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GEOLOGICAL SURVEY

EARTHQUAKE DATA REPORT
JANUARY 1989

by

U.S. Geological Survey
NATIONAL EARTHQUAKE INFORMATION CENTER¹

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

Earthquake Data Report for January, 1989

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

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

EARTHQUAKE DATA REPORT

The Earthquake Data Report (EDR) is issued to those individuals and organizations having a special need for information used in the preparation of the Preliminary Determination of Epicenters (PDE) monthly listing.

Hypocentral coordinates are determined by a modified Geiger's method and may be constrained by reported first arriving P-waves, Pdiff, and the DF branch of PKP. Data are corrected for station elevation and for the ellipticity of the Earth. Outliers may be truncated (ie., removed from the calculation) either automatically or manually. The solution is allowed to converge between rounds of automatic truncation to insure a unique result. Convergence is aided by step length damping.

The error bars of the computed hypocentral coordinates are 90% marginal confidence intervals incorporating Bayesian information to stabilize estimates derived from small samples (Jordan and Sverdrup, 1981). It is assumed that the travel-time errors of the data used are independent, unbiased, and have an expected standard deviation of 1 s. Monte Carlo experiments suggest that the error bars are accurate for events constrained by more than about 30 data. However, care should be exercised in interpreting these numbers in terms of absolute location accuracy because of unmodeled biases. Analysis of events with independently known coordinates indicates that most PDE determinations are accurate to a few tenths of a degree in epicentral position and 25 km in depth. For special studies, we urge that inquiry be made to this office for possible recomputation of hypocenters of interest, using more complete instrumental data.

Restricted focal depths occur in four instances. If at any point in the computation the depth becomes negative, the solution is automatically restricted at 33 km and indicated by "NORMAL DEPTH". If the unrestricted depth computation is unsatisfactory, and in the judgment of the reviewing geophysicist the earthquake probably has a shallow focus, a solution may be held at 33 km. These are also indicated by "NORMAL DEPTH". The geophysicist may restrain the depth at any value indicated by evidence from available seismograms. These are indicated by, for example, "DEPTH = 100 KM (GEOPHYSICIST)". If two or more pP phases are identified, and in general, yield depths within 10 km of the mean, then the depth is automatically restricted to this value and denoted by, for example, "DEPTH = 51 KM (5 DEPTH PHASES)". pP phases may also appear as unidentified second arrivals with associated travel-time residuals. Hypocentral coordinates derived from other sources, such as the California Institute of Technology, the University of California at Berkeley, and the U. S. Department of Energy are noted on the EDR.

Two types of magnitude are computed: body-wave magnitude (m_b) and surface-wave magnitude (M_{SZ}). Each is a 25% trimmed mean of individual station values. Station magnitudes not used in the trimmed mean are marked with an X. This includes station magnitudes of either type which deviate significantly from the mean and surface-wave magnitudes determined from horizontal amplitudes. Body-wave magnitudes are computed according to the formula $\log(A/T) + Q$, derived by Gutenberg and Richter (1956), where A is the P-wave amplitude in micrometers, T is the period in seconds, and Q is the depth-distance factor. Surface-wave magnitudes are computed from the formula $\log(A/T) + 1.66 \log(\Delta) + 3.3$, where A is the maximum vertical surface-wave amplitude in micrometers,

T is the period in seconds, and Δ is the epicentral distance in degrees. Surface-wave magnitudes are determined only for earthquakes whose focal depths (taking into account the computed standard deviations) are potentially less than 50 km, for stations having $20^\circ \leq \Delta \leq 160^\circ$, and for reported periods of $18 \leq T \leq 22$ s. No correction for focal depth is used in the M_S calculation. Body-wave magnitudes are not determined from PKP arrivals or for stations having $\Delta \leq 5^\circ$. Amplitude values stated in this report are in nanometers (nm) for body-waves and micrometers (μm) for surface-waves.

The travel-time residual (observed – computed) is based on the 1940 Jeffreys-Bullen P and 1968 Bolt PKP travel-time tables. Phases not used in the computation are marked by an X. The azimuth from the epicenter to the station is measured clockwise from north. The epicentral distance is the central angle in degrees.

Hypocenter Symbols

& Indicates that parameters of the hypocenter were supplied or determined by a computational procedure not normally used by the National Earthquake Information Service (NEIS). The source or nature of the determination is indicated by a 2 to 5 letter code enclosed by angle brackets and appearing in the first line of comments. A “-P” appended to the code indicates that the computation is preliminary. These codes are included with the list of abbreviations in the PDE Monthly Listing.

% Indicates a single network solution. A non-furnished hypocenter has been computed using data reported by a single network of stations for which the date and/or origin time cannot be confirmed from seismograms available to a NEIS analyst. Also, if we define η to be the geometric mean of the semi-major and semi-minor axes of the horizontal 90% confidence ellipse, then $\eta \leq 16.0$ km.

* Indicates a less reliable solution. In general, $8.5 < \eta \leq 16.0$ km.

? Indicates a poor solution, published for completeness of the catalog. In general, $\eta > 16.0$ km. This includes poor solutions computed using data reported by a single network.

The lack of any symbol indicates that $\eta \leq 8.5$ km.

Note: On printers available to the NEIS for this publication, the symbol for degrees ($^\circ$) appears as “`”.

References

- Bolt, Bruce A. (1968), Estimation of PKP Travel Times, *Bull. Seis. Soc. Am.*, **58**, pp. 1305–1324.
- Gutenberg, B. and C. F. Richter (1956), Magnitude and Energy of Earthquakes, *Ann. di Geofisica*, **9**, no. 1, pp. 1–15.
- Jeffreys, Harold and K. E. Bullen (1940), *Seismological Tables*, British Assoc. for the Advancement of Science, Gray Milne Trust.
- Jordan, Thomas H. and Keith A. Sverdrup (1981), Teleseismic Location Techniques and their Application to Earthquake Clusters in the South-Central Pacific, *Bull. Seis. Soc. Am.*, **71**, pp. 1105–1130.

& JAN 01, 1989 00h 31m 21.36s
58.450 N 155.151 W
DEPTH = 127.4km
ALASKA PENINSULA (12)
<AGS-P>.

Table with columns: Station Name, Time, Depth, Value, Error. Includes stations like PDB, KDC, ILIM, CNPM, NNL, RDT, SVW, SPU, CRP, SLKM, PTE, PMS, MTU, PWL, KNIM, PLRM, KNK, GH0, GLI, SML, FID, VZV, VLZ, KLU, GLB, FBA, YKA.

% JAN 01, 1989 01h 21m 01.65± 2.35s
44.581 N ±23.2km 5.319 E ± 8.8km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.6 (LDG).

Table with columns: Station Name, Time, Depth, Value, Error. Includes stations like LPG, LPL, SMF, CAF, MAF, LBF, AVF, BGF, TCF, LOR.

? JAN 01, 1989 01h 43m 47.79± 4.40s
32.367 S ±18.8km 72.293 W ±31.9km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

Table with columns: Station Name, Time, Depth, Value, Error. Includes stations like ROCH, LCCH, JACH, PEL, LNV, SAN, FCH, PCH.

Table with columns: Station Name, Time, Depth, Value, Error. Includes stations like CHCH, MDZ, TCA.

& JAN 01, 1989 02h 19m 13.27s
60.297 N 152.506 W
DEPTH = 97.7km
SOUTHERN ALASKA (2)
<AGS-P>.

Table with columns: Station Name, Time, Depth, Value, Error. Includes stations like RDT, ILIM, NNL, NKA, SPU, CRP, PDB, CNPM, SLKM, PMS, SVW, PTE, PWA, PLRM, PWL, KNK, GH0, KNIM, MTU, SML, KDC, GLI, HIN, FID, VZV, TTA, VLZ, CVA, KLU, WAX, FBA.

JAN 01, 1989 02h 32m 18.63± 0.71s
42.940 N ± 5.4km 13.169 E ± 6.1km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.8 (SSO).

Table with columns: Station Name, Time, Depth, Value, Error. Includes stations like CIO, ALP, ASS, SSO, ARV, MNS, AOI, AZI, RSM.

* JAN 01, 1989 03h 07m 18.00± 1.93s
44.871 N ±11.0km 14.460 E ±19.6km
DEPTH = 10.0km (geophysicist)
ADRIATIC SEA (382)

Table with columns: Station Name, Time, Depth, Value, Error. Includes stations like RBL, FVI, AQU, MME, BDI, PII, SDI.

JAN 01, 1989 03h 18m 09.89± 0.76s
37.779 N ± 5.9km 32.267 E ± 7.8km
DEPTH = 15.3 ± 6.7 km
TURKEY (366)

Table with columns: Station Name, Time, Depth, Value, Error. Includes stations like BCK, IKL, BBTK, ELL, KHL, KSL, PCY, GPA, CSS, DST, YLV, HRT, KAS, IZM, ISK, EDC, KAP, PRK, EZN, RDO, DSI, MBH.

? JAN 01, 1989 03h 35m 34.84± 4.22s
36.463 N ±17.6km 23.122 E ±47.7km
DEPTH = 1.0km (geophysicist)
SOUTHERN GREECE (368)
ML 3.0 (ATH).

Table with columns: Station Name, Time, Depth, Value, Error. Includes stations like VAM, ATH, NPS, KAP.

JAN 01, 1989 04h 25m 11.89± 0.86s
42.666 N ± 3.9km 12.609 E ±11.4km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

Table with columns: Station Name, Time, Depth, Value, Error. Includes stations like MNS, ASS, CIO, ALP, RMP, ARV, RDP, AZI.

* JAN 01, 1989 04h 31m 52.82± 0.65s
51.376 N ±15.0km 174.815 W ± 6.7km
DEPTH = 33.0km (normal)
4.6mb (7 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

Table with columns: Station Name, Time, Depth, Value, Error. Includes stations like ADK, KDC, IMA, FBA, INK, EDM.

01d 04h

KVN 40.82 85 e(P) 39 32.50 -0.4
 FFC 42.10 56 eP 39 43.00 0.1
 0.5s 4.00nm 4.4mb
 BW06 43.91 75 eP 39 58.60 0.5
 0.6s 2.62nm 4.2mb
 GOL 48.28 75 eP 40 33.50 0.7
 RSON 48.39 57 eP 40 32.50 -0.6
 BLA 64.48 62 eP 42 28.00 -0.2
 CVL 65.00 60 eP 42 32.20 0.7
 JSC 66.13 65 eP 42 38.00 -0.8
 NAO 68.06 357 P 42 48.60 -2.0
 0.6s 2.00nm 4.4mb
 HFS 68.63 355 eP 42 51.70 -2.4
 0.4s 2.90nm 4.7mb
 GUN 74.15 295 P 43 28.70 0.6
 KKN 74.58 295 P 43 30.90 0.5
 0.6s 10.00nm 5.0mb
 PKI 74.68 295 P 43 31.40 0.3
 0.6s 6.00nm 4.8mb
 GKN 74.78 296 P 43 31.90 0.4
 0.6s 20.00nm 5.3mb
 PSI 85.57 269 eP 44 28.50 -0.5
 e 45 10.00
 SLR 148.93 317 ePKP 51 38.70 4.1X
 0.5s 7.04nm
 BLF 152.77 317 e(PKP) 51 40.00 -0.2
 S.D. = 1.0 on 22 of 23 obs.

? JAN 01, 1989 05h 55m 45.86± 4.10s
 39.842 N ±23.9km 20.684 E ±25.3km
 DEPTH = 10.0km (geophysicist)
 GREECE-ALBANIA BORDER REGION (392)
 MD 3.3 (ATH).

KZN 0.95 61 ePb 56 03.60 -0.5
 eSg 56 23.20
 OHR 1.27 4 iPn 56 08.80 -0.7
 LIT 1.41 79 ePn 56 11.30 -0.3
 eS 56 34.60
 GRG 1.72 49 ePn 56 17.20 1.2
 eSn 56 44.90
 THE 1.92 65 ePn 56 18.90 0.1
 eSn 56 47.60
 VAY 2.06 44 iPn 56 21.30 0.4
 KNT 2.14 51 ePn 56 21.80 -0.3
 LCI 2.15 284 P 56 17.50 -4.7X
 eSn 56 41.20
 PLG 2.18 75 ePb 56 23.40 0.6
 SKO 2.20 15 iPn 56 23.50 0.5
 iSn 56 53.20
 iSg 56 58.50
 SOH 2.26 64 ePn 56 24.40 0.5
 eSn 56 55.00
 PAIG 2.31 87 ePnc 56 24.10 -0.4
 eSn 56 53.70
 SRS 2.56 59 ePn 56 27.10 -1.0
 eSn 57 04.70
 S.D. = 0.7 on 12 of 13 obs.

* JAN 01, 1989 07h 03m 27.52± 1.39s
 13.884 N ± 4.9km 60.080 W ±15.3km
 DEPTH = 33.0km (normal)
 WINDWARD ISLANDS (95)
 ML 3.8 (FDF).

MVM 1.03 310 iPc 03 45.36 -0.4
 BIM 1.15 303 iPc 03 47.25 -0.1
 S 04 02.00
 CRM 1.18 317 iPc 03 47.73 -0.1
 SVV 1.24 243 eP 03 48.99 0.4
 eS 04 04.59
 SVB 1.29 242 eP 03 49.94 0.6
 eS 04 09.47
 FDF 1.34 309 iPc 03 49.97 -0.1
 S 04 06.60
 FCV 1.34 238 eP 03 48.63 -1.5
 eS 04 07.10
 DTMT 1.82 318 eP 03 57.28 0.2
 eS 04 22.09
 DSVT 1.83 317 eP 03 58.21 1.0
 eS 04 21.21
 BBL 2.12 320 eP 04 02.01 0.7
 S 04 26.60
 MGG 2.35 330 eP 04 04.30 -0.3
 SFG 2.59 336 eP 04 12.90 4.9X
 PAG 2.63 324 eP 04 09.00 0.3
 S 04 40.10

SEG 2.86 331 eP 04 10.90 -0.9
 TRN 3.47 202 eP 04 21.00 0.5
 eS 04 57.94
 YKA 61.78 335 P 13 44.90 -0.2
 S.D. = 0.7 on 15 of 16 obs.

* JAN 01, 1989 07h 10m 01.76± 0.78s
 3.013 N ±11.6km 128.039 E ±13.1km
 DEPTH = 140.0km (geophysicist)
 4.0mb (3 obs.)
 NORTH OF HALMAHERA (264)

PCI 9.08 245 eP 12 11.00 0.2
 MTN 16.05 169 eP 13 40.00 -1.0
 WB5 23.58 165 eP 15 01.30 0.4
 WRA 23.64 165 Pc 15 02.10 0.7
 0.6s 4.60nm 4.1mb
 OIS 26.03 155 eP 15 23.00 -0.7
 ASPA 27.13 168 iPd 15 33.90 0.2
 CHG 32.51 301 eP 16 21.40 0.0
 CHTO 32.51 301 eP 16 21.20 -0.2
 1.0s 3.25nm 4.1mb
 pP 16 52.20 144kmX
 STK 37.02 161 eP 17 00.00 0.5
 GUN 47.20 306 P 18 23.00 0.2
 GBA 51.06 285 Pc 18 51.80 -0.3
 0.7s 1.50nm 3.9mb
 S.D. = 0.6 on 11 of 11 obs.

? JAN 01, 1989 08h 26m 56.58± 3.26s
 25.080 S ±27.5km 179.820 E ±22.7km
 DEPTH = 549.3 ± 33.2 km
 4.7mb (10 obs.)
 SOUTH OF FIJI ISLANDS (171)

DZM 12.63 281 iPc 29 41.10 -1.0
 BRS 24.35 259 iPc 31 34.00 0.7
 COO 25.26 251 eP 31 43.00 1.7
 RMO 27.98 260 eP 32 05.00 -0.1
 CTA 31.34 272 iPd 32 34.40 0.5
 0.6s 88.00nm 5.6mb
 STK 34.15 250 iPd 32 58.20 0.8
 OIS 37.24 269 eP 33 23.00 -0.1
 ASPA 41.70 262 iPd 33 59.30 0.2
 0.3s 39.00nm 5.4mb
 WB5 42.17 268 iPd 34 02.80 0.0
 WRA 42.18 267 Pc 34 02.90 0.0
 0.3s 13.70nm 5.0mb
 FORR 45.71 251 iPd 34 30.00 -0.3
 0.4s 54.00nm 5.4mb
 MTN 47.39 276 iPc 34 42.20 -1.0
 WARB 47.67 257 iPd 34 35.10 -10.2X
 0.3s 17.00nm
 KNA 48.50 271 eP 34 51.50 -0.1
 COOL 51.64 249 iPd 35 13.70 -0.9
 0.3s 3.00nm 4.2mb
 KLB 54.38 248 iPd 35 33.60 -0.5
 0.3s 7.00nm 4.5mb
 MBL 54.92 261 iPd 35 37.30 -0.7
 0.4s 12.00nm 4.6mb
 BAL 55.45 249 iPd 35 41.10 -0.4
 0.3s 7.00nm 4.5mb
 MUN 55.62 247 iPd 35 42.60 -0.1
 MRWA 56.33 250 eP 35 47.00 -0.7
 0.4s 5.00nm 4.2mb
 NANU 58.37 258 iPd 36 02.00 0.4
 0.3s 9.00nm 4.6mb
 TNP 86.19 45 eP 38 41.00 0.0
 KVN 86.21 44 iP 38 41.70 0.6
 CHTO 89.94 291 eP 39 01.00 2.4
 NAO 143.48 351 PKP 45 28.00 -1.5
 0.7s 1.50nm
 HFS 143.66 348 ePKP 45 27.30 -2.5X
 0.4s 4.00nm
 KSP 151.32 338 iPc 45 50.30 8.1X
 S.D. = 0.9 on 24 of 27 obs.

? JAN 01, 1989 08h 41m 38.63± 7.84s
 4.758 S ±69.9km 130.934 E ±39.5km
 DEPTH = 33.0km (normal)
 4.3mb (2 obs.)
 BANDA SEA (280)

MTN 8.04 179 iPc 43 37.20 1.1
 eS 44 50.00
 KNA 11.13 191 iPd 44 17.60 -1.0
 0.3s 35.00nm 6.1mb X

WB5 15.40 168 eS 46 01.00
 eP 45 11.70 -3.5X
 i 45 15.00
 iS 47 44.70
 WRA 15.45 168 P 45 16.00 0.0
 0.2s 2.20nm 4.0mb
 ASPA 19.02 172 eP 45 59.90 -0.7
 0.4s 13.00nm 4.5mb
 eS 49 06.80
 MBL 19.54 212 eP 46 07.00 0.4
 WARB 21.70 190 eP 46 20.20 -8.6X
 S.D. = 1.2 on 5 of 7 obs.

JAN 01, 1989 10h 16m 16.32± 0.28s
 11.728 S ± 7.4km 77.438 W ± 7.0km
 DEPTH = 45.8km (16 depth phases)
 5.2mb (10 obs.)
 NEAR COAST OF PERU (115)
 Feit (V) ot Lima and (IV) ot Houcho.

ARE 7.44 130 eP 18 12.00 6.6X
 eS 19 40.00
 ZOBO 10.10 118 P 18 41.30 -1.1
 Z 25s 1.85um
 i 18 46.70
 S 20 54.00
 LR 22 33.00
 LPB 10.24 119 P 18 49.00 4.9X
 i 18 51.00
 (S) 21 22.00
 CNCB 10.47 120 P 18 48.00 0.7
 UPB 20.68 354 eP 21 00.20 5.1X
 TCA 22.84 151 eP 21 16.70 0.0
 ITB1 25.34 124 e(P) 21 40.30 -0.4
 BMA 33.53 113 eP 22 52.20 -1.9
 e 22 58.70
 ITR 38.49 89 eP 23 35.40 -0.8
 OLY 48.81 345 P 24 59.00 0.0
 RLO 50.44 342 e(P) 25 11.00 -0.5
 i 25 23.00
 TUL 50.45 341 eP 25 12.00 0.4
 1.2s 111.40nm 5.8mb
 i 25 24.00
 FVM 50.92 347 P 25 15.00 -0.2
 pP 25 26.50 40km
 PRIN 51.89 3 P 25 22.70 0.3
 TBR 52.69 3 P 25 28.30 -0.1
 ALO 53.95 330 eP 25 37.70 -0.3
 1.2s 27.34nm 5.2mb
 epP 25 50.50 46km
 OTT 56.87 1 eP 26 11.00 12.3X
 GOL 57.38 335 P 26 02.50 -0.3
 pP 26 15.00 44km
 PLM 58.48 321 P 26 10.00 -0.5
 pP 26 24.00 51km
 TPC 58.51 323 eP 26 24.00 13.4X
 PEC 59.03 322 P 26 14.30 0.1
 pP 26 28.00 49km
 MSU 59.59 329 P 26 18.50 0.3
 pP 26 31.30 45km
 GSC 59.79 323 eP 26 33.00 13.6X
 MWC 59.81 321 eP 26 33.00 13.3X
 PAS 59.82 321 eP 26 33.00 13.4X
 SBB 59.98 322 eP 26 34.00 13.3X
 CLC 60.61 323 eP 26 38.00 13.0X
 ISA 61.03 322 eP 26 41.00 13.2X
 DUG 61.19 330 P 26 29.50 0.6
 pP 26 42.50 46km
 BW06 61.70 334 P 26 31.80 -0.7
 1.0s 10.94nm 4.9mb
 pP 26 44.50 45km
 TNP 61.97 325 P 26 34.50 0.2
 pP 26 48.00 48km
 RR12 62.95 333 P 26 40.50 -0.3
 pP 26 53.50 46km
 KVN 63.14 325 P 26 41.50 -0.5
 pP 26 55.00 48km
 LLA 63.15 322 eP 26 42.00 0.1
 e 26 55.70
 PRS 63.23 321 eP 26 42.20 -0.2
 e 26 56.70
 CMB 63.76 323 eP 26 45.90 0.0
 e 26 59.90
 RSON 63.92 349 P 26 45.40 -1.3
 0.8s 45.77nm 5.6mb
 pP 26 58.20 44km

VRI	145.40	328	ePKPd	19 09.00	1.3	ZAG	149.95	340	iPKPd	19 20.30	5.5X	DEPTH = 10.0km (geophysicist)					
BBTK	145.50	315	iPKPc	19 08.00	-0.2	HAU	149.99	354	ePKP	19 14.40	-0.4	TURKEY (366)					
SPC	145.58	338	ePKP	19 07.70	-0.4	KOT	150.10	299	ePKP	19 20.00	4.5X	HRT	0.07	8	iPg	40 59.30	-0.1
			e	21 38.40		BSF	150.11	353	ePKP	19 14.70	-0.4	YLV	0.28	229	iPg	41 02.70	-0.2
CLL	145.72	347	iPKP	19 07.80	-0.2	RBL	150.12	343	PKP	19 13.70	-1.4	ISK	0.55	305	ePg	41 08.00	0.0
	0.9s	195.00nm							e	19 20.10		CTT	1.01	294	ePn	41 16.00	0.0
		i		19 09.90		FVI	150.19	344	PKP	19 14.00	-1.1	KCT	1.11	244	ePn	41 18.00	0.2
		pPKP		21 37.00					e	19 20.30		S.D. = 0.2 on 5 of 5 obs.					
BRG	145.92	346	iPKP	19 07.20	-1.1	LJU	150.21	342	ePKP	19 15.10	-0.1	* JAN 02, 1989 01h 44m 50.84±1.01s					
	1.1s	30.00nm				VOY	150.40	343	ePKP	19 14.30	-1.3	47.540 N ±14.9km 27.486 W ±11.6km					
		i		19 10.20		VBY	150.47	340	ePKP	19 15.80	0.2	DEPTH = 10.0km (geophysicist)					
HR1	145.94	303	ePKP	19 11.00	1.9	CEY	150.51	342	ePKP	19 15.60	-0.1	4.3mb (14 obs.)					
WTS	146.00	354	ePKP	19 08.50	0.1	HLW	150.53	299	ePKP	19 22.00	5.9X	NORTH ATLANTIC RIDGE (403)					
	0.9s	142.00nm				TRI	150.73	342	ePKP	19 21.80	5.9X	LPF	17.75	79	eP	48 57.50	-1.9
		id		19 10.50		VAY	150.75	326	iPKP	19 21.30	5.2X	TCF	20.27	83	eP	49 28.90	-0.2
		e		21 35.00		SKO	150.85	329	iPKPd	19 22.00	5.7X	MAF	20.53	83	eP	49 31.40	-0.3
ISR	146.00	328	ePKPd	19 11.00	2.3X				i	21 48.70		BGF	20.63	81	eP	49 32.40	-0.4
JARJ	146.07	301	PKPc	19 11.80	2.5X	LOR	150.92	357	ePKP	19 16.20	0.0	AVE	20.79	126	eP	49 33.00	-1.6
BURJ	146.22	301	PKPd	19 11.70	2.2X	CTI	150.98	345	PKP	19 15.40	-1.1	AVF	20.92	81	eP	49 35.60	-0.1
CJR1	146.23	332	ePKP	19 09.40	0.4	SSF	151.15	357	ePKP	19 16.90	0.4	SSF	20.96	80	eP	49 36.10	-0.1
SALJ	146.34	301	PKPd	19 11.90	2.2X	LBV	151.20	357	ePKP	19 16.70	0.0	LOR	21.15	79	eP	49 37.80	-0.3
MASJ	146.39	300	PKPd	19 12.50	2.7X	AVF	151.42	357	ePKP	19 16.50	-0.4	DOU	21.19	71	Pc	49 38.10	-0.4
LWI	146.39	236	iPKPd	19 13.70	3.2X	SMF	151.55	357	ePKP	19 17.10	0.0	SMF	21.28	81	eP	49 39.40	0.0
IKL	146.47	309	iPKP	19 11.50	1.8	SAL	151.65	347	PKP	19 17.60	0.3	LBF	21.29	80	eP	49 39.40	-0.2
PRU	146.60	345	ePKP	19 09.20	-0.2	MDI	151.66	348	PKP	19 16.20	-1.0	IFR	21.92	122	iP	49 47.00	0.8
		i		19 12.40		BGF	151.67	358	ePKP	19 17.30	0.0	TAF	22.64	115	eP	49 54.00	0.8
MOX	146.63	348	ePKP	19 09.00	-0.5	OHR	151.82	328	ePKP	19 16.00	-1.8	HAU	22.64	76	eP	49 53.70	0.6
	1.2s	28.00nm							i	19 24.20		CDF	23.17	75	eP	49 59.50	1.2
		i		19 12.00		TCF	151.96	359	ePKP	19 17.80	0.0	FRF	24.11	87	eP	50 10.50	3.1X
DSI	146.71	300	ePKP	19 10.00	-0.2	LSF	152.00	0	ePKP	19 17.40	-0.4	SBF	24.54	86	eP	50 13.00	1.4
WAJH	146.73	290	ePKPc	19 10.30	-0.1	MAF	152.02	359	ePKP	19 18.00	0.2	CLL	26.36	67	e(P)	50 32.00	3.4X
PSZ	146.78	337	ePKP	19 09.40	-0.5	ORX	152.11	350	PKP	19 17.88	-0.2	BRG	27.02	67	eP	50 34.50	-0.1
AYN	146.81	295	ePKPc	19 10.30	-0.1	ORO	152.11	350	PKP	19 17.40	-0.7	KHC	27.11	71	P	50 36.60	1.1
GPA	146.87	318	iPKP	19 12.20	1.9	LSD	152.40	352	PKP	19 19.42	0.7	KVN	62.88	299	eP	55 19.00	-0.4
DEV	147.19	332	ePKPc	19 10.00	-0.5	LPG	152.42	352	ePKP	19 19.50	0.7	S.D. = 0.9 on 19 of 21 obs.			JAN 02, 1989 01h 52m 08.04±0.09s		
ENN	147.30	355	ePKP	19 10.00	-0.5	BOB	152.68	348	PKP	19 18.60	-0.3	18.589 S ± 4.0km 174.559 W ± 2.6km			DEPTH = 108.4km (geophysicist)		
	0.9s	62.00nm				RSP	152.69	351	PKP	19 18.70	-0.2	6.1mb (53 obs.)			TONGA ISLANDS (173)		
		id		19 14.00		BNI	152.86	352	PKP	19 20.30	1.1	mb 6.4 (BRK). Depth from					
		e		21 38.00		RJF	152.95	0	ePKP	19 19.30	0.1	broadband displacement					
UCC	147.37	357	PKPd	19 14.00	3.4X	RRL	152.98	352	PKP	19 20.04	0.5	seismograms.					
SRO	147.43	339	ePKP	19 14.20	3.4X	GEN	153.12	348	PKP	19 18.40	-0.9	FAULT PLANE SOLUTION: P-Waves					
		e		19 39.10		LFF	153.30	1	ePKP	19 19.70	0.1	NP1: Strike=245 Dip=72 Slip=-90					
		i		21 39.50		DOI	153.32	351	PKP	19 18.60	-1.2	NP2: 65 18 -90					
MEM	147.45	355	PKPc	19 10.60	-0.1	CAF	153.32	359	ePKP	19 19.90	0.2	Principal Axes:					
ZST	147.49	341	ePKP	19 10.60	-0.3	PZZ	153.34	351	PKP	19 19.22	-0.7	T P1g=27 Azm=335					
		i		19 14.60		ROB	153.43	350	ePKP	19 19.32	-0.6	P 63 155					
		e		21 39.10		PII	153.44	345	PKP	19 18.20	-1.6	Comment: The focal mechanism is					
HQL	147.54	296	ePKP	19 11.70	0.1	FIN	153.45	349	PKP	19 19.42	-0.5	poorly controlled and					
CTT	147.55	321	ePKP	19 14.20	2.9X	LPO	153.57	1	ePKP	19 20.30	0.3	corresponds to normal					
TNS	147.55	352	iPKPc	19 14.80	3.7X	IMI	153.80	350	PKP	19 20.04	-0.4	faulting. The preferred fault					
MBH	147.58	297	iPKPd	19 11.20	-0.4	SBF	153.92	350	ePKP	19 20.50	-0.1	plane is NP1.					
GRF	147.61	348	iPKPd	19 10.20	-0.9	FRF	154.33	351	ePKP	19 21.20	0.2	RADIATED ENERGY					
		id		19 15.00		CVF	154.91	347	ePKP	19 21.90	0.0	No. of sta: 4 Focal mech. M					
KHC	147.63	345	iPKPd	19 11.00	-0.2	EPF	155.20	2	ePKP	19 22.60	0.3	Energy 1.1±0.4*10**13 Nm					
		i		19 15.10		GUD	157.07	11	ePKP	19 25.30	0.4	MOMENT TENSOR SOLUTION					
SNF	147.66	357	iPKPd	19 14.70	3.6X	BNG	158.52	233	iPKPd	19 26.80	-0.4	Dep 122 No. of sta: 11					
VKA	147.67	341	ePKP	19 09.00	-2.3X				ic	20 07.20		Moment Tensor; Scale 10**18 Nm					
	1.0s	82.10nm				EVAL	159.33	19	ePKP	19 28.00	0.7	Mrr=-1.47 Mtt=1.00					
		e		21 40.00		AVE	162.91	26	iPKP	19 32.50	1.4	Mff=0.46 Mrt=1.07					
BADA	147.74	295	ePKP	19 11.30	-0.6	TAF	163.05	11	iPKPc	19 35.00	3.8X	Mrf=0.80 Mtf=0.67					
BZS	147.97	333	ePKPd	19 11.00	-0.8	IFR	163.58	20	iPKPc	19 34.00	2.0	Principal axes:					
DOU	148.06	356	PKPd	19 15.90	4.1X	LIC	166.48	151	PKP	19 33.92	-0.7	T Vol= 1.98 P1g=21 Azm=325					
		e		21 40.20		KIC	166.74	151	PKP	19 34.12	-0.7	N 0.01 1 235					
BCK	148.15	313	iPKP	19 15.50	3.1X	TIC	166.85	150	PKP	19 34.24	-0.7	P -1.99 69 141					
DST	148.32	318	iPKP	19 16.00	3.4X				0.9s	52.00nm		Best Double Couple: Mo=2.0*10**18					
WLF	148.37	354	PKPc	19 12.80	0.6				S.D. = 0.8 on 201 of 247 obs.								
		id		19 17.40					% JAN 02, 1989 01h 40m 56.93±1.71s								
		e		19 22.70					40.751 N ± 8.8km 29.654 E ±13.4km								
		e		21 41.80													
KMR	148.48	344	iPKP-	19 17.40	4.9X												
		i		19 42.40													
		i		21 45.20													
ELL	148.97	312	iPKP	19 17.50	3.7X												
BEO	149.10	333	ePKP	19 17.00	3.5X												
FLN	149.44	3	ePKP	19 13.50	-0.4												
CDF	149.48	353	ePKP	19 13.80	-0.3												
KBA	149.59	344	ePKP	19 12.50	-1.9X												
	0.9s	3.80nm															
		id		19 18.50													
		e(PP)		21 44.00													
		e		21 50.50													
LDF	149.62	2	ePKP	19 14.00	-0.2												
GRR	149.80	3	ePKP	19 14.40	0.0												
PTJ	149.89	340	ePKP	19 14.40	-0.4												

CVF 155.92 354 iPKPd 11 50.50 -0.1	HRT 0.46 15 iPg 31 42.10 0.0	AVF 83.71 341 eP 58 55.30 0.4
RMP 156.04 347 PKPc 11 50.80 0.1	GPA 0.62 98 ePg 31 44.80 -0.3	0.9s 3.90nm 4.6mb
RDP 156.09 346 PKPc 11 50.40 -0.4	ISK 0.77 334 iPg 31 47.70 0.0	SMF 83.73 340 eP 58 55.40 0.3
RFI 156.21 344 PKP 11 51.43 0.5	KCT 0.89 262 iPn 31 49.70 -0.1	1.1s 13.10nm 5.0mb
EPLA 156.40 23 ePKP 11 52.10 0.8	DST 1.02 222 iPn 31 53.00 0.9	BGF 84.04 341 eP 58 57.60 1.0
GUD 156.52 19 iPKPd 11 52.40 0.8	CTT 1.13 314 ePn 31 53.60 -0.2	LPG 84.10 338 iPc 58 58.40 1.1
MGR 156.82 340 PKP 11 50.00 -1.8	BNT 1.21 270 iPn 31 54.70 -0.6	0.9s 9.80nm 5.0mb
ETOR 156.93 15 iPKPd 11 52.90 0.9	EDC 1.26 269 iPn 31 55.50 -0.6	MAF 84.42 341 iPc 58 59.80 1.2
TDS 156.99 338 PKP 11 52.18 0.2	S.D. = 0.6 on 9 of 9 obs.	0.9s 8.10nm 4.9mb
TOL 157.25 19 (PKP)d 11 53.00 0.7	JAN 02, 1989 02h 46m 28.43 ± 0.43s	TCF 84.44 341 eP 58 59.50 0.8
1.4s 209.30nm	46.613 N ± 9.3km 154.961 E ± 7.6km	LSF 84.62 342 eP 59 00.40 0.8
iPKPK 12 24.00	DEPTH = 33.0km (normal)	1.0s 10.80nm 5.0mb
EROO 157.42 10 ePKP 11 53.50 1.0	4.8mb (28 obs.)	CAF 85.76 341 eP 59 06.90 1.6
EBR 157.44 10 ePKP 11 53.50 1.0	KURIL ISLANDS REGION (222)	FRF 85.93 337 eP 59 06.40 0.3
EVAL 158.27 27 iPKPd 11 54.60 1.0	MAT 16.04 237 eP 50 12.00 -1.1X	0.9s 4.50nm 4.7mb
ECHE 158.35 14 ePKP 11 55.00 1.3	0.7s 23.97nm 4.4mb	LRG 86.10 338 eP 59 07.80 0.9
SOI 158.49 337 PKP 11 44.20 -9.5X	(S) 53 10.00	0.9s 9.80nm 5.0mb
EHOR 158.68 24 iPKPd 11 55.00 1.0	SHK 20.71 242 eP 51 10.00 1.7	LMR 86.18 338 eP 59 08.20 0.9
EVIA 158.86 17 ePKP 11 55.90 1.6	SNY 22.91 269 eP 51 29.20 -1.0	0.9s 9.80nm 5.0mb
EBAN 158.90 21 iPKPd 11 55.10 0.8	TIY 32.42 270 Pc 52 56.60 -0.8	S.D. = 1.0 on 54 of 56 obs.
ACU 159.51 13 ePKP 11 55.60 0.6	IMA 33.18 36 eP 53 02.10 -1.6	* JAN 02, 1989 03h 00m 42.39 ± 0.86s
AAPN 159.55 22 iPKPc 11 55.50 0.4	FBA 35.48 38 eP 53 22.40 -1.0	36.699 N ± 8.3km 28.060 E ± 9.1km
ASMO 159.64 21 iPKPc 11 55.50 0.3	0.9s 1.50nm 3.9mb	DEPTH = 10.0km (geophysicist)
ERC 159.64 344 PKP 11 55.39 0.2	XAN 36.77 267 P 53 34.50 -0.2	DOECANESE ISLANDS (369)
MCT 159.72 341 PKP 11 57.40 2.0	LZH 39.16 273 eP 53 53.50 -1.4	KAP 1.35 212 eP 01 06.60 -0.6
ALOJ 159.73 23 iPKPc 11 55.50 0.1	0.5s 0.02nm 2.1mb X	eS 01 26.80
MEU 159.76 338 PKP 11 57.16 1.8	GTA 40.25 280 eP 54 02.10 -1.6	KSL 1.36 115 eP 01 08.20 0.9
EJIF 159.77 26 iPKPd 11 56.60 1.3	CD2 42.14 267 eP 54 20.00 0.8	ELL 1.49 88 iPn 01 10.00 0.7
AFC 159.80 21 iPKPd 11 55.10 -0.4	GYA 42.93 259 P 54 25.80 -0.1	IzM 1.81 340 iPn 01 09.00 -4.9X
ACHM 159.84 22 iPKP 11 56.00 0.6	MBC 44.29 20 eP 54 34.00 -2.1	KHL 2.00 35 ePn 01 11.40 -5.2X
CRT 159.84 21 iPKP 11 56.00 0.6	CHG 53.33 258 eP 55 46.20 -0.5	BCK 2.16 69 ePn 01 17.60 -1.4
EALH 159.89 16 ePKP 11 56.00 0.7	CHTO 53.33 258 eP 55 46.40 -0.2	PRK 2.91 331 eP 01 30.50 1.0
ATEJ 159.94 23 iPKPc 11 56.00 0.4	pP 55 52.50 20kmX	DST 2.94 9 ePn 01 29.10 -0.9
APHE 160.02 22 iPKPc 11 56.50 0.8	CHTO 53.33 258 eP 55 42.90 -3.7X	KCT 3.55 4 ePn 01 39.00 0.3
FAI 160.03 340 PKP 11 57.60 2.1X	1.0s 0.75nm 3.6mb X	S.D. = 1.2 on 7 of 9 obs.
ENIJ 160.49 19 ePKP 11 56.20 0.2	EDM 55.49 47 eP 56 02.00 -0.1	? JAN 02, 1989 03h 18m 05.53 ± 6.04s
BNG 160.98 224 iPKPd 11 57.00 -0.1	GUN 56.28 276 P 56 08.70 0.2	37.137 N ± 36.8km 27.346 E ± 44.9km
0.9s 194.00nm	KKN 56.77 277 P 56 13.20 1.4	DEPTH = 10.0km (geophysicist)
ic 12 41.10	0.7s 17.00nm 5.2mb	TURKEY (366)
id 16 22.90	PKI 56.82 276 P 56 13.80 1.5	IzM 1.26 357 iPn 18 29.50 0.5
AVE 161.37 36 iPKPd 11 55.50 -1.5	DMN 57.00 277 P 56 14.60 1.0	ELL 2.09 100 iPn 18 41.50 0.4
i 12 23.50	0.8s 34.00nm 5.4mb	KHL 2.09 55 ePn 18 42.40 1.2
IFR 162.38 30 iPKPd 12 00.50 2.3X	GKN 57.07 277 P 56 13.30 -0.6	BCK 2.61 82 ePn 18 47.60 -0.9
TAF 162.39 22 iPKPd 11 59.50 1.5	0.7s 22.00nm 5.3mb	DST 2.66 22 ePn 18 48.00 -1.3
LIC 164.03 139 PKP 11 59.70 -0.4	FFC 60.02 41 iPc 56 33.80 -0.1	KCT 3.21 14 ePn 19 00.00 3.1X
1.3s 320.00nm	0.9s 14.00nm 5.1mb	S.D. = 1.5 on 5 of 6 obs.
KIC 164.31 139 PKP 11 59.92 -0.5	LRM 60.26 54 eP 56 36.60 0.6	JAN 02, 1989 03h 38m 24.58 ± 0.32s
1.4s 264.00nm	KVN 61.11 63 eP 56 42.70 1.0	44.162 N ± 2.0km 6.982 E ± 2.9km
TIC 164.35 138 PKP 12 00.14 -0.3	EUR 62.13 61 iP 56 49.90 1.2	DEPTH = 9.8 ± 3.4 km
1.3s 291.00nm	0.7s 1.84nm 4.3mb	FRANCE (538)
LEGH 166.02 156 ePKP 12 02.20 0.4	PSI 65.26 246 eP 57 08.00 -1.1	ML 2.7 (GEN), 2.8 (LDG).
e 13 03.60	NUR 65.87 336 eP 57 15.00 2.6	TOUF 0.24 128 Pg 38 30.08 0.2
SHGH 166.33 156 ePKP 12 02.00 -0.1	WB5 68.75 201 eP 57 30.00 -1.0	STV 0.26 71 P 38 30.24 0.1
e 13 04.80	WRA 68.82 201 Pd 57 30.80 -0.6	S 38 33.66
KOGH 166.39 155 ePKP 12 02.00 -0.2	0.8s 5.10nm 4.6mb	MVIF 0.29 155 Pg 38 31.05 0.3
e 13 04.80	ASPA 72.50 200 eP 57 53.70 0.0	Sg 38 35.13
KUK 166.44 155 ePKP 12 02.00 -0.2	KSP 76.58 335 eP 58 15.50 -1.4	PZZ 0.35 14 P 38 31.90 0.0
e 13 05.50	CLL 77.10 337 iPc 58 18.30 -1.4	S 38 36.74
e 16 45.00	0.9s 15.00nm 5.0mb	AUTN 0.36 117 Pg 38 32.16 0.1
S.D. = 0.9 on 394 of 464 obs.	PRU 77.86 335 P 58 22.90 -1.0	Sg 38 37.53
? JAN 02, 1989 01h 53m 36.87 ± 2.16s	WTS 78.04 341 eP 58 24.00 -0.8	AURF 0.37 138 Pg 38 32.48 0.3
42.111 N ± 21.5km 7.744 W ± 8.7km	0.7s 8.00nm 4.9mb	Sg 38 37.64
DEPTH = 10.0km (geophysicist)	MOX 78.08 337 eP 58 24.00 -1.1	DOI 0.39 29 P 38 32.40 -0.2
SPAIN (377)	KHC 78.91 335 iPc 58 29.50 -0.2	eSg 38 36.90
MG 2.5 (MDD).	1.0s 6.00nm 4.5mb	CALN 0.41 189 Pg 38 33.46 0.4
ERUA 0.53 58 eP 53 47.40 -0.2	GRF 79.05 337 eP 58 30.50 0.0	SBF 0.44 132 Pg 38 33.80 0.2
eS 53 54.30	0.7s 11.00nm 5.0mb	Sg 38 39.80
EZAM 0.71 273 eP 53 50.90 0.0	ENN 79.38 341 eP 58 32.00 -0.2	SAOF 0.45 113 Pg 38 33.69 0.0
eS 54 00.10	0.9s 8.00nm 4.7mb	ROB 0.65 78 P 38 37.65 0.0
STS 0.98 323 eP 53 55.20 -0.2	KBA 80.82 335 iP 58 40.30 0.1	S 38 45.98
eS 54 07.90	0.7s 7.70nm 4.8mb	IMI 0.70 111 P 38 47.71 -0.2
EMON 1.36 13 eP 54 02.20 0.3	i 59 10.70	S 38 49.88
eS 54 20.30	CDF 81.25 339 eP 58 42.00 -0.3	RRL 0.77 350 P 38 39.34 -0.5
S.D. = 0.4 on 4 of 4 obs.	0.8s 5.30nm 4.6mb	S 38 40.40 -0.4
% JAN 02, 1989 02h 31m 32.67 ± 0.69s	HAU 81.86 339 eP 58 45.20 -0.2	Sg 38 52.80
40.375 N ± 5.6km 29.510 E ± 5.2km	0.8s 3.70nm 4.5mb	FIN 0.88 86 P 38 41.55 0.0
DEPTH = 10.0km (geophysicist)	BSF 81.91 339 eP 58 45.30 -0.5	S 38 53.56
TURKEY (366)	0.8s 3.70nm 4.5mb	LMR 0.90 203 Pg 38 41.80 0.0
YLV 0.22 331 iPg 31 38.20 0.8	LOR 83.14 341 eP 58 52.00 -0.1	Sg 38 53.80
	1.0s 8.00nm 4.8mb	
	L8F 83.38 340 eP 58 52.90 -0.4	
	SSF 83.42 341 eP 58 53.60 0.2	
	1.0s 2.80nm 4.3mb	

02d 03h									
BNI	0.92 346 P	38 41.90	-0.3	28.491 N ± 7.2km	142.686 E ± 8.0km	SVV	2.37 311 eP	35 03.50	0.0
	eSg	38 54.90		DEPTH = 33.0km (normal)			eS	35 36.25	
CKI	0.97 74 Pd	38 43.00	0.0	4.7mb (9 obs.)	4.5Msz (1 obs.)	MVM	3.14 332 iPc	35 14.30	-0.2
	eSg	38 55.80		BONIN ISLANDS REGION (212)		BIM	3.19 329 iPc	35 15.50	0.2
RSP	1.01 11 P	38 43.66	-0.1				S	35 53.40	
	S	38 56.95		MAT	8.87 336 iPc	39 38.50	eP	35 17.08	-0.1
LSD	1.30 5 P	38 48.91	0.0		1.0s 39.00nm	5.5mb	S	35 55.50	
	S	39 04.97			eS	41 18.00			
LPG	1.35 353 Pg	38 50.20	0.6	MDJ	19.18 331 eP	41 53.00	0.3		
LPL	1.37 353 Pg	38 50.40	0.5	SNY	20.46 316 eP	42 02.00	-4.5X		
CVF	2.11 139 Pn	38 59.00	-1.4	NJ2	20.88 286 Pd	42 10.40	-0.4		
	Sn	39 22.80		BJI	24.66 305 eP	42 48.00	0.0		
	S.D. = 0.4	on 23 of 23 obs.		Z	16s 0.59um	4.2MszX			
					eS	47 12.00			
JAN 02, 1989 05h 00m 02.08 ± 0.63s				HHC	28.26 304 eP	43 22.20	0.8		
63.221 N ± 8.1km	127.648 W ± 5.9km			Z	20s 1.30um	4.5Msz			
DEPTH = 10.0km (geophysicist)				GYA	31.95 275 P	43 53.40	-1.0		
NORTHWEST TERRITORIES, CANADA (679)				CD2	33.79 284 eP	44 09.60	-0.6		
ML 4.0 (PGC).				KMI	35.70 274 eP	44 26.50	-0.4		
					eS	44 37.00			
WHC	4.31 238 Pn	01 08.50	-0.7	GTA	36.89 299 Pc	44 35.90	-0.7		
DLB	4.95 195 Pn	01 19.00	0.7	CHG	41.02 266 iPd	45 11.00	-0.1		
HYT	5.23 247 P	01 22.70	0.5		1.1s 12.97nm	4.6mb			
DWY	5.32 284 P	01 23.60	0.2	CHTO	41.02 266 eP	45 10.90	-0.1		
INK	5.65 337 eP	01 28.00	0.0		1.4s 18.27nm	4.6mb			
YKA	6.02 91 P	01 34.60	1.4	SHL	45.08 279 eP	45 44.50	0.3		
YKC	6.08 91 Pn	01 35.60	1.5	WMO	46.14 305 P	45 52.50	0.2		
MNB	12.09 152 Pn	02 57.00	-0.5	Z	12s 0.30um	4.5MszX			
EDM	12.50 137 eP	03 02.00	-0.8	WB5	48.75 190 eP	46 08.50	-4.3X		
MBC	13.37 9 eP	03 11.00	-3.1X	WRA	48.82 190 Pd	46 14.40	1.1		
BLC	13.95 71 Pn	03 19.70	-2.1		0.8s 5.90nm	4.7mb			
SES	15.67 137 eP	03 44.00	-0.3	PSI	48.91 246 ePc	46 13.40	-0.8		
	S.D. = 1.2	on 11 of 12 obs.		GUN	49.65 284 P	46 20.70	0.5		
					0.8s 16.00nm	5.1mb			
JAN 02, 1989 05h 23m 30.62 ± 0.94s				PKI	50.14 283 P	46 24.80	0.9		
6.187 S ± 6.4km	149.777 E ± 9.0km				0.5s 2.00nm	4.4mb			
DEPTH = 46.1 ± 9.4 km				KKN	50.20 284 P	46 24.30	0.1		
4.9mb (5 obs.)					0.7s 7.00nm	4.8mb			
NEW BRITAIN REGION (192)				DMN	50.39 284 P	46 26.00	0.3		
					0.6s 5.00nm	4.7mb			
LAT	2.80 260 iPc	24 15.50	1.5	GKN	50.69 284 P	46 28.20	0.3		
RAB	3.10 50 iPc	24 18.00	-0.3		0.7s 7.00nm	4.8mb			
	iS	24 52.00		INK	61.58 25 eP	47 44.50	-0.7		
LMG	3.15 211 eP	24 18.50	-0.6	MBC	64.43 15 eP	48 04.00	0.1		
BLLO	3.29 252 iPd	24 18.40	-2.7	YKA	70.71 29 P	48 43.00	-0.4		
PMG	4.12 219 iPd	24 34.50	1.7	ZOBO	149.12 73 PKP	57 15.00	2.3X		
CTA	14.24 194 eP	26 52.00	0.6	LPB	149.27 74 PKP	57 20.00	7.3X		
QIS	17.36 214 eP	27 31.00	-0.3		S.D. = 0.6	on 23 of 27 obs.			
	e	27 33.00							
MTN	19.54 249 eP	27 57.00	-0.4	* JAN 02, 1989 06h 29m 43.80 ± 2.07s					
GUA	20.18 346 eP	28 05.00	0.7	54.037 N ± 18.8km	161.355 W ± 10.7km				
	1.0s 184.00nm	5.4mb		DEPTH = 33.0km (normal)					
RMQ	20.21 183 iPd	28 04.20	-0.3	4.7mb (1 obs.)					
	0.6s 55.00nm	5.1mb		ALASKA PENINSULA (12)					
WB5	20.24 226 iPd	28 04.90	0.1						
	eS	31 49.00		DLG	1.14 346 eP	30 02.24	-1.3		
GUMO	20.24 346 eP	28 05.80	0.9	NGI	1.25 36 eP	30 04.96	-0.1		
WRA	20.30 226 Pd	28 05.40	0.0	PS4	1.35 347 eP	30 06.13	-0.4		
	0.6s 35.10nm	4.9mb		PVV	1.36 350 eP	30 06.24	-0.4		
BRS	21.28 173 iPd	28 14.50	-1.0		eS	30 28.28			
ASPA	23.14 220 eP	28 34.90	1.1	SASA	1.40 21 eP	30 07.60	0.4		
	Z	25s 0.51um	3.9MszX		eS	30 29.40			
	eS	32 43.20		SDN	1.40 20 iPc	30 07.80	0.6		
	LR	36 37.20		PN6	1.46 347 eP	30 08.75	0.7		
STK	26.68 196 eP	29 08.00	0.7	BLHA	1.72 346 eP	30 12.06	0.2		
WARB	29.71 225 eP	29 25.50	-9.3X	KDC	6.22 50 eP	31 15.50	-0.1		
FORR	31.87 217 eP	29 53.00	-0.7	SVW	7.73 21 eP	31 38.40	1.6		
MAT	43.86 347 (P)	31 33.00	-1.3	PMS	9.59 36 eP	32 01.70	-0.8		
	0.7s 4.79nm	4.3mb		FBA	12.85 27 eP	32 42.80	-3.8X		
SPA	83.85 180 e(P)	35 56.90	0.3	INK	19.34 32 eP	34 07.00	-1.9		
	0.9s 8.18nm	4.8mb		YKA	25.47 52 P	35 15.60	5.7X		
KHC	123.51 327 PKP	42 24.90	0.2	MBC	27.26 20 eP	35 27.00	0.7		
BNG	131.42 270 iPKPd	42 40.00	-0.8	SUF	63.44 356 iP	40 12.60	0.7		
	0.7s 6.00nm			HFS	66.11 3 eP	40 29.40	0.2		
	ic	46 04.00			0.4s 2.60nm	4.7mb			
SHGH	149.99 271 ePKP	43 18.00	4.5X	S.D. = 1.0	on 15 of 17 obs.				
LEGH	150.12 271 ePKP	43 19.20	5.5X						
KOGH	150.19 271 ePKP	43 19.00	5.1X	? JAN 02, 1989 06h 34m 24.02 ± 4.53s					
KUK	150.32 272 ePKP	43 19.50	5.4X	11.766 N ± 15.4km	59.376 W ± 43.7km				
BAO	152.07 141 ePKP	43 17.40	0.6	DEPTH = 10.0km (geophysicist)					
KIC	154.67 272 PKP	43 28.52	8.3X	NORTH ATLANTIC OCEAN (402)					
	0.8s 14.00nm			MG 3.9 (FDF).					
TIC	154.95 272 PKP	43 28.94	8.3X						
LIC	154.95 271 PKP	43 29.04	8.4X	TRN	2.28 241 eP	35 02.26	0.0		
	S.D. = 1.1	on 22 of 30 obs.			eS	35 29.66			
JAN 02, 1989 05h 37m 29.13 ± 0.57s				SVB	2.37 309 eP	35 03.50	0.0		
					eS	35 36.25			

02d 10h

INK	0.6s	2.00nm	4.3mb	EDC	2.99	3 ePn	11 25.00	8.2X	WRA	1.0s	3.00nm	3.8mb X		
MBC	58.09	26 eP	55 54.00	-0.4	YLV	3.47	22 ePn	11 38.00	14.3X	30.20	118 Pc	32 45.90	-0.5	
	60.12	16 eP	55 51.00	-17.3X	IKL	4.96	101 ePn	11 45.00	0.2	0.7s	16.00nm	4.9mb		
		pP	56 09.00	69kmX	S.D. = 0.9	on	7 of	9 obs.	WB5	30.20	118 iPd	32 46.60	0.2	
BRS	62.28	166 e(P)	56 16.00	-7.5X	JAN 02, 1989	13h 15m	53.00 ± 0.87s		ASPA	31.36	125 eP	32 54.90	-1.7	
YKA	67.53	29 P	56 57.30	0.2	16.930 N ± 7.7km	62.316 W ± 8.3km			Z	23s	0.21um	3.7mszX		
DAG	68.78	355 iPd	57 04.70	0.0	DEPTH = 10.0km	(geophysicist)					LR	44 26.90		
	1.2s	20.31nm			LEEWARD ISLANDS	(92)			GYA	33.25	1 eP	33 13.60	0.6	
SUF	69.95	333 iP	57 11.30	-0.7	MGH	0.23	155 eP	15 59.28	1.3	QIS	35.06	116 iPc	33 28.50	-0.1
PNT	71.81	42 eP	57 24.00	0.4		eS	16 03.38		GBA	35.11	306 Pc	33 28.20	-0.8	
EDM	73.04	37 eP	57 31.50	0.7	NEV	0.32	310 eP	15 59.56	-0.1		0.8s	12.80nm	4.9mb	
WDC	74.54	51 ePc	57 40.10	0.4		eS	16 03.82		HYB	36.51	312 iPc	33 40.50	-0.3	
MIN	75.27	51 eP	57 46.10	2.0	ANG	0.52	64 eP	16 02.25	-1.2		1.0s	50.00nm	5.4mb	
ORV	75.76	52 e(P)	57 47.60	0.9		eS	16 03.82		LSA	39.24	339 P	34 05.20	1.2	
SES	75.84	38 eP	57 49.00	2.0		eS	16 08.34		PKI	39.80	331 P	34 07.30	-1.3	
HFS	76.18	335 eP	57 45.60	-3.0	SKI	0.57	315 eP	16 03.86	-0.7		0.4s	4.00nm	4.7mb	
	0.4s	0.80nm				eS	16 11.20		GUN	39.86	331 P	34 08.20	-0.8	
NAO	76.65	337 P	57 49.00	-2.3		eS	16 11.22	1.9		0.4s	17.00nm	5.3mb		
	1.6s	33.60nm			CPB	0.85	33 eP	16 11.22	1.9	DMN	39.98	330 P	34 09.00	-0.9
CMB	77.31	53 ePc	57 57.00	1.5	SEG	0.94	124 eP	16 10.00	-0.9	KKN	40.05	331 P	34 09.60	-0.8
FFC	77.42	31 eP	57 54.00	-1.7		S	16 22.00		GKN	40.54	330 P	34 13.30	-1.1	
	0.8s	9.00nm			PAG	1.08	146 eP	16 13.00	-0.4	PMG	40.61	96 e(P)	34 15.50	0.5
LRM	77.78	43 eP	57 52.50	-5.7X	S.D. = 1.4	on	7 of	7 obs.	POO	40.74	309 iPc	34 18.30	2.2	
KVN	78.25	51 P	58 00.00	-0.8	* JAN 02, 1989	13h 26m	20.79 ± 0.68s		XAN	40.89	3 P	34 16.80	-0.2	
EUR	79.36	50 iP	58 07.20	0.3	33.786 S ± 13.0km	68.548 W ± 5.7km			CTA	40.96	113 iPd	34 19.00	1.2	
	0.5s	3.72nm			DEPTH = 33.0km	(normal)				1.0s	16.00nm	4.8mb		
TNP	79.36	51 P	58 07.40	0.5	MENDOZA PROVINCE, ARGENTINA	(139)			STK	41.25	132 iPd	34 20.70	0.6	
BW06	81.28	44 P	58 18.40	1.3	FCH	1.53	287 iP	26 45.70	-0.7	TIY	44.85	7 eP	34 49.30	0.1
	1.4s	12.33nm				iS	27 05.00		RMO	44.87	121 iPd	34 51.10	1.6	
CLL	82.87	329 eP	58 22.00	-2.8	PCH	1.65	275 iP	26 47.70	-0.2	NDI	45.14	323 iPc	34 50.50	-1.1
GRF	84.83	329 eP	58 36.70	1.9		iS	27 09.00		GTA	46.54	353 Pc	35 02.40	-0.2	
	1.0s	8.00nm			CHCH	1.76	265 iP	26 50.00	0.5	BJI	47.70	10 eP	35 11.00	-0.5
ALQ	88.13	48 eP	58 53.00	1.5		iS	27 12.10		BRS	48.56	120 iPc	35 19.00	0.4	
	1.1s	4.11nm			SAN	1.80	280 eP	26 50.30	0.3		i	35 30.00		
ZOBO	149.94	61 ePKP	05 53.00	5.8X		iS	27 12.10		WMO	53.27	343 P	35 52.50	-1.4	
		LR	59 12.00		LNV	2.39	265 iPd	26 58.40	0.0	CN2	53.48	17 P	35 56.00	0.7
LPB	150.13	61 PKP	05 57.00	9.7X		iS	27 12.30		MAIO	61.39	318 eP	36 48.00	-3.3X	
CNCB	150.39	62 PKP	05 54.00	6.1X		iS	27 30.50		SLR	76.12	245 eP	38 17.00	-5.5X	
	S.D. = 1.5	on	42 of	55 obs.	TCA	4.14	55 ePd	27 23.50	0.2		0.5s	7.04nm	4.8mb	
						(S)	28 10.30		LSZ	76.64	256 iP	38 26.50	0.9	
* JAN 02, 1989	11h 46m	01.01 ± 1.24s			VBA	6.82	130 e(P)	28 01.00	-0.2	PRY	76.82	244 eP	38 23.70	-2.7
6.064 S ± 13.7km	151.654 E ± 18.2km				S.D. = 0.5	on	7 of	7 obs.	KMZ	79.05	258 eP	38 40.00	1.2	
DEPTH = 33.0km	(normal)								BNG	88.19	275 iPd	39 26.00	1.6	
4.3mb	(2 obs.)									0.7s	12.00nm	5.1mb		
NEW BRITAIN REGION	(192)				JAN 02, 1989	14h 19m	28.31 ± 0.80s		SUF	91.61	333 iP	39 41.70	1.7	
RAB	1.93	15 iPc+	46 32.00	-0.1	42.893 N ± 6.6km	18.471 E ± 6.4km				0.5s	2.00nm	4.7mb		
	0.4s	406.78nm			DEPTH = 10.0km	(geophysicist)			SOD	92.40	338 iP	39 44.30	0.7	
LAT	4.66	263 e(P)	47 12.00	1.1	YUGOSLAVIA	(383)			YKA	117.13	20 PKP	45 19.10	1.0	
BLLO	5.13	257 eP	47 21.00	3.4X	MD 2.5	(TTG).			MEO	144.16	36 ePKP	46 07.80	-1.9	
PMG	5.56	233 eP	47 23.00	-0.6	BRY	0.05	82 iPgC	19 30.50	-0.2	SIO	144.73	33 ePKP	46 10.30	-0.3
RMO	20.50	187 eP	50 40.00	1.0		iSg	19 32.70		TUL	144.88	32 ePKP	46 10.50	-0.4	
WB5	21.70	229 eP	50 50.00	-1.3	HCY	0.45	177 iPgC	19 37.40	0.0		0.9s	33.00nm		
WRA	21.76	229 Pc	50 56.20	4.3X		eSg	19 45.50		RLO	145.08	31 iPKPd	46 11.50	0.3	
	0.4s	1.90nm			BDV	0.66	156 ePg	19 41.50	0.0	VVO	145.34	32 ePKP	46 12.20	0.5
ASPA	24.45	222 eP	51 24.40	6.1X		eSg	19 53.10		BAO	145.94	229 e(PKP)	46 14.00	0.6	
	0.7s	17.00nm			TTG	0.74	128 eP	19 42.50	-0.4	CNCB	155.66	194 PKP	46 41.00	12.7X
MBL	34.27	241 eP	52 44.00	-2.4X		eSg	19 55.10		S.D. = 1.2	on	46 of	53 obs.		
	S.D. = 1.4	on	5 of	9 obs.	PLE	0.80	57 ePg	19 43.60	-0.4					
						eSg	19 56.50		JAN 02, 1989	15h 53m	53.58 ± 0.41s			
JAN 02, 1989	13h 09m	56.39 ± 0.74s			IVA	1.05	91 ePg	19 49.00	0.8	1.581 N ± 8.0km	126.553 E ± 13.0km			
32.074 N ± 5.8km	35.650 E ± 11.6km					eSg	20 04.00		DEPTH = 33.0km	(normal)				
DEPTH = 25.7 ± 9.6 km					HVAR	1.51	282 iPn	19 55.50	0.1	5.0mb	(6 obs.)			
DEAD SEA REGION	(373)					iSn	20 15.70		MOLUCCA PASSAGE	(266)				
SALJ	0.07	155 Pc	10 01.30	0.2	SKO	2.38	112 e(Pg)	20 47.00	39.0X	PCI	7.16	250 eP	55 45.40	6.8X
BURJ	0.17	35 Pc	10 01.60	-0.2	S.D. = 0.5	on	7 of	8 obs.	MTN	15.04	163 eP	57 26.00	0.5	
KFNJ	0.21	174 Pd	10 02.70	0.5	JAN 02, 1989	14h 26m	41.62 ± 1.57s		KNA	17.36	173 eP	57 56.00	0.9	
JARJ	0.30	57 Pd	10 03.50	0.0	6.991 S ± 8.6km	106.177 E ± 8.4km			WB5	22.66	161 iPc	58 53.20	-0.2	
MASJ	0.35	170 Pd	10 04.20	-0.1	DEPTH = 84.6 ± 14.5 km					eS	02 57.00			
MKRJ	0.52	181 P	10 06.20	-0.8	4.9mb	(10 obs.)			WRA	22.72	161 Pc	58 53.80	-0.1	
OUTJ	0.83	158 P	10 12.50	0.3	JAVA	(277)				0.6s	48.20nm	5.2mb		
KAP	7.86	298 ePg	11 52.00	0.1	KSI	4.88	313 ePd	27 54.80	0.7	QIS	25.45	150 eP	59 20.00	-0.3
	S.D. = 0.5	on	8 of	8 obs.	PSI	12.04	323 ePd	29 26.40	-5.4X	ASPA	26.09	165 eP	59 25.30	-1.0
* JAN 02, 1989	13h 10m	28.51 ± 1.90s			IPM	12.59	336 ePd	29 44.70	5.7X		0.5s	78.00nm	5.6mb	
37.358 N ± 13.2km	27.663 E ± 17.8km				PCI	14.90	67 eP	30 14.50	5.4X		eS	03 59.90		
DEPTH = 10.0km	(geophysicist)				MBL	19.31	138 eP	31 01.00	-1.8	CTA	28.93	139 iPc	59 57.20	5.1X
TURKEY	(366)					eS	34 16.00		CHTO	32.02	304 eP	00 19.10	-0.4	
IZM	1.09	343 iPn	10 49.60	0.7	NNT	20.48	342 eP	31 17.20	2.3		0.6s	0.56nm	3.6mb X	
KHL	1.76	56 iPn	10 59.10	-0.2	MEKA	22.78	150 eP	31 50.70	12.9X	FORR	32.28	178 eP	00 20.00	-1.6
ELL	1.90	108 iPn	11 01.50	0.2		eS	35 46.00		STK	36.21	158 iPd	00 54.90	-0.4	
KSL	1.98	128 ePb	11 01.70	-0.7	KNA	23.77	113 eP	31 47.40	-0.1	XAN	36.26	335 eP	00 56.10	0.3
		eSb	11 32.50		MTN	25.25	105 iPd	32 01.50	0.0	MAT	36.42	16 eP	00 56.00	-1.1
BCK	2.33	87 ePn	11 08.50	0.9		0.3s	46.00nm	5.4mb		0.7s	6.85nm	4.7mb		
DST	2.37	18 ePn	11 07.00	-1.1	CHG	26.61	345 eP	32 13.00	-1.1	BRS	38.30	141 iPd	01 12.20	-0.8
					CHTO	26.61	345 eP	32 13.60	-0.5	BJI	39.43	347 P	01 23.50	1.3
									BWA	41.28	152 eP	01 39.30	1.7	
									CAN	42.29	152 eP	01 47.00	1.1	

GUN 46.87 308 P 02 23.10 0.0
 0.4s 12.00nm 5.2mb
 KKN 47.29 307 P 02 25.90 -0.4
 0.4s 5.00nm 4.9mb
 DMN 47.35 307 P 02 30.90 4.0X
 HYB 49.70 292 eP 02 45.00 0.1
 GBA 50.02 286 Pd 02 47.30 0.0
 0.5s 2.90nm 4.6mb
 WMO 54.38 326 P 03 24.00 4.3X
 MAIO 70.67 308 eP 05 09.00 0.5
 e 05 33.00
 S.D. = 0.9 on 20 of 24 obs.

& JAN 02, 1989 16h 35m 16.27s
 32.936 N 80.158 W
 DEPTH = 4.9km
 SOUTH CAROLINA (511)
 <GLD>. MD 2.6 (GLD). Felt (111)
 at Summerville.

MGS 0.04 160 P 35 17.71 0.1
 S 35 19.34
 SVS 0.08 293 P 35 18.27 0.1
 S 35 19.65
 BCS 0.09 61 P 35 18.49 0.2
 S 35 19.38
 WSS 0.13 227 P 35 19.65 0.7
 S 35 21.40
 TWB 0.18 15 P 35 20.29 0.2
 S 35 22.72
 HBF 0.18 269 P 35 19.42 -0.6
 S 35 21.35
 HWD 0.22 208 P 35 20.24 -0.6
 S 35 24.21
 VEW 0.28 140 P 35 18.74 -3.3
 S 35 22.13
 VEW 0.28 140 P 35 22.04 0.0
 S 35 24.12
 CFS 0.34 358 P 35 23.38 0.2
 S 35 27.97
 TRK 0.37 60 P 35 23.07 -0.6
 S 35 25.61
 SGS 0.39 311 P 35 24.09 -0.1
 S 35 26.29
 VRN 0.67 279 P 35 28.67 -0.9
 S 35 37.80
 MTT 1.48 304 P 35 43.74 0.1
 S 36 03.12
 JSC 1.62 326 P 35 45.49 -0.1
 S 36 07.39
 LHS 1.63 341 P 35 44.68 -1.0
 e 35 44.75
 S 35 54.13
 PRM 2.17 302 eP 35 52.90 -0.6
 17 obs. associated

? JAN 02, 1989 17h 18m 00.14 ± 4.15s
 37.253 N ± 28.5km 27.569 E ± 31.5km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 IZM 1.17 348 iPn 18 22.70 0.7
 KHL 1.08 55 ePn 18 33.20 0.5
 ELL 1.94 104 ePn 18 33.00 -0.6
 BCK 2.42 84 ePn 18 41.20 0.8
 DST 2.49 19 ePn 18 40.00 -1.4
 S.D. = 1.4 on 5 of 5 obs.

* JAN 02, 1989 18h 21m 25.76 ± 1.88s
 6.694 S ± 9.7km 130.016 E ± 11.5km
 DEPTH = 121.4 ± 20.9 km
 4.9mb (6 obs.)
 BANDA SEA (280)
 MTN 6.21 170 iP 22 57.80 1.4
 0.8s 276.00nm 5.6mb
 eS 24 02.00
 KNA 9.08 188 eP 23 35.90 0.6
 0.3s 19.00nm 5.4mb
 eS 25 10.00
 TZZ 11.23 83 iPd 24 04.60 0.6
 WB5 13.77 163 eP 24 34.80 -2.3
 eS 27 01.00
 WRA 13.02 163 Pd 24 36.20 -1.6
 0.4s 2.50nm 3.9mb
 OIS 16.62 147 iPd 25 12.60 -0.4
 eS 28 03.00

ASPA 17.28 168 eP 25 20.70 -0.4
 0.6s 45.00nm 4.9mb
 eS 28 21.90
 MBL 17.43 213 eP 25 23.50 0.6
 eS 28 25.00
 WARB 19.65 189 eP 25 39.00 -8.5X
 eS 29 10.00
 FORR 24.10 184 eP 26 31.00 -0.3
 MRWA 26.02 209 eP 26 50.00 0.8
 STK 27.29 158 iPd 27 00.40 -0.4
 BWA 32.41 151 eP 27 47.90 1.8
 CAN 33.41 151 eP 27 55.70 0.9
 CHTO 39.76 310 e(P) 28 48.80 0.4
 0.6s i 28 56.10 3.2mb X
 GUN 54.76 311 P 30 46.10 0.4
 0.5s 6.00nm 4.8mb
 PKI 54.94 310 P 30 47.20 0.3
 KKN 55.15 311 P 30 48.70 0.4
 DMN 55.19 310 P 30 45.70 -2.9
 GKN 55.75 310 P 30 52.80 0.3
 0.4s 3.00nm 4.6mb
 YKA 107.47 26 Pd iff 35 55.10 23.8X
 CNCB 150.64 143 PKP 41 08.20 7.4X
 LPB 150.78 142 ePKP 41 09.00 8.2X
 ZOBO 150.97 142 PKP 41 08.00 6.7X
 S.D. = 1.3 on 19 of 24 obs.

? JAN 02, 1989 19h 47m 32.31 ± 3.03s
 29.284 S ± 27.1km 68.194 W ± 10.8km
 DEPTH = 33.0km (normal)
 SAN JUAN PROVINCE, ARGENTINA (137)
 RTRS 1.41 231 iPc 47 55.90 0.0
 S 48 14.40
 RTLL 2.05 187 ePc 48 05.50 0.3
 S 48 32.00
 RTCB 2.26 193 ePd 48 08.00 -0.1
 S 48 35.00
 CFA 2.32 181 ePd 48 09.10 0.2
 RTCV 2.59 186 ePc 48 12.50 -0.3
 S 48 44.20
 TCA 3.73 124 ePc 48 29.00 0.0
 S 49 13.00
 S.D. = 0.3 on 6 of 6 obs.

& JAN 02, 1989 20h 30m 20.47s
 57.666 N 142.980 W
 DEPTH = 10.0km (geophysicist)
 4.2mb (1 obs.)
 GULF OF ALASKA (15)
 <AGS-P>. ML 3.4 (PMR).
 YKU 2.54 41 eP 30 56.70 -5.7
 HMT 2.76 347 iP 30 59.43 -6.1
 WAX 2.79 1 iP 30 59.65 -6.5
 RAGM 2.87 343 iP 31 00.81 -6.3
 BCPM 2.88 36 iP 31 00.87 -6.4
 SGAM 3.07 339 eP 31 03.94 -5.9
 eS 31 38.45
 CVA 3.22 335 eP 31 05.36 -6.7
 HIN 3.29 328 iP 31 06.84 -6.2
 MTU 3.36 316 eP 31 07.55 -6.6
 CTGM 3.42 14 iP 31 08.48 -6.5
 FID 3.58 331 eP 31 10.55 -6.6
 KNIM 3.65 320 eP 31 11.04 -7.1
 GLB 3.81 354 iP 31 13.62 -6.9
 GLI 3.85 329 eP 31 13.66 -7.4
 VZW 3.86 333 iP 31 14.17 -7.1
 VLZ 3.88 335 eP 31 14.05 -7.3
 KLU 4.12 340 iP 31 17.84 -7.0
 SIT 4.19 95 eP 31 17.30 -8.5
 PWL 4.22 322 iP 31 19.08 -7.2
 HYT 4.24 39 P 31 20.20 -6.4
 PTE 4.46 319 eP 31 22.23 -7.4
 KNK 4.68 326 eP 31 26.27 -6.5
 SLKM 4.70 310 eP 31 27.73 -5.4
 CNPM 4.70 297 eP 31 27.10 -6.1
 TOA 4.73 341 eP 31 27.00 -6.6
 NNL 4.93 302 eP 31 31.36 -5.0
 SML 4.96 329 eP 31 30.04 -6.7
 PLRM 5.02 324 eP 31 31.10 -6.5
 PMR 5.02 324 eP 31 31.70 -5.9
 GHO 5.10 326 eP 31 32.26 -6.5
 KDC 5.10 275 eP 31 33.30 -5.4
 RDT 5.66 305 eP 31 40.50 -6.2
 ILIM 5.71 299 eP 31 41.35 -6.1

SPU 5.82 311 eP 31 42.29 -6.6
 PDB 6.22 295 eP 31 48.61 -5.8
 SVW 7.32 303 eP 32 03.50 -6.5
 INK 11.49 18 eP 33 00.00 -7.4
 YKA 14.88 59 P 33 47.60 -4.8
 MBC 20.50 16 eP 34 55.00 -5.7
 FFC 22.75 80 eP 35 20.00 -3.5
 0.7s 6.00nm 4.2mb
 40 obs. associated
 * JAN 02, 1989 22h 01m 18.12 ± 1.61s
 0.505 S ± 12.0km 122.837 E ± 16.5km
 DEPTH = 116.4 ± 17.2 km
 3.9mb (3 obs.)
 MINAHASSA PENINSULA (265)
 PCI 3.03 262 eP 02 05.00 -0.3
 eS 02 37.00
 TSM 6.69 315 ePd 02 55.90 0.6
 KKM 9.27 315 ePd 03 30.30 -0.2
 MBL 20.74 188 iPd 05 52.00 0.7
 WB5 22.32 150 eP 06 06.20 -0.8
 WRA 22.36 150 Pd 06 08.00 0.6
 0.8s 5.20nm 3.9mb
 PSI 24.12 278 iPc 06 24.40 0.0
 ASPA 25.40 156 eP 06 36.40 -0.1
 0.8s 7.00nm 4.2mb
 CHTO 30.32 311 eP 07 20.60 -0.2
 1.0s 1.00nm 3.5mb
 S.D. = 0.6 on 9 of 9 obs.
 JAN 02, 1989 22h 50m 52.84 ± 0.47s
 24.986 N ± 5.1km 95.078 E ± 4.0km
 DEPTH = 105.0 ± 5.1 km
 4.2mb (22 obs.)
 BURMA (296)
 Felt in ports of Assom, Indio.
 SHL 2.95 282 iP 51 40.10 1.1
 iS 52 13.10
 LSA 5.85 324 P 52 23.40 4.3X
 CHG 7.11 149 eP 52 36.90 0.9
 CHTO 7.11 149 eP 52 36.90 1.0
 BDT 8.53 154 eP 52 54.10 -1.1
 GUN 8.74 291 P 52 58.40 -0.1
 PKI 9.05 289 P 53 02.20 -0.5
 KKN 9.22 290 P 53 04.20 -0.6
 DMN 9.32 288 P 53 05.40 -0.8
 0.5s 26.00nm 5.3mb X
 GKN 9.82 290 P 53 12.10 -0.8
 GYA 10.55 80 eP 53 27.00 4.4X
 LZH 13.39 32 eP 54 00.00 0.1
 GTA 14.93 14 P 54 24.40 4.8X
 XAN 15.04 50 eP 54 20.70 -0.3
 HYB 17.14 247 eP 54 51.00 3.7X
 eS 57 59.00
 WHN 17.92 68 eP 54 56.50 -0.3
 WMO 19.74 344 eP 55 17.80 1.2
 SUF 58.46 330 iP 00 40.20 0.6
 0.4s 5.10nm 4.9mb
 WB5 58.73 136 eP 00 40.70 -1.4
 WRA 58.76 136 Pd 00 36.10 -6.2X
 0.6s 0.50nm 3.8mb
 SOD 58.91 335 iP 00 43.30 0.5
 UPP 62.47 326 iP 01 07.20 0.3
 HFS 64.42 327 eP 01 19.60 -0.1
 0.5s 12.00nm 5.1mb
 NAO 65.75 328 P 01 28.00 -0.2
 0.6s 6.50nm 4.7mb
 LPG 71.50 312 eP 02 04.40 0.0
 0.4s 1.30nm 4.1mb
 LOR 72.88 315 eP 02 10.90 -1.2
 0.5s 1.00nm 3.9mb
 LBF 72.89 314 eP 02 11.60 -0.6
 0.4s 1.10nm 4.0mb
 SMF 73.08 314 eP 02 13.10 -0.2
 0.5s 2.90nm 4.4mb
 SSF 73.17 314 eP 02 13.40 -0.4
 0.4s 1.70nm 4.2mb
 AVF 73.36 314 eP 02 15.30 0.4
 0.4s 1.10nm 4.0mb
 BGF 73.76 314 eP 02 17.20 0.0
 0.4s 1.10nm 4.0mb
 MAF 74.06 314 eP 02 19.50 0.5
 0.4s 0.80nm 3.9mb
 TCF 74.27 314 eP 02 20.40 0.2
 0.4s 2.80nm 4.4mb

02d 23h

EKA 74.31 324 P 02 21.00 0.8
0.5s 2.80nm 4.3mb
CAF 74.83 313 eP 02 23.70 0.2
0.5s 1.40nm 4.0mb
LDF 74.96 317 eP 02 24.10 0.0
0.6s 2.50nm 4.2mb
RJF 75.06 313 eP 02 25.20 0.4
0.5s 1.40nm 4.0mb
FLN 75.12 317 eP 02 24.90 -0.1
GRR 75.49 317 eP 02 27.20 0.1
0.6s 1.80nm 4.1mb
LPO 75.50 313 eP 02 27.40 0.2
0.5s 2.90nm 4.4mb
LPF 75.73 316 eP 02 29.00 0.5
0.6s 2.50nm 4.2mb
BNG 75.94 268 ePd 02 30.50 0.2
0.3s 5.00nm 4.8mb
SLR 81.89 237 iPd 03 03.00 0.7
0.5s 10.56nm 4.9mb
YKA 89.66 13 P 03 38.50 -1.3
S.D. = 0.7 on 39 of 44 obs.

* JAN 02, 1989 22h 56m 54.41±1.42s
37.207 N ± 8.7km 27.309 E ± 14.5km
DEPTH = 33.0km (normal)

TURKEY (366)

IZM 1.19 358 ePn 57 21.00 6.2X
KAP 1.66 184 eP 57 21.50 -0.1
eS 57 39.00
KHL 2.08 57 ePn 57 26.80 -0.9
KSL 2.13 120 eP 57 28.00 -0.3
ELL 2.13 102 iPn 57 29.00 0.5
PRK 2.19 338 eP 57 42.00 12.8X
DST 2.61 23 ePn 57 35.60 0.4
BCK 2.63 83 ePn 57 35.90 0.4
S.D. = 0.7 on 6 of 8 obs.

* JAN 03, 1989 00h 00m 11.61±1.51s
31.212 S ± 13.3km 68.553 W ± 12.1km
DEPTH = 100.0 ± 16.5 km

SAN JUAN PROVINCE, ARGENTINA (137)

RTLL 0.14 148 iPd 00 26.20 0.0
RTCB 0.35 218 iPd 00 27.00 0.2
CFA 0.48 146 iPd 00 28.50 1.0
RTCV 0.65 179 i(P) 00 29.20 0.4
RTRS 1.30 323 iPc 00 35.90 0.2
JACH 2.27 229 eP 00 56.00 7.6X
FCH 2.57 214 iP 00 54.20 1.5
PCH 2.92 214 eP 00 58.00 0.9
CHCH 3.24 213 eP 01 01.10 -0.4
eS 01 39.50
TCA 3.40 93 ePc 01 02.70 -0.9
LNV 3.65 221 iP 01 04.00 -2.9
S.D. = 1.5 on 10 of 11 obs.

? JAN 03, 1989 00h 43m 51.89±4.43s
37.246 N ± 29.9km 27.538 E ± 33.5km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

IZM 1.17 349 ePn 44 13.00 -0.8
KHL 1.91 55 ePn 44 24.00 -0.8
ELL 1.96 104 iPn 44 26.10 0.4
BCK 2.44 84 ePn 44 32.00 -0.5
DST 2.51 20 ePn 44 35.00 1.6
S.D. = 1.5 on 5 of 5 obs.

JAN 03, 1989 01h 14m 58.31±0.37s
45.759 N ± 4.4km 26.663 E ± 5.4km
DEPTH = 140.3 ± 5.3 km
4.1mb (10 obs.)

ROMANIA (358)

VRI 0.12 21 iPc 15 17.00 0.2
BRD 0.36 132 iPd 15 19.00 1.5
MLR 0.57 242 iPc 15 19.00 -0.4
ISR 0.63 188 iPd 15 20.00 0.4
BAC 0.82 11 iPc 15 17.00 -3.9X
BIR 0.84 53 iPc 15 21.50 0.4
CFR 1.20 118 iPd 15 23.00 -1.2
CMP 1.24 247 ePc 15 33.00 8.2X
IAS 1.56 23 iPc 15 29.00 0.9
DVD 1.73 145 iPd 15 23.00 -7.0X
PSN 2.34 152 iPd 15 38.00 0.5
iS 16 07.00

CJR1 2.38 296 eP 15 39.20 1.2
SZH 2.55 192 iPd 15 40.00 0.0
iS 15 59.00
DEV 2.63 274 iPd 15 41.00 -0.1
PVL 2.71 201 iPd 15 44.00 1.8
JMB 3.29 181 iPd 15 49.00 -0.7
iS 16 19.00
BZS 3.54 269 ePd 15 53.50 0.6
PGB 3.68 210 iPc 15 55.00 0.2
iS 16 28.00
DIM 3.80 193 iP 15 55.00 -1.3
PLD 3.92 202 eP 15 59.00 1.1
DMK 4.02 168 iPn 15 58.10 -1.2
VTS 4.03 219 iP 16 00.00 0.5
KZD 4.21 193 iPc 16 02.00 0.2
RZN 4.31 200 iPc 16 03.00 -0.3
BEO 4.48 260 eP 16 47.50 42.1X
KKB 4.67 215 iPc 16 08.00 -0.1
MMB 4.68 208 iPc 16 09.00 0.8
ISK 5.01 159 iPn 16 10.80 -1.7
VAY 5.34 215 ePn 16 17.20 0.2
HRT 5.40 155 ePn 16 17.10 -0.8
EDC 5.48 170 ePn 16 17.50 -1.4
DST 6.32 166 iP 16 28.70 -1.6
KAS 6.77 128 iPd 16 36.10 -0.4
KHC 9.49 296 eP 17 13.40 0.6
LPG 13.94 276 eP 18 15.50 4.4X
0.8s 4.00nm 3.8mb

NUR 14.82 356 iP 18 18.60 -3.2X
0.5s 9.80nm 4.4mb
i 18 24.80

HFS 16.33 336 eP 18 37.80 -2.7
0.4s 2.70nm 3.9mb
SUF 17.00 359 iP 18 47.20 -1.4
0.3s 0.90nm 3.6mb
LSF 17.45 281 eP 18 55.30 0.9
0.6s 3.60nm 3.9mb

NAO 17.73 334 P 18 55.90 -1.6
0.6s 2.60nm 3.7mb

KJF 18.49 1 eP 19 04.00 -1.8
0.7s 9.30nm 4.2mb
SOD 21.67 360 iP 19 40.50 2.4X
LIC 48.00 225 P 23 24.20 -0.5
GKN 48.56 91 P 23 31.20 1.9
DMN 49.13 91 P 23 35.80 2.0
0.5s 4.00nm 4.4mb
KKN 49.14 90 P 23 35.60 1.8
0.6s 7.00nm 4.6mb
GUN 49.49 90 P 23 38.30 1.7
0.5s 3.00nm 4.3mb
S.D. = 1.2 on 40 of 47 obs.

? JAN 03, 1989 01h 17m 46.35±6.71s
2.196 N ± 50.4km 126.552 E ± 68.7km
DEPTH = 127.0 ± 47.6 km
4.4mb (3 obs.)

MOLUCCA PASSAGE (266)

MNI 1.87 246 ePc 18 19.00 0.0
WB5 23.24 161 iPc 22 43.60 0.3
WRA 23.29 161 Pd 22 43.60 -0.2
0.5s 4.60nm 4.1mb
ASPA 26.68 165 eP 23 15.40 -0.1
0.6s 6.00nm 4.4mb
CHTO 31.68 303 eP 23 59.00 -1.0
FORR 32.89 178 eP 24 10.50 0.2
STK 36.77 158 eP 24 43.00 -0.4
GUN 46.49 307 P 26 04.20 1.0
0.6s 7.00nm 4.6mb
S.D. = 0.8 on 8 of 8 obs.

* JAN 03, 1989 02h 23m 56.96±2.65s
43.329 N ± 13.6km 5.864 E ± 18.3km
DEPTH = 21.9 ± 3.9 km

NEAR SOUTH COAST OF FRANCE (379)

MD 3.1 (STR).
CALN 0.86 60 Pg 24 13.32 0.1
Sg 24 30.16
MVIF 1.10 58 Pn 24 17.18 0.0
Sg 24 35.85
AURF 1.20 61 Pn 24 18.59 0.0
TOUF 1.22 55 Pn 24 18.89 0.0
Sg 24 39.00
AUTN 1.32 59 Pn 24 19.95 -0.4
Sg 24 41.79
FOUF 1.38 28 P 24 20.05 -0.9

(Sg) 24 38.65
SAOF 1.40 61 Pn 24 21.03 -0.2
STV 1.40 48 P 24 20.89 -0.5
S 24 42.96
PZZ 1.48 37 P 24 22.02 -0.6
S 24 44.56
DOI 1.55 40 P 24 23.20 -0.3
eSn 24 46.10
IMI 1.58 67 P 24 24.62 0.6
S 24 49.01
RRL 1.73 22 P 24 26.59 0.3
S 24 51.45
ROB 1.75 55 P 24 26.92 0.5
S 24 52.60
BNI 1.83 18 P 24 27.80 0.2
eSn 24 52.30
FIN 1.92 62 P 24 29.11 0.3
S 24 56.62
CKI 2.07 57 P 24 31.60 0.6
eSn 25 01.20
RSP 2.09 28 P 24 32.69 1.3
S 25 00.78
CVF 2.33 108 Pn 24 34.71 0.0
S.D. = 0.6 on 18 of 18 obs.

* JAN 03, 1989 02h 38m 48.49±1.03s
37.104 N ± 7.9km 27.385 E ± 11.2km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 3.6 (ATH).

IZM 1.30 356 iPn 39 12.40 -0.1
KAP 1.56 186 ePb 39 15.50 -0.8
KSL 2.02 118 ePn 39 23.70 0.7
ELL 2.05 99 iPn 39 24.10 0.5
KHL 2.09 54 iPn 39 22.40 -1.6
PRK 2.31 338 ePn 39 28.50 1.3
BCK 2.58 81 ePn 39 31.50 0.4
DST 2.68 21 iPn 39 31.70 -0.8
EZN 2.84 343 ePn 39 35.20 0.5
KCT 3.23 13 ePn 39 39.00 -1.2
EDC 3.26 6 ePn 39 39.00 -1.6
YLV 3.79 24 ePn 39 51.00 2.7
S.D. = 1.4 on 12 of 12 obs.

? JAN 03, 1989 04h 04m 25.94±0.82s
33.264 S ± 8.2km 70.646 W ± 9.8km
DEPTH = 33.0km (normal)

CHILE-ARGENTINA BORDER REGION (127)

SAN 0.19 184 iP 04 35.30 2.8X
iS 04 47.30
FCH 0.30 102 iP 04 34.50 0.4
iS 04 46.50
PCH 0.37 163 iP 04 36.00 1.2
iS 04 48.00
ROCH 0.42 313 iP 04 36.70 1.1
iS 04 49.50
JACH 0.58 4 iP 04 36.60 -1.2
iS 04 49.60
CHCH 0.67 180 iPc 04 38.00 -1.0
iS 04 53.00
LCCH 0.80 255 iP 04 41.50 0.7
LNV 0.94 223 eP 04 41.50 -1.3
iS 04 58.50
S.D. = 1.4 on 7 of 8 obs.

JAN 03, 1989 04h 41m 12.07±0.12s
29.487 N ± 2.5km 131.433 E ± 2.7km
DEPTH = 40.4km (19 depth phases)
5.8mb (89 obs.) 5.6msz (7 obs.)

RYUKYU ISLANDS REGION (239)

Up to 3 subevents within 12 seconds observed on broadband displacement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1: Strike=175 Dip=77 Slip=-90
NP2: 355 13 -90
Principal Axes:
T P1g=32 Azm=265
P 58 85
Comment: The focal mechanism is poorly controlled and corresponds to normal faulting. The preferred fault plane is NP1.
RADIATED ENERGY

03d 04h

RMQ	1.8s	381.00nm	51	6.1mb	BHL	78.53	302	PKP	53	12.00	0.9	ZST	82.90	322	eP	53	34.80	1.0
	58.08	162 iPd	51	02.60	BRD	78.70	316	ePd	53	15.00	3.3X	BEO	83.00	318	eP	53	35.00	0.6
	0.8s	71.00nm		5.8mb	VRI	78.72	316	ePc	53	13.50	1.7	TDD	83.02	280	ePd	53	37.74	2.8
		e	51	55.00				e		26.02.00		MIN	83.03	47	iPd	53	34.30	-0.5
KDC	58.27	38 iPd	51	03.40	KRP	78.73	146	P	53	12.80	1.0	CLL	83.07	326	iPd	53	35.30	0.7
MAIO	59.54	297 iPc	51	14.00	BMW	78.78	43	P	53	12.50	0.3		1.2s	180.00nm			6.0mb	
		eSn	59	24.00	IKL	78.86	305	iP	53	13.50	0.8			ipP	53	48.00	42km	
PMR	59.57	33 ePd	51	12.20	PSN	78.93	314	eP	53	16.00	3.1X			eS	03	53.00		
	1.0s	175.00nm		6.1mb	JARJ	79.09	301	Pc	53	15.20	1.0	PRU	83.14	325	Pd	53	36.00	1.0
Z	20s	2.00um		5.2MsZ	RMW	79.10	41	P	53	13.40	-0.5	Z	16s	7.10um			6.1MsZ	
FBA	59.83	29 iPd	51	14.30	ISR	79.20	316	ePd	53	16.50	2.0	N	16s	3.40um				
FORR	60.09	183 iPd	51	16.70				e	25	49.00		E	16s	5.00um				
	0.4s	45.00nm		6.0mb	BURJ	79.24	301	Pd	53	00.15	-14.8X			e	53	47.50	37km	
BRS	60.13	158 iPd	51	17.00	GPA	79.24	310	iP	53	15.70	1.0			S	03	44.00		
		ipPP	51	32.50	PNT	79.34	39	ePd	53	14.00	-1.1	SRS	83.17	314	eP	53	35.30	-0.1
		eS	59	32.00	MLR	79.38	316	ePc	53	17.00	1.5	SES	83.20	35	ePd	53	35.40	0.0
MRWA	60.21	196 eP	51	17.00	SALJ	79.39	301	Pd	53	16.90	1.1		1.3s	218.00nm			6.1mb	
COOL	60.83	190 eP	51	21.00	HRT	79.40	311	eP	53	16.90	1.3	ARO	83.21	279	eP	53	38.50	2.5
	0.8s	64.00nm		5.8mb	LON	79.47	42	P	53	15.80	-0.1	VKA	83.28	322	iPd	53	37.30	1.5
TOA	60.89	32 iPd	51	22.60	MASJ	79.50	300	Pd	53	17.90	1.5		3.3s	1699.00nm			6.6mb	
DZM	61.35	143 iPd	51	25.40	ISK	79.68	311	eP	53	22.00	5.0X	Z	13s	2.70um			5.8MsZ	
BAL	61.38	194 eP	51	25.00	YLV	79.72	311	iP	53	18.40	1.0			i	53	48.80	37km	
STK	61.79	170 iPd	51	28.70	CSS	79.72	304	eP	53	18.50	1.1			LR	38	04.00		
	0.8s	200.00nm		6.3mb	DSI	79.83	300	eP	53	19.00	1.0	KOT	83.29	300	eP	53	37.00	0.9
KLB	62.12	193 eP	51	29.70	CJR1	80.12	318	eP	53	21.50	2.2	SOP	83.50	322	iPd	53	37.00	0.1
CMS	62.16	166 iPd	51	31.40	ABHA	80.13	285	iPc	53	22.40	2.3	ORV	83.52	48	iPd	53	36.80	-0.4
	0.9s	12.00nm		5.0mb	KRA	80.30	323	eP	53	20.90	0.7	KNT	83.58	314	eP	53	37.40	-0.1
		e	51	51.00		0.7s	161.00nm			6.1mb		PLG	83.67	313	eP	53	38.00	0.0
MUN	62.81	195 eP	51	34.00			i	53	22.90	6kmX	HLW	83.69	301	eP	53	40.00	1.8	
COO	62.83	160 eP	51	36.00			i	53	28.90				e	53	50.00	32km		
NWAO	63.52	193 eP	51	40.00	EDM	80.33	33	iPd	53	20.10	-0.3	VAY	83.70	314	iP	53	38.70	0.7
	1.0s	70.00nm		5.7mb	BCK	80.44	308	eP	53	21.60	0.3			i	53	49.40	34km	
ADE	64.47	173 iPd	51	46.70	PPCY	80.47	305	eP	53	22.50	1.1	BRK	83.94	50	iPd	53	39.20	-0.1
	0.9s	319.33nm		6.4mb	COP	80.55	330	iPd	53	22.10	0.8	BKS	83.95	50	eP	53	39.80	0.4
RKG	64.67	193 eP	51	50.30		0.9s	161.34nm			6.0mb		SKO	84.03	315	iPc	53	41.00	1.3
INK	64.78	24 iPd	51	48.00	JMB	80.56	314	ePd	53	23.00	1.3		1.5s	263.00nm			6.1mb	
	1.0s	100.00nm		5.8mb	SPC	80.63	322	iP	53	23.20	1.0	Z	15s	3.04um			5.7MsZ	
BWA	65.56	165 iPd	51	54.50	AYN	80.63	298	iP	53	23.60	1.3	N	18s	3.60um				
MBC	65.99	14 ePd	51	55.40	PRN1	80.70	299	iP	53	24.00	1.3	E	18s	3.50um				
	1.0s	189.00nm		6.1mb	DST	80.70	310	iP	53	22.80	0.2			i	53	53.00	39km	
CAN	66.55	164 iPd	52	00.80	VGB	80.74	43	P	53	22.80	0.1			iS	04	02.00		
BFD	67.13	170 iPd	52	03.50	KHL	80.74	309	iP	53	23.40	0.5			LR	35	26.00		
	0.9s	92.00nm		5.8mb	EDC	80.83	311	eP	53	18.50	-4.7X	KHC	84.17	324	iPd	53	41.50	1.2
KEY	67.45	339 iP	52	03.80	DPW	80.92	40	P	53	23.70	0.1		1.0s	39.00nm			5.5mb	
	1.0s	114.00nm		5.9mb	PVL	80.95	315	iPc	53	26.00	2.3			i	53	54.30	43km	
		eS	01	00.00	MSZ	80.96	155	P	53	24.00	0.4			S	04	06.00		
ALE	68.02	2 ePd	52	09.00		1.0s	121.00nm			5.8mb		MOX	84.17	326	iPd	53	41.00	0.8
	0.6s	27.00nm		5.5mb	DEV	80.97	318	ePc	53	25.00	1.2		1.8s	162.00nm			5.8mb	
SOD	68.57	336 iP	52	11.40	WEL	81.02	148	P	53	23.00	-1.0	Z	18s	10.00um			6.2MsZ	
TAB	68.94	303 eP	52	15.00	MBH	81.06	299	eP	53	26.00	1.4	N	16s	5.00um				
KJF	69.52	333 iP	52	17.00	HQL	81.17	299	iPc	53	26.00	0.8	E	16s	3.50um				
	0.7s	88.10nm		5.9mb	SRFA	81.23	298	iPc	53	26.70	1.2			ipP	53	53.00	39km	
SLY	70.48	300		01 24.00	FHC	81.25	48	iPd	53	26.40	1.0			e	54	40.00		
		iPcP	52	25.00	ELL	81.27	307	iP	53	25.60	-0.1			ePP	56	58.00		
		iS	01	38.00	MUD	81.43	332	iPd	53	25.40	-0.5			iS	04	06.00		
SUF	70.81	332 iP	52	25.30		0.8s	60.00nm			5.6mb				LO	36	30.00		
MSL	71.92	302 ePd	52	33.00	DIM	81.44	314	eP	53	27.00	0.7			LR	36	30.00		
		ePcP	52	44.50	WAJH	81.47	295	iPc	53	28.00	1.2	FFC	84.41	28	iPd	53	41.20	-0.1
		eS	02	52.50	GDH	81.49	2	iPc	53	25.70	-0.3		1.1s	164.00nm			6.1mb	
		eScS	01	35.50		1.5s	111.11nm			5.6mb		LIT	84.43	313	eP	53	41.40	-0.4
DAG	72.41	353 iPd	52	34.40			e	03	45.00		KMR	84.56	323	iP-	53	43.80	1.6	
	1.0s	155.00nm		5.9mb	BADA	81.57	298	iPc	53	28.30	1.1			ipP	53	56.50	42km	
NUR	72.48	330 iP	52	35.30	KDZ	81.72	313	iPd	53	29.00	1.1	MHC	84.64	50	iPd	53	43.10	0.1
	1.2s	176.30nm		5.9mb	KSP	81.73	325	iPd	53	28.70	1.0	ARN	84.70	50	P	53	43.40	0.2
Z	20s	3.50um		5.6MsZ		0.8s	80.00nm			5.8mb		KZN	84.77	314	eP	53	43.40	-0.1
		eS	01	52.00			id	53	41.20	42km		PTJ	84.91	321	iPc	53	45.10	0.9
		LR	29	30.00	BZS	81.87	318	eP	53	29.00	0.5	OHR	84.92	315	iP	53	43.60	-0.6
YKA	74.38	26 P	52	47.50	RDO	81.92	313	eP	53	30.00	1.2	ZAG	84.95	321	iPc	53	45.70	1.5
YKC	74.44	26 iPd	52	47.00	PLD	81.93	314	eP	53	31.00	2.1	GRF	84.98	326	iPd	53	45.30	1.0
	0.7s	50.00nm		5.6mb	TIM	82.03	318	iPd	53	27.00	-2.3		1.2s	156.00nm			6.1mb	
KVT	75.01	309 iP	52	51.60	IZM	82.23	310	iP	53	30.90	0.3	Z	18s	7.40um			6.1MsZ	
UPP	75.81	332 iP	52	54.60	WDC	82.30	48	iPd	53	31.00	0.1			e	53	58.50	44km	
		i	53	06.40			e	56	38.60		WIT	84.99	330	eP	53	45.50	1.3	
KAS	76.41	310 iPc	53	01.20	LBFM	82.31	47	P	53	31.20	0.0		1.2s	308.00nm			6.3mb	
HFS	77.24	333 eP	53	02.10	PRK	82.44	311	eP	53	32.00	0.4			e	53	59.00	46km	
	1.0s	143.80nm		6.0mb	SRO	82.47	321	iP	53	33.70	2.1	SAO	85.08	50	eP	53	44.60	-0.5
Z	17s	4.80um		5.9MsZ			i	53	45.00	37km	CMB	85.09	49	iPd	53	45.30	0.2	
		LR	28	11.00	VTS	82.60	315	iPc	53	34.00	1.4			e	56	59.30		
PGC	77.54	41 ePc	53	05.70	OBO	82.60	280	ePd	53	37.06	4.3X	LRM	85.32	39	ePd	53	46.80	0.4
BBTK	77.80	309 iPc	52	55.00	LTCM	82.77	48	P	53	33.30	0.0	WTS	85.49	329	eP	53	47.00	0.2
		i	53	08.00	MMB	82.82	314	iPc	53	34.00	0.4		0.8s	23.00nm			5.4mb	
NAO	77.91	334 P	53	06.20	MKL	82.86	279	ePd	53	38.34	4.2X	LLA	85.50	50	iPd	53	46.70	-0.5
BIR	77.97	316 eP	53	08.00	BRG	82.88	325	iPd	53	34.30	0.6	VBY	85.55	321	ePd	53	48.30	1.1
CFR	78.19	315 ePc	53	10.00		2.0s	350.00nm			6.1mb		KBA	85.59					

		i	53 51.50	
		i	53 56.50	
		e	54 12.00	
		i	54 28.60	
		ePP	57 09.50	
		eS	04 19.50	
LJU	85.61	321 eP	53 48.00	0.5
FRB	85.75	9 eP	53 48.00	0.2
	0.9s	328.00nm		6.5mb
CEY	85.85	321 eP	53 49.30	0.5
RBL	85.87	322 P	53 48.70	-0.2
VAM	85.90	309 eP	53 51.00	1.8
AGMR	85.94	295 iPc	53 51.00	1.5
	0.1s	1250.00nm		8.1mb X
PRI	85.95	51 iPd	53 50.00	0.4
FUR	85.96	325 eP	53 50.30	1.1
VOY	85.96	322 iPd	53 48.80	-0.6
TNS	85.96	327 ePc	53 49.80	0.5
KVN	85.99	47 P	53 50.20	0.4
EDU	86.01	337 ePd	53 48.70	-0.6
	0.7s	88.00nm		6.1mb
FRI	86.12	49 iPd	53 50.00	-0.2
FVI	86.20	323 P	53 50.00	-0.4
TRI	86.23	322 eP	53 50.60	0.0
PHAM	86.30	51 P	53 51.40	0.2
ELO	86.31	337 eP	53 50.10	-0.7
ESY	86.36	336 ePd	53 50.40	-0.7
	0.8s	40.00nm		5.7mb
EBL	86.63	336 ePd	53 52.10	-0.3
	0.8s	59.00nm		5.9mb
EAU	86.71	336 eP	53 52.40	-0.4
VLS	86.74	312 eP	53 54.00	0.7
ENN	86.75	329 eP	53 53.00	0.0
	1.0s	63.00nm		5.8mb
		i	54 06.20	44km
		e	57 17.00	
BCH	86.88	51 P	53 55.00	0.9
EKA	87.01	336 Pd	53 53.80	-0.4
	1.3s	83.20nm		5.8mb
ESK	87.04	336 eP	53 54.00	-0.4
EUR	87.08	46 iP	53 55.20	0.6
	0.3s	23.46nm		5.9mb
CTI	87.15	323 P	53 54.00	-1.2
GWf	87.21	327 P	53 55.50	0.2
WLF	87.42	328 P	53 56.40	0.1
UCC	87.43	330 eP	54 08.00	11.7X
SNF	87.67	329 Pd	53 57.20	-0.2
ISA	87.69	50 eP	53 57.00	-1.0
CDF	87.76	327 P	53 57.84	-0.3
FEL	87.78	326 P	53 57.74	-0.5
DOU	87.83	329 Pc	53 58.30	0.1
	0.9s	30.00nm		5.6mb
		e	54 03.00	15kmX
SAL	88.03	323 P	53 58.50	-0.8
ARV	88.10	320 P	54 00.40	0.7
CLC	88.18	49 eP	54 01.00	0.7
MOF	88.22	326 P	53 59.77	-0.6
BBS	88.31	326 P	54 00.30	-0.4
MDI	88.34	323 P	54 07.50	6.7X
DUI	88.40	318 P	54 03.60	2.3
BSF	88.40	326 P	54 00.52	-0.7
SFI	88.43	321 P	54 02.40	1.2
HAU	88.49	327 eP	54 00.60	-0.9
	0.8s	21.40nm		5.5mb
VITF	88.52	327 P	54 00.61	-1.0
TDS	88.52	316 Pc	54 03.00	1.2
PGD	88.53	321 P	54 03.20	1.2
ASS	88.53	320 P	54 03.60	1.7
AQU	88.57	319 P	54 04.10	2.0
SGO	88.59	317 P	54 02.00	-0.1
DUG	88.59	44 P	54 02.70	0.4
	1.0s	20.00nm		5.4mb
SBB	88.68	50 eP	54 02.00	-0.8
		e	57 29.00	
LOMF	88.72	326 P	54 02.19	-0.5
PAS	88.76	51 eP	54 04.00	0.9
VAI	88.77	324 P	54 01.60	-1.2
MWC	88.79	51 eP	54 03.00	-0.5
FIR	88.84	321 eP	54 04.00	0.8
		e(S)	04 52.00	
BW06	88.85	40 P	54 03.50	-0.2
MME	88.87	322 P	54 04.10	0.4
MNS	88.96	319 P	54 07.40	3.5X
GSC	89.01	49 eP	54 04.00	-0.3
BDI	89.02	322 P	54 07.65	3.5X
BDI	89.02	322 P	54 03.90	-0.3
BOB	89.16	323 P	54 04.90	0.0

PII	89.28	322 P	54 03.50	-1.8
ORX	89.33	324 P	54 05.00	-0.7
ORO	89.34	324 P	54 08.20	2.5
RVR	89.39	51 eP	54 04.00	-2.0
PEC	89.59	51 P	54 06.80	-0.3
SOI	89.67	315 Pc	54 08.30	1.1
LSD	89.87	324 P	54 08.59	0.2
ATN	89.98	315 P	54 07.80	-0.9
MSU	90.02	45 P	54 09.80	0.6
RSP	90.03	324 P	54 10.95	2.0
LPG	90.05	325 eP	54 08.60	-0.7
	1.2s	32.70nm		5.5mb
LP1	90.10	315 P	54 10.92	1.6
PLM	90.11	51 eP	54 09.00	-0.7
LOR	90.20	327 eP	54 08.70	-0.9
	1.2s	35.70nm		5.6mb
TPC	90.21	50 eP	54 09.00	-1.0
ROB	90.31	323 P	54 10.75	0.6
LBF	90.35	327 eP	54 09.20	-1.1
	1.1s	35.10nm		5.6mb
BNI	90.40	324 Pc	54 10.80	0.1
RRL	90.43	324 P	54 10.54	-0.5
SSF	90.52	327 eP	54 10.30	-0.7
	0.8s	17.40nm		5.5mb
PZZ	90.56	324 P	54 10.95	-0.5
IMI	90.56	323 P	54 13.72	2.3
RSON	90.63	27 P	54 11.00	-0.5
	1.4s	127.36nm		6.1mb
BAR	90.63	51 eP	54 12.00	0.1
SMF	90.66	327 eP	54 11.00	-0.7
	1.1s	39.00nm		5.7mb
AVF	90.79	327 eP	54 11.40	-0.8
	1.2s	42.80nm		5.7mb
LDF	91.02	330 eP	54 12.60	-0.7
	1.0s	28.00nm		5.6mb
FLN	91.04	330 eP	54 12.60	-0.8
	1.0s	20.00nm		5.5mb
BGF	91.19	327 eP	54 13.30	-0.9
	0.9s	14.70nm		5.4mb
PLDF	91.25	327 P	54 14.23	-0.3
AGO	91.43	327 P	54 15.13	-0.1
FRF	91.45	323 eP	54 14.20	-1.2
	1.0s	29.60nm		5.7mb
GRR	91.49	330 eP	54 14.90	-0.6
	1.0s	45.60nm		5.8mb
MAF	91.57	327 eP	54 15.30	-0.6
	1.2s	54.70nm		5.8mb
GLA	91.66	50 eP	54 16.00	-0.6
LRG	91.68	323 eP	54 15.60	-0.8
	0.8s	25.20nm		5.7mb
LMR	91.68	323 eP	54 15.80	-0.6
	1.0s	28.00nm		5.6mb
TCF	91.69	327 eP	54 15.70	-0.8
	1.2s	41.60nm		5.7mb
PYM	91.71	327 P	54 16.02	-0.6
LPF	91.84	330 eP	54 16.80	-0.3
	0.8s	26.80nm		5.7mb
LBL	91.97	326 P	54 19.41	1.7
LSF	92.04	328 eP	54 17.30	-0.7
	1.0s	26.40nm		5.6mb
RJF	92.74	327 eP	54 20.90	-0.4
	1.0s	29.60nm		5.7mb
CAF	92.76	327 eP	54 21.10	-0.4
	1.2s	32.70nm		5.6mb
GOL	93.25	40 P	54 23.90	-0.2
	1.4s	71.80nm		5.9mb
AVY	93.86	251 iPc	54 27.22	0.3
SCH	94.59	10 eP	54 29.00	-0.7
ALO	95.83	44 eP	54 35.00	-1.0
	1.7s	67.31nm		5.8mb
Z	18s	0.86um		5.3msz
TOL	99.53	327 eP	54 52.50	0.1
TUL	101.23	37 e(Pdif	55 01.90	2.0X
	1.5s	9.00nm		5.1mb
BNG	107.49	286 ePKPc	59 37.00	0.2
	0.3s	3.00nm		
SLR	112.98	253 iPKPd	59 47.00	-0.1
	0.8s	14.93nm		
PRY	114.10	252 iPKPd	59 48.50	-0.8
	0.8s	3.13nm		
WIN	121.26	260 ePKP	59 58.00	-5.0X
SHGH	121.61	299 ePKP	00 03.80	0.1
KOGH	121.66	299 ePKP	00 03.80	0.0
LEGH	121.90	299 ePKP	00 04.00	-0.2
CER	122.89	247 ePKP	59 57.00	-8.6X
KIC	124.84	303 PKP	00 09.46	-0.5
	0.7s	61.00nm		

TIC	124.85	303 PKP	00 09.32	-0.6
	0.8s	49.00nm		
LIC	125.14	303 PKP	00 10.06	-0.4
	0.8s	68.00nm		
ARE	155.29	63 ePKP	01 05.00	1.9
ITR	157.29	333 ePKP	01 05.50	0.0
		e	01 36.90	
ZOBO	157.73	58 PKP	01 05.50	-1.1
Z	24s	0.45um		5.2mszX
		LR	56 14.00	
LPB	157.92	59 PKP	01 09.00	2.4X
		LR	56 22.00	
CNCB	158.18	59 PKP	01 09.00	1.9
8AO	166.20	358 ePKP	01 05.20	-9.2X
		e	06 15.00	
S.D. = 1.1 on 346 of 368 obs.				
? JAN 03, 1989 06h 55m 40.59±0.74s				
50.637 N ±11.9km 10.316 E ± 6.3km				
DEPTH = 10.0km (geophysicist)				
GERMANY (543)				
ML 2.7 (GRF).				
GRF	1.11	148 e(Pn)	56 01.70	0.3
		ePg	56 02.50	
		eSg	56 20.40	
TNS	1.26	252 ePd	55 59.20	-4.9X
		e	56 00.00	
		eSn	56 14.80	
CLL	1.83	67 iPn	56 13.60	1.3
		iPg	56 16.20	
		iSg	56 38.00	
BRG	2.32	83 iPg	56 24.00	4.6X
		eSg	56 56.00	
WTS	2.59	303 eP	56 23.00	-0.1
	1.0s	16.00nm		
		e	57 06.50	
KHC	2.59	124 Pg	56 30.80	7.5X
		Sg	57 04.90	
PRU	2.79	102 ePg	56 32.00	6.0X
		Sg	57 13.00	
ENN	2.80	274 eP	56 25.50	-0.6
	0.8s	8.00nm		
WLF	2.85	252 eP	56 26.50	-0.4
DOU	3.70	264 eP	56 40.10	1.1
KSP	3.80	85 eP	56 39.00	-1.5
		eS	57 40.70	
		e	57 46.50	
S.D. = 1.2 on 7 of 11 obs.				
& JAN 03, 1989 07h 49m 55.16s				
61.006 N 150.138 W				
DEPTH = 51.0km				
SOUTHERN ALASKA (2)				
<AGS-P>.				
PMS	0.37	49 iP	50 04.43	-0.7
		iS	50 11.60	
SLKM	0.50	185 iP	50 05.78	-0.8
		eS	50 14.03	
PTE	0.56	104 iP	50 06.80	-0.5
		iS	50 15.53	
NKA	0.60	244 eP	50 08.53	0.8
PWA	0.66	11 iP	50 07.71	-0.8
PLRM	0.76	39 iP	50 08.95	-0.9
		iS	50 20.44	
PME	0.82	40 iP	50 10.03	-0.6
		iS	50 22.36	
PWL	0.89	99 iP	50 11.24	-0.4
		iS	50 24.17	
KNK	0.91	63 iP	50 11.52	-0.4
		eS	50 24.45	
SPU	0.95	282 iP	50 11.70	-0.7
GHO	0.97	37 iP	50 12.15	-0.6
		iS	50 24.26	
CRP	1.01	286 iP	50 12.98	-0.5
		eS	50 26.44	
NNL	1.12	211 iP	50 15.40	0.6
		iS	50 30.20	
SML	1.18	46 iP	50 15.22	-0.5
		eS	50 31.45	
RDT	1.19	250 iP	50 15.07	-0.8
		iS	50 31.13	
KNIM	1.35	118 iP	50 16.41	-1.6
		iS	50 32.75	
GLI	1.49	94 iP	50 18.28	-1.7
		iS	50 36.72	

0.4s 1.00nm 3.5mb
 NB2 21.81 348 P 01 25.20 -1.4
 0.6s 1.80nm 3.7mb
 SUF 23.00 7 iP 01 37.80 -0.5
 YKA 71.65 340 P 07 54.10 -1.9
 S.D. = 1.4 on 37 of 44 obs.

JAN 03, 1989 12h 22m 47.36± 1.01s
 43.404 N ± 6.7km 5.421 E ± 7.2km
 DEPTH = 10.0km (geophysicist)
 NEAR SOUTH COAST OF FRANCE (379)
 MD 2.8 (STR).

GELF 0.02 167 Pg 22 48.77 -0.6
 TREF 0.22 353 Pg 22 51.23 -0.9
 PUYF 0.24 58 Pg 22 50.91 -1.6
 PRAF 0.44 336 Pg 22 56.12 -0.2
 Sg 23 05.67
 VILF 0.50 25 Pg 22 56.43 -1.0
 TAVF 0.51 65 Pg 22 56.67 -1.0
 Sg 23 04.22
 CALN 1.12 71 Pg 23 08.57 0.1
 Sg 23 24.37
 MVIF 1.35 68 Pn 23 11.95 -0.3
 Sg 23 30.82
 TOUF 1.46 65 Pn 23 14.12 0.2
 Sg 23 33.21
 AURF 1.47 70 Pn 23 13.69 -0.2
 FOUF 1.49 41 P 23 14.60 0.4
 (Sg) 23 32.67
 AUTN 1.57 67 Pn 23 15.74 0.2
 Sg 23 37.82
 STV 1.61 58 P 23 16.20 0.2
 S 23 33.66
 PZZ 1.64 47 P 23 17.91 1.5
 S 23 36.63
 SAOF 1.65 69 Pn 23 16.41 -0.2
 RRL 1.81 32 P 23 21.67 2.7
 IMI 1.86 73 P 23 19.51 -0.1
 ROB 1.98 62 P 23 21.88 0.5
 FIN 2.17 67 P 23 24.25 0.1
 RSP 2.19 36 P 23 28.00 3.6X
 LSD 2.40 31 P 23 31.39 3.8X
 S.D. = 1.0 on 19 of 21 obs.

% JAN 03, 1989 13h 09m 00.72± 2.14s
 17.849 N ± 20.3km 66.704 W ± 5.6km
 DEPTH = 10.0km (geophysicist)
 PUERTO RICO REGION (90)

MGP 0.40 293 P 09 08.90 0.0
 SJG 0.59 64 iP 09 12.80 0.1
 S 09 21.30
 APR 0.61 358 P 09 13.00 0.1
 S 09 22.20
 CSB 0.68 50 P 09 14.20 0.0
 MCP 0.69 326 P 09 14.20 -0.1
 LPR 0.92 60 P 09 18.10 -0.2
 S 09 21.60
 S.D. = 0.2 on 6 of 6 obs.

? JAN 03, 1989 14h 15m 32.17± 6.00s
 58.086 N ± 46.6km 6.317 E ± 16.7km
 DEPTH = 0.0km (geophysicist)
 SOUTHERN NORWAY (535)
 MD 2.5 (BER). Probable
 explosion.

KMY 1.26 334 eP 15 56.80 0.3
 eS 16 11.50
 eSg 16 14.10
 BLS1 1.34 11 iP 15 57.60 -0.2
 eS 16 11.90
 ODD1 1.84 5 eP 16 05.90 0.6
 eS 16 27.40
 SUE 3.08 346 eP 16 22.30 -0.7
 eS 16 55.30
 eSg 17 05.00
 HYA 3.09 359 iP 16 23.10 0.0
 eS 16 59.70
 NRA0 3.77 43 iPc 16 32.80 0.0
 iS 17 13.90
 iSg 17 27.80
 S.D. = 0.6 on 6 of 6 obs.

? JAN 03, 1989 15h 00m 22.93± 6.82s
 9.982 S ± 86.9km 127.196 E ± 16.9km

DEPTH = 362.1 ± 30.8 km
 4.2mb (3 obs.)

TIMOR SEA (290)

MTN 4.79 127 iPd 01 41.50 0.1
 0.2s 69.00nm
 eS 02 54.00
 WB5 12.03 146 eP 03 06.00 -0.2
 eS 06 25.50
 WRA 12.07 146 Pd 03 06.30 -0.3
 0.2s 1.50nm 4.1mb
 MBL 13.18 212 eP 03 20.00 0.3
 ASPA 15.04 156 eP 03 40.60 0.6
 0.3s 12.00nm 4.7mb
 WARB 16.12 182 iPd 03 45.90 -5.5X
 0.3s 2.00nm 3.9mb
 MEKA 18.46 205 eP 04 14.70 -0.4
 S.D. = 0.6 on 6 of 7 obs.

* JAN 03, 1989 15h 26m 36.74± 1.65s
 32.712 S ± 7.8km 72.004 W ± 16.3km
 DEPTH = 33.0km (normal)
 OFF COAST OF CENTRAL CHILE (134)

ROCH 0.87 108 iP 26 52.00 -0.9
 iS 27 03.50
 PEL 1.19 112 iPd 26 57.40 0.2
 LNV 1.34 158 iPc 26 59.00 -0.2
 iS 27 16.90
 SAN 1.35 124 iP 27 00.00 0.6
 iS 27 19.00
 PCH 1.54 126 iP 27 03.00 0.7
 iS 27 25.50
 MDZ 2.66 95 eP 26 55.70 -22.6X
 iS 27 50.10
 RTCB 2.98 67 ePc 27 23.50 0.6
 S 28 06.00
 RTLL 3.30 66 ePc 27 29.00 1.6
 RTRS 3.34 41 ePc 27 28.00 0.2
 S 28 15.00
 CFA 3.38 72 ePd 27 28.90 0.4
 TCA 6.44 80 ePd 28 09.00 -2.8
 (S) 29 21.80
 CNCB 16.25 14 eP 30 24.00 -0.7
 LPB 16.49 13 (P) 30 28.00 0.3
 ZOBO 16.74 13 eP 30 27.00 -4.0X
 Z 24s 0.30um 3.7mszX
 LR 33 36.00
 S.D. = 1.2 on 12 of 14 obs.

JAN 03, 1989 16h 52m 19.22± 0.22s
 35.626 N ± 2.6km 11.630 E ± 2.0km
 DEPTH = 10.0km (geophysicist)
 5.0mb (37 obs.) 4.7msz (2 obs.)

TUNISIA (397)

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 9S, 13C

Centroid Location:

Origin Time 16:52:24.4 2.1

Lat 35.79N 0.17 Lon 11.80E 0.18

Dep 15.0 FIX Half-duration 1.5

Moment Tensor: Scale 10¹⁶ Nm

Mrr=-1.18 0.57 Mtt= 4.54 0.93

Mff=-3.36 0.65 Mrt= 0.00 0.00

Mrf= 0.00 0.00 Mtf=-3.75 0.56

Principal Axes:

T Voi= 6.03 Plg= 0 Azm=202

N -1.18 90 180

P -4.85 0 112

Best Double Couple: Mo=5.4*10¹⁶

NP1: Strike=247 Dip=90 Slip= 180

NP2: 337 90 0

PTS 1.22 14 P 52 41.20 -0.6
 CVT 2.25 24 eP 52 57.50 0.5
 FAI 2.33 44 P 52 59.20 1.0
 eSn 53 32.00
 LVI 2.42 13 P 52 59.60 0.2
 ERC 2.53 17 iP 53 00.70 -0.3
 MCT 2.57 38 eP 53 02.80 1.1
 MEU 3.04 60 iP 53 07.20 -1.2
 GIB 3.04 38 P 53 08.20 -0.2
 USI 3.31 21 Pc 53 11.70 -0.4
 eSn 53 54.60
 MNO 3.37 46 iP 53 14.10 1.0
 eS 53 54.30

LPI 3.89 42 eP 53 20.40 0.0
 ATN 3.98 49 eP 53 21.80 0.2
 MSI 4.06 50 P 53 23.40 0.7
 GMB 4.24 52 eP 53 24.50 -0.9
 eS 54 15.00
 SOI 4.31 54 Pc 53 26.20 0.0
 MGR 5.47 33 Pc 53 41.90 -0.8
 TDS 5.49 41 P 53 45.70 2.7
 TDS 5.49 41 P 53 41.40 -1.6
 SGO 5.71 29 Pd 53 46.70 0.6
 RFI 5.96 17 P 53 51.10 1.6
 RDP 6.18 8 P 53 53.90 1.1
 RMP 6.23 7 Pc 53 54.70 1.3
 SDI 6.31 15 Pd 53 55.80 1.2
 DUI 6.42 19 P 53 56.30 0.1
 AZI 6.51 12 P 53 57.50 0.2
 MAO 6.79 357 Pc 54 02.40 1.1
 CVF 7.26 344 Pn 54 07.80 -0.1
 Sn 55 24.80
 ALP 7.30 11 e(P) 54 11.92 3.3X
 ASS 7.48 6 P 54 11.70 0.7
 VLS 7.62 68 eP 54 09.60 -3.3X
 CIO 7.65 8 eP 54 16.56 3.1X
 ARV 7.93 7 P 54 17.00 -0.2
 CRE 8.00 2 P 54 20.60 2.3
 ESEL 8.06 303 eP 54 18.50 -0.7
 PII 8.13 354 Pd 54 19.80 -0.2
 FIR 8.15 358 ePn 54 25.00 4.7X
 PGD 8.24 0 P 54 22.50 0.7
 SFI 8.29 1 P 54 22.60 0.4
 BDI 8.46 355 Pd 54 24.40 -0.4
 MME 8.59 356 P 54 26.30 -0.4
 LMR 8.65 334 Pn 54 25.20 -2.1
 Sn 55 55.00
 IMI 8.76 342 P 54 27.68 -1.2
 FRF 8.81 336 Pn 54 27.00 -2.4
 Sn 55 56.80
 LRG 8.81 334 Pn 54 28.00 -1.5
 Sn 55 59.00
 SBF 8.84 340 Pn 54 28.20 -1.7
 Sn 56 00.50
 AURF 8.89 339 P 54 29.71 -1.0
 CALN 8.90 337 P 54 29.68 -1.2
 SAOF 8.92 341 P 54 29.71 -1.3
 MVIF 8.95 339 P 54 29.92 -1.6
 AUTN 8.96 340 P 54 30.72 -1.1
 FIN 8.97 344 P 54 31.07 -0.6
 GEN 9.02 348 P 54 31.68 -0.7
 TOUF 9.03 339 P 54 31.59 -1.1
 OHR 9.04 50 eP 54 32.00 -0.8
 TAVF 9.06 333 P 54 32.18 -0.8
 GELF 9.11 330 P 54 31.88 -1.7
 PUYF 9.12 332 P 54 32.23 -1.6
 ROB 9.13 343 P 54 33.12 -0.8
 CKI 9.16 345 P 54 33.90 -0.4
 STV 9.22 340 P 54 34.97 -0.3
 KZN 9.27 57 eP 54 35.00 -1.0
 BOB 9.28 350 Pd 54 37.20 1.1
 TREF 9.33 331 P 54 35.93 -0.7
 VILF 9.39 333 P 54 36.67 -0.9
 DOI 9.48 341 P 54 38.90 0.1
 PZZ 9.52 340 P 54 39.07 -0.4
 PRAF 9.56 331 P 54 37.93 -2.0
 FOUF 9.64 339 P 54 38.90 -1.9
 e 54 41.36
 LIT 9.68 59 eP 54 36.60 -4.9X
 NEO 9.92 65 eP 54 45.50 0.6
 SKO 9.93 47 iP 54 45.00 0.0
 Z 11s 2.14um
 N 12s 2.52um
 E 12s 2.80um
 eS 56 32.00
 LR 00 18.00
 RRL 9.99 340 P 54 46.97 0.9
 GRG 10.00 55 eP 54 42.60 -3.3X
 SAL 10.01 356 P 54 46.10 0.1
 ACU 10.04 290 eP 54 45.50 -1.1
 RSP 10.08 342 P 54 46.56 -0.6
 BNI 10.14 340 Pd 54 47.20 -0.8
 EBR 10.18 304 ePn 54 50.00 1.6
 eSg 56 38.00
 TRI 10.20 8 eP 54 56.80 8.1X
 e 58 24.00
 THE 10.23 57 eP 54 46.40 -2.7
 EROQ 10.24 304 eP 54 49.10 -0.1
 MDI 10.24 352 P 54 49.60 0.4
 VBY 10.24 14 ePc 54 52.30 3.0X

03d 16h																				
VAY	10.29	53	iP	54	47.50	-2.4	GRF	14.06	359	iPnc	55	42.20	1.7		LR	05	30.00			
CEY	10.32	11	eP	54	51.50	1.1	Z	20s		1.30um				NRA0	25.13	360	P	57	45.60	0.1
ORX	10.37	346	P	54	51.28	0.2				e	55	52.00		NB2	25.43	360	P	57	48.60	0.2
LSD	10.39	342	eP	54	53.13	1.6	PRU	14.51	8	eP	55	51.40	5.0X		0.7s	23.90nm				5.0mb
KNT	10.43	55	eP	54	49.60	-2.2	Z	13s		2.70um			5.2MszX	MSL	25.46	79	ePd	57	50.00	1.2
PLG	10.46	60	eP	54	50.00	-2.3	N	18s		2.50um					e			58	03.00	
VAI	10.46	349	Pd	54	52.40	0.3	E	14s		2.20um					e			02	32.00	
PAIG	10.46	62	eP	54	44.10	-8.1X				e	55	54.20		TBT	25.89	263	ePKP	57	58.30	5.4X
LPG	10.53	341	Pn	54	55.00	1.5				S	59	48.00		NUR	26.28	15	iP	57	57.00	0.8
VOY	10.54	9	eP	54	55.90	2.6	KSL	14.57	83	eP	55	45.50	-1.8	Z	19s		1.20um			4.5Msz
LPL	10.56	341	Pn	54	55.60	1.8	WLF	14.59	346	P	55	52.80	5.4X		LR			09	40.00	
SOH	10.58	57	eP	54	51.80	-2.1				ic	55	54.70		BHD	27.05	85	ePd	58	03.50	0.0
LJU	10.64	11	eP	54	56.00	1.4	MLR	14.66	43	iPc	55	59.00	10.5X	SLY	27.46	80	eP	58	11.50	4.3X
ZAG	10.70	17	eP	54	58.50	3.0X	TNS	14.77	352	ePc	55	53.20	3.3X	TAB	27.78	75	eP	58	11.00	0.7
PTJ	10.77	16	e(P)	54	55.80	-0.8	ISR	14.79	46	ePc	55	54.00	3.8X	SUF	28.59	14	iP	58	17.20	0.0
SRS	10.87	56	eP	54	56.10	-1.8	ELL	14.81	80	iP	55	49.10	-1.4		0.7s	19.10nm				5.0mb
MMB	11.18	54	iPc	55	02.00	-0.1	SPC	14.96	22	eP	55	58.00	5.5X	KJF	30.23	14	iP	58	30.80	-1.1
BEO	11.39	34	eP	55	10.50	5.6X	MOX	15.01	360	eP	55	55.00	2.0		0.8s	33.70nm				5.2mb
EPF	11.44	314	Pn	55	04.40	-1.3				1.1s	22.00nm		4.5mb	KOGH	31.36	203	eP	58	42.00	-0.3
KBA	11.51	6	iPc	55	09.20	2.4	Z	14s		5.50um					e			08	59.00	
	1.3s		26.90nm			5.4mb	N	14s		2.70um				BNG	31.69	167	iPd	58	45.50	0.3
			i	55	17.50		E	12s		2.80um					1.0s	20.00nm				5.0mb
			i(PP)	55	22.40					i	56	02.00			id			58	55.10	
			i	56	14.30		BRD	15.30	45	eP	56	01.00	4.2X	TIC	32.65	212	P	58	52.56	-1.0
			i	56	21.30		VR1	15.32	44	ePc	56	02.00	4.9X	KIC	32.78	211	Pc	58	53.80	-0.9
			i	56	41.00		BRG	15.33	6	eP	56	04.50	7.4X		1.0s	30.00nm				5.2mb
			e(SS)	58	21.00					1.0s	44.00nm		4.8mb	SOD	32.94	11	iP	58	56.90	1.3
TAF	11.52	270	iPc	55	03.00	-3.8X	DOU	15.34	343	Pc	56	00.10	2.8	LIC	33.03	212	Pc	58	55.94	-0.9
			i	55	19.00		BCK	15.35	78	eP	55	55.00	-2.6		1.0s	72.00nm				5.6mb
			i	55	37.00		KSP	15.58	11	eP	56	03.30	2.9X	KEV	35.21	9	eP	58	58.00	-17.1X
			i	00	20.00					1.2s	51.00nm		4.7mb	MAIO	38.43	75	iPd	59	43.40	0.6
EVIA	11.68	289	eP	55	09.30	0.3	KRA	15.64	20	eP	56	04.10	3.0X	DAG	43.44	350	eP	00	24.40	1.1
CAF	11.81	325	Pn	55	08.00	-2.6				id	56	30.50		QUE	46.25	80	eP	00	47.00	0.3
ETOR	11.94	300	eP	55	13.30	0.7	ENN	15.69	346	eP	56	04.50	2.8	GDH	48.41	334	ePd	01	03.00	0.1
LPO	12.06	322	Pn	55	12.80	-1.2				1.0s	101.00nm		5.0mb		0.5s	28.17nm				5.6mb
PLD	12.06	54	eP	55	14.00	0.0	CLL	15.71	3	eP	56	05.00	3.0X	KMZ	50.63	162	iP	01	21.00	0.3
RDO	12.22	59	eP	55	13.00	-3.2X				1.5s	220.00nm		5.2mb	ALE	52.81	351	eP	01	38.50	2.1
AFC	12.33	282	eP	55	19.00	1.2	SNF	15.80	343	P	56	06.60	3.4X		0.6s	4.00nm				4.5mb
KDZ	12.34	57	eP	55	13.00	-4.8X	AVE	15.88	267	iP	56	09.90		PTZ	53.00	156	iP	01	40.00	1.5
RJF	12.35	325	Pn	55	15.50	-2.4				e	56	09.90		LSZ	53.00	160	iP	01	39.50	1.0
CRT	12.37	282	eP	55	20.00	1.7	IAS	16.59	41	eP	56	15.00	1.7	FRB	54.46	327	eP	01	47.00	-1.6
APHE	12.43	281	iP	55	18.50	-0.7	WTS	16.72	350	eP	56	18.50	3.6X	NDI	55.06	77	eP	01	52.00	-1.5
LFF	12.47	322	Pn	55	18.50	-0.9				1.1s	101.00nm		4.9mb	SCH	55.42	316	eP	01	54.00	-1.8
SMF	12.47	334	Pn	55	19.20	-0.3	PTO	16.78	295	eP	56	17.30	1.6	WMO	57.17	57	eP	02	08.00	-0.6
ASMO	12.49	282	iP	55	20.50	0.5	LIS	16.84	287	iPd	56	18.90	2.3	WIN	58.10	174	iPd	02	15.60	0.2
BZS	12.52	34	eP	55	20.50	0.3	PPCY	16.94	86	eP	56	21.00	3.2X		0.9s	8.40nm				4.8mb
ACHM	12.55	281	eP	55	22.00	1.3	BBTK	17.23	70	iPc	56	22.50	0.9	GKN	61.22	75	P	02	35.80	-1.1
DIM	12.59	55	eP	55	19.00	-2.1	WIT	17.54	350	eP	56	29.00	3.8X		0.8s	18.00nm				5.3mb
SOP	12.59	15	eP	55	22.00	0.9	HLW	17.54	104	eP	56	26.00	0.6	HYB	61.49	88	eP	02	37.00	-1.7
MAF	12.60	330	Pn	55	19.80	-1.4	CSS	17.73	86	eP	56	23.50	-4.2X	DMN	61.77	75	P	02	40.00	-0.8
KAP	12.66	86	eP	55	21.20	-0.9	IKL	17.87	82	iP	56	31.50	2.0		0.7s	26.00nm				5.5mb
ATEJ	12.69	280	iP	55	24.00	1.3	KAS	18.23	65	eP	56	37.00	3.0X	KKN	61.83	75	P	02	40.40	-0.7
LBF	12.71	336	Pn	55	23.60	0.8	KVT	19.88	67	iP	56	54.10	0.6	PKI	62.03	75	P	02	41.60	-1.0
BSF	12.72	345	Pn	55	23.50	0.6	HRI	20.01	90	iPd	56	55.00	0.0		0.6s	4.00nm				4.8mb
BGF	12.76	332	Pn	55	22.00	-1.4	COP	20.07	1	iPd	56	56.90	1.6	GUN	62.24	74	P	02	43.40	-0.7
AVF	12.77	333	Pn	55	23.00	-0.4				1.0s	92.00nm		5.1mb		0.8s	38.00nm				5.6mb
ALOJ	12.77	281	iP	55	24.00	0.3	DSI	20.18	95	eP	00	49.00		GBA	62.60	93	Pc	02	44.40	-1.7
AAPN	12.79	282	iP	55	24.00	0.0	MBH	20.40	100	iP	56	59.50	0.6		1.2s	9.70nm				4.9mb
TCF	12.80	329	Pn	55	23.20	-0.7	YRH	20.69	331	iPd	57	02.30	0.5	SLR	63.03	163	e(P)	02	41.50	-7.3X
SSF	12.94	334	Pn	55	25.60	-0.2				0.9s	154.00nm		5.4mb	PRY	63.99	164	eP	02	43.50	-11.7X
HAU	12.98	344	Pn	55	26.60	0.3	HQL	20.73	101	ePc	57	03.30	0.9	MBC	64.21	348	eP	02	58.00	2.1
EGR1	13.00	307	eP	55	26.80	0.2	MUD	20.91	356	iPd	57	03.50	-0.4	ITR	64.58	237	eP	02	53.90	-5.2X
LOR	13.00	336	Pn	55	27.00	0.4				0.6s	23.00nm		4.7mb	GTA	67.25	57	Pd	03	15.80	-0.4
PVL	13.02	50	iPc	55	25.00	-1.8	ECP	20.93	328	eP	57	12.80	8.6X	SHL	68.07	74	eP	03	20.10	-1.4
LSF	13.06	327	Pn	55	26.00	-1.4				1.0s	186.00nm		5.4mb	CVL	69.25	302	P	03	28.00	-0.4
VKA	13.10	14	eP	55	28.50	0.6	BADA	21.01	103	iPc	57	05.50	0.3	LZH	71.67	59	eP	03	43.50	0.1
Z	12s		3.50um				ETA	21.23	329	iPd	57	07.40	0.1		2.0s	0.05nm				2.3mb X
			i	55	30.20					0.9s	163.00nm		5.4mb	RSON	71.82	320	P	03	42.00	-1.8
			iPP	55	38.80		AYN	21.65	101	eP	57	13.30	1.5	JSC	73.08	300	P	03	51.70	0.2
			e	58	03.00		AGMR	21.76	118	iPc	57	14.50	1.7	YKA	73.14	337	P	03	52.60	1.2
			LR	01	36.00					0.1s	560.00nm		6.9mb X	INK	73.16	347	eP	03	52.00	0.6
TOL	13.11	294	iPd	55	27.50	-0.6	AKSR	22.05	117	iPc	57	17.50	1.8	BTO	73.42	52	eP	03	50.00	-3.5X
	1.0s		100.00nm			5.9mb				0.1s	125.00nm		6.3mb X	FFC	73.56	326	eP	03	44.00	-9.9X
			eS	57	50.00		EKA	22.18	337	P	57	18.00	1.2		0.8s	11.00nm				5.0mb
SRO	13.15	20	eP	55	32.00	3.5X				1.0s	18.60nm		4.5mb	HHC	74.26	51	eP	03	59.10	0.7
CDF	13.18	347	Pn	55	29.00	0.0	CFTV	22.92	259	iPKP	57	28.60	4.2X	CD2	74.					

CHTO 77.17 76 eP 04 04.20 -10.9X
 FVM 77.24 308 P 04 14.00 -1.2
 BJI 77.61 50 eP 04 17.00 -0.2
 IMA 78.00 354 P 04 22.00 3.0X
 0.9s 7.64nm 4.8mb
 FBA 78.51 351 P 04 32.40 10.7X
 GYA 78.88 66 P 04 24.40 -0.2
 OLY 79.36 306 P 04 26.50 -0.4
 EDM 79.48 330 eP 04 27.50 0.2
 TIA 80.50 52 eP 04 33.00 0.0
 SES 80.56 327 eP 04 34.00 0.9
 CN2 80.69 42 Pc 04 34.00 0.2
 RLO 81.27 308 e(P) 04 36.70 -0.3
 TUL 81.92 309 eP 04 39.70 -0.7
 1.0s 13.30nm 5.0mb
 VVO 82.24 308 eP 04 42.50 0.4
 SIO 82.35 309 e(P) 04 42.80 0.2
 MEO 84.40 309 eP 04 53.70 0.5
 LRM 84.53 324 eP 04 55.30 1.3
 IMW 85.20 322 P 04 59.00 1.6
 GOL 85.21 316 P 04 58.50 1.1
 BW06 85.31 321 P 04 58.00 0.1
 1.0s 31.25nm 5.5mb
 ALQ 89.11 314 eP 05 17.00 0.5
 1.2s 6.25nm 4.8mb
 BWA 144.80 101 ePKP 11 57.10 -0.9
 CAN 145.48 102 ePKP 11 59.50 0.3
 S.D. = 1.2 on 231 of 280 obs.

JAN 03, 1989 17h 00m 33.13±1.55s
 4.441 N ±13.8km 95.061 E ±13.5km
 DEPTH = 73.4 ± 14.0 km
 3.8mb (3 obs.)

NORTHERN SUMATERA (706)

BSI 1.07 13 ePc 00 52.50 -0.5
 eS 01 06.50
 PSI 4.23 114 eP 01 37.00 0.5
 IPM 5.95 88 ePd 01 59.90 -0.7
 0.3s 12.70nm 4.7mb X
 e 03 07.20
 NNT 9.32 29 eP 02 48.00 0.9
 CHG 14.78 15 eP 04 04.10 4.4X
 CHTO 14.78 15 eP 04 15.10 15.5X
 1.2s 6.60nm
 GBA 19.63 299 P 04 59.00 0.4
 0.8s 3.30nm 3.7mb
 WB5 45.57 123 eP 08 48.20 0.4
 WRA 45.58 123 Pc 08 47.60 -0.3
 0.3s 0.40nm 3.8mb
 SUF 76.49 334 eP 12 16.00 -0.5
 SLL 82.08 330 eP 12 46.40 -0.3
 0.5s 1.60nm 4.2mb
 S.D. = 0.7 on 9 of 11 obs.

& JAN 03, 1989 17h 08m 35.00s
 35.630 N 11.630 E
 DEPTH = 10.0km (geophysicist)

TUNISIA (397)

<SPEC>. Held to mainshock location.

PTS 1.21 14 P 08 57.50 0.0
 eSn 09 15.70
 CVT 2.25 24 P 09 12.60 -0.2
 FAI 2.33 45 Pd 09 14.40 0.5
 LVI 2.42 13 P 09 16.20 1.0
 ERC 2.52 17 eP 09 16.00 -0.7
 MCT 2.57 38 (P) 09 20.80 3.3
 PZI 3.00 61 P 09 23.10 -0.4
 GIB 3.04 39 P 09 24.20 0.1
 MEU 3.04 60 eP 09 22.20 -1.9
 eS 09 57.50
 MNO 3.37 46 P 09 29.60 0.7
 ATN 3.98 49 eP 09 37.30 0.0
 CLL 15.71 3 eP 12 25.00 7.3
 12 obs. associated

JAN 03, 1989 17h 10m 46.08±0.39s
 32.433 N ± 3.4km 35.482 E ± 5.0km
 DEPTH = 10.0km (geophysicist)

DEAD SEA REGION (373)

ML 3.9 (JER). Felt (V) in ports of the Jordan Valley. Also felt at Haifa, Israel.

MML 0.06 272 iPd 10 50.30 1.9

GLH 0.31 28 iPc 10 53.80 1.2
 BURJ 0.32 133 Pc 10 53.70 0.9
 ATZ 0.43 335 iPc 10 55.40 0.6
 JARJ 0.44 116 Pd 10 55.30 0.3
 CRI 0.44 304 iPc 10 55.80 0.6
 eS 11 02.50
 SALJ 0.46 158 Pc 10 55.70 0.3
 KFNJ 0.59 164 Pc 10 58.20 0.2
 MASJ 0.73 164 Pd 11 00.70 0.2
 HRI 0.86 14 iPc 11 02.50 -0.2
 MKRJ 0.89 171 Pd 11 03.40 0.2
 BHL 1.47 6 Pc 11 12.00 -0.7
 S 11 33.00
 SHBJ 1.78 94 Pd 11 16.20 -0.9
 CSS 3.10 325 eP 11 34.50 -1.4
 HQL 3.17 187 eP 11 35.30 -1.7
 eS 12 20.70
 SRFA 3.50 184 eP 11 41.30 -0.3
 eS 12 33.00
 AYN 3.58 173 eP 11 42.70 0.0
 eS 12 33.30
 PPCY 3.58 314 eP 11 42.50 -0.3
 IKL 4.08 339 ePn 11 48.50 -1.3
 S.D. = 1.0 on 19 of 19 obs.

% JAN 03, 1989 17h 21m 09.56±0.86s
 40.799 N ± 4.9km 27.953 E ± 8.1km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

BNT 0.44 183 iPq 21 18.50 -0.1
 EDC 0.46 189 iPq 21 18.50 -0.4
 eSq 21 25.50
 CTT 0.50 46 iPq 21 19.80 0.1
 iSq 21 28.10
 KCT 0.63 151 iPq 21 21.50 -0.7
 eSq 21 32.00
 ISK 0.88 72 iPq 21 27.10 0.7
 DMK 1.03 352 iPq 21 29.00 -0.1
 iSq 21 42.00
 YLV 1.10 102 iPn 21 30.00 -0.3
 DST 1.30 156 iPn 21 35.20 1.5
 HRT 1.30 88 ePn 21 33.00 -0.7
 S.D. = 0.8 on 9 of 9 obs.

* JAN 03, 1989 18h 19m 25.26±2.49s
 35.690 N ±19.4km 11.688 E ±12.6km
 DEPTH = 10.0km (geophysicist)
 4.0mb (3 obs.)

TUNISIA (397)

PTS 1.14 12 P 19 45.90 -0.7
 CVT 2.17 24 P 20 01.80 -0.1
 FAI 2.25 45 Pc 20 04.60 1.5
 LVI 2.35 13 P 20 04.80 0.3
 ERC 2.45 17 Pd 20 05.60 -0.4
 MCT 2.49 38 P 20 07.90 1.3
 PZI 2.93 62 P 20 12.43 -0.3
 GIB 2.96 39 Pc 20 13.50 0.2
 MEU 2.97 61 iP 20 11.90 -1.5
 eS 20 46.80
 USI 3.24 21 P 20 16.70 -0.4
 MNO 3.29 46 P 20 18.90 0.8
 ATN 3.90 50 P 20 26.90 0.3
 GMB 4.16 52 P 20 29.95 -0.4
 SOL 4.23 55 Pd 20 31.00 -0.2
 MGR 5.39 33 P 20 46.80 -0.8
 KHC 13.50 5 eP 22 44.80 5.5X
 MLR 14.58 43 ePc 23 01.00 7.5X
 MOX 14.95 360 e(P) 23 05.00 6.8X
 BRG 15.26 5 e(P) 23 15.90 13.6X
 1.2s 15.00nm
 KRA 15.56 20 eP 23 13.80 7.6X
 CLL 15.64 3 e(P) 23 14.00 6.8X
 1.3s 20.00nm 4.2mb
 HFS 24.49 2 eP 24 45.90 0.5
 0.5s 1.60nm 3.9mb
 NB2 25.37 359 P 24 53.60 -0.3
 0.8s 3.00nm 4.0mb
 S.D. = 0.8 on 17 of 23 obs.

* JAN 03, 1989 19h 35m 18.16±1.04s
 31.416 S ±10.8km 68.571 W ± 7.4km
 DEPTH = 113.5 ± 12.3 km
 SAN JUAN PROVINCE, ARGENTINA (137)

RTLL 0.12 45 iP 35 33.90 -0.4

RTCB 0.21 250 iPd 35 34.40 -0.2
 S 35 45.50
 CFA 0.34 124 iPd 35 35.20 0.4
 RTCV 0.44 176 iP 35 30.00 -5.3X
 RTRS 1.46 328 iPc 35 45.00 0.0
 MDZ 1.48 189 iP 35 40.40 -5.0X
 PEL 2.49 226 eP 35 59.00 0.8
 iS 36 30.00
 ROCH 2.59 232 iP 36 00.00 0.3
 PCH 2.74 216 eP 36 04.50 2.9X
 TCA 3.40 90 ePd 36 10.80 0.3
 (S) 36 40.50
 LNV 3.49 223 iPc 36 10.60 -0.9
 VBA 8.56 142 e(P) 37 20.50 -0.3
 S.D. = 0.7 on 9 of 12 obs.

? JAN 03, 1989 21h 39m 13.70±4.72s
 45.707 N ±34.1km 26.265 E ±26.7km
 DEPTH = 135.4 ± 46.9 km

ROMANIA (358)

MLR 0.31 226 iPc 39 32.50 0.2
 VRI 0.36 63 iPc 39 32.00 -0.3
 BRD 0.58 109 iPc 39 34.50 0.4
 ISR 0.60 161 ePd 39 34.00 -0.3
 BIR 1.10 59 eP 39 53.00 14.7X
 BZS 3.26 270 eP 40 04.50 0.0
 S.D. = 0.6 on 5 of 6 obs.

JAN 03, 1989 22h 09m 41.13±1.47s
 54.574 N ±14.4km 160.969 W ± 4.8km
 DEPTH = 33.0km (normal)

ALASKA PENINSULA (12)

SQF 0.69 20 eP 09 54.08 -0.3
 eS 10 02.76
 NGI 0.70 48 iPc 09 54.38 -0.2
 DLG 0.76 319 iPd 09 55.04 -0.3
 SASA 0.81 19 eP 09 55.88 -0.2
 eS 10 05.66
 CNBA 0.84 72 eP 09 56.57 0.1
 DRRA 0.84 295 iPd 09 56.40 -0.1
 PVV 0.93 330 iPd 09 57.77 -0.1
 PS4 0.94 327 iPd 09 57.91 -0.1
 SGB 1.02 17 ePd 09 58.92 -0.2
 eS 10 11.12
 PN6 1.03 329 eP 09 59.95 0.5
 BLHA 1.29 331 eP 10 03.29 0.3
 eS 10 19.31
 IVF 1.56 31 eP 10 07.43 0.6
 eS 10 26.08
 S.D. = 0.3 on 12 of 12 obs.

JAN 03, 1989 22h 35m 37.57±0.48s
 3.924 S ± 4.7km 128.388 E ± 7.3km
 DEPTH = 134.4 ± 5.1 km
 4.8mb (15 obs.)

CERAM (272)

AAI 0.30 321 iPc 35 57.50 -0.2
 PCI 9.05 289 eP 37 51.00 4.5X
 eS 39 39.50
 MTN 9.27 163 iP 37 50.00 0.6
 eS 39 30.00
 KNA 11.76 178 eP 38 22.00 -0.2
 TZZ 12.86 96 iPd 38 35.00 -1.7
 TSM 13.11 308 ePc 38 44.50 4.7X
 WB5 16.90 160 eP 39 27.10 -0.4
 eS 42 34.50
 WRA 16.95 160 Pc 39 27.90 -0.2
 0.2s 4.80nm 4.4mb
 MBL 19.04 205 iPc 39 51.30 -0.6
 0.4s 55.00nm 5.2mb
 PMG 19.41 107 e(P) 39 58.50 2.7X
 QIS 19.81 147 iPc 39 58.80 -1.1
 e 40 03.00
 eS 43 32.00
 ASPA 20.34 165 eP 40 05.20 -0.1
 eS 43 41.70
 WARB 22.20 184 eP 40 15.70 -8.0X
 CTA 23.69 134 iPc 40 40.30 2.1
 0.9s 16.81nm 4.5mb
 MEKA 24.45 202 eP 40 45.00 -0.4
 FORR 26.78 181 eP 41 06.40 -0.4
 COOL 27.67 193 eP 41 14.00 -0.9
 MRWA 27.77 204 eP 41 15.70 0.0
 KLB 29.28 199 eP 41 28.00 -1.3

03d 22h

PSI 30.17 282 iPc 41 37.20 -0.1
0.6s 19.60nm 5.0mb

STK 30.45 157 eP 41 39.00 -0.6
NAWO 30.68 199 eP 41 42.00 0.4
ADE 32.34 164 iPc 41 56.70 0.6
1.2s 159.38nm 5.7mb

BFD 35.55 160 iPc 42 24.20 0.7
BWA 35.60 151 eP 42 25.70 1.7
CAN 36.60 151 eP 42 33.30 0.8
CHG 36.76 309 iPc 42 35.70 1.8
0.6s 8.00nm 4.7mb

CHTO 36.76 309 iP 42 35.90 2.0
0.7s 8.10nm 4.6mb
pP 44 55.10

MAT 41.29 12 eP 43 10.00 -1.2
1.0s 20.00nm 4.8mb

XAN 41.99 336 P 43 16.60 -0.5
BJI 45.17 347 eP 43 41.50 -0.9
LZH 45.95 332 eP 43 49.50 0.6
1.0s 0.04nm 2.1mb X

GTA 50.52 331 P 44 24.00 -0.2
pCp 45 40.80

GUN 51.74 310 Pc 44 34.00 0.1
0.6s 29.00nm 5.3mb

PKI 51.93 310 Pc 44 35.00 -0.3
0.5s 4.00nm 4.5mb

KKN 52.14 310 Pc 44 36.60 -0.1
0.5s 9.00nm 4.9mb

DMN 52.18 310 Pc 44 37.20 0.1
0.5s 11.00nm 4.9mb

GKN 52.74 310 Pc 44 41.00 0.0
0.6s 21.00nm 5.2mb

GBA 53.47 290 Pd 44 44.70 -1.6
0.6s 4.50nm 4.5mb

HYB 53.55 295 eP 44 46.00 -1.0
1.2s 28.00nm 5.0mb

WMO 59.96 327 P 45 32.00 0.0
QUE 67.73 305 eP 46 22.50 -0.6
MAIO 75.51 309 iPc 47 09.70 0.6
AVY 79.91 252 eP 47 33.50 -0.2
YKA 105.70 25 PKP 53 46.90 0.8
KIC 133.27 275 PKP 54 41.00 0.8
LIC 133.55 275 PKP 54 41.80 1.1
0.5s 8.00nm

ZOBO 154.13 141 ePKP 55 24.00 8.0X
S.D. = 0.9 on 43 of 48 obs.

% JAN 03, 1989 22h 53m 59.36 ± 0.98s
38.503 N ± 8.7km 30.697 E ± 10.3km
DEPTH = 10.0km (geophysicist)

TURKEY (366)
MD 3.4 (ATH).

KHL 0.94 259 iPn 54 16.50 -0.8
BCK 1.04 185 ePn 54 19.30 0.2
GPA 1.81 351 ePn 54 30.00 -0.8
DST 1.95 305 ePn 54 34.30 1.4
BBTK 2.09 50 eP 54 35.00 0.1
eS 55 04.00

YLV 2.30 334 iPn 54 41.80 3.8X
KCT 2.52 315 iPn 54 46.80 5.8X
S.D. = 1.3 on 5 of 7 obs.

JAN 03, 1989 23h 46m 02.03 ± 0.79s
37.888 N ± 6.5km 27.359 E ± 9.3km
DEPTH = 10.0km (geophysicist)

TURKEY (366)
MD 3.4 (ATH).

IZM 0.51 352 iPg 46 10.90 -1.6
iSg 46 16.90

PRK 1.60 328 ePb 46 31.80 1.4
eSb 46 54.20

KHL 1.76 75 iPn 46 32.50 -0.4
DST 1.98 30 iPn 46 36.30 0.3
EZN 2.10 338 ePn 46 37.00 -0.6
ELL 2.33 118 iPn 46 41.60 0.5
KAP 2.34 184 ePn 46 40.50 -0.6
KCT 2.48 18 iPn 46 42.20 -0.9
EDC 2.49 9 iPn 46 44.50 1.3
BNT 2.50 10 iPn 46 43.70 0.3
YLV 3.10 30 iPn 47 00.20 8.3X
HRT 3.43 31 ePn 47 06.00 9.3X
RDO 3.55 337 ePn 46 58.40 0.2
S.D. = 1.0 on 11 of 13 obs.

& JAN 04, 1989 00h 10m 52.00s
35.630 N 11.630 E

DEPTH = 10.0km (geophysicist)
TUNISIA (397)

<SPEC>. Held to mainshock location.

PTS 1.21 14 Pd 11 14.70 0.2
eSn 11 32.40

ERC 2.52 17 P 11 34.10 0.4
GIB 3.04 39 P 11 42.40 1.3
MEU 3.04 60 P 11 40.90 -0.2
MNO 3.37 46 P 11 47.90 2.0
ATN 3.98 49 P 11 53.50 -0.8
6 obs. associated

? JAN 04, 1989 01h 25m 54.37 ± 5.38s
37.005 N ± 34.4km 27.225 E ± 38.6km

DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM 1.39 1 iPn 26 19.90 0.1
ELL 2.17 96 iPn 26 31.60 0.5
KHL 2.25 54 ePn 26 33.10 0.8
BCK 2.72 79 ePn 26 38.00 -1.0
DST 2.82 23 ePn 26 40.00 -0.4
S.D. = 1.0 on 5 of 5 obs.

JAN 04, 1989 01h 52m 30.82 ± 0.47s
39.979 N ± 5.5km 27.366 E ± 4.0km
DEPTH = 14.6 ± 4.0 km

TURKEY (366)
MD 3.3 (ATH).

EDC 0.53 46 iPg 52 40.50 -0.8
eSg 52 48.50

BNT 0.57 48 iPg 52 41.20 -0.8
KCT 0.81 70 iPg 52 46.70 0.7
EZN 0.82 260 iPg 52 45.10 -1.1
iSg 52 57.10

DST 1.04 111 iPn 52 50.40 0.3
PRK 1.12 229 ePb 52 51.00 -0.3
eSn 53 05.30

CTT 1.42 34 ePn 52 55.60 -0.5
IZM 1.58 183 iPn 52 58.90 0.5
YLV 1.64 68 iPn 52 58.70 -0.7
ISK 1.69 49 iPn 52 59.10 -0.8
GBZT 1.78 62 ePn 53 03.00 1.7
iSg 53 28.00

RDO 1.82 311 ePn 53 02.70 0.9
eSn 53 28.80

DMK 1.86 9 iPn 53 03.20 0.7
HRT 1.95 64 ePn 53 03.10 -0.7
KDZ 2.23 319 iPc 53 08.00 0.2
iS 53 35.00

GPA 2.28 81 ePn 53 11.80 3.3X
KHL 2.36 134 iPn 53 10.60 1.0
DIM 2.49 327 eP 53 14.00 2.6
RZN 2.64 311 iP 53 14.00 0.2
PLD 2.93 317 eP 53 50.00 32.4X
PLG 3.03 279 ePn 53 18.40 -0.7
SRS 3.09 293 eP 53 20.20 0.2
MMB 3.20 301 eP 53 22.00 0.5
eS 53 58.00

PVL 3.58 335 eP 53 26.00 -0.8
KNT 3.60 291 eP 53 26.70 -0.6
VAY 3.89 292 ePn 53 38.30 7.0X
S.D. = 1.0 on 23 of 26 obs.

% JAN 04, 1989 02h 04m 42.45 ± 0.74s
46.257 N ± 7.4km 1.552 E ± 7.0km

DEPTH = 10.0km (geophysicist)
FRANCE (538)

ML 2.4 (LDG).

LSF 0.02 246 Pg 04 43.80 -0.6
TCF 0.46 86 Pg 04 51.60 -0.2
Sg 04 59.20

MAF 0.71 93 Pg 04 56.20 -0.2
Sg 05 06.80

BGF 0.95 71 Pg 05 00.00 -0.5
Sg 05 12.80

RJF 0.95 182 Pg 05 00.50 -0.1
Sg 05 13.20

AVF 1.35 66 Pg 05 06.60 -0.7
Sg 05 24.20

CAF 1.38 165 Pg 05 08.00 0.3
Sg 05 27.50

SSF 1.57 58 Pg 05 10.00 -0.4

LPO 1.59 189 Sg 05 30.40
Pg 05 11.20 0.4

LBF 1.82 66 Sg 05 32.40
Pg 05 15.00 0.9
Sg 05 39.20

LOR 1.88 57 Pg 05 16.00 1.1
Sg 05 39.80

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

JAN 04, 1989 02h 23m 34.35 ± 0.77s
6.165 S ± 4.4km 130.353 E ± 6.2km
DEPTH = 174.5 ± 8.3 km
4.9mb (13 obs.)

BANDA SEA (280)

AAI 3.27 319 eP 24 27.80 1.2
eS 25 10.60

MTN 6.68 173 eP 25 09.00 -2.2
KUPT 7.77 239 ePd 25 27.00 1.5
eS 26 48.40

KNA 9.65 189 iPc 25 48.50 -1.9
eS 27 28.00

WB5 14.18 164 eP 26 44.90 -3.8X
i 26 46.00
26 48.50

WRA 14.23 165 Pd 26 44.40 -5.0X
0.5s 15.20nm 4.6mb

OIS 16.89 149 eP 27 21.00 -1.1
0.8s 119.00nm 5.3mb

PMG 16.95 102 iPd 27 24.00 1.1
0.9s 134.45nm 5.3mb

TRT 17.65 264 iPc 27 27.10 -3.9X
ASPA 17.73 169 iPd 27 31.40 -0.5
0.7s 206.00nm 5.6mb

MBL 18.06 213 iPd 27 35.20 0.0
eS 30 20.00

KKM 18.61 310 ePd 27 41.00 -0.2
WARB 20.22 190 iPd 27 48.50 -9.1X
CTA 20.74 133 iPd 28 03.70 0.9
1.1s 69.62nm 5.1mb

NANU 21.69 220 eP 31 47.00
eS 28 12.90 0.8
32 15.00

MEKA 23.25 208 eP 28 28.00 0.8
FORR 24.65 185 eP 28 40.00 -0.4
eS 33 24.00

COOL 26.07 198 eP 28 54.00 0.5
eS 33 54.00

MRWA 26.64 209 eP 28 59.00 0.3
eS 34 06.00

RMO 26.77 141 iPd 28 59.30 -0.6
e 29 32.00
35 26.00

BAL 27.49 206 eP 29 07.00 0.7
eS 34 31.00

STK 27.66 159 iPd 29 07.70 -0.1
0.4s 18.00nm 5.1mb

KLB 27.91 203 eP 34 20.00
eS 29 10.00 -0.1
34 34.00

MUN 28.88 205 eP 29 19.00 0.2
eS 35 03.00

NWAO 29.29 203 eP 29 27.00 4.6X
BRS 30.00 137 iPd 29 37.90 9.2X
e 30 06.00

BWA 32.71 152 iPd 29 54.10 1.8
BFD 32.81 162 iPc 29 53.90 0.8
e 30 33.00
36 24.00

CAN 33.71 152 iPd 30 02.00 1.0
LOE 36.72 310 eP 30 06.20 -20.3X

DZM 38.27 118 iPd 30 39.00 -0.6
BDT 38.74 307 iPc 30 42.80 -0.6
1.0s 35.50nm 5.0mb

WHN 39.59 338 P 30 50.50 0.3
CHG 39.68 309 iPc 30 51.80 0.7
1.0s 18.00nm 4.7mb

CHTO 39.68 309 iP 30 52.00 0.9
1.1s 15.90nm 4.6mb

XAN 44.84 335 Pc 31 32.10 186kmX
pP 31 31.40 -1.4

BJI 47.80 345 eP 31 55.50 -0.4
LZH 48.84 331 eP 32 04.00 -0.2

HHC 49.87 341 eP 32 12.00 0.1
BTO 50.15 340 eP 32 14.00 0.0

GTA 53.42 331 iPc 32 38.60 0.2
 GUN 54.67 311 P 32 47.70 -0.4
 PKI 54.86 310 P 32 48.60 -0.8
 0.5s 8.00nm 4.7mb
 KKN 55.07 310 P 32 50.40 -0.4
 0.7s 24.00nm 5.1mb
 DMN 55.11 310 P 32 50.70 -0.4
 0.4s 6.00nm 4.7mb
 GKN 55.66 310 P 32 54.60 -0.4
 GBA 56.08 291 Pc 32 56.10 -1.8
 0.9s 7.10nm 4.5mb
 QUE 70.61 305 eP 34 33.50 0.4
 CNCB 150.85 142 iPKPd 43 11.60 8.4X
 LPB 150.99 141 ePKP 43 12.00 8.8X
 ZOBO 151.17 141 ePKP 43 09.00 5.3X
 S.D. = 0.9 on 41 of 51 obs.

JAN 04, 1989 02h 41m 56.78±0.47s
 4.978 S ± 8.2km 102.319 E ± 10.0km
 DEPTH = 33.0km (normol)
 4.9mb (12 obs.)

SOUTHERN SUMATERA (274)

PPI 4.88 337 eP 43 10.20 0.4
 43 57.00
 KGM 7.02 8 ePc 43 44.20 4.3X
 PSI 8.34 336 eP 43 56.00 -2.4
 IPM 9.58 352 ePd 44 18.50 2.9
 0.9s 46.80nm 5.7mb
 e 44 43.10
 BSI 12.55 326 eP 44 52.00 -3.9X
 NST 20.63 354 eP 46 35.00 -1.2
 LOE 22.25 359 eP 46 51.40 -1.1
 BDT 22.32 352 iPd 46 31.30 -21.9X
 1.0s 62.10nm
 CHG 23.87 352 iPd 47 09.00 0.6
 1.0s 42.50nm 4.9mb
 CHTO 23.87 352 iPd 47 09.00 0.6
 0.7s 11.59nm 4.5mb
 QIZ 24.98 17 Pd 47 21.00 2.0
 N 16s 0.80um
 GBA 30.84 307 Pd 48 12.30 0.0
 0.7s 2.40nm 4.1mb
 GYA 31.53 7 P 48 17.80 -0.6
 WB5 34.53 118 eP 48 44.00 -0.4
 WRA 34.52 118 Pd 48 44.60 0.2
 0.8s 8.00nm 4.7mb
 ASPA 35.65 125 iPc 48 54.40 0.4
 CD2 35.71 2 eP 48 53.10 -1.3
 LSA 36.11 343 iPd 48 58.20 -0.1
 PKI 36.25 334 P 48 59.90 0.6
 0.4s 16.00nm 5.3mb
 GUN 36.34 335 P 49 00.30 0.2
 DMN 36.41 334 P 49 00.70 0.1
 0.6s 19.00nm 5.2mb
 KKN 36.49 334 P 49 01.30 0.1
 GKN 36.96 333 P 49 05.30 0.2
 XAN 39.30 0 Pc 49 23.10 -1.4
 LZH 40.87 2 eP 49 37.50 -0.1
 NDI 41.28 326 iPc 49 41.00 0.2
 0.9s 31.51nm 5.0mb
 TIY 43.50 12 Pd 49 58.70 -0.3
 N 16s 0.80um
 GTA 44.23 357 iPc 50 04.80 0.0
 Z 16s 0.80um 4.7mszX
 CTA 45.27 113 iPd 50 14.00 0.6
 1.0s 20.50nm 5.0mb
 BTO 45.90 8 eP 50 19.80 1.6
 HHC 46.38 10 P 50 22.50 0.5
 BJI 46.58 15 eP 50 23.00 -0.3
 QUE 48.68 318 eP 50 39.30 -0.9
 WMO 50.33 346 P 50 52.50 -0.1
 1.0s 0.10nm 2.8mb X
 CN2 52.85 21 Pc 51 09.60 -1.9
 pP 51 19.00 31kmX
 BRS 52.88 121 eP 51 02.00 -10.1X
 MAIO 57.35 319 iPc 51 43.00 -1.4
 VRI 83.60 317 ePd 54 24.50 1.3
 MLR 84.04 317 ePc 54 26.50 0.9
 KJF 87.81 335 iP 54 44.10 0.5
 0.7s 18.70nm 5.5mb
 SUF 88.09 333 iP 54 45.50 0.5
 0.6s 2.20nm 4.6mb
 SOD 89.09 338 iP 54 50.40 0.7
 ZST 90.49 318 e(P) 54 57.60 1.0
 e 55 09.40
 SLL 93.80 330 eP 55 11.80 0.2

0.5s 1.30nm 4.6mb
 YKA 116.50 18 PKP 00 39.00 0.4
 MEO 144.59 30 ePKP 01 29.60 -2.6X
 e 01 43.30
 SIO 144.90 27 ePKP 01 31.60 -1.0
 TUL 144.99 26 ePKPd 01 31.90 -0.9
 0.9s 27.70nm
 i 01 45.00
 RLO 145.10 25 iPKP 01 32.20 -0.8
 i 01 45.10
 VVO 145.49 27 ePKPd 01 33.40 -0.3
 III 154.90 56 (PKP) 01 39.50 -9.0X
 S.D. = 1.0 on 45 of 51 obs.

