NUR	66.15	331	iP	06	03.90	-0.9
			e	06	18.00	
FFC	69.64	34	eP	06	25.00	-0.7
	0.8s		5.00nm			4.5mb
HFS	70.12	335	eP	06	28.70	-0.9
	0.4s		2.90nm			4.6mb
Z	18s		0.11um			4.2MsZ
			e	06	33.20	
			e	06	42.90	
			LR	32	50.00	
NB2	70.15	337	P	06	29.10	-0.7
	0.7s		2.90nm			4.3mb
LRM	70.60	46	P	06	33.20	0.1
FRB	72.23	14	eP	06	42.00	-0.1
KRA	75.57	326	eP	07	01.30	-0.4
KSP	76.46	328	eP	07	07.20	0.5
PRU	77.83	328	eP	07	15.50	1.2
			e	28	28.00	
			Sn	28	40.40	
			Sg	28	48.00	
			i	28	55.20	
KHC	78.89	328	eP	07	21.50	1.3
KBA	80.63	327	iPc	07	28.90	-0.8
	0.9s		3.80nm			4.4mb
			i	07	32.40	
LOR	84.03	333	eP	07	45.70	-0.4
	0.6s		2.70nm			4.5mb
Z	20s		0.22um			4.5MsZ
SSF	84.33	333	eP	07	48.50	0.0
	0.8s		2.70nm			4.3mb
LPL	84.50	330	eP	07	50.60	0.9
	0.6s		1.80nm			4.3mb
LPG	84.51	330	eP	07	51.20	1.4
	0.8s		3.35nm			4.4mb
SMF	84.57	333	eP	07	50.30	0.5
	0.6s		2.70nm			4.5mb
AVF	84.61	333	eP	07	50.60	0.6
	0.6s		2.25nm			4.4mb
MAF	85.38	333	eP	07	54.90	1.1
	1.0s		6.00nm			4.6mb
CAF	86.68	333	eP	08	01.40	1.1
	0.8s		4.05nm			4.6mb
ZOBO	143.82	55	ePKP	14	54.00	1.0
LPB	144.04	55	PKP	14	51.50	-1.6
			e	15	02.00	
CNCB	144.33	55	PKP	14	53.00	-0.8
SIV	147.64	45	PKP	15	01.40	2.8X
S.D. = 1.2 on 66 af 74 obs.						
MAY 29, 1991 02h 39m 10.39±0.74s						
33.301 S ± 7.0km 68.726 W ± 9.0km						
DEPTH = 10.0km (geophysicist)						
MENDOZA PROVINCE, ARGENTINA (139)						
RFA	1.48	172	iPd	39	37.30	0.1
CFA	1.74	14	ePd	39	41.10	0.3
			eS	40	04.00	
RTCB	1.81	358	ePd	39	42.10	0.2
			S	4		

RDW	0.13	68	iPc	48	12.18	0.7
			eS	48	28.85	
NCT	0.14	26	iPc	48	12.02	0.7
			eS	48	29.05	
RED	0.14	96	iPc	48	11.94	0.6
			S	48	29.75	
RS2	0.15	79	iPc	48	12.26	0.8
			eS	48	30.18	
RSO	0.15	79	iPc	48	12.24	0.7
RDN	0.17	61	iPc	48	11.99	0.6
			eS	48	29.45	
DFR	0.24	49	iPc	48	12.13	0.6
			eS	48	29.75	
RDT	0.35	66	iPc	48	12.44	0.7
			S	48	30.49	
CKL	0.84	24	iPc	48	15.05	-0.9
			eS	48	34.86	
PDB	0.86	222	ePd	48	14.60	-1.3
BGL	0.90	21	iPc	48	15.63	-0.7
CRP	0.95	27	ePc	48	15.80	-1.0
			S	48	36.79	
NKA	0.95	70	ePc	48	17.46	0.9
HOM	1.05	137	ePc	48	17.37	0.0
			eS	48	37.96	
AUI	1.12	190	eP	48	17.22	-0.7
			eS	48	37.45	
CNPM	1.29	134	ePc	48	19.24	-0.3
			eS	48	41.37	
SLKM	1.41	86	eP	48	19.15	-1.5
			eS	48	42.42	
SUA	1.53	47	ePc	48	20.80	-1.1
			eS	48	45.30	
CDD	1.54	191	ePd	48	20.83	-1.0
			eS	48	44.74	
SKT	1.72	25	iPc	48	22.73	-1.0
			S	48	48.01	
SEW	1.83	99	ePc	48	24.20	-0.6
SYI	1.86	169	ePd	48	24.27	-0.9
CUT	2.39	33	eP	48	29.70	-1.6
GHO	2.42	54	eP	48	29.55	-2.1
KNK	2.45	64	eP	48	30.15	-1.9
LTJ	2.63	96	iPc	48	33.04	-1.1
KNIM	2.64	90	ePc	48	32.52	-1.8
MTU	2.74	97	eP	48	34.69	-0.8
VZW	3.26	76	eP	48	40.33	-1.7
TRF	3.30	22	eP	48	40.63	-2.0
VLZ	3.37	75	ePc	48	42.00	-1.4
KLU	3.64	70	ePc	48	45.35	-1.6
32 obs. associated						
<hr/>						
?	MAY	29, 1991	02h 52m	19.34±5.61s		
		40.191 N ±11.0km		19.604 E ±49.9km		
		DEPTH = 10.0km	(geophysicist)			
	ALBANIA				(391)	
IGT	0.86	139	ePg	52	35.30	-0.7
			eSg	52	50.40	
QHR	1.29	44	ePn	52	41.50	-1.8
FNA	1.48	66	ePb	52	45.50	-0.5
			eSb	53	05.00	
LIT	2.21	91	iPnd	52	57.90	1.2
SKO	2.26	37	ePn	52	58.50	1.2
GRG	2.26	69	ePn	52	57.30	-0.1
			eSn	53	27.20	
KNT	2.69	68	ePn	53	04.10	0.7
	S.D. = 1.4		on	7	of	7 obs.
<hr/>						
	MAY	29, 1991	02h 55m	57.74±0.68s		
		37.557 N ± 6.6km		29.979 E ± 6.5km		
		DEPTH = 10.0km	(geophysicist)			
	TURKEY				(366)	
	MD 3.4 (ISK).					
BCK	0.49	101	iPg	56	08.00	0.2



ML 2.4 (KBA).																							
MME	0.61	221	P	44 10.00	0.5	BRS	20.73	177	iPKP	06 34.00		TIY	34.57	340	Pc	16 54.00	-0.4						
BDI	0.76	219	P	44 11.00	-0.4				ipP	06 17.00	-3.1X		0.8s		40.00nm			5.4mb					
			eSg	44 24.00		MTN	20.97	251	eP	06 26.00	33kmX	Z	22s		0.52um			4.2msz					
PGD	0.85	157	P	44 13.90	1.1	OLP	21.04	198	iPd	06 23.00	0.4	BJI	35.63	346	eP	17 04.00	0.8						
			eSg	44 26.60		DZM	21.12	138	iPc	06 23.90	0.7		1.0s		74.00nm			5.6mb					
SFI	0.85	150	P	44 11.90	-0.7	WB2	21.26	230	iPc	06 25.00	-0.6				eS	22 33.00							
			eSg	44 26.10			0.8s		58.20nm		5.0mb	MRWA	36.11	196	eP	17 08.00	0.6						
PII	1.07	210	P	44 15.40	-0.4				i	06 28.10			0.4s		4.00nm			4.7mb					
			eSn	44 31.60					e	06 37.20		SNY	36.22	356	Pd	17 07.20	-0.9						
CRE	1.14	154	P	44 17.10	0.2				e	10 19.00			1.0s		30.00nm			5.2mb					
			eSn	44 34.60					e	11 02.70		FORR	36.23	178	eP	17 07.50	-0.9						
BOB	1.29	276	P	44 18.40	-0.7	ASPA	23.94	223	iPd	06 53.00	1.0	LZH	36.97	328	eP	17 14.20	-0.6						
			eSn	44 36.60			0.7s		45.80nm		5.2mb		1.0s		90.00nm			5.7mb					
CTI	1.42	11	P	44 21.00	0.0				iS	11 12.70		Z	25s		0.68um			4.3mszX					
MDI	1.57	316	P	44 24.00	1.1	CMS	25.32	191	eP	07 05.00	-0.2				pP	17 22.00		26kmX					
FVI	2.22	28	P	44 31.50	-0.7	STK	26.80	199	eP	07 25.00	6.1X				sP	17 26.50							
			eSn	44 58.00			0.6s		4.50nm		4.3mb	BAL	37.24	194	eP	17 18.10	1.2						
KBA	2.83	30	iPg	44 41.30	0.1	WARB	30.65	228	eP	07 53.00	-0.7	HHC	37.69	341	eP	17 19.30	-1.4						
			iSg	45 17.80		MBL	33.85	241	eP	08 31.00	9.3X		1.2s		100.00nm			5.6mb					
BRT	5.78	129	P	45 16.50	-6.3X	GUN	71.92	302	P	13 01.76	-1.2	HHC	37.69	341	eP	17 22.00	1.3						
			eSg	45 24.50			0.7s		17.00nm		5.2mb	BT0	37.99	339	eP	17 25.00	1.8						
S.D. = 0.8 on 11 of 12 obs.						PKI	72.21	302	P	13 03.18	-1.5				eS	23 11.00							
* MAY 29, 1991 03h 55m 04.69±1.06s						DMN	72.48	302	P	13 04.98	-1.2	CN2	38.09	358	eP	17 24.60	0.7						
25.007 N ± 8.7km 122.516 E ± 10.1km							0.8s		16.00nm		5.2mb	MUN	38.68	194	eP	17 28.00	-0.9						
DEPTH = 10.0km (geophysicist)						GKN	72.99	302	P	13 07.74	-1.4	MDJ	38.97	3	eP	17 30.80	-0.4						
4.0mb ( 2 obs.)						SVW	78.97	23	eP	13 44.10	2.0		0.8s		50.00nm			5.5mb					
TAIWAN REGION (243)						TTA	79.91	22	eP	13 48.40	1.2	NWAO	39.35	193	eP	17 35.00	0.5						
TWC	0.72	237	iPc	55 17.20	-1.7	PMR	81.85	25	eP	13 58.90	1.6	STK	39.82	160	eP	17 41.20	2.8X						
			eS	55 24.40		IMA	82.58	20	eP	14 02.80	1.6		0.6s		5.80nm			4.7mb					
TWZ	0.85	276	iPd	55 21.30	0.1	FBA	84.03	22	eP	14 09.00	0.6				e	17 46.30							
			eS	55 31.20			0.8s		7.40nm		5.0mb				e	17 57.70							
ANP	0.92	281	eP	55 23.50	1.2	INK	90.59	21	eP	14 39.00	-1.1				eScP	22 56.10							
TWD	1.25	222	iPd	55 27.30	-0.5	YKA	97.62	28	eP	15 28.20	15.8X	RKG	40.50	193	eP	17 50.00	6.1X						
TWG	2.55	212	eP	55 48.20	1.5		0.8s		0.90nm			LSA	41.30	310	eP	17 52.20	1.0						
SSE	6.18	349	eP	56 37.50	-0.6	S.D. = 1.3 on 21 of 25 obs.						GTA	41.57	328	Pc	17 52.60	-0.3						
N 10s			0.30um			MAY 29, 1991 07h 10m 09.87±1.40s							1.0s		20.00nm			4.9mb					
E 10s			0.20um			5.570 N ± 4.9km 126.794 E ± 9.0km						Z	24s		0.70um			4.5mszX					
			i	56 43.60		DEPTH = 66.2 ± 12.6 km									pP	17 56.80		14kmX					
			Lg	58 26.50		5.2mb ( 28 obs.)									sP	18 01.20							
WRA	46.14	164	P	03 31.00	-0.2	MINDANAO, PHILIPPINE ISLANDS (259)									ScP	23 40.00							
	0.7s		1.30nm		4.0mb	DAV	1.93	321	ePc	10 43.90	2.8	GUN	44.72	305	Pd	18 18.88	-0.1						
WB2	46.14	164	iPd	03 31.20	0.0	TSM	8.79	262	ePc	12 22.80	6.0X		1.1s		218.00nm			5.9mb					
	0.8s		1.40nm		4.0mb	OCP	10.62	328	eP	12 40.00	-1.7	PKI	44.98	304	Pd	18 20.36	-0.6						
			iPp	03 37.50	21kmX	BAG	12.38	331	eP	13 10.80	5.4X		1.2s		113.00nm			5.6mb					
			e	07 00.10		MTN	18.80	167	eP	14 25.00	-1.9	BFD	45.00	162	eP	18 21.00	0.5						
S.D. = 1.2 on 8 of 8 obs.							0.3s		50.00nm		5.2mb	KKN	45.17	304	Pd	18 21.90	-0.4						
* MAY 29, 1991 04h 52m 02.09±0.62s						QIZ	21.26	310	eP	14 53.00	0.3				140.00nm			5.7mb					
37.578 N ± 9.6km 71.433 E ± 9.5km						KNA	21.27	175	eP	14 52.00	-0.8	DMN	45.25	304	Pd	18 22.66	-0.3						
DEPTH = 33.0km (normal)						GZH	21.72	325	P	14 57.00	-0.2		1.1s		194.00nm			5.9mb					
4.2mb ( 3 obs.)						KGM	23.68	262	eP	15 18.50	2.0	GKN	45.78	304	Pd	18 26.54	-0.5						
AFGHANISTAN-USSR BORDER REGION (717)						IPM	25.69	269	ePd	15 40.00	4.3X	TOO	46.32	159	eP	18 31.70	0.7						
QUE	8.26	208	eP	54 02.40	-0.3		0.9s		33.40nm		4.8mb	DZM	47.56	127	iPc	18 51.10	10.0X						
			eS	55 23.50		SSE	25.93	349	eP	15 37.00	-0.7	HYB	48.58	288	eP	18 48.00	-1.0						
NDI	10.11	150	eP	54 28.00	0.0	SNG	26.06	275	eP	15 39.00	-0.1	GBA	49.24	283	Pc	18 52.40	-1.6						
GKN	14.63	127	P	55 29.06	0.4	WB2	26.42	164	iPc	15 41.20	-1.1		0.9s		6.90nm			4.7mb					
KKN	15.19	126	P	55 36.32	0.3		0.6s		20.60nm		4.9mb	WMO	51.27	324	iPd	19 09.00	-0.3						
DMN	15.20	127	P	55 36.48	0.2				i	15 44.90			1.5s		100.00nm			5.6mb					
PKI	15.42	126	P	55 38.36	-0.8				eS	18 52.40		Z	24s		0.50um			4.5mszX					
GUN	15.50	124	P	55 40.48	0.3	NJ2	27.37	345	Pc	15 53.00	2.1				sP	19 27.00							
HFS	42.44	321	eP	59 56.00	1.0	WHN	27.46	336	eP	15 50.00	-1.7				PcP	20 24.90							
	0.5s		6.10nm		4.6mb	NST	28.02	293	eP	15 58.00	1.1	NDI	52.18	302	iPd	19 14.00	-2.3						
	Z 16s		0.03um		3.2mszX	GYA	28.30	319	P	16 03.00	3.5X	POO	53.16	289	eP	19 39.00	15.3X						
			LR	17 49.00		QIS	28.85	154	e(P)	16 01.50	-2.9X	GAR	60.74	312	eP	20 16.00	-1.3						
NB2	43.74	322	P	00 06.00	0.4				e	16 05.00		QUE	61.24	301	eP	20 20.40	-0.5						
	0.5s		2.10nm		4.2mb	KHT	29.20	290	eP	16 19.30	11.8X	MAIO	68.46	307	iPd	21 07.00	-0.4						
YKA	80.16	3	eP	04 08.40	-1.5	ASPA	29.88	167	eP	16 13.90	0.4	SVW	79.15	29	eP	22 13.00	4.2X						
	0.5s		0.70nm		3.9mb		1.0s		12.40nm		4.6mb	IMA	80.69	24	eP	22 16.80	-0.3						
S.D. = 0.8 on 10 of 10 obs.						KMI	30.16	313	Pc	16 16.00	-0.3		0.6s		3.90nm			4.5mb					
* MAY 29, 1991 05h 01m 36.70±0.51s						Z	1.4s		110.00nm		5.4mb	PMR	82.31	29	eP	22 25.50	0.1						
6.589 S ± 8.3km 151.461 E ± 11.6km							26s		0.70um		4.2mszX	FBA	83.04	25	eP	22 30.10	1.0						
DEPTH = 10.0km (geophysicist)									pP	16 30.00		56kmX	TOA	83.72	28	eP	22 30.30	-2.5X					
5.1mb ( 7 obs.)						CHG	30.17	298	eP	16 15.80	-0.4		OBN	85.59	325	eP	22 42.00	-0.1					
NEW BRITAIN REGION (192)							1.0s		12.50nm		4.6mb			iPcP	22 52.00								
RAB	2.48	17	iPc	02 17.00	-0.8	WARB	31.56	180	eP	16 29.00	0.7				e								



29d 07h

KAF 90.01 332 iP 23 04.10 0.9  
0.7s 10.70nm 5.2mb  
esP 23 04.90  
NUR 91.13 331 eP 23 09.90 1.5  
VRI 93.02 316 ePd 23 19.50 2.1  
MLR 93.63 316 eP 23 22.00 1.6  
HFS 96.43 332 eP 23 31.80 -1.0  
0.7s 5.00nm 5.2mb  
Z 18s 0.06um 4.1msz  
e 23 39.20  
e 23 50.20  
LR 05 06.00  
NB2 97.18 334 P 23 33.40 -2.8X  
0.9s 3.10nm 4.8mb  
YKA 97.81 24 eP 23 50.50 11.6X  
0.8s 0.90nm  
PRU 99.77 323 eP 23 50.00 1.9  
1.5s 11.20nm 5.2mb  
CLL 100.19 324 e(Pd) 23 51.00 1.1  
MOX 101.26 324 ePd 23 55.00 0.3  
ALO 115.74 47 e(PKP) 28 50.00 2.8X  
KIC 130.19 283 PKP 29 18.20 3.0X  
UPA 150.04 61 ePKP 30 02.50 12.2X  
TCA 152.23 159 e(PKP) 29 58.40 5.2X  
S.D. = 1.2 on 66 of 87 obs.

MAY 29, 1991 09h 18m 19.42 ± 0.73s  
49.152 N ± 5.4km 6.923 E ± 9.4km  
DEPTH = 9.5 ± 7.0 km

GERMANY (543)  
MD 2.8 (STR).

GWF 0.49 111 Pg 18 29.27 -0.1  
CDF 0.78 162 Pg 18 33.86 -0.8  
WLS 0.79 159 Pg 18 34.06 -0.9  
ECH 0.95 170 Pg 18 37.08 -0.5  
VITF 1.12 214 Pg 18 39.51 -1.0  
Sg 18 54.77  
MOF 1.31 174 Pg 18 43.81 0.1  
Sg 19 01.50  
TNS 1.46 42 ePnc 18 45.20 -0.7  
FEL 1.47 150 Pg 18 47.22 1.1  
Sg 19 06.95  
MEM 1.57 338 iP 18 46.59 -0.9  
ENN 1.74 339 iPnc 18 51.60 1.7  
0.5s 38.00nm  
eSn 19 09.00  
DOU 1.79 303 P 18 49.60 -0.9  
i 18 52.60  
LOMF 1.80 182 Pg 18 52.83 1.9  
S.D. = 1.3 on 12 of 12 obs.

MAY 29, 1991 09h 55m 54.30 ± 0.64s  
28.729 N ± 10.7km 98.466 E ± 6.3km  
DEPTH = 33.0km (normal)  
3.9mb (2 obs.)

BURMA-CHINA BORDER REGION (297)

KMI 5.24 132 Pgc 57 12.50 -0.1  
Sg 58 15.00  
LZH 8.63 30 eP 58 00.00 0.0  
CHG 9.88 177 eP 58 42.70 25.6X  
GUN 11.12 269 P 58 37.16 2.7X  
PKI 11.58 267 P 58 40.50 -0.2  
0.6s 17.00nm 5.4mb X  
KKN 11.66 269 P 58 42.52 0.8  
DMN 11.84 268 P 58 43.76 -0.4  
GKN 12.20 270 P 58 48.50 -0.4  
WRA 59.51 140 P 05 57.00 0.2  
1.5s 1.30nm 3.8mb  
WB2 59.52 140 eP 05 51.70 -5.2X  
1.2s 1.60nm 4.0mb  
S.D. = 0.5 on 7 of 10 obs.

? MAY 29, 1991 10h 39m 05.53 ± 10.78s  
17.577 N ± 48.3km 78.371 W ± 75.4km  
DEPTH = 10.0km (geophysicist)

JAMAICA REGION (86)  
MD 3.4 (HOJ).

SPJ 0.88 62 iPc 39 22.40 0.0  
S 39 38.73  
PCJ 1.16 82 P 39 27.22 0.0  
STH 1.56 71 Pc 39 33.80 0.4  
HOJ 1.60 74 Pd 39 33.59 -0.4  
S 39 57.35  
S.D. = 0.5 on 4 of 4 obs.

MAY 29, 1991 11h 02m 10.92 ± 0.72s  
39.660 N ± 6.2km 118.460 E ± 5.1km  
DEPTH = 12.9 ± 5.0 km  
4.6mb (8 obs.)  
NORTHEASTERN CHINA (658)  
ML 4.6 (BJI).

BJI 1.80 283 Pg 02 41.00 -0.8  
Sg 03 04.00  
DL2 2.57 106 iPnd 02 55.00 2.1  
Pg 03 00.80  
Sg 03 32.00  
TIA 3.60 197 Pnc 03 07.30 -0.3  
Z 12s 4.10um  
N 11s 2.70um  
E 11s 2.90um  
Pg 03 17.30  
Sg 04 02.60  
SNY 4.45 59 Pn 03 20.30 0.7  
Pg 03 35.00  
Sn 04 10.00  
Sg 04 33.20  
TIY 5.10 249 Pnc 03 28.40 -0.5  
Z 13s 1.80um  
Pg 03 43.30  
Sn 04 25.00  
Sg 04 48.40  
HHC 5.41 285 Pn 03 34.00 0.7  
Pg 03 48.00  
Sg 05 00.00  
BTO 6.54 281 ePn 03 50.00 0.8  
N 10s 3.70um  
E 11s 1.80um  
Pg 04 06.00  
Sg 05 30.00  
CN2 6.67 49 ePn 03 50.40 -0.5  
iPgc 04 13.30  
eSn 05 01.80  
Sg 05 40.60  
NJ2 7.60 177 ePn 04 02.00 -2.0  
Z 11s 0.80um  
E 12s 3.00um  
Sn 05 35.80  
SSE 8.83 165 eP 04 20.40 -0.7  
N 14s 1.10um  
E 16s 4.60um  
MDJ 9.64 55 eP 04 36.20 4.0X  
Z 12s 1.30um  
LZH 12.09 257 eP 05 14.30 8.4X  
1.4s 22.00nm 5.2mb  
pP 05 19.00  
GTA 14.40 275 eP 05 36.00 -0.4  
pP 05 43.60  
sP 05 48.00  
CD2 14.83 238 P 05 42.70 0.7  
E 14s 2.20um  
MAT 15.85 95 iPc 06 02.80 7.5X  
1.1s 17.72nm 4.2mb  
IRK 15.96 327 eP 06 03.40 6.9X  
eSg 10 24.70  
GYA 16.44 220 P 06 03.80 0.8  
Z 14s 0.80um  
N 12s 1.10um  
E 12s 1.00um  
KMI 19.61 227 eP 06 44.00 1.8  
1.5s 50.00nm 4.6mb  
Z 16s 1.50um 4.4msz  
pP 06 48.00 16kmX  
eS 10 13.00  
OIZ 21.87 202 eP 07 10.00 4.8X  
N 13s 1.20um  
WMO 23.26 290 P 07 22.00 3.1X  
1.2s 100.00nm 5.2mb  
Z 12s 0.30um 4.0mszX  
PP 07 52.00  
sS 11 40.00  
LSA 24.48 254 eP 07 33.60 2.4X  
CHG 26.75 225 eP 08 02.50 10.4X  
GUN 29.35 256 P 08 00.00 -16.0X  
IMA 53.69 30 e(P) 11 33.00 0.7  
FBA 56.40 31 eP 11 54.20 0.3  
0.9s 11.46nm 4.9mb  
PMR 57.13 35 eP 11 57.80 -1.3  
INK 59.91 24 eP 12 10.00 -0.4  
WRA 61.12 163 P 12 27.00 -0.1

1.6s 2.00nm 4.0mb  
ASPA 64.63 164 eP 12 50.40 0.1  
1.7s 5.20nm 4.4mb  
YKA 69.66 23 eP 13 20.20 -1.4  
0.8s 3.00nm 4.5mb  
S.D. = 1.1 on 21 of 30 obs.

MAY 29, 1991 11h 17m 33.06 ± 0.62s  
68.249 N ± 5.3km 148.668 W ± 6.5km  
DEPTH = 10.0km (geophysicist)  
ALASKA (676)  
ML 3.6 (AEIC), 3.2 (PMR).

FYU 2.15 140 eP 18 10.56 1.2  
S 18 41.20  
IMA 2.94 224 ePn 18 20.20 -0.5  
iPg 18 25.40  
MDM 3.31 177 iP 18 25.68 -0.3  
GLM 3.32 171 iP 18 26.14 0.1  
FBA 3.38 174 ePn 18 26.80 -0.1  
ePg 18 36.00  
RDS 3.45 176 eP 18 27.61 -0.2  
CCB 3.64 174 eP 18 30.63 0.1  
NEA 3.69 183 eP 18 31.44 0.1  
WRH 3.80 176 eP 18 32.89 0.0  
HDA 3.92 169 eP 18 34.66 0.1  
BWN 4.11 185 eP 18 36.96 -0.2  
BRW 4.15 321 ePn 18 38.20 0.4  
ePg 18 56.10  
eSg 19 55.40  
DDM 4.63 164 eP 18 44.66 0.0  
DOT 4.99 156 eP 18 49.21 -0.5  
PAX 5.46 164 eP 18 56.20 -0.4  
TMW 5.47 152 eP 18 56.09 -0.4  
INK 5.63 82 P 18 58.00 -0.7  
0.3s 2.00nm 4.3mb X  
TOA 6.26 169 eP 19 09.30 1.6  
S.D. = 0.6 on 18 of 18 obs.

\* MAY 29, 1991 11h 59m 12.49 ± 0.95s  
47.739 N ± 17.0km 114.751 W ± 10.0km  
DEPTH = 5.0km (geophysicist)  
MONTANA (456)  
ML 3.0 (BUT). Felt (III) at Hot Springs.

NEW 1.67 289 iP 59 43.70 1.1  
HRY 2.24 116 ePn 59 50.90 0.0  
BUT 2.29 138 ePg 59 56.50 4.8X  
eSg 00 26.20  
DPW 2.33 275 eP 59 51.00 -1.2  
HBMT 2.44 142 ePn 59 54.10 0.2  
LRM 2.49 140 ePn 59 54.60 0.1  
SXM 2.90 122 ePn 00 00.00 -0.4  
BGMT 3.13 142 ePnd 00 03.50 -0.1  
MCMT 3.20 155 P 00 04.70 0.1  
MEMT 3.37 128 ePn 00 06.80 -0.2  
LTMT 3.70 149 ePn 00 12.30 0.5  
S.D. = 0.7 on 10 of 11 obs.

% MAY 29, 1991 12h 04m 44.25 ± 0.54s  
42.763 N ± 5.1km 19.184 E ± 4.3km  
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)  
ML 1.6 (TTG).

NKY 0.15 290 iPgc 04 48.35 0.6  
iSg 04 51.56  
TTG 0.34 170 iPgc 04 51.58 0.4  
iSg 04 57.28  
BRY 0.49 287 iPgc 04 53.73 -0.5  
iSg 05 01.91  
IVA 0.54 78 iPgc 04 55.25 0.1  
iSg 05 04.18  
BDV 0.55 209 iPgc 04 55.30 0.0  
iSg 05 04.48  
PLE 0.59 15 iPgc 04 56.33 0.1  
iSg 05 05.53  
HCY 0.60 238 iPgc 04 56.11 -0.2  
iSg 05 06.00  
PVY 0.61 106 iPgc 04 56.06 -0.5  
iSg 05 06.65  
S.D. = 0.5 on 8 of 8 obs.

? MAY 29, 1991 12h 40m 43.33 ± 1.72s  
6.990 S ± 13.5km 146.418 E ± 25.5km  
DEPTH = 61.9 ± 27.6 km



4.2mb ( 2 obs.)  
EAST PAPUA NEW GUINEA REGION (207)

LAT 0.67 60 eP 40 57.30 -0.1  
PMG 2.51 163 e(P) 41 35.00 12.5X  
WB2 17.40 221 iPd 44 44.30 0.7  
1.1s 13.80nm 4.0mb  
RMO 19.52 174 iPd 45 09.00 0.4  
GUA 20.45 356 eP 45 18.50 0.2  
ASPA 20.48 215 eP 45 17.50 -1.1  
0.5s 9.20nm 4.4mb  
STK 25.17 190 eP 45 50.50 -14.0X  
0.9s 0.70nm

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

MAY 29, 1991 13h 07m 38.61±0.31s  
52.222 N ± 6.7km 169.560 W ± 3.9km  
DEPTH = 33.0km (normol)  
4.9mb ( 50 obs.) 4.5msz ( 6 obs.)  
FOX ISLANDS, ALEUTIAN ISLANDS ( 9 )  
ML 5.1 (PMR).

ADK 4.41 268 ePc 08 47.20 2.3  
SDN 6.21 56 eP 09 10.30 -0.1  
KDC 11.25 54 eP 10 23.10 3.2X  
PDB 11.44 43 eP 10 21.50 -1.1  
SVW 11.72 35 eP 10 28.90 2.4  
ANM 12.57 8 e(P) 10 39.30 1.6  
TTA 12.93 29 eP 10 45.10 2.6  
PMR 14.52 42 eP 11 03.40 0.1  
KLU 15.82 45 P 11 17.60 -2.8  
TOA 15.99 43 eP 11 20.30 -2.2  
IMA 16.02 24 ePc 11 25.50 2.7  
FBA 16.91 33 eP 11 32.30 -1.7  
INK 23.54 33 eP 12 44.00 -2.1  
0.5s 13.00nm 4.7mb  
pP 13 02.50 83kmX

GMW 30.08 80 eP 13 48.00 1.2  
YKA 30.43 49 eP 13 50.50 0.8  
0.5s 9.30nm 4.8mb  
LON 31.04 81 eP 13 56.00 0.7  
PNT 31.22 75 ePc 13 57.00 0.2  
0.6s 9.00nm 4.8mb  
NEW 33.16 76 eP 14 13.50 -0.3  
1.0s 34.38nm 5.2mb  
YAK 33.17 311 eP 14 12.70 -0.9  
i 14 45.00  
e 16 59.00

SES 35.77 69 eP 14 34.00 -2.2  
LRM 37.14 77 eP 14 47.80 -0.2  
BONR 38.08 91 eP 14 56.60 0.6  
TNP 38.66 90 eP 15 00.90 0.1  
PTI 38.79 81 eP 15 02.50 0.7  
FFC 38.90 59 ePc 15 01.60 -0.7  
0.7s 8.00nm 4.6mb

ISA 39.44 94 eP 15 13.00 5.8X  
MAT 39.57 268 eP 15 09.00 0.8  
0.8s 5.97nm 4.4mb  
CLC 39.88 93 eP 15 23.00 12.2X  
DUG 40.07 84 eP 15 12.70 0.3  
SBB 40.48 95 eP 15 31.00 15.2X  
MWC 40.65 95 eP 15 18.00 0.7  
GSC 40.70 93 eP 15 18.00 0.4  
DAU 40.90 83 eP 15 19.60 0.2  
MSU 41.49 86 eP 15 24.50 0.3  
PLM 41.97 95 eP 15 39.00 10.9X  
BAR 42.55 96 eP 15 33.00 0.3  
CN2 42.94 286 eP 15 35.20 -0.5

Z 20s 0.60um 4.5msz  
epP 15 40.00 16kmX

GOL 44.91 80 eP 15 51.80 -0.2  
1.0s 21.25nm 5.0mb

ANMO 47.30 85 eP 16 10.50 -0.4  
1.0s 12.50nm 4.9mb

ALO 47.30 85 ePc 16 10.30 -0.6  
1.2s 13.28nm 4.8mb  
iPcP 17 54.00

FRB 49.17 35 eP 16 23.00 -1.7  
DAG 49.95 8 eP 16 29.00 -1.5  
1.0s 14.00nm 4.9mb

MEO 52.21 80 iPd 16 44.00 -4.3X  
HHC 52.86 291 eP 16 54.00 0.8

Z 24s 0.40um 4.4mszX  
SSE 53.69 275 Pd 17 02.50 3.3X  
0.7s 10.00nm 4.9mb

Z 20s 0.50um 4.6msz  
BTO 53.91 292 eP 17 00.80 -0.1

TIY 54.44 288 eP 17 05.80 1.0  
Z 10s 0.51um 4.9mszX  
NJ2 54.45 278 Pd 17 05.00 0.2  
SCH 55.66 43 eP 17 12.00 -1.4  
KEV 57.74 353 eP 17 27.00 -0.9  
WHN 58.25 280 eP 17 31.50 -0.5  
XAN 59.03 287 P 17 36.30 -1.2  
SOD 60.11 353 iP 17 42.80 -1.6  
GTA 60.44 297 P 17 46.50 -0.7  
0.8s 10.00nm 5.0mb

Z 20s 0.40um 4.6msz  
pP 17 51.20 15kmX  
sP 17 54.20

LZH 60.53 292 eP 17 46.00 -1.9  
Z 17s 0.39um 4.6mszX  
pP 17 59.50 48kmX

WMO 63.53 308 P 18 07.50 -0.3  
sP 18 17.00  
CD2 64.31 288 P 18 12.90 -0.1

KAF 65.32 352 eP 18 16.90 -2.1  
0.6s 15.30nm 5.3mb  
esP 18 19.00

GYA 65.85 282 P 18 22.80 -0.2  
NUR 67.04 352 eP 18 28.20 -1.8  
0.7s 12.10nm 5.1mb

NB2 67.09 360 P 18 28.80 -1.5  
0.7s 6.60nm 4.8mb  
HFS 67.97 358 eP 18 33.70 -2.1  
0.4s 6.00nm 5.0mb

Z 18s 0.13um 4.2msz  
e 18 37.40  
e 18 41.70  
LR 45 56.00

EKA 72.22 8 Pc 19 00.80 -0.9  
0.6s 4.90nm 4.7mb  
GAR 75.31 316 eP 19 19.50 -0.6

CHG 76.26 283 eP 19 24.00 -1.6  
GUN 76.69 298 P 19 28.00 -0.4  
0.6s 31.00nm 5.5mb

CLL 76.82 358 eP 19 28.00 -0.2  
KKN 77.11 299 P 19 30.00 -0.5  
0.6s 21.00nm 5.3mb

KSP 77.19 356 eP 19 30.20 -0.1  
PKI 77.21 298 P 19 30.50 -0.7  
BRG 77.24 358 iP 19 30.30 -0.2  
1.0s 10.00nm 4.8mb

e 19 44.50  
GKN 77.29 299 P 19 31.00 -0.4  
DMN 77.35 299 P 19 31.20 -0.7

MOX 77.50 359 eP 19 32.50 0.5  
1.1s 19.00nm 5.0mb  
KRA 77.78 354 eP 19 33.90 0.4

PRU 78.11 357 P 19 35.50 0.2  
GRF 78.46 359 eP 19 38.30 1.0  
1.2s 21.00nm 5.0mb

KHC 78.99 358 P 19 41.00 0.8  
LDF 79.16 7 eP 19 40.80 -0.3  
0.8s 10.75nm 4.9mb

LPF 79.65 8 eP 19 43.90 0.2  
1.0s 16.00nm 5.0mb  
CDF 79.71 2 eP 19 44.50 0.3

0.8s 5.35nm 4.6mb  
ZST 79.80 355 iP 19 45.00 0.4  
HAU 80.09 3 eP 19 46.60 0.4

Z 20s 0.20um 4.5msz  
BSF 80.28 2 eP 19 47.40 0.1  
0.8s 10.75nm 4.9mb

LOR 80.73 5 eP 19 49.90 0.3  
0.9s 12.30nm 4.9mb  
Z 20s 0.15um 4.3msz

SSF 80.92 5 eP 19 51.00 0.5  
1.1s 17.10nm 5.0mb  
LBF 81.02 4 eP 19 51.30 0.2

1.0s 10.00nm 4.8mb  
MFF 81.14 7 eP 19 52.30 0.6  
0.9s 13.10nm 4.9mb

AVF 81.18 5 eP 19 52.30 0.4  
1.0s 12.00nm 4.9mb  
SMF 81.35 5 eP 19 53.10 0.3

1.0s 16.00nm 5.0mb  
LSF 81.61 6 eP 19 54.60 0.4  
1.0s 16.00nm 5.0mb

TCF 81.62 6 eP 19 54.50 0.3  
0.8s 6.05nm 4.7mb  
MAF 81.70 6 eP 19 54.60 -0.1

0.6s 4.95nm 4.7mb  
LPL 82.59 3 eP 20 01.10 1.5

0.8s 4.05nm 4.5mb  
LPG 82.61 3 eP 20 01.00 1.2  
0.6s 3.60nm 4.6mb  
LFF 82.86 7 eP 20 01.50 0.8  
0.8s 16.10nm 5.2mb  
CAF 82.96 6 eP 20 02.20 0.9  
0.9s 9.85nm 4.9mb

BNI 83.05 3 P 20 03.60 1.8  
LPO 83.15 7 eP 20 02.80 0.6  
0.8s 8.05nm 4.9mb

BOB 83.39 1 Pd 20 04.70 1.2  
MME 83.97 360 P 20 08.00 1.4  
QUE 84.23 313 eP 20 09.80 1.6  
1.0s 30.00nm 5.4mb

SBF 84.26 2 eP 20 09.00 1.1  
1.0s 28.00nm 5.4mb  
PGD 84.28 359 P 20 10.80 2.7  
FRF 84.54 3 eP 20 10.30 1.1

0.8s 12.10nm 5.1mb  
LRG 84.64 3 eP 20 11.00 1.3  
1.0s 20.00nm 5.3mb

EPF 84.73 7 eP 20 10.50 0.3  
0.8s 8.05nm 5.0mb  
PGF 85.60 1 eP 20 15.50 0.8  
0.8s 24.20nm 5.5mb

SKO 85.70 352 eP 20 14.00 -1.1  
OHR 86.61 352 eP 20 15.30 -4.4X  
WB2 86.81 231 eP 20 20.40 -0.3  
0.9s 2.00nm 4.3mb

WRA 86.82 231 P 20 20.00 -0.7  
0.7s 1.90nm 4.4mb  
WRA 86.82 231 P 20 24.00 3.3X  
0.7s 1.40nm 4.3mb

WRA 86.82 231 P 20 31.00 10.3X  
0.8s 2.60nm  
WRA 86.82 231 P 20 39.00 18.3X  
1.2s 2.40nm

HYB 89.11 298 eP 20 31.00 -1.0  
ASPA 90.21 230 eP 20 38.30 1.5  
1.1s 7.40nm 4.9mb

BUL 144.99 329 iPKPd 27 13.10 -1.0  
0.6s 6.67nm  
iP 27 22.90

SLR 150.30 326 iPKPd 27 26.50 4.1X  
0.9s 16.81nm  
PRY 151.68 327 ePKP 27 23.00 -1.5

FRS 154.99 328 ePKP 27 15.00 -13.7X  
1.0s 10.00nm  
S.D. = 1.1 on 108 of 121 obs.

? MAY 29, 1991 13h 22m 12.75±0.97s  
41.129 N ±22.3km 28.472 E ±17.5km  
DEPTH = 10.0km (geophysicist)

TURKEY (366)  
MD 2.6 (ISK).

CTT 0.04 300 iPg 22 14.10 -0.7  
DMK 0.88 322 iPg 22 30.00 0.4  
0.8s 10.75nm 4.9mb

ISg 22 41.50  
HRT 0.96 108 iPg 22 30.70 -0.3  
IZI 1.10 136 ePn 22 33.70 0.3

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

MAY 29, 1991 13h 29m 55.13±0.51s  
52.985 N ± 7.0km 169.251 W ± 7.2km  
DEPTH = 72.1km ( 3 depth phases )  
4.9mb ( 13 obs.)

FOX ISLANDS, ALEUTIAN ISLANDS ( 9 )

ADK 4.68 259 eP 31 05.70 0.9  
SDN 5.66 62 eP 31 18.20 -0.2  
MCNL 10.38 47 eP 32 23.56 0.2

CDD 10.57 50 eP 32 26.22 0.3  
KDC 10.65 57 eP 32 25.72 -1.3  
PDB 10.76 45 eP 32 20.95 0.5

AUH 10.87 48 eP 32 30.82 0.9  
SVW 10.99 37 ePc 32 34.20 2.5  
SYI 11.02 53 eP 32 28.49 -3.4X

RED 11.70 44 eP 32 42.39 1.3  
NCT 11.71 43 eP 32 42.72 1.5  
RDN 11.75 44 eP 32 43.83 2.0

ANM 11.78 8 eP 32 43.90 1.8  
RDT 11.93 44 eP 32 45.74 1.6  
TTA 12.17 30 eP 32 48.90 1.6

CKL 12.30 41 eP 32 50.67 1.6  
SUA 13.10 42 eP 33 00.69 1.2  
LTI 13.72 51 eP 33 04.21 -3.3X



29d 13h

SCM	14.70	44 eP	33 18.14	-2.2				
VLZ	14.83	48 eP	33 19.15	-2.7				
SGAM	15.12	51 eP	33 24.20	-1.4				
KLU	15.16	47 eP	33 23.03	-3.2X				
IMA	15.24	25 eP	33 29.30	2.0				
TOA	15.31	44 eP	33 27.00	-1.1				
SDG	15.76	43 eP	33 33.04	-0.7				
PAX	15.99	42 eP	33 36.55	-0.2				
GLB	16.08	48 eP	33 35.18	-2.6				
FBA	16.17	34 eP	33 37.70	-1.2				
WAX	16.21	52 eP	33 38.00	-1.6				
BALM	16.62	50 eP	33 43.28	-1.4				
CTGM	17.07	51 eP	33 49.75	-0.6				
PNL	17.74	56 eP	33 58.12	-0.3				
FYU	18.03	32 eP	34 02.22	0.4				
SIT	19.74	65 eP	34 21.90	0.6				
INK	22.79	34 P	34 50.00	-1.8				
	0.4s	2.20nm	3.9mb					
YKA	29.79	50 eP	35 57.80	1.2				
	0.6s	1.80nm	4.0mb					
LON	30.74	82 eP	36 06.00	0.7				
PNT	30.85	77 iP	36 07.00	0.9				
	0.8s	24.00nm	5.0mb					
NEW	32.80	77 eP	36 23.00	-0.2				
	0.8s	24.00nm	5.1mb					
YAK	32.81	310 eP	36 19.40	-3.7X				
		e	36 40.00	89kmX				
		i	39 04.00					
LBFM	33.64	91 eP	36 32.10	1.3				
ORV	34.97	93 eP	36 42.50	0.6				
LRM	36.79	78 eP	36 56.70	-0.8				
BONR	37.91	92 eP	37 08.20	1.1				
		e	37 26.50	75km				
FFC	38.34	60 iPd	37 09.10	-1.1				
	0.8s	17.00nm	5.0mb					
PTI	38.48	82 eP	37 12.80	1.1				
TNP	38.49	91 eP	37 12.30	0.5				
	0.8s	12.99nm	4.9mb					
ISA	39.32	95 eP	37 19.00	0.4				
CLC	39.74	94 eP	37 23.00	0.9				
MAT	39.80	267 eP	37 22.00	-0.4				
	1.1s	12.66nm	4.7mb					
SBB	40.37	96 eP	37 28.00	0.8				
MWC	40.55	97 eP	37 30.00	1.2				
GSC	40.57	94 eP	37 30.00	1.1				
DAU	40.62	84 eP	37 29.60	0.0				
MSU	41.26	87 eP	37 35.40	0.7				
TPC	41.84	95 eP	37 40.00	0.7				
PLM	41.87	97 eP	37 41.00	1.3				
BAR	42.45	97 eP	37 45.00	0.7				
GLA	43.30	95 eP	37 52.00	0.8				
GOL	44.59	81 eP	38 01.80	-0.1				
	0.8s	14.88nm	4.9mb					
ANMO	47.06	86 eP	38 21.30	0.0				
		e	38 39.00	71km				
		e	38 21.00	-0.3				
ALO	47.06	86 eP	38 21.00	-0.3				
	1.0s	4.25nm	4.3mb					
		e	38 38.70	71km				
		e	39 52.00					
		e	40 12.40					
DAG	49.16	9 eP	38 54.00	17.2X				
FVM	54.50	72 eP	39 14.80	-2.6				
	0.7s	8.16nm	4.9mb					
ELC	55.67	72 eP	39 23.20	-2.6				
NAV	60.41	66 eP	39 57.30	-1.7				
CVL	61.21	64 eP	40 03.00	-1.4				
JSC	62.35	69 eP	40 09.90	-2.1				
LHS	62.46	69 eP	40 10.50	-2.2				
NB2	66.32	360 P	40 54.70	17.2X				
	0.8s	1.20nm						
IPM	86.21	273 ePc	42 31.80	2.0				
	0.9s	42.50nm	5.5mb					
RMO	87.17	217 eP	42 34.00	-0.1				
WB2	87.44	232 iPd	42 29.00	-6.5X				
	0.6s	5.20nm	4.8mb					
		e	43 33.30	267kmX				
HYB	88.92	298 eP	42 40.50	-2.4				
ASPA	90.85	230 iPc	42 50.50	-1.0				
	0.9s	18.30nm	5.4mb					
	S.D. = 1.4 on 68 of 75 obs.							
* MAY 29, 1991 13h 35m 00.02 ± 0.78s								
40.522 N ± 6.5km 26.401 E ± 6.4km								
DEPTH = 10.0km (geophysicist)								
TURKEY (366)								
MD 2.9 (ISK).								

ALN	0.46	324 iPd	35 09.60	0.2				
		eS	35 16.30					
EZN	0.70	185 iPg	35 13.70	-0.1				
		iSg	35 22.70					
MFT	0.72	68 iPg	35 14.60	0.4				
		eSg	35 25.00					
EDC	1.13	98 ePn	35 21.50	0.3				
BNT	1.17	98 ePn	35 22.00	0.1				
DMK	1.65	38 ePn	35 29.00	-0.2				
CTT	1.66	67 iPn	35 28.60	-0.7				
	S.D. = 0.5 on 7 of 7 obs.							
? MAY 29, 1991 14h 53m 09.42 ± 0.95s								
40.352 N ± 24.9km 78.988 E ± 53.8km								
DEPTH = 33.0km (normal)								
3.9mb ( 2 obs.)								
SOUTHERN XINJIANG, CHINA (321)								
GKN	13.17	158 P	56 18.32	1.5				
KKN	13.57	156 P	56 22.38	0.3				
GUN	13.65	153 P	56 28.84	5.5X				
DMN	13.68	156 P	56 22.52	-1.1				
PKI	13.81	155 P	56 24.86	-0.6				
NB2	45.24	321 P	01 25.00	-0.1				
	0.7s	1.20nm	3.9mb					
YKA	76.92	6 eP	04 59.70	0.1				
	0.8s	1.10nm	3.9mb					
	S.D. = 1.1 on 6 of 7 obs.							
* MAY 29, 1991 15h 15m 18.22 ± 1.25s								
35.846 N ± 22.0km 53.163 E ± 7.6km								
DEPTH = 33.0km (normal)								
4.3mb ( 5 obs.)								
IRAN (348)								
Felt in the Firuzkuh area.								
TEH	1.45	266 eP	15 42.00	-0.5				
MAIO	5.15	83 eP	16 36.00	0.9				
	0.8s	11.53nm	4.4mb					
		eS	18 15.00					
KER	5.18	255 eP	16 46.00	10.3X				
TAB	5.91	294 eP	16 46.00	0.1				
QUE	12.87	112 e(P)	18 38.30	16.6X				
GAR	13.99	72 eP	18 35.00	-1.4				
		eS	21 36.00					
VRI	22.27	305 ePd	20 17.50	3.7X				
OBN	22.38	335 eP	20 14.00	-0.7				
	1.3s	*****nm	7.8mb X					
		e	20 16.00					
		ePcP	22 22.00					
		e	25 00.00					
MLR	22.69	303 eP	20 22.00	3.9X				
GZR	24.83	302 ePd	20 40.00	1.2				
SKO	25.34	294 eP	20 49.00	5.4X				
GKN	27.75	97 P	21 00.00	-6.0X				
NUR	30.69	332 eP	22 01.20	29.4X				
	0.2s	1.20nm						
KAF	31.20	336 eP	21 36.00	-0.2				
	0.5s	3.20nm	4.4mb					
		eS	21 38.30					
SOD	35.03	342 iP	22 11.30	1.9				
HFS	35.05	326 eP	22 08.50	-1.2				
	1.0s	9.80nm	4.7mb					
		e	22 11.70					
		e	22 20.20					
NB2	36.54	327 P	22 21.00	-1.4				
	0.9s	3.40nm	4.2mb					
KEV	36.83	345 eP	22 25.00	0.4				
YKA	81.51	354 eP	27 34.10	0.9				
	0.9s	1.60nm	4.0mb					
	S.D. = 1.2 on 12 of 19 obs.							
* MAY 29, 1991 17h 35m 16.97 ± 1.50s								
18.322 S ± 12.0km 167.647 E ± 11.4km								
DEPTH = 22.4 ± 13.9 km								
4.9mb ( 3 obs.) 4.5msz ( 1 obs.)								
VANUATU ISLANDS (186)								
PVC	0.86	48 iPc	35 33.50	0.4				
		iS	35 46.50					
BKM	0.86	41 iPd	35 33.50	0.3				
		iS	35 46.50					
DZM	3.90	197 iPc	36 14.90	-2.1				
		iS	36 58.10					
HNR	11.57	319 eP	38 02.00	-1.9				
RMO	19.25	242 iPc	39 44.60	1.8				
CTA	20.28	262 iPd	39 54.90	0.9				

	0.8s	38.06nm	4.8mb					
OLP	23.12	245 eP	40 24.00	1.5				
CNB	23.44	220 eP	40 28.00	2.3X				
CMS	23.68	232 eP	40 30.00	2.1X				
QIS	26.52	261 eP	40 55.00	0.0				
		i	41 25.70					
		eS	45 19.00					
STK	27.10	235 iPc	41 00.60	0.4				
	0.9s	5.80nm	4.2mb					
		e	41 22.50					
WRA	31.48	262 P	41 29.00	-10.5X				
	0.7s	4.20nm						
ASPA	31.90	255 iPd	41 41.90	-1.3				
	0.7s	81.40nm	5.8mb					
		eS	45 55.20					
ORV	87.55	47 eP	48 04.50	0.0				
CMB	87.68	49 ePc	48 05.40	0.2				
FRI	87.73	50 eP	48 05.20	-0.2				
LOR	148.21	339 ePKP	55 03.50	4.1X				
	1.0s	6.00nm						
Z	20s	0.08um	4.5msz					
LBF	148.42	338 ePKP	55 04.40	4.7X				
	0.8s	2.70nm						
SSF	148.51	339 ePKP	55 04.40	4.6X				
	0.8s	6.70nm						
LPG	148.59	334 ePKP	55 05.10	4.7X				
	0.8s	4.05nm						
MAF	149.56	339 ePKP	55 07.00	5.5X				
	1.0s	4.00nm						
TCF	149.62	340 ePKP	55 07.10	5.5X				
	1.0s	5.00nm						
PGF	149.80	328 ePKP	55 07.80	5.7X				
	1.0s	8.00nm						
LSF	149.87	341 ePKP	55 07.10	5.2X				
	1.0s	5.00nm						
LFF	151.29	340 ePKP	55 11.10	7.0X				
	0.8s	8.05nm						
LPO	151.38	340 ePKP	55 11.60	7.4X				
	0.6s	3.60nm						
	S.D. = 1.4 on 13 of 26 obs.							
* MAY 29, 1991 17h 36m 23.36 ± 0.51s								
46.291 N ± 7.6km 1.851 E ± 4.3km								
DEPTH = 12.1 ± 4.3 km								
FRANCE (538)								
ML 2.2 (LDG).								
LSF	0.23	260 Pg	36 28.50	0.1				
TCF	0.25	91 Pg	36 29.30	0.5				
		Sg	36 32.80					
MAF	0.50	98 Pg	36 33.50	-0.1				
		Sg	36 40.50					
BGF	0.74	68 Pg	36 37.20	-0.5				
		Sg	36 46.90					
RJF	1.01	193 Pg	36 42.60	0.2				
		Sg	36 56.60					
AVF	1.15	64 Pg	36 44.50	-0.2				
		Sg	36 58.10					
SSF	1.38	55 Pg	36 48.20	-0.1				
		Sg	37 04.90					
MFF	1.42	283 Pg	36 48.90	0.0				
		Sg	37 06.50					
SMF	1.42	75 Pg	36 49.40	0.4				
		Sg	37 07.90					
LBF	1.62	64 Pg	36 52.80	1.0				
		Sg	37 13.00					
LOR	1.69	54 Pg	36 53.70	0.9				
		Sg	37 14.20					
	S.D. = 0.5 on 11 of 11 obs.							
? MAY 29, 1991 17h 36m 39.77 ± 1.10s								
0.808 S ± 11.6km 131.667 E ± 30.8km								
DEPTH = 33.0km (normal)								
4.5mb ( 2 obs.)								
WEST IRIAN REGION (196)								
MTN	11.97	183 eP	39 30.50	-0.7				
	0.3s	183.00nm	6.7mb X					
		eS	41 40.00					
KNA	15.12	191 eP	40 12.00</					



0.7s 2.30nm 4.2mb  
 HYB 55.33 292 ePc 46 14.00 0.8  
 YAK 62.68 359 iPc 47 02.30 -0.9  
 e 47 52.00  
 S.D. = 1.1 on 6 of 8 obs.