JAN 04, 1989 02h 43m 47.21±0.79s
 44.723 N ± 7.7km 15.794 E ± 8.0km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

ML 2.6 (KBA), 2.6 (ZAG), 2.6
 (LJU). MD 3.0 (TRI). Felt in the
 Udbino oreo.
 VBY 0.87 334 ePg 44 02.50 -1.4
 iSg 44 13.60
 BLY 0.99 88 Pg 44 05.40 -0.6
 Sg 44 21.40
 ZAG 1.10 7 iPgc 44 08.90 1.0
 iSg 44 25.70
 PTJ 1.18 6 iPgc 44 09.60 0.3
 CEY 1.40 317 ePg 44 11.70 -1.1
 iSg 44 31.00
 LJU 1.59 326 ePn 44 16.00 0.5
 eSg 44 36.00
 HVAR 1.62 163 iPn 44 16.10 0.3
 iSn 44 38.40
 TRI 1.74 305 iPg 44 18.10 0.5
 iSg 44 41.10
 VOY 1.87 315 iPnc 44 20.20 0.5
 eSn 44 45.70
 KBA 2.91 325 iP 44 40.30 5.7X
 iPg 44 43.30
 iSg 45 20.60
 S.D. = 1.0 on 9 of 10 obs.

JAN 04, 1989 02h 46m 37.68±0.85s
 39.465 N ± 7.1km 22.950 E ± 8.3km
 DEPTH = 10.0km (geophysicist)

GREECE (364)

ML 3.0 (ATH).
 NEO 0.26 127 ePb 46 44.40 1.1
 PLG 0.98 23 ePb 46 57.00 0.6
 KZN 1.24 313 ePn 46 59.80 -0.9
 ATH 1.61 158 ePn 47 05.20 -0.9
 VAY 1.88 351 iPn 47 09.60 -0.5
 MMB 2.20 15 iPd 47 04.00 -10.9X
 OHR 2.33 316 ePn 47 18.30 1.6
 RDO 2.59 49 ePn 47 20.00 -0.4
 RZN 2.60 31 iP 47 21.00 0.4
 SKO 2.75 336 ePn 47 34.00 11.3X
 KDZ 2.88 40 iPc 47 23.00 -1.5
 MLR 6.42 19 ePd 48 15.00 0.4
 S.D. = 1.1 on 10 of 12 obs.

JAN 04, 1989 02h 55m 33.85±0.85s
 23.460 N ± 11.2km 142.603 E ± 19.1km
 DEPTH = 33.0km (normol)
 4.8mb (8 obs.)

VOLCANO ISLANDS REGION (213)

MAT 13.58 345 eP 58 46.00 -0.5
 WB5 43.82 191 eP 03 39.80 1.2
 WRA 43.89 191 Pd 03 37.60 -1.5
 0.5s 2.40nm 4.2mb
 GUN 50.93 288 P 04 35.20 0.5
 0.4s 17.00nm 5.4mb
 PKI 51.40 287 P 04 38.10 -0.2
 0.4s 4.00nm 4.7mb
 KKN 51.48 288 P 04 38.80 0.1
 0.4s 5.00nm 4.8mb
 DMN 51.66 287 P 04 40.30 0.2
 0.4s 5.00nm 4.8mb
 GKN 52.01 288 P 04 42.80 0.2
 0.4s 10.00nm 5.1mb
 INK 66.18 24 ePd 06 20.60 0.6
 KEV 76.53 341 eP 07 24.00 2.0
 KJF 79.23 336 eP 07 36.00 -0.9

0.5s 8.40nm 5.0mb
 SUF 80.63 335 eP 07 44.00 -0.4
 NUR 82.47 334 eP 07 55.00 0.9
 HFS 86.90 337 eP 08 14.30 -2.1
 0.4s 1.10nm 4.4mb
 S.D. = 1.2 on 14 of 14 obs.

& JAN 04, 1989 04h 33m 46.97s
 57.699 N 143.110 W
 DEPTH = 10.0km (geophysicist)
 GULF OF ALASKA (15)
 <AGS-P>.

YKU 2.57 42 eP 34 23.47 -5.7
 BCPM 2.89 37 iP 34 27.63 -6.3
 SGAM 3.01 340 iP 34 29.59 -6.0
 eS 35 02.88
 CVA 3.16 336 eP 34 30.67 -7.0
 eS 35 05.20
 HIN 3.22 329 eP 34 31.99 -6.6
 eS 35 06.59
 MTU 3.29 316 eP 34 32.80 -6.8
 CTGM 3.40 15 eP 34 34.91 -6.3
 FID 3.52 332 eP 34 35.84 -6.9
 eS 35 12.66
 KNIM 3.57 320 iP 34 35.94 -7.6
 GLB 3.77 355 eP 34 39.60 -6.9
 eS 35 18.25
 GLI 3.79 329 eP 34 38.71 -7.9
 VZW 3.80 334 eP 34 39.51 -7.4
 VLZ 3.82 336 eP 34 39.37 -7.6
 KLU 4.06 341 eP 34 43.39 -7.2
 eS 35 26.46
 PWL 4.15 322 eP 34 43.86 -7.9
 HYT 4.25 40 P 34 49.60 -3.8
 SIT 4.26 95 eP 34 43.70 -9.6
 KNK 4.61 326 eP 34 51.37 -7.0
 SLKM 4.62 311 iP 34 51.15 -7.3
 TOA 4.68 342 eP 34 52.68 -6.7
 SML 4.89 330 eP 34 55.09 -7.3
 KDC 5.03 275 eP 34 57.35 -6.8
 ILIM 5.64 299 eP 35 05.33 -7.5
 YKA 14.93 59 P 37 21.80 2.4
 24 obs. associated

JAN 04, 1989 04h 52m 08.05±0.61s
 40.919 N ± 5.9km 22.043 E ± 5.4km
 DEPTH = 10.0km (geophysicist)

GREECE (364)

MD 3.0 (ATH). ML 2.5 (SKO).
 VAY 0.57 45 iPg 52 18.70 -0.8
 iSg 52 25.70
 KZN 0.65 199 ePb 52 20.80 -0.2
 eSb 52 31.90
 OHR 0.96 282 iPgd 52 26.60 0.2
 iSg 52 40.30
 SKO 1.15 337 iPgc 52 29.00 -0.5
 iSg 52 43.80
 PLG 1.20 117 ePb 52 30.50 0.1
 MMB 1.44 62 iPgc 52 34.00 -0.2
 Sg 52 54.00
 VTS 1.89 27 eP 52 42.00 1.3
 RZN 2.16 60 iP 52 45.00 0.3
 PGB 2.28 44 iP 52 46.00 -0.3
 S.D. = 0.7 on 9 of 9 obs.

? JAN 04, 1989 05h 18m 27.87±6.00s
 61.294 N ± 16.4km 2.976 E ± 48.6km
 DEPTH = 10.0km (geophysicist)

NORWEGIAN SEA (642)

MD 2.3 (BER).
 SUE 0.90 105 iP 18 44.50 -0.5
 iS 18 48.40
 HYA 1.56 93 iP 18 56.00 0.4
 iS 19 08.50
 ODD1 2.27 126 iP 19 05.90 -0.2
 iS 19 25.30
 MOL 2.51 57 eP 19 09.00 -0.4
 eS 19 37.80
 NRA0 4.21 94 eP 19 34.10 0.7
 eS 20 17.70
 eSg 20 24.20
 S.D. = 0.7 on 5 of 5 obs.

JAN 04, 1989 05h 39m 11.80±2.21s

04d 05h

44.187 N ± 25.6km		11.274 E ± 8.0km		NNL	1.60	186	eP	32	11.14	0.5	KSP	21.76	307	eP	34	33.50	-1.1		
DEPTH = 10.0km		(geophysicist)					iS	32	33.92		PRU	22.63	304	P	34	49.00	5.7X		
NORTHERN ITALY		(545)		ILIM	1.83	213	eP	32	13.26	-0.7	KBA	23.00	296	eP	34	49.50	2.3		
MME	0.41	271	P	39	19.80	-0.5								e	35	05.50			
PGD	0.45	134	P	39	20.50	-0.5								e	35	18.00			
			eSg	39	28.00						NUR	23.07	335	iP	34	47.60	0.1		
SFI	0.49	122	P	39	21.70	-0.1	CNPM	2.11	184	iP	32	16.56	-1.2						
			eSg	39	29.60		VZV	2.21	103	eP	32	16.85	-2.3						
BDI	0.50	256	P	39	23.00	1.0	VLZ	2.29	100	eP	32	17.73	-2.5	Z	18s	45.60nm	4.9mb		
			iSg	39	31.20		SVW	2.30	259	iPc	32	18.70	-1.7			i	34	53.80	
PII	0.71	230	P	39	25.20	-0.6	MTU	2.31	134	eP	32	18.30	-2.3			LR	43	30.00	
			eSg	39	35.00		TOA	2.33	76	iPc	32	20.10	-0.7	KHC	23.09	301	Pc	34	50.00
CRE	0.74	139	P	39	27.20	0.8	FID	2.35	110	eP	32	18.10	-3.0			i	34	56.00	
			eSg	39	36.20		KLU	2.42	91	iP	32	19.88	-2.3	CLL	23.88	306	iPc	34	55.50
BOB	1.43	295	Pd	39	41.50	3.6X	PDB	2.43	222	eP	32	21.01	-1.2			e	35	43.00	
	S.D. = 0.9	on	6 of 7 obs.				HIN	2.50	118	eP	32	20.62	-2.6	GRB1	24.37	301	eP	35	02.10
							TTA	2.69	301	iPc	32	24.40	-1.6			1.1s	33.00nm	4.9mb	
JAN 04, 1989	06h	02m	35.79 ± 0.57s				CVA	2.76	111	eP	32	25.16	-1.6	SUF	24.39	340	iP	35	00.40
40.402 N ± 5.3km			29.235 E ± 4.6km				SGAM	3.02	109	eP	32	26.93	-3.6			0.7s	86.90nm	5.5mb	
DEPTH = 10.0km			(geophysicist)				FBA	3.59	22	eP	32	37.10	-1.3	MOX	24.60	304	e(P)	35	03.00
TURKEY			(366)				WAX	4.12	103	eP	32	42.89	-3.1	GRF	24.70	302	eP	35	02.10
YLV	0.19	33	iPg	02	40.00	-0.1	IMA	4.62	346	eP	32	51.10	-1.9			1.1s	33.00nm	4.9mb	
GBZT	0.42	22	ePg	02	44.00	-0.3	CTGM	4.70	94	eP	32	51.60	-2.6	MME	24.86	289	P	35	06.70
			iSg	02	50.50								UPP	25.19	328	iP	35	08.20	
HRT	0.53	38	iPg	02	46.30	-0.3									i	35	17.50		
ISK	0.68	349	ePg	02	49.80	0.6							KJF	25.26	343	iP	35	07.80	
KCT	0.69	257	iPg	02	49.30	-0.1									0.7s	144.20nm	5.8mb		
			iSg	02	54.80								VAI	26.14	293	Pd	35	15.90	
GPA	0.83	98	ePg	02	52.10	0.3							HFS	26.97	326	eP	35	23.90	
			eSg	03	02.60										0.7s	37.70nm	5.2mb		
DST	0.92	211	iPg	02	53.60	0.1							Z	17s	0.56um	4.2mszX			
CTT	0.96	321	iPg	02	54.40	0.3	ALP	0.19	71	iPg	54	59.45	0.1			LR	44	24.00	
BNT	1.01	268	iPn	02	55.50	0.7							SOD	28.25	346	iP	35	35.30	
EDC	1.05	267	iPn	02	54.50	-1.1	CIO	0.50	344	iPg	55	04.96	-0.1	NB2	28.49	326	P	35	37.00
IKL	5.43	139	iPg	04	05.50	6.7X									0.8s	6.20nm	4.4mb		
	S.D. = 0.6	on	10 of 11 obs.				MNS	0.58	235	P	55	06.70	-0.1	WMO	31.95	70	eP	36	09.60
													GKN	35.38	98	P	36	39.60	
% JAN 04, 1989	06h	04m	01.37 ± 0.75s				ASS	0.60	306	P	55	07.30	0.1	DMN	35.94	99	P	36	46.20
40.432 N ± 7.4km			29.225 E ± 6.6km										PKI	36.19	98	P	36	47.40	
DEPTH = 10.0km			(geophysicist)				ARV	0.83	340	P	55	11.30	0.3	GUN	36.36	98	P	36	48.10
TURKEY			(366)										GBA	39.69	124	Pd	37	14.10	
YLV	0.18	40	iPg	04	05.50	0.1	AOI	0.86	13	ePg	55	11.17	-0.3			0.7s	8.10nm	4.5mb	
GBZT	0.39	25	ePg	04	09.10	-0.3							GTA	41.87	73	Pd	37	34.10	
			iSg	04	15.60								BNG	43.02	219	iPc	37	41.20	
HRT	0.52	41	iPg	04	11.80	0.0									0.6s	34.00nm	5.3mb		
KCT	0.69	255	iPg	04	15.30	0.3									ic	37	42.80		
CTT	0.94	320	iPg	04	19.80	0.6							DAG	44.46	343	eP	37	48.00	
DST	0.94	209	iPg	04	19.60	0.2							BTO	48.71	68	eP	38	29.10	
			eSg	04	33.00								XAN	50.74	76	P	38	42.90	
BNT	1.00	266	iPg	04	20.00	-0.3							CHG	51.37	98	eP	38	48.00	
EDC	1.04	266	ePg	04	20.50	-0.6							CHTO	51.37	98	eP	38	48.60	
			eSg	04	35.00										1.1s	6.77nm	4.5mb		
	S.D. = 0.4	on	8 of 8 obs.				TAB	3.23	150	eP	30	38.00	4.9X	BJI	53.23	66	eP	39	02.00
							MSL	4.59	191	ePnc	30	54.00	1.9	TIC	55.52	246	P	39	16.96
& JAN 04, 1989	06h	31m	44.04s										KIC	55.53	246	Pc	39	17.26	
61.625 N			150.976 W											1.0s	28.00nm	5.3mb			
DEPTH = 67.7km							SLY	5.37	169	ePn	31	03.30	0.1	LIC	55.82	246	P	39	19.34
SOUTHERN ALASKA			(2)											1.0s	28.00nm	5.3mb			
<AGS-P>							KVT	6.23	274	iP	31	21.80	6.4X	WHN	56.45	77	eP	39	26.00
PWA	0.52	87	iPc	31	56.50	-0.5	KER	6.90	160	eP	31	57.00	32.0X	MBC	62.68	356	eP	40	07.00
CRP	0.67	238	iP	31	58.33	-0.5	BHD	7.60	179	ePnc	32	06.50	31.9X	FRB	63.05	333	eP	40	09.00
			iS	32	09.40								BRW	67.11	7	eP	40	36.40	
SPU	0.68	230	iP	31	58.18	-0.7							SLR	67.93	196	iPc	40	41.00	
			iS	32	09.26		KAS	7.95	277	eP	31	50.00	10.5X			0.6s	10.00nm	5.2mb	
PMS	0.78	119	iP	31	59.20	-0.8	BBTK	8.85	267	eP	30	54.00	-58.2X	WIN	68.00	207	eP	40	27.50
PLRM	0.88	91	iP	32	00.02	-1.1									0.7s	10.27nm			
			eS	32	13.84								INK	71.12	359	eP	41	00.00	
PMR	0.88	91	iPc	32	00.00	-1.2							BLF	71.63	197	eP	41	05.00	
NKA	0.89	188	eP	32	02.56	1.3	CFR	12.55	295	ePc	32	43.00	0.5	IMA	72.47	8	eP	41	08.50
PME	0.93	89	iP	32	00.91	-0.8	MAIO	12.76	106	eP	32	43.00	-2.4	FBA	74.13	5	eP	41	18.70
			iS	32	15.45								YKA	75.57	350	P	41	26.80	
GHO	0.99	81	iP	32	01.81	-0.8	VRI	13.69	297	ePd	33	02.00	4.3X	TOA	77.01	5	eP	41	35.00
			iS	32	17.07		MLR	14.14	295	ePd	33	06.50	2.9	SVW	77.07	10	eP	41	35.00
SLKM	1.18	162	iP	32	04.06	-1.0	CMP	14.72	294	ePd	33	09.00	-2.1	FFC	80.48	341	eP	41	54.00
			iS	32	20.95		OHR	17.72	278	eP	33	51.50	2.0			0.8s	13.00nm	5.0mb	
PTE	1.21	128	iP	32	04.51	-0.9	BEO	17.88	291	eP	33	53.50	2.1	KDC	80.73	9	eP	41	56.00
			iS	32	20.79		PSZ	18.74	300	eP	34	01.70	-0.3	RSON	81.52	335	eP	42	00.30
KNK	1.23	99	iP	32	04.81	-0.9	SPC	18.84	304	eP	34	03.10	-0.3			1.1s	12.79nm	4.9mb	
			iS	32	22.24		KRA	19.30	307	eP	34	08.60							

04d 10h

FBA	85.30	23	ePc	27	13.20				
BRW	85.41	16	eP	26	46.40	-1.4			
INK	91.75	22	eP	27	17.00	-1.3			
			pP	27	49.00	123kmX			
AVY	96.02	250	iPd	27	39.64	0.4			
PNT	97.12	41	eP	27	44.00	0.7			
	0.6s		4.00nm			5.1mb			
YKA	99.36	28	P	27	54.70	1.5			
BUL	113.41	245	iPKPc	32	49.50	-0.6			
	0.6s		10.00nm						
CNCB	139.55	124	ePKP	33	33.00	-7.4X			
LPB	139.59	124	ePKP	33	31.00	-9.3X			
ZOBO	139.70	123	PKP	33	32.00	-8.7X			
SHGH	146.31	272	ePKP	33	53.20	1.7			
LEGH	146.44	272	ePKP	33	54.00	2.3X			
KOGH	146.51	272	ePKP	33	54.00	2.1X			
KUK	146.64	273	ePKP	33	53.50	1.5			
BMA	150.02	161	ePKP	34	03.10	6.0X			
KIC	150.98	273	PKP	34	04.00	6.0X			
TIC	151.26	273	PKP	34	05.32	6.2X			
	0.6s		66.00nm						
LIC	151.27	272	PKP	34	05.40	6.2X			
BAO	154.60	147	ePKP	33	45.00	-18.9X			
			e	34	13.50				

S.D. = 0.9 on 78 of 96 obs.

JAN 04, 1989 10h 38m 11.47± 0.31s
 14.637 S ± 6.7km 167.047 E ± 7.9km
 DEPTH = 33.0km (normal)
 4.4mb (4 obs.)

VANUATU ISLANDS (186)

DZM	7.42	184	iPd	40	01.00	0.7			
			iS	41	23.10				
HNR	8.66	306	P	40	19.00	1.5			
			S	41	55.00				
BRS	18.38	224	iP	42	32.00	6.4X			
CTA	20.57	252	iPd	42	54.10	3.9X			
	0.9s		15.97nm			4.4mb			
RMO	20.76	233	eP	42	53.00	0.8			
WB5	31.61	256	eP	44	32.70	-1.0			
WRA	31.64	256	Pd	44	32.90	-1.1			
	0.6s		3.20nm			4.4mb			
ASPA	32.51	249	ePc	44	40.30	-1.3			
FORR	39.14	239	eP	45	38.00	0.1			
WARB	39.42	247	eP	45	30.20	-10.1X			
AA1	39.80	282	e(P)	45	38.00	-5.5X			
MBL	45.27	255	eP	46	28.00	0.0			
MEKA	46.69	247	eP	46	39.00	-0.2			
NANU	49.26	253	eP	46	59.00	-0.3			
MAT	57.72	333	eP	48	00.00	-1.5			
WHN	67.72	312	P	49	08.00	0.0			
CN2	69.46	329	eP	49	18.00	-0.5			
BJ1	72.06	321	eP	49	34.00	-0.3			
CHTO	74.84	294	eP	49	51.70	0.7			
	1.0s		3.00nm			4.2mb			
SPA	75.46	180	e(P)	49	53.90	0.0			
	1.0s		8.50nm			4.7mb			
LZH	78.10	312	eP	50	10.50	1.4			
GTA	82.45	314	eP	50	33.00	0.8			
GUN	89.16	299	P	51	06.10	0.2			
KKN	89.64	299	P	51	08.00	0.0			
DMN	89.73	299	P	51	08.70	0.2			
GKN	90.24	299	P	51	10.40	-0.3			
GBA	93.00	283	Pd	51	23.50	0.2			
	0.4s		22.20nm			5.9mb X			
ORX	144.42	334	PKP	57	43.87	-2.4X			
SSF	144.88	340	ePKP	57	47.90	1.1			
	0.8s		9.40nm						
GRR	144.89	346	ePKP	57	46.80	0.0			
	0.8s		9.10nm						
LSD	144.90	335	PKP	57	46.84	-0.4			
LPG	145.03	336	ePKP	57	46.50	-1.0			
	0.8s		9.40nm						
RSP	145.10	335	PKP	57	47.25	-0.2			
SMF	145.13	340	ePKP	57	45.80	-1.5			
	1.0s		10.80nm						
AVF	145.16	340	ePKP	57	46.10	-1.2			
	1.0s		14.80nm						
LPF	145.27	346	ePKP	57	47.90	0.5			
	0.6s		10.80nm						
FIN	145.45	333	PKP	57	47.05	-0.9			
RRL	145.49	335	PKP	57	48.48	0.2			
ROB	145.53	333	PKP	57	47.36	-0.8			
BGF	145.53	341	ePKP	57	47.50	-0.5			
	0.8s		12.00nm						

PZZ	145.69	334	PKP	57	48.89	0.4			
STV	145.81	334	PKP	57	47.25	-1.4			
IMI	145.83	333	PKP	57	48.59	-0.1			
MAF	145.92	341	ePKP	57	48.90	0.2			
	1.0s		10.00nm						
SBF	146.07	333	ePKP	57	48.80	-0.2			
	1.0s		21.60nm						
MFF	146.37	344	ePKP	57	50.00	0.7			
	0.8s		9.10nm						
CVF	146.42	330	ePKP	57	49.90	0.3			
	1.0s		21.60nm						
FRF	146.65	334	ePKP	57	50.70	0.8			
	0.8s		13.40nm						
LRG	146.86	334	ePKP	57	51.40	1.2			
	1.0s		24.00nm						
LMR	146.89	334	ePKP	57	51.30	1.0			
	0.8s		8.00nm						
BNG	147.37	255	iPKPc	57	53.50	1.6			
	0.7s		29.00nm						
			ic	57	56.40				
			id	58	07.60				
LFF	147.64	342	ePKP	57	55.00	3.6X			
	1.0s		13.60nm						
LPO	147.73	341	ePKP	57	56.20	4.6X			
	0.8s		8.00nm						

S.D. = 0.8 on 46 of 53 obs.

% JAN 04, 1989 11h 20m 41.41± 1.00s
 40.378 N ± 7.8km 29.265 E ± 8.1km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

YLV	0.21	24	iPg	20	46.10	0.1			
GBZT	0.43	18	ePg	20	50.50	0.3			
			iSg	20	56.60				
HRT	0.54	35	iPg	20	51.50	-0.8			
			iSg	20	57.50				
ISK	0.70	347	iPg	20	55.30	0.0			
KCT	0.71	260	iPg	20	55.10	-0.3			
			iSg	21	08.10				
DST	0.91	213	iPn	20	59.70	0.8			
			iSg	21	14.70				
CTT	1.00	321	iPn	21	01.50	1.2			
BNT	1.03	269	iPn	21	00.60	-0.2			
EDC	1.07	269	iPn	21	00.50	-1.1			

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

JAN 04, 1989 11h 57m 18.31± 0.76s
 42.717 N ± 6.0km 13.331 E ± 7.3km
 DEPTH = 10.0km (geophysicist)

CENTRAL ITALY (381)

MD 2.1 (SSO).

ALP	0.19	71	iPg	57	22.48	-0.1			
			iSg	57	25.26				
CIO	0.50	344	iPg	57	27.62	-0.8			
			iSg	57	35.42				
MNS	0.58	236	Pd	57	29.90	-0.3			
			eSg	57	39.30				
ASS	0.61	306	Pd	57	30.20	-0.4			
			eSg	57	39.70				
ARV	0.83	340	P	57	36.20	1.8			
			eSg	57	47.40				
AOI	0.86	13	ePg	57	34.33	-0.5			
			iSg	57	47.89				
SDI	1.07	160	P	57	38.00	0.3			

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

? JAN 04, 1989 11h 58m 58.66± 14.90s
 44.065 N ± 21.3km 8.769 E ± 99.3km
 DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)

ML 2.2 (GEN).

FIN	0.43	290	Pd	59	07.33	-0.1			
			S	59	11.78				
IMI	0.65	257	Pc	59	11.64	-0.1			
			S	59	18.73				
ROB	0.69	290	Pd	59	11.82	-0.5			
			S	59	19.13				
STV	1.06	280	Pc	59	19.01	0.4			
			S	59	30.81				
PZZ	1.28	291	P	59	22.72	0.3			
			S	59	37.68				

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

* JAN 04, 1989 12h 20m 20.98± 0.50s

0.428 S ± 10.1km 124.401 E ± 11.2km
 DEPTH = 33.0km (normal)
 4.7mb (7 obs.)

MOLUCCA SEA (269)

AA1	4.98	131	ePd	21	34.50	-1.0			
MKS	6.85	226	iPd	22	02.00	0.3			
			eS	24	02.00				
DAV	7.56	9	eP	22	20.50	8.8X			
TSM	7.83	306	eP	22	21.80	6.3X			
KKM	10.40	308	eP	22	57.50	6.4X			
MTN	14.03	152	eP	23	39.00	-0.6			
WB5	21.66	154	eP	25	10.20	-0.6			
WRA	21.70	154	Pd	25	12.00	0.7			
	0.7s		5.40nm			4.1mb			
IPM	23.88	282	eP	25	34.30	1.6			
ASPA	24.87	159	eP	25	43.90	1.6			
	0.9s		18.00nm			4.7mb			
WARB	25.70	175	eP	25	38.00	-12.0X			
NNT	27.68	299	eP	25	53.80	-14.5X			
LOE	28.51	310	eP	26	15.10	-0.6			
CHG	31.48	309	eP	26	42.90	0.8			
CHTO	31.48	309	eP	26	42.30	0.2			
			pP	26	48.60	22kmX			
BRS	38.21	137	iP	27	39.00	-0.7			
MAT	38.95	1							

DEPTH = 139.8 ± 36.8 km
4.5mb (5 obs.)
FIJI ISLANDS REGION (181)

Table with columns for station name, depth, time, and magnitude. Includes stations like DZM, CTA, WB5, ASPA, FORR, WARB, GCC, PCC, PRS, SAO, PRI, MHC, LLA, FHC, FRI, CMB, WDC, ORV, MIN, EUR, PNT, ALO, LRM, SES, CHTO, YKA, KSP, MLR, PRU, GRF, KHC, DOU, FLN, LDF, CDF, GRR, KBA, LPF, LOR, SSF, LBF, AVF, BGF, TCF, LSF, MAF, ORX, LSD, LPG, RSP, RJF, RRL, CAF, PZZ, LPO, ROB, FIN, STV, IMI, SBF.

S.D. = 0.9 on 43 of 60 obs.

JAN 04, 1989 14h 55m 01.92± 0.30s
39.784 N ± 3.4km 30.694 E ± 3.4km
DEPTH = 10.0km (geophysicist)
4.2mb (3 obs.)

TURKEY (366)
Felt in the Eskisehir area.

Table with columns for station name, depth, time, and magnitude. Includes stations like GPA, YLV, HRT, GBZT, BBTk.

Table with columns for station name, depth, time, and magnitude. Includes stations like DST, KHL, ISK, KCT, CTT, BNT, EDC, BCK, KAS, IZM, DMK, ELL, EZN, PRK, KSL, JMB, RDO, IKL, KVT, PSN, KDZ, DIM, RZN, SZH, PLD, CSS, PVL, PAIG, SRS, PLG, MMB, PGB, SOH, CFR, NEO, THE, KNT, KKB, ISR, VTS, LIT, BRD, VAY, GRG, MLR, VRI, KZN, CMP, SKO, Z, OHR, HRI, DEV, BZS, DSI, MBH, KSP, CLL, NUR, MAIO, SUF, NB2, KJF, BNG, TIC, KIC, DMN, KKN, LIC, PKI, FRB, CHTO, YKA.

S.D. = 1.1 on 68 of 77 obs.

* JAN 04, 1989 14h 57m 00.14± 0.56s
3.035 N ± 10.4km 84.265 W ± 14.2km
DEPTH = 25.0km (2 depth phases)
4.8mb (5 obs.) 4.4Msz (2 obs.)

OFF COAST OF CENTRAL AMERICA (76)

Table with columns for station name, depth, time, and magnitude. Includes stations like UPA, OXX, ZOBO, LPB, CNCB, ALO, GOL, PLM, MSU, BW06, TNP, RRI2, KVN, RSON, SES, EDM, FRB, INK, MBC, SPA, WRA, GKN, KKN, GUN, DMN, PKI, GBA.

S.D. = 1.2 on 19 of 27 obs.

% JAN 04, 1989 15h 03m 37.35± 1.04s
39.892 N ± 9.8km 30.655 E ± 9.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

Table with columns for station name, depth, time, and magnitude. Includes stations like GPA, YLV, HRT, GBZT, DST, BBTk, KHL, KCT, EDC.

S.D. = 1.4 on 7 of 9 obs.

JAN 04, 1989 15h 04m 25.36± 1.14s
16.635 N ± 9.1km 97.827 W ± 5.3km
DEPTH = 59.0 ± 7.6 km
5.0mb (18 obs.)

OAXACA, MEXICO (60)
Felt at Mexico City.

Table with columns for station name, depth, time, and magnitude. Includes stations like OXX, ACX, III, IISM, IIT, UNM, TAC, CRX, LVVM, IIC.

SML	0.47	220	iP	42 42.83	-0.7
			iS	42 50.77	
GHO	0.71	236	iP	42 45.61	-1.1
			iS	42 56.24	
TOA	0.72	94	iP	42 47.25	0.3
			iS	42 57.76	
PME	0.83	230	iP	42 47.27	-1.2
			eS	42 59.29	
KNK	0.84	206	iP	42 47.92	-0.7
			iS	42 59.94	
PLRM	0.89	230	iP	42 47.91	-1.4
KLU	1.08	128	iP	42 51.52	-0.5
			iS	43 07.36	
PWA	1.16	244	iP	42 52.26	-0.8
VLZ	1.23	147	eP	42 52.82	-1.2
			iS	43 10.57	
VZW	1.24	153	eP	42 53.08	-1.2
PMS	1.29	225	iP	42 54.39	-0.5
GLI	1.33	167	iP	42 54.71	-0.7
			iS	43 12.88	
PWL	1.35	193	iP	42 55.39	-0.4
			iS	43 13.70	
PTE	1.46	207	iP	42 56.77	-0.5
FID	1.54	157	eP	42 58.20	-0.3
			iS	43 19.12	
KNIM	1.83	181	eP	43 01.23	-1.3
HIN	1.87	162	eP	43 02.92	-0.2
			eS	43 28.48	
CVA	1.88	149	iP	43 03.33	0.1
			eS	43 29.03	
GLB	1.98	110	eP	43 04.62	-0.2
SGAM	2.06	143	eP	43 04.96	-0.9
			eS	43 34.38	
SLKM	2.07	217	eP	43 05.46	-0.6
MTU	2.19	179	eP	43 08.51	0.7
			eS	43 36.94	
NKA	2.22	232	eP	43 09.67	1.4
SPU	2.30	246	iP	43 08.49	-1.0
RAGM	2.31	139	eP	43 09.03	-0.5
CRP	2.31	249	iP	43 09.25	-0.4
			eS	43 38.42	
HMT	2.48	136	eP	43 11.23	-0.6
FBA	2.74	359	eP	43 14.62	-1.0
RDT	2.78	237	eP	43 15.05	-1.1
CNPM	3.17	215	eP	43 20.43	-1.3
CTGM	3.27	109	eP	43 22.35	-0.9
ILIM	3.30	233	eP	43 22.41	-1.2
SVW	3.93	258	eP	43 29.26	-3.2

33 obs. associated
 * JAN 04, 1989 18h 30m 20.12 ± 1.39s
 40.702 N ± 12.7km 27.425 E ± 10.5km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

EDC	0.49	137	iPg	30 29.50	-0.5
			iSg	30 36.50	
CTT	0.88	59	iPn	30 36.40	-0.7
EZN	1.21	224	iPn	30 42.70	0.0
YLV	1.49	95	iPn	30 48.30	1.3
HRT	1.71	85	ePn	30 50.00	-0.1

S.D. = 1.1 on 5 of 5 obs.
 * JAN 04, 1989 18h 50m 09.79 ± 0.67s
 49.056 N ± 6.0km 112.862 W ± 8.9km
 DEPTH = 5.0km (geophysicist)
 ALBERTA PROVINCE, CANADA (24)
 ML 3.1 (BUT).

SES	1.79	41	Pn	50 41.80	0.2
			Sg	51 04.00	
DMMT	2.20	177	ePn	50 48.60	0.9
HRY	2.45	163	ePn	50 51.60	0.4
BUT	3.05	176	(Pg)	51 00.00	0.2
			eSn	51 45.70	
			eSg	51 49.60	
LRM	3.25	175	ePn	51 01.80	-0.8
LCCM	3.29	168	ePn	51 03.00	-0.2
DPW	3.75	254	e(P)	51 10.20	0.6
SLEB	4.00	304	Pg	51 24.30	11.1X
			Sg	52 17.00	
CCMT	4.14	180	ePn	51 14.40	-0.9
MNB	4.72	314	Pn	51 23.00	-0.5
			Pg	51 38.70	
			Sg	52 38.00	
BW06	6.69	159	e(P)	52 49.50	58.2X

S.D. = 0.7 on 9 of 11 obs.

JAN 04, 1989 19h 01m 32.12 ± 0.83s
 21.001 S ± 6.5km 68.919 W ± 9.1km
 DEPTH = 122.4 ± 8.8 km
 4.8mb (6 obs.)

CHILE-BOLIVIA BORDER REGION (124)						
ANT	3.03	207	iPc	02 17.50	-2.0	
CNCB	4.26	12	iPd	02 36.90	0.2	
LPB	4.51	10	P	02 41.20	1.2	
ZOBO	4.77	9	iPd	02 41.80	-1.8	
ARE	5.13	331	iPd	02 44.00	-4.3X	
			iS	03 41.00		
TCA	11.00	160	ePc	04 01.80	-5.4X	
JACH	11.73	187	iP	04 33.10	16.3X	
MDZ	11.84	180	eP	04 02.70	-15.5X	
PEL	12.20	187	eP	04 23.50	0.6	
FCH	12.34	185	eP	04 26.00	1.0	
PCH	12.65	186	iP	04 37.00	8.2X	
LNV	13.09	189	eP	04 33.00	-1.5	
ITB1	13.88	108	Pd	04 49.20	4.5X	
ITB	14.07	108	e(P)	04 49.20	2.0	
ITB7	14.18	110	e(P)	04 51.50	2.9	
ITR	31.81	72	e(P)	07 45.00	-2.3	
ALQ	66.07	327	eP	12 07.00	-1.2	
			1.0s	6.25nm	4.5mb	
LIC	68.26	74	Pc	12 20.14	-2.0	
			0.6s	15.00nm	5.0mb	
TIC	68.44	74	Pc	12 21.26	-2.0	
			1.0s	28.00nm	5.1mb	
KIC	68.57	74	Pc	12 22.18	-1.9	
			0.7s	41.00nm	5.4mb	
BAR	70.22	318	eP	12 35.00	1.2	
TPC	70.82	320	eP	12 38.00	0.6	
RVR	71.54	319	eP	12 42.00	0.3	
MWC	72.12	319	eP	12 46.00	0.6	
SBB	72.29	319	eP	12 46.00	-0.2	
CLC	72.91	320	eP	12 49.00	-0.8	
PRI	74.98	319	eP	13 02.70	0.8	
LLA	75.46	319	eP	13 05.30	0.8	
PRS	75.54	319	eP	13 05.00	0.9	
GCC	76.38	319	eP	13 10.30	0.8	
LRM	77.35	330	eP	13 15.00	0.8	
ORV	77.70	321	eP	13 17.00	1.0	
WDC	78.97	321	iPc	13 23.00	-0.7	
SES	80.22	334	eP	13 30.00	-0.3	
PNT	83.23	329	eP	13 47.00	1.2	
			0.8s	8.00nm	4.7mb	
EDM	83.31	335	iP	13 45.50	-0.7	
BUL	89.61	111	iPc	14 18.20	0.4	
			0.8s	3.36nm	4.5mb	
				ipP	14 47.90	113kmX
YKC	90.66	341	eP	14 21.00	-0.5	
YKA	90.71	341	P	14 22.00	0.3	
GBA	147.10	97	PKPc	21 00.70	0.1X	
			0.8s	5.10nm		
MAT	151.75	309	iPKPd	21 14.70	7.4X	
			1.0s	20.00nm		

S.D. = 1.4 on 33 of 41 obs.
 * JAN 04, 1989 19h 23m 34.01 ± 1.09s
 34.789 N ± 12.2km 25.931 E ± 9.7km
 DEPTH = 10.0km (geophysicist)
 CRETE (370)

MD 3.8 (ATH).					
NPS	0.54	331	iPg	23 43.50	-1.4
KAP	1.27	53	ePg	23 57.40	-0.2
VAM	1.55	294	ePn	24 02.90	1.3
KSL	3.26	65	ePn	24 28.00	1.8
ELL	3.78	58	ePn	24 36.70	3.0X
BCK	4.62	53	ePn	24 31.60	-13.9X
DSI	8.55	109	eP	25 40.00	-0.6
			eS	27 14.00	
PRNI	8.84	118	eP	25 45.00	0.2
MBH	9.08	121	eP	25 47.00	-1.0

S.D. = 1.4 on 7 of 9 obs.
 * JAN 04, 1989 20h 08m 52.89 ± 0.31s
 7.486 S ± 4.2km 133.250 E ± 5.8km
 DEPTH = 33.0km (normal)
 4.7mb (8 obs.)

AROE ISLANDS REGION (204)					
MTN	5.72	201	iPd	10 20.70	2.9X
			e	10 30.00	
			eS	11 20.00	
AAI	6.29	307	eP	10 26.10	0.3

TZZ	8.22	75	iPd	10 52.70	-0.3
JAY	8.92	57	ePd	11 02.50	0.0
			eS	12 39.50	
KNA	9.31	208	eP	11 08.00	0.1
			e	11 17.00	
			eS	12 47.00	
WB5	12.37	175	eP	11 47.00	-1.8
			eS	13 51.20	
WRA	12.43	175	Pd	11 49.60	-0.8
			0.4s	4.10nm	4.9mb
PMG	13.89	99	eP	12 11.00	1.3
OIS	14.38	155	eP	12 14.00	-2.1
			eS	15 00.00	
ASPA	16.10	178	iPd	12 37.00	-1.5
			0.6s	10.00nm	4.1mb
			e	12 55.40	
			eS	15 25.10	
			e	15 44.80	
CTA	17.77	136	iPc	13 03.10	3.6X
			0.9s	28.15nm	4.4mb
			i	13 15.20	
MBL	18.79	222	eP	13 11.00	-1.0
			eS	16 31.00	
WARB	19.63	198	eP	13 11.50	-10.3X
NANU	22.71	227	eP	13 55.00	1.9
MEKA	23.61	215	eP	14 04.00	2.1
FORR	23.74	191	eP	14 04.50	1.5
RMO	23.97	144	eP	14 08.00	2.6X
			e	14 20.00	
			e	18 42.00	
STK	25.49	163	eP	14 22.00	2.2
			e	14 33.00	
			e	19 24.00	
MRWA	27.04	215	eP	14 35.00	0.8
			e	14 47.00	
			eS	19 37.00	
BRS	27.10	139	iP	14 36.00	1.2
			e	14 50.00	
			e	23 42.00	
BAL	27.73	212	eP	14 40.00	-0.5
KLB	28.00	209	eP	14 43.00	0.1
BWA	30.24	155	eP	15 17.90	14.9X
BFD	30.74	165	eP	15 20.00	12.7X
SSE	40.06	344	Pd	16 27.50	0.6
			1.0s	0.04nm	2.1mb X
NJ2	41.65	341	Pc	16 41.20	1.4
BDT	41.83	306	eP	16 41.20	-0.3
WHN	41.93	335	P	16 43.50	1.3
GYA	42.48	324	P	16 46.60	-0.3
CHG	42.75	308	iPd	16 49.40	0.3
			1.0s	13.25nm	4.6mb
CHTO	42.75	308	iP	16 49.80	0.7
			0.8s	7.69nm	4.5mb
			pP	17 06.00	64kmX
MAT	44.04	6	eP	16 58.00	-1.3
			0.9s	11.76nm	4.7mb
XAN	47.30	332	P	17 24.40	-0.9
TIY	48.99	338	eP	17 38.20	-0.2
BJI	49.85	343	eP	17 44.50	-0.4
LZH	51.40	329	eP	17 56.00	-1.0
BTO	52.42	338	eP	18 04.80	0.2
GTA	56.00	329	iPd	18 31.20	0.4
GUN	57.72	310	P	18 43.00	-0.5
PKI	57.91	309	P	18 44.20	-0.7
			0.6s	9.00nm	5.0mb
KKN	58.12	309	P	18 45.60	-0.6
			1.0s	36.00nm	5.4mb
DMN	58.16	309	P	18 46.10	-0.4
GKN	58.72	309	P	18 49.80	-0.5
HYB	59.43	295	eP	18 54.00	-1.2
			e	19 09.00	
WMO	65.59	325	Pd	19 35.60	-0.2
MAIO	81.50	308	iPd	21 09.30	0.5

S.D. = 1.1 on 40 of 46 obs.
 * JAN 04, 1989 20h 13m 24.66 ± 0.81s
 36.151 N ± 8.6km 30.598 E ± 11.0km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

ELL	0.82	317	iPg	13 43.20	2.7
			iSg	13 56.20	
BCK	1.31	360	iPg	13 48.40	-0.5
			eSg	14 02.2	

04d 20h

CSS 2.52 117 eP 14 06.50 0.1
 IZM 3.48 311 iPn 14 18.80 -1.2
 DST 3.78 336 ePn 14 24.00 -0.3
 BBTk 4.06 24 eP 14 30.00 1.7
 KCT 4.46 337 iPn 14 33.10 -0.7
 HRT 4.72 351 ePn 14 36.00 -1.6
 DSI 6.06 138 eP 15 00.00 3.6X
 KOT 6.29 170 ePn 15 01.00 1.3
 eSn 16 07.50
 PRNI 6.86 146 eP 15 06.00 -1.8
 S.D. = 1.5 on 12 of 14 obs.

JAN 04, 1989 21h 25m 32.36± 1.37s
 44.197 N ± 17.0km 11.232 E ± 4.8km
 DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)

MME 0.38 270 P 25 40.40 0.1
 eSg 25 46.70
 BDI 0.48 254 P 25 41.90 -0.2
 PGD 0.48 132 P 25 42.00 -0.1
 eSg 25 47.80
 SFI 0.53 121 P 25 42.30 -0.7
 eSg 25 49.30
 PII 0.70 227 P 25 46.10 0.0
 eSg 25 55.20
 CRE 0.77 137 P 25 48.20 0.7
 eSg 25 58.00
 RSM 0.92 107 P 25 50.10 0.2
 S.D. = 0.5 on 7 of 7 obs.

* JAN 04, 1989 22h 49m 56.59± 1.55s
 32.594 S ± 11.5km 69.588 W ± 10.8km
 DEPTH = 105.6 ± 25.4 km

MENDOZA PROVINCE, ARGENTINA (139)

MDZ 0.69 115 iP 50 12.00 -2.7
 iS 50 24.80
 JACH 0.85 264 iP 50 15.50 -0.8
 iS 50 30.60
 FCH 0.94 219 iPd 50 19.00 1.5
 iS 50 35.00
 PEL 1.07 239 iPd 50 29.50 10.9X
 iS 50 55.00
 RTCV 1.15 51 e(P) 50 21.00 1.5
 SAN 1.24 226 iPd 50 21.00 0.5
 iS 50 39.40
 ROCH 1.26 252 iP 50 19.50 -1.4
 iS 50 36.50
 PCH 1.29 217 iP 50 22.20 1.2
 iS 50 41.70
 RTCB 1.29 31 iPc 50 22.00 0.9
 S 50 39.50
 TACH 1.55 227 iPd 50 24.00 -0.2
 iS 50 45.50
 RTLL 1.58 37 iP 50 25.00 0.4
 S 50 46.50
 CHCH 1.61 213 iP 50 26.90 2.0
 iS 50 49.00
 LCCH 1.88 242 iP 50 27.40 -1.0
 iS 50 48.00
 LNV 2.04 228 iPd 50 29.50 -0.9
 iS 50 55.00
 RTRS 2.42 3 iPc 50 35.00 -0.4
 TCA 4.43 75 ePd 51 02.10 -0.7
 S 51 50.40
 S.D. = 1.5 on 15 of 16 obs.

* JAN 04, 1989 23h 47m 01.93± 1.39s
 31.298 S ± 11.7km 68.898 W ± 10.0km
 DEPTH = 121.5 ± 16.2 km

SAN JUAN PROVINCE, ARGENTINA (137)

RTCB 0.21 156 iPd 47 18.90 -0.5
 S 47 31.00
 RTLL 0.37 95 ePc 47 19.10 -0.5
 RTCV 0.64 151 eP 47 22.00 0.7
 RTRS 1.22 337 iPd 47 27.00 0.3
 MDZ 1.58 179 iP 47 26.50 -4.4X
 iS 47 49.90
 FCH 2.34 210 iP 47 42.50 1.9X
 iS 48 15.50
 PEL 2.38 219 eP 47 41.20 0.3
 i 47 59.20
 iS 48 10.50
 ROCH 2.45 227 iP 47 42.00 0.1
 PCH 2.69 210 eP 47 46.00 1.1

TACH 2.91 216 iS 48 21.00
 iP 47 42.00 -5.8X
 LNV 3.39 218 iS 48 23.50
 iP 47 52.60 -1.6
 TCA 3.69 92 iPc 47 58.20 0.0
 (S) 48 31.60
 S.D. = 1.0 on 9 of 12 obs.

* JAN 04, 1989 23h 56m 47.58± 0.79s
 35.404 N ± 20.1km 25.841 E ± 8.7km
 DEPTH = 10.0km (geophysicist)

CRETE (370)
 MD 3.8 (ATH).

NPS 0.23 233 ePg 56 52.90 0.3
 KAP 1.10 82 ePb 57 07.60 -0.6
 VAM 1.34 271 ePb 57 11.90 -0.4
 ELL 3.56 67 eP 57 44.00 -0.1
 BCK 4.34 60 eP 57 56.00 0.8
 S.D. = 0.8 on 5 of 5 obs.

* JAN 05, 1989 00h 26m 40.05± 0.90s
 34.893 N ± 12.8km 26.020 E ± 9.7km
 DEPTH = 10.0km (geophysicist)

CRETE (370)
 MD 3.9 (ATH).

NPS 0.50 318 ePg 26 49.20 -1.0
 KAP 1.15 55 ePb 27 02.50 0.9
 eSb 27 22.00
 VAM 1.58 289 ePn 27 09.00 0.9
 ELL 3.66 59 iPn 27 41.70 3.6X
 BCK 4.50 54 ePn 27 52.80 3.0X
 KOT 6.97 134 ePn 28 25.50 0.8
 eSn 29 44.00
 OHR 7.45 328 eP 28 46.30 14.9X
 SKO 7.93 334 eP 28 42.00 3.9X
 DSI 8.51 110 eP 28 45.00 -1.2
 PRNI 8.82 118 eP 28 49.00 -1.6
 MBH 9.07 122 eP 28 55.00 1.1
 S.D. = 1.5 on 7 of 11 obs.

& JAN 05, 1989 00h 31m 46.00s
 35.630 N 11.630 E
 DEPTH = 10.0km (geophysicist)

TUNISIA (397)
 <SPEC>. Held to mainshock location.

PTS 1.21 14 eP 32 08.50 0.0
 eS 32 29.50
 CVT 2.25 24 P 32 24.10 0.3
 FAI 2.33 45 P 32 26.50 1.6
 LVI 2.42 13 (P) 32 29.00 2.8
 ERC 2.52 17 P 32 27.60 -0.1
 MCT 2.57 38 P 32 29.90 1.4
 PZI 3.00 61 P 32 34.70 0.2
 GIB 3.04 39 P 32 34.70 -0.4
 eSn 33 07.40
 MEU 3.04 60 eP 32 34.10 -1.0
 eS 33 08.00
 USI 3.31 21 P 32 39.10 0.2
 MNO 3.37 46 P 32 40.50 0.6
 ATN 3.98 49 P 32 48.40 0.1
 SOI 4.30 54 P 32 53.00 0.0
 13 obs. associated

* JAN 05, 1989 00h 44m 00.17± 0.66s
 46.710 N ± 8.7km 0.303 E ± 5.5km
 DEPTH = 10.0km (geophysicist)

FRANCE (538)
 ML 2.6 (LDG).

MFF 0.33 251 Pg 44 07.80 0.8
 Sg 44 14.00
 LSF 0.96 118 Pg 44 17.70 -0.8
 Sg 44 30.70
 TCF 1.38 107 Pg 44 24.80 -0.7
 Sg 44 42.40
 LPF 1.61 326 Pg 44 27.60 -1.0
 Sg 44 47.40
 MAF 1.64 107 Pg 44 29.00 -0.1
 Sg 44 49.50
 BGF 1.76 94 Pg 44 29.40 -1.5
 Sg 44 51.60
 GRR 1.85 335 Pg 44 31.70 -0.5

AVF 2.10 87 Sg 44 53.80
 Pg 44 36.00 0.2
 FLN 2.12 346 Sg 45 01.20
 Pg 44 36.40 0.3
 Sg 45 00.70
 CAF 2.17 145 Pg 44 42.00 5.1X
 Sg 45 10.40
 SSF 2.22 80 Pg 44 38.20 0.6
 Sg 45 04.20
 LOR 2.50 76 Pg 44 42.50 1.0
 Sg 45 12.00
 LBF 2.54 82 Pg 44 43.80 1.7
 Sg 45 14.00
 S.D. = 1.0 on 12 of 13 obs.

JAN 05, 1989 00h 47m 10.76± 0.35s
 40.346 N ± 4.2km 26.080 E ± 3.3km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)
 MD 3.3 (ATH).

EZN 0.55 160 iPg 47 23.40 1.4
 RDO 0.90 333 ePb 47 28.50 0.5
 PRK 1.11 172 ePb 47 33.00 1.5
 eSb 47 48.50
 EDC 1.36 89 iPn 47 35.50 -0.3
 KDZ 1.40 339 iPd 47 36.00 -0.3
 iS 47 52.00
 BNT 1.41 89 iPn 47 36.40 0.0
 RZN 1.69 323 iPd 47 40.00 -0.7
 KCT 1.74 92 iPn 47 41.40 0.1
 DIM 1.75 347 eP 47 41.00 -0.3
 PAIG 1.89 258 ePn 47 42.60 -0.7
 eSn 48 06.90
 DMK 1.94 40 iPn 47 42.80 -1.4
 CTT 1.96 65 iPn 47 43.30 -1.0
 PLG 2.01 272 ePn 47 50.50 5.3X
 PLD 2.04 330 iPc 47 50.00 4.5X
 SRS 2.04 293 ePnd 47 44.50 -1.1
 DST 2.09 110 iPn 47 47.10 0.7
 SOH 2.13 284 ePnd 47 46.00 -0.9
 IZM 2.15 154 ePn 47 46.00 -1.2
 JMB 2.15 10 eP 47 48.00 0.8
 MMB 2.17 306 iPc 47 47.00 -0.5
 iS 48 14.00
 ISK 2.38 71 ePn 47 48.80 -1.6
 THE 2.39 278 ePn 47 50.20 -0.4
 NEO 2.43 246 ePb 47 58.00 6.8X
 YLV 2.52 84 iPn 47 51.40 -1.1
 KNT 2.55 290 ePnd 47 52.20 -0.7
 GBZT 2.60 79 ePn 48 03.00 9.4X
 iSg 48 34.00
 KKB 2.73 305 iPc 47 55.00 -0.4
 iSg 48 37.00
 LIT 2.76 266 ePn 47 54.70 -1.2
 HRT 2.77 79 ePn 47 55.30 -0.8
 VAY 2.84 291 ePn 48 03.70 6.8X
 GRG 2.86 283 ePn 47 57.70 0.3
 SZH 2.92 358 eP 47 59.00 0.9
 PVL 2.92 349 eP 48 00.00 1.9
 VTS 3.11 317 iP 48 01.00 0.1
 GPA 3.23 90 iPn 48 07.00 4.4X
 KZN 3.29 271 ePn 48 05.20 1.7
 KHL 3.35 126 ePn 48 05.00 0.7
 SKO 3.86 296 ePn 48 22.00 10.5X
 OHR 4.08 282 ePn 48 20.80 6.1X
 MLR 5.14 359 ePd 48 30.50 0.8
 BBTk 5.15 93 eP 48 34.00 4.2X
 VRI 5.54 5 ePd 48 38.00 2.7
 S.D. = 1.1 on 33 of 42 obs.

* JAN 05, 1989 01h 57m 23.94± 0.99s
 6.299 S ± 12.1km 149.157 E ± 8.8km
 DEPTH = 56.3 ± 13.4 km
 4.7mb (2 obs.)

NEW BRITAIN REGION (192)

LAT 2.17 261 eP 57 59.00 0.7
 BLLO 2.67 250 e(P) 57 58.00 -7.5X
 LMG 2.78 201 eP 58 06.00 -1.1
 RAB 3.66 55 iPd 58 19.00 -0.4
 PMG 3.67 213 eP 58 20.00 0.8
 MTN 18.92 249 iPc 01 42.90 -0.2
 WB5 19.72 225 eP 01 51.00 -0.8
 WRA 19.78 225 Pd 01 51.30 -1.1
 0.7s 28.20nm 4.7mb
 RMQ 20.08 181 iPd 01 56.00 0.4

BRS 21.26 171 eP 02 07.00 -0.6
 ASPA 22.66 219 iPd 02 22.60 1.1
 0.6s 19.00nm 4.7mb
 e 02 40.90
 DZM 22.91 135 iPc 02 25.00 1.0
 WARB 29.20 225 eP 03 12.60 -9.9X
 S.D. = 1.0 on 11 of 13 obs.

? JAN 05, 1989 02h 10m 45.41± 5.51s
 3.768 S ±34.1km 149.084 E ±42.7km
 DEPTH = 33.0km (normol)
 4.6mb (1 obs.)

BISMARCK SEA (203)

LAT 3.54 216 iPc 11 40.60 1.2
 BLLO 4.20 216 iPd 11 47.80 -1.1
 LMG 5.19 190 eP 12 06.80 3.8X
 MNDI 5.90 246 P 12 22.00 8.9X
 PMG 5.92 199 iPc 12 13.00 -0.2
 TZZ 7.98 259 eP 12 42.00 -0.1
 WB5 21.50 221 iPc 15 33.80 0.1
 WRA 21.57 221 Pc 15 34.40 0.0
 0.6s 14.30nm 4.6mb

BRS 23.75 172 iPc 16 09.00 13.2X
 ASPA 24.63 215 iPc 16 07.90 3.6X
 0.3s 23.00nm 5.2mb X
 WARB 30.98 222 eP 16 57.50 -4.6X
 S.D. = 0.9 on 6 of 11 obs.

JAN 05, 1989 02h 36m 07.40± 0.81s
 35.913 N ± 7.9km 31.788 E ± 9.5km
 DEPTH = 93.9 ± 22.9 km
 CYPRUS (372)

PPCY 1.12 156 eP 36 29.50 0.5
 LFK 1.56 113 iPn 36 35.30 0.8
 IKL 1.57 78 iPn 36 34.20 -0.4
 CSS 1.58 127 eP 36 33.70 -1.0
 eS 36 52.00
 ELL 1.73 299 iPn 36 38.20 1.3
 BCK 1.82 328 iPn 36 35.90 -2.1
 KHL 3.01 324 ePn 36 54.10 0.1
 BHL 3.76 121 Pn 37 05.50 1.2
 Sn 37 47.50

BBTK 4.00 11 eP 37 08.50 0.9
 HRI 4.19 128 eP 37 14.00 3.6X
 DSI 5.26 144 eP 37 24.00 -1.1
 eS 38 25.00
 KOT 5.97 180 ePn 37 35.00 0.2
 eSn 38 39.50
 MBH 6.66 156 iPc 37 44.00 -0.3
 S.D. = 1.2 on 12 of 13 obs.

JAN 05, 1989 04h 12m 20.18± 0.68s
 56.302 N ± 8.1km 167.940 W ± 6.5km
 DEPTH = 33.0km (normol)
 4.3mb (3 obs.)
 PRIBILOF ISLANDS (8)

BLHA 3.35 98 eP 13 11.43 -0.1
 eS 13 50.86
 DRRA 3.49 111 eP 13 13.72 0.2
 PN6 3.50 102 eP 13 14.01 0.4
 PS4 3.55 103 eP 13 14.88 0.5
 PVV 3.59 102 eP 13 14.90 0.1
 eS 13 56.95

DLG 3.64 106 eP 13 15.69 0.1
 SGB 4.28 97 eP 13 24.11 -0.5
 eS 14 13.76
 SASA 4.31 100 eP 13 24.57 -0.4
 eS 14 13.56
 SDN 4.31 100 eP 13 24.70 -0.3
 IVF 4.73 91 eP 13 29.64 -1.3
 ADK 6.78 233 eP 14 00.00 0.1
 SVW 8.02 48 eP 14 12.70 -4.5X
 KDC 8.55 74 eP 14 24.90 0.4
 TTA 8.97 37 eP 14 38.70 8.2X
 PWA 10.73 53 eP 14 55.20 0.7
 IMA 11.93 29 eP 15 11.00 0.1
 FBA 13.06 41 eP 15 27.70 1.9
 INK 19.66 39 eP 16 46.50 -2.3
 YKA 27.14 55 P 18 02.30 0.6
 PNT 29.50 83 eP 18 24.00 0.8
 0.5s 2.00nm 4.1mb

SLL 63.56 359 eP 22 47.00 -2.1
 0.5s 1.40nm 4.3mb
 GKN 76.10 300 P 24 07.50 1.2

0.6s 4.00nm 4.6mb
 S.D. = 1.1 on 20 of 22 obs.

% JAN 05, 1989 04h 36m 35.36± 2.36s
 62.186 N ±11.3km 4.754 E ±22.8km
 DEPTH = 10.0km (geophysicist)
 NORWEGIAN SEA (642)
 MD 2.4 (BER).

SUE 1.13 180 iP 36 56.70 0.2
 eS 37 07.80
 HYA 1.23 146 iP 36 58.30 0.1
 iS 37 12.20
 MOL 1.36 72 iP 37 04.90 4.6X
 iS 37 23.70

ODD1 2.46 157 eP 37 15.80 -0.3
 iS 37 41.20
 NRA0 3.57 111 eP 37 31.90 0.0
 iPg 37 38.10
 iS 38 09.20
 eSg 38 25.60

NSS 4.01 51 eP 37 38.10 0.0
 S.D. = 0.3 on 5 of 6 obs.

* JAN 05, 1989 04h 56m 43.01± 0.80s
 35.894 N ±10.6km 29.075 E ± 7.7km
 DEPTH = 33.0km (normol)
 EASTERN MEDITERRANEAN SEA (371)
 MD 3.3 (ATH).

KSL 0.47 61 eP 56 55.00 1.8
 ELL 1.09 38 iPg 57 01.20 -0.9
 iSg 57 13.20
 KAP 1.58 258 eP 57 10.00 0.9
 eS 57 29.00

BCK 1.98 37 ePn 57 13.50 -1.4
 KHL 2.45 8 ePn 57 16.10 -5.5X
 NPS 2.89 258 eP 57 27.50 -0.3
 IKL 3.75 83 ePn 57 41.00 1.1
 DSI 6.79 128 eP 58 23.00 0.1
 eS 59 39.00

MBH 7.82 140 eP 58 36.00 -1.3
 eS 00 06.00
 S.D. = 1.4 on 8 of 9 obs.

JAN 05, 1989 05h 08m 14.86± 0.38s
 0.229 N ± 4.9km 29.962 E ± 8.3km
 DEPTH = 10.0km (geophysicist)
 4.8mb (17 obs.)
 ZAIRE REPUBLIC (567)

LWI 2.71 205 iPd 09 00.60 1.1
 iS 09 34.40
 NAI 7.00 102 iPc 09 59.00 -1.2
 0.8s 44.78nm 5.7mb
 iS 11 55.00

IKZ 10.67 166 ePn 10 50.00 -1.1
 iSn 12 43.40
 iSg 13 40.50
 BNG 12.14 290 iPc 11 08.80 -2.2
 0.4s 5.00nm 5.1mb
 iS 13 16.60
 Lg 14 28.10

KMZ 14.20 197 iPn 11 11.00 -27.4X
 iSn 13 38.20
 iSg 15 16.00
 PTZ 14.45 175 iPn 11 43.00 1.4
 iS 14 15.00
 iSg 15 42.70

LSZ 15.51 186 ePn 11 54.00 -1.5
 iSn 14 46.00
 iSg 16 19.00
 BUL 20.29 184 iPn 12 55.20 1.3
 iLg 18 49.00

SLR 25.86 183 e(P) 13 24.50 -24.2X
 WIN 25.89 208 eP 13 49.00 0.0
 KIC 35.16 281 P 15 10.60 -0.6
 LIC 35.42 280 P 15 13.80 0.4
 0.8s 17.00nm 5.0mb

TIC 35.48 281 P 15 13.60 -0.3
 0.8s 26.00nm 5.2mb
 SRO 48.47 350 eP 17 01.40 1.9
 e 32 47.60
 e 33 08.10
 e 33 29.00

KBA 48.87 345 eP 17 02.50 -0.3
 1.0s 4.20nm 4.4mb

ZST 49.06 349 eP 17 04.60 0.5
 KHC 50.72 346 iPd 17 17.10 0.3
 CAF 50.90 335 eP 17 19.20 0.9
 0.6s 3.60nm 4.5mb

LPO 51.09 334 eP 17 20.50 0.8
 0.6s 7.20nm 4.8mb
 GRB5 51.18 345 eP 17 21.20 0.9
 0.6s 10.00nm 4.9mb

BSF 51.51 340 eP 17 22.90 0.0
 0.8s 6.40nm 4.6mb
 GRF 51.83 345 eP 17 21.20 -4.0X
 0.6s 10.00nm 4.9mb

CDF 51.85 341 eP 17 25.20 -0.3
 0.6s 4.30nm 4.6mb
 AVF 51.89 337 eP 17 25.90 0.3
 0.6s 4.50nm 4.6mb

LOR 52.09 338 eP 17 27.10 -0.1
 0.6s 3.00nm 4.4mb
 LDF 54.73 336 eP 17 46.70 0.0
 1.0s 17.60nm 5.0mb

NUR 60.26 357 eP 18 25.00 -0.4
 SLL 61.44 351 eP 18 31.90 -1.7
 0.4s 1.60nm 4.5mb
 NB2 62.33 350 P 18 38.90 -0.7
 0.9s 5.10nm 4.7mb

SUF 62.40 358 iP 18 40.40 0.5
 0.5s 5.00nm 5.0mb
 KJF 63.84 359 eP 18 44.00 -5.4X
 SOD 67.05 359 eP 19 04.00 -6.0X
 S.D. = 1.0 on 27 of 32 obs.

% JAN 05, 1989 05h 10m 11.63± 1.49s
 40.390 N ± 7.9km 29.498 E ±12.8km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

YLV 0.20 332 iPg 10 16.60 0.5
 GBZT 0.40 354 ePg 10 19.80 0.0
 iSg 10 27.00
 HRT 0.45 17 iPg 10 20.70 -0.1
 KCT 0.88 261 iPg 10 28.60 0.0
 DST 1.03 221 iPg 10 31.20 0.1
 eSg 10 43.20

CTT 1.11 313 ePn 10 32.00 -0.4
 S.D. = 0.4 on 6 of 6 obs.

JAN 05, 1989 05h 15m 14.31± 0.94s
 43.410 N ± 7.2km 5.438 E ± 7.4km
 DEPTH = 10.0km (geophysicist)
 NEAR SOUTH COAST OF FRANCE (379)
 MD 2.5 (STR).

GELF 0.03 196 Pg 15 15.81 -0.5
 TREF 0.22 350 Pg 15 18.43 -0.6
 PUYF 0.23 57 Pg 15 17.83 -1.4
 PRAF 0.44 334 Pg 15 23.37 0.1
 VILF 0.49 24 Pg 15 23.20 -1.0
 TAVF 0.50 65 Pg 15 23.38 -1.0
 FOUF 1.48 40 P 15 42.40 1.5
 (Sg) 16 00.71

STV 1.60 58 P 15 43.38 0.6
 S 16 04.82
 PZZ 1.63 47 P 15 44.74 1.5
 S 16 06.63

RRL 1.79 32 P 15 48.71 3.0X
 S 16 12.04
 ROB 1.97 62 P 15 48.69 0.6
 S 16 13.40

FIN 2.16 67 P 15 51.04 0.2
 RSP 2.18 36 P 15 54.97 3.8X
 S.D. = 1.1 on 11 of 13 obs.

JAN 05, 1989 05h 31m 25.98± 0.80s
 51.661 N ± 4.9km 16.181 E ± 5.5km
 DEPTH = 21.0 ± 6.8 km
 POLAND (548)
 ML 4.2 (GRF), 4.1 (VKA).

KSP 0.82 175 iPd 31 40.50 -1.0
 0.3s 1520.00nm
 iS 31 48.40

BRG 1.61 242 iPn 31 57.90 4.5X
 iPg 31 59.80
 iSg 32 19.90
 PRU 1.97 212 iPn 31 58.80 0.2
 Pg 32 00.50
 Sn 32 16.40

05d 14h

CFA 0.71 188 iPd 46 50.00 0.2
 RTCB 0.82 224 iPd 46 50.00 -1.4
 S 47 01.50
 RTCV 1.02 200 ePc 46 51.50 -2.7X
 RTRS 1.36 302 iPc 46 59.20 0.2
 S 47 18.50
 TCA 3.06 99 ePc 47 23.30 -0.1
 S 47 59.30

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

? JAN 05, 1989 15h 18m 48.60±13.47s
 43.652 N ±71.0km 6.837 E ±63.0km
 DEPTH = 10.0km (geophysicist)
 NEAR SOUTH COAST OF FRANCE (379)

STV 0.69 31 P 19 01.83 -0.5
 S 19 10.92
 IMI 0.80 71 P 19 04.08 -0.2
 S 19 15.44
 PZZ 0.87 12 P 19 05.67 0.2
 S 19 17.23
 ROB 0.98 49 P 19 07.66 0.3
 S 19 20.28
 FIN 1.14 60 P 19 10.04 0.1
 S 19 23.74

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

% JAN 05, 1989 15h 26m 45.95±0.94s
 43.430 N ± 8.0km 5.478 E ± 6.7km
 DEPTH = 10.0km (geophysicist)
 NEAR SOUTH COAST OF FRANCE (379)
 MD 2.5 (STR).

GELF 0.06 219 Pg 26 48.20 0.0
 PUYF 0.19 58 Pg 26 50.03 -0.2
 TREF 0.21 341 Pg 26 50.01 -0.5
 PRAF 0.44 329 Pg 26 55.30 0.4
 TAVF 0.46 66 Pg 26 55.57 0.2
 Sg 27 02.87

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

? JAN 05, 1989 15h 34m 50.16±9.73s
 17.292 N ±67.7km 61.625 W ±29.6km
 DEPTH = 10.0km (geophysicist)
 LEEWARD ISLANDS (92)
 ML 2.3 (FDF).

SEG 0.89 173 eP 35 07.20 0.0
 S 35 12.00
 DEG 1.11 151 eP 35 11.20 0.1
 S 35 18.10
 PAG 1.26 182 eP 35 13.50 -0.1
 S 35 22.50
 MGG 1.40 168 eP 35 15.20 -0.5
 BBL 1.76 175 eP 35 21.40 0.4
 S 35 37.40

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

JAN 05, 1989 15h 54m 42.12±0.72s
 37.673 N ± 6.7km 15.010 E ± 5.9km
 DEPTH = 10.0km (geophysicist)
 SICILY (398)

MNO 0.36 316 P 54 49.60 0.0
 (Sg) 54 56.00
 MEU 0.57 186 P 54 53.50 -0.3
 eSg 55 02.50
 ATN 0.60 36 P 54 54.30 0.0
 eSg 55 02.90
 GIB 0.84 292 P 54 57.90 -0.5
 eSg 55 11.90
 SOI 0.92 64 P 54 59.80 0.2
 eSg 55 13.90
 FAI 1.13 250 P 55 04.00 0.7

S.D. = 0.5 on 6 of 6 obs.

* JAN 05, 1989 16h 20m 55.47±2.74s
 10.550 N ±16.7km 62.171 W ±18.0km
 DEPTH = 10.0km (geophysicist)
 NEAR COAST OF VENEZUELA (97)

TCE 0.44 70 iPc 21 04.40 0.0
 eS 21 12.24
 TPP 0.74 108 eP 21 09.82 -0.2
 TRN 0.76 83 ePd 21 09.56 -0.8
 eS 21 26.14
 TBH 1.09 93 eP 21 16.74 0.8

SVB 2.85 18 eP 21 42.92 1.0
 SVV 2.91 19 eP 21 42.92 0.3
 eS 22 21.21
 BIM 4.09 15 eP 21 59.53 0.1
 S 22 48.10
 MVM 4.17 17 eP 22 00.13 -0.5
 FDF 4.28 13 eP 22 01.51 -0.6
 CRM 4.35 16 eP 22 02.90 -0.3

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

JAN 05, 1989 16h 36m 53.05±0.70s
 39.137 N ± 6.5km 24.167 E ± 6.4km
 DEPTH = 26.7 ± 5.7 km
 AEGEAN SEA (365)
 ML 3.0 (ATH).

NEO 0.75 283 ePg 37 07.00 -0.5
 PAIG 0.87 335 ePc 37 09.50 0.1
 ATH 1.22 197 ePb 37 13.50 -0.8
 PLG 1.35 336 ePb 37 16.00 -0.4
 eSb 37 34.50
 LIT 1.61 307 eP 37 19.70 -0.4
 PRK 1.64 86 ePb 37 21.00 0.6
 SOH 1.79 340 ePc 37 23.10 0.4
 SRS 2.03 348 eP 37 25.00 -1.1
 KZN 2.19 303 ePg 37 33.50 5.1X
 KNT 2.24 335 eP 37 32.80 3.6X
 RDO 2.26 27 ePn 37 27.80 -1.6
 GRG 2.27 324 eP 37 30.20 0.7
 eS 37 58.70
 MMB 2.47 352 iPd 37 32.00 -0.5
 VAY 2.50 331 eP 37 39.00 6.2X
 KDZ 2.69 20 iP 37 35.00 -0.4
 OHR 3.25 308 eP 38 00.50 17.0X
 VTS 3.53 348 eP 38 31.00 43.5X

S.D. = 0.8 on 12 of 17 obs.

* JAN 05, 1989 17h 42m 20.89±0.63s
 42.074 N ± 9.6km 90.584 E ± 7.9km
 DEPTH = 10.0km (geophysicist)
 4.3mb (6 obs.)
 NORTHERN XINJIANG, CHINA (332)

WMO 2.75 310 iPnd 43 12.20 6.3X
 GTA 7.50 108 iPnd 44 10.60 -2.4
 Pg 44 40.00
 Sn 45 30.80
 Sg 46 11.00
 KSH 11.38 262 eP 45 15.50 8.9X
 LZH 11.91 116 eP 45 20.50 6.7X
 GUN 14.64 197 P 45 50.30 0.0
 0.8s 12.00nm 4.5mb
 BTO 14.68 89 eP 45 56.60 6.2X
 PKI 15.07 198 P 45 56.00 0.1
 HHC 15.78 87 Pc 46 02.20 -2.6
 XAN 16.50 113 P 46 15.30 1.3
 NDI 17.21 223 eP 46 24.00 1.1
 TIY 17.31 97 eP 46 27.30 3.1X

Z 16s 0.60um

BJI 19.39 87 eP 46 50.50 0.8
 GYA 20.42 135 P 47 02.80 1.8
 WHN 22.27 113 eP 47 21.00 1.5
 CHG 24.25 160 eP 47 39.30 0.3
 CHTO 24.25 160 eP 47 39.30 0.3
 1.0s 2.75nm 3.8mb
 MAIO 24.69 267 eP 47 47.00 3.7X
 CN2 25.47 74 eP 47 52.00 1.5
 HYB 26.64 206 eP 48 01.50 -0.1
 GBA 30.58 206 Pc 48 35.00 -1.9
 0.6s 3.10nm 4.3mb
 NB2 49.46 321 P 51 13.60 0.8
 0.6s 1.30nm 4.1mb
 INK 65.10 17 eP 53 03.00 -0.4
 AVY 72.45 222 eP 53 49.10 -0.6
 BNG 73.73 261 ePd 53 56.20 -0.9
 0.6s 6.00nm 4.8mb
 WRA 73.77 137 Pd 53 56.10 -1.0
 1.1s 3.50nm 4.3mb
 YKA 73.83 12 P 53 57.30 0.4

S.D. = 1.3 on 20 of 26 obs.

* JAN 05, 1989 20h 27m 35.77±0.69s
 10.558 N ±14.2km 57.028 E ± 7.7km
 DEPTH = 10.0km (geophysicist)
 4.8mb (14 obs.)
 CARLSBERG RIDGE (421)

GBA 20.18 79 Pc 32 12.60 -0.9
 0.8s 7.80nm 4.1mb
 HYB 21.96 70 eP 32 31.50 -0.2
 KER 25.36 341 eP 33 07.00 2.2
 MAIO 25.72 5 eP 33 10.00 1.9
 NDI 26.13 44 eP 33 12.00 0.1
 GKN 31.19 52 P 33 57.50 -0.1
 1.0s 18.00nm 4.9mb

DMN 31.37 53 P 33 59.50 0.1
 0.9s 27.00nm 5.2mb
 KKN 31.59 53 P 34 01.30 0.0
 0.9s 31.00nm 5.2mb
 PKI 31.59 54 P 34 01.30 -0.1
 0.8s 6.00nm 4.6mb

GUN 32.12 53 P 34 06.20 0.1
 1.0s 42.00nm 5.3mb
 PTZ 35.45 226 iP 34 43.40 8.8X
 BBTk 36.26 328 eP 34 41.00 -0.3
 LSZ 38.41 229 iP 35 08.50 8.9X
 BNG 38.61 264 ePc 35 09.90 8.7X
 0.9s 8.00nm 4.4mb

ic 35 21.30
 KMZ 39.08 233 iP 35 07.00 1.8
 CHTO 41.28 74 eP 35 22.90 -0.3
 1.3s 4.09nm 4.0mb
 VRI 43.66 329 ePc 35 43.50 1.2
 MLR 43.80 328 eP 35 46.00 2.4
 LPG 55.15 319 eP 37 09.20 -2.0
 0.8s 6.70nm 4.7mb

LBF 57.50 320 eP 37 25.60 -2.0
 0.6s 4.50nm 4.7mb
 LOR 57.67 320 eP 37 27.40 -1.4
 0.8s 9.40nm 4.9mb
 SSF 57.82 319 eP 37 28.60 -1.2
 0.8s 11.20nm 4.9mb

BGF 58.07 319 eP 37 29.30 -2.3
 0.8s 14.70nm 5.1mb
 KIC 61.16 271 P 37 53.62 0.2
 TIC 61.40 272 P 37 54.96 0.0
 LIC 61.46 271 P 37 55.40 0.0
 WRA 81.87 112 P 39 58.00 0.8
 0.6s 1.00nm 4.1mb

S.D. = 1.3 on 24 of 27 obs.

JAN 05, 1989 20h 44m 50.93±0.78s
 40.615 N ± 7.8km 29.979 E ± 6.0km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

HRT 0.31 311 iPg 44 57.30 -0.2
 GPA 0.41 142 iPg 45 05.90 6.5X
 GBZT 0.44 293 ePg 45 03.00 3.1X
 iSg 45 07.20
 YLV 0.46 264 iPg 45 00.30 -0.1
 iSg 45 08.30
 ISK 0.83 303 iPg 45 06.90 -0.1
 iSg 45 19.30
 CTT 1.29 295 iPn 45 15.30 0.5
 KCT 1.29 254 iPn 45 14.30 -0.6
 DST 1.45 226 iPn 45 17.50 0.3
 BNT 1.59 261 iPn 45 19.80 0.6
 EDC 1.64 261 iPn 45 19.50 -0.3
 BBTk 2.26 109 eP 45 29.00 -0.1

S.D. = 0.4 on 9 of 11 obs.

JAN 05, 1989 20h 48m 28.41±0.59s
 33.816 S ± 7.7km 147.019 E ± 6.2km
 DEPTH = 10.0km (geophysicist)
 NEW SOUTH WALES, AUSTRALIA (601)
 ML 4.1 (RIV), 4.0 (BFD). Felt
 strongly in the West Wyalong
 oreo.

BWA 1.31 118 iP 48 54.80 2.1
 CAN 2.22 133 iPd 49 05.30 -0.5
 eS 49 32.20
 CNB 2.44 128 iPd 49 08.20 -0.9
 eS 49 39.00
 CMS 2.53 336 eP 49 11.20 1.0
 ePg 49 17.20
 eS 49 43.80
 RIV 3.45 91 e(P) 49 23.00 -0.2
 eS 49 53.00
 BFD 4.96 226 iPd 49 43.80 -0.8
 eS 50 40.00
 STK 4.96 291 eP 49 46.00 1.3
 eS 50 43.00

COO 5.24 53 eP 49 49.00 0.3
 ADE 6.97 258 iPd 50 12.60 -0.4
 RMO 7.46 12 iPc 50 17.70 -2.2
 WRA 17.83 318 P 52 39.00 0.8
 0.7s 1.10nm 3.1mb
 WB5 17.87 318 eP 52 38.20 -0.5
 eS 55 50.50
 S.D. = 1.3 on 12 of 12 obs.

JAN 05, 1989 21h 04m 34.50 ± 0.72s
 38.838 N ± 5.7km 15.986 E ± 9.0km
 DEPTH = 14.1 ± 5.7 km

SICILY (398)

GRI 0.34 93 P 04 43.13 1.4
 GMB 0.68 188 P 04 45.97 -1.7
 MSI 0.72 208 P 04 49.75 1.5
 SOI 0.77 176 P 04 43.24 -5.8X
 ATN 0.79 211 P 04 49.97 0.4
 TDS 0.86 18 P 04 49.08 -1.7
 MGR 1.34 346 P 04 59.52 0.8
 MNO 1.36 229 P 04 57.81 -1.4
 GIB 1.76 242 P 05 06.07 1.3
 SGO 1.80 343 P 05 05.50 0.3
 MEU 1.92 206 P 04 54.38 -12.8X
 PZI 1.99 205 P 04 53.27 -14.9X
 BSS 2.15 335 P 05 10.76 0.4
 USI 2.20 267 P 05 14.42 3.3X
 FAI 2.40 230 P 05 09.43 -4.5X
 RFI 2.90 329 P 05 22.18 1.2
 DUI 3.05 338 P 05 22.10 -1.1
 SDI 3.31 331 P 05 25.87 -1.0
 MNS 4.34 326 P 05 42.70 1.1
 S.D. = 1.4 on 14 of 19 obs.

& JAN 05, 1989 21h 32m 13.80s
 34.260 N 116.000 W
 DEPTH = 3.0km
 SOUTHERN CALIFORNIA (43)
 <PAS-P>. ML 3.3 (PAS).

TPC 0.16 195 iPd 32 17.20 0.2
 HAY 0.63 151 iPd 32 25.80 -0.5
 PEC 1.03 249 iPc 32 33.00 -1.0
 PLM 1.15 219 iPd 32 35.30 -0.9
 RVR 1.17 257 iPc 32 35.30 -1.0
 GSC 1.23 328 ePd 32 36.10 -1.3
 GLA 1.55 141 eP 32 40.00 -2.4
 SBB 1.57 286 eP 32 42.50 -0.2
 ABL 2.72 283 eP 32 57.40 -2.1
 BCH 3.49 286 eP 33 08.70 -1.5
 KVN 5.07 341 eP 33 30.70 -2.0
 11 obs. associated

% JAN 05, 1989 22h 08m 50.46 ± 0.87s
 39.828 N ± 8.4km 30.596 E ± 8.1km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

GPA 0.51 335 iPg 09 10.10 9.3X
 YLV 1.19 309 iPn 09 13.20 0.5
 HRT 1.22 325 iPn 09 13.50 0.3
 GBZT 1.30 318 ePn 09 16.00 1.5
 iSg 09 34.50
 DST 1.53 262 ePn 09 17.60 -0.4
 BBTK 1.67 89 eP 09 20.00 0.1
 iS 09 43.00
 ISK 1.70 317 ePn 09 19.00 -1.3
 KHL 1.72 209 ePn 09 21.00 0.3
 KCT 1.77 284 iPn 09 20.70 -0.6
 CTT 2.11 309 ePn 09 25.00 -1.3
 EDC 2.16 285 ePn 09 28.00 1.0
 S.D. = 1.0 on 10 of 11 obs.

* JAN 05, 1989 23h 49m 14.15 ± 0.66s
 34.733 N ± 10.3km 34.099 E ± 13.0km
 DEPTH = 23.4 ± 11.3 km
 CYPURUS (372)

FAM 0.27 343 eP 49 20.50 -0.2
 CSS 0.67 290 eP 49 26.80 -0.4
 LFK 0.72 320 iPg 49 28.70 0.8
 IKL 1.54 347 ePn 49 40.00 -0.3
 BURJ 2.87 151 Pd 49 59.30 -0.2
 JARJ 2.93 148 P 50 00.80 0.5

SALJ 3.02 154 Pd 50 01.40 -0.2
 S.D. = 0.6 on 7 of 7 obs.

? JAN 06, 1989 00h 07m 49.71 ± 7.44s
 40.610 N ± 29.6km 25.976 E ± 58.5km
 DEPTH = 10.0km (geophysicist)
 AEGEAN SEA (365)

EZN 0.83 161 ePg 08 05.70 0.0
 EDC 1.46 100 ePn 08 15.50 -0.7
 BNT 1.50 99 iPn 08 17.10 0.4
 KCT 1.85 100 iPn 08 22.10 0.3
 CTT 1.94 73 ePn 08 23.00 0.0
 S.D. = 0.6 on 5 of 5 obs.

& JAN 06, 1989 00h 14m 41.32s
 59.541 N 152.748 W
 DEPTH = 77.2km
 SOUTHERN ALASKA (2)
 <AGS-P>.

ILIM 0.55 349 iP 14 54.91 -0.6
 iS 15 05.70
 CNPM 0.77 90 iP 14 57.21 -0.6
 iS 15 09.47
 PDB 0.77 289 iP 14 56.78 -1.0
 iS 15 09.12
 NNL 0.89 55 iP 14 59.46 0.3
 iS 15 12.44
 RDT 1.05 9 iP 15 00.54 -0.6
 NKA 1.42 31 eP 15 07.49 1.6
 SLKM 1.60 52 eP 15 07.10 -1.2
 SPU 1.68 12 iP 15 08.87 -0.6
 CRP 1.76 9 iP 15 10.14 -0.4
 eS 15 32.80
 KDC 1.80 176 iP 15 09.06 -1.9
 SVW 2.13 319 iP 15 14.31 -1.2
 PTE 2.29 53 eP 15 16.21 -1.4
 PMS 2.33 41 eP 15 17.50 -0.8
 eS 15 44.87
 PWA 2.55 33 eP 15 20.89 -0.3
 PWL 2.57 57 eP 15 19.64 -1.9
 iS 15 48.77
 MTU 2.62 78 eP 15 20.77 -1.4
 KNIM 2.65 70 iP 15 19.92 -2.7
 eS 15 50.24
 PLRM 2.72 39 eP 15 21.74 -1.9
 PME 2.78 40 eP 15 23.08 -1.4
 KNK 2.84 47 eP 15 23.35 -1.9
 iS 15 55.23
 GHO 2.92 38 eP 15 25.14 -1.4
 GLI 3.13 62 eP 15 25.87 -3.4
 eS 15 59.13
 SML 3.15 42 eP 15 27.76 -1.8
 HIN 3.26 72 eP 15 28.53 -2.6
 FID 3.36 66 iP 15 29.01 -3.5
 eS 16 04.50
 VZW 3.44 61 eP 15 30.60 -3.1
 VLZ 3.57 61 eP 15 32.82 -2.5
 CVA 3.65 71 eP 15 34.50 -2.1
 TTA 3.75 337 eP 15 35.65 -2.4
 KLU 3.90 57 iP 15 37.66 -2.5
 SCAM 3.91 72 eP 15 36.89 -3.2
 TOA 4.12 49 eP 15 41.75 -1.5
 32 obs. associated

* JAN 06, 1989 01h 26m 00.20 ± 0.86s
 36.344 N ± 11.2km 78.319 E ± 16.5km
 DEPTH = 10.0km (geophysicist)
 4.0mb (2 obs.)
 KASHMIR-XINJIANG BORDER REGION (324)

NDI 7.69 187 eP 27 55.50 0.5
 eS 29 12.00
 GKN 9.89 145 P 28 25.70 0.2
 0.5s 11.00nm 5.6mb X
 KKN 10.37 143 P 28 31.20 -1.0
 0.8s 17.00nm 5.5mb X
 DMN 10.44 145 P 28 32.40 -0.8
 0.5s 13.00nm 5.6mb X
 GUN 10.57 141 P 28 35.80 0.7
 PKI 10.61 143 P 28 35.80 0.1
 0.5s 8.00nm 5.4mb X
 QUE 11.32 240 eP 29 05.00 19.8X
 e 30 41.50
 HYB 18.85 179 eP 30 28.50 5.8X
 GBA 22.66 182 Pc 31 03.10 0.3

* JAN 06, 1989 01h 26m 00.20 ± 0.86s
 36.344 N ± 11.2km 78.319 E ± 16.5km
 DEPTH = 10.0km (geophysicist)
 4.0mb (2 obs.)
 KASHMIR-XINJIANG BORDER REGION (324)

NDI 7.69 187 eP 27 55.50 0.5
 eS 29 12.00
 GKN 9.89 145 P 28 25.70 0.2
 0.5s 11.00nm 5.6mb X
 KKN 10.37 143 P 28 31.20 -1.0
 0.8s 17.00nm 5.5mb X
 DMN 10.44 145 P 28 32.40 -0.8
 0.5s 13.00nm 5.6mb X
 GUN 10.57 141 P 28 35.80 0.7
 PKI 10.61 143 P 28 35.80 0.1
 0.5s 8.00nm 5.4mb X
 QUE 11.32 240 eP 29 05.00 19.8X
 e 30 41.50
 HYB 18.85 179 eP 30 28.50 5.8X
 GBA 22.66 182 Pc 31 03.10 0.3

0.9s 2.80nm 3.8mb
 NB2 48.06 323 P 34 40.00 -1.4
 0.6s 1.70nm 4.3mb
 AKU 60.02 332 eP 35 55.30 -13.7X
 1.2s 37.50nm
 MBC 67.12 5 eP 36 57.00 1.5
 YKA 80.96 6 P 38 23.80 8.0X
 S.D. = 1.1 on 9 of 13 obs.

% JAN 06, 1989 02h 17m 27.88 ± 0.65s
 40.469 N ± 6.3km 29.172 E ± 6.0km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

YLV 0.18 57 iPg 17 31.60 -0.4
 GBZT 0.38 33 iPgc 17 35.60 -0.1
 iSg 17 42.00
 HRT 0.52 47 iPg 17 37.50 -0.9
 iSg 17 43.00
 ISK 0.60 352 iPg 17 40.70 0.7
 eSg 17 51.00
 KCT 0.66 251 iPg 17 40.60 -0.4
 iSg 17 50.60
 CTT 0.88 321 iPg 17 45.70 0.9
 GPA 0.89 101 ePg 17 52.90 8.0X
 eSg 18 03.90
 DST 0.96 206 iPg 17 44.80 -1.4
 BNT 0.96 264 iPg 17 46.10 -0.1
 EDC 1.01 263 iPg 17 46.50 -0.4
 DMK 1.72 322 ePn 18 01.00 2.9X
 KHL 2.16 173 ePn 18 06.60 2.1
 S.D. = 1.1 on 10 of 12 obs.

& JAN 06, 1989 02h 43m 01.96s
 60.002 N 152.853 W
 DEPTH = 106.0km
 SOUTHERN ALASKA (2)
 <AGS-P>.

ILIM 0.09 326 eP 43 16.25 0.9
 iS 43 28.62
 RDT 0.62 21 iP 43 19.11 -0.5
 iS 43 32.63
 PDB 0.71 253 eP 43 19.18 -1.1
 eS 43 32.96
 NNL 0.78 86 iP 43 21.38 0.4
 CNPM 0.95 120 iP 43 21.79 -0.8
 NKA 1.09 46 eP 43 25.50 1.4
 eS 43 41.39
 SPU 1.25 18 iP 43 25.34 -0.6
 CRP 1.32 15 eP 43 26.49 -0.4
 eS 43 46.06
 SLKM 1.41 68 eP 43 26.82 -1.0
 SVW 1.76 310 eP 43 30.55 -1.7
 PMS 2.05 51 eP 43 34.95 -1.0
 eS 44 00.00
 PTE 2.09 64 eP 43 35.22 -1.1
 PWA 2.20 40 eP 43 36.80 -1.1
 KDC 2.27 175 eP 43 35.55 -3.2
 PWL 2.40 67 eP 43 39.71 -0.8
 eS 44 06.38
 KNIM 2.58 80 eP 43 40.33 -2.6
 2.58 55 eP 43 40.90 -2.1
 eS 44 11.13
 MTU 2.61 88 eP 43 42.11 -1.3
 eS 44 12.03
 GHO 2.62 46 eP 43 41.49 -2.0
 eS 44 12.36
 SML 2.86 49 eP 43 44.42 -2.3
 GLI 2.99 70 eP 43 46.52 -1.9
 HIN 3.20 80 eP 43 49.70 -1.6
 FID 3.25 74 eP 43 49.64 -2.4
 VZW 3.29 68 eP 43 50.81 -1.7
 TOA 3.87 54 eP 43 58.59 -1.9
 25 obs. associated

JAN 06, 1989 03h 04m 07.16 ± 0.63s
 33.907 N ± 8.0km 24.975 E ± 5.3km
 DEPTH = 33.0km (normal)
 3.8mb (3 obs.)
 MEDITERRANEAN SEA (400)
 ML 4.2 (ATH).

NPS 1.45 21 ePn 04 33.70 2.4
 VAM 1.63 337 ePn 04 36.80 2.9X
 KAP 2.44 47 ePn 04 48.00 2.4
 ATH 4.18 346 ePn 05 10.50 0.3

06d 03h

KSL 4.38 58 ePn	05 13.00 -0.1	GZH 8.07 293 eP	04 40.50 -5.7X	Z 20s	1.90um		4.6MsZ
ELL 4.93 54 iPn	05 21.80 0.8	Z 16s	6.90um	E 13s	1.00um		
PRK 5.43 11 ePn	05 28.00 0.1	OIZ 10.95 266 P	05 21.20 -4.5X		eS	12 08.00	
VLS 5.55 321 ePn	05 32.00 2.4	E 15s	3.80um	IPM 25.12 235 ePd		08 11.70	0.7
NED 5.57 346 ePn	05 30.00 0.1		eS 07 15.50	1.2s	42.30nm		4.9mb
KHL 5.74 39 ePn	05 30.10 -2.3	SSE 10.97 359 eP	05 31.20 5.4X	MDJ 25.39 14 Pd		08 12.70	-0.5
BCK 5.78 51 ePn	05 32.40 -0.6	N 16s	2.82um	Z 16s	1.70um		4.7MsZ X
PLG 6.57 350 ePn	05 45.00 1.0	E 16s	2.44um	GTA 26.76 321 eP		08 25.30	-0.7
HLW 6.75 125 ePn	05 49.00 2.5	WHN 12.21 330 eP	05 38.00 -4.5X	Z 16s	1.90um		4.7MsZ X
	eSn 06 59.00	Z 16s	6.20um	E 12s	1.10um		
KZN 6.88 339 ePn	05 52.00 3.6X	N 15s	5.40um		sS	13 00.00	
KOT 7.05 122 ePn	05 51.00 0.4	E 12s	2.40um		sS	13 17.00	
	eSn 07 06.00	DAV 13.54 162 eP	06 04.00 3.8X	SHL 27.72 287 iP		08 34.00	-1.0
IKL 7.51 70 ePn	05 57.00 -0.1	KKM 14.84 201 ePc	06 24.00 6.6X		iS	13 14.00	
VAY 7.64 346 iP	06 09.50 10.5X	1.0s	69.30nm	PSI 27.93 235 ePc		08 36.60	-0.1
OHR 7.92 336 iP	06 02.10 -0.8	GYA 14.95 298 P	06 15.40 -3.5X	KHK I 28.84 192 ePd		08 47.20	2.4
SOI 8.34 302 P	06 08.30 -0.3	E 12s	2.10um		e	10 51.50	
LCI 8.52 321 P	06 08.90 -2.2		PP 06 28.80	LSA 28.99 295 P		08 47.30	0.5
SKD 8.52 342 eP	06 21.20 10.0X		S 08 59.00	GUN 33.29 290 P		09 24.50	0.0
	e 07 48.80		SS 09 23.00		0.8s	25.00nm	5.1mb
PZI 8.78 294 P	06 14.61 -0.2	TIA 16.50 348 eP	06 37.40 -1.0	PKI 33.67 290 P		09 27.30	-0.5
MEU 8.79 294 P	06 15.50 0.5	Z 20s	2.90um		0.5s	2.00nm	4.3mb
TDS 8.99 312 P	06 17.30 -0.4	N 19s	3.20um	KKN 33.80 290 P		09 28.20	-0.6
DSI 9.07 102 eP	06 16.00 -2.7	E 19s	3.10um		0.7s	7.00nm	4.7mb
	eS 07 59.00		eS 09 47.00	DMN 33.94 290 P		09 29.80	-0.2
SALJ 9.20 99 Pc	06 20.20 -0.4	XAN 17.78 324 iPd	06 53.50 -0.9		0.7s	10.00nm	4.8mb
PRNI 9.21 110 eP	06 20.00 -0.8	N 16s	3.00um	GKN 34.39 290 P		09 33.00	-0.8
KFNJ 9.23 100 Pc	06 21.20 0.3	E 15s	2.60um		0.6s	8.00nm	4.8mb
MASJ 9.30 101 Pc	06 22.40 0.4		S 10 12.00	WMQ 36.73 318 eP		09 55.30	2.0
BRT 9.30 321 P	06 20.90 -1.1	KMI 17.94 290 Pd	06 54.50 -2.2	Z 16s	1.70um		4.9MsZ X
JARJ 9.36 97 Pd	06 22.20 -0.6	4.0s	0.50nm		S	15 38.00	
MBH 9.38 113 iPd	06 23.00 0.0	E 15s	2.50um	HYB 40.59 274 eP		10 26.00	0.3
MGR 9.76 312 P	06 26.80 -1.5		sP 07 22.00		e	10 38.50	46km
SGD 10.17 314 P	06 33.80 0.0		eS 10 10.00	MBL 41.02 182 eP		10 28.40	-0.6
CVT 10.59 294 P	06 42.06 2.5		sS 10 29.00	WB5 41.70 161 iPc		10 33.20	-1.4
KBA 15.83 330 i(P)	07 55.60 6.4X	LOE 18.82 265 eP	07 07.00 -0.3		eS	16 44.80	
	0.5s 2.40nm	CD2 19.21 308 iPc	07 10.30 -1.5	WRA 41.75 162 Pc		10 34.10	-1.0
	3.6mb	Z 16s	5.13um		0.6s	14.70nm	4.9mb
KHC 17.41 334 iPd	08 11.70 2.7X	N 14s	3.60um	NANU 42.77 188 eP		10 44.00	0.6
	1.2s 7.50nm		S 10 45.70	KOD 43.41 264 eP		10 54.00	4.9X
GRF 18.76 331 e(P)	08 29.00 3.3X	TIY 19.22 338 Pc	07 11.80 -0.1	OIS 44.14 155 iPc		10 53.30	-1.3
	e(S) 10 54.00	N 14s	3.30um	POO 44.79 276 eP		11 00.50	0.6
CLL 19.45 337 eP	08 34.00 0.2		S 10 45.50	ASPA 45.16 164 ePc		11 02.00	-0.7
DOU 22.05 323 P	09 14.80 14.3X	TSRJ 20.04 37 eP	07 20.20 -0.4		0.5s	50.00nm	5.6mb
SLL 27.65 348 eP	09 51.50 -2.1	BJI 20.39 348 eP	07 23.00 -1.1	Z 23s	0.22um		4.0MsZ X
	0.4s 2.00nm	Z 20s	2.10um		eS	17 37.10	
S.D. = 1.4 on 33 of 41 obs.	4.1mb	N 12s	1.00um		LR	32 10.90	
			eS 11 08.00	WARB 46.27 173 iPc		11 01.20	-10.2X
JAN 06, 1989 04h 02m 48.76 ± 0.16s		NST 20.71 261 eP	07 20.50 -7.1X	MEKA 46.50 184 iPc		11 12.70	-0.5
20.084 N ± 2.8km 121.405 E ± 3.6km		PCI 20.91 184 eP	07 32.00 2.3	MRWA 49.29 186 eP		11 34.80	-0.1
DEPTH = 48.1km (8 depth phases)		IIDJ 21.13 40 P	07 32.00 0.2	QUE 49.92 293 eP		11 40.00	-0.1
5.0mb (31 obs.) 4.4MsZ (4 obs.)		CHG 21.22 270 iPd	07 32.30 -0.4	BAL 50.60 185 eP		11 44.00	-0.9
PHILIPPINE ISLANDS REGION (248)		1.1s	31.65nm	COOL 50.67 180 eP		11 44.00	-1.5
CENTROID, MOMENT TENSOR (HRV)			eS 11 36.00	FORR 51.05 173 iPd		11 48.00	-0.2
Data Used: GDSN		CHTO 21.22 270 iPd	07 32.80 0.1		0.5s	100.00nm	6.1mb X
L.P.B.: 6S, 15C		1.2s	33.33nm	KLB 51.50 184 eP		11 51.00	-0.7
Centroid Location:			4.6mb		0.4s	4.00nm	4.8mb
Origin Time 04:02:47.8 0.8		BDT 21.41 266 eP	07 33.90 -0.7	NWAO 52.86 184 iPd		12 01.80	-0.1
Lat 19.85N 0.11 Lon 121.00E 0.16		SNY 21.75 4 eP	07 38.20 0.3		0.5s	11.00nm	5.1mb
Dep 52.5 9.4 Half-duration 1.9		Z 16s	1.40um	Z 20s	0.20um		4.2MsZ
Moment Tensor; Scale 10**16 Nm		N 16s	0.90um	N 20s	0.20um		
Mrr=7.98 1.09 Mtt=1.50 1.13		E 20s	2.00um	E 20s	0.10um		
Mff=-9.48 1.98 Mrt=-5.61 1.35			SS 11 30.00	RMO 53.36 149 eP		12 05.00	-0.7
Mrf=-2.87 1.06 Mtf=-2.25 0.98		MTMJ 21.82 38 P	07 40.90 2.1	RKG 54.01 185 eP		12 14.00	3.7X
Principal Axes:		MAT 22.03 38 (P)	07 40.00 -0.7	STK 55.17 159 eP		12 19.00	0.1
T Val= 11.31 P1g=61 Azm=172		0.8s	8.21nm	MAIO 56.03 301 eP		12 27.00	1.7
N -0.49 26 23			eS 11 38.00		eS	20 16.00	
P -10.83 13 286		CHJJ 22.16 40 P	07 42.30 0.2	BRS 56.13 146 eP		12 25.50	-0.4
Best Double Couple: Mo=1.1*10**17		LZH 22.17 320 eP	07 43.00 0.6	ADE 57.16 163 iPd		12 34.00	0.8
NP1: Strike=346 Dip=39 Slip= 47		Z 16s	2.50um	COO 58.28 149 eP		12 41.00	0.0
NP2: 217 63 119		N 13s	1.60um	BWA 59.99 154 iPc		12 54.10	1.3
		E 14s	0.60um	BFD 60.34 161 iPc		12 53.20	-1.9
			S 11 48.00	CAN 61.00 154 eP		13 00.00	0.3
PIP 1.90 203 ePc	03 19.50 0.2	HHC 22.34 340 eP	07 44.20 0.3	CNB 61.15 154 iPc		13 01.80	1.1
iS 03 43.50		Z 16s	4.80um	KER 66.29 300 eP		13 38.00	3.3X
CVP 2.40 170 ePc	03 08.80 -17.6X	N 14s	2.70um	TAB 66.38 304 eP		13 36.00	0.7
eS 03 58.50		E 13s	1.00um	BRW 68.52 20 eP		13 47.80	-0.1
BAG 3.74 192 eP	03 45.80 0.2		S 11 45.00	TTA 68.96 29 eP		13 50.70	-0.1
0.9s 554.62nm		BTO 22.65 337 eP	07 48.00 1.1	MSL 69.15 302 eP		13 50.50	-1.9
eS 04 25.00		N 16s	1.32um	IMA 69.78 26 eP		13 55.70	-0.2
QCP 5.43 183 eP	04 13.00 3.8X	E 15s	1.90um		1.0s	12.50nm	4.8mb
QZH 5.49 332 P	04 05.80 -4.3X		pP 07 54.00	PMS 72.15 31 eP		14 00.76	-9.4X
Z 16s	5.30um		S 11 54.00	FBA 72.35 27 eP		14 17.00	5.8X
N 12s	4.20um	GUMO 23.35 102 e(P)	07 53.50 -0.3	KEV 72.85 339 iP		14 14.20	0.2
	S 05 03.00	Z 22s	1.49um	SOD 73.47 336 iP		14 17.00	-0.7
HKC 7.10 289 iP	04 27.60 -5.1X		S 07 53.20	TOA 73.59 29 eP		14 18.30	-0.2
iS 05 43.60		PJG 23.35 102 e(P)	07 53.20 -0.6	KJF 73.71 333 iP		14 18.00	-1.1
MCO 7.60 287 iP	04 34.50 -5.2X	GUA 23.41 102 e(P)	07 48.50 -5.9X				
eS 05 54.10		CN2 23.89 7 eP	07 57.60 -1.2				

MAT 44.95 15 iPd 55 29.30 -1.3
0.8s 14.93nm 4.5mb
GUN 51.54 314 P 56 21.00 0.1
0.6s 11.00nm 4.4mb
PKI 51.68 313 P 56 21.80 -0.1
0.4s 15.00nm 4.7mb
KKN 51.90 314 P 56 23.40 0.1
0.6s 6.00nm 4.1mb
DMN 51.92 313 P 56 23.40 -0.2
0.6s 10.00nm 4.3mb
GKN 52.49 313 P 56 27.50 0.0
0.6s 10.00nm 4.3mb
SPA 83.06 180 iPc 59 33.00 0.0
0.6s 7.72nm 4.5mb
S.D. = 1.0 on 22 of 24 obs.

& JAN 06, 1989 07h 37m 42.00s
35.630 N 11.630 E
DEPTH = 10.0km (geophysicist)
TUNISIA (397)
<SPEC>. Held to mainshock
location.

PTS 1.21 14 P 38 04.50 0.0
CVT 2.25 24 P 38 19.40 -0.4
FAI 2.33 45 P 38 22.40 1.5
LVI 2.42 13 P 38 22.50 0.3
ERC 2.52 17 P 38 23.80 0.1
MCT 2.57 38 P 38 26.30 1.8
PZI 3.00 61 P 38 31.30 0.8
GIB 3.04 39 P 38 31.80 0.7
MEU 3.04 60 P 38 30.30 -0.8
eSg 39 04.50
USI 3.31 21 P 38 34.50 -0.4
MNO 3.37 46 P 38 37.50 1.6
ATN 3.98 49 P 38 45.40 1.1
SOI 4.30 54 P 38 49.20 0.2
13 obs. associated

* JAN 06, 1989 08h 54m 51.92±0.98s
6.792 S ± 9.9km 131.585 E ± 11.0km
DEPTH = 33.0km (normal)
4.5mb (2 obs.)

TANIMBAR ISLANDS REGION (281)
AAI 4.57 312 iP 56 00.50 -0.1
MTN 6.03 184 iPc 56 24.70 3.5X
eS 57 30.00
KNA 9.32 197 eP 57 09.00 1.9
eS 58 49.00
TZZ 9.70 82 iPd 57 12.60 0.2
WB5 13.29 169 eP 58 00.00 -0.9
iS 00 23.20
WRA 13.34 169 Pc 58 00.00 -1.6
0.5s 4.50nm 4.7mb
QIS 15.74 151 eP 58 34.00 1.1
eS 01 19.00
ASPA 16.93 173 iPc 58 47.90 -0.1
0.6s 16.00nm 4.3mb
eS 01 45.80
MBL 18.26 217 eP 59 04.00 -0.5
eS 02 16.00
CTA 19.42 134 iP 59 24.00 5.4X
WARB 19.85 193 eP 59 15.30 -7.9X
FORR 24.16 187 eP 00 08.80 2.7X
S.D. = 1.3 on 8 of 12 obs.

JAN 06, 1989 09h 12m 42.67±0.72s
8.003 S ± 5.5km 147.357 E ± 11.0km
DEPTH = 132.9 ± 5.0 km
4.7mb (10 obs.)

EAST PAPUA NEW GUINEA REGION (207)
BLLO 1.08 317 iPd 13 06.30 -0.7
LAT 1.39 345 iPc 13 09.60 -0.4
PMG 1.41 188 iPd 13 10.50 0.2
eS 13 30.00
MNDI 4.10 296 eP 13 46.00 1.1
TZZ 6.67 294 eP 14 20.00 0.4
CTA 12.06 185 iP 15 36.00 4.7X
0.6s 10.00nm 4.6mb
QIS 14.56 210 eP 16 05.00 1.5
WB5 17.26 225 eP 16 36.20 -0.8
WRA 17.32 225 Pd 16 37.00 -0.8
0.2s 1.70nm 4.0mb
RMO 18.43 176 eP 16 51.00 0.3
BRS 19.96 166 iP 17 07.00 0.4
ASPA 20.22 218 eP 17 09.20 -0.1

0.5s 17.00nm 4.7mb
eS 20 49.00
WARB 26.74 225 iPd 18 01.50 -10.2X
FORR 28.99 216 eP 18 30.50 -1.4
BAL 36.42 228 eP 19 39.00 2.8X
CHTO 54.67 300 iP 22 00.60 0.2
1.0s 4.75nm 4.3mb
GUN 69.26 304 Pc 23 38.20 0.2
0.6s 18.00nm 5.1mb
PKI 69.53 303 Pc 23 39.50 -0.1
0.6s 6.00nm 4.6mb
KKN 69.71 303 Pc 23 40.70 0.1
0.6s 9.00nm 4.8mb
DMN 69.79 303 Pc 23 41.40 0.3
0.6s 19.00nm 5.1mb
GKN 70.32 303 Pc 23 44.20 0.0
0.6s 23.00nm 5.2mb
GBA 72.65 287 Pc 23 57.70 -0.3
0.6s 5.50nm 4.5mb
KIC 152.27 268 PKP 32 25.30 7.2X
LIC 152.54 268 PKP 32 26.00 7.6X
S.D. = 0.7 on 19 of 24 obs.

? JAN 06, 1989 09h 23m 34.95±9.09s
34.554 S ± 61.3km 72.492 W ± 51.2km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

LNv 1.08 57 iP 23 55.20 0.0
iS 24 04.00
SAN 1.88 55 ePc 24 07.20 -0.2
PCH 1.89 61 iP 24 07.80 0.2
ROCH 2.00 38 iP 24 09.50 0.1
PEL 2.06 47 iPc 24 10.00 -0.1
iS 24 30.10
FCH 2.20 57 iP 24 12.30 -0.1
iS 24 37.50
S.D. = 0.2 on 6 of 6 obs.

* JAN 06, 1989 09h 47m 41.24±1.24s
33.976 N ± 11.0km 25.129 E ± 10.5km
DEPTH = 83.8 ± 16.5 km
3.6mb (1 obs.)
EASTERN MEDITERRANEAN SEA (371)
MD 3.9 (ATH).

NPS 1.34 17 ePn 48 05.20 0.1
VAM 1.62 332 ePn 48 03.30 -5.4X
KAP 2.30 46 ePn 48 20.00 2.1X
KSL 4.23 58 ePn 48 45.30 0.6
ELL 4.79 53 ePn 48 52.90 0.4
VLS 5.58 320 ePn 49 03.00 -0.4
KOT 6.98 123 ePn 49 23.00 0.3
eSn 50 38.00
IKL 7.37 70 eP 49 27.00 -1.1
DSI 8.96 103 eP 49 49.00 -0.9
PRNI 9.11 111 eP 49 52.00 0.0
MBH 9.29 114 iPc 49 55.00 0.6
eS 51 30.00
KHC 17.40 334 eP 51 43.70 3.8X
NB2 28.54 346 P 53 31.00 0.3
0.4s 0.60nm 3.6mb
S.D. = 0.7 on 10 of 13 obs.

% JAN 06, 1989 10h 53m 39.22±0.94s
37.488 N ± 9.5km 3.964 W ± 7.7km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
MG 3.0 (MDD).

AFC 0.41 125 iPgc 53 48.10 0.5
eSg 53 53.50
EBAN 0.69 12 iPgc 53 54.20 1.3
eSg 54 04.50
EHOR 1.07 288 ePn 53 59.20 -0.2
eSn 54 13.70
EPRU 1.14 243 ePn 54 00.50 -0.1
EVIA 1.63 45 ePn 54 06.50 -1.6
eSn 54 27.00
S.D. = 1.5 on 5 of 5 obs.

JAN 06, 1989 10h 59m 20.71±0.60s
32.435 N ± 5.3km 35.425 E ± 7.4km
DEPTH = 10.0km (geophysicist)
DEAD SEA REGION (373)
Felt in the Bet Shean area.

SALJ 0.48 153 Pc 59 30.70 0.3
JARJ 0.48 114 Pd 59 30.50 0.0
MASJ 0.75 160 Pd 59 35.40 0.0
BHL 1.48 7 Pgc 59 46.00 -1.4
Sg 00 08.50
SHBJ 1.82 94 Pc 59 52.20 -0.2
CSS 3.07 326 eP 00 10.00 -0.1
HQL 3.17 186 eP 00 12.00 0.4
eS 01 03.00
AYN 3.59 172 eP 00 18.70 1.2
eS 01 11.30
BADA 3.92 185 ePc 00 21.00 -1.2
eS 01 08.00
KOT 3.97 232 ePn 00 22.00 -0.8
eSn 01 07.00
IKL 4.06 340 eP 00 26.00 1.9
KHL 7.60 322 iPg 01 58.30 44.1X
iSg 02 05.30
S.D. = 1.1 on 11 of 12 obs.

& JAN 06, 1989 11h 09m 40.62s
62.763 N 149.846 W
DEPTH = 77.0km
CENTRAL ALASKA (1)
<AGS-P>.

GHO 1.08 156 eP 10 00.15 -0.7
eS 10 15.98
PWA 1.12 181 iP 10 00.50 -0.7
SML 1.19 143 iP 10 01.38 -0.8
eS 10 18.25
SPU 1.90 214 eP 10 11.19 -0.5
eS 10 34.35
TTA 2.83 276 eP 10 23.48 -1.1
5 obs. associated

? JAN 06, 1989 12h 45m 00.07±1.95s
47.009 N ± 31.4km 153.726 E ± 25.7km
DEPTH = 33.0km (normal)
4.9mb (9 obs.)
KURIL ISLANDS (221)

ASAJ 8.30 254 P 47 01.10 0.1
HOOJ 8.75 242 eP 47 04.20 -3.0X
eS 48 39.60
MRRJ 10.10 248 eP 47 22.40 -3.4X
MAT 15.57 233 (P) 48 33.00 -5.7X
0.9s 6.72nm 3.8mb X
(S) 52 16.00
MDJ 16.98 271 eP 48 57.00 0.5
CN2 20.07 271 eP 49 30.80 -2.4
BJI 27.90 269 eP 50 50.00 1.2
Z 16s 0.30um 4.0msz X
GTA 39.34 279 eP 52 28.40 0.5
CD2 41.32 265 eP 52 44.20 0.1
GYA 42.18 258 P 52 51.00 -0.3
ALE 49.44 6 eP 53 47.00 -1.2
1.0s 16.00nm 5.0mb
CHTO 52.59 257 eP 54 12.10 -0.7
1.0s 2.25nm 4.1mb
GUN 55.40 275 P 54 33.50 -0.3
KKN 55.88 276 P 54 37.10 0.0
1.0s 35.00nm 5.3mb
PKI 55.93 275 P 54 37.80 0.2
DMN 56.12 276 P 54 39.00 0.2
1.0s 69.00nm 5.6mb
GKN 56.18 276 P 54 39.20 0.0
DAG 56.41 358 iPd 54 38.50 -1.5
0.6s 5.33nm 4.7mb
LRM 60.70 53 eP 55 20.70 10.1X
NDI 60.76 282 iPd 55 10.50 -0.4
NB2 68.12 341 P 55 57.50 -0.9
0.9s 8.60nm 4.8mb
CLL 76.40 336 iPd 56 47.80 0.4
0.8s 17.00nm 5.1mb
MLR 77.09 325 ePc 56 52.50 0.9
PRU 77.14 334 P 56 52.50 0.9
e 18 20.10
Sn 18 35.50
Sg 18 43.50
MOX 77.38 336 eP 56 54.00 1.1
eSg 19 23.00
KHC 78.19 335 iPc 56 58.30 0.9
1.0s 7.00nm 4.6mb
KBA 80.10 334 ePc 57 08.50 0.5
0.9s 16.50nm 5.0mb
SKO 81.81 326 eP 57 17.00 0.2

06d 12h

VAY 81.93 325 eP 57 17.50 0.1
 SLR 132.29 277 e(Pdif01 11.50 4.5X
 0.5s 16.20nm
 PRY 133.61 276 e(Pdif01 06.50 -6.4X
 S.D. = 0.9 on 25 of 31 obs.

* JAN 06, 1989 13h 14m 42.02± 1.74s
 43.360 N ±11.6km 5.432 E ± 9.7km
 DEPTH = 10.0km (geophysicist)
 NEAR SOUTH COAST OF FRANCE (379)
 MD 2.9 (STR).

GELF 0.02 352 Pg 14 43.98 0.0
 PUYF 0.26 48 Pg 14 46.44 -1.1
 TREF 0.27 352 Pg 14 46.63 -1.0
 PRAF 0.48 337 Pg 14 51.74 -0.1
 TAVF 0.52 60 Pg 14 52.04 -0.6
 Sg 14 58.78
 VILF 0.53 23 Pg 14 51.85 -1.0
 Sg 15 00.76
 CALN 1.13 69 Pg 15 03.89 0.6
 Sg 15 19.73
 MVIF 1.36 66 Pn 15 07.23 0.1
 Sg 15 26.21
 TOUF 1.47 63 Pn 15 08.87 0.1
 Sg 15 27.90
 AURF 1.47 68 Pn 15 08.87 0.2
 Sg 15 29.20
 FOUF 1.52 39 P 15 11.12 1.9
 (Sg) 15 29.87
 AUTN 1.58 66 Pn 15 10.50 0.1
 Sg 15 32.54
 SAOF 1.66 67 Pn 15 11.15 -0.2
 DOI 1.74 48 P 15 12.90 0.4
 (Sn) 15 35.40
 BNI 1.91 27 P 15 17.20 2.1
 eSn 15 40.60
 CKI 2.32 62 P 15 20.60 -0.2
 (Sn) 15 49.00
 CVF 2.64 106 Pn 15 24.30 -1.2
 S.D. = 1.0 on 17 of 17 obs.

JAN 06, 1989 13h 31m 57.49± 0.79s
 25.103 N ± 9.3km 91.593 E ± 6.4km
 DEPTH = 10.0km (geophysicist)
 INDIA-BANGLADESH BORDER REGION (315)

SHL 0.53 30 iP 32 08.30 0.0
 eS 32 53.00
 GUN 5.83 300 P 33 26.20 -0.2
 0.6s 14.00nm 4.8mb X
 PKI 6.07 295 P 33 30.60 0.8
 0.5s 9.00nm 4.8mb X
 KKN 6.26 297 P 33 32.30 -0.1
 0.5s 8.00nm 4.8mb X
 DMN 6.33 295 P 33 33.30 -0.1
 GKN 6.87 296 P 33 40.50 -0.4
 0.6s 17.00nm 5.3mb X
 CHG 9.26 131 eP 34 49.40 35.4X
 CHTO 9.26 131 e(P) 34 14.00 0.0
 S.D. = 0.5 on 7 of 8 obs.

JAN 06, 1989 13h 33m 33.30± 0.65s
 42.537 N ± 6.0km 24.123 E ± 9.7km
 DEPTH = 10.0km (geophysicist)
 BULGARIA (359)

SRS 1.47 196 ePn 33 59.20 -0.7
 eSn 34 20.70
 KNT 1.65 214 ePn 34 02.30 -0.1
 eSn 34 25.40
 VAY 1.68 224 iPn 34 02.60 -0.2
 RDO 1.75 142 ePn 34 03.00 -0.8
 eSn 34 28.50
 SOH 1.81 199 ePnc 34 04.10 -0.7
 eSn 34 31.30
 GRG 2.04 220 ePn 34 07.20 -0.9
 eSn 34 38.80
 SKO 2.07 255 iPn 34 10.00 1.5
 THE 2.09 205 ePn 34 10.70 1.9
 eSn 34 40.20
 PLG 2.22 193 ePn 34 10.00 -0.7
 PAIG 2.63 187 ePn 34 17.70 1.2
 e 34 56.80
 MLR 3.23 23 ePc 34 26.00 0.8
 BZS 3.57 330 ePd 34 28.00 -1.8
 VRI 3.82 28 iPc 34 34.00 0.6

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

JAN 06, 1989 13h 39m 57.31± 0.28s
 3.763 S ± 4.6km 137.385 E ± 5.4km
 DEPTH = 33.0km (normal)
 5.0mb (15 obs.) 4.6Msz (2 obs.)
 WEST IRIAN

TZZ 4.11 111 iPd 40 57.70 -1.7
 MNDI 6.69 111 eP 41 34.00 -2.0
 AAI 9.17 270 eP 42 09.50 -0.9
 MTN 10.94 214 eP 42 35.00 0.3
 e 42 40.00
 eS 44 36.00
 PMG 11.21 121 e(P) 42 30.00 -8.3X
 MNI 13.56 292 e(P) 43 10.50 0.6
 KNA 14.62 215 eP 43 23.40 -0.3
 WBS 16.29 190 iPc 43 41.50 -3.8X
 iS 46 37.00
 WRA 16.35 190 Pd 43 42.30 -3.9X
 0.6s 5.60nm 3.9mb X
 OIS 16.83 173 eP 43 48.00 -4.2X
 eS 46 45.00
 PCI 17.76 279 eP 44 08.20 4.4X
 0.9s 14.50nm 4.1mb
 CTA 18.39 153 iPc 44 10.00 -1.5
 1.1s 109.49nm 4.9mb
 iS 47 46.00
 GUMO 18.77 23 eP 44 20.00 3.7X
 PJG 18.77 23 eP 44 19.00 2.7
 ASPA 20.07 189 iPd 44 30.70 -0.2
 0.9s 202.00nm 5.5mb
 Z 19s 1.93um 4.5Msz
 eS 48 04.80
 LR 52 20.00
 TSM 20.86 292 eP 44 45.50 6.4X
 KHKI 22.13 257 ePd 45 03.80 12.0X
 eS 45 08.80
 PPR 22.94 306 ePc 44 42.00 -17.8X
 HNR 23.10 105 eP 45 01.00 -0.4
 MBL 24.29 223 eP 45 15.00 2.0
 WARB 24.56 204 eP 45 06.00 -9.5X
 eS 49 41.00
 RMO 25.09 155 eP 45 22.00 1.4
 BRS 27.72 150 iP 45 46.00 1.2
 eS 50 40.00
 NANU 28.24 227 eP 45 51.00 1.5
 STK 28.25 172 eP 45 48.00 -1.5
 FORR 28.33 197 eP 45 49.00 -1.3
 COOL 31.02 208 iPd 46 13.00 -1.3
 0.5s 8.00nm 4.8mb
 BWA 32.19 163 eP 46 25.70 1.2
 MRWA 32.45 216 eP 46 26.50 -0.3
 CAN 33.19 162 eP 46 35.50 2.2
 e 46 41.00
 KLB 33.27 211 eP 46 33.00 -0.9
 0.7s 11.00nm 4.9mb
 NWA0 34.60 211 iPd 46 51.20 5.8X
 0.7s 6.00nm 4.6mb
 Z 18s 1.30um 4.7Msz
 N 18s 0.90um
 E 18s 0.40um
 OIZ 35.32 311 eP 46 51.20 -0.5
 PSI 38.97 279 ePd 47 23.70 1.2
 0.8s 14.20nm 4.8mb
 MAT 40.10 1 eP 47 31.00 -0.6
 WHN 40.60 329 P 47 37.20 1.5
 NNT 40.78 294 iPc 47 37.10 -0.3
 GYA 42.26 317 P 47 50.00 0.4
 BDT 43.26 300 eP 47 57.10 -0.6
 CHG 43.99 302 iPc 48 03.90 0.2
 1.1s 17.09nm 4.8mb
 CHTO 43.99 302 eP 48 02.90 -0.7
 1.1s 14.72nm 4.7mb
 KMI 44.22 312 Pc 48 06.50 0.8
 sP 48 30.00
 XAN 46.20 327 iPd 48 20.40 -0.7
 CD2 47.09 319 eP 48 28.40 0.2
 BJI 47.75 338 eP 48 32.00 -1.1
 CN2 48.55 348 eP 48 39.00 -0.3
 MDJ 48.67 353 eP 48 39.70 -0.5
 MSZ 48.78 151 eP 48 43.00 1.9
 LZH 50.54 325 eP 48 55.00 0.0
 SHL 52.86 306 iP 49 12.30 -0.4
 GTA 55.14 325 eP 49 28.00 -1.1
 LSA 55.36 310 Pd 49 32.30 1.0
 GUN 58.71 306 P 49 54.80 -0.1

PKI 58.96 305 P 49 56.20 -0.4
 0.6s 10.00nm 5.1mb
 KKN 59.15 305 P 49 57.80 0.0
 DMN 59.22 305 P 49 58.60 0.2
 0.8s 56.00nm 5.7mb
 GKN 59.76 305 P 50 02.00 0.1
 KOD 61.26 284 eP 50 12.20 -0.3
 HYB 61.73 292 iPc 50 14.50 -0.8
 1.0s 70.00nm 5.7mb
 GBA 61.92 287 Pd 50 14.60 -2.0
 1.0s 22.40nm 5.3mb
 WMO 65.02 322 P 50 36.00 -0.6
 NDI 66.11 304 iPd 50 43.00 -0.8
 POO 66.34 292 iPc 50 44.70 -0.7
 QUE 75.12 302 iPc 51 39.00 0.4
 MAIO 82.49 307 iPc 52 19.50 1.1
 0.9s 19.18nm 5.2mb
 SPA 86.26 180 e(P) 52 37.20 0.3
 1.0s 14.50nm 5.2mb
 AVY 88.47 251 iPc 52 48.82 0.3
 BNG 119.01 273 ePKPd 58 24.80 -20.6X
 0.5s 5.00nm
 id 59 06.90
 KIC 142.19 275 PKP 59 23.10 -6.1X
 LIC 142.48 275 PKP 59 24.00 -5.7X
 ARE 145.09 126 i(PKP) 59 35.00 0.6
 CNCB 147.66 130 PKP 59 40.80 1.9
 LPB 147.73 129 PKP 59 43.00 4.1X
 ZOBO 147.87 129 PKP 59 44.00 4.7X
 S.D. = 1.1 on 58 of 74 obs.

JAN 06, 1989 15h 38m 55.10± 0.67s
 46.855 N ±10.8km 153.844 E ±10.1km
 DEPTH = 33.0km (normal)
 4.9mb (22 obs.)
 KURIL ISLANDS (221)

KUSJ 7.49 243 P 40 40.40 -4.3X
 eS 42 01.90
 ASAJ 8.33 255 P 40 57.30 0.8
 HOOJ 8.75 243 P 40 59.50 -2.8X
 eS 42 36.10
 MRRJ 10.12 249 eP 41 18.60 -2.5X
 NIJJ 14.60 234 eP 42 15.90 -5.2X
 KAKJ 14.74 229 eP 42 26.80 3.9X
 CHJJ 15.48 231 eP 42 32.50 0.0
 MAT 15.55 234 (P) 42 29.00 -4.4X
 0.8s 10.45nm 4.1mb
 MTMJ 15.74 235 P 42 30.30 -5.7X
 IIDJ 16.49 232 eP 42 42.90 -2.5X
 MDJ 17.06 271 eP 42 52.50 -0.1
 CN2 20.15 272 eP 43 25.00 -4.1X
 SNY 22.14 268 eP 43 48.10 -1.2
 BJI 27.98 270 (P) 44 45.50 1.0
 Z 16s 0.59um 4.3Msz X
 TIY 31.65 268 eP 45 17.60 0.2
 N 13s 0.30um
 S 50 14.00
 XAN 36.02 266 iPd 45 54.90 -0.2
 LZH 38.39 272 eP 46 16.00 1.0
 1.0s 37.00nm 5.2mb
 GTA 39.45 279 eP 46 24.00 0.2
 CD2 41.39 266 P 46 40.40 0.7
 GYA 42.23 258 P 46 46.60 -0.1
 MBC 44.33 20 eP 47 04.00 0.9
 WMO 45.36 291 P 47 11.50 -0.3
 Z 16s 0.47um 4.5Msz X
 YKA 50.54 37 P 47 53.10 1.3
 CHG 52.63 257 eP 48 08.00 -0.2
 CHTO 52.63 257 eP 48 08.60 0.4
 0.9s 3.84nm 4.4mb
 SHL 52.88 269 iP 48 09.20 -1.0
 GUN 55.49 275 P 48 29.40 -0.1
 KKN 55.98 276 P 48 33.40 0.6
 1.0s 31.00nm 5.3mb
 PKI 56.03 275 P 48 33.70 0.4
 DMN 56.21 276 P 48 34.80 0.2
 1.0s 90.00nm 5.8mb
 GKN 56.28 276 P 48 35.10 0.2
 DAG 56.56 358 eP 48 34.70 -1.4
 KEV 57.41 341 eP 48 49.00 6.8X
 SOD 59.33 339 iP 48 54.20 -1.5
 NDI 60.87 282 iPc 49 06.00 -0.7
 0.9s 16.81nm 5.2mb
 KJF 61.52 336 iP 49 10.20 -0.4
 SUF 63.12 336 iP 49 19.30 -1.9
 0.6s 3.70nm 4.7mb

BJI 28.04 270 Pc 13 48.00 09 53.50 -1.3
 9.0s 1.40nm 2.6mb X
 Z 16s 17.60um 5.7Msz X
 E 13s 7.80um
 ePP 10 44.00
 eS 14 40.00
 TIA 29.27 262 P 10 05.90 -0.1
 8.0s 1.00nm 2.5mb X
 Z 16s 7.60um 5.4Msz X
 N 14s 8.40um
 E 14s 7.70um
 eS 14 55.50
 SSE 29.63 250 P+ 10 08.00 -1.2
 1.5s 117.00nm 5.4mb
 Z 20s 5.10um 5.1Msz
 N 12s 5.10um
 E 12s 7.10um
 sP 10 16.50
 PPP 11 22.00
 i 12 32.00
 iS 15 12.00
 sS 15 24.00
 NJ2 30.54 254 Pc 10 17.20 0.0
 N 13s 5.30um
 E 13s 7.40um
 S 15 10.00
 HHC 30.85 275 P 10 19.00 -1.0
 Z 18s 5.00um 5.2Msz
 N 16s 11.40um
 E 16s 7.20um
 PP 11 23.00
 S 15 15.00
 TIY 31.71 269 Pc 10 27.50 -0.1
 9.0s 1.80nm 2.9mb X
 E 14s 21.60um
 PP 11 28.00
 S 15 35.00
 sS 15 48.00
 BTO 32.02 275 iPc 10 29.50 -0.8
 N 15s 9.30um
 E 15s 11.40um
 sP 10 44.00
 PP 11 38.00
 S 15 38.00
 SS 17 33.00
 TTA 32.04 41 eP 10 29.70 -0.5
 IMA 33.47 36 eP 10 41.70 -0.9
 0.9s 19.80nm 5.0mb
 BRW 33.70 26 eP 10 44.20 -0.2
 KDC 33.71 51 P 10 43.00 -1.6
 1.1s 62.50nm 5.4mb
 WHN 34.48 256 Pc 10 51.00 -0.5
 8.0s 1.60nm 3.0mb X
 Z 16s 19.80um 5.9Msz X
 N 12s 8.80um
 E 14s 12.00um
 S 16 21.00
 PMR 35.20 44 eP 10 56.50 -0.9
 1.0s 17.50nm 4.9mb
 Z 20s 6.00um 5.3Msz
 QZH 35.55 245 P 11 01.00 0.3
 Z 18s 6.90um 5.5Msz
 N 12s 3.40um
 S 16 40.00
 sS 16 50.00
 FBA 35.80 38 eP 11 02.00 -0.5
 i 11 16.60
 XAN 36.08 266 iPc 11 05.50 0.3
 N 15s 13.20um
 E 16s 15.10um
 LZH 38.45 272 Pc 11 25.00 -0.2
 7.0s 2349.00nm 6.2mb X
 Z 16s 8.40um 5.7Msz X
 N 16s 0.90um
 E 16s 3.60um
 eS 17 16.00
 SS 19 23.00
 GTA 39.52 279 Pc 11 33.20 -0.9
 9.0s 1.20nm 2.7mb X
 Z 16s 14.80um 5.9Msz X
 N 12s 6.30um
 PP 13 08.00
 S 17 29.00
 sS 17 49.50
 GZH 40.19 248 eP 11 40.00 0.5
 N 15s 4.50um

BAG 40.97 234 eP 11 45.50 -0.7
 eS 17 58.00
 INK 41.34 32 eP 11 48.00 -0.4
 CD2 41.44 266 iPc 11 50.10 0.3
 Z 15s 7.10um 5.7Msz X
 N 14s 9.89um
 E 13s 6.80um
 PcS 17 40.00
 eS 18 03.00
 OCP 42.15 231 eP 11 50.00 -5.7X
 GYA 42.27 258 iPc 11 56.40 -0.3
 Z 18s 5.90um 5.5Msz
 PP 13 41.00
 S 18 18.00
 MBC 44.39 20 eP 12 13.00 -0.2
 0.7s 19.00nm 5.0mb
 QIZ 45.37 248 eP 12 23.60 1.9
 N 15s 4.30um
 PP 14 14.00
 WMO 45.44 292 Pc 12 21.00 -1.1
 8.0s 1.40nm 2.9mb X
 Z 16s 17.70um 6.1Msz X
 N 16s 9.90um
 E 14s 12.20um
 PP 14 12.00
 KMI 45.80 260 P+ 12 25.00 -0.3
 7.0s 2.10nm 3.2mb X
 N 16s 7.20um
 E 16s 8.20um
 pP 12 40.00 58km
 sP 12 49.00
 PP 14 17.00
 eS 19 06.00
 S 19 10.00
 iS 19 14.00
 S 22 28.00
 DAV 46.42 221 eP 12 31.00 1.0
 ALE 49.67 6 ePc 12 53.80 -0.8
 1.0s 123.00nm 5.9mb
 YKA 50.57 37 P 13 01.80 0.2
 YKC 50.64 37 eP 13 01.50 -0.6
 1.0s 25.00nm 5.2mb
 RAB 50.76 182 e(P) 13 02.00 -1.6
 LSA 50.83 274 iPc 13 06.00 1.4
 N 14s 4.40um
 LOE 51.81 254 eP 13 10.00 -1.6
 i 15 58.00
 TSM 52.50 227 eP 13 17.50 0.8
 KBS 52.57 351 iPc 13 15.70 -0.9
 CHG 52.67 257 iPc 13 18.00 0.0
 0.2s 157.64nm 6.7mb X
 eS 20 54.00
 ed 45 25.00
 CHTO 52.67 257 iP 13 17.70 -0.3
 1.0s 32.50nm 5.3mb
 pP 13 30.00 44km
 SHL 52.93 269 iP 13 19.20 -1.0
 eS 20 52.00
 BDT 53.74 256 eP 13 25.70 -0.1
 NST 54.12 254 eP 13 29.70 1.1
 RMW 54.54 56 P 13 33.00 1.4
 KSH 55.19 293 eP 13 35.00 -1.5
 N 16s 19.70um
 GUN 55.56 276 P 13 39.40 -0.1
 EDM 55.90 46 ePc 13 40.50 -0.8
 KKN 56.04 276 P 13 42.80 -0.1
 PKI 56.09 276 P 13 43.20 -0.2
 PCI 56.10 222 eP 13 43.00 0.0
 HNR 56.20 173 P 13 52.00 8.3X
 S 21 37.00
 DMN 56.28 276 P 13 44.80 0.2
 DPW 56.34 54 P 13 44.00 -0.6
 GKN 56.35 276 P 13 45.00 0.0
 NNT 56.64 251 eP 13 47.40 0.5
 DAG 56.65 358 iPc 13 44.50 -1.8
 0.8s 93.28nm 5.9mb
 KEV 57.51 341 iP 13 51.00 -1.5
 0.8s 23.50nm 5.3mb
 eS 21 56.00
 WDC 58.02 63 eP 13 57.10 0.7
 SES 58.70 48 ePd 14 00.30 -0.9
 ORV 59.27 64 eP 14 05.00 -0.2
 TRO 59.33 343 iP 14 04.90 -0.2
 SOD 59.44 339 iP 14 04.70 -1.2
 SNG 60.16 247 eP 14 13.10 1.7
 eS 22 30.50

FFC 60.36 40 iPc 14 12.00 -0.4
 1.1s 59.00nm 5.6mb
 pP 14 25.00 46km
 LRM 60.74 53 eP 14 15.10 -0.3
 CMB 60.89 64 eP 14 16.80 0.5
 NDI 60.95 282 iPc 14 16.00 -0.7
 iS 17 49.00
 KJF 61.62 336 iP 14 19.00 -1.8
 1.1s 74.40nm 5.7mb
 eS 22 48.00
 KVN 61.66 62 P 14 21.90 0.2
 HPI 61.69 55 P 14 22.50 0.5
 FRI 61.96 65 eP 14 23.60 0.1
 KGM 62.53 241 eP 14 29.50 2.1
 EUR 62.68 61 iP 14 28.80 0.3
 0.2s 7.82nm 5.5mb
 IMW 62.78 54 P 14 29.80 0.6
 TNP 62.81 62 P 14 29.20 -0.2
 RRI2 62.91 55 P 14 30.80 0.7
 SUF 63.22 336 iP 14 30.20 -1.2
 SYP 63.36 67 eP 14 28.00 -4.9X
 CLC 64.02 65 eP 14 37.00 -0.2
 DUG 64.09 58 P 14 38.00 0.3
 BW06 64.28 54 P 14 39.10 0.1
 1.2s 68.49nm 5.6mb
 SBB 64.61 66 eP 14 45.00 4.0X
 PSI 64.68 245 ePc 14 42.50 1.0
 MWC 64.76 66 eP 14 40.00 -2.2
 FRB 64.85 19 eP 14 41.00 -1.0
 1.0s 70.00nm 5.7mb
 GSC 64.85 65 eP 14 48.00 5.4X
 DAU 64.85 57 P 14 43.00 0.1
 RVR 65.34 66 eP 14 52.00 6.4X
 NUR 65.43 335 iP 14 44.50 -1.3
 1.0s 96.00nm 5.8mb
 eS 23 28.00
 TPC 66.10 65 eP 14 50.00 -0.6
 BAR 66.65 67 eP 15 04.00 9.9X
 RSON 66.67 40 P 14 52.80 -1.1
 1.0s 33.25nm 5.3mb
 Z 20s 3.39um 5.6Msz
 QUE 66.75 290 iPc+ 14 45.60 -9.3X
 1.2s 153.91nm 5.9mb
 e 18 40.00
 RGS 66.78 343 eP 14 54.40 0.1
 CTA 66.90 188 iPc 15 07.90 12.3X
 1.6s 65.00nm
 MA10 67.35 299 iPd 14 59.20 0.7
 e 19 03.00
 eSn 24 12.00
 HYB 67.56 272 eP 14 59.00 -1.0
 1.0s 80.00nm 5.7mb
 GLA 67.56 65 eP 15 00.00 0.2
 AKU 67.71 356 iP 15 02.40 2.2
 1.0s 76.00nm 5.7mb
 UPP 67.90 338 iP 15 00.00 -1.5
 iS 24 04.00
 NB2 68.39 342 P 15 03.20 -1.4
 1.0s 145.90nm 5.9mb
 HFS 68.64 340 eP 15 04.80 -1.2
 0.9s 146.20nm 6.0mb
 WB5 68.65 200 eP 15 04.50 -2.0
 iS 18 04.50
 GOL 68.68 54 P 15 07.10 0.1
 pP 15 20.00 44km
 WRA 68.72 200 Pc 15 05.80 -1.1
 1.1s 15.40nm 4.9mb
 GLD 68.73 54 P 15 07.90 0.7
 1.2s 60.61nm 5.4mb
 DZM 69.44 168 iPc 15 11.20 -0.2
 POO 70.01 276 iPc 15 14.60 -0.5
 1.0s 62.00nm 5.5mb
 BER 70.19 344 iP 15 15.50 0.0
 BOM 70.47 277 eP 15 13.50 -4.3X
 eS 24 31.00
 GBA 70.98 270 Pc 15 20.00 -1.0
 1.0s 28.80nm 5.2mb
 ALO 71.35 59 eP 15 23.00 -0.2
 1.0s 21.25nm 5.0mb
 e 15 35.00
 ASPA 72.41 199 eP 15 29.50 0.3
 1.1s 24.00nm 5.0mb
 TEH 72.49 304 eP 15 30.00 0.1
 COP 72.91 338 iPd 15 32.70 0.9
 0.8s 200.00nm 6.1mb
 Z 18s 1.62um 5.3Msz

06d 20h

SOD	0.5s	5.63nm	4.9mb		
KJF	59.14	339 iP	49 28.30	-1.0	
SUF	61.33	336 eP	49 40.00	-4.3X	
NUR	62.93	336 iP	49 54.30	-0.6	
QUE	0.5s	3.00nm	4.7mb		
NB2	65.14	335 iP	50 08.60	-0.7	
HFS	66.57	290 eP	50 19.00	-0.2	
GBA	68.10	341 P	50 27.80	-0.4	
KSP	0.8s	6.60nm	4.8mb		
CLL	70.89	270 Pd	50 44.90	-1.0	
MLR	0.5s	1.50nm	4.3mb		
PRU	75.84	334 eP	51 14.00	-0.3	
WTS	76.39	336 iP	51 17.30	0.0	
KHC	0.9s	15.00nm	5.0mb		
GRF	77.09	325 ePd	51 23.00	1.5	
BZS	77.12	334 eP	51 22.00	0.5	
ENN	77.36	340 eP	51 24.00	1.3	
KBA	1.0s	16.00nm	5.0mb		
SKO	78.17	335 P	51 28.50	1.2	
VAY	78.34	336 eP	51 31.50	3.3X	
BNI	0.9s	7.00nm	4.7mb		
CKI	78.61	328 ePd	51 30.00	0.3	
DOI	78.71	340 eP	51 32.50	2.4	
FOUF	1.0s	17.00nm	5.0mb		
	80.08	334 iPd	51 40.00	2.1	
	0.8s	9.50nm	4.8mb		
	81.80	326 eP	51 46.00	-0.8	
	81.92	325 eP	51 46.00	-1.4	
	83.83	337 P	51 49.10	-8.3X	
		eSn	52 15.80		
		eSn	51 53.20	-4.7X	
		eSn	52 24.60		
		eSn	51 44.50	-14.6X	
		eSn	52 10.30		
		P	51 42.51	-16.9X	
		(Sg)	52 00.52		
		S.D.	= 1.0 on 37 of 44 obs.		

? JAN 06, 1989 20h 48m 42.46± 3.07s
 7.219 N ±29.8km 82.269 W ±10.3km
 DEPTH = 10.0km (geophysicist)
 SOUTH OF PANAMA (83)
 MD 4.5 (UPA), 4.3 (HDC).

DVD	1.22	352 ePc	49 04.20	-1.0	
PBC	1.41	327 iPd	49 08.30	0.1	
TIG	2.07	331 ePd	49 18.10	0.3	
JCR	2.75	342 iPd	49 44.80	17.4X	
BUS	2.75	328 iP	49 27.80	-0.1	
CDM	2.75	328 ePc	49 27.40	-0.5	
QPS	2.85	320 ePd	49 27.70	-1.1	
ICR	3.15	331 iPd	49 34.40	1.0	
IR22	3.17	330 ePc	49 34.10	0.4	
UPA	3.22	57 ePc	49 33.90	-0.2	
SJS	3.23	327 iP	49 35.00	0.7	
PTCR	3.33	320 ePd	49 34.20	-1.6	
HDC2	3.34	327 eP	49 34.90	-1.0	
SRA	3.57	323 eP	49 44.00	4.8X	
		S.D.	= 0.9 on 12 of 14 obs.		

% JAN 06, 1989 20h 51m 14.18± 0.71s
 43.436 N ± 5.3km 5.433 E ± 5.1km
 DEPTH = 10.0km (geophysicist)
 NEAR SOUTH COAST OF FRANCE (379)
 MD 2.7 (STR).

GELF	0.05	185 Pg	51 16.09	-0.3	
TREF	0.19	349 Pg	51 18.15	-0.3	
PUYF	0.22	64 Pg	51 18.16	-0.7	
PRAF	0.42	333 Pg	51 23.07	0.4	
VILF	0.46	26 Pg	51 23.31	-0.3	
TAVF	0.49	68 Pg	51 23.60	-0.5	
CALN	1.10	73 Pg	51 35.57	0.6	
MVIF	1.33	69 Pn	51 38.93	0.1	
TOUF	1.44	66 Pn	51 40.99	0.5	
		Sg	52 01.51		

AURF	1.45	71 Pn	51 40.82	0.3	
AUTN	1.55	68 Pn	51 42.49	0.4	
SAOF	1.63	70 Pn	51 42.94	-0.2	
		S.D.	= 0.5 on 12 of 12 obs.		

* JAN 06, 1989 21h 12m 10.01± 0.91s
 47.064 N ±15.7km 153.600 E ±12.2km
 DEPTH = 33.0km (normol)
 5.0mb (21 obs.)

KURIL ISLANDS (221)

KUSJ	7.44	241 P	13 53.40	-5.5X	
ASAJ	8.23	253 P	14 10.60	0.6	
HOJ	8.70	241 P	14 13.30	-3.2X	
MRRJ	10.04	247 eP	14 31.40	-3.6X	
MAT	15.54	233 (P)	15 42.00	-6.1X	
MTMJ	15.73	234 P	15 53.70	3.0X	
MDJ	16.89	270 eP	16 05.50	0.2	
CN2	19.98	271 eP	16 38.00	-4.2X	
SNY	21.99	267 eP	17 01.50	-1.2	
HHC	30.61	274 eP	18 23.40	0.3	
TIY	31.49	268 eP	18 31.00	0.1	
XAN	35.87	265 iPd	19 08.30	-0.4	
LZH	38.21	272 eP	19 29.00	0.5	
CD2	41.24	265 P	19 53.80	0.4	
GYA	42.11	258 P	20 00.20	-0.5	
MBC	44.19	20 eP	20 17.00	0.1	
WMO	45.12	291 P	20 25.00	0.1	
ALE	49.40	6 eP	20 57.50	-0.3	
YKA	50.47	37 P	21 06.50	0.3	
CHG	52.52	257 eP	21 21.90	-0.3	
CHTO	52.52	257 eP	21 21.80	-0.4	
SHL	52.71	269 iP	21 23.10	-0.8	
GUN	55.31	275 P	21 42.90	-0.2	
KKN	55.79	275 P	21 46.80	0.4	
PKI	55.84	275 P	21 46.70	-0.2	
DMN	56.02	275 P	21 48.40	0.3	
GKN	56.09	276 P	21 48.40	-0.1	
DAG	56.35	358 eP	21 48.40	-1.1	
SOD	59.08	339 iP	22 08.00	-0.8	
FFC	60.28	40 eP	22 16.00	-1.3	
KJF	61.26	336 iP	22 23.20	-0.5	
SUF	62.86	336 eP	22 33.00	-1.4	
NUR	65.07	335 iP	22 47.00	-1.8	
HYB	67.32	271 eP	23 03.00	-0.9	
UPP	67.54	338 iP	23 04.00	-0.6	
NB2	68.04	341 P	23 07.20	-0.6	
HFS	68.28	340 eP	23 08.60	-0.6	
WRA	68.92	199 Pd	23 09.60	-4.0X	
KSP	75.77	334 eP	23 53.80	-0.1	
CLL	76.32	336 eP	23 57.00	0.1	
MLR	77.00	325 ePc	24 02.00	1.0	
PRU	77.05	334 eP	24 01.50	0.5	
WTS	77.29	340 eP	24 03.00	0.7	
MOX	77.30	336 eP	24 03.00	0.6	
KHC	78.10	334 Pd	24 08.10	1.2	
BZS	78.53	328 ePc	24 09.50	0.3	
ENN	78.64	340 eP	24 10.50	0.8	
DOU	79.58	340 Pc	24 17.00	2.1	
KBA	80.01	334 iPd	24 18.20	0.7	
CDF	80.49	338 eP	24 18.70	-1.2	
SKO	81.72	326 eP	24 27.00	0.7	
VAY	81.84	325 eP	24 27.40	0.5	
LOR	82.40	340 eP	24 29.90	0.1	

SSF	0.6s	6.60nm	4.9mb		
AVF	82.68	340 eP	24 31.10	-0.1	
SMF	82.97	340 eP	24 33.30	0.6	
LPG	0.8s	4.00nm	4.6mb		
MAF	82.99	340 eP	24 33.30	0.4	
	1.0s	18.00nm	5.1mb		
	83.33	337 eP	24 35.90	0.9	
	0.7s	3.30nm	4.6mb		
	83.69	340 eP	24 37.00	0.6	
	0.8s	16.10nm	5.2mb		
		S.D.	= 0.8 on 51 of 58 obs.		

& JAN 06, 1989 21h 29m 54.16s
 61.267 N 150.155 W
 DEPTH = 54.4km
 SOUTHERN ALASKA (2)
 <AGS>-P>.

PMS	0.29	94 iP	30 03.25	-0.5	
PWA	0.41	19 iP	30 03.83	-0.9	
PLRM	0.59	56 iP	30 05.84	-1.0	
PME	0.65	56 iP	30 06.85	-0.7	
PTE	0.68	126 iP	30 07.56	-0.4	
NKA	0.74	226 iP	30 09.69	0.9	
SLKM	0.76	182 iP	30 08.23	-0.8	
GHO	0.78	49 iP	30 08.62	-0.7	
KNK	0.83	79 iP	30 09.56	-0.4	
SPU	0.92	266 iP	30 10.29	-0.9	
CRP	0.97	271 iP	30 11.32	-0.6	
PWL	0.98	114 iP	30 11.50	-0.4	
SML	1.03	57 iP	30 11.87	-0.7	
RDT	1.30	239 iP	30 15.68	-0.7	
NNL	1.35	205 iP	30 17.63	0.6	
KNIM	1.50	127 iP	30 17.16	-2.0	
GLI	1.54	103 iP	30 18.03	-1.6	
VZW	1.76	95 eP	30 21.75	-1.0	
MTU	1.78	135 eP	30 21.54	-1.5	
ILIM	1.82	230 iP	30 23.20	-0.5	
CNPM	1.83	198 eP	30 23.05	-0.7	
VLZ	1.86	93 iP	30 23.07	-1.0	
FID	1.86	105 eP	30 22.29	-1.9	
HIN	1.99	114 eP	30 24.52	-1.5	
KLU	2.05	82 iP	30 25.94	-1.0	
TOA	2.08	64 eP	30 27.04	-0.2	
CVA	2.27	107 eP	30 28.13	-1.8	
PDB	2.49	235 iP	30 31.73	-1.2	
SGAM	2.54	105 eP	30 31.52	-2.2	
SVW	2.65	269 iP	30 34.07	-1.3	
TTA	3.22	304 eP	30 41.85	-1.6	
KDC	3.73	200 eP	30 49.97	-0.5	
FBA	3.80	15 eP	30 51.70	0.1	
CTGM	4.29	90 eP	30 57.04	-1.6	
		34 obs. associated			

JAN 06, 1989 23h 16m 46.86± 0.72s
 26.285 S ± 6.2km 27.287 E ±12.4km
 DEPTH = 5.0km (geophysicist)
 REPUBLIC OF SOUTH AFRICA (584)
 MG 3.3 (BUL).

PRY	0.66	165 iPc	16 59.20	-0.9	
BFS	0.76	216 iPd	17 02.00	-0.2	
SLR	1.05	59 iPd	17 08.00	0.8	
BLF	2.98	199 iPd	17 37.00	1.2	
BUL	6.23	12 iPnc	18 23.20	1.3	
WIN	9.99	290 eP	19 18.00	3.6X	
LSZ	10.99	5 iPn	19 28.20	0.3	

PTZ 12.56 18 iPn 19 47.50 -1.8
 iSn 22 04.00
 iSg 22 16.50
 KMZ 12.84 354 iPn 19 52.30 -0.7
 eSn 22 11.00
 iSg 23 35.00

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

? JAN 06, 1989 23h 19m 58.13 ± 0.98s
 65.458 S ± 15.0km 179.993 W ± 24.4km
 DEPTH = 10.0km (geophysicist)
 5.1mb (1 obs.) 5.2msz (2 obs.)

SOUTH PACIFIC CORDILLERA (691)

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 13S, 27C

Centroid Location:

Origin Time 23:20: 6.8 0.4

Lat 65.52S 0.05 Lon 179.94W 0.09

Dep 15.0 FIX Half-duration 2.7

Moment Tensor: Scale 10**17 Nm

Mrr=-0.95 0.16 Mtt= 5.11 0.19

Mff=-4.16 0.11 Mrt= 0.00 0.00

Mrf= 0.00 0.00 Mtf=-1.11 0.15

Principal Axes:

T Val= 5.24 P1g= 0 Azm=187

N -0.95 90 180

P -4.29 0 97

Best Double Couple: Mo=4.8*10**17

NP1: Strike=232 Dip=90 Slip= 180

NP2: 322 90 0

SBA 13.07 192 eP 23 06.90 0.8
 WEL 24.40 350 P 25 24.80 7.6X
 Z 20s 8.51um 5.2msz

DZM 44.27 342 iPc 28 11.00 1.6
 CTA 50.46 317 iPc 29 06.10 8.3X
 iS 36 17.00
 iSS 39 56.00

ASPA 51.08 302 eP 29 02.20 -0.3
 Z 20s 1.81um 5.1msz
 LR 46 42.00

WRA 54.36 304 Pc 29 26.10 -0.9
 1.9s 35.80nm 5.1mb

WB5 54.41 304 eP 29 26.50 -0.8
 LPB 83.83 116 eP 32 40.00 10.6X
 LR 59 38.00

ZOBO 84.06 116 (P) 32 29.00 -1.7
 LR 59 32.00

SES 127.02 48 ePKP 39 04.00 1.3
 INK 137.44 23 ePKP 39 17.00 -4.8X
 MBC 146.43 22 ePKP 39 40.00 2.6X
 1.7s 155.00nm

BBTK 148.24 232 ePKP 39 52.00 10.4X
 FRB 151.85 61 ePKP 39 57.00 10.9X
 VAY 152.64 219 ePKP 40 02.00 14.1X
 OHR 152.90 216 ePKP 40 10.30 21.9X
 SKO 153.55 218 ePKP 40 11.00 21.8X

S.D. = 1.5 on 7 of 17 obs.

JAN 07, 1989 02h 29m 41.75 ± 0.17s
 46.373 N ± 1.8km 7.470 E ± 1.8km
 DEPTH = 11.4 ± 1.5 km

SWITZERLAND (544)

ML 3.8 (LDG), 3.5 (KBA), 3.5

(STR). mbLg 3.3 (DOU).

DIX 0.30 188 iPc 29 47.20 -0.9
 MMK 0.47 133 iPd 29 49.73 -1.7
 EMS 0.48 231 iPc 29 51.17 -0.5

ORX 0.82 154 P 29 56.00 -1.6
 ORO 0.83 154 P 29 56.10 -1.6
 LSD 0.94 194 P 29 58.40 -1.4
 S 30 11.00

LPL 1.00 211 Pg 30 00.10 -0.6
 LPG 1.01 210 Pg 30 00.40 -0.5
 Sg 30 14.00

TMA 1.01 105 iPd 29 59.73 -1.1
 VAI 1.04 119 Pd 30 00.90 -0.3
 LOMF 1.07 336 Pg 30 03.64 1.8

BBS 1.09 1 Pg 30 02.95 0.8
 Sg 30 18.55

LLS 1.16 64 ePd 30 02.90 -0.6
 RSP 1.23 187 P 30 03.30 -1.3
 ZLA 1.28 29 iPc 30 05.57 0.2
 VDL 1.39 85 ePd 30 06.42 -0.7

BNI 1.43 203 P 30 07.40 -0.3
 eSn 30 26.60

MOF 1.50 351 Pn 30 08.83 0.3
 RRL 1.53 199 P 30 09.20 0.0
 S 30 29.40

BSF 1.53 343 Pn 30 09.36 0.3
 FEL 1.55 14 Pn 30 08.79 -0.6
 SAX 1.56 55 ePc 30 10.47 0.8

SLE 1.56 26 eP 30 11.50 2.1
 MDI 1.67 110 P 30 11.20 0.2
 eSn 30 32.10

HAU 1.80 335 Pn 30 13.40 0.4
 Sg 30 40.60
 OSS 1.87 79 ePd 30 15.09 1.0

DOI 1.88 185 P 30 12.90 -1.2
 PZZ 1.89 188 P 30 13.60 -0.7
 S 30 34.00

FOUF 1.91 195 (Pn) 30 16.39 2.0
 (Sn) 30 30.41

CKI 2.03 163 P 30 16.00 -0.2
 CDF 2.04 356 Pn 30 16.04 -0.5
 ROB 2.10 172 P 30 17.20 -0.1
 S 30 40.20

VITF 2.10 332 Pn 30 17.71 0.5
 BOB 2.12 138 P 30 17.80 0.2
 STV 2.13 183 P 30 17.00 -0.8
 S 30 40.80

FIN 2.23 166 P 30 19.70 0.6
 S 30 42.80

SAL 2.26 109 P 30 19.60 0.0
 TOUF 2.36 184 Pn 30 21.99 0.8
 AUTN 2.38 181 Pn 30 21.66 0.2

SAOF 2.39 179 Pn 30 21.16 -0.2
 IMI 2.48 173 P 30 23.20 0.5
 S 30 49.80

LBF 2.48 286 Pn 30 23.00 0.3
 Pg 30 28.20
 Sg 31 02.00

MVIF 2.49 185 Pn 30 24.82 1.9
 AURF 2.49 182 Pn 30 23.37 0.5
 SBF 2.51 181 Pn 30 23.40 0.3
 Sg 31 01.60

SMF 2.52 278 Pn 30 23.50 0.3
 Pg 30 29.20
 Sg 31 02.40

GWF 2.61 2 Pn 30 23.47 -1.0
 LOR 2.64 291 Pn 30 25.00 0.1
 Pg 30 32.40
 Sg 31 05.00

CALN 2.65 189 Pn 30 27.45 2.2
 PLDF 2.70 263 Pn 30 25.75 -0.2
 SSF 2.81 286 Pn 30 27.80 0.4
 Pg 30 35.00
 Sg 31 10.40

AVF 2.87 280 Pn 30 28.40 0.2
 Sg 31 14.00

FRF 2.87 192 Pn 30 30.40 2.2
 Pg 30 34.80
 Sg 31 10.80

CTI 2.92 95 P 30 30.20 1.2
 eSn 31 04.60

LRG 3.02 196 Pn 30 32.40 2.1
 Pg 30 36.80

AGO 3.03 265 Pn 30 30.13 -0.3
 LMR 3.11 193 Pn 30 32.00 0.4
 Pg 30 38.60

FUR 3.15 54 ePn 30 31.60 -0.6
 MME 3.15 133 P 30 31.90 -0.5
 LBL 3.17 250 Pn 30 31.55 -0.8

PYM 3.17 260 Pn 30 31.92 -0.6
 BDI 3.20 135 P 30 32.00 -0.9
 BGF 3.20 275 Pn 30 32.70 -0.2
 Sn 31 08.00

MAF 3.40 269 Pn 30 35.40 -0.4
 Pg 30 46.00
 Sg 31 31.40

WLF 3.41 345 P 30 36.50 0.7
 iS 31 18.50

PII 3.42 140 P 30 35.50 -0.5
 eSn 31 13.80

HYF 3.44 287 Pn 30 36.90 0.7
 Sn 31 16.00

TCF 3.65 271 Pn 30 39.00 -0.2
 Pg 30 50.80
 Sn 31 20.00

FVI 3.68 85 P 30 41.50 1.9
 TNS 3.91 9 iPnc 30 41.30 -1.7

eSn 31 26.40
 CVF 3.93 165 Pn 30 42.60 -0.7
 CAF 4.06 251 Pn 30 44.80 -0.2
 Sg 31 50.40

KBA 4.10 78 iPnc 30 46.60 0.8
 iPg 31 00.10
 iSn 31 31.70
 i 31 35.30
 iSg 31 51.90

LSF 4.12 270 Pn 30 45.40 -0.5
 Sn 31 30.00

GRF 4.17 36 iPnc 30 40.70 -5.9X
 e 30 52.10

DOU 4.19 334 iPc 30 47.40 0.5
 id 30 49.60
 iS 31 33.30

CRE 4.20 129 P 30 45.20 -2.0
 RBL 4.22 87 P 30 48.20 0.8
 RSM 4.29 123 P 30 47.40 -0.9

RJF 4.30 258 Pn 30 48.80 0.3
 Sg 31 58.00

MEM 4.35 348 Pc 30 48.90 -0.3
 TRI 4.43 96 eP 30 49.70 -0.6
 e 31 41.90

VOY 4.47 92 ePn 30 50.90 -0.1
 eSn 31 43.80
 eSg 32 07.20

ENN 4.52 347 iPnd 30 51.80 0.3
 0.6s 33.00nm
 i 31 12.60

SNF 4.65 334 Pc 30 53.60 0.1
 S 31 44.70

LPO 4.73 251 Pn 30 55.20 0.6
 Sg 32 11.20

ARV 4.83 125 P 30 55.40 -0.7
 CEY 4.88 95 eP 31 02.00 5.2X
 e(Sn) 31 57.00

LJU 4.91 91 e(Pn) 30 57.50 0.3
 e 31 01.20
 eSn 31 54.00

LFF 4.93 256 Pn 30 58.00 0.6
 KHC 4.96 54 iPn 30 56.10 -1.7
 e 31 14.80
 Sg 32 17.90

MOX 5.09 31 ePn 30 56.00 -3.6X
 ePg 31 18.00
 eSg 32 26.00

MFF 5.27 275 Pn 31 01.80 -0.4
 Sn 31 58.00

VBY 5.50 96 e(Pn) 31 07.90 2.4
 LDF 5.61 296 Pn 31 06.00 -1.0
 Sn 32 08.00

FLN 5.89 297 Pn 31 09.80 -1.1
 Sn 32 14.80

PRU 5.95 50 Pn 31 32.50 20.7X
 e 31 37.00
 Sg 32 50.00

GRR 6.00 293 Pn 31 11.60 -0.9
 Sn 32 17.00

LPF 6.03 289 Pn 31 11.80 -1.1
 Sn 32 17.00

EPF 6.08 239 Pn 31 13.20 -0.5
 Sg 32 53.80

CLL 6.14 34 e(Pg) 31 44.00 29.5X
 eSg 33 01.00

BRG 6.22 41 ePg 31 41.00 25.4X
 eSg 33 03.00

VKA 6.31 69 iPnd 31 15.00 -1.9
 iSn 32 22.80
 i 33 02.20

KSP 7.36 49 eP 32 01.50 29.9X
 eS 33 37.50

S.D. = 1.0 on 97 of 104 obs.

% JAN 07, 1989 04h 03m 13.74 ± 1.30s
 31.848 S ± 20.1km 119.633 E ± 10.8km
 DEPTH = 10.0km (geophysicist)

WESTERN AUSTRALIA (590)

COOL 1.61 54 eP 03 42.30 0.0
 eS 04 03.50
 KLB 1.62 279 eP 03 43.00 0.6
 eS 04 06.40

NWAO 2.30 241 eP 03 52.50 0.2
 eS 04 22.40
 BAL 2.80 296 eP 03 59.30 0.0
 eS 04 42.00

07d 04h

MUN 2.92 267 eP 04 00.20 -0.8
eS 04 34.50
S.D. = 0.7 on 5 of 5 obs.

? JAN 07, 1989 04h 08m 37.04± 2.46s
48.109 N ± 42.9km 152.360 E ± 32.7km
DEPTH = 33.0km (normal)
4.6mb (6 obs.)

KURIL ISLANDS (221)

INK 40.79 33 eP 16 16.00 -0.2
YKA 50.15 37 P 17 37.40 6.7X
CHTO 51.96 255 e(P) 17 40.70 -4.3X
1.0s 2.25nm 4.1mb

GUN 54.39 274 P 18 03.20 -0.2
KKN 54.87 274 P 18 07.20 0.4
PKI 54.93 274 P 18 06.80 -0.5
DMN 55.10 274 P 18 08.70 0.2
GKN 55.16 274 P 18 08.50 -0.3
0.6s 15.00nm 5.2mb

SUF 61.56 335 iP 18 53.00 0.2
NB2 66.78 341 P 19 26.40 -0.5
0.6s 2.20nm 4.4mb

HFS 67.00 339 eP 19 27.20 -1.1
0.5s 2.70nm 4.6mb

CLL 75.02 335 iPd 20 17.10 0.6
0.8s 8.00nm 4.8mb

KBA 78.70 333 iPd 20 38.70 1.3
0.7s 4.10nm 4.5mb
S.D. = 0.7 on 11 of 13 obs.

JAN 07, 1989 04h 10m 04.99± 0.52s
48.765 N ± 9.7km 154.891 E ± 10.8km
DEPTH = 33.0km (normal)
4.6mb (10 obs.)

KURIL ISLANDS (221)

KUSJ 9.08 235 eP 12 15.80 -0.8
eS 13 53.30

ASAJ 9.65 246 eP 12 29.70 5.2X
HOJ 10.33 236 eP 12 34.30 0.4
eS 14 26.10

MRRJ 11.56 242 eP 12 51.20 0.6
INK 39.31 34 eP 17 32.00 0.0
YKA 48.59 38 P 18 47.00 0.2
CHTO 53.75 257 iP 19 27.00 0.8
0.9s 9.16nm 4.8mb

GUN 56.02 275 P 19 42.60 -0.6
0.4s 3.00nm 4.7mb

GKN 56.78 276 P 19 48.00 -0.4
WB5 70.75 200 eP 21 19.70 0.0
WRA 70.82 200 Pd 21 20.00 -0.1
0.7s 2.00nm 4.3mb

KHC 76.93 335 eP 21 56.40 1.0
KBA 78.86 334 iPd 22 06.60 0.4
0.7s 4.50nm 4.6mb

LOR 81.09 340 eP 22 17.50 -0.4
1.0s 8.00nm 4.7mb

SSF 81.37 341 eP 22 19.10 -0.2
0.6s 2.10nm 4.3mb

AVF 81.66 341 eP 22 20.80 0.0
0.8s 3.20nm 4.4mb

SMF 81.69 340 eP 22 21.10 0.1
1.2s 14.80nm 4.9mb

LPG 82.08 338 eP 22 23.10 -0.4
0.6s 4.80nm 4.7mb

MAF 82.37 341 eP 22 24.10 -0.5
0.8s 3.20nm 4.4mb
S.D. = 0.5 on 18 of 19 obs.

* JAN 07, 1989 04h 40m 16.55± 1.55s
7.795 S ± 12.7km 129.098 E ± 15.3km
DEPTH = 33.0km (normal)
4.4mb (2 obs.)