MAY 29, 1991 17h 37m 09.31± 0.64s  
 24.091 S ± 5.5km 66.636 W ± 7.6km  
 DEPTH = 195.8 ± 7.1 km  
 4.6mb ( 10 obs.)

SALTA PROVINCE, ARGENTINA (129)

ANT 3.48 276 iPc 38 05.00 0.0  
 iS 38 44.20  
 CCH 6.69 4 P 38 48.10 1.5  
 CNCB 7.35 350 iPc 38 57.00 1.4  
 iS 40 19.00  
 LPB 7.64 349 iPc 39 00.00 0.7  
 0.8s 152.24nm 5.3mb X  
 S 40 24.00  
 ZOBO 7.91 350 iPc 39 03.10 0.1  
 S 40 30.00  
 ARE 8.85 328 iPd 39 12.30 -2.6  
 iS 40 48.00  
 MDZ 8.97 192 e(P) 39 16.10 -0.1  
 JACH 9.24 201 iP 39 21.00 1.3  
 SIV 9.60 34 iPd 39 23.40 -1.0  
 TACH 10.24 201 eP 39 31.00 -1.7  
 LCCH 10.30 204 eP 39 33.00 -0.4  
 PPD 14.25 85 eP 40 25.00 1.3  
 e 40 28.00  
 NNA 15.45 319 iPc 40 38.00 -0.6  
 0.7s 43.15nm 5.0mb  
 eS 43 30.00  
 VAO 18.07 91 eP 41 08.60 -0.2  
 e 41 10.00  
 BMA 20.68 91 eP 41 35.50 0.1  
 e 41 36.90  
 NVL 63.67 159 ePc 47 42.00 20.6X  
 e 48 22.00  
 FVM 65.67 340 iP 47 32.50 -2.0  
 1.1s 14.63nm 4.7mb  
 SPA 66.05 180 iPd 47 37.90 1.0  
 1.0s 35.00nm 5.1mb  
 LIC 67.15 72 P 47 42.90 -1.5  
 KIC 67.46 72 P 47 45.00 -1.3  
 LKO 68.31 68 PC 47 49.98 -1.6  
 ALO 69.80 326 eP 48 00.70 0.2  
 0.9s 6.30nm 4.4mb  
 GOL 73.04 330 iP 48 20.00 0.3  
 1.2s 12.30nm 4.5mb  
 TNP 77.96 321 iP 48 48.10 0.7  
 1.0s 5.25nm 4.2mb  
 LRM 81.07 329 eP 49 04.90 1.0  
 ORV 81.42 320 eP 49 06.50 1.0  
 SES 83.91 333 eP 49 17.00 -1.1  
 FFC 84.15 340 eP 49 19.00 -0.1  
 0.9s 9.00nm 4.5mb  
 NEW 85.03 329 eP 49 26.00 2.3  
 1.0s 2.75nm 4.0mb  
 BUL 86.54 110 iPd 49 32.80 0.9  
 CSY 89.88 179 iPd 49 48.60 1.9  
 0.9s 13.40nm 4.9mb  
 YKA 94.32 340 eP 50 06.50 -0.5  
 0.8s 3.50nm 4.6mb  
 ASPA 128.51 204 iPKPd 55 54.40 -0.5  
 1.0s 9.30nm  
 WB2 131.69 207 iPKPc 56 00.90 -0.1  
 0.5s 6.20nm  
 i 59 07.20  
 WRA 131.70 207 PKP 56 00.00 -1.0  
 0.5s 5.90nm  
 GBA 144.53 101 PKPd 56 23.40 -1.1  
 0.6s 11.30nm  
 HYB 146.84 95 ePKP 56 31.00 2.6X  
 1.0s 30.00nm  
 IRK 151.02 12 ePKP 56 35.80 2.0  
 e 56 41.20  
 S.D. = 1.3 on 36 of 38 obs.

MAY 29, 1991 18h 14m 26.52± 0.42s  
 3.245 S ± 6.9km 98.380 E ± 5.6km  
 DEPTH = 26.4km ( 6 depth phases)  
 5.2mb ( 26 obs.) 4.5msz ( 6 obs.)  
 SOUTHWEST OF SUMATERA (273)

KGM 7.19 43 ePc 16 11.60 -1.0

0.6s 568.20nm 6.8mb X  
 e 18 11.10  
 IPM 8.21 19 ePd 16 26.00 -0.9  
 0.9s 60.80nm 5.8mb  
 BSI 9.21 340 eP 16 36.00 -4.8X  
 SNG 10.59 12 eP 16 58.00 -1.7  
 NST 18.88 5 eP 18 47.00 -0.4  
 KKM 20.06 63 iPc 19 00.20 -0.7  
 1.0s 103.90nm 5.1mb  
 i 19 45.30  
 8DT 20.37 2 eP 19 04.00 0.0  
 0.7s 81.70nm 5.2mb  
 TSM 21.03 69 ePc 19 09.00 -1.8  
 MKS 21.12 96 e(P) 18 52.00 -19.8X  
 CHG 21.93 1 eP 19 20.50 0.6  
 1.0s 15.00nm 4.4mb  
 KOD 24.76 303 eP 19 49.50 1.6  
 QIZ 24.84 27 P 19 50.00 1.7  
 N 13s 0.50um  
 E 12s 0.70um  
 eS 24 07.00  
 sS 24 15.00  
 GBA 26.69 309 Pd 20 05.80 0.3  
 1.2s 63.20nm 5.1mb  
 HYB 28.36 317 ePd 20 20.00 -0.8  
 1.2s 35.70nm 5.0mb  
 KMI 28.51 8 Pd 20 23.00 0.7  
 1.1s 50.00nm 5.2mb  
 Z 24s 0.70um 4.2mszX  
 pP 20 30.00 24km  
 sP 20 34.00  
 eS 25 14.00  
 GYA 30.60 15 P 20 41.40 0.6  
 N 17s 1.00um  
 E 17s 1.90um  
 S 25 42.00  
 POO 32.43 313 iPd 20 56.40 -0.5  
 PKI 33.09 339 P 21 02.70 -0.2  
 1.0s 31.00nm 5.2mb  
 GUN 33.23 340 P 21 04.34 0.2  
 DMN 33.24 338 P 21 03.98 -0.1  
 1.0s 44.00nm 5.3mb  
 KKN 33.34 339 P 21 04.76 -0.1  
 1.0s 84.00nm 5.6mb  
 LSA 33.48 349 eP 21 06.80 0.4  
 GKN 33.77 338 P 21 08.34 -0.2  
 1.0s 95.00nm 5.7mb  
 CD2 34.35 8 eP 21 12.60 -0.8  
 E 17s 1.80um  
 eS 26 41.00  
 WHN 36.90 23 eP 21 36.00 1.1  
 E 14s 0.90um  
 eS 27 18.00  
 WB2 38.81 118 iPc 21 49.90 -1.3  
 0.9s 12.40nm 4.7mb  
 e 27 57.80  
 LZH 39.46 7 Pd 21 56.00 -0.6  
 1.4s 82.00nm 5.3mb  
 Z 15s 0.72um 4.6mszX  
 E 12s 0.41um  
 pP 22 02.00 20km  
 sP 22 06.00  
 PP 23 34.00  
 eS 28 00.00  
 ASPA 39.87 124 eP 22 02.00 2.0  
 1.5s 6.20nm 4.1mb X  
 eS 28 21.40  
 NJ2 40.13 27 Pc 22 03.00 1.1  
 E 12s 2.90um  
 SSE 40.48 31 Pd 22 06.00 1.2  
 1.0s 12.00nm 4.6mb  
 Z 20s 0.90um 4.6msz  
 N 16s 1.60um  
 E 16s 1.50um  
 eS 28 12.00  
 GTA 42.47 2 Pd 22 21.80 0.6  
 1.2s 30.00nm 4.9mb  
 Z 16s 0.60um 4.6mszX  
 E 11s 0.40um  
 pP 22 32.00 35km  
 sP 22 35.80  
 S 28 40.00  
 TIY 42.79 16 eP 22 24.10 0.3  
 Z 10s 0.64um 4.8mszX  
 N 16s 1.10um  
 S 28 51.00  
 QUE 44.81 320 eP 22 41.40 1.0

BTO 44.91 13 ePP 24 36.50  
 N 13s 0.90um  
 E 13s 0.20um  
 ePP 22 50.00 27km  
 eS 29 25.00  
 HHC 45.51 14 P 22 47.00 1.3  
 Z 20s 0.60um 4.5msz  
 N 14s 0.40um  
 E 13s 0.60um  
 eS 29 34.00  
 BJI 46.07 19 P 22 51.00 1.0  
 1.0s 13.00nm 4.8mb  
 WMO 47.83 350 iPd 23 04.60 0.6  
 1.0s 100.00nm 5.8mb  
 Z 20s 0.40um 4.4msz  
 S 30 03.00  
 GAR 49.36 331 eP 23 13.50 -2.4  
 STK 49.56 130 iPc 23 16.60 -0.9  
 1.1s 2.70nm 4.2mb  
 SNY 50.37 24 eP 23 23.00 -0.4  
 Z 18s 0.50um 4.6msz  
 CN2 52.77 24 P 23 40.20 -1.4  
 Z 18s 0.90um 4.9msz  
 N 15s 0.40um  
 E 15s 0.50um  
 pP 23 50.00 32km  
 eS 31 06.00  
 MAIO 53.51 321 iPd 23 46.00 -1.3  
 MAT 54.26 39 (P) 23 54.00 1.4  
 MDJ 55.22 27 eP 24 01.90 2.4  
 MBH 68.93 304 iPd 25 31.90 0.1  
 JVI 69.18 306 eP 25 33.30 0.0  
 YAK 69.35 15 iPd 25 32.00 -1.6  
 e 25 50.00 67kmX  
 eS 34 36.00  
 ATZ 69.52 307 eP 25 35.40 0.1  
 OBN 76.98 329 eP 26 18.00 -0.4  
 e 26 19.00 3kmX  
 ePcP 26 35.00  
 e 27 23.00  
 VRI 79.67 318 ePd 26 32.50 -0.9  
 VAY 81.53 312 eP 26 42.60 -0.7  
 SKO 82.49 313 iP 26 47.00 -1.3  
 OHR 82.80 312 eP 26 48.00 -2.0  
 KAF 84.56 333 iP 26 58.80 0.4  
 0.8s 20.20nm 5.4mb  
 eS 26 59.30  
 NUR 84.86 332 iP 27 00.00 0.1  
 1.2s 39.20nm 5.5mb  
 KRA 85.07 321 eP 27 01.20 0.0  
 SOD 86.04 338 eP 27 06.00 0.3  
 ZST 86.59 319 eP 27 08.20 -0.6  
 KSP 87.50 321 eP 27 14.00 0.9  
 UPF 88.14 330 iP 27 16.30 0.3  
 PRU 88.50 320 P 27 18.20 0.2  
 BRG 88.98 321 iP 27 20.50 0.3  
 1.5s 25.00nm 5.3mb  
 KHC 89.02 319 P 27 20.90 0.3  
 CLL 89.61 321 iPd 27 23.30 0.1  
 1.2s 16.00nm 5.2mb  
 SFI 89.72 314 P 27 25.20 1.4  
 CTI 90.04 316 P 27 25.80 0.3  
 HFS 90.14 330 eP 27 24.40 -1.0  
 0.9s 7.90nm 5.0mb  
 Z 19s 0.10um 4.3msz  
 e 27 30.90 20km  
 LR 05 56.00  
 MOX 90.43 321 ePc 27 28.00 1.0  
 1.5s 24.00nm 5.3mb  
 GRF 90.61 320 eP 27 28.50 0.6  
 1.2s 23.00nm 5.3mb  
 NB2 91.44 331 P 27 30.40 -1.1  
 1.0s 4.40nm 4.8mb  
 SIV 152.10 226 PKP 34 20.00 4.7X  
 S.D. = 1.0 on 68 of 71 obs.

MAY 29, 1991 18h 59m 58.24± 0.16s  
 22.256 S ± 5.2km 138.794 W ± 6.2km  
 DEPTH = 0.0km (geophysicist)  
 5.5mb ( 23 obs.)  
 TUAMOTU (ARCHIPELAGO REGION) (631)

DZM 50.47 259 iPc 09 01.00 0.7  
 PLM 59.12 21 eP 10 03.00 -0.2  
 SYP 59.23 18 eP 10 05.00 1.1  
 PAS 59.43 20 eP 10 07.00 1.9



29d 19h

PEC	59.51	21	ePc	10 05.60	-0.2	BALM	83.04	358	iPc	12 26.70	0.1	PZZ	144.28	43	PKP	19 35.22	-2.9X
MWC	59.53	20	eP	10 06.00	-0.1	VAO	83.16	112	(P)	12 29.00	0.9	ORX	144.30	41	PKP	19 35.53	-2.6X
RVR	59.54	21	eP	10 06.00	0.1	RSO	83.20	353	ePc	12 27.10	-0.5	BRG	144.40	30	iPKPd	19 35.70	-2.2
GLA	59.57	23	P	10 06.20	0.1	KLU	83.65	357	P	12 28.70	-1.0		1.4s	80.00nm			
ABL	59.76	19	P	10 08.00	0.3	PMR	83.97	355	eP	12 31.30	0.2	GBA	144.55	262	PKPd	19 37.70	-1.5
BCH	59.82	18	P	10 08.50	0.6		1.3s	171.30nm		6.1mb			1.6s	150.20nm			
SBB	60.03	20	eP	10 09.00	-0.4	SVW	84.18	352	ePc	12 32.10	-0.2	STV	144.55	44	PKP	19 36.76	-1.8
TPC	60.08	22	eP	10 10.00	0.3	TOA	84.27	357	ePc	12 33.60	0.8	HY8	144.60	269	iPKPd	19 38.00	-1.3
PRS	60.55	16	ePc	10 13.20	0.4	NVL	84.97	171	ePc	12 37.00	0.7		1.2s	157.10nm			
PR1	60.56	17	ePc	10 13.80	0.8					12 49.00		VAI	144.66	40	PKP	19 36.60	-1.9
ISA	60.73	19	eP	10 14.00	-0.1	TTA	85.99	352	ePc	12 41.80	0.4	FUR	144.81	35	ePKP	19 37.50	-1.3
GSC	60.92	21	eP	10 16.00	0.6		1.2s	106.60nm		5.9mb			1.5s	120.00nm			
SAO	60.94	16	ePc	10 15.60	0.2	LVNJ	86.40	43	P	12 43.00	-0.8	RO8	144.87	43	PKP	19 37.48	-1.6
GCC	61.06	15	ePc	10 16.40	0.2	YKA	86.63	11	eP	12 43.10	-1.3	IMI	145.06	44	PKP	19 37.89	-1.5
CLC	61.14	20	eP	10 16.00	-0.9		0.8s	31.00nm		5.6mb		CKI	145.07	43	PKPc	19 37.90	-1.4
PCC	61.41	15	eP	10 18.70	0.1	FBA	87.15	356	ePc	12 46.90	0.0	FIN	145.13	43	PKP	19 37.99	-1.5
MHC	61.44	16	ePc	10 19.70	0.7		1.3s	72.00nm		5.8mb		PCP	145.18	43	PKP	19 37.99	-1.6
ARN	61.48	16	P	10 19.30	0.2	IMA	88.77	354	ePc	12 55.00	0.1	MOTA	145.20	37	iPKPc	19 38.90	-0.7
FR1	61.62	17	ePc	10 19.80	-0.2		1.9s	62.80nm		5.5mb			1.1s	81.60nm			
BRK	61.80	15	ePc	10 21.50	0.3	ANM	88.96	349	eP	12 57.10	1.5	MDI	145.27	40	PKPc	19 38.40	-1.1
BKS	61.81	15	eP	10 22.10	0.8	INK	90.38	2	eP	13 02.00	-0.1	PRU	145.28	31	PKPc	19 38.80	-0.7
	1.2s		106.00nm		5.9mb	BRW	94.14	354	eP	13 20.60	1.2		1.4s	152.00nm			
CMB	62.42	16	ePc	10 25.50	0.1	MAT	97.60	306	eP	13 38.00	2.0						
	1.2s		53.24nm		5.6mb		0.7s	6.16nm		5.4mb		SOTA	145.33	37	iPKPc	19 39.20	-0.6
BONR	62.91	18	P	10 29.70	0.7	TIY	117.76	302	ePKP	18 47.50	-1.0		1.0s	36.20nm			
TNP	63.35	19	ePc	10 31.20	-0.6	XAN	120.10	297	PKP	18 52.30	-0.8	KHC	145.39	32	iPKPc	19 39.50	-0.3
	0.8s		6.37nm		4.9mb	GYA	120.78	288	PKP	18 54.80	0.1		1.1s	54.00nm			
ORV	63.58	15	ePc	10 32.70	-0.3	CD2	124.02	293	PKP	19 00.80	0.1						
ALO	64.64	29	ePc	10 39.90	-0.4	LZH	124.45	299	ePKP	19 00.80	-0.7	KSP	145.48	28	iPKPc	19 39.60	-0.2
	1.3s		40.87nm		5.5mb	BDT	125.64	276	ePKP	19 04.00	-0.1		1.0s	74.00nm			
							1.0s	34.50nm				WTTA	145.54	36	iPKPc	19 39.90	-0.4
ANMO	64.64	29	P	10 39.50	-0.8	CHG	126.09	278	ePKP	19 05.50	0.5		1.2s	99.40nm			
	1.2s		132.81nm		6.0mb	KIM	126.87	162	iPKPc	19 05.70	-0.7						
LBFM	65.19	14	P	10 43.70	-0.1		1.2s	31.25nm				BOB	145.63	42	PKP	19 39.40	-1.0
RMO	65.33	250	iPd	10 45.20	0.4	GTA	127.73	303	iPKPc	19 07.60	-0.1	KSH	145.84	308	ePKP	19 43.00	2.0
MSU	65.40	23	P	10 46.20	1.0	LIC	132.66	103	PKP	19 17.80	0.2	SAL	145.84	40	PKP	19 41.40	0.9
TOO	65.78	238	eP	10 47.00	-0.6	KIC	132.97	102	PKP	19 18.20	0.0	CTI	146.25	38	PKP	19 42.10	0.7
LPB	66.41	99	P	10 53.00	0.7	LKO	133.44	98	PKP	19 18.18	-0.9	KMR	146.37	33	iPKP+	19 43.00	1.6
CNCB	66.43	99	iPc	10 54.00	1.3	SOD	133.96	8	iPKP	19 18.00	-0.5	FVI	146.57	37	PKPc	19 42.30	0.6
ZOBO	66.46	99	iPc	10 53.00	0.1	NB2	136.01	21	PKP	19 22.20	-0.4	KBA	146.58	35	iPKPc	19 42.40	0.4
	1.0s		38.75nm		5.6mb		1.5s	18.80nm					1.2s	75.90nm			
						BUL	136.10	163	iPKPd	19 23.80	-0.4						
PV09	66.53	25	ePc	10 52.00	-0.5		1.0s	19.50nm				MME	146.69	42	PKP	19 43.70	1.4
CMS	66.70	244	eP	10 53.50	0.0	WMO	136.18	311	PKP	19 23.20	-0.4	BDI	146.70	42	PKPc	19 41.80	-0.3
CCH	67.94	100	P	11 03.00	1.1	HFS	137.50	20	ePKP	19 23.90	-1.5	NDI	146.95	289	iPKPc	19 44.00	1.1
BFD	68.16	238	eP	11 02.00	-0.6		0.5s	1.10nm					0.8s	93.28nm			
MEO	68.38	35	iPd	11 01.50	-2.4X	IFR	137.85	64	iPKPd	19 27.50	0.3	OBN	147.02	5	iPKPd	19 41.80	-0.3
MEO	68.38	35	iPd	11 02.60	-1.3	KAF	138.88	11	ePKP	19 18.60	-9.3X						
GOL	69.09	27	ePc	11 07.50	-1.0		0.9s	16.30nm									
	1.0s		18.13nm		5.2mb												
CTA	69.23	256	iPc	11 10.00	0.5	GUN	139.32	287	PKP	19 20.84	-9.4X	FIR	147.25	42	e(PKP)	19 45.50	2.6X
	1.4s		220.93nm		6.2mb		0.8s	31.00nm				VKA	147.32	31	iPKPc	19 44.30	1.4
OLP	69.23	249	iPc	11 10.00	0.6	SNF	139.70	36	PKPc	19 31.20	1.5						
BMW	69.84	11	P	11 12.50	-0.2	PKI	139.72	287	PKP	19 21.44	-9.5X						
STK	70.12	243	iPc	11 14.10	-0.7	KKN	139.84	287	PKP	19 22.32	-8.7X	PGD	147.49	41	PKP	19 44.00	0.5
	1.4s		4.00nm		4.4mb X		0.6s	16.00nm				SFI	147.54	41	PKP	19 44.90	1.6
LON	70.38	12	P	11 15.00	-1.0	DMN	139.99	287	PKP	19 22.74	-8.6X	KRA	147.60	26	ePKP	19 43.90	0.7
LRM	71.86	19	ePc	11 25.60	0.4		0.7s	27.00nm					1.0s	93.00nm			
NEW	72.84	15	ePc	11 30.50	-0.2	NUR	140.05	13	iPKP	19 21.20	-8.8X						
	0.8s		44.79nm		5.6mb		0.8s	20.50nm				TRI	147.65	37	iPKPc	19 45.90	2.5X
OLY	72.86	39	P	11 30.00	-1.0							ZST	147.74	31	iPKP	19 44.00	0.5
SIV	72.99	101	iPc	11 31.80	-0.4	MTD	140.08	166	ePKP	19 33.70	2.2X						
PNT	73.27	13	eP	11 33.00	-0.1	DOU	140.08	37	PKP	19 31.10	0.7	CRE	147.76	42	PKPc	19 44.00	0.1
QIS	75.03	254	iPc	11 44.00	0.0	WTS	140.23	33	ePKP	19 31.50	0.9	MAO	147.87	44	PKP	19 46.80	2.9X
FVM	75.19	38	ePc	11 43.20	-1.3		1.1s	25.00nm				RSM	147.90	41	PKP	19 47.30	3.4X
	0.8s		24.24nm		5.3mb	GKN	140.42	287	PKP	19 22.98	-9.0X	RIY	148.21	37	ePKP	19 44.80	0.5
SES	76.39	18	ePc	11 50.00	-1.1	ENN	140.45	35	ePKP	19 31.00	0.0	SPC	148.40	27	ePKP	19 45.20	0.4
	1.5s		179.00nm		6.0mb		1.0s	17.00nm			ARV	148.43	41	PKP	19 45.90	1.1	
TKL	77.65	43	P	11 57.00	-1.3	MEM	140.58	35	PKP	19 32.00	0.7	ASS	148.49	42	PKP	19 47.60	2.6X
CSY	77.75	203	eP	11 57.80	-0.6	GWF	142.35	37	PKP	19 29.82	-4.8X	SRO	148.58	30	iPKP	19 45.50	0.6
	0.5s		6.80nm		5.0mb	CDF	142.46	38	PKP	19 29.87	-5.0X	PTJ	148.72	35	iPKPd	19 46.10	0.8
JSC	78.42	45	P	12 02.60	0.0	ECH	142.50	38	PKP	19 29.98	-4.9X	ZAG	148.79	35	iPKPc	19 49.50	4.2X
ASPA	79.03	249	iPd	12 05.30	-1.0	WLS	142.50	38	PKP	19 30.03	-4.9X	RDP	149.21	44	PKP	19 49.30	3.1X
	1.4s		29.50nm		5.1mb	STR	142.64	37	PKP	19 36.76	1.8	POO	149.21	269	iPKPd	19 47.40	0.6
WB2	79.89	253	iPc	12 10.70	-0.3	LOMF	142.75	39	PKP	19 30.14	-5.2X	PSZ	149.22	29	ePKP	19 47.00	1.0
	0.7s		29.50nm		5.3mb	FEL	143.16	38	PKP	19 31.33	-4.8X	UZD	149.59	32	e(PKP)	19 46.00	-0.5
WRA	79.90	253	P	12 10.00	-1.0	KOD	143.29	257	ePKP	19 35.50	-2.0	SDI	149.94	43	PKP	19 48.20	0.9
	0.7s		30.70nm		5.4mb	MOX	143.44	32	iPKPc	19 33.00	-3.3X	GAR	150.08	311	ePKP	19 48.00	0.4
KDC	80.52	353	eP	12 13.40	0.1		1.3s	31.00nm				DUI	150.37	43	PKP	19 49.50	1.6
BLA	80.73	44	ePc	12 14.50	-0.6	CLL	143.67	30	ePKP	19 33.00	-3.7X	GZR	152.43	29	ePKPd	19 51.50	0.6
	0.5s		5.62nm		4.8mb		1.4s	27.00nm			TDS	152.65	45	PKP	19 51.90	0.7	
ADK	80.93	337	eP	12 16.20	0.5	BNI	143.76	43	PKP	19 34.50	-2.7X	VRI	153.65	23	ePKP	19 52.50	0.0
CVL	82.44	44	P	12 23.00	-0.9	GRF	143.85	33	iPKPc	19							



<p> i 20 16.00  e 23 51.80  VAY 155.35 35 ePKP 19 55.80 1.0  QUE 155.63 294 ePKP 19 58.10 2.2X  MAIO 158.83 315 ePKP 20 01.00 1.5  i 20 36.00  DSI 169.37 28 iPKPd 20 10.60 1.8  RMN 169.90 34 iPKPd 20 11.10 1.8  MBH 170.60 36 iPKPd 20 11.20 1.5  S.D. = 0.9 on 171 of 202 obs. </p> <hr/> <p> % MAY 29, 1991 19h 55m 58.88±1.53s  43.613 N ±16.2km 11.025 E ± 6.3km  DEPTH = 10.0km (geophysicist)  CENTRAL ITALY (381) </p>					<p> IMI 1.13 192 Pd 25 02.32 0.6  SAOF 1.13 205 Pg 25 16.64  Sg 25 02.48 0.8  SURF 1.13 242 Pg 25 18.86  LPG 1.14 296 Pn 25 01.32 -0.5  Sn 25 05.20 3.2X  Sn 25 19.00  LPL 1.16 296 Pn 25 05.70 3.4X  AUTN 1.16 209 Pg 25 02.82 0.4  Sg 25 20.40  DIX 1.20 332 ePd 25 03.40 0.3  TOUF 1.22 215 Pg 25 03.21 0.0  Sg 25 21.83  SBF 1.28 206 Pn 25 04.90 0.6  AURF 1.29 210 Pg 25 04.97 0.5  Sg 25 23.32  MDI 1.30 54 P 25 04.50 0.0  eSg 25 22.20  RSL 1.31 302 Pg 25 08.57 3.8X  MVIF 1.35 215 Pg 25 05.25 -0.2  Sg 25 26.44  EMS 1.39 320 ePd 25 07.00 1.0  REVf 1.41 206 Pg 25 07.16 0.9  CALN 1.58 217 Pg 25 09.45 0.7  VDL 1.71 30 ePc 25 11.60 0.9  SAL 1.74 69 P 25 10.50 -0.3  FRF 1.84 218 Pn 25 12.70 0.4  Sn 25 36.00  LLS 1.93 16 ePc 25 14.40 0.5  BDI 1.95 118 P 25 14.40 0.3  eSg 25 37.00  MME 1.96 114 P 25 14.20 -0.1  eSg 25 39.00  LRG 2.05 221 Pn 25 15.50 0.1  Sn 25 41.40  LMR 2.08 217 Pn 25 15.70 -0.1  Sn 25 39.90  PII 2.10 127 P 25 16.00 -0.1  eSg 25 41.50  OSS 2.15 38 ePd 25 18.10 1.1  CDR 2.21 233 ePn 25 17.70 0.0  i 25 20.70  i 25 24.10  i 25 38.30  iSn 25 43.50  i 25 45.50  ZLA 2.47 3 ePc 25 22.20 0.8  BBS 2.50 349 Pn 25 22.42 0.6  FIR 2.51 118 ePn 25 28.80 6.9X  iSn 26 09.00  LOMF 2.53 338 Pn 25 23.31 1.0  PGF 2.53 167 Pn 25 20.85 -1.5  CTI 2.63 66 P 25 22.60 -1.2  SLE 2.76 4 ePc 25 25.30 -0.3  SFI 2.83 112 P 25 27.60 1.2  FEL 2.86 357 Pn 25 26.83 -0.3  MOF 2.93 346 Pn 25 28.43 0.4  BSF 2.98 341 Pn 25 28.80 0.0  Sn 26 02.90  CRE 3.02 116 P 25 29.40 0.1  SCE 3.17 49 ePn 25 33.80 2.3  RSM 3.22 108 P 25 32.00 -0.1  HAU 3.26 337 Pn 25 33.10 0.5  Sn 26 10.00  WTTA 3.27 45 iPnd 25 34.40 1.4  i 25 41.50  iSn 26 15.00  i 26 17.10  ECH 3.28 348 Pn 25 32.94 0.0  MAO 3.36 140 P 25 32.90 -1.2  eSn 26 09.70  WLS 3.45 350 Pn 25 35.25 -0.1  CDF 3.46 350 Pn 25 35.22 -0.3  SMF 3.46 300 Pn 25 36.10 0.6  Sn 26 13.50  LBF 3.55 305 Pn 25 36.90 0.2  Sn 26 16.60  VITF 3.55 335 Pn 25 37.06 0.4  FVI 3.56 62 P 25 37.00 0.1  eSn 26 17.30  ARV 3.72 112 P 25 39.10 -0.1  eSn 26 20.50  ASS 3.75 120 P 25 40.00 0.3  LOR 3.77 308 Pn 25 39.90 -0.1  Sn 26 21.60  FUR 3.79 33 ePn 25 39.60 -0.6  AVF 3.83 299 Pn 25 40.90 0.2 </p>					<p> SSF 3.86 304 Pn 26 21.80  Sn 25 41.00 -0.2  Sn 25 23.10  TRI 3.97 78 ePn 25 40.50 -2.2  iSn 26 26.00  iSg 26 46.00  iLO 26 51.10  GWf 3.98 354 Pn 25 42.21 -0.7  BGF 4.06 294 Pn 25 44.10 0.2  Sn 26 28.30  Sn 25 42.80  VOY 4.12 74 ePn 25 42.80 -2.1  eSg 26 50.20  KBA 4.13 58 iPnd 25 46.10 1.0  i 25 54.20  i 26 02.00  i 26 33.10  i 26 38.10  MAF 4.14 289 Pn 25 45.10 0.0  Sn 26 29.60  MNS 4.17 128 P 25 46.00 0.4  CAF 4.36 271 Pn 25 48.20 -0.1  RIY 4.38 84 eP 25 35.20 -13.3X  TCF 4.40 289 Pn 25 48.60 -0.2  Sn 26 36.10  CEY 4.44 78 eP 26 07.50 18.1X  e(Sn) 26 55.00  LJU 4.56 75 e(Pn) 26 04.60 13.5X  eSg 27 15.50  RJF 4.75 276 Pn 25 51.50 -2.3  LSF 4.85 287 Pn 25 54.80 -0.4  Sn 26 47.30  VBY 5.00 82 ePn 26 03.40 6.1X  eSg 27 25.00  LPO 5.01 269 Pn 25 57.40 0.0  GRF 5.11 23 e(Pg) 26 18.30 19.5X  eSg 27 29.60  LFF 5.30 272 Pn 26 02.00 0.4  KHC 5.51 40 iPn 26 03.00 -1.6  e 26 25.50  e 27 04.00  Sg 27 37.00  PTJ 5.52 78 iPc 26 10.30 5.5X  DOU 5.64 336 P 26 05.00 -1.4  i 26 13.60  iS 27 05.60  MEM 5.79 346 iPc 26 13.80 5.4X  ENN 5.96 346 iPnc 26 11.00 0.3  0.7s 6.00nm 4.4mb  EPF 6.01 253 Pn 26 09.80 -1.8  MFF 6.05 288 Pn 26 11.90 -0.3  MOX 6.08 21 ePn 26 08.50 -4.0X  ePg 26 38.00  eSn 27 17.00  eSg 27 53.00  VKA 6.46 57 eP 26 48.00 30.1X  i 27 25.80  i 28 15.80  PRU 6.57 38 ePn 26 17.00 -2.4  Sn 27 04.10  Sn 27 24.50  LDF 6.75 305 Pn 26 21.00 -1.0  BRG 7.01 31 (Pn) 26 50.00 24.4X  e 27 05.00  eSg 28 31.00  FLN 7.04 305 Pn 26 24.80 -1.2  LPF 7.06 299 Pn 26 25.00 -1.3  CLL 7.06 25 (Pg) 27 03.00 36.6X  (Sg) 28 32.00  GRR 7.09 302 Pn 26 25.30 -1.4  KSP 7.96 40 eP 26 36.70 -2.2  e 28 51.00  S.D. = 0.9 on 93 of 108 obs. </p> <hr/> <p> MAY 29, 1991 20h 30m 21.21±0.16s  45.009 N ± 1.4km 8.184 E ± 1.7km  DEPTH = 11.0 ± 1.3 km  NORTHERN ITALY (545)  ML </p>				
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RSP	0.67	283	P	30 43.57	0.3	BGF	4.04	294	Pn	31 24.70	0.4	LSD	0.87	301	P	16 50.23						
BHB	0.68	256	P	30 34.86		MAF	4.12	289	Pn	32 09.20		VAI	0.94	24	P	16 41.41	0.0					
ROB	0.75	198	P	30 42.97		TCF	4.38	289	Pn	31 25.60	0.1	STV	1.00	220	P	16 52.18						
FIN	0.80	179	P	30 35.27	0.7	LSF	4.83	287	Pn	32 10.50		PZZ	0.94	238	P	16 43.00	0.7					
LSD	0.85	302	P	30 44.30		MFF	6.04	288	Pn	31 29.20	0.0	RRL	1.02	265	P	16 56.50						
PZZ	0.92	237	P	30 35.88	0.1	LDF	6.73	305	Pn	31 35.40	-0.2	IMI	1.13	192	P	16 43.87	1.3					
BOB	0.93	105	P	30 45.50		FLN	7.02	305	Pn	32 01.40	-1.0	LPG	1.14	296	Pn	16 56.07						
VAI	0.95	25	Pc	30 46.34	0.0	LPF	7.05	299	Pn	32 05.60	-1.1	FRF	1.84	218	Pn	16 44.08	0.6					
STV	0.98	219	P	30 38.29	-0.5	GRR	7.08	302	Pn	32 05.80	-1.4	PGF	2.53	167	Pn	16 56.59						
RRL	1.00	265	P	30 49.41		S.D. = 0.6 on 68 of 68 obs.											16 43.46	-0.4				
MMK	1.05	352	ePc	30 39.00	0.1	MAY 29, 1991 20h 41m 11.95±0.63s											16 45.92	0.3				
BNI	1.07	273	P	30 52.50		45.044 N ± 3.6km 8.182 E ± 6.2km											16 46.00	0.0				
SAOF	1.12	204	P	30 40.20	1.0	DEPTH = 10.0km (geophysicist)											17 02.80					
IMI	1.12	191	P	30 54.50		NORTHERN ITALY (545)											16 46.60	0.3				
LPG	1.12	296	Pn	30 39.93	0.1	ML 2.4 (GEN), 2.0 (LDG).											17 03.30					
LPL	1.14	297	Pn	30 52.08		PCP	0.56	153	P	41 22.36	-1.1	SBF	1.28	206	Pn	16 48.60	0.4					
AUTN	1.15	208	P	30 40.29	0.1	ORX	0.61	347	P	41 29.95		FRF	1.84	218	Pn	17 06.20						
TOUF	1.20	214	P	30 52.25		RSP	0.66	280	P	41 25.44	1.2	HAU	3.26	337	Pn	16 56.70	0.4					
DIX	1.20	333	ePd	30 41.10	-0.1	BHB	0.68	253	P	41 34.16		SMF	3.47	300	Pn	17 19.50	0.0					
SBF	1.26	205	P	30 41.60	0.2	ROB	0.78	197	P	41 25.03	-0.2	LBF	3.55	305	Pn	17 20.70	-0.1					
AURF	1.28	209	P	30 55.30		FIN	0.84	179	P	41 33.75		LOR	3.78	308	Pn	17 23.70	-0.3					
MDI	1.32	54	P	30 43.13	1.0	LSD	0.83	300	P	41 25.44	-0.1	AVF	3.83	299	Pn	17 24.40	-0.3					
MVIF	1.34	214	P	30 56.10		PZZ	0.94	235	P	41 34.36		SSF	3.87	304	Pn	17 24.70	-0.5					
EMS	1.38	321	ePd	30 43.00	0.6	LPG	1.11	295	Pn	41 28.31	1.1	BGF	4.06	294	Pn	17 27.50	-0.4					
REVF	1.40	205	P	31 00.50		LPL	1.13	295	Pn	41 38.98		MAF	4.14	289	Pn	17 28.00	-1.1					
CALN	1.56	217	P	30 45.40	0.5	IMI	1.15	191	P	41		S.D. = 0.6 on 26 of 26 obs.										
VDL	1.73	31	ePc	30 52.00	0.4	SBF	1.30	205	Pn	41 35.40	-0.6	% MAY 29, 1991 22h 24m 09.37±2.45s										
FRF	1.82	218	Pn	30 53.00	0.3	HAU	3.22	338	Pn	41 53.20		39.253 N ±17.1km 21.610 E ±18.1km										
LLS	1.94	17	ePc	30 55.50	0.8	SMF	3.43	299	Pn	42 03.30	-0.3	DEPTH = 10.0km (geophysicist)										
BDI	1.97	118	P	30 55.40	0.5	LBF	3.51	305	Pn	42 07.80	0.1	GREECE (364)										
MME	1.97	114	P	31 19.90		LOR	3.74	308	Pn	42 10.50	-0.5	AGG	0.61	112	ePg	24 21.40	-0.2					
MME	1.97	114	P	30 56.50	1.4	BGF	4.03	294	Pn	42 14.60	-0.4	LIT	1.09	38	ePg	24 30.60						
LRG	2.03	221	Pn	31 18.90		MAF	4.11	289	Pn	42 15.40	-0.8	FNA	1.54	353	ePb	24 35.20	-1.7					
LMR	2.06	216	Pn	31 20.60		S.D. = 0.6 on 18 of 18 obs.											GRG	1.81	19	ePb	24 41.00	0.2
PII	2.11	127	P	31 20.30		% MAY 29, 1991 21h 11m 50.97±1.22s											OHR	1.96	342	e(Pn)	24 43.80	0.8
OSS	2.17	39	ePc	30 58.70	0.8	46.426 N ±10.8km 3.496 E ±7.6km											KNT	2.15	27	ePn	24 46.60	0.9
CDR	2.19	233	eP	30 58.50	0.5	DEPTH = 10.0km (geophysicist)											SRS	2.40	39	ePn	24 50.60	1.2
LOMF	2.53	339	P	31 20.70		FRANCE (538)											S.D. = 1.4 on 7 of 7 obs.					
PGF	2.53	166	P	31 01.31	-1.7	ML 1.6 (LDG).											MAY 29, 1991 23h 06m 56.58±0.73s					
CTI	2.65	66	P	31 04.20	-0.5	SMF	0.32	47	Pg	11 58.10	0.4	39.608 N ±5.2km 118.384 E ±4.3km										
SLE	2.77	4	ePd	31 05.60	-0.7	AVF	0.38	345	Pg	11 58.70	0.0	DEPTH = 24.4 ±5.9 km										
FEL	2.87	358	P	31 07.10	-0.7	BGF	0.47	287	Pg	12 00.60	0.1	4.9mb (18 obs.)										
MOF	2.94	346	P	31 08.81	0.1	LBF	0.65	30	Pg	12 07.00		NORTHEASTERN CHINA (658)										
BSF	2.98	342	Pn	31 44.04		MAF	0.68	253	Pg	12 04.30	-0.1	ML 4.9 (BJI).										
CRE	3.04	116	P	31 09.70	0.3	LOR	0.88	16	Pg	12 13.40		BJI	1.76	285	Pg	07 25.50	-0.3					
HAU	3.25	338	Pn	31 13.50	0.3	TCF	0.90	262	Pg	12 08.30	0.0	DL2	2.61	105	iPnd	07 48.00						
ECH	3.29	348	P	31 13.34	-0.3	S.D. = 0.4 on 7 of 7 obs.											Z	10s	5.20um	07 39.00	0.8	
SMF	3.45	300	Pn	31 16.60	0.7	MAY 29, 1991 21h 16m 24.46±0.39s											Pg	07 45.00				
WLS	3.45	351	P	31 15.51	-0.5	45.014 N ±2.4km 8.214 E ±3.9km											Sg	08 20.00				
CDF	3.46	350	P	31 15.95	-0.2	DEPTH = 10.0km (geophysicist)											Sg	08 20.00				
LBF	3.54	305	Pn	31 17.50	0.3	NORTHERN ITALY (545)											Pnc	07 51.70	0.4			
VITF	3.55	335	P	31 17.45	0.2	ML 2.5 (GEN), 2.4 (LDG).											Z	13s	8.70um			
FVI	3.58	62	P	31 17.00	-0.8	PCP	0.53	153	P	16 34.95	-0.2	N	10s	3.90um								
LOR	3.76	308	Pn	31 20.40	0.0	CKI	0.59	175	P	16 36.20	-0.2	E	10s	6.10um								
AVF	3.81	300	Pn	31 21.50	0.4	ORX	0.64	345	P	16 38.33	0.9	SNY	4.53	59	Pn	08 01.60						
SSF	3.85	304	Pn	32 04.00	0.1	RSP	0.69	282	P	16 47.36		Sg	08 46.00									
						BHB	0.70	256	P	16 38.03	-0.2	Pg	08 18.40									
						ROB	0.76	199	P	16 46.74		Sg	08 53.60									
						FIN	0.80	180	P	16 48.49		Sg	09 16.30									
										16 48.08	0.0	Pn	08 12.50	0.0								
										16 40.08		Pg	08 32.40									
										16 47.97		Sg	09 32.30									
										16 39.15	-0.2	ePn	08 16.60	-0.7								
										16 48.49		Pg	08 32.00									
										16 40.30	-0.2	Sg	09 47.00									
										16 38.48	0.2	ePn	08 32.90	-0.2								
										16 47.97		ePg	08 51.40									
										16 39.15	-0.2	Sg	10 16.60									
										16 48.49	0.0	ePn	08 34.30	-2.3X								
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N	10s		5.30um				E	10s		2.00um		VOY	36.65	312	eP	16	35.10	0.5			
E	12s		5.50um				NDI	35.50	265	eP	13	54.00	0.7	KSP	36.93	320	eP	16	36.00	-0.8	
SSE	8.80	164	P	09	04.00	-1.2	HYB	40.95	249	eP	14	50.00	11.0X					17	53.00		
Z	20s		2.40um				IMA	53.77	30	eP	16	19.10	0.3	KBA	37.33	313	iPd	16	40.90	0.5	
N	15s		2.50um				SVW	54.46	37	eP	16	25.50	1.6		1.2s	13.40nm			4.7mb		
E	16s		9.20um				SOD	54.81	332	eP	16	26.00	-0.3			i	18	13.90			
			S	10	41.70		FBA	56.47	31	eP	16	39.60	1.2	PRU	37.60	318	eP	16	43.00	0.6	
XAN	9.40	237	P	09	13.00	-0.6		0.9s	20.10nm			5.1mb		Z	14s	0.80um			4.7MsZx		
N	16s		5.40um				KAF	56.82	326	iP	16	40.00	-0.9	N	15s	1.50um					
E	16s		6.50um					0.8s	12.00nm			5.0mb		E	14s	0.70um					
WHN	9.63	201	eP	09	15.00	-1.6			esP	16	43.50				e		18	01.70			
Z	13s		3.00um				PMR	57.20	35	eP	16	42.90	-0.7	KHC	37.86	316	iP	16	44.80	0.1	
N	12s		3.40um				NUR	58.20	324	iP	16	49.90	-0.7		1.2s	7.50nm			4.5mb		
E	12s		5.30um					0.7s	12.10nm			5.1mb		BRG	38.29	319	eP	16	48.40	0.2	
			eS	11	08.00		TOA	58.27	33	eP	16	52.40	1.2		N	19s	2.00um				
MDJ	9.71	55	eP	09	20.00	2.2	INK	59.98	24	eP	17	03.00	0.1	E	19s	1.00um					
Z	12s		3.10um				WRA	61.09	163	P	17	10.00	-0.9			e	18	01.00			
			eS	11	10.00			0.6s	4.10nm			4.7mb		CLL	39.01	320	eP	16	55.00	0.8	
LZH	12.02	258	eP	09	46.50	-3.0X	WB2	61.09	163	eP	17	10.30	-0.6	PGF	39.31	305	eP	16	55.60	-1.3	
Z	12s		4.56um			5.4mb		0.6s	4.20nm			4.7mb		GRF	39.50	316	eP	16	58.40	0.1	
N	10s		4.53um			4.9MsZ			i	17	56.00			1.7s	16.00nm			4.5mb			
			eS	12	02.00		HFS	63.15	327	eP	17	22.50	-1.7	MOX	39.58	318	e(P)	17	02.00	3.0X	
GTA	14.34	275	eP	10	19.70	-0.5	Z	17s	0.49um			4.6mb		BSD	39.64	326	iPd	16	58.60	-0.7	
Z	23s		3.10um						e	17	28.20			0.8s	28.00nm			5.1mb			
			pP	10	27.40				LR	41	36.00		SBF	40.63	307	eP	17	06.60	-1.2		
OZH	14.62	179	eP	10	30.00	6.2X	NB2	63.66	329	P	17	25.80	-1.9		1.0s	20.00nm			4.8mb		
Z	10s		1.90um					0.8s	3.80nm			4.6mb		COP	41.16	325	iPd	17	13.10	1.3	
N	10s		1.00um				ASPA	64.59	164	eP	17	35.00	0.9		0.7s	32.88nm			5.2mb		
E	10s		1.40um					0.8s	5.70nm			4.8mb		LPG	41.38	309	eP	17	13.90	-0.3	
CD2	14.75	238	eP	10	22.00	-3.5X	MUD	67.23	325	eP	17	30.00	-20.6X		0.9s	8.20nm			4.5mb		
Z	11s		1.40um					0.7s	3.60nm					LPL	41.40	309	eP	17	14.00	-0.3	
E	15s		5.30um				YKA	69.73	23	eP	18	04.70	-1.3	BSF	41.81	313	eP	17	16.60	-0.9	
			eS	13	07.00			1.1s	11.30nm			4.9mb			0.9s	11.45nm			4.6mb		
MTMJ	15.58	95	eP	10	45.20	8.8X	EKA	73.13	329	Pd	18	17.50	-9.0X	WTS	42.87	318	eP	17	27.00	1.1	
MAT	15.91	95	eP	10	47.00	6.6X		1.0s	9.30nm			4.8mb			0.9s	16.00nm			4.7mb		
	1.2s		51.56nm			4.6mb	DMU	75.66	330	eP	18	34.00	-7.1X	ENN	43.07	317	eP	17	29.00	1.5	
			eS	14	00.00		DCN	76.22	330	eP	18	34.00	-10.3X		1.0s	12.00nm			4.6mb		
IRK	15.97	327	eP	10	45.20	4.1X	FFC	79.88	22	iPd	19	04.30	-0.1	LBF	43.53	311	eP	17	30.70	-0.7	
			eS	15	09.00			1.2s	25.00nm			5.1mb			1.0s	6.00nm			4.3mb		
IIDJ	16.02	99	P	10	41.70	-0.2	SES	80.43	30	eP	19	07.00	-0.4	SMF	43.57	310	eP	17	30.80	-0.9	
GYA	16.37	220	P	10	47.60	1.2	LRM	83.53	33	eP	19	26.50	2.6X		1.0s	9.00nm			4.5mb		
	3.0s		500.00nm			5.1mb		S.D. = 1.1	on 42 of 61 obs.				LOR	43.65	311	eP	17	31.80	-0.6		
Z	16s		1.40um			4.6MsZ								Z	21s	0.15um			3.9MsZ		
N	12s		2.10um										DOU	43.73	315	P	17	34.20	1.3		
E	12s		1.90um												e	26	17.20				
			pP	10	54.00								SSF	43.86	311	eP	17	33.30	-0.7		
			PP	11	06.00									1.3s	16.25nm			4.6mb			
			sS	14	06.00								BGF	44.23	310	eP	17	36.30	-0.8		
CHJJ	16.66	96	P	10	56.90	6.9X								0.8s	6.70nm			4.5mb			
HKC	17.62	193	eP	11	08.00	6.0X	DHR	3.21	257	iPd	10	21.00	1.7	MAF	44.38	309	eP	17	37.90	-0.4	
KMI	19.53	227	eP	11	26.00	0.5			S	11	20.00			1.1s	7.35nm			4.4mb			
	1.6s		90.00nm			4.8mb	RYD	6.74	251	iPc	11	18.00	8.9X	CAF	44.59	308	eP	17	38.80	-1.2	
Z	17s		2.20um			5.2MsZx			S	12	25.00			1.0s	24.00nm			5.0mb			
			pP	11	33.50	30kmX	KER	9.19	324	eP	11	43.00	-0.2	TCF	44.63	309	eP	17	39.90	-0.5	
			sP	11	37.50		MAIO	10.48	27	eP	12	05.00	4.2X		0.8s	4.05nm			4.3mb		
			S	15	04.00				eS	14	08.00		RJF	45.01	308	eP	17	42.60	-0.8		
QIZ	21.80	202	P	11	53.50	4.8X	KMSA	10.69	233	iPc	11	59.00	-4.7X		1.1s	22.00nm			4.9mb		
	N	13s	1.00um						S	13	47.00			Z	21s	0.10um			3.7MsZ		
	E	12s	2.20um				QUE	12.11	72	eP	12	21.70	-1.3	LPO	45.19	307	eP	17	43.80	-1.0	
			eS	15	50.00				eS	14	31.70			1.2s	20.85nm			4.9mb			
BAG	23.19	175	eP	12	05.50	2.8X	TAB	12.58	333	eP	12	24.00	-5.3X	LFF	45.52	307	eP	17	46.60	-0.8	
WMQ	23.22	290	eP	12	04.00	1.3	HOL	16.54	282	eP	13	20.00	-0.6		0.9s	11.45nm			4.8mb		
Z	10s		0.60um			4.3MsZx			S	16	00.00		EBR	45.52	302	eP	17	53.00	5.6X		
			sS	16	24.00		PRNI	16.68	286	eP	13	22.90	0.5	MTD	48.55	209	iPc	18	11.20	-0.3	
YAK	23.48	13	eP	12	04.20	-0.7	MML	16.70	293	eP	13	21.70	-1.0	TOL	49.02	301	eP	18	15.00	0.1	
			epP	12	22.00	79kmX	BHL	16.92	298	P	13	24.00	-1.5	KRI	49.46	211	iPc	18	18.60	0.0	
			ePP	12	39.00				S	21	54.00		MAL	49.56	296	iPc	18	19.00	-0.1		
			ePPP	13	00.00		RMN	17.01	286	e(P)	13	26.70	0.0	IFR	50.58	292	iP	18	38.00	10.9X	
			eS	16	17.00		GAR	18.34	45	eP	13	43.00	-0.1	LKO	58.36	265	P	19	22.96	-1.0	
			ePS	16	22.00				eS	17	09.00		KIC	59.03	261	P	19	28.00	-0.6		
			eSS	17	24.00		ASW	18.95	266	iPc	13	52.00	1.5		0.8s	14.50nm			5.2mb		
			eSSS	17	49.00				eS	16	22.00		TIC	59.15	261	Pd	19	28.80	-0.6		
			i	19	06.00				eP	14	00.50	0.6		0.8s	20.00nm			5.3mb			
			eScS	22	54.00		HLW	19.79	283	eP	14	00.50	0.6	LIC	59.35	261	Pd	19	30.00	-0.8	
LSA	24.41	254	Pc	12	17.60	2.9	POO	20.46	110	eP	14	07.00	0.1		0.8s	27.50nm			5.4mb		
CHG	26.67	225	eP	12	34.00	-1.5	BBTK	21.52	312	iPd	14	18.00	0.3	Z	21s	0.13um			4.0MsZ		
			e	17	23.00		KAS	21.70	316	eP	14	20.50	1.1								
GUN	29.28	256	P	13	00.30	0.8	VR1	28.44	318	ePd	15	23.00	0.0	FRB	78.81	337	eP	21	32.00	2.1	
	0.7s		25.00nm			5.1mb	MLR	28.71	317	eP	15	30.00	4.4X	SCH	83.82	330	eP	21	57.00	0.6	
KKN	29.79	257	P	13	04.42	0.5	SKO	30.21	308	eP	15	39.00	0.1	IMA	84.85	11	eP	22	02.70	1.2	
	0.8s		19.00nm			4.9mb	OHR	30.40	306	eP	15	41.00	0.4	YKA	90.27	355	eP	22	28.70	1.1	
PKI	29.81	256	P	13	04.94	0.7	SRO	34.44	316	eP	16	16.20	0.4		1.0s	3.10nm			4.6mb		
DMN	30.02	257	P	13	06.80	0.8	KRA	34.50	321	eP	16	16.60	0.4	WRA	91.03	112	P	22	32.00	0.3	
GKN	30.17	258	P	13	07.18	0.0			e	16	24.50			0.9s	1.80nm			4.5mb			
	1.1s		39.00nm			5.1mb	ZST	35.34	316	eP	16										



\* MAY 29, 1991 23h 25m 06.90±0.89s  
35.713 N ±10.6km 139.496 E ±9.9km  
DEPTH = 79.0 ± 7.2 km  
4.5mb ( 5 obs.)

NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	0.53	310	P	25	19.70	-1.3
			S	25	27.70	
KAKJ	0.74	48	P	25	23.80	0.8
			eS	25	34.20	
IDJ	1.31	260	P	25	31.40	1.2
			eS	25	47.70	
MAT	1.33	309	iPd	25	29.50	-0.9
			iS	25	45.30	
NIJ	1.58	345	P	25	32.50	-1.1
			S	25	51.00	
YAMJ	2.49	10	P	25	46.70	0.6
WKYJ	3.53	246	P	26	01.20	0.6
OFUJ	3.78	27	iPd	26	04.80	0.9
			S	26	47.00	
TKSJ	4.80	251	P	26	18.60	0.3
YONJ	4.95	266	P	26	20.40	0.0
HOJ	7.28	23	eP	26	51.90	-0.7
			eS	28	07.20	
KUSJ	8.41	27	eP	27	03.80	-4.2X
			eS	28	34.00	
WRA	55.57	186	P	34	44.00	7.6X
	0.3s					
ASPA	59.29	186	eP	35	00.70	-1.9
	1.2s					
NUR	70.38	332	iP	36	14.20	0.4
	0.3s					
HFS	74.64	335	eP	36	39.20	0.2
	0.5s					
			e	36	44.90	
NB2	74.80	337	P	36	40.60	0.7
	0.7s					
OHR	85.10	318	eP	37	37.20	1.9X
	S.D. = 1.0		on	15	of	18 obs.

& MAY 29, 1991 23h 48m 37.08s  
59.834 N 153.730 W

DEPTH = 148.7km

SOUTHERN ALASKA

<AEIC>

PDB	0.24	259	iPd	48	56.45	0.5
			eS	49	11.77	
AUH	0.49	163	ePc	48	57.88	-0.7
AUE	0.51	159	ePc	48	57.82	-0.7
AUI	0.52	163	ePc	48	57.81	-0.8
			eS	49	14.06	
MCNL	0.72	206	iPc	48	58.79	-1.1
			eS	49	15.57	
RED	0.76	39	iPc	48	59.18	-1.0
			eS	49	16.41	
RDW	0.80	35	iPc	48	59.64	-1.0
			eS	49	18.21	
RS2	0.80	37	iPc	48	59.70	-0.9
			eS	49	18.42	
RSO	0.80	37	iPc	48	59.64	-1.0
			eS	49	18.35	
NCT	0.83	28	iPc	48	59.88	-0.9
			eS	49	17.22	
REF	0.83	38	iPc	48	59.96	-0.9
RDN	0.84	35	iPc	48	59.99	-0.8
CDD	0.91	177	ePd	49	00.13	-1.1
			eS	49	18.64	
DFR	0.92	34	iPc	49	00.47	-1.0
			S	49	19.09	
RDT	0.99	41	iPc	49	01.04	-1.0
			S	49	19.92	
HOM	1.07	99	ePc	49	01.82	-0.8
			eS	49	21.21	
XLV	1.09	110	ePc	49	01.97	-0.8
CNPM	1.30	103	iPc	49	03.56	-1.3
			iS	49	24.05	
SYI	1.41	150	iPd	49	04.56	-1.3
			eS	49	25.59	
CKL	1.53	26	iPc	49	06.57	-0.8
NKA	1.54	53	ePc	49	07.91	0.7
BGL	1.58	24	ePc	49	07.32	-0.5
SVW	1.59	325	iPd	49	06.94	-0.9
			eS	49	31.58	
CRP	1.63	28	iPc	49	07.90	-0.6
			eS	49	32.25	

NCG	1.76	26	ePc	49	08.93	-0.9
SLKM	1.88	67	eP	49	09.76	-1.4
SEW	2.17	81	ePc	49	12.98	-1.5
SUA	2.20	41	ePc	49	13.74	-1.3
SKT	2.41	26	ePc	49	16.23	-1.2
			S	49	46.83	
PMS	2.50	54	ePc	49	16.77	-1.9
PWA	2.63	44	eP	49	19.30	-0.8
LTJ	2.96	83	ePc	49	22.86	-1.6
KNK	3.04	56	eP	49	24.20	-1.3
KNIM	3.05	78	ePc	49	23.02	-2.5
GHO	3.05	48	eP	49	23.73	-2.0
CUT	3.08	32	eP	49	24.38	-1.5
VZW	3.76	68	ePc	49	32.22	-2.7
VLZ	3.89	67	eP	49	34.31	-2.1
KLU	4.19	63	ePc	49	38.08	-2.5
GLB	5.14	67	eP	49	51.08	-2.1
	40 obs.		associated			

? MAY 29, 1991 23h 52m 17.42±2.71s  
26.749 N ±17.8km 54.062 E ±33.0km  
DEPTH = 33.0km (normal)  
3.9mb ( 2 obs.)

SOUTHERN IRAN

(353)

DHR	3.54	264	eP	53	25.00	13.6X
			S	54	10.00	
RYD	7.02	255	ePc	54	00.00	-0.6
			S	55	14.00	
KER	9.66	323	eP	54	38.00	0.7
KMSA	10.83	236	eP	54	53.00	-0.3
			S	56	48.00	
HFS	43.23	332	eP	00	16.50	-0.4
	0.5s					
			e	00	19.50	
			e	00	22.80	
			e	00	26.00	
NB2	44.75	332	P	00	28.40	-0.9
	0.9s					
LIC	59.68	261	P	02	22.80	1.5
	S.D. = 1.2		on	6	of	7 obs.

\* MAY 29, 1991 23h 52m 24.47±1.24s  
3.771 S ±24.8km 75.461 W ±38.1km  
DEPTH = 52.9 ± 16.7 km  
4.1mb ( 2 obs.)

NORTHERN PERU

(111)

TUNG	3.79	308	P	53	22.50	0.4
VC1	4.28	317	eP+	53	29.60	0.4
CAYA	4.58	327	Pd	53	33.60	0.2
GGP	4.75	319	Pd	53	35.50	-0.4
YANA	4.78	319	P+	53	35.70	-0.5
COTA	4.99	325	eP+	53	39.30	0.1
ZOBO	14.36	150	Pd	55	57.90	10.8X
			S	56	22.00	
LPB	14.60	151	eP	55	50.00	0.0
CNCB	14.89	151	P	55	54.00	0.0
ALO	48.28	325	ePd	01	02.20	-0.5
	0.8s					
			e	01	34.00	
YKA	72.45	342	eP	03	47.50	0.5
	0.6s					
			e	03	47.50	
KKN	149.87	36	PKP	12	00.00	-6.3X
	S.D. = 0.5		on	10	of	12 obs.

MAY 30, 1991 00h 12m 31.86±0.35s  
43.173 N ± 3.6km 11.007 E ± 2.6km  
DEPTH = 11.4 ± 1.9 km

CENTRAL ITALY

(381)

ML 3.1 (LDG), 2.7 (GEN).						
FIR	0.63	17	ePg	12	45.00	0.6
			iSg	12	54.00	
PII	0.65	327	Pc	12	44.70	0.0
			eSg	12	54.20	
MAO	0.76	172	P	12	47.70	1.0
			eSg	12	58.60	
CRE	0.83	56	P	12	47.40	-0.4
			eSg	12	58.40	
PGD	0.87	36	P	12	48.50	-0.1
			eSg	12	59.80	
BDI	0.94	342	P	12	49.70	0.0
			eSg	13	03.00	
SFI	0.97	39	P	12	49.70	-0.4
			eSg	13	02.70	
MME	1.04	348	P	12	52.00	0.4

ASS	1.22	94	P	12	54.00	-0.4
RSM	1.29	54	P	12	56.00	0.3
ARV	1.45	76	P	12	57.80	-0.2
MNS	1.46	122	P	12	58.00	-0.1
PGF	1.60	248	Pn	13	01.00	0.8
			Sn	13	20.90	
BOB	1.95	325	P	13	06.60	1.4
PCP	2.25	308	P	13	14.90	5.4X
FIN	2.28	298	P	13	13.26	3.3X
CKI	2.34	303	P	13	10.90	0.1
IMI	2.38	289	P	13	12.23	0.8
SAL	2.46	352	P	13	10.00	-2.4X
ROB	2.53	297	P	13	13.57	0.0
SDI	2.54	124	P	13	14.00	0.3
SBF	2.69	286	Pn	13	15.30	-0.5
			Sn	13	45.40	
MDI	2.76	341	P	13	16.00	-0.8
STV	2.88	293	P	13	18.59	0.1
CTI	2.91	9	P	13	17.80	-1.2
PZZ	3.12	297	P	13	21.67	-0.3
BHB	3.17	303	P	13	21.77	-0.9
FRF	3.20	278	Pn	13	22.50	-0.5
			Sn	13	59.00	
TRI	3.21	37	iP	13	32.30	9.2X
			i	13	59.00	
ORX	3.28	320	P	13	24.95	0.7
LMR	3.29	274	Pn	13	23.60	-0.7
			Sn	14	01.50	
LRG	3.40	276	Pn	13	25.70	-0.1
VDL	3.49	342	ePd	13	27.90	0.7
RRL	3.51	301	P	13	31.31	3.7X
OSS	3.57	350	ePc	13	29.80	1.5
LSD	3.59	311	P	13	27.41	-1.3
MMK	3.61	324	ePc	13	33.60	4.6X
BNI	3.64	303	P	13	28.50	-0.9



DEPTH = 114.7 ± 17.8 km  
SAN JUAN PROVINCE, ARGENTINA (137)

RTCB	0.05	199	iPd	34	38.50	-0.2
RTLL	0.29	67	i(P)	34	38.80	-0.4
RTRS	1.40	335	iPc	34	49.00	0.4
MDZ	1.44	182	iP	34	50.50	1.3
			iS	35	08.50	
PEL	2.34	223	iPc	35	00.00	-0.5
			iS	35	29.40	
RFA	3.33	176	iPc	35	13.30	-0.5
			S	35	50.80	
TCA	3.59	89	iPc	35	17.20	0.0
			S	35	46.20	

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

\* MAY 30, 1991 00h 36m 52.98 ± 0.52s  
19.935 N ± 9.6km 46.046 W ± 11.7km  
DEPTH = 10.0km (geophysicist)  
4.7mb (4 obs.)

NORTH ATLANTIC RIDGE (403)

SIV	38.64	204	P	44	18.20	-0.3
IFR	38.72	61	iP	44	20.00	0.7
ZOBO	42.01	213	P	44	46.20	-0.8
	1.5s	16.13nm			4.5mb	
LPB	42.22	212	eP	45	01.00	12.5X
CNCB	42.40	212	P	44	51.00	0.9
FFC	54.42	324	iPc	46	22.00	0.4
	0.9s	10.00nm			4.8mb	
ALO	54.91	299	eP	46	27.30	0.7
SES	59.01	317	eP	46	55.00	-0.3
YKA	62.62	331	eP	47	18.40	-1.1
	1.1s	3.20nm			4.4mb	
MLR	63.54	48	eP	47	26.00	-0.1
PNT	64.51	316	ePd	47	33.00	0.8
	0.9s	14.00nm			5.2mb	
OBN	69.72	37	eP	48	04.50	-0.4
	1.5s	*****nm			8.3mb X	
			i	48	12.00	
INK	70.73	337	eP	48	10.50	-0.3

S.D. = 0.7 on 12 of 13 obs.

% MAY 30, 1991 01h 11m 24.45 ± 3.75s  
46.009 N ± 27.8km 2.928 E ± 13.2km  
DEPTH = 10.0km (geophysicist)

FRANCE (538)

ML 1.6 (LDG).

MAF	0.33	310	Pg	11	31.50	0.2
			Sg	11	36.50	
BGF	0.55	354	Pg	11	35.40	-0.3
			Sg	11	42.70	
TCF	0.57	299	Pg	11	36.00	-0.1
			Sg	11	43.40	
AVF	0.83	20	Pg	11	40.60	0.0
			Sg	11	51.10	
LSF	1.00	284	Pg	11	43.30	-0.1
			Sg	11	56.40	
SSF	1.13	21	Pg	11	45.60	0.1
			Sg	11	59.90	

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

MAY 30, 1991 02h 02m 48.81 ± 0.22s  
44.543 N ± 1.7km 7.294 E ± 2.6km  
DEPTH = 8.8 ± 2.4 km

NORTHERN ITALY (545)

ML 2.8 (LDG), 2.6 (GEN).

PZZ	0.14	255	P	02	52.33	0.2
			S	02	54.38	
BHB	0.30	356	P	02	55.52	0.5
			S	02	59.63	
STV	0.30	176	P	02	55.40	0.4
			S	02	59.30	
ROB	0.48	121	P	02	59.09	0.5
			S	03	05.96	
RRL	0.52	316	P	02	59.30	-0.1
			S	03	06.58	
TOUF	0.53	184	Pg	02	59.55	0.0
AUTN	0.56	170	Pg	02	59.79	-0.3
			Sg	03	07.24	
SAOF	0.59	161	Pg	03	00.33	-0.3
			Sg	03	08.18	
RSP	0.61	358	P	03	00.33	-0.7
			S	03	08.12	
MVIF	0.65	189	Pg	03	01.83	-0.2

AURF	0.66	178	Pg	03	10.10	
BNI	0.67	319	P	03	01.46	-0.6
			eSg	03	02.00	-0.4
SBF	0.69	171	Pg	03	10.40	
			Sg	03	02.10	-0.5
CKI	0.72	99	P	03	11.30	
			eSg	03	03.20	0.2
FIN	0.74	117	P	03	11.90	
			S	03	13.14	
IMI	0.76	146	P	03	03.71	-0.2
			S	03	13.66	
REVF	0.80	176	Pg	03	05.42	0.8
CALN	0.84	200	Pg	03	04.60	-0.7
PCP	0.89	90	P	03	06.66	0.5
			S	03	18.68	
LSD	0.92	354	P	03	06.58	-0.1
			S	03	18.47	
LPG	1.03	338	Pg	03	08.70	0.1
			Sg	03	21.50	
LPL	1.05	338	Pg	03	08.90	0.0
			Sg	03	21.80	
FRF	1.09	206	Pg	03	09.60	0.2
			Sg	03	22.10	
LRG	1.28	212	Pg	03	13.00	0.4
			Sg	03	29.60	
LMR	1.34	205	Pg	03	13.90	0.4
			Sg	03	30.20	
CDR	1.40	232	ePg	03	15.20	0.7
			e	03	30.40	
PGF	2.35	148	Pn	03	27.40	-0.9
BGF	3.72	304	Pn	03	47.80	0.1

S.D. = 0.5 on 28 of 28 obs.

? MAY 30, 1991 02h 54m 06.38 ± 5.08s  
41.370 N ± 29.9km 23.664 E ± 23.9km  
DEPTH = 10.0km (geophysicist)

GREECE-BULGARIA BORDER REGION (363)

SRS	0.26	192	iPg	54	12.60	0.7
			eSg	54	16.50	
SOH	0.60	203	ePg	54	18.40	-0.1
			eSg	54	27.50	
KNT	0.61	250	ePg	54	19.00	0.2
			eSg	54	27.30	
THE	0.91	216	iPg	54	22.70	-1.0
GRG	1.04	247	ePg	54	26.20	0.2
			eSg	54	40.90	
PAIG	1.44	180	ePb	54	32.40	-0.1

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

% MAY 30, 1991 04h 26m 13.78 ± 1.17s  
42.990 N ± 8.8km 18.670 E ± 8.1km  
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

ML 1.8 (TTG).

BRY	0.13	226	iPg	26	16.94	-0.1
			iSg	26	19.64	
NKY	0.30	126	iPg	26	20.09	0.0
			iSg	26	25.47	
HCY	0.56	193	iPg	26	25.09	0.0
			iSg	26	34.40	
PLE	0.63	57	iPg	26	26.57	0.1
			iSg	26	36.74	
TTG	0.71	142	iPg	26	27.50	-0.2
			iSg	26	38.15	
BDV	0.72	171	iPg	26	28.14	0.3
			iSg	26	39.52	

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

? MAY 30, 1991 04h 29m 03.61 ± 4.36s  
42.985 N ± 37.3km 18.675 E ± 8.9km  
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

ML 1.3 (TTG).

BRY	0.13	229	iPg	29	06.84	0.0
			iSg	29	09.60	
NKY	0.29	126	iPg	29	09.82	0.0
			iSg	29	15.24	
HCY	0.55	194	iPg	29	14.80	0.0
			iSg	29	23.69	
TTG	0.70	142	iPg	29	17.42	0.0
			iSg	29	28.02	

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

& MAY 30, 1991 04h 37m 26.49s  
58.176 N 142.981 W  
DEPTH = 10.0km (geophysicist)  
GULF OF ALASKA (15)  
<AEIC>. ML 2.6 (AEIC).

YKU	2.18	49	eP	37	58.79	-4.5
PNL	2.39	50	iP	38	00.69	-5.6
			eS	38	27.27	
BCPM	2.48	43	eP	38	02.28	-5.3
HON	2.49	57	iP	38	02.04	-5.6
			eS	38	29.24	
TGL	2.59	2	eP	38	03.84	-5.4
CROM	2.59	358	iP	38	03.89	-5.4
BALM	2.89	6	eP	38	08.33	-5.1
CTGM	2.92	16	eP	38	08.64	-5.3
MTU	3.02	309	eP	38	09.86	-5.3
LTJ	3.13	309	iP	38	11.29	-5.5
KNIM	3.27	314	eP	38	12.98	-5.9
GLB	3.30	353	eP	38	13.76	-5.6
VZW	3.41	329	eP	38	15.09	-5.8
VLZ	3.42	332	eP	38	14.91	-5.9
GLI	3.43	324	eP	38	15.30	-5.7
KLU	3.64	337	eP	38	18.59	-5.6

16 obs. associated

% MAY 30, 1991 09h 00m 25.08 ± 0.69s  
40.572 N ± 5.7km 23.028 E ± 7.2km  
DEPTH = 10.0km (geophysicist)  
GREECE (364)

THE	0.08	321	ePg	00	27.70	0.2
			eSg	00	28.70	
KNT	0.60	351	ePg	00	36.90	-0.3
			eSg	00	44.00	
GRG	0.61	309	ePg	00	37.30	-0.1
			eSg	00	43.70	
LIT	0.63	221	ePg	00	37.80	0.1
			eSg	00	48.20	
SRS	0.69	38	ePg	00	39.00	0.2
			eSg	00	49.30	
PAIG	0.82	142	ePg	00	40.70	-0.2
			eSg	00	55.40	

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

? MAY 30, 1991 09h 01m 52.35 ± 1.71s  
43.028 N ± 16.7km 0.692 W ± 9.4km  
DEPTH = 10.0km (geophysicist)

PYRENEES (378)

MD 1.0 (STR).

ATE	0.06	352	Pg	01	54.07	-0.6
			Sg	01	55.18	
ISSF	0.08	270	Pg	01	54.74	-0.2
			Sg	01	56.31	



30d 09h																	
ANT	2.31	265	iPc	06 56.30	-3.7X		1.0s	90.00nm	5.5mb	PGC	87.29	327	ePc	18 56.70	0.5		
			iS	07 21.20				ipP	18 04.10	120km	BUL	87.82	111	iPd	19 00.10	0.4	
CCH	6.34	15	P	07 55.50	0.6			esP	18 19.90			0.8s	22.39nm		5.2mb		
CNCB	6.69	359	iPc	08 01.10	1.2	GOL	71.97	330	P	17 33.80	-1.0	KRI	90.05	108	iPc	19 11.40	1.2
RTRS	6.76	192	iPc	07 46.00	-14.2X		1.0s	51.25nm	5.3mb					i	19 43.00	121km	
LPB	6.96	358	iPc	08 04.00	0.5			pp	18 03.70	119km	CSY	90.46	179	iPc	19 11.60	0.6	
	1.0s	404.00nm		5.9mb		BAR	72.73	318	eP	17 38.00	-1.1		0.7s	79.50nm		6.0mb	
ZOBO	7.23	358	iPc	08 07.20	0.0	PV09	72.81	327	P	17 39.20	-0.6			e	19 42.80	119km	
			S	09 24.00				pp	18 09.80	122km	BTH	90.88	43	P	19 14.50	1.2	
RTLL	7.78	184	iPd	08 08.90	-5.4X	PLM	73.31	319	eP	17 43.00	0.4			e	19 17.50		
ARE	7.80	334	eP	08 11.00	-3.7X	TPC	73.34	320	iPd	17 43.00	0.3			pp	20 09.00	222kmX	
			iS	09 37.50		PEC	73.86	319	iPd	17 45.00	-0.6	MTD	91.78	109	iPc	19 19.40	1.3
RTCB	7.96	186	ePc	08 11.10	-5.7X			esP	18 15.30	120km	LFF	92.41	41	eP	19 20.70	0.4	
ZON	8.01	185	eP	08 12.00	-5.4X				18 29.80			0.6s	10.80nm		5.3mb		
TCA	8.32	160	ePd	08 17.80	-3.7X	SBA	74.01	190	iPd	17 46.10	0.3	MFF	92.75	40	eP	19 22.00	0.2
MDZ	9.35	185	e(P)	08 30.80	-4.7X	RVR	74.06	319	iPd	17 47.00	0.3		0.8s	8.05nm		5.1mb	
			i	08 50.10		RUV	74.62	260	iP	17 50.70	0.4	RJF	93.07	41	eP	19 23.40	0.1
JACH	9.42	194	eP	08 28.50	-7.9X		1.3s	55.00nm	5.2mb				0.6s	3.60nm		4.8mb	
SIV	9.88	42	iPc	08 40.40	-2.1X	GSC	74.62	320	eP	17 50.00	-0.1	CAF	93.22	42	eP	19 24.40	0.4
PEL	9.88	194	iPc	08 34.90	-7.6X	MWC	74.63	319	iPd	17 50.00	-0.3		0.6s	3.15nm		4.8mb	
			i(S)	10 21.00		PAS	74.65	319	eP	17 50.00	-0.1	YKA	93.40	340	eP	19 23.20	-1.2
IHA	10.01	198	eP	08 40.00	-4.2X	VAH	74.83	260	iP	17 52.00	0.5		0.7s	20.40nm		5.5mb	
			e(S)	10 40.00			1.3s	85.00nm	5.4mb			BGF	94.50	41	eP	19 29.80	-0.1
SAN	10.18	193	eP	08 37.50	-8.9X	TPT	74.91	260	iP	17 52.70	0.7		0.8s	8.05nm		5.1mb	
LCCH	10.42	197	eP	08 40.00	-9.5X		1.3s	95.00nm	5.4mb	AVF	94.92	41	eP	19 31.70	-0.1		
TACH	10.43	194	eP	08 40.00	-9.7X	PMO	75.15	260	iP	17 54.00	0.6		0.8s	3.35nm		4.8mb	
RFA	11.21	182	ePd	08 52.80	-7.3X		1.3s	85.00nm	5.4mb	SMF	95.15	41	eP	19 33.00	0.2		
ITB1	12.40	98	eP	09 14.00	-1.7	CER	75.24	120	iPd	17 52.50	-1.3		0.8s	5.35nm		5.0mb	
ITB	12.57	99	eP	09 18.80	0.9		0.4s	18.18nm	5.2mb	LOR	95.46	41	eP	19 33.70	-0.6		
ITB7	12.62	100	eP	09 26.20	7.6X	CLC	75.44	320	iPd	17 54.00	-0.7		0.6s	3.60nm		5.0mb	
NNA	14.28	322	eP	09 40.50	0.3	PAE	75.73	257	iP	17 57.00	0.3	LPL	96.39	43	eP	19 39.70	0.9
	0.5s	63.38nm		5.1mb			1.3s	95.00nm	5.4mb				0.8s	6.05nm		5.1mb	
			eS	12 31.00		ISA	75.86	320	iPd	17 57.00	-0.1	LPG	96.40	43	eP	19 39.90	1.0
PPD	15.38	88	eP	09 54.20	0.2	DUG	75.95	326	P	17 57.30	-0.3		0.8s	6.70nm		5.2mb	
			e	09 57.00				pp	18 28.00	121km	INK	103.16	340	ePd	20 09.00	0.6	
			e	10 16.50		SYP	76.01	318	iPd	17 58.00	0.0	KAF	112.46	30	iPKP	24 44.10	-0.9
			e	10 26.40		TNP	76.80	322	P	18 01.90	-0.6		0.8s	7.50nm			
VAO	19.25	93	iPc	10 39.10	-0.8		0.8s	34.56nm	5.2mb				esP	24 44.50			
			e	10 52.00	58kmX			pp	18 32.50	121km	08N	117.19	39	ePKP	24 54.00	-0.3	
			e	14 13.50		FRI	77.49	320	ePd	18 04.80	-1.2		1.0s	*****nm			
BMA	21.86	93	eP	11 05.70	-0.6			e	18 27.80	87kmX	STK	118.10	208	iPKPc	24 56.10	-0.7	
			e	11 07.70	7kmX	PRI	77.50	319	ePd	18 06.50	0.3		1.3s	1.30nm			
UPA	34.25	339	ePd	12 59.10	0.4	LLA	77.98	319	iPd	18 09.00	0.3	FORR	123.79	197	ePKP	25 06.10	-1.6
			i	15 32.50				ipP	18 39.50	120km	WAR8	128.61	197	ePKP	25 16.00	-1.2	
BIM	38.40	11	eP	13 32.40	-1.2	SCH	78.03	1	ePd	18 08.40	-0.1	OIS	128.63	214	iPKPd	25 16.60	-0.8
MVM	38.47	11	eP	13 32.87	-1.3		0.5s	41.00nm	5.5mb				0.8s	33.00nm			
FDF	38.60	11	eP	13 33.60	-1.7			pp	18 25.00	60kmX	WB2	131.64	208	iPKP	25 22.00	-1.1	
	0.4s	0.50nm		3.6mb X		PRS	78.05	318	ePd	18 09.40	0.3			i	25 52.00		
BLA	61.56	349	P	16 27.90	-1.0			epP	18 38.00	112km			iPP	28 37.00			
	0.7s	31.67nm		5.4mb		SAO	78.38	319	ePd	18 10.50	-0.4	WRA	131.65	208	PKP	25 32.00	8.9X
CBN	62.05	352	eP	16 31.50	-0.5	CM8	78.59	320	ePd	18 11.00	-0.3		0.5s	2.60nm			
	0.1s	20.00nm		6.1mb				epP	18 42.40	120km	MA10	133.18	62	ePKP	25 26.00	0.3	
MBO	62.47	58	iP	16 35.00	-0.2	MHC	78.88	319	ePd	18 14.30	0.5	QUE	139.39	71	ePKP	25 36.80	-0.8
NVL	64.61	159	iPc	16 48.00	-0.5			epP	18 44.80	120km	YAK	139.70	347	ePKP	25 27.20	-9.7X	
			e	16 55.00		GCC	78.89	319	ePd	18 13.90	0.3			i	25 36.00		
			e	16 59.00		TIO	79.42	50	iP	18 18.50	1.6			e	28 26.00		
			epP	17 18.00	122km	PCC	79.43	319	eP	18 16.40	-0.1	GAR	141.46	56	ePKP	25 41.10	0.1
			ePcP	17 26.00		BKS	79.58	319	eP	18 17.10	-0.3	POO	144.03	91	iPKPd	25 39.40	-6.5X
			e	17 46.00			0.8s	90.00nm	5.6mb			GBA	145.78	101	PKPd	25 48.90	0.1
			e	18 13.00		BRK	79.59	319	ePd	18 17.00	-0.4		0.6s	69.00nm			
			ePP	19 25.00		LRM	80.00	330	ePd	18 20.10	0.3	KUSJ	146.77	314	ePKP	25 48.80	-0.9
			eS	25 29.00				e	18 50.50	119km	GUA	147.41	258	ePKP	25 52.90	1.4	
			e	25 32.00		ORV	80.25	321	ePd	18 21.20	0.3		1.1s	526.58nm			
FVM	64.74	340	iPd	16 47.60	-2.1			ipP	18 52.00	121km	ASAJ	147.64	317	ePKP	25 51.60	0.6	
	0.8s	265.15nm		6.2mb		AVE	80.70	48	eP	18 25.00	1.6	HOOJ	148.03	314	ePKP	25 54.70	3.0X
			ipP	17 17.70	123km	KIM	81.25	117	iPd	18 25.70	-1.0	HYB	148.05	95	ePKPd	25 52.50	0.0
			isP	17 32.80			1.0s	25.00nm	5.0mb				1.0s	180.00nm			
SPA	66.61	180	iPd	17 00.00	-1.6	FRS	81.31	119	iPd	18 26.90	0.1			e	26 27.50		
	1.0s	43.50nm		5.3mb			0.7s	51.37nm	5.4mb			NDI	148.34	73	iPKPd	25 53.00	0.4
			i	45 31.00		BLF	82.25	118	iPd	18 32.10	0.2		0.7s	41.10nm			
LIC	68.09	73	P	17 11.14	-0.2		0.5s	24.32nm	5.3mb	MRRJ	149.47	315	ePKP	25 58.20	4.3X		
	0.6s	14.00nm		5.0mb		IFR	82.38	49	iP	18 19.50	-12.9X	OFUJ	150.52	309	PKP	26 00.80	5.2X
	20s	0.16um		4.3Msz				i	18 30.00	33kmX	AOMJ	150.80	312	ePKP	26 02.20	6.2X	
TIC	68.29	72	P	17 12.54	-0.1			i	18 32.50		WMO	151.51	39	iPKPd	25 58.00	0.9	
	0.9s	26.00nm		5.1mb		FHC	82.50	321	ePd	18 33.50	0.8	YAMJ	152.05	308	PKP	26 04.90	6.9X
KIC	68.40	73	P	17 13.32	0.0	SES	82.90	334	ePd	18 33.10	-1.4	KAKJ	152.67	304	ePKP	26 05.50	6.6X
	0.6s	36.50nm		5.4mb			1.2s	131.00nm	5.7mb			NIIJ	153.17	307	ePKP	26 00.10	0.6
ALO	68.69	327	iPd	17 14.90	-0.1			pp	19 04.00	120km	CHJJ	153.62	304	ePKP	26 01.10	0.9	
	0.9s	95.17nm		5.6mb		FFC	83.24	341	iPd	18 35.40	-0.7	MAT	154.03	306	(PKP)	26 01.00	0.2
			epP	17 44.00	117km		1.1s	44.00nm	5.3mb	MTMJ	154.31	306	ePKP	26 01.90	0.6		
ANMO	68.70	327	iPd	17 14.40	-0.6	SLR	85.29	116	iPd	18 45.50	-1.8	MDJ	154.56	330	ePKP	26 01.30	0.1
			ipP	17 44.20	120km		1.0s	40.00nm	5.3mb	IIDJ	154.65	304	PKP	26 01.90	0.2		
			isP	17 59.10		PNT	85.87	329	ePd	18 50.00	0.6	GKN	154.90	74	PKP	26 02.22	-0.2
LKO	69.20	69	P	17 17.76	-0.5		0.8s	30.00nm	5.3mb				1.0s	42.00nm			
	0.8s	71.50nm		5.6mb		TOL	86.70	44	iPc	18 55.50	1.9	DMN	155.34	75	PKP	26 03.06	-0.1
GLA	71.88	320	eP	17 34.00	-0.1		1.5s	138.89nm	5.7mb	KKN	155.48	74	PKP	26 03.10	-0.2		
GLD	71.94	331	iPd	17 33.90	-0.6			eS	29 26.00		PKI	155.61	75	PKP			



1.2s 42.00nm  
 GUN 156.00 74 PKP 26 04.04 -0.1  
 TSRJ 156.08 305 ePKP 26 04.90 1.3  
 CN2 156.99 335 PKP 26 03.80 -0.7  
 SNY 159.39 335 ePKP 26 07.60 0.4  
 PKPab 26 46.00  
 GTA 161.05 30 iPKPd 26 10.00 0.7  
 HHC 162.73 1 PKPc 26 13.00 2.1X  
 BJI 163.18 349 ePKP 26 12.00 0.9  
 LZH 165.59 28 ePKP 26 14.00 0.3  
 TIY 165.86 359 PKPd 26 14.50 0.8  
 TIA 166.63 342 PKPc 26 15.40 1.1  
 CHG 166.87 108 ePKPd 26 15.00 0.0  
 1.2s 19.92nm  
 SSE 168.95 315 PKP 26 16.50 0.5  
 XAN 169.17 14 PKP 26 16.70 0.6  
 CD2 169.56 43 PKP 26 16.80 0.3  
 NJ2 169.62 326 PKPc 26 17.00 0.6  
 KMI 171.32 78 PKPc 26 19.00 1.3  
 GYA 174.28 58 iPKPc 26 19.60 0.9  
 QIZ 175.05 154 ePKP 26 19.40 0.4  
 S.D. = 0.8 on 137 of 165 obs.

MAY 30, 1991 09h 15m 25.09±0.57s  
 46.361 N ± 6.9km 1.869 E ± 5.3km  
 DEPTH = 14.6 ± 4.4 km  
 FRANCE (538)  
 ML 3.1 (LDG).

TCF 0.25 107 Pg 15 31.30 0.6  
 LSF 0.26 245 Pg 15 30.50 -0.4  
 MAF 0.50 106 Pg 15 35.50 0.4  
 Sg 15 42.60  
 BGF 0.70 73 Pg 15 38.90 0.4  
 RJF 1.09 193 Pg 15 44.70 -0.4  
 Sg 15 58.60  
 AVF 1.11 67 Pg 15 46.40 0.9  
 Sg 15 59.90  
 SSF 1.33 58 Pn 15 49.00 0.0  
 Pg 15 50.10  
 Sg 16 06.80  
 SMF 1.39 78 Pn 15 50.00 0.1  
 Pg 15 51.30  
 Sg 16 09.40  
 MFF 1.41 281 Pg 15 50.90 0.7  
 Sg 16 08.60  
 CAF 1.44 174 Pn 15 49.70 -1.0  
 Pg 15 52.10  
 Sg 16 07.80  
 Sg 16 10.00  
 LBF 1.58 66 Pn 15 52.50 -0.2  
 Pg 15 54.60  
 Sg 16 14.70  
 LOR 1.64 56 Pn 15 53.30 -0.2  
 Pg 15 55.70  
 Sg 16 16.20  
 LPO 1.75 196 Pg 15 57.00 2.0  
 Sg 16 19.40  
 LDF 2.61 330 Pg 16 13.10 5.7X  
 GRR 2.75 319 Pg 16 15.80 6.4X  
 HAU 3.47 60 Pn 16 17.30 -2.3X  
 S.D. = 0.9 on 13 of 16 obs.

? MAY 30, 1991 09h 19m 18.25±1.60s  
 46.379 N ± 22.0km 1.841 E ± 7.8km  
 DEPTH = 10.0km (geophysicist)  
 FRANCE (538)  
 ML 1.8 (LDG).

LSF 0.25 239 Pg 19 23.60 0.0  
 Sg 19 26.70  
 TCF 0.27 109 Pg 19 24.30 0.3  
 Sg 19 28.10  
 MAF 0.53 107 Pg 19 28.60 -0.3  
 Sg 19 35.80  
 BGF 0.72 75 Pg 19 32.40 0.0  
 Sg 19 42.10  
 S.D. = 0.5 on 4 of 4 obs.

? MAY 30, 1991 09h 34m 43.22±6.69s  
 11.205 S ± 63.2km 32.624 E ± 24.3km  
 DEPTH = 10.0km (geophysicist)  
 4.7mb (1 obs.)  
 ZAMBIA (576)

SONG 4.37 178 ePg 35 50.40 -0.9  
 eSg 36 47.00

MTD 5.63 190 iPn 36 10.70 1.5  
 iPg 36 25.00  
 iSn 36 57.80  
 iSg 37 21.60  
 KRI 6.31 207 iPn 36 23.40 4.7X  
 iSn 37 19.00  
 iSg 37 41.50  
 NPA 7.52 122 ePn 36 36.00 0.3  
 eSn 37 49.60  
 eSg 38 22.00  
 BUL 9.69 203 iPn 37 07.50 1.6  
 iSn 38 44.50  
 iSg 39 37.50  
 SLR 15.03 195 iPc 38 16.00 -1.5  
 1.0s 100.00nm 5.2mb X  
 S 41 01.00  
 JOZ 16.16 182 e(P) 38 45.00 12.9X  
 S 42 06.40  
 BLF 18.00 198 iPd 39 04.70 -0.5  
 0.5s 24.32nm 4.7mb  
 (S) 42 46.50  
 KIM 18.94 202 eP 39 09.20 2.3X  
 S 42 36.00  
 FRS 19.67 199 eP 39 15.00 -0.4  
 1.0s 150.00nm 5.2mb X  
 S 43 57.50  
 CER 25.22 207 eP 40 30.00 19.3X  
 1.0s 42.00nm  
 S.D. = 1.5 on 7 of 11 obs.

% MAY 30, 1991 09h 39m 44.52±0.87s  
 39.489 N ± 6.8km 29.977 E ± 14.8km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)  
 MD 3.0 (ISK).

ALT 0.45 167 iPg 39 53.60 0.0  
 iSg 39 59.60  
 IZI 0.93 336 iPg 40 02.40 0.0  
 eSg 40 16.90  
 EYL 1.09 7 iPg 40 05.30 0.3  
 HRT 1.35 350 iPn 40 08.90 -0.5  
 BNT 1.80 299 ePn 40 16.00 0.1  
 S.D. = 0.4 on 5 of 5 obs.

? MAY 30, 1991 11h 06m 22.67±0.98s  
 0.472 S ± 6.8km 78.724 W ± 10.1km  
 DEPTH = 10.0km (geophysicist)  
 ECUADOR (107)

GGP 0.32 23 P+ 06 29.70 0.1  
 S 06 35.30  
 QUIL 0.35 215 P 06 30.00 0.0  
 eS 06 35.10  
 VC1 0.36 118 Pd 06 30.20 0.0  
 YANA 0.39 23 Pd 06 30.60 -0.1  
 S 06 36.40  
 S.D. = 0.2 on 4 of 4 obs.

\* MAY 30, 1991 11h 50m 57.11±0.78s  
 47.738 N ± 13.6km 9.610 E ± 7.1km  
 DEPTH = 10.0km (geophysicist)  
 GERMANY (543)  
 ML 2.9 (LDG), 2.5 (VIE). MD 2.9 (STR).

FEL 1.09 278 Pg 51 18.34 0.7  
 Sg 51 34.51  
 BBS 1.45 260 Pn 51 22.95 -0.4  
 WTTA 1.45 108 iPg 51 23.70 0.1  
 i 51 28.90  
 i 51 31.10  
 iSg 51 42.60  
 WLS 1.66 295 Pn 51 26.60 0.2  
 CDF 1.70 294 Pn 51 27.27 0.2  
 Sg 51 55.93  
 ECH 1.72 287 Pn 51 26.99 -0.2  
 GWF 1.82 314 Pn 51 28.25 -0.4  
 BSF 1.90 274 Pg 51 36.90 6.9X  
 Sg 52 04.00  
 LOMF 1.92 259 Pn 51 30.12 -0.2  
 HAU 2.21 278 Pg 51 41.60 7.2X  
 Sg 52 12.30  
 LPL 2.98 223 Pg 51 53.70 8.2X  
 LPG 2.98 222 Pg 51 53.00 7.4X  
 S.D. = 0.5 on 8 of 12 obs.

? MAY 30, 1991 11h 55m 53.04±5.21s  
 41.849 N ± 38.4km 22.331 E ± 10.7km  
 DEPTH = 10.0km (geophysicist)  
 YUGOSLAVIA (383)  
 ML 2.2 (SKO).

VAY 0.56 161 iPg 56 04.30 -0.1  
 iSg 56 10.30  
 KNT 0.81 148 ePg 56 09.30 0.6  
 eSg 56 18.10  
 GRG 0.89 177 ePg 56 10.20 0.0  
 SRS 1.20 127 ePg 56 15.50 0.1  
 eSg 56 31.80  
 SOH 1.28 143 ePg 56 16.20 -0.7  
 eSg 56 33.20  
 FNA 1.28 214 ePg 56 16.90 0.0  
 eSg 56 33.50  
 S.D. = 0.5 on 6 of 6 obs.

? MAY 30, 1991 11h 59m 53.51±5.93s  
 39.861 N ± 28.5km 26.264 E ± 45.9km  
 DEPTH = 10.0km (geophysicist)  
 TURKEY (366)

ALN 1.05 351 ePg 00 13.30 0.0  
 eSg 00 27.90  
 SRS 2.39 302 ePn 00 32.90 -0.5  
 eSn 01 02.40  
 SOH 2.42 294 ePn 00 34.30 0.5  
 AGG 3.16 256 ePn 00 44.20 0.0  
 S.D. = 0.7 on 4 of 4 obs.

% MAY 30, 1991 12h 40m 34.77±0.57s  
 46.344 N ± 7.9km 1.846 E ± 4.6km  
 DEPTH = 10.2 ± 5.4 km  
 FRANCE (538)  
 ML 2.2 (LDG).

LSF 0.24 247 Pg 40 39.80 -0.1  
 Sg 40 42.90  
 TCF 0.26 102 Pg 40 40.50 0.2  
 Sg 40 44.50  
 MAF 0.51 104 Pg 40 45.10 -0.1  
 Sg 40 52.10  
 BGF 0.72 72 Pg 40 48.80 -0.2  
 Sg 40 58.30  
 RJF 1.07 193 Pg 40 54.70 -0.1  
 Sg 41 08.50  
 AVF 1.13 66 Pg 40 56.00 0.1  
 Sg 41 09.70  
 SSF 1.35 57 Pn 40 58.40 -1.2  
 Pg 40 59.60  
 Sg 41 16.30  
 MFF 1.40 281 Pg 41 00.40 0.1  
 Sg 41 18.00  
 SMF 1.41 77 Pg 41 00.90 0.4  
 Sg 41 18.70  
 LOR 1.66 56 Pg 41 05.00 0.9  
 Sg 41 25.70  
 S.D. = 0.7 on 10 of 10 obs.

\* MAY 30, 1991 13h 00m 44.70±0.73s  
 16.593 N ± 19.1km 94.225 W ± 9.9km  
 DEPTH = 160.1 ± 10.5 km  
 4.0mb (3 obs.)  
 OAXACA, MEXICO (60)  
 Felt in the Tehuantepec-Ixhuatan area.

PBJ 1.14 262 iP 01 10.50 -1.4  
 iS 01 30.50  
 SCX 1.53 84 eP 01 14.65 -1.0  
 iS 01 34.79  
 OXX 2.44 282 iP 01 26.37 0.1  
 iS 01 52.70  
 TPX 2.53 131 iP 01 28.69 1.6  
 iS 01 59.45  
 PIO 3.75 268 iP 01 41.50 -1.1  
 iS 02 20.00  
 IISM 3.83 309 eP 01 43.96 0.3  
 eS 02 26.50  
 IIT 4.58 302 eP 01 54.00 0.2  
 PPM 4.86 301 eP 01 58.75 1.0  
 iS 02 56.00  
 IIA 4.93 302 eP 01 59.69 1.6  
 TPM 5.19 298 eP 01 52.00 -9.7X  
 iS 02 57.00



30d 13h

ALO 21.30 331 e(P) 05 20.00 0.0  
 YKA 48.03 347 eP 09 07.50 -1.7  
 0.6s 1.30nm 3.8mb  
 NB2 82.90 28 P 12 53.00 0.6  
 0.8s 2.10nm 4.0mb  
 HFS 84.37 29 eP 12 59.70 -0.1  
 0.5s 1.50nm 4.1mb  
 S.D. = 1.2 on 13 of 14 obs.

% MAY 30, 1991 13h 08m 48.55±0.80s  
 45.008 N ± 5.0km 8.204 E ± 7.5km  
 DEPTH = 10.0km (geophysicist)  
 NORTHERN ITALY (545)  
 ML 2.5 (GEN).

PCP 0.53 152 P 08 58.67 -0.5  
 S 09 05.96  
 ORX 0.64 346 P 09 01.96 0.4  
 S 09 11.49  
 RSP 0.69 282 P 09 01.65 -0.6  
 S 09 11.06  
 BHB 0.69 256 P 09 02.20 0.0  
 S 09 11.88  
 ROB 0.75 199 P 09 03.51 0.2  
 S 09 14.16  
 FIN 0.80 180 P 09 04.21 0.1  
 S 09 15.57  
 LSD 0.87 302 P 09 05.24 -0.2  
 S 09 16.83  
 STV 0.99 220 P 09 07.70 0.3  
 S 09 19.90  
 IMI 1.12 192 P 09 09.83 0.2  
 S 09 24.41  
 S.D. = 0.4 on 9 of 9 obs.

\* MAY 30, 1991 13h 13m 49.78±0.72s  
 2.934 S ± 7.8km 147.795 E ± 15.7km  
 DEPTH = 33.0km (normal)  
 4.6mb ( 3 obs.)  
 ADMIRALTY ISLANDS REGION (199)

LAT 3.78 192 eP 14 47.60 0.5  
 PMG 6.46 186 eP 15 09.00 -16.2X  
 GUA 16.61 350 eP 17 41.00 -0.9  
 eS 20 54.00  
 CTA 17.12 185 iPc 17 54.90 6.7X  
 1.4s 69.77nm 4.6mb  
 iS 20 56.00  
 OIS 19.25 204 eP 18 11.00 -3.5X  
 WB2 21.40 217 iPc 18 33.70 -3.4X  
 1.1s 23.70nm 4.5mb  
 RMO 23.44 178 iPd 18 58.00 0.9  
 DAV 24.31 294 eP 19 06.00 0.4  
 ASPA 24.60 212 iPd 19 07.60 -0.9  
 1.0s 38.20nm 4.9mb  
 eS 23 45.80  
 e 29 03.00  
 DZM 26.27 138 iPc 19 24.10 -0.1  
 STK 29.38 191 eP 19 52.70 0.5  
 1.3s 0.90nm 3.3mb X  
 WARB 30.77 219 eP 20 03.00 -1.6  
 CNB 32.25 178 e(P) 20 17.00 -0.6  
 e 31 26.00  
 GUN 66.90 302 P 24 44.28 2.5X  
 KKN 67.37 302 P 24 45.52 0.9  
 DMN 67.47 301 P 24 46.40 1.1  
 GKN 67.98 302 P 24 48.18 -0.2  
 QUE 83.56 301 eP 26 20.20 3.5X  
 VAO 150.47 152 (PKP) 33 43.00 8.0X  
 S.D. = 0.9 on 12 of 19 obs.

MAY 30, 1991 13h 17m 41.97±0.12s  
 54.567 N ± 2.4km 161.606 W ± 2.0km  
 DEPTH = 28.4km (geophysicist)  
 6.3mb ( 89 obs.) 6.7MsZ ( 39 obs.)

ALASKA PENINSULA ( 12)  
 Ms 6.8 (BRK). Mo=1.8\*10\*\*19 Nm  
 (PPT). Felt (V) at Cold Bay,  
 King Cave and Sand Point; (IV)  
 at False Pass and Perryville;  
 (III) at Chignik Lagoon. Depth  
 from broadband displacement  
 seismograms.  
 FAULT PLANE SOLUTION: P-Waves  
 NP1:Strike= 68 Dip=78 Slip= 90  
 NP2: 248 12 90  
 Principal Axes:

T P1g=57 Azm=338  
 P 33 158  
 Comment: The focal mechanism is  
 poorly controlled and  
 corresponds to reverse  
 faulting. The preferred fault  
 plane is NP2.

RADIATED ENERGY  
 No. of sta: 17 Focal mech. F  
 Energy 9.4±1.4\*10\*\*13 Nm  
 MOMENT TENSOR SOLUTION  
 Dep 21 No. of sta: 17  
 Moment Tensor: Scale 10\*\*19 Nm  
 Mrr= 0.44 Mtt=-0.51  
 Mtf= 0.07 Mtr= 1.61  
 Mrf= 0.89 Mfr= 0.18

Principal axes:  
 T Val= 2.00 P1g=49 Azm=322  
 N -0.20 10 65  
 P -1.80 39 163  
 Best Double Couple: Mo=1.9\*10\*\*19  
 NP1:Strike=306 Dip=12 Slip= 152  
 NP2: 64 85 80  
 CENTROID, MOMENT TENSOR (HRV)  
 Data Used: GDSN  
 L.P.B.: 19S, 54C M.W.: 14S, 33C  
 Centroid Location:  
 Origin Time 13:17:47.5 0.1  
 Lat 54.41N 0.02 Lon 161.64W 0.02  
 Dep 24.1 0.5 Half-duration 10.8  
 Moment Tensor: Scale 10\*\*19 Nm  
 Mrr= 1.05 0.01 Mtt=-0.77 0.01  
 Mtf=-0.28 0.01 Mtr= 2.03 0.07  
 Mrf= 2.03 0.07 Mfr=-0.52 0.01  
 Principal Axes:  
 T Val= 3.07 P1g=55 Azm=311  
 N 0.00 4 47  
 P -3.07 35 140  
 Best Double Couple: Mo=3.1\*10\*\*19  
 NP1:Strike=249 Dip=11 Slip= 113  
 NP2: 46 80 86

SDN 1.01 39 iPd 18 02.90 2.8  
 KDC 6.01 54 eP 19 11.20 0.0  
 MCNL 6.11 38 eP 19 13.60 1.0  
 CDD 6.19 42 eP 19 14.20 0.4  
 SYI 6.50 48 eP 19 18.03 -0.2  
 AUI 6.54 40 eP 19 20.31 1.5  
 eS 20 34.97  
 AUH 6.56 40 eP 19 21.08 2.0  
 AUE 6.58 40 eP 19 20.88 1.6  
 PDB 6.60 35 eP 19 20.55 1.0  
 eS 20 38.77  
 XLV 7.28 44 eP 19 29.79 0.7  
 SVW 7.29 24 ePc 19 31.20 1.9  
 HOM 7.44 43 eP 19 31.59 0.3  
 CNPM 7.52 44 eP 19 31.98 -0.5  
 eS 20 57.29  
 RED 7.55 35 eP 19 33.68 0.8  
 eS 21 02.83  
 RDW 7.58 35 eP 19 35.33 1.8  
 RS2 7.59 35 eP 19 35.33 1.8  
 RSO 7.59 35 eP 19 35.11 1.5  
 NCT 7.60 34 eP 19 35.59 1.9  
 RDN 7.62 35 eP 19 35.33 1.3  
 RFR 7.62 35 eP 19 35.66 1.6  
 DFR 7.71 35 eP 19 35.48 0.4  
 RDT 7.79 36 eP 19 36.96 0.7  
 CKL 8.27 33 eP 19 42.54 -0.5  
 BGL 8.31 32 eP 19 44.43 0.9  
 NKA 8.31 38 eP 19 46.77 3.3  
 CRP 8.38 33 eP 19 45.73 1.1  
 NCG 8.49 32 eP 19 47.26 1.2  
 SLKM 8.53 41 eP 19 46.90 0.3  
 SEW 8.60 45 eP 19 45.91 -1.5  
 TTA 8.87 17 ePd 19 52.30 1.0  
 SUA 8.99 35 eP 19 52.40 -0.6  
 SKT 9.12 31 eP 19 56.03 1.3  
 LTI 9.24 48 eP 19 54.65 -1.6  
 PMS 9.26 39 eP 19 55.44 -1.1  
 MTU 9.30 49 iP 19 55.83 -1.3  
 PWA 9.42 36 eP 19 57.92 -0.8  
 ADK 9.44 260 eP 19 57.20 -1.7  
 KNIM 9.45 47 iP 19 57.40 -1.7  
 MID 9.64 53 eP 20 00.80 -1.0  
 PLRM 9.64 38 eP 20 00.79 -1.0  
 PMR 9.64 38 ePc 20 00.30 -1.5

Z 19s 416.70um  
 KNK 9.77 40 eP 20 01.31 -2.4  
 CUT 9.83 32 eP 20 04.05 -0.4  
 GHO 9.84 38 eP 20 02.73 -1.8  
 GLI 10.00 45 eP 20 04.85 -1.9  
 HIN 10.00 48 eP 20 04.31 -2.5  
 SML 10.07 39 eP 20 05.61 -2.2  
 ANM 10.21 351 eP 20 11.65 2.1  
 VZW 10.32 45 eP 20 08.78 -2.4  
 CVA 10.40 48 eP 20 09.65 -2.5  
 VLZ 10.45 45 eP 20 11.18 -1.6  
 HUR 10.46 31 eP 20 13.36 0.4  
 SCM 10.46 40 eP 20 11.92 -1.2  
 SGAM 10.62 49 eP 20 12.65 -2.5  
 TRF 10.63 29 eP 20 14.94 -0.6  
 RAGM 10.80 51 eP 20 15.65 -2.1  
 KLU 10.81 44 eP 20 15.57 -2.3  
 HMT 10.97 51 eP 20 18.37 -1.6  
 RND 11.01 31 eP 20 18.71 -1.9  
 TOA 11.06 41 eP 20 20.40 -0.9  
 MCK 11.23 30 eP 20 23.34 -0.2  
 TZL 11.31 42 eP 20 24.30 -0.3  
 BWN 11.42 28 eP 20 25.88 -0.3  
 SDG 11.55 40 eP 20 26.61 -1.2  
 CROM 11.65 50 eP 20 27.65 -1.7  
 GLB 11.66 47 eP 20 27.16 -2.2  
 WAX 11.66 52 eP 20 27.18 -2.2  
 TGL 11.78 51 eP 20 29.93 -1.2  
 PAX 11.84 38 eP 20 30.15 -1.7  
 NEA 11.85 27 eP 20 30.43 -1.4  
 WRG 11.90 55 eP 20 32.02 -0.5  
 THY 12.03 36 eP 20 34.30 0.0  
 BALM 12.11 50 eP 20 33.93 -1.6  
 IMA 12.17 15 ePc 20 37.40 1.0  
 DDM 12.23 35 eP 20 35.29 -1.8  
 HDA 12.32 31 eP 20 34.94 -3.3X  
 COL 12.45 28 ePc 20 37.87 -2.0  
 FBA 12.45 28 ePc 20 36.70 -3.2X  
 CTGM 12.54 51 eP 20 40.38 -0.9  
 GLM 12.63 29 eP 20 38.52 -3.8X  
 DOT 12.76 38 eP 20 42.23 -1.9  
 YKU 12.88 58 eP 20 47.20 1.6  
 FYU 14.41 27 eP 21 04.60 -1.0  
 SMY 14.50 273 eP 21 08.70 1.7  
 Z 20s 370.00um  
 SIT 14.95 70 eP 21 11.90 -0.8  
 Z 20s 380.00um  
 ILT 15.61 336 iPc 21 24.50 3.3X  
 BRW 16.93 5 eP 21 39.60 1.6  
 INK 18.97 33 P 22 00.50 -2.6  
 1.2s 41.00nm 4.5mb X  
 PET 23.32 283 iPc 22 50.00 1.9  
 eS 26 50.00  
 PGC 24.20 88 eP 22 59.00 2.4  
 1.2s 286.00nm 5.7mb  
 YKA 25.26 53 eP 23 08.30 1.6  
 0.8s 120.70nm 5.6mb  
 PNT 26.11 84 ePd 23 17.00 2.2  
 0.9s 258.00nm 5.8mb  
 LON 26.12 91 eP 23 17.00 2.0  
 FHC 28.44 103 ePc 23 37.20 1.1  
 eP 23 50.70 54kmX  
 FOX 28.62 104 eP 23 36.69 -1.0  
 LBFM 29.28 100 eP 23 45.00 1.1  
 MIN 30.10 102 ePc 23 51.20 0.1  
 eP 24 04.50 52kmX  
 eS 24 10.00  
 SES 30.53 77 ePc 23 52.50 -2.2  
 1.3s 294.00nm 5.9mb  
 ORV 30.69 103 ePc 23 55.80 -0.3  
 epP 24 09.20 53kmX  
 BRK 31.42 106 ePc 24 03.30 0.7  
 eP 24 14.90 44kmX  
 eS 24 37.00  
 ePP 25 08.00  
 eS 29 04.00  
 eLO 31 20.00  
 eLR 32 45.00  
 BKS 31.43 106 iPd 24 03.10 0.4  
 1.3s 473.00nm 6.2mb  
 Z 20s 185.00um 6.8MsZ  
 N 20s 41.00um  
 E 20s 172.00um  
 iPd 24 14.55 43kmX  
 iPc 24 26.00  
 LRM 32.06 85 eP 24 08.50 0.0  
 MHC 32.14 106 eP 24 09.10 0.0



[illegible]



[illegible]



		e	40	09.00		VKA	77.53	1	iPc	29	36.30	0.1	DEV	79.85	357	ePc	29	50.00	1.1	
		e	44	34.00			6.0s	6716.00nm				6.8mb X	PTJ	79.89	2	iPc	29	49.20	0.0	
		eP'P'	56	49.00		Z	18s	21.50um				6.5MsZ	CAF	79.91	12	iPc	29	49.60	0.3	
KSP	74.95	1	iPc	29	21.40	-0.2						444kmX	EMON	79.93	19	iPd	29	48.99	-0.4	
	1.2s	406.00nm				6.3mb							KKN	79.95	304	Pc	29	49.82	-0.2	
		i	34	10.10									SIM	79.96	349	iPc	29	48.00	-1.5	
		e	56	34.00											iS	39	52.00			
MOX	75.01	4	iPc+	29	22.00	0.0	FEL	77.56	7	P	29	36.08	-0.4	ZAG	79.97	2	iPc	29	51.00	1.5
	1.4s	800.00nm				6.5mb	DSH	77.67	322	iPc	29	37.00	-0.2			iS	39	53.00		
Z	20s	26.00um				6.5MsZ														
N	22s	19.00um					KMR	77.69	3	iP+	29	37.40	0.4	SAL	79.98	6	P	29	50.30	0.8
E	19s	17.00um											GRN	79.99	9	P	29	50.64	0.9	
		eS	39	00.00			LOR	77.80	10	iPc	29	37.80	0.1	CEY	80.01	3	ePc	29	49.50	-0.3
		eP'P'	57	02.00									TRI	80.02	3	iPc	29	49.50	-0.2	
DOU	75.07	9	Pc+	29	22.40	0.1	Z	1.2s	278.95nm			6.2mb			iPP	32	48.00			
	Z	22s	20.90um			6.4MsZ						7.0MsZ			eS	39	45.20			
		S	39	02.00			PSZ	77.88	359	iP	29	39.00	0.8			iSP	40	20.00		
TNS	75.25	7	eP	29	23.60	0.1	BBS	77.93	8	P	29	38.37	-0.1			iSS	45	00.00		
RAR	75.48	178	P	29	32.00	7.1X	APR	77.95	75	P	29	39.00	0.1			iSSS	49	12.00		
		S	39	40.00			SSF	77.96	10	iPc	29	38.70	0.1			iLR	56	00.00		
LSA	75.49	301	P	29	25.40	-0.3	LOMF	77.99	8	P	29	38.81	0.0	LPO	80.05	12	iPc	29	50.20	0.3
	N	18s	45.10um				MFF	77.99	13	iPc	29	39.30	0.6	GKN	80.08	305	Pc	29	50.46	-0.2
		pP	29	39.00		47kmX	SRO	77.99	0	iPc	29	39.80	1.1		0.9s	759.00nm			6.7mb	
		PP	32	16.00									MLR	80.11	355	ePc	29	49.00	-1.4	
		S	39	02.00									DMN	80.19	304	Pc	29	51.32	0.0	
MNDI	75.66	237	eP	29	26.00	-0.4	LRS	78.01	75	P	29	38.50	-0.8	RSP	80.21	8	P	29	51.72	0.8
KRA	75.74	359	iPc	29	25.90	-0.2	CEI	78.06	357	eP	29	42.00	2.9	CHG	80.21	289	ePc	29	50.20	-1.0
	0.8s	283.00nm				6.3mb	MBF	78.09	10	iPc	29	39.30	0.0		1.2s	332.03nm			6.2mb	
		i	29	30.70		15kmX	LGP	78.10	76	P	29	38.00	-1.7			eS	39	52.00		
		i	29	40.30			UPA	78.15	91	iPd+	29	38.30	-1.7	STS	80.23	20	eP	29	51.63	0.7
PRU	75.77	3	Pc	29	26.70	0.4		0.7s	35.62nm			5.5mb	BNI	80.26	8	Pc	29	52.80	1.6	
	1.4s	300.00nm				6.1mb	Z	22s	32.59um			6.6MsZ	VBY	80.27	2	ePc	29	51.20	0.1	
	Z	20s	48.90um			6.8MsZ							CFR	80.28	353	eP	29	52.00	0.9	
	N	20s	38.10um										CMP	80.38	355	iPc	29	54.00	2.3	
	E	18s	16.60um										RRL	80.40	8	P	29	53.87	1.8	
		e	29	46.60		74kmX	AVF	78.22	10	iPc	29	40.10	0.1	RIY	80.41	3	iPc	29	51.50	-0.3
		e	30	35.70			MOTA	78.28	5	iPc	29	40.60	0.1	BHB	80.51	8	P	29	52.13	-0.3
		PPP	34	15.60				1.3s	593.00nm			6.5mb	KKM	80.57	267	ePc	29	51.10	-2.2	
		S	39	09.50										1.2s	260.00nm			6.1mb		
BST	75.77	15	P	29	27.28	0.9	IAS	78.32	354	eP	29	40.00	-0.5	PDA	80.57	34	iPd	29	54.20	1.4
FLN	75.82	13	iPc	29	26.50	-0.2	CLLP	78.33	75	P	29	41.00	0.0	RKT	80.69	155	iP	29	53.70	0.3
	1.0s	156.25nm				6.0mb	WTTA	78.38	5	iPc	29	41.30	0.2		1.2s	105.00nm			5.7mb	
Z	20s	60.00um				6.9MsZ		1.3s	598.00nm			6.5mb	PZZ	80.84	8	P	29	55.31	1.0	
GRFO	75.94	5	ePc	29	26.99	-0.3							SURF	80.84	8	P	29	56.12	1.7	
		e	29	27.90		3kmX							DOI	80.85	8	Pc	29	54.20	-0.1	
		ec	29	29.72			BGF	78.39	11	iPc	29	41.00	0.0	PCP	80.91	7	P	29	54.69	0.1
GRF	75.94	5	iPc	29	27.70	0.4	SQTA	78.41	5	iPc	29	41.40	0.2	EZAM	80.91	20	eP	29	55.91	1.3
	1.5s	759.00nm				6.5mb		1.3s	781.00nm			6.6mb	TSM	80.96	265	ePc	29	56.00	0.8	
Z	21s	22.00um				6.4MsZ								1.2s	978.00nm			6.7mb		
		eS	39	12.00									BEO	80.97	359	iP	29	54.50	-0.3	
		iPc	29	27.70		-0.2	SMF	78.41	10	iPc	29	41.10	0.0	ERUA	80.98	19	iPd	29	55.79	0.9
GRR	76.14	13	iPc	29	28.60	0.1	LSF	78.54	12	iPc	29	41.80	0.0	ORA	81.00	356	ePc	29	56.00	1.0
GW	76.43	7	P	29	29.79	-0.3	LPR	78.55	75	P	29	41.50	-0.8	CKI	81.01	7	Pc	29	55.20	0.2
LPF	76.47	13	iPc	29	30.70	0.4	SJG	78.55	75	eP	29	42.00	-0.3	DZM	81.10	210	iPd	29	55.80	0.0
KHC	76.60	3	iPc	29	31.50	0.4	TCF	78.59	11	iPc	29	42.10	0.0	ROB	81.11	8	P	29	55.31	-0.3
	1.2s	210.00nm				6.0mb	KBA	78.64	4	iPc	29	43.30	0.8	STV	81.11	8	P	29	54.90	-0.8
Z	22s	33.90um				6.6MsZ		1.1s	546.00nm			6.5mb	BUC	81.18	354	iPc	29	58.00	2.1	
	N	22s	18.10um										ELYF	81.24	14	P	29	56.06	-0.3	
E	20s	22.40um											MADF	81.29	14	P	29	56.40	-0.2	
		e	29	43.50		40kmX							BOH	81.30	14	P	29	57.83	1.1	
		e	39	18.00			PTT	78.65	354	eP	29	41.00	-1.3	OGE	81.32	14	P	29	56.77	0.1
SPC	76.61	359	iP	29	31.60	0.3	MAF	78.69	11	iPc	29	42.80	0.2	TOUF	81.34	8	P	29	57.70	0.7
GAR	76.72	321	iP	29	31.60	-0.4	AGO	78.92	11	P	29	44.14	0.2	AUTN	81.37	8	P	29	57.46	0.2
		iPcP	29	41.50			PLDF	79.06	10	P	29	45.18	0.5	SAOF	81.39	8	P	29	57.33	0.3
		iPP	32	22.00			FVI	79.10	4	P	29	45.30	0.5	ESCF	81.39	14	P	29	57.44	0.3
		ePP	34	10.00			PYM	79.21	11	P	29	49.81	4.3X	MME	81.40	6	P	29	58.70	1.3
		e	35	28.00			PYM	79.21	11	P	29	45.81	0.3	ISSF	81.41	14	P	29	58.40	1.1
		eS	39	04.50			UZD	79.22	360	e(P)	29	38.00	-7.4X	MVIF	81.44	8	P	29	58.05	0.5
		eScS	39	34.00			MNI	79.33	257	ePd	29	46.50	0.0	BDT	81.45	288	eP	29	56.10	-1.6
		ePS	39	41.50			RJF	79.47	12	iPc	29	46.70	-0.2		0.9s	281.00nm			6.3mb	
		iPPS	39	56.00			GUN	79.56	304	Pc	29	48.00	0.0	JAU	81.46	14	P	29	57.62	0.0
		eSS	44	05.00			CTI	79.60	5	P	29	47.30	-0.3	AURF	81.47	8	P	29	57.81	0.2
		eSSS	47	00.00			VAI	79.61	7	P	29	48.10	0.6	SBF	81.50	8	iPc	29	58.50	0.8
PMG	76.84	232	eP	29	30.00	-2.7	VOY	79.70	3	iPc	29	47.50	-0.7	BDI	81.52	6	P	29	58.30	0.5
CDF	76.97	8	P	29	32.94	-0.3							CDR	81.54	9	ePc	29	58.40	0.6	
WLS	76.97	8	P	29	32.68	-0.5							LHE	81.55	14	P	29	58.61	0.6	
VITF	77.06	8	P	29	33.98	0.5	LJU	79.71	3	eP	29	48.00	-0.1	EPF	81.56	13	iPc	29	58.00	0.0
UZH	77.12	357	iPc	29	35.00	1.1								1.2s	93.00nm			5.7mb		
ECH	77.15	8	P	29	34.04	-0.1							ECRI	81.56	15	eP	29	59.22	1.2	
HAU	77.30	8	iPc	29	35.20	0.3	LFF	79.74	13	iPc	29	48.70	0.4	CALN	81.57	8	P	29	58.66	0.5
	0.8s	146.90nm				6.1mb	LBL	79.74	11	P	29	40.55	-7.7X	REVF	81.62	8	P	29	58.59	0.3
Z	22s	70.00um				6.9MsZ	LBL	79.74	11	P	29	48.96	0.7	BKR	81.69	341	iPc	30	00.00	1.1
FUR	77.47	5	iPc	29	36.30	0.4	MDI	79.76	6	P	29	48.20	-0.1			iS	40	10.00		
	1.3s	600.00nm				6.5mb	ORX	79.78	7	P	29	49.16	0.5	MLS	81.73	13	P	29	59.30	



30d 13h																					
	Z	22s	60.00um		6.9Msz			ITU	84.27	352	iPc	30	12.00	0.1	MTN	87.71	244	eP	30	28.00	-1.1
FIR		81.84	5 iPc	30	01.50	2.2		CTT	84.27	352	eP	30	11.30	-0.6	ATH	87.72	356	iPc	30	29.00	0.1
			iPP	33	13.00			ISK	84.30	352	eP	30	11.00	-1.0			e	41	06.00		
			iS	40	12.00			FUO	84.34	89	eP	30	10.00	-3.1X			e	53	48.00		
PII		81.86	6 P	29	59.30	-0.1		VAY	84.42	352	iPc	30	13.00	0.4	GIB	87.74	3 P		30	30.50	1.3
PTO		81.90	20 iPc	30	00.50	0.8			0.8s	432.00nm				6.7mb	BCK	87.74	350	iP	30	28.50	-0.7
			eS	40	08.00					iS	40	41.70			MNO	87.82	3 P		30	30.30	0.6
LMR		81.95	9 iPc	30	00.80	0.9	RDO	84.46	355	iPc	30	13.70	0.9	NKM	88.03	19	iPd	30	30.50	0.0	
CRE		82.03	5 Pc	30	01.40	0.9	HRT	84.49	351	eP	30	13.30	0.2			i	30	32.00	5kmX		
NST		82.09	286 eP	30	01.50	0.5	GBZT	84.55	352	eP	30	14.00	0.7	KER	88.05	337	ePc	30	31.50	0.7	
ARV		82.20	4 Pc	30	02.40	1.1	KNT	84.57	357	iPc	30	14.50	1.1	YER	88.27	352	iP	30	31.30	-0.4	
EGRA		82.29	14 eP	30	02.97	1.3	SRS	84.59	356	iPc	30	14.10	0.6	FAI	88.44	4 P		30	37.70	5.3X	
PVL		82.41	355 iPc	30	00.00	-2.3	CEOS	84.61	82	iP	30	12.80	-1.3	ELL	88.51	351	iP	30	33.00	0.0	
PLE		82.47	359 iPc	30	03.98	1.2	TAB	84.66	338	eP	30	14.00	-0.1	VLI	89.00	356	eP	30	33.30	-1.8	
ETER		82.59	12 eP	30	04.35	1.0			i	30	16.00	6kmX	ARG	89.20	352	eP	30	35.00	-1.1		
ASS		82.61	4 P	30	04.60	1.1			e	41	07.00		AVE	89.71	21	iP	30	38.50	0.0		
HVAR		82.62	1 iPc	30	03.70	0.3	OHR	84.67	358	iPc	30	14.40	0.4	CSS	89.91	348	eP	30	39.50	0.0	
PAG		82.73	73 eP	30	04.00	-0.5			1.4s	2047.00nm			7.1mb	IFR	89.96	19	iPd	30	40.00	0.0	
DEG		82.84	72 eP	30	04.00	-1.0				i	30	25.20	34kmX	QIS	90.06	233	eP	30	39.00	-1.1	
BRY		82.91	360 iPc	30	05.03	-0.1				i	30	34.20			0.9s	100.00nm				6.1mb	
NDI		82.92	311 iPc	30	04.00	-0.4				eS	40	32.00		NPS	90.32	354	eP	30	40.00	-1.4	
		0.5s	295.77nm			6.7mb	BAI	84.68	1 P		30	14.00	0.1	IPM	90.57	279	ePc	30	44.30	1.5	
PGF		82.93	7 P	30	05.33	0.1	ALN	84.68	354	iPc	30	14.20	0.3		1.5s	329.50nm				6.4mb	
IVA		82.93	359 iPc	30	05.52	0.4	EYL	84.70	351	iP	30	14.60	0.4	BHL	90.64	346	Pc	30	41.00	-2.0	
NKY		82.99	360 iPc	30	05.40	-0.1	MFT	84.71	353	iP	30	14.30	0.1			PP	31	01.00			
MGG		83.02	73 eP	30	05.00	-0.9	ECHE	84.75	15 eP	30	15.46	1.1			S	41	12.00				
VTS		83.13	356 iPc	30	07.00	0.7	YLV	84.77	352	iP	30	14.30	-0.2	HRI	91.25	346	eP	30	46.30	0.5	
PGB		83.13	356 eP	30	07.00	0.8	GRG	84.79	357	iPc	30	15.60	1.1	RMO	91.30	223	iPd	30	46.40	0.7	
TOV		83.16	83 iP	30	07.00	0.3	BOG	84.84	89	iPc	30	15.00	-0.5		1.4s	917.00nm				7.0mb	
MAO		83.19	5 P	30	07.00	0.6	SOH	84.89	356	iPc	30	15.20	0.1			i	30	59.40	43kmX		
PVY		83.20	359 iPc	30	06.57	-0.1	BRT	84.92	1 P		30	16.10	0.9	KGM	91.32	275	eP	30	47.50	1.3	
GUD		83.21	17 iPd	30	07.40	0.7	FNA	84.99	358	iPc	30	15.60	0.0	KNA	91.38	245	eP	30	45.00	-1.2	
BBL		83.25	73 eP	30	06.00	-1.1	KGT	85.05	353	iP	30	15.80	0.0	TBT	91.39	31	iPd	30	47.80	1.5	
MNS		83.30	4 P	30	07.10	0.1	BNT	85.10	353	iP	30	17.30	1.2	HYB	91.99	304	iPc	30	48.50	-0.8	
AQU		83.36	4 P	30	09.40	2.1	ESEL	85.10	12	eP	30	16.82	0.7		1.0s	400.00nm				6.8mb	
HCY		83.36	360 iPc	30	06.90	-0.4	EDC	85.11	353	iP	30	16.80	0.7	TIO	92.03	22	iP	30	49.50	0.0	
TTG		83.38	359 iPc	30	07.35	0.1	BBTK	85.16	349	iPc	30	17.00	0.5			i	31	20.50	118kmX		
			eS	40	28.00		SGO	85.21	2 Pc		30	17.00	0.4	WB2	92.05	238	iPd	30	47.50	-1.8	
ETOR		83.38	15 iPd	30	07.91	0.4	FCV	85.31	74	eP	30	12.01	-5.4X		0.9s	80.10nm				6.1mb	
SDV		83.40	84 iPd	30	07.50	-0.6	GUAN	85.41	79	iP	30	17.50	-0.6			e	32	38.50	492kmX		
EPLA		83.43	19 iPd	30	08.54	0.8	EVIA	85.44	16	eP	30	18.09	0.1			e	34	35.00			
BMG		83.44	87 iPd	30	07.00	-1.2	KZN	85.45	357	eP	30	18.00	0.0			e	38	59.20			
BDV		83.52	360 iPc	30	08.17	0.1	LCI	85.47	0 P		30	18.90	1.0			e	44	14.60			
KAS		83.53	348 iPc	30	09.30	1.0	LIT	85.64	357	iPc	30	18.80	0.0	WRA	92.06	238	P	30	47.00	-2.3	
KVT		83.53	347 iP	30	09.20	1.0	TEH	85.68	334	ePc	30	21.50	2.3		0.9s	80.20nm				6.1mb	
DIM		83.56	355 iP	30	09.00	0.7	EBAN	85.69	17	eP	30	20.10	1.0	CTFE	92.07	30	eP	30	52.20	2.7	
DMK		83.65	353 iP	30	09.00	0.2	PSO	85.71	94	eP	30	20.50	0.5	CHIE	92.26	32	iPd	30	52.30	1.9	
EROO		83.74	14 eP	30	09.67	0.4	EZN	85.73	354	iP	30	19.80	0.6	ZNT	92.37	346	eP	30	51.20	0.4	
EBR		83.75	14 iPc	30	10.00	0.7	EHOR	85.76	19	eP	30	19.60	0.2	GCC	92.59	30	iPd	30	53.00	1.1	
			iPP	33	24.00		PAIG	85.77	356	iPc	30	18.80	-0.6	CFTV	92.75	28	iPd	30	54.90	2.2	
			iS	40	32.00		QUE	85.81	319	iP	30	19.20	-0.9	BSI	93.10	284	eP	30	53.00	-1.3	
SKO		83.80	358 iPc	30	10.10	0.6			ePcP	30	24.50		POO	93.24	308	iPc	30	53.30	-1.7		
		1.3s	984.00nm			6.8mb			ePP	30	32.80			1.1s	139.24nm					6.3mb	
	Z	20s	40.84um		6.8Msz				e	33	40.20		QLP	93.24	227	iPd	30	55.00	0.4		
N		21s	51.50um						eSKS	40	46.20				i	31	08.60	45kmX			
E		18s	39.60um						eScS	41	06.70		PSI	93.31	279	ePd	31	01.60	6.3X		
			i	30	14.10	13kmX	ACU	85.89	15	eP	30	22.49	2.4	RMN	94.14	346	eP	30	59.30	0.2	
			i	30	16.60		TDS	86.13	2 Pc		30	22.10	0.9	DHR	94.95	332	ePc	31	10.00	7.3X	
			i	30	20.20		ALT	86.21	351	iP	30	22.10	0.3			S	41	36.00			
			iPcP	30	30.30		EHUE	86.23	17	eP	30	22.23	0.3	HLW	95.18	349	eP+	31	05.00	1.2	
			i	30	59.00		PRK	86.31	354	eP	30	22.00	-0.1			(S)	42	20.00			
			iS	40	32.00		EALH	86.38	16	eP	30	24.51	2.0	HOL	95.28	345	eP	31	06.00	1.7	
			i	40	49.50		ECOG	86.59	17	iPd	30	24.26	0.6	ASPA	95.43	236	iPc	31	03.60	-1.2	
ULC		83.84	359 iPc	30	09.82	0.1	AFC	86.62	17	iPd	30	24.38	0.5		0.9s	64.80nm				6.1mb	
KKB		83.86	356 iPd	30	11.00	1.2	CTA	86.65	228	iPc+	30	23.00	-0.9			ePP	34	33.60			
RMP		83.87	4 P	30	11.00	1.1		1.0s	288.00nm				6.5mb			eS	41	38.80			
RDP		83.93	4 P	30	11.50	1.3			iSKS	40	48.00		GBA	95.81	303	Pc	31	05.30	-1.5		
RZN		83.97	355 iPc	30	11.00	0.4	CTAO	86.65	228	ePc	30	22.88	-1.0		0.8s	62.50nm				6.1mb	
KDZ		83.97	355 iPc	30	11.00	0.6			ec	30	23.79	3kmX	NNA	96.65	101	eP	31	10.00	-0.5		
TOL		83.97	17 iPc	30	11.10	0.6			ec	30	24.95			0.9s	15.13nm					5.5mb	
		1.4s	1627.91nm			7.0mb			ecPd	30	33.47			Z	20s	17.02um				6.5Msz	
			ec	30	12.42	4kmX	AGG	86.72	357	iPc	30	23.60	-0.6	CMS	96.90	223	eP	31	12.00	0.8	
			ec	30	13.91		MAL	86.98	18	iPc	30	26.00	0.6	RIV	96.97	218	eP+	31	12.00	0.6	
			esPd	30	22.77				iPP	33	44.00				iS	42	40.00				
			eHPP	33	22.11				iS	41	06.00		RYD	97.39	334	ePc	31	16.00	2.0		
			ePP	33	25.42		KHL	86.99	351	iP	30	25.50	-0.1			S	41	48.00			
			iS	40	35.00		USI	86.99	4 P		30	27.60	2.2	STK	98.98	226	eP	31	20.60	0.0	
			iPS	41	43.00		CNIL	87.01	20	eP	30	26.50	0.9								



SKS 42 32.00  
eLR 05 40.00  
LPB 105.31 97 Pdiff 31 42.00 -7.9X  
Z 25s 31.97um 6.8mszX  
PP 36 27.00  
SKS 42 28.00  
LR 05 06.00  
CNCB 105.60 97 Pdiff 31 49.00 -2.3X  
CCH 107.12 96 ePdiff 31 59.00 1.3X  
SIV 108.96 91 ePdiff 32 03.00 -2.6X  
i 32 29.20  
SIV 108.96 91 (PKP) 35 58.00 -12.3X  
ARO 110.99 334 ePKP+ 35 57.00 -17.2X  
LKO 113.01 26 PKP 36 16.10 -1.9  
TIC 115.94 26 PKP 36 22.80 -0.9  
KIC 116.28 26 PKP 36 23.10 -1.2  
LIC 116.34 26 PKP 36 23.30 -1.1  
Z 20s 28.00um 6.9msz  
PPD 119.38 87 ePKP 36 30.00 0.0  
VAO 122.65 84 ePKP 36 35.70 -0.5  
BMA 124.04 81 ePKP 36 36.70 -2.3  
NAI 124.78 337 ePdiff 33 22.00 5.7X  
NAI 124.78 337 ePKP 36 42.00 1.2  
ePP- 38 16.00  
ePKKS 51 00.00  
eSKKS 57 18.00  
LPA 125.19 102 ePKP- 36 37.00 -3.7X  
Z 20s 31.21um 7.0msz  
ePP 38 32.00  
eSKS 43 40.00  
eSKKS 45 20.00  
IPS 48 36.00  
eSS 55 27.00  
eSSS 00 00.00  
DRV 128.61 206 Pdiff 33 36.00 4.3X  
PP 38 58.00  
SS 56 06.00  
SBA 133.59 189 iPKPd 36 57.00 1.5  
CSY 137.28 217 ePKP 36 55.40 -7.4X  
0.3s 6.20nm  
NPA 137.39 329 ePKP 37 02.50 -2.0  
1.9s 740.00nm  
i 39 50.00  
i (PP) 41 01.00  
CLK 139.11 335 iPKPc 37 04.00 -3.8X  
i 37 48.00  
i 39 51.00  
AIA 140.24 139 e (PKP) 37 08.00 -0.2  
MTD 140.93 340 iPKPc 37 03.90 -7.1X  
i 40 11.70  
KRI 141.35 343 iPKPc 37 05.20 -6.7X  
i 37 25.00  
SPA 144.38 180 iPKPc 37 09.00 -6.6X  
1.0s 65.50nm  
Z 20s 33.56um 7.1msz  
SPA 144.38 180 iPKPc 37 21.00 5.4X  
BUL 144.76 343 iPKPc 37 15.60 -2.1  
i 37 47.00  
i 42 04.00  
WIN 148.03 2 iPKP+ 37 20.00 -3.0X  
0.5s 70.42nm  
Z 22s 69.63um 7.4msz  
PAF 148.26 258 iPKPc 37 29.00 6.7X  
i (PP) 40 48.00  
e (PPP) 44 36.00  
eS 52 36.00  
SLR 150.29 342 ePKPc 37 24.51 -1.8  
1.2s 78.13nm  
Z 22s 40.74um 7.2msz  
ec 37 30.00  
ed 37 39.33  
iHPP 41 04.90  
iPP 41 07.05  
JOZ 151.11 334 iPKPd 37 34.00 6.7X  
1.5s 361.11nm  
KIM 153.79 347 iPKPc 37 30.20 -1.2  
0.8s 55.97nm  
BLF 153.94 344 iPKPc 37 31.20 -0.4  
0.6s 21.43nm  
FRS 154.70 346 iPKPd 37 31.80 -0.5  
1.2s 335.94nm  
CRZF 157.39 277 iPKPc 37 43.00 7.7X  
ePP 41 20.00  
ePPP 45 19.00  
eS 52 28.00  
CER 158.79 358 ePKP 37 26.50 -10.9X  
1.0s 120.00nm

NVL 163.48 172 ePKPc+37 40.00 -1.0  
e 37 55.00  
e 38 28.00  
e 38 38.00  
i 38 47.00  
e 38 56.00  
e 39 03.00  
e 39 24.00  
e 39 41.00  
ePKS 40 03.00  
e 40 23.00  
ePP 41 06.00  
e 41 14.00  
e 41 34.00  
e 42 14.00  
e 42 25.00  
e 42 28.00  
eSKS 43 48.00  
ePPP 44 49.00  
e 45 45.00  
S.D. = 1.1 on 584 of 632 obs.  
\* MAY 30, 1991 13h 22m 30.55±0.49s  
54.572 N ±11.2km 161.827 W ± 8.1km  
DEPTH = 33.0km (normal)  
5.6mb ( 7 obs.)  
ALASKA PENINSULA ( 12)  
BONR 33.73 101 eP 29 10.00 -1.1  
TNP 34.26 100 eP 29 15.00 -0.6  
CLC 35.63 103 eP 29 27.00 -0.1  
GSC 36.45 103 eP 29 35.00 1.0  
MWC 36.53 106 eP 29 30.00 -4.8X  
PLM 37.84 105 eP 29 46.00 0.2  
BAR 38.45 106 eP 29 51.00 0.2  
SHNJ 50.04 275 eP 31 23.80 0.1  
KUMJ 51.35 273 P 31 34.00 0.3  
KAGJ 52.29 272 P 31 40.50 -0.3  
KEV 55.81 356 iP 32 05.90 -0.2  
0.8s 68.90nm 5.7mb  
SOD 58.21 356 iP 32 23.20 0.0  
KAF 63.48 356 eP 32 58.40 -0.5  
0.7s 54.50nm 5.8mb  
esP 32 59.50  
NB2 64.60 4 P 33 04.70 -1.7  
0.8s 43.10nm 5.6mb  
NUR 65.15 356 iP 33 09.20 -0.6  
0.8s 94.60nm 5.9mb  
HFS 65.59 2 eP 33 12.00 -0.6  
0.9s 61.70nm 5.7mb  
e 33 15.00  
MUD 69.08 5 iP 33 36.00 1.4  
1.0s 14.00nm 5.0mb  
ETA 71.20 15 eP 33 48.50 1.0  
ECB 71.43 16 eP 33 49.70 0.8  
ECP 71.67 16 eP 33 51.20 0.8  
WRA 91.95 238 P 35 28.00 -8.8X  
1.2s 4.70nm 4.8mb  
S.D. = 0.8 on 19 of 21 obs.  
\* MAY 30, 1991 15h 08m 21.29±2.37s  
30.653 S ±16.4km 70.044 W ±11.8km  
DEPTH = 149.2 ± 21.7 km  
CHILE-ARGENTINA BORDER REGION (127)  
RTRS 0.70 46 iPd 08 44.00 0.1  
RTCB 1.35 128 iPc 08 49.70 0.0  
eS 09 08.00  
ZON 1.47 128 iPc 08 51.20 0.3  
eS 09 11.20  
RTLL 1.51 117 iPd 08 51.00 -0.3  
S 09 11.00  
CFA 1.82 122 iPd 08 54.00 -0.7  
eS 09 18.80  
JACH 2.08 193 iPd 08 58.50 0.7  
iS 09 25.00  
SAN 2.84 190 eP 09 07.50 0.3  
iS 09 42.00  
LCCH 3.10 204 iPc 09 09.50 -0.9  
iS 09 45.00  
RFA 4.32 162 ePc 09 26.60 0.1  
(S) 10 11.80  
TCA 4.73 100 ePc 09 32.30 0.3  
S 10 14.30  
S.D. = 0.6 on 10 of 10 obs.  
MAY 30, 1991 15h 08m 59.06±0.51s

46.366 N ± 5.0km 1.884 E ± 4.2km  
DEPTH = 12.2 ± 3.6 km  
FRANCE (538)  
ML 3.0 (LDG). MD 2.6 (STR).  
TCF 0.24 109 Pg 09 05.10 0.8  
LSF 0.27 245 Pg 09 04.30 -0.6  
MAF 0.50 107 Pg 09 00.94 -8.2X  
Sg 09 16.30  
BGF 0.69 74 Pg 09 13.00 0.4  
Sg 09 22.20  
AGO 0.92 109 Pg 09 17.24 0.8  
Sg 09 29.73  
PYM 1.00 128 Pg 09 18.16 0.4  
Sg 09 31.66  
RJF 1.09 194 Pg 09 18.90 -0.5  
Sg 09 32.60  
AVF 1.10 67 Pn 09 20.00 0.5  
Pg 09 20.40  
Sg 09 34.10  
GRC 1.24 41 Pg 09 23.09 1.2  
PLDF 1.27 108 Pg 09 22.40 -0.1  
Sg 09 40.17  
SSF 1.32 57 Pn 09 23.10 -0.1  
Pg 09 24.30  
Sg 09 40.90  
SMF 1.38 78 Pn 09 23.90 -0.2  
Pg 09 25.30  
Sg 09 43.30  
MFF 1.42 280 Pg 09 24.90 0.3  
Sg 09 42.30  
CAF 1.45 175 Pn 09 23.90 -1.1  
Pg 09 26.80  
Sg 09 40.20  
LBL 1.48 139 Pg 09 25.31 -0.1  
Sg 09 46.27  
LBF 1.57 66 Pn 09 26.50 -0.3  
Pg 09 28.70  
Sg 09 49.00  
LOR 1.63 56 Pn 09 27.40 -0.2  
Pg 09 29.60  
Sg 09 50.30  
LFF 1.64 210 Pg 09 29.20 1.5  
Sg 09 49.70  
LPO 1.75 196 Pg 09 31.40 2.0  
Sg 09 53.00  
S.D. = 0.9 on 18 of 19 obs.  
\* MAY 30, 1991 15h 18m 23.65±1.54s  
18.348 N ±16.4km 66.890 W ±12.7km  
DEPTH = 33.0km (normal)  
PUERTO RICO REGION ( 90)  
LRS 0.07 142 P 18 30.00 0.7  
APR 0.18 56 P 18 30.70 0.6  
MGP 0.39 209 P 18 31.90 -0.7  
S 18 43.30  
CLLP 0.40 132 P 18 34.00 1.2  
SJC 0.74 108 iP 18 37.70 0.0  
LPR 0.97 92 P 18 39.60 -1.4  
S 18 57.60  
CPD 0.98 108 P 18 40.60 -0.5  
S.D. = 1.1 on 7 of 7 obs.  
\* MAY 30, 1991 15h 40m 35.85±0.50s  
40.440 N ± 6.0km 27.966 E ± 4.3km  
DEPTH = 10.0km (geophysicist)  
TURKEY (366)  
MD 2.6 (ISK).  
BNT 0.09 203 iPg 40 38.00 -0.5  
EDC 0.12 220 iPg 40 38.70 -0.2  
KGT 0.51 272 iPg 40 45.70 -0.4  
MFT 0.63 304 iPg 40 47.90 -0.6  
CTT 0.79 26 iPg 40 51.20 0.0  
YLV 1.08 83 ePn 40 56.30 0.1  
IZI 1.16 95 iPn 40 56.80 -0.7  
HRT 1.35 73 iPn 41 01.30 0.6  
DMK 1.39 354 iPn 41 01.50 0.3  
EZN 1.40 245 ePn 41 02.80 1.4  
ALN 1.53 288 ePd 41 08.50 5.3X  
S.D. = 0.7 on 10 of 11 obs.  
MAY 30, 1991 15h 44m 19.28±0.41s  
54.294 N ± 7.2km 161.298 W ± 4.8km  
DEPTH = 33.0km (normal)



30d 15h

4.9mb ( 42 obs.) ALASKA PENINSULA ML 5.0 (PMR).					( 12)	CN2 SNY	0.4s 47.07 289 P 49.40 288 Pc 1.0s 40.00nm	8.47nm 52 48.00 -1.3 53 07.00 -0.4 5.4mb	5.1mb 53 29.50 -1.4 5.4mb	LPG 80.07 9 eP 0.8s 3.35nm 80.25 304 PKPc 0.7s 28.00nm	56 28.70 1.6 4.4mb 56 28.36 0.1 5.4mb	
SDN	1.15	23	iPd	44 41.80	2.8	DL2	52.48 287 eP 1.0s 50.00nm	53 29.50 -1.4 5.4mb		PKI 80.37 304 PKPc 80.39 305 PKPc 0.8s 58.00nm	56 26.64 -2.4 56 29.02 0.1 5.6mb	
KDC	6.03	51	eP eS	45 49.89 47 00.40	1.5	BJI	54.71 291 eP	53 46.00 -1.3		GKN 80.47 289 eP 80.49 304 PKPc 0.6s 46.00nm	56 29.80 0.6 56 29.82 0.3 5.6mb	
MCNL	6.22	35	eP eS	45 52.12 47 03.70	1.0	KEV	56.11 357 eP	53 55.00 -2.0		CHG 81.75 8 eP 0.6s 6.30nm	56 36.60 1.0 56 39.10 1.3 4.8mb	
CDD	6.28	39	eP eS	45 52.88 47 05.35	0.9	CVL	56.34 70 eP	53 59.00 -0.1		FRF 81.98 9 eP 0.7s 4.40nm	56 37.90 1.2 56 39.10 1.3 4.6mb	
SYI	6.56	45	eP	45 56.49	0.6	HHC	56.63 295 Pd	54 01.00 -0.3		LMR 82.19 9 eP 0.6s 2.70nm	56 39.10 1.3 56 45.00 1.9 4.5mb	
AUI	6.65	37	eP eS	45 58.52 47 12.77	1.4	BTO	57.63 296 eP	54 08.00 -0.3		MAIO 83.17 328 eP e 0.7s 2.75nm	56 44.30 1.2 56 48.80 1.2 57 08.50	
PDB	6.73	32	eP eS	45 59.02 47 17.90	0.7	TIY	58.42 292 eP	54 13.20 -0.6		TOL 84.18 17 eP e 0.7s 2.75nm	56 30.00 -18.2X 56 52.00 1.3 56 52.80 0.8	
SVW	7.48	22	ePc	46 10.20	1.4	SOD	58.51 356 eP	54 13.00 -1.0		VAY 84.70 357 eP 84.95 358 eP 0.9s 42.00nm	56 59.80 1.5 57 26.20 0.2 4.4mb	
CNPM	7.60	42	eP	46 10.53	0.1	NJ2	58.96 283 eP	54 19.00 1.4		QUE 86.14 320 eP 92.06 238 eP 0.8s 1.40nm	57 38.10 57 57.20 01 15.50 01 49.60	
RED	7.67	33	eP	46 12.82	1.2	XAN	63.05 291 P	54 44.00 -1.3		WRA 92.07 238 P 1.1s 0.90nm	57 38.00 12.0X 145.08 344 iPKPc 03 54.40 -0.4 0.9s 33.61nm i 04 15.10	
RDW	7.71	33	eP	46 13.10	0.9	GTA	63.76 301 P	54 49.00 -1.1		S.D. = 1.2 on 131 of 138 obs.		
RS2	7.71	33	eP	46 14.39	2.2	KAF	63.78 356 iP 0.6s 15.50nm	54 48.90 -0.8 5.3mb		& MAY 30, 1991 15h 44m 41.00s 54.600 N 161.600 W DEPTH = 33.0km (normal) 5.1mb ( 5 obs.)		
RSO	7.71	33	eP	46 13.49	1.3	LZH	64.22 296 eP 1.4s 40.00nm	54 52.00 -1.1 5.3mb		ALASKA PENINSULA ( 12) <SPEC>. Held to mainshock location.		
NCT	7.73	32	eP	46 13.92	1.5	NB2	64.86 4 P 1.0s 20.00nm	54 56.00 -0.8 5.2mb		KAF	63.46 356 iP 0.5s 10.10nm	55 09.00 -0.3 5.2mb
RDN	7.75	33	eP	46 14.46	1.8	NUR	65.45 357 eP 0.3s 7.30nm	54 59.90 -0.5 5.3mb		NUR	65.13 357 eP 0.7s 14.30nm	55 20.10 0.0 5.2mb
REF	7.75	33	eP	46 13.81	1.1	HFS	65.85 3 eP 0.4s 20.20nm	55 02.50 -0.5 5.6mb		HFS	65.55 3 eP 0.4s 13.50nm	55 22.70 -0.1 5.4mb
DFR	7.83	33	eP	46 12.38	-1.4	WMO	65.99 312 P 1.0s 10.00nm	55 03.80 -0.5 4.9mb		GRF	75.91 5 iPc 1.1s 15.00nm	56 26.40 55 27.70 56 26.90 1.4 4.9mb
RDT	7.91	34	eP	46 15.06	0.2	UPP	66.20 1 iP 68.24 293 iPd	55 05.10 -0.1 55 18.60 -0.1		WRA	92.08 238 P 1.0s 1.20nm	57 47.00 -0.8 4.3mb
CKL	8.41	31	eP	46 22.47	0.6	CD2	69.98 349 eP e 0.8s 8.00nm	55 28.00 -0.8 55 48.00 0.0 4.8mb		5 obs. associated		
BGL	8.45	31	eP	46 24.63	2.3	OBN	70.10 288 P pP 73.62 8 eP	55 30.20 0.0 55 40.00 31kmX 55 52.00 1.5		% MAY 30, 1991 15h 48m 56.67± 0.64s 44.770 N ± 4.5km 7.188 E ± 6.5km DEPTH = 5.0km (geophysicist) NORTHERN ITALY (545) ML 1.8 (GEN).		
CRP	8.52	31	eP	46 24.94	1.5	GYA	73.62 8 eP 0.8s 8.00nm	55 52.00 1.5 56 12.00 0.0		BHB	0.09 36 P S	48 58.81 0.1 49 00.55
SLKM	8.63	39	eP	46 25.13	0.4	WTS	74.66 4 iPc 1.0s 15.00nm	55 56.90 0.3 4.9mb		PZZ	0.27 193 P S	49 01.89 -0.3 49 05.37
NCG	8.63	31	eP	46 22.89	-2.0	CLL	74.76 8 eP 1.0s 12.00nm	55 58.00 0.8 4.8mb		RRL	0.32 298 P S	49 03.42 0.2 49 08.24
SEW	8.67	43	eP	46 25.39	0.1	ENN	74.76 8 eP 1.0s 12.00nm	55 58.00 0.8 4.8mb		RSP	0.39 7 P S	49 04.24 -0.2 49 10.29
TTA	9.09	15	eP	46 32.20	1.1	BRG	75.13 3 iP 1.1s 15.00nm	55 59.60 0.3 4.9mb		STV	0.53 169 P S	49 07.63 0.2 49 14.50
SUA	9.12	34	eP	46 30.31	-1.3	KSP	75.22 2 eP e 0.5s 10.10nm	56 00.00 0.2 56 20.60 0.0 5.2mb		PCP	0.99 103 P S.D. = 0.3 on 6 of 6 obs.	49 16.04 0.0
SKT	9.27	30	eP	46 34.28	0.7	MOX	75.26 5 iP 1.3s 21.00nm	56 01.30 1.2 5.0mb		& MAY 30, 1991 15h 56m 04.22s 54.060 N 161.547 W DEPTH = 25.0km ALASKA PENINSULA ( 12) <PAL>. MD 3.3 (PAL).		
LTJ	9.29	46	eP	46 32.77	-1.1	LSA	75.79 301 Pd 76.02 359 ePc	56 04.80 0.8 56 05.00 0.6				
MTU	9.35	47	eP	46 34.04	-0.6	KRA	76.02 359 ePc 0.7s 17.00nm	56 05.00 0.6 5.2mb				
PMS	9.36	37	eP	46 33.75	-1.2	PRU	76.03 3 P e 1.0s 16.00nm	56 05.00 0.5 56 26.00 0.0 5.0mb				
KNIM	9.51	45	eP	46 35.16	-1.7	GRF	76.20 5 iPc 1.0s 16.00nm	56 06.40 1.0 5.0mb				
PWA	9.54	35	eP	46 35.99	-1.2	KHC	76.86 3 iP 1.1s 10.30nm	56 10.80 1.6 4.8mb				
ADK	9.57	262	eP	46 38.50	0.8	GAR	77.05 321 iP 77.21 8 eP	56 14.60 0.4 56 10.80 0.3 56 11.70 0.5				
PLRM	9.75	37	eP	46 40.16	0.0	CDF	77.54 8 eP 1.0s 10.00nm	56 13.70 0.8 4.8mb				
PMR	9.75	37	eP	46 40.80	0.6	HAU	77.75 8 eP 0.8s 5.35nm	56 14.60 0.4 4.6mb				
GNK	9.87	39	eP	46 39.76	-2.1	BSF	77.75 8 eP 0.8s 5.35nm	56 14.60 0.4 4.6mb				
GHO	9.95	36	eP	46 41.26	-1.7	LOR	78.03 10 eP 1.0s 8.00nm	56 16.20 0.6 4.7mb				
CUT	9.97	31	eP	46 42.61	-0.6	SSF	78.20 11 eP 0.8s 6.05nm	56 17.00 0.5 4.7mb				
GLI	10.07	43	eP	46 42.66	-1.9	MFF	78.21 13 eP 1.0s 12.00nm	56 17.70 1.1 4.9mb				
SML	10.18	37	eP	46 43.86	-2.3	LBF	78.33 10 eP 1.0s 6.00nm	56 17.60 0.3 4.6mb				
VZW	10.39	43	eP	46 47.58	-1.4	AVF	78.45 11 eP 1.0s 6.00nm	56 18.40 0.5 4.6mb				
ANM	10.51	350	eP	46 50.69	0.1	SMF	78.65 10 eP 0.9s 8.20nm	56 19.30 0.3 4.7mb				
VLZ	10.52	43	eP	46 49.59	-1.1	KBA	78.90 4 iPc 79.86 304 PKPc	56 22.00 1.4 56 26.60 0.3				
SCM	10.56	39	eP	46 48.90	-2.4	GUN	80.05 9 eP 0.6s 1.35nm	56 28.20 1.3 4.1mb				
KLU	10.89	42	eP	46 53.87	-2.0	LPL						
TOA	11.15	39	eP	46 59.30	-0.1							
RND	11.16	30	eP	46 57.14	-2.3							
SDG	11.64	39	eP	47 04.72	-1.3							
CROM	11.69	49	eP	47 06.27	-0.5							
GLB	11.72	45	eP	47 06.05	-1.0							
TGL	11.82	49	eP	47 08.16	-0.4							
PAX	11.95	37	eP	47 08.09	-2.1							
BALM	12.16	49	eP	47 12.15	-0.9							
DDM	12.36	34	eP	47 14.44	-1.2							
IMA	12.39	15	eP	47 16.90	0.8							
HDA	12.46	30	eP	47 13.11	-3.9X							
CTGM	12.58	50	eP	47 17.30	-1.4							
FBA	12.61	27	eP	47 23.00	4.1X							
INK	19.11	32	P	48 40.00	-1.6							
YKA	25.28	52	eP	49 46.00	2.3							
LON	25.93	91	eP	49 54.00	4.0X							
TNP	33.91	100	e(P)	51 02.00	0.7							
YAK	35.56	311	iPd	51 12.80	-2.0							
KUSJ	36.49	275	eP	51 19.90	-3.0							
MSU	36.55	95	eP	51 23.00	-0.7							
ASAJ	37.08	278	eP	51 26.60	-1.3							
HOJ	37.75	275	eP	51 30.30	-3.2X							
ANMO	42.33	94	eP	52 12.00	0.3							
ALO	42.33	94	e(P)	52 12.00	0.3							
FRB	44.51	39	eP	52 20.00	-8.8X							
MAT	44.54	272	(P)	52 29.00	-0.4							
DAG	47.06	11	iPc	52 49.00	0.2							

LPG	80.07	9	eP	56	28.70	1.6
	0.8s		3.35nm			4.4mb
KKN	80.25	304	PKPc	56	28.36	0.1
	0.7s		28.00nm			5.4mb
PKI	80.37	304	PKPc	56	26.64	-2.4
GKN	80.39	305	PKPc	56	29.02	0.1
	0.8s		58.00nm			5.6mb
CHG	80.47	289	eP	56	29.80	0.6
DMN	80.49	304	PKPc	56	29.82	0.3
	0.6s		46.00nm			5.6mb
SBF	81.75	8	eP	56	36.60	1.0
	0.6s		6.30nm			4.8mb
FRF	81.98	9	eP	56	37.90	1.2
	0.7s		4.40nm			4.6mb
LMR	82.19	9	eP	56	39.10	1.3
	0.6s		2.70nm			4.5mb
MAIO	83.17	328	eP	56	45.00	1.9
			e	57	05.00	
PGF	83.18	7	eP	56	44.30	1.2
	0.7s		2.75nm			4.5mb
SKO	84.08	358	eP	56	48.80	1.2
			e	57	08.50	
TOL	84.18	17	eP	56	30.00	-18.2X
VAY	84.70	357	eP	56	52.00	1.3
OHR	84.95	358	eP	56	52.80	0.8
	0.9s		42.00nm			5.6mb
QUE	86.14	320	eP	56	59.80	1.5
WB2	92.06	238	eP	57	26.20	0.2
	0.8s		1.40nm			4.4mb
			i	57	38.10	
			i	57	57.20	
			e	01	15.50	
			e	01	49.60	
WRA	92.07	238	P	57	38.00	12.0X
	1.1s		0.90nm			
BUL	145.08	344	iPKPc	03	54.40	-0.4
	0.9s		33.61nm			
			i	04	15.10	
S.D. = 1.2 on 131 of 138 obs.						
-----						
&	MAY 30, 1991	15h	44m	41.00s		
	54.600 N			161.600 W		
	DEPTH = 33.0km (normol)					
	5.1mb ( 5 obs.)					
ALASKA PENINSULA				( 12)		
<SPEC>. Held to mainshock location.						
KAF	63.46	356	iP	55	09.00	-0.3
	0.5s		10.10nm			5.2mb
			eSP	55	10.80	
NUR	65.13	357	eP	55	20.10	0.0
	0.7s		14.30nm			5.2mb
HFS	65.55	3	eP	55	22.70	-0.1
	0.4s		13.50nm			5.4mb
			e	55	26.40	
			e	55	27.70	
GRF	75.91	5	iPc	56	26.90	1.4
	1.1s		15.00nm			4.9mb
WRA	92.08	238	P	57	47.00	-0.8
	1.0s		1.20nm			4.3mb
5 obs. associated						
-----						
%	MAY 30, 1991	15h	48m	56.67±	0.64s	
	44.770 N ± 4.5km			7.188 E ± 6.5km		
	DEPTH = 5.0km (geophysicist)					
NORTHERN ITALY				(545)		
ML 1.8 (GEN).						
BHB	0.09	36	P	48	58.81	0.1
			S	49	00.55	
PZZ	0.27	193	P	49	01.89	-0.3
			S	49	05.37	
RRL	0.32	298	P	49	03.42	0.2
			S	49	08.24	
RSP	0.39	7	P	49	04.24	-0.2
			S	49	10.29	
STV	0.53	169	P	49	07.63	0.2
			S	49	14.50	
PCP	0.99	103	P	49	16.04	0.0
S.D. = 0.3 on 6 of 6 obs.						
-----						
&	MAY 30, 1991	15h	56m	04.22s		
	54.060 N			161.547 W		
	DEPTH = 25.0km					
ALASKA PENINSULA				( 12)		
<PAL>. MD 3.3 (PAL).						