BANDA SEA (280)

TLE 4.21 60 iPc 41 20.10 0.0
iS 41 25.40

MTN 5.40 158 eP 41 44.70 7.8X
eS 42 46.00

KNA 7.91 182 eP 42 17.40 5.2X
eS 43 45.00

WB5 13.05 158 eP 43 21.90 -0.5
i 43 25.00
eS 45 46.20

WRA 13.10 158 Pd 43 23.10 0.1
0.5s 1.50nm 4.3mb

MBL 16.02 213 eP 44 01.00 -0.1
QIS 16.26 142 eP 44 04.00 -0.2
eS 47 01.00

ASPA 16.44 164 eP 44 07.20 0.7
0.5s 20.00nm 4.5mb
eS 47 06.80

WARB 18.44 187 eP 44 19.00 -12.4X
FORR 22.96 182 eP 45 14.70 -4.4X
BRS 29.71 134 iP 46 26.00 3.9X
e 47 35.00
eS 52 00.00

S.D. = 0.5 on 6 of 11 obs.

JAN 07, 1989 05h 02m 21.94± 0.80s
9.122 S ± 6.1km 122.531 E ± 7.0km
DEPTH = 137.1 ± 9.5 km
4.7mb (13 obs.)

SAVU SEA (288)

KUPT 1.47 134 eP 02 52.00 1.5
e(S) 03 16.50

MKS 4.93 322 iPc 03 36.50 1.4
KNA 8.97 138 iPd 04 25.80 -3.9X
0.3s 79.00nm 5.9mb X
eS 06 01.00

MTN 9.22 114 iPd 04 30.80 -2.2
eS 06 06.00

TRT 9.89 277 ePc 04 41.60 -0.3
0.5s 25.20nm 5.2mb

TLE 10.71 72 ePc 04 50.90 -1.8
MBL 12.25 192 eP 05 10.00 -2.9
eS 07 17.00

NANU 14.96 206 eP 05 47.00 -0.6
WB5 15.66 134 eP 05 52.30 -4.2X
eS 08 37.50

WRA 15.69 135 Pc 05 52.90 -3.9X
0.6s 21.00nm 4.6mb

KKM 16.33 337 ePd 06 07.20 2.4
WARB 17.41 168 eP 06 08.00 -10.0X
MEKA 17.81 192 eP 06 23.00 0.3
0.3s 4.00nm 4.2mb
eS 09 29.00

ASPA 18.10 144 eP 06 25.70 -0.3
0.7s 74.00nm 5.1mb
eS 09 38.40

TZZ 18.93 80 eP 06 36.00 1.0
QIS 20.02 127 iPc 06 45.90 -0.3
e 06 53.00
eS 10 24.00

MRWA 20.91 196 iPc 06 55.20 0.1
COOL 21.69 183 eP 07 02.00 -0.8
BAL 22.06 193 eP 07 07.00 0.6
0.8s 83.00nm 5.2mb

FORR 22.23 167 eP 07 08.50 0.4
0.5s 30.00nm 5.0mb

KLB 22.79 191 iPd 07 14.20 0.7
0.4s 8.00nm 4.5mb

MUN 23.49 194 eP 07 21.00 0.7
NWA0 24.19 191 eP 07 28.00 1.0
0.4s 5.00nm 4.4mb

CTA 25.38 118 iPc 07 39.80 1.6
BRS 33.84 126 iPc 08 54.00 0.7
i 09 05.20

BWA 34.61 141 eP 09 05.10 5.3X
CHTO 36.22 320 eP 09 12.90 -0.5
0.6s 0.84nm 3.7mb X

GBA 50.13 296 P 11 05.00 -0.5
0.8s 1.20nm 3.8mb

GUN 51.11 317 P 11 12.50 -0.7
0.6s 16.00nm 5.0mb

PKI 51.21 317 P 11 12.10 -1.8
0.4s 6.00nm 4.8mb

KKN 51.44 317 P 11 14.80 -0.7
DMN 51.44 316 P 11 14.50 -1.1
GKN 52.01 316 P 11 18.50 -1.2
0.4s 5.00nm 4.7mb

AVY 72.79 253 iPc 13 39.16 1.3
SPA 80.94 180 e(P) 14 23.90 1.7
1.0s 10.00nm 4.5mb

CLL 109.26 321 e(PKP) 20 30.00 -7.2X
PTS 111.84 306 Pd iff 16 57.70 12.1X
YKA 112.85 25 PKP 20 44.10 0.5
S.D. = 1.3 on 31 of 38 obs.

& JAN 07, 1989 05h 16m 35.00s
35.630 N 11.630 E
DEPTH = 10.0km (geophysicist)

TUNISIA (397)
<SPEC>. Held to mainshock location.

FAI 2.33 45 P 17 14.20 0.3
eSn 17 39.60

ERC 2.52 17 P 17 16.80 0.1
eSn 17 46.00

MCT 2.57 38 P 17 18.90 1.4
PZI 3.00 61 P 17 24.64 1.2
GIB 3.04 39 P 17 25.20 1.1
eSn 17 59.40

MEU 3.04 60 P 17 23.20 -0.9
eSn 17 58.00

MNO 3.37 46 P 17 29.10 0.2
SOI 4.30 54 P 17 42.00 0.0
8 obs. associated

JAN 07, 1989 07h 26m 11.46± 0.19s
23.258 S ± 3.9km 68.410 W ± 6.0km
DEPTH = 121.6km (21 depth phases)
5.5mb (29 obs.)

NORTHERN CHILE (123)

Felt (IV) at Antofagasto.

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 13S, 25C

Centroid Location:

Origin Time 07:26:17.0 0.4

Lot 23.20S 0.04 Lon 68.51W 0.05

Dep 151.8 1.6 Half-duration 2.3

Moment Tensor; Scale 10¹⁷ Nm

Mrr=-1.86 0.09 Mtt= 1.15 0.15

Mff= 0.71 0.13 Mrt= 0.92 0.10

Mrf= 0.10 0.09 Mlf=-2.18 0.13

Principal Axes:

T Vol= 3.19 Plg= 7 Azm= 41

N -0.83 32 307

P -2.36 57 142

Best Double Couple: Mo=2.8*10¹⁷

NP1: Strike=162 Dip=47 Slip=-44

NP2: 285 59 -127

ANT 1.89 256 iPc 26 43.30 -0.8

LPB 6.70 3 iPc 27 47.90 -1.3
LR 29 05.00

ZOBO 6.96 2 iPc 27 49.60 -3.2X
eLR 29 48.00

ARE 7.36 336 eP 27 52.00 -6.0X
iS 29 00.20

RTLL 8.04 180 ePc 28 06.00 -1.0

RTCB 8.20 182 ePc 28 08.00 -1.2
S 29 15.00

CFA 8.32 179 ePd 28 10.40 -0.3

RTCv 8.57 181 ePc 28 13.00 -1.1

TCA 8.73 158 iPd 28 15.20 -1.2
(S) 29 41.50

MDZ 9.60 182 e(P) 28 22.70 -5.2X

ROCH 9.94 193 eP 28 29.50 -3.2X

PEL 10.05 191 ePc 28 30.20 -3.7X

FCH 10.17 189 iP 28 34.00 -1.8

PCH 10.49 190 eP 28 37.50 -2.3

TACH 10.59 192 eP 28 39.50 -1.6

VBA 15.74 161 e(P) 29 46.50 -1.1

BAO 20.68 72 eP 30 39.00 -4.7X

BRAS 21.04 93 eP 30 45.60 -1.8

BMA 22.34 93 iPd 31 01.20 1.2

ATB 25.29 41 Pc 31 24.70 -3.5X

ITR 32.13 68 eP 32 26.10 -3.4X
e 32 28.40 8kmX
e 32 32.00

UPA 33.84 340 e(P)c 32 44.80 0.6
1.4s 116.28nm 5.5mb

Z 20s 0.78um 4.4msz

SVB 36.97 12 eP 33 06.59 -4.1X

BIM 38.22 12 eP 33 17.91 -3.3X

MVM 38.29 12 eP 33 18.44 -3.4X

FDf 38.42 11 eP 33 21.30 -1.6

LHS 58.61 348 P 35 56.50 -1.3

TKL 60.37 346 P 36 08.20 -1.7

GBTN 60.48 345 P 36 09.20 -1.4

RSCP 60.76 344 P 36 11.00 -1.5
1.2s 82.76nm 5.6mb

BLA 61.20 349 P 36 13.00 -2.5
1.2s 119.40nm 5.8mb

CVL 61.64 351 P 36 17.00 -1.4

OLY 62.39 339 P 36 21.40 -2.0

MAIO	14.95	94	eP	09 52.00	11 30.00	8.6X	MAF	67.07	311	eP	28 13.40	0.3	SOI	4.55	52	P	49 18.00	0.4	
SRO	18.72	306	eP	12 06.30	-2.5		WRA	67.09	143	P	28 15.00	1.7	MAO	7.04	358	P	49 53.00	0.3	
ZST	19.62	306	eP	12 19.40	-0.2			1.0s	8.00nm		4.8mb		CVF	7.47	345	Pn	49 59.00	0.8	
CEY	20.75	298	e(P)	12 31.00	-0.5		GRR	67.88	315	eP	28 18.00	-0.1	LMR	8.84	336	Pn	50 17.00	-0.7	
KSP	21.13	313	eP	12 35.00	-0.3			0.8s	5.30nm		4.7mb		FRF	9.00	337	Pn	50 19.00	-0.9	
KBA	21.75	301	eP	12 41.00	-0.8		MFF	68.45	313	eP	28 21.60	-0.1	LRG	9.00	335	Pn	50 20.00	0.1	
	1.2s	16.10nm			4.3mb			0.8s	5.30nm		4.7mb		SBF	9.04	341	Pn	50 19.40	-1.2	
PRU	21.82	310	eP	12 43.50	1.2		BNG	79.23	267	iPd	29 25.00	0.2	DOI	9.69	342	P	50 30.44	0.9	
KHC	22.13	307	P	12 45.20	-0.2			0.4s	5.00nm		4.9mb		KHC	13.84	6	eP	51 29.40	4.0X	
CLL	23.22	312	eP	12 56.00	0.0			S.D. = 0.9	on 37 of 37 obs.			MLR	14.92	43	ePd	51 54.50	14.8X		
MOX	23.81	310	e(P)	13 03.00	1.2							HFS	24.82	3	eP	53 30.70	0.8		
NUR	24.06	340	eP	13 06.00	2.0								0.5s	1.60nm		3.9mb			
SUF	25.62	344	iP	13 23.50	4.5X		& JAN 08, 1989 07h 57m 15.73s						NB2	25.69	360	P	53 38.40	0.2	
KJF	26.66	347	eP	13 36.00	7.4X		37.562 N			118.846 W				1.0s	4.70nm		4.1mb		
SLL	27.77	331	eP	13 37.00	-1.8		DEPTH = 8.6km							S.D. = 0.9	on 20 of 22 obs.				
	0.6s	0.90nm			3.7mb		CALIFORNIA-NEVADA BORDER REGION (40)												
GKN	37.75	93	P	15 07.50	1.4		<REN>. MD 3.0 (REN).						? JAN 08, 1989 11h 48m 34.85± 4.68s						
	0.6s	9.00nm			4.7mb								5.466 N ± 60.3km		126.049 E ± 27.4km				
DMN	38.30	93	P	15 12.50	1.6		PPK	0.76	100	eP	57 30.00	-0.8	DEPTH = 33.0km (normal)						
KKN	38.35	93	P	15 16.20	4.9X		SVP	0.84	79	eP	57 31.60	-0.8	4.7mb (3 obs.)						
GUN	38.76	92	P	15 16.00	1.1		LCH	1.01	109	eP	57 34.40	-0.7	MINDANAO, PHILIPPINE ISLANDS (259)						
BNG	39.75	216	ePd	15 18.30	-4.5X		MGM	1.08	96	eP	57 35.80	-0.5	MTN	18.88	165	eP	52 56.00	0.9	
	0.5s	6.00nm			4.5mb		CMB	1.31	292	eP	57 39.00	-1.1	WB5	26.48	162	eP	54 09.00	-2.1	
		ic		15 20.30			TNP	1.39	68	eP	57 41.30	-0.2	WRA	26.53	162	P	54 12.00	0.4	
KIC	52.27	244	P	16 56.86	-5.1X		SGV	1.56	111	eP	57 44.50	0.6		0.5s	1.80nm		3.9mb		
LIC	52.57	244	P	16 58.40	-5.8X		KVN	1.60	21	eP	57 44.50	0.0	QIS	29.09	153	eP	54 29.00	-5.8X	
CHTO	53.71	94	e(P)	17 12.00	-0.6		ARN	2.15	265	eP	57 52.50	0.2	WARB	31.47	179	eP	54 45.00	-10.8X	
	1.0s	1.75nm			4.0mb		LSM	2.21	111	eP	57 56.00	2.7	MEKA	32.71	193	eP	55 07.00	0.4	
YKA	77.19	349	P	19 49.50	6.1X		EUR	2.96	49	iP	58 49.00	45.0		0.4s	5.00nm		4.8mb		
					S.D. = 1.3	on 21 of 36 obs.				11 obs. associated			MRWA	35.81	195	eP	55 33.70	0.4	
							? JAN 08, 1989 10h 31m 42.71± 3.12s						FORR	36.16	177	eP	55 34.80	-1.4	
							11.481 S ± 27.8km			117.379 E ± 49.8km				0.3s	10.00nm		5.2mb		
							DEPTH = 33.0km (normal)						COOL	36.45	187	eP	55 38.00	-0.6	
							4.2mb (1 obs.)						BAL	36.97	193	eP	55 43.00	0.0	
							SOUTH OF SUMBAWA ISLAND (291)						KLB	37.69	192	eP	55 49.00	0.0	
							TRT	6.00	308	ePd	33 11.50	0.0	MUN	38.40	194	eP	55 55.50	0.5	
										eS	33 51.00		NWAO	39.09	192	eP	56 01.00	0.2	
							MBL	9.91	167	eP	34 05.40	-0.6	RKG	40.24	192	eP	56 17.00	6.7X	
								0.3s	8.00nm		5.5mb X		BWA	44.95	154	eP	56 50.10	1.4	
										eS	35 46.00						S.D. = 1.1	on 12 of 15 obs.	
							NANU	11.16	189	eP	34 22.50	-0.6	? JAN 08, 1989 12h 05m 08.35± 1.93s						
								0.3s	5.00nm		5.2mb X		15.282 N ± 13.1km		60.968 W ± 44.2km				
							MEKA	15.09	176	eP	35 16.00	0.7	DEPTH = 33.0km (normal)						
								0.3s	4.00nm		4.2mb		LEEWARD ISLANDS (92)						
										eS	37 51.00		CRM	0.53	174	iPc	05 20.37	1.0	
							MRWA	17.69	184	eP	35 48.80	0.5				S	05 34.80		
										eS	38 50.00		FDF	0.57	198	iPd	05 20.57	0.5	
										S.D. = 0.8	on 5 of 5 obs.					S	05 36.10		
							* JAN 08, 1989 10h 53m 47.93± 0.91s						MGG	0.72	332	eP	05 22.00	0.0	
							22.351 S ± 10.2km			68.753 W ± 10.6km			MVM	0.73	174	iPd	05 21.57	-0.6	
							DEPTH = 119.3 ± 13.3 km						BIM	0.77	187	iPd	05 21.78	-1.0	
							4.2mb (1 obs.)									S	05 39.00		
							NORTHERN CHILE (123)									S.D. = 1.1	on 5 of 5 obs.		
							ANT	2.04	228	iPc	54 22.30	0.0							
										iS	54 48.30		JAN 08, 1989 12h 16m 18.34± 0.60s						
							LP8	5.82	6	P	55 15.00	1.3	43.184 N ± 5.0km		19.182 E ± 5.6km				
							ZOBO	6.08	6	P	55 16.00	-1.4	DEPTH = 10.0km (geophysicist)						
							ITB1	13.38	103	eP	56 54.60	0.4	YUGOSLAVIA (383)						
							ITB	13.56	103	e(P)	56 56.10	-0.4	MD 2.7 (TTG).						
							ALQ	67.28	327	eP	04 32.00	0.0	PLE	0.21	47	ePg	16 22.40	-0.6	
								0.9s	3.36nm		4.2mb					eSg	16 25.50		
							KIC	68.80	73	P	04 37.00	-4.6X	NKY	0.39	200	ePg	16 26.50	0.0	
							YKA	92.03	341	P	06 44.00	0.1				eSg	16 34.00		
										S.D. = 1.2	on 7 of 8 obs.	BRY	0.55	239	iPg	16 28.00	-1.4		
							* JAN 08, 1989 11h 48m 08.51± 3.03s									iSg	16 36.00		
							35.371 N ± 26.0km			11.498 E ± 9.4km						ePg	16 31.00	0.3	
							DEPTH = 23.6 ± 5.4 km									eSg	16 41.00		
							4.0mb (2 obs.)									ePg	16 33.30	0.2	
							TUNISIA (397)									eSg	16 46.00		
							PTS	1.49	15	eP	48 34.10	0.2	HCY	0.89	215	ePg	16 35.10	-0.3	
							CVT	2.53	24	P	48 48.70	-0.2				eSg	16 47.70		
							FAI	2.59	42	P	48 50.80	1.0	BDV	0.94	196	ePg	16 36.60	0.4	
							LVI	2.70	14	P	48 52.70	1.4				eSg	16 51.00		
							ERC	2.80	18	P	48 52.50	-0.3	BEO	1.88	29	ePn	16 52.50	1.8X	
							MCT	2.84	37	P	48 52.80	-0.6				eSg	17 15.50		
							PZI	3.22	58	P	48 59.40	0.6	HVAR	2.00	271	iPn	16 53.80	1.3	
							MEU	3.27	57	eP	48 59.10	-0.4				iSg	17 22.30		
										eS	49 34.30		SKO	2.06	125	ePn	16 57.00	3.6X	
							GIB	3.31	37	P	49 00.40	0.3	BZS	2.99	35	ePc	17 15.00	8.3X	
							MNO	3.62	44	P	49 03.20	-1.5	VAY	3.13	125	ePn	17 18.00	9.4X	
													PTJ	3.56	321	eP	17 28.90	14.1X	
													VBV	3.65	311	eP	17 17.50	1.5X	
																e	17 26.50		

CAN	36.19	154	iPc	01	49.90	1.1
TOO	36.79	160	eP	01	56.00	2.1
WHN	37.01	336	eP	01	54.00	-1.7
			eS	07	42.00	
CHG	38.09	306	iPc	02	05.60	0.6
	0.9s		13.24nm			4.8mb
CHTO	38.09	306	eP	02	04.50	-0.5
KMI	39.06	318	eP	02	15.00	1.7
			pP	02	20.00	17kmX
			sP	02	28.00	
			eS	08	11.00	
DZM	39.50	121	iPc	02	18.60	1.8
MAT	40.22	10	eP	02	20.00	-2.5
	0.9s		8.40nm			4.5mb
			(S)	08	06.00	
CD2	42.53	325	eP	02	42.60	1.1
TIY	44.10	339	eP	02	54.00	-0.3
	N 15s		0.60um			
			eS	09	18.00	
BJI	45.07	344	eP	03	01.50	-0.4
SNY	45.32	353	iPc	03	03.40	-0.4
	Z 20s		1.00um			4.7msz
	N 22s		0.80um			
			S	09	40.00	
LZH	46.44	330	eP	03	13.50	0.5
	1.5s		0.04nm			2.2mb X
CN2	47.07	355	eP	03	16.60	-1.0
HHC	47.21	340	eP	03	19.50	0.5
MDJ	47.66	359	eP	03	21.50	-0.8
LSA	49.98	314	P	03	42.00	1.0
GTA	51.03	329	eP	03	48.40	0.0
KKN	53.42	308	P	04	05.90	-0.8
	0.8s		24.00nm			5.2mb
KOD	54.56	285	eP	04	16.00	0.6
HYB	55.28	294	eP	04	19.00	-1.2
GBA	55.32	289	Pd	04	19.30	-1.2
	1.0s		10.60nm			4.8mb
NDI	60.23	306	eP	04	53.00	-1.9
WMO	60.62	326	eP	04	57.80	0.4
			S	13	11.50	
QUE	69.17	304	eP	05	52.50	-0.6
MAIO	76.81	308	iPc	06	38.40	0.6
AVY	82.20	251	eP	07	08.20	1.0
INK	95.19	22	eP	08	09.00	0.7
LIC	135.68	276	PKP	14	09.40	2.2X
CNCB	152.91	138	PKP	14	45.00	8.3X
LPB	153.03	137	PKP	14	49.00	12.3X
ZOBO	153.20	137	PKP	14	41.00	3.8X
ITR	163.80	222	ePKP	14	52.30	3.4X
			e	15	43.30	

S.D. = 1.3 on 63 of 75 obs.

JAN 08, 1989 15h 50m 27.92 ± 0.85s
10.051 N ± 6.8km 93.362 E ± 6.5km
DEPTH = 105.0 ± 12.3 km
4.4mb (4 obs.)

ANDAMAN ISLANDS REGION (703)

BSI	4.91	157	ePc	51	40.00	-0.8
NNT	6.74	67	eP	52	04.70	-1.2
PSI	9.16	143	ePc	52	40.80	1.9
IPM	9.34	125	ePc	52	41.10	-0.3
	0.7s		19.40nm			5.1mb X
CHG	10.25	31	iPc	52	54.00	0.4
	0.8s		16.23nm			5.0mb X
CHTO	10.25	31	iPc	52	54.00	0.4
	0.6s		16.41nm			5.1mb X
KOD	15.65	272	eP	54	03.00	-1.2
GBA	15.98	284	Pc	54	09.00	1.0
	0.6s		9.20nm			4.2mb
HYB	16.13	299	eP	54	10.00	0.0
			eS	56	47.00	
KKN	19.22	338	P	54	47.00	0.4
WB5	50.14	126	iPc	59	14.80	0.0
WRA	50.16	127	Pd	59	15.30	0.4
	0.6s		4.80nm			4.7mb
ASPA	51.90	131	eP	59	27.60	-0.5
	0.8s		9.00nm			4.8mb
HFS	76.20	330	eP	02	05.70	-0.4
	0.3s		1.10nm			4.2mb

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

& JAN 08, 1989 15h 58m 34.43s
63.335 N 149.721 W
DEPTH = 107.4km
CENTRAL ALASKA (1)
<AGS-P>

GHO	1.61	166	iP	59	02.00	-0.9
SML	1.66	157	iP	59	02.22	-1.3
PWA	1.69	183	eP	59	03.40	-0.4
PME	1.74	169	eP	59	03.37	-1.1
			eS	59	29.57	
PLRM	1.77	171	eP	59	03.40	-1.4
			eS	59	29.59	
FBA	1.78	27	iP	59	04.38	-0.6
KNK	2.02	162	iP	59	06.57	-1.5
TOA	2.05	125	iP	59	07.85	-0.6
PMS	2.10	178	eP	59	07.90	-1.2
SPU	2.42	208	iP	59	12.07	-1.3
PTE	2.50	172	eP	59	12.94	-1.4
KLU	2.56	135	iP	59	13.19	-2.0
PWL	2.57	165	eP	59	13.52	-1.8
VLZ	2.72	143	eP	59	14.75	-2.5
			eS	59	47.05	
GLI	2.76	152	eP	59	15.26	-2.5
TTA	2.89	265	eP	59	17.92	-1.7
FID	3.01	148	eP	59	18.90	-2.3
			eS	59	54.10	
RDT	3.05	206	eP	59	21.34	-0.5
GLB	3.34	122	eP	59	24.20	-1.6
NNL	3.39	193	eP	59	26.00	-0.4
SVW	3.55	234	eP	59	26.55	-2.1
SGAM	3.56	141	eP	59	26.59	-2.0
PDB	4.15	213	eP	59	35.24	-1.5
INK	8.29	46	eP	00	32.00	-1.4
YKA	15.90	77	P	02	14.10	1.3

JAN 08, 1989 16h 57m 20.85 ± 0.40s
47.049 N ± 4.1km 18.086 E ± 3.6km
DEPTH = 11.0 ± 3.3 km

HUNGARY (549)
ML 3.6 (ZAG), 3.2 (VKA), 3.1 (KBA).

UZD	0.57	143	iPg	57	33.00	0.7
BUD	0.77	55	iPgd	57	35.50	-0.3
	0.5s		234.50nm			
SRO	0.78	11	iPc	57	36.50	0.6
			iSg	57	47.20	
			Lg	17	50.00	
SOP	1.22	302	ePn	57	43.10	-0.3
ZST	1.33	330	iPnc	57	44.90	-0.3
	0.4s		0.07nm			
			iSn	58	05.40	
			Lg	58	11.00	
PSZ	1.50	54	ePn	57	47.80	0.0
VKA	1.71	316	iP	57	51.00	0.3
			iPnc	57	54.70	
			i	58	14.00	
			iSg	58	20.20	
PTJ	1.87	233	iPnd	58	52.30	59.2X
			i(Pg)	59	00.00	
			iSn	59	27.00	
ZAG	1.91	230	iPn	57	53.00	-0.5
			iSn	58	18.00	
BLY	2.39	196	eP	58	39.10	38.6X
VBY	2.50	233	ePn	58	08.50	6.5X
			iSn	58	46.60	
SPC	2.58	33	ePn	58	09.20	5.7X
			i	58	10.70	
			i(Sn)	58	45.90	
LJU	2.65	249	ePn	58	12.00	7.7X
			eSn	58	50.10	
BZS	2.83	119	ePc	58	06.50	-0.3
CEY	2.85	244	e(Pn)	58	14.00	6.9X
			eSn	58	55.00	
VOY	3.07	252	ePn	58	09.90	-0.3
			ePg	58	19.60	
			eSn	59	48.00	
RBL	3.17	261	P	58	11.50	-0.1
KBA	3.24	272	eP	58	13.00	0.2
			iPnd	58	15.30	
			iPg	58	25.40	
			i	58	31.80	
			iSn	58	51.10	
			i	59	02.00	
			iSg	59	06.70	
			i	59	13.80	
KRA	3.25	22	eP	58	25.50	12.8X
			e	58	51.50	
TRI	3.28	247	eP	58	22.70	9.6X
			i	58	51.60	
DEV	3.53	108	ePc	58	56.00	39.4X

KHC	3.67	306	iPn	58	19.30	0.5
			e	58	34.20	
			Sg	59	11.70	
FVI	3.67	265	P	58	19.70	1.0
PRU	3.77	323	Pn	58	19.90	-0.2
			Pg	58	34.50	
			Sg	59	18.60	
KSP	3.98	343	eP	58	23.00	0.0
			eS	59	10.50	
			e	59	23.00	
CTI	4.55	260	P	58	47.00	15.7X
GRF	5.28	303	e(Pg)	58	56.60	15.0X
			eSg	59	56.00	

S.D. = 0.5 on 16 of 27 obs.

JAN 08, 1989 17h 41m 41.34 ± 0.46s
23.991 N ± 6.2km 120.464 E ± 6.9km
DEPTH = 33.0km (normol)
4.6mb (3 obs.)

TAIWAN (244)
Felt in centrol Taiwan.

ANP	1.53	39	iPc	42	06.00	-0.7
			eS	42	28.00	
QZH	1.95	299	ePn	42	10.00	-2.8
	Z 10s		7.00um			
	N 10s		18.40um			
			Pg	42	15.50	
			iSn	42	37.50	
HKC	6.03	255	iP	43	08.60	-2.0
			iS	44	45.00	
GZH	6.60	264	ePn	43	19.30	0.8
SSE	7.11	5	P	43	20.50	-5.1X
			pP	43	28.00	
			S	44	38.00	
			sS	44	48.00	
			Lg	45	25.00	
BAG	7.54	179	eP	43	34.70	2.7
NJ2	8.15	350	Pd	43	35.80	-4.5X
	Z 13s		6.30um			
WHN	8.49	322	eP	43	41.00	-4.0X
	Z 10s		5.10um			
			S	45	24.00	
			eP	44	28.00	31.5X
QCP	9.32	176	eP	44	28.00	
KAGJ	11.69	50	eP	44	39.50	10.6X
KUMJ	12.48	45	eP	44	41.30	1.9
GYA	12.73	284	eP	44	39.40	-3.6X
SHNJ	13.72	40	eP	45	01.10	5.2X
XAN	14.21	317	P	45	05.60	3.3X
TIY	15.31	335	eP	45	17.30	0.7
	N 10s		4.10um			
KMI	16.17	278	eP	45	32.50	4.5X
	N 10s		6.80um			
			eS	48	37.00	
			sS	48	42.00	
CD2	16.34	299	P	45	33.00	3.0X
	Z 10s		1.62um			
BJI	16.41	348	eP	45	30.50	-0.1
	Z 12s		1.50um			
	N 11s		1.20um			
			eS	48	37.00	
SNY	17.98	8	Pc	45	50.40	0.1
	Z 12s		2.20um			
	N 11s		1.70um			
			S	49	08.00	
KKM	18.31	194	ePd	45	59.80	5.2X
HHC	18.39	338	eP	45	56.50	1.0
			eS	49	24.00	
LZH	18.74					

08d 17h

NNT 22.68 244 eP 50 35.00 7.7X
 GTA 23.26 316 eP 46 47.40 0.5
 Z 12s 1.60um 4.7MszX
 E 10s 1.00um
 pP 46 53.60 22kmX
 sP 46 59.60
 LSA 26.72 289 P 47 21.70 1.5
 PSI 29.69 228 ePd 47 51.90 5.3X
 KKN 31.81 284 P 48 05.30 -0.2
 WMO 33.32 314 eP 48 24.80 6.5X
 PMG 42.21 139 e(P) 49 32.00 -1.0
 WB5 45.66 162 eP 50 00.70 -0.1
 WRA 45.71 162 P 50 01.00 -0.2
 0.8s 4.60nm 4.5mb

QUE 47.69 290 eP 50 38.00 20.9X
 QIS 48.04 156 eP 50 18.00 -1.6
 WARB 50.24 173 iPc 50 25.30 -11.1X
 CTA 50.51 148 iPd 50 45.80 7.3X
 MAIO 53.35 298 eP 51 08.00 8.0X
 RMO 57.15 150 eP 51 26.00 -1.4
 SOD 69.57 336 eP 53 04.00 15.3X
 KJF 69.86 332 eP 52 54.00 3.5X
 SUF 70.91 331 eP 53 00.00 3.1X
 VRI 75.67 314 ePc 53 30.00 4.9X
 DAG 76.47 351 iPd 53 28.50 -0.6
 0.8s 4.48nm 4.5mb

NB2 78.09 332 P 53 58.00 19.7X
 0.9s 5.60nm
 KSP 80.17 321 eP 53 50.50 0.8
 YKA 83.40 23 P 54 06.80 0.5
 KBA 83.62 319 eP 54 27.50 19.5X
 1.0s 3.50nm
 e 54 41.50
 S.D. = 1.3 on 25 of 52 obs.

* JAN 08, 1989 19h 21m 14.79± 1.26s
 43.405 N ± 9.4km 19.000 E ± 9.9km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)
 MD 2.5 (TTG).

PLE 0.30 105 ePg 21 21.80 0.8
 eSg 21 25.40
 BRY 0.61 214 iPgd 21 27.60 0.5
 iSg 21 36.50
 IVA 0.85 129 ePg 21 30.80 -0.4
 eSg 21 41.30
 TTG 0.99 169 ePg 21 33.00 -0.6
 eSg 21 45.50
 BEO 1.76 36 ePn 21 45.20 -0.3
 eSg 22 17.00
 HVAR 1.88 264 iPn 21 53.90 6.7X
 iSg 22 21.90
 SKO 2.30 128 ePn 21 57.00 3.7X
 OHR 2.65 149 ePn 22 02.00 3.6X
 BZS 2.90 39 ePc 22 45.00 43.2X
 S.D. = 0.8 on 5 of 9 obs.

JAN 08, 1989 19h 57m 06.01± 0.14s
 51.435 N ± 3.8km 174.880 W ± 2.3km
 DEPTH = 33.0km (normal)

5.7mb (79 obs.) 5.5Msz (20 obs.)
 ANDREANOF ISLANDS, ALEUTIAN IS. (7)
 Ms 5.7 (BRK). Felt (III) on Adak
 and (I) on Atko.

CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 11S, 29C

Centroid Location:
 Origin Time 19:57:10.7 0.3
 Lat 52.06N 0.04 Lon 174.97W 0.05
 Dep 15.0 BDY Half-duration 3.7
 Moment Tensor: Scale 10**17 Nm
 Mrr= 4.89 0.14 Mtt=-3.60 0.19
 Mff=-1.28 0.14 Mrt= 9.60 0.48
 Mrf= 5.64 0.46 Mtf=-3.06 0.16
 Principal Axes:
 T Val= 11.93 Plg=58 Azm=332
 N 0.80 2 239
 P -12.73 32 148
 Best Double Couple: Mo=1.2*10**18
 NP1: Strike=230 Dip=13 Slip= 81
 NP2: 59 77 92

ADK 1.21 292 iPd 57 27.60 0.9
 SMY 6.91 285 eP 58 49.70 2.2

SDN 9.44 60 iP 59 22.50 -0.1
 Z 20s 50.00um
 KDC 14.39 55 eP 00 28.30 -0.8
 TTA 15.32 34 eP 00 42.00 0.7
 PMR 17.35 44 eP 01 06.00 -0.8
 0.7s 20.00nm 4.4mb X
 Z 17s 34.50um

IMA 18.18 28 iPc 01 18.40 1.1
 TOA 18.84 44 ePc 01 23.40 -1.9
 FBA 19.43 36 eP 01 30.20 -1.9
 BRW 21.56 16 iPc 01 54.20 0.1
 SIT 23.53 61 eP 02 12.40 -1.2
 i 02 15.70

INK 26.02 34 eP 02 36.00 -1.3
 0.9s 16.00nm 4.6mb X
 KUSJ 28.35 269 eP 02 57.90 -0.8
 MRRJ 30.99 271 eP 03 22.70 0.5
 MBC 32.65 21 eP 03 36.00 -0.4
 0.9s 40.00nm 5.3mb

YKA 33.40 47 P 03 43.50 0.4
 YKC 33.47 47 eP 03 42.50 -1.2
 0.8s 15.00nm 5.0mb
 RMW 34.11 75 eP 03 50.00 0.5
 LON 34.43 76 eP 03 53.30 1.1
 PNT 34.60 71 eP 03 54.00 0.3
 1.1s 278.00nm 6.1mb

KAKJ 35.22 262 P 04 08.00 55kmX
 NHIJ 35.29 265 P 03 59.30 -0.3
 CHJJ 36.05 263 P 04 05.80 -0.3
 FHC 36.16 87 eP 04 08.50 1.5
 0.9s 69.23nm 5.6mb

MAT 36.23 264 iPc 04 07.30 -0.3
 1.3s 278.85nm 6.0mb
 Z 20s 11.70um 5.7Msz
 eS 09 44.00

MTMJ 36.45 265 P 04 11.00 1.5
 EDM 36.63 62 iPc 04 11.30 0.5
 1.0s 451.00nm 6.3mb
 pP 04 25.00 52kmX
 MDJ 36.98 282 eP 04 11.50 -2.2
 Z 20s 14.20um 5.8Msz
 E 20s 11.70um

pP 04 25.00 51kmX
 PP 05 37.00
 S 09 48.00

IIDJ 37.09 263 P 04 15.30 0.5
 WDC 37.19 86 ePd 04 17.40 1.8
 e 04 30.30
 e 04 36.60
 i 04 47.00
 eScP 10 17.90
 e 10 37.70

MIN 37.91 86 e(P) 04 24.00 2.2
 ORV 38.44 87 ePd 04 27.00 0.9
 eScP 10 24.00
 BRK 38.97 89 eP 04 31.70 1.2
 BKS 38.98 89 eP 04 31.60 0.9
 0.8s 34.00nm 5.2mb
 Z 20s 8.00um 5.5Msz
 N 20s 3.40um
 E 20s 9.00um

i 04 44.60
 i 04 48.60
 eS 10 32.00
 eLQ 13 36.00

SES 39.12 66 ePc 04 31.40 -0.3
 1.2s 324.00nm 6.0mb
 pP 04 46.00 57kmX

WKYJ 39.35 264 eP 04 36.00 2.2
 MHC 39.68 89 eP 04 38.00 1.4
 Z 20s 5.00um 5.4Msz
 N 20s 2.10um
 E 20s 6.00um

e 04 50.90
 eS 10 47.00
 e 13 10.00
 eLQ 13 48.00
 eLR 15 27.00

ARN 39.75 89 eP 04 37.50 0.5
 epP 04 50.60 49kmX
 CN2 39.94 283 iPc 04 37.30 -1.2
 5.0s 1.40nm 3.0mb X
 Z 20s 18.70um 5.9Msz
 E 19s 11.00um

pP 04 47.50 35kmX
 PP 06 11.00

eS 10 33.00
 CMB 40.04 88 eP 04 41.00 1.5
 YONJ 40.05 267 eP 04 40.80 1.3
 TKSJ 40.47 265 P 04 45.20 2.2
 PRS 40.48 90 ePd 04 45.00 1.9
 e 04 57.30

LRM 40.53 73 eP 04 44.50 0.8
 LLA 40.57 90 eP 04 45.50 1.7
 e 04 56.30

KVN 40.86 85 eP 04 46.50 0.2
 PRI 41.04 90 ePd 04 49.60 1.8
 FRI 41.11 88 ePd 04 49.60 1.4
 e 05 02.40
 eScP 10 34.20
 e 10 53.20

EUR 41.92 83 iP 04 55.20 0.1
 0.5s 9.04nm 4.8mb
 TNP 41.99 85 eP 04 56.50 0.8
 ALE 42.13 10 eP 04 55.00 -1.1
 0.6s 8.00nm 4.6mb X

pP 06 51.00
 SNY 42.18 282 iPc 04 56.80 0.0
 Z 20s 6.70um 5.5Msz
 N 17s 4.20um
 E 18s 2.90um

S 11 14.00
 SHNJ 42.22 267 eP 04 57.80 0.6
 SYP 42.51 91 eP 05 14.00 14.1X
 CLC 43.17 88 eP 05 06.00 0.8
 KUMJ 43.45 266 eP 05 09.00 1.7
 SBB 43.75 90 eP 05 11.00 1.1
 PAS 43.89 90 eP 05 11.00 0.1

eS 06 00.00
 eScP 11 44.00
 eS 11 58.00
 eLg 15 08.00

MWC 43.91 90 eP 05 12.00 0.7
 BW06 43.94 75 ePc 05 11.30 -0.2
 GSC 44.00 88 eP 05 13.00 1.1
 KAGJ 44.32 264 eP 05 15.00 0.6
 RVR 44.49 90 eP 05 15.00 -0.8
 DL2 45.11 280 Pc 05 20.00 -0.6

Z 20s 2.20um 5.1Msz
 N 17s 3.80um
 E 16s 1.90um

eS 11 56.00
 PLM 45.23 90 eP 05 22.00 0.0
 TPC 45.25 89 eP 05 23.00 1.1
 BAR 45.80 91 eP 05 27.00 0.8
 GLA 46.71 89 eP 05 31.00 -2.4
 BJI 47.75 285 eP 05 41.00 -0.5

4.0s 1.20nm 3.3mb X
 Z 20s 11.20um 5.8Msz
 N 19s 7.20um
 E 20s 5.80um

ePP 07 30.00
 eS 12 32.00
 eP 05 45.50 -0.6
 RSON 48.39 57 eP 05 45.40 -0.9
 epP 05 59.40 53kmX
 TIA 49.58 280 P 05 55.70 0.0

Z 23s 5.00um 5.5MszX
 N 19s 3.50um
 E 19s 2.50um

eS 13 04.00
 GUMO 49.72 235 eP 05 54.50 -2.4
 Z 20s 1.80um 5.1Msz
 PJG 49.72 235 eP 05 54.10 -2.8
 GUA 49.73 235 eP 05 54.30 -2.7
 1.0s 112.00nm 5.8mb

KBS 49.85 358 iP 05 59.00 1.9
 HHC 50.02 288 iPc 05 59.00 -0.1
 5.0s 2.10nm 3.4mb X
 N 16s 3.82um
 E 16s 1.28um

eS 13 10.00
 SSE 50.45 272 P+ 06 02.00 -0.4
 5.0s 1.90nm 3.3mb X
 Z 20s 2.80um 5.3Msz
 N 18s 2.00um
 E 18s 1.40um

sP 06 14.00
 PP 07 58.00
 S 13 12.00
 sS 13 24.00
 ALQ 50.67 81 eP 06 04.00 -0.3
 1.3s 62.50nm 5.4mb

08d 20h

SOP	1.0s	85.60nm	5.7mb	PGB	84.94	346	iPd	09	40.00	1.2	TIC	121.50	12	PKP	15	57.82	0.2						
HAU	80.78	352	eP	09	17.00	-0.2	FIR	85.02	356	eP	09	41.00	2.0	KIC	121.81	12	PKP	15	58.38	0.1			
	80.93	359	eP	09	18.20	0.2	MVIF	85.03	359	P	09	39.39	0.1		1.0s	27.00nm							
SNG	81.01	270	eP	09	16.60	-2.3	VTS	85.04	347	iPd	09	41.00	1.6	LIC	121.91	12	PKP	15	58.60	0.2			
			e	19	26.70		SBF	85.06	358	eP	09	39.40	0.1	KUK	122.41	6	ePKP	16	00.50	1.1			
FEL	81.04	358	P	09	17.77	-1.0	PII	85.11	356	P	09	39.10	-0.3	KOGH	122.52	6	ePKP	16	01.00	1.4			
MOF	81.08	359	P	09	18.50	-0.4	CRE	85.13	355	P	09	41.10	1.4	SHGH	122.69	6	ePKP	16	01.00	1.1			
BSF	81.10	359	P	09	18.61	-0.4	ARV	85.20	354	P	09	40.40	0.4	LEGH	122.96	6	ePKP	16	01.70	1.3			
VRI	81.30	345	ePc	09	29.00	9.0X	TRT	85.25	252	ePc	09	39.30	-1.2	BNG	123.17	344	iPKPd	16	00.50	-0.4			
LOMF	81.58	359	P	09	21.60	0.1	PLD	85.29	346	eP	09	40.00	-0.4		1.2s	35.00nm							
KBA	81.61	354	iPc	09	22.00	0.2	STS	85.31	10	eP	09	41.50	1.0				ic	16	15.40				
	1.0s	74.60nm	5.7mb	FRF	85.38	359	eP	09	41.00	0.2	ITR	124.51	56	ePKP	16	03.70	0.2						
			i	11	33.20			1.2s	59.50nm	5.7mb			e	17	47.00								
LOR	81.67	1	eP	09	21.80	-0.1	LRG	85.49	359	eP	09	41.90	0.6	BAO	124.81	70	ePKP	16	03.50	-0.6			
	1.0s	75.00nm	5.7mb					1.4s	60.90nm	5.6mb		TCA	126.11	97	ePKPd	16	05.60	-0.7					
CFR	81.72	344	eP	09	22.00	-0.1	PSI	85.53	269	ePc	09	41.50	-0.5	LWI	127.09	330	iPKPc	16	10.60	1.8			
MLR	81.79	345	ePd	09	24.00	1.3	LMR	85.60	359	eP	09	42.40	0.5	BMA	132.56	72	ePKP	16	19.60	0.9			
SSF	81.87	1	eP	09	23.20	0.3		1.3s	96.70nm	5.9mb		PTZ	137.33	321	iPKP	16	22.00	-6.0X					
LBF	81.96	1	eP	09	23.30	-0.1	KDZ	85.62	345	eP	09	47.00	4.9X				i	16	29.00				
	1.2s	74.30nm	5.6mb	ASS	85.65	354	P	09	42.60	0.3						i	19	52.00					
FVI	82.13	355	P	09	24.70	0.5	RZN	85.70	345	iPc	09	43.00	0.3	KMZ	138.59	329	iPKP	16	22.00	-8.4X			
AVF	82.14	1	eP	09	24.40	0.1	KKB	85.77	347	eP	09	44.00	1.1				i	17	10.50				
RBL	82.23	354	P	09	24.50	-0.4	EPF	85.82	4	eP	09	42.90	-0.3				i	20	12.00				
MFF	82.24	4	eP	09	25.50	0.7		1.4s	67.00nm	5.7mb		LSZ	139.47	324	ePKP	16	24.00	-7.9X					
	1.0s	84.00nm	5.7mb	SKO	85.89	348	iPc	09	43.70	0.2			e	18	45.00								
QUE	82.28	310	iPc+	09	26.00	0.4		1.3s	188.00nm	6.2mb		SPA	141.25	180	iPKPd	16	29.90	-3.7X					
			eS	19	41.40		Z	18s	2.10um	5.6Msz			1.0s	10.00nm									
BZS	82.29	348	eP	09	24.00	-1.1	N	18s	2.94um														
			e	38	44.50		E	19s	2.12um														
SMF	82.29	1	eP	09	25.50	0.4			iSKS	20	14.00		BUL	143.74	321	iPKPd	16	36.00	-3.4X				
BGF	82.37	2	eP	09	25.70	0.2			iSS	26	18.00			1.0s	110.00nm								
PTJ	82.60	352	eP	09	27.00	0.2	ERUA	85.95	9	eP	09	44.80	1.1	MAW	148.03	218	ePKP	16	48.00	3.2X			
TCF	82.63	2	eP	09	26.90	0.0	MMB	85.95	346	iPd	09	45.00	1.2	SLR	148.85	317	iPKPc	16	48.50	0.9			
	1.0s	46.80nm	5.5mb	CVF	86.32	357	P	09	46.22	0.6													
LSF	82.65	3	eP	09	27.30	0.3	MNS	86.33	354	P	09	45.40	-0.2	PRY	150.24	317	iPKPd	16	53.60	3.9X			
	1.0s	74.10nm	5.7mb	SLY	86.37	328	iPd	09	46.00	0.2													
MAF	82.70	2	eP	09	28.00	0.7	UPA	86.37	80	ePc+	09	47.00	0.9	BFS	150.51	318	iPKPc	16	55.00	4.9X			
	1.2s	59.50nm	5.5mb					1.1s	48.10nm	5.6mb													
IPM	82.76	268	ePd	09	29.50	1.5	Z	22s	1.85um	5.4Msz		SEK	151.39	315	ePKP	16	50.00	-1.4					
	1.2s	69.80nm	5.6mb	VAY	86.38	347	iP	09	46.00	0.2													
BUC	82.82	345	ePd	09	23.00	-4.9X	MAO	86.38	356	P	09	42.50	-3.3X										
CEY	82.87	353	eP	09	27.50	-0.7	MSL	86.41	330	ePd	09	46.50	0.4										
AGO	82.88	1	P	09	28.45	0.3			e	20	11.50												
TRI	82.95	354	e(P)	09	30.00	1.5	HYB	86.47	294	iPc	09	45.00	-1.7										
			e	20	50.00			1.0s	240.00nm	6.4mb													
			e	26	06.00		AZI	86.68	354	P	09	48.20	1.0										
			eLR	39	24.00		OHR	86.82	348	iP	09	47.40	-0.7										
PLDF	82.97	1	P	09	29.10	0.4		1.4s	0.19nm	3.1mb X													
VAI	83.03	357	P	09	28.80	-0.1	SDI	86.93	353	P	09	48.30	-0.3	ADK	1.23	291	iPd	18	03.20	1.2			
VBY	83.05	353	ePd	09	29.50	0.5	PPi	87.05	266	eP	09	51.00	1.5	KDC	14.35	55	eP	21	03.00	-0.6			
PYM	83.18	1	P	09	29.37	-0.5	ASPA	87.24	226	eP	09	49.60	-0.5	IMA	18.14	28	eP	21	54.00	2.2			
BEO	83.21	349	eP	09	29.00	-0.9		1.1s	25.00nm	5.4mb		FBA	19.38	36	eP	22	06.50	-0.2					
SAL	83.23	356	Pc	09	28.70	-1.2	ETOR	87.91	5	eP	09	53.70	0.3	EDM	36.59	62	iPc	24	46.50	1.0			
ORO	83.29	358	P	09	31.60	1.2	GUD	87.94	7	eP	09	54.00	0.4	KVN	40.82	85	eP	25	22.00	0.9			
LPG	83.44	359	eP	09	32.80	1.4	POO	88.23	298	iPc	09	55.70	0.5	BW06	43.90	75	eP	25	46.80	0.6			
	1.2s	32.70nm	5.3mb					1.1s	283.54nm	6.5mb													
BRS	83.49	209	iP	09	32.00	0.6			S	20	36.00		RSON	48.35	57	eP	26	20.20	-0.9				
			e	09	48.00		MGR	88.35	352	P	09	55.60	0.2		0.6s	8.35nm							
			eS	19	52.00		TOL	88.71	7	iPc	09	55.00	-2.2	FRB	51.63	33	eP	26	45.00	-0.9			
RJF	83.59	3	eP	09	32.20	0.4		1.2s	140.63nm	6.2mb		NB2	67.74	357	P	28	36.20	-0.7					
	1.4s	99.30nm	5.8mb	KRP	89.38	188	eP	10	18.20	18.3X													
LBL	83.70	1	P	09	32.65	0.3	GBA	90.15	292	Pc	10	02.90	-1.3	HFS	68.54	355	eP	28	39.20	-2.6			
WB5	83.74	227	eP	09	32.00	-0.8		1.3s	52.10nm	5.6mb													
WRA	83.80	227	Pc	09	31.80	-1.3	AFC	91.36	7	eP	10	09.80	0.1		0.4s	2.50nm							
	1.2s	24.00nm	5.2mb				BWA	91.37	210	eP	10	10.30	1.0										
TAB	83.85	328	iPc	09	34.00	0.5	HRI	91.46	335	ePd	10	03.00	-7.2X										
BNI	83.88	359	P	09	35.00	1.5	CAN	92.03	209	eP	10	14.00	1.7	&	JAN 08, 1989	20h	18m	16.97s					
RMQ	83.93	212	eP	09	33.00	-0.6	MBL	92.04	238	eP	10	12.00	-0.6		58.534	N	142.748	W					
LFF	83.93	3	eP	09	34.20	0.7	JARJ	92.38	334	Pd	10	15.00	0.6										
	1.4s	243.90nm	6.2mb	BURJ	92.45	334	Pc	10	15.00	0.3													
CAF	83.98	2	eP	09	34.40	0.5	WARB	92.76	230	eP	10	06.50	-9.4X										
	1.4s	126.30nm	5.9mb	KOD	92.82	290	eP	10	18.00	1.1													
BOB	84.11	357	Pc	09	35.00	0.4	MKRJ	93.11	334	Pc	10	16.00	-1.8	YKU	1.87	55	eP	18	47.58	-1.6			
PVL	84.11	345	eP	09	35.00	0.5	MBH	95.00	334	eP	10	26.00	-0.4	WAX	1.92	358	iP	18	44.14	-6.0			
LPO	84.20	3	eP	09	35.40	0.5	NANU	95.49	240	eP	10	29.00	0.5	HMT	1.97	338	eP	18	45.38	-5.3			
	1.2s	119.00nm	5.9mb	FORR	96.02	227	eP	10	38.70	8.0X		RAGM	2.10	333	eP	18	47.33	-5.4					
KAS	84.26	339	eP	09	36.80	1.4	ZOBO	112.98	87	ePKP	15	39.00	-3.0	BCPM	2.14	47	eP	18	48.13	-5.1			
MME	84.63	356	P	09	39.20	1.8		Z	22s	1.16um	5.4Msz												
JMB	84.63	344	eP	09	38.00	0.9			PS	26	14.00		SGAM	2.34	329	iP	18	51.03	-5.0				
BDI	84.77	356	P	09	38.20	0.3	LPB	113.20	88	ePKP													

08d 20h

EPF 85.82 4 eP 39 02.30 0.0
0.8s 5.30nm 4.8mb
SKO 85.91 348 iPc 39 03.00 0.3
MNS 86.34 354 P 39 04.60 -0.2
VAY 86.39 347 eP 39 06.20 1.1
HYB 86.52 294 iPc 39 05.50 -0.5
1.0s 700.00nm 6.8mb X
OHR 86.84 348 eP 39 01.00 -6.3X
SDI 86.94 354 P 39 07.40 -0.4
POO 88.27 298 iPc 39 15.30 0.8
0.8s 56.72nm 5.9mb
GBA 90.20 292 Pc 39 22.70 -0.9
1.2s 11.70nm 5.0mb
KIC 121.81 12 PKP 45 18.24 0.9
BNG 123.19 344 iPKPd 45 20.20 0.1
0.5s 10.00nm
PTZ 137.36 321 ePKP 45 54.00 6.8X
KMZ 138.62 329 ePKP 45 54.00 4.4X
LSZ 139.50 325 ePKP 45 46.00 -5.1X
BUL 143.78 321 iPKPd 45 55.70 -2.9
0.8s 18.66nm
SLR 148.89 317 iPKPc 46 11.00 4.2X
0.9s 44.54nm
Z 17s 5.10um 6.4mszX
PRY 150.28 317 iPKPd 46 13.20 4.3X
0.9s 23.08nm
BFS 150.55 318 iPKPd 46 13.50 4.2X
1.0s 40.00nm
SEK 151.43 315 iPKPc 46 17.50 6.9X
0.5s 49.30nm
S.D. = 0.9 an 148 of 169 abs.

JAN 08, 1989 20h 56m 18.64± 0.70s
17.064 N ± 8.0km 62.332 W ± 6.3km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 2.8 (FDF).
NEV 0.24 287 eP 56 24.09 0.3
eS 56 27.82
MGH 0.36 162 eP 56 26.55 0.5
eS 56 31.84
SKI 0.47 305 eP 56 27.91 -0.3
eS 56 33.94
ANG 0.49 79 eP 56 28.79 0.2
eS 56 35.57
SEG 1.03 130 eP 56 38.00 -0.1
S 56 51.00
PAG 1.20 149 eP 56 40.50 -0.6
S 56 57.70
S.D. = 0.6 an 6 of 6 obs.

JAN 08, 1989 21h 13m 25.83± 0.61s
37.237 N ± 6.8km 27.529 E ± 6.0km
DEPTH = 10.0km (geophysicist)
3.9mb (4 abs.)
TURKEY (366)
ML 4.0 (ATH).
IZM 1.18 350 iPn 13 47.80 0.0
KAP 1.71 190 ePg 13 50.70 -5.1X
KHL 1.92 55 iPn 14 00.40 1.5
ELL 1.97 104 iPn 14 00.50 0.8
KSL 1.99 123 ePb 13 59.70 -0.2
PRK 2.24 334 ePb 14 13.50 10.1X
eSn 14 44.80
BCK 2.45 84 ePn 14 05.90 -0.6
NPS 2.51 219 ePg 14 06.10 -1.2
DST 2.52 20 ePn 14 05.80 -1.7
EZN 2.75 340 ePn 14 12.00 1.2
ATH 3.12 285 ePn 14 15.00 -0.9
EDC 3.12 5 ePn 14 14.60 -1.3
RDO 4.20 339 ePn 14 30.50 -0.8
KDZ 4.70 340 iP 14 38.00 -0.5
MMB 5.25 327 eP 14 46.00 -0.2
VAY 5.61 318 e(Pn) 14 54.70 3.5X
KHC 15.62 324 eP 17 13.50 6.0X
SMF 19.91 306 eP 18 01.70 1.4
1.0s 6.00nm 3.9mb
LBF 19.94 307 eP 18 02.40 1.7
1.0s 6.80nm 3.9mb
LOR 20.11 307 eP 18 03.80 1.3
1.0s 6.00nm 3.9mb
SSF 20.27 307 eP 18 03.50 -0.6
1.2s 8.90nm 4.0mb
S.D. = 1.2 an 17 of 21 abs.

* JAN 08, 1989 22h 17m 46.42± 0.89s
3.006 S ± 20.8km 118.861 E ± 21.6km
DEPTH = 33.0km (normal)
4.3mb (3 obs.)
SULAWESI (268)
MKS 2.28 165 iPd 18 23.00 0.5
PSI 20.72 286 ePc 22 26.00 -0.7
WB5 22.59 139 iPc 22 44.80 -0.8
WRA 22.62 139 Pc 22 44.70 -1.1
0.8s 18.90nm 4.6mb
ASPA 25.17 146 eP 23 10.90 0.4
1.0s 10.00nm 4.4mb
CHTO 29.23 319 eP 23 48.30 0.7
0.8s 1.65nm 3.8mb
BWA 41.63 142 eP 25 34.60 1.2
CAN 42.59 143 eP 25 41.00 -0.2
MAIO 67.64 311 eP 28 39.00 -3.6X
S.D. = 1.0 an 8 of 9 abs.

* JAN 08, 1989 22h 28m 40.40± 1.02s
50.541 N ± 11.5km 7.845 E ± 8.4km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 2.7 (DOU).
TNS 0.50 129 iPgd 28 50.00 -0.6
iSg 28 56.80
MEM 1.17 274 P 29 01.20 -1.1
S 29 17.90
ENN 1.24 281 iPg 29 03.00 -0.5
0.4s 21.00nm
eSg 29 19.50
WLF 1.40 232 iP 29 07.60 1.7
S 29 31.60
WTS 1.60 336 e(Pn) 29 09.50 0.8
e(Sn) 29 25.50
DOU 2.13 259 P 29 16.30 -0.2
S 29 42.30
SNF 2.27 271 P 29 18.30 -0.2
S 29 51.20
S.D. = 1.2 an 7 of 7 abs.

JAN 08, 1989 22h 37m 30.95± 0.17s
51.393 N ± 4.2km 174.750 W ± 2.4km
DEPTH = 33.0km (normal)
5.6mb (70 abs.) 5.4msz (21 abs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)
ML 5.8 (PMR). Ms 5.4 (BRK). Felt
(III) an Adak.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 24C
Centroid Location:
Origin Time 22:37:35.4 0.5
Lat 51.92N 0.06 Lon 174.61W 0.06
Dep 15.0 BDY Half-duration 2.8
Moment Tensor: Scale 10**17 Nm
Mrr=-2.99 0.12 Mtt=-2.47 0.18
Mff=-0.52 0.10 Mrt= 3.46 0.33
Mrf= 1.26 0.32 Mtf=-2.20 0.11
Principal Axes:
T Vol= 4.67 Plg=65 Azm=355
N 0.77 9 244
P -5.45 23 150
Best Double Couple: Mo=5.1*10**17
NP1: Strike=222 Dip=23 Slip= 66
NP2: 68 69 100

ADK 1.30 293 iPc 37 53.90 1.1
SMY 7.00 285 eP 39 16.30 2.6
SDN 9.39 60 eP 39 46.60 -0.3
Z 16s 20.00um
KDC 14.36 55 eP 40 50.40 -3.1X
SVW 14.36 40 eP 40 55.20 1.6
TTA 15.32 34 eP 41 08.70 2.6
PMS 16.99 45 eP 41 26.60 -0.8
PMR 17.32 44 eP 41 31.20 -0.3
Z 17s 17.00um
IMA 18.18 28 eP 41 43.00 0.8
TOA 18.82 44 eP 41 48.00 -2.0
FBA 19.42 36 eP 41 55.50 -1.4
BRW 21.58 16 ePc 42 19.20 0.0
SIT 23.48 61 eP 42 39.70 1.6
INK 26.01 34 eP 43 01.00 -1.1
0.9s 11.70nm 4.5mb X
KUSJ 28.43 269 eP 43 21.90 -2.4

ASAJ 29.21 273 eP 43 33.10 1.7
MRRJ 31.06 271 eP 43 43.60 -4.2X
MBC 32.66 21 eP 44 01.00 -0.4
0.8s 30.00nm 5.2mb
YKA 33.38 47 P 44 07.40 -0.4
YKC 33.44 47 eP 44 06.50 -1.9
1.0s 17.00nm 4.9mb
PNT 34.55 71 eP 44 18.00 -0.1
0.8s 76.00nm 5.7mb
KAKJ 35.29 262 P 44 24.30 -0.2
NIIJ 35.37 265 P 44 25.30 0.1
CHJJ 36.12 263 P 44 31.70 0.1
MAT 36.30 265 iPc 44 33.10 0.0
1.0s 92.00nm 5.6mb
Z 22s 4.81um 5.2msz
eS 50 11.00
MTMJ 36.52 265 P 44 35.00 -0.1
EDM 36.58 62 iPc 44 35.70 0.4
0.8s 186.00nm 6.0mb
MDJ 37.06 282 Pc 44 38.00 -1.4
Z 20s 8.00um 5.5msz
E 20s 6.80um
pP 44 47.50 32kmX
PP 46 03.00
S 50 15.00
WDC 37.12 86 ePd 44 38.20 -1.7
e 44 55.30
eScP 50 43.80
IIDJ 37.16 263 P 44 41.10 0.7
MIN 37.84 86 e(P) 44 45.00 -1.1
ORV 38.36 87 e(P) 44 50.50 0.1
BKS 38.91 89 e(P) 45 02.00 7.0X
Z 20s 4.50um 5.3msz
N 20s 1.40um
E 20s 5.00um
eS 50 56.00
eLQ 53 52.00
eLR 55 56.00
SES 39.07 66 ePc 44 56.00 -0.2
0.8s 49.00nm 5.3mb
pP 45 05.00 30kmX
MHC 39.61 89 e(P) 45 02.70 1.8
Z 20s 2.60um 5.1msz
N 20s 1.10um
E 20s 3.30um
eS 51 13.00
eLQ 54 01.00
eLR 55 51.00
ARN 39.67 89 eP 45 01.50 0.1
CMB 39.97 88 ePd 45 04.80 1.0
e 45 22.00
eScP 50 55.20
e 51 14.00
CNZ 40.02 283 iPc 45 03.00 -1.1
5.0s 0.80nm 2.7mb X
Z 20s 10.60um 5.7msz
E 19s 6.20um
pP 45 12.50 32kmX
PP 46 34.00
PRS 40.41 91 eP 45 08.20 0.8
LRM 40.47 73 eP 45 09.40 1.3
LLA 40.49 90 eP 45 09.30 1.2
KVN 40.78 85 eP 45 11.00 0.3
PRI 40.97 90 e(P) 45 12.30 0.2
FRI 41.03 88 e(P) 45 12.30 -0.2
e 45 29.50
eScP 51 00.20
EUR 41.85 83 iP 45 20.20 0.7
TNP 41.92 85 eP 45 20.00 0.0
FFC 42.06 56 iPc 45 20.50 -0.2
0.7s 34.00nm 5.2mb
ALE 42.16 10 eP 45 21.00 -0.2
0.9s 10.00nm 4.5mb X
pP 47 17.00
SNY 42.26 282 iPc 45 22.00 -0.5
Z 18s 4.00um 5.3msz
N 19s 3.50um
E 18s 2.20um
S 51 41.00
IMW 42.41 74 eP 45 24.50 0.4
CLC 43.10 88 eP 45 36.00 6.5X
SBB 43.68 90 eP 45 35.00 0.8
MWC 43.83 90 eP 45 36.00 0.4
BW06 43.87 75 eP 45 36.10 0.2
GSC 43.92 88 eP 45 36.00 -0.2
RVR 44.41 90 eP 45 48.00 7.9X
TPC 45.17 89 eP 45 53.00 6.8X

09d 06h

KLU 2.18 95 iP 54 36.57 -1.7
 eS 55 03.26
 MTU 2.23 141 eP 54 40.79 1.8
 CNPM 2.26 190 eP 54 40.56 1.1
 HIN 2.35 124 eP 54 38.36 -2.3
 PDB 2.69 225 eP 54 43.81 -1.6
 TTA 2.85 297 eP 54 46.00 -1.9
 HMT 3.33 112 eP 54 53.18 -1.4
 FBA 3.38 20 eP 54 53.40 -1.9
 30 obs. associated

* JAN 09, 1989 07h 03m 13.89± 1.06s
 51.537 N ± 22.9km 174.815 W ± 7.9km
 DEPTH = 33.0km (normal)
 4.6mb (3 obs.)
 ANDREANOF ISLANDS, ALEUTIAN IS. (7)
 ML 4.0 (PMR).

ADK 1.21 287 iPc 03 35.80 1.2
 SDN 9.35 60 eP 05 29.40 0.1
 SVW 14.27 40 eP 06 40.10 4.7X
 KDC 14.30 56 eP 06 35.90 0.1
 PMR 17.24 44 eP 07 13.90 0.5
 IMA 18.07 28 eP 07 27.50 3.7X
 TOA 18.74 45 eP 07 31.90 0.0
 FBA 19.32 36 eP 07 39.00 0.2
 INK 25.91 34 eP 08 44.00 -0.1
 YKA 33.31 47 P 09 51.70 1.6
 EDM 36.54 63 iPc 10 18.40 0.5
 BW06 43.87 75 eP 11 18.60 -0.2
 1.0s 5.75nm 4.3mb
 FRB 51.56 33 eP 12 17.00 -1.2
 HFS 68.47 355 eP 14 12.00 -2.2
 0.5s 2.30nm 4.5mb
 GUN 74.08 295 P 14 49.00 0.2
 0.5s 14.00nm 5.2mb
 KKN 74.51 295 P 14 51.10 0.0
 PKI 74.61 295 P 14 51.50 -0.3
 GKN 74.71 296 P 14 52.00 -0.2
 DMN 74.75 295 P 14 52.50 0.0
 S.D. = 0.9 an 17 of 19 obs.

& JAN 09, 1989 08h 03m 26.11s
 37.548 N 118.779 W
 DEPTH = 8.1km
 CALIFORNIA-NEVADA BORDER REGION (40)
 <REN>. MD 3.7 (REN). ML 3.2
 (BRK), 3.2 (PAS).

PPK 0.70 100 iPc 03 39.30 -1.0
 SVP 0.79 78 iPc 03 41.10 -0.8
 FRI 0.93 233 iPc 03 43.00 -1.0
 iS 03 54.80
 LCH 0.95 109 iP 03 43.50 -1.1
 MNA 1.01 29 eP 03 45.60 0.1
 eS 03 58.30
 MGM 1.03 96 iP 03 45.20 -0.6
 MZP 1.12 82 iPc 03 46.70 -0.8
 GMN 1.23 101 iPc 03 49.00 -0.4
 TMO 1.32 124 iP 03 50.80 -0.1
 TNP 1.35 66 iPc 03 51.20 0.0
 CMB 1.36 291 iPc 03 50.60 -0.8
 iS 04 08.80
 MCA 1.50 126 eP 03 52.80 -0.5
 SGV 1.50 112 iP 03 53.50 0.0
 KVN 1.59 19 eP 03 54.50 -0.3
 CTS 1.63 86 iP 03 54.60 -0.8
 BMTN 1.72 98 iPc 03 56.30 -0.4
 PANV 1.77 130 eP 03 56.70 -0.7
 FMT 1.84 119 eP 03 58.00 -0.3
 ISA 1.90 172 iPd 04 00.40 1.3
 YMT1 1.93 110 iP 03 59.40 -0.2
 LLA 1.96 242 ePc 04 00.50 0.4
 YMT5 1.97 109 iP 03 59.80 -0.4
 TMBR 1.98 104 eP 03 59.80 -0.6
 YMT2 1.98 112 iP 04 00.20 -0.2
 YMT4 1.99 110 iP 04 00.20 -0.3
 YMT6 2.02 109 iP 04 00.50 -0.4
 YMT3 2.04 111 iP 04 00.60 -0.6
 PRI 2.06 228 iPd 04 02.70 1.1
 CDH1 2.08 109 iPc 04 01.30 -0.6
 BGB 2.10 103 eP 04 01.70 -0.4
 BLT 2.11 91 ePc 04 01.50 -0.9
 PHAM 2.15 218 eP 04 02.70 0.0
 SDH 2.15 114 eP 04 02.30 -0.5
 LSM 2.16 111 eP 04 02.60 -0.4
 LOP 2.20 108 iP 04 02.80 -0.8

ARN 2.20 266 eP 04 04.00 0.5
 GLR 2.23 98 eP 04 03.20 -0.8
 CPX 2.26 105 iPc 04 03.60 -0.8
 SAO 2.27 251 ePc 04 04.90 0.4
 MHC 2.29 266 ePc 04 05.62 0.8
 eS 04 35.05
 GMR 2.40 94 eP 04 05.80 -0.7
 PRS 2.40 240 iPc 04 06.90 0.5
 JON 2.41 117 eP 04 05.70 -0.8
 TPU 2.49 88 eP 04 07.30 -0.4
 SPRG 2.52 109 iP 04 07.80 -0.3
 NOP 2.54 123 e(P) 04 07.30 -1.0
 WRN 2.57 79 eP 04 08.10 -0.7
 BCH 2.58 204 eP 04 09.50 0.5
 GCC 2.62 260 eP 04 09.40 0.0
 ABL 2.72 188 eP 04 11.70 0.7
 BRK 2.78 278 e(P) 04 12.20 0.5
 PCC 2.86 270 e(P) 04 13.10 0.2
 EUR 2.93 48 iP 04 20.20 6.1
 SRG 2.96 82 iP 04 13.80 -0.6
 PRN 2.97 92 iP 04 13.90 -0.6
 DLM 3.21 88 eP 04 16.90 -1.1
 56 obs. associated

JAN 09, 1989 08h 55m 59.48± 1.42s
 31.808 N ± 11.9km 114.835 W ± 5.8km
 DEPTH = 10.0km (geophysicist)
 GULF OF CALIFORNIA (49)

GLA 1.24 0 iPd 56 22.60 0.0
 PLM 2.30 313 eP 56 38.60 0.3
 PEC 2.86 317 eP 56 46.00 0.1
 NOP 4.45 346 eP 57 07.80 -0.8
 SHRG 4.69 357 eP 57 12.70 0.5
 JON 4.74 348 eP 57 12.40 -0.4
 SPRG 4.94 351 eP 57 15.50 -0.1
 SDH 4.98 346 eP 57 16.00 -0.2
 LSM 5.06 347 eP 57 17.00 -0.3
 YMT3 5.14 346 eP 57 17.80 -0.6
 YMT2 5.15 345 eP 57 18.90 0.3
 CDH1 5.19 347 eP 57 18.80 -0.3
 YMT4 5.20 346 eP 57 19.00 -0.3
 YMT6 5.20 346 eP 57 19.30 0.0
 YMT1 5.23 345 eP 57 19.50 -0.1
 YMT5 5.25 346 eP 57 20.20 0.1
 BGB 5.34 348 eP 57 21.30 -0.1
 TMBR 5.37 347 eP 57 21.40 -0.4
 GLR 5.47 350 eP 57 23.00 -0.1
 GMR 5.57 352 eP 57 24.90 0.4
 PRN 5.59 358 eP 57 25.40 0.6
 BMTN 5.67 345 eP 57 26.30 0.3
 DLM 5.79 1 eP 57 27.80 0.2
 TPU 5.82 354 eP 57 27.30 -0.8
 LCH 5.89 338 eP 57 28.80 -0.2
 SRG 6.06 358 eP 57 32.00 0.5
 TNP 6.56 343 eP 57 38.90 0.3
 ALO 7.67 64 eP 57 54.00 -0.2
 KVN 7.70 341 eP 57 54.80 0.2
 EUR 7.71 353 iP 57 55.50 0.7
 S.D. = 0.4 an 30 of 30 obs.

? JAN 09, 1989 09h 24m 03.05± 5.08s
 17.435 N ± 9.2km 67.970 W ± 45.6km
 DEPTH = 33.0km (normal)

MONA PASSAGE (89)
 MGP 1.01 56 P 24 21.50 0.5
 MCP 1.27 40 P 24 24.60 -0.1
 APR 1.56 49 P 24 28.40 -0.3
 S 24 44.40
 CSB 1.92 64 P 24 34.00 -0.1
 LPR 2.18 66 P 24 37.90 0.1
 S 25 01.40
 PAG 6.19 102 eP 25 33.70 -0.9
 MGG 6.55 102 eP 25 40.30 0.6
 SVB 7.69 122 eP 25 55.73 0.1
 SVV 7.69 121 eP 25 55.69 0.0
 S.D. = 0.5 an 9 of 9 obs.

& JAN 09, 1989 09h 30m 53.55s
 60.089 N 152.860 W
 DEPTH = 108.2km
 SOUTHERN ALASKA (2)
 <AGS-P>

ILIM 0.05 260 iP 31 08.29 1.1
 eS 31 20.15

RDT 0.54 25 iP 31 10.26 -0.5
 eS 31 24.12
 PDB 0.74 246 P 31 11.62 -0.7
 iS 31 25.68
 NNL 0.79 93 iP 31 13.17 0.4
 eS 31 27.50
 CNPM 1.00 124 iP 31 14.60 -0.3
 NKA 1.04 50 iP 31 16.55 1.3
 eS 31 32.49
 SPU 1.17 20 iP 31 16.13 -0.6
 eS 31 32.56
 CRP 1.23 16 iP 31 17.23 -0.4
 eS 31 35.14
 SLKM 1.38 71 eP 31 18.27 -0.9
 eS 31 37.47
 SVW 1.70 308 iP 31 21.76 -1.4
 PMS 2.00 53 iP 31 26.13 -0.8
 eS 31 50.56
 PTE 2.05 66 eP 31 26.01 -1.6
 PWA 2.14 42 eP 31 27.95 -0.8
 KDC 2.36 175 iP 31 29.14 -2.4
 PLRM 2.37 49 eP 31 29.92 -1.8
 PWL 2.37 69 eP 31 29.68 -2.1
 eS 31 58.06
 PME 2.43 49 eP 31 30.91 -1.6
 KNK 2.54 57 iP 31 32.04 -2.0
 eS 32 01.83
 GHO 2.56 47 eP 31 32.50 -1.9
 eS 32 02.87
 KNIM 2.57 82 iP 31 31.78 -2.7
 MTU 2.62 90 eP 31 33.79 -1.3
 eS 32 04.94
 SML 2.80 50 iP 31 35.50 -2.1
 GLI 2.96 72 eP 31 37.79 -1.9
 HIN 3.19 82 eP 31 41.46 -1.3
 TTA 3.23 333 eP 31 41.42 -1.9
 FID 3.23 75 eP 31 41.48 -1.9
 VZV 3.26 70 eP 31 41.20 -2.6
 VLZ 3.38 69 eP 31 42.88 -2.5
 KLU 3.68 65 iP 31 46.99 -2.6
 TOA 3.82 55 eP 31 49.93 -1.6
 SGAM 3.83 80 eP 31 49.85 -1.7
 WAX 5.00 82 eP 32 05.84 -1.7
 FBA 5.37 24 eP 32 10.59 -2.0
 33 obs. associated

JAN 09, 1989 10h 02m 28.59± 0.66s
 35.646 N ± 3.1km 11.630 E ± 2.4km
 DEPTH = 16.7 ± 4.8 km
 5.1mb (37 obs.) 4.3Msz (1 obs.)
 TUNISIA (397)

PTS 1.20 14 P 02 49.70 -0.7
 CVT 2.23 24 P 03 05.30 -0.1
 FAI 2.32 45 Pd 03 07.30 0.7
 LVI 2.40 13 P 03 07.40 -0.3
 ERC 2.51 18 P 03 11.10 1.8
 MCT 2.55 39 P 03 10.80 0.7
 PZI 2.99 62 P 03 15.60 -0.6
 GIB 3.03 39 Pc 03 16.80 0.1
 eSn 03 57.30
 MEU 3.03 60 Pd 03 15.10 -1.7
 USI 3.30 22 P 03 19.40 -1.1
 eSn 04 05.20
 MNO 3.35 46 eP 03 22.50 1.0
 LPI 3.88 42 P 03 22.50 -6.3X
 ATN 3.97 50 P 03 29.90 -0.1
 MSI 4.05 50 P 03 31.30 0.2
 GMB 4.22 52 P 03 33.50 -0.3
 SOI 4.30 54 P 03 33.70 -0.9
 eSn 04 25.20
 MGR 5.45 34 P 03 49.80 -1.3
 TDS 5.48 42 P 03 52.60 1.2
 SGO 5.70 29 P 03 54.70 0.2
 RFI 5.94 17 P 03 59.40 1.6
 RDP 6.16 8 P 04 02.30 1.2
 RMP 6.21 7 P 04 02.80 1.1
 FG4 6.27 28 P 04 04.50 1.9
 SDI 6.29 15 P 04 03.80 0.9
 DUI 6.40 19 P 04 06.40 1.9
 AZI 6.49 12 P 04 07.80 2.2
 FG2 6.74 23 P 04 13.00 3.8X
 MAO 6.77 357 P 04 10.20 0.6
 MNS 6.78 7 P 04 10.60 0.8
 AOU 6.84 11 P 04 12.00 1.4
 CVF 7.24 344 Pn 04 16.00 -0.2
 Sn 05 33.20

09d 10h

LOE 80.15 76 eP 14 38.00 -1.6
 e 19 38.00
 SES 80.54 327 eP 14 41.00 -0.2
 CN2 80.68 42 Pd 14 41.50 -0.5
 SNY 80.91 45 iPc 14 43.20 0.0
 RLO 81.26 308 eP 14 45.00 -0.2
 PWA 81.89 351 eP 14 49.00 1.0
 LNO 81.90 309 eP 14 48.50 0.1
 TUL 81.91 309 eP 14 48.90 0.3
 0.9s 13.90nm 5.0mb
 PCO 82.17 310 eP 14 52.20 2.3
 VVO 82.23 308 eP 14 47.00 -3.2X
 SIO 82.34 309 e(P) 14 50.90 0.1
 MED 84.39 309 eP 15 02.00 0.6
 LRM 84.52 324 eP 15 03.90 1.8
 PNT 84.99 330 eP 15 05.00 0.9
 GLD 85.07 316 P 15 07.00 2.1
 1.0s 60.00nm 5.8mb
 BW06 85.29 321 P 15 06.60 0.6
 1.0s 57.50nm 5.8mb
 DPW 85.54 329 P 15 07.30 0.3
 PSI 86.24 89 ePc 15 10.00 -0.9
 HPI 86.39 323 P 15 12.90 1.4
 ALO 89.10 314 eP 15 25.00 0.4
 1.0s 6.25nm 4.9mb
 BAL 118.46 109 ePdiff17 51.00 14.6X
 KLB 119.71 109 ePdiff17 48.00 6.1X
 SPA 125.46 180 iPKPd 21 29.10 -0.4
 1.0s 10.00nm
 e 21 46.00
 WRA 127.65 89 PKP 21 36.00 1.0
 0.8s 3.00nm
 BWA 144.81 101 ePKP 22 05.90 -0.4
 CAN 145.48 102 iPKPd 22 07.20 -0.2
 COO 146.49 93 ePKP 22 11.00 1.8
 S.D. = 1.3 on 224 of 248 obs.

JAN 09, 1989 10h 09m 57.18 ± 0.79s
 6.071 S ± 5.1km 153.740 E ± 5.2km
 DEPTH = 25.1 ± 6.2 km
 5.0mb (14 obs.)

NEW BRITAIN REGION (192)

PAA 1.76 98 iPc 10 26.50 0.0
 eS 10 43.00
 LAT 6.72 265 iPd 11 37.50 0.6
 HNR 7.00 119 eP 11 47.00 6.3X
 eS 13 13.00
 BLLO 7.16 261 e(P) 11 42.30 -0.8
 PMG 7.32 243 iPd 11 45.00 -0.2
 CTA 15.72 207 iPd 13 42.00 3.3X
 1.0s 81.00nm 4.9mb
 OIS 19.89 222 iPd 14 29.20 -0.6
 1.2s 128.00nm 5.1mb
 e 17 01.00
 DZM 20.09 144 iPd 14 30.00 -1.2
 RMO 20.85 193 iPd 14 40.00 0.2
 TLE 20.89 270 ePc 14 41.80 1.6
 0.2s 6.00nm 4.7mb
 BRS 21.22 182 iPc 14 43.50 -0.1
 i 14 56.20
 MTN 23.28 252 eP 15 04.00 -0.1
 e 15 13.00
 WB5 23.30 232 eP 15 04.70 0.5
 WRA 23.36 232 Pc 15 06.20 1.4
 0.5s 7.90nm 4.5mb
 COO 24.44 184 eP 15 16.00 0.8
 ASPA 25.89 225 iPd 15 28.80 -0.2
 1.2s 74.00nm 5.2mb
 Z 22s 0.49um 4.0Mszx
 LR 24 28.20
 WARB 32.69 229 iPd 16 18.80 -11.1X
 FORR 34.45 221 eP 16 44.00 -1.0
 0.4s 30.00nm 5.6mb
 COOL 39.29 227 eP 17 25.00 -0.9
 MUN 43.48 229 eP 18 00.00 -0.3
 OIZ 49.92 301 eP 18 52.10 0.9
 WHN 52.41 316 eP 19 10.00 0.1
 CN2 55.83 335 eP 19 41.00 6.2X
 GYA 55.90 308 P 19 35.40 -0.4
 XAN 58.18 316 iPc 19 50.80 -0.9
 KMI 58.47 304 Pc 19 54.50 0.4
 CHTO 59.38 296 iP 19 59.40 -0.8
 1.3s 13.07nm 4.9mb
 CDZ 60.27 311 P 20 06.10 -0.1
 LZH 62.79 316 eP 20 22.50 -0.7
 1.5s 26.00nm 5.1mb

GTA 67.22 317 iPd 20 52.00 0.2
 GUN 73.58 301 P 21 30.70 -0.2
 0.7s 27.00nm 5.4mb
 PKI 73.88 301 P 21 32.60 -0.1
 0.6s 7.00nm 4.9mb
 KKN 74.05 301 P 21 33.10 -0.4
 0.6s 9.00nm 5.0mb
 DMN 74.15 301 P 21 34.00 -0.1
 0.8s 26.00nm 5.3mb
 GKN 74.66 301 P 21 36.50 -0.4
 GBA 78.21 285 Pc 21 56.40 -0.4
 1.0s 5.00nm 4.5mb
 SPA 83.97 180 e(P) 22 26.80 0.3
 1.0s 10.00nm 5.0mb
 ZOBO 133.01 119 ePKP 29 15.00 1.1
 Z 24s 0.15um 4.6Mszx
 LR 50 00.00
 BNG 135.36 270 ePKPd 29 19.00 1.2
 0.6s 3.00nm
 BMA 146.48 149 ePKP 29 37.60 0.3
 BAO 149.53 135 ePKP 29 44.50 2.1X
 S.D. = 0.7 on 36 of 41 obs.

? JAN 09, 1989 10h 38m 28.22 ± 0.95s
 16.816 N ± 9.9km 61.955 W ± 10.3km
 DEPTH = 28.2 ± 13.4 km
 LEEWARD ISLANDS (92)

MGH 0.27 249 eP 38 34.96 -0.1
 eS 38 38.40
 ANG 0.36 20 iP 38 36.30 0.0
 NEV 0.67 298 eP 38 41.65 0.3
 eS 38 57.64
 PAG 0.83 161 eP 38 44.00 0.1
 SKI 0.91 305 eP 38 44.83 -0.2
 S.D. = 0.4 on 5 of 5 obs.

* JAN 09, 1989 10h 41m 41.21 ± 0.73s
 51.300 N ± 15.5km 174.712 W ± 6.9km
 DEPTH = 33.0km (normal)
 4.8mb (14 obs.)
 ANDREANOF ISLANDS, ALEUTIAN IS. (7)
 ML 4.1 (PMR).

ADK 1.36 296 iPc 42 04.40 0.3
 SDN 9.42 59 eP 43 57.90 0.4
 KDC 14.39 55 eP 45 10.50 6.3X
 SVW 14.41 40 eP 45 09.60 5.0X
 TTA 15.38 34 eP 45 23.20 6.0X
 PMS 17.04 45 eP 45 37.90 -0.3
 IMA 18.25 28 eP 45 54.60 1.3
 FBA 19.48 35 eP 46 08.00 0.2
 BRW 21.66 16 eP 46 30.20 -0.1
 INK 26.07 34 eP 47 11.00 -1.9
 PNT 34.55 71 eP 48 33.00 4.6X
 0.7s 6.00nm 4.6mb
 EDM 36.60 62 ePc 48 46.50 0.8
 CN2 40.07 283 Pc 49 13.60 -1.2
 SNY 42.31 282 iPd 49 34.00 0.9
 BW06 43.87 75 eP 49 46.30 0.1
 0.7s 5.85nm 4.5mb
 BJI 47.89 285 eP 50 17.50 -0.2
 SSE 50.56 272 e(P) 50 40.50 2.1
 TIY 51.62 285 P 50 46.20 -0.3
 XAN 56.18 284 P 51 19.20 -0.8
 GTA 57.96 294 eP 51 31.00 -1.7
 FVM 58.24 68 eP 51 32.80 -1.7
 0.8s 8.33nm 4.9mb
 GYA 62.87 279 P 52 05.60 -0.7
 NAO 68.14 357 P 52 37.60 -1.9
 0.7s 4.30nm 4.7mb
 HFS 68.71 355 eP 52 41.10 -1.9
 0.5s 9.70nm 5.1mb
 GUN 74.24 295 Pc 53 17.30 0.3
 KKN 74.67 295 Pc 53 19.60 0.2
 0.7s 20.00nm 5.2mb
 PKI 74.77 295 Pc 53 20.00 0.0
 GKN 74.87 296 Pc 53 20.50 0.1
 0.8s 36.00nm 5.4mb
 DMN 74.91 295 Pc 53 21.10 0.3
 0.8s 26.00nm 5.3mb
 CLL 77.56 355 iP 53 34.00 -0.9
 KHC 79.70 354 eP 53 47.30 0.6
 CDF 80.65 359 eP 53 52.30 0.5
 0.5s 2.90nm 4.5mb
 LOR 81.80 1 eP 53 58.50 0.7
 0.8s 7.20nm 4.7mb

SSF 82.01 1 eP 53 59.60 0.8
 0.6s 3.20nm 4.5mb
 LBF 82.09 1 eP 53 59.70 0.4
 AVF 82.28 1 eP 54 00.80 0.6
 SMF 82.43 1 eP 54 01.80 0.8
 0.6s 4.80nm 4.7mb
 TCF 82.76 2 eP 54 03.40 0.6
 LSF 82.78 3 eP 54 03.20 0.3
 0.2s 2.00nm 4.9mb
 MAF 82.83 2 eP 54 04.30 1.2
 0.9s 5.50nm 4.6mb
 BUL 143.91 321 iPKPc 01 12.30 -2.6X
 S.D. = 1.0 on 36 of 41 obs.

JAN 09, 1989 11h 16m 57.25 ± 0.27s
 51.370 N ± 6.3km 174.765 W ± 3.4km
 DEPTH = 33.0km (normal)
 5.2mb (52 obs.) 4.9Msz (7 obs.)
 ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ML 5.2 (PMR). Felt (III) on Adok.
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 11S, 21C
 Centroid Location:
 Origin Time 11:16:57.7 0.7
 Lat 51.63N 0.07 Lon 175.06W 0.14
 Dep 15.0 FIX Half-duration 1.6
 Moment Tensor: Scale 10**16 Nm
 Mrr= 4.00 0.31 Mtt=-5.02 0.38
 Mff= 1.03 0.34 Mrt= 8.62 1.15
 Mrf= 5.97 0.88 Mtf= 0.64 0.40
 Principal Axes:
 T Vol= 11.99 Plg=52 Azm=313
 N -1.13 15 63
 P -10.86 34 163
 Best Double Couple: Mo=1.1*10**17
 NP1: Strike=300 Dip=18 Slip= 148
 NP2: 60 81 75

ADK 1.30 294 iPc 17 20.30 1.1
 SDN 9.41 59 eP 19 13.00 -0.4
 KDC 14.37 55 eP 20 19.50 -0.5
 SVW 14.38 40 eP 20 22.40 2.2
 TTA 15.34 34 eP 20 38.00 5.3X
 PMR 17.34 44 eP 20 57.80 -0.2
 Z 20s 2.00um
 IMA 18.20 28 eP 21 10.50 1.7
 FBA 19.44 36 eP 21 21.40 -2.1
 BRW 21.60 16 eP 21 45.10 -0.7
 INK 26.04 34 eP 22 28.00 -0.6
 MBC 32.68 21 eP 23 28.00 0.1
 0.5s 6.00nm 4.7mb
 YKA 33.40 47 P 23 34.00 -0.3
 PNT 34.56 71 eP 23 46.00 1.5
 0.9s 27.00nm 5.2mb
 EDM 36.59 62 iPc 24 02.30 0.6
 0.5s 32.00nm 5.5mb
 MDJ 37.06 282 Pc 24 04.30 -1.4
 Z 20s 1.20um 4.7Msz
 WDC 37.12 86 eP 24 12.90 6.6X
 MIN 37.84 86 eP 24 20.70 8.2X
 ORV 38.37 87 e(P) 24 23.00 6.3X
 SES 39.08 66 eP 24 23.00 0.4
 CN2 40.02 283 iPc 24 29.60 -0.8
 Z 20s 2.10um 5.0Msz
 E 20s 2.00um
 eS 30 38.00
 PRS 40.41 90 e(P) 24 35.20 1.5
 LRM 40.48 73 eP 24 41.40 6.9X
 KVN 40.79 85 eP 24 37.50 0.5
 EUR 41.86 83 iP 24 46.20 0.3
 TNP 41.93 85 eP 24 47.00 0.6
 FFC 42.08 56 eP 24 47.50 0.4
 0.6s 14.00nm 4.9mb
 ALE 42.18 10 eP 24 47.00 -0.7
 0.6s 6.00nm 4.5mb
 SNY 42.26 282 eP 24 49.10 0.3
 ISA 42.65 89 eP 24 52.00 -0.2
 CLC 43.10 88 eP 25 08.00 12.2X
 MWC 43.84 90 eP 25 09.00 7.0X
 BW06 43.88 75 eP 25 02.50 0.2
 0.8s 22.10nm 5.0mb
 GSC 43.93 88 eP 25 09.00 6.4X
 PLM 45.16 90 eP 25 30.00 17.4X
 PLM 45.16 90 eP 25 13.00 0.4
 TPC 45.17 89 eP 25 25.00 12.4X

09d 12h

FFC 42.10 56 eP 00 49.00 -0.8
0.5s 4.00nm 4.4mb
SNY 42.21 282 iPd 00 51.70 0.8
BW06 43.92 75 eP 01 04.50 -0.6
1.0s 10.94nm 4.6mb
BJI 47.79 285 eP 01 35.50 0.0
HHC 50.06 288 eP 01 53.50 0.3
ALQ 50.65 81 eP 02 00.00 2.1
TIY 51.52 285 Pc 02 04.10 -0.1
XAN 56.08 284 P 02 36.30 -1.6
LZH 57.75 289 eP 02 49.50 -0.3
1.5s 22.00nm 5.0mb
ELC 59.44 67 eP 02 59.50 -1.9
CD2 61.39 285 eP 03 14.20 -0.6
GYA 62.78 279 P 03 24.00 -0.2
KJF 63.40 349 eP 03 26.00 -1.7
SUF 65.02 350 eP 03 37.00 -1.2
0.4s 2.70nm 4.7mb
HFS 68.61 355 eP 03 59.20 -1.7
0.5s 11.00nm 5.2mb
GUN 74.13 295 P 04 35.20 0.3
KKN 74.56 295 P 04 37.80 0.6
PKI 74.65 295 P 04 38.10 0.2
GKN 74.76 296 P 04 38.60 0.3
DMN 74.80 295 P 04 39.30 0.6
KHC 79.59 354 P 05 05.50 0.8
LDF 80.28 4 eP 05 08.40 0.1
0.6s 4.30nm 4.6mb
CDF 80.55 359 eP 05 09.90 0.1
LPF 80.80 4 eP 05 11.60 0.5
0.6s 5.40nm 4.7mb
BSF 81.14 359 eP 05 13.10 0.1
KBA 81.65 354 ePc 05 16.00 0.2
1.2s 5.20nm 4.4mb
LOR 81.70 1 eP 05 16.70 0.9
0.6s 3.90nm 4.6mb
SSF 81.91 1 eP 05 17.50 0.7
0.4s 1.70nm 4.4mb
LBF 81.99 1 eP 05 17.50 0.2
0.6s 2.70nm 4.5mb
AVF 82.18 1 eP 05 18.50 0.3
0.6s 3.60nm 4.6mb
SMF 82.33 1 eP 05 19.40 0.3
0.6s 4.50nm 4.7mb
TCF 82.66 2 eP 05 21.20 0.4
0.6s 2.70nm 4.5mb
LSF 82.68 3 eP 05 21.50 0.6
0.5s 3.60nm 4.7mb
MAF 82.73 2 eP 05 22.70 1.5
0.6s 1.80nm 4.3mb
LFF 83.96 3 eP 05 28.30 0.8
0.7s 8.80nm 5.0mb
CAF 84.02 2 eP 05 28.70 0.9
0.6s 4.30nm 4.8mb
LPO 84.24 3 eP 05 29.50 0.7
0.8s 9.10nm 5.0mb
S.D. = 0.9 on 48 of 52 obs.

* JAN 09, 1989 12h 09m 21.91 ± 1.03s
51.514 N ± 23.4km 174.751 W ± 8.0km
DEPTH = 33.0km (normal)
4.7mb (14 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK 1.26 288 eP 09 43.80 0.5
KDC 14.28 55 eP 12 49.40 5.9X
FBA 19.32 36 eP 13 43.00 -3.7X
INK 25.91 34 eP 14 52.00 -0.1
EDM 36.52 63 iP 16 26.00 0.2
KVN 40.77 85 eP 17 06.50 5.0X
TNP 41.91 85 eP 17 16.00 5.1X
BW06 43.84 75 eP 17 26.00 -0.6
PLM 45.15 90 eP 17 33.50 -3.7X
KJF 63.30 349 eP 19 48.00 -1.2
SUF 64.92 350 iP 19 58.40 -1.3
NAO 67.93 357 P 20 17.80 -1.0
0.8s 4.60nm 4.6mb
GUN 74.13 295 P 20 57.00 -0.1
1.0s 54.00nm 5.5mb
KKN 74.56 295 P 20 59.20 -0.2
0.9s 16.00nm 5.0mb
PKI 74.65 295 P 20 59.50 -0.6
1.0s 20.00nm 5.1mb
GKN 74.76 296 P 21 00.10 -0.4
0.8s 20.00nm 5.2mb
DMN 74.80 295 P 21 00.70 -0.1
1.0s 28.00nm 5.2mb

LOR 81.59 1 eP 21 37.50 0.1
0.6s 2.70nm 4.4mb
SSF 81.79 1 eP 21 39.10 0.7
0.6s 2.70nm 4.4mb
LBF 81.88 1 eP 21 39.10 0.2
0.6s 2.70nm 4.4mb
AVF 82.06 1 eP 21 40.10 0.3
0.6s 1.80nm 4.3mb
SMF 82.22 1 eP 21 41.00 0.4
0.6s 3.90nm 4.6mb
TCF 82.54 2 eP 21 43.40 1.0
0.6s 2.70nm 4.5mb
LSF 82.57 3 eP 21 42.90 0.4
0.6s 3.40nm 4.6mb
MAF 82.62 2 eP 21 44.30 1.6
0.6s 2.70nm 4.5mb
S.D. = 0.8 on 20 of 25 obs.

? JAN 09, 1989 12h 53m 16.76 ± 0.92s
43.153 N ± 6.7km 13.416 E ± 9.9km
DEPTH = 10.0km (geophysicist)

CENTRAL ITALY (381)

SSO 0.14 1 e(Pg) 53 19.78 -0.3
CIO 0.20 282 iPd 53 21.33 0.1
iSg 53 25.32
ALP 0.39 162 e(Pg) 53 24.80 0.0
eSg 53 31.26
AOI 0.42 19 iPg 53 25.55 0.2
iSg 53 33.58
S.D. = 0.4 on 4 of 4 obs.

* JAN 09, 1989 13h 28m 20.27 ± 1.04s
63.544 N ± 11.6km 151.352 W ± 11.3km
DEPTH = 33.0km (normal)

CENTRAL ALASKA (1)

ML 3.1 (PMR).

FBA 2.07 47 eP 28 53.00 -0.3
TTA 2.20 256 eP 28 54.30 -0.9
PMR 2.21 151 ePc 28 52.90 -2.4
IMA 2.72 340 eP 29 02.80 0.1
TOA 2.78 119 eP 29 05.40 1.9
SVW 3.15 221 eP 29 10.50 1.7
S.D. = 2.1 on 6 of 6 obs.

JAN 09, 1989 13h 42m 36.43 ± 0.18s
46.986 N ± 4.2km 153.479 E ± 3.4km
DEPTH = 13.5km (geophysicist)

6.0mb (63 obs.) 6.4MsZ (23 abs.)

KURIL ISLANDS (221)

Ms 6.2 (BRK), 6.2 (PAS). Complex
rupture. Depth from broadband
displacement seismograms, based
on dominant subevent.

FAULT PLANE SOLUTION: P-Waves

NP1: Strike=37 Dip=82 Slip= 90

NP2: 217 8 90

Principal Axes:

T Val= 37 P1g=53 Azm=307

P 37 127

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

RADIATED ENERGY

No. of sta: 6 Focal mech. F

Energy 9.3 ± 2.5 × 10¹³ Nm

MOMENT TENSOR SOLUTION

Dep 12 No. of sta: 16

Moment Tensor; Scale 10¹⁸ Nm

Mrr= 2.64 Mtt= 1.60

Mff=-4.24 Mrt= 1.99

Mrf= 2.97 Mtf= 2.34

Principal axes:

T Val= 5.63 P1g=48 Azm=328

N 0.06 38 180

P -5.69 16 77

Best Double Couple: Mo=5.7 × 10¹⁸

NP1: Strike=126 Dip=44 Slip= 28

NP2: 15 71 131

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 12S, 29C M.W.: 11S, 25C

Centroid Location:

Origin Time 13:42:44.4 0.1

Lat 46.81N 0.01 Lon 154.05E 0.02
Dep 18.9 0.6 Half-duration 7.0
Moment Tensor; Scale 10¹⁸ Nm
Mrr= 5.38 0.05 Mtt=-1.66 0.04
Mff=-3.72 0.05 Mrt= 1.34 0.15
Mrf= 1.19 0.15 Mtf=-2.42 0.04

Principal Axes:

T Val= 5.69 P1g=80 Azm=331

N -0.09 4 215

P -5.60 9 124

Best Double Couple: Mo=5.6 × 10¹⁸

NP1: Strike=209 Dip=36 Slip= 83

NP2: 38 54 95

KUSJ 7.33 241 P 44 20.80 -4.7X

ASAJ 8.13 253 P 44 38.10 1.3

HOOJ 8.59 241 eP 44 40.60 -2.6X

SAP 9.45 250 eP 44 57.00 1.9

MRRJ 9.94 247 eP 44 59.00 -2.8X

NIJ 14.48 233 P 45 56.90 -5.8X

KAKJ 14.64 227 P 46 03.50 -1.4X

CHJJ 15.37 230 P 46 11.80 -2.6X

MAT 15.42 233 P 46 12.00 -3.1X

MTMJ 15.61 234 P 46 13.10 -4.6X

IIDJ 16.37 231 P 46 25.30 -2.1X

MDJ 16.81 271 Pc 46 32.00 -0.8X

Z 20s 41.30um

E 18s 156.00um

TSRJ 17.39 235 P 46 36.50 -3.6X

CN2 19.90 271 Pc 47 05.60 -4.6X

Z 6.0s 12.50nm

E 16s 204.00um

E 14s 106.00um

eS 50 42.00

SHK 20.00 239 ePc 47 10.50 -0.9X

SHNJ 21.22 241 eP 47 24.40 0.5

SNY 21.90 267 iPc 47 29.00 -1.7

Z 21s 86.40um

N 16s 107.00um

E 15s 105.00um

iS 51 32.00

KUMJ 22.51 238 eP 47 36.40 -0.4

HIA 22.53 288 ePc 47 35.37 -1.6

ec 47 38.02

KAGJ 23.46 236 eP 47 48.40 2.2

DL2 24.54 262 iPc 47 57.00 0.4

N 14s 60.30um

E 14s 23.30um

S 52 07.00

BJI 27.73 269 ePc 48 24.84 -1.4

9.0s 12.40nm

E 16s 196.00um

ec 48 29.31

ePP 49 22.00

eS 53 12.43

TIA 29.00 261 eP 48 37.40 -0.3

Z 15s 42.10um

N 14s 16.10um

E 15s 65.40um

S 53 27.00

ScS 59 20.90

SSE 29.42 249 P+ 48 40.00 -1.5

1.0s 86.00nm

Z 18s 41.70um

N 14s 28.20um

E 18s 26.60um

i 48 47.00

sP 49 08.50

PP 49 34.00

S 53 28.00

sS 53 40.00

ScP 55 20.00

PcS 55 32.00

SDN 29.56 56 e(P) 48 34.80 -7.7X

Z 20s 35.00um

NJ2 30.31 253 Pc 48 48.80 -0.6

N 15s 65.30um

E 15s 55.70um

S 53 49.00

HHC 30.53 274 Pd 48 50.80 -0.6

Z 20s 145.00um

E 16s 89.60um

PP 49 48.00

S 53 50.00

	i	55 45.90		LBF	82.68 339 eP	54 59.70 -0.9		e	56 02.00	
	i (PP)	57 42.80		OHR	82.72 326 eP	54 57.80 -3.1X		e	57 24.00	
	i	57 49.50			0.9s	0.38nm	3.5mb X	eS	05 52.00	
DIM	80.05 323 iPc	54 47.00 0.2			iPcP	55 02.30		e	06 20.00	
PGB	80.18 325 iPd	54 48.00 0.4		SSF	82.72 340 eP	55 00.20 -0.6		e	07 20.00	
STR	80.25 338 P	54 49.89 2.1		LPF	82.79 343 eP	55 00.50 -0.6	EMON	88.37 346 eP	55 33.00 4.0X	
PTJ	80.26 331 eP	54 46.60 -1.4		ORX	82.91 336 P	55 02.81 0.9	ERC	88.41 330 P	55 29.50 0.3	
ZAG	80.33 331 iP	54 48.70 0.5		ORO	82.92 336 P	55 00.40 -1.5	PZI	88.49 328 P	55 33.70 4.1X	
PLD	80.34 324 eP	54 52.00 3.7X		LIT	82.92 324 ePd	55 01.50 -0.4	LVI	88.54 330 P	55 30.30 0.6	
KDZ	80.43 323 iPc	54 50.00 1.1		RYD	82.97 299 eP	55 05.20 2.7	ERUA	89.36 346 eP	55 34.40 0.8	
VAL	80.47 350 P	54 50.00 1.2		AVF	83.01 340 eP	55 01.40 -0.9	TAU	89.68 185 eP	55 35.00 0.4	
	S	05 00.00		AOI	83.12 332 eP	55 04.01 1.1		e	06 05.00	
EDC	80.48 321 iP	54 49.70 0.5		RSM	83.15 333 P	55 03.40 0.4		e	07 44.00	
VTS	80.52 325 iP	54 49.00 -0.5		JARJ	83.18 311 Pc	55 03.00 -0.5	ESEL	89.73 338 eP	55 36.40 1.0	
CDF	80.53 338 P	54 49.00 -0.4		BOB	83.29 335 P	55 03.30 -0.5	ETOR	89.90 342 eP	55 35.40 -0.9	
RBL	80.54 333 P	54 47.90 -1.6		BURJ	83.29 311 P	55 03.10 -0.9	WEL	89.91 164 e(P)	55 32.00 -3.8X	
LJU	80.60 332 eP	54 49.00 -0.7		LSD	83.29 337 P	55 04.86 0.8	Z	21s	20.07um	6.5Msz
	e	54 51.20		SFI	83.34 333 P	55 06.90 3.0X		PP	59 28.00	
FVI	80.65 334 P	54 49.20 -0.7		ARV	83.38 332 P	55 04.20 0.0		SKS	06 02.00	
RZN	80.68 324 eP	54 51.00 0.5		PGD	83.42 333 P	55 05.10 0.5		e	06 26.00	
DST	80.76 320 eP	54 52.30 1.6		MME	83.44 334 P	55 05.10 0.3		PS	07 28.00	
VOY	80.81 333 eP	54 49.50 -1.4		RSP	83.55 337 P	55 04.97 -0.2	GUD	90.51 343 eP	55 40.00 0.8	
	e	54 52.30		CIO	83.59 332 eP	55 06.22 0.8	PTO	90.82 347 ePKP	55 36.40 -4.0X	
FEL	80.84 337 P	54 50.03 -1.0		BDI	83.59 334 P	55 06.90 1.5	TOL	91.22 343 iP+	55 43.00 0.7	
VBY	80.84 332 ePc	54 50.00 -1.0		KFNJ	83.62 311 P	55 06.00 0.4		iPP	59 29.00	
	i	54 52.30		FIR	83.65 333 eP	55 09.00 3.5X		iS	06 22.00	
BLY	80.87 330 eP	54 51.90 0.8			iS	05 30.00		iPS	08 07.00	
CEY	80.90 332 eP	54 49.60 -1.7		PLDF	83.72 339 P	55 05.51 -0.5		eSS	16 30.00	
	e	54 52.00		TCF	83.75 340 eP	55 05.50 -0.6		iSS	17 40.00	
VITF	81.04 339 P	54 51.53 -0.4		QASM	83.75 302 ePc	55 08.00 1.5	EPLA	91.43 344 eP	55 42.80 -0.5	
MOF	81.09 338 P	54 51.39 -1.0		AGO	83.76 340 P	55 06.21 0.1	AKSR	91.59 308 iPc	55 47.00 2.8X	
TRI	81.14 333 e(P)d	54 51.00 -1.5		GEN	83.76 335 P	55 06.51 0.4		0.1s	125.00nm	7.2mb X
	i (PP)	58 05.00		CBN	83.78 38 eP	55 06.00 -0.3	AGMR	91.93 308 eP	55 49.50 3.8X	
	e	01 26.00		BNI	83.80 337 Pc	55 08.70 2.2		0.1s	440.00nm	7.8mb X
	e(S)	05 16.00		ALP	83.82 332 eP	55 05.90 -0.7	EVIA	92.09 341 eP	55 47.10 0.6	
	e(SS)	11 22.00		ASS	83.85 332 Pc	55 09.30 2.6	ASMO	93.59 342 eP	55 54.00 0.6	
	eLR	21 58.00		MKRJ	83.88 311 P	55 07.00 -0.1	AAPN	93.72 342 eP	55 51.50 -2.5	
HAU	81.15 338 eP	54 51.70 -0.9		QUTJ	83.89 310 P	55 09.50 2.4	ALOJ	93.90 342 eP	55 55.50 0.6	
	1.2s	178.50nm	6.0mb	RRL	83.89 337 P	55 06.92 -0.2	APHE	93.97 342 eP	55 56.00 0.8	
MMB	81.16 324 iPd	54 52.00 -0.8		PII	83.93 334 P	55 07.90 1.0	ATEJ	94.07 342 eP	55 55.00 -0.7	
KKB	81.19 325 iPd	54 55.00 2.1		CKI	83.94 336 P	55 07.40 0.4	ARO	95.26 293 iP+	56 06.30 5.0X	
BSF	81.19 338 P	54 52.13 -0.8		LSF	83.94 341 eP	55 06.50 -0.5		eS	14 00.00	
VVI	81.31 334 P	54 55.10 1.7		MFF	83.97 342 eP	55 06.60 -0.6	NAI	108.87 289 ePKP	01 21.00 13.5X	
PLE	81.33 328 eP	54 54.00 0.3			1.0s	112.00nm	6.0mb	1.0s	20.00nm	
KHL	81.41 319 iP	54 53.50 -0.7		DSI	84.00 311 eP	55 08.00 0.5	CAR	112.37 44 ePKP	01 10.00 -3.9X	
EZN	81.57 322 iP	54 57.00 2.1		PYM	84.07 340 P	55 08.87 1.1	AVY	114.26 268 ePKP	01 30.00 12.4X	
SRS	81.62 324 eP	54 55.70 0.6		FIN	84.15 336 P	55 07.53 -0.6	LWI	114.68 295 ePdiff	57 29.00 0.7	
BCK	81.63 318 eP	54 54.60 -0.7		ROB	84.17 336 P	55 06.71 -1.6	BNG	115.22 309 ePKPc	01 19.90 0.5	
LOMF	81.63 338 P	54 55.09 -0.1		PZZ	84.19 337 P	55 06.40 -2.1		1.6s	65.00nm	
SKO	81.73 326 iP	54 54.40 -1.3		AQU	84.26 331 P	55 11.10 2.4		id	02 04.00	
	1.0s	294.00nm	6.3mb	BRT	84.26 328 Pc	55 10.80 2.1	PTZ	122.10 284 iPKPd	01 32.50 0.1	
Z	18s	23.00um	6.6Msz	STV	84.37 336 P	55 07.43 -1.9	KUK	122.20 329 ePKP	01 36.50 3.9X	
N	20s	21.30um		LCI	84.46 327 Pc	55 11.60 1.9	KOGH	122.26 329 ePKP	01 35.00 2.3X	
E	18s	35.30um		LBL	84.50 339 P	55 10.31 0.5		e	03 06.70	
	iPcP	54 57.30		IMI	84.52 336 P	55 08.87 -1.2	SHGH	122.33 328 ePKP	01 36.70 3.9X	
	i	55 28.00		SAOF	84.54 336 P	55 10.21 0.1		e	03 08.50	
	iPP	58 05.00		AUTN	84.57 336 P	55 09.77 -0.7	LEGH	122.64 328 ePKP	01 45.00 11.6X	
	iS	05 10.00		AZI	84.57 331 Pc	55 12.00 1.8		e	03 09.50	
	iSS	10 45.00		TOUF	84.60 336 P	55 10.83 0.2	TIC	123.30 334 PKP	01 35.04 0.4	
	LR	33 50.00		AURF	84.70 336 P	55 10.83 -0.2	KIC	123.48 334 PKP	01 35.34 0.3	
VAY	81.85 325 iP	54 57.40 1.1		SDI	84.70 331 Pc	55 12.00 1.0	LIC	123.70 334 PKP	01 35.82 0.3	
	1.1s	0.36nm	3.4mb X	MVIF	84.74 336 P	55 10.68 -0.6	LSZ	124.93 286 iPKPc	01 38.00 0.1	
KNT	81.86 325 eP	54 55.20 -1.2		RJF	84.84 341 eP	55 11.30 -0.3	KMZ	125.12 290 iPKP	01 38.60 0.3	
SOH	81.96 324 eP	54 58.40 1.4			1.0s	64.00nm	5.8mb	iPP	03 34.50	
FLN	81.98 343 eP	54 56.00 -0.9		MAO	84.92 333 Pc	55 14.60 2.6	BUL	128.11 282 iPKPc	01 43.80 -0.2	
	1.1s	112.30nm	5.9mb	CALN	84.94 336 P	55 13.32 1.0		iPP	03 48.50	
LFK	81.98 314 eP	54 56.90 -0.3		RDP	85.02 332 P	55 14.40 1.8	ARE	132.07 66 ePKP	01 54.00 2.2X	
BRY	82.01 328 eP	54 56.00 -1.3		CAF	85.07 340 eP	55 11.80 -1.0	SLR	132.12 276 ePKPc	01 50.33 -1.2	
BHL	82.02 312 P	54 58.50 1.1			1.2s	86.20nm	5.9mb	0.9s	37.82nm	
	SKS	05 24.00		PRNI	85.17 310 eP	55 16.00 2.5	Z	18s	17.87um	6.8Msz
LDF	82.07 343 eP	54 56.40 -0.9		FRF	85.19 336 eP	55 12.60 -0.7		ec	01 51.99	
	1.0s	64.00nm	5.7mb		1.3s	194.90nm	6.2mb	ePP	04 15.99	
TTG	82.16 328 eP	54 57.00 -0.8		LFF	85.36 341 eP	55 13.80 -0.3		iSKPd	05 16.13	
	eS	05 14.00			1.0s	69.60nm	5.8mb	PRY	133.44 276 ePKP	01 51.00 -3.0X
SAL	82.21 335 P	54 59.50 1.4		LMR	85.43 336 eP	55 14.10 -0.4		0.9s	15.38nm	
GRG	82.23 325 ePd	55 00.20 1.9		CVF	85.47 335 P	55 15.85 1.1		i	04 17.50	
MDI	82.29 335 P	54 58.60 0.1		MGR	85.50 329 P	55 10.50 -4.4X	BFS	133.89 276 ePKP	01 55.00 0.2	
IZM	82.36 320 iP	55 01.20 2.1		AYN	85.81 309 eP	55 18.50 1.9		0.7s	27.40nm	
GRR	82.41 343 eP	54 58.50 -0.6		NWAO	85.98 210 ePc	55 13.23 -3.9X	ZOBO	134.00 62 PKP	01 46.80 -9.0X	
LOR	82.44 340 eP	54 58.20 -1.1			ec	55 18.03		PKS	05 33.00	
	1.0s	93.70nm	5.9mb		ed	55 21.51		LR	47 26.00	
HRI	82.47 312 eP	55 05.00 5.2X		SOI	87.15 328 P	55 24.00 1.0	LPB	134.22 63 PKP	01 57.00 1.0	
HVAR	82.50 330 iPc	55 00.80 1.1		EPF	87.26 341 eP	55 22.70 -0.9	Z	22s	7.41um	6.4Msz
ELL	82.52 318 iP	54 59.50 -0.6			1.0s	36.80nm	5.6mb	PKS	05 32.00	
TBR	82.55 34 P	54 57.00 -2.9		ETER	87.35 339 eP	55 28.30 4.3X		eLR	47 08.00	
PAIG	82.59 323 eP	55 01.60 1.4		HLW	87.44 313 PKPc	55 28.00 3.4X	CNCB	134.50 63 ePKP	01 53.00 -3.8X	
CIN	82.65 319 iPc	54 44.00 -16.5X			e	55 46.00		PKS	05 27.00	

Table with columns for station codes (TCF, BNI, ASS, etc.), coordinates, and data values. Includes summary statistics for JAN 09, 1989, 14h 13m.

JAN 09, 1989 14h 13m 44.72 ± 0.31s
37.852 N ± 2.5km 116.133 W ± 2.5km
DEPTH = 5.0km (geophysicist)
SOUTHERN NEVADA (41)
MD 2.9 (REN).

Table listing station codes (OCS, BLT, HCR, etc.) and their corresponding coordinates and data values. Includes summary statistics for JAN 09, 1989, 14h 17m.

* JAN 09, 1989 14h 17m 27.00 ± 0.62s
46.845 N ± 12.5km 153.807 E ± 8.5km
DEPTH = 33.0km (normal)
4.9mb (15 obs.)
KURIL ISLANDS (221)

Table listing station codes (KUSJ, ASAJ) and their corresponding coordinates and data values.

Table listing station codes (HOOJ, MDJ, CN2, etc.), coordinates, and data values. Includes summary statistics for JAN 09, 1989, 15h 01m.

? JAN 09, 1989 15h 01m 43.88 ± 1.66s
47.202 N ± 29.8km 153.140 E ± 21.7km
DEPTH = 33.0km (normal)
5.0mb (12 obs.)
KURIL ISLANDS (221)

Table listing station codes (KUSJ, ASAJ, HOOJ, etc.) and their corresponding coordinates and data values.

Table listing station codes (YKA, CHG, CHTO, etc.), coordinates, and data values. Includes summary statistics for JAN 09, 1989, 15h 05m.

* JAN 09, 1989 15h 05m 45.89 ± 0.80s
47.924 N ± 13.5km 152.020 E ± 13.8km
DEPTH = 33.0km (normal)
4.9mb (16 obs.)
KURIL ISLANDS (221)

Table listing station codes (KUSJ, ASAJ, HOOJ, etc.) and their corresponding coordinates and data values.

09d 15h

MAF 82.51 339 eP 18 06.30 0.1
 1.0s 8.00nm 4.7mb
 S.D. = 0.9 on 19 of 27 obs.

JAN 09, 1989 15h 14m 56.50 ± 0.39s
 46.791 N ± 8.9km 153.777 E ± 4.9km
 DEPTH = 34.7km (6 depth phases)
 5.1mb (31 obs.)

KURIL ISLANDS (221)

KUSJ 7.42 243 eP 16 40.30 -4.7X
 eS 18 00.00
 ASAJ 8.27 255 eP 16 57.30 0.3
 HOOJ 8.68 243 eP 17 00.40 -2.3X
 S 18 33.20
 MDJ 17.02 271 eP 18 52.50 -0.8X
 SNY 22.10 268 eP 19 49.00 -1.1
 BJI 27.93 270 eP 20 46.00 0.7
 HHC 30.75 274 eP 21 10.20 -0.4
 TIY 31.61 268 eP 21 18.20 0.0
 TTA 32.09 41 eP 21 22.10 -0.1
 IMA 33.51 36 eP 21 34.50 0.0
 0.9s 7.30nm 4.6mb
 WHN 34.38 256 eP 21 41.50 -0.7
 PMR 35.25 44 eP 21 49.10 -0.3
 FBA 35.85 38 ePc 21 54.40 0.0
 XAN 35.97 276 iPd 21 56.30 0.4
 LZH 38.34 262 eP 22 16.00 0.1
 1.2s 40.00nm 5.1mb
 GTA 39.41 279 P 22 25.00 0.2
 CD2 41.34 266 P 22 40.50 0.0
 INK 41.37 32 eP 22 41.00 0.7
 GYA 42.17 258 iPc 22 47.40 -0.1
 MBC 44.40 20 eP 23 06.00 1.1
 KMI 45.70 260 Pc 23 15.50 -0.6
 ALE 49.66 6 eP 23 46.00 -0.1
 0.8s 17.00nm 5.1mb
 YKA 50.62 37 P 23 54.30 0.7
 LSA 50.73 274 P 23 56.40 1.0
 CHG 52.57 257 eP 24 09.00 0.1
 CHTO 52.57 257 iP 24 08.70 -0.2
 1.0s 7.25nm 4.6mb
 PNT 54.83 53 eP 24 20.20 40km
 GUN 55.45 275 Pc 24 30.30 -0.1
 KKN 55.94 276 Pc 24 33.90 0.1
 EDM 55.96 46 iPd 24 32.70 -0.7
 PKI 55.99 275 Pc 24 34.10 -0.2
 DMN 56.17 276 Pc 24 35.00 -0.5
 GKN 56.24 276 Pc 24 35.90 0.0
 DAG 56.63 358 iPc 24 36.40 -1.4
 0.7s 15.07nm 5.1mb
 SES 58.77 48 ePc 24 52.60 -0.7
 pP 25 06.00 48kmX
 SOD 59.38 339 eP 24 56.00 -1.2
 FFC 60.41 40 iPc 25 04.40 0.0
 1.0s 29.00nm 5.4mb
 LRM 60.81 53 eP 25 07.60 0.0
 e 25 18.90 38km
 NDI 60.84 282 eP 25 07.00 -0.7
 KJF 61.56 336 iP 25 11.00 -1.1
 0.8s 17.60nm 5.2mb
 KVN 61.74 62 P 25 13.90 -0.1
 EUR 62.76 61 eP 25 20.90 0.2
 pP 25 31.80 36km
 TNP 62.89 62 P 25 21.20 -0.4
 SUF 63.16 336 iP 25 21.90 -0.8
 0.6s 5.40nm 4.8mb
 BW06 64.35 54 P 25 30.00 -1.1
 1.1s 13.02nm 4.9mb
 FRB 64.86 19 eP 25 33.00 -0.8
 NUR 65.36 335 iP 25 35.70 -1.4
 QUE 66.64 290 eP 25 45.60 -0.4
 HYB 67.45 272 eP 25 50.00 -1.0
 UPP 67.84 338 iP 25 51.10 -1.7
 NRA0 68.54 341 P 25 54.70 -2.4
 HFS 68.58 340 eP 25 56.50 -0.9
 0.5s 23.10nm 5.5mb
 NAO 68.61 342 P 25 57.00 -0.6
 0.8s 15.90nm 5.1mb
 WRA 68.70 200 Pc 26 08.50 9.9X
 0.8s 3.80nm 4.5mb
 ALO 71.43 59 eP 26 15.00 -0.4
 1.4s 8.14nm 4.6mb
 KRA 75.60 331 eP 26 40.00 0.8
 e 26 49.50 30km
 KSP 76.07 334 eP 26 41.50 -0.3

SPC 76.24 331 eP 26 43.30 0.2
 CLL 76.61 336 eP 26 44.00 -0.9
 1.3s 26.00nm 5.1mb
 VRI 76.67 325 ePd 26 46.00 0.7
 MLR 77.29 325 ePd 26 50.00 1.1
 KAS 77.31 318 eP 26 51.00 2.0
 PRU 77.35 334 eP 26 49.00 0.0
 MOX 77.60 336 eP 26 51.00 0.7
 1.3s 19.00nm 5.0mb
 ZST 78.14 332 eP 26 54.50 1.2
 KHC 78.40 335 iPc 26 55.50 0.7
 1.0s 9.00nm 4.7mb
 e 27 32.60 149kmX
 ELC 79.08 46 P 26 58.60 -0.1
 OLY 79.32 49 P 27 00.00 0.0
 ABH 79.36 339 ePc 27 00.20 0.1
 SNF 79.56 341 P 27 03.10 2.1
 KBA 80.31 334 ePc 27 05.00 -0.3
 1.0s 25.40nm 5.2mb
 i 27 13.80 28km
 PTJ 80.53 332 eP 27 04.00 -2.4
 CDF 80.79 338 eP 27 08.10 0.3
 1.2s 23.80nm 5.1mb
 VOY 81.08 333 e(P) 27 10.00 0.7
 FEL 81.09 337 ePc 27 09.41 0.0
 CEY 81.17 333 e(P) 27 10.00 0.3
 SKO 82.01 326 eP 27 14.00 -0.1
 VAY 82.13 325 eP 27 15.30 0.6
 GRR 82.66 343 eP 27 18.30 0.9
 0.8s 10.70nm 5.0mb
 LOR 82.70 340 eP 27 17.90 0.3
 0.9s 8.80nm 4.8mb
 SSF 82.97 340 eP 27 19.70 0.7
 0.9s 13.70nm 5.0mb
 DHR 83.00 326 eP 27 16.00 -3.3X
 LPF 83.04 343 eP 27 20.20 0.9
 1.0s 24.00nm 5.2mb
 AVF 83.27 340 eP 27 21.20 0.7
 1.0s 18.00nm 5.1mb
 SMF 83.29 340 eP 27 21.20 0.5
 1.0s 38.00nm 5.5mb
 BGF 83.60 340 eP 27 22.80 0.5
 1.2s 20.80nm 5.1mb
 MAF 83.98 340 eP 27 25.30 1.1
 1.1s 24.40nm 5.3mb
 TCF 84.00 341 eP 27 24.90 0.5
 1.0s 10.00nm 4.9mb
 LSF 84.19 341 eP 27 25.00 -0.3
 1.0s 17.40nm 5.2mb
 SBF 84.95 336 eP 27 29.60 0.4
 1.0s 16.00nm 5.2mb
 LRG 85.62 337 eP 27 33.30 0.9
 1.0s 21.60nm 5.3mb
 LMR 85.70 337 eP 27 33.70 0.9
 0.8s 16.10nm 5.3mb
 LPB 134.12 63 ePKP 34 16.00 3.3X
 CNCB 134.41 63 PKP 34 14.80 1.4
 S.D. = 0.8 on 88 of 94 obs.

* JAN 09, 1989 15h 17m 46.59 ± 1.89s
 4.795 S ± 13.7km 153.188 E ± 12.2km
 DEPTH = 100.2 ± 18.8 km
 4.5mb (5 obs.)

NEW IRELAND REGION (190)

PAA 2.74 123 eP 18 30.00 0.4
 PMG 7.54 232 eP 19 34.50 -1.1
 HNR 8.14 125 P 19 08.00 -35.7X
 (S) 20 11.00
 DZM 21.44 144 iPc 22 27.50 -0.8
 RMO 21.98 191 eP 22 35.00 1.4
 BRS 22.47 181 iPd 22 38.40 0.0
 MTN 23.20 248 eP 22 46.00 0.5
 WB5 23.68 229 iPc 22 51.20 1.1
 WRA 23.74 229 Pd 22 51.90 1.2
 0.4s 8.80nm 4.5mb
 ASPA 26.42 223 eP 23 13.80 -2.0
 e 26 19.00
 FORR 35.06 219 iPd 24 31.40 -0.4
 NANU 40.45 241 eP 25 17.00 0.0
 CHTO 58.33 295 eP 27 37.10 3.3
 GUN 72.45 301 P 29 04.80 0.0
 0.5s 9.00nm 4.9mb
 PKI 72.76 301 P 29 05.80 -0.8
 0.5s 2.00nm 4.2mb
 KKN 72.93 301 P 29 06.80 -0.7

0.5s 4.00nm 4.5mb
 GKN 73.53 301 P 29 10.20 -0.7
 HYB 76.86 289 eP 29 28.50 -1.3
 GBA 77.35 285 Pd 29 32.40 0.0
 0.6s 3.50nm 4.4mb
 GRF 124.95 331 ePKP 36 35.20 -1.4X
 1.0s 13.00nm
 S.D. = 1.3 on 18 of 20 obs.

JAN 09, 1989 15h 24m 33.66 ± 0.42s
 46.639 N ± 8.4km 153.746 E ± 6.1km
 DEPTH = 37.2km (6 depth phases)
 5.1mb (29 obs.)

KURIL ISLANDS (221)

KUSJ 7.33 244 P 26 15.70 -5.2X
 S 27 34.00
 ASAJ 8.21 256 P 26 33.40 0.1
 HOOJ 8.60 244 eP 26 36.10 -2.5X
 eS 28 08.40
 MDJ 17.00 272 eP 28 29.30 -0.8
 SNY 22.07 268 Pc 29 26.80 0.0
 8JI 27.91 270 eP 30 22.50 0.4
 HHC 30.74 275 eP 30 46.80 -0.7
 TIY 31.58 269 eP 30 54.50 -0.4
 TTA 32.22 41 eP 31 00.40 0.2
 IMA 33.64 36 eP 31 13.10 0.5
 XAN 35.94 266 iPd 31 32.40 -0.1
 FBA 35.98 38 eP 31 32.00 -0.4
 1.0s 10.60nm 4.7mb
 LZH 38.33 272 eP 31 53.00 0.3
 1.0s 56.00nm 5.4mb
 CD2 41.30 266 P 32 18.20 1.0
 INK 41.51 32 eP 32 19.00 0.7
 GYA 42.12 258 P 32 23.60 -0.4
 WMO 45.37 292 P 32 49.50 -0.6
 KMI 45.65 260 Pd 32 52.50 -0.1
 ALE 49.81 6 eP 33 23.50 -0.6
 CHG 52.52 257 iPc 33 45.80 0.4
 0.8s 9.33nm 4.8mb
 CHTO 52.52 257 iP 33 45.10 -0.3
 1.2s 17.36nm 4.9mb
 pP 33 57.90 46km
 PNT 54.94 53 eP 34 14.00 11.1X
 GUN 55.44 276 P 34 06.50 -0.7
 KKN 55.93 276 P 34 10.50 -0.1
 0.8s 37.00nm 5.5mb
 PKI 55.98 276 P 34 10.70 -0.4
 0.7s 13.00nm 5.1mb
 EDM 56.08 46 eP 34 10.00 -1.1
 DMN 56.17 276 P 34 12.40 0.1
 1.0s 62.00nm 5.6mb
 GKN 56.24 276 P 34 12.60 -0.1
 DAG 56.78 358 iPd 34 14.30 -1.4
 1.0s 16.00nm 5.0mb
 SES 58.88 48 eP 34 30.00 -0.9
 pP 34 42.00 42km
 FFC 60.54 40 eP 34 41.50 -0.7
 1.2s 28.00nm 5.3mb
 NDI 60.85 282 iP 34 44.30 -0.3
 SUF 63.29 336 eP 34 59.00 -1.4
 NUR 65.49 335 iP 35 13.90 -0.8
 QUE 66.68 290 eP 35 23.00 0.0
 WB5 68.48 200 eP 35 33.50 -0.6
 WRA 68.55 200 P 35 35.00 0.5
 0.7s 1.70nm 4.2mb
 HFS 68.71 340 eP 35 33.50 -1.6
 0.4s 6.10nm 5.0mb
 NAO 68.75 342 P 35 34.00 -1.3
 0.7s 9.80nm 5.0mb
 KRA 75.72 331 eP 36 17.00 0.3
 e 36 27.50 34km
 KSP 76.20 334 eP 36 12.20 -7.2X
 i 36 21.00 28km
 CLL 76.74 336 eP 36 22.00 -0.4
 eP 36 33.00 36km
 MLR 77.41 325 ePd 36 29.00 2.6
 PRU 77.48 334 eP 36 26.50 0.0
 MOX 77.73 336 eP 36 28.00 0.1
 KHC 78.53 335 iPd 36 33.00 0.6
 1.0s 10.50nm 4.8mb
 e 36 44.50 38km
 ENN 79.08 340 eP 36 36.00 0.7
 1.0s 29.00nm 5.2mb
 TOD 79.43 338 ePd 36 37.90 0.6
 ABH 79.50 339 ePd 36 39.42 1.8
 KBA 80.43 334 e(P) 36 42.00 -0.9

0.9s	22.40nm	5.1mb	
	i	36 44.90	9kmX
CDF	80.92 338 eP	36 45.30	0.0
	1.2s	17.80nm	4.9mb
FEL	81.23 337 ePd	36 47.51	0.5
SKO	82.13 326 eP	36 51.00	-0.6
GRR	82.80 343 eP	36 55.50	0.5
	1.2s	20.20nm	5.1mb
LOR	82.83 340 eP	36 55.10	-0.1
	1.0s	10.00nm	4.8mb
LBF	83.07 340 eP	36 56.80	0.3
	1.0s	8.00nm	4.8mb
OHR	83.11 326 eP	36 56.50	-0.3
SSF	83.11 340 eP	36 56.90	0.3
	0.8s	2.60nm	4.4mb
LPF	83.18 343 eP	36 57.30	0.4
	1.2s	29.70nm	5.3mb
AVF	83.40 340 eP	36 58.50	0.4
	1.3s	19.40nm	5.0mb
SMF	83.42 340 eP	36 58.50	0.3
	1.2s	35.70nm	5.3mb
MAF	84.12 340 eP	37 02.90	1.1
	1.2s	23.80nm	5.2mb
TCF	84.14 341 eP	37 02.60	0.7
	1.2s	13.00nm	4.9mb
SBF	85.08 336 eP	37 06.90	0.2
	1.2s	17.80nm	5.1mb
FRF	85.58 337 eP	37 09.60	0.5
	1.2s	20.20nm	5.2mb
LRG	85.76 337 eP	37 10.80	0.9
	1.0s	13.60nm	5.1mb
LMR	85.83 337 eP	37 11.00	0.7
	1.2s	35.70nm	5.5mb
S.D. = 0.8 on 63 of 67 obs.			

JAN 09, 1989 15h 33m 34.55±0.79s
 7.261 N ± 5.8km 123.678 E ± 8.7km
 DEPTH = 616.8 ± 11.4 km
 4.6mb (14 obs.)

MINDANAO, PHILIPPINE ISLANDS (259)

KKM	7.51 261 ePc	35 29.40	-1.0
	0.6s	139.10nm	5.1mb
TLE	15.69 145 ePd	36 51.50	2.5
CHG	26.65 298 eP	38 28.90	0.5
CHTO	26.65 298 iP	38 28.20	-0.2
	0.6s	2.53nm	4.0mb
WB5	28.95 159 iPd	38 47.20	-1.0
WRA	29.00 159 Pd	38 47.60	-1.1
	0.2s	1.40nm	4.2mb
XAN	29.93 335 iPd	38 55.90	-0.6
NANU	30.69 195 eP	39 03.00	0.1
TIY	31.99 343 P	39 13.60	-0.2
ASPA	32.32 162 iPd	39 16.80	0.1
	0.4s	22.00nm	5.1mb
	e	41 45.20	
	eS	43 47.70	
BJI	33.32 349 eP	39 24.00	-0.8
LZH	33.95 331 eP	39 31.00	0.7
	1.0s	22.00nm	4.7mb
COOL	38.00 184 eP	40 03.00	-0.4
FORR	38.13 174 iPd	40 04.30	0.0
	0.4s	26.00nm	5.1mb
BAL	38.24 190 eP	40 05.00	-0.3
KLB	39.05 188 eP	40 12.00	0.2
MUN	39.66 190 eP	40 17.00	0.2
NWAO	40.43 188 iPd	40 23.30	0.4
GUN	41.22 305 P	40 30.30	0.7
	0.4s	20.00nm	5.0mb
PKI	41.47 304 Pd	40 31.90	0.3
	0.3s	3.00nm	4.3mb
KKN	41.66 304 P	40 33.40	0.4
	0.4s	9.00nm	4.6mb
DMN	41.74 304 Pd	40 34.00	0.4
	0.3s	6.00nm	4.6mb
GKN	42.27 304 Pd	40 37.90	0.2
	0.4s	9.00nm	4.6mb
BRS	44.49 142 iPc	40 54.20	-0.6
	i	42 25.20	
	i	45 20.50	
GBA	45.85 282 Pd	41 05.40	0.1
	0.7s	8.50nm	4.4mb
WMO	48.11 325 Pc	41 22.80	0.7
DZM	51.05 126 iPc	41 43.60	-0.4
MAIO	64.97 307 eP	43 18.00	0.7
IMA	80.42 24 eP	44 45.20	0.9
FBA	82.85 25 eP	44 57.20	0.8

KJF	86.11 334 eP	45 11.00	-1.3
SUF	87.04 333 iP	45 16.10	-0.6
	0.6s	5.70nm	4.5mb
DAG	93.38 352 eP	45 44.70	-1.0
NAO	94.55 333 P	45 50.00	-1.3
	0.7s	2.60nm	4.6mb
KIC	126.79 283 PKP	51 32.10	0.3
TIC	126.99 284 PKP	51 32.50	0.3
LIC	127.10 283 PKP	51 32.80	0.4
S.D. = 0.8 on 37 of 37 obs.			

JAN 09, 1989 16h 02m 58.32±1.28s
 44.898 N ± 4.1km 6.642 E ± 12.6km
 DEPTH = 10.0km (geophysicist)

FRANCE (538)
 ML 2.2 (GEN).

RRL	0.10 77 P	03 01.41	0.1
	S	03 03.26	
BNI	0.16 9 P	03 02.00	0.0
	eSg	03 04.60	
FOUF	0.38 165 P	03 06.29	0.1
	(Sg)	03 11.51	
RSP	0.50 60 P	03 08.75	0.2
	S	03 15.85	
PZZ	0.51 140 P	03 08.70	0.0
	S	03 16.23	
DOI	0.58 132 Pd	03 09.80	-0.4
	eSg	03 18.10	
LSD	0.67 33 P	03 11.55	-0.2
	S	03 19.78	
STV	0.82 143 P	03 14.29	0.1
	S	03 25.63	
S.D. = 0.2 on 8 of 8 obs.			

& JAN 09, 1989 17h 38m 32.00s
 37.548 N 118.779 W
 DEPTH = 7.9km
 CALIFORNIA-NEVADA BORDER REGION (40)
 <REN>. MD 3.7 (REN). ML 3.2 (BRK).

PPK	0.70 100 iPc	38 45.10	-1.1
SVP	0.79 78 iP	38 46.90	-1.0
FRI	0.93 233 iPd	38 48.80	-1.1
	iS	39 00.80	
LCH	0.95 109 iP	38 49.40	-1.1
MNA	1.01 29 eP	38 50.60	-0.8
	iS	39 04.70	
MGM	1.03 96 iP	38 51.10	-0.7
MZP	1.12 82 iPc	38 52.70	-0.7
GMN	1.23 101 iPc	38 55.00	-0.3
TNP	1.35 66 eP	38 56.90	-0.3
CMB	1.36 291 iPc	38 56.60	-0.7
	iS	39 14.80	
MCA	1.50 126 eP	38 59.50	0.3
SGV	1.50 112 iP	38 59.50	0.1
KVN	1.59 19 eP	39 00.30	-0.4
BMTN	1.72 98 iP	39 02.00	-0.7
PANV	1.77 130 eP	39 03.00	-0.3
FMT	1.84 119 eP	39 04.00	-0.2
LLA	1.96 242 ePc	39 06.40	0.4
YMT5	1.97 109 iP	39 05.60	-0.5
TMBR	1.98 104 iP	39 05.60	-0.7
YMT4	1.99 110 iP	39 06.00	-0.4
YMT6	2.02 109 iP	39 06.40	-0.4
YMT3	2.04 111 iP	39 06.60	-0.5
PRI	2.06 228 ePd	39 08.50	1.0
CDH1	2.08 109 ePc	39 07.30	-0.5
BGB	2.10 103 eP	39 07.60	-0.5
BLT	2.11 91 eP	39 07.40	-0.9
PHAM	2.15 218 eP	39 08.60	0.0
SDH	2.15 114 eP	39 08.50	-0.2
LSM	2.16 111 iP	39 08.50	-0.4
ARN	2.20 266 eP	39 09.60	0.2
GLR	2.23 98 eP	39 08.80	-1.1
SAO	2.27 251 iPd	39 11.00	0.6
MHC	2.29 266 eP	39 11.90	1.1
	iS	39 41.25	
GMR	2.40 94 e(P)	39 11.70	-0.7
PRS	2.40 240 ePc	39 12.60	0.3
JON	2.41 117 eP	39 11.90	-0.6
TPU	2.49 88 eP	39 13.20	-0.4
SPRG	2.52 109 eP	39 13.30	-0.8
WRN	2.57 79 e(P)	39 14.10	-0.6
BCH	2.58 204 eP	39 15.20	0.3
ABL	2.72 188 eP	39 17.80	0.9

EUR	2.93 48 iP	39 35.80	15.8
SRG	2.96 82 eP	39 19.60	-0.8
PRN	2.97 92 iP	39 20.00	-0.5
NPN	3.05 87 eP	39 20.40	-1.2
DLM	3.21 88 eP	39 22.80	-1.1
46 obs. associated			

* JAN 09, 1989 18h 00m 44.05±1.33s
 51.324 N ± 24.1km 174.798 W ± 10.8km
 DEPTH = 33.0km (normal)
 4.9mb (7 obs.)
 ANDREANOF ISLANDS, ALEUTIAN IS. (7)
 ML 4.0 (PMR).

ADK	1.30 296 iPd	01 06.60	0.6
KDC	14.42 55 eP	04 06.60	-0.8
SVW	14.43 40 eP	04 09.80	2.2
TTA	15.39 34 eP	04 30.50	10.3X
PMS	17.06 45 eP	04 41.20	-0.1
IMA	18.25 28 eP	04 57.80	1.6
FBA	19.49 35 eP	05 10.10	-0.7
INK	26.08 34 eP	06 15.00	-0.9
MBC	32.73 21 eP	07 15.00	-0.2
EDM	36.63 62 iP	07 29.50	-19.4X
KVN	40.82 85 eP	08 38.50	14.5X
BW06	43.92 75 eP	08 50.30	0.9
NAO	68.11 357 P	11 39.80	-2.4
	0.5s	1.50nm	4.3mb
HFS	68.69 355 ePKP	11 43.50	-2.2
	0.4s	4.10nm	4.9mb
GUN	74.18 295 P	12 20.10	0.6
	0.6s	32.00nm	5.5mb
KKN	74.61 295 P	12 22.30	0.4
	0.6s	9.00nm	4.9mb
PKI	74.71 295 P	12 22.70	0.2
	0.5s	5.00nm	4.8mb
GKN	74.82 296 P	12 23.20	0.3
	0.6s	18.00nm	5.2mb
DMN	74.85 295 P	12 23.80	0.5
	0.6s	10.00nm	5.0mb
SLR	148.97 317 ePKP	20 30.10	4.2X
S.D. = 1.3 on 16 of 20 obs.			

? JAN 09, 1989 18h 02m 17.18±3.63s
 6.271 N ± 32.2km 82.774 W ± 8.6km
 DEPTH = 10.0km (geophysicist)

SOUTH OF PANAMA (83)

PBC	2.15 353 eP	02 53.20	-0.4
	S	03 27.90	
DVD	2.17 8 iPd	02 53.30	-0.6
TIG	2.80 349 eP	03 03.40	0.5
	S	04 33.80	
OPS	3.39 337 eP	03 11.10	-0.1
	S	04 48.10	
CDM	3.41 343 eP	03 12.20	0.3
	S	03 50.30	
IRZ2	3.84 343 eP	03 18.60	0.6
	S	04 59.90	
PTCR	3.86 335 eP	03 17.70	-0.4
	S	05 00.30	
HDC2	3.96 340 eP	03 19.70	0.2
	S	05 02.40	
EPA	4.11 334 eP	03 21.30	-0.1
	S	05 05.80	
CAO	4.11 326 eP	03 21.50	0.0
	S	05 06.00	
UPA	4.19 50 ePd	03 22.70	0.1
	0.3s	358.44nm	
	e	04 09.80	
JTS	4.54 332 eP	03 27.50	0.0
	S	05 16.50	
JUD	4.74 325 eP	03 30.30	-0.2
	S	05 21.40	
ITB1	41.34 139 e(P)	10 25.60	20.7X
ITB	41.56 139 eP	10 22.40	15.6X
S.D. = 0.4 on 13 of 15 obs.			

JAN 09, 1989 18h 17m 40.85±0.89s
 5.315 S ± 7.0km 151.233 E ± 5.8km
 DEPTH = 119.4 ± 7.6 km
 5.1mb (7 obs.)

NEW BRITAIN REGION (192)

PAA	4.35 103 iPc	18 45.00	-1.1
	eS	19 17.00	
LAT	4.41 252 iPc	18 47.20	0.3

09d 18h

BLLO 4.95 248 iPc 18 53.10 -1.2
 PMG 5.74 225 iPd 19 04.20 -0.8
 MNDI 7.58 263 e(P) 19 32.00 1.6
 HNR 9.56 116 P 20 03.00 6.1X
 S 21 43.00
 TZZ 9.97 270 eP 20 04.00 1.6
 CTA 15.46 198 iPc 21 14.80 1.1
 0.7s 35.62nm 4.7mb
 iS 24 10.00
 i 24 38.50
 TLE 18.40 268 ePc 21 32.40 -17.1X
 QIS 18.90 216 iPd 21 54.50 -0.4
 RMO 21.19 186 iPc 22 19.20 0.9
 MTN 21.20 248 eP 22 18.00 -0.5
 e 22 41.00
 e 26 08.00
 WB5 21.88 227 iPd 22 25.80 0.6
 iS 26 22.00
 WRA 21.94 227 Pd 22 24.30 -1.5
 0.4s 36.20nm 5.1mb
 BRS 22.00 176 iPc 22 26.90 0.5
 i 22 37.00
 DZM 22.23 140 iPc 22 28.20 -0.5
 ASPA 24.73 221 iPd 22 53.30 0.6
 0.9s 155.00nm 5.5mb
 eS 27 05.60
 COO 25.14 179 eP 22 57.00 0.6
 STK 27.93 198 eP 23 21.00 -0.8
 BWA 29.08 185 eP 23 33.70 1.5
 CAN 29.93 184 eP 23 39.70 0.0
 WARB 31.35 226 iPd 23 41.20 -11.1X
 FORR 33.44 218 iPd 24 09.50 -0.8
 0.4s 32.00nm 5.5mb
 TAU 37.60 185 iPc 24 46.70 1.3
 COOL 38.03 224 eP 24 48.50 -0.7
 0.3s 5.00nm 4.8mb
 NANU 38.50 240 iPc 24 52.90 -0.4
 0.5s 11.00nm 4.9mb
 KLB 40.82 226 eP 25 11.00 -1.2
 BAL 41.07 228 eP 25 13.50 -0.8
 MSZ 41.84 162 P 25 21.00 0.7
 MUN 42.14 227 eP 25 22.00 -1.1
 CHTO 56.81 296 eP 27 15.90 0.6
 1.0s 0.75nm 3.6mb X
 GUN 71.06 302 P 28 48.50 -0.1
 KKN 71.53 301 P 28 50.90 -0.4
 DMN 71.63 301 P 28 51.80 -0.1
 GKN 72.14 302 P 28 54.40 -0.4
 SPA 84.72 180 iPc 30 02.80 0.3
 1.0s 29.00nm 5.1mb
 YKA 96.61 28 P 30 59.00 0.9
 ZOBO 135.55 120 ePKP 36 37.00 -13.3X
 KUK 151.73 273 ePKP 37 23.50 6.3X
 BAO 151.79 138 ePKP 37 07.60 -9.8X
 S.D. = 0.9 on 34 of 40 obs.

* JAN 09, 1989 19h 00m 17.95 ± 0.81s
 40.253 N ± 13.2km 62.969 E ± 11.6km
 DEPTH = 33.0km (normol)
 4.0mb (2 obs.)
 UZBEK SSR (339)

MAIO 4.80 216 ePn 01 30.00 0.1
 eSn 02 24.00
 GKN 21.64 118 P 05 07.20 -0.3
 KKN 22.21 117 P 05 14.30 1.0
 0.6s 4.00nm 4.0mb
 GUN 22.55 116 P 05 15.80 -1.0
 NAO 37.70 321 P 07 31.00 -0.7
 0.8s 2.10nm 4.1mb
 YKA 77.58 359 P 12 12.60 0.9
 S.D. = 1.0 on 6 of 6 obs.

* JAN 09, 1989 19h 23m 47.12 ± 1.65s
 37.251 S ± 16.5km 177.801 E ± 11.4km
 DEPTH = 61.3 ± 16.4 km
 4.6mb (4 obs.)
 OFF E. COAST OF N. ISLAND, N.Z. (160)

HBZ 0.53 131 P 23 59.80 0.3
 S 24 09.00
 GNZ 1.40 173 P 24 11.70 0.9
 RGZ 2.45 219 P 24 26.00 0.6
 S 24 54.00
 CNZ 2.63 222 P 24 29.30 1.2
 WEL 4.67 209 P 24 54.00 -2.6
 S 25 45.00

COB 5.49 224 P 25 04.60 -3.6X
 S 26 06.00
 RTY 5.95 219 P 25 15.00 0.4
 S 26 18.00
 CIZ 7.95 149 P 25 41.00 -1.3
 S 27 04.00
 CTA 32.33 293 iPc 30 13.50 0.9
 0.7s 4.45nm 4.4mb
 ASPA 39.85 277 iPc 31 15.60 -0.7
 0.6s 13.00nm 5.0mb
 FORR 41.29 264 eP 31 27.30 -0.7
 WRA 41.47 282 Pc 31 29.20 -0.4
 0.7s 5.40nm 4.4mb
 WB5 41.49 282 iPd 31 29.80 0.0
 SPA 52.94 180 e(P) 33 00.50 1.4
 1.0s 10.50nm 4.8mb
 MBC 119.87 14 ePKP 42 28.00 -2.7X
 KJF 147.63 336 ePKP 43 19.00 -3.2X
 LIC 149.01 175 PKP 43 28.48 2.5X
 SUF 149.15 335 iPKP 43 26.90 2.2X
 0.6s 9.10nm
 KIC 149.17 175 PKP 43 29.06 2.9X
 TIC 149.43 174 PKP 43 29.02 2.4X
 NUR 151.17 332 iPKP 43 32.00 4.3X
 S.D. = 1.3 on 13 of 21 obs.

? JAN 09, 1989 20h 01m 35.17 ± 1.00s
 41.008 N ± 16.8km 43.182 E ± 24.3km
 DEPTH = 10.0km (geophysicist)
 4.1mb (3 obs.)
 TURKEY-USSR BORDER REGION (367)

TAB 3.81 139 eP 02 36.00 0.7
 MSL 4.62 180 ePd 03 02.00 15.4X
 eS 04 10.00
 eLR 04 57.50
 SLY 5.70 161 iPnd 03 40.00 38.1X
 eSn 04 40.00
 i 06 03.00
 KER 7.34 154 eP 04 20.00 55.0X
 VRI 12.91 298 eP 05 09.00 27.7X
 MAIO 13.58 105 eP 04 52.00 1.6X
 KSP 21.03 307 eP 06 22.50 1.3
 KHC 22.32 301 P 06 41.00 6.7X
 CLL 23.15 307 eP 06 49.00 6.7X
 SUF 24.00 341 iP 06 49.40 -1.1
 0.6s 3.10nm 4.1mb
 KJF 24.92 344 eP 06 58.00 -1.3
 HFS 26.41 326 eP 07 15.00 1.6
 0.6s 1.50nm 3.9mb
 BNG 42.60 218 ePd 09 31.90 -1.2
 1.0s 5.00nm 4.2mb
 S.D. = 1.7 on 6 of 13 obs.

* JAN 09, 1989 20h 05m 42.91 ± 2.14s
 20.348 S ± 14.8km 178.776 W ± 9.1km
 DEPTH = 526.1 ± 25.7 km
 4.8mb (10 obs.)
 FIJI ISLANDS REGION (181)

DZM 13.89 260 iPc 08 46.60 4.9X
 KRP 18.20 195 P 09 24.00 0.2
 0.6s 34.00nm 5.2mb
 CTA 32.78 264 iPc 11 36.00 2.2
 1.0s 20.00nm 4.7mb
 ASPA 43.85 257 eP 13 03.40 -0.6
 1.0s 41.00nm 4.9mb
 e 14 36.50
 eS 18 51.30
 WB5 43.88 262 iPd 13 04.60 0.4
 WRA 43.90 262 Pd 13 02.20 -2.2
 0.7s 7.50nm 4.3mb
 FORR 48.65 246 eP 13 39.70 -0.8
 NANU 60.73 255 eP 15 04.50 -1.0
 PRS 78.21 44 iPd 16 49.50 0.4
 GCC 78.22 43 eP 16 49.50 0.4
 SAO 78.42 44 e(P) 16 50.00 -0.2
 PRI 78.56 45 iPd 16 51.70 0.6
 MHC 78.63 43 ePd 16 51.80 0.3
 ARN 78.71 43 P 16 52.10 0.4
 PLM 79.59 49 P 16 56.40 -0.2
 FRI 79.68 44 eP 16 56.60 -0.1
 CMB 79.85 43 ePd 16 57.70 0.0
 WDC 80.02 40 iPd 16 58.90 0.4
 ORV 80.04 41 ePd 16 58.70 0.1
 KVN 81.90 43 P 17 08.40 0.0
 TNP 81.93 44 P 17 08.60 0.0

EUR 83.51 44 eP 17 16.50 0.0
 GMW 84.19 34 P 17 20.00 0.6
 RMW 84.65 35 P 17 21.70 0.0
 MCW 84.87 33 P 17 23.30 0.6
 PMR 85.04 14 P 17 22.70 -0.5
 0.5s 7.23nm 4.6mb
 DPW 86.86 36 P 17 31.70 -0.6
 ALO 87.88 52 eP 17 36.00 -1.6
 1.0s 11.00nm 4.6mb
 IMA 88.22 10 P 17 37.70 -0.7
 0.8s 14.60nm 4.9mb
 FBA 88.25 13 P 17 37.30 -1.1
 0.8s 32.76nm 5.2mb
 KMI 88.63 297 Pd 17 42.50 1.2
 BDT 88.88 289 eP 17 24.00 -18.2X
 CHG 89.51 290 iPd 17 46.10 1.0
 0.6s 11.00nm 4.9mb
 CHTO 89.51 290 iPd 17 46.10 1.0
 0.8s 11.35nm 4.8mb
 SES 92.18 36 eP 17 56.00 -0.8
 MDZ 94.72 127 eP 18 23.00 13.9X
 RTCV 95.43 127 iPd 18 13.00 0.8
 RTRS 95.51 125 iPc 18 23.20 10.7X
 RTLL 95.73 126 iPd 18 09.80 -3.8X
 CFA 95.77 127 iPc 18 10.20 -3.6X
 YKA 96.68 25 P 18 16.60 -0.3
 FFC 99.05 35 eP 18 48.00 20.2X
 0.8s 12.00nm
 MAIO 127.04 301 ePKP 23 47.00 -1.8
 KJF 132.71 345 ePKP 23 55.00 -3.5X
 0.7s 9.30nm
 SUF 134.34 344 iPKP 23 58.80 -2.8X
 0.6s 4.70nm
 NUR 136.59 343 iPKP 24 02.70 -3.3X
 NAO 139.00 353 PKP 23 59.80 -10.6X
 0.8s 4.40nm
 HFS 139.27 350 ePKP 23 59.20 -11.7X
 0.4s 3.50nm
 EKA 144.91 4 PKP 24 19.00 -1.8X
 1.4s 45.00nm
 DMU 145.93 9 iPKPd 24 22.40 -0.2
 0.6s 46.00nm
 DCN 146.42 9 iPKPd 24 23.70 0.4
 0.6s 60.00nm
 DLE 146.58 8 iPKPd 24 24.00 0.4
 KRA 146.84 338 ePKPd 24 25.00 0.9
 e 24 29.40
 VRI 147.04 326 ePKPd 24 26.00 1.4
 WIT 147.32 354 ePKP 24 27.50 2.7X
 KSP 147.33 342 iPKPd 24 27.20 2.3X
 1.0s 43.00nm
 ic 24 32.00
 e 26 47.50
 SPC 147.45 337 ePKP 24 27.50 2.1X
 MLR 147.70 327 ePKPc 24 27.00 1.1
 CLL 147.74 346 iPKP 24 28.00 2.4X
 1.0s 51.00nm
 i 24 32.60
 pPKP 26 48.00
 WTS 148.11 353 iPKPd 24 28.70 2.6X
 0.9s 63.00nm
 PRU 148.59 343 iPKPd 24 29.90 3.0X
 e 24 36.50
 MOX 148.67 347 iPKP 24 30.00 3.0X
 1.2s 28.00nm
 e 24 36.00
 SRO 149.31 337 ePKP 24 31.20 3.1X
 e 24 39.30
 ZST 149.40 339 ePKP 24 31.70 3.5X
 ENN 149.42 354 ePKP 24 31.00 2.9X
 0.8s 20.00nm
 e 24 39.50
 KHC 149.62 344 iPKPd 24 27.50 -1.1
 i 24 33.50
 i 24 41.30
 GRF 149.65 347 ePKP 24 27.40 -1.2
 e 24 32.60
 e 24 41.90
 BZS 149.72 331 ePKP 24 32.50 3.8X
 SNF 149.80 356 PKP 24 32.80 4.1X
 ec 24 41.00
 ABH 150.10 352 iPKPd 24 33.40 4.1X
 DIM 150.18 322 iPKP 24 34.00 4.4X
 TOD 150.19 350 iPKPd 24 33.39 4.0X
 DOU 150.20 356 iPKPc 24 34.00 4.7X
 RUP 150.34 352 iPKPd 24 34.20 4.5X
 WLF 150.48 353 PKPc 24 34.80 5.1X

09d 23h

DMN 74.83 295 P 37 44.20 0.2
0.9s 17.00nm 5.0mb
MAIO 80.61 318 eP 38 16.00 0.5
S.D. = 1.1 on 19 of 22 obs.

JAN 10, 1989 00h 34m 33.59± 1.19s
34.259 N ± 8.9km 120.943 W ± 7.2km
DEPTH = 5.0km (geophysicist)
SOUTHERN CALIFORNIA (43)
ML 3.0 (PAS), 3.0 (BRK).

BLP 0.54 56 iPd 34 44.50 0.1
SYP 0.84 71 eP 34 50.90 0.5
BCH 1.16 37 eP 34 56.00 0.1
ABL 1.54 67 eP 35 01.80 -0.1
PHAM 1.64 16 eP 35 02.70 -0.4
PRI 1.89 7 ePc 35 06.90 0.0
e 35 29.90
i 35 34.30

PRS 2.10 351 ePd 35 10.30 0.5
LLA 2.35 360 ePc 35 13.70 0.2
SAO 2.53 351 eP 35 16.20 0.1
FRI 2.91 20 eP 35 20.50 -0.8
ARN 3.12 351 eP 35 24.30 -0.1
MHC 3.13 350 e(P) 35 24.70 0.1
PEC 3.16 96 eP 35 25.00 0.0
PLM 3.52 104 eP 35 30.00 -0.2
KVN 5.30 25 eP 36 02.00 6.5X
S.D. = 0.4 on 14 of 15 obs.

* JAN 10, 1989 01h 07m 33.17± 1.80s
67.302 N ± 8.9km 160.657 W ± 20.9km
DEPTH = 33.0km (normal)
ALASKA (676)
ML 3.4 (PMR).

IMA 3.04 111 iPc 08 20.50 0.3
BRW 4.25 17 iPd 08 37.10 -0.1
TTA 4.81 154 eP 08 45.60 0.5
FBA 5.76 109 eP 08 58.60 0.1
SVW 6.59 158 eP 09 10.50 0.2
PMR 7.58 134 eP 09 22.40 -1.7
TOA 8.09 123 eP 09 31.80 0.6
S.D. = 0.9 on 7 of 7 obs.

? JAN 10, 1989 04h 21m 44.85± 3.23s
33.818 S ± 17.8km 72.713 W ± 25.3km
DEPTH = 33.0km (normal)
OFF COAST OF CENTRAL CHILE (134)

LCCH 1.01 71 iPc 22 02.30 -0.5
iS 22 15.20
LNV 1.09 98 iPc 22 04.00 0.2
TACH 1.49 84 iP 22 09.00 -0.6
iS 22 28.50
ROCH 1.66 60 iP 22 11.70 -0.5
CHCH 1.72 94 iPc 22 13.20 0.3
SAN 1.75 79 eP 22 13.80 0.4
i 22 24.50
iS 22 38.00

PEL 1.82 69 iPc 22 14.90 0.4
PCH 1.84 84 iPc 22 14.50 -0.3
FCH 2.08 77 iP 22 18.50 0.1
iS 22 48.00
MDZ 3.37 75 eP 22 40.60 4.2X
iS 23 25.70
CFA 4.37 61 ePd 22 51.30 0.6
TCA 7.29 72 eP 23 28.20 -3.6X
LPB 17.71 15 eP 26 05.00 14.0X
ITR 40.20 60 e(P) 29 20.00 0.0
S.D. = 0.5 on 11 of 14 obs.

* JAN 10, 1989 05h 46m 03.56± 1.79s
3.458 S ± 17.2km 130.485 E ± 17.5km
DEPTH = 87.7 ± 16.9 km
4.8mb (8 obs.)
CERAM (272)

AAI 2.30 264 eP 46 41.00 0.7
eS 46 47.00
TLE 3.13 134 iPc 46 51.90 0.2
MTN 9.35 176 eP 48 16.00 -1.5
eS 50 00.00
WB5 16.76 167 eP 49 52.70 -1.6
eS 52 53.80
WRA 16.81 167 Pd 49 58.30 3.3X
0.3s 2.70nm 3.9mb

QIS 19.18 153 eP 50 24.00 0.9
ASPA 20.36 171 eP 50 37.80 2.4
0.8s 74.00nm 5.1mb
eS 54 23.90

CTA 22.58 138 eP 51 05.00 7.5X
CHTO 38.13 307 eP 53 17.00 1.0
GUN 53.06 309 P 55 14.40 -0.1
0.6s 9.00nm 5.0mb

PKI 53.26 308 P 55 15.00 -1.0
0.5s 3.00nm 4.6mb
KKN 53.46 309 P 55 17.20 -0.2
0.5s 3.00nm 4.6mb
DMN 53.52 308 P 55 17.30 -0.5
0.5s 6.00nm 4.9mb
GKN 54.07 308 P 55 21.50 -0.2
0.6s 11.00nm 5.1mb
GBA 55.29 289 Pd 55 34.80 4.2X
0.8s 1.20nm 4.0mb
S.D. = 1.3 on 12 of 15 obs.

* JAN 10, 1989 05h 52m 30.24± 2.49s
13.983 S ± 23.8km 177.406 E ± 14.5km
DEPTH = 102.6 ± 23.7 km
4.7mb (2 obs.)

FIJI ISLANDS REGION (181)

AFI 10.50 91 e(P) 55 00.00 0.6
DZM 13.16 231 iPc 55 33.10 -1.4
BRS 26.56 236 iPc 58 01.50 1.0
CTA 30.36 254 iPd 58 35.90 1.2
1.1s 13.29nm 4.6mb
TAU 38.74 216 eP 59 46.00 0.0
SPA 76.11 180 iPd 04 07.90 -0.4
1.0s 14.00nm 4.7mb
ISA 78.13 48 eP 04 20.00 0.2
SBB 78.17 50 eP 04 19.00 -1.1
RVR 78.20 50 eP 04 19.00 -1.2
PLM 78.31 51 eP 04 22.00 1.0
CLC 78.84 49 eP 04 24.00 0.3
TPC 79.25 51 eP 04 25.00 -0.9
GLA 79.74 52 eP 04 30.00 1.4
EUR 81.60 46 eP 04 38.80 0.3
SES 89.31 37 eP 05 15.00 -1.1
S.D. = 1.1 on 15 of 15 obs.

JAN 10, 1989 05h 55m 01.45± 0.32s
3.162 S ± 3.7km 130.556 E ± 4.1km
DEPTH = 46.6 ± 2.8 km
5.9mb (54 obs.) 6.5msz (27 obs.)