SDN 1.42 25 iP 56 27.40 -1.1  
FRB 44.79 39 eP 04 16.00 -1.0  
HFS 66.09 3 eP 06 47.20 -3.4  
0.4s 2.10nm 4.6mb  
e 06 49.90  
e 06 51.40  
3 obs. associated

& MAY 30, 1991 16h 36m 41.31s  
53.949 N 161.645 W  
DEPTH = 25.0km  
SOUTH OF ALASKA (17)  
<PAL>. MD 3.0 (PAL).

SDN 1.55 25 eP 37 06.00 -1.5  
1 obs. associated

& MAY 30, 1991 16h 54m 10.78s  
54.226 N 161.672 W  
DEPTH = 83.1km  
ALASKA PENINSULA (12)  
<PAL>. MD 3.1 (PAL).

SDN 1.31 31 eP 54 34.20 0.1  
1 obs. associated

? MAY 30, 1991 17h 32m 17.57±1.71s  
54.163 N ±24.4km 161.098 W ±24.7km  
DEPTH = 33.0km (normal)  
4.1mb (2 obs.)  
ALASKA PENINSULA (12)  
ML 4.5 (PMR).

SDN 1.23 16 iPc 32 40.30 1.8  
SVW 7.56 21 eP 34 08.70 0.5  
TTA 9.18 15 eP 34 29.70 -1.1  
PMR 9.79 36 eP 34 43.40 4.4X  
TOA 11.18 39 eP 34 57.70 -0.4  
IMA 12.49 14 eP 35 15.00 -0.7  
YKA 25.27 52 eP 37 48.00 6.1X  
0.8s 1.30nm 3.6mb  
FRB 44.54 39 eP 40 28.00 0.7  
HFS 65.98 3 eP 43 00.40 -1.7  
0.4s 1.80nm 4.5mb  
e 43 05.70  
GUN 80.03 304 P 44 26.40 0.9  
KKN 80.43 305 P 44 27.80 0.3  
DMN 80.66 305 P 44 28.40 -0.4  
S.D. = 1.2 on 10 of 12 obs.

% MAY 30, 1991 18h 09m 00.38±0.63s  
43.027 N ±5.2km 19.301 E ±4.8km  
DEPTH = 10.0km (geophysicist)  
YUGOSLAVIA (383)  
ML 2.0 (TTG).

NKY 0.31 226 iPg 09 07.35 0.5  
iSg 09 12.50  
PLE 0.31 13 iPg 09 07.06 0.2  
iSg 09 11.81  
IVA 0.47 109 iPg 09 09.98 0.1  
iSg 09 16.95  
BRY 0.57 257 iPg 09 11.45 -0.6  
iSg 09 20.30  
TTG 0.60 183 iPg 09 11.83 -0.6  
iSg 09 22.53  
PVY 0.66 131 iPg 09 13.18 -0.4  
iSg 09 24.23  
BDV 0.82 205 iPg 09 16.61 0.3  
iSg 09 30.03  
HCY 0.83 226 iPg 09 16.28 -0.1  
iSg 09 29.68  
ULC 1.06 182 iPg 09 20.95 0.5  
iSg 09 37.35  
S.D. = 0.5 on 9 of 9 obs.

\* MAY 30, 1991 18h 28m 34.92±0.56s  
24.850 N ±8.3km 127.686 E ±9.6km  
DEPTH = 39.2km (2 depth phases)  
4.6mb (15 obs.)  
RYUKYU ISLANDS REGION (239)

SSE 8.47 319 eP 30 37.70 -0.3  
N 14s 0.40um  
E 14s 0.40um  
MAT 14.74 35 eP 32 09.00 6.5X  
1.2s 15.63nm 4.3mb

DL2 14.92 341 eP 32 06.30 1.5  
1.0s 30.00nm 4.6mb  
TIY 18.25 318 eP 32 46.80 -0.2  
Z 16s 0.48um  
E 15s 0.43um  
XAN 18.71 304 P 32 51.20 -1.4  
CN2 18.99 355 P 32 55.60 -0.3  
1.0s 10.00nm 4.0mb  
Z 17s 0.60um 3.2MsZ  
N 10s 0.20um  
E 10s 0.20um

pP 33 06.00  
eS 36 27.00  
GYA 19.02 279 P 32 57.00 0.5  
CD2 21.98 291 eP 33 25.80 -1.5  
0.8s 30.00nm 4.8mb  
KMI 22.61 276 Pc 33 36.00 2.3  
1.5s 50.00nm 4.7mb  
sP 33 47.50  
LZH 23.34 304 eP 33 39.00 -1.8  
2.0s 30.00nm 4.4mb  
Z 13s 0.39um 4.0MsZ

sP 33 50.00  
GTA 27.57 309 eP 34 18.80 -1.7  
0.8s 10.00nm 4.5mb  
sP 34 30.00  
YAK 37.18 2 eP 35 41.80 -1.9  
GUN 37.45 284 P 35 46.60 -0.3  
0.6s 11.00nm 4.9mb  
KKN 37.99 284 P 35 51.00 -0.3  
0.8s 20.00nm 5.1mb  
DMN 38.16 284 P 35 52.80 0.0  
WB2 44.99 171 iPd 36 47.70 -0.7  
0.6s 14.10nm 5.0mb

e 36 58.50 37km  
i 37 08.70  
e 38 39.90  
ASPA 48.60 172 eP 37 16.30 -0.5  
0.7s 5.90nm 4.7mb  
QUE 53.59 290 eP 37 55.60 0.9  
STK 57.96 166 eP 38 25.50 -0.2  
0.8s 2.10nm 4.3mb  
MAIO 58.74 299 eP 38 33.00 1.6  
INK 70.35 23 eP 39 46.50 0.3  
OBN 70.60 322 eP 39 49.00 1.0  
SOD 71.46 336 eP 39 52.00 -1.0  
NUR 74.82 330 eP 40 14.00 1.3  
UPP 78.26 331 iP 40 32.10 0.2  
HFS 79.81 332 eP 40 40.70 0.3  
0.8s 5.00nm 4.5mb  
Z 17s 0.15um 4.4MsZ

e 40 53.00 41km  
LR 18 04.00  
YKA 79.98 25 eP 40 41.70 0.4  
1.0s 1.40nm 3.9mb  
NB2 80.33 334 P 40 43.40 0.1  
0.7s 4.60nm 4.6mb  
CLL 85.00 325 eP 41 09.00 1.6  
S.D. = 1.1 on 28 of 29 obs.

\* MAY 30, 1991 18h 47m 12.73±1.42s  
45.016 N ±11.8km 115.938 W ±13.8km  
DEPTH = 5.0km (geophysicist)  
WESTERN IDAHO (33)  
ML 2.8 (BUT).

CPI 1.18 193 Pc 47 35.10 -0.1  
TID 1.52 180 P 47 39.90 -0.6  
WPI 1.82 199 P 47 45.30 0.4  
HPI 2.42 122 eP 47 55.00 1.1  
HBMT 2.47 70 iPnc 47 54.80 0.2  
BUT 2.57 66 ePg 48 00.00 4.1X  
eSg 48 34.90  
LRMT 2.58 71 iPnc 47 56.40 0.2  
BGMT 2.77 84 ePn 47 58.50 -0.3  
LTMT 2.77 99 ePn 47 58.00 -0.9  
DPW 3.26 332 e(P) 48 20.00 14.5X  
HRY 3.33 58 ePn 48 06.80 0.1  
SXM 3.51 69 ePn 48 09.20 -0.1  
MEMT 3.55 79 ePn 48 09.70 -0.2  
DAU 5.75 142 eP 48 46.70 5.6X  
S.D. = 0.6 on 11 of 14 obs.

MAY 30, 1991 19h 10m 36.70±0.80s  
38.358 N ±7.8km 21.789 E ±8.9km  
DEPTH = 10.0km (geophysicist)  
GREECE (364)

ML 3.2 (ATH).

VLS 0.96 260 ePn 10 54.50 -0.5  
ATH 1.57 104 ePn 11 03.70 -0.9  
VLI 1.87 151 ePn 11 10.00 0.9  
KZN 1.95 360 iPnc 11 10.00 -0.2  
OHR 2.85 345 ePn 11 28.50 5.4X  
VAY 3.02 11 ePn 11 25.00 -0.4  
SKO 3.62 356 ePn 11 35.00 1.0  
S.D. = 1.0 on 6 of 7 obs.

MAY 30, 1991 19h 18m 13.14±0.25s  
15.229 S ±6.9km 172.808 W ±8.2km  
DEPTH = 33.0km (normal)  
5.3mb (21 obs.) 5.4MsZ (4 obs.)  
SAMOA ISLANDS REGION (169)

CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 13S, 25C  
Centroid Location:  
Origin Time 19:18:14.50.8  
Lat 15.37S FIX; Lon 172.91W FIX  
Dep 19.110.6 Half-duration 1.7  
Moment Tensor; Scale 10+16 Nm  
Mrr= 7.09 3.53 Mtt= 0.55 3.71  
Mff=-7.64 1.83 Mrt=-4.82 3.94  
Mrf= 5.51 3.88 Mtf= 3.96 3.15  
Principal Axes:  
T Vol= 10.25 Plg=65 Azm=208  
N 1.57 14 329  
P -11.82 20 64  
Best Double Couple: Mo=1.1+10+17  
NP1: Strike=177 Dip=27 Slip= 121  
NP2: 323 67 75

AFI 1.65 37 iPd 18 38.00 -2.2  
RAR 13.74 118 P 21 26.00 -1.9  
DZM 20.79 248 iPc 22 47.10 -7.2X  
PMO 24.05 93 iP 23 30.20 3.8X  
1.2s 160.00nm 5.4mb  
PUZ 24.09 197 eP 23 28.50 1.9  
VAH 24.29 93 iP 23 32.00 3.3X  
1.2s 70.00nm 5.1mb  
TPT 24.32 93 iP 23 32.60 3.6X  
1.2s 205.00nm 5.6mb  
RUV 24.53 93 iP 23 34.20 3.1X  
1.2s 95.00nm 5.2mb  
NOZ 24.66 197 eP 23 31.80 -0.3  
MNC 27.27 200 eP 23 56.00 -0.5  
CNB 39.31 232 iPd 25 36.30 -4.7X  
CMS 41.01 239 eP 25 49.00 -5.9X  
TOO 43.01 231 iPc 26 06.70 -4.7X  
1.0s 49.00nm 5.2mb  
i 26 54.00

TAU 43.83 223 eP 26 18.00 0.2  
STK 44.62 240 eP 26 19.40 -5.0X  
1.0s 9.40nm 4.6mb  
BFD 45.12 232 iPc 26 23.00 -5.3X  
W82 50.43 257 iPc 27 03.30 -6.6X  
0.5s 12.00nm 5.2mb  
i 28 24.40  
WRA 50.44 257 P 27 21.00 11.0X  
0.8s 4.90nm  
WRA 50.44 257 P 27 03.00 -7.0X  
0.5s 12.00nm 5.2mb  
ASPA 50.71 252 eP 27 05.70 -6.4X  
0.7s 36.00nm 5.5mb  
WARB 57.25 248 eP 27 53.50 -6.6X  
MAT 69.18 319 eP 29 11.00 -7.7X  
eS 38 20.00  
PRI 70.96 43 eP 29 31.20 1.5  
RVR 71.95 46 eP 29 36.00 0.5  
PLM 71.97 47 eP 29 36.00 0.2  
FRI 72.08 42 eP 29 36.90 0.7  
ISA 72.13 44 eP 29 37.00 0.4  
CMB 72.26 41 ePd 29 38.10 0.8  
ORV 72.48 39 eP 29 38.90 0.3  
MIN 72.91 39 ePd 29 41.30 0.1  
TPC 72.94 47 eP 29 42.00 0.6  
TNP 74.33 43 iP 29 50.20 0.6  
1.0s 10.25nm 4.8mb  
SPA 74.87 180 iPc 29 52.50 0.3  
1.0s 102.50nm 5.8mb  
SVW 77.31 8 eP 30 05.60 -0.2  
PMR 78.84 11 eP 30 14.10 0.0  
1.2s 48.60nm 5.4mb  
MDJ 79.24 322 eP 30 17.20 0.6



	79.57	32 eP	30 19.00	0.7	LOR	147.94	4 ePKP	37 56.60	3.1X	EGUA	2.60 202 ePn	11 21.50	0.3
	0.6 s	10.00nm		5.0mb		1.0 s	14.00nm			EROO	2.63 52 ePn	11 21.00	-0.6
TOA	79.89	12 eP	30 20.90	1.0	Z	20 s	0.68um		5.4Msz		eSn	11 51.50	
ALQ	80.25	50 eP	30 23.80	1.2	SSF	148.11	5 ePKP	37 57.10	3.3X	EBR	2.68 53 ePn	11 33.00	10.7X
	1.2 s	26.56nm		5.1mb		1.0 s	22.00nm				eSg	12 04.00	
CN2	81.32	320 eP	30 26.00	-1.7	LBF	148.23	4 ePKP	37 57.50	3.5X	EPLA	3.00 287 ePn	11 26.80	-0.2
	Z	24 s	1.30um	5.2MszX		1.1 s	24.40nm			ECRI	3.36 358 ePn	12 03.00	
		sP	30 40.00		AVF	148.37	5 ePKP	37 57.80	3.6X		eSn	11 43.00	11.0X
DL2	81.47	314 eP	30 29.00	0.4		1.0 s	14.00nm			EPF	4.28 27 Pn	11 44.41	-0.7
	1.2 s	40.00nm		5.3mb	BEO	148.44	342 ePKP	37 57.00	2.7		Pg	11 59.60	
LRM	81.53	38 ePd	30 30.10	1.0	HRI	148.53	310 ePKP	37 58.90	3.9X		Sn	12 30.80	
SNY	81.54	317 Pc	30 28.50	-0.3	PTJ	148.55	348 ePKP	37 54.30	-0.3	LPO	6.03 25 Pn	12 05.60	-4.2X
	Z	26 s	0.50um	4.8MszX	SMF	148.55	4 ePKP	37 58.30	3.8X	CAF	6.55 29 Pn	12 09.50	-7.6
		pP	30 36.80	26kmX		1.0 s	12.00nm			S.D. = 0.7 on 16 of 20 obs.			
FBA	82.12	10 eP	30 31.30	-0.2	BGF	148.56	6 ePKP	37 56.90	2.4X	MAY 30, 1991 20h 37m 36.69±0.48s			
	0.8 s	35.60nm		5.5mb		1.0 s	14.00nm			45.608 N ± 3.8km 3.467 E ± 4.2km			
IMA	82.32	8 eP	30 32.70	0.1	LJU	148.67	350 ePKP	37 54.00	-0.7	DEPTH = 10.0km (geophysicist)			
	1.5 s	30.50nm		5.1mb	LSF	148.71	8 ePKP	37 58.20	3.4X	FRANCE (538)			
GOL	83.13	46 iP	30 38.50	0.9		1.0 s	14.00nm			ML 2.8 (LDG). MD 2.6 (STR).			
	1.0 s	30.00nm		5.4mb	TCF	148.76	7 ePKP	37 57.70	2.8X	PYM	0.35 294 Pg	37 45.57	1.6
SES	84.74	34 eP	30 44.50	-0.6		1.0 s	8.00nm				Sg	37 52.57	
BJI	85.77	313 eP	30 50.00	-0.4	VOY	148.78	351 e(PKP)	37 58.00	3.0X	PLDF	0.38 17 Pg	37 43.35	-1.1
MEO	86.11	53 iPc	30 54.00	1.7	MAF	148.86	6 ePKP	37 59.00	4.0X		Sg	37 48.90	
TIY	87.58	310 eP	31 02.60	3.2X		0.8 s	10.75nm			LBL	0.41 203 Pg	37 44.30	-0.7
	Z	25 s	0.56um	4.9MszX	CEY	148.98	350 e(PKP)	37 58.00	3.7X		Sg	37 49.96	
INK	87.97	14 eP	31 00.50	0.0	VBY	149.06	349 ePKP	37 55.00	-0.3	AGO	0.50 332 Pg	37 47.54	0.6
		pP	31 15.00	49kmX	DSI	149.57	307 ePKP	38 03.10	6.6X		Sg	37 56.12	
GYA	88.47	298 P	31 07.40	3.4X	RJF	149.64	8 ePKP	38 00.90	4.7X	SSB	0.83 113 Pg	37 47.64	-5.0X
XAN	89.00	306 P	31 05.20	-1.1		0.8 s	5.35nm		5.4Msz		Sg	37 56.56	
YAK	89.16	337 eP	31 03.70	-2.6X	LPL	149.81	1 ePKP	38 02.50	5.7X	MAF	0.88 315 Pn	37 54.20	0.6
		e	34 33.00			0.8 s	6.70nm				Pg	37 54.90	
HHC	89.33	313 eP	31 07.80	0.0	LPG	149.83	1 ePKP	38 02.50	5.6X		Sg	38 08.20	
YKA	89.72	23 eP	31 08.50	-0.4	LFF	149.89	9 ePKP	38 01.60	5.0X	BGF	1.04 336 Pn	37 56.30	-0.1
	0.8 s	4.30nm		4.8mb		1.0 s	12.00nm				Pg	37 57.30	
BTO	90.35	312 eP	31 12.00	-0.5	LPO	150.20	9 ePKP	38 02.30	5.2X		Sg	38 12.50	
FFC	91.65	33 eP	31 18.00	0.0		1.0 s	8.00nm			TCF	1.11 308 Pn	37 57.80	0.3
	1.8 s	46.00nm		5.6mb	BNI	150.27	1 PKP	38 03.40	6.0X		Pg	37 59.00	
LZH	93.58	306 eP	31 28.50	0.9	RMN	150.61	306 ePKP	38 03.60	5.3X		Sg	38 15.00	
	1.5 s	20.00nm		5.3mb	SKO	150.65	338 ePKP	38 02.80	5.0X	AVF	1.19 356 Pn	37 57.40	-1.4
		sP	31 44.00		VAY	150.78	336 ePKP	38 02.40	4.4X		Pg	37 58.50	
NVL	94.16	182 ePc	31 29.00	-0.4	SFI	151.13	353 PKP	38 04.70	6.3X		Sg	38 14.80	
OUE	123.47	296 ePKP	37 10.40	1.0	PGD	151.19	353 PKP	38 04.90	6.1X	CAF	1.20 236 Pn	37 58.80	-0.3
OBN	134.18	337 ePKP	37 28.00	-0.8	FIR	151.34	354 ePKP	38 10.00	11.2X		Pg	38 00.10	
HFS	134.91	355 ePKP	37 29.00	-1.1	ARV	151.40	351 PKP	38 05.00	6.1X		Sg	38 17.80	
	1.0 s	5.60nm			SBF	151.46	360 ePKP	38 05.10	6.0X	RJF	1.41 258 Pn	38 02.30	0.0
WTS	143.32	0 ePKP	37 48.00	2.4		0.8 s	8.05nm				Pg	38 04.50	
CLL	143.71	354 ePKP	37 35.00	-11.3X	CDR	151.62	2 ePKP	38 15.20	15.9X		Sg	38 24.20	
KSP	143.72	350 ePKP	37 43.50	-2.9X	OHR	151.63	338 ePKP	38 04.50	5.1X		Pg	38 22.10	
KRA	143.75	346 ePKP	37 43.00	-3.5X		1.0 s	61.00nm			LBF	1.42 14 Pg	38 01.70	-0.9
		e	37 46.00		FRF	151.76	1 ePKP	38 05.80	6.4X		Sg	38 20.00	
BRG	144.03	353 ePKP	37 46.40	-0.5		1.0 s	8.00nm			SSF	1.45 1 Pg	38 03.00	0.0
	1.0 s	9.00nm			LMR	151.98	1 ePKP	38 06.40	6.6X		Sg	38 22.70	
MOX	144.49	355 ePKPc	37 45.70	-2.0		0.8 s	5.35nm			LSF	1.50 296 Pg	38 06.10	3.1X
	1.2 s	9.00nm			TOL	153.54	20 ePKP	38 23.00	20.9X		Sg	38 27.00	
ENN	144.54	1 ePKP	37 46.00	-1.7	S.D. = 1.0 on 64 of 124 obs.					LOR	1.68 9 Pg	38 07.30	1.0
	1.0 s	12.00nm			MAY 30, 1991 20h 10m 37.81±0.37s						Sg	38 28.90	
MEM	144.70	1 PKPc	37 46.30	-1.7	39.250 N ± 3.5km 2.335 W ± 4.4km					LPO	1.86 241 Pn	38 08.60	-0.3
SNF	144.73	3 PKP	37 47.30	-0.8	DEPTH = 5.0km (geophysicist)						Pg	38 12.60	
PRU	144.82	352 PKPc	37 47.10	-1.2	SPAIN (377)					LFF	2.04 252 Pn	38 11.10	-0.3
		e	38 16.00		mbLg 3.8 (MDD).						Pg	38 16.00	
DOU	145.16	3 PKPc	37 48.00	-0.8	EVIA	0.62 192 ePg	10 50.20	-0.1		LPL	2.30 91 Pg	38 16.20	0.8
KAS	145.25	324 ePKP	37 49.50	0.1		eSg	10 58.00				Sg	38 42.70	
GRF	145.47	355 iPKPd	37 48.90	-0.5	ECHE	1.11 72 ePg	11 00.00	0.8		LPG	2.31 92 Pg	38 16.60	0.9
KHC	145.79	353 PKP	37 51.00	1.0	EHUE	1.45 188 ePn	11 05.00	0.2			Sg	38 43.40	
	1.3 s	27.00nm				eSn	11 23.50			MFF	2.70 293 Pg	38 29.40	8.4X
FLN	145.97	9 ePKP	37 50.70	0.4	TOL	1.47 296 ePn	11 05.60	0.6			Sg	39 05.30	
	1.0 s	22.00nm				iSg	11 28.50			HAU	3.11 38 Pg	38 32.40	5.7X
	Z	20 s	0.73um	5.5Msz	EALH	1.56 152 ePn	11 07.20	0.9			Sg	39 12.40	
VKA	146.21	349 ePKP	37 51.00	0.3		eSn	11 26.00			EPF	3.42 222 Pn	38 27.80	-3.3X
	1.3 s	48.50nm				eSn	11 06.00	-0.4			Pg	38 41.30	
		i	38 09.70		EBAN	1.57 227 ePn	11 28.20				Sg	39 26.30	
SRO	146.23	346 ePKP	37 49.40	-1.3		eSn	11 28.90			LPF	3.93 310 Pn	38 38.10	-0.2
LPF	146.59	10 ePKP	37 51.40	0.1	ETOR	1.58 8 ePn	11 07.00	0.4		GRR	4.06 315 Pn	38 39.60	-0.6
	1.0 s	24.00nm				eSn	11 20.50			S.D. = 0.8 on 19 of 24 obs.			
BBTK	146.83	323 ePKP	37 53.00	0.9	ACU	1.67 116 ePn	11 07.00	-0.9		MAY 30, 1991 20h 38m 57.35±8.31s			
CDF	146.91	360 ePKP	37 53.80	1.9X		eSn	11 28.90			39.814 N ±55.4km 29.358 E ±33.0km			
	1.0 s	26.00nm			GUD	1.97 315 ePn	11 12.60	0.3		DEPTH = 10.0km (geophysicist)			
GZR	147.18	340 ePKP	37 54.00	1.6X		eSn	11 38.00			TURKEY (366)			
HAU	147.31	1 ePKP	37 54.90	2.4X	ECOG	2.20 207 ePn	11 15.00	-0.6		MD 2.9 (ISK).			
	0.8 s	10.75nm				eSn	11 42.30			IZI	0.53 10 iPg	39 08.40	0.3
	Z	20 s	0.22um	5.0Msz		eSn	11 42.80						
BZS	147.36	341 ePKP	37 54.00	1.4X	AFC	2.21 206 ePn	11 15.00	-0.8					
BSF	147.49	1 ePKP	37 55.20	2.3X		eSn	11 42.80						
	0.8 s	8.05nm			ENIJ	2.28 177 ePn	11 17.60	0.9					
KBA	147.83	352 iPKPc	37 57.40	3.8X									



YLV 0.75 1 eSg 39 14.70  
HRT 1.03 13 iPg 39 11.20 -0.9  
BNT 1.23 297 ePn 39 20.00 -0.2  
EDC 1.26 295 ePn 39 21.00 0.2  
ISK 1.27 350 iPn 39 21.20 0.3  
CTT 1.51 332 iPn 39 24.60 0.2

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

MAY 30, 1991 20h 54m 38.13± 0.92s

45.573 N ± 4.9km 3.671 E ± 7.2km

DEPTH = 5.0km (geophysicist)

FRANCE (538)

ML 2.2 (LDG). MD 2.2 (STR).

PLDF 0.40 355 Pg 54 46.06 -0.1  
Sg 54 51.60  
LBL 0.45 221 Pg 54 47.05 -0.2  
Sg 54 53.15  
PYM 0.50 291 Pg 54 48.30 0.2  
Sg 54 55.27  
AGO 0.61 322 Pg 54 50.27 -0.1  
Sg 54 58.70  
MAF 1.01 310 Pg 54 57.70 0.0  
Sg 55 10.90  
SMF 1.08 6 Pg 54 58.60 -0.3  
Sg 55 12.30  
BGF 1.14 330 Pn 54 59.30 -0.6  
Sg 55 15.40  
AVF 1.24 350 Pg 55 01.50 -0.1  
Sg 55 17.50  
TCF 1.25 306 Pg 55 02.00 0.3  
Sg 55 18.10  
CAF 1.31 241 Pg 55 02.80 0.0  
Sg 55 19.60  
LBF 1.43 8 Pg 55 04.90 0.1  
Sg 55 22.40  
SSF 1.49 356 Pg 55 06.30 0.7  
Sg 55 24.80

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

MAY 30, 1991 21h 35m 39.75± 0.94s

24.086 N ± 4.9km 122.872 E ± 6.3km

DEPTH = 42.3 ± 7.8 km

4.9mb (27 obs.) 4.0Msz (2 obs.)

TAIWAN REGION (243)

TWD 1.17 270 ePc 35 59.90 0.0  
TWZ 1.55 311 ePc 36 05.70 0.4  
ANP 1.65 312 iP 36 08.00 1.2  
eS 36 32.00  
TWK 2.33 250 ePc 36 16.90 0.4  
eS 36 46.50  
QZH 3.99 283 Pnd 36 38.00 -2.0  
Z 16s 3.50um  
iSn 37 21.70  
SSE 7.14 348 Pd 37 22.60 -1.7  
0.5s 20.00nm 5.2mb  
Z 20s 0.60um 3.2MszX  
N 12s 0.50um  
E 12s 0.60um  
pP 37 28.50  
eS 38 45.50  
NJ2 8.69 337 iPc 37 43.50 -2.3  
0.8s 20.00nm 5.2mb  
Z 10s 0.70um 3.5MszX  
sP 37 57.00  
GZH 8.80 265 P 37 45.40 -1.9  
S 39 19.00  
WHN 9.94 312 eP 38 03.00 0.0  
Z 12s 1.20um  
TIA 13.06 339 eP 38 48.20 3.1X  
E 12s 0.70um  
OIZ 13.12 250 eP 38 47.80 1.8  
N 14s 0.90um  
eS 41 18.00  
DL2 14.81 356 Pc 39 12.00 4.0X  
N 10s 0.30um  
GYA 14.85 283 P 39 09.00 0.2  
Z 18s 1.20um  
N 10s 1.00um  
E 10s 1.40um  
pP 39 16.00  
PP 39 19.40  
SS 42 03.60  
XAN 15.71 312 P 39 18.20 -1.5  
TIY 16.25 329 eP 39 29.00 2.3

Z 15s 1.10um  
N 13s 1.10um  
BJI 16.88 342 eP 39 36.00 1.6  
SNY 17.70 2 eP 39 45.60 0.9  
Z 15s 0.60um  
E 13s 0.40um

S 43 05.00  
MAT 18.12 43 (P) 39 51.00 1.1  
CD2 18.26 296 iPc 39 51.40 -0.3  
0.8s 30.00nm 4.5mb

Z 16s 0.80um 4.7MszX  
E 10s 0.70um

eS 43 10.00  
KMI 18.34 277 eP 39 53.50 0.6  
2.0s 40.00nm 4.2mb

Z 16s 1.60um 4.0MszX  
pP 40 02.00

HHC 19.22 333 Pc 40 04.20 1.0  
Z 14s 1.20um

N 11s 0.40um  
BTO 19.69 330 eP 40 07.00 -1.4  
N 13s 1.00um

E 12s 0.60um  
epP 40 12.00 19kmX  
CN2 19.78 6 P 40 11.40 2.2

Z 13s 1.50um  
N 12s 0.50um

E 12s 0.30um  
epP 40 20.40 36kmX  
LZH 20.31 310 eP 40 14.50 -0.5

1.4s 40.00nm 4.6mb  
Z 14s 1.01um 4.3MszX  
N 10s 0.48um

pP 40 25.00 43kmX  
MDJ 21.20 13 eP 40 23.40 -0.5  
CHG 22.87 261 eP 40 42.80 2.2

GTA 24.76 314 P 40 58.80 -0.2  
1.0s 100.00nm 5.3mb  
Z 14s 0.90um 4.4MszX

E 11s 0.60um  
LSA 28.78 288 Pd 41 37.20 0.8  
GUN 33.39 285 Pd 42 17.00 0.1

KKN 33.92 284 Pd 42 21.00 -0.3  
WMO 34.84 313 P 42 28.50 -0.4  
YAK 38.20 5 eP 42 54.10 -2.7X

NDI 40.97 287 iPd 43 20.00 -0.2  
0.5s 28.17nm 5.3mb  
WRA 45.17 165 P 43 53.00 -1.3

0.9s 15.70nm 4.9mb  
WB2 45.17 165 iPd 43 53.60 -0.8  
0.9s 15.90nm 4.9mb

e 44 26.50  
i 45 40.50  
e 47 19.30

e 48 23.80  
GAR 46.58 302 iP 44 05.60 0.0  
OIS 47.27 158 iPc 44 11.00 0.0

ASPA 48.66 166 iPd 44 22.10 0.3  
0.5s 15.60nm 5.3mb  
OUE 49.73 290 P 44 31.60 1.4

WAR8 50.11 176 iPc 44 33.30 0.5  
0.4s 17.00nm 5.4mb  
MAIO 55.25 298 eP 45 12.00 0.8

STK 58.46 161 iPc 45 34.00 0.2  
1.0s 4.00nm 4.5mb  
KEV 69.64 338 eP 46 42.00 -4.4X

SOD 70.38 336 eP 46 50.00 -1.0  
INK 72.74 22 eP 47 05.00 0.0  
NUR 73.26 329 eP 47 08.00 -0.2

HFS 78.40 331 eP 47 35.50 -1.7  
0.4s 1.10nm 4.2mb  
e 47 45.40

YKA 82.46 23 eP 47 58.20 -0.6  
0.8s 6.20nm 4.7mb  
CLL 83.05 324 eP 48 03.00 0.9

GRF 84.86 323 eP 48 12.00 0.7  
0.7s 2.00nm 4.4mb  
LPG 89.69 321 eP 48 34.80 -0.3

0.8s 5.35nm 4.9mb  
LPL 89.69 321 eP 48 34.80 -0.3  
0.8s 4.05nm 4.8mb

SBF 90.21 319 eP 48 36.40 -0.9  
0.8s 5.35nm 4.9mb  
LOR 90.27 323 eP 48 37.00 -0.5

0.6s 1.80nm 4.6mb  
Z 20s 0.08um 4.1Msz  
LBF 90.38 323 eP 48 37.60 -0.4

0.8s 2.70nm 4.6mb

SMF 90.66 323 eP 48 39.10 -0.1  
1.0s 8.00nm 5.0mb

AVF 90.84 323 eP 48 39.90 -0.1  
0.8s 4.05nm 4.9mb

SSB 91.08 322 eP 48 38.30 -2.9X  
0.6s 5.40nm 5.1mb

MAF 91.61 323 eP 48 43.40 -0.2  
0.6s 2.25nm 4.8mb

FRB 92.00 5 eP 48 44.50 -0.5  
FFC 92.60 24 iPd 48 48.20 0.2

0.5s 6.00nm 5.3mb  
CAF 92.69 322 eP 48 49.00 0.3  
0.8s 5.35nm 5.0mb

RJF 92.76 323 eP 48 49.10 0.2  
0.8s 5.35nm 5.0mb

Z 20s 0.05um 4.0Msz  
S.D. = 1.1 on 58 of 63 obs.

& MAY 30, 1991 21h 48m 32.07s

60.865 N 147.359 W

DEPTH = 20.0km

SOUTHERN ALASKA (2)

<AEIC>. ML 2.6 (AEIC).

GLI 0.13 83 iPc 48 36.67 0.3  
iS 48 40.86

VZW 0.44 63 iPc 48 40.34 -0.8  
iS 48 47.25

KNIM 0.55 200 iPd 48 41.60 -1.3  
eS 48 49.66

VLZ 0.57 61 iPc 48 42.09 -1.1  
eS 48 50.09

HIN 0.63 138 iPc 48 43.91 -0.4  
eS 48 53.84

KNK 0.76 316 eP 48 45.37 -1.2  
eS 48 55.87

CVA 0.85 111 ePc 48 47.14 -0.9  
S 48 59.93

LTJ 0.86 197 ePd 48 46.86 -1.4  
MTU 0.89 190 iPd 48 47.74 -1.0

KLU 0.94 47 ePc 48 47.93 -1.7  
SCM 0.97 1 ePd 48 48.58 -1.6

SML 1.06 334 ePc 48 49.85 -1.7  
eS 49 04.53

SGAM 1.12 108 iPc 48 51.43 -1.2  
S 49 07.59

PLRM 1.13 311 ePc 48 50.69 -2.0  
PMS 1.14 291 iPc 48 51.11 -1.8

eS 49 05.87  
GHO 1.18 321 ePc 48 52.03 -1.6

SEW 1.29 234 ePc 48 53.04 -1.9  
TOA 1.37 24 ePd 48 55.31 -0.9

RAGM 1.41 109 eP 48 55.62 -1.1  
eS 49 15.51

PWA 1.45 304 ePc 48 56.10 -1.1  
SLKM 1.45 257 iPc 48 55.75 -1.6

eS 49 14.26  
TZL 1.51 37 eP 48 57.48 -0.6

eS 49 18.24  
HMT 1.62 108 eP 48 57.91 -1.8

eS 49 19.80  
SUA 1.75 292 ePc 49 00.12 -1.6

GLB 1.82 70 iPc 49 01.40 -1.2  
eS 49 24.16

SDG 1.88 27 ePd 49 02.91 -0.6  
CROM 2.07 91 ePc 49 04.72 -1.7

CUT 2.08 319 ePc 49 05.38 -1.0  
eS 49 32.95

TGL 2.22 91 eP 49 06.62 -1.9  
WAX 2.26 99 ePc 49 06.90 -2.1

SKT 2.30 301 iPc 49 07.41 -2.1  
eS 49 36.60

CNPM 2.36 237 eP 49 08.73 -1.6  
CRP 2.37 282 eP 49 08.65 -2.0

HUR 2.38 334 eP 49 08.27 -2.4  
NCG 2.39 285 eP 49 08.72 -2.2

CKL 2.45 280 ePc 49 09.33 -2.4  
BALM 2.45 84 eP 49 09.91 -1.9

BGL 2.48 281 eP 49 09.90 -2.3  
RDT 2.50 265 iPc 49 09.66 -2.8

DFR 2.63 266 ePc 49 11.43 -2.9  
REF 2.66 264 iPc 49 12.37 -2.4

RDN 2.68 265 ePc 49 12.00 -3.1  
RSO 2.69 264 eP 49 12.34 -2.9

RS2 2.69 264 eP 49 12.83 -2.4  
RED 2.70 263 eP 49 12.41 -3.0



30d 21h

RDW 2.71 264 ePc 49 12.64 -2.9  
 NCT 2.76 266 eP 49 13.08 -3.0  
 47 obs. associated

& MAY 30, 1991 22h 07m 44.00s  
 39.200 N 99.400 W  
 DEPTH = 5.0km (geophysicist)  
 KANSAS (480)  
 <MACRO>. mblg 3.5 (TUL). Felt  
 (IV) at Zurich. Also felt at  
 Palco and Plainville.

LAW 3.24 93 P 08 40.00 3.5  
 SIO 4.24 144 P 08 50.00 -0.6  
 TUL 4.36 138 ePn 08 50.60 -1.8  
 ePg 09 07.10  
 eSn 09 42.00  
 MEO 4.46 171 Pn 08 53.40 -0.4  
 S 09 44.30  
 GLD 4.54 279 P 08 55.00 -0.1  
 GOL 4.65 278 P 08 55.50 -1.3  
 ANMO 7.06 235 P 09 33.00 2.3  
 ALQ 7.06 235 e(P) 09 33.00 2.2  
 FVM 7.13 97 P 09 28.50 -3.1  
 OLY 7.31 118 P 09 31.00 -3.1  
 ELC 8.23 100 P 09 41.00 -5.9  
 11 obs. associated

MAY 30, 1991 22h 15m 45.50±0.65s  
 49.109 N ± 5.9km 6.930 E ± 8.0km  
 DEPTH = 5.0km (geophysicist)  
 GERMANY (543)  
 MD 2.1 (STR).

GWF 0.47 106 Pg 15 55.20 0.2  
 CDF 0.73 162 Pg 15 59.62 -0.6  
 WLS 0.75 158 Pg 16 00.06 -0.5  
 ECH 0.91 170 Pg 16 03.55 0.2  
 MOF 1.27 174 Pg 16 09.84 0.3  
 FEL 1.43 149 Pg 16 13.06 0.8  
 Sg 16 32.98  
 MEM 1.62 339 P 16 14.00 -0.7  
 LOMF 1.76 182 Pn 16 16.62 -0.3  
 DOU 1.81 304 iP 16 18.20 0.6  
 id 16 23.00  
 S.D. = 0.6 on 9 of 9 obs.

\* MAY 30, 1991 22h 16m 54.05±1.17s  
 42.992 N ± 8.8km 18.677 E ± 8.2km  
 DEPTH = 10.0km (geophysicist)  
 YUGOSLAVIA (383)  
 ML 3.0 (THE).

BRY 0.13 227 iPgd 16 57.23 -0.1  
 iSg 17 00.07  
 NKY 0.30 127 iPgc 17 00.20 -0.1  
 iSg 17 05.60  
 HCY 0.56 194 iPgd 17 05.37 0.0  
 iSg 17 14.40  
 PLE 0.62 57 iPgc 17 06.78 0.1  
 iSg 17 16.53  
 TTG 0.71 142 iPgd 17 07.68 -0.3  
 iSg 17 18.55  
 BDV 0.72 171 iPgd 17 08.65 0.5  
 iSg 17 19.27  
 S.D. = 0.3 on 6 of 6 obs.

\* MAY 30, 1991 22h 32m 41.14±0.90s  
 60.847 N ± 16.6km 167.367 E ± 13.7km  
 DEPTH = 33.0km (normal)  
 4.3mb (12 obs.)  
 EASTERN SIBERIA (671)

YAK 17.88 290 eP 36 49.60 1.1  
 e 42 26.00  
 INK 25.46 48 eP 38 12.00 4.9X  
 YKA 34.98 52 eP 39 32.40 0.8  
 0.8s 0.90nm 3.8mb  
 NB2 57.06 346 P 42 24.80 -1.0  
 0.7s 4.00nm 4.6mb  
 HFS 57.64 345 eP 42 28.20 -1.6  
 0.6s 0.80nm 3.9mb  
 e 42 30.40  
 e 42 33.50  
 CHG 63.25 261 eP 43 07.80 -0.7  
 LOR 71.41 348 eP 43 58.50 -1.0  
 0.8s 5.35nm 4.6mb

LBF 71.68 348 eP 44 00.40 -0.7  
 0.6s 1.80nm 4.3mb  
 AVF 71.94 349 eP 44 02.70 0.2  
 0.8s 3.35nm 4.4mb  
 SMF 72.03 348 eP 44 03.50 0.3  
 0.6s 1.80nm 4.2mb  
 LPL 72.83 346 eP 44 08.60 0.5  
 0.4s 1.15nm 4.2mb  
 LPG 72.85 346 eP 44 09.30 1.0  
 0.4s 1.15nm 4.2mb  
 LFF 74.01 350 eP 44 15.30 0.6  
 0.6s 3.60nm 4.5mb  
 LPO 74.23 350 eP 44 16.50 0.5  
 0.6s 2.70nm 4.4mb  
 WRA 84.80 211 P 45 13.00 0.0  
 0.7s 1.10nm 4.2mb  
 NVL 166.01 215 ePKP 52 32.00 -9.5X  
 S.D. = 0.9 on 14 of 16 obs.

\* MAY 30, 1991 23h 20m 26.91±1.08s  
 30.912 S ± 8.9km 68.408 W ± 9.7km  
 DEPTH = 10.0km (geophysicist)  
 SAN JUAN PROVINCE, ARGENTINA (137)

RTCB 0.66 210 iPd 20 39.70 -0.5  
 eS 20 50.00  
 ZON 0.67 200 iPd 20 39.70 -0.6  
 eS 20 49.70  
 CFA 0.71 168 ePd 20 42.20 1.3  
 eS 20 55.30  
 RTRS 1.17 309 iPd 20 49.10 0.3  
 S 21 07.20  
 TCA 3.30 98 ePd 21 19.20 -0.6  
 S.D. = 1.2 on 5 of 5 obs.

? MAY 30, 1991 23h 53m 26.36±1.80s  
 40.759 N ± 16.4km 15.745 E ± 8.8km  
 DEPTH = 10.0km (geophysicist)  
 SOUTHERN ITALY (390)

SGO 0.39 239 P 53 34.20 -0.1  
 eSg 53 38.20  
 ORI 0.88 142 P 53 42.30 -0.9  
 eSg 53 55.40  
 BRT 1.11 83 P 53 47.40 0.1  
 eSg 54 02.50  
 TDS 1.19 157 P 53 49.40 0.9  
 S.D. = 1.3 on 4 of 4 obs.

& MAY 30, 1991 23h 55m 04.04s  
 54.123 N 161.439 W  
 DEPTH = 25.0km  
 4.1mb (3 obs.)  
 ALASKA PENINSULA (12)  
 <PAL>. MD 3.5 (PAL).

SDN 1.34 24 iPd 55 26.00 -1.2  
 YKA 25.45 52 eP 00 30.60 -0.5  
 0.5s 0.50nm 3.4mb  
 SOD 58.68 356 eP 05 11.00 10.0  
 NB2 65.04 4 P 05 40.60 -3.2  
 0.8s 1.60nm 4.2mb  
 NUR 65.61 357 eP 05 34.00 -13.4  
 HFS 66.03 3 eP 05 46.40 -3.6  
 0.5s 2.70nm 4.6mb  
 Z 12s 0.05um 4.0MszX  
 6 obs. associated

\* MAY 31, 1991 00h 33m 51.85±0.96s  
 45.315 N ± 14.9km 151.225 E ± 13.2km  
 DEPTH = 33.0km (normal)  
 4.1mb (3 obs.)  
 KURIL ISLANDS (221)

KUSJ 5.18 247 P 35 05.40 -3.7X  
 S 35 59.00  
 ASAJ 6.23 262 eP 35 24.90 1.0  
 HOOJ 6.44 246 eP 35 25.30 -1.5  
 S 36 32.60  
 MRRJ 7.88 252 eP 35 47.20 0.2  
 DAV 44.10 218 eP 42 16.00 17.4X  
 GUN 53.81 275 P 43 14.00 0.0  
 KKN 54.31 275 P 43 17.90 0.4  
 WB2 66.74 197 eP 44 42.10 0.3  
 0.6s 1.50nm 4.3mb  
 WRA 66.74 197 P 44 42.00 0.2  
 0.9s 1.00nm 3.9mb

NB2 69.15 340 P 44 55.70 -0.8  
 0.6s 1.00nm 4.1mb  
 CLL 77.21 335 e(P) 45 44.00 0.3  
 S.D. = 0.9 on 9 of 11 obs.

MAY 31, 1991 00h 41m 21.29±0.46s  
 10.175 N ± 6.8km 126.204 E ± 13.2km  
 DEPTH = 33.0km (normal)  
 4.6mb (9 obs.) 4.1Msz (3 obs.)  
 PHILIPPINE ISLANDS REGION (248)

OCP 6.69 312 eP 42 47.00 -12.8X  
 BAC 8.27 319 eP 43 22.00 -0.1  
 OZH 16.37 335 eP 45 12.00 1.7  
 S 48 22.00  
 QIZ 18.10 301 eP 45 31.00 -1.0  
 SSE 21.33 348 P 46 08.00 0.3  
 1.0s 12.00nm 4.3mb  
 Z 20s 0.50um 3.9Msz  
 N 10s 0.30um  
 E 10s 0.10um

eS 50 03.00  
 NJZ 22.81 344 P 46 24.00 1.6  
 WHN 23.08 333 eP 46 24.50 -0.5  
 GYA 24.57 314 P 46 41.40 1.7  
 pP 46 52.80 44kmX  
 CHG 27.72 291 eP 47 08.00 -0.9  
 TIY 30.09 338 eP 47 31.00 0.9  
 Z 20s 0.50um 4.2Msz  
 N 20s 0.91um  
 S 52 32.00  
 WB2 30.99 165 iPd 47 36.50 -1.5  
 1.2s 2.60nm 3.9mb  
 i 48 12.40

SNY 31.61 356 eP 47 42.60 -0.7  
 LZH 32.82 325 eP 47 53.00 -1.1  
 1.2s 23.00nm 5.0mb  
 Z 20s 0.59um 4.3Msz  
 QIS 33.26 157 iPc 47 57.20 -0.7  
 BTQ 33.52 337 eP 48 03.00 2.9X  
 eS 53 18.00  
 ASPA 34.47 167 eP 48 07.60 -0.7  
 0.4s 7.00nm 4.9mb  
 eS 53 26.80  
 WARB 36.14 179 eP 48 24.00 1.5  
 0.3s 6.00nm 5.0mb  
 GTA 37.42 325 Pc 48 32.00 -1.3  
 0.8s 10.00nm 4.7mb  
 Z 16s 0.90um 4.7MszX

pP 48 45.00 48kmX  
 MRWA 40.38 194 eP 48 58.50 0.6  
 FORR 40.83 178 eP 49 01.80 0.3  
 GUN 41.76 301 P 49 11.40 1.7  
 KKN 42.23 300 P 49 13.40 -0.1  
 MUN 42.99 192 eP 49 20.00 0.7  
 NWAQ 43.71 191 eP 49 25.00 0.0  
 STK 44.34 161 eP 49 31.30 1.1  
 0.3s 2.70nm 4.6mb  
 HYB 46.73 284 eP 49 49.50 0.0  
 WMO 47.26 322 eP 49 52.00 -1.4  
 Z 16s 0.60um 4.7MszX  
 N 14s 0.60um  
 DZM 50.84 129 iPc 50 26.20 5.0X  
 KEV 83.70 340 eP 53 45.00 -2.8X  
 SOD 84.35 337 eP 53 52.00 0.9  
 KAF 85.68 332 eP 53 56.20 -1.6  
 0.6s 2.10nm 4.5mb  
 eS 53 57.70

NUR 86.85 331 eP 54 02.30 -1.3  
 YKA 93.87 24 eP 54 36.70 0.2  
 1.0s 1.00nm 4.2mb  
 CNCB 164.72 117 PKP 01 29.00 4.7X  
 LPB 164.72 116 (PKP) 01 35.00 10.8X  
 ZOBO 164.80 115 PKP 01 20.00 -4.4X  
 S.D. = 1.1 on 29 of 36 obs.

? MAY 31, 1991 01h 00m 35.65±0.85s  
 10.111 N ± 16.7km 126.093 E ± 13.2km  
 DEPTH = 33.0km (normal)  
 4.4mb (4 obs.)  
 PHILIPPINE ISLANDS REGION (248)

SSE 21.37 348 P 05 22.00 -0.5  
 0.8s 10.00nm 4.3mb  
 WB2 30.95 165 iPd 06 50.90 -1.2  
 0.7s 2.00nm 4.0mb  
 i 07 24.30



OHR	83.33	326	eP	40	54.50	-1.0
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AVF	83.76	340 eP	40	57.80	0.3
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CRE 84.26 333 P 41 02.30 2.0

LFF	86.12	341	eP	41	10.50	1.1
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7 MAY 31 1991 01b 51m 11 72+ 2 59s

51	43.00	eSg	51	43.00
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AEGEAN SEA (365)

S.D. = 0.5 on 6 of 6 obs.

MAY 31, 1991 02h 39m 11.10 ± 0.28 s  
44.505 N ± 3.2 km 10.979 E ± 3.1 km  
DEPTH = 11.5 ± 2.7 km  
NORTHERN ITALY (545)  
MD 3.3 (TRI). ML 3.1 (LDG).

MME	0.37	213	Pc	39	19.30	0.4
			eSg	39	24.60	
BDI	0.52	212	P	39	21.30	-0.4
			eSg	39	28.80	



31d 02h

PGD 0.83 139 P 39 26.70 -0.4  
 PII 0.85 203 P 39 26.40 -0.9  
 SFI 0.86 133 P 39 27.40 -0.1  
 CRE 1.12 141 P 39 32.70 0.6  
 RSM 1.21 118 P 39 35.50 2.1  
 CTI 1.61 17 P 39 40.30 0.7  
 ARV 1.74 125 P 39 43.00 1.7  
 ASS 1.88 139 P 39 42.10 -1.4  
 CKI 1.93 269 P 39 45.50 1.3  
 TRI 2.31 58 iPnd 39 48.60 -1.0  
 PGF 2.43 217 Pn 39 50.90 -0.5  
 FVI 2.44 31 P 39 51.90 0.5  
 MNS 2.46 149 P 39 52.00 0.3  
 SCE 2.59 11 ePn 40 02.20 8.5X  
 SBF 2.63 257 Pn 39 55.50 1.3  
 DOI 2.67 271 P 39 55.20 0.4  
 KBA 3.06 32 iPnc 40 01.60 1.2  
 BNI 3.11 282 P 40 01.50 0.4  
 LPG 3.16 290 Pn 40 01.70 -0.2  
 LPL 3.18 290 Pn 40 01.90 -0.2  
 LMR 3.43 252 Pn 40 05.50 0.0  
 LRG 3.49 254 Pn 40 07.40 1.0  
 PTJ 3.79 67 eP 40 09.00 -1.6  
 CDR 3.85 259 eP 40 12.40 1.0  
 BSF 4.42 320 Pn 40 19.70 0.1  
 CDF 4.67 328 Pn 40 23.70 0.5  
 HAU 4.75 319 Pn 40 24.50 0.2  
 KHC 4.96 20 Pn 40 27.50 0.3  
 GRF 5.19 2 e(Pg) 40 55.00 24.5X  
 SMF 5.45 296 Pn 40 33.40 -0.7  
 LBF 5.49 299 Pn 40 34.50 -0.3  
 LOR 5.69 302 Pn 40 37.00 -0.5  
 AVF 5.81 296 Pn 40 38.60 -0.6  
 SSF 5.82 299 Pn 40 38.70 -0.6  
 BGF 6.07 293 Pn 40 41.90 -0.9  
 S.D. = 0.9 on 35 of 37 obs.

MAY 31, 1991 02h 50m 47.94 ± 0.25s  
 45.275 N ± 2.4km 6.860 E ± 2.9km  
 DEPTH = 5.0km (geophysicist)  
 FRANCE (538)  
 ML 2.8 (LDG), 2.7 (GEN), MD 2.8 (STR).

LPG 0.24 341 Pg 50 52.50 -0.3  
 LPL 0.26 340 Pg 50 52.90 -0.3  
 BNI 0.26 210 Pd 50 52.70 -0.5  
 LSD 0.28 49 P 50 53.94 0.3  
 RSP 0.31 114 P 50 55.27 1.1  
 RRL 0.36 189 P 50 55.17 0.0  
 RSL 0.44 338 Pn 50 56.26 -0.6  
 BHB 0.52 146 P 50 58.88 0.5  
 PZZ 0.79 167 P 51 03.27 -0.6  
 DOI 0.82 160 P 51 03.80 -0.5  
 ORX 0.87 65 P 51 05.12 0.0

STV 1.08 162 P 51 08.91 0.1  
 ROB 1.22 143 P 51 11.17 0.1  
 CKI 1.32 130 P 51 13.50 0.7  
 PCP 1.40 121 P 51 14.12 -0.1  
 SBF 1.47 164 Pn 51 18.00 2.8X  
 IMI 1.55 151 P 51 14.96 -1.3  
 SSB 1.64 271 Pn 51 18.54 1.0  
 FRF 1.72 185 Pg 51 21.90 3.2X  
 CDR 1.78 206 ePnd 51 22.20 2.6X  
 LRG 1.85 191 Pg 51 23.40 2.8X  
 LMR 1.96 188 Pg 51 25.10 3.0X  
 SMF 2.51 304 Pn 51 30.10 0.0  
 BSF 2.56 359 Pn 51 30.70 -0.1  
 LBF 2.63 311 Pn 51 33.00 1.1  
 HAU 2.75 353 Pn 51 32.80 -0.8  
 AVF 2.87 303 Pn 51 35.60 0.3  
 LOR 2.88 315 Pn 51 35.40 0.0  
 SSF 2.94 309 Pn 51 37.80 1.7  
 BGF 3.08 296 Pn 51 44.20 -0.5  
 CDF 3.15 5 Pn 51 38.40 -0.8  
 MAF 3.15 289 Pn 51 39.30 0.1  
 CAF 3.41 266 Pn 51 42.50 -0.5  
 S.D. = 0.7 on 28 of 33 obs.

MAY 31, 1991 03h 15m 01.85 ± 0.31s  
 40.479 N ± 3.9km 26.405 E ± 2.9km  
 DEPTH = 12.5 ± 2.6 km  
 TURKEY (366)  
 MD 3.5 (ISK).

ALN 0.50 327 iPg 15 11.40 -0.6  
 EZN 0.66 185 iPg 15 15.00 0.3  
 MFT 0.73 65 iPg 15 16.10 0.0  
 RDO 0.94 316 eP 15 19.80 0.3  
 EDC 1.12 96 iPg 15 23.00 0.4  
 BNT 1.16 96 iPn 15 23.50 0.1  
 PRK 1.24 185 eP 15 25.50 0.9  
 KDZ 1.39 328 iPc 15 27.00 0.1  
 CTT 1.68 66 iPn 15 30.50 -0.5  
 DMK 1.69 37 iPn 15 30.00 -1.2  
 DIM 1.70 338 eP 15 32.00 0.6  
 RZN 1.76 314 iPd 15 32.00 -0.4  
 ISK 2.10 73 ePn 15 37.00 -0.2  
 PAIG 2.16 256 ePb 15 36.10 -1.9  
 IZM 2.18 162 ePn 15 38.30 -0.1  
 SRS 2.23 288 ePn 15 38.60 -0.5  
 YLV 2.26 87 ePn 15 39.00 -0.6  
 IZI 2.35 92 ePn 15 40.60 -0.2  
 HRT 2.51 81 ePn 15 43.00 0.0  
 KNT 2.75 286 ePn 15 46.80 0.3

KKB 2.87 300 eP 16 17.20 0.9  
 VAY 3.03 287 ePn 15 56.40 6.1  
 GRG 3.08 280 ePn 15 49.80 -1.3  
 VTS 3.20 312 eP 15 54.00 1.1  
 KHL 3.24 131 ePn 15 53.00 -0.4  
 S.D. = 0.8 on 24 of 25 obs.

MAY 31, 1991 03h 48m 01.54 ± 0.83s  
 41.990 N ± 6.1km 23.089 E ± 8.2km  
 DEPTH = 10.0km (geophysicist)  
 GREECE-BULGARIA BORDER REGION (363)  
 ML 1.6 (SKO).

KKB 0.12 182 iPg 48 05.00 0.4  
 VTS 0.61 8 iPg 48 14.00 0.1  
 MMB 0.62 130 ePg 48 14.00 -0.1  
 VAY 0.77 210 ePn 48 16.30 -0.3  
 PGB 0.98 55 ePg 48 20.00 -0.1  
 RZN 1.25 103 eP 48 25.00 0.0  
 S.D. = 0.3 on 6 of 6 obs.

MAY 31, 1991 04h 02m 13.80 ± 0.88s  
 45.345 N ± 6.3km 6.699 E ± 12.8km  
 DEPTH = 33.0km (normol)  
 FRANCE (538)  
 ML 2.2 (GEN).

LPG 0.16 14 Pg 02 20.40 0.0  
 LPL 0.17 8 Pg 02 20.70 0.3  
 BNI 0.29 183 P 02 20.60 -1.0  
 LSD 0.34 71 P 02 22.05 -0.3  
 RRL 0.43 172 P 02 23.58 0.0  
 RSP 0.44 116 P 02 23.22 -0.4  
 BHB 0.64 141 P 02 26.79 0.3  
 PZZ 0.89 161 P 02 31.02 1.0  
 ORX 0.95 72 P 02 34.97 4.1X  
 S.D. = 0.7 on 8 of 9 obs.

? MAY 31, 1991 04h 21m 33.20 ± 2.31s  
 6.459 S ± 16.4km 147.514 E ± 20.0km  
 DEPTH = 75.0 ± 15.1 km  
 4.1mb (3 obs.)  
 EAST PAPUA NEW GUINEA REGION (207)

YYYY 1.55 278 eP 21 59.20 -0.4  
 PMG 2.95 187 iPd 22 17.80 -0.9  
 MNDI 3.84 274 eP 21 34.00 -57.4X  
 OIS 15.98 208 eP 25 15.40 0.6  
 WB2 18.52 222 iPc 25 45.30 -1.1  
 BRS 21.41 167 iPd 26 16.50 -0.2  
 ASPA 21.54 216 eP 26 18.20 0.1  
 STK 25.89 192 eP 27 00.70 0.9  
 WARB 27.95 223 eP 27 20.10 1.4  
 PPD 146.21 147 (PKP) 41 06.00 -0.3  
 S.D. = 1.0 on 9 of 10 obs.

% MAY 31, 1991 04h 46m 13.14 ± 1.27s  
 18.042 N ± 15.6km 66.869 W ± 10.4km  
 DEPTH = 33.0km (normol)  
 PUERTO RICO REGION (90)  
 MGP 0.21 261 P 46 19.60 -0.2  
 LRS 0.25 5 P 46 21.00 0.7



CLLP 0.28 82 P 47 17.00  
46 23.00 2.4  
46 42.00  
APR 0.43 18 P 46 22.10 -0.6  
46 40.10  
S 46 26.30 -0.1  
S 46 28.80 -0.7  
S 46 51.80  
LPR 0.99 74 P 46 29.40 -1.3  
S.D. = 1.5 on 7 of 7 obs.

\* MAY 31, 1991 04h 49m 06.08±2.21s  
39.199 N ±14.6km 22.612 E ±20.0km  
DEPTH = 10.0km (geophysicist)  
GREECE (364)

AGG 0.28 231 ePg 49 12.20 0.2  
eSg 49 19.90  
SOH 1.72 19 ePb 49 36.00 -0.2  
eSb 49 58.90  
IGT 1.80 281 ePn 49 36.90 -0.5  
FNA 1.85 329 ePnc 49 39.60 1.5  
eSn 50 03.50  
OHR 2.36 325 ePn 49 44.50 -1.0  
S.D. = 1.4 on 5 of 5 obs.

MAY 31, 1991 05h 28m 02.67±0.09s  
6.048 S ±2.5km 130.599 E ±3.3km  
DEPTH = 33.0km (normal)  
6.0mb (51 obs.) 5.0Msz (20 obs.)  
BANDA SEA (280)

Mo=1.0\*10\*\*18 Nm (PPT). Complex  
event observed on broadband  
displacement seismograms.  
FAULT PLANE SOLUTION: P-Waves  
NP1: Strike=120 Dip=70 Slip= 150  
NP2: 221 62 23  
Principal Axes:

T Plg=35 Azm= 78  
P 5 172  
Comment: The focal mechanism is  
moderately well controlled and  
corresponds to strike-slip  
faulting with a moderate  
reverse component. The  
preferred fault plane is not  
determined.

CENTROID, MOMENT TENSOR (HRV)  
Data Used: GDSN  
L.P.B.: 19S, 45C  
Centroid Location:  
Origin Time 05:28:11.0 0.3  
Lat 5.94S 0.02 Lon 130.64E 0.03  
Dep 96.5 1.6 Half-duration 3.3  
Moment Tensor: Scale 10\*\*17 Nm  
Mrr= 5.06 0.17 Mtt=-6.64 0.25  
Mff= 1.58 0.31 Mrt=-1.05 0.19  
Mrf=-2.64 0.17 Mtf= 0.22 0.21  
Principal Axes:

T Vol= 6.56 Plg=62 Azm= 99  
N 0.17 28 267  
P -6.73 5 0  
Best Double Couple: Mo=6.6\*10\*\*17  
NP1: Strike=117 Dip=47 Slip= 130  
NP2: 246 56 56

KNA 9.81 190 iPd 30 25.30 0.8  
eS 32 06.00  
DAV 13.98 339 eP 31 24.00 3.3X  
WRA 14.28 166 P 31 21.20 -3.5X  
WB2 14.29 166 iPc 31 21.30 -3.4X  
0.5s 389.40nm 6.3mb  
i 31 33.30  
e 32 46.20  
e 35 08.30  
e 40 07.60  
e 44 18.10  
BKB2 14.47 289 iPd 31 38.10 10.9X  
MDG 15.13 88 eP 31 38.40 2.7X  
YYYY 15.28 92 iPd 31 41.30 3.4X  
TSM 16.14 309 ePd 31 57.00 8.2X  
1.0s 572.10nm 5.7mb  
PMG 16.74 103 eP+ 31 55.00 -1.4  
QIS 16.86 150 iPd 31 55.70 -2.2  
ASPA 17.80 170 iPd 32 07.50 -2.2  
0.8s 3505.90nm 6.5mb  
iS 35 10.20

TRT 17.91 264 iPd 32 13.70 2.7X  
1.0s 304.70nm 5.4mb  
MBL 18.29 214 iPd 32 16.60 0.9  
eS 35 28.00  
KKM 18.72 310 iPd 32 24.10 3.0X  
1.0s 675.90nm 5.8mb  
WARB 20.38 190 iPd 32 41.10 1.7  
CTA 20.64 134 iPc+ 32 43.00 0.8  
1.0s 570.00nm 5.9mb  
iS 36 27.00  
CTAO 20.64 134 iPc 32 43.11 0.9  
e 32 46.26  
RAB 21.56 86 iPc 32 52.00 0.4  
iS 36 44.00  
NANU 21.93 220 eP 32 57.50 2.3  
QCP 22.62 335 eP 33 12.00 10.0X  
GUA 24.10 36 eP 33 17.90 1.5  
0.6s 490.67nm 6.2mb  
PJG 24.11 36 eP 33 17.90 1.4  
QLP 24.21 149 iPc 33 19.00 1.6  
i 33 41.00  
i 37 34.00  
BAG 24.42 336 ePd- 33 21.00 1.3  
eS 37 15.00  
FORR 24.78 185 iPd 33 24.00 1.1  
eS 37 59.00  
COOL 26.25 199 iPd 33 37.80 1.0  
eS 38 34.00  
RMO 26.70 142 iPc 33 41.50 0.6  
1.0s 569.00nm 6.1mb  
i 33 50.00  
i 35 52.00  
i 38 52.00  
i 41 11.00  
MRWA 26.86 209 iPd 33 43.50 1.2  
0.3s 27.00nm 5.3mb  
eS 38 46.00  
STK 27.68 160 iPc 33 50.90 1.1  
0.5s 140.10nm 5.9mb  
e 34 18.00  
eS 39 09.80  
KGM 28.39 286 eP 33 57.50 1.1  
CMS 29.05 152 iPc 34 02.40 0.3  
1.3s 403.00nm 6.0mb  
i 34 29.00  
iS 39 34.50  
MUN 29.09 206 eP 34 03.50 1.0  
eS 39 40.00  
HNR 29.27 98 eP 34 04.00 -0.3  
NWA 29.50 203 eP 34 07.00 0.9  
0.5s 45.00nm 5.5mb  
Z 22s 5.10um 5.1Msz  
N 22s 5.70um  
E 22s 6.20um  
ePP 34 33.00  
eS 38 56.00  
ADE 29.74 166 iPc- 34 08.90 0.6  
1.0s 1040.00nm 6.6mb  
BRS 29.92 138 iPd 34 09.60 -0.4  
i 34 36.00  
i 37 42.00  
iS 38 57.00  
iScP 41 28.00  
iScS 44 56.00  
RKG 31.04 202 eP 34 21.00 1.3  
IPM 31.36 289 ePd 34 24.40 1.6  
1.0s 76.20nm 5.5mb  
e 37 18.90  
e 40 53.00  
QIZ 32.24 321 eP 34 32.00 1.6  
N 15s 1.50um  
E 14s 0.90um  
HKC 32.45 331 eP 34 33.20 1.1  
SNG 32.67 293 eP 34 35.20 0.9  
eS 39 46.70  
PSI 32.80 284 ePd 34 41.60 6.2X  
QZH 32.95 340 eP 34 35.00 -1.5  
0.5s 40.00nm 5.6mb  
Z 20s 1.20um 4.6Msz  
N 15s 0.81um  
E 15s 0.76um  
S 39 45.00  
sS 40 14.00  
GZH 33.51 330 P 34 42.00 0.6  
Z 26s 2.10um 4.7MszX  
E 10s 1.00um  
RIV 33.58 148 iPc 34 43.20 1.3

0.3s \*\*\*\*\*nm 8.9mb X  
eS 40 42.00  
e 41 57.00  
CNB 33.87 152 iPd 34 45.40 0.9  
0.2s 111.00nm 6.4mb  
i 35 13.70  
i 35 46.40  
i 41 29.70  
i 43 07.90  
TOO 34.19 159 iPc 34 49.20 2.0  
0.6s 159.00nm 6.1mb  
i 41 36.20  
KAGJ 37.02 0 P 35 12.70 1.5  
BSI 37.06 287 eP 35 11.00 -0.8  
NST 37.10 306 eP 35 14.00 2.0  
KHT 37.89 303 iPd 35 21.50 2.8X  
SSE 38.01 347 Pc 35 20.50 0.9  
6.0s 400.00nm 5.5mb X  
Z 24s 1.60um 4.7MszX  
N 10s 0.50um  
E 10s 0.70um  
sP 35 30.20  
DZM 38.10 118 iPc 35 20.30 -0.3  
KUMJ 38.37 0 P 35 23.30 0.8  
PVC 38.60 111 iPc 35 24.50 -0.2  
NJZ 39.51 344 iPc 35 34.00 2.0  
0.8s 100.00nm 5.6mb  
Z 16s 0.40um 4.3MszX  
N 12s 0.50um  
E 12s 0.40um  
iS 41 27.00  
ScS 45 33.00  
WHN 39.57 338 iPd 35 35.00 2.4  
3.0s 600.00nm 5.8mb  
Z 20s 1.30um 4.8Msz  
N 12s 0.50um  
E 14s 0.30um  
S 41 29.00  
PcS 41 29.50  
TAU 39.58 161 ePc 35 33.64 1.1  
i 36 01.10  
e 37 08.00  
e 41 31.00  
GYA 39.78 325 P 35 36.20 1.6  
1.2s 100.00nm 5.5mb  
PP 37 13.00  
PcP 37 41.20  
ScP 41 21.00  
S 41 30.00  
PcS 41 32.00  
ScS 45 33.00  
CHG 39.80 309 iPc 35 36.60 1.9  
1.1s 329.11nm 6.0mb  
eS 41 28.00  
TKSJ 39.95 4 eP 35 36.70 1.0  
SHNJ 39.96 1 P 35 36.80 1.1  
WKYJ 40.33 6 P 35 38.40 -0.5  
SHK 40.41 3 eP 35 40.60 1.2  
YONJ 41.10 4 P 35 46.20 1.1  
KMI 41.16 320 Pc 35 48.00 1.9  
1.5s 210.00nm 5.6mb  
Z 20s 2.00um 5.0Msz  
pP 35 58.50 36kmX  
sP 36 05.00  
TSRJ 41.67 7 P 35 50.60 0.8  
IIDJ 41.88 9 P 35 52.40 0.9  
CHJJ 42.61 10 P 35 56.70 -0.8  
MTMJ 42.94 9 P 36 00.10 -0.2  
MAJO 42.96 9 ePc 35 59.69 -0.7  
eS 42 14.34  
MAT 42.96 9 eP 35 59.00 -1.4  
0.8s 82.09nm 5.5mb  
Z 21s 1.79um 4.9Msz  
eS 42 14.00  
KAKJ 42.98 11 P 35 59.90 -0.6  
NIIJ 43.77 10 P 36 07.10 0.2  
TIA 43.90 344 eP 36 07.90 -0.1  
Z 44s 2.40um 4.8MszX  
PcP 37 53.70  
sS 42 58.00  
ScS 45 59.10  
CDZ 44.83 327 Pc 36 16.00 0.3  
1.2s 100.00nm 5.6mb  
sS 43 10.00  
ScS 46 04.00  
XAN 44.84 334 P 36 15.70 0.0  
N 14s 1.30um



31d 05h

E	12s	1.40um				ScP	42	18.00		PPN	78.66	107	iP	40	05.20	1
YAMJ	44.86	11	eP	36	16.70	1.0				TVO	78.82	107	iP	40	06.20	1
DL2	45.49	350	P	36	22.00	1.3				PMO	80.28	104	iP	40	14.20	1
	Z	28s	1.50um			4.8MsZ							ipP	40	42.40	109
	N	13s	1.60um							VAH	80.52	104	iP	40	15.20	1
	E	10s	1.10um										ipP	40	43.30	109
			PP	38	11.00					TPT	80.54	104	iP	40	15.60	1
			S	42	54.00								ipP	40	43.60	108
OFUJ	46.06	12	eP	36	25.20	0.1				RUV	80.76	104	iP	40	16.50	1
TIY	46.71	340	iPc	36	30.40	-0.1							ipP	40	44.60	109
	Z	20s	1.00um			4.8MsZ				SDN	83.19	32	ePc	40	27.00	0
	N	13s	0.74um								0.8s	918.60nm			6.9mb	
			pP	36	38.00	25kmX				SPA	83.99	180	iPc	40	30.90	0
			sP	36	47.00						1.0s	136.00nm			6.1mb	
			S	43	10.00					Z	20s	2.25um			5.5Ms	
BJI	47.75	345	eP	36	39.00	0.5							i	50	41.20	
	1.0s	72.00nm				5.6mb				SPA	83.99	180	iPc	40	31.00	0
	Z	39s	1.80um			4.8MsZ				ANM	84.63	23	ePc	40	35.00	1
	E	14s	0.67um							SVW	87.51	28	ePc	40	49.30	1
			PcP	38	08.00					PDB	87.82	29	P	40	48.20	-1
			esS	43	50.00					TTA	87.88	26	ePc	40	50.40	0
			eScS	46	23.00						1.1s	260.60nm			6.4mb	
SNY	48.07	353	Pd	36	41.00	0.0				KER	88.03	305	ePc	40	51.00	0
	5.0s	500.00nm				5.8mb X				KDC	88.14	32	ePc	40	51.70	0
	Z	24s	1.80um			5.0MsZ				RSO	88.69	29	P	40	51.90	-2
			pP	36	53.00	43kmX				TAB	89.19	308	iPc	40	58.00	1
			PP	38	33.00					IMA	89.74	23	ePc	40	58.90	0
			S	43	30.00						1.6s	130.40nm			6.0mb	
			sS	43	54.00					SLKM	89.92	29	P	40	58.00	-1
			SS	46	57.00					BRW	90.20	18	ePc	41	00.90	0
LZH	48.86	331	ePc	36	48.09	0.7				PMR	90.66	28	ePc	41	02.30	-0
MRRJ	49.18	10	eP	36	50.00	0.5					0.6s	34.50nm			5.9mb	
HOOU	49.57	12	eP	36	53.40	0.9				COL	91.88	25	ePc	41	06.62	-1
CN2	49.83	355	Pc	36	54.60	0.1					ec	41	08.69			
	5.0s	600.00nm				5.9mb X				FBA	91.88	25	ePc	41	07.30	-1
	Z	20s	3.00um			5.3MsZ					1.1s	62.30nm			5.9mb	
			PcP	38	13.00					TOA	92.13	28	ePc	41	10.30	0
			ScS	46	35.00					KLU	92.16	28	P	41	09.70	-0
HHC	49.83	341	P	36	55.60	0.8				NVL	93.43	197	iPd	41	16.50	0
	N	12s	0.24um								ePcP	41	25.00			
	E	13s	0.37um								e	41	41.00			
			sP	37	11.00						e	41	45.00			
			S	43	59.00						e	42	06.00			
			sS	44	20.00						e	42	29.00			
BTO	50.13	340	P	36	57.00	0.0					e	45	00.00			
	E	13s	0.50um								e	45	28.00			
			sP	37	05.50						e	47	55.00			
			ePP	38	54.00						e	48	37.00			
			S	43	59.00						eS	51	39.00			
MSZ	50.38	146	P	36	59.60	0.9					eScS	51	48.00			
MDJ	50.44	359	ePc	36	59.39	0.3					e	52	16.00			
	N	10s	0.65um								ePS	52	24.00			
			ed	37	01.29						e	53	31.00			
			iS	44	05.47						e	54	04.00			
KUSJ	50.56	13	P	37	00.20	0.1										
ASAJ	51.10	11	P	37	04.10	-0.1				NAI	93.64	268	iPc	41	21.00	3
TLC	51.35	146	P	37	05.80	-0.5				BALM	93.82	29	P	41	16.80	-0
MHZ	51.39	145	P	37	05.90	-0.6				HRI	97.34	303	iPd	41	40.50	6
LTZ	51.85	142	P	37	09.50	-0.5				ATZ	97.71	302	iPd	41	42.40	6
LSA	51.93	315	eP	37	12.50	1.2				INK	97.76	22	ePc	41	34.00	-1
			S	44	25.00						0.7s	53.00nm			6.2mt	
HITZ	52.14	135	P	37	13.30	1.1					pP	42	04.00		114	
CNZ	52.21	136	P	37	13.50	0.6				RMN	98.17	300	iPd	41	44.00	5
RATZ	52.21	136	P	37	14.10	1.3				SLR	98.40	243	iPd	41	39.60	0
NGZ	52.23	136	P	37	13.80	0.7					1.0s	20.00nm			5.6mt	
KETZ	52.23	136	P	37	13.90	0.8				BBTK	99.86	309	eP	41	44.00	-1
TCW	52.31	139	P	37	12.40	-1.0				KEV	100.34	340	iPd	41	47.00	0
KHZ	52.45	140	P	37	13.50	-0.9				SOD	100.92	338	iPd	41	48.20	-1
	0.8s	124.00nm				5.9mb				KAF	101.99	332	ePd	41	52.80	-1
											1.6s	117.60nm			6.3mt	
CCW	52.54	139	P	37	15.00	-0.2					esP	41	54.60			
KIW	52.56	138	P	37	14.10	-1.2				NUR	103.07	331	iPd	41	57.50	-1
MRW	52.60	139	P	37	14.50	-1.1					0.8s	19.10nm			5.9mt	
WEL	52.67	139	Pc	37	14.20	-1.9				VRI	103.98	316	ePd	41	57.50	0
	1.2s	116.50nm				5.7mb				MLR	104.56	315	ePd	41	57.50	0
CAW	52.78	138	P	37	15.40	-1.6					e	52	39.00			
WDW	52.81	139	P	37	15.50	-1.7				YKA	106.64	26	ePd	41	57.50	-1
MNG	52.82	138	P	37	16.00	-1.3					0.9s	6.90nm			5.7mt	
MTW	53.09	138	P	37	17.50	-1.8				YKA	106.64	26	ePKP	46	24.00	-1
PGZ	53.36	137	P	37	19.70	-1.5					0.9s	8.60nm				
	0.8s	195.00nm				6.1mb				BRK	107.21	52	ePd	41	57.50	2
GTA	53.44	330	iPc	37	22.60	0.7				DAG	107.39	353	iPd	41	57.50	-0
	3.5s	510.00nm				5.9mb X					0.7s	9.59nm			6.0mt	
	Z	20s	0.80um			4.8MsZ				PNT	107.42	40	ePd	41	57.50	-2
	E	12s	0.80um							PNT	107.42	40	ePKP	46	28.00	0
			pP	37	34.60	42kmX					0.9s	12.00nm				
			sP	37	39.00					MIN	107.45	50	ePd	41	57.50	2
			PcP	38	34.00					VAY	107.50	311	ePd	41	57.50	-0



GCC	107.51	53	e(Pdiff42	21.50	1.8	WFF	115.81	322	PKP	46	43.07	-0.6	DMU	121.22	332	iPKPc	46	53.20	-0.5	
ORV	107.62	51	ePdiff42	21.10	1.0	FFC	115.84	31	iPKPd	46	42.70	-0.8		0.7s	108.00nm					
MHC	107.76	53	e(Pdiff42	23.00	2.0		1.1s	40.00nm					LPF	121.41	324	ePKP	46	53.80	-0.5	
KRA	107.83	321	ePdiff42	21.60	0.8	FEL	115.98	321	PKP	46	42.73	-1.4		0.9s	80.25nm					
KRA	107.83	321	ePKP	46	27.40	-0.9	BOB	116.10	317	PKP	46	43.40	-1.0	MFF	121.56	322	ePKP	46	53.90	-0.7
			e	46	35.90		ENN	116.11	324	iPKPc	46	44.60	0.5		0.7s	73.85nm				
PRS	108.08	54	e(Pdiff42	25.00	2.7x		0.7s	27.00nm					LPO	121.59	320	ePKP	46	54.70	0.0	
HFS	108.41	332	ePKP	46	27.80	-1.3	MEM	116.13	324	PKPd	46	44.80	0.7		1.1s	80.60nm				
	0.5s	1.80nm					WLS	116.19	322	PKP	46	43.19	-1.2	ETA	121.62	331	iPKPd	46	54.40	-0.1
Z	21s	0.46um		5.0MsZ			VAI	116.19	319	PKP	46	42.70	-1.7	DCN	121.74	332	ePKP	46	54.80	0.1
		e	46	30.80			CDF	116.24	322	PKP	46	43.26	-1.3	LFF	121.76	320	ePKP	46	55.50	0.5
		LR	26	23.00			ECH	116.38	321	PKP	46	43.41	-1.4		1.0s	74.00nm				
CMB	108.67	52	e(Pdiff42	26.20	1.3	MOF	116.53	321	PKP	46	44.03	-1.1	ECP	122.01	330	ePKP	46	55.10	-0.1	
		e	42	29.40		AKU	116.56	346	iPKP	46	45.60	1.1		0.8s	150.00nm					
OHR	108.85	311	ePdiff42	24.00	-1.6		0.9s	20.17nm					ECB	122.10	331	ePKP	46	55.00	-0.4	
OHR	108.85	311	ePKP	46	12.20	-18.5x	BSF	116.76	321	ePKP	46	44.50	-1.1	ESEL	122.38	314	ePKP	46	56.90	0.5
NB2	109.20	333	Pdiff	42	24.70	-2.0		1.0s	70.00nm				EPF	122.85	318	ePKP	46	56.90	-0.4	
	1.2s	20.10nm					PCP	116.78	317	PKP	46	44.02	-1.7		0.8s	20.15nm				
NEW	109.26	41	Pdiff	42	28.00	0.7	ORX	116.79	319	PKP	46	43.91	-1.8	BTH	123.17	319	PKP	46	58.30	0.5
	0.8s	10.83nm					LOMF	116.91	321	PKP	46	44.90	-1.0			PKKP	56	19.60		
FRI	109.33	53	ePdiff42	29.10	1.3	HAU	116.96	321	ePKP	46	45.10	-0.8	EGRA	123.65	318	ePKP	46	58.00	-0.8	
		e	42	31.00			1.1s	73.25nm					EBR	123.67	316	ePKP	46	58.00	-0.8	
SRO	109.36	319	i(PKP)	46	30.80	-0.5	Z	22s	0.20um		4.7MsZ		ECRI	124.91	319	ePKP	47	01.90	0.6	
KSP	109.91	322	ePdiff42	29.80	-0.2	CKI	117.00	317	PKP	46	44.70	-1.3	ETOR	125.42	317	ePKP	47	02.90	0.5	
	1.1s	29.00nm				VITF	117.11	322	PKP	46	45.20	-0.8	MEQ	126.48	51	e(PKP)	47	04.00	-0.6	
		id	46	32.10		DOU	117.17	324	PKPd	46	46.30	0.2	EVIA	126.67	315	iPKPd	47	05.00	0.1	
VKA	110.56	319	iPKPd	46	34.10	0.5		e	57	32.00		GUD	126.92	317	iPKPd	47	05.80	0.4		
		i	47	19.20		SNF	117.17	325	PKP	46	45.90	-0.2	EHUE	127.09	314	ePKP	47	05.50	-0.2	
PAS	110.92	56	ePKP	46	35.00	0.3	ROB	117.32	317	PKP	46	45.14	-1.6	TOL	127.20	317	iPKPd	47	06.00	0.2
PRU	111.22	322	PKP	46	34.20	-0.6	LSO	117.39	319	PKP	46	46.37	-0.7		1.2s	93.75nm				
	1.0s	21.70nm				IMI	117.44	317	PKP	46	45.55	-1.4	EMON	127.55	322	ePKP	47	06.20	-0.2	
		e	47	00.70		RSP	117.44	318	PKP	46	45.45	-1.5	ERUA	127.99	321	ePKP	47	07.50	0.3	
		e	48	12.80		BHB	117.54	318	PKP	46	43.50	-3.6x	TUL	128.17	48	ePKPc	47	06.90	-0.8	
BRG	111.32	323	iPdiff42	36.60	0.3	LPG	117.65	319	ePKP	46	47.00	-0.6		1.0s	141.50nm					
	1.4s	42.00nm					0.7s	36.40nm					Z	22s	0.46um		5.1MsZ			
BRG	111.32	323	iPKPd	46	34.70	-0.2	LPL	117.65	319	ePKP	46	46.80	-0.7			LR	28	36.60		
		e	47	28.00		STV	117.71	317	PKP	46	44.84	-2.7x	EGUA	128.20	313	ePKP	47	08.80	1.0	
		ePKKP	57	41.00		PZZ	117.77	318	PKP	46	45.14	-2.5x	EPLA	128.49	318	iPKPd	47	08.90	0.6	
PTJ	111.38	317	iPKPc	46	34.50	-0.8	RRL	117.83	318	PKP	46	46.78	-1.1	STS	128.60	322	ePKP	47	08.10	-0.2
RVR	111.60	56	ePKP	46	36.00	0.0	BNI	117.86	318	PKP	46	47.10	-0.7	EHOR	128.97	315	iPKPd	47	09.30	0.1
CLL	111.76	323	iPKP	46	35.40	-0.3	SURF	117.97	318	PKP	46	47.77	-0.4	PTO	129.59	320	ePKP	47	10.30	0.1
	1.2s	44.00nm				GRN	118.40	319	PKP	46	48.36	-0.4	EJIF	129.75	313	iPKPd	47	10.30	-0.4	
		(PKKP)	57	39.00		FRF	118.40	317	ePKP	46	47.90	-0.8	IFR	130.72	310	iPKPd	47	14.00	1.1	
GSC	111.89	54	ePKP	46	38.00	1.4		1.0s	56.00nm			FVM	131.07	43	PKP	47	12.10	-1.1		
		e	47	18.00		LMR	118.57	317	ePKP	46	48.30	-0.7	ELC	132.25	44	PKP	47	14.10	-1.3	
VBY	111.95	317	iPKPd	46	36.50	0.2		1.0s	32.00nm			AVE	132.55	310	iPKP	47	06.00	-10.1x		
KHC	112.07	321	iPKPd	46	36.50	0.0	EKA	118.61	332	PKPd	46	48.40	-0.3			i	47	07.50		
	1.2s	23.00nm				LRG	118.63	317	ePKP	46	48.60	-0.5	TIO	133.41	307	iPKP	47	18.40	0.4	
		e	46	44.50			0.8s	20.20nm				TACH	135.55	154	ePKP	47	13.00	-8.9x		
LJU	112.30	317	ePKP	46	36.50	-0.5		1.0s	62.00nm			RFA	135.59	157	ePKP	47	10.30	-11.7x		
BAR	112.35	57	ePKP	46	38.00	0.5	Z	22s	0.43um		5.0MsZ	KIC	135.61	273	PKP	47	08.28	-14.2x		
CEY	112.45	317	ePKP	46	36.50	-0.8	LOR	118.80	321	ePKP	46	48.70	-0.7	PCM	135.76	154	ePKP	47	12.00	-10.4x
WET	112.50	321	iPKPd	46	37.20	-0.1		0.9s	35.20nm			SAN	135.84	154	ePKP	47	13.00	-9.4x		
SES	112.50	38	ePKP	46	35.00	-2.3x	Z	20s	0.40um		5.0MsZ	LIC	135.89	273	PKP	47	08.68	-14.3x		
TPC	112.68	56	ePKP	46	39.00	0.9	LBF	118.85	321	ePKP	46	48.80	-0.7	TIC	135.90	273	PKP	47	08.76	-14.3x
VOY	112.73	318	ePKPc	46	36.90	-1.0		1.0s	52.00nm			ROCH	136.10	153	ePKP	47	11.00	-12.2x		
		eSKS	53	13.50		CDR	118.96	317	ePKPc	46	48.90	-0.9	LKO	136.48	277	PKP	47	10.02	-14.1x	
MOX	112.80	323	iPKPd	46	37.70	-0.1	SMF	119.07	321	ePKP	46	49.20	-0.7	MDZ	137.10	156	i(PKP)	47	16.00	-8.9x
	1.3s	31.00nm					1.2s	63.95nm				PRM	138.67	43	PKP	47	16.80	-10.9x		
Z	17s	0.30um		5.0MsZx		SSF	119.11	321	ePKP	46	49.40	-0.6	PNJ	138.83	29	PKP	47	16.50	-11.2x	
N	19s	0.30um				SSB	119.17	319	PKP	46	49.37	-0.8			i	47	53.10			
E	23s	0.30um				AVF	119.32	321	ePKP	46	49.60	-0.7	GMTN	138.84	29	iPKP	47	17.40	-10.3x	
KBA	112.81	319	iPKPd	46	36.80	-1.3		0.8s	29.55nm			CBN	139.15	34	ePKP	47	21.00	-7.4x		
	0.8s	19.20nm				BGF	119.73	321	ePKP	46	50.80	-0.4			e	50	18.00			
		i	46	40.80		MAF	120.05	321	ePKP	46	51.40	-0.4	LHS	139.48	41	PKP	47	16.90	-12.2x	
		e	47	30.00			1.1s	29.30nm				TCA	140.09	160	ePKPd	47	21.80	-8.6x		
TRI	112.91	317	iPKPc	46	37.00	-1.1	TCF	120.24	321	ePKP	46	51.80	-0.4	SGS	140.44	43	PKP	47	23.60	-7.2x
		i	47	43.10		ANMO	120.26	53	PKP	46	52.00	-0.8	ANT	144.01	146	iPKPc	47	35.80	-1.5	
LRM	112.95	43	ePdiff42	44.30	0.2	ALO	120.26	53	ePdiff43	21.70	4.9x		1.2s	218.75nm						
GRF	113.36	322	ePKPc	46	38.50	-0.4		1.0s	48.00nm			GCM	146.22	64	ePKP	47	41.10	-0.1		
	Z	22s	0.40um		5.0MsZ		Z	20s	0.35um		5.0MsZ	MBO	147.05	287	iPKPc	47	45.30	2.7x		
FUR	113.82	320	iPKPc	46	39.40	-0.5	LDF	120.60	324	ePKP	46	52.10	-0.6	ITB7	148.67	172	PKPd	47	48.70	3.7x
	0.7s	65.00nm					1.0s	42.00nm				ARE	148.73	136	ePKP	47	47.00	1.3		
WTTA	113.87	319	iPKPc	46	39.10	-1.1	LSF	120.69	321	ePKP	46	52.40	-0.6	ITB	148.99	171	ePKP	47	49.50	4.0x
	0.6s	53.50nm				FLN	120.72	325	ePKP	46	52.40	-0.5	ITB1	149.11	171	ePKP	47	50.10	4.5x	
		i	46	40.10			1.1s	53.70nm				QUIL	149.76	102	PKP	47	48.50	0.9		
		i	50	06.80			Z	22s	0.45um		5.1MsZ	UPA	149.99	83	iPKPc+47	46	10.10	-1.1		
ARV	114.06	315	PKP	46	39.90	-0.6	FRB	120.77	10	ePKPc	46	51.40	-1.1		Z	20s	0.28um		5.1MsZ	
CTI	114.23	318	PKP																	



BMA	150.98	190	ePKP	47 49.30	0.7	
			e	47 55.00		
			e	48 02.50		
VAO	151.03	185	ePKP	47 50.00	1.3	
			e	47 55.20		
			e	48 02.70		
			e	48 16.00		
			e	48 36.60		
			e	51 26.40		
ZOBO	151.10	140	ePKPc	47 50.43	0.8	
			ic	47 56.23		
ANGL	151.19	102	ePKP	47 49.10	-0.6	
CCH	151.44	145	PKP	47 50.30	0.6	
			i	47 56.50		
PSO	151.73	99	ePKP	47 51.50	1.1	
PPD	152.03	176	ePKP	47 50.40	0.3	
			e	47 56.60		
SIV	155.24	152	iPKPc	47 54.80	0.1	
FUO	155.78	90	ePKP	47 50.00	-5.9X	
BMG	156.46	86	iPKPd	47 56.50	0.0	
SDV	158.76	81	ePKP	47 59.40	0.0	
MGP	159.04	54	PKP	47 58.50	-0.8	
LRS	159.08	53	PKP	47 58.50	-0.9	
TOV	159.47	78	iPKP	48 00.50	0.5	
SJG	159.73	52	e(PKP)	48 00.00	-0.1	
CPD	159.95	52	PKP	48 00.00	-0.3	
S.D. = 1.0 on 332 of 382 obs.						
* MAY 31, 1991 05h 47m 20.21±1.80s 31.488 S ±13.1km 66.501 W ± 8.7km DEPTH = 167.6 ± 24.4 km						
LA RIOJA PROVINCE, ARGENTINA (138)						
CFA	1.49	265	iPd	47 50.90	-0.5	
			S	48 10.00		
TCA	1.64	85	iP	47 52.80	-0.2	
RTLL	1.69	275	iPd	47 53.10	-0.4	
ZON	1.86	268	iPc	47 55.50	0.2	
			eS	48 20.50		
MDZ	2.43	234	iP	48 02.50	0.6	
			iS	48 30.90		
RTRS	2.86	297	iPc	48 08.00	0.9	
RFA	3.67	206	iPc	48 17.70	0.4	
			(S)	48 53.80		
JACH	3.67	250	iP	48 20.50	3.1X	
PCH	4.00	237	iPc	48 22.50	0.8	
			iS	49 11.00		
SAN	4.03	240	eP	48 22.00	0.1	
ROCH	4.10	248	iPd	48 23.00	-0.1	
			iS	49 10.60		
TACH	4.32	239	iPc	48 25.50	-0.3	
			iS	49 15.00		
IHA	4.62	249	eP	48 28.50	-1.1	
			e(S)	49 11.00		
LCCH	4.72	244	iP	48 30.50	-0.5	
S.D. = 0.7 on 13 of 14 obs.						
% MAY 31, 1991 07h 10m 06.44±1.03s 30.609 S ± 9.6km 69.284 W ±15.4km DEPTH = 10.0km (geophysicist)						
CHILE-ARGENTINA BORDER REGION (127)						
RTRS	0.46	341	iPc	10 16.00	0.1	
RTLL	1.00	136	iPd	10 25.70	0.2	
			(S)	10 38.00		
CFA	1.34	138	ePc	10 31.70	0.6	
			eS	10 49.50		
TCA	4.10	101	ePc	11 10.00	-0.5	
RFA	4.21	171	ePc	11 11.70	-0.4	
			(S)	12 18.50		
S.D. = 0.6 on 5 of 5 obs.						
MAY 31, 1991 07h 50m 19.28±3.21s 35.684 N ±23.0km 80.939 E ±12.8km DEPTH = 58.9 ± 35.9 km 4.3mb ( 5 obs.)						
KASHMIR-TIBET BORDER REGION (304)						
NDI	7.66	205	eP	52 11.50	0.9	
GKN	8.28	157	P	52 19.16	-0.2	
KKN	8.69	154	P	52 24.74	-0.4	
DMN	8.80	155	P	52 26.02	-0.6	
GUN	8.81	150	P	52 27.50	0.6	
PKI	8.94	154	P	52 28.82	0.2	
GAR	9.08	295	eP	52 14.50	-15.9X	
OUE	12.96	249	eP	53 23.30	0.6	
MAIO	17.37	278	eP	54 17.00	-2.1	
BSI	32.82	153	eP	56 44.00	-5.2X	
NUR	43.26	323	eP	58 17.00	0.8	
HFS	48.67	322	eP	58 59.20	0.2	
			0.6s	2.40nm	4.4mb	
			Z 17s	0.03um	3.4Mszx	
				e	59 01.60	
				e	59 13.70	
				LR	16 28.00	
NB2	49.86	323	P	59 00.40	0.2	
			0.8s	4.40nm	4.5mb	
EKA	58.37	318	Pc	00 11.10	0.6	
			0.5s	1.50nm	4.4mb	
WRA	74.95	129	P	02 01.00	5.0X	
			0.6s	1.30nm	4.0mb	
WB2	74.95	129	eP	01 55.10	-0.9	
			1.2s	1.00nm	3.6mb	
S.D. = 1.0 on 13 of 16 obs.						
* MAY 31, 1991 08h 05m 16.25±1.81s 44.308 N ± 6.7km 7.550 E ±14.2km DEPTH = 5.0km (geophysicist)						
NORTHERN ITALY (545)						
ML 2.6 (LDG).						
DOI	0.29	312	P	05 22.10	-0.1	
			eSg	05 26.50		
SAOF	0.32	179	Pg	05 22.87	0.1	
AUTN	0.32	196	Pg	05 22.59	-0.3	
			Sg	05 27.03		
TOUF	0.37	216	Pg	05 23.02	-0.6	
			Sg	05 27.81		
AURF	0.45	201	Pg	05 25.04	-0.3	
			Sg	05 31.04		
SBF	0.45	191	Pg	05 25.50	0.2	
			Sg	05 31.80		
MVIF	0.50	215	Pg	05 26.70	0.4	
			Sg	05 32.75		
FRF	0.99	221	Pg	05 35.70	0.2	
			Sg	05 47.30		
LRG	1.21	226	Pg	05 39.70	0.4	
			Sg	05 56.20		
LMR	1.23	218	Pg	05 39.50	-0.1	
			Sg	05 55.80		
S.D. = 0.4 on 10 of 10 obs.						
? MAY 31, 1991 08h 25m 20.98±4.51s 16.338 N ±11.9km 60.821 W ±39.8km DEPTH = 35.0 ± 19.1 km						
LEEWARD ISLANDS (92)						
ML 2.7 (FDF).						
DEG	0.23	264	iPc	25 20.11	0.0	
			S	25 31.90		
SFG	0.37	257	eP	25 29.77	0.0	
			S	25 34.90		
MGG	0.63	229	iPd	25 33.62	0.2	
			S	25 41.60		
SEG	0.66	276	ePd	25 33.76	-0.1	
			S	25 42.10		
PAG	0.88	250	ePd	25 37.00	0.0	
			S	25 48.30		
BBL	1.03	218	eP	25 39.00	-0.1	
			S	25 52.30		
BPA	1.22	305	eP	25 41.90	0.0	
S.D. = 0.1 on 7 of 7 obs.						
MAY 31, 1991 08h 58m 21.27±0.56s 37.945 N ± 8.5km 72.351 E ± 7.2km DEPTH = 33.0km (normal)						
4.1mb ( 2 obs.)						
TAJIK SSR (715)						
QUE	8.94	212	P	00 32.00	0.7	
			0.7s	191.78nm	6.4mb X	
			eS	02 05.90		
NDI	10.09	155	eP	00 48.00	1.0	
MAIO	10.40	265	eP	00 50.00	-1.3	
			eS	02 37.00		
GKN	14.29	130	P	01 43.40	0.0	
KKN	14.84	129	P	01 49.96	-0.6	
DMN	14.86	130	P	01 50.96	0.0	
PKI	15.07	130	P	01 55.08	-0.7	
GUN	15.12	127	P	01 54.22	-0.2	
HFS	42.61	321	eP	06 16.00	0.4	
			0.4s	1.30nm	4.0mb	
			Z 10s	0.07um	3.9Mszx	
INK	72.31	10	eP	09 45.50	0.6	
YKA	79.75	3	eP	10 27.10	0.2	
			0.5s	1.50nm	4.2mb	
S.D. = 0.8 on 11 of 11 obs.						
? MAY 31, 1991 09h 08m 32.90±13.16s 37.098 N ±109. km 22.942 E ±23.0km DEPTH = 106.8 ± 55.7 km						
SOUTHERN GREECE (368)						
AGG	1.98	346	ePb	09 06.00	0.0	
			eSb	09 28.40		
PAIG	2.88	11	iPnc	09 18.00	0.1	
			eSn	09 48.00		
LIT	3.02	353	ePn	09 19.70	-0.1	
			eSn	09 52.60		
SOH	3.73	5	ePn	09 29.70	0.2	
			eSn	10 09.80		
GRG	3.88	354	ePn	09 32.00	0.5	
FNA	3.88	342	ePn	09 31.40	-0.1	
			eSn	10 15.50		
SRS	4.05	7	ePn	09 33.30	-0.5	
			eSn	10 16.40		
QHR	4.34	338	ePn	09 45.00	7.1X	
ALN	4.50	32	ePn	09 40.00	0.1	
HFS	23.80	349	eP	13 39.20	2.7X	
			0.4s	1.60nm	3.8mb	
			Z 11s	0.06um	3.3Mszx	
S.D. = 0.4 on 8 of 10 obs.						
* MAY 31, 1991 09h 19m 08.12±1.05s 25.395 S ± 8.5km 70.131 W ±29.7km DEPTH = 32.4 ± 17.8 km						
NEAR COAST OF NORTHERN CHILE (122)						
ANT	1.70	351	iP	19 36.20	0.2	
			iS	19 59.00		
RTRS	4.79	173	ePd	20 19.80	-0.1	
RTLL	6.09	166	e(P)	20 37.20	-1.1	
CFA	6.41	165	ePd	20 47.90	5.1X	
MDZ	7.55	172	e(P)	21 04.90	6.2X	
TCA	7.67	142	ePd	21 01.20	0.7	
PEL	7.74	183	eP	21 02.00	0.6	
CNCB	8.77	14	eP	21 16.00	-0.3	
			i	21 30.80		
LPB	9.02	13	P	21 27.00	7.5X	
ZOBO	9.27	12	P	21 34.00	10.8X	
PPD	17.55	83	(P)	23 20.00	8.0X	
S.D. = 1.1 on 6 of 11 obs.						
MAY 31, 1991 09h 49m 49.01±0.18s 44.293 N ± 2.4km 10.063 E ± 1.7km DEPTH = 10.0km (geophysicist)						
NORTHERN ITALY (545)						
ML 3.3 (LDG). MD 3.3 (TRI).						
BDI	0.45	121	Pd	49 58.10	-0.1	
			eSg	50 04.50		
MME	0.47	102	Pc	49 58.50	-0.1	
			eSg	50 05.60		
BOB	0.65	317	Pd	50 01.00	-1.0	
			eSg	50 11.60		
PII	0.66	150	P	50 02.80	0.6	
			eSg	50 12.20		
FIR	1.00	120	e(Pg)	50 17.00	9.0X	
			iSg	50 26.00		
PCP	1.12	283	P	50 10.31	0.3	
			S	50 24.55		
PGD	1.27	109	P	50 12.80	0.2	
			eSg	50 31.40		
CKI	1.29	276	P	50 12.20	-0.6	
			eSg	50 30.80		
SFI	1.34	105	P	50 13.40	-0.3	
			eSg	50 34.40		
SAL	1.35	14	P	50 14.30	0.4	
			eSg	50 34.90		
MDI	1.50	351	P	50 16.60	0.6	
			eSg	50 37.70		
CRE	1.52	115	P	50 16.30	0.0	
			eSg	50 36.70		
ROB	1.57	271	P	50 16.93	-0.2	
			S	50 35.41		
IMI	1.61	257	P	50 17.19	-0.5	
			S	50 35.41		
RSM	1.76	101	P	50 21.00	1.3	
VAI	1.82	330	P	50 21.70	1.1	
			eSg	50 44.00		