CERAM (272)
Ms 6.7 (BRK), 6.6 (PAS).
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=305 Dip=83 Slip= 90
NP2: 125 7 90
Principal Axes:
T P1g=52 Azm=215
P 38 35

Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting. The preferred fault plane is NP2.
RADIATED ENERGY
No. of sto: 7 Focal mech. C
Energy 1.6±0.4*10**14 Nm
MOMENT TENSOR SOLUTION
Dep 30 No. of sto: 13
Moment Tensor; Scale 10**18 Nm
Mrr= 2.11 Mtt=-2.88
Mff= 0.77 Mrt=-6.51
Mrf= 6.51 Mtf= 1.04

Principal axes:
T Val= 9.59 P1g=50 Azm=236
N 0.06 11 133
P -9.65 38 34
Best Double Couple: Mo=9.6*10**18
NP1:Strike= 75 Dip=13 Slip= 32
NP2: 314 83 101
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 15S, 42C M.W.: 13S, 28C
Centroid Location:
Origin Time 05:55: 4.1 0.2
Lat 2.97S 0.02 Lon 130.27E 0.02
Dep 28.7 0.9 Half-duration 7.8
Moment Tensor; Scale 10**18 Nm
Mrr= 5.24 0.08 Mtt=-3.20 0.07

Mff=-2.04 0.09 Mrt=-8.02 0.34
Mrf= 6.50 0.32 Mtf= 2.78 0.08
Principal Axes:
T Val= 11.52 P1g=59 Azm=219
N 0.22 0 309
P -11.74 31 39
Best Double Couple: Mo=1.2*10**19
NP1:Strike=129 Dip=14 Slip= 90
NP2: 309 76 90

AAI 2.41 257 ePd 55 39.20 -0.1
e(S) 56 02.50
TLE 3.29 138 ePc 55 50.90 -0.9
MTN 9.64 177 iPc 57 15.80 -4.8X
KUG 9.81 225 ePc 57 25.50 2.6X
JAY 10.16 87 ePd 57 23.50 -4.2X
1.2s 348.80nm 6.4mb
MKS 11.24 259 iPd 57 45.00 2.6X
DAV 11.33 334 eP- 57 42.00 -1.6
KNA 12.63 188 eP 57 54.00 -7.0X
eS 00 10.00
MNDI 13.39 103 e(P) 58 07.00 -4.3X
KHKI 15.74 250 ePc 58 40.90 -0.8
eS 01 59.50
e 21 29.00

LAT 16.74 103 eP 58 57.00 2.6X
KKM 16.99 303 ePd 58 58.50 0.9
1.2s 306.50nm 5.3mb
e 59 25.00

WB5 17.03 168 eP 58 50.70 -7.3X
WRA 17.08 168 Pd 58 49.20 -9.5X
0.8s 13.00nm 4.1mb X
PMG 17.62 111 iPd- 59 04.00 -1.3
TRT 18.40 255 ePc 59 12.60 -2.3
iS 59 56.20

QIS 19.41 154 iPd 59 23.40 -3.4X
eS 02 50.00
ASPA 20.64 171 iPc 59 37.20 -2.6
0.9s 3220.00nm 6.7mb
Z 19s 153.32um 6.4msz
eS 03 21.50
LR 11 10.90

RAB 21.59 93 iPd- 59 48.00 -1.4
0.8s 776.12nm 6.2mb
iS 03 52.80

BAG 21.80 333 ePd- 59 51.00 -0.7
1.9s 1168.42nm 6.0mb
e 02 42.00
eS 03 50.00

GUA 21.87 40 eP 59 51.50 -0.7
1.2s 2075.00nm 6.4mb
Z 20s 121.28um 6.3msz
GUMD 21.88 40 eP 59 52.00 -0.2
1.4s 2430.77nm 6.4mb

PJG 21.88 40 eP 59 51.50 -0.7
CTA 22.75 139 iPc+ 00 00.20 -0.7
0.9s 291.60nm 5.7mb
iS 04 08.00
TPI 22.88 270 ePc 00 04.00 1.9
e 11 00.20

WARB 23.20 189 iPc 59 52.70 -12.5X
0.4s 3.00nm
PIP 23.49 336 ePc 00 07.00 -1.0
0.9s 462.00nm 6.0mb

NANU 24.17 216 iPd 00 12.30 -2.3
0.4s 90.00nm 5.7mb
FORR 27.64 185 eP 00 44.00 -2.8
0.5s 281.00nm 6.2mb

KGM 27.71 280 ePd 00 49.00 1.4
1.0s 720.60nm 6.3mb
KSI 27.92 268 ePc 00 50.00 0.5
0.9s 12.00nm 4.5mb X

COOL 28.97 197 eP 00 55.70 -3.2X
RMQ 29.02 145 eP 00 57.00 -2.4
e 01 05.00
KLM 29.56 282 eP 01 06.30 2.0
HKC 29.95 328 P 01 08.10 0.4
S 06 02.00

QIZ 30.03 318 eP 01 07.00 -1.4
N 14s 64.50um
E 15s 35.50um
pP 01 16.00 31kmX
MCO 30.13 327 eP 01 11.90 2.6
QZH 30.26 338 eP 01 06.00 -4.3X

Z 24s 40.50um 6.0msz X
N 14s 38.50um
sP 01 19.00

10d 06h

			iSKS 18 21.50			eSP 22 42.00			e	12 04.00		
			iSKKS 18 35.50			eSS 28 32.00			ePKP	13 32.00	1.7	
			iS 19 14.00			eLQ 38 25.00			ePP	14 05.80		
QASM	88.70	296	ePd 07 54.00	2.2		eLR 43 06.00			ePdiff09	40 00.00	10.3X	
FBA	89.30	25 P	07 54.50	0.7	KRA	105.58	321	ePdiff09	14.70	6.8X		
	1.3s	61.32nm						e	09 18.40			
MSL	89.77	306	ePd 07 57.00	0.4	SPC	105.59	320	e(Pdiff09	12.70	4.5X		
			ePP 11 44.00					e	12 40.90			
			eSKS 18 26.00		MIN	105.61	49	ePKP	13 32.20	10.4X		
			eSKKS 18 44.00		CER	105.85	234	ePKP	13 26.50	4.3X		
			eS 19 05.00		SLL	105.90	333	ePdiff09	07.40	-1.7		
			e 19 45.00			0.5s	4.00nm			5.7mb		
NAI	93.68	269	iPd 08 19.00	3.7X	MHC	106.04	52	ePdiff09	17.00	6.5X		
	1.1s	63.29nm				Z 20s	17.00um			6.6Msz		
SIT	94.88	33	e(P) 08 27.50	7.9X		N 20s	1.30um					
	Z 22s	16.00um				E 20s	17.00um					
INK	95.12	22	eP 08 20.00	-0.5			ec	12 26.00				
	1.1s	7.00nm					ePPd	13 36.00				
KVT	95.46	311	eP 08 24.40	1.6			ec	16 13.00				
BHL	95.82	304 P	08 28.00	3.4X			ec	16 49.00				
			S 19 35.00				iSKS	19 57.00				
MBH	96.48	299	eP 08 30.00	2.5			e	20 29.00				
KAS	97.18	311	eP 08 36.00	5.5X			iSKKS	20 41.00				
KEV	97.63	340	eP 08 33.00	1.1			ed	21 15.00				
	Z 24s	40.10um					e(S)	21 36.00				
			eSKS 19 08.00				iPS	22 51.00				
			eS 19 44.00				i	23 36.00				
			ePS 21 24.00				iSS	28 45.00				
			eSS 26 28.00				i	29 27.00				
			LR 57 30.00				eSSS	32 40.00				
MBC	97.77	13	eP 08 31.00	-1.5			eLO	39 51.00				
	0.9s	42.00nm					e	40 59.00				
BBTK	98.00	310	eP 08 38.00	3.6X	LLA	106.71	53	ePdiff09	21.50	8.2X		
PTZ	98.15	255	iPd 08 36.00	0.6	NAO	106.88	334	Pdiff 09	11.60	-1.8		
			i 12 35.50			1.3s	22.70nm			6.1mb		
SOD	98.25	338	iP 08 35.40	0.7	OHR	106.91	312	ePdiff09	14.00	-0.2X		
KBS	98.41	350	eP 08 40.00	4.7X			i	12 19.80				
KJF	98.42	334	eP 08 34.00	-1.5	CMB	106.92	51	ePdiff09	22.50	8.2X		
	0.8s	19.10nm					ePP	13 42.20				
			i 08 39.00				ePKKp	25 11.80				
			eS 19 56.00		KSP	107.61	323	ePdiff09	21.50	4.6X		
SUF	99.39	333	eP 08 40.00	0.0			e	12 35.50				
	0.8s	11.00nm					ePdiff09	27.20		9.9X		
HLW	99.56	300	e(P) 08 42.00	0.5	FRI	107.62	52	ePdiff09	27.20	9.9X		
			eS 19 22.00		SYP	107.80	55	ePKP	13 42.00	16.0X		
SLR	99.66	243	eP+ 08 42.30	0.1			e	13 56.00				
	0.9s	21.01nm			EDM	107.93	35	ePKP	13 26.50	0.9		
SEK	99.85	241	eP 08 45.50	2.4	VKA	108.34	320	iPKPc	13 37.50	11.0X		
	1.0s	20.00nm				7.5s	1399.00nm					
BUL	100.10	249	iPdiff08	45.80	Z 18s		7.20um			6.3Msz		
PRY	100.20	242	iPdiff08	45.60			i	14 05.30				
	0.8s	15.63nm					ePP	14 18.00				
NUR	100.55	331	ePdiff08	48.00			e	23 26.00				
			eS 19 20.00				LR	11 52.00				
ISK	100.74	311	ePdiff08	55.00	ISA	108.83	53	ePKP	13 28.00	0.1		
LSZ	101.07	254	iPdiff08	50.00			e	14 05.00				
			i 12 01.50		PRU	108.94	322	ePdiff09	31.90	9.1X		
PPE	101.23	316	ePdiff08	51.00	Z 17s		8.60um			6.4MszX		
LWI	101.61	267	ePdiff08	52.00	N 17s		7.00um					
VRI	101.89	316	ePdiff08	53.00	E 20s		6.20um					
MLR	102.48	316	ePdiff08	56.00			e	12 47.00				
KMZ	103.55	255	iPdiff09	02.00	PTJ	109.24	318	e(PKP)	13 29.30	1.0		
			i 13 13.00		MWC	109.41	55	ePKP	13 36.00	6.8X		
YKA	104.08	26	Pdiff 09	04.80			e	14 01.00				
UPP	104.10	331	ePdiff09	05.00	CLL	109.42	324	ePdiff09	26.00	1.0		
			i 12 28.10			Z 19s	13.50um			6.5Msz		
WAR	104.39	323	e(Pdiff09	20.00			e	09 34.00				
	Z 18s	14.00um					eS	21 32.00				
			e 09 44.00		CLC	109.51	53	ePKP	13 33.00	3.9X		
			e 14 05.00		KMR	109.80	320	iPKP-	13 32.60	3.4X		
			e 16 24.00				ePP	14 05.00				
			e 19 50.00		KHC	109.81	322	ePdiff09	35.20	8.4X		
			e 20 52.00				e	13 34.20				
DAG	104.54	353	ePdiff09	00.00	VBY	109.82	317	ePdiff09	35.50	8.6X		
WDC	104.87	49	ePdiff09	13.40			e	12 15.00				
			ePP 13 24.90		V8Y	109.82	317	iPKP	13 32.20	2.9X		
BZS	105.46	316	ePdiff09	09.50	RVR	110.01	55	ePKP	13 34.00	3.9X		
BRK	105.48	52	ePdiff09	10.00			e	14 04.00				
			ePP 13 30.00		EUR	110.03	49	iPKP	13 33.50	3.2X		
			eSP 22 45.00		LJU	110.15	318	e(Pdiff09	40.50	12.1X		
			eLR 43 29.00		LJU	110.15	318	ePKP	13 30.50	0.6		
BKS	105.50	52	ePdiff09	16.00			e	13 35.20				
	Z 20s	23.00um			GSC	110.24	54	ePKP	13 36.00	5.4X		
	N 20s	21.00um					e	14 09.00				
	E 20s	2.70um			SES	110.25	37	ePdiff09	34.00	5.3X		
			ePP 13 24.00		SES	110.25	37	ePKP	13 34.00	3.9X		
			eSKS 19 50.00		CEY	110.31	318	ePdiff09	34.00	4.9X		

10d 06h

GSM 6.27 46 eP 30 53.15 0.1
S.D. = 0.3 on 28 of 28 obs.

JAN 10, 1989 07h 29m 21.39 \pm 0.47s
42.377 N \pm 4.5km 19.488 E \pm 4.1km
DEPTH = 13.6 \pm 3.3 km

YUGOSLAVIA (383)
MD 2.9 (TTG).

TTG 0.18 287 ePg 29 26.50 0.8
eSg 29 30.20

PVY 0.42 59 iPgc 29 29.60 -0.6
iSg 29 35.10

ULC 0.45 203 ePg 29 31.00 0.4
eSg 29 39.20

BDV 0.50 259 iPg 29 31.00 -0.5
iSg 29 41.50

IVA 0.58 31 iPg 29 32.70 -0.2
eSg 29 40.00

HCY 0.74 276 iPg 29 35.50 0.0
iSg 29 47.60

BRY 0.87 307 ePg 29 37.50 -0.4
iSg 29 51.20

PLE 0.95 356 ePg 29 40.00 0.7
eSg 29 52.50

SKO 1.51 105 iPn 29 49.00 1.0
OHR 1.60 142 iPn 29 52.60 3.2X

BRT 2.28 230 P 30 06.00 6.9X
eSn 30 42.50

HVAR 2.38 291 iPn 30 01.20 0.6
iSn 30 31.30

BZS 3.58 25 ePd 30 17.00 -0.7
SGO 3.63 241 P 30 17.20 -1.1
eSn 30 59.00

MGR 3.71 234 P 30 19.00 -0.6
eSn 31 01.60

SDI 4.28 263 P 30 28.40 0.8
VBY 4.37 317 e(Pn) 30 31.50 2.7X
i 31 33.30
iSn 31 39.30

CEY 4.96 314 e(Pn) 30 37.80 0.6
eSn 31 33.00

TRI 5.30 311 eP 30 18.40 -23.6X
i 30 38.80

VOY 5.43 314 ePn 30 43.60 -0.4
eSn 31 46.60

KBA 6.42 319 iPd 30 58.20 0.2
0.4s 2.80nm 4.5mb X
S.D. = 0.7 on 17 of 21 obs.

* JAN 10, 1989 07h 32m 03.67 \pm 0.87s
3.272 S \pm 12.3km 130.885 E \pm 12.8km
DEPTH = 33.0km (normol)
4.6mb (4 obs.)

CERAM (272)

AAI 2.72 261 eP 32 45.30 -0.6
TLE 3.00 142 ePc 32 58.30 8.4X
eS 33 35.00

WARB 23.14 190 eP 37 00.00 -8.1X
NANU 24.28 217 eP 37 20.00 0.9

BAL 30.31 205 eP 38 14.00 -0.4
KLB 30.76 202 eP 38 19.00 0.6

PSI 32.49 280 eP 38 32.00 -1.7
CHG 38.34 306 eP 39 24.00 0.4

CHTO 38.34 306 eP 39 24.00 0.5
1.0s 2.75nm 4.0mb
i 39 29.40

DZM 39.23 121 iPc 39 30.40 -0.7
GUN 53.25 309 P 41 28.70 6.6X
0.9s 25.00nm 5.2mb

KKN 53.66 308 P 41 29.00 4.1X
0.8s 12.00nm 5.0mb

DMN 53.72 308 P 41 25.40 0.0
GBA 55.61 289 P 41 40.00 1.0
0.6s 1.70nm 4.3mb
S.D. = 1.0 on 10 of 14 obs.

? JAN 10, 1989 07h 56m 21.85 \pm 1.54s
3.015 S \pm 19.2km 130.889 E \pm 17.2km
DEPTH = 33.0km (normol)
4.5mb (2 obs.)

CERAM (272)

AAI 2.77 256 eP 57 05.00 0.1
TLE 3.20 145 ePd 57 18.00 7.0X
WB5 17.10 169 eP 00 19.80 -0.4

WRA 17.16 169 Pc 00 23.70 2.0X
0.4s 4.30nm 3.9mb

OIS 19.40 155 iPd 00 48.60 0.4
ASPA 20.74 172 eP 00 59.60 -2.8X
0.7s 58.00nm 5.1mb

GUN 53.10 308 P 05 39.00 -0.1
S.D. = 0.5 on 4 of 7 obs.

% JAN 10, 1989 07h 59m 56.15 \pm 0.83s
61.416 N \pm 8.1km 7.461 E \pm 8.6km
DEPTH = 10.0km (geophysicist)

SOUTHERN NORWAY (535)
MD 2.4 (BER).

HYA 0.66 248 iPd 00 09.30 0.0
eS 00 18.10

MOL 1.16 2 eP 00 18.30 0.5
eS 00 33.70

SUE 1.35 256 eP 00 20.20 -0.8
iS 00 39.20

ODD1 1.56 196 eP 00 23.80 -0.3
iS 00 44.00

BLS1 2.06 189 eP 00 32.60 1.3
eS 00 55.30

NRA0 2.10 107 iP+ 00 31.00 -0.7
iPb 00 34.80
iPb 00 35.60
iS 00 56.60

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

? JAN 10, 1989 09h 14m 50.16 \pm 2.91s
11.083 S \pm 31.5km 41.493 E \pm 15.6km
DEPTH = 10.0km (geophysicist)
4.1mb (1 obs.)

NORTHWEST OF MADAGASCAR (574)

NPA 4.54 208 ePg 16 00.51 0.0
0.5s 720.00nm
eSn 16 37.40
e 16 50.00
eSg 17 01.70

AVY 9.85 143 eP 17 15.10 0.0
PTZ 10.40 251 iPn 17 23.40 0.9
iSn 19 12.30
iSg 20 23.00

LSZ 13.61 251 iPn 18 05.00 -0.9
iSn 20 28.80
iSg 21 13.00

BUL 15.32 232 iPn 18 30.10 1.7X
iLg 22 34.20

KMZ 15.48 260 iPn 18 30.50 0.0
iSn 21 12.00

SEK 21.52 215 eP 19 35.50 -6.2X
BNG 27.55 303 ePc 20 44.90 5.5X
0.7s 3.00nm 4.1mb
S.D. = 0.9 on 8 of 8 obs.

? JAN 10, 1989 09h 51m 27.70 \pm 1.79s
3.859 S \pm 21.2km 130.608 E \pm 22.7km
DEPTH = 33.0km (normol)
4.5mb (2 obs.)

CERAM (272)

AAI 2.41 274 eP 52 05.50 -0.2
MTN 8.94 177 eP 53 39.00 1.3
eS 55 24.00

WB5 16.34 167 eP 55 15.70 -0.7
eS 58 15.50

QIS 18.77 153 eP 55 47.00 0.4
ASPA 19.95 171 eP 55 58.80 -1.2
0.5s 54.00nm 5.1mb

CHTO 38.46 307 e(P) 58 49.00 0.4
1.0s 1.75nm 3.8mb
S.D. = 1.2 on 6 of 6 obs.

JAN 10, 1989 10h 42m 39.78 \pm 0.88s
57.650 N \pm 8.6km 155.531 W \pm 7.6km
DEPTH = 116.2 \pm 14.2 km

ALASKA PENINSULA (12)

KDC 1.63 85 iPc 43 09.40 0.5
PDB 2.26 17 iP 43 17.22 0.4
ILIM 2.78 28 iP 43 24.77 1.0

CNPM 2.93 48 eP 43 26.38 0.6
eS 43 59.54

NNL 3.26 41 eP 43 31.46 1.4

RDT 3.35 27 eP 43 32.11 0.8
SVW 3.47 359 iPd 43 33.10 0.1

SDN 3.60 232 eP 43 34.00 -0.6
NKA 3.81 34 eP 43 39.68 2.2
SPU 3.96 25 eP 43 40.31 0.6

SLKM 3.96 41 eP 43 39.63 -0.1
CRP 4.02 24 eP 43 41.39 0.9
PTE 4.64 43 iP 43 48.52 -0.3
MTU 4.72 57 iP 43 50.15 0.2

PMS 4.72 38 iP 43 49.96 0.0
KNIM 4.85 53 eP 43 51.27 -0.5
PWL 4.90 46 eP 43 51.81 -0.6
eS 44 44.30

PLRM 5.12 37 eP 43 54.16 -1.1
PMR 5.12 37 eP 43 56.10 0.8
KNK 5.21 41 eP 43 55.51 -1.2
eS 44 51.42

TTA 5.30 358 ePd 43 58.40 0.4
GHO 5.32 36 eP 43 57.12 -1.0
GLI 5.40 50 eP 43 57.55 -1.7
HIN 5.42 56 iP 43 59.24 -0.2

SML 5.53 38 iP 44 00.00 -1.1
FID 5.59 52 eP 44 00.83 -1.1
VZW 5.72 50 eP 44 02.84 -0.9
CVA 5.82 56 eP 44 04.57 -0.4
VLZ 5.85 50 eP 44 05.05 -0.4

SGAM 6.04 57 iP 44 07.76 -0.3
KLU 6.22 48 eP 44 09.87 -0.7
TOA 6.49 43 eP 44 14.10 -0.2
CTGM 7.99 59 eP 44 34.91 0.2
FBA 8.17 24 ePc 44 34.60 -2.4
IMA 8.49 5 eP 44 41.70 0.2
HYT 9.76 63 P 45 01.00 2.4
YKA 20.71 59 P 47 14.00 1.9
S.D. = 1.1 on 37 of 37 obs.

? JAN 10, 1989 10h 46m 15.37 \pm 4.19s
21.715 S \pm 76.8km 170.863 E \pm 31.1km
DEPTH = 33.0km (normol)
4.7mb (3 obs.)

LOYALTY ISLANDS REGION (189)

DZM 4.12 264 iPd 47 17.50 -0.2
iS 47 59.80

BRS 17.39 247 eP 50 19.00 1.8X
CTA 23.04 270 eP 51 24.00 5.2X
CMS 24.36 241 eP 51 32.00 0.4

ASPA 34.10 260 iPd 53 00.10 0.8
0.8s 19.00nm 5.1mb

FORR 39.21 247 eP 53 43.00 0.7
WARB 40.51 255 iPc 53 43.30 -9.9X
COOL 45.19 248 eP 54 30.00 -1.2
KLB 48.07 247 eP 54 53.50 -0.4

NWAO 48.49 245 eP 54 57.00 -0.1
BAL 49.02 248 eP 55 01.00 -0.2
SPA 68.42 180 e(P) 57 16.00 0.1
1.0s 9.00nm 4.8mb

CHTO 81.06 294 eP 58 38.70 9.7X
1.0s 2.50nm 4.2mb

KSP 144.78 332 ePKP 06 00.50 10.2X
KHC 147.22 332 ePKP 06 08.00 13.6X
SKO 147.36 315 iPkPd 06 06.80 12.0X
BNG 148.13 241 iPkPd 06 05.70 8.8X
0.8s 18.00nm

OHR 148.19 314 ePKP 06 07.00 10.7X
S.D. = 0.7 on 9 of 18 obs.

% JAN 10, 1989 11h 05m 29.14 \pm 1.35s
60.837 N \pm 7.9km 4.805 E \pm 16.2km
DEPTH = 10.0km (geophysicist)

SOUTHERN NORWAY (535)

SUE 0.22 354 iPg 05 34.20 0.3
iSg 05 37.90

HYA 0.75 63 iPg 05 43.20 -0.6
iSg 05 53.60

ODD1 1.30 135 iP 05 53.10 -0.1
iS 06 07.80

KMY 1.64 172 eP 05 57.00 -1.1
eS 06 18.50

BLS1 1.77 144 eP 06 01.60 1.5
iS 06 23.50
S.D. = 1.4 on 5 of 5 obs.

? JAN 10, 1989 12h 49m 15.06 \pm 2.19s
3.194 S \pm 23.3km 130.603 E \pm 18.1km
DEPTH = 72.3 \pm 18.8 km

3.8mb (2 obs.) CERAM (272)

Table with columns: Station Name, Time, Phase, Amplitude, Phase, Amplitude, Phase. Includes stations like AAI, TLE, MTN, WB5, WRA, OIS, ASPA, CTA, CHTO.

JAN 10, 1989 13h 01m 38.45± 0.91s 50.605 N ±12.8km 10.035 E ± 5.7km DEPTH = 10.0km (geophysicist)

GERMANY (543) ML 2.9 (GRF).

Table with columns: Station Name, Time, Phase, Amplitude, Phase, Amplitude, Phase. Includes stations like TNS, GRF, TOD, ABH, RUP, WTS, ENN, WLF, KHC, PRU, FEL, DOU, KSP, KBA.

% JAN 10, 1989 13h 29m 11.77± 0.65s 40.385 N ± 5.2km 29.423 E ± 5.2km DEPTH = 10.0km (geophysicist)

TURKEY (366)

Table with columns: Station Name, Time, Phase, Amplitude, Phase, Amplitude, Phase. Includes stations like GBZT, HRT, GPA, ISK, KCT, DST, CTT, EDC.

* JAN 10, 1989 13h 40m 45.29± 1.13s 40.080 N ± 7.5km 20.763 E ±10.2km DEPTH = 10.0km (geophysicist)

GREECE-ALBANIA BORDER REGION (392) MD 3.3 (ATH).

Table with columns: Station Name, Time, Phase, Amplitude, Phase, Amplitude, Phase. Includes stations like KZN, OHR, LIT, VAY, VLS, KNT, SKO, NEO, PLG.

eSn 41 50.00 S.D. = 0.8 on 7 of 9 obs.

% JAN 10, 1989 15h 54m 27.71± 0.66s 44.284 N ± 8.6km 7.521 E ± 5.5km DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545) ML 2.1 (GEN).

Table with columns: Station Name, Time, Phase, Amplitude, Phase, Amplitude, Phase. Includes stations like STV, ROB, PZZ, IMI, FIN, RRL.

* JAN 10, 1989 15h 55m 13.47± 0.73s 23.947 N ± 7.5km 103.072 E ±11.0km DEPTH = 10.0km (geophysicist)

YUNNAN PROVINCE, CHINA (318) ML 3.9 (BJI).

Table with columns: Station Name, Time, Phase, Amplitude, Phase, Amplitude, Phase. Includes stations like KMI, GYA, CHG, CHTO, LOE, CD2, BDT, QIZ, WHN, GTA, TIY.

? JAN 10, 1989 17h 10m 47.70± 5.56s 62.549 N ±42.5km 5.590 E ±33.1km DEPTH = 10.0km (geophysicist)

SOUTHERN NORWAY (535) MD 2.6 (BER).

Table with columns: Station Name, Time, Phase, Amplitude, Phase, Amplitude, Phase. Includes stations like MOL, HYA, SUE, ODD1, BLS1, KMY, NRA0.

& JAN 10, 1989 17h 21m 22.90s 34.500 N 120.630 W DEPTH = 6.0km (geophysicist)

SOUTHERN CALIFORNIA (43) <PAS-P>. ML 3.1 (PAS).

Table with columns: Station Name, Time, Phase, Amplitude, Phase, Amplitude, Phase. Includes stations like BLP, SYP, BCH, ABL, PHAM, KVN.

& JAN 10, 1989 17h 25m 18.28s 59.979 N 152.806 W DEPTH = 88.3km SOUTHERN ALASKA (2) <AGS-P>.

Table with columns: Station Name, Time, Phase, Amplitude, Phase, Amplitude, Phase. Includes stations like ILIM, RDT, PDB, NNL, CNPM, NKA, SPU, SLKM, SVW, PMS, PTE, KDC, PWL, PLRM, KNIM, KNK, MTU, GHO, SML, GLI, HIN, FID, KLU.

JAN 10, 1989 17h 56m 18.36± 1.22s 43.396 N ±10.2km 5.457 E ± 7.7km DEPTH = 10.0km (geophysicist)

NEAR SOUTH COAST OF FRANCE (379)

Table with columns: Station Name, Time, Phase, Amplitude, Phase, Amplitude, Phase. Includes stations like GELF, PUYF, TREF, PRAF, TAVF, VILF, FOUF.

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

JAN 10, 1989 18h 22m 08.68± 1.33s 3.278 S ± 6.8km 130.522 E ± 7.6km DEPTH = 46.5 ± 12.8 km 5.0mb (12 obs.) 3.5msz (1 obs.) CERAM (272)

Table with columns: Station Name, Time, Phase, Amplitude, Phase, Amplitude, Phase. Includes stations like AAI, TLE, MTN, WB5, WRA, PMG, TRT, OIS, ASPA, CTA, TPI, WARB, NANU, KLI, FORR, COOL.

KBA 80.21 334 e(P) 40 46.00 0.7
0.8s 3.80nm 4.4mb
S.D. = 0.9 on 16 of 17 obs.

JAN 11, 1989 01h 43m 00.74± 0.71s
40.278 N ± 8.4km 25.707 E ± 8.5km
DEPTH = 10.0km (geophysicist)

AEGEAN SEA (365)
MD 2.6 (ATH).

EZN 0.66 133 iPg 43 12.20 -1.6
iSg 43 21.70
RDO 0.88 352 iPbc 43 16.80 -0.8
PRK 1.12 157 ePb 43 22.10 0.4
eSb 43 37.20
KDZ 1.39 351 iPd 43 26.00 -0.1
RZN 1.60 332 eP 43 30.00 0.8
EDC 1.65 87 ePn 43 28.90 -1.0
PLG 1.73 274 ePn 43 30.50 -0.6
JMB 2.28 16 eP 43 43.00 4.0X
KNT 2.31 293 eP 43 40.00 0.5
DST 2.34 106 ePn 43 42.30 2.3
KKB 2.54 310 eP 43 48.00 5.3X
PGB 2.55 333 eP 43 46.00 3.2X
VAY 2.60 295 e(Pn) 43 56.40 12.9X
PVL 2.95 355 eP 43 54.00 5.6X
S.D. = 1.3 on 9 of 14 obs.

* JAN 11, 1989 03h 21m 28.95± 1.11s
12.135 N ± 9.7km 144.402 E ± 19.1km
DEPTH = 51.0 ± 11.0 km
4.4mb (3 obs.)

SOUTH OF MARIANA ISLANDS (210)

GUA 1.48 20 ePd 21 53.60 0.0
eS 22 13.20
GUMO 1.51 17 eP 21 53.80 -0.3
PJG 1.51 17 eP 21 54.30 0.2
WB5 33.31 197 eP 28 04.20 0.0
WRA 33.38 197 Pc 28 04.60 -0.2
0.5s 1.20nm 4.0mb
ASPA 37.03 196 eP 28 36.20 0.3
0.6s 5.00nm 4.6mb
GUN 56.69 295 P 31 10.00 -0.4
INK 75.88 22 eP 33 12.00 0.6
MBC 79.78 14 eP 33 33.00 0.2
0.6s 3.00nm 4.4mb
OXX 113.00 65 iPd iff 36 08.00 -0.8
SCX 116.75 64 ePd iff 36 12.50 -12.7X
LIC 144.55 299 (PKP) 41 02.60 0.2
ZOBO 148.22 101 ePKP 41 05.00 -4.1X
S.D. = 0.5 on 11 of 13 obs.

* JAN 11, 1989 04h 51m 45.08± 2.12s
3.805 S ± 14.5km 134.954 E ± 13.0km
DEPTH = 122.7 ± 23.1 km
4.6mb (3 obs.)

WEST IRIAN REGION (196)

TLE 2.85 230 ePc 52 02.90 -27.3X
0.2s 50.00nm
TZZ 6.41 103 eP 52 29.00 -49.6X
AAI 6.75 271 eP 53 22.50 -0.5
eS 54 09.00
MTN 9.75 203 eP 54 04.00 0.5
e 54 51.00
e 55 53.00
PMG 13.33 115 eP 54 50.00 -0.7
WRA 16.05 182 P 55 26.00 0.8
0.6s 3.70nm 3.8mb
OIS 17.26 165 eP 55 41.00 1.0
e 55 50.00
eS 58 46.00
e 00 57.00
CTA 19.58 147 iPc 56 12.10 6.1X
0.9s 27.31nm 4.6mb
ASPA 19.77 183 eP 56 14.40 6.4X
0.9s 196.00nm 5.5mb
Z 22s 0.49um 3.5MsZ
e 57 01.40
LR 05 49.70
KKM 21.12 298 ePc 56 27.00 5.3X
WARB 23.64 199 eP 56 44.00 -2.2
BAG 24.61 325 eP 57 01.00 5.3X
BRS 28.98 146 iPd 57 44.30 9.0X
CHG 41.98 304 eP 59 37.00 11.2X
BJI 46.92 340 eP 00 11.00 6.0X

GUN 56.79 307 P 01 18.90 -0.5
KKN 57.21 307 P 01 23.30 1.1
DMN 57.28 306 P 01 23.20 0.5
S.D. = 1.3 on 9 of 18 obs.

JAN 11, 1989 04h 52m 09.76± 0.96s
43.418 N ± 7.0km 5.431 E ± 7.0km
DEPTH = 10.0km (geophysicist)

NEAR SOUTH COAST OF FRANCE (379)
MD 2.5 (STR).

GELF 0.03 184 Pg 52 11.46 -0.4
TREF 0.21 351 Pg 52 13.50 -0.8
PUYF 0.23 60 Pg 52 13.40 -1.3
PRAF 0.43 334 Pg 52 18.28 -0.3
VILF 0.48 25 Pg 52 18.59 -0.9
Sg 52 29.44
TAVF 0.50 66 Pg 52 18.68 -1.2
Sg 52 26.61
CALN 1.11 72 Pg 52 31.14 0.4
Sg 52 46.76
MVIF 1.34 68 Pn 52 33.93 -0.6
Sg 52 52.40
TOUF 1.45 65 Pn 52 36.04 -0.1
Sg 52 55.95
AURF 1.45 71 Pn 52 36.17 0.0
Sg 52 55.91
AUTN 1.56 68 Pn 52 38.03 0.3
Sg 52 59.42
STV 1.60 58 P 52 38.55 0.3
S 53 00.08
PZZ 1.62 47 P 52 39.98 1.4
S 53 02.46
SAOF 1.64 69 Pn 52 38.62 -0.2
RRL 1.79 33 P 52 43.99 2.9
S 53 07.66
ROB 1.97 63 P 52 44.09 0.5
S 53 08.55
S.D. = 1.1 on 16 of 16 obs.

% JAN 11, 1989 05h 00m 13.86± 0.88s
42.264 N ± 7.0km 19.341 E ± 7.2km
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)
MD 2.1 (TTG).

TTG 0.18 340 iPg 00 18.30 0.5
iSg 00 22.10
ULC 0.31 193 ePg 00 20.50 0.2
eSg 00 26.50
BDV 0.38 273 ePg 00 21.50 -0.2
eSg 00 28.00
PVY 0.57 55 ePg 00 25.30 -0.3
eSg 00 34.50
HCY 0.65 287 ePg 00 26.60 -0.3
eSg 00 36.00
S.D. = 0.5 on 5 of 5 obs.

% JAN 11, 1989 05h 01m 37.12± 0.75s
42.280 N ± 6.2km 19.334 E ± 5.9km
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)
MD 2.3 (TTG).

TTG 0.16 340 iPg 01 41.70 0.9
iSg 01 45.80
ULC 0.32 191 ePg 01 44.00 0.2
eSg 01 50.20
BDV 0.38 271 ePg 01 45.20 0.4
eSg 01 52.50
PVY 0.57 56 ePg 01 48.40 -0.3
eSg 01 58.00
HCY 0.64 285 ePg 01 49.40 -0.6
eSg 01 59.50
IVA 0.72 35 ePg 01 51.50 0.1
eSg 02 03.00
BRY 0.85 317 ePg 01 53.00 -0.6
eSg 02 06.70
S.D. = 0.7 on 7 of 7 obs.

JAN 11, 1989 05h 07m 18.06± 0.62s
42.312 N ± 5.8km 19.325 E ± 5.4km
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)
MD 2.2 (TTG).

TTG 0.13 338 iPg 07 22.40 1.3

iSg 07 26.40
ULC 0.35 189 ePg 07 24.90 -0.4
eSg 07 30.90
BDV 0.37 266 ePg 07 26.10 0.4
eSg 07 32.20
PVY 0.56 59 ePg 07 29.00 -0.5
eSg 07 40.00
HCY 0.63 283 ePg 07 30.00 -0.7
eSg 07 40.20
IVA 0.70 37 ePg 07 31.60 -0.4
eSg 07 43.00
BRY 0.82 316 ePg 07 33.60 -0.5
eS 07 47.30
SKO 1.61 101 ePn 07 54.50 7.9X
OHR 1.63 137 ePn 07 47.70 0.8
S.D. = 0.9 on 8 of 9 obs.

? JAN 11, 1989 05h 10m 14.55± 7.14s
15.691 N ± 27.0km 59.847 W ± 57.7km
DEPTH = 15.1 ± 7.5 km

LEEWARD ISLANDS (92)
ML 3.4 (FDF).

MGG 1.43 279 eP 10 39.80 -0.1
S 10 54.40
MVM 1.52 222 eP 10 40.76 -0.4
FDF 1.58 233 eP 10 42.25 0.2
S 11 04.00
BBL 1.58 264 iPc 10 42.11 0.0
S 11 02.60
BIM 1.66 226 eP 10 43.27 0.0
S 11 06.40
PAG 1.80 281 eP 10 45.30 0.1
S 11 09.50
SVV 2.71 210 eP 10 58.87 0.6
eS 11 30.74
SVB 2.76 210 eP 10 58.61 -0.5
eS 11 30.18
S.D. = 0.4 on 8 of 8 obs.

JAN 11, 1989 05h 14m 08.53± 0.98s
41.150 N ± 10.4km 19.851 E ± 8.9km
DEPTH = 10.0km (geophysicist)

ALBANIA (391)
MD 2.6 (TTG).

OHR 0.72 93 iPg 14 21.30 -1.4
iSg 14 33.20
ULC 0.93 331 ePg 14 26.50 0.2
eSg 14 38.50
TTG 1.35 341 ePg 14 33.20 -0.1
eSg 14 52.40
BDV 1.37 326 ePg 14 33.00 -0.6
eSg 14 52.10
PVY 1.45 4 ePg 14 35.30 0.4
eSg 14 56.00
SKO 1.45 55 iPnc 14 34.50 -0.3
iSn 14 54.40
HCY 1.64 322 ePg 14 37.00 -0.5
eSg 14 59.40
KZN 1.68 119 ePn 14 39.00 0.8
eSn 15 04.60
IVA 1.72 1 ePn 14 39.70 1.0
eSn 15 04.40
VAY 2.06 84 ePn 14 43.70 0.2
LIT 2.27 117 eP 14 46.60 0.0
PLG 2.84 105 ePn 14 55.20 0.4
S.D. = 0.7 on 12 of 12 obs.

? JAN 11, 1989 06h 13m 09.18± 10.21s
32.434 S ± 55.4km 72.166 W ± 63.9km
DEPTH = 33.0km (normal)

OFF COAST OF CENTRAL CHILE (134)

ROCH 1.11 119 iP 13 28.00 -0.7
iS 13 40.90
LCCH 1.15 154 eP 13 29.00 0.0
iS 13 41.00
JACH 1.35 101 iP 13 32.20 0.2
TACH 1.60 140 iP 13 35.50 0.0
eS 13 52.50
LNV 1.64 158 eP 13 36.00 -0.1
iS 13 52.50
FCH 1.81 120 iPd 13 39.00 0.1
iS 14 00.50
PCH 1.82 131 iP 13 39.20 0.3
iS 14 00.70

11d 06h

CHCH 1.96 140 eP 13 41.00 0.2
 IS 14 05.50
 S.D. = 0.4 on 8 of 8 obs.

? JAN 11, 1989 06h 24m 03.64±11.37s
 32.209 S ±83.7km 71.301 W ±41.3km
 DEPTH = 33.0km (normal)
 NEAR COAST OF CENTRAL CHILE (135)

JACH 0.76 128 iPd 24 18.00 0.0
 ROCH 0.80 162 iP 24 19.00 0.3
 SAN 1.35 157 eP 24 26.20 -0.2
 IS 24 44.70

FCH 1.40 143 iPd 24 27.60 0.2
 IS 24 47.00
 PCH 1.56 155 iP 24 29.20 -0.2
 IS 24 50.50

LNv 1.74 183 iP 24 32.00 0.0
 IS 24 54.60
 CHCH 1.80 163 iPc 24 33.00 0.0
 IS 24 57.50

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

JAN 11, 1989 07h 07m 18.20±0.46s
 52.266 N ±8.9km 158.460 E ±9.0km
 DEPTH = 33.0km (normal)
 4.9mb (33 obs.)

NEAR EAST COAST OF KAMCHATKA (218)

KUSJ 13.02 231 eP 10 21.10 -2.1
 ASAJ 13.31 239 P 10 31.50 4.3X
 HOOJ 14.24 232 eP 10 38.90 -0.4

CHJJ 21.29 228 eP 12 05.30 1.4
 MTMJ 21.41 231 eP 12 06.40 1.2
 IIDJ 22.26 229 eP 12 15.60 2.0

TTA 26.05 48 e(P) 12 49.70 -0.2
 FBA 29.71 44 e(P) 13 24.50 1.5
 0.8s 10.30nm 4.6mb

TOA 30.63 49 e(P) 13 31.10 -0.1
 INK 35.13 37 eP 14 10.00 -0.1
 MBC 38.19 23 eP 14 36.00 0.3

0.4s 3.00nm 4.5mb
 YKA 44.44 41 P 15 27.40 0.2
 DAG 51.23 359 iPc 16 18.80 -1.0

0.5s 15.49nm 5.2mb
 SES 52.94 53 ePc 16 31.60 -1.6
 FFC 54.31 45 eP 16 42.00 -1.1

0.8s 14.00nm 5.0mb
 LRM 55.20 58 eP 16 36.50 -13.6X
 CHG 56.76 257 eP 16 05.30 -56.0X

GUN 57.99 275 P 17 08.70 -1.5
 0.4s 5.00nm 4.9mb
 KKN 58.44 276 P 17 11.50 -1.7

0.4s 6.00nm 5.0mb
 PKI 58.52 275 P 17 13.20 -0.7
 FRB 58.66 22 eP 17 12.00 -2.0

DMN 58.68 276 P 17 13.90 -1.1
 0.4s 5.00nm 5.0mb
 GKN 58.68 276 P 17 14.10 -0.7

0.4s 2.00nm 4.6mb
 SUF 59.37 337 iP 17 19.30 0.3
 NAO 64.32 343 P 17 50.60 -1.6

0.6s 4.30nm 4.7mb
 HFS 64.42 341 eP 17 51.50 -1.3
 0.5s 10.50nm 5.2mb

EKA 71.69 349 P 18 38.00 -0.2
 0.9s 17.50nm 5.1mb
 WTS 73.41 342 eP 18 48.50 0.2

0.8s 13.00nm 5.0mb
 GBA 73.88 271 P 18 54.00 2.4
 0.6s 1.30nm 4.1mb

KHC 74.66 337 eP 18 55.90 0.2
 ENN 74.75 342 eP 18 45.00 -11.1X
 0.9s 17.00nm 5.1mb

WRA 74.92 203 Pc 18 56.50 -0.9
 0.8s 6.30nm 4.7mb
 DOU 75.63 343 P 19 01.10 -0.1

0.7s 7.80nm 4.8mb
 KBA 76.63 336 iPc 19 07.20 0.2
 0.8s 13.80nm 5.0mb

CDF 76.73 341 eP 19 07.40 -0.1
 HAU 77.31 341 eP 19 10.60 0.0
 FLN 77.76 346 eP 19 12.90 -0.1

1.0s 20.00nm 5.1mb
 GRR 78.18 346 eP 19 15.10 -0.3
 0.9s 13.10nm 5.0mb
 LOR 78.49 343 eP 19 17.20 0.1

0.6s 12.90nm 5.1mb
 LPF 78.56 346 eP 19 17.80 0.4
 ASPA 78.60 203 eP 18 05.40 -72.5X

0.6s 5.00nm
 LBF 78.74 342 eP 19 18.30 -0.2
 0.6s 5.40nm 4.7mb

SSF 78.75 343 eP 19 18.70 0.2
 0.7s 12.10nm 5.0mb
 AVF 79.04 343 eP 19 20.50 0.4

0.7s 15.80nm 5.1mb
 SMF 79.09 342 eP 19 20.70 0.3
 BGF 79.36 343 eP 19 22.10 0.3

0.5s 7.20nm 4.9mb
 LPG 79.62 340 iPc 19 24.70 1.1
 0.5s 5.10nm 4.8mb

TCF 79.73 344 iPc 19 24.30 0.4
 0.7s 9.20nm 4.9mb
 MAF 79.73 343 iPc 19 24.90 1.0

0.5s 21.80nm 5.4mb
 MFF 79.82 345 eP 19 25.00 0.7
 LSF 79.89 344 eP 19 25.20 0.5

0.7s 12.10nm 5.0mb
 RJF 80.80 344 eP 19 30.30 0.7
 0.8s 8.00nm 4.8mb

SBF 81.04 339 eP 19 31.40 0.5
 0.8s 10.70nm 4.9mb
 CAF 81.08 343 iPc 19 31.50 0.5

0.5s 9.40nm 5.0mb
 LFF 81.29 344 eP 19 32.80 0.7
 0.8s 9.10nm 4.8mb

LPO 81.46 344 iPc 19 33.30 0.3
 0.7s 24.20nm 5.3mb
 LMR 81.74 340 eP 19 34.80 0.3

EPF 83.21 344 eP 19 43.00 0.8
 0.7s 5.90nm 4.8mb
 S.D. = 1.0 on 53 of 58 obs.

* JAN 11, 1989 07h 29m 40.51±1.24s
 16.969 N ±19.5km 94.746 W ±10.2km
 DEPTH = 33.0km (normal)

OAXACA, MEXICO (60)
 EVV 1.59 339 iP 30 07.50 0.9
 OXX 1.89 274 iP 30 12.00 0.7

SCX 2.04 96 iP 30 13.00 -0.1
 IISM 3.21 309 iP 30 28.50 -1.3
 IIT 3.96 302 eP 30 40.50 -0.2

S.D. = 1.2 on 5 of 5 obs.
 JAN 11, 1989 08h 02m 07.39±0.46s
 42.314 N ±4.5km 19.314 E ±4.1km

DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 MD 2.7 (TTG).

TTG 0.12 341 iPg 02 11.70 1.3
 ISg 02 15.50
 ULC 0.35 188 iPg 02 14.00 -0.7

iSg 02 20.20
 BDV 0.36 265 iPg 02 15.10 0.3
 eSg 02 22.00

PVY 0.56 60 iPg 02 18.20 -0.7
 iSg 02 28.00
 HCY 0.62 283 iPg 02 19.30 -0.5

iSg 02 29.50
 IVA 0.70 38 ePg 02 21.10 -0.3
 eSg 02 32.50

BRY 0.82 316 ePg 02 22.90 -0.4
 eSg 02 37.50
 PLE 1.02 3 ePg 02 27.00 0.3

eSg 02 42.50
 SKO 1.62 101 iPn 02 35.50 -0.5
 i 02 37.00

OHR 1.64 137 iPnd 02 37.90 1.5
 VAY 2.63 111 ePn 02 50.70 0.1
 BZS 3.70 26 ePd 03 05.50 -0.2

VBY 4.33 319 eP 03 56.30 41.5X
 CEY 4.91 316 e(Pn) 03 26.00 3.0X
 e(Sn) 04 48.00

TRI 5.25 312 eP 03 33.60 5.9X
 e 04 34.70
 VOY 5.39 315 ePn 03 29.60 -0.2

eSn 04 29.70
 S.D. = 0.8 on 13 of 16 obs.
 * JAN 11, 1989 09h 32m 31.70s
 33.970 N 116.290 W

DEPTH = 3.0km
 SOUTHERN CALIFORNIA (43)
 <PAS-P>. ML 3.1 (PAS).

TPC 0.24 56 iPd 32 36.50 -0.1
 HAY 0.60 116 iPc 32 43.40 -0.3
 PEC 0.73 264 eP 32 45.50 -0.7

PLM 0.78 218 iPd 32 46.60 -0.7
 CPE 1.28 212 iPd 32 54.70 -1.4
 BAR 1.33 194 eP 32 55.50 -1.4

GLA 1.53 126 eP 32 58.00 -2.0
 KVN 5.28 344 eP 33 51.50 -2.1
 8 obs. associated

* JAN 11, 1989 09h 47m 05.80±2.17s
 4.395 S ±11.2km 102.384 E ±13.5km
 DEPTH = 95.0 ± 17.5 km
 4.6mb (5 obs.)

SOUTHERN SUMATERA (274)

KGM 6.44 8 ePd 48 39.60 -0.1
 IPM 9.02 351 ePc 49 21.10 6.0X
 CHG 23.31 352 iPd 52 06.70 0.5

0.8s 11.19nm 4.3mb
 WRA 34.75 119 Pc 53 48.50 -0.6
 0.9s 6.50nm 4.5mb

CD2 35.13 2 eP 53 51.30 -0.9
 PKI 35.75 334 P 53 57.60 -0.3
 0.4s 4.00nm 4.7mb

GUN 35.84 335 P 53 58.80 0.2
 DMN 35.92 333 P 53 59.60 0.4
 ASPA 35.93 125 eP 53 58.80 -0.3

KKN 36.00 334 P 53 59.90 0.1
 0.5s 18.00nm 5.3mb
 GKN 36.47 333 P 54 03.10 -0.6

XAN 38.72 9 P 54 21.90 -0.4
 LZH 40.29 2 eP 54 36.00 0.6
 1.0s 0.02nm 1.9mb X

NDI 40.84 325 iPc 54 40.00 0.2
 TIY 42.92 12 eP 54 56.80 0.0
 GTA 43.65 357 P 55 02.40 -0.3

CTA 45.44 114 iPd 55 18.10 0.8
 0.9s 10.92nm 4.7mb
 HHC 45.80 10 P 55 20.80 0.9

BJI 46.00 15 eP 55 21.00 -0.3
 WMO 49.79 346 P 55 51.00 0.2
 BRS 53.13 121 iPc 56 16.50 0.3

TUL 144.44 26 ePKP 06 32.40 -0.6
 0.8s 7.10nm
 RLO 144.55 25 ePKP 06 24.70 -8.5X

S.D. = 0.5 on 21 of 23 obs.
 JAN 11, 1989 10h 53m 28.34±0.77s
 43.056 N ±7.0km 71.849 E ±7.8km

DEPTH = 10.0km (geophysicist)
 BULGARIA (359)

PVL 0.30 303 iPc 53 35.00 0.5
 PLD 1.19 217 ePg 53 50.00 -0.5

VTS 1.87 256 iP 54 01.00 0.2
 DMK 1.98 128 iPn 54 02.60 0.4
 MLR 2.44 4 eP 54 08.00 -1.0

VAY 2.88 234 ePn 54 21.00 5.8X
 VRI 2.91 15 ePd 54 16.00 0.4
 S.D. = 0.8 on 6 of 7 obs.

* JAN 11, 1989 11h 58m 21.03±1.65s
 32.568 S ±9.0km 71.849 W ±12.5km
 DEPTH = 58.6 ± 12.6 km
 5.0mb (8 obs.)

NEAR COAST OF CENTRAL CHILE (135)
 Felt (III) at Valparaiso. Also
 felt at Santiago.

PEL 1.14 121 iPd 58 39.20 -1.8
 MDZ 2.55 98 iP 59 00.90 0.1
 IS 59 38.20

RTCB 2.81 68 ePc 59 05.70 1.2
 RTCV 2.89 77 ePc 59 07.60 1.9
 RTLL 3.13 68 ePc 59 09.50 0.5

S 00 02.60
 RTRS 3.14 41 ePc 59 10.00 0.8
 ANT 8.92 9 e(P) 00 28.80 -0.9

ARE 16.04 1 eP 02 05.00 0.4
 CNCB 16.08 13 Pd 02 04.20 -1.1
 LPB 16.32 13 P 02 09.70 1.4
 1.1s 126.58nm 5.0mb

11d 14h

CTT 0.77 328 iPg 14 13.10 0.8
BNT 0.81 260 iPg 14 13.00 -0.1
EDC 0.86 260 ePg 14 13.00 -0.9
DST 0.93 196 ePn 14 15.70 0.6
GPA 1.05 101 ePn 14 17.80 0.6
S.D. = 0.8 on 8 of 8 obs.

& JAN 11, 1989 14h 40m 35.08s
62.904 N 151.040 W
DEPTH = 107.0km
CENTRAL ALASKA (1)
<AGS-P>.

GHO 1.51 138 eP 41 01.41 -0.8
PMR 1.59 145 iPc 41 01.50 -1.7
SML 1.67 130 iP 41 02.81 -1.5
CRP 1.72 198 eP 41 04.35 -0.7
SPU 1.79 196 eP 41 04.38 -1.4
TTA 2.28 273 ePc 41 10.00 -2.1
TOA 2.40 107 iPc 41 12.50 -1.2
FBA 2.46 34 ePd 41 12.80 -1.7
8 obs. associated

JAN 11, 1989 14h 59m 13.21 ± 0.73s
42.300 N ± 7.7km 19.284 E ± 6.3km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.6 (TTG).

TTG 0.13 353 ePg 59 17.40 1.1
ULC 0.34 184 iPgd 59 19.50 -0.7
BDV 0.34 267 ePg 59 20.20 0.0
PVY 0.59 60 iPgd 59 23.80 -1.4
HCY 0.60 285 ePg 59 24.90 -0.4
SKO 1.64 101 iPn 59 42.20 0.1
OHR 1.64 136 iPnc 59 43.70 1.4
VAY 2.64 111 ePn 59 48.00 -8.6X
S.D. = 1.2 on 7 of 8 obs.

JAN 11, 1989 15h 03m 47.90 ± 0.83s
37.586 N ± 6.8km 15.222 E ± 6.4km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MEU 0.54 206 P 03 58.80 0.0
MNO 0.54 310 Pc 03 59.30 0.4
ATN 0.60 18 Pc 03 59.70 -0.4
SOI 0.82 53 Pc 04 04.00 0.3
GIB 1.03 293 P 04 07.30 -0.1
MCT 1.26 273 P 04 11.30 -0.2
S.D. = 0.4 on 6 of 6 obs.

? JAN 11, 1989 15h 15m 16.03 ± 1.05s
25.718 N ± 13.6km 95.978 E ± 10.4km
DEPTH = 33.0km (normal)
BURMA-INDIA BORDER REGION (294)

KMI 6.14 94 Pn 16 47.00 -0.1
CHG 7.40 158 iPn 17 04.20 -0.3
BDT 8.89 161 eP 17 25.00 -0.2
GUN 9.28 286 P 17 31.00 0.0
LOE 9.85 146 eP 17 39.00 0.6
S.D. = 0.5 on 5 of 5 obs.

JAN 11, 1989 15h 52m 02.21 ± 0.38s
44.534 N ± 3.4km 129.735 W ± 3.7km
DEPTH = 10.0km (geophysicist)
4.8mb (12 obs.) 4.4MsZ (1 obs.)

OFF COAST OF OREGON (30)

KMOR 4.56 74 eP 53 12.18 -0.7
NLO 4.70 68 eP 53 15.14 0.2
ONR 4.79 59 eP 53 16.21 0.1
OBH 4.96 54 eP 53 18.22 -0.2
BMW 4.97 65 eP 53 18.23 -0.4
OOV 5.01 48 eP 53 19.32 0.1
OTR 5.15 45 eP 53 21.47 0.2
OSP 5.17 42 eP 53 21.77 0.4
RVW 5.19 69 eP 53 21.71 0.0
CPW 5.22 60 eP 53 21.89 -0.4
PGO 5.25 77 eP 53 23.27 0.7
OBC 5.26 46 eP 53 22.68 -0.1
SMW 5.26 56 eP 53 22.24 -0.6
OSD 5.33 50 eP 53 23.53 -0.4
APW 5.41 64 eP 53 24.38 -0.5
CZM 5.43 67 eP 53 25.04 -0.1
FL2 5.46 70 eP 53 25.73 0.0
MTMW 5.52 72 eP 53 26.47 0.0
SHW 5.54 70 eP 53 27.23 0.4
STW 5.54 47 eP 53 26.61 -0.1
VLMM 5.55 77 eP 53 27.41 0.5
JLK 5.58 71 eP 53 28.32 0.9
HDW 5.59 54 eP 53 27.46 -0.1

ESD 5.60 70 eP 53 28.42 0.7
MEW 5.62 59 eP 53 28.65 0.8
LMW 5.64 65 eP 53 28.49 0.2
KOSW 5.64 67 eP 53 27.80 -0.4
TDH 5.69 80 eP 53 29.50 0.5
GMW 5.70 56 eP 53 28.74 -0.2
CWZ 5.77 67 eP 53 29.65 -0.3
VLL 5.79 78 eP 53 31.02 0.7
APM 5.82 75 eP 53 31.49 0.8
BLN 5.83 51 eP 53 31.14 0.3
PGC 5.97 44 eP 53 32.00 -0.7
LON 5.98 65 eP 53 32.90 -0.1
MCW 6.31 46 eP 53 37.00 -0.6
VGB 6.42 78 eP 53 38.30 -0.9
LBFM 6.58 116 eP 53 44.00 2.4X
WDC 6.62 124 ePd 53 43.70 1.8
ORV 7.89 126 ePd 53 59.40 -0.3
PNT 8.41 52 eP 54 07.00 -0.1
DPW 8.67 63 eP 54 09.00 -1.6
CMB 9.57 129 eP 54 22.30 -0.7
KVN 10.27 118 eP 54 33.00 0.2
FRI 10.70 131 ePd 54 39.10 0.7
EUR 11.41 111 iP 54 50.30 1.8

LRM 12.27 78 eP 55 00.80 0.7
CLC 12.71 129 eP 55 05.00 -0.8
SBB 13.44 133 eP 55 14.00 -1.4
GSC 13.53 129 eP 55 13.00 -3.7X
MWC 13.68 135 eP 55 25.00 6.2X
EDM 13.82 45 eP 55 20.50 0.1
1.6s 262.00nm 5.8mb X
BW06 14.71 90 eP 55 34.00 1.7
TPC 14.83 130 eP 55 35.00 1.3
PLM 14.98 134 eP 55 36.00 0.2
BAR 15.61 135 eP 55 48.00 4.2X
GOL 18.68 96 eP 56 22.50 -0.2
YKA 20.02 21 P 56 36.40 -1.2
ALQ 20.24 110 eP 56 39.50 -1.0

FFC 20.54 50 iPc 56 42.50 -0.6
1.5s 230.00nm 5.3mb
PMR 20.54 333 e(P) 56 42.80 -0.2
1.2s 31.30nm 4.5mb
SVW 22.56 326 e(P) 57 06.40 2.8X
FBA 22.75 340 e(P) 57 06.90 1.6
TTA 23.81 330 e(P) 57 18.10 2.4
INK 23.92 357 eP 57 19.00 2.4
RSON 24.88 62 eP 57 25.80 -0.3
1.0s 20.75nm 4.8mb
IMA 25.21 337 e(P) 57 28.20 -1.1
MEO 25.75 101 eP 57 34.30 -0.2
TUL 27.15 97 e(P) 57 52.40 5.0X
1.2s 7.30nm 4.3mb
Z 18s 1.00um 4.4MsZ

FRB 38.80 38 eP 59 32.00 3.7X
DAG 51.60 16 eP 01 09.00 -1.1
NAO 70.21 19 P 03 15.80 -0.9
1.0s 10.80nm 4.9mb
CLL 79.23 23 eP 04 13.00 4.3X
1.2s 13.00nm 4.8mb

LOR 79.87 30 eP 04 12.40 0.2
CDF 80.06 27 eP 04 13.30 0.0
0.8s 9.10nm 4.8mb
AVF 80.09 31 eP 04 13.00 -0.4
TCF 80.09 32 eP 04 13.30 -0.2
BGF 80.10 31 eP 04 13.30 -0.2
LBF 80.15 30 eP 04 13.50 -0.3
BSF 80.40 28 eP 04 15.00 -0.2
KSP 80.53 21 eP 04 15.70 0.0
CAF 81.18 32 eP 04 19.50 0.2
0.9s 7.20nm 4.7mb
KHC 81.36 23 P 04 20.60 0.5
EPF 82.09 35 eP 04 23.90 -0.2
ZOBO 82.41 122 P 04 23.60 -3.1
1.0s 13.75nm 5.0mb
LPB 82.63 122 eP 04 27.00 -0.6
CNCB 82.92 122 P 04 25.00 -4.2X
KBA 83.14 24 iPd 04 30.30 0.7
1.1s 8.80nm 4.9mb
e 04 36.00
S.D. = 0.9 on 79 of 88 obs.

? JAN 11, 1989 15h 55m 17.28 ± 0.94s
42.964 N ± 8.6km 13.409 E ± 9.7km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.3 (SSO).

ALP 0.22 146 iPg 55 22.09 0.0
iSg 55 26.07
CIO 0.30 320 iPg 55 23.42 -0.2
i(Sg) 55 29.15
ASS 0.56 281 P 55 28.80 0.1
eSg 55 39.30
AOI 0.60 13 ePg 55 29.56 0.1
i(Sg) 55 38.74
S.D. = 0.3 on 4 of 4 obs.

? JAN 11, 1989 15h 58m 19.89 ± 5.24s
43.751 N ± 33.4km 6.856 E ± 23.3km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)

IMI 0.76 78 P 58 35.09 0.2
S 58 49.76
PZZ 0.77 13 Pn 58 35.06 0.0
Sn 58 50.89
Sg 58 52.84
DOI 0.80 20 Pd 58 35.80 0.3
eSg 58 37.40
ROB 0.91 53 Pn 58 37.79 0.4
Pg 58 39.04
Sn 58 55.74
Sg 58 58.25
FIN 1.08 64 Pn 58 39.42 -0.8
Sn 58 40.93
Sg 59 00.14
RRL 1.17 357 Pn 58 41.18 -0.7
Sn 58 42.31
Sg 59 02.90
BNI 1.31 354 P 58 44.60 0.4
eSg 59 06.30
RSP 1.43 11 P 58 46.14 0.2
S 59 11.44
S.D. = 0.6 on 8 of 8 obs.

& JAN 11, 1989 19h 51m 50.23s
48.513 N 119.916 W
DEPTH = 0.0km
WASHINGTON (29)
<SEA>. CL 2.9 (SEA).

NLW 0.52 213 iPd 51 59.78 -0.8
DHWZ 0.54 169 iPd 52 00.24 -0.7
eS 52 07.95
WTV 0.82 182 iPd 52 05.13 -1.4
SAW 0.88 157 iP 52 06.35 -1.5
RPW 1.06 267 eP 52 09.45 -1.8
EPH 1.18 169 iP 52 11.51 -1.7
DPW 1.31 119 eP 52 13.96 -1.6
MBW 1.34 282 eP 52 14.91 -1.2
JCW 1.38 257 eP 52 15.71 -0.9
TBM 1.42 199 eP 52 16.45 -0.9
HTW 1.43 241 eP 52 16.55 -0.9
ODS 1.44 146 eP 52 16.67 -0.9
VTG 1.56 182 eP 52 18.62 -0.6
WRD 1.63 161 eP 52 19.87 -0.4

EBG	1.66	196	eP	52	19.88	-1.0	VAM	3.51	190	ePn	58	44.40	-0.3	NP2:	162	78	147			
BVW	1.70	179	eP	52	21.47	0.1	CTT	3.52	49	ePn	58	43.90	-0.9	YUP	2.55	309	iPc	28	43.50	-0.3
CRF	1.73	168	eP	52	21.74	0.1	KHL	3.64	97	ePn	58	49.60	3.0	QZG	2.57	322	iPd	28	44.75	0.6
WAH2	1.77	172	eP	52	22.75	0.4	DMK	3.65	35	iPn	58	44.40	-2.3	RIN3	2.94	128	eP	28	49.30	0.2
GSM	1.82	225	eP	52	23.53	0.3	KAP	3.77	151	ePn	58	47.80	-0.6				S	29	21.30	
							ISK	3.85	54	iPn	58	49.40	-0.2	IXG	3.06	301	iPc	28	50.00	-0.9
							OHR	3.88	306	ePn	58	51.00	1.0	JUD	3.25	138	ePc	28	52.40	-1.0
							SKO	4.08	320	iPn	58	52.50	-0.3				S	29	26.70	
							ELL	4.48	117	ePn	59	02.00	3.5X	REC	3.26	304	iP	28	53.50	-0.1
							MLR	6.66	6	ePc	59	31.00	1.7	TER	3.32	301	iP	28	51.75	-2.6
							VRI	7.12	10	ePd	59	37.00	1.4	FUG	3.52	302	ePd	28	56.50	-0.8
							BZS	7.17	341	ePc	59	36.50	0.1				S	29	37.50	
							MGR	7.36	283	Pd	59	39.10	0.1	JTS	3.58	130	eP	28	58.00	0.1
										eSg	59	51.60					S	29	36.70	
							BNG	34.77	191	ePd	04	41.40	-0.2	CAO	3.88	138	ePd	29	01.30	-0.8
										0.9s	5.00nm	4.4mb					S	30	41.70	
										S.D. = 1.0	on 36	of 37	obs.	EPA	4.04	130	ePd	29	04.30	-0.1
														SRA	4.09	127	iPc	29	04.90	-0.3
																S	30	01.20		
														SOG2	4.27	300	iP	29	08.00	0.2
																S	29	54.00		
														PTCR	4.29	130	ePd	29	07.90	-0.2
														SOG	4.31	301	iP	29	09.00	0.5
																S	29	56.00		
														HDC2	4.38	125	iPc	29	09.50	0.3
														SJS	4.49	126	iPc	29	10.50	-0.3
																S	30	11.00		
														IRZ2	4.60	124	P	29	13.10	0.6
														ICR	4.64	124	iPc	29	14.10	0.9
														LCR2	4.65	127	iPd	29	12.80	-0.2
														QPS	4.77	131	ePd	29	14.40	-0.1
														KKG	4.79	300	iPd	29	15.00	0.1
														SBG	4.88	302	iP	29	17.50	1.1
														CDM	4.94	127	eP	29	17.30	-0.1
														TPX	4.95	298	iP	29	17.00	0.0
														BUS	4.95	127	iPc	29	18.00	0.5
														JCR	5.30	121	iP	28	59.90	-22.2X
														TIG	5.63	129	ePc	29	26.60	0.0
														PBC	6.22	131	ePd	29	33.70	-1.1
														DVD	6.65	128	iPc	29	41.60	0.9
														OXX	9.75	298	eP	30	25.00	1.6
														IISM	11.23	306	eP	30	45.50	2.4
														III	12.67	298	iP	31	04.00	1.6
														PRM	21.94	12	P	32	54.00	2.2
														JSC	22.37	14	P	32	57.60	1.6
														LHS	22.67	15	P	33	01.40	2.4
														MEO	24.17	338	iPc	33	13.30	-0.3
																e	33	35.80		
														BLA	25.37	14	P	33	25.70	0.8
																1.0s	55.00nm	5.0mb		
														CBN	27.12	18	eP	33	41.00	0.1
														ALO	27.97	326	eP	33	48.00	-0.8
																1.3s	27.88nm	4.7mb		
														GOL	31.16	333	P	34	16.80	-0.5
														OTT	34.25	15	eP	34	43.00	-0.7
														LPB	34.86	146	eP	34	50.00	0.3
														CNCB	35.15	146	P	34	52.50	0.2
																S	37	23.00		
														DUG	35.24	326	P	34	52.80	0.4
														BW06	35.51	332	P	34	53.90	-0.9
																1.0s	20.63nm	5.0mb		
														TNP	36.50	319	P	35	03.10	0.0
														CCH	36.65	144	P	35	03.50	-1.1
														IMW	37.01	332	P	35	07.00	-0.5
														KVN	37.63	320	P	35	13.00	0.4
														CMB	38.54	317	ePd	35	20.80	0.7
														LRM	39.18	332	ePc	35	25.70	0.2
														ORV	40.09	318	ePd	35	33.00	0.2
														WDC	41.31	319	e(P)	35	42.40	-0.4
														LBFM	41.32	320	P	35	42.30	-0.9
														SES	42.23	338	ePc	35	49.50	-0.8
																pP	36	08.00	75kmX	
														DPW	43.37	330	P	35	58.80	-0.8
														FFC	43.49	348	iPc	35	59.10	-1.3
																1.1s	44.00nm	5.2mb		
														LON	44.48	327	P	36	08.10	-0.5
														PNT	45.05	331	eP	36	13.00	-0.1
																pP	36	32.00	77kmX	
														SCH	45.22	17	ePc	36	12.10	-2.2
																0.6s	32.00nm	5.3mb		
														EDM	45.36	339	iPc	36	14.00	-1.5
														FRB	52.83	11	ePc	37	09.20	-3.5X
														YKA	53.39	345	P	37	15.10	-1.7
														INK	62.97	343	eP	38	21.50	-2.1
														MBC	65.83	352	eP	38	40.00	-2.0

11d 22h

0.8s 8.00nm 4.7mb
 DAG 73.05 13 eP 39 22.70 -3.5X
 CLL 86.88 38 eP 41 02.00 21.5X
 KHC 87.85 40 eP 41 04.00 18.7X
 BJI 123.10 338 ePKP 46 47.00 -5.6X
 Z 14s 0.59um 5.4mszX
 N 12s 0.67um
 TIY 126.49 340 ePKP 46 54.60 -4.8X
 N 12s 0.60um
 XAN 130.98 342 PKP 47 02.60 -5.4X
 WRA 139.03 254 PKPd 47 24.20 0.7
 0.5s 3.10nm
 WARB 144.98 242 ePKP 47 23.00 -10.8X
 HYB 147.25 25 ePKP 47 47.50 9.8X
 CHG 148.09 348 ePKP 47 41.00 2.0
 BDT 149.60 347 ePKP 47 44.00 2.7
 KKM 149.83 307 ePKPd 47 47.50 5.5X
 GBA 150.11 30 PKPc 47 44.20 2.0
 1.2s 8.30nm
 S.D. = 1.1 on 68 of 79 obs.

* JAN 11, 1989 22h 56m 16.24 ± 1.66s
 51.214 N ± 17.6km 15.698 E ± 8.8km
 DEPTH = 10.0km (geophysicist)
 POLAND (548)
 ML 3.6 (VKA), 3.5 (KBA).

KSP 0.53 134 iPd 56 24.70 -2.2
 iS 56 33.50
 PRU 1.43 211 Pn 56 42.70 0.5
 Pg 56 44.50
 eSn 57 01.50
 eSg 57 08.00
 CLL 1.70 274 iPn 56 44.00 -2.0
 iPg 56 46.80
 iSg 57 12.80
 KHC 2.49 214 iPn 56 58.50 1.0
 iPg 57 04.00
 Sn 57 33.50
 Sg 57 41.50
 MDX 2.64 259 ePg 57 07.00 7.3X
 eSn 57 35.00
 iSg 57 46.00
 WET 2.75 222 ePn 57 01.70 0.5
 KRA 2.94 112 iPd 57 05.80 2.0
 iS 57 42.90
 VKA 2.98 172 iPgd 57 12.30 7.9X
 iSg 57 55.70
 ZST 3.16 163 eP 57 32.40 25.5X
 i 57 58.70
 e 58 10.80
 GRF 3.24 244 e(Pn) 57 08.40 0.3
 e(Pg) 57 22.50
 e 57 34.70
 eSg 58 06.70
 SPC 3.56 123 eP 57 21.00 8.3X
 e 58 06.90
 KBA 4.42 201 ePnc 57 24.50 -0.5
 iPg 57 40.50
 i 58 45.20
 DDU 7.15 265 P 58 03.80 0.5
 S.D. = 1.6 on 9 of 13 obs.

& JAN 11, 1989 23h 34m 26.50s
 33.185 N 115.593 W
 DEPTH = 1.0km
 SOUTHERN CALIFORNIA (43)
 <PAS-P>. ML 3.2 (PAS).

HAY 0.52 356 iPd 34 35.30 -1.6
 GLA 0.66 101 ePc 34 37.60 -2.0
 TPC 0.99 336 iPd 34 43.10 -3.1
 PLM 1.08 279 iPc 34 44.20 -3.5
 PEC 1.49 299 eP 34 52.50 -2.0
 5 obs. associated

? JAN 11, 1989 23h 38m 45.96 ± 1.49s
 46.249 N ± 31.6km 153.842 E ± 21.6km
 DEPTH = 33.0km (normal)
 4.7mb (7 obs.)
 KURIL ISLANDS (221)

KUSJ 7.23 247 eP 40 29.50 -2.5
 eS 41 45.90
 HOOJ 8.50 247 eP 40 50.00 0.4
 eS 42 20.10
 CN2 20.18 273 eP 43 22.40 2.2

TIY 31.64 269 eP 45 08.40 0.3
 LZH 38.41 273 eP 46 06.50 0.4
 1.5s 33.00nm 4.9mb
 CD2 41.34 266 eP 46 31.00 0.8
 INK 41.81 32 eP 46 34.00 0.5
 GYA 42.10 259 P 46 37.00 0.4
 YKA 51.03 37 P 47 47.00 0.7
 CHG 52.50 258 eP 47 59.20 1.2
 GUN 55.55 276 P 48 20.20 -0.6
 KKN 56.04 276 P 48 24.30 0.2
 0.6s 8.00nm 4.9mb
 PKI 56.09 276 P 48 24.10 -0.5
 0.5s 2.00nm 4.4mb
 GKN 56.35 277 P 48 25.90 -0.4
 0.6s 8.00nm 4.9mb
 FFC 60.80 40 eP 48 56.50 -0.2
 0.9s 12.00nm 5.0mb X
 NAO 69.14 342 P 49 48.40 -2.1
 0.9s 4.20nm 4.5mb
 KHC 78.91 335 P 50 47.00 -0.3
 GRF 79.08 336 eP 50 48.60 0.4
 1.1s 8.00nm 4.6mb
 KBA 80.81 334 e(P) 50 57.00 -0.7
 0.8s 2.90nm 4.3mb
 S.D. = 1.1 on 19 of 19 obs.

* JAN 12, 1989 01h 04m 37.56 ± 0.86s
 10.425 N ± 14.2km 86.227 W ± 10.8km
 DEPTH = 33.0km (normal)
 4.3mb (2 obs.)
 OFF COAST OF COSTA RICA (77)
 MD 4.2 (HDC).

JUD 0.72 111 iPc 04 50.80 -0.5
 RIN3 0.91 66 iPc 04 54.90 0.8
 S 05 14.00
 JTS 1.26 96 iPc 04 59.00 0.0
 CAO 1.32 123 ePc 04 58.70 -1.1
 S 05 20.80
 EPA 1.66 105 ePc 05 04.80 0.0
 PTCR 1.88 109 ePc 05 07.70 -0.5
 POA2 1.96 97 ePd 05 10.00 0.6
 HDC2 2.10 101 iPd 05 11.80 0.5
 QPS 2.30 116 eP 05 13.50 -0.4
 IRZ2 2.34 101 ePd 05 15.10 0.3
 CDM 2.57 109 P 05 18.40 0.1
 DVD 4.22 118 ePc 05 42.30 1.1
 JSC 24.17 10 P 09 52.70 0.8
 RSCP 25.07 1 P 10 00.00 -0.6
 MEO 26.74 337 eP 10 17.90 1.8
 e 10 24.90
 e 10 35.50
 TUL 26.82 343 eP 10 15.70 -1.1
 0.8s 8.30nm 4.4mb
 LNO 26.82 343 eP 10 15.60 -1.0
 RLO 26.84 344 P(P) 10 15.20 -1.8
 ALQ 30.59 326 P 10 51.70 0.7
 0.7s 2.54nm 4.1mb
 GOL 33.76 333 P 11 19.00 0.3
 TNP 39.11 320 P 12 06.20 2.3
 KVN 40.25 320 P 12 14.80 1.5
 YKA 55.87 345 P 14 13.80 -0.3
 INK 65.48 343 eP 15 18.00 -1.3
 MBC 68.18 352 eP 15 34.00 -2.3
 ASPA 139.59 246 ePKP 23 49.90 -14.6X
 0.7s 11.00nm
 KKN 141.13 12 PKP 23 59.00 -8.4X
 FORR 142.22 232 ePKP 23 44.50 -24.4X
 GBA 151.14 35 PKP 24 31.00 7.2X
 S.D. = 1.2 on 25 of 29 obs.

* JAN 12, 1989 01h 04m 39.52 ± 1.42s
 4.207 S ± 12.9km 129.446 E ± 12.2km
 DEPTH = 42.1 ± 15.5 km
 4.6mb (3 obs.)
 BANDA SEA (280)

AAI 1.35 292 ePd 05 02.00 -0.2
 eS 05 19.00
 e 30 11.00
 TLE 3.59 113 ePd 05 35.00 0.9
 MTN 8.74 169 eP 06 46.00 -0.4
 WRA 16.35 163 Pd 08 23.90 -3.9X
 1.0s 3.90nm 3.5mb X
 OIS 19.02 150 eP 08 59.00 -1.9
 MBL 19.27 208 eP 09 04.30 0.6
 ASPA 19.82 168 eP 09 09.20 -0.5

eS 12 45.00
 WARB 22.02 187 eP 09 22.50 -9.6X
 NANU 22.68 215 iPd 09 40.50 1.9
 0.7s 38.00nm 5.0mb
 CTA 22.74 135 iPd 09 39.90 0.6
 0.8s 11.94nm 4.4mb
 CHG 37.76 308 eP 11 54.70 1.2
 GBA 54.56 290 Pd 14 04.70 -1.5
 0.7s 4.40nm 4.6mb
 HYB 54.62 295 eP 14 05.50 -1.2
 MAIO 76.51 309 eP 16 28.00 0.6
 ZOBO 153.24 140 PKP 24 37.50 9.1X
 S.D. = 1.4 on 12 of 15 obs.

JAN 12, 1989 02h 55m 35.91 ± 0.18s
 46.467 N ± 3.9km 153.631 E ± 2.9km
 DEPTH = 33.0km (normal)
 5.6mb (69 obs.) 4.9msz (4 obs.)
 KURIL ISLANDS (221)
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 14S, 26C
 Centroid Location:
 Origin Time 02:55:36.3 0.8
 Lat 46.35N 0.08 Lon 153.75E 0.10
 Dep 15.0 FIX Half-duration 1.8
 Moment Tensor; Scale 10**17 Nm
 Mrr = 0.96 0.05 Mtt = 0.09 0.06
 Mff = -1.05 0.06 Mrt = 0.30 0.16
 Mrf = 0.63 0.17 Mtf = -0.47 0.06
 Principal Axes:
 T Vol = 1.17 Plg = 73 Azm = 305
 N 0.26 4 201
 P -1.42 16 110
 Best Double Couple: Mo = 1.3*10**17
 NP1: Strike = 194 Dip = 29 Slip = 82
 NP2: 23 61 95

KUSJ 7.18 245 P 57 17.20 -4.1X
 S 58 33.50
 ASAJ 8.10 257 P 57 34.80 0.8
 HOOJ 8.45 245 P 57 37.10 -1.8
 eS 59 06.90
 MRRJ 9.85 250 P 57 55.80 -2.4
 eS 59 42.00
 ADMJ 11.29 243 P 58 12.30 -5.5X
 S 00 13.80
 OFUJ 11.47 234 P 58 15.00 -5.3X
 S 00 14.00
 YAMJ 13.02 235 eP 58 34.40 -6.7X
 S 00 53.80
 NIJ 14.26 235 P 58 54.10 -3.3X
 KAKJ 14.38 229 eP 58 56.80 -2.1
 CHJJ 15.12 232 eP 59 01.90 -6.8X
 MAT 15.20 235 eP 59 06.00 -3.7X
 1.0s 51.00nm 4.7mb
 Z 20s 2.84um 3.9msz
 eS 01 58.00
 MTMJ 15.40 236 eP 59 01.80 -10.6X
 IIDJ 16.14 233 eP 59 20.90 -0.9
 MDJ 16.93 272 P 59 30.50 -1.2
 Z 16s 4.10um
 N 18s 3.70um
 TSRJ 17.18 237 P 59 34.30 -0.6
 CN2 20.02 273 Pc 00 03.80 -4.7X
 E 17s 4.20um
 SHNJ 21.06 242 P 00 20.40 1.1
 SNY 21.99 269 Pc 00 26.40 -2.2
 Z 16s 4.10um 4.9mszX
 N 16s 1.90um
 E 16s 2.30um
 S 04 30.00
 KUMJ 22.33 240 eP 00 33.80 1.7
 KAGJ 23.26 237 eP 00 42.40 1.2
 DL2 24.58 264 Pd 00 54.60 0.6
 N 14s 1.80um
 S 05 13.00
 BJI 27.83 270 eP 01.24.00 0.0
 8.0s 0.71nm 2.4mb X
 Z 16s 3.20um 5.0mszX
 N 13s 0.77um
 E 13s 1.30um
 eS 06 16.00
 TIA 29.03 263 P 01 35.00 0.1
 N 17s 1.20um
 E 17s 1.30um
 eS 06 26.00

KHC 78.69 335 iPd 23 10.00 0.5
1.0s 7.00nm 4.6mb
GRF 78.87 336 eP 23 11.20 0.8
1.2s 26.00nm 5.1mb
ENN 79.25 340 eP 23 13.00 0.6
1.0s 22.00nm 5.1mb
KBA 80.60 334 iPd 23 20.60 0.6
1.2s 26.00nm 5.1mb
PTJ 80.82 332 eP 23 20.50 -0.5
CDF 81.10 338 eP 23 23.30 0.8
1.0s 13.60nm 4.9mb
SKO 82.27 326 eP 23 28.00 -0.6
VAY 82.39 325 eP 23 29.00 -0.1
LOR 83.01 340 eP 23 32.30 0.0
0.8s 5.30nm 4.7mb
AVF 83.58 340 eP 23 34.20 -1.0
0.9s 6.50nm 4.8mb
SMF 83.60 340 eP 23 34.60 -0.7
0.9s 16.30nm 5.2mb
LPG 83.93 337 eP 23 36.90 -0.5
MAF 84.30 340 eP 23 38.30 -0.6
1.0s 16.00nm 5.1mb
S.D. = 1.1 on 47 of 49 obs.

? JAN 12, 1989 04h 29m 21.90± 8.96s
43.693 N ± 46.4km 127.258 W ± 54.9km
DEPTH = 10.0km (geophysicist)
OFF COAST OF OREGON (30)
CL 3.1 (SEA).

KMOR 3.32 53 eP 30 14.20 -0.8
NLO 3.61 47 eP 30 19.34 0.2
GT2 3.86 66 eP 30 22.45 -0.2
PGO 3.86 61 eP 30 22.73 0.1
BMW 3.99 44 eP 30 23.78 -0.6
eS 31 14.69
RVW 4.04 51 eP 30 25.17 0.1
VLMM 4.16 62 eP 30 26.87 0.0
TDH 4.23 66 eP 30 27.72 -0.2
MTMW 4.28 55 eP 30 28.69 0.0
FL2 4.29 53 eP 30 28.99 0.2
VBEM 4.29 69 eP 30 28.52 -0.3
CZM 4.34 49 eP 30 29.40 -0.1
OBH 4.35 32 eP 30 29.70 0.2
SHW 4.35 53 eP 30 30.11 0.4
VLL 4.36 64 eP 30 30.03 0.2
JLK 4.38 54 eP 30 30.14 0.1
CPW 4.38 40 eP 30 29.39 -0.7
APW 4.40 46 eP 30 30.02 -0.3
ESD 4.41 54 eP 30 30.87 0.4
VFP 4.45 67 eP 30 31.33 0.2
APM 4.47 61 eP 30 31.20 -0.1
KOSW 4.53 51 eP 30 32.68 0.5
OOW 4.58 27 eP 30 33.01 0.2
LMW 4.60 48 eP 30 33.21 0.0
GULW 4.61 59 eP 30 33.60 0.3
CWZ 4.65 51 eP 30 34.03 0.2
S.D. = 0.3 on 26 of 26 obs.

JAN 12, 1989 05h 23m 30.33± 0.75s
8.523 S ± 7.0km 112.948 E ± 9.4km
DEPTH = 147.8 ± 7.5 km
4.8mb (10 obs.)

JAVA (277)
TRT 0.87 339 iPd 23 55.60 1.6
eS 24 40.00
KHKI 2.64 87 iPd 24 13.00 -0.5
iS 24 40.10
e 30 31.00
NANU 14.18 170 iPd 26 44.90 -0.8
eS 29 13.00
MBL 14.21 153 eP 26 44.00 -2.1
0.3s 13.00nm 4.8mb
eS 29 09.00
MTN 18.37 105 eP 27 35.00 -1.6
COOL 23.53 162 eP 28 27.70 -0.5
e 28 50.00
eS 32 49.00
WB5 23.60 121 iPd 28 29.90 0.9
WRA 23.61 121 Pc 28 29.70 0.7
0.6s 17.20nm 4.7mb
ASPA 25.08 129 iPd 28 42.80 -0.1
e 33 33.50
CHG 30.47 333 eP 29 31.90 0.5

CTA 34.18 113 iPc 30 04.10 0.4
STK 35.33 135 iPc 30 13.90 0.7
ADE 35.35 142 iPc 30 14.20 0.8
1.0s 28.00nm 5.0mb
SHL 39.60 329 iP 30 49.40 0.2
SSE 40.18 11 P 30 54.30 0.8
1.0s 28.00nm 4.9mb
CD2 40.19 348 P 30 54.10 0.4
GBA 41.55 302 Pd 31 03.50 -1.5
0.9s 2.70nm 3.9mb
BRS 42.03 122 iPd 31 10.50 1.5
GUN 44.69 325 Pc 31 30.70 0.0
PKI 44.70 324 P 31 30.30 -0.5
0.6s 13.00nm 4.7mb
DMN 44.91 324 Pc 31 31.90 -0.4
0.6s 40.00nm 5.2mb
KKN 44.94 324 Pc 31 32.20 -0.4
0.8s 29.00nm 5.0mb
LZH 45.19 350 eP 31 35.00 0.7
2.0s 55.00nm 4.8mb
GKN 45.48 324 Pc 31 36.20 -0.5
TIY 46.00 359 eP 31 40.00 -0.5
BJI 48.41 3 eP 31 58.50 -0.7
BTO 48.95 357 eP 32 03.60 0.1
HHC 49.14 359 eP 32 04.80 -0.2
GTA 49.22 347 iPc 32 06.00 0.3
MDJ 54.99 14 eP 32 46.00 -2.3
SPA 81.53 180 e(P) 35 33.40 0.9
1.0s 5.00nm 4.2mb
ITR 146.71 240 ePKP 42 51.90 -3.5X
e 42 57.90
BAO 149.46 218 ePKP 43 02.00 2.2
S.D. = 1.1 on 32 of 33 obs.

* JAN 12, 1989 05h 34m 16.66± 0.66s
36.233 N ± 10.6km 71.672 E ± 10.7km
DEPTH = 33.0km (normal)
4.7mb (5 obs.)

AFGHANISTAN-USSR BORDER REGION (717)
QUE 7.21 215 eP 36 03.00 0.4
eS 38 08.00
NDI 8.86 147 ePn 36 26.50 1.1
eSn 37 54.00
MAIO 9.84 274 eP 36 33.00 -5.9X
eS 38 25.00
GKN 13.70 123 P 37 30.40 -0.7
DMN 14.27 123 P 37 38.00 -0.7
0.5s 21.00nm 5.0mb
KKN 14.28 122 P 37 37.60 -1.1
0.5s 17.00nm 4.9mb
PKI 14.50 123 P 37 41.10 -0.7
0.6s 31.00nm 5.0mb
GUN 14.61 121 P 37 42.80 -0.4
SHL 20.30 116 eP 38 54.50 1.8
HFS 43.61 322 eP 42 17.40 -1.7
0.5s 1.40nm 4.0mb
NAO 45.09 323 P 42 29.70 -1.4
0.6s 1.30nm 4.0mb
MBC 67.58 3 eP 45 13.00 1.6
INK 74.08 9 eP 45 51.50 0.8
YKA 81.49 3 P 46 32.50 1.0
S.D. = 1.3 on 13 of 14 obs.

JAN 12, 1989 05h 59m 03.69± 0.59s
19.334 N ± 12.4km 68.439 W ± 8.6km
DEPTH = 33.0km (normal)
4.8mb (12 obs.)

NORTH ATLANTIC OCEAN (402)
APR 1.84 118 P 59 44.00 10.6X
MGP 1.84 136 P 59 40.00 6.5X
CSB 2.40 115 P 59 49.20 7.7X
SJJ 2.49 119 iP 59 05.20 -37.6X
S 59 37.20
LPR 2.64 112 P 59 52.50 7.6X
PAC 7.23 116 eP 00 50.50 0.6
S 01 24.00
MGG 7.59 115 eP 00 57.00 2.1
BBL 7.65 119 eP 00 55.00 -0.7
BIM 8.52 123 eP 01 06.39 -1.5
BLA 20.67 332 P 04 07.00 23.6X
TUL 29.19 310 eP 05 05.10 0.8
0.7s 10.30nm 4.7mb
SCH 35.44 2 ePc 06 03.20 4.5X
0.5s 23.00nm 5.4mb
ALO 36.98 303 eP 06 11.50 -0.7

1.0s 3.25nm 4.1mb
e 06 43.00
RSON 37.27 333 P 06 16.20 2.1
0.7s 7.88nm 4.7mb
BW06 41.71 313 P 06 51.50 0.1
FRB 44.38 360 eP 07 16.00 3.5X
LRM 44.75 316 eP 07 17.10 1.0
TNP 46.12 305 P 07 26.30 -0.7
KVN 46.97 306 P 07 32.30 -1.4
YKA 53.48 335 P 08 22.60 -0.1
FLN 61.23 44 iPc 09 17.90 0.1
MFF 61.37 47 iPc 09 18.80 0.0
0.4s 7.30nm 5.2mb
LDF 61.46 45 iPc 09 19.50 0.1
EPF 61.68 51 eP 09 21.20 0.2
0.6s 7.20nm 5.0mb
LPO 62.28 49 eP 09 24.60 -0.3
MBC 62.48 348 eP 09 25.00 -0.8
RUF 62.51 48 eP 09 26.20 -0.3
DAG 62.55 11 iPc 09 26.40 0.2
0.5s 6.34nm 5.0mb
CAF 62.90 49 eP 09 28.70 -0.4
0.5s 2.40nm 4.6mb
KIC 63.12 93 (P) 09 25.40 -5.5X
LOR 64.12 46 iPc 09 36.20 -0.8
0.5s 5.80nm 4.9mb
LPG 66.19 48 eP 09 50.60 -0.2
0.7s 4.40nm 4.7mb
NAO 68.10 31 P 10 01.40 -0.7
0.8s 3.10nm 4.5mb
BNG 85.71 87 ePc 11 37.00 -4.3X
0.5s 5.00nm 5.0mb
GTA 120.54 11 ePKP 17 58.50 4.6X
CD2 129.49 9 ePKP 18 08.00 -3.3X
GYA 134.23 6 PKP 18 21.80 1.3
S.D. = 1.0 on 25 of 37 obs.

JAN 12, 1989 06h 13m 56.09± 0.44s
40.436 N ± 6.5km 122.594 E ± 6.5km
DEPTH = 33.0km (normal)
4.9mb (11 obs.)

NORTHEASTERN CHINA (658)
ML 4.7 (BJI).
SNY 1.58 28 iPnc 14 22.00 0.0
iPg 14 23.80
Sg 14 42.80
DL2 1.70 206 Pn 14 24.00 0.2
Pg 14 25.00
Sg 14 48.80
CN2 3.98 31 Pn 14 55.20 -1.0
iPg 15 08.40
Sn 15 40.60
Sg 15 59.00
BJI 4.93 267 Pn 15 08.50 -1.3
Z 12s 1.80um
N 10s 0.82um
E 10s 1.30um
Sg 16 26.00
TIA 6.02 227 ePn 15 30.70 5.5X
Sg 16 59.70
MDJ 6.65 49 ePg 15 58.00 24.1X
eSg 17 24.00
TIY 8.36 254 Pc 15 58.20 0.2
HHC 8.40 276 eP 15 59.00 0.4
SSE 9.39 187 eP 16 12.20 0.1
N 10s 0.85um
eS 17 56.00
Lg 18 47.00
e 19 05.50
BTO 9.58 275 eP 16 15.50 0.6
Z 13s 1.20um
E 11s 0.70um
LZH 15.35 260 eP 17 31.50 -0.6
2.0s 27.00nm 4.1mb
KMI 22.55 233 eP 18 56.00 1.2
GUN 32.61 259 P 20 26.30 -0.9
0.7s 20.00nm 5.1mb
KKN 33.13 259 P 20 30.80 -0.8
0.7s 16.00nm 5.0mb
PKI 33.15 259 P 20 30.90 -1.0
0.6s 12.00nm 5.0mb
DMN 33.35 259 P 20 32.90 -0.7
0.5s 13.00nm 5.1mb
GKN 33.50 260 P 20 33.80 -0.9
0.9s 37.00nm 5.3mb
GBA 47.60 249 Pc 22 33.00 2.3

12d 06h

0.8s 2.80nm 4.3mb
 INK 57.88 25 eP 23 46.00 -0.6
 WB5 61.00 167 eP 24 07.50 -1.0
 WRA 61.06 167 Pd 24 07.70 -1.2
 0.8s 5.70nm 4.8mb
 YKA 67.65 25 P 24 51.90 0.4
 BRG 69.81 320 e(P) 25 06.60 1.7
 ZST 69.89 317 e(P) 25 08.60 3.1X
 CLL 69.98 321 iPc 25 07.50 1.5
 1.4s 2.00nm 4.0mb
 KHC 71.11 319 P 25 12.70 -0.3
 PVC 71.81 134 iPc 25 05.50 -11.9X
 GRF 71.90 320 eP 25 18.10 0.4
 1.0s 10.00nm 4.8mb
 e 25 21.20
 KBA 72.56 317 eP 25 21.50 -0.4
 1.0s 10.60nm 4.8mb
 i 25 23.60
 DZM 74.38 138 iPc 25 34.20 1.7
 S.D. = 1.0 on 26 of 30 obs.

JAN 12, 1989 06h 28m 34.82± 0.25s
 59.459 S ± 7.2km 25.847 W ± 7.3km
 DEPTH = 33.0km (normal)
 5.2mb (10 obs.)

SOUTH SANDWICH ISLANDS REGION (153)

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 10S, 20C

Centroid Location:

Origin Time 06:28:42.3 0.7

Lat 59.78S 0.15 Lon 25.60W 0.36

Dep 15.0 FIX Half-duration 1.7

Moment Tensor: Scale 10**16 Nm

Mrr=-0.31 0.62 Mtt=0.21 0.56

Mff=-0.51 0.77 Mrt=-2.44 1.21

Mrf=-9.86 1.00 Mtf= 2.82 0.70

Principal Axes:

T Vol= 11.04 Plg=43 Azm=116

N -1.05 15 12

P -9.99 43 267

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

NP1: Strike=281 Dip=15 Slip= -1

NP2: 12 90 -105

SPA 30.71 180 ePc 34 48.80 0.2
 1.0s 45.00nm 5.2mb
 e 34 54.50
 MAW 37.01 140 eP 35 42.00 -0.4
 1.0s 38.00nm 5.2mb
 BMA 38.96 333 eP 36 03.00 3.7X
 LNV 39.18 290 eP 36 00.50 -0.5
 SAN 39.23 291 eP 36 02.00 0.5
 PEL 39.50 292 iP 36 04.50 0.8
 BAO 46.68 330 eP 37 02.50 0.4
 PRY 48.73 72 eP 36 57.00 -21.1X
 SLR 50.12 72 iPc 37 24.20 -4.6X
 1.2s 34.38nm 5.2mb
 CCH 51.15 308 P 37 36.20 -0.7
 ITR 51.48 344 iPc 37 38.60 -0.4
 e 37 40.40
 e 37 45.10
 CNCB 52.42 306 P 37 47.00 0.2
 LPB 52.72 306 P 37 49.00 0.2
 1.0s 74.00nm 5.6mb
 ZOBO 52.97 306 P 37 50.60 -0.2
 1.0s 55.00nm 5.5mb
 LR 55 52.00
 ARE 54.22 302 iP 38 00.00 0.3
 BUL 55.02 69 iPc 38 04.80 -0.6
 0.6s 5.67nm 4.8mb
 LIC 67.54 22 Pc 39 30.48 0.7
 0.6s 17.00nm 5.4mb
 KIC 67.73 23 Pc 39 31.50 0.6
 0.6s 11.00nm 5.1mb
 TIC 67.95 22 Pc 39 32.98 0.7
 0.6s 9.00nm 5.1mb
 BNG 72.67 47 iPd 40 02.10 1.1
 0.9s 27.00nm 5.2mb
 i 40 20.50
 ADE 85.05 167 e(P) 41 07.60 -0.5
 CAN 85.47 176 eP 41 11.00 0.8
 BWA 86.34 175 eP 41 15.20 0.7
 FORR 87.47 158 eP 41 20.70 0.8
 DMN 123.95 93 PKP 47 31.00 0.1
 0.7s 7.00nm
 GKN 124.03 92 PKP 47 30.70 -0.3

0.5s 8.00nm
 PKI 124.07 93 PKP 47 31.20 -0.1
 0.6s 6.00nm
 KKN 124.18 93 PKP 47 31.40 0.1
 0.6s 7.00nm
 GUN 124.59 93 PKP 47 32.50 0.2
 0.6s 10.00nm
 FRB 127.09 338 ePKP 47 35.00 -0.5
 DAG 136.05 2 iPc 47 51.50 -0.7
 0.8s 5.22nm
 YKC 139.08 315 ePKPc 47 57.80 -0.4
 0.9s 20.00nm
 YKA 139.14 315 PKP 47 58.40 0.1
 ALE 142.98 353 ePKP 48 02.00 -2.7
 0.7s 13.00nm
 INK 148.85 317 ePKP 48 14.00 -0.6
 BJI 149.31 112 ePKP 48 21.00 4.8X
 S.D. = 0.7 on 32 of 36 obs.

% JAN 12, 1989 07h 53m 06.00± 1.36s
 31.480 N ± 10.1km 35.716 E ± 13.6km
 DEPTH = 10.0km (geophysicist)
 DEAD SEA REGION (373)

MKRJ 0.10 318 Pd 53 08.70 0.0
 MASJ 0.25 0 P 53 11.60 0.3
 QUTJ 0.31 126 Pd 53 12.50 0.0
 BURJ 0.73 3 Pc 53 20.30 -0.1
 JARJ 0.78 14 P 53 21.10 -0.2
 S.D. = 0.2 on 5 of 5 obs.

* JAN 12, 1989 10h 11m 42.48± 0.68s
 10.543 N ± 12.9km 125.989 E ± 15.6km
 DEPTH = 33.0km (normal)
 4.7mb (1 obs.)

LEYTE, PHILIPPINE ISLANDS (256)

WB5 31.34 165 eP 18 02.20 -0.1
 OIS 33.68 157 eP 18 22.00 -0.8
 FORR 41.20 177 eP 19 26.00 0.2
 GUN 41.39 300 P 19 28.00 0.1
 KLB 42.63 190 eP 19 38.00 0.5
 GBA 47.52 279 Pd 20 16.60 -0.3
 0.4s 3.10nm 4.7mb
 BWA 49.53 156 eP 20 35.80 3.6X
 DZM 51.23 129 iPc 20 45.80 0.4
 MBC 85.51 13 eP 24 18.00 0.0
 S.D. = 0.5 on 8 of 9 obs.

* JAN 12, 1989 10h 35m 48.48± 1.46s
 18.743 S ± 21.1km 178.046 W ± 16.4km
 DEPTH = 419.7 ± 17.2 km
 4.6mb (5 obs.)

FIJI ISLANDS REGION (181)

AFI 7.70 52 eP 37 41.00 -0.4
 S 39 02.00
 DZM 14.91 255 iPc 39 03.30 1.9
 BRS 28.14 247 iPd 41 08.00 1.6
 CAN 33.48 234 eP 41 52.70 0.4
 BWA 33.62 236 eP 41 52.20 -1.3
 TOO 36.92 232 eP 42 22.00 1.0
 STK 38.54 242 iPc 42 35.80 1.4
 BFD 39.02 234 eP 42 35.00 -3.2X
 MTN 49.13 269 eP 43 57.00 -1.0
 FORR 49.93 245 eP 44 03.30 -0.6
 0.4s 39.00nm 5.1mb
 WARB 51.33 251 iPc 44 02.40 -11.9X
 COOL 55.91 245 eP 44 45.50 -1.7
 MBL 58.11 256 iPd 45 01.40 -1.0
 0.4s 10.00nm 4.6mb
 KLB 58.77 244 eP 45 05.50 -1.3
 NWA0 59.13 242 eP 45 08.50 -0.7
 MUN 60.06 243 eP 45 14.80 -0.7
 NANU 61.82 254 eP 45 26.90 -0.3
 0.3s 7.00nm 4.7mb
 MAT 68.78 323 (P) 46 10.00 -0.7
 SPA 71.37 180 e(P) 46 25.90 0.0
 0.5s 8.33nm 4.6mb
 ALO 86.34 51 eP 47 45.00 -1.0
 1.1s 4.43nm 4.2mb
 YKA 94.94 25 P 48 25.40 0.5
 CLL 146.35 347 iPc 54 42.00 2.0
 0.9s 19.00nm
 BRG 146.55 346 iPc 54 42.40 2.0
 1.0s 14.00nm
 PRU 147.24 345 ePKP 54 44.50 3.0X

KHC 148.27 345 PKPc 54 47.40 4.1X
 LOR 151.51 357 ePKP 54 53.70 5.5X
 0.5s 3.90nm
 SSF 151.73 358 ePKP 54 54.90 6.4X
 0.9s 11.40nm
 MAF 152.59 359 ePKP 55 09.20 19.5X
 0.8s 8.50nm
 S.D. = 1.3 on 21 of 28 obs.

% JAN 12, 1989 10h 39m 33.06± 1.05s
 44.109 N ± 7.4km 8.089 E ± 8.1km
 DEPTH = 10.0km (geophysicist)
 NORTHERN ITALY (545)
 ML 2.2 (GEN).

FIN 0.13 41 P 39 36.23 0.0
 S 39 38.03
 ROB 0.24 320 P 39 38.50 0.2
 S 39 42.03
 IMI 0.25 216 P 39 38.39 0.1
 S 39 42.13
 STV 0.57 284 P 39 44.46 -0.2
 S 39 52.45
 PZZ 0.81 300 P 39 48.89 0.0
 S 40 00.14
 RRL 1.24 311 P 39 56.13 -0.1
 S.D. = 0.2 on 6 of 6 obs.

* JAN 12, 1989 11h 25m 42.94± 0.96s
 46.264 N ± 20.5km 153.939 E ± 14.6km
 DEPTH = 33.0km (normal)
 4.8mb (10 obs.)

KURIL ISLANDS (221)

KUSJ 7.30 248 eP 27 28.10 -1.8
 eS 28 45.30
 ASAJ 8.26 259 eP 27 44.90 1.5
 HOOJ 8.56 247 eP 27 46.70 -0.8
 eS 29 20.00
 MRRJ 9.98 252 eP 28 06.50 -0.6
 eS 29 53.80
 MAT 15.26 236 eP 29 23.00 5.5X
 1.0s 27.00nm 4.5mb X
 BJI 28.05 271 eP 31 41.00 8.0X
 Z 16s 0.30um 4.0MsZ X
 INK 41.76 32 eP 33 30.00 -0.1
 MBC 44.86 20 eP 33 58.00 2.8
 YKA 50.97 37 P 34 43.00 0.1
 PNT 55.06 53 eP 35 12.00 -1.6
 GUN 55.61 276 P 35 18.60 0.4
 0.5s 8.00nm 5.0mb
 KKN 56.10 276 P 35 22.50 0.9
 0.6s 8.00nm 4.9mb
 PKI 56.15 276 P 35 22.50 0.4
 0.8s 6.00nm 4.7mb
 DMN 56.34 276 P 35 24.00 0.7
 0.5s 5.00nm 4.8mb
 GKN 56.41 277 P 35 24.20 0.5
 0.6s 7.00nm 4.9mb
 DAG 57.16 358 eP 35 25.00 -3.2X
 FFC 60.74 40 iPd 35 52.90 -0.4
 0.9s 14.00nm 5.1mb
 WB5 68.18 200 eP 36 43.10 1.1
 HFS 69.11 340 eP 36 44.60 -2.7
 0.5s 2.80nm 4.6mb
 NAO 69.15 342 P 36 45.60 -1.9
 0.9s 7.00nm 4.7mb
 MLR 77.79 325 eP 37 37.50 -0.8
 KHC 78.92 335 P 37 44.50 0.2
 GRF 79.10 336 e(P) 37 48.10 2.9X
 0.7s 5.00nm 4.6mb
 BZS 79.33 328 eP 37 47.50 1.0
 KBA 80.83 334 e(P) 37 56.00 1.2
 1.3s 10.60nm 4.7mb
 i 38 04.40
 S.D. = 1.4 on 21 of 25 obs.

? JAN 12, 1989 11h 45m 27.52± 1.50s
 46.936 N ± 29.8km 153.725 E ± 24.9km
 DEPTH = 33.0km (normal)
 4.6mb (7 obs.)

KURIL ISLANDS (221)

MAT 15.53 234 eP 49 06.00 0.4
 0.7s 8.90nm 4.1mb
 YKA 50.52 37 P 54 24.60 0.5
 KKN 55.89 276 P 55 04.90 0.3

0.5s 7.00nm 4.9mb
 PKI 55.94 275 P 55 04.10 -1.0
 DMN 56.12 276 P 55 05.90 -0.4
 GKN 56.19 276 P 55 06.30 -0.4
 0.5s 4.00nm 4.7mb
 FFC 60.33 40 eP 55 34.00 -1.1
 0.8s 8.00nm 4.9mb
 HFS 68.43 340 eP 56 26.60 -1.1
 0.6s 2.10nm 4.4mb
 NAO 68.46 341 P 56 27.90 0.0
 0.9s 5.20nm 4.6mb
 KBA 80.16 334 eP 57 38.50 2.7
 0.7s 2.40nm 4.3mb
 e(Sg) 01 20.00
 S.D. = 1.3 on 10 of 10 obs.

% JAN 12, 1989 12h 06m 23.17 ± 3.14s
 15.724 N ± 11.3km 60.500 W ± 24.9km
 DEPTH = 10.0km (geophysicist)
 LEEWARD ISLANDS (92)
 ML 2.9 (FDF).

MGG 0.81 284 eP 06 39.40 0.5
 S 06 49.60
 BBL 0.96 258 eP 06 41.40 -0.1
 S 06 53.40
 CRM 1.04 203 iPd 06 43.05 0.2
 S 06 56.70
 FDF 1.17 213 iP 06 44.99 0.0
 S 06 59.90
 PAG 1.18 285 eP 06 44.80 -0.4
 S 06 59.50
 SEG 1.18 305 eP 06 45.10 -0.1
 MVM 1.22 198 iP 06 45.89 -0.1
 S 07 01.60
 BIM 1.32 205 iPc 06 47.53 -0.1
 S.D. = 0.3 on 8 of 8 obs.

& JAN 12, 1989 12h 50m 04.50s
 40.455 N 125.528 W
 DEPTH = 5.0km (geophysicist)
 OFF COAST OF NORTHERN CALIFORNIA (34)
 <BRK>. ML 3.5 (BRK).

FHC 1.22 73 iPc 50 26.20 -1.6
 iS 50 41.30
 WDC 2.28 86 iPc 50 41.30 -2.1
 iS 51 08.30
 LTCM 2.61 94 eP 50 46.30 -1.8
 LBFM 2.90 71 eP 50 51.00 -1.4
 MIN 3.00 91 ePc 50 50.90 -2.8
 eS 51 27.30
 ORV 3.22 105 ePc 50 54.80 -1.9
 eS 51 29.50
 PCC 3.84 139 eP 51 01.80 -3.7
 ARN 4.40 134 eP 51 10.00 -3.5
 SAO 4.88 138 e(P) 51 15.50 -4.8
 KVN 5.89 101 eP 51 34.00 -0.8
 10 obs. associated

JAN 12, 1989 13h 27m 42.57 ± 1.55s
 3.320 S ± 7.9km 130.520 E ± 9.0km
 DEPTH = 46.2 ± 15.0 km
 4.9mb (10 obs.)

CERAM (272)
 AAI 2.35 261 eP 28 22.40 2.9
 eS 29 00.00
 TLE 3.20 136 ePc 28 32.90 1.3
 MTN 9.48 176 eP 29 57.00 -2.6
 eS 31 41.00
 WB5 16.88 167 eP 31 34.50 -2.8
 eS 34 35.00
 PMG 17.60 111 e(P) 31 45.00 -1.2
 OIS 19.28 153 eP 32 05.00 -1.6
 e 32 15.00
 eS 35 30.00
 MBL 20.56 210 eP 32 18.00 -2.0
 0.3s 5.00nm 4.3mb
 CTA 22.66 139 iPd 32 42.70 1.6
 1.0s 18.00nm 4.5mb
 iS 36 52.00
 WARB 23.04 189 eP 32 34.00 -10.8X
 NANU 24.02 216 eP 32 54.60 0.3
 0.5s 25.00nm 5.0mb
 COOL 28.81 197 eP 33 38.00 -0.6
 RMO 28.92 145 eP 33 40.00 0.4

BAL 30.12 204 eP 33 50.10 -0.2
 STK 30.26 161 eP 33 52.00 0.5
 IPM 30.50 285 ePc 33 54.80 1.0
 KLB 30.58 202 eP 33 54.00 -0.3
 0.6s 13.00nm 4.9mb
 MUN 31.52 204 eP 34 02.90 0.3
 NWA0 31.97 201 iPd 34 06.40 -0.1
 PSI 32.14 280 ePc 34 08.20 0.0
 0.6s 9.90nm 4.8mb
 e 35 20.00
 ADE 32.39 167 eP 34 12.10 1.9
 BWA 35.14 154 eP 34 36.50 2.5
 CAN 36.15 154 eP 34 44.20 1.7
 GYA 37.53 323 P 34 54.20 -0.1
 CHG 38.07 306 eP 35 00.20 1.4
 TIY 44.14 339 Pc 35 47.90 -0.7
 CN2 47.13 355 eP 36 11.60 -0.5
 SHL 47.18 310 iP 36 12.00 -1.0
 LSA 49.97 314 P 36 34.40 -0.5
 GTA 51.05 329 eP 36 41.80 -0.7
 GUN 53.00 309 Pc 36 57.10 -0.5
 PKI 53.20 308 Pc 36 58.20 -0.9
 0.6s 10.00nm 5.0mb
 KKN 53.41 308 P 36 59.90 -0.6
 0.6s 19.00nm 5.3mb
 DMN 53.46 308 P 37 00.50 -0.4
 0.7s 31.00nm 5.4mb
 GKN 54.01 308 Pc 37 04.10 -0.7
 0.6s 34.00nm 5.6mb
 HYB 55.24 294 eP 37 13.00 -0.8
 GBA 55.28 289 Pc 37 12.90 -1.1
 0.6s 3.60nm 4.6mb
 MAIO 76.80 308 eP 39 33.00 1.4
 MBC 97.94 13 eP 41 14.00 -0.4
 KIC 135.33 276 (PKP) 47 02.80 2.6
 CNCB 152.91 138 PKPd 47 40.00 9.6X
 ZOBO 153.19 137 PKP 47 40.50 9.7X
 S.D. = 1.4 on 38 of 41 obs.

% JAN 12, 1989 14h 08m 37.46 ± 2.18s
 43.117 N ± 15.7km 18.755 E ± 15.4km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 MD 2.2 (TTG).

BRY 0.27 216 iPgd 08 42.80 -0.3
 iSg 08 46.80
 PLE 0.51 65 ePg 08 48.00 0.1
 eSg 08 55.50
 HCY 0.70 196 ePg 08 51.40 0.2
 eSg 09 02.50
 TTG 0.78 151 ePg 08 50.80 -1.9
 eSg 09 01.40
 BDV 0.83 176 ePg 08 53.50 -0.1
 eSg 09 04.50
 ULC 1.21 162 ePg 09 02.00 2.0
 eSg 09 19.00
 S.D. = 1.6 on 6 of 6 obs.

JAN 12, 1989 17h 00m 10.35 ± 0.33s
 44.517 N ± 3.4km 11.026 E ± 3.4km
 DEPTH = 10.0km (geophysicist)
 NORTHERN ITALY (545)
 ML 2.7 (LDG), 2.6 (KBA).

MME 0.40 216 P 00 19.00 0.4
 BDI 0.55 214 P 00 21.50 0.0
 eSg 00 29.20
 FIR 0.76 167 e(Pg) 00 22.00 -3.1X
 iSg 00 37.00
 PGD 0.81 142 P 00 26.10 -0.1
 eSg 00 38.80
 SFI 0.84 135 P 00 27.10 0.5
 PII 0.87 205 P 00 26.80 -0.3
 CRE 1.11 143 P 00 31.00 -0.3
 SAL 1.15 342 Pd 00 33.40 1.6
 eSn 00 51.50
 BOB 1.15 283 P 00 32.50 0.5
 eSg 00 49.20
 RSM 1.18 119 P 00 32.70 0.3
 eSg 00 49.30
 MDI 1.57 324 P 00 39.90 1.7
 eSn 01 00.40
 CTI 1.59 16 P 00 40.50 1.8
 ARV 1.72 126 P 00 41.00 0.5
 eSn 01 02.50
 ASS 1.87 140 P 00 41.70 -1.0

VAI 2.09 311 P 00 45.30 -0.5
 FVI 2.41 30 P 00 51.10 0.7
 eSn 01 20.20
 ORD 2.43 298 P 00 51.00 0.2
 CVF 2.50 220 Pn 00 51.80 0.1
 Sn 01 21.30
 VOY 2.53 52 ePn 00 49.70 -2.5
 ePg 01 10.20
 eSn 01 19.60
 e(Sg) 01 41.50
 SBF 2.66 257 Pn 00 55.30 1.2
 Sn 01 27.20
 CEY 2.70 62 eP 00 55.00 0.4
 e(Sn) 01 35.00
 KBA 3.03 32 iPgc 01 07.20 7.8X
 iSn 01 34.30
 iSg 01 51.20
 LPG 3.19 289 Pn 01 01.80 0.1
 LPL 3.20 290 Pn 01 02.30 0.4
 FRF 3.30 255 Pn 01 03.40 0.3
 Sn 01 42.90
 LMR 3.47 252 Pn 01 05.70 0.2
 Sn 01 46.20
 BSF 4.43 320 Pn 01 18.70 -0.5
 CDF 4.68 328 Pn 01 21.70 -1.0
 HAU 4.76 319 Pn 01 22.60 -1.3
 KHC 4.94 20 eP 01 43.10 16.8X
 SMF 5.47 295 Pn 01 33.40 -0.5
 LBF 5.52 299 Pn 01 32.70 -1.8
 LOR 5.71 301 Pn 01 36.10 -1.1
 S.D. = 1.0 on 30 of 33 obs.

* JAN 12, 1989 17h 12m 58.58 ± 0.52s
 6.979 N ± 9.4km 82.484 W ± 15.0km
 DEPTH = 10.0km (geophysicist)
 SOUTH OF PANAMA (83)
 MD 4.4 (HDC).

DVD 1.45 1 iPc 13 24.20 -0.6
 PBC 1.53 339 iPc 13 26.00 0.0
 S 13 44.30
 TIG 2.20 339 iPc 13 36.40 0.7
 S 14 03.40
 CDM 2.86 334 iPc 13 45.70 0.2
 S 14 19.70
 OPS 2.91 326 iPc 13 45.40 -0.4
 IRZ2 3.28 335 iPc 13 52.00 0.5
 PTCR 3.39 326 ePc 13 52.30 -0.5
 S 14 31.80
 HDC2 3.44 332 iPc 13 54.10 0.7
 EPA 3.65 325 ePd 13 56.50 0.2
 CAO 3.75 316 ePc 13 57.00 -1.0
 JUD 4.38 316 ePc 14 06.40 -0.4
 ARE 25.71 155 e(P) 18 33.00 1.9
 ZOBO 27.12 148 P 18 44.00 -0.5
 Z 24s 0.60um 4.1MsZx
 LR 26 36.00
 LPB 27.36 149 eP 18 36.00 -10.5X
 CNCB 27.65 149 eP 18 48.00 -1.3
 YKA 60.18 343 P 23 08.60 -0.1
 INK 69.87 342 eP 24 12.00 0.7
 MBC 72.11 351 eP 24 24.00 -0.7
 KKN 143.47 18 PKP 32 40.00 3.8X
 S.D. = 0.8 on 17 of 19 obs.

% JAN 12, 1989 18h 32m 55.73 ± 0.78s
 37.468 N ± 7.1km 3.947 W ± 6.5km
 DEPTH = 10.0km (geophysicist)
 SPAIN (377)
 MG 2.7 (MDD).

AFC 0.39 123 iP 33 04.00 0.3
 eS 33 10.40
 EBAN 0.71 10 iP 33 09.50 -0.2
 iS 33 19.50
 MAL 0.83 207 iPnd 33 10.80 -0.9
 iSg 33 22.20
 EHOR 1.09 289 eP 33 15.90 -0.3
 eS 33 31.00
 EPRU 1.14 244 eP 33 17.90 0.8
 EVAL 2.23 274 eP 33 33.50 0.3
 S.D. = 0.8 on 6 of 6 obs.

JAN 12, 1989 18h 58m 21.87 ± 0.30s
 44.522 N ± 3.1km 11.139 E ± 3.0km
 DEPTH = 10.0km (geophysicist)
 NORTHERN ITALY (545)

	PP	56 44.00		ORV	59.29 64 eP	57 41.70 0.1	POO	69.99 276 iPc	58 52.10 0.7
	S	01 08.00		TRO	59.30 343 iP	57 41.00 -0.3		iS	08 02.60
	sS	01 24.00		SOD	59.41 339 iP	57 39.40 -2.7	BER	70.16 344 iP	58 52.80 1.1
	SS	03 50.00		FFC	60.36 40 iPd	57 48.60 -0.2	ODD1	70.35 343 iP	58 53.80 0.8
	ScS	05 15.20			1.0s 41.00nm	5.5mb	BOM	70.44 277 iP	58 54.70 0.7
GZH	40.18 248 eP	55 16.00 0.3		ARN	60.61 66 P	57 55.00 4.2X		iS	08 05.80
Z	17s 12.80um	5.8MszX		LRM	60.74 53 eP	57 51.70 -0.1	GBA	70.96 270 Pc	58 56.00 -1.2
E	18s 16.30um			CMB	60.90 64 eP	57 52.20 -0.6		1.0s 40.60nm	5.4mb
HKC	40.22 246 iP	55 18.00 2.0		NDI	60.92 282 iPc	57 52.00 -0.9	ALO	71.36 59 eP	59 00.00 0.3
BAG	40.97 234 eP+	55 22.00 -0.4			0.8s 102.61nm	6.0mb	Z	1.2s 44.14nm	5.4mb
INK	41.33 32 eP	55 25.00 0.4		KJF	61.59 336 iP	57 56.00 -1.0	Z	20s 2.31um	5.4Msz
	0.9s 4.70nm	4.2mb X			0.5s 21.10nm	5.5mb	TEH	72.46 304 ePc	59 05.00 -1.2
CD2	41.42 266 P	55 25.80 -0.1		Z	16s 27.50um	6.5MszX	COP	72.88 338 iPc+	59 09.50 1.5
	N 15s 22.40um				ePPP 01 52.00		Z	0.9s 154.62nm	6.0mb
GYA	42.25 258 iPc	55 33.00 0.2			eS 06 16.00		Z	22s 4.07um	5.7Msz
	4.0s 3.20nm	3.4mb X			eScS 07 52.00		MUD	72.97 340 iPd	59 08.00 -0.5
N	15s 25.40um				eSS 10 24.00			0.6s 26.00nm	5.4mb
E	15s 9.80um			KVN	61.67 62 P	57 57.00 -1.2	RMO	73.08 185 eP	59 10.00 0.5
MBC	44.38 20 eP	55 50.00 0.6		IPM	61.90 244 ePd	58 00.10 0.5		e	59 22.00
	0.6s 25.00nm	5.2mb		FRI	61.98 65 e(P)	58 00.60 0.7	SCH	73.09 23 eP	59 09.00 -0.4
QIZ	45.36 248 Pc	56 00.00 2.1		KGM	62.52 240 eP	58 06.00 2.3	WAR	73.41 332 eP	59 12.00 0.8
N	14s 5.60um			GDH	62.52 11 ePc	58 02.00 -1.1	Z	18s 23.00um	6.5Msz
E	14s 7.50um				1.6s 73.33nm	5.6mb		e	03 40.00
WMQ	45.41 292 P	55 57.20 -1.0			Z	20s 7.45um		e	08 40.00
	9.0s 3.40nm	3.3mb X		MTN	62.78 205 iPc	58 05.20 -0.1	TAB	73.60 308 iPc	59 13.00 0.2
Z	18s 27.40um	6.2Msz		IMW	62.79 54 P	58 06.10 0.5	BRS	73.84 181 iPc	59 15.30 1.4
E	14s 47.90um			TNP	62.82 62 P	58 04.00 -1.8	IAS	75.30 325 eP	59 22.00 -0.2
	PcS 01 31.10			SUF	63.19 336 iP	58 05.50 -2.1	KRA	75.64 331 ePc	59 22.90 -1.2
KMI	45.78 260 iPc+	56 02.00 0.6			0.6s 26.30nm	5.5mb	Z	18s 12.90um	6.3Msz
N	14s 2.70nm	3.4mb X		DUG	64.10 58 P	58 14.80 0.7	N	18s 12.70um	
E	16s 8.20um			BW06	64.28 54 P	58 14.90 -0.5		i	59 25.50
	10.40um				1.0s 26.25nm	5.3mb		i	59 27.40
HON	46.33 106 P	56 15.00 9.5X		SBB	64.62 66 eP	58 19.00 1.5	SLY	75.86 307 iPd	59 26.00 0.4
DAV	46.42 221 eP	56 06.00 -0.2		PSI	64.67 245 ePd	58 17.50 -0.3		iPcP	59 34.50
YKA	50.57 37 P	56 38.40 0.5			1.0s 10.70nm	4.9mb		iS	09 09.00
RAB	50.78 182 e(P)	56 36.00 -4.0X		MWC	64.78 66 eP	58 22.00 3.4X	MEO	75.98 54 eP	59 25.30 -1.0
LSA	50.81 274 iPc	56 40.60 -0.1		FRB	64.84 19 eP	58 16.00 -2.3	BIR	76.04 325 eP	59 27.00 0.6
	E 17s 10.00um			GSC	64.86 65 eP	58 18.00 -1.0	PPE	76.08 325 ePc	59 26.50 -0.2
LOE	51.80 254 eP	56 46.50 -1.3		NUR	65.40 335 iP	58 20.20 -1.8	KSP	76.11 334 eP	59 25.00 -1.7
TSM	52.50 227 eP	56 53.00 0.8			0.5s 67.40nm	6.0mb	SPC	76.28 331 eP	59 27.50 -0.5
KBS	52.55 351 iP	56 52.00 -0.7			Z	18s 16.90um	EKA	76.43 347 P	59 29.00 0.5
CHG	52.65 257 iPc	56 54.00 -0.2						0.7s 30.80nm	5.4mb
	1.1s 82.28nm	5.6mb		TPC	66.11 65 eP	58 25.00 -2.0	ESK	76.45 347 eP	59 30.00 1.4
SHL	52.91 269 iP	56 55.40 -0.9		BAR	66.66 67 eP	58 31.00 0.5	SIO	76.51 52 eP	59 29.50 0.2
BDT	53.72 256 eP	57 01.90 -0.1		RSON	66.67 40 P	58 28.80 -1.5	KVT	76.53 317 iP	59 30.00 0.6
NST	54.10 254 eP	57 07.00 2.2			1.0s 27.50nm	5.3mb	MSL	76.55 309 ePd	59 29.50 0.0
RMW	54.55 56 P	57 12.00 4.0X		QUE	66.72 290 iPc+	58 31.00 -0.2		ePcP	59 38.50
PNT	54.77 53 eP	57 09.00 -0.5			eS 07 04.00			e	00 13.00
	1.0s 46.00nm	5.5mb		RGS	66.75 343 iP	58 30.00 -0.6		eP	02 13.00
KSH	55.17 293 Pc	57 12.00 -0.6		CTA	66.92 188 iPd	58 42.30 10.2X	CLL	76.65 336 iPc	59 29.20 -0.6
E	16s 54.50um				1.3s 65.38nm	6.3Msz	Z	1.1s 155.00nm	5.9mb
TLE	55.46 206 ePd	57 13.40 -1.3		MAIO	67.32 299 iPc+	58 34.00 -0.7		11.00um	6.2Msz
EDM	55.90 46 ePd	57 17.00 -0.6			iS (SSS) 07 24.00		LNO	76.67 51 ePc	59 29.50 -0.5
VSG	56.03 173 P	57 20.00 1.2			iS 14 53.00		TUL	76.67 51 ePc-	59 30.80 0.6
HNR	56.23 173 eP	57 20.00 -0.2		HYB	67.53 272 iPc	58 35.90 -0.3		1.2s 35.50nm	5.3mb
	0.9s 78.15nm	5.7mb			1.2s 114.30nm	5.8mb	Z	21s 11.14um	6.2Msz
PMG	56.27 188 e(P)	57 21.00 0.5		AKU	67.69 356 iP	58 38.40 2.0	WARB	76.70 205 iPd	59 20.10 -10.2X
NNT	56.63 251 iPd	57 24.00 0.8			0.9s 43.70nm	5.6mb	CFR	76.72 324 ePd	59 30.00 -0.2
DAG	56.63 358 iPc	57 19.80 -2.7		AFI	67.82 144 eP	58 40.00 2.1	VR1	76.72 325 ePd	59 30.00 -0.3
	0.9s 78.15nm	5.7mb		UPP	67.87 338 eP	58 35.00 -2.7	BRG	76.77 335 iP	59 29.80 -0.7
KEV	57.49 341 eP	57 21.00 -7.6X			1.8s 150.00nm	5.7mb		1.8s 150.00nm	5.7mb
	0.6s 15.60nm	5.2mb		QIS	68.26 194 eP	58 39.00 -1.5		i	59 41.30
Z	16s 18.10um	6.3MszX			e	58 51.00		eS	09 06.00
	eS 05 28.00			NRA0	68.57 341 P	58 40.80 -1.2	BRD	76.89 325 ePc	59 33.50 2.3
WDC	58.03 63 eP	57 32.90 0.0		HFS	68.61 340 eP	58 40.20 -2.1	RLO	76.89 51 eP	59 31.50 0.1
SES	58.71 48 ePd	57 36.60 -0.9			0.7s 124.40nm	6.1mb	VVO	77.13 52 eP	59 32.90 0.2
	eScS 07 20.00				Z	17s 13.76um	CJR1	77.18 327 eP	59 28.60 -4.2X
	LR 29 20.00			NAO	68.64 342 P	58 40.30 -2.2	MLR	77.34 325 ePd	59 34.00 0.1
					0.7s 63.40nm	5.8mb	PRU	77.39 334 Pd	59 34.50 0.6
				WB5	68.66 200 eP	58 42.60 -0.4		2.5s 294.10nm	5.9mb
					0.9s 58 55.20		Z	17s 15.30um	6.4MszX
				GOL	68.68 54 P	58 43.80 0.4	N	17s 18.80um	
					Z	20s 3.75um	E	16s 3.00um	
				GLD	68.73 54 P	58 43.00 -0.6		S	09 28.00
					Z	20s 5.00um	ISR	77.40 325 ePd	59 35.00 0.9
				HYA	69.28 344 iP	58 47.00 0.7	PSZ	77.50 330 eP	59 35.10 0.5
				DZM	69.47 168 iPc	58 48.10 0.1	WTS	77.62 340 iPd	59 35.70 0.6

MBH 86.04 310 iPd 00 20.50 1.1	SUF 63.53 336 iP 46 37.40 -0.9	BLHA 1.56 346 eP 25 14.23 0.9
AYN 86.16 309 ePd 00 21.30 1.3	HFS 68.93 340 eP 47 11.20 -1.5	KDC 6.14 51 eP 26 18.00 -0.2
VAM 86.53 321 eP 00 24.00 2.2	0.4s 2.30nm 4.6mb	SVW 7.59 22 eP 26 39.00 0.3
SOI 87.47 328 Pd 00 25.80 -0.4	NAO 68.96 342 P 47 12.00 -0.9	TTA 9.20 16 eP 26 59.00 -2.0
EPF 87.54 341 eP 00 26.10 -0.6	0.9s 3.30nm 4.4mb	PMR 9.87 36 eP 27 10.00 -0.1
ATN 87.61 328 P 00 24.20 -2.8	CLL 76.99 336 e(P) 48 01.00 0.9	TOA 11.27 39 eP 27 28.40 -0.9
HLW 87.78 313 eP+ 00 28.00 0.1	KHC 78.78 335 eP 48 08.40 -1.7	INK 19.22 32 eP 29 08.00 -3.2X
e 00 52.00	GRF 78.94 337 e(P) 48 14.60 3.7X	MBC 27.12 21 eP 30 28.00 -0.8
eS 10 56.00	1.1s 8.00nm 4.6mb	0.6s 6.00nm 4.4mb
USI 87.92 330 P 00 24.00 -4.4X	BZS 79.23 328 eP 48 13.00 0.5	KVN 32.78 100 eP 31 24.00 4.3X
MNO 88.09 329 P 00 30.00 0.5	KBA 80.69 334 eP 48 22.00 1.5	FRB 44.63 39 eP 32 58.00 0.0
ERC 88.72 330 P 00 32.84 0.5	0.7s 5.30nm 4.6mb	CN2 47.05 289 Pd 33 17.20 -0.2
LVI 88.85 331 P 00 33.02 0.1	i 48 24.30	DAG 47.17 11 iPc 33 16.80 -1.2
TAU 89.50 185 eP 00 52.00 16.5X	S.D. = 1.1 on 15 of 16 obs.	0.7s 6.16nm 4.7mb
e 11 04.00	JAN 12, 1989 21h 19m 15.28±0.59s	SOD 58.61 356 iP 34 41.40 -1.6
eS 10 45.00	46.206 N ± 5.5km 9.171 E ± 5.7km	SUF 63.28 356 iP 35 13.30 -1.3
TOL 91.49 343 eP 00 44.00 -0.2	DEPTH = 10.0km (geophysicist)	0.5s 5.00nm 4.9mb
LWI 115.02 296 e(Pd) 02 36.00 4.5X	SWITZERLAND (544)	LZH 64.22 296 eP 35 20.50 -0.9
BNG 115.57 309 ePKPd 06 23.00 1.4	1.6s 39.00nm	2.0s 55.00nm 5.3mb
i 07 19.10	TMA 0.23 244 iP+ 19 21.00 0.7	NAO 65.17 4 P 35 25.70 -1.2
i 07 40.90	VDL 0.35 36 iPc 19 22.90 0.3	0.8s 7.60nm 4.8mb
TIC 123.60 335 PKP 06 36.40 -0.5	VAI 0.44 220 Pc 19 24.60 0.4	NUR 65.55 357 iP 35 27.90 -1.4
KIC 123.79 334 PKP 06 36.80 -0.4	eSg 19 30.90	HFS 65.96 3 eP 35 30.60 -1.4
LIC 124.00 334 PKP 06 37.20 -0.4	MDI 0.57 138 Pd 19 26.50 -0.3	0.7s 14.40nm 5.2mb
BUL 128.44 282 iPKPc 06 45.50 -0.7	eSg 19 35.50	CD2 68.23 293 eP 35 47.00 0.1
SLR 132.43 277 iPKPc 06 54.50 0.9	LLS 0.67 350 ePc 19 28.30 -0.5	EKA 69.38 13 Pd 35 53.80 0.3
0.9s 12.60nm	OSS 0.83 54 ePd 19 31.30 -0.1	2.7s 276.60nm 5.8mb
Z 20s 18.44um 6.8Msz	MMK 0.85 260 ePc 19 30.80 -1.1	CLL 74.77 4 iPd 36 25.90 0.4
ZOBO 133.83 63 PKPd 06 57.50 0.4	SLE 1.63 344 ePd 19 44.70 0.6	BRG 75.24 3 iPd 36 28.40 0.2
1.5s 32.26nm	S.D. = 0.7 on 8 of 8 obs.	1.0s 14.00nm 4.9mb
Z 22s 1.71um 5.7Msz	* JAN 13, 1989 00h 04m 57.49±1.26s	MOX 75.37 5 iP 36 29.00 0.0
PKS 10 32.00	36.296 N ± 14.4km 69.399 E ± 12.4km	1.4s 21.00nm 4.9mb
eLR 52 30.00	DEPTH = 33.0km (normal)	PRU 76.14 3 P 36 33.80 0.5
LPB 134.05 63 PKP 06 59.30 2.0	4.3mb (4 obs.)	GRF 76.30 5 eP 36 35.40 1.1
Z 20s 2.13um 5.9Msz	HINDU KUSH REGION (718)	1.0s 6.00nm 4.6mb
PKS 10 26.00	QUE 6.43 199 eP 06 32.50 0.0	KHC 76.97 3 P 36 39.00 1.0
eLR 52 40.00	MAIO 8.00 273 ePn 06 49.00 -5.4X	1.0s 7.00nm 4.6mb
CNCB 134.34 63 PKP 06 59.20 1.2	eSn 08 12.00	ZST 77.98 1 eP 36 44.10 0.6
SEK 134.53 274 ePKP 06 58.90 1.3	NDI 10.06 137 eP 07 26.00 3.3X	KBA 79.01 4 iPc 36 50.30 0.8
0.6s 10.00nm	eS 09 11.00	0.8s 6.20nm 4.7mb
ITR 140.67 19 ePKP 07 02.40 -6.8X	GKN 15.31 118 P 08 31.80 -1.2	GUN 79.87 304 P 36 55.30 0.6
e 07 41.00	0.5s 17.00nm 4.5mb	0.5s 12.00nm 5.1mb
CER 143.27 275 ePKP 07 07.40 -5.8X	DMN 15.88 119 P 08 40.20 -0.2	KKN 80.26 304 P 36 57.20 0.6
0.5s 13.51nm	KKN 15.90 118 P 08 40.40 -0.2	0.5s 10.00nm 5.1mb
BAO 143.99 38 ePKP 07 11.50 -3.5X	0.5s 10.00nm 4.2mb	PKI 80.38 304 P 36 57.80 0.4
TCA 146.74 76 ePKPd 07 19.60 0.4	PKI 16.12 118 P 08 43.00 -0.5	0.6s 15.00nm 5.2mb
ITB1 148.42 55 e(PKP) 07 25.70 3.8X	0.6s 17.00nm 4.4mb	GKN 80.40 305 P 36 57.80 0.6
VAO 150.92 42 ePKP 07 32.00 6.1X	GUN 16.26 116 P 08 45.90 0.6	0.4s 10.00nm 5.2mb
BMA 151.89 37 ePKP 07 34.20 6.9X	0.4s 8.00nm 4.2mb	DMN 80.50 304 P 36 58.30 0.4
e 07 45.90	SHL 22.00 113 iP 09 52.70 1.9	0.6s 26.00nm 5.4mb
S.D. = 1.0 on 355 of 392 obs.	MBC 67.60 2 eP 15 52.00 -0.4	BZS 80.54 358 eP 36 58.00 0.6
? JAN 12, 1989 19h 54m 01.39±4.06s	S.D. = 1.1 on 8 of 10 obs.	MAIO 83.22 328 eP 37 12.00 0.3
20.944 N ± 14.2km 92.661 E ± 52.8km	JAN 13, 1989 01h 05m 35.03±0.57s	SKO 84.18 358 eP 37 16.00 0.2
DEPTH = 33.0km (normal)	46.338 N ± 5.2km 7.596 E ± 5.0km	OHR 85.05 358 eP 37 13.00 -7.8X
BURMA (296)	DEPTH = 10.0km (geophysicist)	HYB 92.31 304 eP 37 56.00 0.3
GUN 9.29 320 P 56 15.20 -1.2	SWITZERLAND (544)	GBA 96.12 303 Pd 38 13.00 -0.2
PKI 9.34 316 P 56 19.00 1.9	5.0mb (18 obs.)	0.7s 3.10nm 4.9mb
DMN 9.56 315 P 56 20.80 0.7	ALASKA PENINSULA (12)	BUL 145.16 343 PKPd 44 22.60 -0.6
KKN 9.57 317 P 56 18.90 -1.3	ML 4.0 (PMR).	1.0s 20.00nm
GKN 10.14 315 P 56 20.70 -7.2X	DIX 0.29 207 iPc 05 41.30 0.1	SLR 150.68 342 iPKPc 44 38.00 6.1X
KOD 18.08 236 eP 58 12.00 -0.2	MMK 0.38 138 iPd 05 42.70 -0.3	1.0s 10.00nm
eS 08 40.00	EMS 0.53 240 iP 05 45.90 0.0	S.D. = 0.9 on 43 of 47 obs.
PRY 79.04 236 eP 06 04.50 0.2	TMA 0.92 104 ePd 05 52.60 -0.1	* JAN 13, 1989 02h 10m 12.41±0.81s
S.D. = 1.5 on 6 of 7 obs.	LLS 1.10 61 ePc 05 55.90 0.0	6.289 S ± 11.7km 149.913 E ± 10.3km
? JAN 12, 1989 20h 36m 09.47±2.07s	VDL 1.30 83 ePd 05 59.70 0.4	DEPTH = 33.0km (normal)
46.554 N ± 32.5km 154.333 E ± 32.4km	SLE 1.56 23 ePd 06 02.80 0.0	NEW BRITAIN REGION (192)
DEPTH = 33.0km (normal)	FEL 1.57 10 ePn 06 02.82 -0.2	LAT 2.92 263 eP 10 57.50 0.0
4.7mb (9 obs.)	S.D. = 0.2 on 8 of 8 obs.	RAB 3.07 47 iPc 10 59.80 0.1
KURIL ISLANDS REGION (222)	JAN 13, 1989 01h 24m 47.56±0.53s	0.5s 1239.44nm
MAT 15.65 236 eP 39 48.00 -1.1	54.191 N ± 7.8km 161.396 W ± 6.9km	LMG 3.13 214 iPc 11 00.30 -0.5
INK 41.37 32 eP 43 54.00 0.6	DEPTH = 33.0km (normal)	BLLO 3.39 254 e(P) 11 04.00 -0.4
SHL 53.21 270 iP 45 27.00 0.0	5.0mb (18 obs.)	PMG 4.13 221 iPd 11 16.00 1.2
GUN 55.86 276 P 45 46.40 -0.1	ALASKA PENINSULA (12)	RMO 20.12 183 eP 14 46.00 -0.5
0.5s 5.00nm 4.8mb	ML 4.0 (PMR).	ASPA 23.14 220 eP 15 17.10 0.2
KKN 56.34 276 P 45 50.40 0.6	DLG 0.99 345 eP 25 04.58 -0.5	S.D. = 0.2 on 7 of 7 obs.
0.6s 11.00nm 5.1mb	NGI 1.15 42 eP 25 08.50 1.1	* JAN 13, 1989 03h 07m 56.09±1.53s
PKI 56.39 276 P 45 51.40 1.1	eS 25 22.83	54.349 N ± 15.5km 161.511 W ± 11.0km
0.6s 3.00nm 4.5mb	PS4 1.20 347 eP 25 08.23 0.2	DEPTH = 33.0km (normal)
DMN 56.58 276 P 45 52.70 1.1	PVV 1.21 349 iPd 25 08.42 0.2	ALASKA PENINSULA (12)
0.7s 12.00nm 5.0mb	eS 25 22.78	ML 4.0 (PMR).
GKN 56.65 277 P 45 51.90 -0.1	SASA 1.26 24 ePd 25 10.35 1.4	DLG 0.82 347 eP 08 11.00 -0.2
0.7s 13.00nm 5.1mb	eS 25 25.56	PS4 1.03 349 eP 08 14.82 0.6
	SDN 1.27 24 iP 25 10.40 1.4	eS 08 29.44

13d 03h

Table with columns for station name, magnitude, depth, and other parameters. Includes stations like PVV, NGI, PN6, SASA, KDC, TTA, YKA, MBC, KKN, GKN.

* JAN 13, 1989 03h 42m 09.39 ± 0.46s
26.891 S ± 12.5km 176.395 W ± 10.6km
DEPTH = 33.0km (normal)
5.4mb (5 obs.)
SOUTH OF FIJI ISLANDS (171)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 22C
Centroid Location:
Origin Time 03:42:16.6 1.0
Lat 26.795 0.10 Lon 176.57W 0.11
Dep 15.0 FIX Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr=6.24 0.41 Mtt=-2.52 0.61
Mff=-3.72 0.50 Mrt=-0.25 1.39
Mrf=7.15 1.80 Mtf=-0.25 0.44
Principal Axes:
T Val=9.98 Plg=62 Azm=267
N -2.53 2 0
P -7.46 28 91
Best Double Couple: Mo=8.7*10**16
NP1: Strike=186 Dip=18 Slip=96
NP2: 0 73 88

Table with columns for station name, magnitude, depth, and other parameters. Includes stations like RAO, AFI, DZM, PVC, RMQ, TAU, TOO, CTA, OIS, ASPA, WB5, DRV, FORR, WARB, MBL, NANU, IIDJ, MTMJ, TSRJ, PRS, GCC, PRI, FRI, CMB, ORV, WDC, MIN, PSI, WHN, CN2, TIA, NNT, ALO, GYA, BJI, TIY, LRM, XAN.

Table with columns for station name, magnitude, depth, and other parameters. Includes stations like KMI, CHG, CD2, LZH, KJF, SUF, BHD, MSL, UPP, NAO, HFS, KAS, BHL, PRNI, MBH, BBTk, IKL, BNG, VRI, KSP, MLR, SPC, CLL, BRG, BZS, KHC.

JAN 13, 1989 04h 14m 59.39 ± 0.43s
3.376 S ± 6.0km 130.488 E ± 10.0km
DEPTH = 33.0km (normal)
5.1mb (8 obs.)
CERAM (272)

Table with columns for station name, magnitude, depth, and other parameters. Includes stations like TLE, MTN, PCI, MKS, KNA, WB5, QIS, ASPA, MBL, CTA, TPI, WARB, NANU, MEKA, FORR, COOL, IPM, KLB, PSI, ADE, BWA, CAN, CHG, TIY, BJI, LZH, SHL, HHC, GTA.

Table with columns for station name, magnitude, depth, and other parameters. Includes stations like GUN, PKI, KKN, DMN, GKN, GBA, WMO, MAIO.

% JAN 13, 1989 04h 18m 21.32 ± 1.74s
62.968 N ± 13.5km 6.225 E ± 14.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 3.1 (BER).

Table with columns for station name, magnitude, depth, and other parameters. Includes stations like MOL, HYA, RGS, SUE, NSS, ODD1, NRA0, BLS1, KMY.

* JAN 13, 1989 04h 24m 27.35 ± 1.86s
5.941 S ± 11.3km 104.465 E ± 10.9km
DEPTH = 78.6 ± 15.5 km
5.1mb (16 obs.)
SOUTHERN SUMATERA (274)

Table with columns for station name, magnitude, depth, and other parameters. Includes stations like KSI, TPI, TRT, PSI, PCI, NNT, KUPT, MBL, CHG, WB5, GYA, GBA, ASPA, QIS, PKI, GUN, DMN, KKN, POO, GKN, XAN, CTA.

STK 43.22 131 iPc 32 22.60 0.1
 0.7s 25.00nm 5.2mb
 NDI 43.29 324 iPd 32 22.50 -0.5
 0.7s 95.89nm 5.7mb
 TIY 44.06 9 P 32 30.80 1.6
 GTA 45.33 355 eP 32 39.00 -0.4
 BJI 47.01 12 eP 32 52.00 -0.5
 BWA 49.47 131 eP 33 13.10 1.2
 WMO 51.80 345 P 33 28.00 -1.4
 CN2 53.02 19 Pd 33 37.80 -0.5
 MAIO 59.48 318 iPc 34 23.80 -0.9
 VRI 85.75 317 ePc 37 01.00 1.9
 MLR 86.21 316 ePc 37 03.00 1.5
 BNG 86.41 275 ePd 37 03.90 0.9
 0.4s 3.00nm 4.7mb
 VAY 87.82 312 eP 37 10.00 0.8
 OHR 89.11 311 eP 37 16.00 0.5
 BZS 89.22 316 eP 37 17.50 1.7
 KJF 89.58 335 iP 37 18.00 0.9
 0.7s 20.00nm 5.4mb
 SUF 89.91 333 iP 37 19.50 0.8
 0.7s 7.50nm 5.0mb
 NUR 90.13 331 eP 37 20.00 0.3
 HFS 95.49 330 eP 37 42.70 -1.7
 0.5s 1.40nm 4.7mb
 KIC 109.67 275 Pdiff 38 35.44 -13.5X
 0.9s 28.00nm
 LIC 109.94 274 Pdiff 38 33.64 -16.5X
 0.8s 20.00nm
 TIC 109.96 275 Pdiff 38 35.36 -14.9X
 0.9s 24.00nm
 SIO 144.72 30 ePKP 43 56.50 -0.6
 LNO 144.84 29 iPKPd 43 56.70 -0.5
 TUL 144.84 29 iPKP 43 57.00 -0.3
 0.7s 32.00nm
 Z 23s 0.22um 4.9mszX
 RLO 145.01 28 ePKP 43 57.00 -0.6
 VVO 145.33 30 ePKP 43 58.70 0.5
 S.D. = 1.2 on 42 of 49 abs.

* JAN 13, 1989 04h 26m 48.04 ± 1.14s
 38.531 S ± 9.2km 71.473 W ± 16.1km
 DEPTH = 33.0km (normal)
 5.0mb (1 abs.) 4.6msz (1 abs.)
 S. CHILE-ARGENTINA BORDER REGION(145)

LNv 4.57 1 ePd 27 56.40 -0.2
 iS 29 53.50
 CHCH 4.64 8 eP 27 59.00 1.4
 TACH 4.89 5 eP 28 01.00 -0.2
 PCH 4.96 9 iP 28 02.50 0.2
 SAN 5.11 8 ePd 28 04.00 -0.4
 FCH 5.28 11 iPd 28 08.70 1.7
 RTCV 7.08 21 e(P) 28 32.50 0.5
 RTCB 7.36 18 ePd 28 35.00 -1.0
 VBA 7.49 89 iPc 28 36.50 -1.2
 RTLL 7.60 20 e(P) 28 39.60 0.3
 RTRS 8.50 12 ePd 28 49.50 -2.3
 TCA 9.13 40 ePd 29 02.00 1.4
 (S) 31 11.70
 CCH 21.58 14 P 31 36.00 -1.3
 ARE 21.99 360 eP 31 41.00 -0.3
 LPB 22.12 9 P 31 44.00 1.3
 1.2s 140.63nm 5.3mb X
 S 35 48.00
 LR 39 14.00
 ZOBO 22.37 8 P 31 44.50 -1.0
 Z 19s 2.19um 4.6msz
 S 35 52.00
 LR 39 12.00
 BAO 30.77 49 eP 32 59.00 -3.9X
 CER 70.68 118 iPc 38 01.00 -1.6
 0.5s 8.11nm 5.0mb
 FRS 76.96 118 eP 38 43.00 3.9X
 ALO 79.97 331 eP 38 55.00 -0.5
 SLR 81.49 116 eP 39 05.50 1.7
 BUL 85.22 112 eP 39 24.20 1.3
 S.D. = 1.3 on 20 of 22 abs.

* JAN 13, 1989 05h 53m 18.03 ± 1.13s
 36.038 N ± 8.3km 30.006 E ± 15.8km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

ELL 0.71 354 iPn 53 31.60 -0.6
 iSg 53 46.60
 BCK 1.50 18 iPn 53 45.60 0.6

KHL 2.31 351 ePn 53 57.00 0.2
 IKL 2.98 85 ePn 54 06.00 -0.2
 KOT 6.28 165 ePn 54 53.00 0.0
 S.D. = 0.6 on 5 of 5 obs.

& JAN 13, 1989 06h 33m 27.41s
 47.660 N 122.195 W
 DEPTH = 0.0km

WASHINGTON (29)
 <SEA>. ML 2.1 (SEA). Felt at
 Bellevue, Kirkland and Mercer
 Island.

SPW 0.11 198 iP 33 30.51 0.9
 BLH 0.21 32 eP 33 31.77 0.2
 PGW 0.32 301 eP 33 34.21 0.5
 HTW 0.32 63 iP 33 33.67 -0.2
 eS 33 39.10
 RMW 0.33 127 eP 33 34.19 0.2
 eS 33 39.70
 GMW 0.42 255 eP 33 35.68 0.0
 JCW 0.56 18 iP 33 38.01 -0.6
 eS 33 46.42
 HDW 0.58 269 iP 33 38.07 -0.9
 BLN 0.63 304 eP 33 38.76 -1.2
 RVC 0.73 168 eP 33 41.31 -0.7
 CMW 0.77 4 eP 33 41.68 -1.0
 FMW 0.81 154 eP 33 42.10 -1.5
 SMW 0.85 247 eP 33 43.12 -1.2
 RPW 0.91 30 eP 33 44.28 -1.3
 CPW 0.94 223 eP 33 44.39 -1.7
 LMW 0.99 184 eP 33 45.40 -1.9
 APW 1.06 197 eP 33 46.17 -2.1
 WPW 1.06 155 eP 33 46.59 -1.8
 MCW 1.11 338 eP 33 47.17 -2.0
 MBW 1.14 10 iPc 33 48.50 -1.3
 GLK 1.17 160 eP 33 48.61 -1.6
 CWZ 1.18 174 eP 33 48.44 -1.9
 TBM 1.19 114 eP 33 49.43 -1.2
 KOSW 1.20 180 eP 33 48.79 -1.9
 CZM 1.24 190 eP 33 49.41 -2.1
 NAC 1.31 134 eP 33 52.01 -0.7
 EBG 1.34 124 iP 33 52.13 -1.0
 BMW 1.38 211 eP 33 51.48 -2.4
 28 abs. associated

& JAN 13, 1989 06h 34m 44.93s
 47.664 N 122.193 W
 DEPTH = 0.0km

WASHINGTON (29)
 <SEA>. ML 2.2 (SEA).

SPW 0.12 198 iPd 34 47.93 0.7
 eS 34 51.27
 BLH 0.20 32 eP 34 49.22 0.2
 PGW 0.32 300 eP 34 51.60 0.4
 HTW 0.32 64 iP 34 51.12 -0.2
 RMW 0.33 128 eP 34 51.60 0.0
 eS 34 57.65
 GMW 0.42 254 eP 34 53.24 0.0
 JCW 0.56 18 iP 34 55.42 -0.7
 eS 35 03.80
 HDW 0.58 269 eP 34 55.48 -1.1
 BLN 0.63 304 eP 34 56.14 -1.3
 RVC 0.74 168 eP 34 58.19 -1.5
 CMW 0.76 4 eP 34 59.35 -0.8
 FMW 0.81 154 iP 34 59.57 -1.6
 RPW 0.91 30 eP 35 01.43 -1.6
 CPW 0.94 223 eP 35 01.88 -1.8
 LMW 1.00 184 eP 35 02.90 -2.0
 TWW 1.04 120 eP 35 04.58 -1.0
 APW 1.06 197 eP 35 03.59 -2.2
 WPW 1.06 155 eP 35 04.42 -1.5
 MCW 1.10 337 eP 35 04.56 -2.0
 MBW 1.14 10 eP 35 05.90 -1.4
 GLK 1.17 160 eP 35 05.98 -1.8
 CWZ 1.18 174 eP 35 06.20 -1.7
 TBM 1.19 114 eP 35 06.98 -1.1
 KOSW 1.20 180 eP 35 06.20 -2.1
 NLW 1.32 71 eP 35 09.50 -0.8
 NAC 1.32 134 eP 35 10.38 0.1
 EBG 1.34 124 iPd 35 09 53 -1.1
 27 abs. associated

& JAN 13, 1989 06h 39m 14.73s
 47.663 N 122.196 W
 DEPTH = 0.0km

WASHINGTON (29)
 <SEA>. ML 2.2 (SEA). Felt at
 Bellevue, Juanita, Kirkland and
 Mercer Island.

SPW 0.11 197 iP 39 17.85 0.8
 BLH 0.21 32 eP 39 19.01 0.2
 PGW 0.32 300 eP 39 21.60 0.6
 HTW 0.32 64 iPc 39 20.96 -0.2
 eS 39 26.41
 RMW 0.33 127 eP 39 21.39 0.0
 eS 39 27.52
 GMW 0.42 254 eP 39 23.00 0.0
 GSM 0.53 149 eP 39 24.97 -0.4
 JCW 0.56 19 iPd 39 25.28 -0.6
 HDW 0.58 269 eP 39 25.42 -0.9
 GHW 0.62 185 eP 39 26.40 -0.8
 BLN 0.63 304 eP 39 26.09 -1.1
 OHW 0.70 341 eP 39 27.41 -1.3
 RVC 0.74 168 eP 39 27.87 -1.6
 CMW 0.76 4 eP 39 28.97 -1.0
 FMW 0.81 154 eP 39 29.37 -1.6
 RPW 0.91 30 eP 39 31.22 -1.7
 CPW 0.94 223 eP 39 31.67 -1.8
 APW 1.06 197 eP 39 33.43 -2.2
 WPW 1.06 155 eP 39 34.12 -1.6
 MCW 1.10 338 iP 39 34.44 -2.0
 MBW 1.14 10 eP 39 35.73 -1.4
 GLK 1.17 160 eP 39 35.89 -1.7
 CWZ 1.18 174 eP 39 36.15 -1.5
 TBM 1.19 114 eP 39 36.72 -1.2
 KOSW 1.20 180 eP 39 36.12 -2.0
 CZM 1.25 190 eP 39 36.73 -2.1
 EBG 1.34 124 eP 39 39.33 -1.1
 BMW 1.38 211 eP 39 38.89 -2.3
 28 abs. associated

* JAN 13, 1989 06h 40m 37.42 ± 1.80s
 3.705 S ± 22.5km 130.350 E ± 12.6km
 DEPTH = 45.6 ± 18.6 km
 CERAM (272)

AAI 2.15 270 e(P)c 41 11.50 0.0
 TLE 3.07 129 iPc 41 24.90 0.3
 0.1s 6.50nm
 iS 41 26.10
 e 52 46.70
 MTN 9.12 175 eP 42 49.00 -0.3
 eS 44 40.00
 WB5 16.55 167 eP 44 28.20 0.2
 eS 47 31.10
 OIS 19.02 152 eP 44 58.00 -0.5
 ASPA 20.14 171 iPd 45 11.40 0.7
 0.6s 46.00nm 5.0mb X
 eS 48 58.50
 CTA 22.49 138 eP 45 34.00 -0.3
 S.D. = 0.6 on 7 of 7 abs.

JAN 13, 1989 08h 11m 32.25 ± 0.52s
 6.761 S ± 3.5km 155.355 E ± 3.4km
 DEPTH = 73.6 ± 4.6 km
 5.5mb (21 obs.)

SOLOMON ISLANDS (193)
 Felt (IV) at Arawo and Panguna,
 Bougainville.
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 8S, 18C
 Centroid Location:
 Origin Time 08:11:36.1 0.5
 Lat 6.845 0.06 Lon 155.14E 0.05
 Dep 25.9 3.7 Half-duration 2.3
 Moment Tensor; Scale 10**17 Nm
 Mrr=-0.77 0.06 Mtt=-0.70 0.10
 Mff=-0.08 0.10 Mrt= 1.67 0.28
 Mrf=-2.32 0.33 Mtf= 0.86 0.06
 Principal Axes:
 T Val= 2.89 Plg=53 Azm= 66
 N 0.35 10 323
 P -3.24 35 225
 Best Double Couple: Mo=3.1*10**17
 NP1: Strike=275 Dip=14 Slip= 41
 NP2: 144 81 100

PAA 0.48 16 iPd 11 44.50 -0.9
 eS 11 57.00
 RAB 4.07 309 eP 12 35.00 1.5

13d 08h										
VSG	4.97 120	iS 13 28.00 iP 12 47.00 0.8	OPA	53.75 57 P	20 49.60 0.1	DEPTH = 33.0km (normal) 4.3mb (1 obs.)				
HNR	5.26 121	iS 13 47.00 eP 12 50.00 -0.2 eS 13 53.00	MDJ	56.16 338 eP	21 05.70 -0.9	S. CHILE-ARGENTINA BORDER REGION(145)				
LMG	7.45 253	eP 13 19.00 -1.6	PSI	57.11 278 ePd	21 10.80 -3.1X	LNV	4.72 3 eP	35 34.50 -0.5		
LAT	8.30 270	eP 13 31.00 -1.2 eS 14 54.00	GYA	57.60 307 P	21 18.20 0.9	TACH	5.06 7 eP	35 38.50 -1.3		
PMG	8.54 252	eP 13 36.00 0.6	NNT	58.52 289 iPc	21 23.70 0.0	PCH	5.14 11 eP	35 40.50 -0.6		
BLLQ	8.68 267	eP 13 37.00 -0.5	BJI	58.93 326 eP	21 40.00 13.9X	FCH	5.46 13 eP	35 47.50 1.7		
JAY	15.20 285	ePd 15 04.70 0.6	NST	59.05 293 iPd	21 07.90 -19.4X	VBA	7.67 88 iPd	36 16.20 -0.3		
	1.2s 317.10nm	5.4mb	TIY	59.63 321 eP	21 30.00 -1.2	TCA	9.36 41 ePd	36 40.30 0.3		
CTA	15.92 213	iPd- 15 14.20 0.9	Z 24s 0.80um	XAN	59.79 316 P	21 30.70 -1.5	ARE	22.14 1 eP	39 19.00 -0.1	
	1.3s 608.65nm	5.6mb		KMI	60.18 304 Pd-	21 37.00 1.7	LPB	22.29 9 eP	39 22.00 1.3	
				CHG	61.12 296 iPc	21 42.00 0.5		eLR	14 50.00	
					1.2s 97.66nm	5.8mb	ZOBO	22.55 9 P	39 23.00 -0.4	
								1.1s 13.05nm	4.3mb	
								LR	13 24.00	
								S.D. = 1.1 on 9 of 9 obs.		
PVC	16.70 132	iPc 15 27.00 3.9X	CD2	61.94 310 eP	20 45.80 -1.1	JAN 13, 1989 09h 20m 36.12± 0.71s				
DZM	18.61 146	iP 15 46.50 -0.1	BTO	62.89 323 eP	21 53.60 0.5	6.714 S ± 9.0km 155.353 E ± 7.2km				
OIS	20.52 227	iPd 16 06.40 -0.6	LZH	64.40 315 eP	22 02.50 -0.7	DEPTH = 75.2 ± 8.4 km				
					2.0s 55.00nm	5.1mb	4.2mb (3 obs.)			
RMQ	20.60 197	iPd 16 07.20 -0.5	GTA	68.81 317 eP	22 31.00 0.0	SOLOMON ISLANDS (193)				
	1.2s 485.00nm	5.7mb	SHL	69.49 300 iP	22 36.20 0.7	Felt (111) at Arawa and Panguna, Bougainville.				
					0.7s 33.00nm	5.4mb	PAA	0.43 19 iPd	20 48.40 -0.7	
								eS	20 59.00	
BRS	20.66 187	iPd 16 08.00 -0.4	LSA	71.44 304 P	22 46.60 -1.0	RAB	4.04 308 e(P)	21 45.00 8.1X		
			GUN	75.30 301 P	23 10.60 0.5		iS	22 41.00		
					0.9s 27.90nm	5.2mb	VSG	5.00 121 eP	21 51.00 0.6	
								eS	21 53.00	
							HNR	5.29 121 eP	21 55.00 0.6	
							PMG	8.55 251 eP	22 40.00 0.6	
							CTA	15.96 213 iPc	24 18.50 0.9	
								1.0s 20.00nm	4.2mb	
TLE	22.50 272	ePc 16 28.00 1.3	PKI	75.61 301 P	23 13.80 2.0	DZM	18.65 146 iPc	24 50.00 -0.8		
	0.6s 10.00nm	4.4mb X	KKN	75.78 301 P	23 12.90 0.3	OIS	20.55 226 eP	25 10.00 -1.0		
GUMO	22.74 333	eP 16 35.30 6.2X	GKN	76.39 301 P	23 16.40 0.5	RMQ	20.65 197 eP	25 11.00 -0.9		
COO	23.91 187	iPc 16 41.80 1.4	TTA	78.68 20 eP	23 27.80 0.0		e	25 15.00		
WB5	24.19 235	iPd 16 44.40 1.3	WMQ	78.90 317 P	23 30.00 0.7	WB5	24.21 235 iPd	25 48.10 1.0		
			HYB	79.53 289 ePc	23 33.50 0.3	MTN	24.62 254 eP	25 51.00 0.0		
MTN	24.61 254	iPc 16 48.10 0.9		1.0s 40.00nm	5.3mb	ASP	26.63 228 eP	26 08.40 -1.2		
	1.0s 563.00nm	6.0mb	GBA	79.93 285 Pd	23 35.20 -0.1		0.6s 7.00nm	4.4mb		
ASPA	26.60 229	iPd 17 04.90 -0.7		0.9s 27.90nm	5.2mb	GBA	79.92 285 P	32 40.00 1.1		
	1.1s 123.00nm	5.4mb	PMR	80.43 24 eP	23 36.80 -0.2		0.5s 1.60nm	4.2mb		
Z 22s 2.22um		4.7mszX		0.9s 45.80nm	5.4mb	MBC	95.35 14 eP	33 52.00 -0.7		
						YKA	95.92 28 P	33 56.00 0.5		
						BAO	147.94 134 ePKP	40 01.50 -10.8X		
							S.D. = 1.0 on 14 of 16 obs.			
KNA	27.53 249	iPd 17 14.00 -0.2	IMA	81.47 19 P	23 42.50 -0.1	JAN 13, 1989 09h 24m 39.60± 0.75s				
STK	28.10 205	eP 17 18.00 -1.1	TOA	81.89 24 eP	23 45.60 0.8	42.308 N ± 7.0km 19.286 E ± 6.7km				
			FBA	82.77 21 eP	23 48.20 -1.0	DEPTH = 10.0km (geophysicist)				
BWA	28.26 192	eP 17 19.90 -0.7	NDI	82.90 300 eP	23 51.00 0.3	YUGOSLAVIA (383)				
			SPA	83.28 180 ePc	23 52.90 0.8	MD 2.4 (TTG).				
CNB	28.95 190	eP 17 27.00 0.2		1.0s 25.00nm	5.1mb	TTG	0.12 351 iPgd	24 43.50 0.9		
CAN	29.02 191	eP 17 27.00 -0.4	BRW	84.03 14 P	23 55.60 0.1		iSg	24 48.00		
			POO	84.13 289 iPc	23 58.00 0.9	BDV	0.34 266 iPgc	24 47.10 0.4		
TOO	31.95 195	eP 17 53.00 -0.3	MAW	84.75 203 eP	24 00.00 0.8		iSg	24 54.00		
ADE	31.98 206	iPd 17 52.90 -0.7		1.0s 38.00nm	5.4mb	ULC	0.35 185 ePg	24 45.80 -0.9		
	0.8s 98.51nm	5.7mb	INK	89.38 21 eP	24 22.00 0.4		eSg	24 51.20		
BFD	32.45 199	iPc 17 52.20 -5.3X		1.0s 6.80nm	4.8mb	PVY	0.58 60 ePg	24 50.40 -1.1		
WARB	33.49 231	iPc 17 55.20 -11.6X	ISA	90.80 54 eP	24 30.00 1.1		eSg	25 00.00		
	1.0s 200.00nm		MWC	90.94 56 eP	24 30.00 0.2	HCY	0.60 284 ePg	24 51.30 -0.4		
FORR	35.02 223	iPc 18 19.00 -0.8	SBB	91.20 55 eP	24 31.00 0.2		eSg	25 01.50		
MKS	35.72 270	e(P)d 18 25.00 -0.9	RVR	91.48 56 eP	24 32.00 0.0	BRY	0.81 317 ePg	24 55.00 -0.3		
TAU	36.69 190	eP 18 34.00 0.2	CLC	91.52 54 eP	24 33.00 0.7		eSg	25 08.20		
MBL	37.21 244	iPd 18 37.90 -0.5	KVN	91.53 51 P	24 32.40 0.0	SKO	1.64 101 ePn	25 20.00 11.5X		
	0.3s 15.00nm	5.4mb	PLM	91.83 57 eP	24 35.00 1.1	OHR	1.65 136 ePn	25 10.20 1.5		
TSM	38.78 285	ePd 18 53.80 2.1	TNP	92.10 52 P	24 35.90 0.8		S.D. = 1.2 on 7 of 8 obs.			
MSZ	39.32 166	P 18 58.00 2.3	TPC	92.58 56 eP	24 37.00 -0.2	* JAN 13, 1989 11h 40m 34.64± 0.79s				
COOL	40.02 229	eP 19 01.00 -0.8	MBC	95.39 14 eP	24 49.00 -0.2	17.267 S ± 21.7km 65.010 W ± 8.5km				
MEKA	40.20 236	eP 19 03.00 -0.2		1.0s 28.00nm	5.7mb	DEPTH = 33.0km (normal)				
	0.8s 82.00nm	5.7mb	YKA	95.96 28 P	24 52.80 0.8	BOLIVIA (120)				
KKM	41.08 287	ePc 19 11.00 0.3	BW06	98.28 48 P	25 01.90 -1.3	CCH	1.09 269 iPd	40 54.00 0.1		
	1.0s 127.40nm	5.7mb		1.2s 8.39nm	5.1mb		1.1s 21.70nm	41 21.00 1.3		
BAG	41.40 304	eP 19 13.50 0.1	SUF	113.15 337 iPKP	30 01.70 -0.7	LPB	3.05 283 P	41 21.00 -1.0		
			FRB	115.02 20 ePKP	30 05.00 -1.0		i	41 28.00		
KLB	42.90 230	eP 19 25.00 -0.4	HFS	119.41 339 ePKP	30 13.20 -1.3	ZOBO	3.14 288 P	41 23.20 -0.3		
MRWA	43.28 234	eP 19 28.00 -0.4		0.4s 2.00nm		Z	16s 0.53um			
BAL	43.28 232	eP 19 20.00 -8.4X	NAO	119.88 341 PKP	30 15.00 -0.4		LR	42 28.00		
NWAO	43.91 228	eP 19 33.00 -0.5		0.8s 5.20nm		ARE	6.26 276 eP	42 12.00 4.6X		
MUN	44.26 230	eP 19 36.00 -0.3	BUL	121.21 242 ePKP	30 18.60 -0.7					
RKG	44.62 227	iPc 19 42.10 2.9	BRG	125.61 331 iPKP	30 27.10 0.3					
	0.7s 88.00nm	5.7mb		0.9s 16.00nm						
TPi	47.69 272	ePc 20 04.00 0.3	SKO	126.27 318 ePKP	30 28.00 -0.4					
			KHC	126.92 329 iPKPc	30 30.30 0.9					
KGM	52.66 278	ePc 20 41.20 -0.5	ASMO	144.09 331 iPKP	31 00.00 -1.7					
HON	53.59 57 P	20 40.00 -8.3X	AAPN	144.31 331 iPKP	31 00.50 -1.5					
Z 20s 2.13um		5.2msz	APHE	144.39 331 iPKP	31 01.00 -1.2					
			ALOJ	144.46 331 iPKP	31 01.00 -1.3					
			ATEJ	144.57 331 iPKP	31 01.50 -1.1					
			BMA	145.05 147 ePKP	31 02.90 -0.7					
				e	31 17.10					
				e	31 23.70					
			BAO	147.91 134 ePKP	31 09.50 1.0					
			ATB	150.71 109 e(PKP)	31 12.00 -0.8					
				S.D. = 0.9 on 104 of 113 obs.						
			? JAN 13, 1989 08h 34m 24.27± 3.19s							
			38.682 S ± 25.6km 71.707 W ± 24.2km							

ITB1 12.34 128 e(P) 43 31.50 0.6
 ITB 12.56 128 e(P) 43 33.00 -0.8
 ITB7 12.77 130 e(P) 43 33.10 -3.6X
 BAO 16.41 87 eP 44 24.50 0.3
 BMA 20.32 109 eP 45 15.90 5.0X
 S.D. = 1.0 on 7 of 10 obs.

* JAN 13, 1989 11h 43m 56.01 ± 0.91s
 47.618 N ± 14.9km 153.131 E ± 16.7km
 DEPTH = 33.0km (normal)
 4.8mb (10 obs.)

KURIL ISLANDS (221)

BJI 27.51 268 eP 49 50.00 8.8X
 Z 16s 0.59um 4.3mszX
 N 10s 0.34um
 eS 54 28.00
 LZH 37.88 271 eP 51 11.00 -0.7
 2.0s 41.00nm 4.9mb
 INK 40.91 33 eP 51 48.00 11.8X
 YKA 50.22 37 P 53 00.80 10.5X
 GUN 54.94 274 P 53 26.50 0.1
 KKN 55.42 275 P 53 30.20 0.5
 PKI 55.48 274 P 53 30.10 -0.2
 DMN 55.66 275 P 53 31.70 0.2
 1.1s 51.00nm 5.5mb
 GKN 55.72 275 P 53 31.80 0.0
 0.9s 39.00nm 5.4mb
 DAG 55.78 358 iPd 53 30.70 -0.7
 1.0s 9.00nm 4.8mb
 SUF 62.22 335 iP 54 16.60 0.4
 0.6s 4.40nm 4.8mb
 HFS 67.65 339 eP 54 51.10 -0.2
 0.4s 1.50nm 4.4mb
 NAO 67.69 341 P 54 50.40 -1.2
 0.9s 4.80nm 4.6mb
 DZM 70.39 167 iPd 55 08.50 -0.1
 SKO 81.08 326 eP 55 50.00 -19.0X
 LOR 81.77 339 eP 56 14.50 2.0
 0.8s 5.90nm 4.7mb
 SSF 82.05 340 eP 56 17.00 3.1X
 0.7s 2.20nm 4.3mb
 MAF 83.06 340 eP 56 22.40 3.2X
 0.8s 7.20nm 4.8mb
 S.D. = 0.9 on 12 of 18 obs.

JAN 13, 1989 12h 01m 55.89 ± 0.58s
 44.345 N ± 7.0km 7.310 E ± 6.3km
 DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)
ML 2.0 (GEN).

STV 0.10 174 P 01 59.42 0.7
 S 02 01.40
 DOI 0.17 344 P 02 00.40 0.7
 eSg 02 03.30
 PZZ 0.22 317 P 02 00.90 0.2
 ROB 0.41 97 P 02 04.39 0.2
 S 02 10.33
 FOUF 0.42 296 P 02 03.97 -0.5
 (Sg) 02 08.46
 IMI 0.60 136 P 02 07.55 -0.6
 S 02 16.07
 FIN 0.66 102 P 02 08.78 -0.3
 S 02 17.41
 RRL 0.69 327 P 02 09.20 -0.5
 TRI 4.77 71 eP 03 04.70 -4.9X
 S.D. = 0.6 on 8 of 9 obs.

JAN 13, 1989 12h 27m 22.40 ± 0.67s
 37.068 N ± 8.1km 22.084 E ± 6.2km
 DEPTH = 33.0km (normal)

SOUTHERN GREECE (368)
ML 3.1 (ATH). Felt in the
Kolomoi oreo.

ATH 1.58 55 ePn 27 47.50 -0.9
 VLS 1.62 313 ePn 27 51.10 2.0
 VAM 2.38 133 ePn 27 59.90 -0.1
 NEO 2.41 22 ePn 28 00.40 0.0
 KZN 3.24 356 ePb 28 17.00 4.8X
 NPS 3.38 121 ePn 28 16.00 1.9
 PLC 3.47 17 ePn 28 14.50 -0.9
 OHR 4.16 346 ePn 28 29.30 4.1X
 VAY 4.26 5 ePn 28 26.00 -0.6
 KAP 4.38 109 ePn 28 27.60 -0.8
 SOI 4.89 284 P 28 35.00 -0.5

SKO 4.92 354 ePn 28 37.00 1.0
 ATN 5.37 284 P 28 42.20 -0.1
 MEU 5.72 272 P 28 45.30 -2.0
 MGR 5.96 303 P 28 51.70 1.0
 S.D. = 1.3 on 13 of 15 obs.

JAN 13, 1989 13h 00m 51.94 ± 0.89s
 41.557 N ± 10.0km 22.279 E ± 7.0km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

VAY 0.32 137 iPg 00 58.70 0.1
 iSg 01 04.50
 SKO 0.75 304 eP 01 05.00 -1.7
 MMB 1.09 88 iPgC 01 11.00 -1.4
 OHR 1.20 249 eP 01 15.50 1.1
 VTS 1.24 33 iP 01 17.00 1.8
 PGB 1.72 54 eP 01 22.00 -0.1
 RZN 1.83 85 eP 01 24.00 0.1
 S.D. = 1.5 on 7 of 7 obs.

* JAN 13, 1989 13h 58m 13.98 ± 0.66s
 46.491 N ± 15.0km 154.240 E ± 7.9km
 DEPTH = 33.0km (normal)
 5.0mb (19 obs.)

KURIL ISLANDS REGION (222)

KUSJ 7.58 247 P 00 02.60 -2.3
 S 01 21.60
 ASAJ 8.51 258 eP 00 18.00 0.1
 MDJ 17.35 273 eP 02 10.50 -4.5X
 CN2 20.44 273 eP 02 49.20 -1.8
 HHC 31.09 275 eP 04 29.80 -1.5
 TIY 31.92 269 eP 04 39.40 0.8
 IMA 33.57 36 P 04 51.40 -1.3
 0.8s 5.75nm 4.5mb
 FBA 35.89 38 P 05 11.30 -1.1
 0.8s 9.48nm 4.8mb
 XAN 36.27 266 eP 05 15.70 -0.3
 LZH 38.67 273 eP 05 37.00 0.7
 2.0s 41.00nm 4.9mb
 INK 41.46 32 eP 05 59.00 0.4
 CD2 41.63 266 eP 06 01.60 1.0
 WMO 45.74 292 P 06 32.60 -1.2
 YKA 50.67 37 P 07 11.90 0.3
 CHG 52.82 258 eP 07 40.50 12.1X
 SHL 53.14 270 iP 07 30.50 -0.5
 GUN 55.80 276 P 07 51.00 0.4
 KKN 56.29 276 P 07 55.10 1.2
 0.5s 7.00nm 4.9mb
 PKI 56.34 276 P 07 55.00 0.6
 0.5s 4.00nm 4.7mb
 DMN 56.52 276 P 07 56.50 0.8
 0.6s 16.00nm 5.2mb
 GKN 56.59 277 P 07 56.80 0.7
 0.4s 8.00nm 5.1mb
 DAG 56.94 358 eP 07 56.00 -1.7
 WDC 57.96 63 e(P) 08 05.80 0.5
 FFC 60.44 40 eP 08 22.00 -0.3
 1.0s 18.00nm 5.2mb
 CMB 60.82 64 eP 08 25.50 0.3
 KVN 61.60 62 P 08 30.00 -0.7
 KJF 61.96 337 iP 08 41.00 8.5X
 1.0s 22.00nm 5.2mb
 TNP 62.75 63 P 08 38.00 -0.3
 SUF 63.56 336 iP 08 41.20 -1.8
 0.4s 1.90nm 4.6mb
 BW06 64.26 54 P 08 47.70 -0.6
 1.4s 23.42nm 5.1mb
 FRB 65.04 19 eP 08 56.00 3.4X
 NUR 65.77 335 eP 08 55.00 -2.3
 HFS 68.97 340 eP 09 15.90 -1.6
 0.7s 13.50nm 5.1mb
 NAO 69.00 342 P 09 16.20 -1.5
 1.1s 20.50nm 5.1mb
 GBA 71.20 270 P 09 43.00 11.3X
 0.9s 3.20nm
 KSP 76.48 334 eP 10 02.50 0.7
 e 10 12.00
 MLR 77.72 326 ePc 10 10.00 1.1
 PRU 77.76 335 eP 10 09.50 0.6
 e 10 19.50
 MOX 78.00 337 e(P) 10 11.00 0.8
 KHC 78.81 335 eP 10 10.90 -3.8X
 i 10 25.40
 GRF 78.97 337 eP 10 16.50 0.9
 0.8s 5.00nm 4.6mb

BZS 79.25 328 eP 10 18.00 0.9
 e 32 43.00
 KBA 80.72 334 eP 10 26.00 0.8
 0.9s 14.70nm 5.0mb
 i 10 37.30

PTJ 80.95 332 eP 10 27.10 0.8
 CDF 81.19 338 eP 10 28.40 0.9
 1.1s 14.60nm 4.9mb

HAU 81.80 339 eP 10 31.60 1.0
 BSF 81.85 339 eP 10 31.80 0.8
 SKO 82.44 326 eP 10 35.00 1.0
 VAY 82.56 325 eP 10 34.60 0.0
 LOR 83.09 340 eP 10 38.50 1.1
 1.2s 19.00nm 5.1mb
 OHR 83.42 326 eP 10 40.00 0.8
 AVF 83.66 340 eP 10 40.50 0.3
 SMF 83.68 340 eP 10 40.40 0.0
 1.1s 19.50nm 5.2mb
 MAF 84.37 341 eP 10 44.30 0.4
 1.2s 20.80nm 5.2mb
 S.D. = 1.0 on 48 of 54 obs.

JAN 13, 1989 14h 26m 27.06 ± 0.67s
 27.798 N ± 5.0km 54.246 E ± 3.4km
 DEPTH = 64.7 ± 6.4 km
 4.8mb (21 obs.)

SOUTHERN IRAN (353)
Felt at Lor.

SHI 2.38 321 eP 27 04.00 -0.7
 BJA 3.71 242 iPn 27 24.60 1.4
 BEE 3.77 243 iPn 27 25.10 1.1
 (Sn) 28 42.10
 DHR 3.95 249 eP 27 26.00 -0.6
 RYD 7.51 248 iPc 28 11.80 -4.5X
 iS 29 34.00
 TEH 8.28 344 eP 28 20.00 -7.1X
 KER 8.95 319 eP 28 35.00 -1.3
 MAIO 9.57 26 eP 28 44.00 -0.7
 eS 30 59.00
 QASM 9.71 262 ePc 28 41.30 -5.3X
 SLY 10.76 318 ePnd 29 02.00 1.2
 iSn 30 52.00
 i 32 42.00
 QUE 11.37 75 iPd 29 06.90 -2.4
 eS 31 09.50
 TAB 12.20 329 eP 29 10.00 -10.2X
 MSL 12.71 315 ePc 29 24.00 -2.7
 eS 31 40.50
 e 33 44.00
 e 34 45.50
 AYN 16.10 278 eP 30 20.30 9.6X
 JARJ 16.45 290 P 30 19.60 4.4X
 BURJ 16.60 290 P 30 19.00 2.0
 GLH 16.78 291 iP 30 19.00 -0.3
 JVI 16.90 289 eP 30 22.50 1.8
 BHL 17.08 295 P 30 24.00 1.0
 S 36 18.00
 MBH 17.09 281 eP 30 24.50 1.4
 KOT 19.75 282 eP 30 52.50 -1.8
 POO 20.22 113 iPd 31 00.00 0.6
 BBTK 21.46 310 iPc 31 12.50 0.6
 KAS 21.56 314 eP 31 14.00 1.2
 ELL 22.38 300 iP 31 21.60 0.5
 KHL 23.16 303 eP 31 28.00 -0.6
 GPA 23.34 308 eP 31 30.00 -0.3
 YLV 24.11 308 iP 31 38.80 1.0
 HYB 24.66 110 ePc 31 44.00 0.8
 GBA 25.82 118 Pc 31 53.80 -0.2
 0.8s 10.10nm 4.4mb
 VRI 28.26 317 ePc 32 21.00 5.0X
 MLR 28.55 316 ePd 32 21.00 2.2
 VAY 29.19 306 iP 32 24.00 -0.4
 SKO 30.19 307 iP 32 32.50 -0.9
 OHR 30.41 305 iP 32 35.00 -0.4
 WMQ 31.23 50 Pc 32 43.00 0.4
 SPC 33.70 319 eP 33 10.00 5.8X
 KRA 34.27 320 eP 33 07.60 -1.2
 e 33 13.40
 ZST 35.19 315 e(P) 33 21.40 4.7X
 VBY 35.51 310 e(P) 33 20.00 0.6
 CEY 36.13 310 eP 33 25.20 0.5
 LJU 36.14 311 eP 33 25.00 0.2
 VOY 36.57 311 eP 33 28.10 -0.4
 TRI 36.57 310 eP 33 18.50 -9.8X
 KSP 36.71 319 eP 33 34.00 4.5X

ADE	32.34	228	e	12	28.00				
	0.9s	25.21nm	iPc	06	13.90	2.3	5.0mb		
TAU	32.42	208	eP	06	12.00	-0.1			
ASPA	32.62	250	eP	06	12.80	-1.3			
Z	19s	1.06um	i	06	15.90				
			eS	11	16.30				
			e	12	30.50				
			e	16	25.90				
			LR	19	12.80				
KNA	37.24	264	eP	06	52.00	-1.4			
FORR	39.11	240	eP	07	09.00	0.1			
WARB	39.50	247	eP	07	01.00	-11.2X			
AFR	41.01	99	iP	07	25.30	0.7			
	1.2s	90.00nm					5.3mb		
PAE	41.19	99	iP	07	27.00	0.9			
	1.2s	100.00nm					5.4mb		
PPT	41.20	99	iP	07	27.00	0.8			
	1.2s	100.00nm					5.4mb		
PPN	41.34	99	iP	07	28.20	0.9			
	1.2s	35.00nm					4.9mb		
TVO	41.50	100	iP	07	29.40	0.7			
	1.2s	100.00nm					5.4mb		
PMO	43.03	96	iP	07	41.60	0.5			
	1.2s	270.00nm					5.8mb		
VAH	43.26	96	iP	07	43.10	0.1			
	1.2s	185.00nm					5.6mb		
TPT	43.30	96	iP	07	43.70	0.4			
	1.2s	270.00nm					5.8mb		
RUV	43.50	96	iP	07	45.30	0.4			
	1.2s	270.00nm					5.8mb		
MBL	45.46	255	eP	08	00.00	-0.5			
MEKA	46.78	248	eP	08	11.00	0.1			
PCI	49.13	282	eP	08	31.80	2.6			
	1.0s	5.00nm					4.2mb X		
NANU	49.43	253	eP	08	31.00	-0.4			
SBA	62.50	180	iPd	10	05.40	1.6			
WHN	68.50	312	eP	10	42.50	-0.4			
MDJ	68.92	332	eP	10	44.50	-0.7			
PSI	70.10	279	ePd	10	51.60	-1.4			
CN2	70.28	329	eP	10	53.20	-0.3			
GYA	72.22	305	P	11	05.60	0.0			
LOE	72.52	294	eP	11	06.60	-0.8			
BJI	72.87	321	eP	11	09.00	0.1			
			eS	20	20.00				
TIY	73.85	317	Pd	11	15.70	0.9			
XAN	74.25	313	P	11	17.00	-0.2			
KMI	74.79	302	Pd	11	22.00	1.3			
CHG	75.50	294	iPd	11	25.80	1.2			
	1.0s	20.50nm					4.8mb		
HHC	76.18	320	P	11	29.00	0.9			
CD2	76.54	308	P	11	30.90	0.7			
BTO	77.02	319	eP	11	34.00	1.3			
LZH	78.88	312	eP	11	44.00	0.9			
	1.5s	132.00nm					5.5mb		
GTA	83.24	314	iPd	12	07.00	1.2			
SHL	84.03	298	iP	12	10.30	0.1			
BKS	84.48	48	ePc	12	11.80	-0.1			
	1.0s	35.00nm					5.2mb		
PRS	84.49	50	eP	12	11.40	-0.6			
LLA	84.92	50	eP	12	13.30	-0.9			
PRI	84.94	51	eP	12	14.00	-0.4			
WDC	85.38	46	eP	12	15.10	-1.2			
ORV	85.69	47	eP	12	16.40	-1.5			
CMB	85.88	49	eP	12	17.70	-1.3			
FRI	85.98	50	eP	12	18.30	-1.1			
PNT	90.79	39	ePd	12	42.00	0.1			
WMO	93.30	314	P	12	54.00	0.3			
GBA	93.55	283	Pd	12	55.50	0.3			
	1.1s	8.60nm					4.9mb		
YKA	98.03	27	P	13	13.90	-0.7			
DAG	118.50	2	ePKP	18	24.00	-1.4			
KJF	123.99	340	iPKP	18	36.00	-0.2			
	0.6s	23.50nm							
SUF	125.50	339	iPKP	18	38.60	-0.5			
	0.7s	10.00nm							
BUL	126.32	230	iPKPc	18	41.40	-0.9			
	1.1s	24.05nm							
NUR	127.52	338	iPKP	18	43.00	-0.1			
PTZ	127.57	238	iPKPc	18	44.70	0.0			
NAI	128.50	256	ePKP	18	47.00	0.3			
LSZ	129.53	235	iPKPd	18	49.40	1.0			
			i	22	01.80				
			i	22	17.60				
APO	130.98	343	ePKP	18	49.50	-0.2			
	1.1s	28.10nm							

NAO	131.57	345	PKP	18	49.80	-1.0			
	0.8s	7.70nm							
KMZ	132.44	235	ePKP	18	52.00	-2.0			
MLR	135.92	321	ePKPd	18	59.00	-0.8			
SPC	136.96	329	ePKP	19	01.80	0.1			
KSP	137.68	333	ePKP	19	02.50	-0.3			
			e	28	29.00				
BRG	138.66	335	ePKP	19	05.20	0.7			
	1.3s	30.00nm							
CLL	138.71	336	iPKP	19	04.80	0.2			
	1.6s	43.00nm							
SRO	138.83	328	ePKP	19	03.30	-1.6			
ZST	139.17	330	ePKP	19	05.50	0.0			
MOX	139.77	336	ePKP	19	06.00	-0.5			
KHC	140.13	333	iPKPc	19	07.90	0.6			
VAY	140.14	317	ePKP	19	05.70	-1.8			
SKO	140.53	319	ePKP	19	03.00	-5.2X			
			i	19	07.00				
GRF	140.68	336	ePKP	19	08.80	0.6			
	1.1s	28.00nm							
PTJ	141.31	328	e(PKP)	19	08.40	-1.2			
OHR	141.39	318	ePKP	19	09.00	-0.8			
BHG	141.50	332	ePKP	19	05.10	-4.6X			
KBA	141.76	331	ePKPd	19	09.00	-1.5			
	1.1s	10.50nm							
MEM	141.79	341	PKP	19	04.30	-5.8X			
ABH	141.90	339	ePKP	19	06.23	-4.2X			
LJU	141.93	329	ePKPd	19	10.40	-0.2			
VBY	141.94	328	ePKP	19	10.70	0.1			
RBL	142.12	330	PKP	19	10.00	-1.0			
CEY	142.20	329	ePKP	19	09.70	-1.4			
RUP	142.22	339	ePKPd	19	06.96	-4.1X			
VOY	142.25	330	ePKP	19	09.60	-1.7			
FVI	142.38	331	PKP	19	06.80	-4.5X			
TRI	142.55	329	ePKP	19	07.20	-4.4X			
DOU	142.67	342	PKPc	19	08.40	-3.3X			
OGA	142.97	333	iPKPd	19	09.80	-2.8			
	1.3s	104.00nm							
CDF	143.23	338	ePKP	19	08.40	-4.4X			
SLE	143.31	336	ePKPc	19	12.80	-0.1			
CTI	143.31	331	PKP	19	10.20	-2.8			
SAX	143.38	335	ePKPd	19	11.30	-2.1			
FEL	143.40	337	ePKPd	19	10.21	-3.0			
OSS	143.49	333	ePKPd	19	11.60	-1.8			
LLS	143.83	335	ePKPc	19	12.70	-1.3			
BSF	143.90	338	ePKP	19	10.20	-3.8X			
HAU	143.91	338	ePKP	19	10.50	-3.4X			
VDL	143.94	334	ePKPd	19	12.20	-2.0			
SAL	144.15	332	PKPd	19	12.80	-1.5			
MDI	144.39	333	PKPd	19	12.60	-2.1			
RSM	144.47	328	PKPd	19	15.00	0.1			
TMA	144.49	334	ePKPc	19	13.20	-1.9			
ARV	144.52	327	PKPd	19	14.40	-0.7			
VAI	144.72	334	PKPd	19	14.50	-0.8			
SFI	144.78	329	PKPd	19	15.90	0.5			
PGD	144.88	329	PKPd	19	16.00	0.1			
MMK	144.91	335	ePKPd	19	15.50	-0.5			
DUI	144.93	324	PKPd	19	15.30	-0.6			
CRE	144.94	328	PKP	19	16.00	0.1			
ASS	144.97	327	PKPd	19	15.50	-0.4			
TDS	145.03	319	PKPd	19	16.10	0.1			
DIX	145.11	335	ePKPd	19	17.00	0.7			
SGO	145.13	321	PKPd	19	15.80	-0.3			
MME	145.14	330	PKPd	19	17.00	0.6			
FIR	145.18	329	ePKP	19	17.00	0.9			
MGR	145.23	321	PKP	19	15.40	-1.0			
ORX	145.24	334	PKP	19	15.90	-0.5			
ORO	145.25	334	PKPd	19	15.90	-0.5			
FLN	145.26	346	ePKP	19	14.80	-1.3			
SDI	145.27	324	PKPd	19	15.20	-1.2			
BDI	145.29	330	PKP	19	15.00	-1.4			
BOB	145.29	332	PKPd	19	16.90	0.5			
AZI	145.29	325	PKP	19	16.80	0.5			
EMS	145.31	336	ePKPd	19	16.50	-0.1			
LDF	145.33	345	ePKP	19	15.10	-1.1			
LOR	145.40	340	ePKP	19	15.60	-0.8			
MNS	145.43	326	PKP	19	15.80	-0.9			
PII	145.58	330	PKP	19	16.00	-0.8			
LBF	145.61	340	ePKP	19	16.30	-0.5			
SSF	145.69	340	ePKP	19	16.80	-0.1			
GRD	145.69	346	ePKP	19	16.50	-0.4			
LSD	145.72	335	PKP	19	18.67	1.3			
RMP	145.81	325	PKP	19	16.50	-0.8			
RDP	145.84	325	PKP	19	17.20	-0.2			
LPG	145.85	336	ePKP	19	17.50	-0.1			
SMF	145.95	340	ePKP	19	17.10	-0.3			
AVF	145.98	340	ePKP	19	17.20	-0.2			

LPF	
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13d 16h

3.297 S ± 7.4km 130.432 E ± 7.8km
DEPTH = 39.2 ± 14.3 km
4.9mb (8 obs.)

CERAM (272)

Table with columns: Station Name, Time, Magnitude, Type, Depth, Location, etc. Includes stations like AAI, TLE, MTN, PCI, KNA, WB5, PMG, TRT, OIS, ASPA, MBL, CTA, TPI, NANU, KLI, MEKA, MRWA, BAL, STK, KLB, MUN, NWAO, PSI, ADE, BWA, CAN, BJI, LZH, GUN, PKI, KKN, DMN, GKN, HYB, GBA, WMO, FFC, CNCB, LPB, ZOBO.

JAN 13, 1989 16h 38m 36.47 ± 0.52s
30.902 S ± 4.6km 117.206 E ± 6.2km
DEPTH = 10.0km (geophysicist)

WESTERN AUSTRALIA (590)

Table with columns: Station Name, Time, Magnitude, Type, Depth, Location, etc. Includes stations like WA4, BAL, KLB, MUN, MRWA, NWAO, RKG, COOL.

Table with columns: Station Name, Time, Magnitude, Type, Depth, Location, etc. Includes stations like MEKA, WARB, MBL.

* JAN 13, 1989 16h 54m 35.54 ± 1.16s
38.481 S ± 9.7km 71.402 W ± 17.1km
DEPTH = 33.0km (normol)
4.6mb (2 obs.) 3.9Msz (1 obs.)
S. CHILE-ARGENTINA BORDER REGION(145)

Table with columns: Station Name, Time, Magnitude, Type, Depth, Location, etc. Includes stations like LNV, CHCH, TACH, PCH, LCCH, SAN, FCH, PEL, MDZ, VBA, TCA, CCH, CNCB, ARE, LPB, ZOBO, SPA, HYB.

JAN 13, 1989 18h 01m 56.59 ± 0.16s
46.477 N ± 3.5km 153.673 E ± 3.0km
DEPTH = 33.0km (normol)
5.7mb (67 obs.) 5.6Msz (15 obs.)

KURIL ISLANDS (221)
Ms 5.3 (BRK).
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 25C
Centroid Location:
Origin Time 18:01:58.3 0.3
Lat 46.56N 0.03 Lon 154.22E 0.05
Dep 15.0 BDY Half-duration 3.4
Moment Tensor; Scale 10**17 Nm
Mrr= 7.40 0.16 Mtt=-1.55 0.17
Mff=-5.86 0.20 Mrt=-0.04 0.64
Mrf= 0.67 0.60 Mtf=-3.74 0.19
Principal Axes:
T Val= 7.45 Plg=86 Azm=244
N 0.59 3 30
P -8.04 2 120
Best Double Couple: Mo=7.7*10**17
NP1: Strike=213 Dip=43 Slip= 95
NP2: 27 47 86

Table with columns: Station Name, Time, Magnitude, Type, Depth, Location, etc. Includes stations like KUSJ, ASAJ, HOOJ, SAP, MRRJ, ADMJ, OFUJ, YAMJ, NIIJ, KAKJ, SMY, CHJJ.

Table with columns: Station Name, Time, Magnitude, Type, Depth, Location, etc. Includes stations like MTMJ, IIDJ, MDJ.

Z 16s 46.80um
E 16s 28.40um
S 08 56.00
SS 09 18.00

Table with columns: Station Name, Time, Magnitude, Type, Depth, Location, etc. Includes stations like TSRJ, WKYJ, YONJ, TKSJ, SHK, ADK, CN2.

Table with columns: Station Name, Time, Magnitude, Type, Depth, Location, etc. Includes stations like BJI, TIA.

Table with columns: Station Name, Time, Magnitude, Type, Depth, Location, etc. Includes stations like SSE, NJ2.

HHC 30.70 275 Pc 08 10.50 0.0
Z 16s 20.20um 5.9Msz
N 15s 22.10um
S 13 06.00

Table with columns: Station Name, Time, Magnitude, Type, Depth, Location, etc. Includes stations like TIY, BTO.

Table with columns: Station Name, Time, Magnitude, Type, Depth, Location, etc. Includes stations like TTA, ANP, IMA, KDC, BRW, WHN.

Table with columns: Station Name, Time, Magnitude, Type, Depth, Location, etc. Includes stations like QZH.

E	14s	3.80um				KSH	55.15	293 iPc	11 28.00	-0.1	MAIO	67.34	299 iPc+	12 50.80	0.4
		PP	10 11.00			E	16s	24.30um					eS	21 52.00	
		sS	14 26.00					sP	11 40.00		HYB	67.39	272 iPc	12 51.00	0.1
PMR	35.53	44 eP	08 50.80	-1.2		GUN	55.41	276 Pc	11 30.60	0.2		1.2s	71.40nm		5.6mb
	1.1s	37.50nm		5.2mb		PCI	55.76	222 eP	11 32.10	-0.4	QIS	67.92	194 eP	12 53.00	-1.0
	Z	20s	8.00um		5.5Msz	KKN	55.90	276 Pc	11 34.20	0.4	AKU	67.99	356 iP	12 56.70	2.8
XAN	35.88	266 iPc	08 55.00	-0.3		HNR	55.94	173 eP	11 38.00	4.3X		1.0s	96.00nm		5.9mb
	7.0s	2.90nm		3.3mb X		PKI	55.95	276 Pc	11 34.40	0.2	UPP	68.11	338 iP	12 52.70	-2.0
N	14s	10.50um				DMN	56.13	276 Pc	11 36.10	0.6	WB5	68.31	200 eP	12 55.80	-0.7
E	15s	12.80um				GKN	56.21	277 Pc	11 36.30	0.4	NRA0	68.81	341 P	12 57.00	-2.1
FBA	36.14	38 eP	08 57.10	0.0		EDM	56.23	46 iP	11 35.00	-0.6	HFS	68.85	340 eP	12 58.00	-1.3
TOA	36.91	43 eP	09 04.00	0.3			1.0s	132.00nm		5.9mb		0.8s	89.80nm		5.9mb
LZH	38.28	273 iPc	09 16.50	0.8		NNT	56.38	251 iPc	11 38.00	1.0	NAO	68.89	342 P	12 58.20	-1.4
	7.0s	3.36nm		3.3mb X		DAG	56.94	358 iPc	11 38.10	-2.2		0.9s	93.70nm		5.9mb
Z	16s	12.80um		5.8MszX			1.2s	210.94nm		6.0mb	GOL	68.99	54 P	13 01.00	0.1
N	15s	10.90um				KEV	57.73	341 eP	11 50.00	4.1X	Z	18s	2.60um		5.5Msz
E	17s	8.70um				Z	16s	10.70um		6.0MszX					
		eS	15 04.00					eS	19 40.00		GLD	69.04	54 P	13 02.00	0.9
GTA	39.40	280 iPc	09 24.80	-0.1				eScS	21 36.00		DZM	69.20	167 iPc	13 05.90	3.9X
	8.0s	2.60nm		3.0mb X				LR	43 30.00		POO	69.87	276 iPc	13 07.30	1.1
Z	14s	13.20um		5.9MszX		SES	59.03	48 eP	11 56.00	0.6		1.1s	93.67nm		5.8mb
E	12s	9.10um				TRO	59.56	343 iP	11 57.00	-1.6	BOM	70.33	277 eP	13 07.00	-1.9
		PP	10 59.00			SOD	59.65	339 iP	11 58.20	-1.1			eS	22 19.50	
		PcP	11 34.20			SNG	59.88	246 eP	12 04.30	2.8	BER	70.42	344 eP	13 09.50	0.6
		S	15 24.00					eS	20 21.40		GBA	70.81	270 P	13 12.00	0.1
		sS	15 40.00			BKS	60.12	65 e(P)c	12 05.80	2.8		2.1s	159.60nm		5.7mb
		ScS	19 31.80			Z	0.7s	19.00nm		5.3mb	ALQ	71.65	59 eP	13 17.00	-0.1
GZH	39.92	248 P	09 30.00	0.9		Z	20s	1.50um		5.1Msz	Z	20s	26.17nm		5.1mb
Z	16s	6.00um		5.5MszX		E	20s	1.90um					1.95um		5.4Msz
N	16s	5.90um						eS	20 20.00		RMQ	72.76	185 eP	13 25.00	1.8
E	17s	10.00um						eSS	24 20.00				e	13 39.00	
BAG	40.66	234 eP+	09 35.00	-0.5				eLQ	27 10.00		COP	73.11	338 iPd	13 24.90	-0.1
		eS	15 44.00			FFC	60.70	40 iPc	12 06.30	-0.4		0.9s	141.18nm		6.0mb
CD2	41.24	266 iPc	09 40.30	0.3			1.1s	99.00nm		5.9mb	KOD	73.16	267 eP	13 26.20	-0.1
Z	14s	7.50um		5.7MszX		NDI	60.84	282 iPc	12 07.50	-0.4			eS	22 58.00	
N	16s	10.90um						eS	20 26.00		MUD	73.21	340 eP	13 21.00	-4.6X
		sS	15 56.00			LRM	61.05	53 eP	12 10.20	0.7		0.7s	30.00nm		5.4mb
INK	41.68	32 ePc	09 43.30	0.3		CMB	61.18	64 P	12 10.00	-0.2	SCH	73.44	23 eP	13 26.00	-1.0
	0.9s	7.20nm		4.4mb X			1.5s	69.28nm		5.6mb	BRS	73.52	181 eP	13 32.00	4.3X
OCP	41.84	231 eP	09 36.00	-8.9X		KJF	61.82	336 eP	12 12.00	-2.1			e(S)	23 00.00	
GYA	42.04	258 iPc	09 47.00	0.3		Z	1.0s	52.00nm		5.6mb	WAR	73.62	332 e(P)	13 28.00	0.0
	4.0s	3.10nm		3.4mb X		Z	16s	11.10um		6.1MszX	Z	20s	9.50um		6.1Msz
N	15s	6.30um						eS	20 32.00				e	23 20.00	
E	15s	4.90um						eScS	22 08.00		TAB	73.67	308 iPc	13 30.00	1.2
		PP	11 28.00					eSS	24 52.00		IAS	75.47	325 eP	13 39.00	0.2
		S	16 03.00					LR	43 10.00		KRA	75.84	331 ePc	13 40.00	-0.8
MBC	44.72	20 eP	10 08.00	0.2		KVN	61.96	62 P	12 15.70	0.0		0.7s	76.00nm		5.8mb
	0.6s	15.00nm		5.0mb		KGM	62.23	240 eP	12 18.00	0.5	Z	17s	10.80um		6.2MszX
OIZ	45.10	248 Pc	10 13.00	1.6		GDH	62.85	11 eP	12 16.00	-4.9X			i	13 42.00	
E	14s	4.30um						i	12 20.00		SLY	75.92	307 iP	13 42.00	0.5
WMO	45.39	292 iPc	10 13.00	-0.6				e	40 20.00				eS	23 30.00	
Z	16s	28.70um		6.3MszX		TNP	63.10	62 P	12 22.70	-0.6			PcP	13 56.00	
N	14s	12.30um				SUF	63.42	336 iP	12 23.30	-1.4	KER	75.94	305 ePc	13 42.00	0.1
E	14s	18.50um				TPI	63.59	233 eP	12 27.00	0.6	MEO	76.28	54 eP	13 44.20	0.5
KMI	45.57	260 iPc	10 16.00	0.6				e	14 00.00		KSP	76.32	334 iPc	13 43.10	-0.4
	6.0s	3.20nm		3.4mb X		SYP	63.63	67 eP	12 43.00	16.3X		0.9s	44.00nm		5.5mb
N	16s	6.60um				CLC	64.31	64 eP	12 30.00	-1.0			i	13 44.50	
		S	16 58.00			PSI	64.39	245 eP	12 32.00	0.3	SPC	76.48	331 eP	13 44.70	0.0
DAV	46.08	220 eP	10 20.00	0.8		BW06	64.59	54 P	12 32.40	-0.6	MSL	76.63	309 ePd	13 41.30	-4.2X
HON	46.39	106 P	10 30.00	8.4X			1.0s	56.25nm		5.6mb			ePcP	13 53.50	
Z	18s	11.34um		5.9Msz		SBB	64.89	65 eP	12 35.00	0.2			ePP	16 30.50	
ALE	49.98	6 eP	10 48.00	-0.8		MWC	65.04	66 eP	12 35.00	-1.0			eS	23 30.00	
	1.4s	193.00nm		5.9mb		GSC	65.13	64 eP	12 37.00	0.6			eSS	24 08.00	
RAB	50.47	182 e(P)	10 52.00	-1.2		TRT	65.14	226 ePc	12 35.70	-0.7	KVT	76.65	316 iP	13 47.00	1.4
		eS	18 10.00			FRB	65.18	19 eP	12 34.00	-2.1	SIO	76.83	52 e(P)	13 46.70	0.1
LSA	50.68	274 P	10 56.00	0.7			1.2s	111.00nm		5.8mb	CLL	76.87	336 iPc	13 45.60	-1.0
Z	7.0s	2.00nm		3.2mb X		NUR	65.62	335 iP	12 37.00	-2.0		1.2s	125.00nm		5.8mb
E	14s	3.67um					0.8s	57.20nm		5.7mb	CFR	76.88	324 ePc	13 47.00	0.3
		PP	12 51.00			Z	18s	13.70um		6.2Msz	VRI	76.89	325 ePc	13 47.00	0.2
		S	18 14.00					eS	21 32.00		LNO	76.98	51 eP	13 47.70	0.3
YKA	50.91	37 P	10 56.20	0.1				eSS	25 48.00		TUL	76.98	51 eP	13 47.50	0.0
LOE	51.56	254 eP	11 00.00	-1.6				LR	34 00.00		Z	1.3s	33.50nm		5.2mb
CHG	52.43	257 iPc	11 09.00	0.8		RVR	65.62	66 eP	12 39.00	-0.4			5.52um		5.9Msz
	1.1s	110.76nm		5.7mb		TPC	66.38	65 eP	12 43.00	-1.4	BRG	76.99	335 iPc	13 46.60	-0.7
		eS	18 42.00			CTA	66.59	188 eP	12 57.00	11.4X		1.9s	95.00nm		5.5mb
SHL	52.75	269 iP	11 11.50	0.8				iS	21 36.00		WIT	77.14	340 eP	13 49.00	1.0
		iS	18 42.00			QUE	66.68	290 iPc+	12 46.20	-0.3	RLO	77.20	51 eP	13 49.10	0.4
KBS	52.83	351 iP	11 19.50	9.1X				eS	21 28.00		CJR1	77.36	327 eP	13 50.00	0.6
BDT	53.50	256 eP	11 15.50	-0.5		KLI	66.89	235 eP	12 48.00	0.4	VVO	77.44	52 e(P)	13 50.10	0.1
	1.0s	46.90nm		5.4mb				e	13 16.00		KAS	77.49	318 iPd	13 51.90	1.6
NST	53.87	254 eP	11 20.00	1.3		BAR	66.93	66 eP	12 48.00	0.2	MLR	77.51	325 ePc	13 51.00	0.6
PNT	55.08	53 eP	11 27.00	-0.3		RGS	67.00	343 eP	12 48.00	0.2	ISR	77.56	325 ePc	13 51.00	0.4
	1.1s	84.00nm		5.7mb		RS0N	67.01	39 P	12 46.00	-2.0	PRU	77.60	334 P	13 50.80	0.2
		pP	11 39.00	42kmX			1.0s	37.50nm		5.4mb	Z	17s	9.10um		6.2MszX
TLE	55.12	206 eP	11 27.10	-0.7		Z	18s	3.87um		5.7Msz	N	18s	8.90um		

ZOBO 134.11 63 ePKP 21 13.00 -0.2 1.8s 25.25nm SS 40 08.00 LR 06 40.00	HOOJ 8.35 245 P 23 26.10 -1.6 eS 24 57.70	RTLL 3.31 64 ePd 00 42.00 0.2 (S) 01 22.00
LPB 134.33 63 ePKP 21 15.00 1.6 SS 41 15.00 LR 07 12.00	CN2 19.93 273 eP 25 54.00 -3.9X SNY 21.90 269 eP 26 16.70 -1.3 HHC 30.59 275 eP 27 39.10 0.0 TIY 31.41 269 eP 27 47.70 1.4 LZH 38.17 273 eP 28 45.00 0.7 1.5s 44.00nm 5.1mb	RTRS 3.39 39 Pc 00 44.00 1.0 TCA 6.42 79 ePc 01 22.20 -3.6X S 02 25.40
SEK 134.40 274 ePKP 21 16.50 3.6X	GTA 39.29 280 eP 28 54.20 0.6 GYA 41.90 258 iPd 29 16.00 0.8 YKA 51.04 37 P 30 27.00 0.3 CHG 52.30 257 iPd 30 38.00 1.2 1.0s 10.00nm 4.7mb	ANT 9.19 9 eP 02 20.80 16.5X CNCB 16.35 14 P 03 40.00 -0.2 LPB 16.59 13 (P) 03 45.00 1.8 ZOBO 16.84 13 P 03 45.00 -1.5 GBA 146.16 117 PKPd 19 27.00 -2.0 0.7s 3.90nm S.D. = 1.4 on 19 of 21 obs.
CNCB 134.61 63 PKP 21 16.00 1.9	SHL 52.63 269 iP 30 39.30 -0.2 GUN 55.30 276 P 30 59.60 0.4 KKN 55.79 276 P 31 04.10 1.5 0.6s 21.00nm 5.3mb	* JAN 13, 1989 23h 09m 33.74 ± 1.92s 30.190 N ± 27.4km 83.056 E ± 11.8km DEPTH = 33.0km (normal)
PEL 143.89 84 ePKPc 21 31.50 1.6	PKI 55.84 276 P 31 03.50 0.4 0.7s 8.00nm 4.9mb	TIBET (306)
ITB1 148.72 56 e(PKP)21 41.60 3.6X	DMN 56.02 276 P 31 05.10 0.8 0.7s 21.00nm 5.3mb	GKN 2.58 147 P 10 14.00 -0.3 KKN 3.08 140 P 10 21.20 -0.3 0.5s 9.00nm
VAO 151.25 42 e(PKP)21 47.00 5.0X	GKN 56.10 276 P 31 05.20 0.5 0.7s 19.00nm 5.2mb	DMN 3.14 145 P 10 22.60 0.3 PKI 3.33 141 P 10 25.20 0.2 GUN 3.36 132 P 10 25.50 0.0 NDI 5.31 255 eP 10 52.80 0.0 WB5 70.11 129 eP 20 45.00 0.0 S.D. = 0.3 on 7 of 7 obs.
BMA 152.23 37 ePKP 21 49.00 5.6X e 22 18.60	SUF 63.43 336 iP 31 53.00 -1.4 0.4s 2.10nm 4.6mb HFS 68.87 340 eP 32 28.00 -1.1 0.7s 9.10nm 5.0mb NAO 68.92 341 P 32 28.20 -1.2 0.8s 6.20nm 4.7mb	? JAN 13, 1989 23h 10m 54.94 ± 1.64s 26.942 N ± 20.2km 142.768 E ± 24.6km DEPTH = 33.0km (normal)
S.D. = 1.0 on 335 of 368 obs.	KSP 76.33 334 eP 33 13.00 -0.2 CLL 76.89 336 eP 33 15.00 -1.3 0.7s 10.00nm 5.0mb	BONIN ISLANDS REGION (212)
* JAN 13, 1989 18h 03m 53.68 ± 1.28s 39.384 N ± 7.6km 20.529 E ± 16.1km DEPTH = 10.0km (geophysicist)	KHC 78.66 334 Pd 33 26.70 0.5 GRF 78.84 336 eP 33 27.50 0.4 1.1s 77.00nm 5.6mb	MAT 10.32 339 eP 13 24.00 0.1 eS 14 23.00
GREECE-ALBANIA BORDER REGION (392) MD 3.0 (ATH).	KBA 80.57 334 e(P) 33 37.00 0.4 0.7s 6.90nm 4.8mb	GUN 50.10 285 Pd 19 49.70 0.2 PKI 50.59 285 Pd 19 53.00 -0.1 0.6s 18.00nm 5.2mb
VLS 1.21 178 ePb 04 16.00 -0.2	MBH 86.08 310 eP 34 08.00 3.2X S.D. = 1.1 on 25 of 27 obs.	KKN 50.65 285 Pd 19 53.50 0.0 0.8s 45.00nm 5.5mb
KZN 1.33 46 ePb 04 18.00 -0.2	% JAN 13, 1989 21h 41m 12.50 ± 0.75s 42.775 N ± 5.6km 13.022 E ± 6.4km DEPTH = 10.0km (geophysicist)	DMN 50.84 285 Pd 19 55.10 0.1 0.6s 17.00nm 5.2mb
OHR 1.74 7 ePn 04 24.50 0.4	CENTRAL ITALY (381)	GKN 51.15 285 Pd 19 57.10 -0.1 0.7s 34.00nm 5.4mb
NEO 2.09 91 ePn 04 29.60 0.4	ASS 0.40 318 Pc 41 20.80 0.1 eSg 41 27.00	GBA 62.12 272 Pc 21 24.90 9.5X 0.5s 6.10nm 5.0mb
VAY 2.48 38 ePn 04 34.30 -0.5	ALP 0.41 89 iPgc 41 20.92 0.0 iSg 41 27.57	KJF 76.13 336 iP 22 40.00 -0.9 0.7s 24.00nm 5.3mb
SKO 2.68 15 ePn 04 41.00 3.4X S.D. = 0.5 on 5 of 6 obs.	CIO 0.43 12 iPg 41 21.05 -0.2 iSg 41 28.09	SUF 77.55 335 iP 22 47.60 -1.2 NUR 79.43 334 iP 22 58.40 -0.7 HFS 83.77 337 eP 23 22.60 0.8 0.4s 2.20nm 4.7mb
JAN 13, 1989 19h 14m 39.36 ± 1.05s 43.392 N ± 8.5km 5.436 E ± 7.5km DEPTH = 10.0km (geophysicist)	MNS 0.46 213 Pc 41 21.90 -0.1 eSg 41 28.60	NAO 84.23 339 P 23 25.80 1.6 0.7s 5.20nm 4.8mb S.D. = 0.9 on 11 of 12 obs.
NEAR SOUTH COAST OF FRANCE (379) MD 2.8 (STR).	ARV 0.73 355 Pd 41 26.70 -0.1 eSg 41 38.40	JAN 14, 1989 00h 50m 33.14 ± 0.15s 15.244 S ± 6.0km 173.608 W ± 4.6km DEPTH = 33.0km (normal)
GELF 0.01 213 Pg 14 40.66 -0.6	AOI 0.88 28 e(Pg) 41 29.64 0.2 eSg 41 44.89	5.6mb (27 obs.) 5.1msz (5 obs.)
TREF 0.23 351 Pg 14 42.70 -1.7	S.D. = 0.2 on 6 of 6 obs.	TONGA ISLANDS (173) Ms 5.3 (BRK).
PUYF 0.24 54 Pg 14 42.52 -1.9	* JAN 13, 1989 21h 59m 51.03 ± 1.23s 32.826 S ± 6.8km 71.948 W ± 13.0km DEPTH = 33.0km (normal)	CENTROID, MOMENT TENSOR (HRV) Data Used: GDSN L.P.B.: 13S, 27C Centroid Location: Origin Time 00:50:42.9 0.4 Lat 15.28S 0.06 Lon 173.61W 0.06 Dep 33.0 FIX Half-duration 2.0 Moment Tensor; Scale 10**17 Nm Mrr=0.00 0.06 Mtt=0.48 0.10 Mff=-0.48 0.08 Mrt=-2.39 0.09 Mrf=1.45 0.09 Mtf=0.45 0.07 Principal Axes: T Vol= 2.79 Plg=44 Azm=198 N 0.17 13 301 P -2.95 43 43 Best Double Couple: Mo=2.9*10**17 NP1:Strike=207 Dip=13 Slip= 177 NP2: 300 89 77
PRAF 0.45 335 Pg 14 47.59 -1.0	NEAR COAST OF CENTRAL CHILE (135) Felt (III) in the Valparaiso oreo.	AFI 2.21 53 iPc 51 05.00 -3.4X (S) 51 20.00
VILF 0.50 24 Pg 14 47.62 -1.9	LCCH 0.72 154 iPc 00 05.50 0.8 iS 00 15.40	PVC 17.51 259 iPc 54 44.50 8.0X
TAVF 0.51 63 Pg 14 48.12 -1.5 Sg 14 55.62	ROCH 0.80 101 iP 00 03.70 -2.4 PEL 1.11 107 iPd 00 09.40 -0.9 JACH 1.15 83 iP 00 09.00 -2.0 iS 00 22.00	DZM 20.07 247 iPc 55 06.80 0.0 PAE 23.17 99 eP 55 39.00 1.2 1.2s 70.00nm 5.0mb
CALN 1.12 71 Pg 14 59.78 -0.6 Sg 15 16.49	TACH 1.18 135 iP 00 11.40 0.1 LNV 1.21 158 iPc 00 12.80 1.1 iS 00 29.00	
MVIF 1.34 67 Pn 15 03.73 -0.5 Sg 15 22.62	SAN 1.25 120 iPd 00 12.00 -0.3 iS 00 27.40	
TOUF 1.45 64 Pn 15 05.65 -0.2 Sg 15 26.46	PCH 1.44 124 iP 00 15.00 -0.1 iS 00 34.00	
AURF 1.46 70 Pn 15 05.39 -0.5 Sg 15 23.83	FCH 1.48 110 iP 00 15.40 -0.5 iS 00 32.00	
FOUF 1.50 40 P 15 07.02 0.8 (Sg) 15 26.46	CHCH 1.55 136 iPc 00 17.60 1.0 iS 00 36.50	
AUTN 1.57 67 Pn 15 07.50 0.0 Sg 15 29.23	MDZ 2.61 92 e(P) 00 34.20 2.3 RTCB 2.99 64 ePc 00 38.00 0.7 S 01 16.00	
STV 1.61 57 P 15 07.53 -0.5 S 15 27.69	RTCJ 3.04 72 eP 00 39.00 1.0	
PZZ 1.64 47 P 15 08.99 0.5 S 15 30.17		
SAOF 1.65 68 Pn 15 07.78 -0.7 Sg 15 29.27		
DOI 1.72 49 P 15 10.30 0.8 eSn 15 33.20		
RRL 1.81 32 P 15 12.35 1.3 S 15 36.31		
IMI 1.85 73 P 15 11.03 -0.5 S 15 34.57		
BNI 1.88 28 P 15 13.90 1.9 eSn 15 40.10		
ROB 1.98 62 P 15 13.37 0.0 S 15 37.91		
FIN 2.17 67 P 15 15.42 -0.6 S 15 40.98		
RSP 2.19 36 P 15 18.92 2.5		
CKI 2.30 62 P 15 21.00 3.1 eSn 15 48.00		
LSD 2.40 30 P 15 21.26 1.7 S.D. = 1.4 on 24 of 24 obs.		
? JAN 13, 1989 19h 21m 26.20 ± 1.76s 46.406 N ± 29.1km 153.501 E ± 24.6km DEPTH = 33.0km (normal) 5.0mb (12 obs.)		
KURIL ISLANDS (221)		
KUSJ 7.08 245 P 23 07.70 -2.4		
ASAJ 8.00 257 eP 23 23.80 0.9		

Table with columns: Station ID, Time, Amplitude, Phase, Period, etc. Includes stations like MASJ, BGF, VOY, VDL, EDC, LSF, TCF, CEY, DST, VBY, MAF, DSI, KDZ, CTI, TRI, VTS, TMA, AGO, DIX, RZN, MMK, EMS, PLDF, VAI, PYM, SAL, ORX, RJF, MMB, LPG, LSD, LBL, LFF, MBH, RSP, CAF, BNI, LPO, SKO, RRL, BOB, VAY, DOI, PZZ, GEN, CKI, MME, RSM, ROB, SFI, BDI, STV, FIN, PGD, FIR, ARV, CRE, TOUF, AUTN, SAOF, OHR, PII, IMI, MVIF, AURF, SBF, CALN, ASS, FRF, LWI, LRG, LMR, AQU, MNS, AZI, CVF, DUI, SDI, TOL, MGR.

Table with columns: Station ID, Time, Amplitude, Phase, Period, etc. Includes stations like TDS, SOI, BNG, LIC, TIC, KIC, & JAN 14, 1989, PWA, PMS, PLRM, PMR, PME, GHO, KNK, SML, PTE, NKA, PWL, SLKM, SPU, CRP, RDT, GLI, KNIM,>NNL, VZW, VLZ, FID, TOA, KLU, HIN, CNPM, CVA, SGAM, PDB, SVW, GLB, TTA, FBA, WAX, KDC, IMA, * JAN 14, 1989, KUSJ, ASAJ, HOOJ, MRRJ, MAT, BJI, LZH, GTA, CD2.

Table with columns: Station ID, Time, Amplitude, Phase, Period, etc. Includes stations like GYA, MBC, YKA, CHG, GUN, KKN, PKI, DMN, GKN, DAG, FFC, KJF, SUF, FRB, NUR, WB5, HFS, NAO, ASPA, CLL, MOX, ZST, KHC, GRF, KBA, JAN 14, 1989, KURIL ISLANDS, CENTROID, MOMENT TENSOR, KUSJ, ASAJ, HOOJ, MRRJ, OFUJ, YAMJ, NIJJ, KAKJ, CHJJ, MAT, MTMJ, IIDJ, MDJ.

VBY	81.48	332	e(P)	33	26.00	-0.4
CEY	81.54	333	eP	33	26.00	-0.7
OGA	81.56	335	eP	33	27.70	0.6
VITF	81.68	339	P	33	27.19	-0.1
MOF	81.72	338	P	33	27.34	-0.4
ZLA	81.73	337	ePc	33	28.50	0.7
IKL	81.74	315	iP	33	28.00	0.1
TRI	81.77	333	P	33	26.50	-1.4
HAU	81.78	339	eP	33	27.90	-0.1
MMB	81.79	325	iPd	33	29.00	0.9
KKB	81.81	325	eP	33	19.00	-9.2X
BSF	81.83	338	P	33	27.57	-0.8
OSS	81.97	336	ePd	33	29.50	0.3
CTI	82.12	334	P	33	29.20	-0.7
LLS	82.13	337	ePd	33	30.70	0.7
LOMF	82.27	338	P	33	30.43	-0.2
VDL	82.35	336	ePc	33	31.00	0.6
SKO	82.36	326	iPc	33	31.00	-0.1
VAY	82.48	325	eP	33	31.00	-0.7
FLN	82.61	343	iPc	33	32.20	0.0
LDF	82.70	343	iPc	33	32.70	0.0
SAL	82.85	335	P	33	34.80	1.3
TMA	82.86	336	ePd	33	34.10	0.3
GRR	83.04	343	eP	33	34.60	0.1
LOR	83.08	340	iPc	33	34.70	0.0
VAI	83.11	336	P	33	36.80	2.0
MMK	83.16	337	ePd	33	36.70	1.2
DIX	83.29	337	ePd	33	36.50	0.4
LBF	83.32	340	iPc	33	35.80	-0.2
OHR	83.35	326	eP	33	35.20	-1.0
SSF	83.36	340	eP	33	36.30	0.2
LPF	83.42	343	iPc	33	36.50	0.1
ORX	83.54	337	P	33	37.19	-0.1
AVF	83.65	340	iPc	33	37.80	0.2
SMF	83.67	340	iPc	33	38.00	0.3
MLL	83.88	312	iPd	33	41.40	2.3
BOB	83.93	335	P	33	39.60	0.4
LSD	83.93	337	P	33	40.47	1.1
BGF	83.98	340	iPc	33	39.60	0.3
LPG	84.00	337	iPc	33	40.70	0.9
ARV	84.01	333	P	33	40.00	0.5
PGD	84.06	334	P	33	41.00	1.0
MME	84.08	334	Pc	33	41.10	0.9
RSP	84.19	337	P	33	40.57	0.1
CRE	84.21	333	P	33	41.50	0.9
BDI	84.23	334	P	33	41.80	1.1
FIR	84.29	334	eP	33	42.00	1.2
MAF	84.37	340	iPc	33	41.90	0.6
TCF	84.38	341	iPc	33	41.80	0.4
BNI	84.43	337	Pc	33	43.00	1.2
ASS	84.49	333	P	33	42.20	0.2
RRL	84.53	337	P	33	42.52	0.1
CKI	84.57	336	P	33	42.50	0.2
LSF	84.57	341	eP	33	42.70	0.4
DSI	84.58	311	iPd	33	44.60	2.1
MFF	84.60	342	eP	33	42.90	0.5
DOI	84.79	337	P	33	42.30	-1.2
FIN	84.79	336	P	33	42.63	-0.8
ROB	84.81	336	P	33	43.24	-0.3
PZZ	84.83	337	P	33	42.83	-0.9
STV	85.00	337	P	33	43.24	-1.3
MNS	85.10	332	P	33	39.80	-5.2X
IMI	85.16	336	P	33	44.68	-0.6
DUI	85.16	331	P	33	46.20	0.8
SAOF	85.18	336	P	33	45.06	-0.3
AUTN	85.21	336	P	33	45.56	-0.2
AZI	85.21	332	P	33	45.60	0.1
TOUF	85.24	337	P	33	45.78	-0.1
SBF	85.33	336	eP	33	46.10	-0.1
AURF	85.33	336	P	33	44.24	-2.0
SDI	85.34	331	Pc	33	45.50	-0.7
MVIF	85.37	337	P	33	46.08	-0.4
RJF	85.47	341	eP	33	46.70	-0.1
CALN	85.58	337	P	33	47.40	-0.1
RDP	85.65	332	P	33	43.80	-4.0X
CAF	85.70	340	eP	33	48.30	0.3
FRF	85.82	337	eP	33	48.80	0.2

LFF	85.99	341	eP	33	49.20	-0.2
LRG	86.00	337	iPc	33	49.90	0.5
LMR	86.07	337	iPc	33	50.30	0.5
CVF	86.11	335	P	33	48.66	-1.4
MGR	86.13	329	P	33	50.00	-0.2
LPO	86.14	341	eP	33	49.90	-0.2
MBH	86.27	310	iPd	33	53.00	2.0
TDS	86.28	329	P	33	50.80	-0.1
SOI	87.78	328	P	33	51.80	-6.3X
PTZ	122.51	284	iPKPd	40	06.00	0.9
TIC	123.93	334	PKP	40	07.60	-0.3
KIC	124.12	334	PKP	40	07.90	-0.4
LIC	124.33	334	PKP	40	08.30	-0.4
LSZ	125.35	286	ePKP	40	02.00	-8.7X
KMZ	125.57	290	ePKP	40	24.00	12.8X
SLR	132.45	276	iPKPd	40	24.50	0.4
SEK	134.54	274	ePKP	40	21.80	-6.2X
BAO	144.30	38	ePKP	40	43.00	-2.9

S.D. = 0.9 on 220 of 241 obs.
 JAN 14, 1989 04h 21m 57.50 ± 0.66s
 37.729 N ± 6.4km 15.066 E ± 5.7km
 DEPTH = 10.0km (geophysicist)

SICILY (398)

MNO	0.36	305	Pc	22	05.20	0.3
ATN	0.53	36	Pc	22	09.00	0.7
MSI	0.61	39	P	22	09.90	0.1
MEU	0.64	190	Pc	22	09.80	-0.5
SOI	0.85	66	Pc	22	14.00	0.1
FAI	1.19	248	P	22	20.80	1.0
USI	1.78	304	P	22	27.60	-0.9
TDS	2.17	27	P	22	34.40	0.3
MGR	2.43	9	P	22	36.80	-1.1

S.D. = 0.8 on 9 of 9 obs.
 ? JAN 14, 1989 05h 22m 53.14 ± 6.31s
 35.554 S ± 56.2km 70.939 W ± 20.0km
 DEPTH = 93.7 ± 16.9 km

CHILE-ARGENTINA BORDER REGION (127)

CHCH	1.63	8	iPc	23	21.60	0.4
LNv	1.64	346	iPc	23	21.50	0.3
TACH	1.90	0	iP	23	24.70	0.1
PCH	1.96	10	iPd	23	26.20	0.6
SAN	2.11	6	iPc	23	27.50	0.0
LCCH	2.14	346	iPd	23	27.40	-0.4
FCH	2.28	14	eP	23	37.90	7.8X
PEL	2.41	5	iPc	23	31.50	-0.1
ROCH	2.58	359	iP	23	33.30	-0.7
JACH	2.88	6	iPc	23	37.90	-0.1
MDZ	3.18	34	eP	23	51.40	9.3X
TCA	6.77	53	ePd	24	31.40	-0.3
ZOBO	19.37	8	eP	27	15.00	0.3

S.D. = 0.5 on 11 of 13 obs.
 * JAN 14, 1989 05h 52m 02.02 ± 0.69s
 46.435 N ± 14.4km 153.827 E ± 11.5km
 DEPTH = 33.0km (normol)
 4.8mb (10 obs.)

KURIL ISLANDS (221)

KUSJ	7.29	246	P	53	47.60	-1.3
ASAJ	8.22	258	eP	54	03.00	1.1
HOOJ	8.56	246	eP	54	04.40	-2.2

MAT	15.29	235	(P)	55	37.80	6.0X
YKA	50.88	37	P	01	01.60	0.3
CHG	52.53	257	eP	01	15.50	1.2
SHL	52.86	269	iP	01	16.60	-0.3
GUN	55.52	276	P	01	38.90	2.3
KKN	56.01	276	P	01	40.60	0.6
PKI	56.06	276	P	01	40.80	0.3
DMN	56.24	276	P	01	42.30	0.6
GKN	56.32	277	P	01	42.00	-0.1
FFC	60.66	40	eP	02	11.50	-0.4
SUF	63.50	336	eP	02	29.00	-1.7
W85	68.31	200	eP	03	02.00	0.1
HFS	68.92	340	eP	03	04.10	-1.1
NAO	68.96	342	P	03	04.20	-1.3
ALO	71.58	59	eP	03	22.00	-0.1
ASPA	72.07	199	eP	03	24.80	0.1
KHC	78.74	335	P	04	03.50	1.1
KBA	80.64	334	eP	04	13.50	0.7

S.D. = 1.2 on 20 of 21 obs.
 & JAN 14, 1989 06h 47m 34.24s
 46.547 N 121.812 W
 DEPTH = 3.8km
 WASHINGTON (29)
 <SEA>. ML 3.4 (SEA). Felt in the
 Pockwood-Rondle area.

GLK	0.14	83	iPc	47	37.10	-0.1
CWZ	0.15	248	iPd	47	37.58	0.3
WPW	0.24	50	iPc	47	38.74	-0.3
KOSW	0.28	252	iPd	47	39.59	-0.2
TDL	0.34	235	iPd	47	40.71	-0.4
LMW	0.35	290	iPc	47	41.38	0.1
SOSW	0.38	216	iPc	47	41.27	-0.7
FMW	0.40	14	iPd	47	41.69	-0.5
RVC	0.41	345	iPc	47	42.06	-0.4
STD	0.42	223	iPd	47	42.19	-0.5
ESD	0.42	214	iPd	47	42.33	-0.4
ASR	0.42	159	iPd	47	42.53	-0.2
YEL	0.43	218	iPd	47	42.40	-0.4
ERK	0.44	237	iPd	47	42.38	-0.7
SHW	0.46	220	iPd	47	42.97	-0.5
JLK	0.46	211	iP	47	42.97	-0.6
CZM	0.49	257	iPd	47	43.58	-0.5
FL2	0.51	227	iPd	47	43.81	-0.7
APW	0.59	281	iPc	47	45.41	-0.5
GHW	0.59	328	iPc	47	44.90	-1.1
MTMW	0.59	208	iPd	47	45.17	-0.9
GULW	0.64	166	iPd	47	46.43	-0.6
GSM	0.66	1	iPd	47	46.59	-0.8
NAC	0.70	74	eP	47	47.85	-0.5
RVW	0.76	239	iPd	47	48.01	-1.4
APM	0.82	174	eP	47	49.24	-1.3
MEW	0.87	319	iP	47	50.64	-0.9
TWW	0.88	47	eP	47	50.54	-1.2
YAKW	0.89	91	eP	47	51.54	-0.3
GL2	0.90	130	eP	47	51.38	-0.8
RMW	0.91	0	iP	47	50.80	-1.5
EBG	0.93	67	iPd	47	51.59	-1.0
BMW	0.98	266	iP	47	51.93	-1.6
CPW	1.01	296	iPc	47	52.35	-1.6
VLMM	1.02	189	iPd	47	52.76	-1.4
TBM	1.04	53	eP	47	53.53	-1.0
SPW	1.05	344	eP	47	53.53	-1.1
VLL	1.09	175	iPd	47	54.24	-1.1
PGO	1.17	203	eP	47	55.14	-1.5
GMW	1.20	327	iPc	47	55.29	-1.9
NLO	1.22	249	eP	47	56.34	-1.3
VFP	1.25	169	eP	47	56.72	-1.5

14d 06h

HTW	1.26	1	eP	47 56.44	-1.8
TDH	1.26	179	eP	47 56.57	-1.7
VGB	1.26	145	eP	47 57.10	-1.1
BRVW	1.26	92	eP	47 58.17	-0.1
BLH	1.30	353	eP	47 57.25	-1.6
SMW	1.30	307	iPc	47 57.46	-1.5
VTG	1.32	71	eP	47 58.42	-0.8
BVW	1.35	78	eP	47 59.33	-0.6
PGW	1.38	337	eP	47 59.01	-1.3
ONR	1.39	284	eP	47 59.01	-1.4
HDW	1.39	323	iPc	47 58.34	-2.2
MDW	1.42	87	eP	48 00.42	-0.4
GT2	1.43	193	eP	47 59.35	-1.7
KMOR	1.48	233	eP	48 00.17	-1.6
VBEM	1.50	174	eP	48 01.27	-0.8
WAH2	1.56	81	eP	48 02.44	-0.4
GBL	1.62	87	eP	48 03.99	0.3
JCW	1.65	357	eP	48 02.95	-1.2
BLN	1.66	332	eP	48 02.53	-1.8
CRF	1.69	80	eP	48 04.12	-0.6
WTV	1.71	47	eP	48 05.05	-0.1
			eS	48 27.68	
WIW	1.75	93	eP	48 04.87	-0.6
JBO	1.75	128	eP	48 04.93	-0.7
GROR	1.76	228	eP	48 04.69	-1.1
OTH	1.80	83	eP	48 05.30	-1.0
OSD	1.81	315	eP	48 05.80	-0.9
NLW	1.83	33	eP	48 06.81	-0.1
OHW	1.84	345	eP	48 05.88	-1.0
WRD	1.88	76	eP	48 07.46	0.0
CMW	1.89	354	eP	48 07.40	-0.3
ETP	1.90	91	eP	48 07.14	-0.6
RPW	1.91	6	eP	48 07.54	-0.5
DHW2	2.00	43	eP	48 09.90	0.6
SAW	2.01	54	eP	48 08.93	-0.5
OOW	2.01	307	eP	48 09.17	-0.3
STW	2.04	322	eP	48 09.76	0.0
PNT	3.14	27	eP	48 30.00	4.6
				79 obs. associated	

* JAN 14, 1989 07h 55m 05.71 ± 0.82s
46.443 N ± 14.6km 153.405 E ± 14.6km

				DEPTH = 33.0km (normal)	
				4.8mb (5 obs.)	
				KURIL ISLANDS (221)	
KUSJ	7.03	245	P	56 47.80	-1.1
			eS	58 03.70	
ASAJ	7.94	257	eP	57 05.10	3.4X
HOOJ	8.30	244	eP	57 05.90	-0.7
			eS	58 37.30	
MAT	15.06	234	eP	58 38.00	0.3
CN2	19.86	273	eP	59 37.20	0.5
HHC	30.52	275	eP	01 20.40	2.4
CD2	41.06	266	eP	02 50.70	3.1X
GYA	41.85	258	P	02 57.40	3.2X
YKA	51.05	37	P	04 06.00	-0.3
FFC	60.85	40	eP	05 16.00	-0.8
	0.7s		6.00nm		4.8mb
SUF	63.37	336	iP	05 32.30	-1.2
	0.4s		1.50nm		4.5mb
FRB	65.27	19	eP	05 48.00	2.2
NUR	65.57	335	iP	05 46.20	-1.6
WB5	68.22	199	eP	06 05.00	0.0
HFS	68.81	340	eP	06 07.10	-1.2
	0.5s		7.20nm		5.0mb
NAO	68.86	341	P	06 07.60	-1.0
	1.0s		12.60nm		4.9mb
ASPA	71.98	199	eP	06 28.00	0.1
KHC	78.60	334	P	07 07.00	1.6
KBA	80.51	334	eP	07 16.50	0.7
	1.0s		8.80nm		4.7mb
				S.D. = 1.3 on 16 of 19 obs.	
				* JAN 14, 1989 08h 11m 40.02 ± 0.58s	
				3.341 S ± 8.2km 130.596 E ± 10.6km	
				DEPTH = 33.0km (normal)	
				5.1mb (7 obs.)	
				CERAM (272)	
AAI	2.42	262	eP	12 21.00	2.8
			eS	13 07.50	
MTN	9.46	177	eP	13 56.00	-1.1
			eS	15 43.00	
KNA	12.46	188	eP	14 35.60	-2.4
WB5	16.85	168	eP	15 32.60	-2.5
			i	15 38.20	
			eS	18 36.00	
PMG	17.52	111	e(P)	15 43.00	-0.5
ASPA	20.46	171	iPc	16 18.10	0.4
	0.8s		111.00nm		5.3mb
			eS	20 00.50	
MBL	20.58	210	eP	16 18.00	-0.8
CTA	22.59	139	eP	16 41.00	1.9
WARB	23.03	189	iPd	16 33.10	-10.3X
NANU	24.05	216	eP	16 54.00	0.7
MEKA	25.87	205	eP	17 10.00	-0.6
FORR	27.46	185	eP	17 25.50	0.4
MRWA	29.23	207	eP	17 40.00	-1.2
PPI	30.32	275	eP	17 52.30	1.3
ADE	32.36	167	iPc	18 09.90	1.2
BWA	35.09	154	eP	18 34.30	1.9
CAN	36.10	154	eP	18 42.80	1.9
CHG	38.15	306	eP	19 00.20	1.9
LZH	46.52	330	e(P)	20 06.00	-0.4
SHL	47.25	310	iP	20 12.20	-0.3
GUN	53.07	309	P	20 56.60	-0.5
PKI	53.28	308	P	20 57.70	-0.9
	0.7s		12.00nm		5.0mb
KKN	53.48	308	P	20 59.20	-0.7
	0.6s		18.00nm		5.2mb
DMN	53.53	308	P	20 59.90	-0.5
	0.7s		26.00nm		5.3mb
GKN	54.08	308	P	21 03.60	-0.7
	0.7s		40.00nm		5.6mb
HYB	55.32	294	eP	21 12.00	-1.3
GBA	55.36	289	P	21 13.00	-0.5
	0.6s		3.70nm		4.6mb
MAIO	76.87	308	eP	23 31.00	0.0
SPA	86.68	180	e(P)	24 23.50	1.8
	0.7s		3.52nm		4.7mb
KJF	98.60	334	eP	25 15.00	-1.6
SUF	99.56	333	iP	25 26.40	5.4X
	0.6s		3.40nm		5.1mb X
NUR	100.72	331	iPd	25 32.70	6.5X
SLL	106.08	333	ePd	25 56.20	6.1X
	0.5s		2.20nm		5.4mb X
ZOBO	153.13	137	PKP	31 39.00	9.1X
				S.D. = 1.4 on 29 of 34 obs.	

				& JAN 14, 1989 08h 26m 40.26s	
				46.553 N	121.811 W
				DEPTH = 3.6km	
				WASHINGTON	(29)
				<SEA> CL 2.7 (SEA)	
GLK	0.14	85	iP	26 43.09	-0.1
CWZ	0.15	246	iPd	26 43.60	0.2
			eS	26 46.03	
WPW	0.23	51	iPc	26 44.71	-0.3
KOSW	0.28	251	eP	26 45.59	-0.3
TDL	0.35	234	iPd	26 46.72	-0.5
LMW	0.35	289	iPc	26 47.36	0.1
SOSW	0.39	216	iPc	26 47.29	-0.8
FMW	0.39	14	iPd	26 47.68	-0.4
RVC	0.41	344	eP	26 48.12	-0.3
STD	0.43	222	eP	26 48.23	-0.6
ESD	0.43	214	eP	26 48.36	-0.5
ASR	0.43	159	iPd	26 48.58	-0.3
YEL	0.43	217	iPd	26 48.42	-0.5
ERK	0.44	236	iPd	26 48.39	-0.7
SHW	0.47	219	iPd	26 49.02	-0.6
CZM	0.49	256	eP	26 49.63	-0.5
FL2	0.52	227	iPd	26 49.84	-0.8
GHW	0.58	327	iP	26 50.94	-1.0
APW	0.59	280	iP	26 51.41	-0.5
GULW	0.65	167	iPd	26 52.46	-0.7
GSM	0.65	1	iP	26 52.53	-0.7
RVW	0.76	238	iP	26 54.07	-1.4
APM	0.82	174	eP	26 55.16	-1.5
TWW	0.87	48	eP	26 56.56	-1.1
YAKW	0.89	92	eP	26 57.51	-0.4
GL2	0.91	131	eP	26 57.36	-0.9
RMW	0.91	0	eP	26 56.97	-1.3
EBG	0.93	67	eP	26 57.58	-1.0
BMW	0.98	266	iPc	26 57.90	-1.6
CPW	1.00	295	iPc	26 58.37	-1.5
VLMW	1.03	189	eP	26 58.91	-1.4
TBM	1.04	53	eP	26 59.34	-1.1
VLL	1.09	175	eP	27 00.25	-1.2
PGO	1.18	203	eP	27 01.20	-1.6
GMW	1.20	327	eP	27 01.32	-1.9
NLO	1.23	248	eP	27 02.51	-1.2
HTW	1.25	1	eP	27 02.60	-1.5
VFP	1.26	169	eP	27 02.78	-1.6
TDH	1.26	179	eP	27 02.71	-1.7
VGB	1.26	145	eP	27 03.08	-1.2
SMW	1.30	307	eP	27 03.45	-1.5
VTG	1.32	71	eP	27 04.42	-0.8
HDW	1.39	323	eP	27 04.34	-2.2
ONR	1.39	284	eP	27 05.36	-1.1
MDW	1.42	87	eP	27 05.82	-1.0
GT2	1.43	193	eP	27 05.41	-1.8
KMOR	1.49	232	eP	27 06.24	-1.7
				47 obs. associated	
				* JAN 14, 1989 09h 25m 44.88 ± 0.97s	
				22.197 S ± 8.6km 67.269 W ± 15.5km	
				DEPTH = 183.4 ± 14.7 km	
				4.7mb (2 obs.)	
				CHILE-BOLIVIA BORDER REGION (124)	
ANT	3.27	242	iPc	26 37.70	0.3
			iS	27 17.10	
CCH	4.91	13	P	27 05.50	6.8X
LPB	5.69	352	P	27 11.00	2.0
	1.0s		176.00nm		5.2mb X
ZOBO	5.95	352	iPd	27 13.20	0.6
			S	28 19.80	
ARE	6.96	324	iPd	27 22.60	-3.0
			iS	28 36.80	
TCA	9.41	166	ePd	27 56.70	-1.0
			S	29 40.40	
PEL	11.32	195	iPc	28 23.50	1.1
ITB1	12.07	104	Pd	28 40.50	8.3X
ITB	12.26	105	e(P)	28 41.80	7.2X
BAO	19.36	74	eP	29 58.40	-0.4
LIC	67.13	73	Pd	36 21.00	-0.1
TIC	67.32	72	P	36 22.20	-0.2
KIC	67.44	73	Pd	36 22.90	-0.2
	0.8s		21.00nm		5.0mb
ALO	67.92	326	eP	36 25.80	-0.1
	0.9s		5.88nm		4.3mb
YKA	92.35	340	P	38 36.10	1.2
				S.D. = 1.5 on 12 of 15 obs.	
				JAN 14, 1989 12h 39m 44.47 ± 0.52s	

43.675 N \pm 5.2km DEPTH = 10.0km CORSICA ML 2.6 (LDG).	9.287 E \pm 3.9km (geophysicist) (380)	VZW 5.38 45 eP 52 18.48 -0.9 CVA 5.42 52 eP 52 19.27 -0.6 TTA 5.50 352 eP 52 20.70 -0.5 VLZ 5.51 45 eP 52 20.78 -0.4 SGAM 5.63 54 eP 52 22.32 -0.5 KLU 5.89 44 eP 52 25.89 -0.7 FBA 8.08 20 eP 52 55.50 -1.2 IMA 8.60 2 eP 53 03.50 -0.6 YKA 20.27 59 P 55 33.60 2.0 MBC 22.62 21 eP 55 57.00 2.1 NAO 61.45 8 P 01 09.90 -0.6 0.5s 1.50nm 4.4mb HFS 62.33 7 eP 01 15.60 -0.8 0.4s 2.00nm 4.6mb S.D. = 1.1 on 35 of 35 obs.	MD 2.7 (SSO).	AOI 0.38 331 iPg 04 56.64 -0.4 iSg 05 02.85 ALP 0.49 205 iPg 04 58.07 -1.1 iSg 05 06.19 CIO 0.52 267 iPg 04 59.24 -0.6 iSg 05 08.42 ARV 0.72 293 Pc 05 03.30 -0.2 eSg 05 09.80 ASS 0.89 261 P 05 06.00 -0.3 eSg 05 18.80 MNS 1.20 226 P 05 13.20 1.5 eSg 05 29.70 PGD 1.68 294 P 05 19.90 0.9 S.D. = 1.1 on 7 of 7 obs.
GEN 0.79 341 P 40 00.33 0.6 S 40 11.64 PII 0.90 87 P 40 02.40 0.7 FIN 0.94 305 P 40 03.02 0.5 S 40 17.59 BDI 1.02 67 P 40 02.90 -1.0 eSg 40 16.40 IMI 1.04 284 P 40 05.00 0.9 S 40 20.52 CKI 1.04 316 Pc 40 03.90 -0.3 eSg 40 18.80 BOB 1.10 6 P 40 05.00 -0.1 eSg 40 19.30 CVF 1.15 196 Pn 40 06.50 0.5 Sn 40 20.90 ROB 1.20 302 P 40 06.30 -0.5 S 40 23.91 SBF 1.35 279 Pn 40 09.50 0.1 Sn 40 28.40 STV 1.53 293 P 40 12.02 0.1 S 40 32.07 DOI 1.69 300 P 40 13.50 -0.7 PZZ 1.78 299 P 40 16.83 1.2 S 40 39.27 FRF 1.92 268 Pn 40 16.80 -0.7 Sn 40 40.70 LMR 2.05 261 Pn 40 18.50 -0.9 Sn 40 43.60 LRG 2.14 265 Pn 40 20.20 -0.5 Sn 40 46.80 S.D. = 0.7 on 16 of 16 obs.	* JAN 14, 1989 14h 11m 59.38 \pm 0.68s 29.274 S \pm 7.3km 67.933 W \pm 11.0km DEPTH = 131.6 \pm 13.8 km 4.6mb (1 obs.) LA RIOJA PROVINCE, ARGENTINA (138)	RTRS 1.60 236 iPc 12 31.50 2.5 RTL 2.10 193 iPc 12 36.10 0.9 RTCB 2.33 199 iPc 12 39.20 1.1 S 13 09.00 RTCV 2.63 191 i(P) 12 43.00 1.1 TCA 3.55 126 iPd 12 52.80 -1.2 MDZ 3.68 192 iP 12 56.10 0.3 S 13 33.40 FCH 4.52 206 iP 13 08.20 0.9 PEL 4.52 211 iPc 13 06.70 -0.3 ROCH 4.53 215 iP 13 06.50 -0.9 SAN 4.77 209 iPc 13 10.20 -0.3 S 14 04.50 PCH 4.86 206 iP 13 12.10 0.4 TACH 5.06 210 iP 13 13.00 -1.3 CHCH 5.19 206 iPd 13 16.00 -0.1 S 14 15.00 LCCH 5.22 216 eP 13 15.40 -1.0 LNV 5.53 212 iPd 13 18.10 -2.5 VBA 10.06 152 e(P) 14 21.00 -0.7 CNCB 12.41 360 P 14 54.00 0.9 LPB 12.68 359 (P) 14 54.00 -2.5 ZOBO 12.94 359 P 15 00.00 -0.1 VAO 19.82 77 eP 16 21.30 -0.7 BAO 22.84 58 e(P) 16 47.00 -5.0X LIC 69.93 70 P 22 59.50 1.1 TIC 70.17 70 P 23 01.20 1.3 KIC 70.24 70 P 23 01.50 1.2 0.6s 6.00nm 4.6mb HYB 147.16 104 ePKP 31 31.00 4.4X S.D. = 1.3 on 23 of 25 obs.	? JAN 14, 1989 19h 41m 47.20 \pm 1.11s 24.562 N \pm 14.8km 126.581 E \pm 21.5km DEPTH = 33.0km (normol) 4.7mb (3 obs.) RYUKYU ISLANDS (238)	
& JAN 14, 1989 12h 48m 29.60s 38.800 N 122.800 W DEPTH = 2.0km NORTHERN CALIFORNIA <BRK>. ML 2.8 (BRK).	(36)	ZSP 0.95 153 iPc 48 48.60 0.1 iS 49 03.00 BRK 1.02 155 iPc 48 49.00 -0.6 BKS 1.02 154 iPc 48 49.30 -0.4 eS 49 04.10 ORV 1.26 53 iPd 48 51.50 -2.3 PCC 1.34 166 ePd 48 55.30 0.2 ARN 1.76 145 eP 48 59.30 -2.1 CMB 2.04 111 iPc 49 03.70 -1.8 KVN 3.67 85 eP 49 26.00 -2.9 8 obs. associated	FORR 55.12 178 iPc 51 17.50 -1.0 0.4s 10.00nm 5.2mb e 51 35.00 INK 71.00 23 eP 53 08.00 4.8X MBC 71.79 13 eP 53 10.00 2.1 SLL 79.57 332 eP 53 52.00 -0.2 0.4s 3.40nm 4.7mb NAO 80.42 333 P 53 56.60 -0.1 0.7s 3.50nm 4.5mb YKA 80.66 24 P 54 03.30 5.4X S.D. = 1.3 on 10 of 18 obs.	
JAN 14, 1989 12h 50m 59.89 \pm 0.94s 57.503 N \pm 9.2km 154.413 W \pm 7.4km DEPTH = 70.9 \pm 9.4 km 4.5mb (2 obs.) KODIAK ISLAND REGION (13)	* JAN 14, 1989 18h 24m 14.05 \pm 0.76s 3.370 S \pm 8.7km 130.417 E \pm 12.9km DEPTH = 33.0km (normol) 4.8mb (5 obs.) CERAM (272)	KDC 1.06 76 iPc 51 20.50 1.1 PDB 2.29 3 eP 51 36.21 0.0 eS 52 04.94 CNPM 2.63 38 eP 51 42.23 1.4 eS 52 14.53 NNL 3.02 31 eP 51 48.11 1.8 RDT 3.25 18 eP 51 50.29 0.7 NKA 3.64 25 eP 51 57.31 2.4 SVW 3.67 351 iPc 51 54.80 -0.6 SLKM 3.71 34 eP 51 56.27 0.2 SPU 3.88 17 eP 51 58.78 0.3 CRP 3.95 16 eP 52 00.74 1.3 SDN 4.01 240 eP 52 00.00 -0.2 PTE 4.36 37 eP 52 05.07 -0.1 KNIM 4.48 48 iP 52 06.29 -0.6 PMS 4.50 31 eP 52 07.13 0.0 PWL 4.59 40 eP 52 07.95 -0.5 PWA 4.76 27 eP 52 10.80 0.2 PLRM 4.90 31 eP 52 11.93 -0.7 PMR 4.90 31 eP 52 13.60 0.9 KNK 4.96 35 eP 52 13.15 -0.4 eS 53 06.69 GLI 5.06 45 eP 52 12.97 -2.0 GHO 5.11 31 eP 52 14.82 -0.8 FID 5.22 48 eP 52 15.71 -1.5 SML 5.30 33 eP 52 18.02 -0.4	* JAN 14, 1989 19h 04m 49.23 \pm 2.66s 43.220 N \pm 7.2km 13.856 E \pm 20.9km DEPTH = 10.0km (geophysicist) CENTRAL ITALY (381)	YUGOSLAVIA (383) MD 2.9 (TTG).
	AAI 2.24 262 ePd 24 50.00 0.4 KNA 12.41 187 eP 27 11.00 -0.3 WB5 16.86 167 eP 28 07.90 -1.3 e 28 11.80 eS 31 10.00 OIS 19.29 153 eP 28 40.00 0.8 ASPA 20.46 171 eP 28 52.70 1.0 0.6s 41.00nm 5.0mb X eS 32 39.10 MBL 20.46 209 eP 28 51.50 -0.2 WARB 22.97 189 eP 29 09.00 -7.9X GUN 52.95 309 P 33 30.20 0.0 0.6s 11.00nm 5.0mb PKI 53.15 308 P 33 31.20 -0.5 0.6s 2.00nm 4.3mb KKN 53.38 308 P 33 33.00 -0.1 0.6s 5.00nm 4.7mb DMN 53.41 308 P 33 33.60 0.1 0.7s 7.00nm 4.8mb GKN 53.96 308 P 33 37.40 0.0 0.6s 9.00nm 5.0mb S.D. = 0.7 on 11 of 12 obs.	BRY 0.64 113 iPgc 55 24.70 -2.5 iSg 55 37.00 HCY 0.90 141 ePg 55 32.10 0.6 eSg 55 50.00 HVAR 0.95 272 iPg 55 31.80 -0.6 iSg 55 48.80 BDV 1.18 137 ePg 55 37.00 0.7 eSg 55 59.00 TTG 1.33 122 ePg 55 37.50 -1.3 eSg 56 01.00 VBY 2.95 324 e(Pn) 56 04.10 2.0 eSn 56 39.60 SKO 2.97 112 ePn 56 04.00 1.6 PTJ 3.03 336 ePb 56 06.80 3.5X eSn 56 34.20 OHR 3.05 131 ePn 56 04.80 1.2 CEY 3.51 319 eP 56 20.40 10.3X e(Sn) 56 55.00 e 57 11.00 LJU 3.69 323 eP 56 19.00 6.4X e(Sn) 57 19.40 BZS 3.71 47 ePc 56 13.00 0.1 TRI 3.83 313 e(P) 56 13.40 -1.2 e 56 22.90 e 57 17.50 VOY 3.98 318 e(Pn) 56 16.30 -0.5 eSn 57 05.90 eSg 57 26.30 S.D. = 1.5 on 11 of 14 obs.		

14d 20h

& JAN 14, 1989 20h 59m 32.54s
62.994 N 149.311 W
DEPTH = 82.6km
CENTRAL ALASKA (1)
<AGS-P>

GHO 1.24 171 iP 59 54.11 -1.0
eS 00 12.01
PMR 1.41 176 eP 59 56.00 -1.1
TOA 1.71 120 iP 00 01.00 -0.2
FBA 2.03 19 iPd 00 04.30 -1.1
TTA 3.06 272 iP 00 17.57 -2.1
IMA 3.62 331 eP 00 26.00 -1.5
6 obs. associated

JAN 14, 1989 20h 59m 45.08 ± 0.34s
40.801 N ± 3.9km 27.883 E ± 3.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EDC 0.45 182 iPg 59 55.30 1.0
iSg 00 02.30
CTT 0.54 50 iPg 59 55.50 -0.5
KCT 0.66 147 iPg 59 57.50 -0.7
ISK 0.93 73 iPg 00 02.00 -0.8
iSg 00 12.50
DMK 1.02 355 iPg 00 03.80 -0.6
iSg 00 16.80
YLV 1.16 101 iPn 00 06.50 -0.3
GBZT 1.19 90 ePg 00 09.10 1.9
iSg 00 25.70
DST 1.32 154 iPn 00 08.90 -0.6
HRT 1.35 89 ePn 00 10.00 0.0
EZN 1.54 231 iPn 00 11.80 -0.8
RDO 1.81 282 iPbd 00 17.10 0.6
GPA 1.92 105 ePn 00 18.60 0.5
JMB 1.93 330 eP 00 19.00 0.8
KDZ 2.04 295 iP 00 21.00 1.1
DIM 2.16 306 eP 00 22.00 0.4
IZM 2.45 191 ePn 00 31.00 5.3X
RZN 2.55 291 iPc 00 27.00 -0.3
PLD 2.72 300 eP 00 36.00 6.4X
KHL 2.78 152 ePn 00 38.20 7.7X
PVL 3.07 323 eP 00 35.00 0.5
MMB 3.23 285 iPc 00 37.00 0.1
PGB 3.29 303 eP 00 38.00 0.3
KKB 3.77 288 iP 00 44.00 -0.5
BBTK 3.85 103 eP 01 02.00 16.3X
eS 01 54.00
VAY 4.05 279 ePn 00 47.00 -1.4
MLR 4.90 344 ePc 01 01.50 0.9
SKO 4.99 286 ePn 00 50.00 -11.7X
VRI 5.14 351 eP 01 02.50 -1.3
S.D. = 0.9 on 23 of 28 obs.

* JAN 14, 1989 21h 06m 43.89 ± 1.96s
43.082 N ± 9.3km 13.687 E ± 17.3km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.8 (SSO).

ALP 0.31 195 iPg 06 50.25 -0.2
iSg 06 58.86
CIO 0.41 286 iPg 06 50.97 -1.4
i(Sg) 06 58.29
AOI 0.47 352 iPg 06 49.39 -4.1X
i(Sg) 06 56.64
ARV 0.69 308 P 06 58.00 0.5
eSg 07 09.00
ASS 0.75 270 P 06 57.80 -0.8
eSg 07 15.80
MNS 1.02 227 P 07 04.80 1.6
eSg 07 22.20
RSM 1.23 314 Pc 07 06.60 -0.2
SDI 1.38 176 P 07 08.40 -0.8
eSg 07 29.70
PGD 1.64 300 P 07 14.20 1.2
eSn 07 34.80
TRI 2.63 1 eP 07 52.30 25.3X
VBY 2.67 24 eP 07 55.70 28.0X
CEY 2.71 11 eP 07 55.00 26.7X
VOY 2.95 3 e(Pn) 07 36.50 4.7X
eSn 08 06.60
PTJ 3.25 29 e(P) 07 40.70 4.7X
S.D. = 1.2 on 8 of 14 obs.

JAN 14, 1989 21h 56m 57.37 ± 0.80s

43.228 N ± 7.5km 19 169 E ± 7.2km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.4 (TTG).

PLE 0.19 58 iPg 57 01.10 -0.6
iSg 57 05.00
BRY 0.56 235 iPg 57 07.00 -1.9
iSg 57 16.30
IVA 0.64 123 ePg 57 09.80 -0.5
eSg 57 19.10
TTG 0.80 175 ePg 57 13.00 0.1
eSg 57 25.50
BDV 0.98 195 ePg 57 16.20 0.3
eSg 57 30.50
BEO 1.84 30 e(Pg) 57 47.50 1B.2X
HVAR 1.99 270 iPn 57 32.70 1.3
iSg 58 00.30
SKO 2.09 126 ePn 57 39.00 6.1X
OHR 2.44 150 ePn 57 39.00 1.1
BZS 2.96 35 ePd 57 45.50 0.2
TRI 4.60 305 eP 58 32.80 24.3X
e 59 42.10
S.D. = 1.2 on 8 of 11 obs.

JAN 14, 1989 22h 19m 01.63 ± 0.35s
35.746 N ± 4.3km 27.282 E ± 3.8km
DEPTH = 92.0 ± 5.8 km
4.0mb (7 obs.)
DODECANESE ISLANDS (369)
MD 3.7 (ATH).

KAP 0.21 204 iPc 19 14.50 -0.6
NPS 1.44 251 iPd 19 28.00 0.8
eS 19 46.00
KSL 1.90 78 iPd 19 34.80 1.7
eS 19 57.50
ELL 2.35 64 iPn 19 40.60 1.4
VAM 2.53 263 eP 19 42.70 1.0
IZM 2.65 360 iPn 19 42.60 -0.6
KHL 3.14 34 iPn 19 49.70 -0.3
BCK 3.16 56 iPn 19 51.50 1.1
PRK 3.59 347 eP 19 56.00 0.0
ATH 3.62 309 eP 19 57.30 0.8
DST 4.00 15 iPn 20 00.90 -0.9
EZN 4.14 350 iPn 20 02.40 -1.3
PPCY 4.23 100 eP 20 05.00 0.0
CSS 5.01 97 eP 20 15.50 -0.3
eSn 21 05.50
IKL 5.22 83 iPn 20 18.50 -0.2
FAM 5.54 96 eP 20 15.50 -7.7X
RDO 5.56 346 eP 20 23.50 0.0
BBTK 5.96 45 iPd 20 29.50 0.4
KDZ 6.07 347 iPd 20 31.00 0.5
RZN 6.26 342 iPc 20 33.00 -0.3
KZN 6.30 318 eP 20 35.00 1.3
HLW 6.79 149 ePnd 20 41.00 0.6
eSn 21 54.00
KOT 6.95 145 ePn 20 41.00 -1.6
eSn 21 55.00
BHL 7.13 103 Pn 20 44.00 -1.1
Sn 21 56.00
PGB 7.21 341 iP 20 44.00 -2.2
ATZ 7.23 112 eP 20 47.70 1.3
eS 22 03.40
HRI 7.41 107 iPc 20 49.90 0.9
DOR 7.48 122 iPc 20 50.10 0.1
eS 22 08.20
VTS 7.53 336 iPg 20 52.00 1.3
BURJ 7.88 114 Pd 20 55.10 -0.2
SALJ 7.92 116 P 20 54.70 -1.3
DSI 7.93 119 eP 20 56.50 0.5
JARJ 8.00 113 P 20 56.40 -0.7
RMN 8.08 128 iPc 20 57.80 -0.4
MASJ 8.09 117 P 20 57.40 -0.9
MKRJ 8.13 119 P 20 58.00 -0.8
MBH 8.74 131 iP 21 07.40 0.3
MEU 10.05 281 Pd 21 22.70 -2.2
eSg 21 25.50
TRI 14.27 318 eP 22 12.80 -7.6X
KRA 15.27 342 eP 22 36.70 3.6X
KHC 16.73 327 eP 22 53.50 2.0
LPG 18.33 308 eP 23 10.50 -1.0
eSs 2.90nm 3.8mb
BSF 19.41 315 eP 23 22.50 -0.5
CDF 19.44 317 eP 23 22.50 -0.8
HAU 19.75 315 eP 23 25.40 -1.1

SMF 20.65 309 eP 23 34.70 -1.0
0.4s 4.00nm 4.1mb
LBF 20.70 310 eP 23 35.00 -1.3
LOR 20.90 311 eP 23 37.10 -1.1
0.7s 4.40nm 3.9mb
AVF 21.02 309 eP 23 38.60 -0.8
SSF 21.03 310 eP 23 38.60 -0.9
0.6s 5.40nm 4.1mb
CAF 21.23 303 eP 23 42.10 0.5
BGF 21.25 308 eP 23 41.60 -0.1
DOU 21.83 318 P 23 49.20 1.8
0.5s 6.20nm 4.2mb
LDF 23.88 311 eP 24 08.30 0.9
FLN 24.16 311 eP 24 11.10 0.9
LPF 24.25 309 eP 24 11.40 0.4
GRR 24.26 310 eP 24 11.30 0.2
HFS 25.94 344 eP 24 26.00 -0.7
0.4s 3.80nm 4.3mb
SUF 27.01 359 eP 24 41.00 4.6X
NAO 27.22 342 P 24 40.50 2.2
0.4s 1.10nm 3.8mb
KIC 41.45 233 (P) 26 43.40 2.5
S.D. = 1.1 on 57 of 61 obs.

% JAN 14, 1989 22h 46m 49.03 ± 1.02s
43.228 N ± 12.3km 0.557 W ± 9.8km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
ML 2.8 (LDG). Feit (II) at
Esquiale, France.

EPF 0.69 106 Pg 47 02.50 -0.2
Sg 47 12.10
ECRI 1.56 247 eP 47 17.00 0.1
eS 47 36.90
LPO 1.92 40 Pn 47 23.40 1.3
Pg 47 26.90
Sg 47 53.30
LFF 1.95 28 Pg 47 27.70 5.2X
Sg 47 54.50
EROO 2.51 163 eP 47 40.30 9.8X
eS 48 04.50
CAF 2.54 47 Pn 47 30.70 -0.3
Pg 47 39.00
Sn 48 01.20
RJF 2.55 35 Pg 47 38.00 6.8X
Sn 48 00.70
Sg 48 12.00
LSF 3.37 25 Pn 47 41.80 -0.9
Sn 48 21.50
Sg 48 37.00
S.D. = 1.1 on 5 of 8 obs.

? JAN 14, 1989 23h 47m 41.81 ± 5.23s
20.368 S ± 22.3km 178.219 W ± 20.1km
DEPTH = 342.6 ± 47.4 km
4.8mb (13 obs.)

FIJI ISLANDS REGION (181)
DZM 14.40 261 iPc 51 05.30 12.3X
VSG 23.99 294 P 52 33.00 4.7X
BRS 27.39 250 iPd 53 02.30 3.4X
COO 28.76 243 eP 53 14.00 3.0X
BWA 32.60 238 eP 53 46.00 1.7
CTA 33.30 264 iPd 53 53.00 2.7
0.8s 59.70nm 5.0mb
PMG 35.12 283 iPd 54 08.50 2.9
0.8s 59.70nm 5.0mb
STK 37.67 244 eP 54 29.00 2.3
OIS 39.43 262 iPd 54 42.60 1.2
ASPA 44.35 257 iPd 55 21.90 0.9
0.6s 101.00nm 5.2mb
WB5 44.40 262 iPd 55 22.20 0.8
eS 01 14.50
MTN 48.96 271 iP 55 57.10 0.4
0.8s 195.00nm 5.5mb
FORR 49.12 246 iPc 55 57.30 -0.4
0.4s 14.00nm 4.6mb
KNA 50.44 266 iPd 56 07.80 -0.1
0.4s 37.00nm 5.1mb
WARB 50.67 252 iPd 55 58.10 -11.5X
0.6s 18.00nm
COOL 55.09 246 eP 56 40.00 -1.7
MBL 57.59 257 iPd 56 57.50 -1.7
0.4s 22.00nm 4.9mb
MEKA 57.84 251 eP 56 59.00 -2.0

15d 01h

ISA 80.07 323 eP 39 53.00 0.8
FRS 80.42 119 iPc 39 54.00 -0.3
0.9s 88.24nm 5.7mb
BW06 81.84 333 P 40 01.00 -0.6
1.3s 11.89nm 4.7mb
KVN 82.53 325 P 40 05.90 0.7
CMB 82.87 323 eP 40 08.10 1.3
SEK 82.89 119 iPc 40 08.00 0.6
1.0s 70.00nm 5.6mb
PRY 83.51 118 iPc 40 10.60 0.0
0.7s 10.00nm 5.0mb
KSR 83.64 116 iPc 40 10.00 -1.3
0.9s 53.85nm 5.6mb
RSON 84.48 346 P 40 11.70 -2.9
1.3s 12.90nm 4.8mb
SLR 84.76 117 iPc 40 16.50 -0.4
0.9s 63.03nm 5.7mb
LRM 85.52 333 eP 40 21.20 0.9
WDC 85.89 324 e(P) 40 30.00 8.2X
SCH 86.30 3 eP 40 23.00 -0.6
BUL 88.04 112 iPd 40 32.50 -0.5
SES 88.04 336 ePc 40 35.10 -0.8
KMZ 89.39 105 iPd 40 40.50 1.0
FFC 89.94 343 eP 40 40.00 -1.0
1.2s 26.00nm 5.4mb
LSZ 90.33 108 iPc 40 45.50 1.7
PNT 91.22 331 eP 40 48.00 1.1
BNG 92.61 86 iPc 40 54.30 0.1
0.6s 11.00nm 5.5mb
PTZ 93.44 109 iPd 40 59.20 1.1
YKA 99.98 341 P 41 27.00 0.4
ASPA 119.67 207 ePKP 46 32.20 -0.5
WB5 122.87 210 ePKP 46 39.00 0.1
MAIO 139.72 70 ePKP 47 01.00 -9.6X
e 50 03.00
AAI 139.96 212 ePKPc 47 28.80 17.3X
0.6s 486.80nm
KSI 144.43 170 ePKPd 47 18.70 -0.6
e 49 00.00
POO 146.40 105 iPKPc 47 24.50 2.0
1.3s 215.38nm
GBA 146.55 116 PKPc 47 21.30 -1.4
0.9s 134.50nm
HYB 149.63 111 ePKP 47 28.00 0.4
1.0s 175.00nm
i 47 32.50
IPM 152.16 165 ePKPd 47 38.50 7.0X
0.9s 91.10nm
KSH 152.81 65 ePKP 47 37.00 5.2X
GKN 159.25 94 PKP 47 41.20 0.7
1.1s 31.00nm
DMN 159.54 96 PKP 47 42.00 1.1
KKN 159.74 95 PKP 47 42.00 0.9
1.0s 18.00nm
PKI 159.78 96 PKP 47 42.00 0.7
WMO 159.86 47 PKP 47 40.80 0.2
GUN 160.28 95 PKP 47 42.90 1.1
BDT 163.34 148 ePKP 47 45.00 0.4
SHL 164.43 109 iPKP 47 46.20 0.4
GTA 169.75 39 ePKP 47 50.60 1.4
TIA 171.34 303 PKP 47 50.90 1.0
LZH 174.35 39 ePKP 47 52.00 0.7
1.5s 44.00nm
CD2 176.12 101 PKP 47 53.40 1.7
XAN 177.62 345 PKPc 47 52.40 0.6
S.D. = 1.1 on 91 of 99 obs.

? JAN 15, 1989 02h 34m 03.32± 4.12s
31.547 S ±25.5km 71.705 W ±28.3km
DEPTH = 33.0km (normal)

NEAR COAST OF CENTRAL CHILE (135)

JACH 1.47 140 iP 34 28.00 0.1
iS 34 46.50
ROCH 1.54 158 eP 34 40.40 11.4X
iS 35 09.00
PEL 1.81 152 iPd 34 32.00 -0.8
iS 34 54.30
LCCH 1.93 177 eP 34 35.00 0.6
iS 34 57.50
SAN 2.10 155 eP 34 37.00 0.2
iS 35 01.00
FCH 2.14 146 iP 34 38.00 0.3
iS 35 03.00
TACH 2.20 163 iP 34 38.50 0.3
PCH 2.30 154 iP 34 39.50 -0.3
LNV 2.41 174 eP 34 40.40 -0.9

CHCH 2.54 160 iPc 34 43.70 0.5
iS 35 13.00
MDZ 2.76 120 eP 34 50.70 4.4X
iS 35 28.10
TCA 6.08 90 iP 35 33.40 0.0
S 36 46.00
S.D. = 0.6 on 10 of 12 obs.
JAN 15, 1989 03h 19m 50.63± 0.76s
31.750 S ± 4.4km 71.847 W ± 8.0km
DEPTH = 49.9 ± 6.7 km
5.0mb (19 obs.) 5.6MsZ (1 obs.)

NEAR COAST OF CENTRAL CHILE (135)

ROCH 1.41 150 iP 20 14.00 -0.5
iS 20 29.00
JACH 1.41 132 iP 20 14.50 0.1
LCCH 1.74 172 iPc 20 18.90 0.0
SAN 1.97 150 iPc 20 22.20 0.0
TACH 2.05 158 iP 20 23.20 -0.1
FCH 2.05 141 iPc 20 23.50 -0.1
PCH 2.18 149 iP 20 25.20 0.0
LNV 2.23 171 iP 20 25.30 -0.5
CHCH 2.40 156 iPc 20 28.50 0.2
RTRS 2.58 53 iPc 20 32.50 1.7
RTCB 2.61 85 iPc 20 33.20 1.8
ZON 2.71 87 iPc 20 34.00 1.3
MDZ 2.78 115 iP 20 36.20 2.5
iS 21 13.50
RTCV 2.82 93 ePd 20 31.00 -3.3X
TCA 6.21 88 ePc 21 19.30 -2.8
ANT 8.11 9 e(P) 21 46.50 -2.0
VBA 10.26 131 e(P) 22 15.50 -2.5
CCH 15.21 21 P 23 25.00 0.9
ARE 15.22 1 eP 23 24.00 -0.3
LPB 15.53 14 P 23 29.00 0.7
1.0s 80.00nm 4.9mb
Z 16s 2.02um 5.7MsZ

ZOBO 15.78 13 P 23 30.00 -1.7
1.1s 46.40nm 4.5mb
Z 22s 1.32um 4.7MsZ
LR 28 30.00
ITB1 16.93 70 e(P) 23 46.70 1.2
VAO 23.71 75 eP 24 56.90 -2.0
BAO 27.01 59 eP 25 23.00 -7.1X
e 25 27.80
SPA 58.42 180 ePc 29 43.10 -0.3
1.0s 29.50nm 5.4mb
TUL 70.96 340 eP 31 04.40 -0.3
0.9s 10.20nm 4.8mb
LNO 70.96 340 e(P) 31 03.80 -0.8
RLO 70.97 340 eP 31 03.70 -1.1
FVM 71.51 345 P 31 06.90 -1.1
0.9s 9.32nm 4.7mb
ALO 73.89 331 P 31 21.90 -0.4
1.0s 800.00nm 6.6mb X
LIC 73.92 72 Pc 31 21.64 -1.0
TIC 74.17 72 Pc 31 23.14 -0.9
0.7s 52.00nm 5.5mb
KIC 74.23 72 Pc 31 23.60 -0.8
0.8s 113.00nm 5.9mb

RSNY 75.97 358 P 31 34.00 0.3
0.9s 16.81nm 5.0mb
GAC 77.16 357 ePd 31 40.90 0.6
GLD 77.59 334 P 31 44.10 1.0
1.1s 15.43nm 4.9mb
GOL 77.60 334 P 31 43.90 0.6
0.9s 3.79nm 4.4mb
FRS 80.44 119 iPd 31 59.50 0.8
0.8s 29.85nm 5.3mb
BW06 81.84 333 P 32 06.80 0.9
1.2s 4.45nm 4.4mb
KVN 82.52 325 P 32 10.20 0.7
SEK 82.90 119 iPd 32 13.00 1.2
1.0s 20.00nm 5.1mb
PRY 83.53 118 iPd 32 14.00 -1.0
KSR 83.65 116 iPd 32 14.50 -1.2
0.7s 15.00nm 5.1mb
RSON 84.49 346 P 32 19.00 0.1
1.0s 5.00nm 4.5mb
SLR 84.78 117 iPc 32 21.00 -0.3
0.9s 29.41nm 5.4mb
Z 18s 2.06um 5.6MsZ
SCH 86.32 3 eP 32 28.00 0.0
BUL 88.06 112 iPd 32 37.00 -0.4

SES 88.84 336 eP 32 40.00 -0.3
FFC 89.95 343 eP 32 45.00 -0.3
0.9s 10.00nm 5.1mb
PNT 91.22 331 ePd 32 52.00 0.7
0.8s 6.00nm 5.1mb
BNG 92.64 86 iPc 32 59.00 0.3
0.7s 6.00nm 5.1mb
YKA 99.98 341 P 33 31.10 0.1
WB5 122.84 210 ePKP 38 43.20 0.0
MAIO 139.75 70 ePKP 39 06.00 -9.0X
KOD 144.45 120 ePKP 39 03.00 -21.0X
POO 146.42 105 iPKPc 39 26.00 -0.9
GBA 146.56 116 PKPc 39 25.00 -2.1
0.8s 49.40nm
PPI 147.14 166 ePKP 39 30.60 2.5
HYB 149.65 111 ePKP 39 33.00 1.0
1.0s 100.00nm
IPM 152.16 165 ePKPc 39 42.50 6.7X
0.7s 38.80nm
NDI 153.14 88 iPKPc 39 43.50 6.7X
GKN 159.28 94 PKP 39 45.80 1.0
DMN 159.56 96 PKP 39 46.50 1.2
KKN 159.76 95 PKP 39 46.80 1.3
GUN 160.31 95 PKP 39 47.50 1.3
S.D. = 1.2 on 59 of 65 obs.

* JAN 15, 1989 03h 43m 24.20± 0.88s
36.231 N ±14.6km 31.627 E ±13.2km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

PPCY 1.46 156 eP 43 52.00 1.4
ELL 1.48 291 ePn 43 51.10 0.1
BCK 1.48 326 ePn 43 50.90 -0.1
IKL 1.66 89 iPn 43 54.50 1.0
CSS 1.88 132 eP 43 54.50 -2.2
KHL 2.68 322 ePn 44 08.00 -0.2
S.D. = 1.6 on 6 of 6 obs.

* JAN 15, 1989 03h 59m 47.00± 1.85s
0.120 N ±11.4km 121.871 E ±20.6km
DEPTH = 171.6 ± 25.8 km
4.5mb (8 obs.)

MINAHASSA PENINSULA (265)

MNI 3.25 66 eP 00 38.50 -0.3
eS 01 13.50
MTN 15.82 145 iPd 03 22.80 1.0
KNA 17.18 157 eP 03 38.20 -0.1
0.4s 24.00nm 4.9mb
MBL 21.24 185 eP 04 21.00 0.3
WB5 23.35 149 eP 04 41.00 -0.1
ASPA 26.37 155 eP 05 08.60 -0.7
0.4s 11.00nm 4.9mb
MEKA 26.77 187 eP 05 13.40 0.6
FORR 31.36 170 eP 05 52.50 -1.0
STK 36.89 151 iPd 06 41.00 0.3
GUN 44.19 312 P 07 41.70 0.5
0.5s 13.00nm 4.8mb
PKI 44.36 311 P 07 42.60 0.1
0.5s 3.00nm 4.1mb
KKN 44.58 311 P 07 44.50 0.4
0.5s 4.00nm 4.2mb
DMN 44.61 311 P 07 45.00 0.6
0.5s 5.00nm 4.3mb
GKN 45.17 311 P 07 48.90 0.2
0.5s 8.00nm 4.5mb
HYB 45.95 294 eP 07 55.00 0.2
GBA 45.99 289 Pd 07 53.10 -2.0
0.5s 2.70nm 4.0mb
S.D. = 0.8 on 16 of 16 obs.

JAN 15, 1989 04h 00m 56.57± 0.78s
37.593 N ± 6.9km 15.170 E ± 6.9km
DEPTH = 10.0km (geophysicist)

SICILY (398)

MNO 0.51 312 P 01 07.00 0.1
eSg 01 13.30
MEU 0.53 201 P 01 06.70 -0.6
eSg 01 14.90
ATN 0.61 22 P 01 09.30 0.4
eSg 01 18.40
SOI 0.85 55 Pd 01 13.80 0.9
eSg 01 27.20
MCT 1.22 272 P 01 19.50 0.1
FAI 1.23 256 P 01 20.20 0.7

eSn 01 36.90
 TDS 2.26 24 P 01 34.30 -0.2
 MGR 2.56 7 P 01 37.20 -1.5
 eSn 02 10.00
 S.D. = 0.9 on 8 of 8 obs.

JAN 15, 1989 04h 16m 20.64 ± 0.44s
 55.684 N ± 6.8km 156.747 W ± 5.9km
 DEPTH = 33.0km (normal)
 4.8mb (13 obs.)

SOUTH OF ALASKA (17)
 ML 4.5 (PMR).

SDN 2.16 262 iPc 16 55.30 0.3
 KDC 3.13 47 iPc 17 08.70 0.0
 SVW 5.47 6 eP 17 43.10 1.1
 PMS 6.73 31 eP 17 58.80 -0.9
 PWA 6.97 28 eP 18 03.00 0.0
 PMR 7.13 31 eP 18 03.90 -1.3
 TTA 7.28 3 eP 18 07.70 0.3
 TOA 8.44 36 eP 18 22.70 -0.9
 FBA 10.24 22 eP 18 46.30 -2.0
 IMA 10.53 7 eP 18 52.40 0.1
 HYT 11.35 55 P 18 55.40 -0.1X
 ADK 12.38 260 eP 19 15.90 -1.3
 INK 16.55 31 eP 20 12.00 0.6

0.5s 9.00nm 4.2mb
 YKA 22.34 55 P 21 18.60 2.0
 PNT 23.27 90 eP 21 29.00 3.2X
 MBC 24.78 20 eP 21 42.00 1.8
 0.5s 45.00nm 5.3mb
 KVN 30.51 107 eP 22 32.80 -0.1
 TNP 31.69 107 eP 22 43.00 -0.3
 BW06 32.75 93 eP 22 52.80 0.3

0.6s 3.60nm 4.4mb
 PLM 35.44 112 eP 23 15.90 0.2
 ALE 35.77 13 eP 23 18.00 0.2
 0.6s 10.00nm 4.9mb
 FRB 41.75 42 eP 24 11.00 3.4X
 DAG 45.16 13 iPc 24 35.40 0.2

0.8s 18.66nm 5.0mb
 MAT 47.08 274 (P) 24 51.00 0.2
 CN2 49.07 290 Pc 25 05.60 -0.7
 KEV 54.84 358 eP 25 49.00 -0.1
 0.8s 19.10nm 5.2mb
 SOD 57.24 358 iP 26 06.80 0.4
 KJF 60.40 358 eP 26 28.00 -0.4
 SUF 61.91 358 iP 26 38.50 -0.1

0.5s 4.70nm 4.9mb
 NAO 63.42 7 P 26 48.60 -0.1
 0.7s 4.80nm 4.7mb
 NUR 64.15 359 iP 26 52.90 -0.5
 HFS 64.28 5 eP 26 51.80 -2.5
 0.4s 1.60nm 4.5mb
 GTA 65.22 304 P 27 00.00 -0.8
 CD2 70.06 296 eP 27 31.00 -0.2
 KHC 75.24 7 eP 28 02.80 1.4
 KBA 77.27 7 i(P) 28 14.20 1.2

0.7s 2.40nm 4.3mb
 GUN 81.18 307 P 28 35.90 1.3
 0.8s 10.00nm 4.9mb
 KKN 81.55 308 P 28 38.90 2.5
 0.4s 3.00nm 4.7mb
 GKN 81.66 308 P 28 37.10 0.2
 PKI 81.68 308 P 28 37.20 0.0
 DMN 81.79 308 P 28 38.40 0.7

0.6s 6.00nm 4.8mb
 BUL 144.29 351 ePKP 35 52.40 -2.4
 SPA 145.50 180 e(PKP) 35 54.80 -0.6
 0.9s 7.73nm
 S.D. = 1.1 on 40 of 43 obs.

JAN 15, 1989 05h 39m 56.13 ± 0.97s
 30.753 S ± 5.9km 71.862 W ± 12.0km
 DEPTH = 61.4 ± 11.6 km
 NEAR COAST OF CENTRAL CHILE (135)

RTRS 2.15 175 iPd 40 29.40 -0.8
 JACH 2.21 151 iPd 40 31.80 0.7
 ROCH 2.33 162 iP 40 32.70 -0.2
 LCCH 2.73 175 iPd 40 38.10 -0.2
 iS 41 10.50
 RTCB 2.73 106 ePd 40 39.00 0.6
 S 41 14.50
 SAN 2.88 160 ePd 40 40.40 -0.2
 iS 41 21.50
 FCH 2.89 153 iP 40 41.50 0.4

iS 41 17.50
 TACH 3.00 165 iP 40 42.00 -0.2
 iS 41 23.50
 RTCV 3.05 112 ePd 40 43.70 0.7
 PCH 3.08 159 iP 40 43.60 0.1
 iS 41 26.50
 LNV 3.22 173 eP 40 44.50 -0.8
 MDZ 3.33 130 iP 40 49.20 2.2
 iS 41 28.40
 TCA 6.27 97 ePd 41 24.00 -4.2X
 (S) 42 28.30

ANT 7.14 11 e(P) 41 38.70 -1.5
 VBA 10.94 134 e(P) 42 30.00 -2.3
 ARE 14.23 1 e(P) 43 18.00 1.8
 ZOBO 14.82 14 P 43 24.00 -0.1
 Z 20s 0.15um
 LR 48 18.00
 VAO 23.48 77 eP 44 59.50 -1.6
 LIC 73.63 72 Pc 51 25.60 0.5
 TIC 73.87 72 Pc 51 27.00 0.5
 KIC 73.94 72 Pc 51 27.40 0.5

S.D. = 1.2 on 20 of 21 obs.
 ? JAN 15, 1989 06h 01m 57.40 ± 3.65s
 15.863 N ± 33.7km 97.948 W ± 11.8km
 DEPTH = 33.0km (normal)
 NEAR COAST OF OAXACA, MEXICO (66)

OXX 1.69 44 iP 02 25.00 -0.2
 ACX 2.09 299 iP 02 31.00 0.2
 III 2.89 330 iP 02 42.00 -0.3
 IISM 3.16 10 iP 02 46.50 0.6
 IIT 3.16 354 iP 02 46.00 -0.2
 IIC 4.08 342 (P) 02 55.00 -4.4X
 LVVM 4.11 20 (P) 03 04.50 5.0X
 S.D. = 0.6 on 5 of 7 obs.

* JAN 15, 1989 08h 08m 06.01 ± 1.59s
 4.046 S ± 18.0km 130.400 E ± 14.2km
 DEPTH = 33.0km (normal)
 BANDA SEA (280)

AAI 2.23 279 ePc 08 41.50 0.1
 MTN 8.77 175 eP 10 15.00 1.4
 eS 11 59.00
 KNA 11.74 188 eP 10 54.00 -0.3
 WB5 16.21 167 eP 11 52.00 -1.0
 eS 14 51.50
 QIS 18.70 152 eP 12 24.00 -0.1
 ASPA 19.80 170 eP 12 36.80 0.1

0.6s 48.00nm 5.0mb
 eS 16 17.70
 MBL 19.87 210 eP 12 37.00 -0.5
 BWA 34.55 153 eP 14 53.80 0.0
 CAN 35.56 153 eP 15 02.50 0.2
 GUN 53.36 309 P 17 13.00 -12.2X
 S.D. = 0.7 on 9 of 10 obs.

* JAN 15, 1989 10h 20m 04.25 ± 1.52s
 15.920 S ± 11.6km 167.374 E ± 13.5km
 DEPTH = 69.8 ± 12.7 km
 4.9mb (2 obs.)
 VANUATU ISLANDS (186)

PVC 2.02 154 iP 20 37.70 1.0
 DZM 6.18 188 iPc 21 33.10 -2.0
 iS 22 44.00
 HNR 9.70 311 eP 22 24.00 0.6
 VSG 9.99 311 eP 22 28.00 0.6
 eS 24 20.00

RMQ 20.27 236 eP 24 38.00 1.3
 WB5 31.63 258 eP 26 21.50 -1.5
 ASPA 32.36 251 ePc 26 28.50 -0.9
 0.9s 13.00nm 4.8mb
 FORR 38.77 240 iPd 27 24.70 1.0
 0.4s 8.00nm 5.0mb

MAT 59.00 333 eP 29 57.00 -2.1
 YKA 98.55 27 P 33 35.10 -0.8
 KJF 124.47 340 ePKP 38 55.00 -1.5
 SUF 125.98 339 iP 38 57.70 -1.8
 0.5s 3.00nm
 APO 131.48 343 ePKP 39 07.80 -2.2
 0.5s 2.60nm
 CDF 143.71 337 ePKP 39 28.00 -4.1X
 BSF 144.37 337 ePKP 39 31.00 -3.2X
 HAU 144.39 338 ePKP 39 31.20 -2.9
 ORX 145.70 334 PKP 39 35.08 -1.4

FLN 145.77 346 ePKP 39 34.60 -1.7
 LDF 145.84 345 ePKP 39 34.90 -1.6
 LOR 145.88 340 ePKP 39 35.40 -1.2
 LBF 146.09 339 ePKP 39 35.90 -1.1
 SSF 146.18 340 ePKP 39 36.50 -0.6
 LSD 146.19 335 PKP 39 37.96 0.4
 GRR 146.21 346 ePKP 39 36.30 -0.8
 LPG 146.32 335 ePKP 39 37.30 -0.5
 SMF 146.43 339 ePKP 39 37.20 -0.3
 AVF 146.47 340 ePKP 39 37.30 -0.3
 LPF 146.58 346 ePKP 39 37.40 -0.3
 FIN 146.73 332 PKP 39 37.85 -0.3
 RRL 146.78 334 PKP 39 39.60 1.2
 ROB 146.81 333 PKP 39 38.06 -0.2
 BGF 146.84 340 ePKP 39 38.10 -0.1
 STV 147.09 333 PKP 39 39.90 1.1
 MAF 147.23 340 ePKP 39 39.50 0.7
 TCF 147.28 341 ePKP 39 39.50 0.6
 BNG 147.32 253 iPc 39 42.20 2.3

0.4s 5.00nm
 SBF 147.34 333 ePKP 39 39.50 0.4
 LSF 147.53 342 ePKP 39 39.90 0.6
 CVF 147.68 330 ePKP 39 40.40 0.7
 MFF 147.69 344 ePKP 39 40.60 1.1
 FRF 147.93 333 ePKP 39 41.10 1.1
 LRG 148.14 333 ePKP 39 41.80 1.5
 LMR 148.17 333 ePKP 39 41.80 1.4
 RJF 148.38 341 ePKP 39 42.40 1.7
 CAF 148.54 340 ePKP 39 43.00 2.0
 LFF 148.95 341 ePKP 39 43.80 2.2
 LPO 149.04 341 ePKP 39 44.20 2.5
 EPF 150.79 340 ePKP 39 48.70 4.2X

S.D. = 1.4 on 45 of 48 obs.

* JAN 15, 1989 10h 41m 51.22 ± 0.47s
 9.261 S ± 11.0km 67.243 E ± 9.2km
 DEPTH = 10.0km (geophysicist)
 4.4mb (10 obs.)
 MID-INDIAN RISE (429)

KOD 21.88 28 eP 46 46.00 -0.6
 GBA 24.87 24 P 47 18.00 2.5
 0.7s 3.30nm 4.1mb
 PTZ 35.47 258 iP 48 50.00 -0.3
 LSZ 38.59 257 iPc 49 17.00 0.4
 BUL 38.80 249 iPd 49 17.90 -0.5
 0.9s 4.20nm 4.1mb
 SLR 40.42 241 iPd 49 32.00 0.3
 0.9s 16.81nm 4.7mb
 DMN 40.53 25 P 49 34.00 1.3
 0.6s 6.00nm 4.5mb

PKI 40.62 25 P 49 34.00 0.5
 0.6s 2.00nm 4.0mb
 GKN 40.69 24 P 49 34.20 0.4
 0.6s 6.00nm 4.5mb
 KKN 40.76 25 P 49 35.10 0.6
 0.5s 3.00nm 4.3mb

KMZ 40.78 260 iP 49 35.60 0.9
 GUN 41.12 25 P 49 38.30 0.7
 0.6s 8.00nm 4.6mb
 PRY 41.46 240 eP 49 40.70 0.5
 KSR 41.65 241 eP 49 26.00 -15.8X
 CHG 41.90 48 iPc 49 44.70 1.0
 0.6s 7.67nm 4.6mb

SHL 42.12 34 iP 49 46.40 0.8
 MAIO 45.90 351 eP 50 15.00 -0.9
 BNG 50.40 284 ePd 50 50.40 -0.9
 0.5s 3.00nm 4.5mb
 CD2 53.12 40 eP 51 10.00 -1.5
 WMO 56.00 18 eP 51 31.20 -1.2
 GTA 57.09 30 eP 51 38.70 -1.6
 XAN 58.46 40 P 51 47.70 -2.2
 ASPA 65.01 112 eP 52 33.90 -0.3
 WB5 65.47 108 eP 52 37.50 0.3
 VRI 65.80 330 ePd 52 35.00 -3.7X
 BJI 66.71 39 eP 52 44.00 -0.6
 QIS 70.36 109 eP 53 08.00 0.2

ALO 153.80 348 ePKP 02 02.00 17.3X
 S.D. = 1.1 on 25 of 28 obs.

* JAN 15, 1989 10h 45m 33.97 ± 1.46s
 32.266 S ± 7.2km 71.737 W ± 15.5km
 DEPTH = 33.0km (normal)
 NEAR COAST OF CENTRAL CHILE (135)

ROCH 0.93 139 iP 45 50.50 -0.4
 JACH 1.05 114 iPd 45 51.00 -1.5

15d 10h

LCCH	1.21 173 iPd	45 56.40	1.7	0.6s	7.00nm	4.8mb	38.098 N ±11.6km	77.162 E ±19.6km
TACH	1.54 154 iP	45 59.10	-0.3	PKI	75.08 301 P	38 39.60	DEPTH = 33.0km	(normal)
FCH	1.61 131 iP	45 59.50	-1.3	KKN	75.25 301 P	38 40.80	4.3mb (3 obs.)	
PCH	1.70 143 iP	46 01.50	-0.3	DMN	75.35 301 P	38 40.90	SOUTHERN XINJIANG, CHINA	(321)
LNV	1.71 171 iP	46 02.00	0.2	GKN	75.85 301 P	38 44.50	NDI	9.39 180 eP
CHCH	1.90 152 iP	46 05.00	0.4	YKA	95.93 28 P	40 24.20	eS	50 39.00
RTCB	2.62 73 iPd	46 16.00	1.1	S.D. = 1.4 on 13 of 13 obs.			GKN	11.85 146 P
ZON	2.70 75 iPd	46 16.20	0.2	* JAN 15, 1989 14h 43m 31.85±2.14s			0.4s	16.00nm
RTCV	2.75 82 ePd	46 17.30	0.6	33.064 S ± 8.0km 72.167 W ±19.6km			KKN	12.33 144 P
RTRS	2.86 44 ePd	46 20.00	1.8	DEPTH = 33.0km (normal)			0.6s	14.00nm
TCA	6.15 83 iPc	47 01.30	-3.7X	OFF COAST OF CENTRAL CHILE (134)			DMN	12.40 145 P
ZOBO	16.26 12 P	49 20.00	-2.1	LCCH	0.65 129 iPd	43 43.50	0.5s	6.00nm
S.D. = 1.3 on 13 of 14 obs.				ROCH	0.98 85 iP	43 47.70	12.51	142 P
JAN 15, 1989 14h 21m 33.19±0.93s				LNV	1.09 145 iPc	43 51.50	0.4s	8.00nm
43.357 N ± 5.5km 143.168 E ± 7.2km				TACH	1.18 120 iP	43 52.00	12.57	144 P
DEPTH = 31.4 ± 6.2 km				PEL	1.25 94 iPd	43 52.50	0.4s	14.00nm
4.5mb (4 obs.)				SAN	1.32 107 iPd	43 53.90	14.20	268 eP
HOKKAIDO, JAPAN REGION (224)				JACH	1.38 74 iPd	43 55.30	20.64	176 eP
Felt (I JMA) at Obihiro.				PCH	1.49 112 iP	43 57.00	GBA	24.40 179 Pc
OBI	0.44 175 iP+	21 42.90	0.2	CHCH	1.53 125 iPc	43 58.50	0.8s	1.50nm
SAP	1.38 258 iP	21 55.20	-1.1	FCH	1.59 100 iP	43 58.50	SUF	39.28 326 eP
AOMJ	3.49 218 P	22 13.90	0.4	MDZ	2.79 87 iP	44 19.70	HFS	44.90 321 eP
OFUJ	4.42 195 P	22 39.50	-0.3	RTCB	3.26 62 ePc	44 23.00	0.6s	3.30nm
YAMJ	5.70 206 P	22 57.70	-0.1	RTCV	3.29 70 eP	44 24.10	NAO	46.31 322 P
NIJ	6.89 209 P	23 14.30	-0.3	ZON	3.32 64 eP	44 24.00	0.6s	5.00nm
KAKJ	7.50 199 P	23 21.70	-1.5	CFA	3.63 67 ePd	44 30.80	MBC	65.45 4 eP
MAT	7.80 211 eP	23 27.00	-0.3	RTRS	3.70 39 ePc	44 28.20	YKA	79.31 6 P
1.0s 33.00nm 5.4mb				TCA	6.65 77 ePd	45 07.80	S.D. = 1.4 on 13 of 14 obs.	
MTMJ	7.92 213 P	23 30.10	1.0	CNCB	16.62 14 eP	47 06.00	JAN 15, 1989 18h 52m 51.40±0.21s	
CHJJ	7.97 205 P	23 30.00	0.2	LPB	16.87 14 (P)	47 10.00	58.878 S ± 7.6km 26.061 W ± 5.1km	
IDJ	8.85 209 eP	23 42.50	0.5	ZOBO	17.12 13 eP	47 30.00	DEPTH = 118.1km (2 depth phases)	
TSRJ	9.58 218 eP	23 52.80	0.8	S.D. = 1.2 on 15 of 20 obs.			5.2mb (14 obs.)	
GN2	12.86 278 eP	24 36.00	-0.4	* JAN 15, 1989 15h 39m 55.10s			SOUTH SANDWICH ISLANDS REGION (153)	
N 18s 1.60um				32.950 N 117.740 W			AIA	18.75 234 eP
BJI	20.39 270 eP	26 11.00	1.0	DEPTH = 6.0km (geophysicist)			TCA	37.82 300 ePd
GTA	32.49 278 eP	27 57.50	-5.6X	4.5mb (1 obs.)			BMA	38.39 332 eP
WMO	39.53 290 eP	29 02.00	-0.8	CALIFORNIA-MEXICO BORDER REGION (45)			CHCH	38.52 290 eP
GUN	48.14 271 P	30 12.20	-0.4	<PAS-P>. ML 4.2 (PAS). Felt (IV)			PCH	38.71 291 eP
KKN	48.64 271 P	30 17.00	0.7	at Dana Point, Encinitas and San			FCH	38.84 291 iP
PKI	48.67 271 P	30 17.00	0.3	Diego. Felt (III) at Escondido,			LNV	38.88 290 iP
DMN	48.87 271 P	30 18.80	0.6	Oceanside and San Luis Rey.			TACH	38.89 290 iP
YKA	57.71 32 P	31 22.70	-0.1	CPE	0.54 97 iPd	40 05.20	SAN	38.92 291 ePd
WB5	63.44 189 eP	32 01.00	-1.1	SCI	0.68 273 iPd	40 07.90	PEL	39.18 291 iPc
ASPA	67.23 189 eP	32 26.50	0.0	CIS	0.72 309 iPc	40 08.20	0.8s	29.10nm
FFC	67.70 35 eP	32 49.00	19.8X	PLM	0.84 61 iPd	40 10.30	LCCH	39.34 290 eP
LRM	68.76 47 eP	32 29.30	-7.0X	BAR	0.94 106 iPd	40 11.90	FRS	45.27 73 iPc
CMB	69.20 57 eP	32 39.20	0.4	PEC	1.06 27 iPd	40 14.00	0.7s	23.97nm
FRB	70.32 14 eP	32 43.00	-2.1	RVR	1.08 16 iPd	40 14.40	BAO	46.12 330 eP
KHC	77.85 329 P	33 32.00	3.0X	IKP	1.41 102 iPc	40 19.90	PRY	48.66 73 iPc
ALO	79.55 52 eP	33 40.00	1.3	ABL	2.26 327 eP	40 31.40	KSR	49.26 72 iPd
KBA	79.62 328 e(P)	33 40.00	1.1	GLA	2.45 87 eP	40 34.10	0.7s	30.00nm
S.D. = 0.9 on 26 of 30 obs.				BLP	2.74 307 eP	40 37.20	SLR	50.05 73 iPd
* JAN 15, 1989 14h 27m 02.47±0.81s				BCH	2.96 320 eP	40 41.00	0.5s	21.13nm
6.481 S ±15.3km 154.893 E ± 7.4km				PHAM	3.62 323 eP	40 49.80	CNCB	51.99 306 P
DEPTH = 62.1 ± 10.5 km				PRI	4.00 324 eP	40 55.50	LPB	52.29 306 P
4.7mb (2 obs.)				SAO	4.87 322 eP	41 06.00	1.0s	30.00nm
SOLOMON ISLANDS (193)				TNP	5.14 5 eP	41 13.30	ZOBO	52.53 306 iPc
PAA	0.62 73 iPd	27 14.00	-2.1	MHC	5.42 325 e(P)	41 16.50	0.8s	25.40nm
RAB	3.54 310 e(P)	27 58.50	2.3	CMB	5.51 338 eP	41 18.10	Z 24s	0.13um
VSG	5.51 120 eP	28 25.00	1.1	KVN	6.10 357 eP	41 26.80	eLR	19 48.00
HNR	5.80 121 eP	28 29.00	1.1	BKS	6.13 325 e(P)	41 26.80	ARE	53.81 302 eP
LAT	7.84 268 eP	28 56.00	-0.4	ALO	9.58 75 eP	42 17.50	BUL	54.92 70 iPc
PMG	8.20 249 eP	29 00.00	-1.2	SES	18.12 14 eP	44 09.00	1.0s	44.00nm
BLLO	8.25 265 e(P)	29 03.00	1.0	FFC	24.45 22 eP	45 14.50	ipP	02 18.40
GUN	74.77 301 P	38 38.20	-0.3	MBC	43.38 359 eP	47 59.00	iPd	02 39.40
* JAN 15, 1989 16h 46m 38.39±0.67s				24 obs. associated			i	02 47.90
							iPc	02 44.30
							0.6s	17.00nm
							0.7s	18.00nm
							0.7s	16.00nm
							0.7s	18.00nm
							0.3s	18.00nm
							i	04 36.00
							MSZ	76.17 190 eP
							TAU	78.43 175 iPc
							ADE	85.65 168 iPd

FORR	88.05	158 iPd	05 30.00	0.8
	0.5s	17.00nm		5.3mb
STK	89.00	170 iPd	05 34.20	0.5
ASPA	96.10	162 ePc	06 05.80	-0.8
	0.8s	12.00nm		5.4mb
		eS	16 26.70	
SCH	117.97	335 ePKP	11 23.00	-1.2
PRI	122.38	287 ePKP	11 34.40	1.1
FRI	122.58	289 ePKP	11 33.80	0.3
HFS	122.68	22 ePKP	11 31.50	-1.4
	0.4s	1.10nm		
NAO	122.78	20 PKP	11 33.80	0.7
	0.9s	6.10nm		
PRS	122.88	287 ePKP	11 35.00	0.9
LLA	122.89	287 ePKP	11 35.20	1.1
CMB	123.73	289 iPKPd	11 36.30	0.5
MHC	123.81	287 ePKP	11 37.00	0.9
DMN	124.08	92 PKP	11 37.00	-0.1
GKN	124.16	92 PKP	11 36.60	-0.5
PKI	124.21	93 PKP	11 36.80	-0.6
KKN	124.32	92 PKP	11 37.10	-0.4
BKS	124.52	287 e(PKP)	11 38.30	1.1
BRK	124.53	287 ePKP	11 38.00	0.8
GUN	124.73	93 PKP	11 37.40	-1.0
NUR	125.44	28 ePKP	11 36.00	-2.3
ORV	125.45	289 e(PKP)	11 40.20	1.2
SHL	125.92	100 ePKP	11 40.50	-0.1
MIN	126.11	290 ePKP	11 40.50	0.0
FRB	126.51	338 ePKP	11 40.00	-0.3
	0.7s	33.00nm		
WDC	126.75	289 ePKP	11 41.20	-0.3
SUF	127.72	27 ePKP	11 42.00	-0.6
FFC	128.52	314 ePKP	11 43.50	-0.9
	1.1s	25.00nm		
SES	128.86	305 ePKP	11 44.50	-0.8
KJF	129.35	27 ePKP	11 42.00	-3.7X
		iSKP	14 54.00	
SOD	131.77	24 iPKP	11 50.30	0.1
DAG	135.47	2 iPKPd	11 56.70	-0.3
	0.7s	5.48nm		
YKA	138.65	315 PKP	11 56.70	-6.6X
GTA	140.91	95 ePKP	12 07.00	-1.3
XAN	141.35	110 PKP	12 08.80	-0.4
ALE	142.39	353 ePKP	12 06.00	-3.6X
	0.9s	28.00nm		
SSE	144.48	127 ePKP	12 13.50	-1.0
		e	12 47.50	
TIY	146.00	110 ePKP	12 18.40	1.4
MBC	146.81	334 ePKP	12 16.00	-1.1
	1.1s	70.00nm		
		pP	12 54.00	
BTO	147.01	104 ePKP	12 21.60	3.0X
TIA	147.02	117 ePKP	12 20.90	2.3
HHC	147.98	105 ePKP	12 27.00	6.8X
INK	148.34	317 ePKPc	12 22.90	3.2X
	0.8s	5.50nm		
BJI	149.63	112 ePKP	12 27.50	4.9X
		e	13 02.00	

S.D. = 0.9 on 65 of 75 obs.

? JAN 15, 1989 19h 16m 50.90±3.34s
46.967 N ±41.5km 153.595 E ±55.3km
DEPTH = 33.0km (normol)
4.9mb (9 obs.)

KURIL ISLANDS (221)

MAT	15.47	233 (P)	20 28.00	-0.2
	0.8s	5.97nm		3.9mb X
GUN	55.31	275 P	26 23.70	-0.3
	0.7s	7.00nm		4.8mb
KKN	55.80	275 P	26 28.20	0.9
	0.8s	17.00nm		5.1mb
PKI	55.85	275 P	26 27.60	-0.2
	0.6s	4.00nm		4.6mb
DMN	56.03	275 P	26 29.10	0.0
	0.8s	32.00nm		5.4mb
GKN	56.10	276 P	26 29.30	-0.1
	0.8s	32.00nm		5.4mb
HFS	68.37	340 eP	27 49.40	-1.3
	0.5s	4.10nm		4.8mb
NAO	68.41	341 P	27 50.00	-0.9
	0.8s	7.80nm		4.8mb
CLL	76.40	336 iPd	28 38.40	0.1
	0.8s	12.00nm		5.0mb
KHC	78.19	334 eP	28 49.20	1.0
GRF	78.36	336 eP	28 50.20	1.1
	0.8s	8.00nm		4.8mb

S.D. = 0.8 on 11 of 11 obs.
JAN 15, 1989 19h 40m 52.42±1.16s
37.815 N ± 7.1km 76.566 E ± 6.5km
DEPTH = 35.1 ± 13.2 km
5.0mb (11 obs.)

SOUTHERN XINJIANG, CHINA (321)

KSH	1.70	345 Pg	41 21.50	1.2
		Sg	41 45.00	
NDI	9.12	176 eP	43 07.00	2.3
		eS	44 48.00	
WMO	10.35	51 Pc	43 17.80	-3.8X
		S	45 12.00	
GKN	11.90	143 P	43 41.50	-1.3
KKN	12.39	141 P	43 48.40	-1.0
DMN	12.45	142 P	43 49.00	-1.3
GUN	12.59	139 P	43 51.20	-1.1
	0.5s	17.00nm		5.4mb
PKI	12.63	141 P	43 51.60	-1.2
	0.4s	17.00nm		5.5mb
MAIO	13.72	269 eP	44 06.00	-0.9
		i	44 18.00	
LSA	14.57	119 eP	44 20.20	1.8
SHL	17.83	129 eP	44 56.40	-3.3X
		eS	48 05.80	
GTA	18.23	78 Pd	45 03.80	-0.7
POO	19.36	188 eP	45 26.50	8.4X
HYB	20.40	175 eP	45 30.00	0.9
LZH	21.84	86 eP	45 44.00	0.1
	1.5s	0.09nm		2.0mb X
CD2	23.43	99 eP	46 01.50	2.2
GBA	24.12	178 Pc	46 10.50	4.5X
	0.5s	3.60nm		4.2mb
BTO	25.98	73 eP	46 24.80	1.1
XAN	26.40	88 P	46 27.50	0.0
TIY	28.25	79 eP	46 49.40	5.1X
MLR	38.06	298 ePc	48 11.00	1.7
KJF	39.01	328 iP	48 15.40	-1.5
	0.6s	9.10nm		4.7mb
SUF	39.25	326 iP	48 19.20	0.3
	0.5s	8.50nm		4.8mb
NUR	39.44	322 iP	48 20.50	0.0
	0.8s	22.00nm		5.0mb
SOD	40.52	333 eP	48 27.00	-2.3
KRA	41.62	306 eP	48 39.30	0.8
UPP	42.84	321 iP	48 48.20	-0.2
HFS	44.82	321 eP	49 04.10	-0.4
	0.6s	21.20nm		5.2mb
BRG	45.32	308 eP	49 09.20	0.6
	0.8s	10.00nm		4.8mb
KHC	45.84	305 P	49 13.60	0.8
NAO	46.23	322 P	49 15.10	-0.5
	0.6s	12.30nm		5.0mb
TRI	46.43	301 eP	49 17.40	0.0
DAG	54.75	344 eP	50 19.00	-1.3
BNG	62.28	253 ePc	51 13.50	-0.1
	0.5s	5.00nm		4.9mb
MBC	65.76	4 eP	51 35.00	-0.4
	0.6s	12.00nm		5.2mb
MBL	71.39	138 eP	51 50.00	-21.0X
		e	52 11.00	
INK	71.82	11 eP	52 13.00	0.0
YKA	79.63	5 P	52 57.40	0.2

S.D. = 1.2 on 32 of 38 obs.

? JAN 15, 1989 20h 55m 51.38±7.21s
30.423 S ±38.2km 72.335 W ±51.0km
DEPTH = 33.0km (normol)
OFF COAST OF CENTRAL CHILE (134)

RTRS	2.50	85 iPd	56 31.00	0.4
JACH	2.70	147 iPd	56 33.00	-0.5
		iS	57 02.50	
ROCH	2.78	156 iP	56 33.50	-1.2
PEL	3.05	153 iPd	56 38.00	-0.5
		iS	57 16.20	
RTCB	3.22	110 ePc	56 17.00	-23.8X
		S	57 17.00	
ZON	3.33	111 eP	56 41.00	-1.5
		eS	57 18.00	
SAN	3.34	155 eP	56 44.50	2.0
		iS	57 23.50	
FCH	3.38	150 eP	56 44.00	0.6
TACH	3.43	160 eP	56 43.50	-0.4
PCH	3.54	155 eP	56 45.00	-0.5
		iS	57 30.00	

RTC	3.56	115 iPd	56 45.80	0.1
CHCH	3.78	158 iPc	56 49.00	0.2
MDZ	3.85	130 eP	56 51.20	1.4
		i	57 38.60	
TCA	6.72	100 eP	57 25.70	-4.7X
		(S)	58 27.40	
CNCB	14.12	17 P	00 28.00	76.2X
LPB	14.36	17 eP	00 30.00	75.3X
ZOBO	14.61	16 P	00 33.00	74.9X
GKN	159.76	91 PKP	15 43.70	-4.6X
DMN	160.08	92 PKP	15 51.80	3.0X
	0.4s	5.00nm		
KKN	160.27	92 PKP	15 52.80	3.9X
	0.5s	7.00nm		
PKI	160.33	93 PKP	15 53.80	4.6X
	0.4s	4.00nm		
GUN	160.81	92 PKP	15 56.10	6.5X
	0.4s	6.00nm		

S.D. = 1.1 on 12 of 22 obs.
? JAN 15, 1989 22h 59m 39.55±3.02s
29.593 N ±17.3km 141.307 E ±20.8km
DEPTH = 65.2 ± 21.8 km
4.6mb (6 obs.)

SOUTH OF HONSHU, JAPAN (211)				
KAKJ	6.66	352 P	01 15.50	-1.5
WKYJ	6.70	315 eP	01 19.10	1.5
CHJJ	6.73	344 P	01 17.20	-0.7
		eS	02 28.70	
MAT	7.40	340 (P)	01 27.00	-0.3
	0.8s	8.21nm		4.5mb X
		(S)	02 52.00	
MTMJ	7.57	338 eP	01 31.40	1.8
TKSJ	7.57	307 eP	01 30.70	1.1
NIJJ	7.87	346 eP	01 31.80	-1.8
CHG	39.91	264 iPd	07 08.10	-0.9
	0.8s	10.07nm		4.8mb
WB5	49.64	189 eP	08 26.00	-0.5
YKA	70.32	29 P	10 49.70	1.9
SOD	71.80	338 eP	10 55.00	-1.6
KJF	73.19	335 iP	11 04.80	0.0
	0.5s	8.40nm		4.9mb
SUF	74.61	334 iP	11 12.80	-0.2
	0.5s	3.00nm		4.5mb
NUR	76.49	333 iP	11 23.50	-0.2
FFC	80.03	32 eP	11 45.00	1.8
	0.8s	9.00nm		4.8mb
HFS	80.83	336 eP	11 46.90	-0.4
	0.4s	2.20nm		4.4mb
NAO	81.30	338 P	11 49.80	0.0
	0.7s	4.50nm		4.5mb

S.D. = 1.4 on 17 of 17 obs.
JAN 16, 1989 00h 15m 17.29±0.74s
50.909 N ± 6.4km 6.091 E ± 6.2km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 3.6 (UCC).

ENN	0.18	217 iPg	15 20.90	-0.4
	0.5s	373.00nm		
		iSg	15 23.40	
		i	15 28.50	
MEM	0.31	190 Pd	15 22.80	-0.8
		iS	15 27.90	
WTS	1.18	22 ePn	15 38.50	-0.7
	0.5s	16.00nm		
		i	15 45.50	
		i(Sg)	15 54.40	
SNF	1.22	252 iP	15 40.70	0.8
WLF	1.25	178 Pc	15 40.40	0.0
		S	15 57.60	
DOU	1.26	230 Pn	15 40.90	0.3
		Pg	15 41.50	
		e	15 42.60	
		Sg	15 59.00	
RUP	1.36	152 eP	15 42.00	-0.3
ABH	1.39	137 ePc	15 42.60	-0.1
TNS	1.65	114 ePn	15 47.80	1.3
		eSn	16 11.40	
CDF	2.62	162 P	16 26.29	25.9X
VITF	2.70	182 P	16 42.30	40.8X
BSF	3.11	171 P	16 30.58	23.1X
MOF	3.14	167 P	16 39.26	31.5X

S.D. = 0.8 on 9 of 13 obs.

16d 00h

JAN 16, 1989 00h 45m 02.23± 0.71s
44.316 N ± 9.8km 17.882 E ± 7.5km
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

Table with columns: Station Name, Time, Latitude, Longitude, Depth, and other parameters. Includes stations like BLY, HVAR, BEO, PTJ, VBY, CEY, LJU, BZS, TRI, VOY, OHR, KBA, CLL, KAS.

S.D. = 1.3 on 10 of 14 obs.

& JAN 16, 1989 03h 08m 23.70s
45.935 N 111.598 W
DEPTH = 5.7km

MONTANA (456)

<BUT>. ML 2.4 (BUT). Felt at Trident.

Table with columns: Station Name, Time, Latitude, Longitude, Depth, and other parameters. Includes stations like LCCM, MEMT, LRM, BUT, BGMT, HRY, DMMT, CCMT, BW06.

* JAN 16, 1989 04h 40m 49.33± 0.73s
12.108 S ± 14.1km 14.483 W ± 13.2km
DEPTH = 10.0km (geophysicist)

SOUTH ATLANTIC RIDGE (410)

Table with columns: Station Name, Time, Latitude, Longitude, Depth, and other parameters. Includes stations like KIC, TIC, KUK, BNG, BUL, ZOBO, TRI, FEL, SKO, ABH, TOD, KHC, ZST, MOX, BRG, MAIO, FRB, DAG.

S.D. = 0.6 on 12 of 18 obs.

? JAN 16, 1989 05h 32m 25.21± 1.91s
47.287 N ± 34.2km 153.544 E ± 24.7km

DEPTH = 33.0km (normal)

4.9mb (9 obs.)

KURIL ISLANDS (221)

Table with columns: Station Name, Time, Latitude, Longitude, Depth, and other parameters. Includes stations like YKA, GUN, KKN, DMN, GKN, DAG, SUF, HFS, NAO, KBA.

JAN 16, 1989 05h 33m 11.92± 0.32s
37.161 N ± 4.6km 30.947 E ± 5.3km
DEPTH = 133.1 ± 6.2 km

4.2mb (4 obs.)

TURKEY (366)

Table with columns: Station Name, Time, Latitude, Longitude, Depth, and other parameters. Includes stations like BCK, ELL, KSL, KHL, IKL, PPCY, CSS, BBTk, DST, IZM, KAP, BNT, EDC, PRK, EZN, NPS, ADI, BURJ, JARJ, DOR.

MASJ 6.70 143 P 34 48.60 -0.6
KOT 7.25 174 ePn 34 55.00 -1.5
eSn 36 12.50

HLW 7.29 177 ePn 34 58.00 0.9
eSn 36 14.00

MBH 8.07 155 iP 35 08.00 0.4
eS 36 32.80

MLR 9.13 337 eP 34 30.00 -51.9X

BRG 18.31 324 e(P) 37 18.10 -0.1

GRF 18.96 318 eP 37 23.00 -2.2
0.8s 4.00nm 3.8mb

CLL 19.04 324 iPd 37 26.20 0.2
1.4s 20.00nm 4.3mb

MOX 19.31 320 eP 37 29.00 0.2
1.0s 22.00nm 4.5mb

NAO 26.89 338 P 38 43.80 2.0
0.5s 2.40nm 4.0mb

S.D. = 0.9 on 29 of 30 obs.

? JAN 16, 1989 06h 17m 53.79± 4.75s
7.266 S ± 33.4km 129.049 E ± 54.0km
DEPTH = 176.3 ± 37.8 km
4.7mb (1 obs.)

BANDA SEA (280)

Table with columns: Station Name, Time, Latitude, Longitude, Depth, and other parameters. Includes stations like TLE, MTN, KNA, WB5.

ASPA 16.96 165 ePd 21 42.70 0.4

0.5s 17.00nm 4.7mb

eS 24 45.20

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

JAN 16, 1989 06h 24m 43.75± 0.81s
17.304 N ± 6.2km 61.787 W ± 7.8km
DEPTH = 10.0km (geophysicist)

LEEWARD ISLANDS (92)

ML 3.1 (FDF).

ANG 0.15 196 iP 24 52.55 5.2X

CPB 0.34 354 iP 24 51.00 0.4

MGH 0.71 215 eP 24 59.25 1.5

eS 25 09.66

NEV 0.77 258 eP 24 58.70 0.0

eS 25 10.97

SKI 0.91 272 iP 25 00.27 -0.9

SFG 1.19 151 eP 25 06.10 0.2

PAG 1.27 175 eP 25 07.00 -0.4

S 25 24.50

MGG 1.45 162 ePc 25 09.80 -0.2

BBL 1.80 170 eP 25 14.50 -0.5

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

& JAN 16, 1989 06h 29m 53.60s
37.735 N 121.983 W

DEPTH = 4.0km

CENTRAL CALIFORNIA (39)

<BRK>. ML 2.4 (BRK).

Ma=9.3*10**12 Nm (BRK). Felt at San Ramon.

BKS 0.24 305 iPc 29 58.50 0.0

eS 30 02.60

BRK 0.26 302 iPc 29 58.70 -0.1

iS 30 03.10

ZSP 0.30 314 iPc 29 59.80 0.1

iS 30 05.30

PCC 0.39 234 iPd 30 01.25 -0.2

MHC 0.48 145 iPd 30 03.20 0.0

iS 30 11.00

ARN 0.53 137 eP 30 03.70 -0.4

GCC 0.70 181 ePd 30 06.90 -0.8

eS 30 17.80

NWRM 1.01 316 eP 30 11.40 -1.9

SAO 1.06 156 iPc 30 13.10 -1.0

CMB 1.30 76 e(P) 30 17.90 -0.4

PRS 1.48 161 ePc 30 19.00 -2.1

11 obs. associated

& JAN 16, 1989 07h 07m 03.80s
37.737 N 121.980 W

DEPTH = 5.0km

CENTRAL CALIFORNIA (39)

<BRK>. ML 2.5 (BRK).

Mo=1.4*10**13 Nm (BRK). Felt at East Oakland and San Ramon.

BKS 0.25 305 iPc 07 08.70 -0.1

eS 07 12.90

BRK 0.26 302 iPc 07 09.00 -0.1

iS 07 13.30

ZSP 0.30 314 iPc 07 10.10 0.2

iS 07 15.60

PCC 0.40 234 iPd 07 11.60 -0.2

iS 07 17.40

MHC 0.48 146 iPd 07 13.50 0.1

iS 07 21.80

ARN 0.53 137 eP 07 14.20 -0.1

GCC 0.71 181 iPd 07 17.30 -0.6

NWRM 1.01 315 eP 07 21.60 -1.8

SAO 1.06 156 ePc 07 22.80 -1.4

ic 07 23.40

CMB 1.30 76 e(P) 07 26.30 -2.0

i 07 29.20

e(S) 07 42.70

PRS 1.49 161 iPc 07 29.30 -1.9

11 obs. associated

JAN 16, 1989 07h 24m 21.06± 0.38s
41.438 N ± 3.5km 142.007 E ± 3.7km
DEPTH = 75.9 ± 3.7 km
5.2mb (53 obs.)

HOKKAIDO, JAPAN REGION (224)

Felt (III JMA) at Hachinohe, (II JMA) at Miyako and Morioka and

(I JMA) at Aomori, Honshu. Felt (II JMA) at Tomokomoi and (I JMA) at Obihiro and Urukawa, Hokkaido. CENTROID, MOMENT TENSOR (HRV) Data Used: GDSN L.P.B.: 8S, 16C Centroid Location: Origin Time 07:24:21.9 1.2 Lat 41.94N 0.15 Lon 141.69E 0.15 Dep 51.211.6 Half-duration 1.5 Moment Tensor: Scale 10**16 Nm Mrr= 3.64 0.51 Mtt=-0.24 0.72 Mff=-3.39 0.67 Mrt= 0.36 0.79 Mrf= 3.50 0.83 Mtf=-0.52 0.71 Principal Axes: T Val= 5.09 Plg=68 Azm=274 N -0.16 2 7 P -4.92 22 98 Best Double Couple: Mo=5.0*10**16 NP1:Strike=191 Dip=23 Slip= 94 NP2: 7 67 88			E 16s 1.00um eS 33 35.00 WHN 24.78 253 P 29 36.00 -1.0 pP 29 57.00 96kmX QZH 25.46 237 Pc 29 44.00 0.5 XAN 27.07 265 Pd 29 56.40 -1.8 LZH 30.06 272 eP 30 23.50 -1.7 1.5s 44.00nm 5.0mb Z 28s 0.70um 4.2MszX pP 30 46.00 100kmX eP 30 40.20 -1.6 GTA 31.96 281 PcP 33 31.00 PcS 37 15.20 CD2 32.38 263 P 30 43.40 -2.0 GYA 32.65 254 P 30 47.00 -0.9 KMI 36.29 256 Pd 31 19.50 0.3 WMQ 39.43 292 Pc 31 45.00 -0.1 Z 16s 1.20um 4.8MszX pP 31 57.00 44kmX S 37 46.50 TTA 41.60 37 eP 32 03.30 0.6 BRW 42.21 25 eP 32 06.70 -0.7 IMA 42.70 33 ePc 32 11.70 0.0 CHG 42.97 252 iPc 32 14.50 0.2 1.0s 16.25nm 4.8mb NST 44.25 247 iPd 32 26.50 1.9 PMR 44.87 39 eP 32 29.00 -0.1 1.1s 14.70nm 4.7mb FBA 45.17 34 ePc 32 31.70 0.2 e 32 50.20 NNT 46.69 244 eP 32 45.00 1.0 GUN 47.32 272 Pd 32 49.60 0.2 KKN 47.84 272 Pd 32 53.40 0.2 PKI 47.86 272 Pd 32 53.50 0.0 0.8s 42.00nm 5.4mb DMN 48.06 272 Pd 32 55.00 0.0 GKN 48.21 273 Pd 32 55.80 -0.2 INK 50.29 29 eP 33 11.00 -0.1 0.6s 13.20nm 5.1mb MBC 52.18 17 eP 33 25.00 -0.5 0.9s 30.00nm 5.3mb NDI 53.40 278 eP 33 33.00 -2.1 PSI 54.60 237 ePd 33 43.20 -0.7 0.6s 19.60nm 5.3mb MTN 54.94 193 eP 33 46.00 -0.3 KHKI 55.17 212 ePc 33 47.40 -0.6 e 35 44.00 ALE 55.69 4 eP 33 50.00 -1.1 1.0s 59.00nm 5.6mb YKA 59.80 32 P 34 20.20 0.1 SOD 61.10 336 iP 34 28.20 -0.8 WB5 61.41 188 eP 34 30.50 -1.0 DAG 61.44 355 iPd 34 29.90 -1.2 0.8s 17.16nm 5.2mb QIS 61.72 183 eP 34 32.00 -1.5 POO 61.72 270 eP 34 33.00 -0.9 GBA 62.10 264 Pd 34 35.50 -0.7 0.8s 26.80nm 5.4mb MAIO 62.11 295 iPd 34 36.30 0.0 KOD 64.25 261 eP 34 50.00 -0.8 SUF 64.28 333 iP 34 48.20 -1.8 0.6s 18.90nm 5.2mb PNT 64.73 46 eP 34 53.00 -0.2 1.1s 23.00nm 5.0mb ASPA 65.21 188 eP 34 55.80 -0.6 1.2s 19.00nm 4.9mb NUR 66.30 331 iP 35 01.70 -1.2 FHC 67.09 55 e(P) 35 14.00 5.6X RMQ 67.87 173 eP 35 13.00 -0.2 WDC 68.11 55 eP 35 15.70 0.9 e 35 34.00 SES 68.51 41 eP 35 17.00 -0.1 WARB 68.77 195 iPd 35 07.70 -11.1X MIN 68.83 55 eP 35 18.70 -0.7 ORV 69.36 55 ePd 35 22.20 -0.3 FFC 69.77 34 iPd 35 24.50 -0.2 1.0s 29.00nm 5.2mb HFS 70.28 335 eP 35 26.90 -0.7 0.7s 19.70nm 5.1mb NAO 70.60 337 P 35 28.20 -1.4 0.9s 20.70nm 5.1mb LRM 70.71 46 eP 35 32.00 1.1 CMB 70.98 56 ePd 35 33.00 0.6 e 35 40.20 e 35 51.90 KVN 71.75 54 P 35 37.00 -0.2 pP 35 56.00 71kmX			FRI 72.05 56 e(P) 35 39.00 0.3 FRB 72.39 14 eP 35 39.00 -1.2 0.7s 47.00nm 5.5mb BW06 74.27 47 P 35 51.00 -0.9 1.0s 13.75nm 4.8mb pP 36 10.00 70kmX KRA 75.71 326 iPd 36 00.40 0.7 e 36 19.10 SPC 76.24 325 eP 36 04.00 1.1 MLR 76.33 319 eP 36 03.00 -0.4 KSP 76.61 328 iPd 36 05.40 0.7 1.1s 36.00nm 5.2mb e 36 23.00 PSZ 77.35 324 eP 36 09.30 0.4 BRG 77.50 329 iP 36 09.60 0.0 1.0s 30.00nm 5.2mb i 36 28.80 CLL 77.51 330 iPc 36 08.80 -0.8 1.3s 33.00nm 5.1mb PRU 77.97 328 P 36 13.00 0.8 1.1s 22.90nm 5.0mb JMB 78.19 317 iP 36 15.00 1.5 ZST 78.34 326 eP 36 14.60 0.4 WIT 78.50 334 eP 36 16.50 1.5 MOX 78.57 330 eP 36 16.00 0.5 1.0s 22.00nm 5.0mb HOF 78.74 330 eP 36 16.60 0.2 KHC 79.04 328 iPd 36 18.80 0.7 1.0s 18.00nm 5.0mb e 36 38.00 EKA 79.14 341 P 36 19.00 0.5 1.8s 60.00nm 5.2mb WTS 79.15 334 eP 36 19.00 0.5 0.9s 27.00nm 5.2mb e 36 38.00 PGB 79.35 318 eP 36 21.00 1.0 KDZ 79.38 317 eP 36 22.00 1.9 HRI 79.42 305 iP 36 22.50 1.9 GRF 79.49 330 iPc 36 21.20 0.7 1.1s 42.00nm 5.3mb RZN 79.71 317 eP 36 24.00 1.9 iSg 02 31.00 VTS 79.80 319 iPd 36 24.00 1.5 iSg 37 27.00 MMB 80.28 318 iPd 36 26.00 1.1 TOD 80.45 331 ePc 36 25.91 0.3 ENN 80.48 333 eP 36 26.00 0.3 1.0s 24.00nm 5.1mb PTJ 80.62 325 e(P) 36 26.10 -0.6 ABH 80.67 332 ePc 36 26.99 0.2 KBA 80.78 327 eP 36 27.00 -0.6 1.0s 23.20nm 5.1mb i 36 47.70 DSI 80.80 304 eP 36 30.00 2.3 RUP 80.99 332 ePc 36 28.52 0.0 SCH 81.01 16 eP 36 29.00 0.5 VAY 81.06 318 eP 36 30.00 1.1 SKO 81.13 319 iPc 36 30.30 1.0 RBL 81.20 327 P 36 29.00 -0.7 FVI 81.40 327 P 36 30.50 -0.1 ALQ 81.42 51 eP 36 31.80 0.6 1.3s 12.50nm 4.7mb TRI 81.71 326 P 36 32.00 -0.2 CDF 82.00 331 eP 36 33.90 0.0 1.0s 17.60nm 4.9mb OHR 82.10 319 eP 36 34.20 -0.2 FEL 82.19 331 eP 36 34.82 0.0 CTI 82.30 328 P 36 35.00 -0.5 MBH 82.35 303 eP 36 38.00 2.2 BSF 82.67 331 eP 36 37.30 0.0 HAU 82.68 332 eP 36 37.40 0.1 0.9s 7.80nm 4.6mb SAL 83.11 328 P 36 40.00 0.5 VAI 83.58 329 P 36 42.00 0.1 PGD 84.04 326 P 36 46.00 1.5 ORX 84.08 330 P 36 43.94 -0.7 CRE 84.15 326 P 36 43.00 -1.9 LOR 84.18 333 eP 36 44.90 0.0 1.0s 34.00nm 5.3mb BOB 84.23 328 P 36 46.00 0.7 FLN 84.28 336 eP 36 45.20 -0.2 LDF 84.32 336 eP 36 45.80 0.2 1.1s 21.40nm 5.1mb LBF 84.39 333 iPc 36 46.00 0.0 1.1s 22.90nm 5.1mb SSF 84.48 333 eP 36 46.70 0.3 LSD 84.54 330 P 36 47.63 0.6		
URA	0.92	39	iP+	24	38.10	-1.0		
			iS	24	51.50			
HAC	0.98	202	iP+	24	38.80	-1.1		
			S	24	52.20			
AOM	1.11	236	iPd	24	41.20	-0.3		
			iS	24	56.40			
TMR	1.24	345	eP	24	00.00	-43.1X		
AOMJ	1.52	235	P	24	46.60	-0.2		
SAP	1.69	343	eP	24	48.00	-1.2		
			eS	25	07.00			
OBI	1.73	31	eP	24	51.00	1.3		
			eS	25	11.00			
MIY	1.79	181	iPd	24	50.10	-0.4		
			S	25	10.30			
MRK	1.85	200	eP	24	52.00	0.6		
			S	25	15.40			
OFUJ	2.37	186	P	24	58.10	-0.4		
			eS	25	27.60			
YAMJ	3.60	206	P	25	16.90	1.3		
			eS	25	58.30			
NIIJ	4.80	210	P	25	33.30	0.9		
KAKJ	5.42	196	P	25	38.20	-2.8		
			eS	26	41.50			
MTMJ	5.85	215	P	25	48.50	1.4		
CHJJ	5.87	205	P	25	46.50	-0.9		
			eS	26	58.00			
IDJ	6.76	210	eP	25	59.90	0.2		
			eS	27	20.50			
TSRJ	7.55	221	P	26	13.00	2.5		
WKYJ	8.81	217	P	26	27.90	0.0		
YONJ	9.16	230	P	26	34.60	1.9		
MDJ	9.63	293	eP	26	38.50	-0.6		
	Z	20s	2.20um					
			eP	26	41.20			
			eS	28	28.00			
TKSJ	9.75	223	eP	26	40.60	-0.1		
SHK	10.08	230	iP	26	46.50	1.3		
	0.3s	129.87nm			6.4mb X			
SHNJ	11.29	233	P	27	03.70	2.2		
CN2	12.43	286	Pc	27	17.50	1.0		
	Z	16s	2.00um					
	E	12s	1.00um					
			eS	29	30.00			
SNY	13.79	278	iPd	27	35.50	1.1		
DL2	15.78	267	eP	28	01.00	1.0		
	Z	28s	0.70um					
			eS	31	00.00			
BJI	19.61	274	eP	28	42.50	-3.2X		
	Z	26s	1.40um					
	E	12s	0.40um					
			eS	32	48.00			
SSE	19.66	245	eP	28	45.00	-1.3		
	1.0s	64.00nm			4.9mb			
	Z	19s	0.50um			5.3MszX		
	N	10s	0.40um					
			sP	28	54.00			
			ePP	29	10.00			
			eS	32	34.00			
			esS	32	51.00			
TIA	20.05	263	Pc	28	47.10	-3.3X		
HHC	22.88	279	P	29	18.20	-0.6		
	Z	18s	1.30um			4.4Msz		
TIY	23.04	270	eP	29	18.20	-2.2		
BTO	24.08	279	eP	29	28.00	-2.5		

16d 07h

DUI 84.65 323 P 36 48.00 0.5
 LPG 84.66 330 eP 36 48.10 0.4
 0.9s 34.30nm 5.4mb
 GRR 84.73 336 eP 36 47.90 0.3
 0.7s 11.00nm 5.0mb
 SMF 84.73 333 eP 36 47.90 0.2
 1.2s 44.60nm 5.4mb
 RSP 84.76 330 P 36 47.83 -0.2
 AVF 84.77 333 eP 36 48.30 0.5
 1.2s 45.80nm 5.4mb
 MNS 84.85 325 P 36 48.50 0.1
 CKI 84.98 329 P 36 58.00 9.0X
 BNI 85.07 330 P 36 50.00 0.4
 LPF 85.10 336 eP 36 50.10 0.6
 1.1s 26.30nm 5.2mb
 RRL 85.14 330 P 36 49.89 -0.1
 BGF 85.14 333 eP 36 50.20 0.4
 FIN 85.19 329 P 36 48.86 -1.2
 ROB 85.25 329 P 36 49.48 -0.9
 DOI 85.31 329 P 36 50.00 -0.7
 MGR 85.36 322 P 36 50.00 -0.9
 PZZ 85.37 329 P 36 49.07 -2.0
 TDS 85.37 321 P 36 52.00 1.0
 FOUF 85.47 330 P 36 51.75 0.4
 STV 85.50 329 P 36 49.58 -2.1
 MAF 85.53 333 iPc 36 52.60 0.9
 1.0s 60.80nm 5.6mb
 IMI 85.56 329 P 36 51.63 -0.3
 TCF 85.60 333 iPc 36 52.70 0.6
 0.9s 17.00nm 5.1mb
 SAOF 85.63 329 P 36 50.81 -1.4
 AUTN 85.67 329 P 36 51.44 -1.3
 TOUF 85.73 329 P 36 51.81 -1.1
 SBF 85.78 329 eP 36 52.70 -0.4
 0.8s 19.80nm 5.2mb
 AURF 85.80 329 P 36 51.76 -1.4
 LSF 85.86 334 eP 36 53.70 0.4
 0.9s 42.50nm 5.5mb
 MVIF 85.86 329 P 36 52.17 -1.4
 MEO 85.96 46 eP 36 54.90 0.9
 MFF 86.09 335 iPc 36 55.30 0.8
 0.9s 30.70nm 5.3mb
 FRF 86.34 329 eP 36 55.50 -0.2
 SIO 86.43 44 e(P) 36 57.10 0.8
 LRG 86.54 329 eP 36 56.80 0.1
 1.1s 41.00nm 5.4mb
 LNO 86.58 43 eP 36 57.80 0.9
 TUL 86.58 43 eP 36 56.00 -1.0
 1.0s 4.00nm 4.5mb
 Z 22s 0.26um 4.6msz
 LR 09 26.00
 LMR 86.59 329 eP 36 57.10 0.2
 1.0s 24.00nm 5.2mb
 RJF 86.69 333 eP 36 58.20 0.8
 0.9s 22.90nm 5.3mb
 RLO 86.78 43 e(P) 36 57.50 -0.5
 CAF 86.84 333 iPc 36 59.50 1.3
 0.8s 36.20nm 5.5mb
 VVO 87.05 44 eP 37 00.20 0.9
 LFF 87.27 334 eP 37 01.30 1.1
 1.1s 70.30nm 5.7mb
 LPO 87.35 333 eP 37 01.70 1.1
 1.0s 41.60nm 5.5mb
 EPF 89.09 333 eP 37 09.20 0.1
 ZOBO 143.91 55 ePKP 43 50.00 -0.2
 Z 20s 0.10um 4.6msz
 LR 33 12.00
 LPB 144.13 55 PKP 43 50.00 -0.4
 S.D. = 1.0 on 187 of 193 obs.
 ? JAN 16, 1989 08h 28m 00.90 ± 2.53s
 6.513 S ± 19.4km 131.355 E ± 30.1km
 DEPTH = 33.0km (normol)
 4.1mb (1 obs.)
 TANIMBAR ISLANDS REGION (281)

TLE 1.64 58 iPc 28 27.70 0.0
 iS 28 45.60
 MTN 6.30 182 iPc 29 38.10 4.2X
 eS 30 53.00
 KNA 9.52 195 eP 30 19.20 0.3
 eS 32 07.50
 WB5 13.61 168 eP 31 13.50 -0.5
 eS 33 46.10
 QIS 16.09 151 eP 31 47.00 0.6
 eS 34 44.00
 ASPA 17.23 172 eP 32 00.40 -0.4

0.5s 8.00nm 4.1mb
 eS 35 09.70
 S.D. = 0.7 on 5 of 6 obs.
 JAN 16, 1989 08h 36m 49.38 ± 0.66s
 42.314 N ± 6.0km 24.805 E ± 6.0km
 DEPTH = 10.0km (geophysicist)
 BULGARIA (359)

PLD 0.22 200 iPg 36 53.00 -1.2
 iSg 36 55.00
 PGB 0.53 297 iP 36 59.00 -1.1
 iS 37 10.00
 RZN 0.63 186 iP 37 01.00 -1.2
 iS 37 09.00
 KDZ 0.81 145 iPc 37 04.00 -1.0
 iSg 37 13.00
 PVL 0.98 23 iPc 37 36.00 28.0X
 iS 38 20.00
 VTS 1.21 284 iPg 37 12.00 -0.1
 iSg 37 27.00
 SZH 1.26 41 iP 37 14.00 1.2
 JMB 1.33 83 iP 37 14.00 0.1
 SRS 1.50 218 iPbc 37 17.20 0.8
 KNT 1.83 232 iPbc 37 21.50 0.3
 SOH 1.85 217 iPbc 37 23.20 1.8
 VAY 1.94 240 ePn 37 24.30 1.6
 GRG 2.26 234 ePn 37 30.80 3.5X
 BZS 4.02 326 ePc 37 51.00 -1.3
 S.D. = 1.3 on 12 of 14 obs.
 % JAN 16, 1989 09h 29m 55.85 ± 0.84s
 39.282 N ± 7.0km 27.748 E ± 8.2km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

DST 0.75 64 ePg 30 10.80 0.2
 eSg 30 22.80
 IZM 0.96 203 ePg 30 14.00 -0.2
 EDC 1.07 5 ePn 30 15.00 -0.9
 KCT 1.07 26 iPn 30 16.40 0.3
 BNT 1.08 7 iPn 30 16.40 0.2
 EZN 1.23 297 ePn 30 19.00 0.4
 S.D. = 0.6 on 6 of 6 obs.
 ? JAN 16, 1989 09h 38m 44.83 ± 1.70s
 31.743 N ± 16.3km 142.671 E ± 43.1km
 DEPTH = 33.0km (normol)
 SOUTH OF HONSHU, JAPAN (211)

KAKJ 4.91 336 P 39 58.70 0.5
 CHJJ 5.27 326 P 40 02.20 -1.1
 IIDD 5.45 314 P 40 06.40 0.6
 NIIJ 6.26 332 P 40 17.50 0.2
 MTMJ 6.29 321 P 40 17.00 0.0
 WB5 51.94 190 iPd 47 53.00 0.2
 ASPA 55.73 190 eP 48 20.40 -0.2
 S.D. = 0.7 on 7 of 7 obs.
 % JAN 16, 1989 09h 55m 15.92 ± 0.88s
 43.422 N ± 6.3km 5.428 E ± 6.4km
 DEPTH = 10.0km (geophysicist)
 NEAR SOUTH COAST OF FRANCE (379)
 MD 2.5 (STR)

GELF 0.04 181 Pg 55 17.47 -0.6
 TREF 0.21 351 Pg 55 19.93 -0.5
 PUYF 0.23 61 Pg 55 19.75 -1.1
 PRAF 0.43 334 Pg 55 24.92 0.3
 VILF 0.48 26 Pg 55 24.82 -0.8
 TAVF 0.50 67 Pg 55 25.32 -0.7
 Sg 55 33.07
 CALN 1.11 72 Pg 55 37.16 0.3
 Sg 55 53.30
 MVIF 1.34 69 Pn 55 40.58 -0.1
 Sg 55 59.72
 TOUF 1.45 65 Pn 55 42.73 0.4
 AURF 1.45 71 Pn 55 42.62 0.3
 Sg 56 03.09
 FOUF 1.48 41 P 55 44.26 1.8
 (Sg) 55 59.40
 AUTN 1.56 68 Pn 55 44.59 0.6
 Sg 56 06.74
 S.D. = 0.9 on 12 of 12 obs.
 ? JAN 16, 1989 10h 38m 04.85 ± 4.03s
 32.424 S ± 20.7km 71.974 W ± 28.4km

DEPTH = 33.0km (normol)
 NEAR COAST OF CENTRAL CHILE (135)

ROCH 0.98 124 iP 38 21.50 -1.0
 LCCH 1.10 162 iPd 38 23.60 -0.4
 iS 38 34.40
 JACH 1.19 103 iPc 38 25.50 0.1
 iS 38 36.10
 PEL 1.30 124 iPd 38 27.20 0.3
 iS 38 34.50
 TACH 1.50 145 iP 38 29.50 -0.3
 iS 38 46.00
 SAN 1.51 133 iPd 38 29.70 -0.2
 iS 38 45.50
 LNV 1.60 163 iP 38 31.20 0.1
 iS 38 48.70
 FCH 1.68 123 iPd 38 32.60 0.0
 iS 38 50.50
 PCH 1.71 135 iP 38 33.00 0.1
 iS 38 51.50
 CHCH 1.87 144 iP 38 36.00 0.9
 iS 38 57.00
 MDZ 2.67 101 eP 38 51.40 4.8X
 TCA 6.37 82 eP 39 39.00 0.0
 S.D. = 0.5 on 11 of 12 obs.
 * JAN 16, 1989 10h 45m 19.00 ± 0.97s
 3.123 S ± 13.8km 130.595 E ± 17.1km
 DEPTH = 33.0km (normol)
 4.8mb (5 obs.)
 CERAM (272)

AAI 2.46 257 eP 45 59.80 2.1
 eS 46 36.60
 MTN 9.68 177 eP 47 37.00 -2.1
 eS 49 22.00
 WB5 17.06 168 eP 49 15.70 -1.0
 i 49 19.70
 eS 52 24.00
 QIS 19.43 154 eP 49 47.00 1.3
 ASPA 20.67 171 ePc 49 58.50 -0.4
 0.7s 58.00nm 5.1mb X
 eS 53 45.00
 CTA 22.75 139 eP 50 22.00 2.3
 WARB 23.24 189 eP 50 14.00 -10.4X
 PSI 32.18 280 ePc 51 46.00 -0.3
 BWA 35.29 154 eP 52 15.70 2.7X
 LZH 46.33 330 e(P) 53 50.00 6.1X
 2.0s 33.00nm 4.9mb
 GUN 52.93 309 PKP 54 34.00 -1.1
 0.7s 11.00nm 4.9mb
 PKI 53.14 308 PKP 54 37.60 1.0
 0.5s 4.00nm 4.6mb
 KKN 53.34 308 PKP 54 37.30 -0.6
 0.6s 3.00nm 4.5mb
 DMN 53.40 308 PKP 54 37.80 -0.6
 GKN 53.95 308 PKP 54 41.60 -0.6
 0.6s 5.00nm 4.7mb
 S.D. = 1.5 on 12 of 15 obs.
 * JAN 16, 1989 10h 49m 27.05 ± 1.14s
 24.055 N ± 19.3km 92.104 E ± 15.8km
 DEPTH = 33.0km (normol)
 INDIA-BANGLADESH BORDER REGION (315)

SHL 1.52 352 eP 49 52.25 -0.1
 eS 50 34.50
 GUN 6.79 306 P 51 08.20 0.9
 PKI 6.97 302 P 51 08.80 -1.1
 0.5s 4.00nm 4.6mb X
 KKN 7.18 303 P 51 14.40 1.7
 GKN 7.78 302 P 51 19.60 -1.4
 0.4s 9.00nm 5.2mb X
 CHG 8.23 128 eP 51 27.20 0.0
 S.D. = 1.5 on 6 of 6 obs.
 JAN 16, 1989 12h 34m 55.57 ± 0.66s
 44.312 N ± 8.4km 7.474 E ± 5.7km
 DEPTH = 10.0km (geophysicist)
 NORTHERN ITALY (545)
 ML 2.1 (GEN)

STV 0.13 238 P 34 59.11 0.4
 S 35 01.44
 ROB 0.29 93 P 35 02.10 0.5
 S 35 06.27
 PZZ 0.33 306 P 35 02.53 0.1

IMI 0.50 143 P S 35 07.91 35 05.30 -0.4
S 35 12.34
FIN 0.54 101 P S 35 06.30 -0.2
S 35 13.33
RRL 0.78 321 P S 35 10.60 -0.4
S.D. = 0.5 on 6 of 6 obs.