SAOF	1.83	261	Pn	50 20.87	0.1	YUGOSLAVIA	(383)	GYA	63.36	280	P	36 52.00	3.4X	
PGF	1.91	204	Pn	50 42.61		ML 1.7 (TTG).		CVL	64.50	61	eP	36 56.00	0.2	
AUTN	1.92	262	Pn	50 22.41	0.1	TTG	0.06 315 iPg	50 38.63	0.4	KAF	65.71	350	eP	37 01.80 -1.4
			Sg	50 45.55			iSg	50 40.78			0.5s	4.40nm	4.8mb	
SBF	1.94	258	Pn	50 22.20	-0.2	BDV	0.38 254 iPg	50 44.45	0.7	NUR	67.46	350	eP	37 02.10 -1.6
			Sn	50 48.00			iSg	50 49.50			0.5s	5.70nm	4.9mb	
STV	1.97	270	P	50 23.03	0.2	ULC	0.43 187 iPg	50 44.45	-0.3	HFS	68.66	356	eP	37 20.10 -1.7
			S	50 45.57			iSg	50 51.93			0.5s	2.40nm	4.5mb	
ORO	1.99	313	P	50 24.00	0.8	NKY	0.48 331 iPg	50 45.62	-0.2	Z	11s	0.05um	4.0mszx	
ORX	1.99	313	P	50 23.56	0.3		iSg	50 53.72						
			S	50 45.71		HCY	0.61 276 ePg	50 47.85	-0.4	GUN	74.66	295	Pc	37 58.76 0.2
AURF	2.01	259	Pn	50 23.50	0.0		iSg	50 57.45		KKN	75.09	296	Pc	38 00.76 -0.1
DOI	2.03	277	P	50 24.30	0.6	IVA	0.65 41 iPg	50 49.12	0.1		0.8s	27.00nm	5.3mb	
			eSn	50 47.50			iSg	50 59.95		PKI	75.18	296	Pc	38 01.30 -0.3
MAO	2.04	157	P	50 23.90	0.1	BRY	0.77 312 iPg	50 50.67	-0.4		1.0s	51.00nm	5.5mb	
TOUF	2.04	263	Pn	50 24.30	0.3		iSg	51 02.98		GKN	75.29	296	P	38 01.80 -0.1
BHB	2.07	286	P	50 27.26	2.9X						0.8s	52.00nm	5.6mb	
CTI	2.08	32	P	50 24.40	-0.1	S.D. = 0.5 on 7 of 7 obs.				DMN	75.33	296	Pc	38 02.30 0.0
			eSn	50 49.40							0.9s	39.00nm	5.4mb	
PZZ	2.13	277	P	50 25.11	-0.2	MAY 31, 1991 11h 17m 52.92±0.51s				CLL	77.51	356	iP	38 13.50 -0.2
			S	50 49.09		41.726 N ± 5.2km 23.824 E ± 4.1km				BRG	77.90	355	iP	38 15.50 -0.4
MVIF	2.13	260	Pn	50 25.53	0.2	DEPTH = 10.0km (geophysicist)					0.8s	14.00nm	5.0mb	
RSP	2.18	294	P	50 25.90	0.0	GREECE-BULGARIA BORDER REGION (363)				MOX	78.24	356	iPd	38 18.20 0.4
			S	50 50.50		ML 2.6 (SKO).					1.0s	12.00nm	4.9mb	
ARV	2.23	110	P	50 26.50	0.0	MMB	0.15 208 iPg	17 57.00	0.5	PRU	78.75	354	eP	38 20.00 -0.6
ASS	2.25	122	P	50 25.50	-1.4		iSg	17 59.00		GRF	79.20	357	iPc	38 23.80 0.7
CALN	2.35	258	Pn	50 27.98	-0.4	KKB	0.57 285 iPg	18 04.00	-0.5		1.0s	18.00nm	5.0mb	
LSD	2.37	300	P	50 28.92	0.1		iSg	18 11.00		KHC	79.66	355	iP	38 26.00 0.4
			S	50 57.27		RZN	0.67 93 iPg	18 06.00	-0.4	CDF	80.57	359	iPd	38 30.90 0.4
RRL	2.42	286	P	50 31.32	1.8		eSg	18 15.00			0.8s	6.70nm	4.7mb	
			S	50 59.25		PLD	0.76 60 iPg	18 08.00	0.3	HAU	80.99	360	iPd	38 33.10 0.5
FRF	2.57	255	Pn	50 30.90	-0.5		eSg	18 21.00			0.6s	5.40nm	4.7mb	
			Sn	51 00.50		PCB	0.86 17 iPg	18 10.00	0.4	BSF	81.16	360	iPd	38 33.80 0.1
LPG	2.64	298	Pn	50 33.40	0.7		eSg	18 22.00			0.6s	5.40nm	4.7mb	
LPL	2.66	298	Pn	50 33.50	0.5	VTS	0.98 332 iPg	18 12.00	0.4	LOR	81.71	2	iPd	38 36.80 0.4
MNS	2.70	134	P	50 33.50	0.2		iSg	18 27.00			0.8s	5.35nm	4.6mb	
LMR	2.75	251	Pn	50 33.20	-0.7	VAY	1.02 247 ePg	18 12.30	0.0	KBA	81.72	355	iPc	38 37.30 0.6
			Sn	51 04.30			i	18 26.70			0.7s	10.00nm	4.9mb	
LRG	2.81	254	Pn	50 34.50	-0.2		Lg	18 29.00		SSF	81.91	2	iPd	38 38.10 0.7
TRI	2.98	60	iPnc	50 36.00	-1.2	KDZ	1.20 93 iPc	18 15.00	-0.2		0.6s	4.05nm	4.6mb	
			iSn	51 11.10			iSg	18 29.00		LBF	81.99	1	iPd	38 38.20 0.3
			iSg	51 25.90		OHR	2.36 256 ePn	18 37.00	4.7X		0.8s	4.05nm	4.5mb	
FVI	2.99	39	P	50 37.50	0.2	GZR	3.74 349 ePd	19 00.00	8.0X	AVF	82.17	2	iPd	38 39.30 0.5
CDR	3.16	260	eP	50 40.20	0.4	MLR	4.07 22 eP	19 12.00	15.4X		0.8s	5.35nm	4.6mb	
			e	50 43.10		BZS	4.21 338 ePc	18 58.00	-0.5	SMF	82.33	2	iPd	38 40.20 0.6
			eSn	51 13.50		S.D. = 0.5 on 9 of 12 obs.					0.8s	8.75nm	4.9mb	
			e	51 16.00						TCF	82.65	3	eP	38 41.80 0.5
WTTA	3.17	20	iPnc	50 40.70	0.7	MAY 31, 1991 12h 26m 20.33±0.54s					0.8s	3.35nm	4.5mb	
			i	50 41.70		51.388 N ± 12.1km 173.910 W ± 6.1km				LSF	82.66	3	eP	38 41.90 0.5
			iSn	51 18.80		DEPTH = 33.0km (normal)					0.8s	6.70nm	4.8mb	
			i	51 23.80		4.8mb (33 obs.) 4.4msz (1 obs.)				MAF	82.72	2	eP	38 42.40 0.7
KBA	3.61	38	i(Pn)	51 02.00	15.7X	ANDREANOF ISLANDS, ALEUTIAN IS. (7)					0.8s	4.05nm	4.6mb	
			iSn	51 46.20						QUE	82.78	310	P	38 44.30 1.8
BSF	4.21	328	Pn	50 53.90	-0.8	ADK	1.80 287 iP	26 49.20	-0.3	WB2	84.22	228	eP	38 48.20 -1.3
			Sn	51 42.10		PMR	16.96 43 eP	30 21.30	5.0X		0.8s	1.20nm	4.1mb	
HAU	4.52	327	Pn	50 58.40	-0.7	IMA	17.94 27 eP	30 29.70	1.1	SBF	85.12	359	iPd	38 54.70 0.7
			Sn	51 50.20		TOA	18.45 44 eP	30 35.80	0.9		0.8s	16.10nm	5.3mb	
CDF	4.55	336	Pn	50 58.10	-1.4	FBA	19.11 35 eP	30 40.20	-2.6	FRF	85.43	360	iPd	38 56.50 1.1
			Sn	51 49.40		INK	25.72 34 eP	31 47.00	-1.8		0.6s	5.40nm	4.9mb	
SMF	4.97	300	Pn	51 04.70	-0.7	PNT	34.04 72 eP	33 09.00	5.8X	LMR	85.66	360	iPd	38 57.60 1.1
LBF	5.04	304	Pn	51 06.80	0.3		0.6s	4.00nm	4.5mb		0.8s	8.05nm	5.0mb	
LOR	5.26	307	Pn	51 08.80	-0.8	NEW	35.99 72 eP	33 20.00	0.2	PGF	86.41	358	iPd	39 01.00 0.6
AVF	5.33	300	Pn	51 10.20	-0.4	MAT	36.83 265 eP	33 27.00	0.1		0.8s	10.75nm	5.1mb	
KHC	5.41	25	ePn	51 09.00	-2.7X	SES	38.58 66 eP	33 40.00	-1.6	OHR	86.99	349	eP	39 04.50 1.3
			ePg	51 23.00		CN2	40.54 284 eP	33 56.60	-1.1	HYB	87.04	294	eP	39 04.00 0.2
			eSg	52 09.50			pP	34 12.60	63kmX	SLR	149.30	318	ePKP	46 07.50 4.8X
GUN	61.33	78	P	00 00.00	-7.6X	FFC	41.62 56 eP	34 06.50	0.0					
							0.7s	8.00nm	4.6mb	S.D. = 1.0 on 55 of 61 abs.				
S.D. = 0.7 on 52 of 57 obs.						SNY	42.78 283 Pc	34 16.60	0.5	? MAY 31, 1991 12h 40m 05.75±1.06s				
? MAY 31, 1991 10h 04m 45.56±1.53s							1.0s	30.00nm	5.0mb	39.179 N ± 7.4km 27.273 E ± 39.9km				
43.464 N ± 6.3km 12.947 E ± 19.0km						MSU	44.27 82 eP	34 39.50	10.9X	DEPTH = 10.0km (geophysicist)				
DEPTH = 5.0km (geophysicist)						DL2	45.71 280 eP	34 39.30	-0.4	TURKEY (366)				
CENTRAL ITALY (381)							1.0s	30.00nm	5.2mb	MD 2.8 (ISK).				
ARV	0.03	354	Pc	04 46.70	-0.2	ANMO	50.08 82 eP	35 14.00	-0.1					
			eSg	04 48.10		SSE	51.06 273 Pd	35 23.50	2.2	IZM	0.78	181	ePg	40 21.00 0.0
ASS	0.45	208	P	04 54.10	-0.4		0.8s	10.00nm	4.8mb					
			eSg	05 00.50			pP	35 37.20	51kmX	EDC	1.25	21	ePn	40 29.00 0.0
SFI	0.92	300	P	05 03.70	0.2	BTO	51.68 290 eP	35 26.00	-0.1	KGT	1.27	1	ePn	40 29.60 0.3
MNS	1.10	190	P	05 07.00	0.4	TIY	52.08 285 eP	35 28.80	-0.3	MFT	1.61	0	ePn	40 34.00 -0.3
			eSg	05 21.00		Z	20s	0.38um	4.4msz					
S.D. = 0.6 on 4 of 4 obs.						WHN	55.70 277 eP	36 02.00	6.3X	S.D. = 0.4 on 4 of 4 abs.				
% MAY 31, 1991 10h 50m 36.00±0.83s						XAN	56.65 284 P	36 01.00	-1.5	MAY 31, 1991 13h 34m 47.52±0.73s				
42.389 N ± 5.5km 19.316 E ± 6.9km						GTA	58.38 295 P	36 13.80	-0.9	49.079 N ± 5.5km 6.885 E ± 6.6km				
DEPTH = 10.0km (geophysicist)							1.0s	10.00nm	4.9mb	DEPTH = 5.0km (geophysicist)				
						WMO	61.87 306 P	36 37.50	-1.0	GERMANY (543)				
						CD2	61.95 285 P	36 38.80	-0.4					



31d 13h

## MD 2.5 (STR).

GWF	0.50	102	Pg	34	57.18	-0.3
CDF	0.72	159	Pg	35	01.69	-0.1
			Sg	35	12.57	
WLS	0.74	155	Pg	35	02.11	-0.1
ECH	0.88	168	Pg	35	05.26	0.3
VITF	1.05	215	Pg	35	07.56	-0.2
MOF	1.24	172	Pg	35	11.47	0.4
FEL	1.42	148	Pg	35	14.62	0.5
			Sg	35	35.04	
LOMF	1.73	181	Pn	35	17.93	-0.6
ENN	1.80	340	iPnc	35	19.50	0.1
	0.5s		19.00nm			
			eSn	35	40.00	
S.D. = 0.4 on 9 of 9 obs.						

? MAY 31, 1991 14h 37m 05.41±4.90s  
 1.324 S ±26.7km 78.597 W ±48.9km  
 DEPTH = 10.0km (geophysicist)  
 ECUADOR (107)

TUNG	0.18	122	P	37	09.50	-0.1
VC1	0.71	16	P	37	19.20	-0.5
			eS	37	29.40	
GGP	1.14	0	Pd	37	27.30	0.1
YANA	1.20	1	P+	37	28.00	-0.1
			eS	37	44.50	
CAYA	1.52	24	P	37	33.80	0.6
COTA	1.67	9	P	37	36.50	1.2X
S.D. = 0.6 on 5 of 6 obs.						

\* MAY 31, 1991 14h 57m 47.74±1.13s  
 22.703 N ±9.4km 121.462 E ±9.0km  
 DEPTH = 10.0km (geophysicist)  
 3.4mb (1 obs.)  
 TAIWAN REGION (243)

TWC	0.38	288	iPc	57	55.80	0.3
			eS	57	59.00	
TWF1	0.66	347	iPd	58	00.40	-0.5
			eS	58	07.30	
TWM1	0.97	277	ePd	58	07.30	1.2
TWK	1.06	302	ePd	58	07.30	-0.4
			eS	58	20.00	
TWD	1.38	5	eP	58	13.50	0.6
HKC	6.75	268	eP	59	28.20	-1.2
WB2	44.22	162	eP	05	59.00	0.1
	1.0s		0.60nm			3.4mb
S.D. = 1.0 on 7 of 7 obs.						

MAY 31, 1991 15h 39m 43.80±0.25s  
 58.719 N ±3.0km 143.575 W ±2.0km  
 DEPTH = 10.0km (geophysicist)  
 4.7mb (18 obs.) 4.3MsZ (2 obs.)  
 GULF OF ALASKA (15)  
 ML 4.6 (AEIC), 4.5 (PMR).

WRG	1.54	30	iPd	40	11.46	0.1
MID	1.59	298	iPc	40	13.20	1.1
HMT	1.66	348	iPc	40	14.20	1.1
RAGM	1.76	342	iPc	40	15.65	1.0
WAX	1.77	12	iPc	40	15.05	0.2
SGAM	1.97	336	iPc	40	18.85	1.3
			S	40	41.89	
CROM	2.06	6	iPd	40	19.24	0.3
			S	40	45.01	
TGL	2.08	10	iPd	40	19.46	0.2
			S	40	45.16	
CVA	2.14	330	ePc	40	20.42	0.4
YKU	2.15	65	eP	40	20.30	0.1
HIN	2.25	320	iPc	40	22.59	1.0
			eS	40	50.25	
BALM	2.41	14	iPd	40	23.96	0.0
MTU	2.45	303	iPc	40	24.49	0.1
			eS	40	53.47	
CTGM	2.52	26	iPd	40	25.34	-0.2
			eS	40	53.18	
LTI	2.56	303	iPc	40	25.97	0.0
KNIM	2.68	309	iPc	40	27.57	-0.1
			eS	40	59.45	
GLB	2.73	358	iPd	40	28.79	0.2
VZW	2.79	329	iPc	40	29.24	-0.1
VLZ	2.79	331	iPc	40	29.22	0.0
GLI	2.80	322	iPc	40	29.44	-0.1
KLU	3.02	338	iPc	40	32.92	0.3
SEW	3.31	297	eP	40	36.00	-0.6

TZL	3.46	345	eP	40	39.21	0.4
TOA	3.63	340	ePc	40	42.50	1.2
SCM	3.64	331	ePc	40	41.63	0.2
KNK	3.64	320	iPc	40	42.08	0.6
HYT	3.73	53	P	40	41.60	-1.1
PLBC	3.79	76	Pc	40	41.00	-2.5
			S	41	22.50	
SLKM	3.82	301	eP	40	43.49	-0.5
BRLK	3.90	289	eP	40	45.17	0.1
			eS	41	28.39	
SML	3.90	325	ePc	40	45.16	0.1
PMS	3.93	313	ePc	40	45.53	0.0
SDG	3.94	347	ePc	40	46.00	0.4
PLRM	4.00	318	ePc	40	46.65	0.2
PMR	4.00	318	iPc	40	47.30	0.9
CNPM	4.03	285	ePc	40	47.32	0.4
GHO	4.06	321	ePc	40	47.53	0.2
HOM	4.26	286	eP	40	49.83	-0.2
XLV	4.27	283	eP	40	50.59	0.3
PWA	4.31	316	eP	40	51.43	0.6
PAX	4.37	349	ePc	40	51.68	-0.1
NKA	4.38	301	eP	40	53.68	1.9
SUA	4.52	311	eP	40	53.00	-1.0
SYI	4.61	272	ePc	40	55.03	0.0
TMW	4.63	3	eP	40	55.09	-0.3
SIT	4.71	107	eP	40	51.60	-4.9X
WHC	4.74	61	P	40	55.80	-1.3
KDC	4.81	262	eP	40	57.70	-0.3
RDT	4.85	296	ePc	40	58.15	-0.5
DOT	4.95	357	eP	41	00.87	0.9
CUT	4.96	321	ePc	41	00.15	0.2
REF	4.96	295	eP	40	59.52	-0.8
RED	4.98	294	eP	40	59.58	-0.8
			eS	41	54.39	
RSO	4.98	294	ePc	41	00.43	-0.1
RS2	4.98	294	eP	40	59.65	-0.9
DFR	4.99	296	eP	40	59.52	-1.0
RDN	5.00	295	eP	40	59.34	-1.4
CRP	5.01	304	eP	41	00.73	-0.2
RDW	5.01	295	eP	41	00.80	-0.2
CKL	5.06	303	eP	41	00.41	-1.1
NGC	5.07	306	eP	41	00.77	-1.0
NCT	5.09	295	eP	41	01.34	-0.7
AUE	5.10	281	eP	41	02.40	0.4
BGL	5.11	304	eP	41	01.47	-0.8
SKT	5.13	313	eP	41	01.53	-0.9
			S	41	59.35	
AUI	5.13	281	eP	41	03.43	1.0
			S	41	58.50	
AUH	5.14	281	eP	41	02.73	0.1
HUR	5.20	328	eP	41	03.52	0.1
DDM	5.20	349	ePd	41	04.61	1.0
CDD	5.24	277	ePc	41	04.38	0.4
RND	5.35	334	eP	41	06.09	0.4
PDB	5.55	286	ePc	41	08.63	0.2
MCNL	5.59	279	eP	41	07.37	-1.6
MCK	5.66	335	eP	41	10.02	0.1
DWY	5.71	19	P	41	09.90	-0.8
TRF	5.75	328	eP	41	11.31	-0.1
HDA	5.93	346	eP	41	12.94	-0.8
CCB	6.28	343	eP	41	17.49	-1.2
NEA	6.43	338	eP	41	19.36	-1.5
SVW	6.51	297	eP	41	22.20	0.2
FBA	6.52	344	eP	41	20.40	-1.6
GLM	6.54	346	eP	41	20.75	-1.7
MDM	6.64	343	eP	41	22.13	-1.6
DLB	7.08	87	P	41	25.70	-4.3X
TTA	7.40	310	eP	41	33.80	-0.6
VIB	8.26	127	P	41	39.50	-7.0X
CWB	8.55	126	P	41	43.50	-7.1X
IMA	8.73	332	eP	41	51.00	-2.0
BNB	9.08	128	P	41	50.70	-7.1X
SDN	9.82	257	ePc	42	07.30	-0.6
INK	10.60	21	P	42	19.00	0.4
			0.8s		4.20nm	4.9mb
YKA	14.65	63	eP	43	20.30	7.7X
			0.4s		3.30nm	4.3mb
PNT	16.85	114	ePd	43	41.00	0.0
			1.1s		52.00nm	4.6mb
LON	17.71	123	eP	43	51.00	-0.9
SES	20.44	100	ePc	44	21.00	-2.7
			1.0s		55.00nm	4.9mb
LRM	22.76	111	eP	44	47.30	0.0
FFC	22.89	82	ePc	44	47.30	-1.0
			0.9s		20.00nm	4.6mb X
FFC	22.89	82	iPd	44	56.10	7.8X
			0.9s		34.00nm	4.9mb

CMB	25.56	134	eP	45	14.80	0.7
TNP	26.76	129	eP	45	26.00	0.6
	0.9s		4.56nm			4.2mb
MSU	28.55	121	eP	45	42.20	0.5
ANMO	34.08	118	eP	46	31.00	0.6
	1.4s		20.35nm			4.9mb
FRB	34.51	49	eP	46	34.00	0.5
JSC	47.24	93	eP	48	18.00	-0.4
LHS	47.31	92	eP	48	19.00	-0.1
CN2	54.41	297	eP	49	13.00	0.2
			pP	49	20.00	23kmX
HFS	60.15	13	eP	49	59.40	6.1X
	0.7s		2.20nm			4.4mb
Z	11s		0.11um			4.3MsZ
			e	50	03.20	
			e	50	09.00	
			e	50	17.50	
TIY	65.19	302	eP	50	28.80	1.7
Z	20s		0.38um			4.6MsZ
GTA	69.00	312	eP	50	52.00	0.8
	1.0s		10.00nm			5.0mb
			pP	51	00.00	26kmX
LOR	71.02	23	eP	51	04.50	1.3
	0.8s		4.05nm			4.6mb
Z	20s		0.08um			3.9MsZ
SSF	71.15	23	eP	51	04.50	0.5
	0.8s		7.40nm			4.9mb
LBF	71.32	23	eP	51	05.70	0.6
	0.6s		1.80nm			4.4mb
AVF	71.38	23	eP	51	06.50	1.2
	0.6s		3.60nm			4.7mb
BGF	71.49	24	eP	51	07.30	1.2
	0.8s		8.05nm			4.9mb
TCF	71.61	24	eP	51	08.10	1.3
	1.0s		10.00nm			4.9mb
MAF	71.75	24	eP	51	08.80	1.2
	0.9s		8.20nm			4.8mb
KBA	72.86	16	iPc	51	16.80	2.4
	0.9s		5.50nm			4.6mb
			i	51	23.00	
CAF	72.88	25	eP	51	15.10	0.8
	0.8s		4.70nm			4.6mb
GYA	77.30	300	P	51	41.60	1.6
S.D. = 0.9 on 111 of 119 obs.						

MAY 31, 1991 16h 22m 49.61±0.41s  
 40.339 N ±4.9km 25.823 E ±3.3km  
 DEPTH = 10.0km (geophysicist)  
 AEGEAN SEA (365)

MD 3.6 (ISK).						
ALN	0.58	17	ePg	23	01.90	0.5
EZN	0.64	143	iPg	23	02.80	0.4
KGT	1.14	84	iPn	23	10.50	-0.4
MFT	1.20	68	iPn	23	12.60	0.6
KDZ	1.35	347	iPc	23	15.00	0.6
			iSg	23	28.00	
EDC	1.56	89	iPn	23	18.00	0.6
RZN	1.59	328	iPc	23	18.00	0.0
			eSg	23	40.00	
BNT	1.60	89	iPn	23	18.60	0.6
PAIG	1.69	257	ePb	23	18.30	-1.1
DIM	1.72	353	eP	23	20.00	0.2
			eSg	23	46.00	
PLD	1.96	335	ePg	23	27.00	3.9X
			eSg	23	53.00	
MMB	2.02	309	ePc	23	25.00	0.9
			eS	23	55.00	
DMK	2.08	44	iPn	23	23.00	-2.0
CTT	2.14	67	iPn	23	25.10	-0.7
IZM	2.24	150	ePn	23	27.10	-0.2
KNT	2.37	291	ePn	23	30.00	0.8
			eSn	24	04.40	
LIT	2.56	266	ePn	23	30.40	-1.5
KKB	2.57	307	eP	23	32.00	0.0
			eSg	24	12.00	
VAY	2.66	293	ePn	23	45.00	11.8X
GRG	2.68	284	ePn	23	35.10	1.6
			eSn	24	11.20	
YLV	2.72	84	ePn	23	34.90	0.7
IZI	2.79	89	ePn	23	34.90	-0.3
PVL	2.90	353	iPd	23	35.00	-1.6
HRT	2.97	79	ePn	23	38.00	0.3
VTS	2.99	320	eP	23	38.00	0.0
			iSg	24	27.00	
EYL	3.31	85	ePn	23	50.00	7.3X
BZS	6.11	331	ePc	24	26.00	4.0X



S.D. = 0.9 on 23 of 27 obs.															
MAY 31, 1991 17h 47m 02.20 ± 0.20s				FBA 59.33 337 eP 57 09.70 148km				eS 53 36.87							
17.291 N ± 4.0km 94.391 W ± 3.1km				1.0s 21.00nm				eP 53 27.66 0.4							
DEPTH = 148.2km ( 11 depth phases)				RSO 59.67 331 eP 56 52.80 -0.3				eS 53 29.76							
4.5mb ( 30 obs.)				SVW 61.21 331 eP 57 28.50 151km				eP 53 29.46 0.1							
CHIAPAS, MEXICO ( 61)				1.0s 32.00nm 5.2mb				S 53 42.88							
PBJ 1.29 229 iP 47 27.50 -2.3				LPF 79.54 43 eP 57 38.50 152km				eP 53 44.23							
SCX 1.77 108 iP 47 36.00 1.1				0.8s 8.05nm 4.5mb				eS 53 30.28 -0.5							
OXX 2.24 265 iP 47 40.00 -0.7				GRR 79.57 43 eP 58 53.90 -0.2				eS 53 44.66							
LVVM 3.12 322 iP 47 49.50 -2.1				FLN 79.72 42 eP 58 54.90 0.0				eS 53 32.03 0.1							
TPX 3.13 139 iP 47 53.00 1.2				LDF 80.00 42 eP 58 56.20 -0.2				eS 53 48.16							
IISM 3.30 301 iP 47 53.00 -0.9				MFF 80.49 44 eP 58 58.90 -0.1				eS 53 34.75 1.2							
P10 3.69 257 iP 47 55.25 -3.8X				LFF 81.53 46 eP 59 04.20 -0.2				eS 53 50.83							
IIT 4.10 295 iP 48 05.50 0.7				LSF 81.70 44 eP 59 04.50 -0.8				eS 53 34.82 0.4							
PPM 4.40 294 iP 48 09.50 0.6				EPF 81.77 48 eP 59 05.70 -0.2				eS 53 51.14							
IIA 4.46 295 iP 48 12.27 3.1X				LPO 81.91 46 eP 59 06.20 -0.2				eS 53 34.81 0.3							
TPM 4.75 291 iP 48 12.50 -0.8				RJF 81.96 45 eP 59 06.10 -0.6				eS 53 50.76							
III 4.95 283 iP 48 15.50 -0.6				TCF 82.14 44 eP 59 07.20 -0.5				eS 53 33.90 -0.7							
UNM 4.98 295 eP 48 17.50 1.0				NB2 82.36 28 P 59 09.30 0.8				eS 53 34.33 -0.6							
TAC 5.02 295 (S) 49 14.00				MAF 82.40 44 eP 59 08.70 -0.3				eS 53 51.70							
ACX 5.25 266 iP 48 16.50 -3.3X				CAF 82.44 45 eP 59 08.80 -0.4				eS 53 52.56							
MRX 6.88 291 iP 48 43.00 1.1				BGF 82.49 44 eP 59 09.00 -0.4				eS 53 35.93 -0.4							
CGX 8.93 287 eP 49 11.00 1.5				DOU 82.54 40 P 59 10.70 1.1				eS 53 54.79							
GCM 12.52 79 P 49 56.55 0.3				AVF 82.75 43 eP 59 10.10 -0.6				eS 53 38.64 1.5							
UPA 16.65 118 ePc 50 49.00 0.7				SSF 82.77 43 eP 59 10.20 -0.7				eS 53 59.85							
MEO 17.82 349 iPd 51 02.00 -0.3				LOR 82.94 43 eP 59 11.40 -0.3				eS 53 41.02 2.7							
OLY 18.32 8 eP 51 07.00 -0.8				LBF 83.10 43 eP 59 11.80 -0.8				eS 53 40.34 1.3							
PRM 19.90 31 eP 51 23.60 -0.6				HFS 83.84 29 eP 59 16.50 0.5				eS 54 01.81							
ELC 20.43 12 eP 51 28.80 -0.7				Z 17s 0.04um 3.9mszX				eS 53 41.59 2.0							
ANMO 20.62 331 eP 51 32.00 0.3				RRL 85.62 44 P 59 26.62 1.1				eS 53 43.54 3.2							
LHS 20.99 33 eP 51 35.70 0.6				LRG 85.83 46 eP 59 27.10 0.8				eS 53 45.05 2.6							
NAV 23.27 28 eP 51 56.70 -0.7				RSP 85.86 44 P 59 27.65 1.1				eS 54 09.84							
BLA 23.36 29 eP 51 59.00 0.7				BHB 85.97 44 P 59 27.34 0.4				eS 53 44.63 0.0							
GOL 24.28 339 eP 52 09.50 2.1				LMR 85.98 46 eP 59 27.60 0.6				eS 53 47.39 2.1							
PLM 25.77 313 eP 52 22.10 1.0				PZZ 85.98 45 P 59 28.06 0.9				eS 54 07.12 2.3							
DUG 27.85 329 eP 52 40.00 0.2				FRF 85.99 46 eP 59 27.40 0.3				eS 54 07.72 4.0							
TNP 28.80 321 eP 52 49.00 0.5				ORX 86.17 43 P 59 26.93 -1.1				eS 54 03.46 -0.3							
LRM 32.18 336 eP 53 21.00 152km				STV 86.22 45 P 59 29.08 0.8				eS 54 07.80 3.1							
SES 35.63 342 eP 54 19.00 31.6X				ROB 86.57 45 P 59 30.11 0.2				eS 54 06.51 -2.3							
NEW 36.04 334 eP 53 51.00 0.1				IMI 86.72 45 P 59 30.42 -0.3											
FFC 37.82 353 eP 54 23.00 143km				LIC 87.57 84 P 59 36.00 0.8											
PNT 37.91 333 eP 54 41.00 34.5X				WB2 133.86 259 iPKPc 06 03.30 -0.6											
ZOBO 42.22 141 P 54 42.90 0.0				WRA 133.87 259 PKP 06 03.00 -1.0											
LPB 42.44 141 eP 54 45.00 0.5				HYB 144.82 12 ePKP 06 22.00 -1.9											
CNCB 42.72 141 P 54 47.00 0.0				MUN 148.71 236 ePKP 06 33.00 3.2X											
CCH 44.28 140 P 54 59.30 0.0				BAL 148.76 239 ePKP 06 33.00 3.1X											
SIV 46.61 133 Pd 55 16.00 -1.4				S.D. = 0.9 on 81 of 90 obs.											
YKA 47.32 347 eP 55 21.30 -1.1				& MAY 31, 1991 17h 53m 10.65s											
PEL 55.03 156 iPc 56 20.50 -0.1				63.675 N 146.662 W											
BALM 55.28 334 eP 56 22.00 -0.3				DEPTH = 15.7km											
SAN 55.31 156 eP 56 23.00 0.4				CENTRAL ALASKA ( 1)											
PCH 55.52 156 eP 56 24.00 -0.2				<AEIC>. ML 2.8 (AEIC).											
MDZ 55.55 154 i(P) 56 24.00 0.4				DDM 0.37 72 iP 53 18.03 -0.5											
INK 56.65 344 eP 56 31.00 -0.7				THY 0.48 122 eP 53 20.44 0.1											
KLU 57.02 333 eP 56 35.00 0.4				HDA 0.75 350 iP 53 24.09 -0.7											



31d 18h

SJG	3.12	99	iP	27	07.50	-0.1	LPG	0.6s	2.70nm	4.3mb	DEPTH = 10.0km (geophysicist)
CPD	3.36	100	P	27	11.00	0.3		67.33	48 eP	37 04.60	AEGEAN SEA (365)
LPR	3.36	95	P	27	10.00	-0.8		0.6s	2.70nm	4.3mb	
BPA	7.35	101	eP	28	03.30	-2.0	NB2	69.35	31 P	37 16.40	0.5
PAG	7.81	108	eP	28	12.01	0.5		0.8s	3.40nm	4.2mb	
			S	29	33.00		HFS	70.61	32 eP	37 23.40	-0.1
MGG	8.17	108	eP	28	16.51	0.1		0.6s	1.50nm	4.0mb	
BBL	8.18	111	eP	28	16.51	0.0	Z	11s	0.07um	4.2Mszx	
DEG	8.28	105	eP	28	16.51	-1.4			e	37 28.00	
DTMT	8.40	112	eP	28	16.63	-3.0X			e	37 30.20	
			eTT	36	22.00				e	37 33.40	
TOV	8.80	183	ePn	28	26.30	1.3			ePcP	37 42.00	
			iSn	29	58.30		KHC	71.60	43 P	37 30.50	0.7
UAV	10.10	190	ePn	28	41.00	-1.6	BRG	71.62	42 i(P)	37 30.40	0.6
			eSn	30	24.00		PRU	72.11	42 eP	37 32.50	-0.2
TRN	11.08	135	eP	28	59.00	3.7X	SOD	75.27	23 iP	37 51.50	0.9
			e	29	22.00		NUR	75.95	31 eP	37 55.60	1.1
			e	29	27.00		KAF	76.35	29 eP	37 57.30	0.5
			eS	30	56.00			0.4s	2.70nm	4.4mb	
UPA	13.74	227	eP	29	30.30	0.1			eSP	37 58.10	
LHS	18.77	329	P	30	30.00	-1.9	WB2	157.55	263 ePKP	45 54.90	-8.5X
JSC	18.83	328	P	30	29.00	-3.6X		1.2s	1.20nm		
CVL	20.84	304	P	30	54.00	0.7	WRA	157.56	263 PKP	46 04.00	0.6
BLA	20.89	335	P	30	53.00	-0.8		0.8s	0.60nm		
LVNJ	22.58	349	P	31	10.00	-0.4				S.D. = 0.8 on 65 of 70 obs.	
TBR	22.81	351	P	31	13.00	0.4				MAY 31, 1991 20h 39m 31.46±0.26s	
ZOBO	34.70	178	iPc	32	55.00	-5.5X				44.984 N ± 2.2km 8.187 E ± 2.5km	
CNCB	35.24	178	P	33	06.00	0.9				DEPTH = 8.8 ± 2.2 km	
SIV	35.37	166	P	33	04.40	-1.1				NORTHERN ITALY (545)	
ALO	36.61	304	eP	33	16.50	0.4				ML 2.7 (GEN), 2.6 (LDG).	
				0.8s	1.31nm	3.9mb	PCP	0.51	150 P	39 42.08	0.3
ANMO	36.61	304	P	33	16.00	-0.1			S	39 48.03	
				1.0s	7.50nm	4.5mb	CKI	0.56	173 Pd	39 43.40	0.6
GOL	37.43	312	P	33	23.00	0.0			eSg	39 52.40	
				0.6s	1.54nm	4.1mb	ORO	0.66	347 P	39 45.00	0.3
MSU	42.02	307	P	34	01.30	0.4			eSg	39 55.00	
TNP	45.78	305	P	34	31.40	0.3	ORX	0.66	347 P	39 45.45	0.6
				0.7s	3.70nm	4.3mb			S	39 53.75	
BONR	46.59	305	P	34	38.50	0.9	BHB	0.67	258 P	39 45.61	0.7
YKA	53.74	336	eP	35	29.20	-2.0			S	39 54.20	
				0.6s	3.30nm	4.5mb	RSP	0.68	285 P	39 44.73	-0.4
DCN	58.67	38	eP	36	06.50	0.1			S	39 53.34	
DMU	58.99	38	eP	36	08.50	-0.1	ROB	0.73	198 P	39 46.16	0.3
EKA	61.38	37	Pd	36	23.60	-1.4			S	39 54.09	
				0.7s	3.50nm	4.5mb	DOI	0.83	235 P	39 47.70	0.1
LPF	61.96	45	iPc	36	28.90	0.0			eSg	40 00.90	
				0.8s	9.40nm	4.8mb	LSO	0.87	303 P	39 48.42	-0.1
GRR	62.10	45	iPc	36	29.80	0.0			S	39 59.91	
				0.7s	8.80nm	4.9mb	PZZ	0.91	239 P	39 48.63	-0.5
FLN	62.37	44	iPc	36	31.70	0.1			S	40 01.04	
				0.6s	9.00nm	4.9mb	BOB	0.92	103 P	39 50.00	0.7
MFF	62.51	47	iPc	36	33.00	0.4			eSg	40 04.00	
				0.6s	12.65nm	5.1mb	STV	0.96	220 P	39 49.90	0.0
LDF	62.60	44	iPc	36	33.30	0.2			S	40 02.02	
				0.6s	7.20nm	4.8mb	VAI	0.97	25 P	39 50.60	0.6
EPF	62.82	51	iPc	36	35.60	0.8			eSg	40 04.80	
				0.7s	7.70nm	4.8mb	RRL	1.00	267 P	39 50.47	-0.2
LFF	63.10	49	eP	36	36.60	0.1			S	40 02.79	
				0.6s	5.40nm	4.7mb	BNI	1.07	274 P	39 52.50	0.6
LPO	63.42	49	eP	36	38.70	0.1			eSg	40 06.70	
				0.6s	5.40nm	4.7mb	IMI	1.09	191 P	39 51.45	-0.7
TIC	63.65	92	P	36	40.10	-0.5			S	40 05.11	
RJF	63.65	48	eP	36	40.10	-0.1	LPG	1.14	297 Pn	39 53.10	0.0
				0.6s	3.60nm	4.5mb			Sn	40 00.70	
LIC	63.77	92	P	36	40.70	-0.6	LPL	1.16	298 Pn	39 53.50	0.1
KIC	64.00	92	P	36	42.40	-0.5			Sn	40 09.50	
CAF	64.04	49	eP	36	42.90	0.2	SBF	1.24	206 Pn	39 55.60	0.9
				0.6s	4.95nm	4.6mb			Sn	40 12.90	
TCF	64.13	47	iPc	36	43.10	-0.2	MDI	1.34	53 P	39 55.20	-1.0
				0.8s	6.70nm	4.6mb			eSg	40 13.40	
BGF	64.57	47	eP	36	45.80	-0.3	FRF	1.80	218 Pn	40 03.30	0.4
				0.6s	5.40nm	4.7mb	LRG	2.02	221 Pn	40 06.10	0.1
AVF	64.92	46	iPc	36	48.00	-0.3			S	40 06.20	-0.2
				1.0s	9.00nm	4.7mb	LMR	2.04	217 Pn	40 06.20	-0.2
SSF	65.02	46	iPc	36	48.60	-0.3	PGF	2.50	166 Pn	40 11.80	-1.3
				0.8s	2.70nm	4.2mb	HAU	3.28	338 Pn	40 23.70	-0.4
LDR	65.25	46	iPc	36	50.10	-0.4			Sn	40 26.70	0.0
				0.6s	8.10nm	4.8mb	SMF	3.46	300 Pn	40 27.90	0.0
SMF	65.25	47	iPc	36	50.10	-0.4			Sn	40 31.00	-0.2
				0.7s	5.50nm	4.6mb	LOR	3.78	309 Pn	40 31.00	-0.2
LBF	65.34	46	iPc	36	50.30	-0.8			Sn	40 31.90	0.0
				0.6s	2.70nm	4.4mb	AVF	3.83	300 Pn	40 32.10	-0.3
ENN	66.55	42	eP	36	59.00	0.4	SSF	3.87	304 Pn	40 32.10	-0.3
				0.7s	5.00nm	4.5mb	BGF	4.05	295 Pn	40 34.80	-0.2
WTS	67.08	41	eP	37	02.50	0.5				S.D. = 0.5 on 31 of 31 obs.	
				0.8s	16.00nm	5.0mb	%	MAY 31, 1991 20h 42m 06.27±0.89s			
LPL	67.32	48	eP	37	04.50	0.6		40.250 N ± 6.7km 24.051 E ± 6.8km			



IRK	143.18	291	ePKP	37	11.00	0.5
			e	40	24.70	
TOL	147.38	103	ePKP	37	21.00	3.0X
			iPKKP	37	35.00	
			ePP	40	50.00	
GAR	152.84	242	ePKP	37	33.10	6.7X
MAIO	155.30	222	ePKP	37	38.00	8.2X
OHR	160.32	135	ePKP	37	36.00	0.4
VAY	161.16	139	ePKP	37	34.00	-2.3
KBA	161.49	111	ePKP	37	39.00	2.3
			e	38	19.00	
GRF	161.97	102	ePKP	37	39.00	2.1
Z	20s		0.20um			
MLR	166.00	139	ePKPc	37	41.50	0.6
			e	38	41.00	
			ed	42	26.50	
S.D. = 1.4 on 25 of 34 obs.						

\* MAY 31, 1991 23h 33m 36.36± 2.56s  
 38.728 N ±24.4km 0.420 E ±10.0km  
 DEPTH = 10.0km (geophysicist)  
 SPAIN (377)  
 mbLg 3.4 (MDD).

TOL	3.65	290	ePg	34	35.00	0.8
EPF	4.30	359	Pn	34	44.30	1.0
			Sn	35	43.80	
ECRI	4.47	331	eP	34	43.71	-2.0
			eS	35	43.20	
LPO	5.98	5	Pn	35	06.30	-0.7
LFF	6.21	2	Pn	35	10.50	0.3
CAF	6.31	11	Pn	35	12.30	0.5
LMR	6.51	43	Pn	35	14.90	0.4
LRG	6.51	42	Pn	35	15.80	1.3
PGF	7.56	57	Pn	35	27.70	-1.6
S.D. = 1.3 on 9 of 9 obs.						



X = data received for this 6-hour time period

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
AAI			XX	XX	XXX		XX		XX				XX	X	XXXX		XX	X		X	XXXXX	XXX	XXXX	XXXXXX		XXXX								
ABA	X										X	X		X	X		X	X	X										X		X			
ABH	X	XXX	X		XX	X		X	XXX		X			X					X	XX	XXXX													
ABHA			X	X			XX	X				XX	XX	X		X			X															
ABL					XX						X	X								X	X	X	XX		X							X		
ACX	X	X		X		X	X	XX	X	X	X	X	X	X	X	X	X	X	X		X	XXX	X					X	X	X	XXX	X		
ADE	XX		X	X	XXX	X	X	XXX			XX	X	XX	XX	XX	X	X	XX	X	X		X						X	X	X	XXX	X		
ADK	XX	XXX	X	X	X	X	X	XXX	X	X	X	X	X	X	X	X				XX	XX	XX	X	X		X	XXX	X	XX		X	X		
AFC	X	X		XXX		X	XX	X	X			X	X	X						X	XX													
AFI	X	X	X	XXXXX		X	XX	X	X	X	XXXXX		XXXXX			X	X				XXX	XX	XXX			X			XXX			XXX	X	
AFR	X	X	X				X		X		X										X		X									X	X	
AGG	X	XXXXXX		XXXX	X	XX	X	XXXXX		XXXX	X	X	XX	XXXXX	X		XXX	XX		XXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXX	XXXX	XXXXXXX		XXXX	XXXX	XXXXXXX			XXXX	X	X
AGO			X	X	X			X		X	X	X		X						X													XX	
AIA	X	XXXXX		XX	X	XX	X	XXXX	XX	XXX	X	XX	XX	X	X	X	X	XXXX			XX	XXXXX	XX	X	XXX	X	X	X	X	XXXXXXXXXX	XX	XXX	X	
AKU	X	XX	X	X	X			X					X	X							X												X	X
ALJ	XX		X	XX			X	X																										
ALN	XXXXX	X	XXX		X	X	X	X	XX	X	XXX	X	XX	XXX	X	XX	X	XX		XX	X	XX		X	X		X	X	XX	X	X	XXXX		
ALO	XXXXXXXXXX	XXX	XXXX	XXXXXXXXXX	XXXX			XXXX	XXXX	XXXX	X					XX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	X	XX	X	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX
ALT	X	XX	XXXXX	X		X	X	X	X		X	XX	X		XX	XX	XX	XX																
ANGL	X	X		X	X		X	X			XX		X					X																
ANM	XX	XX	X	X	XXX	XXXXX	XXX		XX		X	X		X		XX		X	X	X		X	X	X	X		XX	X	XX		XX	X	X	
ANMO	XX	XXXXXX		XX	XX	X	XXXXX	XX		X	XXXXXXXX	XX	X	XX	X	XX		XXXX	XXX	XX		XXXXXX	XXXXX	X	XX	X	XX	XX	X	XX	XXXX	XX	XX	XX
ANP	XX		X	XXX	XX		X	X	XXX			X	X		XX	XX	X		X	X	X	X					X	X	X	X		XX		
ANT	XX	XX	XXXX	X	XX	X		XXX	XXX		X	XX	X	XX				XXXX	X	XXXX		XX	XX	XXX	X	XXX	X	XX	XXX	X	XXX	X	XXX	
AOMJ							XX																											
APR																																		
AQU	X	XX	X	X		XX	X	X			XXX	X		XX	X	X	X	X	X															
ARE	X	XX	XXX	XX	XXX	X	X	XXXXX	X		X	XXX	X	XXXXX	XXX	XX	XXXXX	XX	X	X	X	XX		X	X		X	XX	X	XXXXXXXXXXXXX	XX			
ARG																																		
ARN	X	X	XX		X	X		X	X	X	X	X	X	X																				
ARO																																		
ARV	XX	XXX	XX	XX		XXX	X	X	X	X	X	XXXXXXXX	X	XX		XXXXX	X	X	XXXX	X	XXXXX	X	XX	X	X	X	X	XXX	XXX	X	XXXXXXXXXXXX	XX		
ASAJ	XX		XXX	XX	XXX	X		XX	X		X	X		XX	XX	X	X	X	X	X	X						X	XX	X	XX	X	XX	X	
ASK	X	X	X		X		X	X	XX		X			X	X	XX	X					X		XX										
ASPA	XX																																	



[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		
CRE	XX	XX	X	X	XX		X	XX	X		X	XX	X	XX	X	X	XX	XXX	X	X	X	XX	X		X	X		X	XX	XX	X	XX	
CRP	XX	X	X		X	XXXX	XXXX	X	X	X	X	X	XX	XXXXXXXX	XX	X	X	X	XXX	X	XX	XX	XX	XX	XXXX		X	XXX	XXX	X	X	XX	
CROM	XX	XX		X	X	X	XXXX	X	X	X		X	XXX	X	XX	X	XX		XXX	X				X	X		X	X			X	XX	
CRZF		X	X	X	X						X	X	X	X				X	X			X									X	X	
CSS	X	X	X	X		XX		X	X	X		X	X	X		X	XX		X			X	XXX		X		XX		X	XXX	X	X	
CSSTJ	X	X	X	X			X	X		X		X	X	X							X		XXX		X								
CSY	XXX	X	XX	X	XX	X	X	XX	X	XX	X	X	XX	X	X	XX	X	X	XX	X	X	X	X	X		XX	XX	X	X	XX	XX	XX	
CTA			X	X	X		X	X	XXX		X	XX	X	XX	XX	X		XXX	X	XXX	X	XX	X			X	XX	X		X	XX	X	
CTGM	XX	X		X	X	XXX	X	X	X	X		X	XXX	X	X	X	XX		XXXX	X	XXX	X	X	XX	X		X	X		X	X	X	
CTI	XX	XX	XX	X		XX	X	X	X	X	XX	X	X	XX	X	X	X		XXXX	X	XX	XXX	X		X	X	X	X	X	X	XX	X	
CTT	XX	XX	X	XX	XX	XXX	XX	X	X		X	XXX	XXX	XX	XXX	XXX	XX	X			XX			XXX	XXX	XX	XXX	XXXXXXXX	XXXX				
CUT	XX	X	X		X	XXXX	XXXX	X	X	XX	X	X	XX	XXXXXXXX	XX	X	X	X	XXXX	XX	XXX	X	XX	XX	XX	X	XXX	XX	X	X	XX	X	
CVA	XX	X			X	X	XX		X	X			XXX	XX		XX			XXX	X	XXX	X	X				X					XX	X
CVL		XX		X	X		X	X				X	X	X	X		X		XX				X		X	X						XX	X
CVO			X	X	X	X	X					X	X	X	X		X				X	X	XX	XXX	X	X	X					XX	X
CVT	XX												X	X							X		X		X								
DAG	XX	XXX														X	X	X	XX	XX	X	XX	XX								X	X	
DAU			X	XX	XX	XX		X			X	X		X				X						X		X		X			X	X	
DAV		X	XX	X	X	XXX	X	X	XX	XXX	XXX	XX	XX		X	X			XX		X	XX	XX	X	X	X		X	X		X	X	
DBN		X		X	XX			X			X		X	X				X	X													X	
DCN																									X	X					X	X	X
DDM	XX		X	X		XXX		X	X	X		X	X	X		X			XXX	X	XXX	X	X	X		X					XX	X	X
DEG		X	X	X	XXX	X	XX	X	XX		X	X							X	X	XX	X	XX		X		X	X	X	XX	X	X	X
DEF		X	XX	X	X	X		X			X					X		XX			X	XX					X	XXX	X		XX		
DVR	XX	X		X	XXXX	XXXX	X	X	X	X	X	XX	XXXX					X	XXX	X	XX	X		XXXX	X	XXX	XX	X	X	XX	X	XX	X
DHR		X	X	XX	X	X	XXX				X	X	X	XX					X	X	X	X	X	XX							X	X	X
DIM		X	X	X	XXX		X	X	X				X			XX	X				X	X					X	X	X		XX	X	X
DIX		X	XXX	X	XX	X		X			X	XXX	X	X		X	X								X	X	X	X			XX		
DL2		X	X	XX	XXX	XXX	XXXX	XX	XX		XXXX		X	X			X		X	XXX	X		XX	X	X		X	XX		XXX	XXX	X	
DLF								X			X	X	X			X					X	XXXXXX	X	X		X	X	X					
DMK	XX	XXXXX	XX	XX	X	X	XX	XXX	XX	X	X	X	X	XX	XX	XXX	X	XXX	X	X	X	X	X	X		XX	X	X	XX	XX	XX	X	XXX
DMN	XX																																