JAN 16, 1989 12h 49m 43.01 ± 0.83s
39.146 N ± 7.6km 27.592 E ± 7.7km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

I ZM 0.79 199 ePn 49 58.60 0.2
DST 0.93 60 ePn 50 01.00 0.3
EZN 1.19 305 ePn 50 06.00 0.8
BNT 1.24 12 ePn 50 06.30 0.3
KCT 1.25 28 iPn 50 05.80 -0.4
CIN 1.59 166 eP 50 54.00 42.7X
BRT 8.16 286 P 51 43.40 -0.9
S.D. = 0.8 on 6 of 7 obs.

* JAN 16, 1989 15h 58m 28.81 ± 1.19s
15.836 N ± 14.9km 92.257 W ± 12.5km
DEPTH = 214.1 ± 17.4 km

MEXICO-GUATEMALA BORDER REGION (62)

SBG 0.73 164 ePd 58 59.50 0.3
KKG 0.88 166 iPc 58 59.40 -0.3
S 59 22.70
TPX 0.93 180 (P) 59 23.00 23.2X
SCX 0.97 338 eP 59 01.50 1.5
OC2 1.27 177 ePc 59 01.60 -0.6
S 59 17.50
LHG 1.73 143 iPd 59 05.60 -0.6
TER 2.15 135 ePd 59 10.75 0.4
IXG 2.40 133 ePd 59 13.75 0.7
MRL 2.59 107 iPc 59 14.70 -0.5
MYT 2.77 130 iPc 59 09.40 -7.7X
OZG 3.02 113 iPc 59 45.40 25.3X
EVV 3.94 312 (P) 59 29.50 -1.4
OXX 4.46 287 iPd 59 37.50 -0.1
LVVM 5.57 315 (P) 59 49.50 -1.9
IISM 5.81 303 (P) 59 53.50 -1.0
IIT 6.59 300 iP 00 06.00 1.2
SMMM 7.29 303 (P) 00 15.00 1.3
III 7.34 291 iP 00 15.50 0.9
ACX 7.37 279 iP 00 14.00 -0.7
IIC 7.73 301 (P) 00 20.50 0.7
S.D. = 1.1 on 17 of 20 obs.

JAN 16, 1989 16h 25m 31.97 ± 0.80s
45.948 N ± 8.7km 14.372 E ± 6.1km
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)
MD 2.6 (LJU), 2.1 (TRI).

LJU 0.15 50 iPgc 25 34.00 -1.4
iSg 25 35.30
CEY 0.21 170 iPg 25 36.20 -0.4
eSg 25 39.50
VOY 0.34 284 iPgc 25 39.20 0.1
eSg 25 45.60
TRI 0.49 241 ePg 25 41.70 -0.2
iSg 25 49.50
PTJ 1.11 92 ePn 25 54.20 1.4
eSg 26 03.10
FVI 1.28 301 P 25 56.20 0.5
eSn 26 16.00
KBA 1.33 328 iPgc 26 01.70 5.0X
i(Sg) 26 15.50
S.D. = 1.2 on 6 of 7 obs.

& JAN 16, 1989 16h 42m 22.59s
62.925 N 151.205 W
DEPTH = 109.7km
CENTRAL ALASKA (1)
<AGS-P>

PWA 1.42 154 eP 42 47.80 -1.0
SML 1.75 129 eP 42 51.65 -1.2
eS 43 14.95
SPU 1.80 193 eP 42 51.31 -2.2
eS 43 14.20
PMS 1.86 155 eP 42 52.50 -1.7
eS 43 16.10
4 obs. associated

* JAN 16, 1989 18h 02m 49.70 ± 1.02s
17.057 N ± 20.2km 94.306 W ± 9.6km
DEPTH = 33.0km (normal)

CHIAPAS, MEXICO (61)

SCX 1.63 101 (P) 03 16.50 0.0
EVV 1.71 325 eP 03 20.50 2.9X
OXX 2.31 271 iPd 03 26.50 0.0
TPX 2.91 137 (P) 03 57.50 22.8X
LVVM 3.35 323 iP 03 40.50 -0.6
IISM 3.50 304 eP 03 43.50 0.4
IIT 4.28 298 (P) 03 55.50 1.0
III 5.09 286 iP 04 05.00 -1.0
S.D. = 0.9 on 6 of 8 obs.

% JAN 16, 1989 18h 10m 17.11 ± 1.62s
15.388 N ± 7.5km 60.824 W ± 18.9km
DEPTH = 10.0km (geophysicist)

LEEWARD ISLANDS (92)
ML 2.7 (FDF).

CRM 0.64 188 iPd 10 31.06 1.2
S 10 44.80
BBL 0.64 282 eP 10 31.50 1.5
FDF 0.72 206 iPd 10 31.34 0.0
S 10 45.30
MVM 0.83 185 iPd 10 32.74 -0.5
S 10 48.40
BIM 0.90 195 eP 10 33.43 -0.9
DEG 0.95 346 eP 10 35.80 0.6
S 10 51.00
PAG 1.04 308 eP 10 35.00 -1.8
S 10 49.00
S.D. = 1.4 on 7 of 7 obs.

JAN 16, 1989 18h 53m 21.95 ± 0.48s
39.363 N ± 6.9km 19.297 E ± 4.3km
DEPTH = 10.0km (geophysicist)

GREECE-ALBANIA BORDER REGION (392)
MD 3.6 (ATH).

LCI 1.42 314 P 53 48.10 0.4
eSn 54 10.30
VLS 1.56 139 ePn 53 49.90 0.2
OHR 2.09 33 iPn 53 58.20 0.7
KZN 2.13 63 ePn 53 58.50 0.5
BRT 2.21 314 P 54 07.70 8.6X
eSn 54 43.30
TDS 2.31 278 P 54 04.80 4.2X
LIT 2.57 72 ePn 54 04.50 0.2
iSn 54 45.80
SOI 2.84 244 P 54 08.60 0.4
GRG 2.86 55 ePn 54 09.00 0.5
MGR 2.99 286 P 54 10.60 0.4
NEO 3.05 90 ePn 54 12.00 0.9
SKO 3.07 31 ePn 54 10.80 -0.6
iSn 54 45.00
VAY 3.18 51 ePn 54 12.30 -0.6
ATN 3.23 249 P 54 12.60 -1.1
KNT 3.29 56 ePn 54 14.20 -0.4
PLG 3.35 71 ePn 54 14.00 -1.4
MEU 4.11 238 P 54 23.10 -3.2X
eSn 55 11.00
S.D. = 0.8 on 14 of 17 obs.

* JAN 16, 1989 19h 15m 35.87 ± 1.78s
34.044 S ± 17.6km 70.901 W ± 9.5km
DEPTH = 33.0km (normal)

CHILE-ARGENTINA BORDER REGION (127)

CHCH 0.23 62 iPc 15 43.60 0.7
iS 15 57.00
TACH 0.39 356 iP 15 46.20 1.3
iS 16 02.00
LNV 0.43 282 iPc 15 45.20 -0.2
iS 16 00.00
PCH 0.53 37 iP 15 51.00 4.0X
iS 16 10.00
LCCH 0.79 315 eP 15 50.50 -0.1
iS 16 09.70
FCH 0.88 36 iP 15 51.00 -1.1
iS 16 10.00
PEL 0.92 11 iPd 15 52.30 -0.1
i 16 12.00
ROCH 1.07 355 iP 15 54.50 -0.3
JACH 1.38 11 iP 16 03.00 3.9X
iS 16 22.60

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

JAN 16, 1989 19h 49m 01.66 ± 0.35s
44.281 N ± 2.7km 7.236 E ± 3.1km
DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)
ML 2.6 (GEN), 2.3 (LDG).

STV 0.07 120 P 49 04.41 0.3
S 49 05.99
PZZ 0.24 337 P 49 07.18 0.2
S 49 10.77
TOUF 0.27 178 Pg 49 07.16 -0.2
AUTN 0.32 154 Pg 49 08.23 -0.1
SAOF 0.37 142 Pg 49 09.31 0.0
Sg 49 14.53
MVIF 0.39 189 Pg 49 09.89 0.2
Sg 49 14.79
AURF 0.40 170 Pg 49 09.44 -0.4
S 49 15.25
FOUF 0.41 308 P 49 09.62 -0.4
Sg 49 15.06
SBF 0.44 161 Pg 49 10.30 -0.4
Sg 49 15.20
ROB 0.46 88 P 49 11.46 0.5
S 49 17.94
IMI 0.60 128 P 49 13.44 -0.4
S 49 21.41
FIN 0.70 96 P 49 15.57 0.0
S 49 25.27
RRL 0.72 333 P 49 15.59 -0.3
S 49 25.00
FRF 0.84 211 Pg 49 18.20 0.4
Sg 49 27.60
LRG 1.04 218 Pg 49 21.70 0.4
Sg 49 34.60
LMR 1.08 209 Pg 49 22.20 0.2
Sg 49 35.50
LPG 1.26 344 Pg 49 30.60 5.3X
S.D. = 0.3 on 16 of 17 obs.

* JAN 16, 1989 20h 11m 25.76 ± 0.83s
32.718 N ± 7.6km 141.807 E ± 12.5km
DEPTH = 33.0km (normal)

5.2mb (4 obs.)
SOUTH OF HONSHU, JAPAN (211)

KAKJ 3.73 339 P 12 22.60 0.2
eS 12 54.30
CHJJ 4.06 326 P 12 25.10 -2.0
S 13 02.70
IIDJ 4.25 312 iP+ 12 29.40 -0.4
eS 13 09.80
NIIJ 5.07 334 P 12 40.70 -0.7
eS 13 29.80
MTMJ 5.08 321 P 12 41.20 -0.4
WKYJ 5.41 288 P 12 44.90 -1.3
TSRJ 5.59 302 P 12 47.60 -1.1
YAMJ 5.63 346 P 12 49.30 0.0
eS 13 45.10
OFUJ 6.35 359 P 12 59.90 0.4
S 14 03.50
TKSJ 6.61 283 P 13 02.80 -0.4
YONJ 7.36 292 eP 13 10.90 -2.7
GUMO 19.25 171 eP 15 49.50 -0.8
PJG 19.25 171 eP 15 49.50 -0.8
GUA 19.30 171 eP 15 50.50 -0.4
0.8s 101.49nm 5.1mb
WHN 23.46 272 eP 16 35.00 1.9
TIY 24.46 290 eP 16 42.00 -0.8
N 10s 0.40um
BTO 26.58 296 eP 17 04.20 1.4
XAN 27.43 282 eP 17 09.90 -0.6
GTA 34.36 293 eP 18 13.70 1.9
WMO 43.21 301 P 19 26.60 1.2
GUN 48.05 280 P 20 06.40 1.9
PKI 48.56 280 P 20 10.40 2.0
KKK 48.59 280 P 20 09.80 1.3
GKN 49.05 280 P 20 13.30 1.4
WB5 52.78 189 iPc 20 49.90 9.9X
QIS 53.01 183 iPd 20 52.00 10.3X
ASPA 56.57 189 eP 21 17.20 9.6X
0.8s 24.00nm 5.3mb
WARB 60.33 196 iPc 21 31.30 -2.4
0.7s 37.00nm 5.6mb
BRS 60.68 169 eP 21 45.80 9.7X
GBA 61.30 268 Pd 21 41.80 1.2

16d 20h

1.0s 6.20nm 4.7mb
 FORR 64.54 193 eP 22 10.60 9.0X
 BWA 67.08 174 eP 22 29.90 12.0X
 YKA 67.39 29 P 22 29.50 9.9X
 ZOBO 148.37 66 PKP 31 21.30 13.3X
 LPB 148.54 66 ePKP 31 22.00 13.9X
 CNCB 148.00 67 PKP 31 23.00 14.3X
 S.D. = 1.4 on 26 of 36 obs.

JAN 16, 1989 23h 28m 56.40±0.78s
 22.701 N ± 8.7km 99.379 E ± 8.3km
 DEPTH = 33.0km (normal)
 4.3mb (1 obs.)

BURMA-CHINA BORDER REGION (297)

CHG 3.89 186 iPn 29 57.10 1.7
 iPg 30 09.00
 iSg 30 58.90
 KMI 3.91 51 Pgc 29 57.50 1.7
 Sg 30 44.00
 BDT 5.44 184 ePn 30 15.70 -1.6
 ePg 30 58.20
 eSg 31 46.90
 LOE 5.71 157 ePg 30 29.90 8.7X
 eSg 31 47.40
 SHL 7.42 294 iP 30 45.30 0.0
 GYA 7.61 59 P 30 46.40 -1.6
 GUN 13.26 296 P 32 07.00 1.7
 PKI 13.55 294 P 32 08.40 -0.7
 0.7s 3.00nm 4.3mb X
 KKN 13.73 295 P 32 10.90 -0.4
 GKN 14.33 295 P 32 18.40 -0.8
 0.7s 6.00nm 4.3mb
 GTA 16.66 1 eP 32 49.00 -0.1
 S.D. = 1.5 on 10 of 11 obs.

JAN 17, 1989 00h 35m 23.18±0.13s
 6.151 S ± 3.1km 148.947 E ± 3.4km
 DEPTH = 31.8km (geophysicist)
 5.9mb (32 obs.) 6.4Msz (33 obs.)

NEW BRITAIN REGION (192)

Ms 6.3 (BRK). 6.0 (PAS). Felt
 (IV) at Finschhafen, New Guinea.
 Felt (III) at Kimbe, New Britain
 and on Umbai. Also felt in the
 Kandrian area. Depth from
 broadband displacement
 seismograms.

FAULT PLANE SOLUTION: P-Waves

NP1: Strike=135 Dip=70 Slip= 90
 NP2: 315 20 90
 Principal Axes:

T P1g=65 Azm= 45
 P 25 225

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

RADIATED ENERGY

No. of sto: 6 Focal mech. F
 Energy 4.3±1.2*10**13 Nm

MOMENT TENSOR SOLUTION

Dep 29 No. of sto: 10
 Moment Tensor: Scale 10**18 Nm
 Mrr= 2.57 Mtt=-1.92
 Mff=-0.65 Mrt= 3.83
 Mrf=-2.51 Mtf= 1.16

Principal axes:

T Val= 5.25 P1g=60 Azm= 35
 N 0.03 1 303
 P -5.28 30 212

Best Double Couple: Mo=5.3*10**18
 NP1: Strike=298 Dip=15 Slip= 86
 NP2: 123 75 91

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 15S, 40C M.W.: 14S, 36C

Centroid Location:

Origin Time 00:35:34.2 0.2

Lat 6.28S 0.01 Lon 148.99E 0.01

Dep 36.0 BDY Half-duration 6.3

Moment Tensor: Scale 10**18 Nm

Mrr= 3.82 0.04 Mtt=-4.39 0.04
 Mff= 0.57 0.05 Mrt= 2.32 0.11
 Mrf=-1.60 0.10 Mtf= 0.65 0.04

Principal Axes:

T Val= 4.88 P1g=68 Azm= 56
 N 0.31 15 285
 P -5.20 16 191
 Best Double Couple: Mo=5.0*10**18
 NP1: Strike=260 Dip=32 Slip= 61
 NP2: 113 63 107

LAT 2.00 255 iPd 36 00.90 5.5X
 ULO 2.58 65 P 36 04.00 0.2
 LMG 2.85 196 iPd 36 08.60 1.0
 PMG 3.69 209 iP 36 23.50 4.1X
 RAB 3.75 59 P 36 20.80 0.5
 DOY 3.94 61 P 36 23.80 0.9
 MNDI 5.26 270 e(P) 36 53.00 11.1X
 TZZ 7.74 276 eP 36 32.00 -44.6X
 JAY 8.98 293 ePc 37 40.70 7.0X
 VSG 11.10 107 eP 38 02.00 -0.9
 HNR 11.37 107 eP 38 05.00 -1.6
 eS 40 06.00
 CTA 14.10 190 iPd- 38 43.60 0.7
 i 40 13.20
 iS 41 27.00
 i 41 43.00
 CTAO 14.10 190 iPd 38 43.22 0.3
 OIS 16.95 211 iPd 39 20.10 0.5
 MTN 18.78 248 eP 39 42.00 -0.4
 WBS 19.67 225 iPd 39 53.00 0.2
 GUA 19.97 348 eP+ 39 57.50 1.7
 1.2s 2400.00nm 6.4mb
 Z 20s 108.94um 6.1Msz
 PJG 20.02 348 eP 39 58.50 2.1
 RMO 20.23 180 iPd 39 58.10 -0.4
 e 40 06.00
 e 47 53.00
 e 40 08.50 3.8X
 AAI 20.82 276 eP 40 10.30 -0.6
 BRS 21.44 171 eP 40 19.30
 e 40 32.00
 e 42 00.00
 iS 44 00.00
 i 44 10.30
 i 45 06.90
 iScP 47 50.30
 KNA 21.97 243 eP 40 17.30 1.0
 PVC 22.14 123 iPc 40 16.50 -1.5
 ASPA 22.65 218 eP 40 24.40 1.4
 0.5s 398.00nm 6.1mb
 Z 23s 113.45um 6.2MszX
 e 40 43.50
 eS 44 32.10
 LR 48 43.60
 e 51 36.80
 DZM 23.16 135 iPc 40 26.20 -1.9
 iS 44 35.00
 ScP 47 55.00
 ScS 51 42.00
 COO 24.46 174 iPd 40 40.40 -0.1
 e 40 55.00
 e 48 08.00
 STK 26.51 194 eP 40 59.00 -0.7
 e 41 16.00
 e 41 26.00
 DAV 26.77 299 eP 41 02.00 -0.3
 RIV 27.62 176 eP 41 10.00 0.2
 Z 17s 21.90um 5.8MszX
 e 41 22.00
 eS 46 04.00
 CNB 29.03 179 iPc 41 22.20 -0.4
 CAN 29.03 180 eP 41 11.90 -10.7X
 e 41 41.20
 MKS 29.35 270 ePd 41 38.40 12.8X
 ADE 30.19 197 iPd 41 32.60 -0.4
 0.7s 82.19nm 5.6mb
 FORR 31.41 216 iPd 41 43.50 -0.2
 BFD 31.43 190 eP 41 36.00 -7.8X
 TOO 31.43 185 iPd 41 44.00 0.1
 e 42 06.00
 e 48 30.00
 TSM 32.51 288 eP 42 07.00 13.5X
 KHKI 33.14 264 ePd 41 58.20 -0.8
 e 46 54.00
 PPR 34.01 298 ePc 42 13.00 6.5X
 KKM 34.84 290 eP 42 16.50 2.6
 MEKA 35.40 231 eP 42 19.40 1.0
 COOL 35.85 223 iPd 42 22.50 0.3
 BAG 35.92 309 eP 42 20.00 -3.1X
 eS 47 08.20

TRT 36.07 265 ePd 42 26.40 2.2
 0.5s 41.00nm 5.6mb
 NANU 36.12 240 iPc 42 25.60 1.1
 TAU 36.64 182 iPd 42 29.30 0.8
 i 42 30.30
 e 43 53.00
 e 44 09.00
 eS 48 12.00
 KLB 38.61 225 iPd 42 45.80 0.4
 0.5s 96.00nm 5.8mb
 MRWA 38.64 230 eP 42 46.80 1.2
 BAL 38.83 227 eP 42 48.00 0.8
 AFI 39.39 104 iPc 42 50.29 -1.8
 epPd 42 59.40 31kmX
 NWA0 39.74 224 ePd 42 55.53 0.8
 epPd 43 03.64 27kmX
 i 43 53.41
 ePP 44 25.97
 MUN 39.93 226 iPd 42 57.00 0.7
 1.0s 260.00nm 5.9mb
 Z 20s 57.40um 6.4Msz
 RKG 40.55 222 eP 43 05.50 4.1X
 0.9s 234.00nm 5.9mb
 KAGJ 40.95 336 P 43 06.60 2.0
 ANP 41.01 321 eP+ 43 06.00 0.7
 eS 49 16.00
 MSZ 41.80 160 P 43 12.30 0.9
 0.8s 52.00nm 5.3mb
 pP 43 23.00 37kmX
 PcP 45 02.00
 WEL 41.88 151 P 43 11.00 -1.2
 pP 43 24.00 49kmX
 PcP 45 11.00
 S 49 25.00
 SS 52 36.00
 WKYJ 42.09 343 eP 43 15.90 1.9
 KUMJ 42.16 337 P 43 16.10 1.6
 TKSJ 42.33 342 eP 43 16.60 0.7
 IIDJ 42.69 347 P 43 19.10 0.2
 QZH 42.75 317 Pc 43 20.00 0.5
 Z 26s 28.70um 6.1MszX
 N 20s 17.90um
 S 49 38.00
 sS 50 06.00
 ScS 53 15.00
 KAKJ 42.93 350 eP 43 21.20 0.5
 CHJJ 43.00 348 eP 43 20.90 -0.5
 TSRJ 43.22 345 P 43 24.90 1.7
 SHK 43.28 340 ePc 43 23.00 -0.7
 SHNJ 43.47 338 P 43 26.40 1.3
 YONJ 43.63 342 P 43 26.90 0.4
 MAT 43.64 347 iPc 43 26.10 -0.5
 1.2s 301.56nm 5.9mb
 Z 20s 25.18um 6.1Msz
 eS 49 40.00
 MTMJ 43.77 347 P 43 27.70 -0.1
 NIIJ 44.15 349 P 43 31.00 0.3
 HKC 44.26 311 iP 43 37.90 6.2X
 S 50 08.00
 YAMJ 44.87 350 eP 43 36.90 0.4
 GZH 45.33 311 Pc 43 40.00 -0.4
 N 20s 17.50um
 E 18s 13.80um
 S 50 19.00
 OFUJ 45.50 352 P 43 43.00 1.5
 SSE 45.57 326 P+ 43 42.00 0.0
 1.0s 61.00nm 5.5mb
 Z 20s 36.80um 6.3Msz
 N 18s 20.30um
 E 18s 15.70um
 i 45 42.00
 PcS 49 16.00
 S 50 18.00
 sS 50 40.00
 SS 53 44.00
 OIZ 45.94 304 eP 43 44.00 -1.2
 N 21s 10.70um
 E 18s 6.60um
 eS 50 26.00
 sS 50 44.00
 KGM 46.28 279 eP 43 55.00 7.0X
 AOMJ 47.14 351 eP 43 58.00 3.6X
 NJ2 47.60 325 iPc 43 58.00 -0.1
 6.0s 2.20nm 3.4mb X
 N 21s 25.20um
 E 20s 18.10um
 pP 44 11.00 48kmX

			S	50	45.00			
			sS	51	10.00			
HOOJ	48.58	354	eP	44	06.80	1.3		
PPI	48.77	275	eP	44	06.50	-1.1		
MRRJ	48.87	352	eP	44	08.20	0.4		
IPM	49.02	281	ePd	44	12.90	3.4X		
			e	44	24.30			
KUSJ	49.17	356	P	44	10.90	0.9		
WHN	49.28	320	Pc	44	15.00	3.8X		
	8.0s				1.90nm		3.2mb X	
N	20s				13.80um			
E	16s				6.80um			
			S	51	10.00			
			sS	51	32.00			
SAP	49.46	353	eP	44	12.00	-0.3		
SNG	50.00	285	eP	44	18.70	1.7		
ASAJ	50.36	354	P	44	20.50	1.3		
PSI	50.72	279	ePd	44	23.00	0.6		
DL2	51.49	333	Pc	44	27.00	-0.8		
Z	18s				20.20um		6.2Msz	
N	18s				25.20um			
E	19s				18.70um			
			eS	51	37.50			
TIA	51.64	327	Pd	44	27.90	-1.2		
Z	22s				42.30um		6.4Msz	
N	21s				25.60um			
E	21s				26.90um			
			S	51	44.50			
			sS	52	05.00			
RAR	51.78	112	P	44	28.00	-2.4		
			S	51	52.00			
LOE	52.18	297	eP	44	31.50	-2.0		
GYA	52.25	310	iPc	44	34.00	0.0		
	8.0s				1.80nm		3.1mb X	
N	17s				6.30um			
E	17s				5.00um			
			pP	44	46.00	43kmX		
			PP	46	37.00			
			S	51	59.00			
			sS	52	19.00			
NNT	52.33	291	eP	44	34.50	-0.1		
NST	52.98	295	eP	44	39.00	-0.4		
SNY	53.08	336	iPc	44	39.00	-0.7		
	8.0s				2.20nm		3.2mb X	
Z	18s				26.50um		6.3Msz	
N	18s				17.10um			
E	17s				9.00um			
			pP	44	49.00	33kmX		
			PcP	45	45.00			
			S	52	08.00			
			sS	52	25.50			
MDJ	53.45	343	Pc	44	41.40	-1.1		
Z	20s				35.40um		6.4Msz	
N	20s				20.50um			
			epP	44	54.00	45kmX		
			S	52	11.00			
CN2	54.07	339	Pd	44	46.70	-0.3		
	6.0s				2.20nm		3.4mb X	
Z	20s				18.10um		6.1Msz	
N	19s				16.70um			
E	19s				9.20um			
			pP	44	56.00	31kmX		
			PP	46	52.00			
			S	52	20.00			
			sS	52	36.00			
KMI	54.63	307	P+	44	51.00	-0.8		
	6.0s				1.30nm		3.1mb X	
N	18s				10.50um			
			pP	45	09.00	70kmX		
			sP	45	20.00			
			eS	52	24.00			
			iS	52	29.00			
BJI	54.99	330	eP	44	51.00	-2.8		
	7.0s				1.30nm		3.1mb X	
N	21s				22.20um			
			eS	52	33.00			
XAN	55.04	319	eP	44	52.40	-2.0		
	8.0s				1.40nm		3.0mb X	
N	23s				16.70um			
E	25s				21.60um			
			pP	45	10.20	69kmX		
			S	52	29.70			
CHG	55.16	298	iPd	44	55.20	-0.3		
	1.0s				18.00nm		5.1mb	
			eS	52	38.00			
CHTO	55.16	298	ePc	44	53.79	-1.7		
			epPd	45	03.39	31kmX		

			id	46	03.42			
			ePP	47	01.09			
TIY	55.32	325	iPc	44	55.00	-1.4		
	8.0s				1.70nm		3.1mb X	
N	20s				19.00um			
			pP	45	07.50	44kmX		
			PP	46	57.00			
			S	52	32.00			
			sS	52	55.50			
CD2	56.78	313	eP	45	05.80	-1.1		
Z	20s				12.40um		6.0Msz	
N	19s				15.20um			
			epP	45	24.00	70kmX		
			esS	53	14.00			
HHC	57.99	327	iPc	45	14.00	-1.4		
N	20s				18.20um			
E	19s				19.30um			
			PP	47	25.50			
BTO	58.67	326	iPc	45	20.00	-0.1		
N	20s				25.10um			
E	20s				26.00um			
			PP	47	27.00			
			S	53	16.00			
			SS	57	11.00			
HON	58.74	61P		45	20.00	-0.8		
Z	20s				39.89um		6.5Msz	
LZH	59.60	318	ePc	45	25.67	-1.0		
	8.0s				1483.00nm		6.2mb X	
			epPd	45	34.94	30kmX		
			eS	53	22.00			
DRV	60.73	184	eP	45	34.90	1.2		
HIA	60.78	339	ePc	45	32.92	-1.5		
			epPd	45	43.19	34kmX		
			eS	53	48.27			
			esS	54	08.30			
AFR	60.80	107	iP	45	34.10	-0.9		
	1.3s				250.00nm		6.2mb	
PAE	61.00	107	iP	45	35.70	-0.6		
	1.3s				220.00nm		6.1mb	
PPT	61.00	107	iP	45	35.70	-0.6		
	1.3s				205.00nm		6.1mb	
Z	21s				7.00um		5.8Msz	
PPN	61.13	107	iP	45	36.20	-1.0		
	1.3s				255.00nm		6.2mb	
TVO	61.32	107	iP	45	38.00	-0.6		
	1.3s				470.00nm		6.5mb	
TBI	61.53	113	iP	45	39.30	-0.6		
	1.3s				275.00nm		6.2mb	
SMY	62.43	17	eP	45	46.20	0.8		
Z	21s				20.00um		6.3Msz	
PMO	62.53	104	iP	45	46.10	-0.6		
	1.3s				800.00nm		6.7mb	
VAH	62.79	104	iP	45	47.60	-0.8		
	1.3s				255.00nm		6.2mb	
TPT	62.80	104	iP	45	47.80	-0.6		
	1.3s				660.00nm		6.6mb	
RUV	63.03	104	iP	45	49.20	-0.7		
	1.3s				550.00nm		6.5mb	
SHL	63.73	302	iP	45	53.40	-1.3		
			eS	54	25.50			
GTA	64.11	319	Pc	45	55.20	-1.7		
	8.0s				1.50nm		3.1mb X	
Z	21s				13.40um		6.1Msz	
E	20s				15.60um			
			pP	46	08.00	44kmX		
			PP	48	16.00			
			S	54	29.00			
			SS	58	34.00			
ADK	64.84	23	eP	46	00.60	-0.6		
	0.9s				254.20nm		6.3mb	
LSA	65.88	306	Pc	46	08.30	-0.6		
N	21s				4.50um			
E	22s				6.80um			
			sP	46	25.50			
			S	54	51.00			
			sS	55	14.00			
GUN	69.57	303	P	46	29.90	-2.1		
PKI	69.86	302	P	46	31.80	-1.9		
KKN	70.04	302	P	46	32.50	-2.2		
DMN	70.13	302	P	46	33.10	-2.2		
GKN	70.64	302	P	46	35.90	-2.4		
SBA	72.27	176	Pc+	46	48.40	1.5		
KOD	73.02	283	eP	46	52.00	-0.8		
HYB	73.33	290	eP	46	54.50	0.3		
GBA	73.64	286	Pc	46	56.20	0.2		
	0.7s				27.50nm		5.4mb	

SDN	74.13	27	eP	46	57.10	-0.9		
WMQ	74.17	319	P	46	57.00	-1.7		
	6.0s				1.10nm		3.0mb X	
Z	20s				8.00um		6.0Msz	
N	14s				3.30um			
			ScS	57	02.00			
RKT	74.82	112	iP	47	02.00	-0.8		
	1.2s				165.00nm		5.9mb	
NDI	77.11	301	eP	47	15.50	-0.1		
			eS	56	59.50			
POO	77.94	290	eP	47	21.50	1.1		
PAF	78.02	221	iPd	47	09.00	-11.2X		
			eS	57	20.00			
			eSS	02	30.00			
			eSSS	05	50.00			
BOM	78.97	291	eP	47	24.40	-1.5		
			eS	57	08.40			
KDC	79.15	28	eP	47	24.70	-1.4		
SVW	79.57	24	P	47	28.00	-0.5		
TTA	80.44	22	eP	47	33.10	-0.1		
KSH	80.90	311	eP	47	36.00	-0.1		
E	18s				10.00um			
			sP	47	51.00			
			ePP	50	36.00			
			S	57	40.00			
PMR	82.51	25	eP	47	42.20	-1.6		
	0.9s				60.40nm		5.7mb	
Z	21s				16.00um		6.4Msz	
MAW	82.85	203	eP	47	46.40	0.8		
	0.9s				65.00nm		5.7mb	
IMA	83.02	20	eP	47	45.80	-0.8		
	0.9s				32.30nm		5.4mb	
SPA	83.89	180						

eSKS 04 49.00
 ePPS 09 50.00
 ISS 15 35.00
 eSSS 21 05.00
 PTO 139.81 333 ePKP 54 37.70 -12.4X
 UAV 140.18 84 ePKP 54 45.60 -6.3X
 ASMO 140.20 325 ePKP 54 45.50 -5.7X
 AAPN 140.45 325 ePKP 54 44.00 -7.6X
 APHE 140.45 325 ePKP 54 47.00 -4.7X
 ALOJ 140.58 325 ePKP 54 46.00 -5.9X
 ATEJ 140.67 325 ePKP 54 46.90 -5.2X
 SDV 140.68 84 ePKP 54 46.00 -6.8X
 EHOR 140.71 327 e(PKP) 54 48.50 -3.4X
 TAF 141.13 321 ePKP 55 04.00 11.1X
 e 55 24.00
 EPRU 141.32 326 e(PKP) 54 53.00 -0.1
 TOV 141.48 82 ePKP 54 52.20 -1.8
 EVAL 141.68 328 e(PKP) 54 51.70 -2.0
 MORO 142.87 80 ePKP 54 51.00 -5.5X
 IFR 143.67 322 iPKP 54 54.00 -3.4X
 i 54 56.00
 i 55 38.00
 i 58 31.50
 SJG 143.77 68 e(PKP) 54 51.00 -6.8X
 GUAC 143.94 81 ePKP 54 55.00 -3.4X
 CAR 144.26 81 iPKP 54 54.00 -4.8X
 LLAV 144.38 81 ePKP 54 55.00 -4.0X
 OLLA 144.41 81 iPKP 54 56.00 -3.1X
 AVE 145.19 324 iPKP 54 59.50 -0.3
 i 55 12.00
 i 56 16.00
 CUM 146.96 80 iPKP 55 02.40 -0.8
 VAO 147.11 152 ePKP 55 03.10 -0.2
 e 55 05.10
 e 55 22.20
 NEV 147.31 68 ePKP 55 05.89 2.2
 MGH 147.75 68 ePKP 55 06.07 1.7
 CPB 147.86 66 ePKP 55 06.22 1.7
 ANG 147.99 67 ePKP 55 06.38 1.7
 BRAS 148.14 154 ePKP 54 47.60 -17.6X
 PAG 148.43 69 ePKP 55 07.00 1.5
 BMA 148.60 156 ePKP 55 04.60 -1.1
 e 55 10.50
 e 55 14.20
 e 55 19.10
 e 55 28.60
 e 55 39.20
 ITA 148.66 155 ePKP 55 07.20 1.1
 e 55 09.60
 e 55 15.00
 e 55 19.80
 e 55 27.80
 BBL 148.74 70 ePKP 55 08.00 2.0
 MGG 148.79 69 ePKP 55 08.00 2.0
 SHGH 149.16 271 ePKP 55 12.00 5.3X
 FDF 149.23 72 ePKPd 55 08.52 1.7
 LEGH 149.29 271 ePKP 55 12.20 5.3X
 BIM 149.35 72 ePKP 55 09.03 2.0
 KOGH 149.37 272 ePKP 55 05.80 -1.3
 SVB 149.43 74 ePKP 55 08.77 1.7
 CRM 149.45 71 ePKP 55 09.00 1.9
 KUK 149.50 272 ePKP 55 07.00 -0.3
 MVM 149.51 72 ePKP 55 08.47 1.3
 TPP 149.64 80 ePKP 55 12.37 5.0X
 TRN 149.66 79 ePKP 55 10.45 3.0X
 TBH 150.00 80 ePKP 55 12.99 5.0X
 BAO 152.61 142 iPKPc 55 12.30 0.4
 CFTV 152.64 326 iPKP 55 20.50 9.0X
 TBT 154.37 332 iPKP 55 26.90 13.0X
 ATB 156.87 113 PKPc 55 16.40 -1.2
 S.D. = 1.2 on 284 of 358 obs.
 JAN 17, 1989 00h 47m 29.48 ± 0.71s
 42.833 N ± 4.9km 12.912 E ± 7.0km
 DEPTH = 10.0km (geophysicist)
 CENTRAL ITALY (381)
 MD 2.3 (SSO).
 ASS 0.30 322 P 47 36.50 0.7
 eSg 47 41.60
 CIO 0.40 25 iPg 47 37.21 -0.5
 iSg 47 44.02
 MNS 0.48 201 P 47 38.50 -0.7
 eSg 47 47.30
 ALP 0.49 96 e(Pg) 47 39.29 -0.2
 iSg 47 47.33
 ARV 0.67 2 P 47 42.20 -0.5

eSg 47 52.80
 AOI 0.88 35 e(Pg) 47 46.74 0.4
 eSg 48 01.95
 SDI 1.31 149 P 47 54.60 0.8
 S.D. = 0.8 on 7 of 7 obs.
 * JAN 17, 1989 00h 57m 10.20 ± 1.18s
 6.377 S ± 17.8km 149.270 E ± 16.3km
 DEPTH = 61.4 ± 20.9 km
 NEW BRITAIN REGION (192)
 LAT 2.27 263 eP 57 46.00 0.0
 LMG 2.75 204 eP 57 52.00 -0.9
 RAB 3.61 53 iPc 58 05.00 0.0
 1.0s 2320.00nm
 PMG 3.67 215 eP 58 07.00 1.3
 WB5 19.74 226 eP 01 36.50 -1.4
 ASPA 22.67 219 eP 02 08.40 1.0
 S.D. = 1.6 on 6 of 6 obs.
 * JAN 17, 1989 01h 03m 25.32 ± 1.06s
 4.318 S ± 12.4km 148.496 E ± 20.3km
 DEPTH = 33.0km (normal)
 4.5mb (1 obs.)
 BISMARCK SEA (203)
 RAB 3.67 88 iPd 04 43.20 22.1X
 1.0s 2240.00nm
 LMG 4.57 184 iPd 04 28.00 -6.2X
 PMG 5.23 195 ePd 04 43.00 -0.3
 0.9s 142.86nm 5.5mb X
 eS 05 30.00
 OIS 18.31 207 eP 07 40.00 1.3
 WB5 20.71 221 eP 08 14.00 8.5X
 RMO 22.05 179 iPc 08 18.60 -0.4
 BRS 23.31 170 iP 08 29.80 -1.6
 ASPA 23.84 215 eP 08 44.70 8.1X
 0.6s 10.00nm 4.5mb
 eS 12 50.70
 DZM 24.78 137 iPc 08 47.00 1.2
 GUN 68.22 302 P 14 26.20 0.6
 KKN 68.69 302 P 14 27.20 -1.2
 DMN 68.78 302 P 14 33.10 4.1X
 GKN 69.30 302 P 14 32.40 0.4
 S.D. = 1.3 on 8 of 13 obs.
 & JAN 17, 1989 02h 26m 52.99s
 61.143 N 151.203 W
 DEPTH = 58.4km
 SOUTHERN ALASKA (2)
 <AGS-P>.
 NKA 0.40 182 iP 27 05.31 1.4
 eS 27 13.64
 SPU 0.41 276 iP 27 03.64 -0.5
 eS 27 12.35
 CRP 0.48 286 iP 27 04.40 -0.5
 eS 27 14.30
 SLKM 0.80 143 iP 27 07.61 -0.9
 eS 27 20.40
 PMS 0.80 82 iPc 27 07.90 -0.7
 PWA 0.82 51 iPc 27 08.60 -0.1
 RDT 0.82 226 iP 27 08.26 -0.6
 eS 27 20.56
 PLRM 1.10 65 iP 27 11.55 -0.8
 PMR 1.10 65 iPc 27 11.60 -0.8
 PTE 1.10 104 iP 27 11.90 -0.5
 eS 27 27.21
 NNL 1.11 182 iP 27 13.24 0.7
 eS 27 28.96
 PME 1.15 64 iP 27 12.56 -0.6
 eS 27 28.09
 GHO 1.26 59 iP 27 14.11 -0.7
 KNK 1.35 77 iP 27 15.31 -0.7
 ILIM 1.37 220 iP 27 15.95 -0.3
 eS 27 34.51
 PWL 1.43 100 iP 27 15.76 -1.2
 eS 27 33.91
 SML 1.53 63 iP 27 17.31 -1.1
 CNPM 1.62 181 iP 27 19.15 -0.6
 KNIM 1.88 114 eP 27 20.43 -2.8
 PDB 2.01 229 eP 27 24.03 -1.1
 eS 27 48.43
 GLI 2.02 96 eP 27 22.30 -2.9
 MTU 2.10 122 eP 27 24.43 -2.0
 eS 27 49.10
 SVW 2.14 271 iPc 27 25.30 -1.7

VZW 2.26 90 eP 27 26.37 -2.3
 FID 2.34 98 eP 27 26.42 -3.3
 eS 27 54.30
 VLZ 2.36 88 eP 27 27.94 -2.1
 eS 27 55.65
 KLU 2.57 80 iP 27 30.81 -2.2
 TOA 2.59 66 eP 27 32.60 -0.7
 CVA 2.74 100 eP 27 32.30 -3.0
 TTA 2.89 310 iPc 27 35.60 -2.0
 KDC 3.47 191 eP 27 44.20 -1.5
 GLB 3.58 82 eP 27 44.64 -2.7
 FBA 4.08 21 iPd 27 53.30 -0.9
 IMA 5.07 348 eP 28 05.80 -2.5
 34 obs. associated
 & JAN 17, 1989 03h 55m 20.20s
 31.920 N 114.880 W
 DEPTH = 6.0km (geophysicist)
 GULF OF CALIFORNIA (49)
 <PAS-P>. ML 3.1 (PAS).
 GLA 1.13 2 iPd 55 40.70 -1.1
 BAR 1.70 297 eP 55 50.20 -0.3
 eS 56 11.40
 PLM 2.20 311 eP 56 00.00 2.0
 3 obs. associated
 % JAN 17, 1989 04h 55m 27.88 ± 0.98s
 40.255 N ± 11.6km 27.321 E ± 7.6km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 EDC 0.42 77 iPg 55 36.00 -0.6
 iSg 55 42.00
 BNT 0.47 77 iPg 55 37.50 0.1
 EZN 0.88 241 ePn 55 44.60 -0.1
 DST 1.20 122 ePn 55 50.50 0.3
 CTT 1.23 43 ePn 55 51.00 0.3
 S.D. = 0.5 on 5 of 5 obs.
 JAN 17, 1989 05h 04m 13.39 ± 0.32s
 2.114 S ± 4.4km 139.002 E ± 6.7km
 DEPTH = 33.0km (normal)
 5.3mb (13 abs.) 4.6Msz (1 obs.)
 NEAR N. COAST OF WEST IRIAN (197)
 JAY 1.75 103 iPd 04 40.50 -1.4
 TZZ 3.84 145 eP 04 25.50 -46.1X
 MNDI 6.14 131 eP 05 50.00 5.6X
 PMG 10.87 132 e(P) 06 49.00 -0.9
 MTN 13.21 216 eP 07 20.00 -1.3
 eS 09 44.00
 KNA 16.89 216 eP 08 09.00 0.0
 eS 11 11.00
 WB5 18.23 194 eP 08 24.80 -0.9
 eS 11 37.50
 OIS 18.34 178 eP 08 26.00 -1.1
 e 08 42.00
 eS 11 43.00
 CTA 19.22 159 iPc 08 39.00 1.3
 0.6s 16.00nm 4.4mb
 eS 12 20.00
 ASPA 21.99 193 eP 09 06.20 -0.3
 0.6s 57.00nm 5.2mb
 Z 18s 2.27um 4.6Msz
 eS 13 03.80
 LR 17 59.80
 RMO 25.98 160 eP 09 47.00 2.0
 MBL 26.59 223 eP 09 51.00 0.3
 FORR 30.39 199 eP 10 24.50 -0.2
 NANU 30.54 226 eP 10 26.50 0.3
 ADE 32.69 180 iPd 10 46.10 1.2
 0.6s 46.67nm 5.6mb
 COOL 33.23 209 eP 10 49.40 -0.3
 0.5s 15.00nm 5.2mb
 BWA 33.32 166 eP 10 51.80 1.3
 CAN 34.32 165 eP 11 00.50 1.4
 MRWA 34.73 217 iPc 11 02.80 0.2
 0.5s 14.00nm 5.1mb
 BFD 35.04 175 eP 11 00.00 -5.2X
 BAL 35.34 214 eP 11 07.50 -0.3
 KLB 35.52 212 eP 11 09.20 -0.1
 MUN 36.65 213 eP 11 19.00 0.1
 NWA0 36.84 211 eP 11 20.40 0.0
 SSE 37.12 334 Pd 11 22.80 0.0
 0.8s 16.00nm 4.9mb
 e 15 10.00

17d 05h

PSI 40.35 277 iPc 11 50.00 0.0
0.7s 21.50nm 5.0mb
NST 42.30 296 eP 12 07.20 1.3
XAN 45.76 324 eP 12 33.20 -0.5
TIY 46.64 331 P 12 41.30 0.6
BJI 46.87 336 eP 12 42.00 -0.3
CD2 46.94 317 eP 12 43.40 0.3
MDJ 47.28 351 eP 12 45.00 -0.5
HHC 49.54 333 eP 13 03.60 0.4
BTO 50.07 331 eP 13 07.40 0.1
LZH 50.18 323 eP 13 09.00 0.7
GTA 54.77 323 eP 13 42.50 0.0
GUN 59.09 304 P 14 13.90 0.2
0.8s 42.00nm 5.6mb
PKI 59.36 304 P 14 15.30 -0.2
0.6s 9.00nm 5.1mb
KKN 59.54 304 P 14 16.60 0.0
0.8s 45.00nm 5.7mb
DMN 59.62 304 P 14 17.40 0.2
0.7s 38.00nm 5.6mb
GKN 60.15 304 P 14 20.70 0.0
0.7s 41.00nm 5.7mb
GBA 62.99 286 Pd 14 38.20 -1.6
0.6s 11.20nm 5.2mb
WMO 64.73 321 P 14 51.00 0.2
MAIO 82.79 307 iPd 16 37.60 1.5
KIC 143.61 278 PKP 23 44.60 -3.1X
TIC 143.86 278 PKP 23 45.40 -2.7
LIC 143.90 278 PKP 23 45.40 -2.8
ARE 144.68 123 ePKP 23 50.00 0.2
LPB 147.45 126 PKP 23 56.00 1.5
ZOBO 147.57 125 PKP 23 58.00 3.1X
1.3s 44.95nm
S.D. = 1.0 on 45 of 50 obs.

& JAN 17, 1989 05h 05m 13.10s
41.147 N 124.230 W
DEPTH = 24.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 3.4 (BRK). Felt (V) at
Arcota and (III) at Eureka,
Somoa and Trinidad.

FHC 0.39 152 iPd 05 20.50 -1.0
WDC 1.40 113 iPd 05 35.40 -1.9
iS 05 53.30
LBFM 1.78 83 eP 05 42.00 -0.9
LTCM 1.86 120 eP 05 41.80 -2.1
MIN 2.15 111 ePd 05 45.60 -2.7
i 06 16.80
ORV 2.62 126 eP 05 53.00 -1.9
ZSP 3.54 154 eP 06 07.80 -0.1
BRK 3.61 154 e(P) 06 07.50 -1.3
BKS 3.61 154 e(P) 06 07.70 -1.2
PCC 3.91 158 e(P) 06 10.60 -2.5
MHC 4.30 151 eP 06 17.90 -0.8
CMB 4.30 135 e(P) 06 22.00 3.3
ARN 4.33 150 eP 06 17.60 -1.5
GCC 4.46 156 e(P) 06 17.90 -3.0
SAO 4.88 153 eP 06 24.20 -2.7
KVN 5.15 112 eP 06 28.00 -2.8
LLA 5.20 149 e(P) 06 29.60 -1.8
PRS 5.30 154 e(P) 06 30.50 -2.3
18 obs. associated

& JAN 17, 1989 05h 47m 21.72s
58.044 N 142.624 W
DEPTH = 10.0km (geophysicist)
4.5mb (1 obs.)
GULF OF ALASKA (15)
<AGS-P>. ML 3.7 (PMR).

YKU 2.14 44 eP 47 52.60 -5.2
WAX 2.42 357 eP 47 56.55 -5.4
HMT 2.45 341 iP 47 56.45 -5.9
BCPM 2.46 38 iP 47 56.69 -5.8
RAGM 2.58 337 iP 47 58.10 -6.1
SGAM 2.80 333 eP 48 01.48 -5.9
CVA 2.98 329 eP 48 03.09 -6.7
CTGM 3.00 12 iP 48 04.51 -5.8
MTU 3.25 309 eP 48 06.60 -7.1
FID 3.35 326 eP 48 08.51 -6.7
GLB 3.46 351 iP 48 10.39 -6.4
KNIM 3.50 313 iP 48 09.80 -7.5
eS 48 48.64
VLZ 3.63 330 eP 48 11.83 -7.2
eS 48 52.21

VZW 3.63 328 eP 48 11.96 -7.2
GLI 3.65 323 iP 48 11.81 -7.6
HYT 3.82 41 P 48 16.00 -6.0
KLU 3.84 336 iP 48 15.48 -6.7
SIT 4.06 101 eP 48 16.30 -8.8
PWL 4.06 317 eP 48 17.68 -7.5
eS 49 02.58
PTE 4.32 314 iP 48 21.09 -7.8
eS 49 07.94
TOA 4.44 338 iPc 48 24.70 -6.0
KNK 4.49 321 iP 48 24.70 -6.6
SLKM 4.61 306 eP 48 25.84 -7.3
CNPM 4.72 292 eP 48 27.93 -6.7
SML 4.74 325 eP 48 27.76 -7.2
PMS 4.76 315 eP 48 27.60 -7.7
PME 4.83 321 eP 48 29.47 -6.7
PLRM 4.84 320 eP 48 29.46 -6.8
PMR 4.84 320 eP 48 29.20 -7.1
GHO 4.90 322 eP 48 30.37 -6.9
NNL 4.91 298 eP 48 31.51 -5.7
PWA 5.14 318 eP 48 33.57 -7.0
KDC 5.27 271 ePc 48 36.10 -6.3
RDT 5.62 301 eP 48 39.76 -7.6
RDT 5.62 301 eP 48 40.16 -7.2
ILIM 5.71 295 eP 48 41.88 -6.8
SPU 5.73 307 eP 48 40.66 -8.2
CRP 5.81 308 eP 48 42.29 -7.8
SVW 7.28 300 eP 49 03.50 -7.2
FBA 7.31 342 eP 49 02.20 -8.8
TTA 8.22 312 eP 49 15.60 -8.3
YKA 14.53 60 P 50 51.60 2.6
FFC 22.50 81 iPc 52 21.70 -0.6
0.8s 13.00nm 4.5mb
43 obs. associated

? JAN 17, 1989 06h 06m 53.98± 4.95s
18.836 S ±24.3km 179.233 W ±28.3km
DEPTH = 552.4 ± 50.4 km
4.9mb (7 obs.)

FIJI ISLANDS REGION (181)

DZM 13.80 254 iPc 09 50.90 -0.4
BRS 27.07 246 iPd 11 55.80 1.3X
CAN 32.52 233 iPc 12 42.20 1.1
CTA 32.53 262 iPc 12 41.30 0.0
1.0s 31.00nm 4.9mb
BWA 32.65 235 eP 12 41.30 -0.9
TOO 35.98 231 eP 13 12.00 2.1
STK 37.51 242 eP 13 24.00 1.6
ADE 40.48 238 e(P) 13 43.10 -3.5X
WB5 43.68 261 iPc 14 11.80 -0.2
ASPA 43.79 255 iPc 14 13.10 0.2
0.6s 134.00nm 5.6mb
iS 20 15.20
MTN 48.00 269 eP 14 44.00 -1.1
FORR 48.87 245 iPc 14 51.50 0.0
0.5s 41.00nm 5.2mb
KNA 49.61 265 eP 14 56.50 -0.5
WARB 50.24 251 iPc 14 49.30 -12.3X
0.4s 7.00nm
COOL 54.85 245 eP 15 34.00 -0.7
MBL 57.00 257 iPc 15 49.00 -0.6
0.6s 25.00nm 4.7mb
KLB 57.71 244 eP 15 54.00 -0.3
NWA0 58.09 242 eP 15 57.00 0.1
BAL 58.68 245 eP 16 00.30 -0.6
MUN 59.01 244 eP 16 03.20 0.1
NANU 60.72 254 iPc 16 14.60 0.2
0.6s 53.00nm 5.1mb
SPA 71.28 180 ePc 17 17.00 -2.2
0.7s 14.84nm 4.6mb
PNT 85.94 34 eP 18 28.00 -8.5X
0.7s 8.00nm 4.6mb
ALQ 87.28 52 eP 18 32.00 -11.5X
KJF 131.15 345 ePKP 24 58.00 -6.0X
SUF 132.77 344 ePKP 25 00.00 -7.2X
SLL 137.45 351 ePKP 25 00.60 -15.5X
0.4s 1.70nm
NAO 137.45 353 PKP 25 11.60 -4.5X
0.7s 2.90nm
DMU 144.51 8 ePKP 25 20.00 -8.7X
DCN 145.00 8 ePKP 25 22.00 -7.5X
DLE 145.15 8 ePKP 25 22.00 -7.8X
KSP 145.76 342 iPc 25 26.70 -4.2X
CLL 146.18 346 iPc 25 27.80 -3.7X
0.9s 23.00nm
BRG 146.36 345 iPc 25 28.70 -3.1X

1.0s 20.00nm
WTS 146.57 353 ePKP 25 28.00 -4.1X
0.8s 8.00nm
PRU 147.02 344 PKP 25 30.00 -2.9
ENN 147.88 354 ePKP 25 32.00 -2.2
0.8s 8.00nm
KHC 148.06 344 PKP 25 33.50 -1.2
GRF 148.09 347 ePKP 25 33.60 -1.1
ABH 148.55 352 ePKP 25 33.70 -1.7
TOD 148.63 350 ePKP 25 33.89 -1.6
DOU 148.66 355 PKPd 25 34.40 -1.1
RUP 148.80 352 ePKP 25 34.62 -1.2
WLF 148.94 353 PKPc 25 35.10 -0.8
KBA 150.00 343 iPcPd 25 37.00 -0.9
0.7s 6.50nm
CDF 150.03 351 ePKP 25 37.30 -0.4
FLN 150.13 2 ePKP 25 37.00 -0.7
LDF 150.31 1 ePKP 25 37.30 -0.7
FEL 150.44 350 ePKP 25 38.79 0.4
GRR 150.49 2 ePKP 25 37.80 -0.5
HAU 150.55 352 ePKP 25 38.40 -0.1
BSF 150.66 352 ePKP 25 38.70 -0.1
VOY 150.79 341 iPcPd 25 39.50 0.5
VBY 150.81 339 i(PKP) 25 40.60 1.7
LPF 150.84 2 ePKP 25 38.70 -0.1
CEY 150.88 340 ePKP 25 40.40 1.4
TRI 151.12 341 iPcPd 25 40.20 0.9
LOR 151.53 356 ePKP 25 40.80 0.9
SSF 151.76 356 ePKP 25 41.30 1.1
LBF 151.80 355 ePKP 25 41.20 0.8
OHR 151.95 327 e(PKP) 25 32.00 -8.8X
MFF 152.30 1 ePKP 25 42.00 1.0
BGF 152.30 357 ePKP 25 42.20 1.2
TCF 152.60 358 ePKP 25 42.90 1.4
MAF 152.65 357 ePKP 25 43.40 1.9
LSF 152.65 359 ePKP 25 42.70 1.2
LPG 152.95 351 ePKP 25 44.90 2.6
RJJ 153.60 359 ePKP 25 45.00 2.2
LIC 166.25 155 PKP 25 52.50 -4.8X
KIC 166.49 156 PKP 25 52.70 -4.8X
TIC 166.64 154 PKP 25 53.00 -4.7X
S.D. = 1.2 on 51 of 71 obs.

JAN 17, 1989 06h 40m 36.03± 0.84s
43.767 N ± 7.2km 147.238 E ± 7.5km
DEPTH = 102.7 ± 7.3 km
4.7mb (24 obs.)

KURIL ISLANDS (221)
Felt (I JMA) at Kushiro,
Hokkaido.

KUSJ 1.96 251 iP+ 41 08.10 -0.5
S 41 30.60
KUS 2.22 250 iP+ 41 12.70 0.7
S 41 38.00
HOOJ 3.21 246 iP+ 41 26.60 1.2
S 42 03.50
ASAJ 3.34 278 iP+ 41 28.40 1.2
MRRJ 4.71 256 P 41 46.00 0.0
S 42 37.80
OFUJ 6.28 224 P 42 06.40 -1.3
YAMJ 7.80 227 P 42 27.60 -0.9
eS 43 52.00
NIIJ 9.04 227 P 42 44.10 -1.3
KAKJ 9.29 218 eP 42 45.20 -3.5X
S 44 27.30
CHJJ 9.97 222 eP 42 59.10 1.2
S 44 43.40
MAT 9.99 227 eP 42 57.00 -1.1
0.8s 20.90nm 5.1mb
eS 44 46.00
MTMJ 10.17 228 P 42 59.70 -1.0
CN2 15.74 278 Pd 44 09.70 -3.2X
BJI 23.35 272 eP 45 35.00 -0.7
SSE 24.13 247 Pd 45 45.50 2.1
0.8s 20.00nm 4.6mb
TIA 24.18 262 eP 45 43.80 0.0
HHC 26.42 276 P 46 06.80 2.1
BTO 27.61 276 P 46 16.40 0.9
XAN 31.12 265 eP 46 45.20 -1.5
CD2 36.47 264 P 47 32.90 0.2
TTA 37.38 39 eP 47 40.90 0.9
IMA 38.63 34 eP 47 51.30 0.8
0.8s 7.70nm 4.6mb
FBA 41.04 36 eP 48 10.70 0.5
WMO 42.15 292 P 48 20.00 0.4
S 54 32.00

INK	46.36	30	eP	48	53.00	0.1
CHG	47.35	254	iPd	49	02.10	0.7
	1.0s	16.00nm			4.8mb	
GUN	51.08	273	P	49	30.20	-0.1
	0.4s	10.00nm			5.2mb	
KKN	51.58	274	P	49	34.00	0.1
	0.7s	14.00nm			5.1mb	
PKI	51.61	273	P	49	33.90	-0.4
	0.5s	9.00nm			5.0mb	
DMN	51.81	274	P	49	34.80	-0.9
	0.7s	17.00nm			5.2mb	
GKN	51.92	274	P	49	36.20	-0.2
	0.5s	11.00nm			5.1mb	
SUF	63.94	334	iP	50	57.60	-2.1
SES	64.19	44	eP	51	24.00	22.4X
WB5	64.42	193	eP	51	04.00	0.7
		i		51	16.20	
FFC	65.65	37	eP	51	10.50	-0.4
	0.6s	9.00nm			4.9mb	
ASPA	68.21	193	eP	51	28.50	1.2
FRB	69.15	16	eP	51	31.00	-1.6
HFS	69.70	337	eP	51	34.00	-2.0
	0.4s	4.90nm			4.7mb	
NAO	69.89	339	P	51	35.40	-1.8
	0.8s	3.20nm			4.2mb	
KSP	76.58	331	eP	52	16.00	-0.4
CLL	77.33	333	iPd	52	20.10	-0.3
	0.8s	11.00nm			4.7mb	
PRU	77.92	331	P	52	23.90	0.2
KHC	78.98	331	eP	52	30.10	0.5
GRF	79.30	333	e(P)	52	31.20	-0.1
	0.8s	7.00nm			4.5mb	
KBA	80.80	330	iPc	52	39.70	0.2
	0.7s	3.30nm			4.3mb	
CDF	81.69	334	eP	52	43.60	-0.4
FLN	83.60	339	eP	52	53.20	-0.5
	0.7s	7.40nm			4.7mb	
LDF	83.66	339	eP	52	54.00	0.0
LOR	83.76	336	eP	52	54.30	-0.3
	0.7s	3.70nm			4.4mb	
LBF	83.98	336	eP	52	55.30	-0.4
	0.7s	3.70nm			4.4mb	
GRR	84.04	339	eP	52	55.90	0.0
	0.6s	7.20nm			4.8mb	
SSF	84.05	336	eP	52	55.80	-0.2
SMF	84.32	336	eP	52	57.40	0.0
	0.7s	4.40nm			4.5mb	
AVF	84.34	336	eP	52	57.50	0.1
LPF	84.42	339	eP	52	58.10	0.3
LPG	84.44	333	eP	52	58.40	0.0
	0.6s	3.00nm			4.4mb	
MAF	85.08	336	eP	53	01.80	0.6
	0.8s	8.50nm			4.7mb	
TCF	85.13	336	eP	53	01.70	0.2
LSF	85.36	337	eP	53	02.90	0.3
MFF	85.50	338	eP	53	03.70	0.4
RJF	86.22	337	eP	53	07.40	0.5
CAF	86.41	336	eP	53	08.70	0.8
	0.8s	5.30nm			4.6mb	
LFF	86.78	337	eP	53	10.30	0.7
LPO	86.89	336	eP	53	10.90	0.8
	0.6s	4.30nm			4.6mb	
BAO	149.11	30	ePKP	00	14.80	5.1X
	S.D. = 0.9 on 61 of 65 obs.					
? JAN 17, 1989 07h 37m 07.64 ± 0.91s						
59.753 N ± 8.2km 5.980 E ± 8.3km						
DEPTH = 10.0km (geophysicist)						
SOUTHERN NORWAY (535)						
MD 2.7 (BER).						
ODD1	0.36	64	iP	37	15.20	0.1
		iS		37	20.20	
BLS1	0.56	130	iP	37	19.10	-0.1
		iS		37	26.70	
KMY	0.66	215	iP	37	20.80	0.0
		iS		37	29.50	
SUE	1.44	336	iP	37	33.70	0.0
		eS		37	52.70	
NRA0	2.94	68	eP	37	58.60	3.3X
		eS		38	36.50	
	S.D. = 0.1 on 4 of 5 obs.					
JAN 17, 1989 07h 56m 55.67 ± 0.72s						
43.428 N ± 5.6km 5.444 E ± 5.2km						
DEPTH = 10.0km (geophysicist)						
NEAR SOUTH COAST OF FRANCE (379)						

MD 2.8 (STR).						
GELF	0.05	196	Pg	56	57.66	-0.2
TREF	0.20	347	Pg	56	59.64	-0.5
PUYF	0.21	61	Pg	56	59.48	-0.8
PRAF	0.43	332	Pg	57	04.46	0.1
VILF	0.47	25	Pg	57	04.89	-0.3
TAVF	0.48	67	Pg	57	05.07	-0.5
		Sg		57	13.00	
CALN	1.10	72	Pg	57	16.57	0.2
		Sg		57	33.67	
MVIF	1.33	69	Pn	57	20.39	0.2
		Sg		57	38.51	
TOUF	1.43	65	Pn	57	21.75	-0.1
		Sg		57	41.43	
AURF	1.44	71	Pn	57	21.95	0.0
		Sg		57	41.49	
FOUF	1.46	41	P	57	23.82	1.7
		(Sg)		57	40.16	
AUTN	1.55	68	Pn	57	23.57	0.1
		Sg		57	45.87	
SAOF	1.63	69	Pn	57	24.59	0.1
	S.D. = 0.7 on 13 of 13 obs.					
JAN 17, 1989 08h 03m 52.05 ± 0.24s						
44.631 N ± 2.3km 9.448 E ± 2.2km						
DEPTH = 10.0km (geophysicist)						
NORTHERN ITALY (545)						
ML 3.2 (LDG), 3.0 (KBA), MD 2.9						
(STR).						
BOB	0.14	0	Pc	03	54.00	-1.4
GEN	0.43	240	P	04	01.46	0.7
		S		04	08.61	
CKI	0.86	257	P	04	08.70	0.1
		eSg		04	21.80	
FIN	0.98	245	P	04	10.89	0.1
		S		04	24.92	
MME	1.00	116	P	04	11.20	0.1
BDI	1.00	124	P	04	11.10	0.0
		eSg		04	26.40	
MDI	1.16	9	P	04	13.60	-0.1
		eSg		04	31.80	
ROB	1.18	254	P	04	13.93	-0.2
		S		04	30.15	
PII	1.19	139	P	04	14.40	0.1
		eSg		04	32.70	
SAL	1.24	38	P	04	15.80	0.8
		eSg		04	33.60	
VAI	1.32	339	P	04	16.80	0.3
IMI	1.33	238	P	04	15.80	-0.9
		S		04	33.19	
ORO	1.44	314	P	04	18.40	0.2
		eSn		04	37.60	
ORX	1.44	314	P	04	18.50	0.2
		S		04	36.65	
SAOF	1.50	245	Pg	04	18.39	-0.7
		Sg		04	38.89	
TMA	1.53	345	eP	04	19.40	-0.2
STV	1.57	256	P	04	20.36	0.3
		S		04	39.86	
DOI	1.58	266	P	04	21.70	1.5
		eSn		04	42.30	
AUTN	1.58	247	Pg	04	20.49	0.1
		Sg		04	41.97	
SBF	1.64	243	Pn	04	20.70	-0.4
		Sn		04	43.50	
RSP	1.64	289	P	04	21.82	0.7
PZZ	1.68	267	P	04	22.22	0.4
TOUF	1.70	249	Pg	04	22.18	0.2
AURF	1.70	245	Pg	04	21.92	0.0
		Sg		04	44.18	
MMK	1.76	324	eP	04	24.00	0.9
PGD	1.80	114	P	04	23.60	0.1
MVIF	1.81	247	Pg	04	23.74	0.2
		Sg		04	47.86	
LSD	1.82	298	P	04	23.28	-0.6
		S		23	46.40	
VDL	1.86	0	eP	04	24.50	0.2
RRL	1.92	280	P	04	26.05	0.8
BNI	2.02	283	P	04	26.50	-0.1
		eSn		04	51.20	
CALN	2.04	245	Pg	04	27.21	0.2
DIX	2.04	316	eP	04	30.50	3.4X
CRE	2.06	118	P	04	28.10	0.8
		eSn		04	53.50	
LPG	2.10	295	Pn	04	28.20	0.2

CVF	2.11	192	Pg	04	26.41	-1.4
		Sg		04	51.80	
OSS	2.11	13	eP	04	28.20	0.2
LPL	2.12	296	Pn	04	28.50	0.3
		Sn		04	55.70	
LLS	2.26	352	eP	04	30.70	0.5
FRF	2.28	243	Pn	04	30.00	-0.4
		Sn		04	58.20	
EMS	2.28	310	eP	04	32.90	2.3
LMR	2.49	240	Pn	04	32.20	-1.0
		Sn		05	02.10	
LRG	2.52	243	Pn	04	34.40	0.8
		Sn		05	03.70	
SAX	2.62	358	eP	04	36.40	1.0
SLE	3.20	348	eP	04	41.90	-1.5
TRI	3.24	69	eP	05	19.90	36.0X
		i		05	35.90	
VOY	3.43	64	e(Pn)	04	46.30	-0.5
		e(Sn)		05	40.70	
KBA	3.66	47	ePn	04	50.50	0.4
		i		05	06.20	
		i		05	23.80	
		iSn		05	33.30	
		iSg		05	50.80	
BSF	3.69	331	Pn	04	50.80	0.3
		Sn		05	30.50	
HAU	4.00	329	Pn	04	54.30	-0.4
		Sn		05	39.00	
CDF	4.07	339	Pn	04	53.30	-2.4
SMF	4.42	299	Pn	05	00.50	-0.2
		Sn		05	50.60	
LBF	4.49	304	Pn	05	01.40	-0.3
		Sn		05	52.00	
LOR	4.71	306	Pn	05	03.20	-1.6
BGF	5.02	295	Pn	05	08.70	-0.4
CAF	5.27	276	Pn	05	12.50	-0.2
KHC	5.32	31	eP	05	39.00	25.6X
		e		06	12.80	
	S.D. = 0.8 on 54 of 57 obs.					
JAN 17, 1989 10h 34m 27.58 ± 0.34s						
37.841 N ± 3.1km 116.134 W ± 2.3km						
DEPTH = 5.0km (geophysicist)						
SOUTHERN NEVADA (41)						
MD 2.8 (REN).						
OCS	0.19	113	iP	34	31.70	0.2
BLT	0.36	178	eP	34	34.80	0.0
TPU	0.45	121	iP	34	36.80	0.1
WRN	0.45	72	iP	34	36.60	-0.1
HCR	0.46	329	iP	34	36.40	-0.4
CTS	0.50	249	eP	34	37.50	-0.2
GMR	0.58	150	iP	34	39.40	0.1
BMTN	0.68	216	iP	34	41.20	-0.1
MT1	0.70	103	eP	34	41.10	-0.5
TMBR	0.83	194	eP	34	44.00	-0.3
TNP	0.89					

Best Double Couple: Mo=5.4+10+16 NP1: Strike=184 Dip=90 Slip=180 NP2: 274 90 0				PNT 55.42 329 iPd 30 20.90 0.5 INX 72.32 342 eP 32 10.50 -0.5 MBC 74.10 351 eP 32 19.00 -2.3 1.1s 18.00nm 5.0mb TOL 75.12 50 eP 32 30.00 2.1 FBA 76.08 336 P 32 31.50 -1.3 0.9s 16.67nm 5.1mb DAG 78.15 12 iPd 32 32.60 -11.5X 1.2s 14.06nm EPF 78.64 47 eP 32 49.20 1.7 IMA 78.75 336 P 32 47.60 -0.2 1.0s 19.17nm 5.1mb LFF 79.04 45 eP 32 50.90 1.3 TTA 79.16 333 P 32 49.40 -0.6 1.0s 15.00nm 5.0mb LPO 79.34 46 eP 32 52.50 1.3 0.7s 5.20nm 4.7mb CAF 79.97 45 eP 32 55.80 1.1 MAF 80.38 44 eP 32 58.30 1.5 0.7s 3.70nm 4.5mb SMF 81.27 44 eP 33 02.50 1.0 0.8s 4.00nm 4.5mb BSF 83.29 43 eP 33 11.50 -0.5 APO 86.82 30 eP 33 31.40 2.1 0.5s 1.70nm 4.5mb CLL 87.15 39 eP 33 33.00 1.9 KHC 87.72 41 Pd 33 36.50 2.6 KBA 87.77 43 eP 33 35.00 0.6 1.5s 8.90nm 4.9mb BRG 87.78 39 eP 33 36.10 2.0 1.2s 26.00nm 5.4mb KSP 89.26 39 eP 33 49.20 8.0X e 34 05.50				RMW 0.32 126 iPd 55 35.39 0.1 GMW 0.42 256 iPc 55 36.91 -0.2 GSM 0.52 149 eP 55 38.81 -0.5 MEW 0.55 215 eP 55 40.03 0.3 JCW 0.57 18 iPd 55 39.52 -0.6 HDW 0.58 270 iP 55 39.39 -1.1 GHW 0.61 185 eP 55 40.43 -0.7 BLN 0.64 304 iPd 55 40.07 -1.4 OHW 0.71 341 eP 55 41.46 -1.5 RVC 0.73 168 eP 55 42.32 -1.0 CMW 0.77 4 iP 55 43.16 -1.1 FMW 0.80 154 eP 55 43.41 -1.5 SMW 0.85 247 eP 55 44.28 -1.5 RPW 0.92 29 eP 55 45.62 -1.5 CPW 0.94 224 iPc 55 45.61 -1.9 LON 0.94 164 iPd 55 45.80 -1.8 LMW 0.99 184 eP 55 46.84 -1.6 OSD 1.03 280 eP 55 47.44 -1.9 APW 1.05 197 iP 55 47.44 -2.0 WPW 1.05 155 iP 55 47.88 -1.6 STW 1.11 297 eP 55 47.91 -2.6 MCW 1.11 338 ePd 55 48.45 -2.1 MBW 1.15 10 eP 55 49.86 -1.3 GLK 1.16 160 eP 55 49.94 -1.4 CWZ 1.17 174 eP 55 49.92 -1.5 OBH 1.18 255 eP 55 50.01 -1.7 TBM 1.18 114 eP 55 50.80 -1.0 eS 56 07.64 KOSW 1.19 180 iPd 55 50.20 -1.7 CZM 1.24 190 eP 55 50.58 -2.1 NAC 1.31 134 eP 55 52.45 -1.4 NLW 1.32 70 eP 55 52.15 -1.9 ONR 1.33 235 eP 55 52.61 -1.5 EBG 1.33 123 eP 55 53.29 -1.0 BMW 1.38 211 eP 55 52.65 -2.4 SHW 1.46 181 eP 55 54.50 -1.9 VGB 2.35 155 eP 56 07.30 -1.9 PNT 2.39 45 eP 56 11.00 1.3 DPW 2.70 84 eP 56 11.00 -3.2 42 obs. associated																																												
ANCC 3.02 130 iPc 21 31.35 -1.0	JCR 5.84 318 iPd 22 32.20 19.9X	GKN 143.25 24 PKP 40 18.70 -2.0	ASPA 143.37 237 ePKP 40 16.30 -4.5X	ASPA 143.70 24 PKP 40 20.40 -1.1	DMN 143.79 24 PKP 40 18.90 -2.9X	GUN 143.82 23 PKP 40 19.80 -2.1	PKI 143.94 24 PKP 40 18.70 -3.4X	0.7s 5.00nm	WB5 144.36 243 ePKP 40 21.70 -0.9	WRA 144.36 243 PKPc 40 21.90 -0.7	0.8s 12.90nm	MTN 149.20 254 ePKP 40 35.00 4.4X	GBA 150.04 51 PKPc 40 37.00 5.2X	1.2s 18.30nm	KOD 152.01 56 ePKP 40 43.20 8.0X	CHG 155.80 4 ePKP 40 42.00 2.1	S.D. = 1.5 on 79 of 97 obs.	% JAN 17, 1989 11h 51m 05.89±0.87s 34.963 N ± 6.2km 139.391 E ± 9.6km DEPTH = 10.0km (geophysicist) NEAR S. COAST OF HONSHU, JAPAN (230) Felt (II JMA) on Oshimo.	OSH 0.20 183 iP+ 51 10.20 -0.1 iS 51 13.10 CHJJ 1.13 343 iP+ 51 26.70 -0.4 S 51 41.90 IIDJ 1.32 293 iPd 51 29.00 -1.3 S 51 46.10 KAKJ 1.39 27 P 51 31.20 -0.1 MAT 1.85 329 iPc 51 38.10 0.2 iS 52 02.10 MTMJ 2.07 322 P 51 42.10 0.9 S 52 09.60 NIJ 2.29 352 P 51 44.20 -0.1 TSRJ 2.85 283 eP 51 53.00 0.8 S.D. = 0.8 on 8 of 8 obs.	? JAN 17, 1989 15h 09m 59.48±1.41s 46.480 N ± 19.3km 153.956 E ± 27.2km DEPTH = 33.0km (normal) 4.6mb (8 obs.) KURIL ISLANDS (221)	CHG 52.62 258 eP 19 12.80 0.3 GUN 55.60 276 P 19 34.30 -0.4 0.5s 3.00nm 4.6mb KKN 56.09 276 P 19 38.50 0.5 0.6s 10.00nm 5.0mb PKI 56.14 276 P 19 38.40 -0.1 0.6s 4.00nm 4.6mb GKN 56.40 277 P 19 39.80 -0.4 0.7s 14.00nm 5.1mb WB5 68.38 200 eP 21 10.30 10.5X WRA 68.45 200 Pc 21 00.00 -0.2 0.6s 0.80nm 4.0mb HFS 68.91 340 eP 21 01.50 -1.1 0.5s 2.90nm 4.6mb NAO 68.95 342 P 21 02.00 -0.8 0.8s 4.90nm 4.6mb CLL 76.95 336 eP 21 50.00 0.1 KBA 80.64 334 eP 22 12.50 2.2 0.8s 6.20nm 4.7mb S.D. = 1.0 on 10 of 11 obs.	? JAN 17, 1989 17h 58m 07.11±1.79s 3.318 S ± 19.8km 131.040 E ± 20.5km DEPTH = 33.0km (normal) 4.0mb (2 obs.) WEST IRIAN REGION (196)	AAI 2.86 263 ePd 58 52.00 0.5 MTN 9.47 179 eP 00 24.00 -0.3 eS 02 07.00 WB5 16.78 169 eP 01 59.50 -1.8 eS 04 56.50 WRA 16.84 169 Pd 02 01.80 -0.3 0.4s 0.70nm 3.1mb OIS 19.06 155 eP 02 31.00 1.5 ASPA 20.42 172 eP 02 45.40 1.0 0.4s 23.00nm 4.9mb eS 06 23.00 GUN 53.40 309 P 07 26.00 -0.6 S.D. = 1.4 on 7 of 7 obs.																													
CRX 24.29 307 (P) 26 07.50 4.9X	LPB 24.46 154 P 26 00.00 -4.4X	Z 18s 1.37um 4.5MsZ	e 26 08.00	LR 33 50.00	ATB 28.31 107 e(P) 26 37.50 -2.1	VVO 33.41 335 eP 27 22.90 -1.6	RLO 33.84 337 eP 27 26.00 -2.2	LNO 33.93 335 eP 27 27.00 -1.9	TUL 33.93 335 eP 27 26.70 -2.3	Z 22s 29.00nm 5.0mb 0.45um 4.2MsZ	LR 36 00.00	SIO 34.00 335 eP 27 28.60 -1.1	MEO 34.24 331 eP 27 29.30 -2.5	e 27 33.60	BAO 37.34 125 eP 27 57.90 -0.5	ALO 38.65 323 iPc 28 10.00 0.7	0.9s 63.03nm 5.3mb	e 29 43.00	GLD 41.41 329 P 28 33.00 1.0	1.3s 69.54nm 5.2mb	GOL 41.45 329 P 28 32.50 0.1	1.1s 32.05nm 5.0mb	GLA 43.04 314 eP 28 47.00 1.7	ITA 43.64 131 eP 28 49.60 -1.0	BAR 44.18 313 eP 28 56.00 1.5	MSU 44.45 322 P 28 58.10 1.2	TPC 44.46 315 eP 28 58.00 1.2	PLM 44.65 313 eP 29 00.00 1.4	DAU 45.15 325 P 29 03.20 0.6	RVR 45.34 314 eP 29 05.00 1.2	GSC 45.61 316 eP 29 08.00 2.0	BW06 45.85 329 P 29 06.80 -1.2	1.3s 42.01nm 5.3mb	DUG 45.90 324 P 29 09.20 0.9	1.0s 20.00nm 5.1mb	MWC 45.95 314 eP 29 10.00 1.2	SBB 46.01 314 eP 29 10.00 0.8	CLC 46.43 316 eP 29 13.00 0.5	ISA 46.96 315 eP 29 18.00 1.3	TNP 47.39 319 P 29 21.20 1.0	KVN 48.50 319 P 29 29.40 0.5	LLA 49.17 315 ePd 29 34.40 0.6	LRM 49.47 330 eP 29 36.40 0.1	CMB 49.49 317 ePd 29 37.00 0.7	SCH 50.21 9 eP 29 40.00 -1.5	BRK 50.70 316 e(P) 29 45.50 0.1	ORV 51.01 318 ePd 29 49.00 1.2	MIN 51.48 319 ePd 29 51.70 0.1	SES 52.12 335 eP 29 55.00 -1.2	FFC 52.44 344 iPc 29 56.00 -2.4	1.2s 37.00nm 5.2mb	EDM 55.18 336 iPc 30 16.50 -2.2

JAN 17, 1989 20h 08m 30.49± 0.70s
 5.752 S ± 3.0km 150.350 E ± 5.1km
 DEPTH = 93.4 ± 7.7 km
 5.2mb (16 obs.)
 NEW BRITAIN REGION (192)

RAB 2.39 50 iPd 09 08.40 -0.1
 iS 09 40.50
 PMG 4.82 221 iPd 09 42.00 -0.1
 0.6s 720.00nm
 eS 10 35.00
 PAA 5.14 96 eP 09 45.50 -1.1
 TZZ 9.10 273 eP 10 05.00 -36.0X
 HNR 10.19 112 eP 10 56.00 0.3
 eS 12 48.00
 CTA 14.80 195 iPd 12 00.20 4.0X
 1.0s 235.00nm 5.4mb
 i 12 15.90
 i 12 23.90
 iS 14 48.00
 QIS 18.04 214 iPc 12 36.20 -0.4
 0.6s 59.00nm 5.0mb
 GUA 19.91 344 eP 12 58.30 1.1
 1.3s 1538.46nm 6.2mb
 GUMO 19.97 344 eP 12 59.20 1.3
 PJG 19.97 344 eP 12 58.50 0.6
 MTN 20.22 248 iPd 12 59.90 -0.6
 e 13 15.00
 RMO 20.68 184 iPc 13 05.80 0.7
 0.9s 270.00nm 5.6mb
 e 13 20.00
 WB5 20.95 226 iPc 13 08.00 0.2
 iS 16 26.20
 WRA 21.01 226 Pd 13 08.80 0.4
 0.6s 71.40nm 5.2mb
 BRS 21.64 174 iPc 13 14.80 0.1
 i 13 21.80
 i 13 28.00
 eS 17 04.00
 DZM 22.48 138 iPc 13 23.30 0.2
 KNA 23.39 243 eP 13 32.00 0.2
 ASPA 23.83 220 iPc 13 37.10 1.0
 0.8s 98.00nm 5.3mb
 eS 17 44.70
 e 20 49.50
 e 24 37.60
 COO 24.74 177 iPc 13 45.70 0.9
 CMS 25.95 189 eP 13 55.00 -0.9
 e 14 13.00
 STK 27.26 196 iPc 14 07.60 -0.3
 e 14 23.00
 BWA 28.59 183 eP 14 19.20 -0.7
 CAN 29.45 182 iPc 14 27.30 -0.3
 WARB 30.42 226 iPc 14 24.00 -12.3X
 PCI 30.83 278 eP 15 03.50 23.5X
 ADE 31.00 199 iPd 14 41.30 0.0
 0.6s 44.00nm 5.4mb
 TOO 31.98 187 eP 14 50.00 0.2
 BFD 32.08 192 eP 14 44.00 -6.6X
 FORR 32.56 217 iPc 14 54.10 -0.7
 0.6s 63.00nm 5.6mb
 MBL 33.30 240 eP 15 00.50 -0.9
 MEKA 36.74 232 eP 15 30.40 -0.3
 TAU 37.10 184 iPc 15 34.60 1.2
 COOL 37.10 224 eP 15 33.00 -0.7
 NANU 37.53 240 iPc 15 37.00 -0.3
 0.6s 46.00nm 5.6mb
 KLB 39.89 226 eP 15 56.40 -0.4
 0.5s 16.00nm 5.1mb
 e 16 13.00
 BAL 40.12 228 eP 15 58.00 -0.8
 NWA0 40.99 224 eP 16 05.00 -0.9
 MUN 41.21 226 iPd 16 07.90 0.3
 MSZ 41.70 161 P 16 12.20 0.7
 0.3s 16.00nm 5.3mb
 RKG 41.79 223 eP 16 15.30 2.9
 IIDJ 42.65 345 P 16 19.30 -0.1
 CHJJ 42.92 346 P 16 21.20 -0.4
 TSRJ 43.23 343 P 16 24.40 0.3
 QZH 43.42 316 P 16 26.40 0.6
 MAT 43.58 346 eP 16 26.00 -0.9
 1.2s 50.00nm 5.2mb
 MTMJ 43.72 345 P 16 28.20 0.0
 NIIJ 44.06 347 P 16 31.00 0.2
 WHN 49.90 318 eP 17 16.50 -0.1
 TIA 52.08 326 eP 17 32.60 -0.4

SNY 53.29 335 Pc 17 42.40 0.6
 MDJ 53.50 342 iPc 17 44.00 0.6
 CN2 54.21 338 Pc 17 48.90 0.3
 BJI 55.37 328 eP 17 57.50 0.4
 XAN 55.66 318 P 17 59.00 -0.4
 TIY 55.81 324 eP 18 01.00 0.6
 CHG 56.22 297 eP 18 04.30 0.7
 CD2 57.53 312 P 18 13.20 0.5
 HHC 58.43 326 eP 18 19.00 0.1
 BTO 59.13 325 eP 18 23.20 -0.6
 LZH 60.24 317 eP 18 32.50 1.0
 GTA 64.72 319 P 19 01.60 0.4
 GUN 70.54 302 PKP 19 37.30 -0.8
 0.7s 19.00nm 5.1mb
 PKI 70.83 302 PKP 19 39.20 -0.7
 KKN 71.01 302 PKP 19 39.10 -1.7
 DMN 71.10 302 PKP 19 39.80 -1.6
 0.7s 7.00nm 4.6mb
 GKN 71.62 302 PKP 19 43.30 -1.0
 0.7s 8.00nm 4.7mb
 WMO 74.80 318 eP 20 01.20 -1.3
 GBA 74.87 286 P 20 05.00 1.8
 0.6s 1.10nm 3.9mb X
 SPA 84.29 180 ePc 20 54.30 1.3
 1.0s 19.00nm 5.0mb
 i 21 12.70
 INK 90.21 21 eP 21 20.00 -1.3
 APO 116.29 338 ePKP 27 03.80 -0.5
 0.4s 2.20nm
 BNG 131.99 271 ePKPd 27 35.60 -0.2
 0.4s 5.00nm
 i 30 54.30
 KUK 150.88 272 ePKP 28 25.00 16.2X
 S.D. = 0.8 on 67 of 73 obs.

? JAN 17, 1989 20h 17m 38.88± 9.04s
 32.435 N ±49.0km 35.374 E ±33.3km
 DEPTH = 10.0km (geophysicist)
 DEAD SEA REGION (373)

BURJ 0.40 124 Pc 17 46.70 -0.3
 SALJ 0.50 148 Pc 17 49.20 0.2
 JARJ 0.52 112 Pd 17 49.70 0.2
 KFNJ 0.63 156 Pc 17 51.70 0.2
 MASJ 0.76 157 Pd 17 53.60 -0.2
 MKRJ 0.91 165 P 17 56.30 0.0
 S.D. = 0.3 on 6 of 6 obs.

* JAN 17, 1989 20h 18m 14.80± 2.11s
 43.350 N ±13.7km 5.433 E ±11.9km
 DEPTH = 10.0km (geophysicist)
 NEAR SOUTH COAST OF FRANCE (379)
 MD 3.1 (STR).

GELF 0.03 354 Pg 18 16.38 -0.5
 PUYF 0.27 47 Pg 18 18.91 -1.5
 TREF 0.28 353 Pg 18 18.63 -2.0
 PRAF 0.49 337 Pg 18 23.80 -1.0
 TAVF 0.53 59 Pg 18 24.27 -1.2
 Sg 18 31.97
 VILF 0.54 22 Pg 18 23.93 -1.9
 CALN 1.13 69 Pg 18 36.25 0.1
 Sg 18 51.37
 MVIF 1.36 66 Pn 18 39.56 -0.4
 Sg 18 58.70
 TOUF 1.47 63 Pn 18 41.47 -0.1
 Sg 19 00.91
 AURF 1.48 68 Pn 18 40.80 -0.7
 Sg 19 01.30
 FOUF 1.53 39 P 18 43.17 1.0
 Sg 19 00.84
 AUTN 1.58 65 Pn 18 43.05 -0.1
 Sg 19 05.54
 STV 1.64 56 P 18 43.56 -0.2
 S 19 00.88
 PZZ 1.67 46 P 18 44.34 0.0
 S 19 02.71
 DOI 1.75 48 P 18 45.40 0.0
 eSn 19 09.60
 RRL 1.85 31 P 18 48.58 1.6
 S 19 11.73
 IMI 1.87 72 P 18 46.67 -0.5
 S 19 09.12
 BNI 1.92 27 P 18 50.10 2.1
 eSn 19 14.20
 ROB 2.00 61 P 18 49.34 0.3
 S 19 13.57

FIN 2.19 66 P 18 51.46 -0.3
 S 19 18.01
 RSP 2.23 35 P 18 55.26 2.8
 S 19 23.90
 CKI 2.32 61 P 18 53.60 -0.1
 LSD 2.44 30 P 18 58.15 2.6
 S 19 27.95
 CVF 2.64 106 Pn 18 57.09 -1.1
 Sg 19 27.86
 GEN 2.74 66 P 18 59.16 -0.5
 S 19 30.05
 ORX 2.92 38 P 19 03.54 1.3
 BOB 3.22 63 P 19 07.00 0.5
 S.D. = 1.3 on 27 of 27 obs.

? JAN 17, 1989 21h 09m 55.43± 6.63s
 10.394 N ±34.1km 59.172 W ±48.2km
 DEPTH = 10.0km (geophysicist)
 NORTH ATLANTIC OCEAN (402)

TBH 1.87 273 eP 10 31.79 4.1X
 TRN 2.21 277 eP 10 32.61 0.0
 eS 10 43.18
 TPP 2.24 268 eP 10 32.95 -0.2
 TCE 2.56 277 iPc 10 38.06 0.5
 eS 10 57.44
 GRW 3.01 306 eP 10 43.47 -0.6
 SVB 3.51 325 eP 10 51.51 0.3
 eS 11 22.62
 SVV 3.53 326 eP 10 51.81 0.4
 eS 11 25.39
 MVM 4.46 338 iPc 11 04.54 -0.2
 BIM 4.50 336 eP 11 04.84 -0.4
 S 11 47.60
 CRM 4.66 339 iPc 11 07.44 0.0
 S 11 51.20
 FDF 4.73 336 eP 11 08.80 0.3
 S 11 53.70
 S.D. = 0.4 on 10 of 11 obs.

& JAN 17, 1989 22h 39m 54.20s
 37.815 N 122.598 W
 DEPTH = 12.0km
 CENTRAL CALIFORNIA (39)
 <BRK>. ML 2.6 (BRK).

BRK 0.27 78 eP 39 59.70 -0.4
 eS 40 03.60
 PCC 0.36 151 eP 40 00.90 -0.8
 iS 40 05.70
 NWRM 0.68 340 eP 40 04.20 -3.3
 MHC 0.89 122 e(P)c 40 10.18 -1.1
 eS 40 23.05
 GCC 0.92 148 eP 40 10.90 -0.7
 eS 40 23.10
 ARN 0.97 118 eP 40 11.40 -1.0
 SAO 1.39 138 eP 40 16.20 -3.2
 CMB 1.76 82 eP 40 26.80 2.0
 eS 40 50.00
 8 obs. associated

* JAN 17, 1989 23h 31m 19.88± 1.55s
 30.474 N ±13.8km 57.955 E ±19.9km
 DEPTH = 33.0km (normal)
 4.4mb (5 obs.)
 IRAN (348)

MAIO 5.95 12 ePn 32 47.00 -1.1
 i 33 11.00
 eSn 34 15.00
 NDI 16.85 91 eP 35 15.00 0.1
 HYB 22.83 120 eP 36 20.60 -0.6
 GKN 23.40 89 P 36 27.80 0.9
 0.9s 13.00nm 4.4mb
 DMN 23.89 90 P 36 31.60 -0.2
 KKN 24.00 90 P 36 33.40 0.6
 0.8s 8.00nm 4.3mb
 PKI 24.16 90 P 36 34.80 0.3
 0.8s 9.00nm 4.4mb
 GUN 24.49 89 P 36 38.10 0.4
 0.9s 24.00nm 4.8mb
 GBA 24.59 129 Pd 36 37.30 -0.9
 0.3s 0.80nm 3.8mb
 CHG 38.83 98 eP 38 42.80 -0.9
 YKA 87.17 357 eP 44 04.70 1.2
 S.D. = 0.9 on 11 of 11 obs.

18d 00h

JAN 18, 1989 00h 09m 51.14 ± 0.80s
 41.810 N ± 8.4km 21.722 E ± 8.0km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 MD 2.8 (ATH). ML 2.5 (SKO). Felt
 (11) at Sveti Nikole.

SKO 0.27 308 iPg 09 55.50 -1.3
 0.5s 350.00nm
 i 09 58.80
 iSg 10 01.10
 LR 10 05.00
 VAY 0.80 127 iPg 10 01.60 -5.1X
 iSg 10 11.40
 OHR 0.98 225 iPg 10 10.80 0.9
 iSg 10 24.70
 KZN 1.50 179 ePb 10 18.70 0.5
 PLG 1.94 137 ePb 10 22.50 -2.0
 KDZ 2.77 92 iP 10 37.00 0.6
 iS 11 12.00
 RDO 2.94 102 ePn 10 39.00 0.2
 BZS 3.81 359 ePd 10 52.00 1.0
 S.D. = 1.4 on 7 of 8 obs.

JAN 18, 1989 01h 00m 49.33 ± 0.95s
 32.404 N ± 5.1km 35.459 E ± 9.2km
 DEPTH = 10.0km (geophysicist)
 DEAD SEA REGION (373)

BURJ 0.32 126 Pd 00 56.20 0.2
 SALJ 0.44 154 Pc 00 58.70 0.4
 JANJ 0.45 112 Pd 00 58.20 -0.2
 KFNR 0.57 161 Pc 01 00.70 -0.2
 MASJ 0.71 162 Pd 01 03.40 0.0
 MKRJ 0.86 170 Pd 01 05.90 -0.1
 QUTJ 1.20 157 Pd 01 11.50 -0.2
 BHL 1.50 6 Pg 01 16.50 0.1
 Sg 01 38.00
 SHBJ 1.79 93 P 01 20.60 0.0
 S.D. = 0.2 on 9 of 9 obs.

* JAN 18, 1989 01h 25m 27.50 ± 1.81s
 38.231 N ± 17.6km 21.836 E ± 10.4km
 DEPTH = 10.0km (geophysicist)
 GREECE (364)

MD 3.0 (ATH).
 VLS 0.98 267 ePn 25 46.00 -0.2
 NEO 1.53 45 ePn 25 56.00 1.1
 LIT 1.94 15 ePb 26 00.10 -0.7
 eSb 26 25.50
 KZN 2.07 359 ePn 26 03.20 0.4
 PAIG 2.22 40 ePn 26 05.10 0.2
 PLG 2.48 30 ePn 26 07.00 -1.6
 GRG 2.76 9 ePn 26 12.70 0.1
 OHR 2.99 345 ePn 26 16.50 0.7
 KNT 3.04 15 ePn 26 16.50 0.0
 eSn 26 49.50
 VAY 3.14 10 ePn 26 17.70 -0.2
 SKO 3.75 355 ePn 26 31.00 4.4X
 S.D. = 0.8 on 10 of 11 obs.

% JAN 18, 1989 02h 14m 39.98 ± 0.79s
 39.363 N ± 6.8km 27.729 E ± 7.7km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

DST 0.74 71 iPg 14 53.90 -0.6
 eSg 15 05.90
 EDC 0.99 6 ePn 14 59.00 0.3
 eSg 15 13.00
 BNT 1.00 8 iPn 14 59.00 0.0
 KCT 1.01 28 iPn 14 59.50 0.4
 IZM 1.03 201 iPn 14 59.80 0.3
 EZN 1.18 294 ePn 15 01.50 -0.5
 S.D. = 0.5 on 6 of 6 obs.

JAN 18, 1989 03h 46m 16.46 ± 0.62s
 38.923 N ± 5.7km 23.679 E ± 5.8km
 DEPTH = 10.0km (geophysicist)
 GREECE (364)

ML 2.9 (ATH).
 NEO 0.52 317 ePb 46 27.20 0.2
 ATH 0.95 178 ePn 46 34.00 -0.5
 eSn 46 47.00
 PAIG 1.00 0 ePg 46 35.50 0.1

PLG 1.46 353 iSg 46 49.30
 ePn 46 42.30 -0.6
 eSb 46 59.90
 LIT 1.49 322 iPbc 46 43.10 -0.2
 iSb 47 02.90
 THE 1.79 342 iPbd 46 47.80 0.2
 iSb 47 09.60
 KZN 2.02 314 ePb 46 51.50 0.5
 PRK 2.04 80 ePn 46 53.00 1.7
 SRS 2.19 358 ePn 46 52.60 -0.9
 eSn 47 17.80
 EZN 2.24 65 ePn 46 53.00 -1.1
 GRG 2.26 335 ePn 46 53.90 -0.5
 KNT 2.32 345 ePn 46 55.10 -0.1
 VAY 2.54 341 ePn 46 58.50 0.1
 RDO 2.64 32 ePn 47 00.00 0.2
 KDZ 3.03 25 iP 47 02.00 -3.3X
 iS 47 40.00
 OHR 3.11 316 ePn 47 07.50 1.0
 S.D. = 0.8 on 15 of 16 obs.

? JAN 18, 1989 03h 57m 50.13 ± 7.60s
 51.630 N ± 44.2km 16.317 E ± 46.8km
 DEPTH = 10.0km (geophysicist)

POLAND (548)
 ML 3.5 (VKA), 3.0 (KBA).

KSP 0.79 181 iPd 58 05.50 0.0
 0.3s 43.00nm
 iS 58 14.20
 i 58 20.50
 BRG 1.67 244 ePn 58 19.10 -0.4
 iPg 58 21.00
 iSg 58 40.10
 PRU 1.99 215 Pn 58 24.10 -0.1
 Pg 58 26.00
 Sn 58 43.00
 Sg 58 50.50
 CLL 2.10 263 iPn 58 25.90 0.2
 e(Pg) 58 30.00
 eSg 58 55.00
 KRA 2.79 123 eP 58 47.30 11.8X
 eS 59 24.50
 KHC 3.05 216 iPn 58 40.20 0.8
 iPg 58 45.90
 eSn 59 13.10
 Sg 59 28.10
 HOF 3.10 247 ePn 58 40.00 0.0
 MOX 3.12 253 ePg 58 48.00 7.7X
 iSg 59 28.00
 WET 3.32 223 ePn 58 43.10 -0.1
 VKA 3.37 180 iPg 58 53.30 9.4X
 iSg 59 36.70
 ZST 3.47 171 e(Pn) 59 43.40 58.1X
 GRF 3.78 241 e(Pn) 58 53.40 3.7X
 e(Pg) 59 06.30
 eSg 59 55.90
 KBA 4.95 204 ePnc 59 06.00 -0.4
 iPgPg 59 25.20
 i 00 27.10
 CIO 8.71 196 iPg 59 16.29 -42.8X
 iSg 59 18.31
 S.D. = 0.5 on 8 of 14 obs.

* JAN 18, 1989 04h 40m 48.76 ± 0.99s
 18.047 S ± 16.1km 178.499 W ± 10.2km
 DEPTH = 576.0 ± 13.0 km
 5.2mb (19 obs.)

FIJI ISLANDS REGION (181)

AFI 7.66 58 eP 42 45.00 0.2
 BRG 28.03 245 iPd 45 56.30 -0.1
 COO 29.63 240 iPd 46 11.60 1.4
 0.6s 50.00nm 5.3mb
 RMO 31.38 249 iPd 46 26.00 1.0
 0.6s 75.00nm 5.5mb
 CNB 33.27 232 iPc 46 42.20 1.3
 CTA 33.34 261 iPc 46 41.90 0.4
 0.8s 95.52nm 5.5mb
 CAN 33.55 233 iPd 46 44.00 0.8
 BWA 33.67 234 iPd 46 42.70 -1.5
 TOO 37.02 231 iPd 47 13.00 1.2
 0.8s 78.00nm 5.4mb
 TAU 38.08 222 eP 47 21.00 0.7
 STK 38.49 241 iPd 47 25.20 1.4
 0.5s 31.00nm 5.1mb
 BFD 39.09 233 iPd 47 22.70 -5.9X

OIS 39.54 259 iPd 47 32.10 -0.4
 ADE 41.49 237 iPd 47 48.60 0.7
 0.8s 50.75nm 5.1mb
 WB5 44.50 260 iPd 48 11.20 -0.4
 WRA 44.52 260 Pd 48 11.20 -0.6
 0.6s 36.80nm 5.1mb
 ASPA 44.67 254 iPd 48 12.90 0.0
 0.8s 374.00nm 6.0mb
 iS 54 05.90
 e 57 06.70
 MTN 48.71 269 iPd 48 42.90 -0.8
 0.7s 165.00nm 5.7mb
 FORR 49.84 245 iPd 48 50.80 -0.9
 0.5s 60.00nm 5.4mb
 KNA 50.37 264 iPd 48 55.20 -0.6
 WARB 51.16 251 iPd 48 48.50 -13.0X
 0.4s 45.00nm
 COOL 55.82 245 iPd 49 33.00 -1.5
 0.4s 21.00nm 4.8mb
 MEKA 58.38 249 eP 49 50.50 -1.5
 KLB 58.69 244 eP 49 52.60 -1.4
 0.4s 21.00nm 4.8mb
 NWA0 59.07 242 eP 49 55.00 -1.5
 0.6s 14.00nm 4.4mb
 BAL 59.65 245 iPd 49 58.90 -1.4
 MUN 59.98 243 eP 50 01.90 -0.6
 MRWA 60.37 246 iPd 50 14.00 8.9X
 0.6s 11.00nm 4.3mb
 NANU 61.60 254 iPd 50 13.00 -0.2
 0.4s 40.00nm 5.1mb
 TRT 67.61 269 iPd 50 50.50 -0.4
 0.7s 80.30nm 5.4mb
 SYP 76.32 46 eP 51 41.00 0.2
 GCC 76.37 43 eP 51 40.80 0.0
 PRS 76.39 44 iPc 51 41.40 0.5
 SAO 76.58 44 eP 51 41.80 -0.2
 BKS 76.71 43 ePd 51 42.90 0.3
 PRI 76.75 45 eP 51 43.70 0.7
 LLA 76.83 44 eP 51 43.50 0.2
 MWC 77.49 48 eP 51 47.00 -0.2
 BAR 77.68 50 eP 51 48.00 0.0
 RVR 77.86 48 eP 51 48.00 -0.8
 FRI 77.86 44 eP 51 48.50 -0.3
 PLM 77.89 49 eP 51 49.00 -0.3
 SBB 77.90 47 eP 51 49.00 -0.2
 ISA 77.97 46 eP 51 49.00 -0.5
 CMB 78.00 43 iPc 51 49.40 -0.2
 WDC 78.10 40 ePc 51 50.00 0.0
 ORV 78.15 41 eP 51 49.90 -0.4
 MDJ 78.25 325 eP 51 51.00 0.3
 MIN 78.54 41 eP 51 51.70 -0.8
 CLC 78.66 46 eP 51 53.00 -0.1
 TPC 78.86 49 eP 51 54.00 -0.2
 GSC 78.94 47 eP 51 55.00 0.4
 GLA 79.21 50 eP 51 57.00 1.0
 CN2 80.08 322 eP 52 00.50 0.3
 BJI 83.82 315 eP 52 19.50 0.3
 PNT 84.90 34 ePc 52 24.00 -0.3
 0.8s 37.00nm 5.1mb
 ALO 86.25 52 eP 52 31.00 -0.3
 1.0s 12.50nm 4.6mb
 XAN 86.28 307 iPc 52 33.10 1.8
 LRM 87.13 40 eP 52 35.20 -0.2
 CHG 88.97 290 iPd 52 45.00 0.9
 0.9s 12.18nm 4.8mb
 SES 90.18 36 iPc 52 48.00 -1.0
 EDM 90.32 33 iPc 52 48.70 -0.9
 INK 92.04 15 eP 52 54.00 -3.1X
 YKA 94.49 25 eP 53 08.00 -0.5
 DMU 143.63 8 iPKPc 59 16.90 -2.8
 0.5s 30.00nm
 DCN 144.12 9 ePKP 59 18.60 -1.9
 0.7s 38.00nm
 DLE 144.28 8 ePKP 59 19.20 -1.6
 KSP 145.22 344 iPKP 59 23.20 0.7
 CLL 145.58 347 iPKPc 59 23.90 0.9
 BRG 145.78 346 e(PKP) 59 23.50 0.1
 WTS 145.87 354 ePKP 59 25.00 1.6
 0.7s 13.00nm
 ENN 147.17 355 ePKP 59 28.00 2.4
 0.8s 6.00nm
 e 59 31.50
 MEM 147.31 355 PKP 59 28.60 2.8
 KHC 147.49 345 ePKP 59 29.60 3.4X
 SNF 147.53 357 PKP 59 29.10 2.9
 e 59 33.20
 DOU 147.93 356 PKP 59 30.60 3.8X

WLF 148.24 354 PKPc 59 31.40 4.1X
 FLN 149.32 3 ePKP 59 33.30 4.3X
 CDF 149.35 352 ePKP 59 33.70 4.5X
 KBA 149.45 344 iPKP 59 35.00 5.5X
 0.7s 2.00nm
 e 59 42.00
 LDF 149.50 2 ePKP 59 33.80 4.5X
 GRR 149.68 3 ePKP 59 34.30 4.8X
 HAU 149.86 354 ePKP 59 34.90 5.0X
 LPF 150.02 3 ePKP 59 35.30 5.2X
 LOR 150.79 357 ePKP 59 37.00 5.7X
 SSF 151.02 357 ePKP 59 37.70 6.1X
 LBF 151.07 356 ePKP 59 37.50 5.7X
 SMF 151.42 357 ePKP 59 39.50 7.3X
 MFF 151.49 2 ePKP 59 38.40 6.1X
 BGF 151.55 358 ePKP 59 38.70 6.3X
 LSF 151.88 360 ePKP 59 39.10 6.2X
 MAF 151.89 358 ePKP 59 39.90 7.0X
 S.D. = 1.1 on 70 of 92 obs.

& JAN 18, 1989 05h 54m 43.29s
 37.530 N 118.430 W
 DEPTH = 8.1km
 CALIFORNIA-NEVADA BORDER REGION (40)
 <REN>. MD 3.1 (REN).

PPK 0.43 104 iPc 54 51.50 -0.5
 LCH 0.69 115 eP 54 55.90 -1.3
 MGM 0.75 97 eP 54 57.30 -1.0
 TNP 1.11 60 eP 55 04.20 -0.2
 SGV 1.24 116 eP 55 06.10 -0.6
 KVN 1.54 10 eP 55 11.10 -0.1
 CMB 1.63 289 eP 55 12.20 -0.2
 ARN 2.48 267 eP 55 26.50 1.9
 8 obs. associated

JAN 18, 1989 07h 14m 16.27± 0.98s
 41.473 N ±13.2km 24.639 E ± 4.3km
 DEPTH = 10.0km (geophysicist)
 GREECE-BULGARIA BORDER REGION (363)
 MD 3.1 (ATH).

RDO 0.75 115 iPbd 14 30.50 -0.5
 eSb 14 41.30
 SRS 0.87 246 iPgc 14 32.10 -0.8
 iSg 14 43.80
 SOH 1.17 237 ePgc 14 38.30 0.2
 KNT 1.35 257 iPgc 14 40.50 -0.6
 iSg 14 59.20
 PLG 1.42 220 ePb 14 42.00 -0.2
 eSb 15 04.00
 THE 1.52 237 ePb 14 43.30 -0.2
 iSb 15 06.30
 PAIG 1.71 206 iPbc 14 45.90 -0.3
 ARG 1.76 254 iPbd 14 48.50 1.4
 iSb 15 12.20
 EZN 2.09 142 ePn 14 54.00 2.3
 LIT 2.13 231 ePn 14 52.80 0.4
 DMK 2.36 80 iPn 14 57.30 1.6
 NEO 2.42 207 ePn 14 55.60 -0.9
 SKO 2.45 283 iPn 15 00.60 3.7X
 KZN 2.47 243 ePn 14 56.80 -0.4
 PRK 2.55 150 ePb 15 00.00 1.7
 EDC 2.69 114 ePn 15 00.00 -0.4
 BNT 2.73 113 ePn 14 59.00 -1.9
 OHR 2.92 264 ePn 15 04.00 0.4
 KCT 3.07 112 iPn 15 03.80 -2.0
 MLR 4.13 13 ePc 15 26.00 5.2X
 BZS 4.69 333 ePd 15 25.00 -3.7X
 S.D. = 1.2 on 18 of 21 obs.

JAN 18, 1989 08h 02m 27.36± 0.59s
 54.983 N ± 8.1km 160.081 W ± 4.9km
 DEPTH = 56.6 ± 5.1 km
 ALASKA PENINSULA (12)

NGI 0.06 7 iPc 02 35.03 0.3
 CNBA 0.33 120 ePc 02 36.85 -0.6
 eS 02 43.37
 SOF 0.36 311 iPd 02 37.17 -0.6
 eS 02 43.54
 SASA 0.43 326 iPd 02 38.07 -0.3
 eS 02 44.82
 SGB 0.60 339 iPd 02 40.24 -0.1
 eS 02 49.04
 IVF 0.97 19 iPd 02 45.95 1.0
 DLG 1.02 280 iPd 02 45.54 -0.2

PVV 1.06 292 iPd 02 46.25 0.1
 eS 02 59.39
 PS4 1.09 291 iPd 02 46.82 0.1
 DRRRA 1.27 268 iPd 02 48.76 -0.4
 BALA 1.57 279 eP 02 54.75 1.5
 SNKA 1.64 253 eP 02 54.35 0.0
 eS 03 13.44
 KDC 5.05 54 eP 03 43.00 0.7
 TTA 8.24 13 eP 04 25.60 -1.2
 INK 18.15 32 eP 06 36.00 -0.4
 YKA 24.30 54 eP 07 44.50 4.4X
 FRB 43.53 40 eP 10 27.00 0.7
 DAG 46.25 11 eP 10 48.00 0.1
 DMN 80.68 305 P 14 35.00 -0.8
 S.D. = 0.7 on 18 of 19 obs.

& JAN 18, 1989 11h 03m 58.06s
 56.886 N 142.907 W
 DEPTH = 10.0km (geophysicist)
 GULF OF ALASKA (15)
 <AGS-P>.

BCPM 3.52 28 iP 04 47.09 -6.9
 eS 05 24.38
 WAX 3.58 0 iP 04 47.58 -7.2
 SGAM 3.82 343 eP 04 51.48 -6.7
 eS 05 32.57
 CVA 3.96 339 eP 04 52.33 -7.7
 MTU 3.99 323 eP 04 52.79 -7.7
 eS 05 35.96
 CTGM 4.17 11 eP 04 56.25 -7.0
 KNIM 4.29 326 eP 04 57.22 -7.7
 VZW 4.59 337 eP 05 00.96 -8.2
 GLB 4.59 355 eP 05 01.57 -7.6
 eS 05 51.47
 HYT 4.84 33 P 05 06.10 -6.7
 PTE 5.10 324 eP 05 09.41 -6.8
 eS 06 02.46
 CNPM 5.14 304 eP 05 09.37 -7.5
 eS 06 04.41
 SLKM 5.27 317 eP 05 11.44 -7.3
 KDC 5.27 283 eP 05 11.99 -6.6
 KNK 5.36 330 eP 05 14.32 -5.7
 >NNL 5.42 309 eP 05 14.30 -6.6
 GHO 5.79 330 eP 05 20.54 -5.5
 RDT 6.17 311 eP 05 23.63 -7.9
 CRP 6.48 317 eP 05 28.64 -7.3
 PDB 6.62 301 eP 05 30.63 -7.0
 20 obs. associated

* JAN 18, 1989 13h 42m 13.41± 0.93s
 42.138 N ± 9.7km 24.762 E ± 8.1km
 DEPTH = 10.0km (geophysicist)
 BULGARIA (359)

PLD 0.05 233 P 42 15.00 -0.6
 S 42 24.00
 KDZ 0.69 135 iP 42 28.00 0.9
 iS 42 55.00
 MMB 0.95 235 iPgd 42 36.00 4.5X
 Sg 42 52.00
 RDO 1.15 149 eP 42 34.00 -0.9
 PVL 1.16 21 eP 42 22.00 -13.0X
 iS 42 48.00
 VTS 1.24 292 iP 42 15.00 -21.5X
 iSg 42 25.00
 SZH 1.42 37 ePg 42 39.00 -0.3
 eSg 42 55.00
 VAY 1.83 244 ePn 42 34.50 -10.7X
 i 42 47.00
 PLG 2.02 210 eP 42 54.50 6.5X
 SKO 2.48 267 ePn 42 55.00 0.5
 KZN 2.90 232 eP 43 03.50 2.9X
 MLR 3.46 14 ePc 43 18.00 9.5X
 BZS 4.15 328 ePd 43 10.00 -8.2X
 S.D. = 1.1 on 5 of 13 obs.

JAN 18, 1989 13h 53m 07.75± 0.65s
 21.532 S ± 6.6km 178.114 W ± 4.1km
 DEPTH = 367.2 ± 6.6 km
 4.9mb (28 obs.)
 FIJI ISLANDS REGION (181)
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 9S, 18C
 Centroid Location:
 Origin Time 13:53:17.6 1.0

Lot 21.75S 0.15 Lon 178.25W 0.09
 Dep 425.5 4.6 Half-duration 1.5
 Moment Tensor: Scale 10**16 Nm
 Mrr=-5.60 0.50 Mtt= 0.32 0.97
 Mff= 5.27 0.73 Mrt=-2.57 0.72
 Mrf= 0.86 0.83 Mtf=-2.34 0.63
 Principal Axes:
 T Val= 6.47 Plg= 9 Azm=246
 N 0.08 18 153
 P -6.56 70 0
 Best Double Couple: Mo=6.5*10**16
 NP1: Strike=356 Dip=40 Slip= -60
 NP2: 140 56 -112

AFI 9.69 40 iPc 55 22.00 -1.0
 WEL 20.59 195 eP 57 21.00 0.7
 eS 00 45.00
 VSG 24.58 296 P 57 57.00 -0.8
 AFR 26.98 87 iP 58 19.80 0.5
 0.8s 25.00nm 4.6mb
 BRS 27.10 252 iPc 58 21.30 0.9
 i 59 32.70
 PAE 27.14 87 iP 58 21.20 0.5
 0.8s 15.00nm 4.4mb
 PPT 27.16 87 iP 58 21.20 0.2
 0.8s 25.00nm 4.6mb
 PPN 27.30 87 iP 58 22.70 0.5
 0.8s 20.00nm 4.5mb
 PMO 29.39 82 iP 58 41.00 0.5
 0.8s 25.00nm 4.6mb
 VAH 29.56 83 iP 58 41.90 -0.1
 0.8s 15.00nm 4.4mb
 TPT 29.65 82 iP 58 43.10 0.3
 0.8s 25.00nm 4.6mb
 RUV 29.81 83 iP 58 44.30 0.1
 0.8s 30.00nm 4.7mb
 RMQ 30.61 254 eP 58 53.00 1.8
 e 59 07.00
 CNB 31.57 237 iPd 59 01.20 1.7
 CAN 31.86 237 eP 59 03.00 1.1
 BWA 32.07 239 eP 59 02.00 -1.8
 CTA 33.30 266 iPd 59 15.40 1.2
 1.0s 26.00nm 4.5mb
 iS 04 05.00
 CMS 33.62 245 iPd 59 18.10 1.2
 e 00 42.00
 TOO 35.21 235 eP 59 31.00 0.8
 1.0s 118.00nm 5.2mb
 TAU 35.82 225 eP 59 36.00 0.8
 STK 37.26 245 eP 59 48.00 0.7
 BFD 37.38 237 eP 59 42.00 -6.2X
 ASPA 44.19 258 iPd 00 43.00 -0.6
 0.9s 31.00nm 4.6mb
 ePcP 02 11.10
 eScP 05 36.90
 eS 06 43.20
 eScS 09 59.90
 JAY 44.28 290 ePd 00 43.50 -0.8
 0.7s 103.60nm 5.2mb
 WB5 44.35 263 eP 00 44.50 -0.3
 WRA 44.36 263 Pd 00 44.80 -0.1
 1.0s 18.80nm 4.3mb
 FORR 48.76 247 iPc 01 18.80 0.1
 0.4s 37.00nm 5.1mb
 MTN 49.08 271 eP 01 20.00 -1.4
 GUA 50.32 311 eP 01 31.00 0.3
 1.8s 1600.00nm 6.0mb X
 GUMO 50.38 311 eP 01 31.40 0.2
 0.8s 158.13nm 5.4mb
 KNA 50.47 267 eP 01 31.50 -0.4
 COOL 54.72 247 eP 02 01.00 -1.7
 MBL 57.44 258 iPd 02 20.50 -1.3
 0.4s 18.00nm 4.9mb
 KLB 57.52 246 eP 02 21.50 -0.8
 MEKA 57.56 251 eP 02 21.40 -1.2
 NWA0 57.82 244 eP 02 23.30 -1.0
 BAL 58.55 247 eP 02 28.00 -1.3
 MUN 58.79 245 eP 02 30.00 -0.9
 MRWA 59.36 248 eP 02 34.30 -0.6
 NANU 61.03 255 iPd 02 45.90 -0.2
 0.4s 22.00nm 5.0mb
 TRT 67.95 270 ePd 03 30.00 -0.3
 0.9s 48.60nm 5.2mb
 SPA 68.60 180 ePd 03 34.20 0.5
 1.0s 16.50nm 4.7mb
 e 03 39.00
 IIDJ 70.37 323 P 03 44.20 -0.4

18d 14h

OFUJ	71.08	328	eP	03	48.90	0.3	KEY	129.46	349	ePKP	11	28.00	-5.9X	i	12	22.80					
YAMJ	71.21	326	eP	03	50.40	0.9		0.7s	17.40nm					i	12	25.30					
PIP	71.87	299	iPc	03	53.90	0.2					11	34.00		i	12	30.30					
SHK	72.77	319	eP	03	58.50	-0.1	BUL	131.03	214	ePKP	11	36.20	-2.4	i	12	36.20					
ADK	73.11	1	ePd	03	59.20	-0.9					14	22.50									
	0.8s	146.80nm												LDF	152.95	3	ePKP	12	21.70	6.5X	
OZH	76.89	304	Pc	04	22.50	0.5	SOD	131.58	347	iPKP	11	37.60	-0.4		PTJ	153.11	338	ePKP	12	22.00	6.4X
SDN	78.03	10	eP	04	26.80	-0.7	KJF	134.01	345	ePKP	11	35.00	-7.7X		GRR	153.11	4	ePKP	12	22.10	6.7X
BLP	78.21	45	P	04	29.60	0.7		0.7s	22.70nm					HAU	153.34	353	ePKP	12	22.50	6.7X	
SSE	78.27	310	iPd	04	29.50	0.2					11	41.00		RBL	153.39	342	PKP	12	22.10	6.1X	
	1.0s	27.00nm					SUF	135.64	344	ePKP	11	39.00	-6.8X	LJU	153.46	340	ePKP	12	22.20	6.2X	
SYP	78.47	46	eP	04	31.00	0.5	NUR	137.89	343	iPKP	11	41.00	-9.1X	LPF	153.46	4	ePKP	12	23.00	7.1X	
PRS	78.63	44	eP	04	32.00	0.8		0.7s	21.40nm				BSF	153.46	353	ePKP	12	22.70	6.6X		
BCH	78.78	45	P	04	33.30	1.1					11	48.80		FVI	153.47	343	PKP	12	23.40	7.5X	
SAO	78.85	43	eP	04	32.60	0.2	NAO	140.24	353	PKP	11	45.60	-8.8X	VAY	153.65	323	ePKP	12	16.40	0.0	
BKS	79.04	42	ePd	04	34.10	0.8		0.8s	13.00nm												
ARN	79.15	43	P	04	35.10	1.1	HFS	140.54	351	ePKP	11	46.90	-8.0X	VOY	153.67	341	ePKP	12	23.00	6.6X	
MWC	79.58	47	eP	04	36.00	-0.6		0.6s	14.90nm					VBY	153.69	338	ePKP	12	23.60	7.3X	
PLM	79.91	48	eP	04	39.00	0.7	MUD	144.70	353	iPKPc	12	00.70	-1.5	CEY	153.76	340	ePKP	12	23.50	7.1X	
RVR	79.92	47	eP	04	38.00	-0.1		0.7s	132.00nm					SKO	153.81	326	ePKP	12	15.00	-1.6	
SBB	80.01	47	eP	04	38.00	-0.6	COP	145.00	350	iPKPc	12	03.30	0.6								
FRI	80.10	44	eP	04	39.10	0.2		0.7s	117.81nm												
CMB	80.29	43	eP	04	40.00	0.0	EKA	146.04	5	PKPd	12	04.20	-0.3	TRI	154.00	341	iPKPd	12	23.50	6.8X	
NJ2	80.45	310	Pc	04	42.10	1.3		0.9s	41.90nm												
ORV	80.52	41	eP	04	41.40	0.3	DMU	147.00	10	ePKP	12	07.00	0.9	LOR	154.28	357	ePKP	12	24.80	7.7X	
WDC	80.53	40	ePd	04	41.60	0.5		0.8s	70.00nm					SSF	154.50	357	ePKP	12	25.50	8.1X	
CLC	80.80	46	eP	04	42.00	-0.7	DCN	147.47	10	ePKP	12	08.10	1.3	LBF	154.55	357	ePKP	12	25.30	7.8X	
TPC	80.80	48	eP	04	43.00	-0.2		0.9s	100.00nm					OHR	154.76	325	ePKP	12	11.00	-7.0X	
MIN	80.95	40	eP	04	43.40	-0.1	DLE	147.65	9	ePKP	12	08.40	1.3	SMF	154.90	357	ePKP	12	25.90	8.0X	
GSC	81.04	47	eP	04	44.00	0.0		0.9s	58.00nm					MFF	154.94	3	ePKP	12	26.10	8.2X	
GLA	81.17	49	eP	04	46.00	1.3	HRI	147.89	299	e(PKP)	12	11.00	2.7	BGF	155.02	358	ePKP	12	26.30	8.2X	
MDJ	81.30	325	Pd	04	45.00	0.0	BBTK	148.01	312	iPKPd	12	10.50	2.2	VAI	155.08	349	PKP	12	16.70	-1.4	
LBFM	81.40	39	P	04	47.00	1.1	BURJ	148.08	297	PKPd	12	09.90	1.3	TCF	155.30	359	ePKP	12	26.90	8.4X	
KDC	81.83	14	ePd	04	47.90	0.5	KRA	148.16	338	ePKP	12	09.20	1.2	LSF	155.34	1	ePKP	12	26.90	8.4X	
KVN	82.33	43	P	04	50.90	0.2	ETA	148.27	9	ePKP	12	11.00	2.9X	MAF	155.37	359	ePKP	12	27.30	8.7X	
TNP	82.34	44	P	04	51.00	0.2	YRH	148.35	8	ePKP	12	10.00	1.7	LPG	155.76	352	ePKP	12	28.90	9.4X	
SNY	82.93	320	eP	04	53.20	-0.1	ECB	148.50	10	ePKP	12	07.90	-0.6	BNG	156.54	226	iPKPc	12	19.40	-1.7	
WHN	82.97	307	Pd	04	54.50	0.7	DSI	148.52	296	ePKPd	12	13.00	3.8X		0.6s	6.00nm					
CN2	83.05	323	Pd	04	54.20	0.3	KSP	148.64	342	ePKP	12	07.80	-1.0								
TIA	83.89	313	P	04	58.40	0.1		0.8s	87.00nm												
BMW	83.89	35	P	04	59.10	1.0					12	12.50		LIC	163.38	155	PKP	12	27.00	-1.3	
SVW	84.33	11	eP	05	00.00	0.0								KIC	163.61	156	PKP	12	27.00	-1.6	
SNG	84.55	280	eP	05	03.50	1.5								TIC	163.76	155	PKP	12	27.50	-1.2	
	0.8s	67.16nm					IKL	148.70	305	ePKP	12	04.00	-5.3X								
LON	84.82	35	P	05	01.00	-1.8	ECP	148.75	10	ePKP	12	11.30	2.5								
MSU	85.90	46	P	05	09.30	0.8	SPC	148.77	337	i(PKP)	12	12.90	3.6X								
TTA	85.97	10	eP	05	07.40	-0.7	MLR	149.02	326	ePKPd	12	11.00	1.3								
PMR	86.04	13	eP	05	07.80	-0.5	CLL	149.04	346	ePKP	12	07.00	-2.4								
	1.0s	55.30nm									12	13.20									
BJI	86.55	315	eP	05	11.50	0.3															
GYA	87.07	300	iPc	05	15.00	0.8	BRG	149.23	345	ePKP	12	08.60	-1.1	YLV	0.25	49	iPg	55	03.10	0.0	
TOA	87.16	14	eP	05	13.80	0.0								KCT	0.61	256	ePg	55	08.10	-2.0	
NNT	87.42	285	eP	05	17.00	1.2								ISK	0.66	355	ePg	55	11.00	0.1	
LOE	87.51	290	eP	05	16.50	0.3								DST	0.89	206	ePn	55	16.00	1.2	
PNT	87.57	34	ePd	05	16.00	0.1	MBH	149.23	292	ePKP	12	14.00	3.7X	GPA	0.91	97	ePg	55	14.70	-0.5	
	1.0s	43.00nm					GPA	149.47	314	ePKP	12	13.20	2.8	CTT	0.91	325	iPg	55	15.80	0.6	
TIY	87.88	312	eP	05	18.30	0.5	PRU	149.89	344	ePKPd	12	09.50	-1.2								
ALO	88.13	51	eP	05	18.10	-1.0															
	1.0s	9.50nm					PSZ	149.95	335	ePKP	12	14.90	3.9X								
XAN	88.67	307	Pd	05	21.60	0.1	MOX	149.95	348	ePKP	12	10.00	-0.8								
FBA	89.27	12	ePd	05	21.10	-2.4		1.2s	60.00nm												
IMA	89.28	10	ePd	05	23.10	-0.6															
LRM	89.57	40	eP	05	26.00	0.4	HOF	150.22	347	iPKPd	12	15.70	4.5X								
KMI	89.72	297	Pd	05	28.00	1.2	BUD	150.64	336	ePKP	12	16.00	4.1X								
BW06	89.79	43	P	05	26.10	-0.6	MEM	150.80	355	PKP	12	17.00	5.0X								
	1.0s	22.94nm																			
BDT	89.84	289	eP	05	27.00	-0.1	TNS	150.90	351	ePKPc	12	17.40	5.1X								
CHG	90.49	290	iPd	05	31.00	0.9	VKA	150.92	340	iPKP	12	19.40	7.1X								
	1.1s	28.48nm						0.7s	34.20nm												
BTO	90.91	314	eP	05	33.00	1.3	KHC	150.93	344	iPKPc	12	11.50	-0.8	SASA	0.42	330	iPd	17	45.77	0.1	
CD2	91.25	303	eP	05	33.40	-0.1															
SES	92.76	36	ePc	05	39.00	-0.9															
EDM	93.03	33	eP	05	40.50	-0.6	KHL	150.94	311	ePKP	12	17.50	4.7X	SGB	0.60	342	iPd	17	47.93	-0.2	
LZH	93.31	307	eP	05	43.50	0.5	GRF	150.94	347	ePKP	12	18.00	5.7X	IVF	0.98	20	iPd	17	53.65	0.2	
	1.2s	40.00nm																			
BRW	93.77	7	eP	05	43.50	-0.5															
ZON	94.27	126	ePd	05	44.00	-3.5X	SNF	151.02	357	PKPc	12	17.90	5.6X	DLG	1.00	280	eP	17	53.27	-0.4	
INK	95.29	15	eP	05	50.00	-1.1															
YKA	97.49	25	eP	06	00.80	-0.2	BZS	151.05	331	ePKPc	12	10.00	-2.5	PVV	1.03	293	iPd	17	53.97	-0.2	
GTA	97.54	309	eP	06	02.40	0.4	DOU	151.41	356	PKPc	12	18.80	5.8X	PS4	1.07	292	eP	17	54.39	-0.3	
KKN	105.31	294	PKP	10	46.00	-3.4X															
	0.4s	3.00nm					WLF	151.72	354	PKPc	12	19.80	6.4X								

NEAR COAST OF CENTRAL CHILE (135)

PEL 3.49 21 iPd 25 12.70 0.2
 RTCV 5.46 35 iPd 25 41.00 0.5
 RTCB 5.67 31 iPd 25 43.40 0.0
 (S) 26 42.50
 RTRS 6.63 21 iPd 25 56.20 -0.7
 TCA 8.10 54 eP 26 17.30 -0.2
 LPB 20.13 11 P 28 56.00 1.5
 ZOBO 20.39 11 P 28 56.00 -1.3

Z 24s 0.08um 3.0mszX
 LR 37 56.00

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

JAN 18, 1989 15h 35m 39.36 ± 0.94s
 46.261 N ± 8.3km 12.914 E ± 7.4km
 DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)

MD 2.2 (TRI).

FVI 0.35 345 P 35 45.00 -1.5
 eSg 35 49.00
 RBL 0.49 68 P 35 49.00 -0.3
 eSg 35 55.40
 VOY 0.72 108 ePgd 35 53.10 -0.5
 eSg 36 05.40
 TRI 0.81 133 e(Pg) 35 55.10 0.1
 i 35 58.00
 i(Sg) 36 09.00
 i 36 12.00
 KBA 0.87 20 iPgd 35 58.00 1.8
 iSg 36 06.10
 CTI 0.90 257 P 35 57.10 0.3
 eSg 36 10.10

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

JAN 18, 1989 15h 45m 39.41 ± 0.49s
 32.565 N ± 7.5km 93.820 E ± 5.9km
 DEPTH = 33.0km (normol)
 4.5mb (3 obs.)

TIBET (306)

LSA 3.66 219 iPnc 46 40.80 5.3X
 Pg 46 47.00
 Sn 47 24.00
 Sg 47 33.00
 GUN 8.29 238 P 47 41.00 0.4
 GTA 8.38 34 eP 47 41.00 -0.6
 E 10s 0.60um
 CD2 8.62 98 eP 47 46.20 1.3
 KKN 8.79 239 P 47 47.00 -0.4
 0.4s 13.00nm 5.4mb X
 PKI 8.82 238 P 47 46.80 -1.2
 LZH 9.00 64 (P) 47 48.00 -2.3
 Z 10s 0.80um 3.0mszX
 DMN 9.02 239 P 47 50.10 -0.5
 0.5s 18.00nm 5.5mb X
 GKN 9.15 243 P 47 51.40 -0.9
 0.4s 13.00nm 5.5mb X
 KMI 10.77 131 eP 48 13.00 -1.6
 WMO 12.22 339 P 48 32.50 -1.6
 XAN 12.72 79 eP 48 37.80 -3.0X
 GYA 12.73 115 iPc 48 38.40 -2.5
 BTO 15.27 54 eP 49 16.00 1.8
 BDT 15.96 162 eP 49 25.00 1.9
 TIY 16.06 66 eP 49 25.00 0.6
 eS 52 13.00
 BJI 19.47 61 eP 50 07.00 0.7
 eS 53 47.00
 HYB 20.43 226 eP 50 18.50 1.9
 NNT 20.61 163 eP 50 18.00 -0.5
 SSE 23.28 86 eP 50 46.00 1.0
 1.0s 15.00nm 4.5mb
 CN2 27.12 56 Pc 51 21.00 -0.1
 Z 15s 0.60um 4.3mszX
 HFS 57.57 324 eP 55 29.50 1.6
 0.5s 2.40nm 4.5mb
 NAO 58.84 325 P 55 37.30 0.5
 0.8s 4.50nm 4.6mb
 WB5 64.99 138 eP 56 19.00 0.6
 YKA 82.55 13 eP 58 02.80 2.9X

S.D. = 1.4 on 22 of 25 obs.

& JAN 18, 1989 16h 15m 59.93s
 61.748 N 150.885 W
 DEPTH = 62.7km
 SOUTHERN ALASKA (2)

<AGS-P>.

PWA 0.49 101 iP 16 11.74 -0.4
 eS 16 21.71
 CRP 0.78 232 iP 16 15.05 -0.6
 eS 16 26.52
 SPU 0.80 225 iP 16 15.02 -0.8
 eS 16 26.93
 PMS 0.81 128 iP 16 15.20 -0.8
 eS 16 27.02
 PLRM 0.85 100 P 16 15.40 -1.0
 eS 16 27.90
 PME 0.89 97 eP 16 16.53 -0.4
 eS 16 30.04
 GHO 0.93 88 iP 16 17.08 -0.5
 eS 16 30.92
 NKA 1.02 190 iP 16 19.82 1.2
 KNK 1.21 105 iP 16 20.41 -0.8
 SML 1.21 86 iP 16 20.20 -1.0
 PTE 1.26 134 P 16 20.76 -1.0
 eS 16 37.71
 SLKM 1.29 165 iP 16 21.25 -1.0
 RDT 1.39 213 iP 16 22.73 -0.9
 eS 16 41.49
 PWL 1.52 125 iP 16 23.85 -1.5
 eS 16 43.43
 NNL 1.72 187 iP 16 28.80 0.6
 ILIM 1.96 212 eP 16 30.51 -1.0
 eS 16 56.65
 GLI 2.03 114 iP 16 29.62 -2.8
 VZW 2.20 106 eP 16 32.97 -1.8
 TOA 2.26 79 eP 16 35.09 -0.6
 VLZ 2.27 104 eP 16 33.34 -2.5
 FID 2.35 113 eP 16 34.10 -2.9
 eS 17 01.97
 SVW 2.37 256 eP 16 35.12 -2.1
 MTU 2.37 137 eP 16 34.52 -2.7
 eS 17 02.44
 KLU 2.39 94 eP 16 35.35 -2.1
 PDB 2.55 221 eP 16 37.96 -1.8
 TTA 2.67 299 iP 16 39.65 -1.8

26 obs. associated

& JAN 18, 1989 16h 26m 11.75s
 60.763 N 149.564 W
 DEPTH = 39.1km

KENAI PENINSULA, ALASKA (14)

<AGS-P>. ML 3.3 (PMR).

PTE 0.28 69 iP 26 19.05 -0.7
 SLKM 0.41 232 iP 26 20.58 -0.8
 eS 26 27.53
 PMS 0.48 0 iP 26 21.02 -1.3
 PWL 0.61 80 iP 26 23.51 -0.5
 eS 26 32.63
 NKA 0.82 269 iP 26 27.66 0.7
 KNK 0.85 39 iP 26 26.72 -0.6
 eS 26 38.18
 PLRM 0.86 14 iP 26 26.54 -0.9
 PMR 0.86 14 iPc 26 26.60 -0.8
 PWA 0.90 350 ePc 26 27.40 -0.7
 PME 0.91 16 eP 26 27.37 -0.8
 KNIM 0.99 114 iP 26 28.95 -0.5
 GHO 1.06 17 iP 26 29.84 -0.6
 NNL 1.12 231 iP 26 31.67 0.4
 SML 1.21 29 iP 26 32.03 -0.4
 GLI 1.22 83 iP 26 31.87 -0.7
 eS 26 48.19
 MTU 1.23 128 eP 26 32.44 -0.3
 SPU 1.29 290 iP 26 32.85 -0.7
 CRP 1.36 293 iP 26 34.27 -0.5
 RDT 1.41 264 iP 26 35.03 -0.4
 eS 26 52.60
 CNPM 1.50 215 eP 26 36.67 0.1
 VZW 1.50 77 iP 26 36.49 -0.2
 FID 1.51 89 iP 26 35.82 -1.0
 eS 26 55.48
 HIN 1.56 102 iP 26 36.96 -0.4
 VLZ 1.62 75 iP 26 38.18 -0.1
 ILIM 1.82 249 iP 26 41.04 -0.2
 eS 27 04.28
 CVA 1.89 95 eP 26 41.57 -0.6
 KLU 1.91 66 iP 26 42.51 -0.1
 TOA 2.11 49 iP 26 47.00 1.5
 SGAM 2.16 95 iP 26 45.03 -1.1
 PDB 2.50 249 eP 26 51.31 0.3
 GLB 2.88 74 eP 26 55.62 -0.6

SVW 2.98 279 eP 26 56.51 -1.2
 KDC 3.38 208 eP 27 02.60 -0.7
 TTA 3.75 308 eP 27 07.90 -0.8
 CTGM 4.03 84 eP 27 11.71 -1.1
 FBA 4.23 10 eP 27 15.10 -0.3

36 obs. associated

JAN 18, 1989 17h 04m 02.88 ± 0.74s
 39.632 N ± 6.1km 26.193 E ± 8.2km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

EZN 0.22 28 iPg 04 08.00 0.4
 iSg 04 12.50
 PRK 0.39 171 ePb 04 10.10 -0.8
 eSb 04 16.60
 EDC 1.47 60 ePn 04 30.00 0.6
 IZM 1.49 146 iPn 04 30.30 0.6
 BNT 1.51 61 iPn 04 30.50 0.5
 RDO 1.59 342 ePb 04 30.00 -1.1
 PLG 2.24 290 ePn 04 41.50 0.9
 CTT 2.28 48 ePn 04 40.00 -1.2
 YLV 2.61 68 ePn 04 52.00 6.1X

S.D. = 1.0 on 8 of 9 obs.

JAN 18, 1989 17h 32m 11.62 ± 0.13s
 7.025 S ± 2.8km 74.598 W ± 2.9km
 DEPTH = 147.3km (58 depth phases)
 5.4mb (78 obs.)

PERU-BRAZIL BORDER REGION (112)

CENTROID, MOMENT TENSOR (HRV)

Date Used: GDSN

L.P.B.: 13S, 24C

Centroid Location:

Origin Time 17:32:12.1 1.0

Lat 7.345 S 0.07 Lon 74.25W 0.08

Dep 148.1 2.2 Half-duration 1.8

Moment Tensor: Scale 10**17 Nm

Mrr=-1.17 0.07 Mtt= 0.13 0.09

Mff= 1.03 0.10 Mrt= 0.35 0.06

Mrf=-0.12 0.07 Mtf= 0.72 0.09

Principal Axes:

T Val= 1.44 Plg= 2 Azm=299

N -0.14 19 30

P -1.30 71 205

Best Double Couple: Mo=1.4*10**17

NP1: Strike= 10 Dip=47 Slip=-117

NP2: 227 50 -64

PSO 8.60 341 eP 34 13.50 -1.2
 ARE 9.86 162 eP 34 32.00 0.7
 ZOBO 11.16 146 Pc 34 46.20 -2.4
 Z 24s 0.43um
 i 34 47.00
 eLR 37 04.00
 LPB 11.39 147 Pc 34 50.00 -1.5
 eLR 37 36.00
 BOG 11.58 3 eP 34 56.00 2.1
 eS 36 57.00
 CNCB 11.68 147 Pc 34 53.40 -2.0
 CCH 13.19 142 Pd 35 13.50 -1.3
 BMG 14.09 6 eP 35 29.00 3.0X
 SDV 16.29 14 eP 35 56.40 2.8
 CEOS 17.13 21 eP 36 05.00 1.3
 TOV 17.37 16 iPc 36 07.30 0.6
 GUAC 18.59 23 eP 36 21.00 0.5
 BUS 18.83 331 iPd 36 26.00 2.7
 CAR 19.02 24 eP 36 52.00 27.1X
 LLAV 19.04 24 eP 36 26.00 1.0
 ICR 19.23 331 iPd 36 29.00 1.5
 SJS 19.31 331 iPc 36 29.10 1.2
 TRN 21.93 37 eP 36 53.00 -1.0
 ATB 22.59 82 Pc 36 59.50 -0.9
 BBL 25.90 30 eP 37 30.00 -1.8
 TCA 25.94 160 ePc 37 31.70 -0.4
 ITB1 26.10 134 eP 37 33.10 -0.4
 PAG 26.24 29 eP 37 32.50 -2.4
 PEL 26.24 173 iPc 37 36.00 1.2
 ITB 26.32 134 e(P) 37 31.00 -4.6X
 ITB7 26.55 135 e(P) 37 37.10 -0.6
 BAO 27.43 110 eP 37 43.50 -2.3
 BMA 33.19 121 eP 38 37.20 0.7
 PRM 41.54 350 iP 39 46.10 0.0
 iP 40 18.70 146km
 iPcP 41 40.70
 JSC 41.56 352 iP 39 46.30 0.1
 epP 40 19.00 147km

18d 17h

LHS	41.69	352	eP	41 40.80	-0.2	BW06	58.89	330	P	41 55.10	-2.4	PAE	0.8s	30.00nm	5.1mb			
			eP	39 47.10			1.0s	75.00nm					73.63	254	iP	43 32.30	1.3	
			eP	40 00.30	89kmX								0.8s	70.00nm	5.4mb			
TKL	43.32	349	eP	40 00.30	-0.3	ABL	59.21	318	eP	41 59.50	-0.4	AFR	73.82	254	iP	43 33.20	1.0	
GBTN	43.42	349	iPd	40 01.00	-0.3								0.8s	140.00nm	5.7mb			
			eP	40 34.00	148km	BLP	59.84	317	eP	42 03.30	-0.5	AVE	75.17	53	iPd	43 40.50	0.8	
			ePcP	41 46.00		TNP	59.88	322	P	42 04.20	-0.2							
RSCP	43.64	347	P	40 02.00	-1.2		0.9s	47.85nm					KUK	75.21	82	eP	43 40.00	-0.3
	0.7s	64.18nm																
PWLA	43.67	344	eP	40 02.00	-1.4	RSON	59.97	346	P	42 02.00	-2.5	LEGH	75.32	82	eP	43 40.60	-0.3	
			eP	40 35.40	150km		0.6s	35.77nm					KOGH	75.32	82	eP	43 41.00	0.0
			ePcP	41 46.80								SHGH	75.50	82	eP	43 42.00	0.1	
BLA	44.34	353	P	40 09.50	0.7	BCH	59.98	318	eP	42 03.90	-1.1	YKA	75.79	342	eP	43 42.50	-0.1	
NAV	44.49	353	iP	40 10.30	0.4							IFR	77.05	53	iPd	43 51.50	1.0	
			eP	40 43.50	148km	RKT	60.06	247	iP	42 05.60	0.1	EVAL	77.09	49	e(P)	43 51.00	0.7	
			ePcP	41 50.30			1.2s	615.00nm				GDH	77.49	8	iPd	43 51.10	-0.7	
CVL	44.92	356	iP	40 13.40	0.2	PHAM	60.56	318	iP	42 08.80	0.0		1.1s	25.32nm	4.9mb			
			iP	40 46.80	149km													
			iPcP	41 52.20		MNA	60.68	322	e(P)	42 09.90	0.2	EJIF	77.69	50	e(P)	43 55.00	1.4	
NA2	45.01	356	eP	40 14.50	0.5	FRI	60.78	319	ePd	42 08.70	-1.6	EPRU	78.03	50	e(P)	43 57.00	1.4	
OLY	45.19	341	iPd	40 13.80	-1.6	PRI	60.91	318	ePd	42 10.90	-0.4	EHOR	78.29	49	e(P)	43 57.70	0.8	
			iP	40 47.20	149km							EPLA	78.40	47	e(P)	43 57.70	0.1	
			iPcP	41 52.70		KVN	61.03	322	P	42 11.00	-1.2	ERUA	78.45	44	e(P)	43 58.00	0.3	
			e	42 32.00								MAL	78.58	50	iPd	44 00.00	1.5	
VVO	46.61	336	iPd	40 26.30	-0.4	LLA	61.37	318	ePd	42 13.70	-0.6	ALQJ	78.93	50	iPd	44 02.00	1.4	
RLO	47.05	337	iPd	40 29.40	-0.8							ATEJ	78.94	50	iPd	44 02.00	1.3	
TUL	47.13	336	iPd	40 30.20	-0.6	PRS	61.49	318	ePd	42 14.80	-0.3	AAPN	78.98	50	iPd	44 02.00	1.2	
	1.2s	99.50nm										ACHM	79.14	50	iPc	44 03.40	1.7	
Z	23s	0.50um				SAO	61.79	318	ePd	42 16.30	-0.7	APHE	79.20	50	iPd	44 03.50	1.4	
						CMB	61.83	320	ePd	42 16.90	-0.5	ASMO	79.28	50	iPd	44 03.20	0.7	
												CRT	79.34	50	iPc	44 04.20	1.5	
LNO	47.13	336	iPd	40 30.20	-0.5	SCH	61.96	5	ePd	42 16.80	-1.0	AFC	79.40	50	e(P)	44 04.10	0.9	
FVM	47.15	343	P	40 28.70	-2.2		1.1s	220.00nm				EBAN	79.49	49	e(P)	44 04.00	0.5	
			pP	41 02.20	148km							TAF	79.58	53	iPd	44 03.00	-1.1	
PRIN	47.15	360	iP	40 30.80	0.0													
			iP	41 04.50	149km	ARN	62.18	319	iP	42 19.90	0.3	TOL	79.82	47	iPd	44 06.00	0.8	
			iP	40 30.80	-0.5								1.2s	343.75nm	6.0mb			
SIO	47.19	336	iPd	40 30.80	-0.5	MHC	62.24	319	ePd	42 20.50	0.3	GUD	79.98	47	e(P)	44 06.70	0.5	
FKO	47.23	334	ePc	40 31.30	-0.3	GCC	62.30	318	ePd	42 20.20	-0.2	VAL	80.18	34	eP	44 07.00	0.3	
			i	41 05.40	151km	LRM	62.53	331	eP	42 21.70	-0.4	EVIA	80.59	49	e(P)	44 10.60	1.2	
MEO	47.35	333	iPd	40 32.20	-0.4							ETOR	81.55	47	e(P)	44 15.20	0.9	
RRO	47.82	334	ePd	40 37.00	0.9							ECRI	81.75	45	e(P)	44 16.20	0.9	
TBR	47.93	0	eP	40 36.20	-0.6	PCC	62.82	319	eP	42 23.70	-0.1	ECHE	82.01	48	e(P)	44 18.00	1.4	
			eP	41 10.20	150km	BKS	62.94	319	ePd	42 24.80	0.2	ECB	82.31	35	eP	44 17.60	-0.2	
PCO	48.29	336	ePc	40 39.30	-0.4		0.8s	119.00nm										
			e	41 14.30	155km	BRK	62.95	319	ePd	42 24.70	0.1	DCN	82.40	34	iPd	44 18.40	0.1	
ACO	49.20	334	iPc	40 46.90	0.1								0.7s	61.00nm	5.5mb			
			e	41 20.50	147km	ORV	63.43	321	iPd	42 28.30	0.5	ECP	82.47	35	iPd	44 18.50	-0.2	
DHN	49.72	357	iP	40 50.10	-0.5								0.6s	44.00nm	5.4mb			
RSNY	51.33	0	P	41 01.00	-1.8	MIN	63.96	322	ePd	42 30.30	-1.1	ETA	82.76	35	iPd	44 20.10	0.0	
	0.8s	24.65nm				WDC	64.68	321	iPd	42 34.00	-1.9		0.7s	38.00nm	5.3mb			
PTN	51.36	360	eP	41 02.30	-0.7								DLE	82.79	34	iPd	44 19.90	-0.4
			eP	41 36.20	147km	LBFM	64.73	322	iP	42 36.00	-0.4	DMU	82.81	33	iPd	44 20.40	0.0	
ALO	51.44	326	iPd	41 03.90	-0.1	SES	65.31	335	iPd	42 39.10	-0.7	SPA	83.02	180	iPc	44 12.90	-8.6X	
	1.0s	93.00nm					0.5s	45.00nm					1.0s	275.50nm	6.0mb			
			eP	41 38.20	149km													
BNH	51.46	3	eP	41 03.20	-0.6	FFC	65.65	343	iPd	42 40.70	-1.1	AKU	83.32	20	iP	44 24.90	2.1	
			eP	41 37.80	151km		0.7s	49.00nm					0.9s	30.25nm	5.1mb			
EMM	51.92	6	eP	41 06.90	-0.3	FHC	65.71	321	ePd	42 43.30	0.8							
			eP	41 40.50	146km	EDM	68.38	336	iPd	42 58.30	-0.8	EROO	83.35	48	e(P)	44 25.00	1.5	
MIM	52.27	5	eP	41 08.60	-1.1		0.7s	294.00nm				YRH	83.70	35	iPd	44 25.20	0.2	
			eP	41 43.40	151km	PNT	68.45	330	iPd	43 00.20	0.6		0.7s	146.00nm	5.9mb			
GAC	52.49	359	ePd	41 11.10	-0.3		0.8s	243.00nm				EPF	83.88	45	eP	44 26.60	0.4	
			pP	41 46.00	152km	PGC	69.99	328	eP	43 10.00	1.1		1.2s	111.50nm	5.6mb			
CBM	54.03	5	iP	41 22.00	-0.7		1.0s	114.00nm				LPF	84.35	40	eP	44 28.20	-0.1	
GLD	54.47	331	P	41 26.00	-0.3	LIC	70.65	81	Pc	43 12.48	-1.1		0.9s	49.10nm	5.3mb			
	1.5s	256.25nm				FRB	70.72	3	eP	43 10.00	-3.0X	MFF	84.52	42	eP	44 29.10	-0.1	
BAR	56.21	317	eP	41 39.00	0.2		0.7s	64.00nm					0.8s	41.30nm	5.3mb			
			e	42 13.00	145km	TIC	70.73	80	P	43 13.12	-0.9	GRR	84.57	40	eP	44 29.10	-0.3	
			e	42 34.00		KIC	70.95	81	Pc	43 14.44	-1.0		0.7s	42.70nm	5.4mb			
TPC	56.67	319	eP	41 42.00	0.0		0.8s	91.00nm				LFF	84.67	44	eP	44 29.90	-0.1	
			e	42 16.00	145km								0.8s	88.60nm	5.6mb			
PLM	56.75	318	P	41 42.80	0.1	RUV	71.62	256	iP	43 19.90	0.6	LPO	84.91	44	eP	44 31.20	0.0	
			pP	42 17.20	147km		0.8s	45.00nm					1.1s	119.10nm	5.6mb			
RVR	57.47	318	eP	41 47.00	-0.5	TPT	71.86	257	iP	43 21.40	0.6	FLN	84.91	40	eP	44 31.00	-0.1	
			e	42 22.00	149km		0.8s	80.00nm					0.8s	59.10nm	5.5mb			
STJ	57.70	17	eP	41 47.40	-1.4	VAH	71.86	256	iP	43 21.20	0.5	LDF	85.09	40	eP	44 31.90	-0.1	
			pP	42 21.50	145km		0.8s	60.00nm					0.8s	42.90nm	5.3mb			

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

The Earthquake Data Report (EDR) is issued to those individuals and organizations having a special need for information used in the preparation of the Preliminary Determination of Epicenters (PDE) monthly listing.

Hypocentral coordinates are determined by a modified Geiger's method and may be constrained by reported first arriving P-waves, Pdiff, and the DF branch of PKP. Data are corrected for station elevation and for the ellipticity of the Earth. Outliers may be truncated (ie., removed from the calculation) either automatically or manually. The solution is allowed to converge between rounds of automatic truncation to insure a unique result. Convergence is aided by step length damping.

The error bars of the computed hypocentral coordinates are 90% marginal confidence intervals incorporating Bayesian information to stabilize estimates derived from small samples (Jordan and Sverdrup, 1981). It is assumed that the travel-time errors of the data used are independent, unbiased, and have an expected standard deviation of 1 s. Monte Carlo experiments suggest that the error bars are accurate for events constrained by more than about 30 data. However, care should be exercised in interpreting these numbers in terms of absolute location accuracy because of unmodeled biases. Analysis of events with independently known coordinates indicates that most PDE determinations are accurate to a few tenths of a degree in epicentral position and 25 km in depth. For special studies, we urge that inquiry be made to this office for possible recomputation of hypocenters of interest, using more complete instrumental data.

Restricted focal depths occur in four instances. If at any point in the computation the depth becomes negative, the solution is automatically restricted at 33 km and indicated by "NORMAL DEPTH". If the unrestricted depth computation is unsatisfactory, and in the judgment of the reviewing geophysicist the earthquake probably has a shallow focus, a solution may be held at 33 km. These are also indicated by "NORMAL DEPTH". The geophysicist may restrain the depth at any value indicated by evidence from available seismograms. These are indicated by, for example, "DEPTH = 100 KM (GEOPHYSICIST)". If two or more pP phases are identified, and in general, yield depths within 10 km of the mean, then the depth is automatically restricted to this value and denoted by, for example, "DEPTH = 51 KM (5 DEPTH PHASES)". pP phases may also appear as unidentified second arrivals with associated travel-time residuals. Hypocentral coordinates derived from other sources, such as the California Institute of Technology, the University of California at Berkeley, and the U. S. Department of Energy are noted on the EDR.

Two types of magnitude are computed: body-wave magnitude (m_b) and surface-wave magnitude (M_{SZ}). Each is a 25% trimmed mean of individual station values. Station magnitudes not used in the trimmed mean are marked with an X. This includes station magnitudes of either type which deviate significantly from the mean and surface-wave magnitudes determined from horizontal amplitudes. Body-wave magnitudes are computed according to the formula $\log(A/T) + Q$, derived by Gutenberg and Richter (1956), where A is the P-wave amplitude in micrometers, T is the period in seconds, and Q is the depth-distance factor. Surface-wave magnitudes are computed from the formula $\log(A/T) + 1.66 \log(\Delta) + 3.3$, where A is the maximum vertical surface-wave amplitude in micrometers,

T is the period in seconds, and Δ is the epicentral distance in degrees. Surface-wave magnitudes are determined only for earthquakes whose focal depths (taking into account the computed standard deviations) are potentially less than 50 km, for stations having $20^\circ \leq \Delta \leq 160^\circ$, and for reported periods of $18 \leq T \leq 22$ s. No correction for focal depth is used in the M_S calculation. Body-wave magnitudes are not determined from PKP arrivals or for stations having $\Delta \leq 5^\circ$. Amplitude values stated in this report are in nanometers (nm) for body-waves and micrometers (μm) for surface-waves.

The travel-time residual (observed – computed) is based on the 1940 Jeffreys-Bullen P and 1968 Bolt PKP travel-time tables. Phases not used in the computation are marked by an X. The azimuth from the epicenter to the station is measured clockwise from north. The epicentral distance is the central angle in degrees.

Hypocenter Symbols

& Indicates that parameters of the hypocenter were supplied or determined by a computational procedure not normally used by the National Earthquake Information Service (NEIS). The source or nature of the determination is indicated by a 2 to 5 letter code enclosed by angle brackets and appearing in the first line of comments. A “-P” appended to the code indicates that the computation is preliminary. These codes are included with the list of abbreviations in the PDE Monthly Listing.

% Indicates a single network solution. A non-furnished hypocenter has been computed using data reported by a single network of stations for which the date and/or origin time cannot be confirmed from seismograms available to a NEIS analyst. Also, if we define η to be the geometric mean of the semi-major and semi-minor axes of the horizontal 90% confidence ellipse, then $\eta \leq 16.0$ km.

* Indicates a less reliable solution. In general, $8.5 < \eta \leq 16.0$ km.

? Indicates a poor solution, published for completeness of the catalog. In general, $\eta > 16.0$ km. This includes poor solutions computed using data reported by a single network.

The lack of any symbol indicates that $\eta \leq 8.5$ km.

Note: On printers available to the NEIS for this publication, the symbol for degrees ($^\circ$) appears as “`”.

References

- Bolt, Bruce A. (1968), Estimation of PKP Travel Times, *Bull. Seis. Soc. Am.*, **58**, pp. 1305–1324.
- Gutenberg, B. and C. F. Richter (1956), Magnitude and Energy of Earthquakes, *Ann. di Geofisica*, **9**, no. 1, pp. 1–15.
- Jeffreys, Harold and K. E. Bullen (1940), *Seismological Tables*, British Assoc. for the Advancement of Science, Gray Milne Trust.
- Jordan, Thomas H. and Keith A. Sverdrup (1981), Teleseismic Location Techniques and their Application to Earthquake Clusters in the South-Central Pacific, *Bull. Seis. Soc. Am.*, **71**, pp. 1105–1130.

18d		18h															
BWA	35.39	163	eP	05 42.50	-0.7	PKI	13.23	262	P	25 49.40	-6.5X	WB5	59.65	142	iPd	32 49.90	-0.9
			i	05 50.00		KKN	13.29	263	P	25 50.60	-6.0X	WRA	59.68	142	Pd	32 50.00	-1.1
KLB	35.76	209	eP	05 46.00	-0.3	DMN	13.48	263	P	25 53.20	-6.0X		0.7s		6.50nm		4.9mb
CAN	36.39	163	eP	05 51.00	-0.7	GZH	13.70	118	eP	26 01.50	-0.2	AGMR	59.97	281	iPd	32 55.00	2.0
			i	06 00.00		Z	12s		5.50um			0.1s		250.00nm		7.3mb	X
BFD	36.81	172	iPd	05 49.20	-5.9X	N	12s		11.50um			DEV	60.61	309	ePc	32 56.00	-1.0
NWAO	37.11	208	eP	05 58.50	0.8	E	10s		6.10um			UPP	60.78	325	iP	32 59.90	1.9
TOO	37.68	169	iPd	06 04.40	1.9	GKN	13.79	265	P	25 55.60	-7.6X	BZS	61.55	309	eP	33 01.00	-2.4
PSI	38.04	275	ePc	06 05.20	-0.6	HHC	14.08	38	P	26 07.00	0.2	SPC	61.55	313	eP	33 06.00	2.3
CHG	41.90	299	eP	06 37.30	-0.4	Z	11s		12.70um		VAY	62.06	304	eP	32 58.00	-8.9X	
TAU	43.20	169	eP	06 49.00	1.1	N	11s		7.00um					i		33 08.00	
CD2	44.34	318	eP	06 57.20	-0.2	E	11s		9.70um		ASPA	62.55	145	eP	33 13.40	3.0X	
BJI	44.60	337	eP	07 10.00	10.8X	NST	14.44	180	iPd	26 12.50	1.0		1.0s		9.00nm		4.9mb
CN2	45.33	348	eP	07 09.00	4.0X	TIA	15.37	63	eP	26 23.80	0.2	HFS	62.66	326	eP	33 09.70	-1.0
MDJ	45.44	353	eP	07 07.00	1.1	Z	10s		1.90um			0.5s		5.00nm		4.9mb	
GUN	56.44	304	P	08 29.40	-0.6	N	10s		0.80um			Z	15s		0.25um		4.5mszX
KKN	56.89	304	P	08 32.20	-0.9	E	10s		1.20um					LR		58 57.00	
DMN	56.97	304	P	08 33.00	-0.7	NJ2	16.07	79	Pc	26 34.00	1.4	SKO	62.68	305	iP	33 12.20	1.2
GKN	57.50	304	P	08 36.60	-0.7	N	10s		1.90um			SRO	63.15	312	eP	33 16.10	2.1
GBA	60.49	286	Pc	08 59.30	1.4	BJI	16.33	49	eP	26 38.00	2.3	OHR	63.40	304	eP	33 14.70	-1.2
	0.9s		1.70nm		4.2mb	Z	14s		4.10um		KSP	63.58	315	eP	33 15.00	-1.9	
MAIO	80.14	307	eP	10 57.00	-0.2	N	10s		2.60um		ZST	63.82	312	eP	33 28.10	9.6X	
CNCB	150.05	126	PKP	18 41.00	7.3X	E	11s		2.00um		NAO	63.86	327	P	33 15.80	-2.8	
ZOBO	150.22	125	ePKP	18 39.00	5.0X				eS	29 52.00			0.8s		7.20nm		4.8mb
MCP	150.53	52	PKP	18 45.30	11.6X	WMO	16.87	327	P	26 43.50	0.9	PRU	64.90	315	eP	33 28.00	2.5
MGP	150.78	52	PKP	18 50.00	16.0X		4.0s		0.50nm		2.0mb	BRG	65.00	316	iP	33 25.00	-1.1
APR	150.81	51	PKP	18 49.10	15.1X	Z	12s		2.40um		5.7mszX		1.4s		24.00nm		5.1mb
			S.D. = 1.0	on 36	of 47 obs.	N	10s		3.00um						i		33 28.10
						OZH	17.10	103	Pc	26 44.60	-1.0	CLL	65.43	316	eP	33 31.00	2.1
						Z	10s		5.10um				1.6s		25.00nm		5.1mb
						NNT	17.51	182	eP	26 49.80	-0.9	KHC	65.76	314	P	33 30.40	-0.7
						SSE	18.07	82	Pd	27 00.50	2.9	MOX	66.47	316	e(P)	33 38.00	2.4
							1.2s		52.00nm		4.5mb	KBA	66.58	312	iPd	33 35.60	-1.0
									e	32 15.00			0.7s		5.10nm		4.7mb
						DL2	19.64	58	P	27 17.00	0.8				i		33 38.20
						Z	16s		1.50um						e		34 13.00
						N	12s		1.40um			CTA	66.78	133	iPd	33 37.90	-0.1
						E	12s		1.30um				1.5s		51.39nm		5.4mb
						NDI	20.08	271	iPd	27 19.50	-1.5	GRF	67.03	315	eP	33 38.70	-0.5
							1.0s		220.00nm		5.4mb		0.8s		6.00nm		4.7mb
									eS	31 12.00					e		33 42.80
						KSH	21.89	302	eP	27 40.00	0.6	FVI	67.11	312	P	33 41.20	1.5
									S	31 39.00		NAI	67.89	255	iPd	33 47.00	1.7
						SNY	22.12	52	iPc	27 43.00	1.5		1.0s		35.00nm		5.4mb
						Z	17s		1.90um		4.6mszX	OSS	68.78	312	ePc	33 49.10	-1.3
						E	12s		1.80um			IMA	68.98	25	eP	33 50.70	-0.6
									S	31 42.00		VDL	69.28	312	ePc	33 52.20	-1.3
						HYB	23.49	242	eP	27 53.00	-2.2	MME	69.35	310	P	33 54.30	0.3
						CN2	24.20	49	Pd	28 03.00	1.2	SLE	69.41	314	ePc	33 52.90	-1.2
							3.0s		0.80nm		2.7mb	LLS	69.44	313	ePc	33 53.00	-1.4
						Z	13s		3.30um		5.0mszX	BDI	69.46	310	P	33 56.30	1.8
									pP	28 08.00	18kmX	TTA	69.49	28	eP	33 54.00	-0.3
						POD	26.60	250	iPc	28 26.50	1.8	ZLA	69.59	314	ePc	33 53.90	-1.3
							0.8s		64.18nm		5.3mb	TMA	69.81	312	ePc	33 55.00	-1.7
						GBA	26.72	237	Pc	28 25.60	-0.1	CDF	69.92	315	eP	33 55.50	-1.7
							1.0s		44.20nm		5.0mb		1.0s		12.00nm		4.9mb
						MDJ	27.25	50	eP	28 30.00	-0.3	WLF	70.10	316	Pc	33 58.00	-0.1
						Z	14s		2.70um		5.0mszX	AVY	70.25	233	iPd	34 00.64	0.9
									S	33 02.00		MMK	70.41	312	ePc	33 59.50	-1.0
						PSI	27.36	183	eP	28 28.00	-3.6X	BSF	70.44	314	eP	33 58.90	-1.5
						KOD	29.04	232	eP	28 48.50	1.4		0.8s		10.70nm		4.9mb
						MAIO	34.41	291	iPc	29 35.70	1.8	SVW	70.47	30	eP	34 00.70	0.4
									eS	34 10.00		HAU	70.65	315	eP	33 59.50	-2.1
						TAB	44.77	295	eP	31 03.50	3.7X	DIX	70.75	313	ePc	34 02.00	-0.6
						BHD	47.11	289	ePc	31 20.00	1.8	DOU	70.85	317	Pc	34 05.90	3.2X
						MSL	47.52	293	iPd	31 23.00	1.6	EMS	71.06	313	ePc	34 03.20	-1.2
						BHL	54.05	292	P	32 13.00	2.0	CVF	71.21	309	eP	34 03.80	-1.3
						HRI	54.15	291	eP	32 14.50	2.8		0.8s		12.00nm		5.0mb
						BURJ	54.42	290	Pc	32 13.80	0.2	LPG	71.41	312	eP	34 05.50	-1.1
						MASJ	54.59	289	Pc	32 15.60	0.6	SBF	71.64	310	eP	34 06.30	-1.4
						DSI	54.91	289	eP	32 20.00	2.8		0.7s		11.00nm		5.0mb
						BGTK	54.91	300	eP	32 16.00	-1.3	BNI	71.64	312	P	34 10.20	2.4
						KJF	55.69	330	iP	32 20.20	-2.2	FBA	71.70	25	ePd	34 07.20	-0.4
							0.7s		24.00nm		5.3mb		0.9s		18.70nm		5.1mb
						RMN	55.84	288	ePc	32 26.00	2.0	FRF	72.29	310	eP	34 10.20	-1.2
						KEV	56.22	336	iP	32 29.60	3.4X		1.0s		8.00nm		4.7mb
							0.7s		18.70nm		5.2mb	LMR	72.47	310	eP	34 11.20	-1.3
						SOD	56.23	333	iP	32 24.20	-2.1		0.8s		7.20nm		4.7mb
						SUF	56.40	328	iP	32 25.70	-1.8	LOR	72.48	315	eP	34 10.70	-1.9
							0.7s		9.60nm		4.9mb		0.6s		5.70nm		4.7mb
						NUR	57.22	325	eP	32 35.00	1.6	LRG	72.52	310	eP	34 11.50	-1.3
						Z	17s		0.50um		4.7mszX		0.8s				

SSF	0.8s	5.60nm	4.6mb	
	72.79	315 eP	34 12.90	-1.5
	0.8s	27.40nm		5.3mb
PMR	72.95	28 eP	34 14.20	-0.8
AVF	73.00	314 eP	34 14.20	-1.4
	0.8s	37.60nm		5.4mb
RMO	73.03	135 eP	34 16.00	0.0
PLDF	73.20	314 P	34 14.73	-2.1
BGF	73.42	314 eP	34 16.50	-1.5
	0.8s	12.00nm		4.9mb
AGO	73.47	314 P	34 17.29	-1.1
PYM	73.68	314 P	34 18.43	-1.2
MAF	73.74	314 eP	34 18.40	-1.5
	0.7s	13.20nm		5.0mb
LBL	73.76	313 P	34 18.80	-1.2
TCF	73.93	314 eP	34 20.10	-1.0
	0.8s	29.50nm		5.3mb
INK	74.11	18 eP	34 21.50	-0.1
ADE	74.26	148 e(P)	34 22.30	-0.7
LDF	74.28	317 eP	34 21.90	-1.1
	0.6s	6.10nm		4.8mb
LSF	74.37	315 eP	34 21.90	-1.7
	0.8s	8.00nm		4.8mb
CAF	74.64	313 eP	34 24.70	-0.5
	0.7s	14.70nm		5.1mb
GRR	74.81	317 eP	34 24.80	-1.2
	0.6s	18.00nm		5.2mb
RJF	74.82	314 eP	34 25.70	-0.4
	0.8s	24.10nm		5.2mb
LPF	75.09	317 eP	34 26.70	-0.9
	0.7s	5.20nm		4.6mb
MFF	75.23	315 eP	34 27.30	-1.2
	0.8s	8.00nm		4.8mb
LPO	75.31	313 eP	34 28.20	-0.8
	0.6s	16.20nm		5.2mb
LFF	75.47	314 eP	34 29.30	-0.6
	0.7s	17.60nm		5.2mb
BWA	78.72	141 eP	34 54.00	6.0X
PTZ	79.62	247 iPd	34 54.80	1.5
CAN	79.71	141 eP	34 58.50	5.1X
BNG	80.59	270 iPd	35 00.10	1.5
	0.6s	11.00nm		5.0mb
			35 08.50	
ASMO	82.20	309 eP	35 09.00	2.3
APPE	82.37	308 eP	35 10.50	2.8
AAPN	82.48	309 eP	35 10.20	2.0
ALOJ	82.57	309 eP	35 11.00	2.3
AATEJ	82.62	308 eP	35 11.20	2.3
TAF	82.62	306 iP	35 11.00	2.1
LSZ	82.71	248 iPc	35 12.10	2.5
YKA	83.52	15 eP	35 13.40	0.6
KMZ	83.62	251 iPc	35 17.00	2.7
BUL	85.09	243 iPc	35 23.20	1.6
	0.9s	15.97nm		5.2mb
IFR	85.21	306 iPc	35 23.00	0.8
			35 26.50	
AVE	86.92	307 eP	35 23.00	-7.4X
			35 34.00	
SLR	88.50	239 eP	35 40.00	1.9
EDM	91.96	19 eP	35 54.50	0.7
FRS	92.90	237 e(P)	35 40.00	-18.2X
FFC	93.31	13 eP	35 59.00	-0.9
	0.8s	12.00nm		5.4mb
BMA	147.33	275 ePKP	42 27.70	0.6
BAO	147.47	289 e(PKP)	42 21.00	-6.6X
ZOBO	162.51	320 PKP	42 47.60	-0.2
LPB	162.71	319 (PKP)	42 52.00	4.2X
CNCB	162.86	318 PKP	42 49.00	0.8
S.D. = 1.5 on 143 of 163 obs.				
JAN 18, 1989 19h 30m 03.73±0.34s				
32.495 N ± 6.6km 93.839 E ± 4.8km				
DEPTH = 33.0km (normal)				
4.5mb (4 obs.)				
TIBET (306)				
LSA	3.62	220 Pn	31 04.50	5.3X
		Sn	31 54.00	
GUN	8.26	239 P	32 04.20	-0.4
KKN	8.77	240 P	32 10.80	-0.6
	0.5s	14.00nm		5.4mb X
PKI	8.80	238 P	32 11.60	-0.4
DMN	9.00	239 P	32 14.00	-0.6
	0.4s	10.00nm		5.3mb X
LZH	9.02	64 e(P)	32 15.00	0.2
Z	10s	0.70um		
		i	32 55.50	

		(Lg)	34 52.00	
GKN	9.13	243 P	32 15.20	-1.1
	0.6s	20.00nm		5.5mb X
KMI	10.71	131 eP	32 37.00	-1.2
BTO	15.30	54 eP	33 38.60	-0.3
BDT	15.89	162 eP	33 48.20	1.7
TIY	16.08	66 eP	33 49.30	0.4
BJI	19.49	61 eP	34 29.50	-1.3
HYB	20.39	226 eP	34 42.00	1.4
SSE	23.27	86 eP	35 09.80	0.6
GBA	24.05	222 Pc	35 17.20	0.3
	0.7s	1.50nm		3.6mb
CN2	27.14	56 eP	35 44.80	-0.9
HFS	27.64	324 eP	39 53.40	0.7
	0.5s	2.00nm		4.4mb
NAO	28.90	325 P	40 01.80	0.2
	0.9s	4.30nm		4.6mb
BSF	28.89	312 eP	40 42.30	0.3
WB5	28.93	138 eP	40 42.20	-0.2
LPG	28.93	310 eP	40 48.70	0.7
	0.8s	6.70nm		4.8mb
BGF	28.86	312 eP	40 47.70	-13.1X
	0.8s	4.50nm		4.8mb
INK	73.53	17 eP	41 35.00	0.4
BNG	75.23	266 ePd	41 28.20	-17.2X
	0.7s	3.00nm		
S.D. = 0.9 on 21 of 24 obs.				
* JAN 18, 1989 20h 28m 09.71±0.91s				
52.328 N ± 19.9km 171.073 W ± 9.0km				
DEPTH = 33.0km (normal)				
4.5mb (2 obs.)				
FOX ISLANDS, ALEUTIAN ISLANDS (9)				
ADK	3.49	265 eP	29 03.70	0.8
SDN	6.95	60 eP	29 52.20	0.5
SVW	12.19	38 eP	31 06.00	2.2
TTA	13.30	31 eP	31 27.90	9.4X
PMR	15.07	43 eP	31 48.90	7.4X
IMA	16.31	26 eP	32 09.40	11.8X
TOA	16.55	44 eP	32 00.70	0.0
FBA	17.34	34 eP	32 08.70	-1.7
INK	23.96	34 eP	33 21.00	-0.4
YKA	31.06	49 eP	34 25.70	-0.6
PNT	32.09	74 iPd	34 35.70	0.2
	0.6s	6.00nm		4.7mb
EDM	34.12	65 eP	34 53.00	-0.1
SUF	64.49	351 eP	38 45.00	0.2
SLL	67.49	358 eP	39 03.80	-0.1
	0.5s	1.60nm		4.4mb
GUN	75.82	297 P	39 53.90	-0.6
KKN	76.24	298 P	39 56.40	-0.4
PKI	76.34	297 P	39 57.40	-0.1
GKN	76.42	298 P	39 57.40	-0.3
DMN	76.48	298 P	39 58.60	0.5
S.D. = 0.9 on 16 of 19 obs.				
* JAN 18, 1989 21h 19m 10.06±1.44s				
13.287 S ± 11.3km 130.570 E ± 14.7km				
DEPTH = 10.0km (geophysicist)				
NORTHERN TERRITORY, AUSTRALIA (591)				
MTN	0.70	51 iPc	19 23.90	0.0
		eS	20 27.00	
KNA	3.01	215 eP	19 58.50	-0.1
		eS	21 30.00	
WB5	7.50	151 eP	21 01.90	-0.3
		eS	23 25.10	
WRA	7.54	152 Pc	21 02.50	-0.3
	0.8s	4.10nm		4.7mb X
ASPA	10.80	163 iPc	21 48.40	0.6
	0.8s	5.00nm		4.9mb X
		eS	24 49.80	
S.D. = 0.5 on 5 of 5 obs.				
* JAN 18, 1989 22h 16m 24.65±2.54s				
54.859 N ± 21.6km 159.819 W ± 17.6km				
DEPTH = 53.4 ± 14.2 km				
4.7mb (8 obs.)				
SOUTH OF ALASKA (17)				
SASA	0.62	321 iPd	16 38.86	1.3
		eS	16 46.96	
DLG	1.20	285 ePd	16 46.16	0.8
		eS	16 59.57	
PVV	1.24	295 iPd	16 44.83	-1.2
		eS	16 58.55	

PS4	1.28	294 iPd	16 45.43	-1.1
		eS	16 59.21	
DRRA	1.42	274 eP	16 48.96	0.4
KDC	5.00	52 eP	17 42.50	3.5X
TTA	8.33	12 eP	18 24.30	-1.1
IMA	11.64	12 eP	19 10.00	-0.6
INK	18.17	32 eP	20 35.00	0.8
YKA	24.25	53 eP	21 42.10	4.8X
MBC	26.17	21 eP	21 56.00	0.8
DAG	46.34	12 iPd	24 46.50	0.2
	0.8s	6.72nm		4.6mb
SUF	62.67	357 iP	26 44.60	-0.7
HFS	65.24	4 eP	27 01.60	-0.5
	0.4s	0.80nm		4.1mb
GUN	80.25	305 P	28 31.60	0.3
	0.8s	11.00nm		4.8mb
KKN	80.64	305 P	28 33.80	0.6
	0.6s	4.00nm		4.5mb
GKN	80.76	306 P	28 34.20	0.5
	0.7s	6.00nm		4.6mb
PKI	80.76	305 P	28 34.40	0.4
	0.6s	5.00nm		4.6mb
DMN	80.87	306 P	28 35.20	0.7
	0.4s	5.00nm		4.8mb
WB5	93.03	239 iPd	29 33.00	-0.3
WRA	93.10	239 Pd	29 32.30	-1.3
	0.6s	7.10nm		5.3mb
WIN	147.67	5 e(PKP)	36 06.50	4.7X
SLR	150.30	345 ePKP	36 12.00	6.3X
S.D. = 0.9 on 19 of 23 obs.				
* JAN 18, 1989 22h 27m 28.93±0.91s				
38.792 N ± 10.3km 21.250 E ± 12.3km				
DEPTH = 10.0km (geophysicist)				
GREECE (364)				
VLS	0.80	220 eP	27 44.20	-0.3
		eS	27 59.00	
KZN	1.57	15 eP	27 57.60	0.7
NEO	1.62	71 eP	27 59.50	1.9
LIT	1.62	36 ePn	27 27.80	-29.8X
		iSn	28 21.40	
THE	2.26	35 ePn	28 05.60	-1.3
PLG	2.32	46 eP	28 07.00	-0.8
GRG	2.34	22 ePn	28 07.50	-0.5
OHK	2.34	352 ePn	28 09.50	1.4
KNT	2.68	28 ePn	28 12.80	-0.1
		eSn	28 46.70	
VAY	2.72	21 ePn	28 13.00	-0.5
SRS	2.94	37 ePn	28 16.10	-0.4
SKO	3.18	3 ePn	28 15.00	-4.9X
S.D. = 1.1 on 10 of 12 obs.				
? JAN 18, 1989 23h 38m 54.69±2.85s				
5.867 S ± 33.2km 149.135 E ± 17.1km				
DEPTH = 33.0km (normal)				
4.3mb (1 obs.)				
NEW BRITAIN REGION (192)				
LMG	3.18	198 iPd	39 42.60	-1.0
		eS	40 13.00	
PMG	4.03	209 eP	39 57.50	1.8
	0.5s	21.13nm		
		eS	40 42.00	
WB5	20.00	225 eP	43 27.10	-0.5
WRA	20.07	224 Pd	43 27.90	-0.3
	0.8s	11.40nm		4.3mb
RMO	20.51	181 iPd	43 31.90	-0.9
ASPA	22.98	218 iPd	43 58.00	0.4
DZM	23.23	136 iPc	44 00.70	0.6
S.D. = 1.2 on 7 of 7 obs.				
JAN 19, 1989 01h 42m 05.62±1.52s				

19d 01h

CALN	1.12	70	Pg	42 26.52	-0.2
MVIF	1.35	66	Pn	42 30.37	-0.2
			Sg	42 48.86	
TOUF	1.46	63	Pn	42 32.28	0.1
AURF	1.46	69	Pn	42 31.61	-0.6
			Sg	42 51.57	
FOUF	1.51	39	P	42 33.79	1.1
			Sg	42 51.84	
AUTN	1.57	66	Pn	42 33.94	0.1
			Sg	42 54.43	
STV	1.62	57	P	42 34.16	-0.2
			S	42 55.40	
PZZ	1.65	46	P	42 36.02	1.1
			S	42 58.13	
SAOF	1.65	67	Pn	42 34.44	-0.4
			Sg	42 55.86	
DOI	1.73	48	P	42 36.20	0.2
			eSn	43 00.20	
RRL	1.83	32	P	42 39.13	1.6
			S	43 01.00	
IMI	1.86	72	P	42 37.41	-0.4
			S	42 59.42	
BNI	1.90	27	P	42 40.40	1.9
			eSn	43 02.50	
ROB	1.99	61	P	42 40.08	0.4
			S	43 04.01	
FIN	2.17	66	P	42 42.21	-0.2
			S	43 06.88	
RSP	2.21	36	P	42 45.70	2.7
			S	43 13.49	
CKI	2.31	62	P	42 43.80	-0.5
			eSn	43 14.60	
LSD	2.42	30	P	42 47.51	1.4
			S	43 15.64	
CVF	2.64	107	Pn	42 47.53	-1.5
			S.D. = 1.2 on 26 of 26 obs.		

JAN 19, 1989 01h 43m 52.13± 1.05s
22.305 N ± 5.9km 121.738 E ± 6.0km
DEPTH = 45.6 ± 9.6 km
4.9mb (15 obs.)

TAIWAN REGION (243)

ANP	2.87	356	iPd	44 37.50	0.9
			0.7s 602.74nm		
			eS	44 52.50	
BAG	5.96	191	eP	45 21.00	0.6
HKC	7.01	271	iP	45 32.90	-1.9
MCO	7.58	270	eP	45 48.80	6.0X
GZH	7.79	277	P	45 44.40	-1.3
			Z 16s 2.50um		
			N 16s 3.30um		
			E 16s 2.50um		
			S	47 08.40	
SSE	8.77	357	eP	46 00.20	1.0
			Z 12s 1.36um		
			N 10s 0.08um		
NJ2	10.04	346	eP	46 15.00	-1.7
QIZ	11.60	256	eP	46 38.60	0.6
			N 14s 1.00um		
			E 14s 2.70um		
GYA	14.34	290	P	47 12.00	-2.4
			SS	50 03.00	
TIA	14.43	345	eP	47 19.80	4.5X
XAN	16.24	319	eP	47 36.20	-2.5
			N 12s 1.10um		
			E 12s 1.00um		
TIY	17.32	334	Pc	47 54.40	2.1
			N 11s 3.10um		
			PP	48 10.50	
			SS	51 30.50	
KMI	17.62	283	Pc	47 59.00	2.7
TSRJ	18.12	40	eP	48 06.80	4.7X
CD2	18.20	302	eP	48 02.00	-1.2
BJI	18.30	346	eP	48 05.50	1.2
			Z 15s 0.64um		
			N 10s 0.57um		
			eS	51 32.10	
IJDJ	19.27	44	eP	48 16.60	0.6
MTMJ	19.92	41	eP	48 23.70	0.8
MAT	20.13	42	(P)	48 25.00	-0.1
			1.0s 26.00nm		4.5mb
			eS	52 20.00	
CHJJ	20.32	44	eP	48 26.80	-0.2
HHC	20.39	337	eP	48 27.40	-0.5
			Z 16s 1.20um		4.3mszX
			N 10s 0.50um		

LZH	E 10s	0.40um			
	20.75	315	eP	48 32.50	0.8
	2.0s	220.00nm			5.2mb
		e(S)	52 25.00		
BTO	E 12s	2.40um			
	20.76	334	eP	48 32.00	0.3
	N 12s	3.10um			
NIIIJ	E 12s	2.40um			
	21.07	41	eP	48 34.10	-0.6
CHG	E 11s	28.48nm			4.6mb
	21.62	265	iPc	48 42.80	2.4
CN2	E 11s	7	eP	48 39.60	-1.0
BDT	E 11s	261	eP	48 47.50	3.7X
MDJ	Z 16s	0.60um			4.1mszX
		S	53 04.00		
GUMO	E 12s	108	eP	48 44.50	-15.5X
GTA	Z 16s	1.20um			4.5mszX
	E 13s	0.80um			
LSA	E 13s	291	P	49 46.70	1.7
PSI	E 13s	232	ePc	49 54.40	-0.1
		e	51 40.00		
GUN	E 13s	287	P	50 25.20	0.8
		51.00nm			5.3mb
PKI	E 13s	287	P	50 28.60	0.7
		64.00nm			5.3mb
KKN	E 13s	287	P	50 29.10	0.3
		48.00nm			5.3mb
DMN	E 13s	287	P	50 30.60	0.4
		67.00nm			5.4mb
GKN	E 13s	287	P	50 33.80	0.1
		34.00nm			5.2mb
WMO	Z 12s	0.40um			4.4mszX
		pP	50 57.60		44kmX
WB5	E 13s	163	eP	51 53.20	-1.4
		e	53 41.20		
WRA	E 13s	163	Pd	51 54.00	-1.0
		1.80nm			4.0mb
WARB	E 13s	174	iPc	52 18.80	-13.2X
CTA	E 13s	149	iPd	52 33.10	0.8
		21.15nm			5.0mb
MAIO	E 13s	299	eP	53 24.00	1.1
SOD	E 13s	336	iP	55 09.30	-0.9
KJF	E 13s	333	iP	55 12.80	0.7
		9.10nm			4.9mb
SUF	E 13s	331	eP	55 17.00	-1.3
INK	E 13s	22	eP	55 28.00	-0.8
MLR	E 13s	314	ePd	55 46.00	-3.3X
HFS	E 13s	331	eP	55 54.40	-0.5
		1.90nm			4.2mb
NAO	E 13s	332	P	55 57.90	-2.1
		3.60nm			4.4mb
VAY	E 13s	311	eP	56 08.70	-0.7
KSP	E 13s	322	eP	56 10.00	0.3
SKO	E 13s	312	iP	56 12.00	-0.2
BRG	E 13s	323	e(P)	56 09.00	-7.5X
PRU	E 13s	322	eR	56 17.30	0.4
CLL	E 13s	323	e(P)	56 16.00	-2.1
YKA	E 13s	23	eP	56 21.80	0.6
KHC	E 13s	321	P	56 22.00	0.2
KBA	E 13s	319	eP	56 26.00	-1.5
		3.50nm			4.5mb
		i	56 40.30		
PNT	E 13s	35	eP	56 51.00	1.5
		4.00nm			4.9mb
EDM	E 13s	30	eP	56 53.50	0.9
KIC	E 13s	292	PKP	02 40.00	-0.9X
		S.D. = 1.2 on 53 of 62 obs.			

JAN 19, 1989 03h 17m 48.15± 0.37s
4.010 S ± 6.4km 105.707 W ± 7.8km
DEPTH = 10.0km (geophysical)
5.4mb (20 obs.) 5.8msz (11 obs.)
NORTHERN EASTER I. CORDILLERA (694)
Ms 5.9 (BRK).

CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P. 8.: 19S, 44C
Centroid Location:
Origin Time 03:17:54.7 0.3
Lat 4.59S 0.03 Lon 105.96W 0.03
Dep 15.0 FIX Half-duration 3.7
Moment Tensor: Scale 10**18 Nm
Mrr=-0.04 0.02 Mlt= 0.31 0.02
Mff=-0.27 0.03 Mrt=-0.02 0.07
Mrf= 0.31 0.07 Mlf= 1.03 0.02

Principal Axes:
T Val= 1.12 Plg= 9 Azm=322
N 0.00 74 200
P -1.11 14 54
Best Double Couple: Mo=1.1*10**18
NP1: Strike= 97 Dip=74 Slip= -4
NP2: 188 87 -164

ACX	21.54	15	(P)	22 58.00	18.2X
OXX	22.76	23	(P)	23 03.00	10.8X
III	23.08	15	(P)	23 06.50	11.2X
CRX	24.01	14	(P)	23 15.50	11.0X
IIT	24.02	17	(P)	23 17.50	13.0X
TAC	24.13	15	P	23 23.30	17.7X
IIC	24.46	15	(P)	23 18.50	9.6X
LVVW	25.29	21	P	23 29.50	13.1X
PSO	28.83	80	eP	23 49.50	0.1
BOG	32.75	75	eP	24 32.00	7.9X
			eS	29 58.00	
BMG	34.38	71	eP	24 39.00	1.1
ARE	35.80	113	eP	24 54.00	3.8X
SDV	37.24	70	eP	25 00.40	-1.9
GLA	37.86	347	P	25 06.80	-0.2
BAR	37.94	345	eP	25 09.00	1.3
PLM	38.63	345	eP	25 15.00	1.3
ALO	38.75	359	eP	25 16.00	1.3
			1.0s 17.50nm		4.7mb
Z 20s	6.74um				5.5msz
ZOBO	38.86	111	P	25 11.00	-5.3X
		i	25 21.00		
		LR	34 38.00		
LPB	38.95	111	P	25 14.80	-2.1
		i	25 22.30		
		eLR	34 34.00		
CNCB	39.13	112	eP	25 14.00	-4.6X
TPC	39.15	346	eP	25 18.00	0.1
MEO	39.16	9	eP	25 22.90	5.0X
RVR	39.37	345	eP	25 20.00	0.3
MWC	39.77	344	eP	25 24.00	0.8
FKO	39.84	11	eP	25 30.40	6.9X
SBB	40.15	344	eP	25 25.00	-1.2
VVO	40.24	13	e(P)	25 31.10	4.3X
GSC	40.47	346	eP	25 31.00	2.2
		e	26 30.00		
SIO	40.52	12	e(P)	25 34.30	5.2X
SYP	40.62	342	eP	25 30.00	-0.1
LNO	40.79	12	eP	25 35.10	3.9X
ACO	40.96	8	e(P)	25 33.20	0.5
CCH	40.97	112	P	25 26.00	-7.5X
CLC	41.16	345	eP	25 35.00	0.6
CAR	41.22	69	eP	25 40.00	4.8X
ISA	41.24	344	eP	25 36.00	0.9
BCH	41.26	342	P	25 35.40	0.1
OLY	41.51	18	P	25 37.90	0.7
POW	42.20	18	P	25 43.90	1.0
PRI	42.32	342	ePc	25 44.30	0.2
RUV	42.48	252	iP	25 45.40	0.0
		1.4s 50.00nm			5.1mb
TPT	42.67	252	iP	25 47.10	0.1
		1.4s 85.00nm			5.3mb
PRS	42.72	341	ePc	25 47.00	-0.2
VAH	42.73	252	iP	25 47.50	0.1
		1.4s 50.00nm			5.1mb
MSU	42.73	353	P	25 48.80	1.3
FRI	42.83	343	ePc	25 47.00	-1.0
LLA	42.85	342	eP	25 48.40	0.2
PMO	42.94	252	iP	25 49.40	0.2
		1.4s 100.00nm			5.4mb
GOL	43.50	0	P	25 53.70	0.0
		Z 22s 6.35um			5.5msz
GLD	43.55	1	P	25 56.70	2.7
		1.8s 215.38nm			5.6mb
LNV	43.64	137	ePc	25 55.70	1.0
PEL	43.68	136	iPc	25 56.00	0.9
RSCP	43.69	24	P	25 55.60	0.5
MHC	43.73	342	eP	25 56.10	0.6
		Z 20s 10.00um			5.7msz
		N 20s 18.00um			
		E 20s 6.00um			
		e	26 09.00		
		iS	32 50.00		
		eSS	36 10.00		
		eLR	38 44.00		
PRM	43.83	28	P	25 56.00	-0.2
SAN	43.87	136	eP	25 56.80	0.2
GMB	43.99	343	eP	25 58.00	0.5
GBTN	44.32	25	P	26 00.50	0.4

KVN 44.35 346 P 25 59.70 -0.9	WMO 138.62 345 ePKP 37 15.40 -1.1	SIO 26.37 97 e(P) 36 45.70 3.9X
BKS 44.41 341 e(P)d 26 09.80 8.9X	Z 21s 4.70um 6.2msz	TUL 26.66 97 eP 36 54.90 10.4X
1.2s 81.00nm 5.5mb	PP 40 12.00	1.3s 15.10nm
Z 20s 15.00um 5.9msz	CD2 141.45 317 PKP 37 28.30 6.3X	LNO 26.66 97 e(P) 36 54.70 10.3X
N 20s 13.00um	Z 20s 3.23um 6.1msz	RLO 27.09 96 eP 36 47.90 -0.5
E 20s 9.00um	N 19s 5.10um	S.D. = 0.5 on 44 of 49 obs.
eS 32 44.00	ePP 40 27.00	* JAN 19, 1989 04h 41m 32.72±1.02s
e 32 56.00	37 24.20 1.3	4.963 S ± 9.0km 129.747 E ±11.5km
e(LQ) 36 24.00	GYA 141.82 309 PKP 37 23.80 -3.6X	DEPTH = 10.1 ± 6.7 km
e 37 22.00	KSH 144.68 358 ePKP 37 23.80 -3.6X	4.2mb (2 obs.)
eLR 38 40.00	N 18s 4.30um	BANDA SEA (280)
BRK 44.42 341 e(P) 26 01.20 0.3	SKS 44 30.00	AAI 2.00 309 iPd 42 07.00 0.1
DUG 44.47 352 P 26 02.50 1.0	MAIO 145.09 21 ePKP 37 25.00 -3.1X	iS 42 21.90
TKL 44.50 26 P 26 01.40 -0.2	AVY 145.31 132 ePKP 37 31.10 2.0	TLE 3.06 103 iPc 42 22.00 -0.1
PPN 44.87 249 eP 26 04.00 -0.9	KMI 145.53 310 ePKP 37 20.30 -9.1X	iS 46 43.90
1.4s 50.00nm 5.2mb	E 20s 2.30um	KNA 10.76 185 eP 44 09.70 -0.3
ORV 45.73 343 eP 26 11.80 0.4	sPKP 38 17.00	WB5 15.49 164 eP 45 11.50 -1.5
MIN 46.49 343 e(P) 26 17.20 -0.3	ePP 41 15.00	e 45 22.00
BW06 46.70 356 P 26 18.00 -1.3	LSA 149.87 330 ePKP 37 37.60 1.2	eS 48 00.90
0.7s 26.32nm 5.4mb	CHG 151.78 303 ePKP 37 42.50 3.5X	WRA 15.55 164 Pc 45 13.50 -0.2
WDC 46.98 342 eP 26 19.80 -1.4	NST 152.07 296 ePKP 37 44.50 5.1X	0.7s 2.20nm 3.5mb
BLA 47.29 28 P 26 31.30 7.5X	BDT 152.43 300 ePKP 37 44.00 4.1X	OIS 18.22 149 eP 45 48.00 0.5
1.0s 47.00nm 5.5mb	SHL 152.71 323 iPKP 37 42.20 1.8	ASPA 19.02 168 iPd 45 59.10 1.7
PAG 47.88 64 eP 26 26.00 -2.8X	GUN 153.79 336 PKP 37 44.00 1.9	eS 49 46.60
CBN 49.54 29 eP 26 48.00 6.9X	KKN 154.14 337 PKP 37 45.50 3.1X	CHG 38.46 309 eP 48 57.90 1.1
LRM 49.97 354 eP 26 49.10 4.4X	GKN 154.18 339 PKP 37 45.20 2.9X	GUN 53.44 310 P 50 55.60 -0.2
SHW 52.09 345 P 27 12.60 11.9X	PKI 154.28 337 PKP 37 46.60 3.9X	0.6s 12.00nm 5.0mb X
PRIN 52.51 30 P 27 10.00 6.3X	PSI 155.38 268 ePKPc 37 50.00 5.9X	KKN 53.84 310 P 50 58.10 -0.4
DPW 52.82 349 P 27 05.20 -0.8	e 40 50.00	DMN 53.88 309 P 50 58.70 -0.2
SES 54.38 356 eP 27 17.00 -0.4	GBA 169.98 342 PKPd 38 04.40 6.5X	GKN 54.44 310 P 51 02.50 -0.4
1.1s 151.00nm 5.9mb	1.0s 10.50nm	0.6s 7.00nm 4.9mb
PNT 54.47 349 eP 27 16.00 -2.0	S.D. = 1.3 on 67 of 123 obs.	S.D. = 1.0 on 12 of 12 obs.
1.1s 52.00nm 5.5mb	JAN 19, 1989 03h 31m 03.79±0.98s	* JAN 19, 1989 05h 02m 18.76±1.11s
RSON 55.62 9 P 27 24.80 -1.6	44.261 N ± 3.5km 129.089 W ± 9.0km	34.895 N ±12.3km 25.911 E ± 8.4km
0.9s 42.02nm 5.5mb	DEPTH = 10.0km (geophysicist)	DEPTH = 10.0km (geophysicist)
Z 20s 10.17um 5.9msz	4.3mb (3 obs.)	CRETE (370)
RSNY 55.83 27 P 27 34.00 6.0X	OFF COAST OF OREGON (30)	NPS 0.44 326 iPgc 02 27.10 -0.7
Z 20s 2.03um 5.2msz	GROR 4.01 72 eP 32 06.39 -0.3	KAP 1.22 57 ePb 02 40.10 -1.4
GAC 56.33 25 eP 27 33.00 1.5	KMOR 4.21 69 eP 32 08.76 -0.7	VAM 1.49 291 ePb 02 46.00 0.4
BNH 57.37 29 P 27 44.80 5.8X	NLO 4.39 63 eP 32 12.41 0.4	KSL 3.24 67 ePb 03 14.00 3.4X
EDM 57.38 355 eP 27 37.00 -2.0	BMW 4.69 60 eP 32 16.33 0.0	ELL 3.74 59 eP 03 19.40 1.5
BAO 57.86 106 eP 27 36.00 -7.1X	OBH 4.77 48 eP 32 17.08 -0.3	BCK 4.57 55 eP 03 30.50 0.9
FFC 58.61 3 eP 27 52.00 4.5X	RVW 4.87 65 eP 32 18.56 -0.2	DSI 8.60 110 e(P) 04 25.00 -1.1
1.0s 36.00nm 5.4mb	PGO 4.87 73 eP 32 19.37 0.6	MBH 9.15 121 eP 04 34.00 0.3
MIM 58.93 30 P 27 54.90 5.1X	ODW 4.87 43 eP 32 18.63 -0.2	S.D. = 1.3 on 7 of 8 obs.
ITA 61.71 113 eP 28 12.90 3.1X	GT2 4.94 77 eP 32 19.82 -0.1	* JAN 19, 1989 05h 22m 31.46±3.00s
BMA 62.26 113 eP 28 25.50 12.4X	CPW 4.98 55 eP 32 20.04 -0.3	40.786 N ±22.8km 30.108 E ±22.4km
SIT 65.44 343 P 28 50.00 16.8X	OTR 5.05 39 eP 32 21.69 0.4	DEPTH = 10.0km (geophysicist)
Z 20s 6.50um 5.8msz	OSP 5.05 51 eP 32 21.13 -0.3	TURKEY (366)
YKA 66.67 356 eP 28 38.10 -2.8	SMW 5.09 36 eP 32 22.40 0.5	GBZT 0.50 271 ePg 22 42.00 0.3
SCH 66.89 23 eP 28 48.00 5.4X	APW 5.12 60 eP 32 22.53 0.1	iSg 22 46.00
AIA 67.80 162 e(P) 28 47.00 -1.1	CZM 5.12 63 eP 32 22.20 -0.2	GPA 0.52 163 iPg 22 42.10 0.1
KDC 72.08 336 P 29 18.80 4.5X	OBK 5.14 41 eP 32 23.00 0.4	eSg 22 48.60
1.1s 46.25nm 5.5mb	FL2 5.14 66 eP 32 22.78 0.1	ISK 0.84 290 ePg 22 47.80 0.1
FRB 73.06 16 eP 29 18.00 -2.0	VLM 5.17 73 eP 32 23.22 0.1	CTI 1.32 286 ePn 22 55.70 -0.2
1.0s 93.00nm 5.8mb	OSD 5.17 45 eP 32 23.19 -0.1	KCT 1.44 249 iPn 22 57.20 -0.4
PMR 73.41 340 eP 29 19.80 -2.3	ERK 5.18 64 eP 32 22.77 -0.6	S.D. = 0.4 on 5 of 5 obs.
Z 20s 5.00um 5.8msz	SHW 5.21 66 eP 32 24.63 0.9	& JAN 19, 1989 06h 53m 28.80s
INK 74.72 350 eP 29 27.00 -2.5	STD 5.24 65 eP 32 24.52 0.4	33.920 N 118.630 W
1.2s 49.00nm 5.4mb	YEL 5.25 66 eP 32 25.15 0.8	DEPTH = 12.0km
FBA 75.35 343 P 29 28.00 -5.3X	TDL 5.28 64 eP 32 24.75 0.0	5.2mb (33 obs.) 4.8msz (1 obs.)
1.1s 17.19nm 5.0mb	SOSW 5.29 66 eP 32 25.45 0.5	SOUTHERN CALIFORNIA (43)
IMA 77.93 342 eP 29 51.00 3.1X	TDH 5.30 76 eP 32 24.87 -0.1	<PAS-P>. ML 5.0 (PAS). 5.2
MBC 80.53 357 eP 30 00.00 -1.5	VBEM 5.41 79 eP 32 26.63 0.0	(BRK). Several people injured,
0.9s 34.00nm 5.3mb	GMW 5.49 51 eP 32 27.00 -0.6	some broken windows and many
GDH 81.19 17 ePc 30 11.00 5.8X	LON 5.69 62 eP 32 30.00 -0.5	items knocked from store shelves
1.0s 20.00nm 5.1mb	VGB 6.04 75 eP 32 34.80 -0.5	in the Malibu-Santa Monica-
e 40 28.00	WDC 6.08 125 eP 32 39.80 3.9X	Redondo Beach area. Slight
e 51 45.00	MCW 6.18 42 eP 32 36.90 -0.4	damage (VI) at Hollywood,
WRA 116.42 246 PKP 36 34.00 -0.8	MIN 6.79 123 eP 32 46.70 0.7	Longster, Los Angeles, Malibu
0.5s 0.60nm	ORV 7.36 127 ePc 32 53.50 -0.3	and Monterey Park. Felt in Kern,
BNG 124.41 87 iPKPd 36 57.20 6.9X	PNT 8.23 49 iPd 33 06.30 0.2	Orange, Los Angeles, San
0.8s 11.00nm	0.6s 18.00nm 5.5mb X	Bernardino, San Diego, Santa
BJI 127.93 319 ePKP 37 02.00 5.8X	DPW 8.39 61 eP 33 07.00 -1.3	Barbara, Riverside and Ventura
Z 22s 5.00um 6.2msz	CMB 9.04 130 eP 33 16.80 -0.5	Counties.
N 20s 1.20um	FRI 10.17 132 eP 33 31.90 -0.9	PAS 0.44 59 iPd 53 37.10 -0.8
E 20s 3.20um	SES 13.68 57 eP 34 29.00 8.9X	CIS 0.55 160 iPd 53 39.00 -0.8
ePP 39 12.00	BW06 14.25 89 eP 34 28.80 0.9	MWC 0.56 57 iPd 53 39.30 -0.9
eS 56 26.00	GOL 18.19 96 eP 35 18.30 0.1	SCI 0.94 176 iPd 53 45.70 -0.8
HHC 130.35 323 ePKP 37 09.00 8.0X	ALQ 19.71 110 eP 35 38.00 1.5	
Z 30s 4.00um 5.9msz X	1.1s 13.25nm 4.2mb	
TIY 131.65 319 ePKP 37 07.00 3.5X	YKA 20.11 20 eP 35 40.60 0.4	
E 20s 2.50um	FFC 20.36 49 iPc 35 42.50 -0.3	
PP 39 26.50	0.8s 25.00nm 4.6mb	
GTA 137.85 330 ePKP 37 20.30 5.0X	RSON 24.60 62 eP 36 25.30 0.3	
Z 26s 4.30um 6.1msz X	0.7s 5.11nm 4.3mb	
E 19s 3.70um		

19d 06h

SBB	1.02	41	iPd	53	47.00	-0.9	TUL	18.83	77	iP	57	50.20	-0.4	LPO	84.59	38	eP	06	02.90	-0.3
ABL	1.05	332	iPd	53	47.80	-0.8		1.4s		230.90nm		5.2mb			1.0s		13.60nm		5.1mb	
SYL	1.27	299	iPd	53	51.20	-1.1	Z	21s		2.42um		4.8msz		HAU	84.75	34	eP	06	03.70	-0.3
PLM	1.58	110	iPc	53	54.80	-2.0				eS	01	25.00			1.0s		9.60nm		5.0mb	
BLP	1.60	294	iPc	53	55.70	-1.2				LR	03	37.00		CAF	84.87	38	eP	06	04.10	-0.5
CPE	1.65	129	eP	53	54.80	-2.8	LND	18.83	77	eP	57	49.80	-0.7		1.2s		26.70nm		5.3mb	
BCH	1.74	317	iPc	53	58.70	-0.4	VVO	18.89	79	eP	57	50.40	-0.9	CDF	84.88	33	eP	06	04.10	-0.6
ISA	1.74	4	iPd	53	58.90	-0.2	RLO	19.45	77	iP	57	56.70	-1.5		1.2s		14.20nm		5.1mb	
GSC	2.04	47	ePc	54	03.10	-0.3	EDM	19.66	9	eP	57	58.00	-2.4	TOL	84.92	45	iPd	06	05.50	0.6
BAR	2.05	126	iPd	54	00.90	-2.7	CRX	22.21	126	(P)	58	29.50	2.5		1.1s		50.63nm		5.7mb	
CLC	2.07	24	iPd	54	03.20	-0.7	IIC	22.25	124	P	58	28.50	1.1	MOX	85.05	29	eP	06	05.00	-0.4
TPC	2.15	84	iP	54	03.80	-1.2	OLY	22.36	78	eP	58	27.00	-1.1		1.5s		34.00nm		5.4mb	
PHAM	2.40	323	iPc	54	07.50	-1.0	FVM	23.15	72	eP	58	36.00	0.2				e	06	10.00	
PKEM	2.46	331	iPc	54	09.00	-0.3	FFC	23.85	24	iPc	58	41.20	-1.3				LR	45	30.00	
GWY	2.77	35	eP	54	12.70	-1.3		1.3s		152.00nm		5.4mb		BSF	85.08	33	eP	06	05.20	-0.5
PRI	2.78	324	iPc	54	12.90	-1.1	ACX	23.93	131	(P)	58	30.00	-13.5		1.2s		11.90nm		5.0mb	
NOP	3.00	42	eP	54	15.80	-1.2	RSON	24.83	40	eP	58	50.30	-1.7	CLL	85.09	28	ePc	06	05.00	-0.5
AMR	3.04	35	eP	54	16.30	-1.3	OXX	25.83	125	(P)	59	03.50	1.5				e	06	10.00	
TMO	3.05	19	eP	54	17.30	-0.6	RSCP	27.13	77	eP	59	12.00	-1.6	EPF	85.28	40	eP	06	06.40	-0.3
FRI	3.19	344	iPc	54	18.70	-1.0	YKA	28.71	4	eP	59	26.90	-0.6		1.2s		14.80nm		5.1mb	
GVN	3.25	19	eP	54	20.60	0.0	PRM	29.97	79	eP	59	37.80	-1.4	SNY	85.45	318	eP	06	05.00	-2.5
LLA	3.29	326	iPc	54	20.00	-1.2	JSC	30.84	79	eP	59	45.20	-1.6	GRF	85.62	30	eP	06	09.40	1.1
PRS	3.29	318	ePc	54	19.00	-2.2	BLA	31.12	73	eP	59	48.00	-1.3		0.9s		10.00nm		5.0mb	
GLA	3.29	104	eP	54	19.80	-1.5	PMR	33.85	334	ePc	00	13.00	0.2	BRG	85.80	28	iPd	06	09.40	0.3
YMT2	3.35	31	eP	54	21.50	-0.6		1.1s		69.10nm		5.5mb			1.4s		36.00nm		5.4mb	
YMT1	3.39	30	eP	54	22.40	-0.3	GAC	34.78	57	eP	00	19.00	-2.0				i	06	13.90	
YMT4	3.42	31	eP	54	22.40	-0.7	INK	35.47	351	ePc	00	26.00	-0.6	PRU	86.73	28	eP	06	13.00	-0.7
CDH1	3.49	32	eP	54	23.40	-0.7		1.3s		74.00nm		5.4mb					e	06	18.00	
LOP	3.55	34	eP	54	24.40	-0.6	FBA	35.70	339	eP	00	27.90	-0.7	KBA	88.55	31	ePd	06	21.50	-1.3
GMN	3.55	18	eP	54	24.70	-0.4	SVW	36.09	330	ePc	00	31.40	-0.6	ITA	89.84	117	eP	06	28.10	-1.2
SPRG	3.60	39	eP	54	24.90	-0.8	TTA	37.23	333	ePc	00	41.20	-0.4	BJI	90.69	321	eP	06	32.00	-0.7
SAO	3.65	322	ePc	54	23.40	-2.9	IMA	38.29	338	ePc	00	50.80	0.2	HHC	92.40	324	eP	06	40.80	0.1
			eS	54	58.95			1.0s		36.80nm		5.1mb		BZS	93.04	27	eP	06	43.00	-0.4
CPX	3.67	34	eP	54	25.80	-0.8	MBC	42.41	360	ePc	01	24.40	0.1	BTO	93.34	325	eP	06	45.00	0.0
BGB	3.68	32	eP	54	26.10	-0.7		1.0s		56.00nm		5.2mb		WB5	114.62	262	ePKP	12	09.30	-1.8
BMTN	3.73	25	eP	54	27.20	-0.5	FRB	42.71	30	eP	01	26.00	-0.8	WRA	114.67	262	PKPd	12	09.70	-1.5
GLR	3.90	32	eP	54	29.40	-0.6		0.8s		38.00nm		5.2mb			1.0s		3.00nm			
MZP	3.91	15	eP	54	29.80	-0.3	ADK	44.88	312	eP	01	43.00	-1.6	BNG	124.43	55	iPKPd	12	28.50	-1.5
CTS	4.04	22	eP	54	31.60	-0.3	ALE	52.32	8	eP	02	40.00	-1.9		0.8s		11.00nm			
BLT	4.10	29	eP	54	32.20	-0.6		1.0s		28.00nm		5.1mb		POO	126.50	345	ePKP	12	48.00	14.1
GMR	4.13	34	eP	54	32.90	-0.2	ARE	67.27	130	eP	04	26.00	0.1	WIN	139.67	86	ePKP	13	03.20	4.3
GCC	4.14	319	ePc	54	30.10	-3.1	ZOBO	69.31	128	P	04	37.20	-1.7	KMZ	141.88	66	iPKP	13	02.40	-0.6
ARN	4.16	326	eP	54	31.20	-2.3		Z	24s		0.11um		4.0mszX	LSZ	144.80	66	iPKPc	13	06.40	-1.5
MHC	4.20	325	ePc	54	31.60	-2.5				LR	03	08.00					i	13	28.40	
			eS	55	14.00		LPB	69.52	128	P	04	39.50	-0.5	TUH	145.01	101	ePKP	13	05.00	-2.6
KRNA	4.23	25	eP	54	34.10	-0.6	CNCB	69.80	128	P	04	41.00	-0.9		1.0s		60.00nm			
TNP	4.31	15	iPc	54	35.70	-0.1	CCH	71.42	127	eP	04	50.00	-1.5	CER	145.14	101	iPKPd	13	04.00	-3.9
CMB	4.35	341	ePc	54	35.00	-1.2	SOD	75.66	13	eP	05	05.00	-10.1		0.9s		84.62nm			
TPU	4.40	33	eP	54	36.20	-0.9	NAO	76.98	23	P	05	21.70	-0.9	MAW	146.26	181	ePKP	13	09.00	0.4
MNA	4.52	5	e(P)	54	38.00	-0.7		1.0s		12.00nm		4.9mb	PTZ	146.50	62	iPKPd	13	11.90	1.2	
			e(S)	55	46.00		HFS	78.43	22	eP	05	29.40	-1.2				i	13	36.50	
PRN	4.54	39	eP	54	38.70	-0.3		1.2s		34.60nm		5.3mb	BUL	147.91	73	iPKPd	13	14.00	1.1	
PCC	4.70	321	ePc	54	37.70	-3.4		Z	17s		0.25um		4.6mszX		1.0s		32.50nm			
DLM	4.85	40	eP	54	42.80	-0.7				LR	40	02.00		FRS	149.19	92	iPKPd	13	23.20	8.7
SRG	4.90	35	eP	54	43.30	-0.8	SUF	79.63	16	iP	05	36.60	-0.5		1.0s		40.00nm			
BKS	4.91	324	iPc	54	41.50	-2.7		0.7s		6.70nm		4.7mb	BFS	149.47	86	iPKPd	13	17.00	1.8	
			e	55	15.80		MAT	79.82	307	iPd	05	37.40	-1.2		1.0s		60.00nm			
			i	55	32.15			1.3s		51.92nm		5.4mb	PRY	150.05	86	iPKPd	13	19.60	3.5	
			eS	55	38.50		MDJ	80.30	318	eP	05	39.00	-2.0		0.7s		35.00nm			
			e	55	41.70		NUR	81.21	17	iP	05	45.50	0.0	SLR	150.26	83	iPKPc	13	21.30	4.9
				54	41.10	-3.2		Z	19s		0.40um		4.8msz				174	obs.	associated	
BRK	4.92	324	ePc	54	41.10	-3.2	DOU	82.45	33	Pc	05	52.90	0.8	& JAN 19, 1989 06h 59m 37.20s						
ZSP	4.98	325	ePc	54	42.40	-2.7	MEM	82.71	32	P	05	52.90	-0.5	33.900 N					118.620 W	
KVN	5.14	5	eP	54	47.30	-0.2	CN2	83.11	319	eP	05	54.00	-1.7	DEPTH = 12.0km						
NWRM	5.69	324	eP	54	52.50	-2.6	BAO	83.29	114	eP	05	54.90	-2.2	SOUTHERN CALIFORNIA					(43)	
ORV	6.08	339	iPd	54	59.60	-1.0	WLF	83.46	32	P	05	57.40	0.1	<PAS-P>. ML 3.0 (PAS).						
MIN	6.84	341	e(P)	55	12.00	0.5	LSF	83.68	37	eP	05	58.20	-0.4	PAS	0.45	56	eP	59	45.70	-0.7
MSU	6.94	47	eP	55	13.30	0.3	TCF	84.00	37	eP	05	59.80	-0.4				eS	59	51.80	
WDC	7.34	336	ePd	55	15.60	-2.8		1.2s		20.80nm		5.2mb	CIS	0.52	160	eP	59	47.30	-0.6	
DUG	7.80	35	eP	55	26.00	1.1	SSF	84.09	36	eP	06	00.30	-0.3	MWC	0.57	55	iPd	59	47.80	-0.9
FHC	8.08	330	e(P)	55	29.30	0.5	LOR	84.11	35	eP	06	00.40	-0.4	SCI	0.92	176	iPc	59	53.90	-0.7
DAU	8.75	40	eP	55	40.00	1.7		1.2s		30.90nm		5.4mb	ABL	1.07	333	eP	59	56.50	-0.8	
ALQ	10.11	81	eP	56	14.50	0.6	BGF	84.12	36	eP	06	00.40	-0.4	PLM	1.57	110	eP	00	06.00	1.0
BW06	11.35	36	eP	56	14.50	0.6		1.2s		41.60nm		5.5mb	BLP	1.62	295	eP	00	04.70	-0.9	
LRM	12.79	20	eP	56	36.30	2.9	LFF	84.18	38	eP	06	01.10	0.0	BCH	1.76	317	eP	00	07.20	-0.6
RMW	13.74	351	P	56	48.00	2.3		1.2s		41.60nm		5.5mb	PHAM	2.42	323	eP	00	17.00	-0.2	
PGC	15																			

CIS 0.54 160 iPd 01 03.40 -0.8
 MWC 0.56 57 iPd 01 03.70 -0.8
 SCI 0.94 176 eP 01 10.20 -0.7
 ABL 1.05 332 eP 01 12.20 -0.8
 PLM 1.57 111 eP 01 20.50 -0.6
 BLP 1.61 294 eP 01 20.00 -1.4
 BCH 1.75 317 eP 01 23.30 -0.3
 NOP 2.99 42 eP 01 41.30 -0.1
 GMN 3.55 18 eP 01 49.40 -0.1
 10 obs. associated

& JAN 19, 1989 07h 02m 47.30s
 33.910 N 118.640 W
 DEPTH = 11.0km
 SOUTHERN CALIFORNIA (43)
 <PAS-P>. ML 3.1 (PAS).

PAS 0.46 58 iPd 02 55.80 -0.8
 CIS 0.54 158 iPd 02 57.50 -0.7
 MWC 0.58 57 iPd 02 58.00 -1.0
 ABL 1.05 333 eP 03 06.30 -0.9
 PLM 1.58 110 eP 03 14.50 -1.0
 BLP 1.60 294 eP 03 13.60 -1.9
 BCH 1.74 317 eP 03 17.00 -0.8
 PHAM 2.40 324 eP 03 26.50 -0.7
 NOP 3.01 42 eP 03 35.00 -0.8
 GMN 3.56 18 eP 03 43.40 -0.5
 BMTN 3.74 25 eP 03 46.00 -0.5
 11 obs. associated

* JAN 19, 1989 07h 13m 27.32± 1.15s
 43.151 N ± 7.0km 19.369 E ± 15.5km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 MD 2.4 (TTG).

PLE 0.18 6 iPg 13 31.30 -0.1
 eSg 13 35.40
 TTG 0.73 186 ePg 13 41.60 0.0
 eSg 13 55.00
 HCY 0.95 223 ePg 13 44.60 -0.8
 eSg 13 59.50
 BDV 0.95 205 ePg 13 46.00 0.5
 eSg 14 01.50
 HVAR 2.14 272 iPn 14 03.90 0.4
 iSn 14 31.00
 OHR 2.30 152 e(Pn) 14 14.50 8.6X
 S.D. = 0.7 on 5 of 6 obs.

& JAN 19, 1989 07h 44m 21.90s
 33.910 N 118.630 W
 DEPTH = 11.0km
 SOUTHERN CALIFORNIA (43)
 <PAS-P>. ML 3.0 (PAS).

PAS 0.45 58 iPd 44 30.40 -0.7
 CIS 0.54 159 iPd 44 32.00 -0.8
 MWC 0.57 56 iPd 44 32.50 -1.0
 SCI 0.93 176 iPd 44 38.70 -0.9
 SBB 1.02 40 iPd 44 40.30 -0.9
 ABL 1.06 333 eP 44 41.10 -0.8
 PLM 1.58 110 eP 44 48.40 -1.6
 BLP 1.60 294 eP 44 48.50 -1.7
 BCH 1.75 317 eP 44 51.70 -0.7
 PHAM 2.41 323 eP 45 00.20 -1.7
 NOP 3.00 42 eP 45 09.30 -1.1
 TNP 4.32 15 e(P) 45 30.50 1.3
 PRN 4.55 39 eP 45 31.90 -0.4
 KVN 5.15 5 e(P) 45 43.50 2.6
 14 obs. associated

* JAN 19, 1989 07h 47m 02.00± 1.57s
 39.000 N ± 9.4km 29.907 E ± 16.7km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

KHL 0.74 204 iPg 47 16.50 -0.1
 iSg 47 27.50
 DST 1.16 302 iPn 47 21.70 -2.0
 GPA 1.32 13 ePn 47 25.30 -1.2
 YLV 1.62 345 iPn 47 31.10 0.4
 KCT 1.73 317 iPn 47 32.60 0.3
 GBZT 1.82 349 ePn 47 34.40 0.8
 iSg 47 57.00
 EDC 2.07 311 ePn 47 39.00 1.8
 BBTk 2.36 68 eP 47 50.00 8.4X
 iS 48 22.00

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

JAN 19, 1989 07h 47m 12.04± 1.07s
 33.917 N ± 11.2km 118.622 W ± 6.9km
 DEPTH = 10.0km (geophysicist)
 SOUTHERN CALIFORNIA (43)

ABL 1.05 332 eP 47 32.40 0.3
 PLM 1.57 110 eP 47 40.50 0.3
 BLP 1.61 294 eP 47 40.00 -0.5
 BCH 1.75 317 eP 47 43.00 0.3
 NOP 3.00 42 eP 48 00.00 -0.5
 BMTN 3.73 25 eP 48 11.50 0.3
 PRN 4.54 39 eP 48 22.20 -0.3
 S.D. = 0.5 on 7 of 7 obs.

* JAN 19, 1989 07h 55m 18.19± 1.16s
 33.929 N ± 14.3km 118.657 W ± 9.1km
 DEPTH = 10.0km (geophysicist)
 SOUTHERN CALIFORNIA (43)

ABL 1.03 333 eP 55 38.10 0.3
 BLP 1.58 294 eP 55 45.90 -0.3
 PLM 1.60 110 eP 55 47.00 0.2
 BCH 1.72 317 eP 55 48.60 0.2
 NOP 3.01 42 eP 56 06.50 -0.3
 S.D. = 0.4 on 5 of 5 obs.

* JAN 19, 1989 07h 57m 59.97± 1.20s
 33.890 N ± 14.8km 118.645 W ± 9.3km
 DEPTH = 10.0km (geophysicist)
 SOUTHERN CALIFORNIA (43)

ABL 1.07 334 eP 58 20.70 0.4
 PLM 1.58 109 eP 58 28.50 0.2
 BLP 1.60 295 eP 58 28.00 -0.4
 BCH 1.76 318 eP 58 30.80 0.1
 NOP 3.03 42 eP 58 48.50 -0.4
 S.D. = 0.5 on 5 of 5 obs.

& JAN 19, 1989 08h 10m 05.60s
 33.920 N 118.620 W
 DEPTH = 12.0km
 SOUTHERN CALIFORNIA (43)
 <PAS-P>. ML 3.2 (PAS).

PAS 0.44 58 iPd 10 13.90 -0.7
 CIS 0.54 160 iPd 10 15.80 -0.8
 MWC 0.56 57 iPd 10 16.10 -0.8
 SBB 1.01 40 iPd 10 23.80 -0.8
 ABL 1.05 332 eP 10 24.70 -0.7
 PLM 1.57 111 eP 10 32.30 -1.2
 BLP 1.61 294 eP 10 32.30 -1.5
 BCH 1.75 317 eP 10 35.70 -0.3
 PHAM 2.41 323 eP 10 44.30 -1.1
 NOP 2.99 42 eP 10 52.80 -1.0
 GMN 3.55 18 eP 11 01.50 -0.4
 BMTN 3.73 25 eP 11 04.20 -0.2
 ARN 4.16 326 eP 11 10.40 0.0
 TNP 4.31 15 eP 11 13.00 0.4
 CMB 4.35 341 eP 11 13.00 0.0
 PRN 4.53 39 eP 11 15.40 -0.3
 KVN 5.14 5 eP 11 24.50 0.2
 17 obs. associated

JAN 19, 1989 08h 15m 20.60± 1.05s
 33.822 N ± 10.1km 118.637 W ± 6.2km
 DEPTH = 10.0km (geophysicist)
 SOUTHERN CALIFORNIA (43)

ABL 1.13 335 eP 15 41.80 -0.2
 PLM 1.55 107 eP 15 48.50 0.0
 BLP 1.64 297 eP 15 49.20 -0.3
 BCH 1.81 319 eP 15 52.70 0.6
 NOP 3.07 41 eP 16 10.40 0.2
 YMT4 3.51 30 eP 16 15.60 -0.8
 GMN 3.65 18 eP 16 18.70 0.2
 BMTN 3.82 25 eP 16 21.00 0.0
 PRN 4.62 38 eP 16 32.50 0.3
 S.D. = 0.4 on 9 of 9 obs.

JAN 19, 1989 09h 05m 06.41± 0.59s
 43.319 N ± 7.9km 17.176 E ± 6.5km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 ML 2.6 (TTG).

HVAR 0.55 255 iPg 05 17.20 -0.4
 iSg 05 28.10
 HCY 1.31 131 ePg 05 30.50 -0.1
 eSg 05 48.70
 BLY 1.43 0 ePn 05 31.90 -0.5
 Sn 05 49.90
 8DV 1.60 130 ePg 05 34.70 -0.1
 eSg 05 57.00
 PLE 1.62 89 ePg 05 34.00 -1.2
 eSg 05 55.50
 TTG 1.77 119 ePn 05 37.50 0.2
 eSn 06 01.70
 PVY 2.18 108 ePn 05 44.40 1.1
 eSn 06 11.50
 VBY 2.58 328 ePn 05 50.00 1.1
 iSn 06 21.90

BEO 2.80 56 eP 06 36.00 44.0X
 TRI 3.42 316 eP 06 12.10 11.4X
 i 06 42.30
 i 06 54.80
 i 06 56.90
 i 07 05.40
 SKO 3.42 112 e(Pn) 06 22.00 21.1X
 OHR 3.48 128 e(Pn) 06 17.20 15.5X
 VOY 3.58 320 ePn 06 03.00 -0.2
 eSn 06 47.90
 S.D. = 0.8 on 9 of 13 obs.

& JAN 19, 1989 10h 25m 08.50s
 33.920 N 118.610 W
 DEPTH = 11.0km
 SOUTHERN CALIFORNIA (43)
 <PAS-P>. ML 3.3 (PAS).

PAS 0.43 58 iPd 25 16.70 -0.6
 CIS 0.54 161 iPd 25 18.70 -0.7
 MWC 0.55 56 iPd 25 18.90 -0.8
 SCI 0.94 177 eP 25 25.40 -0.9
 SBB 1.00 40 iPd 25 26.60 -0.9
 RVR 1.03 86 ePc 25 26.90 -1.0
 ABL 1.06 332 eP 25 27.30 -1.2
 PLM 1.56 111 eP 25 34.30 -2.1
 BLP 1.61 294 eP 25 35.40 -1.6
 BCH 1.75 316 eP 25 38.60 -0.5
 PHAM 2.41 323 eP 25 47.30 -1.2
 GWY 2.76 35 eP 25 53.00 -0.7
 NOP 2.99 42 eP 25 55.50 -1.2
 CDH1 3.48 32 eP 26 03.00 -0.8
 LOP 3.54 34 eP 26 04.30 -0.4
 GMN 3.55 18 eP 26 04.50 -0.3
 BMTN 3.73 25 eP 26 07.00 -0.4
 BLT 4.09 29 eP 26 12.00 -0.5
 TNP 4.30 15 eP 26 15.10 -0.5
 CMB 4.35 341 eP 26 15.50 0.4
 PRN 4.53 39 eP 26 18.20 -0.5
 KVN 5.14 4 eP 26 28.00 0.7
 22 obs. associated

* JAN 19, 1989 10h 43m 40.79± 0.80s
 11.543 S ± 8.9km 117.372 E ± 16.7km
 DEPTH = 33.0km (normol)
 4.8mb (1 obs.)
 SOUTH OF SUMBAWA ISLAND (291)

KHK1 3.60 331 ePc 44 36.00 0.3
 eS 45 13.10
 e 46 55.00
 MBL 9.85 166 iPd 46 02.30 -0.9
 eS 47 40.00
 NANU 11.10 189 iPd 46 19.00 -1.3
 0.2s 7.00nm 5.5mb X
 eS 48 10.00
 MEKA 15.03 176 eP 47 13.00 0.4
 eS 49 47.00
 WARB 16.99 150 eP 47 25.00 -12.6X
 eS 49 21.00
 MRWA 17.63 184 eP 47 46.00 0.4
 eS 50 46.00
 WB5 18.33 119 eP 47 54.20 -0.1
 eS 51 07.00
 COOL 19.56 170 eP 48 09.00 0.0
 eS 51 31.00
 ASPA 19.81 130 ePd 48 16.40 4.7X
 eS 51 43.30
 KLB 19.96 179 eP 48 15.00 1.9
 eS 51 40.00
 MUN 20.37 183 eP 48 12.30 -5.1X

19d 10h

eS 51 51 00
 GUN 49.68 323 P 52 31.50 -0.7
 0.6s 6.00nm 4.8mb
 S.D. = 1.1 on 9 of 12 obs.

* JAN 19, 1989 10h 45m 50.90 ± 1.14s
 33.923 N ± 14.2km 118.622 W ± 9.0km
 DEPTH = 10.0km (geophysicist)
 SOUTHERN CALIFORNIA (43)

ABL 1.05 332 eP 46 10.70 -0.2
 PLM 1.57 111 eP 46 19.10 0.0
 BLP 1.60 294 eP 46 19.20 -0.1
 BCH 1.74 317 eP 46 21.80 0.3
 NOP 2.99 42 eP 46 39.30 0.0
 S.D. = 0.3 on 5 of 5 obs.

* JAN 19, 1989 10h 50m 22.27 ± 1.24s
 33.847 N ± 14.9km 118.657 W ± 9.4km
 DEPTH = 10.0km (geophysicist)
 SOUTHERN CALIFORNIA (43)

ABL 1.10 335 eP 50 43.50 0.3
 PLM 1.58 108 eP 50 50.70 0.2
 BLP 1.61 297 eP 50 50.50 -0.3
 BCH 1.78 319 eP 50 53.50 0.1
 NOP 3.07 41 eP 51 11.40 -0.3
 S.D. = 0.4 on 5 of 5 obs.

* JAN 19, 1989 11h 42m 37.74 ± 0.67s
 36.811 N ± 10.7km 70.789 E ± 11.1km
 DEPTH = 33.0km (normal)
 4.2mb (4 obs.)
 HINDU KUSH REGION (718)
 Felt (11) at Khorog, USSR.

QUE 7.34 207 iPd 44 26.70 1.2
 eS 44 28.00
 MAIO 9.10 270 ePn 44 43.00 -6.9X
 eSn 46 13.00
 NDI 9.74 144 iPd 44 57.00 -1.6
 0.6s 73.33nm 6.1mb X
 eS 46 36.00
 GKN 14.61 123 P 46 03.70 -0.4
 DMN 15.18 123 P 46 11.40 -0.3
 0.6s 42.00nm 4.9mb
 KKN 15.19 122 P 46 11.20 -0.4
 PKI 15.41 123 P 46 14.40 -0.3
 GUN 15.52 121 P 46 16.00 -0.1
 SHL 21.20 116 iP 47 25.30 2.4
 GBA 23.86 164 Pd 47 43.90 -5.1X
 0.5s 3.40nm 4.1mb
 HFS 42.72 322 eP 50 31.80 -1.2
 0.4s 2.00nm 4.2mb
 NAO 44.20 323 P 50 43.40 -1.6
 0.4s 1.00nm 4.0mb
 MBC 67.03 3 eP 53 30.00 0.9
 INK 73.63 9 ePc 54 10.00 0.9
 YKA 80.94 3 eP 54 50.30 0.6
 S.D. = 1.3 on 13 of 15 obs.

JAN 19, 1989 11h 52m 53.80 ± 0.70s
 29.844 N ± 13.0km 94.809 E ± 7.7km
 DEPTH = 33.0km (normal)
 4.2mb (3 obs.)
 INDIA-CHINA BORDER REGION (313)

LSA 3.10 268 Pgc 53 49.40 6.3X
 Sg 54 24.20
 SHL 4.99 217 iP 54 11.00 2.5
 S 55 04.50
 GUN 8.06 258 P 54 52.60 0.7
 PKI 8.56 257 P 54 58.40 -0.3
 KKN 8.61 259 P 54 59.10 -0.1
 DMN 8.80 258 P 55 02.00 0.0
 GKN 9.10 261 P 55 14.60 -1.4
 GYA 10.99 105 P 55 30.00 -0.9
 TIY 16.61 57 eP 56 47.30 2.1
 GBA 22.79 229 Pc 57 54.30 -0.4
 0.6s 2.40nm 3.1mb
 MLR 55.09 307 ePd 02 26.00 1.0
 HFS 60.28 325 eP 03 00.90 -0.2
 0.7s 7.10nm 4.9mb
 NAO 61.56 326 P 03 08.80 -1.0
 0.6s 2.90nm 4.6mb
 WBS 62.42 137 eP 03 14.10 -1.9
 S.D. = 1.4 on 13 of 14 obs.

& JAN 19, 1989 12h 21m 42.24s
 47.568 N 121.904 W
 DEPTH = 2.7km
 WASHINGTON (29)
 <SEA>. ML 2.5 (SEA). Felt (111)
 at Snoqualmie. Also felt in the
 Carnation, Fall City, Preston
 and Tiger Mountain areas.

RMW 0.13 148 iPd 21 45.16 0.3
 SPW 0.23 267 iP 21 47.46 0.6
 HTW 0.25 21 iPd 21 47.08 -0.2
 eS 21 50.88
 BLH 0.28 342 iPd 21 47.79 -0.1
 GSM 0.37 168 iPc 21 49.41 -0.3
 eS 21 55.19
 PGW 0.53 299 eP 21 52.54 -0.4
 GHW 0.58 206 eP 21 52.95 -0.9
 GMW 0.60 268 eP 21 53.56 -0.6
 JCW 0.63 358 iPd 21 53.77 -1.0
 RVC 0.63 184 iPd 21 53.86 -0.9
 FMW 0.66 166 iPd 21 54.26 -1.1
 HDW 0.78 276 iP 21 56.22 -1.7
 LON 0.82 175 eP 21 56.90 -1.7
 BLN 0.84 302 eP 21 56.95 -2.1
 OHW 0.87 331 eP 21 57.57 -1.9
 CMW 0.87 351 iPd 21 58.29 -1.4
 WPW 0.90 164 eP 21 58.49 -1.8
 RPW 0.92 16 iPd 21 59.00 -1.5
 LMW 0.94 197 eP 21 59.15 -1.8
 TBM 0.97 114 eP 22 00.45 -1.0
 SMW 1.01 256 eP 22 00.29 -1.7
 GLK 1.02 169 iP 22 00.95 -1.4
 CPW 1.03 235 iP 22 00.51 -1.9
 APW 1.05 209 iP 22 00.90 -1.8
 CWZ 1.08 184 iP 22 01.56 -1.7
 NAC 1.11 138 eP 22 02.64 -1.2
 EBG 1.12 125 eP 22 03.32 -0.7
 KOSW 1.12 190 eP 22 02.25 -1.8
 NLW 1.17 64 eP 22 03.36 -1.5
 CZM 1.21 200 eP 22 03.56 -1.8
 eS 22 20.26
 MBW 1.22 0 iP 22 04.24 -1.4
 TDL 1.24 190 eP 22 04.04 -2.0
 MCW 1.27 331 eP 22 04.30 -2.3
 ERK 1.30 193 eP 22 05.05 -2.0
 SOSW 1.34 187 eP 22 05.58 -2.2
 STD 1.35 189 eP 22 05.93 -2.0
 YEL 1.37 188 eP 22 06.54 -1.9
 SHW 1.39 190 eP 22 07.10 -1.6
 YAKW 1.41 138 eP 22 07.60 -1.2
 BMW 1.42 220 iP 22 06.92 -2.1
 JLK 1.43 187 eP 22 07.42 -1.8
 ASR 1.43 171 eP 22 07.90 -1.4
 ONR 1.45 242 eP 22 07.94 -1.5
 DPW 2.52 82 eP 22 22.80 -2.0
 44 obs. associated

& JAN 19, 1989 12h 34m 12.68s
 47.569 N 121.900 W
 DEPTH = 2.5km
 WASHINGTON (29)
 <SEA>. ML 2.7 (SEA). Felt (111)
 at Snoqualmie. Also felt in the
 Carnation, Fall City, Preston
 and Tiger Mountain areas.

RMW 0.13 150 iPd 34 15.57 0.3
 eS 34 18.32
 SPW 0.23 266 iP 34 17.95 0.6
 HTW 0.25 21 iPd 34 17.51 -0.2
 BLH 0.28 342 iPd 34 18.22 -0.1
 GSM 0.37 169 iPc 34 19.85 -0.3
 eS 34 25.69
 PGW 0.54 298 eP 34 22.98 -0.4
 GHW 0.59 206 eP 34 23.51 -0.9
 GMW 0.60 268 eP 34 23.84 -0.8
 JCW 0.63 358 iPd 34 24.17 -1.0
 MEW 0.63 234 eP 34 25.12 -0.1
 RVC 0.63 184 iP 34 24.29 -0.9
 FMW 0.66 166 eP 34 24.57 -1.2
 HDW 0.79 276 eP 34 26.66 -1.7
 LON 0.82 176 eP 34 27.30 -1.8
 BLN 0.85 302 eP 34 27.39 -2.1
 OHW 0.87 331 eP 34 28.00 -2.0
 CMW 0.87 350 iPd 34 28.74 -1.4
 WPW 0.90 164 eP 34 28.88 -1.9

RPW 0.92 16 iPd 34 29.43 -1.5
 LMW 0.94 197 eP 34 29.46 -2.0
 TBM 0.97 114 eP 34 30.81 -1.1
 SMW 1.01 256 eP 34 30.77 -1.8
 GLK 1.03 169 eP 34 31.31 -1.5
 CPW 1.03 235 eP 34 30.95 -1.9
 APW 1.05 209 eP 34 31.31 -1.9
 CWZ 1.08 184 eP 34 32.02 -1.7
 NAC 1.11 138 eP 34 33.17 -1.1
 EBG 1.12 126 eP 34 33.70 -0.7
 KOSW 1.13 190 eP 34 32.61 -1.9
 NLW 1.17 64 eP 34 34.19 -1.1
 CZM 1.21 200 eP 34 34.00 -1.9
 MBW 1.22 0 iP 34 34.68 -1.4
 TDL 1.24 190 eP 34 34.47 -2.0
 OSD 1.24 282 eP 34 35.63 -1.0
 MCW 1.27 331 eP 34 35.01 -2.0
 ERK 1.30 194 eP 34 35.27 -2.3
 STW 1.33 297 eP 34 35.11 -2.8
 SOSW 1.34 187 eP 34 36.14 -2.1
 STD 1.35 190 eP 34 36.70 -1.7
 OBH 1.36 260 eP 34 37.68 -0.8
 YEL 1.37 188 eP 34 37.09 -1.8
 SHW 1.40 190 eP 34 37.67 -1.5
 YAKW 1.41 138 eP 34 38.14 -1.1
 FL2 1.41 193 eP 34 37.03 -2.3
 BMW 1.42 220 eP 34 37.33 -2.2
 JLK 1.43 187 eP 34 37.82 -1.9
 ASR 1.43 171 eP 34 38.25 -1.5
 VTC 1.44 114 eP 34 39.22 -0.5
 ONR 1.45 242 eP 34 38.43 -1.5
 DPW 2.51 82 eP 34 53.50 -1.8
 50 obs. associated

? JAN 19, 1989 12h 46m 39.82 ± 8.80s
 44.742 N ± 52.0km 28.167 E ± 45.8km
 DEPTH = 10.0km (geophysicist)
 ROMANIA (358)

CFR 0.44 359 iPd 46 48.00 -0.8
 BRD 1.11 315 ePd 47 01.50 0.9
 VRI 1.52 318 ePd 47 06.00 -1.0
 PPE 1.52 345 eP 47 08.50 1.4
 MLR 1.74 296 ePc 47 10.00 -0.4
 S.D. = 1.5 on 5 of 5 obs.

? JAN 19, 1989 13h 37m 03.76 ± 3.12s
 28.501 N ± 35.3km 84.175 E ± 11.7km
 DEPTH = 29.6 ± 10.2 km
 NEPAL (310)

GKN 0.64 140 P 37 16.60 0.0
 0.4s 8.00nm
 KKN 1.21 126 P 37 25.10 0.2
 0.5s 11.00nm
 DMN 1.21 137 P 37 25.40 0.4
 0.4s 4.00nm
 PKI 1.43 130 P 37 27.50 -0.7
 0.4s 4.00nm
 GUN 1.61 111 P 37 31.00 0.1
 ROO 13.71 226 eP 40 18.50 0.0
 iS 43 42.00
 S.D. = 0.6 on 6 of 6 obs.

* JAN 19, 1989 13h 42m 23.46 ± 1.56s
 7.576 S ± 19.4km 128.829 E ± 14.3km
 DEPTH = 158.1 ± 39.2 km
 3.8mb (2 obs.)
 BANDA SEA (280)

TLE 4.34 64 ePd 43 29.00 -0.1
 eS 44 16.30
 MTN 5.71 157 iPd 43 48.30 1.1
 eS 44 50.00
 KUPT 5.76 243 ePd 43 48.00 0.1
 eS 44 46.70
 KNA 8.12 180 eP 44 19.00 -0.6
 eS 45 46.00
 WB5 13.36 157 eP 45 27.10 -1.0
 eS 47 49.70
 WRA 13.41 157 Pd 45 26.90 -1.8
 0.6s 1.30nm 3.5mb
 QIS 16.59 142 eP 46 09.00 0.6
 eS 49 05.00
 ASPA 16.72 164 iPc 46 11.70 1.7
 0.6s 5.00nm 4.0mb
 eS 49 12.10

S.D. = 1.5 on 8 of 8 obs.			DEPTH = 11.0km			0.9s 34.62nm																																																																		
* JAN 19, 1989 13h 53m 41.68± 1.13s			SOUTHERN CALIFORNIA (43)			BFS 150.28 318 iPKPd 25 17.00 3.6X																																																																		
5.767 S ±17.8km 149.595 E ±12.5km			<PAS-P>. ML 3.1 (PAS).			0.5s 14.08nm																																																																		
DEPTH = 23.0 ± 8.9 km						FRS 153.39 317 ePKP 25 31.50 13.9X																																																																		
4.5mb (3 obs.)						S.D. = 1.1 on 43 of 48 obs.																																																																		
NEW BRITAIN REGION (192)						* JAN 19, 1989 17h 12m 33.35± 0.94s																																																																		
						42.310 N ± 7.1km 13.398 E ± 9.9km																																																																		
						DEPTH = 13.3 ± 7.9 km																																																																		
						CENTRAL ITALY (381)																																																																		
						MD 2.2 (SSO).																																																																		
LAT 2.73 251 eP 54 27.00 2.0	PAS 0.44 58 iPd 48 09.30 -0.7	CIS 0.54 160 iPd 48 11.40 -0.7	MWC 0.56 57 iPd 48 11.50 -1.0	SCI 0.94 176 iPd 48 18.10 -0.8	SBB 1.01 40 iPd 48 19.30 -0.9	RVR 1.04 86 iPc 48 19.50 -1.1	ABL 1.05 332 eP 48 20.20 -0.8	PLM 1.57 111 eP 48 27.00 -2.1	BLP 1.61 294 eP 48 28.50 -1.0	BCH 1.75 317 eP 48 31.20 -0.4	NOP 2.99 42 eP 48 48.20 -1.2	GMN 3.55 18 eP 48 57.20 -0.3	BMTN 3.73 25 eP 48 59.90 -0.2	13 obs. associated	AQU 0.04 5 P 12 35.40 -0.7	ALP 0.49 16 iPg 12 43.52 0.2	iSg 12 51.61	MNS 0.54 278 P 12 43.80 -0.3	SDI 0.68 153 P 12 46.70 0.2	eSg 12 57.00	CIO 0.90 348 ePg 12 50.36 -0.1	eSg 13 06.73	ASS 0.93 325 P 12 51.60 0.7	eSn 13 07.30	S.D. = 0.7 on 6 of 6 obs.																																															
RAB 3.00 59 iPd 54 28.00 -0.9	iS 54 46.00	OIS 17.61 212 eP 57 45.00 -2.4	MTN 19.52 248 eP 58 10.00 -0.7	WB5 20.40 225 eP 58 18.20 -1.7	eScP 02 34.50	WRA 20.46 225 Pd 58 18.90 -1.6	0.5s 13.60nm 4.6mb	RMD 20.62 182 iPd 58 23.20 1.0	8RS 21.72 172 iPc 58 35.40 2.1	i 58 39.30	KNA 22.72 242 eP 58 44.00 0.7	DZM 22.98 136 iPd 58 51.10 5.1X	ASPA 23.34 219 iPd 58 50.70 1.3	0.6s 16.00nm 4.7mb	eS 02 55.30	BWA 28.54 182 eP 59 43.30 5.5X	WARB 29.88 225 eP 59 38.00 -12.0X	MBL 32.64 239 eP 00 14.50 0.2	MEKA 36.15 232 eP 00 46.00 1.6	S.D. = 1.6 on 16 of 20 obs.	JAN 19, 1989 17h 28m 17.86± 0.43s	38.124 N ± 9.0km 39.585 E ± 5.1km	DEPTH = 10.0km (geophysicist)	4.3mb (5 obs.)	TURKEY (366)	MSL 3.33 120 ePn 29 11.50 0.4	ePg 29 20.50	iSn 30 05.00	iSg 30 15.00	KVT 4.02 318 iP 29 19.60 -1.3	IKL 5.07 250 eP 29 35.00 -0.7	BHL 5.28 218 Pn 29 39.00 0.2	Sn 31 10.00	TAB 5.32 89 eP 29 51.00 11.6X	SLY 5.37 116 ePnd 29 40.00 0.1	i 30 03.00	iSn 31 11.50	iS* 31 40.00	iSg 32 01.50	BBTK 5.59 290 eP 29 43.00 -0.2	e 29 53.00	BHD 6.22 140 ePn 30 16.50 24.6X	eP* 30 29.00	eSn 31 25.00	eS* 31 43.00	MAIO 15.97 90 eP 32 05.00 0.8	ZST 19.18 309 eP 32 43.70 -0.3	KBA 21.21 303 i(P) 33 06.70 0.7	1.1s 6.10nm 3.9mb	KHC 21.70 309 eP 33 13.10 2.4	GKN 38.76 91 P 35 43.40 -0.9	0.6s 7.00nm 4.5mb	DMN 39.31 92 P 35 48.90 -0.1	KKN 39.36 91 P 35 49.40 0.0	0.7s 3.00nm 4.1mb	PKI 39.56 92 P 35 50.80 -0.4	0.7s 6.00nm 4.4mb	GUN 39.78 91 P 35 52.60 -0.5	0.8s 13.00nm 4.7mb	S.D. = 0.9 on 15 of 17 obs.												
BLLO 3.28 244 eP 54 32.50 -0.4	LMG 3.43 205 iPd 54 33.20 -2.0	PMG 4.35 214 iPd 54 48.00 -0.1	MNDI 5.92 266 e(P) 55 18.00 7.6X	CTA 14.60 193 iPc 57 09.80 0.9	JAN 19, 1989 17h 05m 29.64± 0.40s	51.566 N ± 9.7km 175.197 W ± 4.8km	DEPTH = 33.0km (normal)	4.8mb (13 obs.)	ANDREANOF ISLANDS, ALEUTIAN IS. (7)	ADK 0.98 290 iP 05 49.60 2.6	SMY 6.69 284 eP 07 06.50 -1.5	SDN 9.55 61 eP 07 47.40 -0.3	KDC 14.48 56 eP 08 52.70 -1.2	TTA 15.33 35 eP 09 06.40 1.4	PMR 17.39 45 eP 09 32.10 1.1	IMA 18.16 29 eP 09 43.00 2.4	1.0s 15.90nm 4.1mb	FBA 19.44 36 eP 09 55.00 -0.8	BRW 21.49 16 eP 10 18.00 1.0	INK 26.03 34 eP 11 01.00 0.1	MBC 32.60 22 eP 11 59.00 -0.6	0.7s 5.00nm 4.5mb	YKA 33.46 47 eP 12 07.40 0.2	LON 34.59 26 eP 12 18.30 1.1	MAT 36.04 264 eP 12 30.00 0.4	1.0s 13.00nm 4.8mb	DPW 36.24 73 eP 12 32.20 1.0	KVN 41.04 85 eP 13 12.50 1.0	SNY 41.96 282 Pd 13 19.80 1.1	BW06 44.09 75 iPc 13 37.00 0.6	0.6s 16.28nm 5.0mb	e 13 44.00	BJI 47.53 284 eP 14 04.00 0.7	GOL 48.46 75 eP 14 11.40 0.4	ALO 50.85 81 e(P) 14 29.00 -0.2	FRB 51.67 33 eP 14 33.00 -1.8	XAN 55.82 283 eP 15 04.70 -1.2	GTA 57.57 294 eP 15 17.50 -0.9	SCH 58.47 40 eP 15 23.00 -1.3	GYA 62.53 279 P 15 52.00 -0.5	GBTN 63.59 65 eP 15 58.20 -1.0	BLA 64.60 62 eP 16 05.70 -0.1	0.7s 23.39nm 5.4mb	CVL 65.11 60 eP 16 08.80 -0.2	PRM 65.78 65 eP 16 12.80 -0.6	JSC 66.27 64 eP 16 16.00 -0.5	LHS 66.37 64 eP 16 16.50 -0.6	HFS 68.42 355 eP 16 27.10 -2.6	0.4s 1.10nm 4.3mb	SHL 72.15 289 iP 16 53.20 0.2	GUN 73.85 294 P 17 03.20 0.0	0.4s 20.00nm 5.5mb	KKN 74.29 295 P 17 05.40 -0.1	0.5s 6.00nm 4.8mb	PKI 74.38 295 P 17 05.60 -0.6	0.4s 2.00nm 4.5mb	GKN 74.49 295 P 17 06.40 -0.2	0.4s 8.00nm 5.1mb	DMN 74.52 295 P 17 07.00 0.0	0.5s 7.00nm 4.9mb	MTN 79.16 233 eP 17 33.00 0.5	0.7s 51.00nm 5.6mb	WB5 83.68 227 eP 17 56.90 0.8	WRA 83.75 227 Pc 17 57.10 0.6	0.6s 2.00nm 4.4mb	HYB 86.24 293 eP 18 09.00 -0.2	SLR 148.62 316 iPKPc 25 14.50 3.6X	1.0s 32.00nm	WIN 149.52 337 iPKPc 25 17.40 5.0X	0.6s 20.00nm	PRY 150.01 316 iPKPd 25 17.90 4.9X	S.D. = 0.9 on 8 of 9 obs.
BLLO 3.28 244 eP 54 32.50 -0.4	LMG 3.43 205 iPd 54 33.20 -2.0	PMG 4.35 214 iPd 54 48.00 -0.1	MNDI 5.92 266 e(P) 55 18.00 7.6X	CTA 14.60 193 iPc 57 09.80 0.9	0.9s 7.56nm 4.2mb	OIS 17.61 212 eP 57 45.00 -2.4	MTN 19.52 248 eP 58 10.00 -0.7	WB5 20.40 225 eP 58 18.20 -1.7	eScP 02 34.50	WRA 20.46 225 Pd 58 18.90 -1.6	0.5s 13.60nm 4.6mb	RMD 20.62 182 iPd 58 23.20 1.0	8RS 21.72 172 iPc 58 35.40 2.1	i 58 39.30	KNA 22.72 242 eP 58 44.00 0.7	DZM 22.98 136 iPd 58 51.10 5.1X	ASPA 23.34 219 iPd 58 50.70 1.3	0.6s 16.00nm 4.7mb	eS 02 55.30	BWA 28.54 182 eP 59 43.30 5.5X	WARB 29.88 225 eP 59 38.00 -12.0X	MBL 32.64 239 eP 00 14.50 0.2	MEKA 36.15 232 eP 00 46.00 1.6	S.D. = 1.6 on 16 of 20 obs.	? JAN 19, 1989 14h 16m 22.34± 6.22s	58.171 N ± 48.0km 6.400 E ± 17.2km	DEPTH = 0.0km (geophysicist)	SOUTHERN NORWAY (535)	MD 2.4 (BER). Probable explosion.	KMY 1.21 331 eP 16 45.60 -0.1	eS 17 01.30	BLS1 1.24 10 eP 16 46.30 -0.1	eS 17 03.60	ODD1 1.75 4 iP 16 54.80 0.6	iS 17 16.60	HYA 3.01 358 iP 17 11.80 -0.3	eS 17 48.70	NRA0 3.67 43 iP+ 17 21.50 -0.1	iS 18 04.20	iSg 18 16.10	S.D. = 0.5 on 5 of 5 obs.	? JAN 19, 1989 14h 43m 33.61± 1.65s	10.972 N ± 10.3km 62.348 W ± 30.9km	DEPTH = 123.3 ± 19.3 km	NEAR COAST OF VENEZUELA (97)	TCE 0.64 115 iP 43 52.24 -0.9	TRN 0.98 109 iP 43 55.72 -0.3	eS 44 07.95	TPP 1.10 126 eP 43 57.34 0.2	GRW 1.36 30 eP 44 01.10 1.0	PIG 1.49 83 iP 44 02.13 0.6	eS 44 21.80	BOT 1.61 83 iP 44 03.13 0.2	SVB 2.52 25 eP 44 15.22 0.8	eS 44 47.36	SVV 2.58 25 eP 44 16.08 0.9	BIM 3.74 19 iP 44 29.02 -1.6	MVM 3.83 22 iPd 44 30.32 -1.5	FDV 3.92 17 iPd 44 31.37 -1.7	S 45 12.10	CRM 4.01 20 eP 44 32.98 -1.3	DSVT 4.34 13 eP 44 40.11 1.5	DTMT 4.35 13 eP 44 40.47 1.6	BBL 4.60 11 eP 44 48.00 5.7X	YKA 63.48 336 eP 53 52.60 0.3	S.D. = 1.3 on 15 of 16 obs.	& JAN 19, 1989 14h 48m 01.10s	33.920 N 118.620 W				

19d 18h

* JAN 19, 1989 18h 30m 47.75± 1.72s
6.172 S ± 15.5km 133.824 E ± 18.7km
DEPTH = 33.0km (normal)
4.1mb (3 obs.)

AROE ISLANDS REGION (204)

AAI 6.13 293 eP 32 18.50 0.1
MTN 7.14 202 iPd 32 34.10 1.4
... TZZ 7.42 83 eP 31 46.00 -50.5X
... KNA 10.73 207 eP 33 21.00 -1.3
... WRA 13.70 178 P 34 02.00 -0.1
... OIS 15.36 159 eP 34 24.00 0.1
... ASPA 17.39 180 iPd 34 49.50 -0.2
... CTA 18.36 140 eP 35 08.00 6.3X
... RAB 18.38 85 iPc 35 40.50 38.6X
... WARB 21.05 198 eP 35 20.00 -11.4X
... SPA 83.87 180 e(P) 43 15.30 -0.1
S.D. = 1.0 on 7 of 11 obs.

* JAN 19, 1989 19h 52m 25.37± 0.82s
30.913 S ± 6.6km 116.911 E ± 9.8km
DEPTH = 10.0km (geophysicist)
WESTERN AUSTRALIA (590)

BAL 0.35 330 eP 52 32.30 -0.3
WA4 0.41 41 eP 52 33.80 0.0
KLB 0.99 133 eP 52 44.10 -0.1
MRWA 1.87 335 eP 52 58.00 0.4
NWAO 2.03 172 eP 53 00.00 0.0
S.D. = 0.4 on 5 of 5 obs.

JAN 19, 1989 20h 35m 41.12± 0.42s
18.848 S ± 4.1km 67.210 W ± 5.6km
DEPTH = 236.4 ± 4.3 km
4.6mb (17 obs.)

BOLIVIA (120)

CCH 1.78 35 iPd 36 22.70 1.6
CNCB 2.16 340 iPc 36 26.00 1.1
LPB 2.45 340 iPc 36 29.00 1.2
ZOBO 2.71 341 iPc 36 31.10 0.5
Z 18s 1.56um
... ARE 4.72 300 iPc 36 52.70 -1.2
... ANT 5.68 211 iPd 37 03.30 -2.3
... TCA 12.66 170 ePc 38 33.60 -0.8
... ITB1 13.23 118 Pd 38 42.00 0.5
... ITB 13.44 118 e(P) 38 42.00 -2.1
... ITB7 13.60 120 e(P) 38 40.80 -5.3X
... JACH 14.11 192 iPd 38 54.40 2.1
... PEL 14.57 192 iPd 38 57.00 -1.0
... FCH 14.68 190 eP 39 00.50 0.9
... SAN 14.87 191 eP 39 02.00 0.4
... PCH 15.01 191 eP 39 02.00 -1.3
... CHCH 15.34 191 iP 39 08.40 1.2
... LNV 15.51 193 eP 39 08.50 -0.7
... BAO 18.63 83 eP 39 44.00 0.3
... VBA 19.67 168 e(P) 39 52.60 -1.4
... ITA 21.35 103 eP 40 11.40 0.4
... BMA 21.89 104 eP 40 16.50 0.6
... JSC 54.50 346 P 44 45.00 -1.6
... PRM 54.58 345 P 44 45.00 -2.3
... LHS 54.59 346 P 44 45.00 -1.8
... OLY 58.75 337 P 45 14.50 -2.0
... POW 59.22 337 P 45 17.60 -2.1
... VVO 60.30 333 eP 45 26.30 -0.8
... FVM 60.60 339 P 45 27.10 -2.0
... RLO 60.71 334 iP 45 29.60 -0.3

TUL 60.82 334 eP 45 29.70 -0.9
LNO 60.82 334 iPd 45 29.20 -1.3
SIO 60.90 333 e(P) 45 28.90 -2.2
RSNY 63.44 354 P 45 46.90 -0.8
ALQ 65.20 325 eP 45 58.70 -0.8
LIC 66.12 74 P 46 04.10 -1.4
TIC 66.30 74 P 46 05.30 -1.3
KIC 66.44 74 P 46 05.90 -1.6
GLD 68.24 329 P 46 18.40 0.0
GOL 68.27 329 P 46 18.40 -0.4
BAR 69.72 317 eP 46 28.00 0.5
TPC 70.25 318 eP 46 31.00 0.4
KUK 70.37 76 P 46 30.50 -1.2
RVR 71.01 318 eP 46 35.00 -0.2
GSC 71.50 319 eP 46 39.00 0.9
MWC 71.60 317 eP 46 39.00 0.1
SBB 71.74 318 eP 46 39.00 -0.6
DAU 71.80 326 P 46 40.60 0.5
CLC 72.32 319 eP 46 43.00 0.1
DUG 72.48 325 P 46 44.20 0.4
BW06 72.66 329 P 46 44.60 -0.3
ABL 72.74 317 P 46 46.20 0.6
RSON 73.21 343 P 46 46.30 -1.4
SCH 73.37 0 eP 46 48.00 -0.5
BCH 73.50 317 P 46 50.80 1.0
TNP 73.56 321 P 46 51.00 0.8
PHAM 74.10 317 P 46 54.30 1.1
KVN 74.71 321 P 46 57.40 0.6
ARN 75.75 318 P 47 03.50 1.0
LRM 76.30 329 eP 47 06.30 0.6
ORV 77.07 320 P 47 11.20 1.5
LBFM 78.41 321 P 47 18.00 0.7
SES 79.02 333 ePd 47 19.70 -0.5
FFC 79.06 340 eP 47 20.00 -0.3
FHC 79.34 320 P 47 23.70 1.6
DPW 80.57 328 P 47 29.20 0.8
LON 81.72 325 P 47 34.80 0.4
EDM 82.07 334 iPd 47 35.50 -0.6
RMW 82.16 326 P 47 36.90 0.2
PNT 82.23 328 ePd 47 38.00 1.1
BMW 82.31 325 P 47 38.70 1.2
FRB 82.33 359 eP 47 36.00 -1.0
GMW 82.73 326 P 47 40.00 0.4
MCW 83.46 327 P 47 44.00 0.8
LFF 88.48 41 eP 48 08.30 0.5
LPO 88.64 42 eP 48 09.20 0.6
MFF 88.75 39 eP 48 09.40 0.4
YKA 89.24 340 eP 48 11.60 0.6
CAF 89.31 42 eP 48 12.10 0.4
TCF 90.03 40 eP 48 15.00 0.0
MAF 90.22 41 eP 48 16.30 0.5
BGF 90.54 40 eP 48 17.50 0.2
SMF 91.20 41 eP 48 20.80 0.5
ATN 95.88 52 P 49 00.90 18.9X
WRA 136.04 210 PKPd 54 21.60 -14.8X
WB5 136.08 210 ePKP 54 22.20 -14.3X
NDI 146.11 66 ePKP 54 55.00 1.0
WMO 147.39 35 PKP 54 57.00 1.3
HYB 147.46 87 iPKPc 55 00.10 3.7X
MAT 151.55 313 iPKPd 55 08.70 6.5X
GKN 152.66 65 PKP 55 05.60 1.4
CN2 152.94 340 ePKP 55 11.50 7.6X
DMN 153.15 66 PKP 55 06.10 1.0
KKN 153.26 65 PKP 55 06.40 1.3

PKI 153.43 66 PKP 55 06.40 0.9
GUN 153.75 65 PKP 55 07.30 1.3
GTA 156.63 26 ePKP 55 10.60 1.4
S.D. = 1.1 on 89 of 96 obs.

* JAN 19, 1989 21h 34m 13.05± 2.28s
30.382 N ± 22.0km 131.070 E ± 10.2km
DEPTH = 60.8 ± 15.7 km
4.6mb (2 obs.)

KYUSHU, JAPAN (235)

KAGJ 0.82 349 P 34 26.70 -2.2
KUMJ 2.16 355 P 34 47.00 -0.2
SHNJ 3.73 0 eP 35 10.70 1.3
TSRJ 6.59 37 P 35 50.20 0.7
MTMJ 8.36 40 eP 36 23.70 9.6X
SSE 8.54 277 eP 36 17.50 1.1
MAT 8.56 42 (P) 36 17.00 0.2
CHJJ 8.72 48 P 36 19.30 0.4
CN2 14.12 343 eP 37 39.60 8.3X
Z 16s 0.40um
BJI 15.51 312 eP 40 16.00
TIY 17.07 300 eP 38 10.40 1.3
XAN 19.09 287 eP 38 30.00 -3.6X
GYA 21.81 266 P 39 01.40 -0.4
LZH 23.43 291 eP 39 19.50 1.8
CD2 23.49 278 eP 39 18.20 0.1
GTA 27.06 298 eP 39 50.00 -1.8
GUN 39.35 278 P 41 38.70 0.1
KKN 39.89 278 P 41 42.60 -0.4
GKN 40.39 279 P 41 46.40 -0.6
KJF 68.59 333 eP 45 10.00 -1.1
SUF 69.87 332 eP 45 19.00 0.0
HFS 76.30 333 eP 45 56.80 0.1
S.D. = 1.1 on 18 of 22 obs.

& JAN 19, 1989 21h 36m 38.40s
48.071 N 70.960 W
DEPTH = 30.0km
SOUTHERN QUEBEC (447)
<OTT-P>. mbLg 3.9 (OTT), 3.9 (NEIS). Felt in the Chicoutimi area.

CBM 2.24 120 eP 37 15.30 1.2
MIM 3.12 154 eP 37 28.50 1.8
BNH 3.49 183 eP 37 33.00 1.1
GAC 3.90 234 eP 37 37.00 -0.7
RSNY 4.30 216 eP 37 42.00 -1.5
PTN 4.47 220 eP 37 44.00 -1.9
SCH 7.24 20 eP 38 23.00 -1.8
7 obs. associated

& JAN 19, 1989 22h 01m 57.90s
33.920 N 118.640 W
DEPTH = 12.0km
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 3.8 (PAS). Felt (V) at Canoga Park; (IV) at Inglewood, Lomita, Pacific Palisades and Venice; (III) at Gardena, Harbor City, Hawthorne, Huntington Park, Long Beach, Los Angeles, Malibu, Redondo Beach, Santa Monica and Westchester.

PAS 0.45 60 iPd 02 06.30 -0.9
CIS 0.55 159 iPd 02 08.10 -0.9
MWC 0.57 58 iPd 02 08.50 -1.0
SCI 0.94 175 iPd 02 14.60 -1.0
SBB 1.02 41 iPd 02 16.20 -0.9
ABL 1.05 333 eP 02 16.90 -0.7
RVR 1.05 86 iPc 02 16.30 -1.3
PLM 1.59 110 ePc 02 23.70 -2.3
BLP 1.59 294 eP 02 24.60 -1.3
BCH 1.74 317 eP 02 27.50 -0.6
ISA 1.74 4 eP 02 28.20 0.0
GSC 2.05 47 iPd 02 32.10 -0.5
CLC 2.08 24 iPc 02 32.20 -0.8
PHAM 2.40 323 eP 02 36.30 -1.3
OSM 2.51 35 iPc 02 38.20 -0.9

GWY	2.78	35	eP	02 41.80	-1.4
MCA	2.94	22	eP	02 44.50	-0.8
NOP	3.00	42	iPc	02 45.00	-1.2
TMO	3.05	19	eP	02 46.40	-0.6
FMT	3.11	29	eP	02 46.80	-1.0
GVN	3.25	19	eP	02 49.60	-0.2
JON	3.26	39	eP	02 48.90	-1.0
YMT2	3.36	31	eP	02 50.50	-0.8
YMT3	3.39	32	eP	02 50.90	-0.9
YMT1	3.40	30	eP	02 51.20	-0.7
LCH	3.40	13	eP	02 51.70	-0.3
LSM	3.41	34	eP	02 51.30	-0.8
YMT4	3.42	31	eP	02 51.40	-0.9
YMT6	3.45	31	eP	02 52.00	-0.7
YMT5	3.47	30	eP	02 51.90	-1.0
CDH1	3.49	32	eP	02 52.40	-0.8
PPK	3.55	9	eP	02 53.90	-0.2
GMN	3.56	18	eP	02 53.80	-0.4
LOP	3.56	34	eP	02 54.40	0.2
SPRG	3.61	39	eP	02 53.70	-1.2
MGM	3.63	15	eP	02 55.30	-0.1
SAO	3.65	322	eP	02 53.00	-2.4
CPX	3.67	34	eP	02 55.00	-0.8
BGB	3.68	32	eP	02 55.00	-1.0
SHRG	3.85	47	eP	02 57.40	-0.9
SVP	3.85	10	eP	02 58.40	-0.1
GLR	3.91	32	eP	02 58.40	-0.7
MZP	3.91	15	eP	02 58.90	-0.4
BLT	4.10	29	eP	03 01.70	-0.2
GMR	4.13	34	eP	03 02.00	-0.3
KRNA	4.23	25	eP	03 03.20	-0.6
TNP	4.31	15	eP	03 04.70	-0.2
CMB	4.34	341	eP	03 04.20	-1.1
TPU	4.41	33	eP	03 05.20	-1.1
OCS	4.43	29	eP	03 05.80	-0.8
PRN	4.54	39	eP	03 07.50	-0.7
MTI	4.64	35	eP	03 08.50	-1.1
HCR	4.66	22	eP	03 09.10	-0.8
NPN	4.79	38	eP	03 10.80	-0.9
DLM	4.86	40	eP	03 11.70	-1.0
SRG	4.90	35	eP	03 12.50	-0.8
KVN	5.14	5	eP	03 16.30	-0.3
MBC	42.41	360	eP	09 53.00	-0.4
58 obs. associated					

& JAN 19, 1989 22h 09m 41.70s
 33.920 N 118.640 W
 DEPTH = 12.0km
 SOUTHERN CALIFORNIA (43)
 <PAS> ML 3.5 (PAS). Felt in
 the Los Angeles area.

PAS	0.45	60	iPd	09 50.10	-0.9
CIS	0.55	159	iPd	09 52.00	-0.8
MWC	0.57	58	iPd	09 52.30	-1.0
SCI	0.94	175	eP	09 58.50	-0.9
SBB	1.02	41	iPd	10 00.00	-0.9
ABL	1.05	333	eP	10 00.50	-0.9
BLP	1.59	294	eP	10 08.40	-1.3
BCH	1.74	317	eP	10 11.40	-0.5
PHAM	2.40	323	eP	10 20.30	-1.1
OSM	2.51	35	eP	10 22.00	-0.9
GWY	2.78	35	eP	10 25.50	-1.5
TMO	3.00	42	eP	10 28.70	-1.3
NOP	3.05	19	eP	10 30.40	-0.4
FMT	3.11	29	eP	10 30.50	-1.1
GVN	3.25	19	eP	10 33.50	-0.1
JON	3.26	39	eP	10 32.40	-1.3
YMT2	3.36	31	eP	10 34.50	-0.6
YMT3	3.39	32	eP	10 34.00	-1.6
YMT1	3.40	30	eP	10 35.00	-0.7
LCH	3.40	13	eP	10 35.40	-0.4
LSM	3.41	34	eP	10 34.20	-1.7
YMT4	3.42	31	eP	10 35.30	-0.8
YMT6	3.45	31	eP	10 35.50	-1.0
CDH1	3.49	32	eP	10 36.30	-0.7
PPK	3.55	9	eP	10 37.50	-0.4
GMN	3.56	18	eP	10 37.60	-0.4
LOP	3.56	34	eP	10 37.50	-0.5
SPRG	3.61	39	eP	10 37.50	-1.2
SHRG	3.85	47	eP	10 41.20	-0.9
SVP	3.85	10	eP	10 42.00	-0.3
GLR	3.91	32	eP	10 42.30	-0.6
BLT	4.10	29	eP	10 45.20	-0.5
GMR	4.13	34	eP	10 46.00	-0.1
TNP	4.31	15	eP	10 49.00	0.3
CMB	4.34	341	eP	10 49.00	-0.1

PRN	4.54	39	eP	10 51.30	-0.7
NPN	4.79	38	eP	10 54.60	-0.9
DLM	4.86	40	eP	10 55.50	-1.0
38 obs. associated					

JAN 19, 1989 22h 32m 16.22± 0.79s
 38.852 N ± 6.4km 22.989 E ± 10.1km
 DEPTH = 10.0km (geophysicist)

GREECE (364)
 ML 2.8 (ATH).

NEO	0.49	22	ePb	32 26.80	0.6
ATH	1.05	147	ePn	32 36.00	0.0
			eSn	32 51.70	
LIT	1.31	343	ePnd	32 40.10	-0.3
PLG	1.56	13	ePn	32 43.50	-0.6
KZN	1.73	327	ePn	32 46.90	0.3
THE	1.78	359	ePn	32 47.00	-0.2
KNT	2.31	358	ePn	32 54.70	-0.2
VAY	2.49	353	ePn	32 57.30	-0.1
OHR	2.81	324	ePn	33 02.40	0.3
S.D. = 0.4 on 9 of 9 obs.					

* JAN 19, 1989 23h 54m 42.35± 1.62s
 39.002 N ± 15.8km 142.620 E ± 20.8km
 DEPTH = 33.0km (normal)
 NEAR EAST COAST OF HONSHU, JAPAN(228)
 Felt (1 JMA) at Miyako.

OFUJ	0.75	276	iPd	54 55.40	-1.0
			S	55 05.00	
MIY	0.82	322	P	55 08.60	11.2X
YAMJ	2.19	249	P	55 16.40	-0.7
			S	55 42.60	
NIJ	3.35	239	P	55 35.60	1.9
KAKJ	3.40	216	P	55 32.80	-1.6
			eS	56 10.90	
CHJJ	4.12	225	P	55 44.50	-0.1
MAT	4.27	236	eP	55 48.00	1.3
			0.7s	14.38nm	
			eS	56 56.00	
KUSJ	4.39	20	eP	55 48.50	0.2
			eS	56 37.40	
S.D. = 1.5 on 7 of 8 obs.					

* JAN 20, 1989 01h 37m 15.01± 0.77s
 6.072 S ± 11.8km 102.519 E ± 12.9km
 DEPTH = 33.0km (normal)
 4.7mb (6 obs.) 3.7msz (1 obs.)
 SOUTHWEST OF SUMATERA (273)

KSI	2.42	2	eP	37 53.00	-0.2
			eS	38 22.50	
			e	38 42.00	
KLI	2.62	63	iP	37 52.50	-3.4X
TPI	6.09	57	ePc	38 46.00	0.9
			e	43 00.00	
CHG	24.98	352	iPd	42 35.10	-2.2
			1.0s	12.50nm	4.5mb
SHL	33.10	342	iP	43 48.70	-1.7
WRA	33.84	117	Pc	43 56.00	-0.8
			0.8s	3.70nm	4.4mb
WB5	33.85	117	eP	43 56.20	-0.6
ASPA	34.88	123	eP	44 06.30	0.6
			Z 19s	0.15um	3.7msz
			LR	58 43.20	
PKI	37.31	334	P	44 26.90	0.4
			0.7s	7.00nm	4.6mb
GUN	37.41	335	P	44 28.20	0.9
			0.8s	42.00nm	5.4mb
DMN	37.48	334	P	44 28.70	0.9
KKN	37.56	334	P	44 29.10	0.7
			0.7s	17.00nm	5.0mb
GKN	38.02	334	P	44 33.20	1.0
QIS	38.73	115	eP	44 38.00	-0.2
XAN	40.35	8	eP	44 47.70	-3.7X
CTA	44.66	112	iPd	45 27.20	0.4
			1.0s	10.00nm	4.6mb
WMO	51.44	346	P	46 19.00	-0.2
CN2	53.79	20	Pc	46 32.60	-4.0X
			pP	46 45.00	44kmX
S.D. = 1.1 on 15 of 18 obs.					

JAN 20, 1989 01h 55m 18.00± 0.17s
 10.297 S ± 3.8km 74.885 W ± 3.9km
 DEPTH = 129.1km (9 depth phases)
 5.1mb (43 obs.)

PERU					(116)
ARE	6.96	152	eP	56 58.00	-1.1
			iS	58 28.10	
ZOBO	8.86	133	iPKPc	57 24.10	-0.9
Z	24s		1.96um		
			eLR	52 14.00	
LPB	9.05	134	PKPc	57 27.50	0.0
	1.0s		120.00nm		5.6mb
Z	20s		2.84um		
			eLR	52 08.00	
CNCB	9.32	135	ePKP	57 31.00	-0.2
CCH	11.03	131	ePKP	57 52.60	-0.9
SDV	19.52	13	iPd	59 38.70	0.7
	0.8s		300.00nm		5.7mb
TOV	20.59	14	eP	59 48.70	0.0
	0.6s		117.60nm		5.5mb
			iS	03 42.70	
GUAC	21.72	21	eP	00 01.00	0.9
OLLA	21.72	22	eP	00 00.10	0.0
CAR	22.13	21	eP	00 05.00	0.9
LLAV	22.14	22	eP	00 05.00	0.8
TCA	23.01	157	ePd	00 14.80	2.3
PEL	23.06	171	iPd	00 14.50	1.6
			i	00 40.10	
ATB	23.54	74	Pc	00 16.30	-1.3
LNV	23.76	173	eP	00 14.00	-5.6X
TPP	24.45	34	eP	00 28.43	2.1
BAO	26.73	104	eP	00 46.80	-0.7
SVB	27.04	30	iP	00 48.76	-1.5
SVV	27.10	30	eP	00 49.21	-1.5
ITA	31.28	116	eP	01 23.70	-4.6X
			e	01 34.80	
BMA	31.86	117	e(P)	01 34.00	1.0
JSC	44.74	352	P	03 20.00	-0.1
			pP	03 33.10	49kmX
LHS	44.88	353	P	03 21.30	0.1
			pP	03 33.90	46kmX
TKL	46.47	350	P	03 33.00	-0.8
			pP	03 47.10	53kmX
GBTN	46.55	350	P	03 33.80	-0.6
			pP	03 48.20	55kmX
PWLA	46.73	345	P	03 34.30	-1.5
RSCP	46.75	348	P	03 35.30	-0.8
			0.7s	52.51nm	5.4mb
BLA	47.54	354	P	03 42.40	0.2
			0.6s	27.03nm	5.2mb
			pP	03 55.00	46kmX
NAV	47.68	354	P	03 43.20	-0.1
CVL	48.14	356	P	03 46.80	0.1
			pP	03 58.00	39kmX
OLY	48.17	342	P	03 45.90	-1.2
CBN	48.30	357	eP	03 48.00	0.1
POW	48.69	342	P	03 50.00	-1.0
FVM	50.18	344	P	04 01.20	-1.2
			pP	04 18.10	66kmX
PRIN	50.41	0	P	04 05.00	1.0
TBR	51.18	1	P	04 10.00	0.1
DHN	52.95	357	P	04 22.50	-0.6
ALO	54.02	328	iPd	04 31.00	-0.3
			0.8s	39.18nm	5.4mb
			e	05 01.00	
PTN	54.61	360	P	04 35.00	-0.2
BNH	54.73	3	P	04 36.40	0.3
MIM	55.53	5	P	04 42.10	0.3
GAC	55.74	359	ePd	04 43.30	0.0
			pP	04 53.50	33kmX
GLD	57.20	332	P	04 54.00	0.0
	1.0s		75.00nm		5.6mb
GOL	57.23	332	P	04 53.70	-0.6
	1.0s		47.50nm		5.4mb
CBM	57.29	6	P	04 54.60	0.3
GLA	57.50	320	eP	04 55.00	-1.1
			e	05 47.00	
BAR	58.44	319	eP	05 02.00	-0.6
			e	05 51.00	
TPC	58.96	320	eP	05 06.00	-0.3
			e	05 53.00	
PLM	58.99				

20d 02h

SPRG	60.53	323	P	05	17.00	0.0	LFF	0.9s	11.10nm	4.8mb	TIY	151.92	348	PKP	14	53.00	0.2	
DAU	60.64	329	P	05	18.00	0.1		87.22	44 eP	07 51.20	0.3	TIA	152.00	339	ePKP	14	53.50	0.6
GWY	60.71	322	P	05	17.80	-0.5		0.8s	5.30nm	4.6mb	GBA	152.73	80	PKPd	14	54.70	0.3	
STJ	60.89	17	eP	05	18.00	-1.1	GRR	87.24	40 eP	07 51.60	0.7		0.9s	7.50nm				
CLC	61.04	321	eP	05	20.00	-0.4		0.8s	9.10nm	4.8mb	LSA	156.70	32	PKP	15	01.50	1.4	
WRN	61.27	324	P	05	22.30	0.2	LPO	87.45	44 eP	07 52.20	0.2	N 19s	6.60um					
DUG	61.29	328	P	05	22.30	0.2		1.0s	12.00nm	4.8mb	E 20s	4.70um						
OCS	61.31	324	P	05	22.90	0.5	FLN	87.60	40 eP	07 53.00	0.4	DAV	159.53	263	ePKP	15	12.00	8.9X
BMTN	61.42	323	P	05	22.80	-0.4	CAF	88.12	44 eP	07 55.50	0.2	GYA	163.86	355	PKP	15	08.20	0.9
ISA	61.49	320	eP	05	23.00	-0.5		1.0s	6.80nm	4.6mb	N 15s	1.40um						
KRNA	61.57	323	P	05	24.20	0.1	LSF	88.14	42 eP	07 55.40	0.1	E 15s	2.00um					
BW06	61.59	332	P	05	23.30	-0.9		1.0s	12.00nm	4.9mb	S.D. = 0.8	on 160	of 171	obs.				
	1.0s	43.75nm				5.4mb	INK	88.53	341 iPd	07 57.30	0.6							
CTS	61.71	323	P	05	25.00	-0.1		0.7s	8.00nm	4.9mb								
	61.80	322	P	05	25.80	0.1			pP	08 30.00	126km							
HCR	61.93	324	P	05	26.90	0.4	TCF	88.60	43 eP	07 57.50	-0.1							
MZP	62.13	323	P	05	28.00	0.0		0.8s	6.70nm	4.7mb								
BCH	62.22	319	P	05	28.90	0.6	MAF	88.82	43 eP	07 58.70	0.1							
TNP	62.29	323	P	05	28.90	0.0		0.8s	9.40nm	4.9mb								
	1.0s	18.33nm				5.0mb	BGF	89.10	42 eP	07 59.80	-0.1							
PHAM	62.82	319	P	05	32.60	0.4		0.8s	20.10nm	5.2mb								
RSON	63.06	347	P	05	31.80	-1.7	AVF	89.50	42 eP	08 01.60	-0.1							
	0.8s	42.25nm				5.4mb		0.9s	8.10nm	4.8mb								
		pP	05	47.50	58kmX		SSF	89.67	42 eP	08 02.20	-0.3							
FRI	63.10	321	e(P)	05	32.40	-1.5		0.8s	2.60nm	4.4mb								
PRI	63.17	319	eP	05	34.60	-0.1	SMF	89.78	43 eP	08 03.10	0.0							
		ePP	06	07.50	136km			0.9s	12.10nm	5.0mb								
KVN	63.45	323	P	05	36.40	-0.1	LOR	89.96	42 eP	08 03.60	-0.3							
LLA	63.64	320	ePd	05	37.50	-0.1		0.8s	4.50nm	4.6mb								
		ePP	06	08.50	127km		LBF	89.96	42 eP	08 03.60	-0.3							
PRS	63.74	319	iPd	05	38.40	0.2		0.6s	4.50nm	4.7mb								
		ePP	06	09.50	128km		MBC	90.25	350 ePd	08 05.80	1.2							
CMB	64.17	321	ePd	05	40.90	-0.1		0.7s	30.00nm	5.5mb								
		ePP	06	13.70	136km				pP	08 38.00	124km							
		ePKKP	24	55.60			DOU	91.15	39 Pc	08 20.30	11.0X							
ARN	64.46	320	P	05	43.80	0.9		0.7s	8.90nm									
MHC	64.53	320	eP	05	44.00	0.5			e	08 41.60								
GCC	64.56	320	ePd	05	43.80	0.3	LPG	91.47	44 eP	08 10.30	-0.9	PAF	10.08	219	eP	06	18.50	-3.9X
BKS	65.23	320	ePd	05	48.50	0.7		0.8s	5.30nm	4.8mb								
	0.8s	47.00nm				5.5mb	PMR	91.61	333 P	08 11.00	-0.1	MAW	27.37	194	eP	09	41.00	-0.5
BRK	65.24	320	eP	05	48.00	0.2	WLF	92.03	40 P	08 25.10	11.8X	MBL	39.35	71	eP	11	26.00	0.1
LRM	65.26	332	ePd	05	47.80	-0.3	FBA	92.13	336 P	08 14.20	0.7	SLR	45.16	274	eP	12	14.50	1.0
ORV	65.80	322	ePd	05	52.20	0.8		1.0s	32.50nm	5.5mb								
		ePP	06	23.50	128km		CDF	92.47	41 eP	08 15.60	0.1	Z 20s	55.56nm					
		ePKKP	24	53.70			DAG	92.66	11 eP	08 15.80	0.1		20.57um					
MIN	66.35	323	eP	05	54.20	-0.9	FRS	93.67	121 eP	08 16.50	-4.9X	DNP	45.39	53	eP	12	29.50	14.3X
WDC	67.06	322	iPd	05	57.70	-1.7			i	12 19.00		BFS	45.63	272	e(P)	12	17.00	-0.2
		ePP	06	29.60	130km		BNG	94.15	86 iPc	08 24.20	0.3	PSI	47.62	26	ePc	12	35.00	2.2
LBFM	67.14	323	P	06	00.00	-0.2		0.4s	6.00nm	5.3mb								
FHC	68.06	322	eP	06	06.70	1.0	IMA	94.83	336 P	08 26.40	0.3	ASPA	48.07	85	iPd	12	35.50	-0.9
SES	68.15	336	iPd	06	05.80	-0.3	BFS	95.62	119 eP	08 29.50	-1.1		1.7s	57.00nm				
	0.6s	37.00nm				5.4mb	SEK	95.98	120 iPc	08 32.50	0.3	Z 21s	23.63um					
		pP	06	37.00	127km			0.6s	6.67nm	5.3mb								
FFC	68.68	344	iPd	06	08.20	-1.0	PRY	96.20	119 iPc	08 32.50	-0.8	BUL	48.23	280	iPc	12	37.80	0.1
	0.8s	20.00nm				5.0mb		0.7s	7.50nm	5.3mb		SPA	48.29	180	e(P)	12	37.30	-0.4
VGB	69.19	327	P	06	13.60	1.1	NAO	96.82	29 P	08 36.20	1.2		1.0s	58.50nm				
DPW	69.47	330	P	06	15.20	1.0		1.0s	7.40nm	5.1mb		Z 20s	30.54um					
LON	70.54	328	P	06	20.80	0.0	SLR	97.21	118 eP	08 37.00	-0.8	TAU	48.53	115	eP	12	49.00	9.4X
RMW	70.99	328	P	06	23.40	-0.1	APO	98.30	30 eP	08 42.40	0.8							
BMW	71.11	327	P	06	24.90	0.7		0.6s	1.40nm	4.7mb		STK	49.37	99	eP	12	46.00	-0.2
PNT	71.14	331	iPd	06	24.90	0.6	MAIO	131.35	50 ePKP	14 18.00	0.9	TOO	49.50	108	eP	12	48.00	0.8
	1.0s	63.00nm				5.4mb	WARB	138.13	210 ePd	11 27.50	-12.2X	WRA	50.63	82	P	12	57.00	1.0
EDM	71.25	337	iPd	06	24.00	-0.9							0.9s	17.00nm				
LIC	71.47	80	P	06	25.00	-1.9	WRA	138.39	224 PKPd	14 30.70	-0.1	WB5	50.69	82	eP	12	56.00	-0.4
GMW	71.56	328	P	06	27.00	0.2		0.6s	9.40nm									
TIC	71.57	79	P	06	26.20	-1.3	WMO	143.34	21 PKP	14 36.00	-2.9							
KIC	71.78	80	P	06	27.60	-1.1	SNY	144.65	336 PKPd	14 39.30	-1.8	SNG	52.38	26	eP	13	16.80	7.6X
	0.6s	22.00nm				5.1mb	KNA	145.10	222 iPcPd	14 41.60	-0.9	CMS	52.68	101	eP	13	11.00	-0.4
MCW	72.31	329	P	06	32.10	0.8		0.7s	92.00nm			MTN	52.90	72	eP	13	12.00	-1.1
PGC	72.60	329	eP	06	34.00	1.1	SHK	145.13	318 iPcP	14 41.80	-0.4	CAN	53.05	107	eP	13	14.80	0.6
FRB	73.98	3	ePd	06	40.10	-0.4		0.9s	134.45nm			BWA	53.08	106	eP	13	16.70	2.3
KUK	75.98	81	eP	06	52.60	-0.5	MTN	145.42	229 iPcPd	14 43.20	0.1	CNB	53.32	107	eP	13	16.00	-0.1
KOGH	76.08	81	eP	06	48.70	-5.0X		0.5s	135.00nm			QIS	54.16	86	eP	13	21.00	-1.4
YKA	78.80	342	P	07	07.60	0.0			e	15 13.00		GBA	55.28	357	P	13	31.00	0.6
EHOR	80.63	49	e(P)	07	19.40	1.5	MBL	145.56	205 iPcPd	14 42.80	-0.4		1.1s	11.00nm				
EBAN	81.84	49	e(P)	07	25.70	1.5	BJI	148.79	343 ePKP	14 48.50	0.6	RMO	57.53	98	eP	13	45.00	-1.7
TOL	82.23	47	iPc	07	22.00	-4.2X		Z 22s	3.10um	6.1msz		HYB	59.03	358	eP	13	54.50	-2.6
	1.0s	60.00nm				5.3mb		E 16s	1.10um			CTA	59.41	90	eP	13	59.00	-0.9
GUD	82.42	46	e(P)	07	29.00	1.7			i	14 51.50								
EVIA	82.94	49	e(P)	07	32.00	2.0			e	27 17.00								
ETOR	83.98	47	e(P)	07	37.00	1.8			e	28 33.00								
EPF	86.37	45	eP	07	50.50	3.5X	HHC	149.04	350 ePKP	14 49.70	1.3	BRS	59.98	101	iPc	13	56.30	-7.4X
	1.0s	8.00nm				4.6mb		Z 24s	6.50um	6.3mszX								
LPF	87.01	40	eP	07	50.20	0.4		N 19s	3.40um									
	0.8s	5.30nm				4.6mb	BTO	149.51	353 ePKP	14 54.00	4.9X							
MFF	87.14	42	eP	07	50.80	0.3	GTA	150.63	8 PKPd	14 51.30	0.4	NST	60.25	23	eP	14	06.00	0.6

* JAN 20, 1989 02h 03m 54.69± 0.46s
 41.906 S ±10.8km 79.930 E ± 8.5km
 DEPTH = 10.0km (geophysicist)
 5.3mb (7 obs.) 6.1msz (4 obs.)
 MID-INDIAN RISE (429)
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 15S, 36C
 Centroid Location:
 Origin Time 02:04: 2.4 0.3
 Lot 41.69S 0.04 Lon 79.46E 0.05
 Dep 15.0 FIX Half-duration 3.2
 Moment Tensor; Scale 10**17 Nm
 Mrr=-0.76 0.16 Mtt= 7.09 0.19
 Mff=-6.33 0.20

20d 03h

PLM 1.57 110 eP 25 48.50 -1.5
 BLP 1.61 294 eP 25 48.70 -1.7
 BCH 1.75 317 eP 25 51.80 -0.8
 10 obs. associated

JAN 20, 1989 03h 32m 15.93± 0.90s
 43.412 N ± 5.9km 5.431 E ± 6.7km
 DEPTH = 10.0km (geophysicist)

NEAR SOUTH COAST OF FRANCE (379)
 MD 2.8 (STR).

GELF 0.03 186 Pg 32 17.54 -0.4
 BERF 0.21 118 Pg 32 20.55 -0.1
 TREF 0.21 351 Pg 32 19.48 -1.1
 PUYF 0.23 58 Pg 32 19.29 -1.6
 PRAF 0.44 334 Pg 32 24.68 -0.2
 VILF 0.49 25 Pg 32 24.56 -1.3
 TAVF 0.50 66 Pg 32 24.80 -1.3
 Sg 32 32.60
 GANF 0.68 30 Pg 32 29.40 0.0
 CALN 1.11 72 Pg 32 37.19 0.3
 Sg 32 52.87
 MVIF 1.34 68 Pn 32 40.93 0.2
 Sg 32 58.44
 TOUF 1.45 65 Pn 32 42.40 0.0
 Sg 32 02.99
 AURF 1.46 70 Pn 32 42.01 -0.3
 Sg 33 02.88
 FOUF 1.48 41 P 32 43.82 1.2
 (Sg) 33 01.79
 AUTN 1.56 67 Pn 32 44.16 0.2
 Sg 33 06.11
 STV 1.60 58 P 32 44.54 0.1
 S 33 05.32
 PZZ 1.63 47 P 32 46.07 1.2
 S 33 06.73
 RRL 1.79 32 P 32 50.31 2.9
 S 33 11.51
 IMI 1.85 74 P 32 48.04 0.0
 S 33 08.74
 BNI 1.87 28 P 32 52.80 4.5X
 eSn 33 16.50
 ROB 1.97 63 P 32 50.11 0.3
 S 33 11.00
 FIN 2.16 67 P 32 52.32 -0.2
 S 33 16.53
 RSP 2.18 36 P 32 56.06 3.2X
 S 33 23.06
 S.D. = 1.1 on 20 of 22 obs.

* JAN 20, 1989 07h 13m 35.23± 1.62s
 6.213 S ± 8.4km 130.255 E ± 19.4km
 DEPTH = 126.5 ± 23.3 km
 3.4mb (1 obs.)

BANDA SEA (280)

TLE 2.55 77 iPc 14 16.40 0.0
 iS 14 39.40
 MTN 6.65 173 eP 15 12.00 0.2
 eS 16 23.00
 KNA 9.59 189 eP 15 51.00 -0.5
 eS 17 33.00
 WB5 14.16 164 eP 16 50.30 -1.0
 eS 18 16.50
 WRA 14.21 164 P 16 54.00 2.0
 0.2s 0.40nm 3.4mb
 OIS 16.90 148 eP 17 25.00 -0.6
 eS 20 19.00
 ASPA 17.70 169 eP 17 35.30 -0.1
 eS 20 39.70
 GUN 54.63 311 P 22 53.30 -0.4
 KKN 55.02 310 P 22 56.60 0.3
 GKN 55.62 310 P 23 00.70 0.2
 S.D. = 1.0 on 10 of 10 obs.

JAN 20, 1989 07h 29m 52.64± 0.69s
 43.476 N ± 6.7km 142.913 E ± 9.4km
 DEPTH = 27.4 ± 6.3 km
 4.2mb (1 obs.)

HOKKAIDO, JAPAN REGION (224)

ASAJ 0.67 343 P 30 05.40 -0.3
 S 30 15.70
 HOOJ 1.13 166 P 30 12.00 -0.6
 S 30 28.00
 KUSJ 1.37 105 P 30 16.40 0.4
 S 30 34.90

MRRJ 1.71 233 P 30 21.90 0.9
 S 30 43.60
 OFUJ 4.49 192 eP 31 00.20 -0.4
 eS 31 53.80
 YAMJ 5.73 203 eP 31 18.70 0.6
 MAT 7.81 209 (P) 31 46.00 -1.3
 YKA 57.71 32 P 39 42.60 -0.2
 WRA 63.59 189 P 40 24.00 0.9
 0.6s 1.10nm 4.2mb
 S.D. = 0.9 on 9 of 9 obs.

? JAN 20, 1989 09h 09m 02.65± 3.65s
 34.050 N ± 23.4km 24.302 E ± 35.9km
 DEPTH = 10.0km (geophysicist)

CRETE (370)
 MD 3.7 (ATH).

VAM 1.36 356 ePb 09 27.50 -0.1
 NPS 1.62 41 ePb 09 31.50 0.1
 KAP 2.80 57 ePn 09 52.00 3.7X
 DSI 9.65 102 iPd 11 24.50 0.0
 eS 13 03.00
 PRNI 9.78 109 e(P) 11 25.00 -1.4
 eS 13 07.00
 MBH 9.95 113 eP 11 30.00 1.3
 eS 13 15.00
 S.D. = 1.4 on 5 of 6 obs.

JAN 20, 1989 09h 33m 45.60± 0.45s
 57.843 N ± 4.2km 8.385 E ± 6.8km
 DEPTH = 10.0km (geophysicist)

DENMARK (542)
 ML 4.2 (NAO), 3.9 (UPP). Felt.

MUD 1.45 163 iP 34 14.90 3.1
 0.5s 97.00nm
 BLS1 1.75 333 iP 34 17.00 0.7
 KMY 2.14 311 iP 34 23.10 1.3
 iSg 34 53.10
 ODD1 2.27 337 iP 34 24.20 0.5
 iSg 34 56.30
 BER 2.99 330 iP+ 34 34.50 0.6
 COP 3.11 132 iPd 34 36.80 1.3
 i 34 44.00
 i 34 48.00
 i 35 28.00
 NAD 3.24 22 P 34 36.90 -0.6
 NRA0 3.32 28 iP+ 34 37.90 -0.7
 iS 35 14.30
 iSg 35 32.10
 HYA 3.52 342 iP 34 41.50 0.2
 eS 35 24.50
 iSg 35 37.30

HFS 3.58 48 eP 34 41.70 -0.6
 0.3s 42.20nm

SUE 3.72 332 iP 34 43.70 -0.5
 eS 35 32.80
 iSg 35 42.80
 UPP 5.21 63 iPn 35 05.20 -0.1
 iSn 36 00.10
 i 36 13.40
 iSg 36 25.70

WTS 5.93 189 ePn 35 15.00 -0.5
 e 35 23.00
 e(Sn) 36 13.00
 EKA 6.85 253 Pd 35 26.50 -2.0
 0.5s 8.50nm 5.1mb X

CLL 7.07 156 e(Pn) 35 31.00 -0.6
 iSn 36 43.20

ENN 7.24 193 ePn 35 34.00 0.1
 e 35 40.00
 e(Sn) 36 44.00

MEM 7.38 192 P 35 36.20 0.3
 MOX 7.46 164 ePn 35 36.00 -1.0
 e 36 04.00
 e 36 55.00

BRG 7.70 153 ePn 35 39.00 -1.4
 e 36 58.00
 e 38 10.00

SNF 7.73 200 P 35 45.10 4.3X
 DOU 8.08 198 P 35 47.00 1.4X
 S 37 08.90

GRF 8.34 167 e(P) 36 05.40 16.1X
 0.6s 6.00nm

KSP 8.39 143 eP 36 01.40 11.3X
 e 36 37.70
 iS 37 17.50

PRU 8.66 153 eP 35 46.00 -7.8X
 NUR 8.77 65 iP 35 53.00 -2.2X
 0.5s 33.70nm 5.9mb X

iS 37 24.00
 KHC 9.26 158 eP 36 00.00 -2.1X
 e 37 39.10

DMU 9.46 252 eP 36 01.30 -3.5X
 eS 37 40.80

CDF 9.47 184 Pn 36 10.20 5.1X
 DLE 9.60 248 eP 36 10.20 3.5X

HAU 9.93 188 Pn 36 15.40 4.1X
 DCN 9.94 250 eP 36 08.50 -2.9X

SUF 10.07 54 eP 36 10.00 -3.1X
 0.4s 14.80nm 5.8mb X

FLN 10.52 214 Pn 36 17.80 -1.6X
 Sn 38 09.20

LDF 10.57 212 Pn 36 17.90 -2.1X
 Sn 38 10.20

LOR 10.94 196 Pn 36 24.10 -1.1X
 GRR 10.97 214 Pn 36 23.40 -2.1X

SSF 11.20 197 Pn 36 29.20 0.6X
 KJF 11.30 48 iP 36 25.00 -5.0X
 0.5s 18.20nm 5.7mb X

iS 38 22.00
 LPF 11.34 214 Pn 36 30.00 -0.5X

BGF 11.80 199 Pn 36 36.20 -0.6X
 MFF 12.40 208 Pn 36 44.50 -0.4X

SOD 12.66 34 iP 36 42.50 -5.7X
 iS 38 55.00

RJF 13.25 202 Pn 37 01.10 4.9X
 LFF 13.76 203 Pn 37 03.80 0.9X

S.D. = 1.2 on 19 of 44 obs.

& JAN 20, 1989 11h 50m 41.35s
 39.298 N 119.649 W
 DEPTH = 0.0km

NEVADA (37)
 <REN>. MD 2.5 (REN). Felt at
 Virginia City.

KVN 1.23 101 iPd 51 04.40 -0.9
 CMB 1.39 205 eP 51 05.70 -2.2

LTCM 2.11 296 eP 51 19.50 1.1
 SVP 2.14 137 P 51 20.20 1.0

TNP 2.26 122 eP 51 21.50 0.8
 PPK 2.32 143 P 51 21.00 -0.6

MZP 2.39 131 eP 51 24.00 1.3
 HCR 2.73 112 eP 51 29.60 2.2

CTS 2.82 125 eP 51 30.30 1.5
 BMTN 3.10 129 eP 51 35.30 2.6
 10 obs. associated

& JAN 20, 1989 12h 10m 41.56s
 39.288 N 119.672 W
 DEPTH = 0.5km

NEVADA (37)
 <REN>. MD 3.1 (REN). Felt at
 Virginia City.

KVN 1.24 100 iPd 11 04.40 -1.3
 CMB 1.37 204 ePd 11 06.20 -1.6

iS 11 26.20
 ORV 1.44 281 iPc 11 07.40 -1.5
 iS 11 25.70

MNA 1.46 125 e(P) 11 08.50 -0.8
 MIN 1.83 306 iPc 11 16.10 1.6
 eS 11 40.00

LTCM 2.10 297 eP 11 19.30 0.9
 SVP 2.15 136 eP 11 19.20 -0.2

TNP 2.27 121 eP 11 21.30 0.3
 FRI 2.29 181 eP 11 21.00 -0.2
 iS 11 52.70

PPK 2.32 143 eP 11 20.80 -1.0
 MZP 2.40 131 eP 11 23.50 0.6

ARN 2.43 218 eP 11 22.70 -0.5
 BKS 2.45 236 e(P) 11 26.20 2.7
 eS 11 56.60
 e 11 57.90

MHC 2.49 219 ePc 11 23.90 -0.1
 iS 11 58.80

WDC 2.55 301 eP 11 26.40 1.5
 LCH 2.60 142 eP 11 28.60 3.0

HCR 2.74 112 eP 11 28.50 0.7
 GMN 2.75 136 eP 11 27.50 -0.4

CTS 2.83 124 eP 11 30.50 1.5
 SAO 2.88 210 eP 11 30.70 1.1

LSM 3.70 132 eP 11 41.60 0.3

20d 15h

S.D. = 0.9 on 13 of 14 obs.

% JAN 20, 1989 15h 45m 07.49± 0.95s
44.582 N ± 9.2km 7.391 E ± 6.9km
DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)
ML 2.4 (GEN).

PZZ 0.22 250 P 45 11.93 -0.4
S 45 15.20

STV 0.34 188 P 45 14.13 -0.4
S 45 18.77

ROB 0.45 130 P 45 16.01 -0.6
S 45 21.82

RRL 0.55 308 P 45 18.26 -0.4
S 45 25.29

FIN 0.69 122 P 45 20.85 -0.4
S 45 29.91

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

? JAN 20, 1989 15h 47m 15.59± 4.30s
33.877 N ± 44.5km 135.328 E ± 21.8km
DEPTH = 33.0km (normal)

NEAR S. COAST OF SOUTHERN HONSHU(233)
Felt (III JMA) at Wakayama.

WKY 0.37 339 iP+ 47 18.30 -6.0X
iS 47 19.20

WKYJ 0.41 33 iPd 47 24.00 -0.9
S 47 29.90

TKSJ 1.07 276 P 47 34.00 -0.3
S 47 47.90

TSRJ 1.74 18 P 47 45.10 1.1
S 48 04.20

YONJ 2.02 311 P 47 47.00 -1.0
S 48 09.50

SHK 2.29 287 eP 47 52.80 1.0
IIDJ 2.66 52 eP 48 04.10 7.0X

SHNJ 3.51 275 P 48 12.40 3.2X

MAT 3.55 41 (P) 48 22.00 12.2X
(S) 49 14.00

CHJJ 3.71 53 eP 48 17.70 5.7X

S.D. = 1.4 on 5 of 10 obs.

JAN 20, 1989 17h 26m 38.83± 1.62s
11.544 S ± 5.6km 166.134 E ± 6.2km
DEPTH = 74.0 ± 13.5 km
5.3mb (23 obs.)

SANTA CRUZ ISLANDS (184)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 15S, 29C
Centroid Location:
Origin Time 17:26:41.8 0.3
Lat 11.44S 0.03 Lon 165.72E 0.03
Dep 58.0 1.7 Half-duration 2.9
Moment Tensor: Scale 10**17 Nm
Mrr= 4.43 0.11 Mtt= 0.71 0.23
Mff=-5.15 0.23 Mrt=-0.04 0.15
Mrf= 1.66 0.18 Mtf= 0.88 0.13
Principal Axes:
T Val= 4.71 Plg=80 Azm=279
N 0.83 3 172
P -5.55 9 82
Best Double Couple: Mo=5.1*10**17
NP1: Strike=168 Dip=36 Slip= 85
NP2: 354 54 94

HNR 6.44 288 iP- 28 13.60 0.6
eS 29 25.00

PVC 6.51 161 iPc 28 29.50 15.4X

VSG 6.71 289 iP 28 18.00 1.1
eS 29 35.00

DZM 10.47 178 iPd 29 05.90 -2.6X
iS 30 58.00

PAA 11.73 295 eP 29 29.00 3.6X

RAB 15.64 297 eP 30 16.00 -0.2
iS 33 16.00

PMG 18.78 275 e(P) 30 57.00 1.9
0.9s 42.02nm 4.7mb

BLLO 19.73 281 eP 31 07.00 1.6

BRS 20.15 217 iPd 31 09.00 -0.7
i(pP) 31 21.70 58kmX
i 31 31.70
i(sP) 31 35.70
iS 34 52.00
eLR 36 00.00

CTA 20.91 244 iPd 31 19.00 1.5
1.2s 96.88nm 5.0mb
Z 21s 3.94um 4.8Msz

WHN 65.01 312 eP 37 12.70 -0.7
DL2 65.10 323 eP 37 15.00 1.1
Z 20s 0.90um 5.0Msz

TIA 66.24 318 eP 37 20.60 -0.6
CN2 66.36 329 eP 37 20.20 -1.7
Z 20s 1.80um 5.3Msz

IPM 66.71 280 ePd 37 24.30 -0.4
1.0s 93.50nm 5.7mb

SNG 67.77 283 eP 37 19.90 -11.4X

PSI 68.29 278 ePc 37 34.00 -0.6
0.8s 31.00nm 5.3mb

GYA 69.01 304 P 37 38.60 -0.4

BJI 69.11 321 eP 37 38.00 -1.1
Z 28s 1.76um 5.2MszX

LOE 69.81 293 eP 37 42.00 -1.8

NNT 70.12 288 eP 37 46.00 0.2

TIY 70.18 317 P 37 45.00 -0.8
N 20s 2.30um

NST 70.70 291 eP 37 51.00 1.8

XAN 70.74 312 P 37 48.50 -0.8

KMI 71.70 301 P 37 56.00 0.5

BDT 72.22 292 eP 37 58.80 0.5

HHC 72.46 320 eP 37 59.00 -0.5
Z 22s 2.70um 5.5Msz

CHG 72.77 294 iPd 38 02.10 0.5
1.1s 34.81nm 5.2mb

CD2 73.21 307 eP 38 03.40 -0.6
Z 24s 1.51um 5.2MszX

BTO 73.31 319 eP 38 05.00 0.5
N 18s 1.10um

E 18s 0.80um

LZH 75.37 312 eP 38 17.00 0.5
1.5s 110.00nm 5.6mb

Z 22s 1.90um 5.4Msz

SPA 78.53 180 ePc 38 31.90 -1.6
0.9s 33.64nm 5.3mb
Z 20s 0.54um 4.9Msz

GTA 79.68 314 iPc 38 40.20 0.0
Z 24s 2.00um 5.4MszX

TTA 79.79 17 eP 38 38.90 -1.4

PMR 80.89 20 eP 38 45.60 -0.3
0.9s 14.60nm 4.9mb

TOA 82.25 21 eP 38 52.00 -1.2

FHC 82.73 46 ePc 38 57.80 1.8

IMA 82.88 15 eP 38 57.00 0.6
1.0s 6.30nm 4.5mb

LSA 82.94 302 P 38 58.50 0.6

PRS 83.06 51 iPc 38 58.50 0.7

MHC 83.20 50 iPc 38 59.20 0.5

PRI 83.54 51 e(P) 39 00.30 -0.1

FBA 83.67 18 eP 38 57.70 -2.6
i 39 00.70

WDC 83.67 47 iPc 39 01.30 0.5

ORV 84.06 48 iPc 39 03.10 0.3

CMB 84.37 50 iPc 39 04.60 0.2

FRI 84.54 51 iPc 39 05.50 0.3

MWC 84.96 54 eP 39 22.00 14.3X

SBB 85.29 53 eP 39 09.00 -0.1

RVR 85.44 54 eP 39 23.00 13.2X

BAR 85.62 56 eP 39 11.00 0.2

PLM 85.66 55 eP 39 11.00 -0.2

CLC 85.80 52 eP 39 12.00 0.4

TPC 86.52 54 eP 39 16.00 0.8

GUN 86.89 299 P 39 17.30 -0.2

PKI 87.21 299 P 39 18.80 -0.2

KKN 87.38 299 P 39 19.50 -0.2

DMN 87.48 299 P 39 20.20 0.0

GKN 87.98 299 P 39 21.80 -0.7

PNT 88.64 39 eP 39 26.00 1.0
0.5s 6.00nm 5.0mb

WMO 89.71 315 P 39 29.40 -0.9
Z 26s 2.00um 5.4MszX

S 50 18.00
sS 50 53.00

HYB 91.13 287 ePd 39 37.20 0.0
1.2s 71.40nm 5.9mb

GBA 91.42 284 Pd 39 36.50 -2.0

AFI 21.67 99 e(P) 31 24.00 -1.2X
S 35 28.80

RMQ 22.12 225 eP 31 30.00 0.5
e 31 43.00

COO 23.09 213 eP 31 36.00 -3.0X

OIS 26.99 247 eP 32 18.00 2.2

CMS 27.31 220 iPd 32 18.50 0.0
e 32 21.00
e 32 34.00

BWA 27.92 212 eP 32 21.80 -2.3

CAN 28.32 211 eP 32 26.60 -1.1

STK 30.35 224 eP 32 46.00 0.2
e 32 49.00

WB5 31.64 251 eP 32 55.00 -2.3
i 33 11.90
ePcP 35 46.10
eS 38 05.40
eScP 39 33.00

WRA 31.67 251 P 32 56.50 -1.1
0.8s 24.90nm 5.1mb

TOO 31.85 212 iPd 32 58.70 -0.2

GUMO 32.69 319 eP 33 03.50 -2.8
0.5s 61.22nm 5.7mb

ASPA 32.92 244 iPc 33 06.70 -1.7
0.8s 61.00nm 5.5mb

Z 22s 5.14um 5.2MszX

epP 33 23.10 68kmX

eS 38 22.50

eScP 40 02.30

eScS 43 37.30

LR 44 42.50

MSZ 33.04 178 P 33 09.00 -0.1

ADE 34.12 222 eP 33 18.60 -0.1
0.9s 104.20nm 5.8mb

MTN 34.22 264 eP 33 19.00 -0.7

TAU 35.27 204 eP 33 29.00 0.7

FORR 40.06 235 eP 34 11.00 2.4

MNI 43.02 285 ePd 34 33.50 0.5

TVO 43.52 104 eP 34 35.00 -2.1
1.2s 45.00nm 5.2mb

DAV 44.39 293 eP 34 44.00 -0.1

PMO 44.81 100 iP 35 02.50 15.0X
1.2s 60.00nm

VAH 45.07 100 iP 35 04.30 14.8X
1.2s 55.00nm

TPT 45.08 100 iP 35 04.60 15.0X
1.2s 85.00nm

MBL 45.31 252 eP 34 51.60 0.3

RUV 45.31 100 iP 35 06.20 14.8X
1.2s 75.00nm

COOL 45.78 238 eP 34 55.00 0.0
0.5s 15.00nm 5.2mb

MKS 46.55 274 ePc 35 02.50 1.3

MEKA 47.14 244 iPc 35 05.60 -0.2

KLB 48.76 238 eP 35 17.40 -0.9

NANU 49.40 250 iPd 35 23.90 0.6
0.3s 9.00nm 5.3mb

NWAO 49.50 236 eP 35 23.50 -0.5
Z 20s 5.90um 5.6Msz

N 22s 2.60um

E 20s 5.80um

eS 42 37.00

MUN 50.14 238 eP 35 28.50 -0.3

DNP 50.16 268 eP 35 41.00 11.7X

PPR 51.66 292 ePd 35 44.50 3.9X

OCP 51.67 299 eP 35 40.70 0.1

KKM 52.65 287 eP 35 49.00 0.9
0.8s 67.70nm 5.7mb

BAG 52.93 301 eP 35 48.00 -2.2
eS 43 18.00

MAT 54.59 332 eP 36 01.00 -0.9
0.9s 28.57nm 5.3mb

Z 20s 1.06um 4.9Msz

eS 43 33.00

TPI 58.58 274 ePd 36 34.00 3.3X
e 37 15.00

SSE 60.47 316 eP 36 42.00 -1.4
0.8s 39.00nm 5.6mb

Z 24s 1.50um 5.1MszX

esP 37 00.00

eS 44 58.00

esS 45 20.00

20d 21h

PWA	1.77	41	eS	26 20.92			
			eP	26 02.30	-0.5		
			eS	26 24.09			
SVW	1.80	297	iP	26 01.52	-1.8		
			eS	26 23.21			
PLRM	2.00	49	eP	26 04.25	-1.6		
PWL	2.03	73	eP	26 04.10	-2.2		
			iS	26 28.99			
PME	2.06	50	eP	26 05.00	-1.7		
KNK	2.17	59	eP	26 06.26	-2.0		
			iS	26 31.56			
GHO	2.19	47	eP	26 06.91	-1.6		
			iS	26 32.57			
KNIM	2.27	88	eP	26 06.24	-3.4		
MTU	2.35	97	eP	26 08.41	-2.3		
			eS	26 36.00			
SML	2.43	51	iP	26 09.86	-2.0		
KDC	2.60	182	eP	26 11.45	-2.6		
GLI	2.63	76	eP	26 12.19	-2.3		
			eS	26 41.00			
FID	2.91	79	eP	26 14.47	-3.9		
VLZ	3.04	72	eP	26 17.11	-3.0		
TTA	3.15	327	eP	26 19.68	-2.0		
KLU	3.33	67	eP	26 21.39	-2.8		
TOA	3.46	56	eP	26 24.11	-1.9		

28 obs. associated

JAN 20, 1989 23h 38m 54.68± 0.91s
 32.975 S ± 8.9km 70.918 W ± 8.9km
 DEPTH = 33.0km (normal)
 CHILE-ARGENTINA BORDER REGION (127)

ROCH	0.08	272	iP	39 02.00	1.3		
PEL	0.26	131	iP	39 03.40	1.4		
			iS	39 12.50			
JACH	0.40	43	iP	39 03.00	-0.9		
			iS	39 12.00			
SAN	0.52	156	iP	39 06.10	0.4		
			iS	39 17.20			
FCH	0.63	124	iPc	39 07.00	-0.5		
			iS	39 18.10			
PCH	0.73	152	iP	39 08.70	0.1		
			iS	39 21.20			
LCCH	0.74	227	iPd	39 08.60	-0.1		
			iS	39 21.00			
CHCH	0.90	167	iPc	39 11.60	-0.6		
			iS	39 27.00			
LNV	1.06	203	eP	39 12.00	-1.2		
			iS	39 29.00			

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

? JAN 21, 1989 01h 14m 19.81± 1.55s
 40.305 N ± 21.5km 27.492 E ± 8.3km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

EDC	0.29	82	iPg	14 26.00	0.2		
			iSg	14 30.00			
KCT	0.66	95	iPg	14 32.80	-0.2		
			iSg	14 42.30			
EZN	1.02	242	ePn	14 39.00	0.0		
DST	1.12	128	ePn	14 40.90	0.1		

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

& JAN 21, 1989 01h 33m 42.75s
 59.858 N 153.465 W
 DEPTH = 127.2km
 SOUTHERN ALASKA (2)
 <AGS-P>

ILIM	0.34	49	iP	34 00.25	0.8		
			iS	34 14.57			
PDB	0.37	259	iP	34 00.22	-0.9		
			iS	34 13.62			
RDT	0.89	36	iP	34 04.01	-0.8		
NNL	1.11	79	iP	34 06.84	0.1		
			iS	34 27.08			
CNPM	1.18	105	iP	34 06.41	-1.1		
			eS	34 24.72			
NKA	1.42	50	eP	34 10.83	0.8		
			eS	34 30.20			
SPU	1.50	27	iP	34 10.22	-0.9		
			iS	34 32.71			
CRP	1.55	24	iP	34 11.27	-0.6		
			iS	34 34.29			
SVW	1.65	321	iPd	34 11.40	-1.4		
SLKM	1.75	67	eP	34 12.51	-1.4		

KDC	2.18	166	eP	34 16.62	-2.6		
			iS	34 43.29			
PMS	2.38	53	eP	34 20.24	-1.6		
PTE	2.43	63	iP	34 20.46	-1.9		
PWA	2.52	43	eP	34 21.91	-1.6		
			eS	34 51.53			
PWL	2.74	66	iP	34 24.06	-2.4		
PLRM	2.75	49	eP	34 23.93	-2.6		
PME	2.81	49	eP	34 24.88	-2.5		
KNIM	2.91	78	iP	34 26.11	-2.6		
KNK	2.92	56	iP	34 26.19	-2.7		
MTU	2.93	85	iP	34 27.72	-1.3		
GHO	2.94	47	eP	34 26.55	-2.6		
SML	3.18	50	iP	34 29.57	-2.8		
TTA	3.32	339	eP	34 32.00	-2.2		
HIN	3.53	78	eP	34 35.31	-1.6		
FID	3.59	73	eP	34 34.52	-3.2		
			eS	35 13.23			
VZW	3.63	68	eP	34 36.74	-1.6		
VLZ	3.75	67	eP	34 37.09	-2.8		
CVA	3.91	77	eP	34 40.11	-1.9		
KLU	4.06	63	iP	34 41.18	-2.9		
SGAM	4.17	78	eP	34 43.61	-2.0		
			eS	35 29.68			
TOA	4.21	54	eP	34 43.80	-2.3		
GLB	5.01	67	eP	34 54.13	-2.8		
FBA	5.70	25	iPc	35 03.50	-2.8		
SDN	5.90	223	eP	35 05.70	-3.3		
IMA	6.24	359	eP	35 11.50	-2.3		
YKA	18.72	65	eP	37 51.50	-2.2		

36 obs. associated

& JAN 21, 1989 02h 26m 19.60s
 35.130 N 118.660 W
 DEPTH = 11.0km
 CENTRAL CALIFORNIA (39)
 <PAS-P>. ML 3.5 (PAS). Felt in
 the Bakersfield area.

ABL	0.54	239	iPc	26 29.40	-1.2		
ISA	0.55	16	iPd	26 30.00	-0.8		
SBB	0.82	122	iPc	26 34.40	-1.0		
MWC	1.03	151	iPd	26 38.30	-0.8		
PAS	1.06	158	iPd	26 38.80	-0.7		
CLC	1.11	51	iPc	26 39.50	-0.8		
BCH	1.17	273	iPc	26 39.80	-1.6		
SYR	1.24	241	iPc	26 41.90	-0.8		
PKEM	1.50	309	eP	26 45.90	-0.6		
GSC	1.53	83	ePd	26 45.90	-1.0		
BLP	1.54	249	eP	26 45.80	-1.2		
RVR	1.55	137	iPd	26 45.80	-1.4		
PHAM	1.58	297	eP	26 45.50	-2.2		
PEC	1.75	135	eP	26 48.40	-1.7		
PRI	1.92	302	iPd	26 50.90	-1.7		
			iS	27 16.00			
FRI	2.04	336	ePc	26 53.70	-0.6		
			iS	27 19.40			
PLM	2.32	139	eP	26 56.40	-2.0		
LLA	2.37	309	iPd	26 57.30	-1.8		
PRS	2.51	299	iPc	26 58.50	-2.5		
SAO	2.79	307	iPd	27 03.30	-1.7		
TNP	3.17	21	eP	27 07.60	-2.9		
ARN	3.21	314	eP	27 08.90	-2.0		
CMB	3.21	335	e(P)	27 11.00	0.0		
GCC	3.30	306	e(P)	27 09.50	-2.7		
GLA	3.80	122	eP	27 16.10	-3.2		
KVN	3.94	6	eP	27 22.50	1.0		

26 obs. associated

JAN 21, 1989 02h 52m 20.37± 0.12s
 38.147 N ± 2.7km 26.243 W ± 1.6km
 DEPTH = 10.0km (geophysicist)
 5.4mb (69 obs.) 5.1msz (7 obs.)
 AZORES ISLANDS (405)
 Felt (IV) on Sao Miguel; (III)
 on Sao Jorge, Terceira, Santo
 Maria and Pico; (II) on Faial.
 CENTROID. MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 14S, 27C
 Centroid Location:
 Origin Time 02:52:25.2 0.5
 Lat 37.92N 0.04 Lon 25.92W 0.06
 Dep 15.0 FIX Half-duration 2.5
 Moment Tensor: Scale 10**17 Nm
 Mrr=-3.28 0.09 Mtt= 2.03 0.15

Mff=	1.25	0.12		Mrt=	0.49	0.37
Mrf=	-0.25	0.35		Mtf=	-1.84	0.11
Principal Axes:						
N Val=	3.56			Plg=	5	Azm= 39
T	-0.23			2		309
P	-3.33			85		195
Best Double Couple: Mo=3.4*10**17						
NP1: Strike=	131			Dip=	41	Slip= -87
NP2:	307			50		-93
ADH	0.93	303	iP	52 38.70	0.6	
HOR	1.91	282	iPc	52 51.60	-1.7	
			iS	53 13.80		
TBT	11.72	141	iPd	55 05.90	-4.7X	
			iS	57 06.40		
CVVD	12.43	144	iP	55 15.70	-4.5X	
CTFE	12.74	136	iP	55 20.50	-3.9X	
			eS	57 30.70		
GGC	13.37	135	iPd	55 29.40	-3.3X	
			eS	57 47.50		
LIS	13.42	82	eP	55 27.50	-5.8X	
			eS	57 48.00		
CFTV	14.05	130	iP	55 39.60	-2.0X	
			iS	58 04.30		
STS	14.26	65	eP	55 38.50	-5.9X	
ERUA	15.18	68	eP	55 50.50	-5.9X	
EMON	15.26	64	eP	55 52.00	-5.5X	
EVAL	15.41	86	eP	55 55.20	-4.3X	
EPLA	15.77	77	eP	56 00.20	-3.9X	
AVE	16.03	102	iP	56 07.00	-0.5	
			i	56 14.50		
			i	57 13.50		
			i	58 56.50		
CNIL	16.18	90	iP	56 07.00	-2.3X	
MOMI	16.45	90	eP	56 12.00	-0.8X	
PLAT	16.46	91	eP	56 12.00	-1.0X	
EHOR	16.56	85	eP	56 11.00	-3.1X	
LIJA	16.57	88	iP	56 11.00	-3.5X	
EJIF	16.62	89	eP	56 12.60	-2.3X	
OJEN	16.64	91	eP	56 12.00	-3.3X	
EPRU	16.70	88	eP	56 13.50	-2.5X	
GUD	17.25	75	eP	56 18.80	-4.2X	
TOL	17.33	77	iPc	56 21.00	-2.9X	
	1.2s	343.75nm		5.4mb		
MAL	17.40	88	iPd	56 23.00	-1.7X	
			iS	59 52.00		
AAPN	17.52	86	iPc	56 24.40	-2.0X	
ALOJ	17.57	87	iPd	56 25.50	-1.5X	
EBAN	17.66	83	eP	56 25.20	-2.8X	
ATEJ	17.67	87	iP	56 27.50	-0.8X	
IFR	17.73	99	iP	56 26.00	-3.0X	
			i	56 29.00		
			i	56 31.00		
VAL	17.77	34	P	56 31.00	1.8X	
			S	59 59.00		
			e	13 20.00		
ACHM	17.78	86	iPc	56 27.60	-2.0X	
ASMO	17.81	86	iPc	56 28.30	-1.7X	
APHE	17.92	87	iP	56 30.00	-1.4X	
CRT	17.95	86	iPc	56 31.00	-0.7	
AFC	17.98	86	eP	56 30.30	-1.9X	
ECRI	18.60	69	eP	56 39.20	-0.5	
EVIA	18.61	81	eP	56 37.70	-2.1X	
ETOR	18.85	74	eP	56 41.00	-1.7X	
ENIJ	19.08	86	eP	56 45.00	-0.5	
TAF	19.44	93	iPd	56 51.00	1.1	
			i	57 32.00		
ECB	19.65	37</				

? JAN 21, 1989 03h 57m 44.77± 2.60s
3.732 S ±31.0km 130.141 E ±21.1km
DEPTH = 33.0km (normal)
4.1mb (2 obs.)

CERAM (272)

AAI 1.94 271 eP 58 16.00 -0.1
MTN 9.11 174 eP 59 59.00 2.0
e 01 46.00
WB5 16.57 166 eP 01 35.50 -0.9
eS 04 46.20
WRA 16.63 166 Pd 01 35.70 -1.4
0.5s 1.40nm 3.3mb
OIS 19.10 152 eP 02 07.00 -0.6
ASPA 20.15 170 iPd 02 19.20 0.0
0.5s 29.00nm 4.9mb
CTA 22.61 137 eP 02 45.00 1.0
S.D. = 1.4 on 7 of 7 obs.

JAN 21, 1989 06h 26m 29.69± 1.13s
47.528 N ± 8.1km 7.250 E ± 7.3km
DEPTH = 10.0km (geophysicist)

SWITZERLAND (544)
ML 2.1 (LDG).

MOF 0.33 346 Pg 26 36.69 0.1
Sg 26 41.13
LOMF 0.34 238 Pg 26 36.76 0.1
BSF 0.43 315 Pg 26 38.08 -0.5
Sg 26 43.69
FEL 0.62 56 Pg 26 42.10 -0.2
HAU 0.77 308 Pg 26 45.00 0.2
Sg 26 54.30
Sn 26 56.40
CDF 0.89 1 Pg 26 47.09 0.3
Sg 26 57.94
S.D. = 0.4 on 6 of 6 obs.

* JAN 21, 1989 06h 54m 57.73± 1.61s
31.585 S ±10.3km 69.705 W ±10.3km
DEPTH = 131.9 ± 21.5 km

SAN JUAN PROVINCE, ARGENTINA (137)

RTCB 0.78 83 iPc 55 18.80 -0.5
S 55 33.80
RTCV 1.03 106 iPc 55 21.80 0.4
JACH 1.33 214 iPc 55 23.80 -0.7
iS 55 43.20
RTRS 1.43 9 iPc 55 26.00 0.6
PEL 1.76 208 iPd 55 29.00 -0.4
iS 55 51.50
ROCH 1.77 218 iPd 55 29.00 -0.7
iS 56 52.00
FCH 1.81 196 iPc 55 31.50 1.3
iS 55 56.00
SAN 2.03 203 eP 55 33.00 0.4
eS 55 58.20
PCH 2.14 198 iPd 55 34.50 0.4
iS 56 01.70
TACH 2.31 206 iPc 55 35.50 -0.6
iS 56 04.10
CHCH 2.47 199 iPc 55 38.70 0.4
iS 56 09.50
LNV 2.77 211 iP 55 10.20 -31.7X
iS 56 10.00
TCA 4.38 88 ePc 56 03.00 -0.5
(S) 56 50.60
S.D. = 0.8 on 12 of 13 obs.

? JAN 21, 1989 07h 07m 00.13± 2.47s
3.390 S ±27.8km 128.968 E ±35.3km
DEPTH = 111.9 ± 18.6 km
4.4mb (3 obs.)

CERAM (272)

AAI 0.83 249 iPd 07 20.20 0.2
iS 07 49.00
MNI 6.33 319 ePc 08 14.20 -18.3X
MTN 9.64 167 eP 09 17.00 -0.4
eS 11 11.00
WB5 17.22 163 eP 10 53.70 -1.5
eS 14 07.50
WRA 17.27 163 Pd 10 56.80 1.0
0.8s 9.60nm 4.1mb
OIS 19.96 150 eP 11 25.00 -0.9
ASPA 20.71 167 iPc 11 34.70 1.2
1.0s 74.00nm 5.0mb X

Z 21s 0.24um 3.5msz
eS 15 21.70
LR 19 50.70
WARB 22.77 185 eP 11 45.00 -8.8X
CTA 23.66 136 iPc 12 03.20 0.8
1.0s 12.00nm 4.3mb
CHG 36.88 308 eP 14 00.30 0.6
GUN 51.84 310 P 15 59.70 0.1
0.8s 14.00nm 5.0mb
PKI 52.04 309 P 16 00.80 -0.2
KKN 52.24 309 P 16 01.30 -1.1
DMN 52.29 309 P 16 03.00 0.2
GKN 52.84 309 P 16 06.90 0.1
S.D. = 0.9 on 13 of 15 obs.

JAN 21, 1989 07h 09m 11.73± 0.69s
42.497 N ± 7.7km 16.735 E ± 6.7km
DEPTH = 10.0km (geophysicist)

ADRIATIC SEA (382)
ML 3.0 (KBA).

HVAR 0.71 343 iPg 09 27.10 1.3
iSg 09 40.20
HCY 1.31 92 ePg 09 35.50 -0.4
eSg 09 56.00
BRY 1.39 73 ePg 09 37.50 0.2
eSg 10 01.00
BDV 1.56 97 ePn 09 40.00 0.4
eSn 10 04.50
TTG 1.87 91 ePn 09 45.00 1.0
eSn 10 14.00
DUI 1.89 245 P 09 43.70 -0.7
eSn 10 12.60
MGR 2.52 201 P 09 54.80 1.4
eSn 10 27.70
VBY 3.19 341 eP 10 04.30 1.4
OHR 3.34 113 ePn 10 03.30 -1.8
PTJ 3.45 351 eP 10 18.00 11.4X
TRI 3.86 327 eP 10 55.50 43.1X
e 11 27.40
i 11 33.10

LJU 3.88 337 eP 10 13.00 0.3
e(Sn) 11 00.00
VOY 4.08 331 ePn 10 14.60 -1.0
eSn 11 04.00
KBA 5.18 333 ePn 10 29.00 -2.2
eSn 11 31.00
eSg 12 05.00
S.D. = 1.4 on 12 of 14 obs.

* JAN 21, 1989 08h 12m 42.06± 1.03s
21.203 S ± 9.2km 69.530 W ±25.2km
DEPTH = 184.4 ± 26.1 km

NORTHERN CHILE (123)

ANT 2.62 198 eP 13 26.80 0.0
CNCB 4.61 19 P 13 52.00 -0.3
LPB 4.84 17 P 13 56.00 0.9
ARE 5.07 338 eP 13 58.00 0.0
iS 14 57.60
ZOBO 5.08 15 P 13 57.90 -0.6
BAO 21.16 78 eP 17 14.00 0.0
S.D. = 0.8 on 6 of 6 obs.

JAN 21, 1989 08h 19m 14.72± 0.51s
44.400 N ± 4.8km 7.352 E ± 4.1km
DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)
ML 2.6 (GEN), 2.2 (LDG).

STV 0.16 187 P 19 18.53 0.1
S 19 20.46
PZZ 0.21 300 P 19 19.91 0.6
S 19 23.05
ROB 0.39 106 P 19 23.54 0.9
S 19 29.42
FOUF 0.43 288 P 19 23.16 -0.3
Sg 19 28.13
SBF 0.54 174 Pg 19 25.80 0.1
Sg 19 32.00
IMI 0.62 142 P 19 27.09 -0.2
S 19 35.26
FIN 0.64 107 P 19 27.94 0.3
S 19 37.08
RRL 0.66 322 P 19 27.90 -0.1
S 19 36.57
FRF 0.98 211 Pg 19 33.10 -0.2

LRG 1.19 218 Pg 19 44.50 0.2
Sg 19 37.00
Sg 19 51.80
THE 12.12 103 ePg 22 09.00 -1.3
S.D. = 0.6 on 11 of 11 obs.

JAN 21, 1989 08h 25m 33.39± 0.50s
7.538 N ±16.6km 82.002 W ±15.7km
DEPTH = 9.9 ± 3.2 km
SOUTH OF PANAMA (83)
MD 4.2 (HDC).