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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	
IISM	X	X	X	X	X	XXX	XXXXXX	XXXX	X	X	XX	XXXXXXXX	X	X	X	XXX	X	X	X	X	XX	XXXXXX	X	X		XXXX	XXX	XX	XX	X	XXX	XXX
IIT	X	X		X	X	X	X	X	X	X	XX	X		X	X	X	XX	X	X		X	XX	X	X		X	XX	X	X	X	XXX	X
IKP	X		X										X				X				X					X					X	
IMA	XX	XXXX	XXX	XXX	XXXXX		XXXX	XX	XX		XXXX	XX	XXX	XXX	XXX		XXX	XXXXXXXX	XX	XXXXXX	XX	X	X	XX		XXXXXXXXXX	XXXXXXXXXX	XXXXX	X			
IMI																															XX	XXXX
INK	XXXXXXXXXXXXXXXXXXXX					XXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX				XXXXXXXXXXXX				XXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	X	XXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXX					XXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXX						
IPM	XX	X	X	XX	XXX	X	X	XX	XX	X	X	XX	XX	X	X	X		XXXXXX	XX	XX	XX	XXX	X	XX	X	X	XXXX	X		XXXX	XXX	
IRK	X			X			XX	XX					XX	X			XXXXXX	X	X	X	XX	X	XX	X	X	XX	X			XXXXXX	XX	X
ISA	XX	X	X	X	XX	XX	X	X	X		X	XX	X			XXX	X	X			X	X	X	X						XX	XXX	
ISK	X		X	XX	X	X	X	X	X	X	XX	XX	X	X	XX	X		X	X	X	X	X	X	X	X	X	X	X	XX		XXX	
ISR		X	X	X	X	X	X		XXX	XXXXXXX	X		X	X	X	XXX			X	X	X	X	X	X	XX							
ISSF	XX		X	X	X	X							X					X		X	XX			X	X		XX	XX	X	XX		
ITB		X	XX				X	X			X	X				X	X	X	XXX		X			X				X	X	X	X	
ITB1		X	XX				X	X			X	X				X	X	X	XX		X			X				X	X	X	X	
ITB7		X	XX				X	X			X	X				X	X	X	XX		X			X				X	X	X	X	
ITU	X	X	X	XXX			X	X			X	X						X		X	X			X				X	X	X	X	
IYA	X	X	X	X	X	X	XXX	X				X				X	X		X		X	X	X	X	X	X	X	X	X	X	X	
IZI	XXXXXX	XX	XXX	X	X	XX	XXX	XX		X	XXXXXXXX	XX	XXXXX	X	X	X	XXXXXX	XXXXXX	XXXX	XXXXXXXXXXXXXXXXXX	XX	XXXX	XX	XXXXXX	XXXX	XXXX	XXXX	XX	XXXX	XX	XXXX	
IZM	X	XX	XXXXXXXXXX	XX	XX	X	XX	XX	XXX	XXXXXXXXXX	XXXX	XX	X	XXXX	XX	XXXX	XXXX		X	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XX	XXXX	XX	XXXX	
JACH	XX	X			XXX	X		X	X		X	X	XXX	XX	XXX	X		XX	X	XX	X	X	X	X	X	XX	X			X	XXXX	
JAU				X	X		X				X	X									XX			X				X	X			
JMB	X		X	XX			X	X	X		X	X		X	X	X			X	X		X			X	X						
JMI					XX		X				X		XX					X		X	X							X	X			
JNE			XX		X	X	XX				X		XX		X			X		X	X							X	X			
JNW	X		XX		X	X	XX				X		XX		X			X		X	X							X	X			
JSC		X		X	X		X	X			XX				X	XX	XX	XX	X					X	X					XX	X	XX
JVI		X	X		X	X					XXXX	X						X	X	X	X	X						X	X	X		
KAF	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX	XXXX	XXXXXXXXXX	XXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	X	XXXXX	XX	X	XXXXXX	XXXX	X	XXXXXX	XXXX	X	XXXX	XXXX	XXXX	XXXX	X	X	XXXX	XXXXXXXXXX	XX	XXXXX	XX	XXXX	XXXX	
KAGJ		X			X	X	XX		X									X			X	XX								X	X	
KAKJ	XX		X	XX	X	XX	X				XX		X	XX	X	X	X	X	XX	X				X			X	X	X	X	X	X
KAS	XX	XX	XX	XX		X	XXX	X		X	XX	X	X	XX	X	XXX	X	X	X	X	XXXX	X	XXX		XX	X	XX		X	X	XXX	
KBA	XX	XX	XX	XX		XXXXXXXX	XXX	XX	XX	XXX	X	XX	XXX	X	XX	X	XX	XX	X	X	XXXX	XX	X	X	X	XX	X	X	XXX	XX	XX	XXXXXX
KBS	X		X	X														X	XX	X	X	XX		X								
KCT	XXX	XXX	XXXXXXXX	XXX	XX	X	XXXXXXXXXXXX	XX	XX	XXXXXX	XXX							X		XX	X	XX		X								
KDC					X	X	X		X	X	X	X	X	X	X			X		X	X	XX	XX	X	X	XX		XX	X	X	X	
KDZ	X	X		XXX	X	X	X	X	X	X	X	XX	X	X	X	XXX	X	X	XX	X	XX	X	XX		X	X		XX	XX	X	XXX	
KER	X	X	X	X	X	X	XXXX			XX	XX	X	X		X	XX	XX	X	X	X	X	XX		X	XX		X	XX	XX	X	X	
KEV	XXX	XXX	XXXXX	XXXXXXXXXXXX	XXX	XXXXX	X	XXX	XX	XX	XXXXXX	X	X	X	XXXXXX	XX	X	XXXXXX	X	XX	XXXX	X	XXX		XXXX	XX	XX	XXXX	XXXXXX			
KFNJ		X	X		X	X	X				X					X		X	X	X	X				X							
KGM	X	X	X		X	X	X	X	X	XX	XX	X	X	X		XXX		XX	XX	X	X			X		XX	X		X	X	X	
KGT	XXXXXXXX	XXXXXXXXXXXXXXXXXXXX					X	XXXXXXXXXXXX	XXX	XXX		XXX	XX	XXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	
KHC	XXXXXXXXXX	XX	X	XXXXXXXXXX	XXXXXXXX	XXX	XXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	
KHL	X	X	X	XX	X	X	XX	X	X	X	XX	X	XX	X	X	XXX	XXX	X	X	X	X	XXXX	XX	X	XXXX	XX	XXXX	X	XX	XX	XXXX	
KHT	XX	X	X	XX	XXX	XXX	XX	X	X	X	XX	X						X		X	X											
KHZ	X	XXXXXX	X		X	X				XX	X	X				X		XX	X	XX	X	X	X	X	X	X						
KIC	XXX	XX	XX	XXX	XXXX	XX	XX	XXX	XXXXXXXXXX	XX	XX	X	X	X	XXXXXX	XXXXX	X	XX	XXXX	XXXX	XXXX			X	XXXXX	XX	XXXXXX	X	XX	XXXX		
KIW		XX	X		X	XX					X							X	X	XX	X			X								
KKB	X	XX	X	XXX	X		X	X	X		X	XXX	X	XX	X	XXX	X	X	XX	X	XX	XX		X			X	XX	X	X	XXX	
KKM		X	X			X	X				X	X	X	X		X		X	X	X					X		XXX	XXXX	XX	XXXX	XXXX	
KKN	XX																															



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MNDI	X			XX			X				X	X	XX		X	X	XX	X	XX		XX		XX		X		XX		X		X	X			
MNG	X		XXXXX		X	X	XX	XX	X		XXXX	XXXX	XXXXX				X	X	X	X	XX		XX		X	X	XX		X	X	X	XX			
MNI							XXXX				XXXX				XX		XXX		X		XXXX					XX					X	XX			
MNO	XX			X			XXX	X	X		X		X	X	X	XXX	XXX	X			X	XXX	XX	X	X	X	X		XX	XX	XXX				
MNS	X	XX	X	XX		XX	X	X	X		X	XX	XXX		X	X	XXXXXXXX	X	X		X	XX	X	X	XXXX		XX			X	XX	X	XX		
MOF	X	X	X				X	X	X			XX	X		X	X	X	XX	X			X	X	X	XX		X	X	X	X	XX	XXX	X		
MOL	XX	X	X	X		X	XX	X	X		X	X			XX	X	XX					X		X		XXX		X		X	X	X			
MOR7	XX		X		X	X	X	X							X				X		X									X	X	X			
MOX	XX	XXXXXX	XX	X	XXXXXXXXXX	XXXX	XXX	XXXXX		XXXXX	X	X	XX	X	XXXXX	XXXX	X	XXXXX	XXXX	X	XXXXX	X	X	XX	X	X	XXXX	XXX	XXXXXXXXXXXX						
MRRJ	XX		X		XX		X					X	XX	XX	X		X	X	X				XX				XX		X	X		X			
MRW	X		XX	X		X	XX	X		XXX	X					X			XX	X	XX	X		X	X	X						X			
MRX	X		X	X	X	X	X	X	X	X	XX	X	X	X	X	X	XX			X	XXX	X		X	X	X		XX	XX	XXX	X	XX			
MSU			XX	XXXXX		XXX	X	X		X	XX	X	X	X		X		XX	X				XXXX	XX	X	X	XX			XX	X	XX			
MTD	X		X							X								X	X		X	X		XXX	X	XX		XX		X	XX				
MTMJ	X		X	X	X	X	XX	X		XX	XX		X	XX	X	X	XX	X		X	X	X	XX	X	XX		XXX	X	X	X	X	X			
MTN	XX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXX		XXXXXX	X	XX	XXXXXXXX					X	XXXXXXXXXXXX	XXXXX	X	XXXXXXXXXXXX	XXXXX	X	XXXXXXXXXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXX	XX			
MTU	XX	XX	X	XXXXX	XXXX	X	X	X	X		XXX	XXXXX	XXX		X	XXXXX						X	XX	XX	XX		X	X	XX	X	X	X			
MTUR	X	X	X	X		XX	X												X	X		XX										X			
MTW	X		X	X		X			XX	X					X			XX	X		X			X	X	X						X			
MUN	X	XXXX	X	X	X	X	XX	XXX	X		XX	X	XXXXXX	XX		X	XXX	XX	XX	X	XX	X		X			XXXX		X	X		X	X		
MVIF	XX		XX	X	X			X				X	XX													XX		XX		XX	X	X			
MVM			X	X	X		X	X	X	X	XX			X					X	X	X		X		X	X	X		XX	XX	X	X			
MWC	XX		XX	X	XX		X		X	X	X	X				XX			X	XX	X	XX	X		XX	X			XX	XX		XX			
NAI		XXX		XX	XXXX		X	XXXXXXXXXXXX	X	XXX	XX	XX	XX		X	X	X	X	X			X	XX	XXXX		XXXX	X	X	XXX	X	X	X			
NANU	X	X	X	X	X	XX	XXX	XXXXXX	XXX	XX	XX	XXXX	XXXXXX	XX	XX	XXXXXXXX	XX	XXXX	XX	XXXX	XX	XXXX	XX	XX	X	XXXX		XX		X	XX	X			
NB2	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX			
NCG	XX	X	X	XXXXX	XXXX	X	X	X	XX	X	X	XX	XXXXXXXX	XXX	X	X					XX	XXX		XX	XX	XXX	XX	X	XX	XXX	X	XX	X		
NCT	XX	X		X	XXX	XXXX	X	X	X	X	X	X	X	XXXXX				XXX	X	XX				XXXX		XXXX	X	XXX	XX	X	XX	XX	X		
NDF		XXXX	X		XX	X				X	X		X					X																	
NDI	XXX	XXXXX	XXX	X	X	X	XX	X	X	X	XXXXXXXX	X	XXXXXX	X	X		XXX	XX	XXXXXX	XX	XX	X	XX	X	XX	XX	X	XX	XXX	XXXXXX	X	XXXX	X		
NEA	XX		X		X	X	X	X	X	XX	X		X	XXXXXX	XX	X	X	X	XX	X	XXX	X	X	X	X		X		XX	X		X			
NEW	XX	XXXXX	XX	X		XXXXX	XX	X	XX	XX	X					XX						X	X	XX	X	X		XXX	XX	X	XXX	X	X		
NGZ			XX			X														X	X	XX		X								X			
NI1J	XX		X		XX	X		XX	X	X		XX	X	X	X	X	XX	X		X		X	XX	X		XXX	X	X	X	X	X	X	X		
NJ2	XX	X	XXX	XXX	XXXXX	XX	XX	XX	XXXX	X	XXXXXXXX	XX	X	X	XX	XX	XXX		X	X	XX	X	XXX	X	XX	X	XXX	XX	XXX	XXXX	XXXX	XXXX			
NKA	XX	X		X	XXXX	XXXX	X	X	X	X	X	X	XXXXXXXX	X	X			X	XXX		XX	XX	X	XX	XXXXX		XXXX	XX	X	X	X	X	X		
NKM																				X	X												X		
NKY	X	X	X	X	XX	X	XXX	X							X		X	X	X	X		X		X		X	X	X	X	X	X	X	X		
NNA	XXX	X	XXX	XXXXX	XXXX	XXXX		XX	XX	XXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX		
NNL	XX	X		X	XXXXX	XXXX	X	X	X	X	X	XXXXXXXX	X	X																					
NOZ			X	XX	XX	X	X	X	X		X	XX	X	XXX		X						XX	X	X	X	X	X						XX		
NPA	X				X		X	X		X	XXX	X		X	X	X			XX		X		X	X	XXX		XX		X		XX				
NPS	XX	XX	X							X	XX	X	X	XX	X	X			X			XXX		X				XXXX					X		
NRA0	X	XXX	X	X		XX	X	X	X	X	X		X	XXX	XXX	X	XX	X		X		X	X	X	X	X	X	X	X	X	XXX	XX			
NSS	XX		X		X	X	XX				X				X							X		X		X		X	X				X		
NST	XX	XXX	X	X	X	X	X	X	X	XX		X	XX	XX	X		XX			X	XXXX	X	X		X		XX			X	X	X	X		
NUR	XXXXXXXXXXXXXXXX	XXXXXXXXXXXX	XXXX	XXXXX		XXXXX	XXXX	XXXXX	XXXX	XXXX	XX	XX	XXXXXXXX	XX	X	XXXXXXXXXX	XX	XXXXXXXXXX	XX	XXXXXXXXXX	XX	XXXXXXXXXX	X	XXXX	XXXXX	XX	XX	XXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX		
NVL	XX	XX	XX	X	X		XX	X	X	X	XX		XX	XX	XX	XX	XXXX	XXXXXXXXXX		XX	XXXX		X	X	X	X	X	X	X	XX	XXXX	XX	XX		
NWA0	X	XXXX	X	X	XX	XX	XX	X		X	XX	X	X		X	XX	XX	XX	X	X	XX	XX		X		XXXX		X	X				X		
OBN	XXXXXX		XXXXXXXXXXXX	XX	XXX		XXXX		XXXXX	XXXX	XXXX	XXXXXX	XXXX	XXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX		
ODD1			X			XX	X	X						XX		X	X					X	X	X	XX		X		X	X	XX	XX			
OFUJ	XX		X		XX	X	X	X	X		XX	XXX	X	XX	XX	XX	X	XXX	XXXX		X	XXX	XX	XX	XXX		XXX		XX	X	X	X	X		
OGE	X			X	X		X				X											XX		X				XX	X				X		
OHR	XXXXXXXXXXXXXX		XXX	XXXXXX		X	X	X	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXX	XXXX	XXXX	XXXXXXXXXXXXXX	XX	X	X	XX	XXX		XX	XXXXXX	XXXXXXXXXX	XX	X	XX	XXX		XX	XXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX			
OLY			X	X			X				X	X	X		X	X	XX					X		X								X	X		
ORI	X	XX	XX	XXX	X	XX	X	X			XX	X	X	X	X	X					XX	XX	XX		X		X	X	XXX			X			
ORV	XX	XX	X	X	XX	XXXXXXXX		X		X	X	X		X		X	XXXXX		XXX	X		XX	XXX	XX	X	X	X	X	XX	X	XX	XXXX			
ORX							X			X		XX	X	XX		X	X					XX	X		X		X	X	X		XX	X	XXXX		
OSS	X	XXX	X	XX	X			X		XX	X	X	X	X	X								XX	X		X	X	X	X		XX				
OUR	X	X	X	X	X		X	X		X	X	XX	XX	X	XX		X		XXX				X				XX		X				X		
OXX	X	X		X	X	XXX	XXXXXX	X		X	XX	XX	XXXX	X	X	X	XXXX	X	X	X	X	XXX	X	X		XXXX	XXX	XX	XX	X		XXX	XX		
PAE	X	XX	X	X		X		X		X	X											X		X		X							XX	X	
PAF			X			X	X	X			X	XX	X	X					X														X		
PAG	X	X	X	XXX	X	XX	X	XX		X	X	XX		X					X	X	X	XX		XXXX	X		XX	X	XX	XX	X		X	X	
PA1G	X	X	XXXX	XXX	XXX	X	X	XXXX	X	XX		X	XXX	XXXXXXXXXXXX	XX	XXXX		XXX	XXXXXXXX		XX	XX	XX	X	X	XXX	XX	XXX		XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX		
PAS	XX	X	X	X	XX		X		X	X	X	X		X					X		X	XX	X		X								X	XX	X
PAX	XX	X	X	X	X	XXX	X	X	X	X	X	XX	XXXX	XX	X	X	X	XXX	X	XXX	X	XXX	X	X	X		X	X		XX	X		X	X	
PBJ	XX	XX	X	X	X	X	XXXXXXXX		X	XX		XXX		X	XXXX	X			X	X	X	XX	XX	XX	X	XXXX	XXX	XX	XXX	X	XXX	XXX	XXX		
PCC	X		XX		X		X	X	X	X		X	XX	X					X		X		X	X		X		X	X	X	X	X	X	X	
PCH	XX	X	XX	XXXXX	X		XX	X	X		XX	X	X	XXX	XX	XXX																			



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				
PGZ	X		XX	X	X	X		X	X		XX	X					X		XX		XX	X	X	X	X	X					X				
PHAM	X		X	X	X			X			X	X										XX		X		X		X	XXX			X			
PHP	X	X	X	XX		XXX	XX	X		X	XXXX	XX	XX	XX		XX	X	X	X	X	X	XX	XX			XXX		XXX	XX						
PII																		XX	X			X	XX	X				X	X	X	XX				
PIO		X	X	X	X	XXX	XXXXXXXXXX	X		X	XX	XX	XXXXX		X	X	XXXX	X	X	X	XX	XXX	X		X	XX	XXX	XX	XX	X	XXX	XXX			
PJG	X	XXX	X	X	XXXX	XXXXXXXXXXXX			X		X	XXX		XX	XXXXX	XXXX	X		X	XX	XXX	X										X	X		
PKI	XX																	X	XXXXXXXXXXXXXXXXXXXXXXXXXXXX													XXX			
PLAT	X		XX	X			X					X						X	X						X				XX						
PLD	X	X	X	XXX			X	X	X		X	XX	X	X		XX	X				X	X	X	X		X	X	X	XX		X	XX			
PLDF			X	X	X			X			X	X	X				X				X	X	XX	X	X		X					XX			
PLE		X	X	X	XX	X		XXX	X				X				X	X		X		X	X	X	X	X	X	X	X	X	X	XX			
PLM	XX	X	X	XX	XX	X	X	XXX	X		X	XX	X	X		X	XXX	X	X	XX	X	XXXXX	X	XXX	X		XX	X	XX	XX	XX	X			
PLRM	XX	X	X	X	XXXXX	XXXX	X	X	X	X	X	XX	XX	XX		X	X	X	X	XXXXX	XX	XX	X	XX	XX	XX	XX	X	XXX	XXX	XX	X			
PMG	XXXXXXXXXXXXXXXXXXXX		X	XXXXXXXXXX		XXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX		X	XXXXXX		XXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX		X	XXXXXXXX	XXXXXXXXXXXXXXXXXXXX		XXXX	XX	XXXXX	X	XX	X	XX	XXXXX		X	XX	XXXX					
PMO	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	XXXX			
PMR	XXX	XXX	X	XX	XXX	XXXXXX	XXXX	XX	XX	X	XX	XX	XX	XX		XXXXX	X	XXXXXX	XX	XXXXXXXXXX	X		XXX		XXXXXXXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	X			
PMS	XX	X	X	X	XXXXX	XXXX	X	X	X	XX	X	X	XX	XXXXXXXX	XX	X	X	X	XX	XX	XX	XX	XX	XX	XXXXX		X	XXX	XXX	X	XX	X			
PNJ	X	XX	X	X	X		X	X	XX							XX	X		X	X	X	X	X	X	XXXXX		X	XXX	XXX		X	XX	X		
PNL		X		X	X	X	X					X	X	X	X	X			XX	X	X	XX		X	XX		X	X		X	X	X			
PNT	XX	XXXXXXXXXX	XX	X	X	XXX	XX	X	X		XX	XXX	X	X	X	X		XXX	XX	X	X	XXX	XX	X	X	XX	XX	X	XXXXX	X	XXXXXXXX	X			
P00	XX	XXX	XXXXX	X	XX		XXX	X	X	X		X	XXXX	XX	XXX	X	X	XXX		X	XX	XX	XX	XXX	X	X	XXX	XXXXXXXX	X	X	XX	XXX			
PPCY	X		X	X			X		X		X		X						X			XX													
PPD	XXXXXX	XX	X	XXX		XXX	X	X	XX	XXXXX	X	XXXX	X	XX	XX	X	X	XXX	XX	XXX	X	XXX	XX	X	X	X	X	XXXX		XXX	XXX	XXXXXXXX			
PPE	X	X	X	X	X	X			X	XX	X		X																						
PP1	X	XXXX	X			XXXXX	XX	X	X	XX																									
PPM	X	X	X	X	X	X	XXX	XXXXXX	XXXX	X	X	XXXXXXXX		X	X	X	XXX	X	XXX	X	X	XX	X	XXXXXX	X	X		X	XX	XX	XX	XX	XXX	XXX	
PPN	X	X	X	X	X	XX	X	X		X											X				X								X	X	
PPT	X	X	X		X	X	X	X	X		X													X									X	X	
PR1	XX	X	XX	X	X	X	X	X	X		X	X	X		X	X	X	XX		X	X	X	XX	X	X		X	X	X	XXX	X	XXX	X		
PRK	X	XX	X	X		X	X	X		X			XX	X	X	X					X	X		X									X	X	
PRM		X		X				X				XX	X	X		X		X	X														X	X	
PRN1		X	X	X				X	XX	X	X	X	X	X		X		X	X	X			XXXX		X								X		
PRS	XX	XX	XX	XX	X	XXX	X	X	X	X	X	X	X	X		X	X	XX	X		X	X	XX	X	X	X	X	XXX	X	XX	X	XX	X		
PRU	XX	XXXXXXXX	XXXX	XXXXXXXXXX	XXXXXXXXXX	XXXX	XXXXX	XXX	XXXXX		XXXXXXXX	XXX	XXX	XXXX	XXXX	XXXXXX	X	XXXXX	XXXXXX	XXXX	XXXX	XXXXXX	XX	X	X	XXX	XXXXXX	XXXXX	XXXX	XXXX	XXXX	XXXX	XX	XX	
PRY	X						X	XX	X		XXX	X	X					X	X	XX		X											X		
PS1		XXX	X	XX	XXXX	X		XX	X	XXX	X	X	XXXXXXXX		X		XXX	XXXXXX	X		XXX	XXXX		XXXX		XXX	XX	X	X				XXX		
PSN	X	X	X	XX			X	X	X				X	X						X															
PSO	XXX	X		X	X			X				X					X	X	X		X	X	X		X								XX	X	
PSZ	XX	XX	XX	XX	X		X	X		X	X	XX	X	X		X	X	X		X			X	XX		X	X		X	X	X	X	XX		
PTJ	XX	XXX	XX	XXX	XX	XXXX	XX	X	XX		X	XX	XX	X	X	X	XX	X	X	X	X	X	X	XX	X	XX	XX	X	X	XXX	XX	XX	X	XXXXX	
PTO		X	X	X	XX	X		X									X		X		X	X	X			X							X	X	
PTT	X	X	X	X			XX	X	X		X					XX					X	X		X		X	X						X		
PUZ	X		XX	X			X	X	XX	X		XX	XX	X	XXXX		X	X		XX	X	X	XX	XX		X	X	X		X			XX		
PV09	XX	XX				X	XXXXX	XX	X	X		X									X	X	X	X	X		X						XXXX	X	
PVC	X	XX	X	XX			XX	XX	X	X		XX			X	XX	XX	X	XX	X	XXX	X	X	XX	X	XX	XX	XX		XXX		XX	XX	X	
PVL	X	X	X	XXX			X	X	X		X	X	XXX	X	X		XX	X		X		X	X	X	X		X	X	X	X	X	X	X	X	
PVY	X	X	X	X	X	X		X	X										X				X											X	XX
PWA	XX	X	X	X	XXXX	XXX	X	X	X	XX	X	X	XX	XXXXXX	XX	X	X	X	XXX	X	XX	XXX	X	XX	XX	XXXX		X	XXX	XX	X	XX	X		
PYM			X	X	X			X		X	X	X				X						X		XX	X		X						XX		
PZZ	XXX	XX	XX	XX	XX	X	X	XXX	XXX	X	X	X	X		XX	X	XXX		XX	X				XX	X	X	X	X				XX	X	XXXX	
QCP	XX	XXX	X	XX	XXXX	XX	X	XX	XX	X	X	XX					XX	X	XX	XXX	X	X		X		X	XX					X	X	X	
Q15	XXXX	XXX		X	XXX	XXXX	X	XXX	XXXXX	X	XXXXXXXX	X	X	X	XXXX	X	XXX	XXXXXXXXXX	XXX	XXXXXXXXXXXX	X	X	XXXXXXXXXX		X	XXXXXXXXXX	XXXXXXXXXX	XXXX	X					X	
Q1Z	XX	XX	X	X	X	X	XX	XX	XX	XX	X	X	X	X	X		X	XXX		X	X	X	X	X	X	X	X	XX	XX	X	X	XXXX			
Q1P	XXX	XXX	X	X	X	X	XX				XX	X	XX	X	X		XXX		XXX	X	X	XX	XX	X		X	X	XX	XX	X	XX	X	X		
QTO		X		X				X				X																							
QUE	XX	XXXXX	XX	XXXX	XXXXXX	XX	XXX		X	XXXXX	XXX						XXXXXXXXXXXXXXXXXXXX		XXX				X	XXX		XXXXXXXXXXXXXXXXXXXX	XXXXXX	XXXXXX	XXXX	XXXX	XXXX	XXXX	XXXX		
QUIL		X		X	X		X				XX						X																X	X	
QUR	X	X		X	X		X				XX						X																X	X	
QZ	XX	X	X	X	X	XX	X	XX	XX	XX	X	X	X	X	X		X	XXX		X	X	X	XX	X	X		X	X	X	X	X	X	XXX		
RAB	XX		X	X	XXXXX		XX	XX	XXXX	X		XXX	X			XX	X	XXXXXXXX	X	X			X	X	X	X		XX	XX	X	XX	XX	X		
RAGM	XX	X			X	X	XX		X		X		XXX	XX		XX			XX	X	XXX	X	X	X			X	X					XX	X	
RAR	X	X	X				X				X								X			X			X								XXX	X	
RDN	XX	X		X	XXXX	XXXX	X	X	X	X	X	X	X	XXXXXX	XXX	X		XXX	X	XX	XX	XX	X	XX	XXXXX		X	XXX	XX	X	XX	XX	X		
RDO		XX		X	X		X	X		X			XX	XX	X	X	X		X		X			X		X		X	X				X	X	
RDP	X	X	X	XX	X		XX				X	X	X				X	X					X	XX	XX	X	X	X		XX		XX	X		
RDS	XX		X	X		XXX			X	X	XX	X	X	XXXXX	X		X				X	X	X	XX		X							X		
RDT	XX	X		X	XXXX	XXXX	X	X	X	X	X	X	XX	XXXXXXXX	XXX	X	X	X	XXXXX	XX	XXX	XX	XX	XX	XXXXXX		X	X	X	XX	XX	XX	X		
RDW	XX	X		X	XX	X	XXXX	X	X	X	X	X	X	XXXXX				X		XXX	X	XX			XXXX		X	XXX	XX	X	X	XX	X		
RED	XX	X		X	XXXX	XXXX	X	X	X		X	X	XXXXXX	XXX	X			XXX	X	XX	XX	XX	XX	XXXXXX		X	XXX	XX	X	XX	XX	XX	X		
REFV	XX			X	X						X		XX														XX						XX</		



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		
RND	XX	X	X	X	X	XXXX	X	X	X	X	X	XX	XXXXXX	XX	X	X	X	XXX	X	XX	XX	X	X	XX	X	X	X	X	X	X	X		
ROB	XXX	X	X	XX	X	X	X	XXX	XXX	X	X	X	XX	X	X	XX	X	XX	X	X	XX	X	XX	X	X	XX	X	X	XX	X	XX		
ROCH	X	X	X	X	XXX	X	X	X	X	X	X	X	XXX	X	XXX	X	X	X	X	XXX	X	X	XX	X	X	X	X	X	X	X	X		
PRL	XXX	X	XX	XX	XXX	X	XXX	X	X	X	X	X	XX	X	XX	X	X	X	X	XX	X	XX	X	XX	X	X	X	X	X	X	X		
RS2	XX	X	X	XXXX	XXXX	X	X	X	X	X	X	X	XXXXXXXX	XX	X	X	X	XXX	X	XX	XX	XX	XX	XX	XXXXXX	X	XXX	XX	X	X	XX		
RSCP	X	X	XX	X	X	X	XX	X	X	X	X	X	X	XX	XX	XX	X	X	X	XX	X	XX	X	XX	X	XX	X	X	X	X	X		
RSL	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
RSM	XX	X	X	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
RSNY	X	XX	XX	X	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
RSO	XX	XXX	X	X	XXXXX	XXXX	X	XX	X	XX	X	X	XXXXXXX	XXX	X	X	X	XXX	X	XX	XX	XX	XX	XX	XXXXXX	XX	XXX	XX	X	X	XXX		
RSP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
RTCB	XXX	X	XXX	XX	XXX	XX	X	XXXXXX	XXX	X	XX	XX	X	XXXXXX	XXX	X	XX	XX	XXX	XXXX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX		
RTLL	XXX	X	XXX	XXXXXX	XXXXXX	XXXXXX	XXXX	X	XX	XX	X	XXXXXX	XXX	X	XXX	XX	XX	XXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX		
RTRS	XXX	X	XXX	XXXXXX	XXXXXX	XXXX	X	XX	XX	X	XXXXXX	XXX	X	XXX	XX	XX	XXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX		
RUP	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
RUV	X	X	X	X	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
RVR	XX	X	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
RYD	X	X	XX	X	X	XXX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
RZN	X	XX	X	XX	X	X	X	X	X	X	X	X	XXX	X	XX	XX	X	X	XX	X	X	X	XX	X	X	X	X	X	X	X	X		
SAL	X	XX	X	X	XX	X	X	X	X	X	X	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
SALJ	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
SAN	X	X	X	X	X	X	X	X	X	X	X	X	XXX	X	XXX	X	XXX	X	XX	XXX	X	X	XX	X	X	X	X	X	X	X	X		
SAO	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
SAOF	XX	XX	X	X	X	X	X	X	X	X	X	X	XX	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
SBA	X	X	X	X	XXXX	XX	XXXXXX	XXXXXX	X	XX	X	X	XXX	X	XX	X	XX	X	X	XX	XXX	X	X	XX	XXX	X	X	XX	X	XXXX	X	XX	
SBB	XX	X	X	X	XXXX	X	X	XX	X	X	X	X	XXX	X	X	XXX	X	X	XX	X	XX	X	XX	X	XX	X	X	X	X	X	X		
SBF	XXX	XXXX	XX	X	XX	XX	XX	XX	XX	XXX	XX	X	XXXX	X	X	XXX	X	X	X	XX	XXXX	X	X	XXX	X	X	XXX	XXXX	XXXX	XXXX	XXXX	XXXX	
SCH	XX	XXX	XX	XX	X	XX	XX	X	X	XXXX	XX	X	X	X	XX	XX	X	X	XX	XX	XXXX	X	X	XX	XX	X	XX	XX	X	XX	XX	XX	
SCM	XX	XX	X	X	XX	XXXX	X	X	X	X	X	XX	XXXX	XX	X	X	X	XXX	X	XX	XXX	XX	X	XX	X	X	X	XXX	X	X	XX	X	
SCX	X	X	X	X	X	XX	XXXX	X	X	XX	XX	X	XXX	X	X	X	X	X	X	X	XX	X	X	X	X	X	X	X	X	X	X	X	
SDA	X	X	X	X	XX	X	X	X	XXX	XX	X	X	XXXX	XX	X	X	X	XXX	X	XXX	XX	X	XX	X	X	X	X	X	X	X	X	X	
SDG	XX	X	X	X	X	XXXX	X	X	X	X	X	XX	XXXX	XX	X	X	X	XXX	X	XXX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
SDI	XXXXXX	XX	XX	XXX	X	X	XX	X	XX	XX	XX	XX	XX	X	XXX	X	XXX	XXX	XXX	XXXX	X	X	XXX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
SDN	X	X	X	X	XX	XX	X	X	X	X	X	XX	X	X	X	X	X	XX	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	
SDV	XX	X	X	X	X	XX	X	XX	X	X	X	X	X	X	X	X	X	XX	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	
SEG	X	X	XXX	X	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SES	XX	XXXXXXXXXX	XX	X	XXX	XX	X	XX	XX	XXX	XXXX	X	XXX	XXXX	X	XXX	XXXX	X	XXXX	XX	X	XX	XX	XX	XX	XX	XX	XXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	
SEW	XX	X	X	XXXX	XXXX	X	X	X	X	X	X	XX	XXXXXXXX	XXX	X	X	X	XXXX	XX	XX	XX	XX	XX	XXXXXX	X	XXX	XX	X	XX	X	XX	X	
SFG	X	X	X	X	X	X	X	X	X	X	X	X	XXXXXX	XXX	X	X	X	XXXX	X	XX	XX	XX	XX	XX	XXXX	X	XXX	XX	X	XX	X	X	
SFI	XXXXXX	X	XX	XX	X	XXX	XX	XXXXXX	XX	XXX	X	XX	X	X	XXXX	X	XXXX	X	XX	X	XX	X	X	X	X	X	X	XX	XXX	XXX	XXX	XXX	
SGAM	XX	X	X	X	XX	X	X	X	X	XXX	XX	XX	XX	XX	XX	XX	XX	XXX	X	XXX	X	X	X	X	X	X	X	X	X	X	X	X	
SGE	X	XXXX	X	X	XXX	X	X	XX	X	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SGO	X	XXXX	X	X	XXX	X	X	XX	X	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SGS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SHK	X	X	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SHL	XXX	X	XXXX	XXXXXXXXXX	XX	X	X	XX	X	XX	X	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
SHNJ	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SHW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SIT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SIV	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXX	
SJG	X	X	X	X	XX	X	XXX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SKO	XXXXXX	X	XXX	X	XXX	XXX	X	X	XXX	X	XXXXXX	XXXXXX	X	XX	XX	X	XX	X	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
SKT	XX	X	X	XXXXXX	XXXX	X	X	XX	X	XX	X	XX	XXXXXX	XX	X	X	X	XXXX	XX	XXXX	X	XX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
SLB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SLE	X	XX	X	XX	X	X	X	X	X	X	X	X	XXXX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SLKM	XX	XXXX	X	XXXX	XXXX	X	XX	X	X	XX	XX	XXXXXX	XXXX	X	XX	XX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	
SLR	XX	XXXXXX	XX	X	XX	X	X	X	XX	XXXX	XX	X	XX	X	XX	X	XX	X	XX	X	XX	X	XX	X	XX	X	XX	X	XX	X	XX	XX	
SMF	XXX	XXX	XX	XXXX	X	XXXXXX	X	X	XXXXXX	XXXXXX	XXXXXX	XXXXXX	X	XXX	X	XXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
SML	XX	X	X	XXXX	XXXX	X	X	X	XX	X	XX	XXXX	XXXX	X	X	X	X	XX	X	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	
SMY	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SNA	X	XX	XXX	X	X	XX	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SNF	X	XX	X	XX	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SNG	XX	XXXX	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SNY	XX	XXX	XX	XXXXXXXXXX	XX	XX	X	XX	X	XX	XX	XX	XX	X	XXX	X	X	XX	XXX	X	XXXX	X	X	XX	XX	XX	XX	XX	XX	XX	XX	XX	
SNZO	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SOB1	XX	XXXXXX	X	X	X	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SOD	XXXXXX	XXXX	XXXX	XXXX	XXX	XX	XX	XXX	XX	XXXX	XX	XXXX	XXXX	X	X	XXXXXX	XXXX	XXXX	XXXX														



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				
STS	X			XX	X					X	X						X						X								X	X			
STV	XXX	XX	XX	XX	X	X	X	XXX			X			XX	X	XXX	XX	X			X		XX	X	X		XX	X	X		XX	X	XXXX		
SUA	XX	X	X	X	XXXXXX	XXXX	X	X	X	X	X	XX	XXXXXXXX	XX	X	X	X	XXX	X	XX	XXX	XX	XX	XX	XXXXXX	X	XXX	XXX	X	XX	XX	X			
SUE	X	X	X		XX	X	X			X				X	X	XX	XX	X			X	X	X	XX		X					XX	X			
SVA	X	XXXX	X		X	XXX	X	X	XX	X	XX	X	X								X		X												
SVO	XXX		XXX	XXX	XXXXXXXX	XXX	XX	XX		X	X	X	XXXX	XXX		XX	X	XXX	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
SVV	X		X	X	X		X	XX			X																								
SVW	XXX	XX	X	X	X	XXX	XXXXXXXX	XX	X	XX	X	XXXX	X	XX	XX	XXXX	XXX	X	XXX	X	XXXXXXXX	XX	XXXXX	XXXXXX	X	XX		XXXXX	XXXX	XXXX	XXXX	X			
SXM	XX			X	X		X			X			X	X							X										X	X			
SYI	X			X	X		XX		X	X		X	X	X	X	XX	XXXX	XX	X		XX		XX	XX	XX	XX	X	XX	XX	XX	X	X			
SYP	X		X	X	XX						X	X	X								X		XX								X	X			
TAB	XXXXXX	XXXX	X		XX	X	XX		XX	X	XXXXXX	X	X	XX	X		XXXX	X				XXXX	XX		XXX	X	X	X	X		XX	X	X		
TAC			X				X			X	X					X	X				X	X	X		X		X		X	XX		X	X		
TACH	XX	XX	XX	XX	X	X	XX	X		XX	X	X	XXX		XXX	XX	X	XX	X	XXX		X	X	XX	X	XX	X	XXXX	X	X		X	X	X	
TAU	XX		X	X	X	XX		X	X	XX	X	X	X	X			XXXX	XX	X	X		X	X	X	X	X	XXX					XX	X		
TBH		X	X	X	X			X		X							X														X	X			
TBR	X	X	X								X	X					X	X														X	X		
TCA	X	XXXX	XXXXX		XX	XXX	XXXXXX	XXXX	X	X	X	XXX	XXXXX	XXX	XXXX	XX	X	XXX				XXXXX	XX	XXXX	XX	XX		XX	XXX	XXXXX			X		
TCE	X	X	X	X			X		X		X																					XX			
TCF	XXX	XXX	XX	XX	XX	XXXXXXXX	X		X	X	X	XXXXX	X	XX		XXX	XX	X	XX	XXXXXXXX	XXXX	X	X	X	XXXXX	X	XX	XX	XXXXX	XX	XXXXX	XX			
TDW	X		XX	X			X			XX	X	X					XX				X	XX	X	XX	X		X					X			
TEH	XXXXXX	XX	XX	X	XX	X	X		X	X		XXXX	X	X	XXXX	X		XX	X	XX	X	XX	X	X	XXX	X	X	X	XXX	X	XX	X	XX		
TGL			X	X			X				XXX	X				X		X	X			X								X		X			
THE	XX	XX	X	XXX	XXXX	X	X	X		X		XXX	XXXX	X	XX			XXXX	X	XXX	XX	X	XX	X	X		X	X			X	XX	X		
THY	X	XX	X	XXXXXXXXXX	XXXXX		XXXXX	XX	XX	XXXXXXXX	XX	XXXX	X	X	XXXX	XX	X	X	XXXX	XXX		X					XX	X	X	XXX	XXX	X	X		
THZ	X	X	XX	X	X	X	XX	X		X	XX	X	X	X	X			X	X	XX	X	XX	X	X	X	X	X	X	X	X	X	X	X		
TIA	XX	XXXX	XXX	XXXX	X	XX	XX	X	XX	X	XX	X	XX	X	XX	X	X	XXX	XXX	X	XXXX	X	XXXX	X	X		XXXXXX	X	X	XX	X	XXXX			
TIC	XXX	XX	X	XXX	XXXX		X	XX	XXX		XXXX	X	X	XX	X	X	X		XXXXXX	XXX	X	XX	XXXX		XX	X		X	XX	X	XXXX	X	X		
TIM	X	X		X			X						X								X		X								X				
TIO	XX	XXX	XX	XXX	XX	XX	XX	X								XXX	X	XXXXXXXX		X	XX	X		X	XX	XX	XXX	XXXXX	X	XX	XX	X	X		
TIR	X	X		XX									XX	XXX		XX	X	X	X	XX	X		X		X	XXXX	X	XXX	XX			X			
TIY	XXX	XXXX	XXX	XXXXXXXXXXXX	XX	XXXX		XXXXX	XX	XX	X	XX	X	X	X	X	XXX	XX	XXXX	XX	XXXXX	XX	XXXX	X	XX	XXXX	XXXXXXXXXX	XXXX	XXXX	XXXX	XXXX	XXXX	X		
TKL		X						X			X	X				X		XX	XX	X												X			
TKSJ																	X	X														X	X		
TLB	X	XX	XXXXXX	X	X	XX	XX		X	X	XX		X	XX	X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
TMB	X		X		XX		X	X	X	X	X		X	X		X		X		X	XXX		X	X							X		X		
TNP	XX	XXX	X	XX	XX	X	X	XXXXXX	XXXX	XXXXXXXXXX	XXXX	XX		XX	X	XXXXXXXX	XXXXXX	XXXXXX	XXXXXX	X	XX	X	X	X	X	X	XXXX	XXX	X	XX	XXXX	XX	XX		
TNR	X	XX	X	XX			X	X	X		X						X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		
TNS	X	X	X	X	X		X	X	X	X		X				XX		X		X	X	X	X	X	X	X	X	XX	X	X			X		
TOA	XXXXXX	X	X	XXX	XXXX	XXXX	XXX	X	X	X	XXXX	XXXXXXXX	XXX	XXXXX	X	XXXXXX	XX	XXX	XX	XXX	XXX	XXX	XXX	XXX	X	XXXXXX	XXXX	XXX	XXX	XXX	XXX	XXX	X		
TOD	X		XX	X	X											X					X														
TOL	X	XX	XX	XXX	X	XXXXXX	X	X		XXXXXX	X	XX	XXX	XX	XX	XX	X	X	XX	XXX	XX	XXX	X	XX	XX	XXXX	X	X	XXXX	X	XXXX	X	XXXX		
TOO	XX	XXXXXX	XXXX	X	XX		XXX	X	XXXX	XX	X	XX		XX	XXX	X	XXX	XX	XX	XX	XX	XX	XX		X	X	XXX	XX	X	X	XXX		XXX		
TOUF	XX	XX	X	X	X		X				X	XX														XX				XX	X	X			
TOV	XX	X	X	X	X		X	XX	X		X	X	X	X	X	X		X	X	X		X					XX			X	X	X	X		
TPC			X	XX	X	X	X	X		X	X	XX	X	X		XXX	X	X	X		XX	X	XXX	X	X		X		X		XX	XXXX			
TPE		X							X	X	X	XX	XX	XXX						XX	X	XX	XX		X							X			
TPM	X		X		X	X	XX	XXX	X	X	X	XX	XXXX	XXX	X	XX	X															X	X		
TPP	X	X	X	X	X		X			X																					X				
TPT	X	X	X	XX	X	XX	X	X		X	X					X		X	X	X	X	X	X	X	X							XXXX			
TPX	X	X	X	X	X	XXXX	X	X	X	X	XX		X	XX	XX		XX				X	XX	X	X	X	X	XX	XX			X	X	X		
TRF	XX	X	X	X	XX		X	X	XX	X	X	XX	XX	XX	XX	X	X	XXX	X	XX	XXX	X	X	X	XX	X		X	X	X	X	X	X		
TRI	X	XXX	X	XX	XX	X	XXXX	XXXX	X	XXXX	X	X	X	XX	X		XX	X	X		X	XX	XX	X	X	X	X	X	X	X	XX	X	XX		
TRN	X	X	X	X			X			X							X														X	XX	X	X	
TRO	XX		X	XX	XX	X	X	X	XX		X	X	X	X				X	X			X	X							X	XX	X	XX		
TRT	X	X	X	X	XX		X	XX	XX	X	X	X	X	XX	X		XX	X	XX	XX	X	X	X	X	X	X	X	X	X	X	XXXX	X	XXXX	X	
TSM	XX	X	X	X	XX	XXXX	X	X	X	X	X	XXXX	X	X	X		XX	XX	X	XXX	X	XXX		X	X	X	XX	X	XXXX	X	XX	X	XX	XX	
TSRJ	X		X			X	X	X		X	XX	XX		X	XX	X	X	X	X		X	XX		X	XX		XXX	X	X	X	X	X	X		
TTA	XXX	XX	X	XXX	XXX	XXXX	XX	X	XX	XX	X	X	XX	XX	XX	XX	X	XX	XXXXXX	XX	XXXXXX	XX	XXX	X	XX		X		XXX	X	XX	X	X	X	
TTG	X	X	X	X	XX	X		XXX	X		X		X	X		X	X	X	X	X		X	X	X	X	X	XX	X	X	X	X	X	XX	X	
TUL	XX	X	XXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXX	XX	XX
TUNG																																			
TVO	X	X	X		X	XX	X	X		X											X		X	X	X	X							X	X	
TWC	X			XXX	XX	X		X		XX		X					X				X		X	X	X		XX	X	X				X	X	
TWD	X			XX	XX	X		X		XX		X	X														XX	X	X					X	X
TWF1	X			XXX	XX	X		X		XX		X	X														XXX	XX						X	X
TWG	X			XXX	XX	X		X		XX		X	X																					X	X
TWK					X		X					X																						X	X
TWZ				X	X																													X	X
TZL	XX	X	X	X	XX	X</																													



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
VAL		X	X	XX				X											X		X		XX	X		X	X			X	
VAO	XXXXXX	XX	XXX	X		X			X	X	XX	XX			X	X		XXXX	XX	XX	XXX		X	X	XXXX	XXX		XX	XX	XX	X
VAY	XX	XXXXXXXXXXXXXXXXXX			X	X	XX	XX	XXX	X	XXXXXXXXXX	XX			X	XXX	XXX	X	X	XX	XXXXXX	XXX	XX		X	X	XX	XX	XXX	XX	XXXXXXXXXX
VBY	XX	XXXX	X	XX		XXXX	XXXX	XX	X	X	XXX	X	X	XX	X	XX	XX	X	X	X	XX	XXXXXX	X		X	X	XX	X	X	XXXXXXXXXXXX	
VC1																															
VDL	X	XXX	X	X	X			X			XXXX			X																	
VHO																															
VITF	X	X	X					X	X	X																					
VKA	X	XX	XX	XX				XX	X																						
VLI	XX	XX	XX	XX	XXX	X	X	X		X																					
VLS	X	XX	XX	XX	X	X	X	X																							
VLZ	XX	XX		X	XXXXX	XXXX	X	X	X	X																					
VOY	X	XXXX	X	XX	XX	XXXXX	X	X																							
VR1	XX	XXX	XXXXXXXX	X	X	X	X	X																							
VSG	X	X	XX		XXX	XXXXXX	X	X																							
VTS	X	X	X	XXX	X			X	X																						
VUN	X	XXXX	X		X	XXX	X	X	XX	X	XX	X																			
VZW	XX	XX		X	XXXX	XXXX	X	X	X	X	X																				
WARB	X	XXXXXXXX	X	XX																											
WAX	XX			X	X	XX		X		X																					
WB2	XXXXXXXX	XX																													
WDC																															
WDW																															
WEL																															
WET																															
WHN	XX	X	X	XXX	XXX	XXXX	XX	XX	X	XX	XXXXXXXX	X	X																		
WIN																															
WIT	X																														
WKYJ																															
WLF	X	XX	X																												
WLS	X	X	X																												
WLZ																															
WMQ	XXX	XXXX	XXX	XXXXXXXXXX	XX	X	XX	XX	XXXX	XX	X	XXX																			
WRA	XXXX			XX																											
WRG	XX																														
WRH	XX	X	X		XXX	X	X	XX	X	X	XXXX	XX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
WTS	XX	XX	X	XX	X	X	XXXXX	X	XXX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
WTTA	X																														
WVLY	X	X																													
XAN	XXX	XXXX	XXX	XXXXXXXXXXXX	XX	XXXX	XX	XXX	XX	XX	XXXX	X	X	XXXXXX	XXXX	XXXXXX	XX	XX	X	X	XXX	XXXXX	XXXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	
XLV	X	X		X	X																										
YAK	XXX	XXXX	X	XXX	XXXXXXXX	XXX	XX	XX	XXX	XX	X	XX																			
YAMJ	X																														
YANA	X																														
YER	XX	XXXX	XX	X	X	X	XXXX	X	XX	XX	XX	X	X	XXXX	X	XXXX	XX	X	X	XX	XXXX	X	X	XXXX	X	XXXX	X	XXXX	X	XX	X
YKA	XX																														
YKU	X	X																													
YLV	XXXXXX	XXXXXX	XXX	XXXXXX	XXXXXX	XX	X	XXX	XXXXXXXX	X	XX																				
YONJ																															
YYYY	XXX	X		X	XX	X	X	XXX	XX	X	XX	XXX																			
ZAG	X	XX	X	X																											
ZLA	X	XX	X	X																											
ZOBO	XX																														
ZON	XX	X	XX	XXXX				X	X	XX	XXX	X	X	X	XXXX	XX	X	XXXX	XXXX	XXXX	XX	XXXX	X		X	X	XX	XXXX	XXXX	XXXX	
ZSP	X																														
ZST	XX																														

The following stations each reported less than 10 readings:

AAE	ACTN	ACU	ADH	ADI	AGAL	AGMR	AGRW	AHA	AIN	AKRL	AKSR	ALB	ALP	AMAN	ANAL	ANCC	AOI
APA	APM	ASR	ATA	ATZ	BAC	BBB	BBJ	BCI	BCPM	BDBC	BEE	BFT	BGG	BISH	BJA	BKR	BLE
BLF	BLH	BLN	BLO	BLP	BLW	BNB	BNH	BOH	BOT	BPIL	BRN	BRVW	BSD	BSS	BST	BTB	BUGC
BURJ	BUT	BVA	BVW	CALA	CAO	CAR	CBB	CCM	CCMO	CCW	CDFW	CDM	CER	CFTV	CGLM	CHIE	CIO
CIS	CLE	CLI	CLK	CLMC	CNZ	COR	CPB	CPE	CPH	CPI	CPK	CPW	CRF	CRM	CROR	CRX	CSIL
CTAO	CTFE	CUMC	CVD	CWB	CWF	CZM	DAF	DAH	DBCT	DBO	DES	DHH	DHJN	DHLJ	DHW2	DIW	DLA
DLB	DOG	DPMT	DSH	DSVT	DTMT	DVD	DWM	DWY	EAB	EALH	EAU	EBG	EBH	EBI	EBL	ECD	EDB
EDI	EDM	EDR	EDU	EGRA	ELF	ELO	ELYF	EMEL	EMM	EPA	EPH	ERC	ERK	ESD	ESEL	ESK	ESR
ESY	ET3	ETB	ETER	ETW	FAM	FCV	FL2	FMW	FOO	FOX	FRO	FRS	FRU	FUG	GBL	GBR	GCG
GCM	GGC	GHW	GHZJ	GIBL	GL2	GLH	GMB	GMO	GMTN	GOIL	GRB5	GRC1	GRFO	GRI	GRM	GRN	GRO
GSH	GSM	GT2	GUAN	GULW	GUM2	HAT1	HBF	HBO	HDC2	HDW	HIA	HIL	HITJ	HITZ	HKL	HLD	HLP
HMDT	HMH	HOB	HOJ	HON	HOCQ	HOR	HPI	HPO	HPU	HON	HRV	HRJ	HSJH	HSO	HSR	HTC	HTW
HUH	HUL	HVD	HYF	HYT	IIS	IKZ	ILT	IMW	IRZ2	IXG	JARJ	JBO	JCR	JCW	JFO	JHP	JLK
JOZ	KAE	KBR	KEK	KETZ	KFH	KHU	KIH	KIM	KIP	KIR	KIS	KKH	KKK	KKU	KLL	KMOR	KMZ
KNH	KOE	KOH	KONO	KOSW	KPO	KRO	KSHT	KSR	KSU	KTD	KUG	KUH	LAV	LAW	LCH	LCR2	LDN
LFU	LIS	LISJ	LLAV	LMW	LOCW	LSZ	LTCM	LVI	LVP	LVV	MBW	MCT	MCW	MDN	MDW	MEMT	MEW
MFTN	MGB	MGM	MHA	MHZ	MIM	MJ2	MKA	MKL	MKT	MLH	MLS	MLX	MMCZ	MLL	MMR	MNB	MNK
MOMI	MORO	MOTA	MOW	MRWA	MSI	MSP	MSZ	MTMW	MUB	MUD	MUDJ	MVH	MWH	MXC	MZDA	NA2	NAC
NAH	NAO	NAOJ	NAV	NDE	NEV	NGH	NHIL	NLO	NLW	NMMD	NPH	NRMS	NWRM	OBC	OBH	OBO	OC2
OCM	OD2	OGA	OGTN	OHTN	OHW	OLLA	ONR	OOV	OPA	ORO	OSD	OSG	OSP	OTR	OUT	OVA	OZB
PBC	PCJ	PCM	PCT	PET	PFH	PGA	PGO	PGW	PHC	PICD	PIG	PKEM	PLBC	PLG	PLH	PLL	POA2
POF	POH	PORP	PPK	PPL	PRN	PSG2	PTCR	PTI	PTS	PTZ	PUE	PUH	PUK	PUL	PURC	PV01	PV02
PV03	PV04	PV05	PV06	PV07	PV08	PV10	PWH	PYA	PZI	OPS	QTRJ	QZA	RAC	RATZ	RBA	RC1	RDJ



[illegible]