DVD 1.00 334 iPc 25 52.30 0.0
PBC 1.35 311 iPc 25 58.30 0.1
S 26 11.00
CTCR 1.54 331 iPc 26 01.50 0.3
S 27 17.00
ACR 1.60 314 iPc 26 00.90 -0.9
TIG 1.96 319 ePc 26 07.20 0.1
JCR 2.55 334 iPc 26 32.80 17.3X
CDM 2.66 319 ePc 26 17.30 -0.2
OPS 2.81 311 ePd 26 18.20 -0.9
LCR2 2.95 318 iPd 26 21.20 -0.2
ICR 3.03 323 iPd 26 23.90 1.3
IRZ2 3.06 322 eP 26 22.90 -0.1
SJS 3.13 320 iPd 26 24.10 0.3
HDC2 3.24 320 iPd 26 25.40 -0.1
PTCR 3.28 313 ePc 26 25.40 -0.6
SRA 3.50 316 iP 26 30.40 1.3
EPA 3.54 314 ePd 26 28.90 -0.6
ANCC 6.49 128 eP 27 11.40 0.0
CLMC 6.52 124 eP 27 11.60 -0.3
HOBC 6.64 118 eP 27 12.00 -1.6
HOOC 6.70 127 eP 27 14.20 -0.4
SALC 6.96 130 eP 27 18.20 0.1
DIAC 7.15 126 eP 27 21.00 0.2
PURC 7.64 132 eP 27 29.60 1.6
S.D. = 0.8 on 22 of 23 obs.

JAN 21, 1989 08h 28m 07.54± 0.57s
40.002 N ± 4.8km 23.359 E ± 5.5km
DEPTH = 10.0km (geophysicist)

GREECE (364)
ML 3.2 (ATH).

PAIG 0.26 107 iPg 28 12.40 -0.6
iSg 28 15.70
PLG 0.38 10 ePb 28 15.50 0.2
LIT 0.67 279 ePg 28 20.20 -0.7
iSg 28 30.70
NEO 0.70 189 ePn 28 20.00 -1.4
eSn 28 30.00
SOH 0.82 360 ePg 28 23.40 0.0
SRS 1.13 9 ePg 28 29.60 0.9
GRG 1.20 323 ePg 28 30.20 0.3
KNT 1.21 343 ePg 28 30.10 0.0
KZN 1.25 285 ePn 28 30.70 -0.2
VAY 1.45 336 iPn 28 34.00 0.3
MMB 1.61 10 eP 28 36.00 -0.1
RZN 1.97 31 iPc 28 43.00 1.5
iSg 29 14.00
RDO 2.01 55 ePn 28 41.20 -0.7
ATH 2.05 172 ePb 28 45.00 2.6
OHR 2.24 300 ePn 28 50.20 4.9X
KDZ 2.27 43 iPc 28 45.00 -0.7
iS 29 17.00
SKO 2.45 324 ePn 28 51.10 3.0X
PVL 3.54 24 eP 29 02.00 -1.6
MLR 5.81 18 ePd 29 39.00 3.1X
S.D. = 1.1 on 16 of 19 obs.

* JAN 21, 1989 08h 51m 33.48± 2.36s
39.865 N ±18.6km 24.041 E ± 9.2km
DEPTH = 10.0km (geophysicist)

AEGEAN SEA (365)

PAIG 0.28 283 ePg 51 39.00 -0.4
SOH 1.09 331 ePg 51 54.00 0.0
iSg 52 06.00
THE 1.12 313 ePg 51 54.00 -0.5
LIT 1.21 282 ePg 51 56.20 0.1
SRS 1.30 345 ePg 51 57.30 -0.2
KNT 1.56 326 ePg 52 01.10 -0.2
GRG 1.66 312 ePg 52 03.70 0.9
MMB 1.74 352 eP 52 05.00 1.1
iS 52 25.00
RZN 1.89 16 eP 52 07.00 0.7

21d 08h

KDZ 2.07 30 iPd 52 29.00 0.4
 52 09.00
 iS 52 41.00
 VTS 2.80 347 eP 52 19.00 -0.2
 52 59.00
 i
 PVL 3.49 16 eP 52 27.00 -1.8
 S.D. = 0.8 on 12 of 12 obs.

JAN 21, 1989 09h 11m 47.60± 0.36s
 29.530 N ± 5.5km 131.455 E ± 4.8km
 DEPTH = 33.0km (normal)
 4.5mb (5 obs.)

RYUKYU ISLANDS REGION

(239)

SHK 5.09 11 iP 13 03.60 -0.1
 0.5s 112.68nm 5.6mb X
 TSRJ 7.10 31 P 13 31.50 -0.4
 eS 14 50.30
 IIDJ 8.06 41 eP 13 44.70 -0.6
 MAT 9.00 37 eP 13 58.00 -0.3
 (S) 14 28.00
 SSE 9.01 283 P 13 59.00 0.6
 0.9s 0.02nm 2.3mb X
 Z 18s 0.45um
 E 13s 1.20um
 CHJJ 9.08 42 eP 13 59.60 0.2
 CN2 15.03 343 eP 15 26.40 7.2X
 BJI 16.33 314 eP 15 40.00 4.1X
 Z 13s 0.89um
 TIY 17.80 302 P 15 55.50 1.1
 N 13s 0.60um
 XAN 19.67 289 P 16 14.70 -2.1
 N 10s 0.70um
 BTO 20.68 308 eP 16 27.50 0.2
 N 13s 0.50um
 E 13s 0.40um
 eS 20 20.00
 GYA 22.09 268 P 16 42.20 0.4
 CD2 23.95 280 eP 16 59.50 -0.3
 GTA 27.76 299 eP 17 34.60 -0.8
 Z 12s 0.90um 4.6msz X
 E 11s 0.40um
 CHG 31.42 258 eP 18 08.00 -0.1
 49.20 176 eP 20 34.50 -0.2
 WRA 49.26 176 Pc 20 35.10 -0.1
 0.2s 0.40nm 4.1mb
 CTA 51.35 162 eP 20 51.00 -0.1
 GBA 52.23 264 Pd 20 58.10 0.2
 0.7s 4.50nm 4.5mb
 KOD 53.78 261 eP 21 10.00 0.3
 INK 64.73 24 eP 22 25.00 0.6
 SUF 70.78 332 iP 23 02.60 0.3
 DAG 72.37 353 iPc 23 11.60 0.0
 1.0s 7.00nm 4.6mb
 YKA 74.33 26 eP 23 24.20 1.0
 HFS 77.21 333 eP 23 39.30 -0.3
 0.4s 2.00nm 4.5mb
 NAO 77.88 334 P 23 43.00 -0.3
 0.6s 2.50nm 4.4mb
 FRB 85.70 9 eP 24 25.00 1.0
 S.D. = 0.7 on 25 of 27 obs.

? JAN 21, 1989 10h 56m 32.32± 3.11s
 39.776 N ± 24.1km 21.687 E ± 15.4km
 DEPTH = 10.0km (geophysicist)

GREECE (364)

LIT 0.70 62 ePg 56 44.70 -1.4
 eSg 56 55.50
 GRG 1.30 25 ePg 56 55.30 -1.1
 e 57 12.70
 OHR 1.50 333 ePn 56 58.70 -0.6
 PAIG 1.54 84 ePb 56 59.80 0.0
 iSb 57 20.10
 SOH 1.65 50 ePb 57 01.60 0.1
 KNT 1.66 33 ePb 57 02.10 0.5
 VAY 1.68 23 ePn 57 02.50 0.6
 SKO 2.20 355 ePn 57 14.00 4.6X
 MMB 2.38 40 eP 57 14.00 1.9
 eS 57 38.00
 S.D. = 1.2 on 8 of 9 obs.

* JAN 21, 1989 13h 49m 55.81± 2.27s
 6.280 S ± 9.4km 149.779 E ± 15.9km
 DEPTH = 59.7 ± 15.9 km
 4.4mb (5 obs.) 3.5msz (1 obs.)
 NEW BRITAIN REGION (192)

LAT 2.79 262 eP 50 39.00 0.1
 LMG 3.07 212 iPd 50 42.10 -1.0
 eS 51 18.00
 BLLO 3.27 254 e(P) 50 47.00 1.2
 OIS 17.29 214 eP 53 55.00 0.3
 MTN 19.50 249 eP 54 20.00 -1.1
 RMQ 20.12 183 eP 54 27.00 -0.5
 WB5 20.17 226 iPc 54 28.20 0.1
 eS 58 08.00

WRA 20.23 226 Pc 54 29.00 0.3
 0.6s 4.50nm 4.0mb
 BRS 21.19 173 eP 54 39.00 0.5
 ASPA 23.07 220 eP 55 00.40 3.3X
 Z 20s 0.18um 3.5msz
 iS 59 09.50
 LR 04 07.50

WARB 29.65 226 eP 55 45.00 -13.1X
 MBL 32.54 240 eP 56 23.00 -0.5
 NANU 36.77 240 eP 56 59.50 -0.2
 WHN 49.92 319 eP 58 45.50 -0.1
 Z 12s 5.40um 5.8msz X
 N 13s 2.80um
 E 14s 4.90um

BJI 55.53 329 eP 59 07.00 -20.2X
 XAN 55.68 319 P 59 43.80 15.3X
 TIY 55.90 324 P 59 24.80 -5.3X
 HHC 58.55 327 eP 59 47.00 -1.8
 BTO 59.24 325 eP 59 57.00 3.5X
 N 15s 1.30um
 E 15s 1.40um

PKI 70.63 302 P 01 08.00 0.2
 KKN 70.81 302 P 01 09.40 0.7
 0.5s 2.00nm 4.3mb
 DMN 70.90 302 P 01 10.00 0.7
 0.5s 4.00nm 4.6mb
 GKN 71.41 302 P 01 12.50 0.2
 0.6s 4.00nm 4.5mb

SPA 83.76 180 e(P) 02 20.50 0.8
 1.0s 4.50nm 4.4mb
 KJF 109.19 337 ePKP 08 26.00 5.8X
 SUF 110.49 336 iPc 08 34.50 11.8X
 NUR 112.18 334 iPc 08 44.40 18.5X
 BNG 131.42 270 ePKPd 09 03.10 -1.2X
 0.3s 5.00nm

KUK 150.33 271 ePKP 09 42.00 4.5X
 BAO 152.00 141 ePKP 09 47.10 7.0X
 S.D. = 0.8 on 18 of 30 obs.

JAN 21, 1989 13h 55m 17.69± 0.40s
 29.501 N ± 6.6km 131.472 E ± 6.3km
 DEPTH = 33.0km (normal)
 4.7mb (12 obs.)

RYUKYU ISLANDS REGION

(239)

SHK 5.12 11 iP 56 33.30 -0.8
 0.7s 104.11nm 5.4mb X
 TSRJ 7.12 31 P 57 01.60 -0.6
 IIDJ 8.07 41 P 57 14.40 -1.1
 MTMJ 8.84 35 eP 57 27.40 1.2
 MAT 9.01 37 eP 57 27.00 -1.6
 0.6s 13.33nm 5.3mb
 SSE 9.03 283 eP 57 28.00 -0.8
 1.1s 0.03nm 2.4mb X
 Z 18s 1.80um 3.8msz X
 N 11s 1.40um
 E 12s 1.60um

CHJJ 9.09 42 P 57 29.20 -0.4
 CN2 15.06 343 Pd 58 55.00 5.3X
 BAG 16.43 220 eP 59 07.00 -0.5
 GYA 22.11 268 P 00 11.60 -0.4
 CD2 23.97 280 eP 00 29.40 -0.7
 LZH 24.09 293 eP 00 30.00 -1.3
 2.5s 0.08nm 1.8mb X
 CHTO 31.43 258 eP 01 39.50 1.2
 1.2s 4.17nm 4.2mb
 WMO 37.47 305 eP 02 28.00 -2.0
 GUN 39.83 279 P 02 49.80 -0.4
 PKI 40.31 279 P 02 53.20 -0.9
 KKN 40.37 279 P 02 54.00 -0.5
 DMN 40.56 279 P 02 55.70 -0.4
 GKN 40.87 280 P 02 57.90 -0.6
 WB5 49.17 176 eP 04 04.00 -0.6
 e 06 06.10

WRA 49.23 176 Pd 04 04.30 -0.7
 1.0s 1.90nm 4.1mb
 CTA 51.32 162 iPc 04 21.10 0.1
 1.1s 15.19nm 4.9mb

i 06 23.00
 MBL 51.60 194 eP 04 22.90 -0.2
 GBA 52.24 264 Pd 04 28.00 -0.1
 0.9s 5.40nm 4.5mb
 KOD 53.79 261 eP 04 41.00 1.1
 INK 64.75 24 eP 05 54.00 -0.6
 KJF 69.53 333 iP 06 25.80 1.1
 0.7s 10.70nm 5.0mb
 SUF 70.81 332 eP 06 34.00 1.4
 0.9s 6.70nm 4.7mb
 DAG 72.40 353 iPd 06 42.30 0.4
 1.0s 8.00nm 4.7mb
 NUR 72.49 330 iP 06 44.60 2.0
 YKA 74.35 26 eP 06 54.40 1.0
 HFS 77.24 333 eP 07 09.20 -0.7
 0.4s 1.10nm 4.2mb
 NAO 77.91 334 P 07 13.20 -0.4
 1.0s 8.20nm 4.7mb
 VRI 78.73 316 ePd 07 21.00 2.7
 KSP 81.74 325 eP 07 35.00 0.8
 BRG 82.89 326 eP 07 51.60 11.4X
 1.6s 17.00nm
 CLL 83.08 326 eP 07 42.00 0.9
 1.3s 14.00nm 4.9mb
 iP 07 52.10 32kmX
 VAY 83.71 314 eP 07 45.50 0.9
 SKO 84.05 315 eP 07 50.50 4.2X
 KHC 84.17 324 eP 07 45.40 -1.5
 e 07 59.60
 OHR 84.93 315 eP 07 52.00 1.2
 GRF 84.99 326 eP 07 55.30 4.4X
 1.1s 11.00nm 5.0mb
 FRB 85.73 9 eP 07 55.00 0.8
 VOY 85.97 322 eP 07 57.00 1.0
 S.D. = 1.1 on 40 of 44 obs.

JAN 21, 1989 13h 57m 19.44± 0.46s
 29.498 N ± 7.9km 131.520 E ± 5.9km
 DEPTH = 30.0km (11 depth phases)
 4.9mb (14 obs.)

RYUKYU ISLANDS REGION

(239)

SHK 5.11 11 iP 58 35.40 -0.6
 0.6s 160.00nm 5.7mb X
 TSRJ 7.10 31 P 59 03.40 -0.6
 S 00 21.80
 IIDJ 8.04 40 P 59 16.10 -1.1
 MTMJ 8.82 35 P 59 27.00 -0.9
 MAT 8.99 37 eP 59 28.00 -2.3
 0.9s 42.86nm 5.6mb X
 (S) 01 24.00
 CHJJ 9.07 42 iP+ 59 30.90 -0.4
 SSE 9.07 283 P 59 30.00 -1.4
 1.5s 0.16nm 3.0mb X
 Z 12s 11.10um 3.5msz
 N 12s 5.10um
 E 12s 6.10um
 ANP 9.88 247 e(P) 00 26.00 43.5X
 KAKJ 9.88 45 P 59 42.10 -0.4
 NIIJ 9.93 37 P 59 42.60 -0.6
 NJ2 11.19 286 Pd 00 08.00 7.6X
 N 13s 3.00um
 E 12s 7.60um
 DL2 12.44 322 eP 00 17.00 -0.3
 N 13s 3.50um
 E 12s 3.30um
 eS 02 51.00
 TIA 13.82 303 eP 00 35.80 0.3
 Z 15s 4.00um
 N 14s 2.50um
 E 14s 4.20um
 SNY 13.88 335 Pd 00 40.00 3.7X
 Z 14s 2.50um 5.8msz X
 N 14s 2.30um
 E 13s 3.50um
 WHN 14.91 278 eP 00 54.50 4.7X
 Z 12s 5.40um
 N 13s 2.80um
 E 14s 4.90um
 CN2 15.08 343 eP 00 57.40 5.5X
 Z 16s 2.20um
 E 14s 4.00um
 MDJ 15.17 355 eP 01 03.00 9.9X
 Z 16s 1.30um
 N 14s 4.00um
 eS 03 40.00
 BJI 16.39 314 eP 01 11.00 2.2

N 13s 5.00um	MOX 84.20 326 eP 09 50.00 0.9	GRR 2.41 332 Pg 06 21.60 0.2
E 13s 4.30um	1.2s 18.00nm 5.1mb	Sg 06 50.50
GZH 17.50 253 P 01 24.50 1.7	e 10 00.00 32km	LDf 2.41 345 Pg 06 21.70 0.3
TIY 17.86 302 Pd 01 26.80 -0.6	OHR 84.96 315 eP 09 51.00 -2.2	Sg 07 49.70
N 13s 2.30um	GRF 85.02 326 eP 09 55.00 1.8	FLN 2.65 341 Pg 06 26.00 1.2
eS 04 52.50	e 10 04.40 30km	Sg 06 57.00
HHC 19.81 310 eP 01 48.80 -1.7	CMB 85.02 49 eP 09 54.00 0.5	EPF 3.26 187 Pn 06 31.40 -2.2
Z 14s 6.80um	1.0s 7.50nm 4.9mb	Sn 07 09.00
N 12s 2.85um	LRM 85.26 39 eP 09 55.70 0.9	Sg 07 24.70
E 10s 2.90um	VBY 85.58 321 e(P) 09 57.90 1.8	S.D. = 1.3 on 16 of 19 obs.
S 05 30.00	KBA 85.63 323 e(P) 10 03.50 7.0X	JAN 21, 1989 14h 06m 12.29 ± 0.13s
BTO 20.74 308 P 01 57.00 -3.2X	1.5s 17.90nm 5.1mb	29.511 N ± 2.8km 131.512 E ± 2.7km
N 13s 2.80um	i 10 06.70 10kmX	DEPTH = 33.3km (29 depth phases)
E 13s 3.40um	LJU 85.64 322 eP 09 58.20 1.8	5.4mb (64 obs.) 5.5msz (2 obs.)
PP 02 17.50	i 10 07.00 28km	RYUKYU ISLANDS REGION (239)
GYA 22.15 268 P 02 12.40 -2.1	CEY 85.89 321 eP 09 59.30 1.6	CENTROID, MOMENT TENSOR (HRV)
N 12s 1.60um	i 10 08.10 28km	Data Used: GDSN
E 12s 2.60um	KVN 85.93 47 eP 09 58.50 0.3	L.P.B.: 11S, 20C
pP 02 26.00 58kmX	VOY 86.00 322 e(P) 10 00.90 2.6	Centroid Location:
DAV 22.99 195 eP 02 42.00 19.3X	TRI 86.27 322 eP 10 00.30 0.8	Origin Time 14:06:14.4 0.5
CD2 24.01 280 eP 02 31.30 -1.3	TNP 87.05 47 eP 10 09.50 5.7X	Lot 29.34N 0.06 Lon 131.11E 0.07
LZH 24.13 293 eP 02 32.00 -1.8	1.5s 22.73nm 5.2mb	Dep 24.2 3.9 Half-duration 2.1
2.0s 0.11nm 2.1mb X	S.D. = 1.3 an 64 of 77 obs.	Moment Tensor; Scale 10**17 Nm
Z 16s 6.10um 5.2mszX	? JAN 21, 1989 13h 59m 45.78 ± 2.37s	Mrr=-1.47 0.10 Mtt=-0.15 0.09
KMI 25.91 267 Pd 02 50.00 -0.9	29.851 N ± 43.8km 131.366 E ± 24.2km	Mff=1.62 0.14 Mrt=-0.27 0.17
E 14s 6.20um	DEPTH = 33.0km (normal)	Mrf=0.75 0.21 Mtf=0.66 0.09
GTA 27.83 299 eP 03 07.50 -0.8	4.8mb (3 obs.)	Principal Axes:
Z 13s 3.40um 5.1mszX	RYUKYU ISLANDS REGION (239)	T Vol= 1.96 P1g=11 Azm=286
E 12s 3.30um	TSRJ 6.88 33 P 01 27.30 0.4	N -0.20 19 192
S 07 58.00	IIDJ 7.87 43 P 01 40.60 -0.2	P -1.76 68 44
sS 08 15.00	MTMJ 8.61 37 eP 01 51.40 0.2	Best Double Couple:Mo=1.9*10**17
CHG 31.47 258 iPd 03 40.00 -0.8	MAT 8.79 39 eP 01 53.00 -0.6	NP1:Strike= 38 Dip=38 Slip=-59
1.0s 12.00nm 4.7mb	CHJJ 8.90 44 P 01 55.20 0.1	NP2: 180 58 -112
SNG 36.58 239 eP 04 20.70 -4.0X	INK 64.47 24 eP 10 21.00 0.1	SHK 5.10 11 iPd 07 27.20 -1.3
GUN 39.87 279 P 04 51.60 -1.0	SUF 70.46 332 eP 10 59.00 0.4	1.0s 960.00nm 6.2mb X
PKI 40.35 279 P 04 55.30 -1.3	YKA 74.08 26 eP 11 20.20 0.3	TSRJ 7.10 31 P 07 55.20 -1.2
KKN 40.41 279 P 04 55.80 -1.2	HFS 76.89 333 eP 11 35.40 -0.6	IIDJ 8.04 41 P 08 08.10 -1.6
DMN 40.61 279 P 04 57.70 -0.9	0.9s 13.80nm 5.0mb	MTMJ 8.81 35 eP 08 17.30 -3.1X
GKN 40.92 280 P 04 59.60 -1.4	NAO 77.56 334 P 11 39.00 -0.7	MAT 8.98 37 iPd 08 20.60 -2.1
0.5s 6.00nm 4.6mb	0.7s 3.80nm 4.5mb	1.2s 200.00nm 6.2mb X
MTN 42.10 181 eP 05 10.00 -0.5	CLL 82.73 326 eP 12 08.00 0.5	(S) 10 14.00
MBL 51.61 194 eP 06 24.90 -0.4	1.1s 10.00nm 4.8mb	CHJJ 9.06 42 P 08 22.90 -0.9
GBA 52.29 265 Pc 06 28.60 -2.0	iP 12 18.10 32kmX	SSE 9.06 283 P 08 22.00 -1.8
0.7s 4.40nm 4.5mb	S.D. = 0.5 on 11 of 11 abs.	1.0s 1.22nm 4.0mb X
ASPA 52.91 177 eP 06 34.00 -1.0	JAN 21, 1989 14h 05m 41.31 ± 0.63s	pP 08 28.00
1.3s 8.00nm 4.5mb	46.274 N ± 5.5km 0.846 E ± 6.3km	KAKJ 9.88 45 P 08 33.30 -1.7
KOD 53.83 261 eP 06 42.80 0.4	DEPTH = 10.0km (geophysicist)	NIIJ 9.93 37 P 08 34.60 -1.1
MAIO 59.60 297 eP 07 24.00 1.1	FRANCE (538)	YAMJ 11.17 37 P 08 52.10 -0.6
INK 64.74 24 eP 07 56.00 -0.7	ML 2.9 (LDG).	NJ2 11.18 286 eP 08 51.50 -1.3
MBC 65.96 14 eP 08 04.00 -0.5	LSF 0.47 93 Pg 05 49.70 -1.3	N 12s 18.20um
DAG 72.40 353 iPc 08 43.40 -0.7	MFF 0.76 296 Pg 05 56.90 -5.7X	E 14s 46.10um
1.1s 17.72nm 5.0mb	Sg 06 00.30	OZH 12.36 251 eP 09 11.00 2.2
YKA 74.33 26 eP 08 56.00 0.5	TCF 0.95 89 Pg 05 58.10 -1.3	Z 12s 24.10um
YKC 74.39 26 eP 08 55.50 -0.4	Sg 06 11.50	N 12s 21.10um
0.5s 5.00nm 4.8mb	RJF 1.08 154 Pg 06 02.10 0.5	E 12s 21.60um
HFS 77.26 333 eP 09 12.40 0.2	MAF 1.20 92 Pg 06 02.90 -0.7	DL2 12.43 322 eP 09 09.00 -0.6
0.5s 5.30nm 4.8mb	Sg 06 19.60	N 12s 13.60um
BBTK 77.85 309 eP 09 18.50 2.5	LFF 1.34 183 Pg 06 06.50 0.6	E 12s 21.40um
NAO 77.93 334 P 09 14.50 -1.3	Sg 06 25.60	OFUJ 12.70 39 eP 09 11.70 -1.6
1.0s 17.30nm 5.0mb	BGF 1.41 78 Pg 06 06.40 -0.7	AOMJ 13.19 31 eP 09 24.70 5.0X
VRI 78.76 316 ePc 09 23.50 2.8	CAF 1.60 147 Pn 06 09.90 0.2	TIA 13.81 303 eP 09 27.60 -0.3
MLR 79.42 316 eP 09 25.00 0.5	Pg 06 11.40	Z 15s 23.70um
e 18 17.00	Sg 06 33.40	SNY 13.87 335 Pd 09 30.00 1.4
EDM 80.28 34 ePc 09 29.30 0.5	LPO 1.61 171 Pg 06 11.50 1.7	Z 13s 21.70um
KRA 80.34 323 eP 09 30.50 1.4	Sg 06 33.50	N 12s 18.00um
0.7s 25.00nm 5.3mb	AVF 1.81 72 Pg 06 13.20 0.5	E 11s 5.10um
e 09 35.00 14kmX	SSF 1.99 66 Pn 06 12.60 -2.8X	S 12 00.00
SPC 80.67 322 eP 09 42.00 10.9X	Sg 06 35.30	sS 12 09.00
KSP 81.76 325 eP 09 37.70 1.2	SMF 2.10 79 Pg 06 18.40 1.4	WHN 14.90 278 P 09 40.50 -1.8
i 09 47.20 30km	LPF 2.18 324 Pg 06 16.00 -2.1	Z 14s 39.20um
SRO 82.51 321 eP 09 39.10 -1.4	Sg 06 45.70	N 13s 26.10um
e 09 50.90 39km	LBF 2.27 71 Pg 06 22.10 2.6X	E 13s 32.20um
BRG 82.92 326 eP 09 52.60 10.1X	LOR 2.30 63 Pg 06 21.30 1.5	sP 09 49.00
1.7s 40.00nm 5.2mb	Sg 06 50.00	CN2 15.06 343 eP 09 47.00 2.7X
e 10 12.00 71kmX	MDJ 15.15 355 eP 09 46.50 1.0	Z 14s 13.80um
ZST 82.94 322 eP 09 44.70 2.0	Z 15s 8.70um	E 13s 18.30um
CLL 83.10 326 eP 09 45.00 1.5	E 12s 7.10um	esP 09 56.00
1.5s 34.00nm 5.2mb	eS 12 27.00	eS 12 27.00
iP 09 54.00 28km	BJI 16.38 314 eP 10 01.00 -0.2	10 01.00
SES 83.15 35 eP 09 44.00 0.2	Z 14s 41.20um	
PRU 83.17 325 eP 09 45.00 1.1	N 12s 28.90um	
e 09 54.70 31km	E 12s 20.10um	
VAY 83.74 314 eP 09 47.40 0.5		
i 09 57.00 30km		
SKO 84.08 315 iP 09 49.50 0.8		
i 09 57.50 25km		
KHC 84.20 324 P 09 50.40 1.2		

SOP	83.52	322	eP	18 38.70	0.6	SNF	87.68	329	P	19 10.30	11.7X	RYUKYU ISLANDS REGION		(239)			
PLG	83.70	313	eP	18 39.00	-0.2	CDF	87.78	327	P	18 58.94	-0.3	SHK	5.05	11	eP	15 10.50	-0.8
VAY	83.73	314	iP	18 39.40	0.2	FEL	87.79	326	P	18 58.71	-0.7	TSRJ	7.04	31	P	15 39.20	-0.1
			i	18 49.00	30km	DOU	87.84	329	P	19 11.50	12.1X	IIDJ	7.99	41	P	15 52.00	-0.6
BKS	83.88	50	ePd	18 39.90	-0.2				S	29 39.00		MTMJ	8.76	35	P	16 01.70	-1.6
	1.1s		46.00nm		5.5mb	CLC	88.12	49	eP	19 01.00	-0.1	MAT	8.93	37	eP	16 04.00	-1.6
SKO	84.06	315	iP	18 41.80	0.8	RSM	88.12	321	P	19 02.40	1.6		1.2s		89.06nm		5.8mb
Z	17s		1.73um		5.5mszX	MOF	88.24	326	P	19 00.82	-0.7	CHJJ	9.02	42	P	16 06.70	0.0
N	16s		2.55um			BBS	88.32	326	P	19 01.09	-0.8	KAKJ	9.83	45	P	16 17.20	-0.7
E	17s		2.47um			BSF	88.42	326	P	19 01.47	-0.9	NIIJ	9.88	37	P	16 18.60	0.0
			i	18 51.20	30km	SFI	88.45	321	P	19 04.20	1.8	SNY	13.83	334	eP	17 11.80	0.1
			iS	29 07.00		HAU	88.51	327	eP	19 02.60	-0.1	CN2	15.01	343	eP	17 32.80	5.6X
			LR	00 00.00					1.0s	12.00nm	5.2mb	MDJ	15.10	355	eP	17 31.50	3.1X
KHC	84.19	324	iPc	18 42.30	0.8	DUG	88.52	44	P	19 03.80	0.7	BJI	16.35	314	P	17 45.00	0.6
	1.0s		17.50nm		5.2mb	VITF	88.54	327	P	19 02.37	-0.4	BAG	16.50	220	eP	17 45.50	-1.2
			i	18 51.60	29km	TDS	88.55	316	P	19 04.00	1.0	BTO	20.71	308	eP	18 35.00	-0.9
			SKS	29 10.00		PGD	88.55	321	P	19 04.50	1.3	CD2	24.01	280	eP	19 07.70	-1.0
MOX	84.19	326	eP	18 42.00	0.6	ASS	88.55	320	P	19 04.90	1.8	LZH	24.11	293	eP	19 09.00	-0.7
	1.1s		35.00nm		5.4mb	CRE	88.59	321	P	19 04.76	1.5		2.0s		0.05nm		1.7mb X
Z	14s		3.10um		5.8mszX	SBB	88.62	50	eP	19 03.00	-0.5	KMI	25.92	267	eP	19 27.00	-0.1
N	14s		5.10um			BW06	88.79	40	eP	19 04.00	-0.4	GTA	27.80	299	eP	19 44.60	0.5
E	14s		2.10um						1.0s	15.00nm	5.3mb	CHTO	31.49	258	eP	20 17.00	0.0
			iP	18 52.00	32km						eP	19 16.00	39km				4.8mb
			eS	29 06.00		MME	88.90	322	P	19 05.50	0.6	NNT	33.98	247	eP	20 39.00	0.3
			LQ	56 00.00		GSC	88.94	49	eP	19 06.00	0.9	GUN	39.86	279	P	21 27.90	-0.8
			LR	01 45.00		MSU	89.96	45	P	19 11.30	1.3	PKI	40.35	279	P	21 30.70	-2.0
FFC	84.36	28	eP	18 41.50	-0.6	PLM	90.04	51	eP	19 11.00	0.6	KKN	40.41	279	P	21 32.00	-1.0
	1.1s		59.00nm		5.7mb	LPG	90.07	325	eP	19 10.50	0.0	DMN	40.60	279	P	21 33.80	-0.8
NEO	84.44	312	eP	18 52.00	9.1X				1.0s	8.80nm	5.0mb	GKN	40.91	280	P	21 35.80	-1.2
WET	84.53	325	iPc	18 44.40	1.2	TPC	90.15	50	eP	19 13.00	2.3	WB5	49.23	176	eP	22 57.00	13.7X
KMR	84.58	323	iP+	18 45.30	1.9	LOR	90.22	327	eP	19 10.50	-0.3	CTA	51.37	162	iPc	22 59.20	-0.4
			iP	18 56.40	36km				1.0s	10.00nm	5.1mb		1.6s		50.00nm		5.2mb
KZN	84.80	314	eP	18 44.00	-0.8	LBF	90.37	327	eP	19 11.20	-0.3				i	28 20.00	
PTJ	84.94	321	eP	18 46.10	0.7				1.0s	12.00nm	5.1mb	GBA	52.30	264	Pc	23 04.90	-1.9
OHR	84.95	315	eP	18 45.70	0.2	SSF	90.53	327	eP	19 12.20	0.0		0.8s		5.00nm		4.5mb
	1.3s		0.11nm		2.9mb X				1.0s	6.00nm	4.9mb	KOD	53.84	261	eP	23 19.00	0.4
			i	18 56.40	34km	BAR	90.56	52	eP	19 14.00	1.4	SVW	56.37	34	eP	23 36.30	0.3
ZAG	84.98	321	iP	18 46.90	1.5	RSON	90.58	27	eP	19 11.50	-0.8	BRW	56.44	22	eP	23 36.30	-0.1
WIT	85.00	330	eP	18 27.00	-18.3X				1.1s	23.84nm	5.4mb	IMA	57.22	28	eP	23 41.80	-0.4
GRF	85.00	326	iPd	18 46.30	0.8						eP	19 23.00	37km				4.7mb
	1.2s		44.00nm		5.5mb	MNO	90.63	315	P	19 22.50	9.4X	PMR	59.46	33	eP	23 56.30	-1.3
Z	18s		8.00um		6.2msz	SMF	90.68	327	eP	19 12.60	-0.3		1.0s		22.50nm		5.3mb
			e	18 56.70	33km	AVF	90.80	327	eP	19 13.40	0.0	MAIO	59.57	297	eP	24 04.00	5.2X
CMB	85.02	49	iPd	18 46.00	0.1				1.1s	13.10nm	5.2mb	FBA	59.72	29	eP	23 59.10	-0.3
LRM	85.25	39	eP	18 47.30	0.1	BGF	91.21	327	eP	19 15.30	0.0	INK	64.68	24	eP	24 32.00	-0.4
PRS	85.30	51	iPd	18 47.30	0.0				1.0s	14.00nm	5.3mb	MBC	65.90	14	eP	24 40.00	-0.2
WTS	85.51	329	eP	18 48.50	0.6	GRR	91.50	330	eP	19 16.80	0.2	ALE	67.94	2	eP	24 53.00	0.0
	1.0s		13.00nm		5.1mb				1.2s	38.00nm	5.7mb		0.9s		11.00nm		5.0mb
AKSR	85.56	295	eP	18 50.00	1.3	MAF	91.59	327	eP	19 16.50	-0.6	SOD	68.53	336	eP	24 57.00	0.1
	0.2s		125.00nm		6.8mb X				1.2s	17.80nm	5.3mb	KJF	69.49	333	eP	25 03.00	0.2
VBY	85.57	321	eP	18 49.60	1.2	GLA	91.59	50	eP	19 17.00	-0.4		0.8s		24.90nm		5.3mb
			i	18 59.70	32km	TCF	91.71	328	eP	19 17.80	0.2	SUF	70.78	332	iP	25 10.30	-0.4
KBA	85.61	323	eP	18 49.50	0.7				1.2s	20.80nm	5.4mb	MSL	71.95	302	eP	25 19.00	0.8
	1.5s		57.10nm		5.6mb	LPF	91.86	330	eP	19 18.80	0.6	DAG	72.34	353	iPc	25 19.40	-0.4
			i	18 56.20	21kmX				1.0s	24.00nm	5.6mb		0.9s		22.69nm		5.2mb
			e	19 06.00		MFF	92.55	329	eP	19 21.90	0.4	NUR	72.45	330	iP	25 20.90	0.2
LJU	85.63	321	eP	18 49.00	0.3				1.2s	44.00nm	5.8mb	YKA	74.27	26	eP	25 32.10	0.8
			i	18 59.30	32km	RJF	92.76	327	eP	19 22.80	0.3	YKC	74.33	26	eP	25 31.50	-0.1
FRB	85.71	9	ePd	18 48.70	0.0				1.0s	12.00nm	5.3mb		1.0s		22.00nm		5.1mb
	1.0s		100.00nm		6.0mb	GOL	93.19	40	P	19 25.40	0.5	UPP	75.78	332	iP	25 39.60	-0.3X
CEY	85.88	321	eP	18 51.00	1.0	GLD	93.24	40	P	19 26.00	1.0	HFS	77.21	333	eP	25 46.90	-1.0
			i	19 00.60	30km	LFF	93.40	327	eP	19 25.50	0.1		0.6s		12.60nm		5.1mb
PRI	85.88	51	iPd	18 50.80	0.5	AVY	93.93	251	iPc	19 28.82	0.4	BBTK	77.82	309	eP	25 52.50	0.7
RBL	85.90	322	P	18 48.30	-1.8	ALQ	95.76	44	eP	19 37.00	0.2	NAO	77.88	334	P	25 50.60	-1.0
KVN	85.93	47	iP	18 50.80	0.2				1.2s	29.70nm	5.6mb		0.9s		17.50nm		5.1mb
			eP	19 03.00	40km	BNG	107.55	286	ePKPd	25 00.10	22.0X	VR1	78.71	316	ePd	25 58.00	1.5
TNS	85.98	327	ePd	18 51.00	0.6				0.9s	5.00nm		EDM	80.22	34	ePc	26 05.30	0.8
VOY	85.98	322	eP	18 49.90	-0.7	KIC	124.89	303	PKP	25 10.76	-0.4	KRA	80.29	323	ePc	26 06.00	1.1
			i	19 00.70	34km				0.9s	23.00nm			0.8s		33.00nm		5.4mb
AGMR	85.99	295	iPc	18 51.00	0.1	TIC	124.90	304	PKP	25 10.60	-0.5	SPC	80.62	322	e(P)	26 18.00	11.1X
	0.1s		250.00nm		7.4mb X	LIC	125.19	303	PKP	25 11.26	-0.4	MBH	81.09	299	eP	26 10.00	0.5
FRI	86.05	49	iPd	18 50.80	-0.1	ZOBO	157.66	58	ePKP	26 09.00	1.3	KSP	81.71	325	eP	26 11.30	-1.1
FVI	86.22	323	P	18 51.40	-0.2				Z	24s			ec			26 13.50	7kmX
PHAM	86.23	51	P	18 52.40	0.5						LR	21 20.00	e			26 22.20	
TRI	86.26	322	eP	18 51.10	-0.7	LPB	157.85	59	(PKP)	26 10.00	2.3	BRG	82.86	326	iPc	26 19.60	1.3
			i	19 02.10	35km						LR	12 30.00					5.0mb
ENN	86.77	329	iPc	18 54.80	0.6	CNCB	158.11	59	ePKP	26 11.00	2.8X	ZST	82.89	322	eP	26 20.00	1.5
	0.5s		12.00nm		5.4mb	BAO	166.18	358	ePKP	26 16.00	0.5	CLL	83.05	326	iPd	26 19.90	0.6
			i	19 05.90	35km				S.D. = 1.0	on 243 of 266 obs.			1.5s		53.00nm		5.4mb
EKA	87.02	336	P	18 55.00	-0.3				JAN	21, 1989	14h 13m				i	26 24.80	
	2.4s		190.00nm		5.9mb										i (pP)	26 30.20	33km
TNP	87.05	47	iP	18 56.20	0.1							SES	83.09	35	eP	26 20.00	0.4
	1.1s		57.14nm		5.7mb							PRU	83.12	325	P	26 21.00	1.3
			eP	19 09.00	42km										i	26 24.80	
GWF	87.23	327	P	18 56.13	-0.4										i (pP)	26 30.20	33km
SYP	87.25	52	eP	18 5													

21d 14h

VAY	83.70	314	eP	26 23.00	32km	0.2
SKO	84.03	315	iP	26 25.20	0.7	
MOX	84.15	326	iP	26 26.00	1.1	
KHC	84.15	324	iPc	26 26.10	1.1	
FFC	84.30	28	eP	26 26.00	0.4	
OHR	84.92	315	eP	26 27.50	-1.5	
GRF	84.96	326	iPc	26 30.50	1.5	
CMB	84.98	49	eP	26 30.00	0.6	
LRM	85.20	39	eP	26 31.30	0.7	
VBY	85.54	321	eP	26 33.40	1.5	
KBA	85.58	323	e(P)	26 36.50	4.1X	
LJU	85.60	322	e(P)	26 32.00	-0.3	
FRB	85.66	9	eP	26 33.00	0.8	
CEY	85.84	321	eP	26 34.60	1.1	
VOY	85.95	322	e(P)	26 35.20	1.1	
TRI	86.22	322	eP	26 35.40	0.1	
TNP	87.01	47	eP	26 40.00	0.4	
BW06	88.74	40	eP	26 48.50	0.6	
SLR	113.08	253	ePKP	32 20.00	-12.1X	
BAO	166.13	358	e(PKP)	33 59.00	-0.2	

S.D. = 0.9 on 73 of 81 obs.

* JAN 21, 1989 14h 19m 15.87±1.09s
 29.501 N ±19.1km 131.561 E ±12.7km
 DEPTH = 33.0km (normal)
 4.6mb (10 obs.)
 RYUKYU ISLANDS REGION (239)

SHK	5.11	10	iPc	20 32.90	0.8	
TSRJ	7.08	31	P	20 59.40	-0.4	
IIDJ	8.02	40	P	21 12.40	-0.6	
MTMJ	8.79	35	eP	21 23.80	0.0	
MAT	8.97	37	eP	21 25.00	-1.1	
CHJJ	9.04	42	P	21 27.30	0.2	
NIJJ	9.91	37	eP	21 38.80	-0.3	
GUN	39.90	279	P	26 48.70	-0.3	
PKI	40.39	279	P	26 51.90	-1.0	
KKN	40.45	279	P	26 52.90	-0.4	
DMN	40.64	279	P	26 55.00	0.1	
GKN	40.95	280	P	26 56.80	-0.5	
GBA	52.32	265	Pd	28 26.70	-0.2	
INK	64.72	24	eP	29 52.50	-0.1	
KJF	69.56	333	eP	30 23.00	-0.1	
SUF	70.85	332	eP	30 31.00	0.0	
DAG	72.41	353	eP	30 40.30	0.2	
NUR	72.53	330	eP	30 35.00	-6.0X	
YKA	74.31	26	eP	30 52.60	1.2	
HFS	77.28	333	eP	31 07.30	-0.9	
NAO	77.95	334	P	31 11.40	-0.5	
CLL	83.12	326	eP	31 40.00	0.5	
PRU	83.19	325	eP	31 41.50	1.5	
KHC	84.22	324	P	31 46.50	1.2	
FRB	85.71	9	eP	31 53.00	0.6	

S.D. = 0.7 on 24 of 25 obs.

? JAN 21, 1989 14h 20m 40.79±2.01s
 29.683 N ±43.0km 131.424 E ±29.5km
 DEPTH = 33.0km (normal)
 4.3mb (4 obs.)
 RYUKYU ISLANDS REGION (239)

TSRJ	6.99	32	P	22 23.50	0.0	
IIDJ	7.96	42	P	22 36.90	-0.2	
MAT	8.89	38	eP	22 49.00	-1.0	
CHJJ	8.99	43	P	22 51.50	0.2	
CHTO	31.43	257	iP	27 01.00	-0.4	
GBA	52.22	264	Pd	29 50.30	-0.7	
INK	64.61	24	eP	31 17.00	0.2	
YKA	74.20	26	eP	32 16.60	0.9	
APO	76.72	333	eP	32 29.70	-0.4	
NAO	77.73	334	P	32 35.30	-0.4	
CLL	82.90	326	eP	33 05.00	1.7	

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

JAN 21, 1989 14h 30m 17.28±0.36s
 46.319 N ±8.0km 153.850 E ±5.6km
 DEPTH = 39.1km (4 depth phases)
 4.8mb (25 obs.)
 KURIL ISLANDS (221)

KUSJ	7.26	247	P	31 59.50	-4.1X	
ASAJ	8.21	258	P	32 16.80	-0.1	
HOOJ	8.53	246	P	32 20.40	-0.8	
MAT	15.24	236	eP	33 49.00	-2.3	
MDJ	17.09	273	eP	34 14.00	-0.7	
CN2	20.18	273	eP	34 46.00	-5.0X	
SNY	22.13	269	eP	35 09.60	-1.3	
BJI	27.99	271	eP	36 08.00	1.8	
HHC	30.84	275	eP	36 31.00	-0.8	
TIY	31.65	269	eP	36 38.80	-0.1	
TTA	32.41	41	eP	36 45.00	-0.3	
IMA	33.86	35	eP	36 57.30	-0.6	
PMR	35.56	44	eP	37 12.40	0.1	
XAN	35.99	266	P	37 16.70	0.4	
FBA	36.19	38	eP	37 17.00	-0.6	
GTA	39.54	280	Pd	37 46.40	0.2	
CD2	41.35	266	iPd	38 01.70	0.7	
INK	41.75	32	eP	38 04.00	0.3	
GYA	42.12	259	iPd	38 08.20	0.8	
MBC	44.83	20	eP	38 30.00	1.3	
KMI	45.67	261	Pd	38 37.50	1.3	
LSA	50.81	274	P	39 18.10	1.7	
YKA	50.97	37	eP	39 17.00	0.4	
CHG	52.52	258	iPd	39 30.00	1.2	
SHL	52.87	269	iP	39 31.50	-0.1	
PNT	55.08	53	eP	39 47.00	-0.3	
EDM	56.25	46	eP	39 55.00	-0.7	
SOD	59.84	339	iP	40 20.40	-0.2	
FFC	60.74	40	iPc	40 26.50	-0.5	
LRM	61.05	53	eP	40 29.70	0.2	
CMB	61.14	64	eP	40 30.00	0.0	
KJF	62.01	336	eP	40 35.00	-0.4	
TNP	63.07	62	eP	40 43.00	0.0	
SUF	63.61	336	iP	40 44.50	-1.5	
BW06	64.58	54	iP	40 53.10	0.1	
FRB	65.29	19	eP	40 55.00	-1.8	
NUR	65.81	335	iP	40 59.10	-1.1	
WB5	68.21	200	eP	41 15.80	0.0	
WRA	68.27	200	Pd	41 16.60	0.4	
HFS	69.04	340	eP	41 19.00	-1.5	
NAO	69.08	342	P	41 19.40	-1.3	
GBA	70.93	270	Pd	41 30.20	-2.4	
ASPA	71.96	199	eP	41 39.10	0.5	
KSP	76.51	334	eP	42 04.40	-0.2	

CLL	77.07	336	iPd	42 07.20	-0.4	
BRG	77.19	335	e(P)	42 08.10	-0.2	
MLR	77.71	325	ePc	42 13.00	1.5	
PRU	77.80	334	P	42 12.10	0.4	
MOX	78.05	337	eP	42 13.00	-0.1	
ZST	78.58	332	eP	42 16.00	0.0	
KHC	78.85	335	iPd	42 18.10	0.6	
GRF	79.02	336	eP	42 17.80	-0.6	
KBA	80.75	334	ePd	42 28.00	0.0	
SKO	82.43	326	eP	42 37.00	0.4	
LOR	83.16	340	eP	42 40.90	0.6	
LBF	83.40	340	eP	42 42.10	0.6	
OHR	83.42	326	eP	42 41.00	-0.7	
SSF	83.44	340	eP	42 42.30	0.6	
AVF	83.73	340	eP	42 44.10	1.0	
SMF	83.75	340	eP	42 44.00	0.7	
BGF	84.06	340	eP	42 45.60	0.7	
LPG	84.08	337	eP	42 47.00	1.6	
MAF	84.45	340	eP	42 48.10	1.3	

S.D. = 0.9 on 61 of 63 obs.

* JAN 21, 1989 14h 37m 08.63±0.93s
 29.510 N ±14.3km 131.490 E ±8.8km
 DEPTH = 33.0km (normal)
 4.5mb (8 obs.)
 RYUKYU ISLANDS REGION (239)

SHK	5.11	11	iPc	38 24.30	-0.6	
TSRJ	7.11	31	P	38 52.50	-0.4	
IIDJ	8.05	41	P	39 05.60	-0.6	
MTMJ	8.82	35	P	39 17.00	0.1	
MAT	9.00	37	eP	39 18.00	-1.3	
SSE	9.05	283	P	39 30.10	10.2X	
CHJJ	9.08	42	P	39 20.30	0.0	
CN2	15.06	343	eP	40 42.00	1.4	
BJI	16.37	314	eP	41 04.00	6.6X	
TIY	17.84	302	eP	41 16.80	0.9	
XAN	19.70	289	P	41 36.30	-1.9	
BTO	20.72	308	eP	41 48.00	-0.7	
CD2	23.99	280	eP	42 20.80	-0.4	
GTA	27.80	299	eP	42 57.30	0.5	
GUN	39.84	279	P	44 41.20	0.0	
PKI	40.33	279	P	44 44.60	-0.6	
DMN	40.58	279	P	44 45.20	-2.0	
WB5	49.18	176	eP	46 06.50	10.9X	
GBA	52.26	264	Pd	46 19.40	0.2	
INK	64.74	24	eP	47 45.50	0.0	
KJF	69.52	333	eP	48 15.00	-0.7	
SUF	70.81	332	iP	48 23.00	-0.5	
NUR	72.49	330	eP	48 34.00	0.4	
YKA	74.33	26	eP	48 45.20	0.9	
HFS	77.24	333	eP	49 00.40	-0.4	
NAO	77.91	334	P	49 03.80	-0.7	
KRA	80.31	323	eP	49 18.50	0.8	
KSP	81.74	325	eP	49 26.70	1.5	
CLL	83.08	326	e(P)	49 54.00	21.9X	
PRU	83.15	325	eP	49 34.50	2.0	
SKO	84.05	315	eP	49 36.60	-0.7	
KHC	84.18	324	eP	49 39.50	1.7	

KBA 85.60 323 e 50 00.00
 0.8s 1.00nm 4.1mb
 e 49 46.00
 FRB 85.72 9 eP 49 46.00 0.9
 S.D. = 1.0 on 29 of 34 obs.

JAN 21, 1989 14h 42m 57.77± 0.35s
 29.527 N ± 5.6km 131.635 E ± 5.1km
 DEPTH = 33.0km (normol)
 4.7mb (13 obs.)

RYUKYU ISLANDS REGION (239)

SHK 5.07 10 iP 44 13.20 -0.3
 0.9s 151.26nm 5.4mb
 TSRJ 7.03 30 P 44 41.00 0.0
 IIDJ 7.96 40 P 44 53.90 -0.2
 MTMJ 8.74 35 eP 45 04.40 -0.5
 MAT 8.91 37 eP 45 06.00 -1.2
 0.7s 15.07nm 5.3mb
 CHJJ 8.98 42 P 45 08.70 0.6
 SSE 9.17 282 eP 45 11.00 0.3
 NIJJ 9.85 37 P 45 20.40 0.3
 CN2 15.08 343 eP 46 34.00 4.0X
 BJI 16.45 314 eP 46 52.00 4.5X
 TIY 17.93 302 eP 47 08.00 1.7
 XAN 19.82 289 eP 47 29.30 0.8
 GYA 22.25 268 P 47 53.40 -0.1
 CD2 24.11 280 eP 48 10.00 -1.5
 CHTO 31.58 258 eP 49 20.00 0.4
 1.1s 2.94nm 4.1mb
 GUN 39.96 279 P 50 30.50 -0.9
 0.8s 26.00nm 5.0mb
 PKI 40.45 279 P 50 34.10 -1.2
 0.8s 8.00nm 4.5mb
 KKN 40.51 279 P 50 34.50 -1.2
 WB5 49.19 177 eP 51 45.10 0.3
 WRA 49.25 177 Pc 51 45.70 0.4
 0.8s 2.10nm 4.2mb
 MBL 51.66 194 eP 52 03.50 -0.1
 GBA 52.39 265 Pc 52 08.90 -0.4
 0.7s 2.00nm 4.2mb
 ASPA 52.93 177 iPd 52 12.90 -0.2
 1.6s 9.00nm 4.5mb
 INK 64.67 24 eP 53 34.00 -0.2
 MBC 65.91 14 eP 53 42.00 -0.1
 0.8s 8.00nm 4.9mb
 SOD 68.61 336 eP 54 17.00 17.8X
 KJF 69.57 333 eP 54 14.00 8.9X
 SUF 70.86 332 iP 54 12.50 -0.4
 0.7s 3.60nm 4.5mb
 DAG 72.39 353 eP 54 21.50 -0.4
 YKA 74.26 26 eP 54 34.30 1.3
 HFS 77.28 333 eP 54 49.60 -0.6
 0.6s 6.80nm 4.9mb
 NAO 77.95 335 P 54 53.50 -0.3
 0.7s 5.20nm 4.7mb
 CLL 83.13 326 iPc 55 22.40 0.9
 1.0s 15.00nm 5.1mb
 iPp 56 02.20 159kmX
 iSg 06 08.80
 PRU 83.21 325 eP 55 23.30 1.4
 e 27 35.50
 KHC 84.24 324 iPc 55 28.50 1.3
 FRB 85.68 9 eP 55 34.00 -0.3
 S.D. = 0.8 on 32 of 36 obs.

JAN 21, 1989 15h 15m 00.42± 0.35s
 29.492 N ± 6.0km 131.470 E ± 5.6km
 DEPTH = 29.3km (5 depth phases)
 4.9mb (20 obs.)

RYUKYU ISLANDS REGION (239)

SHK 5.13 11 iPc 16 16.80 -0.5
 0.7s 186.30nm 5.7mb X
 TSRJ 7.13 31 P 16 44.60 -0.8
 IIDJ 8.08 41 P 16 58.20 -0.5
 MAT 9.02 37 eP 17 10.00 -1.7
 0.7s 12.33nm 5.2mb X
 SSE 9.03 283 eP 17 11.50 -0.4
 1.0s 0.02nm 2.3mb X
 Z 12s 1.50um
 N 12s 1.50um
 E 12s 1.30um
 CHJJ 9.10 42 P 17 12.40 -0.4
 CN2 15.07 343 Pd 18 39.00 6.1X
 BJI 16.37 314 eP 18 51.50 1.9

Z 12s 1.90um
 N 12s 1.00um
 E 12s 0.75um
 TIY 17.83 302 Pc 19 09.00 1.0
 N 12s 1.10um
 XAN 19.69 289 P 19 27.60 -2.7X
 BTO 20.71 308 eP 19 40.00 -1.0
 N 14s 0.40um
 E 14s 1.00um
 GYA 22.10 268 P 19 54.20 -1.0
 CD2 23.97 280 eP 20 12.80 -0.5
 LZH 24.09 293 eP 20 13.00 -1.5
 KMI 25.87 267 eP 20 31.00 -0.6
 GTA 27.79 299 eP 20 47.20 -1.8
 CHG 31.43 258 eP 21 21.50 0.0
 CHTO 31.43 258 eP 21 22.00 0.5
 1.0s 3.75nm 4.2mb
 NNT 33.91 247 eP 21 44.50 1.4
 SHL 35.21 273 iP 21 52.50 -1.9
 GUN 39.83 279 P 22 33.00 -0.4
 PKI 40.31 279 P 22 36.50 -0.9
 0.8s 22.00nm 5.0mb
 KKN 40.37 279 P 22 35.80 -1.9
 0.8s 20.00nm 4.9mb
 DMN 40.56 279 P 22 38.10 -1.2
 0.8s 15.00nm 4.8mb
 PSI 40.80 235 ePc 22 41.00 0.0
 GKN 40.87 280 P 22 40.10 -1.6
 0.6s 11.00nm 4.8mb
 WB5 49.16 176 eP 23 47.20 -0.5
 WRA 49.23 176 Pd 23 47.90 -0.3
 0.7s 1.40nm 4.1mb
 MBL 51.59 194 eP 24 06.40 0.2
 0.6s 6.00nm 4.7mb
 GBA 52.24 264 Pc 24 11.40 0.1
 0.8s 8.00nm 4.7mb
 ASPA 52.90 177 iPd 24 15.60 -0.5
 1.1s 6.00nm 4.5mb
 KOD 53.79 261 eP 24 24.00 0.9
 NANU 53.98 198 eP 24 24.00 0.1
 INK 64.76 24 ePd 25 37.90 -0.1
 MBC 65.98 14 eP 25 45.00 -0.7
 KJF 69.53 333 iP 26 08.00 0.0
 SUF 70.82 332 iP 26 15.70 -0.2
 0.7s 6.20nm 4.8mb
 DAG 72.40 353 iPd 26 24.50 -0.7
 0.9s 12.60nm 4.9mb
 NUR 72.49 330 iP 26 25.50 -0.4
 YKA 74.36 26 eP 26 37.40 0.6
 UPP 75.82 332 iP 26 44.70 -0.4
 HFS 77.25 333 eP 26 52.80 -0.4
 0.8s 15.80nm 5.1mb
 BBTK 77.83 309 eP 26 58.00 1.1
 NAO 77.92 334 P 26 56.30 -0.6
 0.8s 14.10nm 5.0mb
 VRI 78.73 316 ePd 27 03.50 1.9
 EDM 80.31 34 ePc 27 10.50 0.5
 KRA 80.32 323 eP 27 11.00 1.0
 0.8s 28.00nm 5.3mb
 e 27 20.50 30km
 M8H 81.09 299 iPc 27 16.00 1.5
 KSP 81.74 325 iPc 27 19.00 1.5
 e 27 27.80 28km
 SRO 82.49 321 eP 27 23.20 1.8
 BRG 82.90 326 eP 27 25.10 1.6
 1.4s 21.00nm 5.1mb
 e 27 34.00 28km
 ZST 82.92 322 eP 27 25.70 2.0
 CLL 83.08 326 iP 27 24.90 0.5
 1.5s 51.00nm 5.4mb
 i 27 34.50 30km
 PRU 83.15 325 P 27 36.50 11.6X
 VAY 83.72 314 eP 27 29.00 1.1
 SKO 84.05 315 eP 27 30.80 1.2
 KHC 84.18 324 iPc 27 31.80 1.6
 1.0s 9.00nm 4.9mb
 MOX 84.18 326 eP 27 31.00 0.9
 FFC 84.39 28 eP 27 31.50 0.5
 0.9s 10.00nm 5.0mb
 GRF 85.00 326 eP 27 37.00 2.8X
 1.1s 12.00nm 5.0mb
 KBA 85.60 323 eP 27 38.00 0.5
 0.8s 4.80nm 4.8mb
 i 27 47.60 30km
 FRB 85.74 9 eP 27 38.00 0.4
 TRI 86.25 322 eP 27 37.80 -2.7
 KIC 124.87 303 PKP 33 59.60 -0.2

TIC 124.88 304 PKP 33 59.90 0.1
 LIC 125.17 303 PKP 34 00.40 0.0
 S.D. = 1.1 on 62 of 66 obs.

JAN 21, 1989 16h 12m 51.63± 0.42s
 46.546 N ± 4.6km 6.401 E ± 4.4km
 DEPTH = 10.0km (geophysicist)

SWITZERLAND (544)
ML 2.8 (LDG).

EMS 0.60 142 iPc 13 02.50 -1.4
 DIX 0.84 123 iPd 13 07.50 -0.5
 LPL 1.06 167 Pg 13 11.40 -0.3
 Sg 13 26.60
 LPG 1.08 167 Pg 13 11.50 -0.6
 Sg 13 26.90
 MMK 1.19 114 iPc 13 14.20 0.2
 BSF 1.31 12 Pg 13 17.30 1.3
 Sg 13 35.20
 ORX 1.43 129 P 13 18.78 1.1
 S 13 37.85
 HAU 1.46 359 Pn 13 18.20 0.1
 Pg 13 19.30
 Sg 13 39.70
 BNI 1.51 173 P 13 18.90 0.1
 eSn 13 39.60
 RSP 1.52 156 P 13 19.50 0.6
 S 13 38.93
 RRL 1.65 170 P 13 22.37 1.4
 S 13 43.39
 LBF 1.72 286 Pn 13 22.50 0.6
 Pg 13 23.90
 Sg 13 47.20
 SMF 1.77 274 Pg 13 24.80 2.3
 Sg 13 48.20
 LLS 1.82 79 iPd 13 23.50 0.2
 SLE 1.88 49 iPc 13 22.40 -1.7
 LOR 1.89 293 Pn 13 24.70 0.5
 Pg 13 27.20
 Sg 13 52.00
 CDF 1.96 17 Pn 13 24.30 -1.0
 Sg 13 54.00
 SSF 2.05 286 Pg 13 30.70 4.1X
 Sg 13 56.20
 PZZ 2.10 166 P 13 30.78 3.4X
 S 13 55.55
 AVF 2.11 278 Pn 13 26.20 -1.3
 Pg 13 31.70
 Sg 13 57.80
 VDL 2.12 90 iPc 13 28.80 1.0
 BGF 2.45 272 Pn 13 31.40 -0.9
 Pg 13 38.20
 Sg 14 08.70
 TCF 2.91 266 Pn 13 37.20 -1.7
 Sg 14 23.50
 DOU 3.75 342 eP 14 46.90 56.1X
 S.D. = 1.2 on 21 of 24 obs.

* JAN 21, 1989 16h 19m 02.86± 0.95s
 29.768 N ± 9.2km 50.638 E ± 10.2km
 DEPTH = 33.0km (normol)

SOUTHERN IRAN (353)

SHI 1.65 94 eP 19 30.00 0.0
 eS 19 53.00
 DHR 3.48 187 eP 19 55.50 -0.5
 BEE 3.74 182 ePn 20 00.00 0.4
 BJA 3.76 180 ePn 20 00.00 0.1
 eSn 20 49.90
 RYD 6.17 216 eP 20 24.50 -9.7X
 eS 22 26.00
 BHD 6.38 305 ePnc 20 37.00 0.0
 eP* 20 49.00
 ePg 21 05.00
 iSn 21 49.50
 iS* 22 09.50
 QASM 7.27 241 ePc 20 31.50 -18.1X
 MSL 9.11 318 ePc 21 18.50 3.5X
 eS 23 24.00
 GKN 29.76 85 P 24 58.90 -10.0X
 S.D. = 0.5 on 5 of 9 obs.

JAN 21, 1989 16h 22m 19.58± 0.90s
 38.819 N ± 6.6km 142.755 E ± 10.1km
 DEPTH = 10.0km (geophysicist)
 4.5mb (1 obs.)

NEAR EAST COAST OF HONSHU, JAPAN(228)

21d 16h

Felt (11 JMA) at Ofunato and (1 JMA) at Miyako.

Table with columns for station name, time, magnitude, depth, and other parameters. Includes stations like OFU, OFUJ, MIY, YAMJ, ADMJ, KAKJ, NIJ, HOOJ, MRRJ, CHJJ, MAT, KUSJ, IIDJ, ASAJ, GUN, WB5, WRA.

JAN 21, 1989 17h 02m 36.14 ± 0.42s 29.464 N ± 6.4km 131.464 E ± 5.5km DEPTH = 33.0km (narmol) 4.5mb (11 abs.)

RYUKYU ISLANDS REGION (239)

Table with columns for station name, time, magnitude, depth, and other parameters. Includes stations like SHK, TSRJ, IIDJ, MTMJ, SSE, MAT, CHJJ, CN2, BJI, TIY, XAN, BTO, GYA, CD2, LZH, GTA, CHTO, GUN, PKI, KKN, DMN, GKN, WB5, WRA, MBL, GBA, ASPA, KOD, INK, KJF, SUF, NUR.

Table with columns for station name, time, magnitude, depth, and other parameters. Includes stations like YKA, HFS, NAO, VRI, KHC, FRB.

S.D. = 1.0 an 36 of 38 obs.

JAN 21, 1989 17h 37m 37.50 ± 0.22s 29.513 N ± 4.0km 131.466 E ± 4.2km DEPTH = 32.0km (7 depth phases) 5.2mb (29 abs.)

RYUKYU ISLANDS REGION (239)

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 9S, 15C

Centroid Location:

Origin Time 17:37:39.5 1.1

Lat 29.20N 0.11 Lon 131.24E 0.15

Dep 15.0 FIX Half-duration 1.5

Moment Tensor; Scale 10**16 Nm

Mrr=-4.64 0.47 Mlt=-0.40 0.40

Mff= 5.03 0.68 Mrt= 2.85 1.11

Mrf= 2.38 1.65 Mtr= 1.89 0.42

Principal Axes:

T Val= 6.54 Plg=16 Azm=292

N -0.32 18 28

P -6.23 65 163

Best Double Couple: Mo=6.4*10**16

NP1:Strike=357 Dip=33 Slip=-125

NP2: 217 64 -70

Table with columns for station name, time, magnitude, depth, and other parameters. Includes stations like SHK, MAT, SSE, Z, E, NJ2, QZH, SNY, WHN, CN2, BJI, BAG, GZH, TIY, XAN, HHC, GUMO, GUA, BTO.

Table with columns for station name, time, magnitude, depth, and other parameters. Includes stations like GYA, QIZ, CD2, LZH, KMI, GTA, CHG, NST, PCI, NNT, SHL, WMO, GUN, PKI, KKN, DMN, PSI, GKN, KLI, KNA, NDI, HNR, WB5, WRA, HYB, OIS, CTA, GBA, ASPA, KOD, NANU, WARB, SVW, BRW, IMA, RMO, PMR, MAIO, FBA, DZM, CMS, ADE, INK, BWA, MBC, CAN, KEV, ALE, TOO, SOD.

21d 18h

WRA 60.23 189 Pd 07 17.90 -2.2
0.5s 1.10nm 4.2mb
YKA 60.70 31 eP 07 35.10 12.2X
GBA 62.38 265 Pd 07 33.80 -1.0
0.6s 4.90nm 4.8mb
SOD 62.49 337 eP 07 34.00 -0.9
DAG 62.80 355 eP 07 36.00 -0.8
KJF 64.16 334 eP 07 45.00 -0.8
SUF 65.65 333 iP 07 54.80 -0.7
0.4s 3.50nm 4.7mb
NUR 67.67 332 iP 08 07.50 -0.8
Z 17s 0.80um 5.0mszX
LR 25 10.00
FFC 70.64 34 eP 08 27.00 0.4
0.6s 7.00nm 4.8mb
HFS 71.66 336 eP 08 32.10 -0.6
0.4s 3.00nm 4.6mb
NAO 71.99 337 P 08 33.80 -0.9
0.8s 6.50nm 4.6mb
FRB 73.58 14 eP 08 44.00 0.2
KSP 77.96 328 eP 09 09.50 0.6
e 09 22.70
KHC 80.39 329 iPd 09 23.10 1.0
e 09 36.50
GRF 80.86 330 eP 09 25.40 0.9
0.8s 59.00nm 5.6mb
KBA 82.13 328 eP 09 32.00 0.6
0.8s 3.30nm 4.4mb
OHR 83.30 320 e(P) 09 30.00 -7.9X
LOR 85.56 333 eP 09 49.10 0.5
1.0s 12.00nm 5.0mb
LBF 85.76 333 eP 09 49.90 0.2
0.8s 4.00nm 4.6mb
SSF 85.86 333 eP 09 50.70 0.6
0.8s 4.00nm 4.7mb
LPG 86.02 331 eP 09 52.00 0.7
0.8s 7.20nm 4.9mb
MAF 86.91 333 eP 09 56.40 1.1
1.0s 12.00nm 5.1mb
S.D. = 1.0 on 52 of 55 obs.

& JAN 21, 1989 18h 34m 42.99s
62.389 N 149.952 W
DEPTH = 63.9km
CENTRAL ALASKA (1)
<AGS-P>

GHO 0.79 142 iP 34 58.13 -0.7
eS 35 12.42
PLRM 0.89 154 eP 34 59.10 -0.9
eS 35 13.98
PMR 0.89 154 eP 34 59.00 -1.0
KNK 1.21 143 eP 35 02.72 -1.5
eS 35 20.60
FBA 2.70 20 eP 35 23.30 -1.6
5 obs. associated

& JAN 21, 1989 19h 30m 16.79s
37.476 N 118.843 W
DEPTH = 6.7km
CALIFORNIA-NEVADA BORDER REGION (40)
<REN>. MD 3.7 (REN).

PPK 0.75 94 iPc 30 30.80 -0.9
FRI 0.84 235 iPc 30 32.40 -1.0
eS 30 43.50
SVP 0.86 74 iPc 30 33.00 -0.9
LCH 0.98 104 eP 30 35.20 -0.7
MNA 1.10 29 eP 30 38.00 0.2
eS 30 52.10
CMB 1.34 295 eP 30 41.00 -0.9
iS 30 58.20
SGV 1.53 108 eP 30 44.70 0.0
PKEM 1.74 216 iPc 30 48.70 1.1
LLA 1.89 244 ePc 30 50.50 0.7
PRI 1.98 228 e(P) 30 52.40 1.2
eS 31 19.10
PHAM 2.06 218 eP 30 52.20 -0.1
ARN 2.15 267 eP 30 53.90 0.3
LSM 2.18 109 eP 30 54.00 -0.2
SAO 2.20 252 eP 30 54.80 0.5
MHC 2.23 267 eP 30 55.60 0.7
e 31 03.10
eS 31 25.90
PRS 2.33 241 eP 30 56.50 0.4
BCH 2.50 204 eP 30 58.70 0.1
17 obs. associated

% JAN 21, 1989 19h 45m 46.22±0.58s
30.903 S ± 5.3km 117.170 E ± 6.8km
DEPTH = 10.0km (geophysicist)

WESTERN AUSTRALIA (590)

WA4 0.30 9 eP 45 52.80 0.3
BAL 0.50 306 eP 45 56.00 -0.3
eS 46 02.50
KLB 0.85 144 eP 46 03.20 0.5
iS 46 14.00
MUN 1.35 217 iPc 46 11.00 -0.1
iS 46 28.00
MRWA 1.96 328 eP 46 20.20 0.3
eS 46 45.50
NWA0 2.02 178 eP 46 20.60 -0.1
eS 46 28.50
COOL 3.42 91 eP 46 40.00 -0.6
eS 47 18.00
WARB 9.56 63 eP 47 49.80 -17.2X
eS 49 32.00
S.D. = 0.5 on 7 of 8 obs.

* JAN 21, 1989 19h 48m 22.37±0.71s
29.552 N ± 11.5km 131.449 E ± 8.0km
DEPTH = 32.6km (2 depth phases)
4.6mb (9 obs.)

RYUKYU ISLANDS REGION (239)

SHK 5.07 12 eP 49 37.00 -1.2
IIDJ 8.04 41 P 50 18.90 -1.0
MAT 8.98 37 (P) 50 32.00 -0.9
(S) 52 23.00
SSE 9.00 282 eP 50 32.00 -1.1
1.0s 0.01nm 2.1mb X
CHJJ 9.07 42 P 50 33.20 -0.8
CN2 15.01 343 Pd 51 59.20 5.5X
BJI 16.31 314 eP 52 11.00 0.5
Z 14s 1.50um
N 12s 1.10um
E 12s 0.75um
TIY 17.78 302 eP 52 28.70 -0.3
N 13s 1.00um
E 14s 0.60um
eS 55 47.00
XAN 19.65 289 P 52 48.20 -3.3X
BTO 20.66 308 eP 53 01.00 -1.0
N 13s 0.50um
E 13s 0.80um
GYA 22.09 268 P 53 17.80 1.3
CD2 23.94 280 eP 53 34.00 -0.5
LZH 24.05 293 eP 53 34.50 -1.2
2.5s 0.04nm 1.5mb X
Z 14s 1.30um 4.6mszX
GTA 27.75 299 eP 54 10.00 -0.1
Z 11s 1.30um 4.8mszX
E 12s 0.60um

CHTO 31.42 258 eP 54 42.00 -0.9
1.0s 1.25nm 3.7mb
GUN 39.80 279 P 55 53.80 -0.8
0.8s 29.00nm 5.1mb
PKI 40.28 279 P 55 57.00 -1.6
0.8s 6.00nm 4.4mb
KKN 40.34 279 P 55 57.60 -1.4
DMN 40.54 279 P 55 59.40 -1.2
GKN 40.85 280 P 56 02.20 -0.8
WRA 49.29 176 Pc 57 09.00 -1.2
1.2s 4.20nm 4.3mb
GBA 52.23 264 Pd 57 48.40 15.7X
0.9s 3.00nm
INK 64.72 24 eP 58 58.00 -1.1
KJF 69.47 333 eP 59 39.00 9.9X
SUF 70.76 332 iP 59 36.90 -0.1
0.7s 4.00nm 4.6mb
DAG 72.34 353 iPd 59 46.00 -0.3
1.0s 8.00nm 4.7mb
HFS 77.19 333 eP 00 13.40 -0.9
0.4s 1.60nm 4.4mb
NAO 77.86 334 P 00 17.60 -0.4
0.9s 7.10nm 4.7mb
VRI 78.68 316 ePd 00 25.00 2.2
KSP 81.68 325 ePc 00 40.70 2.0
e 00 51.30 34km
BRG 82.84 325 eP 00 55.60 10.9X
1.6s 10.00nm
ZST 82.86 322 eP 00 47.20 2.4
CLL 83.02 326 iPd 00 47.00 1.4
e 00 57.00 32km

PRU 83.09 325 P 00 47.50 1.5
VAY 83.66 314 eP 00 49.50 0.4
KHC 84.12 324 P 00 53.20 1.9
MOX 84.12 326 e(P) 00 53.00 1.8
OHR 84.88 315 eP 00 54.50 -0.8
GRF 84.94 326 eP 00 56.40 1.0
1.1s 10.00nm 4.9mb
FRB 85.68 9 eP 00 59.00 0.3
TRI 86.19 322 eP 01 02.70 1.1
S.D. = 1.2 on 36 of 41 obs.

* JAN 21, 1989 20h 27m 33.74±0.75s
43.513 N ± 8.0km 142.953 E ± 9.6km
DEPTH = 33.0km (normal)
HOKKAIDO, JAPAN REGION (224)

ASAJ 0.65 340 iPd 27 45.70 -0.7
S 27 57.70
HOOJ 1.16 168 P 27 52.60 -1.0
S 28 08.70
KUSJ 1.35 107 P 27 56.60 0.2
eS 28 14.70
MRRJ 1.76 232 P 28 02.60 0.3
S 28 25.20
MAT 7.85 209 eP 29 29.00 0.4
YKA 57.67 32 eP 37 23.50 0.7
S.D. = 0.9 on 6 of 6 obs.

? JAN 21, 1989 20h 28m 57.86±3.48s
3.232 S ± 24.0km 130.738 E ± 24.5km
DEPTH = 73.6 ± 26.4 km
4.1mb (1 obs.)

CERAM (272)

AAI 2.58 260 eP 29 38.80 0.6
eS 31 21.20
MTN 9.56 178 iPc 31 13.90 -1.2
eS 32 57.00
PCI 11.14 282 eP 31 32.00 -4.4X
WB5 16.92 168 eP 32 50.10 -1.4
eS 35 46.00
WRA 16.98 168 Pd 32 53.20 1.0
0.7s 9.90nm 4.1mb
QIS 19.27 154 eP 33 21.00 1.5
eS 36 46.00
ASPA 20.54 172 iPc 33 34.60 1.8X
0.8s 79.00nm 5.1mb X
eS 37 16.00
MBL 20.74 210 eP 33 34.00 -0.8
CTA 22.58 139 eP 33 57.00 3.9X
WARB 23.16 189 eP 33 48.50 -10.2X
NANU 24.22 216 eP 34 10.00 1.0
BWA 35.13 154 eP 35 52.20 5.8X
GUN 53.11 309 P 38 10.00 -0.8
S.D. = 1.5 on 8 of 13 obs.

JAN 21, 1989 20h 42m 38.24±0.16s
29.469 N ± 3.0km 131.470 E ± 3.2km
DEPTH = 33.4km (6 depth phases)
5.4mb (44 obs.) 5.0msz (2 obs.)

RYUKYU ISLANDS REGION (239)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 21C
Centroid Location:
Origin Time 20:42:41.0 0.5
Lat 29.16N 0.07 Lon 130.92E 0.09
Dep 18.4 4.3 Half-duration 1.8
Moment Tensor: Scale 10**16 Nm
Mrr=-5.40 0.55 Mtt=1.80 0.45
Mff=3.60 0.80 Mrt=6.96 1.90
Mrf=7.05 2.11 Mtf=1.91 0.46
Principal Axes:
T Val=10.77 Plg=31 Azm=310
N 0.74 4 42
P -11.51 58 139
Best Double Couple: Mo=1.1*10**17
NP1: Strike=27 Dip=14 Slip=-106
NP2: 27 77 -86

SHK 5.15 11 iPd 43 54.00 -1.1
0.8s 417.91nm 5.9mb X
TSRJ 7.15 31 P 44 22.10 -1.0
S 45 39.10
IIDJ 8.09 41 P 44 33.60 -2.8
MTMJ 8.87 35 P 44 46.10 -1.0
SSE 9.04 283 P 44 48.00 -1.4

Z	4.0s	1.45nm	3.5mb	X	E	15s	3.50um		IMA	57.33	28	eP	52	24.90	-0.3						
Z	12s	18.10um					eS	51	40.00			1.2s	17.60nm		5.0mb						
N	12s	6.30um					sS	51	47.00		RMO	58.05	162	eP	52	29.00	-1.5				
E	12s	14.50um			DAV	22.95	195	eP	47	39.10	-1.6	KDC	58.27	38	eP	52	30.90	-0.7			
		pP	44	54.00	CD2	23.98	280	eP	47	49.10	-1.5	PMR	59.57	33	ePc	52	39.50	-1.1			
MAT	9.04	37	eP	44	48.00	-1.5	Z	14s	6.70um	5.3MszX		1.2s	54.70nm		5.6mb						
		eS	45	38.00	E	12s	12.40um		S	52	03.50	MAIO	59.57	297	eP	52	41.00	0.0			
CHJJ	9.12	42	P	44	49.80	-0.7	LZH	24.10	293	eP	47	49.50	-2.4	BRS	60.11	158	iPc	52	43.70	-1.0	
ANP	9.82	247	eP	44	52.00	-8.3X		5.0s	1.42nm	2.8mb	X	DZM	61.32	143	iPd	52	52.90	-0.2			
KAKJ	9.93	45	P	45	01.00	-0.7	Z	14s	17.90um	5.7MszX		61.77	170	iPc	52	55.90	0.1				
NIIJ	9.98	37	P	45	01.70	-0.7	N	13s	2.50um			62.14	166	iPc	52	58.60	0.3				
NJ2	11.15	287	iPc	45	16.00	-2.4	E	13s	6.70um			63.51	193	eP	53	07.00	-0.4				
	4.0s	1.00nm	3.4mb	X				S	52	08.00		NWAO	64.45	173	iPc	53	14.00	0.4			
N	14s	7.90um			KMI	25.86	267	Pd	48	07.50	-1.4	ADE	1.0s	70.00nm		5.7mb					
E	13s	25.30um			N	14s	6.60um		pP	48	17.50	37km	INK	64.78	24	eP	53	14.00	-1.3		
OZH	12.31	252	eP	45	33.00	-1.1	GTA	27.80	299	eP	48	23.00	-3.4X	BWA	65.54	165	eP	53	21.30	0.7	
Z	12s	10.90um					Z	13s	10.10um	5.6MszX		MBC	66.00	14	eP	53	23.00	-0.1			
N	15s	13.20um					E	13s	6.20um			0.8s	17.00nm		5.2mb						
E	15s	9.80um						PP	49	21.50		CAN	66.53	164	eP	53	27.00	0.1			
DL2	12.44	322	eP	45	32.00	-3.7X	CHG	31.42	258	iPd	48	58.00	-0.7	KEV	67.48	339	iP	53	32.00	-0.5	
Z	14s	9.70um						1.1s	34.49nm	5.1mb		1.0s	84.00nm		5.8mb						
N	12s	11.60um						eS	55	40.00		TOO	67.97	168	eP	53	37.00	1.0			
E	12s	7.30um					PCI	32.18	202	eP	49	05.00	-0.3	ALE	68.04	2	eP	53	36.00	0.1	
TIA	13.80	303	eP	45	52.60	-1.1		1.5s	3.00nm	4.0mb	X	SOD	68.60	336	iP	53	38.80	-0.8			
Z	15s	13.70um					NNT	33.90	247	iPd	49	20.00	-0.3	TAB	68.97	303	eP	53	43.00	0.5	
N	12s	11.20um						e	00	12.60		KJF	69.55	333	iP	53	45.00	-0.4			
E	13s	9.40um					LSA	34.94	281	P	49	28.90	-0.8		0.9s	38.90nm		5.5mb			
SNY	13.89	335	Pd	45	55.00	0.1	N	13s	2.00um			SUF	70.84	332	iP	53	52.20	-1.1			
Z	13s	13.50um					E	14s	3.90um			0.9s	40.80nm		5.5mb						
N	13s	6.00um						S	54	57.00		MSL	71.96	302	ePc	54	01.00	0.5			
E	12s	7.80um					SHL	35.21	273	iP	49	28.50	-3.2X	BHD	72.28	299	ePd	54	02.00	-0.4	
		pP	46	04.00				eS	55	10.00		DAG	72.43	353	iPc	54	02.00	-0.6			
WHN	14.87	278	eP	46	06.50	-1.3	SNG	36.53	239	eP	49	38.00	-4.6X		1.3s	80.77nm		5.6mb			
Z	12s	15.70um					WMQ	37.49	305	P	49	48.00	-2.6	NUR	72.51	330	iP	54	02.70	-0.6	
N	10s	6.60um						Z	16s	4.30um	5.3MszX	Z	16s	2.10um		5.5MszX					
E	12s	9.80um						N	12s	4.60um			LR	30	10.00						
		sP	46	16.00			IPM	37.98	235	ePd	49	56.20	1.3	TAU	73.48	168	eP	54	09.00	-0.1	
CN2	15.09	343	iPc	46	11.00	0.4	TP1	39.33	220	eP	50	06.00	-0.2	YKA	74.38	26	eP	54	14.40	0.3	
Z	16s	5.60um						e	51	00.00	262kmX	YKC	74.44	26	eP	54	14.50	0.0			
E	13s	9.00um					GUN	39.83	279	P	50	09.80	-0.9		0.9s	27.00nm		5.2mb			
		sP	46	16.00			PKI	40.32	279	P	50	13.30	-1.4	KVT	75.04	309	eP	54	18.70	0.3	
MDJ	15.19	355	eP	46	12.00	0.1	KKN	40.37	279	P	50	14.00	-1.0	UPP	75.84	332	iP	54	22.00	-0.5	
Z	16s	4.80um					DMN	40.57	279	P	50	15.50	-1.1	HFS	77.27	333	eP	54	29.80	-0.7	
		epP	46	18.00			PSI	40.79	235	ePc	50	19.00	0.8		1.0s	63.70nm		5.6mb			
		esP	46	23.00				0.9s	19.90nm	4.9mb		BBTK	77.84	309	iPd	54	35.00	0.8			
		S	49	03.00			GKN	40.88	280	P	50	17.60	-1.4	NAO	77.94	334	P	54	33.20	-1.0	
BJI	16.38	314	eP	46	25.00	-2.2	PMG	41.50	156	e(P)	50	24.00	0.0		1.0s	46.80nm		5.5mb			
Z	12s	20.50um					PPI	42.01	230	iP	50	30.50	2.3	CFR	78.23	315	eP	54	36.00	0.0	
N	12s	14.40um					MTN	42.07	180	iPc	50	28.00	-0.6	BHL	78.57	302	P	54	39.50	1.2	
E	11s	10.80um					KLI	42.64	221	eP	50	34.00	0.7	VRI	78.75	316	ePd	54	40.00	1.0	
BAG	16.40	220	eP	46	27.10	-0.6	KNA	45.03	184	eP	50	52.00	-0.6		e	05	34.50				
		eS	49	26.00			KSH	46.19	298	eP	51	04.00	2.2	HRI	78.80	302	e(P)	54	40.00	0.4	
HKC	17.11	249	P	46	38.00	1.6		E	13s	5.40um		JARJ	79.12	301	Pd	54	43.00	1.6			
		S	50	04.00			NDI	47.05	283	eP	51	05.70	-2.9X	BURJ	79.27	301	Pd	54	43.00	0.9	
GZH	17.45	253	eP	46	40.00	-0.6		HNR	47.42	140	eP	51	10.00	-1.6	PNT	79.33	39	eP	54	42.00	-0.1
N	14s	10.50um					WB5	49.14	176	eP	51	22.50	-2.3	MLR	79.42	316	ePd	54	43.50	0.8	
E	15s	6.20um					WRA	49.20	176	Pd	51	24.50	-0.8	MASJ	79.53	300	Pc	54	44.40	0.8	
		S	49	45.00				1.3s	39.00nm	5.3mb	ISK	79.71	311	eP	54	44.40	0.2				
TIY	17.84	302	Pc	46	44.20	-1.4	HYB	49.64	268	eP	51	28.00	-0.9	JVI	79.71	301	ePd	54	45.00	0.6	
	1.4s	0.30nm					QIS	50.35	170	iPd	51	33.20	-0.9	YLV	79.76	311	iP	54	44.40	-0.2	
N	12s	10.30um					CTA	51.29	162	iPd-	51	40.80	-0.4	CTT	80.08	312	eP	54	46.00	-0.2	
E	13s	6.40um						1.3s	198.08nm	5.9mb	CJR1	80.15	318	eP	54	48.10	1.6				
XAN	19.70	289	P	47	05.10	-2.6		iS	59	11.00		EDM	80.33	34	iPc	54	47.90	0.6			
N	13s	7.50um					MBL	51.57	194	iPd	51	43.00	-0.3	KRA	80.33	323	eP	54	49.20	1.8	
E	14s	12.90um						0.8s	69.00nm	5.7mb	KCT	80.59	311	iP	54	48.90	-0.1				
		pP	47	14.90	41km		GBA	52.24	265	Pc	51	48.70	0.1	JMB	80.59	314	iPd	54	50.00	1.1	
HHC	19.80	310	Pc	47	06.80	-1.9		1.1s	49.30nm	5.4mb	SPC	80.66	322	iPd	54	50.60	1.2				
Z	14s	18.60um					ASPA	52.88	177	iPd	51	52.50	-0.7	BNT	80.82	311	iP	54	50.40	0.2	
N	12s	4.10um						0.6s	64.00nm	5.8mb	EDC	80.86	311	eP	54	50.00	-0.4				
E	12s	10.00um						Z	22s	0.40um	4.4Msz	PVL	80.98	315	iPd	54	53.00	2.1			
		S	50	48.00					iPcP	53	02.30	DEV	81.01	318	iPd	54	53.00	2.0			
GUMO	20.09	139	eP	47	04.30	-7.6X		eS	59	19.20		MBH	81.10	299	iPd	54	53.00	1.2			
	1.3s	745.10nm						LR	11	29.20		ELL	81.30	307	iP	54	53.00	0.1			
GUA	20.16	139	eP	47	04.50	-8.1X						PSZ	81.58	321	eP	54	55.00	0.9			
	1.1s	364.56nm					POO	53.29	272	iPd	51	56.00	-0.5	KSP	81.76	325	iPc	54	55.80	1.0	
BTO	20.73	308	iPc	47	16.00	-2.4	KOD	53.78	261	eP	52	01.00	0.7		1.2s	68.00nm		5.5mb			
N	13s	6.80um					NANU	53.96	198	eP	52	01.00	0.0	RDO	81.95	313	eP	54	57.00	1.0	
E	13s	9.00um					BOM	54.05	273	eP	52	09.30	7.4X	PGB	82.06	315	iPd	54	58.00	1.3	
		pP	47	21.00	19kmX				eS	59	38.30		EZN	82.14	311	eP	54	57.00	0.0		
		PP	47	45.00			QUE	55.27	288	eP	52	09.55	-1.4	RZN	82.18	314	iPc	54	58.00	0.5	
GYA	22.10	268	P	47	31.00	-1.5		eS	03	46.00		IZM	82.27	310	iP	54	58.30	0.5			
N	13s	9.20um					WARB	55.53	185	iPc	51	59.70	-12.8X	WDC	82.29	48	eP	54	57.90	0.1	
		e	51	34.00				0.7s	27.00nm		BUD	82.31	321	eP	54	59.00	1.2				

21d 21h

	i	34	33.50		
	e(PP)	38	08.00		
BBS	150.54	359	PKP	34	20.85
LWI	150.61	229	iPKP+	34	27.00
MASJ	150.63	303	PKPc	34	26.60
LOR	150.63	4	ePKP	34	25.20
	1.2s	41.60nm			
LDMF	150.66	0	PKP	34	20.98
SSF	150.81	5	ePKP	34	25.70
	1.2s	51.70nm			
BEO	150.91	340	iPKP	34	25.70
LBF	150.92	4	ePKP	34	25.80
	1.0s	20.00nm			
OGA	150.95	354	ePKP	34	26.50
FVI	151.02	352	PKP	34	25.10
RBL	151.05	351	PKP	34	26.20
AVF	151.07	5	ePKP	34	26.10
	1.2s	17.80nm			
KCT	151.10	325	iPKP	34	25.90
PTJ	151.13	347	ePKP	34	20.30
ZAG	151.20	347	ePKP	34	27.50
SMF	151.25	4	ePKP	34	26.70
	1.2s	22.00nm			
BGF	151.25	6	ePKP	34	26.70
	1.3s	46.90nm			
LJU	151.28	349	ePKP	34	20.00
EDC	151.30	325	ePKP	34	26.00
DST	151.39	323	ePKP	34	27.00
VOY	151.40	350	ePKP	34	19.90
LSF	151.40	8	ePKP	34	26.60
	1.2s	35.70nm			
TCF	151.45	7	ePKP	34	26.80
	1.2s	26.70nm			
MAF	151.56	6	ePKP	34	27.60
	1.2s	38.60nm			
CEY	151.59	349	e(PK)P	34	21.90
		e	34	27.00	
VBY	151.65	348	ePKP	34	22.20
KHL	151.71	320	iPKP	34	27.90
TRI	151.73	350	ePKP	34	21.00
		e	34	42.40	
MBH	151.97	300	ePKPc	34	29.50
EZN	152.50	326	ePKP	34	29.00
LPG	152.51	0	ePKP	34	23.80
	1.0s	6.80nm			
LSD	152.56	360	PKP	34	38.01
SKO	153.04	336	ePKP	34	23.20
RRL	153.09	0	PKP	34	40.58
VAY	153.12	333	ePKP	34	23.00
OHR	154.03	336	ePKP	34	23.50
MAL	158.75	26	ePKP	34	30.50
		eS	43	48.00	
IFR	161.06	33	iPKP	34	34.00
BNG	162.45	222	iPKPc	34	35.10
	0.8s	11.00nm			
		id	35	23.50	
KIC	163.78	134	PKP	34	41.00
		S.D. = 1.2	on 115 of 192 obs.		

? JAN 21, 1989 22h 09m 37.23±10.33s
 7.914 S ±88.6km 129.197 E ±17.1km
 DEPTH = 164.0 ± 50.1 km
 4.4mb (2 obs.)

BANDA SEA (280)					
MTN	5.26	159	iPc	10	55.80
	0.3s	79.00nm			5.4mb X
		eS	11	58.00	
KNA	7.80	183	iPc	11	28.50
		eS	12	57.00	
WB5	12.91	158	iPc	12	34.60
		eS	14	56.00	
WRA	12.96	158	Pd	12	35.60
MBL	15.98	213	eP	13	14.50
		eS	16	07.00	
QIS	16.10	142	eP	13	16.00
		eS	16	10.00	
ASPA	16.30	164	iPc	13	20.20
	0.5s	13.00nm			4.5mb
		eS	16	14.50	
NANU	19.62	221	iPc	13	55.00
	0.3s	4.00nm			4.3mb
		S.D. = 1.3	on 8 of 8 obs.		

? JAN 21, 1989 22h 09m 55.63± 1.14s
 42.258 N ± 6.3km 13.655 E ±13.1km
 DEPTH = 10.0km (geophysicist)

CENTRAL ITALY (381)					
MD 2.3 (SSO).					
AOU	0.21	297	P	10	00.20
AZI	0.32	211	P	10	02.20
			eSg	10	06.20
ALP	0.52	354	iPg	10	06.31
			iSg	10	14.29
SDI	0.56	168	P	10	07.10
			eSg	10	15.60
		S.D. = 0.1	on 4 of 4 obs.		
JAN 22, 1989 00h 12m 49.58± 0.68s					
41.983 N ± 8.9km 20.561 E ± 6.6km					
DEPTH = 10.0km (geophysicist)					

ALBANIA (391)					
ML 2.9 (SKO), 2.6 (TTG).					
SKO	0.65	91	iPg	13	02.00
			iSg	13	12.30
PVY	0.75	325	ePg	13	03.70
			eSg	13	15.90
OHR	0.89	168	iPg	13	06.20
			iSg	13	19.80
ULC	0.98	269	ePg	13	08.00
			eSg	13	24.00
IVA	1.01	331	ePg	13	08.50
			eSg	13	24.40
TTG	1.06	295	ePg	13	08.50
			eSg	13	25.20
BDV	1.32	284	ePg	13	13.50
			eSg	13	35.00
HCY	1.60	288	ePn	13	18.50
VAY	1.64	113	ePn	13	19.50
BRY	1.75	302	ePn	13	22.80
			eSn	13	47.00
		S.D. = 1.2	on 10 of 10 obs.		

GREECE (364)					
ML 3.0 (ATH).					
ATH	0.61	109	ePn	01	44.30
			eSn	01	54.70
NEO	1.14	9	iPbc	01	54.30
PAIG	1.83	17	ePnc	02	03.10
			iSn	02	36.00
VLS	1.89	271	ePn	02	04.50
LIT	1.96	349	ePn	02	05.50
PLG	2.22	9	ePn	02	09.30
KZN	2.33	336	ePn	02	11.00
THE	2.45	360	ePn	02	11.80
SOH	2.66	6	ePn	02	15.50
PRK	2.78	66	ePb	02	26.50
GRG	2.81	351	ePn	02	18.00
SRS	2.97	9	ePn	02	19.50
KNT	2.98	359	ePn	02	20.10
EZN	3.08	57	ePn	02	27.00
VAY	3.16	354	ePn	02	22.70
OHR	3.38	331	ePn	02	26.00
SKO	3.97	343	ePn	02	34.00
		S.D. = 0.4	on 15 of 17 obs.		

JAN 22, 1989 01h 14m 00.68± 0.29s
 29.581 N ± 5.3km 131.525 E ± 4.7km
 DEPTH = 34.1km (8 depth phases)
 5.0mb (24 obs.) 4.8msz (2 obs.)

RYUKYU ISLANDS REGION (239)					
SHK	5.03	11	iPd	15	15.00
	1.0s	240.00nm			5.6mb X
TSRJ	7.03	31	P	15	43.10
IIDJ	7.98	41	P	15	56.20
MTMJ	8.75	35	P	16	06.60
MAT	8.92	37	iPd	16	08.50
	0.8s	53.73nm			5.7mb X
		(S)	18	32.00	
CHJJ	9.00	42	P	16	11.10
SSE	9.06	282	P	16	10.70
	1.1s	0.07nm			2.7mb X
	N	12s	3.50um		
	E	12s	4.00um		
		eS	17	58.00	
KAKJ	9.82	45	P	16	22.30
NIIJ	9.86	37	P	16	22.70

NJ2	11.17	286	eP	16	36.00
	N	11s	0.90um		-5.0X
	E	12s	3.90um		
TIA	13.78	302	eP	17	16.50
	N	12s	1.60um		0.6
	E	13s	0.70um		
SNY	13.81	334	eP	17	20.60
	Z	14s	2.00um		4.4X
	N	16s	1.30um		
	E	16s	2.30um		
WHN	14.91	278	eP	17	32.50
	Z	12s	3.60um		1.9
	N	14s	1.90um		
	E	12s	2.20um		
CN2	15.00	343	eP	17	37.40
	Z	14s	2.00um		5.6X
	E	14s	1.50um		4.8mszX
		eS	20	20.00	
MDJ	15.09	355	eP	17	39.00
BJI	16.34	314	eP	17	49.00
	Z	14s	2.10um		6.1X
	N	14s	2.20um		0.0
	E	14s	1.20um		
BAG	16.52	220	eP	17	50.00
TIY	17.82	302	Pd	18	07.00
	N	12s	1.20um		-1.6
	E	12s	0.80um		-0.7
XAN	19.71	289	P	18	26.40
	N	13s	2.10um		-3.8X
	E	12s	1.80um		
HHC	19.76	310	eP	18	28.60
	Z	18s	2.00um		-2.2
	N	11s	0.90um		5.2mszX
	E	12s	1.30um		
GUMD	20.15	139	e(P)	18	44.20
GUA	20.21	139	e(P)	18	40.90
	1.1s	313.92nm			9.3X
					5.3X
BTD	20.70	308	eP	18	39.00
	N	15s	1.20um		-1.5
	E	15s	0.80um		
GYA	22.16	268	P	18	54.00
	N	13s	1.96um		-1.3
QIZ	22.34	247	Pd	18	56.70
	E	12s	1.20um		-0.4
CD2	24.00	280	eP	19	12.00
	Z	12s	2.40um		-1.3
	N	11s	2.30um		4.9mszX
LZH	24.10	293	eP	19	12.50
	2.0s	0.05nm			-1.8
	Z	16s	3.30um		1.7mb X
			pP	19	22.50
			eP	19	31.00
KMI	25.92	267	eP	19	31.00
GTA	27.79	299	P	19	47.90
	Z	12s	2.40um		-0.8
	E	12s	1.50um		5.0mszX
CHG	31.49	258	iPd	20	20.80
	0.8s	7.46nm			-0.9
					4.6mb
NNT	33.98	247	eP	20	44.00
SHL	35.25	273	iP	20	52.40
WMO	37.46	305	eP	21	12.00
IPM	38.08	235	ePd	21	22.70
GUN	39.86	279	P	21	32.20
PKI	40.35	279	P	21	36.20
	0.8s	24.00nm			-1.1
					5.0mb
KKN	40.40	279	P	21	36.80
	0.8s	36.00nm			-0.8
					5.2mb
DMN	40.60	279	P	21	38.60
	0.7s	17.00nm			-0.6
PSI	40.89	235	eP	21	43.60
GKN	40.91	280	P	21	41.20
	0.6s	10.00nm			-0.4
					4.7mb
KNA	45.14	184	eP	22	15.50
NDI	47.07	283	eP	22	28.70
WB5	49.25	176	eP	22	47.10
QIS	50.45	170	iPd	22	56.40
CTA	51.38	162	iPd	23	04.20
	1.2s	34.38nm			-0.8
					5.2mb
MBL	51.69	194	eP	23	06.00
GBA	52.30	264	Pd	23	10.60
	0.7s	6.90nm			-0.6
ASPA	52.99	177	iPd	23	15.70
	1.1s	11.00nm			4.7mb
KOD	53.85	261	eP	23	23.00
WARB	55.64	185	eP	23	22.50
IMA	57.21	28	eP	23	46.50
	1.2s	15.60nm			-0.2
					4.9mb
PMR	59.45	33	eP	24	00.80
					-1.3

22d 04h

	0.8s	0.20nm	2.9mb	X	KHL	36.61	271	iP	04	16.60	0.2	TTG	40.95	283	iPc	04	52.70	0.4
	N 11s	1.30um			SSE	36.69	105	P	04	17.00	0.1	NPS	40.95	270	iPc	04	52.00	-0.5
XAN	27.18	114	Pc	02	53.10	-0.6						NNT	41.00	148	iPc	04	53.80	0.9
		PcP	06	13.20											e	06	53.70	
		iPc	03	01.00	0.6										eP+	04	53.20	-0.2
BJI	27.94	96	iPc	03	01.00	0.6						KHC	41.14	295	iPc	04	54.70	0.8
	Z 13s	2.40um			5.0MszX								1.0s	135.50nm				5.6mb
	N 12s	1.30um													e	06	30.00	
	E 10s	1.30um																
MSL	29.04	256	iPd	03	12.00	1.6						SUE	41.15	315	iP+	04	53.70	0.0
KJF	30.27	317	iPc	03	19.80	-1.3						PTJ	41.24	289	iPc	04	55.00	0.2
	0.6s	769.30nm			6.7mb							ZAG	41.26	289	iPc	04	55.40	0.6
BHD	30.32	250	ePd	03	22.50	0.6						KMR	41.31	293	iP+	04	56.60	1.4
TIA	30.79	102	Pc	03	26.30	0.3						KMY	41.56	312	iP	04	57.00	-0.1
		PcP	06	22.10								MOX	41.60	298	iPc	04	58.00	0.4
KVT	30.90	270	iP	03	26.50	-0.4							1.1s	314.00nm				6.0mb
KMI	30.93	134	Pc	03	27.00	-0.6							Z 12s	1.00um				4.9MszX
SUF	30.93	315	iPc	03	26.30	-0.7							E 12s	0.70um				
	0.6s	217.50nm			6.3mb										iPP	06	36.00	
SOD	31.03	324	iP	03	26.50	-1.3									LO	22	45.00	
KEY	31.31	328	iP	03	29.10	-1.1									LR	22	45.00	
	0.5s	241.10nm			6.4mb													
BOM	31.33	191	iPc	03	30.80	0.0						VAM	41.78	271	iPc	04	58.00	-1.2
		eS	05	54.00								VBY	41.86	289	iPc	05	00.40	0.6
POO	31.57	189	iPc	03	33.00	0.0						LJU	42.03	290	iPc	05	01.50	0.3
	0.7s	195.89nm			6.1mb										ePP	06	38.00	
GYA	31.73	127	iPc	03	34.60	0.1						KBA	42.24	292	iPc	05	03.70	0.6
		PcP	06	25.40									0.7s	148.00nm				5.8mb
NUR	31.76	310	iPc	03	33.60	-0.7									i	05	06.00	
	0.5s	536.10nm			6.7mb										i	06	29.20	
	Z 18s	1.20um			4.6Msz							CEY	42.25	290	iPc	05	02.90	-0.1
		LR	16	50.00											iPP	06	40.50	
SNY	31.78	87	iPc	03	33.10	-1.5						GRF	42.26	297	iPc	05	19.30	16.3X
CN2	32.03	83	Pd	03	35.80	-1.0							1.3s	284.00nm				
	Z 14s	2.10um			5.0MszX								Z 18s	0.60um				4.5Msz
	E 10s	1.20um										RBL	42.42	291	Pc	05	04.40	0.0
		ePP	03	39.40	13kmX							VOY	42.43	291	iPc	05	03.90	-0.6
DL2	32.00	94	P	03	37.00	-0.3									ePP	06	40.00	
DHR	32.30	234	iPc	03	39.00	0.5						VLS	42.46	277	iPc	05	04.00	-0.8
BJA	32.31	233	iP	03	39.50	0.1						TRI	42.67	290	iPc	05	06.10	-0.2
BEE	32.34	233	iP	03	40.00	0.4									i	06	49.90	
	0.4s	387.00nm			6.7mb							ABHA	42.78	235	iPc	05	10.40	2.5X
HYB	32.43	180	ePc	03	39.20	-1.3						FVI	42.82	292	Pc	05	07.50	-0.1
WHN	32.89	113	iPc	03	44.50	0.1						LCL	42.91	281	Pc	05	07.50	-0.9
	0.6s	0.20nm			3.2mb	X						BRT	43.08	282	Pc	05	10.20	0.3
		iPcP	06	28.20								TSRJ	43.33	87	eP	05	11.50	-0.4
IAS	33.50	285	eP	03	50.00	0.4						WIT	43.40	303	iPc	05	13.50	1.3
BBTK	33.68	271	iPc	03	52.50	1.1									iPP	06	50.20	
BIR	33.85	284	eP	03	51.00	-1.6						FG3	43.42	284	P	05	06.02	-6.6X
PPE	33.88	284	ePd	03	52.00	-0.9						TNS	43.60	299	iPd	05	14.50	0.5
CLI	33.94	285	ePc	03	53.50	0.0									ic	06	54.70	
CFR	33.99	282	ePc	03	54.00	0.2						WTS	43.69	302	iPc	05	15.20	0.6
TRD	34.08	327	iP	03	53.30	-1.1							0.7s	117.00nm				5.8mb
MDJ	34.30	79	Pc	03	56.00	-0.5									iPcP	07	02.30	
NJ2	34.59	106	Pd	03	59.40	0.3						DAG	43.71	341	iPc	05	13.60	-0.9
		PcP	06	33.20									0.6s	146.67nm				6.0mb
VR1	34.59	284	iPc	04	00.00	1.0						OGA	43.73	293	iPc	05	15.80	0.5
CHG	34.97	145	iP	04	03.70	1.2							0.8s	194.00nm				6.0mb
CHTO	34.97	145	iPc	04	03.50	1.0						CTI	43.77	292	P	05	10.38	-5.1X
GPA	35.02	273	iP	04	02.10	-0.7						CTI	43.77	292	Pc	05	14.90	-0.6
ISR	35.03	283	iPc	04	05.00	2.2						FG2	43.85	285	P	05	16.18	0.1
IKL	35.15	265	iP	04	03.50	-0.4						STU	43.86	296	iPc	05	16.00	-0.1
MLR	35.25	284	iPc	04	05.50	0.7							1.0s	280.00nm				6.0mb
UPP	35.33	310	iPc	04	04.30	-0.8						MTMJ	43.87	84	P	05	15.00	-1.4
	0.8s	1100.00nm			6.7mb							AOI	43.88	288	eP	05	16.08	-0.2
BHL	35.35	260	Pc	04	06.00	0.3						MAT	44.15	84	eP	05	16.00	-2.6
		PP	05	28.00									1.0s	38.00nm				5.2mb
		PcP	06	36.00								AKSR	44.16	251	iPc	05	20.50	1.8
ISK	35.41	275	iP	04	06.70	0.6							0.1s	750.00nm				7.5mb
RYD	35.45	237	iPc	04	07.00	0.3						NIIJ	44.24	83	eP	05	17.20	-2.1
YLV	35.48	274	iP	04	06.70	0.0						ALP	44.31	287	eP	05	19.74	-0.2
HRI	35.70	259	iPc	04	10.20	1.4						ARV	44.32	288	Pc	05	19.90	0.1
CTT	35.78	276	iP	04	09.40	0.2						TDS	44.32	281	Pc	05	20.80	0.9
DMK	35.86	277	iP	04	09.90	0.0						OSS	44.34	293	ePc	05	20.80	0.6
QASM	36.09	242	iPc	04	12.10	0.1						CIO	44.35	288	eP	05	19.60	-0.6
CSS	36.16	263	eP	04	13.00	0.5						DUI	44.37	285	Pc	05	20.80	0.4
CJR1	36.17	287	eP	04	13.50	1.0						RSM	44.39	289	P	05	20.94	0.6
GBA	36.24	182	Pc	04	11.90	-1.3						SGO	44.46	283	Pc	05	21.80	0.9
	0.7s	167.30nm			6.0mb							AGMR	44.53	251	iPc	05	21.00	-0.7
JARJ	36.25	257	Pd	04	14.20	0.8							0.1s	440.00nm				7.3mb
KCT	36.30	274	iP	04	13.20	-0.5						SAX	44.53	295	ePc	05	22.30	0.5
BURJ	36.38	257	Pc	04	15.20	0.8						MGR	44.54	283	Pc	05	22.00	0.3
BCK	36.42	269	iP	04	14.60	-0.2						IIDJ	44.61	86	eP			

ENN	44.76	300	iPc	05	23.90	0.6	ESK	47.37	310	ePc	05	42.50	-1.4	0.6s	225.40nm	6.3mb							
	0.9s	120.00nm				5.8mb		0.8s	264.00nm						50.72	308	iPc	06	09.30	-0.5			
		iPP	07	07.00			BAG	47.39	120	eP	05	45.00	0.3	0.9s	528.00nm	6.5mb							
SLE	44.77	296	eP+	05	23.50	0.0	AUTN	47.40	292	P	05	44.12	-0.4	REY	50.73	326	iP	06	11.10	1.4			
STR	44.78	297	P	05	23.49	0.0	FAI	47.41	280	P	05	43.70	-0.7	LFF	50.81	296	iPc	06	10.70	0.1			
MEM	44.79	300	iPc	05	23.53	0.0	SBF	47.46	292	iPc	05	44.70	-0.2		0.5s	96.80nm				6.0mb			
AZI	44.83	286	P	05	24.00	0.8		1.0s	271.80nm					PPR	51.87	127	iPc	06	10.00	-8.9X			
VDL	44.85	294	ePc	05	24.50	0.2	FOUF	47.49	293	P	05	44.40	-0.5		1.0s	85.00nm				5.6mb			
CRE	44.85	289	Pc	05	24.80	0.5	TOUF	47.49	292	P	05	45.20	-0.1	KGM	52.00	148	ePc	06	21.00	0.5			
PGD	44.86	289	iPc	05	25.60	1.2	EAB	47.50	311	ePc	05	44.00	-0.9		1.0s	676.30nm				6.5mb			
		ePcP	07	07.00				0.9s	121.00nm					EPF	52.17	295	iPc	06	19.70	-1.3			
LLS	44.93	294	ePc	05	24.90	-0.1	AURF	47.52	292	P	05	44.94	-0.4		0.7s	175.70nm				6.1mb			
CHJJ	44.96	84	eP	05	23.90	-1.2	MVIF	47.62	292	P	05	45.66	-0.5	VAL	52.72	309	iP	06	24.50	-0.4			
ZLA	44.97	295	ePc	05	25.30	0.2	ERC	47.64	282	P	05	45.20	-1.1	BRW	52.81	20	iPc	06	24.90	-0.4			
FEL	44.99	296	P	05	24.87	-0.5	LOR	47.71	297	iPc	05	45.70	-1.0	PPI	53.49	153	iPd	06	30.00	-0.9			
MDI	45.07	293	Pd	05	24.50	-1.3		0.5s	74.00nm						0.8s	396.30nm				6.4mb			
CDF	45.15	297	P	05	26.13	-0.5	LBF	47.79	297	iPc	05	46.30	-1.1	MBC	53.57	5	iPc	06	30.20	-0.6			
WLF	45.17	299	Pc	05	26.60	0.1		0.5s	42.70nm						0.6s	583.00nm				6.7mb			
FR	45.20	289	iPc	05	28.00	1.1	CALN	47.85	292	P	05	47.58	-0.5	KKM	53.80	132	iPc	06	33.10	-0.3			
MME	45.31	290	iPc	05	29.10	1.0	SSF	48.02	297	iPc	05	48.20	-1.0		0.7s	138.00nm				6.1mb			
		ePcP	07	08.50				1.0s	104.60nm					SMY	55.28	47	eP	06	42.20	-1.5			
RMP	45.39	286	Pc	05	28.40	0.0	SMF	48.06	297	iPc	05	48.50	-1.0	GDH	56.10	342	iPd	06	48.30	-1.1			
TMA	45.40	293	ePc	05	28.00	-0.7	FRF	48.11	292	iPc	05	49.50	-0.4		0.5s	218.31nm				6.4mb			
SOI	45.42	280	Pc	05	29.10	0.4		0.7s	210.10nm						i					07	01.00		
BDI	45.45	290	Pc	05	29.00	0.0	AVF	48.26	297	iPc	05	50.20	-0.8			i					07	46.00	
GMB	45.48	280	P	05	29.90	0.5		0.8s	62.90nm					TSM	56.28	131	iPd	06	50.10	-1.2			
MOF	45.52	296	P	05	29.01	-0.5	GANF	48.30	292	P	05	51.13	-0.3		0.9s	637.20nm					6.7mb		
UCC	45.61	301	Pc	05	30.60	0.6	LMR	48.32	291	iPc	05	51.10	-0.4	KSI	57.16	151	ePc	06	55.00	-2.5			
		e	07	15.00				0.9s	140.70nm						0.8s	40.00nm						5.5mb	
KAKJ	45.62	83	eP	05	28.50	-1.8	LRG	48.34	292	iPc	05	51.40	-0.2		e						10	09.00	
MSI	45.66	280	Pc	05	30.30	-0.3		0.7s	106.70nm					IMA	57.58	23	iPc	06	59.40	-0.8			
PII	45.67	290	Pc	05	30.50	-0.1	ARO	48.39	230	iP+	05	53.30	0.9		0.8s	133.60nm						6.0mb	
BSF	45.72	296	P	05	30.66	-0.5	TAVF	48.43	292	P	05	52.18	-0.2	TPI	58.05	145	iPc	07	04.00	0.2			
ATN	45.74	280	iPc	05	31.10	-0.2	VILF	48.50	292	P	05	52.71	-0.3		e						09	10.00	
		ePP	07	22.00			AKU	48.53	327	iPc	05	54.20	1.4	MAL	58.97	291	iPc	07	08.50	-1.6			
BOB	45.76	291	Pc	05	31.60	0.2		0.9s	238.66nm					TAF	59.03	288	iPc	07	11.00	0.4			
SNF	45.79	301	iPc	05	31.70	0.2	PLDF	48.55	296	P	05	52.75	-0.6		i						07	14.00	
		e	07	15.60			BGF	48.68	297	iPc	05	53.50	-0.7	TTA	59.45	26	iPc	07	12.80	-0.5			
DOU	45.83	300	iPc	05	32.00	0.2		0.7s	60.20nm					INK	59.65	13	iPc	07	14.10	-0.3			
	0.7s	86.70nm				5.9mb	PUYF	48.69	292	P	05	54.16	-0.2	FBA	59.95	21	iPc	07	16.00	-0.5			
		PcP	07	09.70			AGO	48.79	296	P	05	54.69	-0.5	MOMI	60.03	292	iP	07	16.00	-1.4			
PIP	45.87	118	iPd	05	34.00	1.6	BERF	48.82	292	P	05	55.55	0.1	OJEN	60.07	292	iP	07	16.00	-1.8			
HAU	45.89	297	iPc	05	32.20	-0.2	TREF	48.83	292	P	05	55.18	-0.3	ADK	60.09	44	eP	07	16.70	-0.9			
	0.6s	136.60nm				6.1mb	PRAF	48.85	293	P	05	55.36	-0.3		0.7s	140.00nm						6.2mb	
LOMF	45.95	296	P	05	32.83	-0.1	CGL	48.91	286	iPc	05	55.50	-0.8	PLAT	60.19	292	iP	07	16.50	-2.0			
MMK	45.96	294	ePc	05	32.70	-0.5	IPM	48.92	150	ePc	05	56.90	0.5	CNIL	60.20	292	iP	07	17.00	-1.5			
VITF	45.99	297	P	05	32.69	-0.4		0.9s	603.40nm					LIS	60.45	296	iPc	07	20.00	-0.3			
MAO	46.01	288	Pd	05	33.40	0.1		e					IFR	61.56	289	iPc	07	27.00	-1.1				
ORX	46.18	293	P	05	32.64	-2.1		e					PMR	62.41	24	iPc	07	31.70	-1.5				
ORO	46.18	293	Pc	05	33.10	-1.7	GELF	48.94	292	P	05	56.31	0.0		0.6s	207.30nm						6.5mb	
GEN	46.26	291	P	05	34.32	-0.9	MAF	49.03	297	iPc	05	56.70	-0.2	TOA	62.71	22	iPc	07	34.70	-0.6			
DIX	46.27	294	ePc	05	35.70	0.0		0.8s	109.10nm				AVE	63.10	290	iPc	07	37.20	-0.9				
ALE	46.35	353	iPc	05	35.50	0.0	PYM	49.03	296	P	05	56.92	-0.1		i						07	57.00	
	0.5s	40.00nm				5.7mb	LBL	49.18	295	P	05	58.02	-0.1	FRB	63.81	345	iPc	07	41.30	-1.1			
SNG	46.35	149	eP	05	36.80	0.6	TCF	49.20	297	iPc	05	57.70	-0.5		0.8s	275.00nm						6.5mb	
	0.8s	223.88nm				6.3mb		0.6s	56.30nm					TRT	64.49	142	iPc	07	46.30	-1.0			
		e	07	11.90			LDF	49.24	301	iPc	05	58.00	-0.5		0.6s	282.50nm						6.7mb	
MNO	46.37	281	Pd	05	36.80	0.3	FLN	49.35	301	iPc	05	58.80	-0.6	TIO	64.66	288	iPc	07	48.50	0.0			
BSI	46.40	157	eP	05	36.00	-0.6		0.6s	287.40nm						i						10	04.50	
	1.0s	305.00nm				6.3mb	YRH	49.37	307	iPc	05	58.60	-0.8	KDC	64.69	28	iPc	07	47.40	-0.8			
EMS	46.56	294	ePc	05	37.50	-0.4		0.6s	115.00nm					KHKI	66.30	140	ePd	07	57.10	-1.8			
CKI	46.65	292	Pc	05	37.30	-1.0	LSF	49.61	297	iPc	06	00.30	-1.1		e						10	54.80	
EDU	46.68	311	iPc	05	37.70	-0.7		0.7s	62.00nm				LWI	67.34	236	iPc	08	05.00	-0.9				
MEU	46.71	279	Pc	05	39.50	0.4	GRR	49.77	301	iPc	06	01.70	-0.9	LWI	67.34	236	iPc	08	04.70	-1.2			
GIB	46.76	281	Pc	05	38.10	-1.3		0.6s	91.50nm				YKA	67.42	7	eP	08	05.00	-0.6				
LSD	46.76	293	Pc	05	39.39	-0.1	DMU	49.95	310	iPc	06	03.30	-0.6	YKC	67.45	7	iPc	08	04.80	-0.9			
PZI	46.76	279	P	05	39.36	-0.1		0.7s	254.00nm					0.5s	187.00nm							6.6mb	
ESY	46.78	310	iPc	05	38.40	-0.9	CAF	50.05	296	iPc	06	05.00	0.2	BNG	67.79	249	iPc	08	07.50	-1.0			
	0.7s	179.00nm				6.3mb		0.7s	89.50nm						0.2s	248.00nm							7.1mb X
FIN	46.81	291	Pc	05	38.33	-1.3	PSI	50.06	153	ePc	06	04.20	-0.9		ic						09	25.90	
RSP	46.86	293	Pd	05	37.61	-2.6		0.6s	153.10nm					AAI	68.20	125	ePc	08	10.30	-0.7			
USI	46.87	282	Pc	05	39.90	-0.2	LPF	50.07	300	iPc	06	04.10	-0.7	SIT	69.71	19	eP	08	20.00	0.3			
ROB	46.97	292	Pc	05	39.63	-1.3		0.6s	164.80nm					CFTV	70.59	291	iP	08	27.80	2.1			
LPG	46.98	294	iPc	05	41.70	0.4	DLE	50.10	309	iPc	06	04.30	-0.7	SCH	71.73	340	ePc	08	30.40	-1.7			
ELO	47.05	311	iPc	05	40.50	-0.9		0.8s	303.00nm						0.9s	244.00nm						6.3mb	
EDI	47.06	310	iPc	05	40.60	-0.8	RJF	50.15	296	iPc	06	05.50	-0.1	GGC	71.74	292	iP	08	32.				

PLG	2.15	24	ePn	41	11.70	-0.4
THE	2.28	13	ePn	41	12.80	-1.1
SOH	2.54	18	ePn	41	17.60	0.0
GRG	2.55	2	ePn	41	16.90	-0.8
KNT	2.79	9	ePn	41	20.70	-0.4
SRS	2.88	20	ePn	41	21.90	-0.5
OHR	2.94	337	ePn	41	24.40	1.1
MMB	3.36	18	iPd	41	29.00	-0.3
			eS	42	01.00	
SKO	3.62	350	ePn	41	34.50	1.5
			i	41	43.00	
RZN	3.76	29	iPc	41	35.00	-0.1
LCI	3.89	301	P	41	36.80	0.1
KDZ	4.02	35	eP	41	33.00	-5.6X
BRT	4.65	304	P	41	47.60	0.0
MGR	5.52	290	P	42	00.20	0.3
SDI	7.30	299	P	42	26.30	1.3

S.D. = 0.9 on 20 of 21 obs.

* JAN 22, 1989 06h 34m 51.06±0.87s
41.608 N ±12.7km 20.125 E ±8.2km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.8 (SKO).

OHR	0.71	134	iPg	35	04.80	-0.3
			iSg	35	15.50	
ULC	0.74	299	ePg	35	04.80	-0.9
			eSg	35	17.20	
TTG	1.04	322	ePg	35	09.60	-1.1
			eSg	35	26.00	
SKO	1.05	69	ePg	35	09.50	-1.3
			iSg	35	22.00	
BDV	1.18	305	ePg	35	12.80	-0.3
			eSg	35	32.20	
HCY	1.47	305	ePg	35	18.00	0.4
			eSg	35	41.00	
BRY	1.75	318	ePn	35	22.80	1.1
			eSn	35	48.00	
PLE	1.80	343	ePn	35	23.80	1.3
			eSn	35	49.00	
VAY	1.86	98	ePn	35	24.40	1.2

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

& JAN 22, 1989 07h 11m 53.54s
60.086 N 152.700 W
DEPTH = 88.1km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM	0.13	268	iP	12	05.79	1.0
			iS	12	15.95	
RDT	0.51	17	iP	12	07.87	-0.6
			iS	12	19.34	
NNL	0.71	93	eP	12	10.37	0.2
PDB	0.81	249	iP	12	10.60	-0.6
			iS	12	23.42	
CNPM	0.93	127	eP	12	11.58	-1.0
NKA	0.98	47	iP	12	14.27	1.1
SPU	1.14	16	iP	12	14.67	-0.5
			iS	12	31.24	
CRP	1.22	13	eP	12	14.75	-1.4
			eS	12	32.54	
SLKM	1.31	70	eP	12	16.28	-0.9
			eS	12	34.05	
SVW	1.77	307	iP	12	21.95	-1.2
PMS	1.93	52	eP	12	24.69	-0.7
			eS	12	47.51	
PTE	1.98	65	eP	12	24.54	-1.4
PWA	2.09	40	eP	12	27.11	-0.3
PWL	2.30	68	iP	12	27.92	-2.3
			iS	12	55.00	
PLRM	2.31	48	eP	12	28.97	-1.4
KDC	2.35	177	eP	12	27.93	-2.9
PME	2.37	48	eP	12	31.06	-0.1
KNK	2.47	56	eP	12	30.64	-2.0
			eS	12	58.86	
GHO	2.50	46	eP	12	31.99	-1.1
			eS	13	00.18	
SML	2.74	49	eP	12	34.56	-1.8
VZW	3.19	70	eP	12	39.48	-3.0
TTA	3.27	332	eP	12	42.03	-1.6
KLU	3.61	64	eP	12	45.39	-3.0
TOA	3.76	55	eP	12	48.43	-2.0

24 obs. associated

& JAN 22, 1989 09h 03m 16.90s

62.128 N 148.075 W
DEPTH = 43.7km
CENTRAL ALASKA (1)
<AGS-P>. ML 3.1 (PMR).

SML	0.34	201	iP	03	25.59	-0.4
GHO	0.54	229	iP	03	27.40	-1.0
			iS	03	36.39	
PME	0.68	223	eP	03	29.25	-0.9
			iS	03	39.54	
PLRM	0.73	223	iP	03	29.71	-1.2
PMR	0.73	223	iPc	03	29.70	-1.3
KNK	0.74	194	iP	03	30.60	-0.5
			iS	03	41.48	
TOA	0.89	91	iPc	03	33.40	0.1
PWA	0.98	242	iPd	03	33.70	-0.7
PMS	1.13	219	iPd	03	36.10	-0.5
KLU	1.21	121	iP	03	37.16	-0.5
			iS	03	53.91	
PWL	1.28	186	iP	03	38.21	-0.4
			iS	03	55.45	
VZW	1.30	145	iP	03	37.89	-1.0
VLZ	1.30	139	iP	03	37.64	-1.3
			iS	03	56.58	
PTE	1.35	200	iP	03	39.29	-0.3
			iS	03	57.15	
HIN	1.90	156	eP	03	47.04	-0.4
SLKM	1.93	213	eP	03	47.31	-0.5
			eS	04	11.42	
CVA	1.94	144	eP	03	48.03	0.0
NKA	2.06	229	eP	03	50.93	1.3
SPU	2.12	245	eP	03	50.00	-0.6
CRP	2.13	248	eP	03	50.85	0.0
GLB	2.14	107	eP	03	50.58	-0.3
SGAM	2.14	138	eP	03	49.88	-1.0
RAGM	2.40	135	eP	03	53.88	-0.7
HMT	2.58	133	eP	03	56.06	-1.1
RDT	2.60	235	eP	03	56.63	-0.9
NNL	2.61	218	eP	03	57.46	-0.2
FBA	2.79	2	iP	03	59.20	-0.8
WAX	3.03	121	eP	04	02.05	-1.6
CNPM	3.04	212	eP	04	02.70	-0.9
ILIM	3.14	231	eP	04	04.11	-1.0
CTGM	3.43	107	eP	04	08.18	-1.2
SVW	3.75	257	iPc	04	11.30	-2.4
TTA	3.77	286	iPc	04	11.90	-2.1
PDB	3.80	235	eP	04	12.11	-2.2
DWY	4.38	60	P	04	21.20	-1.4
KDC	4.92	209	eP	04	26.60	-3.6
			i	04	27.30	
HYT	5.23	100	P	04	33.40	-1.4

37 obs. associated

? JAN 22, 1989 09h 09m 54.10±3.01s
16.341 N ±24.8km 61.144 W ±27.8km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 2.3 (FDF).

SFG	0.10	210	ePd	09	59.86	0.0
MGG	0.45	202	ePd	10	03.94	-0.1
			S	10	10.50	
PAG	0.60	239	eP	10	06.20	0.0
			S	10	13.60	
BBL	0.87	202	eP	10	10.10	0.1

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

? JAN 22, 1989 09h 30m 56.04±18.17s
40.966 N ±47.4km 27.286 E ±129. km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EDC	0.76	144	iPg	31	11.00	0.1
			eSg	31	17.00	
BNT	0.78	141	iPg	31	11.00	-0.2
CTT	0.88	78	ePg	31	13.00	0.0
			eSg	31	26.50	
KCT	1.08	131	iPg	31	16.50	0.0

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

? JAN 22, 1989 09h 46m 28.39±4.28s
39.331 N ±33.3km 21.507 E ±16.8km
DEPTH = 10.0km (geophysicist)
GREECE (364)

LIT	1.08	44	ePbd	46	49.40	0.7
GRG	1.76	23	ePnd	46	58.10	-1.1

PAIG	1.78	70	ePn	47	26.80	
OHR	1.86	343	iPn	46	59.30	-0.1
SOH	2.05	43	ePn	47	03.90	0.5
KNT	2.12	30	ePn	47	03.90	-0.4
VAY	2.15	22	ePn	47	04.00	-0.7
SKO	2.64	359	ePn	47	12.80	1.1

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

& JAN 22, 1989 11h 11m 15.37s
61.412 N 150.958 W
DEPTH = 63.9km
SOUTHERN ALASKA (2)
<AGS-P>.

PWA	0.57	65	iPd	11	28.10	-0.4
SPU	0.58	247	iP	11	28.06	-0.7
			iS	11	38.14	
CRP	0.60	256	iP	11	28.50	-0.5
			eS	11	40.36	
NKA	0.68	192	iP	11	31.15	1.3
PMS	0.69	103	iP	11	29.49	-0.6
PLRM	0.89	78	iP	11	31.53	-0.9
PMR	0.89	78	iPd	11	31.50	-0.9
PME	0.95	76	iP	11	32.43	-0.7
			iS	11	46.01	
SLKM	0.98	158	iP	11	32.64	-0.9
			iS	11	46.58	
GHO	1.04	69	iP	11	33.62	-0.8
			iS	11	48.80	
PTE	1.09	119	iP	11	34.14	-0.8
			iS	11	49.09	
RDT	1.10	221	iP	11	34.48	-0.7
			iS	11	50.13	
KNK	1.20	89	iP	11	35.68	-0.9
			eS	11	51.56	
SML	1.32	71	iP	11	36.94	-1.2
			iS	11	53.79	
NNL	1.38	187	eP	11	39.68	0.7
PWL	1.39	112	iP	11	37.82	-1.2
			iS	11	55.93	
ILIM	1.66	217	iP	11	42.36	-0.5
CNPM	1.90	184	eP	11	45.13	-1.0
			eS	12	09.71	
VZW	2.16	98	eP	11	47.62	-2.1
VLZ	2.25	95	eP	11	48.72	-2.2
			eS	12	15.30	
SVW	2.27	264	iP	11	49.80	-1.6
PDB	2.28	226	iP	11	50.13	-1.3
TOA	2.38	71	iPd	11	52.00	-0.9
HIN	2.40	113	eP	11	50.99	-2.2
KLU	2.42	86	iP	11	51.14	-2.3
TTA	2.82	305	iPc	11	57.30	-1.7
SGAM	2.95	106	eP	11	57.69	-3.1
GLB	3.43	86	eP	12	04.55	-3.1
KDC	3.76	193	eP	12	09.90	-2.2
FBA	3.78	21	eP	12	11.70	-0.8
WAX	4.07	100	eP	12	12.95	-3.7
IMA	4.83	347	iPd	12	25.10	-2.2
YKA	16.99	70	eP	15	12.20	2.4

33 obs. associated

* JAN 22, 1989 11h 24m 35.39±2.60s
44.503 N ±10.3km 6.733 E ±20.3km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.7 (GEN).

FOUF	0.04	53	P	24	38.22	0.7
			Sg	24	39.44	
PZZ	0.26	89	P	24	40.73	-0.3
			S	24	44.32	
RRL	0.42	5	P	24	43.70	-0.3
			S	24	49.64	
STV	0.50	121	P	24	45.04	-0.5
			S	24	52.00	
RSP	0.75	30	P	24	49.76	-0.4
			S	24	58.57	
ROB	0.84	104	P	24	51.09	-0.6
			S	25	01.66	
IMI	1.02	125	P	24	54.27	-0.5
			S	25	06.98	
FIN	1.10	105	P	24	55.40	-0.6

22d 11h

DEPTH = 10.0km (geophysicist)				BGF				? JAN 22, 1989 17h 01m 13.33± 3.83s			
FRANCE (538)				3.47 307 Pn 59 29.10 0.3				15.407 N ± 38.7km 119.967 E ± 28.0km			
ML 3.2 (GEN), 3.0 (LDG).				Pg 59 38.30				DEPTH = 58.4 ± 31.3 km			
				Sg 00 24.50				4.2mb (1 obs.)			
				HAU 3.48 354 Pn 59 28.70 -0.4				LUZON, PHILIPPINE ISLANDS (249)			
				TCF 3.71 300 Pn 59 32.60 0.2				PGP 2.12 153 eP 01 47.00 0.0			
				CDF 3.88 4 Pn 59 33.60 -1.2				eS 02 07.00			
				LSF 4.13 296 Pn 59 38.20 0.0				NNT 19.83 264 eP 05 42.00 -0.1			
				S.D. = 0.6 on 47 of 47 obs.				WB5 37.82 158 eP 08 26.00 0.0			
FOUF 0.06 259 P 58 35.86 -0.1				? JAN 22, 1989 14h 35m 11.81± 2.70s				GBA 41.17 273 Pd 08 54.10 0.2			
Sg 58 37.06				35.479 N ± 24.5km 21.552 E ± 15.6km				MA10 57.34 303 eP 10 58.00 -0.1			
PZZ 0.17 101 Pc 58 38.42 0.7				DEPTH = 33.0km (normal)				S.D. = 0.3 on 5 of 5 obs.			
DOI 0.28 97 Pc 58 39.60 0.0				MEDITERRANEAN SEA (400)				JAN 22, 1989 17h 21m 49.06± 0.17s			
eSg 58 45.30				ML 4.0 (ATH).				44.555 N ± 1.5km 6.877 E ± 2.0km			
RRL 0.38 352 Pd 58 41.29 -0.4				VAM 2.16 91 ePn 35 46.10 -0.1				DEPTH = 10.0km (geophysicist)			
S 58 46.82				VLS 2.80 344 ePb 35 57.00 1.7				FRANCE (538)			
STV 0.44 132 Pc 58 42.57 -0.2				ATH 3.04 34 ePn 35 59.80 1.2				ML 3.0 (GEN), 2.7 (LDG).			
S 58 49.24				NPS 3.32 93 ePb 36 07.10 4.3X				FOUF 0.07 249 P 21 51.14 -0.3			
BNI 0.53 346 P 58 43.50 -1.0				NEO 4.05 19 ePn 36 11.60 -1.4				e 21 51.27			
eSg 58 50.70				KZN 4.82 2 ePn 36 24.50 0.5				Sg 21 52.07			
TOUF 0.59 152 Pg 58 45.71 -0.2				PLG 5.11 16 ePn 36 25.00 -3.1X				PZZ 0.17 107 Pc 21 53.75 0.8			
RSP 0.67 25 P 58 46.89 -0.3				ATN 5.57 301 P 36 39.40 4.9X				S 21 56.59			
S 58 55.91				LCI 5.62 331 P 36 35.00 -0.2				DOI 0.27 101 P 21 55.10 0.3			
MVIF 0.68 162 Pg 58 47.17 -0.1				OHR 5.65 354 ePn 36 34.30 -1.5				eSg 21 59.00			
Sg 58 56.92				VAY 5.89 7 ePn 36 35.00 -4.0X				RRL 0.37 350 P 21 56.59 -0.2			
AUTN 0.68 143 Pg 58 47.27 -0.1				BRT 6.39 329 P 36 45.80 -0.2				S 22 02.50			
Sg 58 56.72				SKO 6.48 359 ePn 36 44.00 -3.4X				STV 0.45 134 P 21 57.95 -0.2			
AURF 0.73 153 Pg 58 48.14 -0.1				MGR 6.65 316 P 36 52.60 2.9X				S 22 04.46			
Sg 58 58.06				S.D. = 1.3 on 8 of 14 obs.				BNI 0.52 344 P 21 59.00 -0.6			
SAOF 0.74 138 Pg 58 48.31 0.0				* JAN 22, 1989 16h 19m 33.57± 0.63s				TOUF 0.60 154 Pg 22 01.02 -0.4			
Sg 58 58.63				7.526 S ± 6.4km 128.406 E ± 13.8km				RSP 0.66 24 P 22 02.10 -0.1			
ROB 0.76 108 Pc 58 48.50 -0.2				DEPTH = 165.9 ± 8.0 km				S 22 11.24			
S 58 58.38				4.7mb (9 obs.)				AUTN 0.68 145 Pg 22 02.61 -0.2			
CALN 0.79 179 Pg 58 49.29 0.1				BANDA SEA (280)				Sg 22 12.04			
SBF 0.79 148 Pg 58 49.30 0.1				AAI 3.82 357 iPd 20 33.60 1.0				MVIF 0.69 163 Pg 22 02.39 -0.4			
Sg 59 00.60				MTN 5.93 153 iPd 20 59.70 -0.6				Sg 22 11.84			
LSD 0.94 13 Pc 58 51.40 -0.5				KNA 8.18 178 iPd 21 28.70 -1.6				AURF 0.74 154 Pg 22 03.61 -0.1			
S 59 04.26				WB5 13.57 155 eP 22 37.50 -3.1X				SAOF 0.75 139 Pg 22 03.60 -0.1			
LPG 0.96 355 Pg 58 51.90 -0.3				WRA 13.62 156 Pd 22 36.30 -4.9X				Sg 22 13.76			
Sg 59 05.00				0.5s 4.50nm 4.1mb				ROB 0.76 110 P 22 03.94 0.0			
IMI 0.97 130 Pc 58 52.26 0.0				MBL 15.89 211 eP 23 08.50 -0.9				S 22 14.48			
S 59 05.31				OIS 16.89 141 eP 23 21.00 -0.8				SBF 0.80 150 Pg 22 04.70 0.1			
LPL 0.98 355 Pg 58 52.20 -0.3				ASPA 16.89 162 iPc 23 21.40 -0.4				Sg 22 15.60			
Sg 59 05.60				0.7s 29.00nm 4.7mb				CALN 0.80 179 Pg 22 04.72 0.0			
FRF 0.99 189 Pg 58 52.70 0.2				WARB 18.63 185 eP 23 29.00 -12.2X				REVVF 0.89 156 Pg 22 06.66 0.5			
Sg 59 04.80				0.3s 7.00nm				LSD 0.92 12 P 22 07.11 0.2			
FIN 1.02 108 Pc 58 52.93 -0.1				NANU 19.42 218 eP 23 50.00 0.7				S 22 19.74			
S 59 06.79				MEKA 21.18 205 eP 24 10.00 3.0X				LPG 0.95 355 Pg 22 07.30 0.0			
CKI 1.02 96 P 58 53.00 0.0				MRWA 24.54 207 eP 24 41.60 2.2				Sg 22 20.30			
eSg 59 07.40				STK 27.17 155 eP 25 05.00 1.6				LPL 0.97 354 Pg 22 07.60 0.0			
LRG 1.14 199 Pg 58 55.10 0.0				CHG 39.10 312 eP 26 47.00 0.6				Sg 22 20.70			
Sg 59 08.60				CHTO 39.10 312 eP 26 47.00 0.6				S 22 07.86 0.3			
LMR 1.23 192 Pn 58 56.60 0.0				1.1s 5.89nm 4.2mb				LOR 1.16 199 Pn 22 10.50 -0.2			
Pg 58 57.40				XAN 45.28 337 P 27 35.20 -1.1				Sg 22 24.20			
Sg 59 11.90				TIY 47.41 343 P 27 52.40 -0.7				LMR 1.25 192 Pg 22 12.70 0.4			
ORO 1.34 36 P 58 59.00 0.5				LZH 49.14 334 eP 28 07.00 0.4				Sg 22 27.80			
eSg 59 13.60				GTA 53.69 333 Pc 28 40.40 -0.1				ORX 1.33 36 P 22 12.91 -0.8			
S 59 13.93				GUN 54.12 312 Pd 28 43.70 -0.5				CVF 2.46 143 Pn 22 29.50 -0.3			
ORX 1.35 36 P 58 57.40 -1.3				0.6s 27.00nm 5.2mb				S 22 57.80			
S 59 13.93				PKI 54.28 312 Pd 28 44.40 -0.9				Sg 22 37.70 0.4			
EMS 1.53 2 ePd 59 02.30 1.0				0.6s 13.00nm 4.9mb				S 22 08.30 0.1			
DIX 1.59 14 ePc 59 03.40 1.2				DMN 54.52 312 Pd 28 46.40 -0.6				FIN 1.01 109 P 22 08.38 0.1			
MMK 1.70 27 ePc 59 05.50 1.7				0.6s 12.00nm 4.9mb				S 22 22.37			
CVF 2.45 143 Pn 59 13.99 -0.5				GKN 55.09 312 Pd 28 50.40 -0.5				LRG 1.16 199 Pn 22 10.50 -0.2			
VDL 2.67 42 ePd 59 17.60 -0.2				0.4s 19.00nm 5.3mb				Sg 22 24.20			
SMF 2.99 316 Pn 59 23.00 1.0				SPA 82.52 180 e(P) 31 40.60 1.8				LMR 1.25 192 Pg 22 12.70 0.4			
Pg 59 29.60				0.7s 3.13nm 4.2mb				Sg 22 27.80			
Sg 00 06.20				YKA 108.91 26 ePKP 37 45.50 1.2				ORX 1.33 36 P 22 12.91 -0.8			
OSS 3.15 46 ePd 59 25.20 0.8				ZOBO 151.25 145 PKP 39 07.00 2.9X				CVF 2.46 143 Pn 22 29.50 -0.3			
LBF 3.17 321 Pn 59 25.00 0.4				S.D. = 1.1 on 22 of 27 obs.				S 22 57.80			
Pg 59 32.50								Sg 22 44.80			
Sn 00 00.50								Sg 23 24.00			
Sg 00 12.10								Pn 22 40.20			
BSF 3.29 359 Pn 59 26.20 -0.3								Pg 22 48.60			
AVF 3.33 314 Pn 59 27.20 0.3								Sn 23 17.00			
Pg 59 37.30								Sg 23 29.00			
Sg 00 21.00								Pn 22 44.20 0.5			
SLE 3.42 19 ePd 59 28.00 -0.2								Pg 22 53.80			
CAF 3.44 278 Pn 59 27.80 -0.7								S 23 23.60			
Pg 59 39.80								Sg 23 38.30			
LOR 3.44 324 Pn 59 27.80 -0.7								Pn 22 44.80 1.0			
Pg 59 39.80								Pg 22 53.80			
LOR 3.44 324 Pn 59 28.80 0.3								Sn 23 24.30			
Pg 59 37.70											
Sn 00 06.60											
Sg 00 21.70											
SSF 3.45 318 Pn 59 28.80 0.3											
Pg 59 37.80											
Sn 00 08.20											
Sg 00 23.70											
MAF 3.46 301 Pn 59 29.00 0.2											
Pg 59 39.30											
Sg 00 24.20											

CAF 3.45 278 Sg 23 39.40
Pn 22 43.10 -0.8
Pg 22 53.00
BGF 3.47 307 Pn 22 44.50 0.3
Pg 22 53.80
Sg 23 39.80
TCF 3.72 299 Pn 22 47.90 0.1
CDF 3.87 4 Pn 22 49.20 -0.7
S.D. = 0.4 on 36 of 36 obs.

JAN 22, 1989 17h 29m 45.44 ± 0.41s
27.917 N ± 4.8km 139.830 E ± 7.6km
DEPTH = 529.4 ± 6.7 km
4.7mb (13 obs.)

BONIN ISLANDS REGION (212)
Felt (1 JMA) on Chichi-shimo.

CB1 2.24 111 iP 30 54.10 -0.9
eS 31 49.00
IIDJ 7.71 348 iP+ 31 40.60 -0.1
CHJJ 8.14 355 iP+ 31 44.10 -0.8
S 33 19.30
KAKJ 8.27 2 iPd 31 45.20 -1.0
S 33 21.20
TSRJ 8.27 338 iP+ 31 46.90 0.6
MAT 8.71 351 iPc 31 49.70 -1.1
0.7s 128.08nm 5.3mb
MTMJ 8.81 349 iP+ 31 51.30 -0.6
SHK 9.00 319 iPc 31 54.80 1.1
1.0s 216.00nm 5.4mb
NIJ 9.32 356 iP+ 31 56.40 -0.6
eS 33 40.00
GUMD 15.01 161 eP 32 56.80 1.6
0.7s 193.14nm 5.8mb X
PJG 15.01 161 eP 32 57.20 2.0
GUA 15.07 161 iPd 32 57.70 1.9
0.6s 298.67nm 6.0mb X
CN2 19.63 328 eP 33 41.80 2.0
TIA 20.91 299 eP 33 51.90 0.1
WHN 22.38 283 P 34 05.50 0.4
GYA 29.49 275 P 35 07.80 -0.4
CD2 31.48 284 iPd 35 25.00 -0.1
GTA 34.96 300 iPd 35 54.40 0.1
CHG 38.46 265 iPd 36 23.00 -0.1
1.0s 29.50nm 4.8mb
NNT 40.38 256 eP 36 39.00 0.3
SNG 42.43 248 eP 36 55.70 0.8
SHL 42.67 278 iP 36 56.90 -0.1
iS 38 37.50
IPM 43.58 245 ePd 37 04.60 0.5
0.7s 51.80nm 5.2mb
WMO 44.40 305 P 37 11.00 0.7
GUN 47.33 283 Pd 37 34.00 0.7
WB5 47.81 187 iPd 37 35.20 -1.2
e(S) 43 53.00
PKI 47.82 283 Pd 37 36.80 -0.1
0.6s 22.00nm 4.8mb
KKN 47.88 283 Pd 37 37.50 0.2
0.7s 40.00nm 5.0mb
DMN 48.07 283 Pd 37 38.90 0.1
0.6s 36.00nm 5.0mb
QIS 48.19 180 eP 37 38.00 -1.2
GKN 48.38 284 Pd 37 41.10 0.1
ASPA 51.60 187 iPd 38 03.40 -1.1
0.5s 16.00nm 4.7mb
iPcP 39 09.90
eS 44 42.10
MBL 52.48 204 eP 38 10.10 -0.7
WARB 55.26 194 eP 38 17.00 -13.5X
NANU 55.40 208 eP 38 30.70 -0.7
GBA 59.50 270 Pd 38 58.80 -0.8
0.8s 14.70nm 4.4mb
POO 60.73 277 iPc 39 08.00 0.3
COOL 61.13 198 eP 39 09.00 -1.0
MRWA 61.22 204 eP 39 10.00 -0.6
0.3s 5.00nm 4.4mb
QUE 62.71 291 eP 39 21.00 0.5
KLB 62.80 201 eP 39 20.00 -0.8
MUN 63.67 202 eP 39 26.50 0.2
NWAO 64.20 201 eP 39 29.00 -0.7
MBC 65.64 15 eP 39 39.00 0.8
YKA 72.41 28 eP 40 20.80 2.0
KJF 74.16 335 eP 40 27.00 -1.7
SUF 75.55 334 iP 40 36.70 0.3
0.4s 5.80nm 4.4mb
NUR 77.38 333 iP 40 46.70 0.3

HFS 81.83 336 eP 41 09.10 -0.5
0.4s 3.40nm 4.2mb
NAO 82.35 337 P 41 12.00 -0.2
0.7s 5.40nm 4.2mb
SLR 119.62 255 ePKP 47 36.10 -0.8
S.D. = 0.9 on 50 of 51 obs.

* JAN 22, 1989 18h 43m 29.54 ± 1.23s
24.799 N ± 6.2km 122.019 E ± 12.6km
DEPTH = 5.0km (geophysicist)
4.1mb (1 obs.)

TAIWAN REGION (243)

TWC 0.24 219 iPd 43 34.30 -0.2
TWZ 0.50 307 iPc 43 39.70 0.2
eS 43 48.10
ANP 0.60 310 iPc 43 41.90 0.4
TWD 0.81 208 ePc 43 45.50 -0.3
TWF1 1.58 205 ePc 43 58.40 0.1
QZH 3.12 273 ePn 44 18.60 -1.6
Sn 45 04.10
SSE 6.32 353 ePn 45 00.40 -5.2X
NJ2 7.74 340 eP 45 33.00 7.4X
GYA 13.95 280 eP 46 54.40 4.0X
S 49 31.60
XAN 14.65 312 P 47 07.30 7.8X
N 12s 1.50um
BJ1 15.97 343 eP 47 21.50 5.0X
Z 14s 0.59um
CD2 17.25 295 eP 47 35.50 2.6X
KMI 17.49 275 Pc 47 38.50 2.4X
N 10s 2.30um
BTO 18.68 330 eP 47 56.00 5.4X
N 15s 1.20um
E 10s 0.60um
eS 51 23.50
LZH 19.26 310 eP 47 57.50 -0.3
2.5s 0.12nm 1.7mb X
Z 16s 0.80um 4.0msz
MDJ 20.71 15 eP 48 13.00 -0.2
Z 15s 0.50um 4.0mszx
E 13s 0.60um
eS 52 06.00
CHTO 22.22 259 eP 48 31.10 2.4
1.1s 9.13nm 4.1mb
GTA 23.70 313 eP 48 42.80 -0.5
WB5 46.01 164 eP 51 52.30 -3.5X
S.D. = 1.1 on 10 of 10 obs.

? JAN 22, 1989 19h 15m 22.38 ± 4.06s
26.083 N ± 4.25km 110.349 W ± 20.8km
DEPTH = 10.0km (geophysicist)
4.4mb (2 obs.)

GULF OF CALIFORNIA (49)

GLA 7.96 332 eP 17 18.00 -3.0
PLM 9.19 324 eP 17 39.00 0.8
ALO 9.44 20 eP 17 41.50 -0.2
FRI 13.48 326 eP 18 44.90 8.8X
e 18 52.60
LLA 13.85 322 eP 18 47.20 6.1X
e 18 55.20
PRS 13.89 320 e(P) 18 47.90 6.3X
e 18 55.90
KVN 14.48 335 eP 18 51.00 1.6
CMB 14.63 327 e(P) 18 57.90 6.6X
e 19 05.30
BKS 15.47 322 ePc 18 13.90 -48.3X
1.2s 63.00nm
BW06 16.67 2 eP 19 18.30 0.5
1.2s 20.55nm 4.1mb
LRM 19.77 356 eP 19 56.70 0.9
LON 22.55 339 eP 20 25.00 1.1
SES 24.28 359 eP 20 41.00 0.3
EDM 27.20 356 eP 21 06.50 -1.5
YKA 36.51 357 eP 22 29.30 -0.2
MBC 50.42 357 eP 24 21.00 -0.5
0.7s 7.00nm 4.7mb
S.D. = 1.5 on 11 of 16 obs.

& JAN 22, 1989 19h 16m 52.38s
46.416 N ± 121.273 W
DEPTH = 3.0km
WASHINGTON (29)
<SEA>. CL 2.7 (SEA).

GLK 0.28 303 iPd 16 57.88 0.0

WPW 0.34 326 iPd 16 58.97 -0.2
ASR 0.35 220 iP 16 59.28 0.0
NAC 0.44 44 eP 17 00.82 -0.4
CWZ 0.52 279 iP 17 02.32 -0.4
YAKW 0.52 78 iPc 17 02.52 -0.3
GULW 0.54 205 iPd 17 02.79 -0.4
GL2 0.55 145 iP 17 02.60 -0.8
FMW 0.58 332 eP 17 03.23 -0.8
KOSW 0.64 274 iP 17 04.16 -0.9
ESD 0.65 251 eP 17 04.57 -0.7
TDL 0.66 265 eP 17 04.58 -0.9
JLK 0.67 246 iP 17 04.81 -0.9
YEL 0.67 252 eP 17 04.83 -0.9
HSR 0.68 249 eP 17 05.28 -0.6
EBC 0.69 44 iP 17 05.76 -0.5
MXC 0.70 76 iPc 17 05.59 -0.7
SHW 0.70 252 iP 17 05.46 -1.0
RVC 0.71 318 iPc 17 05.66 -1.0
APM 0.74 203 iP 17 06.18 -0.9
LMW 0.75 290 iP 17 06.45 -0.8
MTMW 0.76 239 eP 17 06.32 -1.2
FL2 0.78 254 iP 17 06.65 -1.3
CZM 0.85 272 iPc 17 08.00 -1.4
GSM 0.87 336 eP 17 08.46 -1.3
TBM 0.88 31 iP 17 08.98 -1.1
BRVW 0.89 85 iP 17 09.06 -1.1
GHW 0.93 313 eP 17 09.22 -1.6
VGB 0.96 159 eP 17 09.83 -1.6
APW 0.98 284 eP 17 10.34 -1.3
VLL 1.00 197 eP 17 10.79 -1.2
VLMM 1.03 212 eP 17 11.38 -1.1
BVV 1.04 67 eP 17 11.56 -1.1
VTG 1.04 58 eP 17 11.51 -1.1
RVW 1.05 256 eP 17 11.79 -1.1
MDW 1.06 79 eP 17 11.69 -1.4
RMW 1.11 341 eP 17 12.43 -1.4
VFP 1.11 187 eP 17 12.42 -1.5
PRW 1.12 100 eP 17 12.94 -1.1
RSW 1.17 91 iPc 17 13.72 -1.2
PATW 1.18 116 iP 17 14.36 -0.7
TDH 1.18 198 eP 17 13.92 -1.3
WAH2 1.23 73 iP 17 14.71 -1.1
PGO 1.26 221 eP 17 15.68 -0.7
GBL 1.27 81 eP 17 15.21 -1.3
SPW 1.32 330 eP 17 17.17 -0.2
VTHM 1.33 158 eP 17 16.18 -1.5
BMW 1.35 273 iPd 17 16.46 -1.6
CRF 1.36 72 eP 17 16.47 -1.7
WIW 1.37 89 iP 17 17.01 -1.3
VBEM 1.37 189 eP 17 17.14 -1.4
JBO 1.38 133 eP 17 17.05 -1.5
CPW 1.40 294 eP 17 17.22 -1.6
HTW 1.43 346 eP 17 17.97 -1.3
GT2 1.44 209 eP 17 18.27 -1.2
CROR 1.45 172 eP 17 18.11 -1.5
OTH 1.45 76 eP 17 18.02 -1.6
EPH 1.48 50 eP 17 19.19 -0.8
ETP 1.53 87 eP 17 19.04 -1.6
GMW 1.53 318 iP 17 19.41 -1.3
NLO 1.55 259 eP 17 20.47 -0.5
WRD 1.57 69 eP 17 19.81 -1.4
WTV 1.57 35 eP 17 20.42 -0.8
63 obs. associated

% JAN 22, 1989 19h 34m 16.53 ± 2.01s
44.523 N ± 10.3km 6.755 E ± 17.3km
DEPTH = 10.0km (geophysicist)

FRANCE (538)
ML 2.7 (GEN).

PZZ 0.25 94 Pc 34 22.14 0.2
S 34 25.59
RRL 0.40 3 P 34 25.10 0.4
S 34 30.40
STV 0.49 124 P 34 26.51 -0.1
S 34 32.97
BNI 0.53 354 P 34 27.10 -0.2
eSg 34 34.30
RSP 0.72 29 P 34 30.71 -0.1
S 34 39.95
ROB 0.83 106 P 34 32.54 -0.1
S 34 42.80
IMI 1.02 127 P 34 36.10 0.2
S 34 49.00
FIN 1.09 106 P 34 36.76 -0.3
S 34 50.37
S.D. = 0.3 on 8 of 8 obs.

22d 19h

JAN 22, 1989 19h 41m 10.34± 0.90s
24.743 N ± 9.3km 94.210 E ± 8.4km
DEPTH = 77.6 ± 15.8 km
4.0mb (1 obs.)

BURMA-INDIA BORDER REGION (294)

SHL	2.26	292	iP	41	47.80	1.3
			iS	42	13.00	
LSA	5.64	332	P	42	36.20	2.4
			S	43	33.60	
CHG	7.36	142	iPd	42	57.20	0.0
	1.0s	24.50nm			4.8mb X	
CHTO	7.36	142	iP	42	58.00	0.8
GUN	8.11	295	P	43	47.60	-0.3
PKI	8.39	291	P	43	11.00	-0.8
KKN	8.57	293	P	43	13.20	-0.9
DMN	8.66	291	P	43	14.40	-1.0
BDT	8.70	148	eP	43	16.00	0.4
GKN	9.18	293	P	43	21.10	-1.2
LZH	14.02	34	eP	44	26.00	-0.8
	2.0s	0.05nm			1.5mb X	
GTA	15.37	17	eP	44	49.60	5.4X
XAN	15.80	51	P	44	48.30	-1.3
MBL	51.99	149	eP	50	13.50	-0.4
WB5	59.11	135	eP	51	04.80	-0.4
HFS	64.19	327	eP	51	41.30	2.5
	0.5s	0.90nm			4.0mb	

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

% JAN 22, 1989 20h 21m 52.23± 0.81s
38.206 N ± 9.3km 1.857 W ± 6.8km
DEPTH = 10.0km (geophysicist)

SPAIN (377)

MG 2.9 (MDD).

EALH	0.49	135	iPc	22	01.90	-0.3
			eS	22	09.00	
EVIA	0.67	310	eP	22	05.00	-0.6
			eS	22	14.80	
ACU	1.18	75	iP	22	14.40	0.2
			iS	22	29.70	
EBAN	1.52	269	iPd	22	20.00	0.5
			eS	22	40.00	
ECHE	1.55	26	eP	22	20.00	0.1
			eS	22	40.50	
AFC	1.64	235	ePg	22	26.50	5.1X
			eSg	22	48.00	
ETOR	2.61	357	ePg	22	43.40	8.1X
			eSg	23	15.00	
GUD	3.01	325	ePg	22	48.90	7.9X
			eSg	23	24.30	

S.D. = 0.6 on 5 of 8 obs.

% JAN 22, 1989 20h 31m 05.64± 2.58s
44.484 N ± 10.7km 6.592 E ± 19.8km
DEPTH = 10.0km (geophysicist)

FRANCE (538)

ML 2.6 (GEN).

PZZ	0.36	87	Pc	31	12.85	-0.3
			S	31	16.26	
RRL	0.46	17	P	31	15.80	0.8
			S	31	21.62	
BNI	0.57	6	P	31	16.40	-0.9
			eSg	31	25.00	
STV	0.58	114	P	31	17.41	0.0
			S	31	23.88	
RSP	0.82	35	P	31	21.77	0.2
			S	31	30.62	
ROB	0.94	101	P	31	23.41	-0.1
			S	31	33.29	
IMI	1.10	121	P	31	26.80	0.5
			S	31	39.03	
FIN	1.19	103	P	31	27.49	-0.4
			S	31	39.96	

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

* JAN 22, 1989 20h 34m 01.15± 0.90s
5.960 S ± 12.3km 102.455 E ± 10.4km
DEPTH = 33.0km (normal)
4.8mb (4 obs.) 4.2Msz (1 obs.)

SOUTHERN SUMATRA (274)

KSJ	2.31	3	iPc	34	38.00	0.3
			e	39	10.00	
KLI	2.63	66	eP	34	41.00	-1.2
			eS	35	19.00	

PPI	5.84	339	eP	35	20.80	-6.9X
			eS	36	31.00	
TPI	6.08	59	ePc	35	57.00	25.8X
			eS	37	04.00	
			e	40	00.00	
KGM	7.97	6	eP	36	00.00	2.4
IPM	10.57	352	eP	36	37.00	3.6X
PCI	18.06	75	eP	38	12.00	0.7
NNT	18.63	352	eP	38	15.00	-3.3X
BDT	23.31	352	eP	39	05.00	-2.2
CHG	24.86	352	iPd	39	20.90	-1.4
	0.8s	12.69nm			4.6mb	
SHL	32.98	342	eP	40	34.00	-1.5
WB5	33.95	117	eP	40	44.00	0.1
ASPA	34.99	123	eP	40	53.20	0.4
Z	22s	0.54um			4.2Msz	
			LR	55	43.80	
PKI	37.18	334	P	41	11.40	-0.1
	0.6s	7.00nm			4.7mb	
GUN	37.28	335	P	41	12.80	0.4
DMN	37.35	334	P	41	13.30	0.5
KKN	37.43	335	P	41	13.80	0.3
	0.6s	14.00nm			5.0mb	
GKN	37.89	334	P	41	17.60	0.3
	0.6s	9.00nm			4.8mb	
NDI	42.16	326	eP	41	53.00	0.6
MAIO	58.18	320	eP	43	55.00	0.4

S.D. = 1.2 on 16 of 20 obs.

& JAN 22, 1989 20h 59m 09.60s
40.500 N 125.600 W
DEPTH = 5.0km (geophysicist)

OFF COAST OF NORTHERN CALIFORNIA (34)

<BRK>. ML 3.1 (BRK).

FHC	1.27	76	iPc	59	31.60	-2.0
			eS	59	47.80	
WDC	2.33	87	ePc	59	46.80	-2.5
			iS	00	14.30	
LBFM	2.94	72	eP	59	57.00	-1.0
MIN	3.05	92	eP	59	56.50	-3.1
			eS	00	33.60	
ORV	3.29	105	e(P)	00	00.40	-2.4
			eS	00	37.30	
KVN	5.96	102	eP	00	38.50	-2.3

6 obs. associated

% JAN 22, 1989 21h 02m 17.68± 2.36s
44.529 N ± 10.7km 6.790 E ± 20.2km
DEPTH = 10.0km (geophysicist)

FRANCE (538)

ML 2.8 (GEN).

PZZ	0.22	96	P	02	22.83	0.2
			S	02	26.01	
RRL	0.39	359	P	02	25.72	0.0
			S	02	31.61	
STV	0.48	126	P	02	27.39	0.0
			S	02	33.98	
RSP	0.71	28	P	02	31.75	0.1
			S	02	41.23	
ROB	0.81	106	P	02	33.27	-0.1
			S	02	44.20	
IMI	1.00	128	P	02	36.95	0.2
			S	02	50.56	
FIN	1.07	107	P	02	37.49	-0.3
			S	02	52.21	

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

? JAN 22, 1989 22h 04m 18.55± 7.97s
40.139 N ± 48.1km 29.264 E ± 41.2km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

YLV	0.44	11	iPg	04	27.50	0.0
			iSg	04	32.50	
KCT	0.70	279	iPg	04	31.00	-1.5
			iSg	04	41.00	
ISK	0.94	351	ePn	04	36.50	0.1
BNT	1.05	282	iPn	04	40.00	1.6
CTT	1.19	328	ePn	04	40.50	-0.3

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

JAN 22, 1989 22h 20m 17.97± 0.10s
41.806 N ± 2.1km 144.282 E ± 2.0km
DEPTH = 25.0km (geophysicist)
6.0mb (80 obs.) 6.3Msz (27 obs.)

HOKKAIDO, JAPAN REGION (224)

Ms 5.8 (BRK), 5.7 (PAS). Felt
(111 JMA) at Hirao, Urakawa and
Obihira; (11 JMA) at Tomakomai;
(1 JMA) at Nemuro and Asahikawa.
Depth from broadband
displacement seismograms.

FAULT PLANE SOLUTION: P-Waves
NP1: Strike=32 Dip=85 Slip=90
NP2: 212 5 90

Principal Axes:
T Val=50 P1g=50 Azm=302
P 40 122

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

RADIATED ENERGY

No. of sta: 5 Focal mech. M
Energy 4.1±0.9*10**13 Nm

MOMENT TENSOR SOLUTION

Dep 21 No. of sta: 15
Moment Tensor; Scale 10**18 Nm
Mrr=-0.53 Mtt=-0.45
Mff=-0.08 Mrt=0.92
Mrf=1.79 Mtf=-0.85

Principal axes:
T Val=2.05 P1g=51 Azm=277

N 0.34 17 29
P -2.39 34 131

Best Double Couple: Mo=2.2*10**18

NP1: Strike=269 Dip=19 Slip=152
NP2: 26 81 73

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 14S, 33C M.W.: 10S, 16C

Centroid Location:

Origin Time 22:20:23.2 0.2

Lat 41.58N 0.02 Lon 144.26E 0.03

Dep 27.7 1.4 Half-duration 4.6

Moment Tensor; Scale 10**18 Nm

Mrr=0.88 0.02 Mtt=-0.41 0.02

Mff=-0.48 0.03 Mrt=0.38 0.05

Mrf=1.72 0.09 Mtf=-0.65 0.02

Principal Axes:
T Val=2.05 P1g=56 Azm=268

N -0.05 15 21

P -2.00 30 120

Best Double Couple: Mo=2.0*10**18

NP1: Strike=248 Dip=20 Slip=139

NP2: 17 77 75

KUS 1.17 4 iP+ 20 39.30 0.5

iS 20 54.70

URA 1.17 288 iP+ 20 42.50 3.7X

eS 20 58.00

OBI 1.36 325 iP+ 20 43.20 1.7

S 21 06.60

NEM 1.80 32 eP 20 47.00 -0.8

S 21 07.50

ASA 2.41 325 iP+ 20 58.10 1.5

eS 21 30.00

HAC 2.44 239 iP+ 20 57.80 0.8

eS 21 27.00

AOM 2.81 251 iP+ 21 04.00 1.7

iS 21 43.10

MRK 3.17 229 iP+ 21 08.30 1.0

S 21 43.20

NIIJ 6.12 224 P 21 48.10 -1.0

KAKJ 6.44 211 P 21 51.10 -2.6

MAT 7.06 224 iPc 22 01.50 -0.9

1.1s 639.24nm 6.6mb X

eS 23 22.00

CHJJ 7.07 217 P 22 01.10 -1.4

MTMJ 7.24 226 P 22 04.50 -0.5

IIDJ 8.04 220 P 22 16.10 -0.1

TSRJ 9.01 229 P 22 29.20 -0.3

MDJ 11.08 290 Pc 22 58.00 0.1

	1.5s	125.00nm		5.7mb		iScS	43	03.00		ARV	84.48	327	Pd	32	50.40	0.7				
	Z	21s	7.35um	6.0Msz		iSS	48	24.00		SFI	84.57	328	Pc	32	51.00	0.9				
BNT	79.94	316	iP	32	27.00	0.8	iSSS	51	54.00		ORX	84.61	331	P	32	49.63	-0.8			
DBN	79.97	336	eP	32	26.00	-0.1	LR	12	20.00		EMS	84.61	332	ePc	32	50.80	0.2			
	Z	18s	23.40um	6.6Msz		IVA	81.96	322	eP	32	37.50	0.6	FLN	84.61	337	iPc	32	50.30	0.0	
			eS	42	29.00		YRH	81.98	342	iPd	32	37.40	0.7		1.4s	182.90nm		6.1mb		
			eSS	48	00.00			1.0s	220.00nm		6.1mb		LOR	84.61	334	iPc	32	50.40	0.1	
EDC	79.98	316	iP	32	26.00	-0.4	FVI	81.99	329	Pc	32	36.00	-0.8		1.2s	344.00nm		6.5mb		
GRF	80.01	331	iPc	32	27.00	0.6	DSI	82.00	305	iPc	32	38.00	0.9	ORO	84.62	331	Pd	32	49.80	-0.7
	Z	18s	54.00um	6.4mb		DLE	82.00	343	eP	32	37.50	0.7	CIO	84.65	326	eP	32	49.31	-1.3	
GRFO	80.01	331	iPc	32	26.72	0.3		0.9s	106.00nm		5.9mb		LDF	84.66	337	iPc	32	50.60	0.1	
			epPd	32	32.02	17kmX	VOY	82.01	328	ePc	32	35.90	-1.2		1.6s	211.40nm		6.1mb		
			ed	32	33.34		CEY	82.04	327	iPc	32	36.90	-0.3	FKO	84.76	46	eP	32	52.10	0.9
			isPd	32	37.98		DCN	82.11	343	eP	32	37.70	0.4	BRT	84.77	323	Pd	32	51.40	0.2
DST	80.12	315	iP	32	27.20	-0.1		1.3s	439.00nm		6.3mb		BOB	84.80	330	Pc	32	51.60	0.2	
SCH	80.16	18	eP	32	27.00	-0.2	KSL	82.14	312	eP	32	37.10	-0.7	MME	84.80	328	Pd	32	52.70	1.1
BEO	80.19	323	iP	32	27.00	-0.4	PVY	82.15	322	eP	32	38.40	0.5	ALP	84.81	326	eP	32	51.98	0.4
			iS	37	47.00		STR	82.16	333	P	32	37.89	0.2	LBF	84.83	334	iPc	32	51.40	0.0
PGB	80.20	320	iPc	32	28.00	0.4	PLG	82.20	319	iPc	32	38.00	-0.1	LCI	84.86	322	Pc	32	51.10	-0.5
BHL	80.21	307	Pc	32	27.00	-0.9	THE	82.24	319	iPc	32	38.20	0.0	SSF	84.91	334	iPc	32	52.10	0.3
			PP	35	29.00				i(S)	42	52.80		FIR	84.93	328	eP	32	53.50	1.6	
			S	42	32.00		TRI	82.33	327	iPc	32	38.00	-0.6	NPS	84.94	314	iPc	32	51.60	-0.6
KMR	80.27	329	iP+	32	28.40	0.6			iPP	35	37.50		ASS	84.95	327	Pd	32	52.70	0.6	
PLD	80.27	319	eP	32	30.00	2.1			iPP	35	50.00		BDI	84.95	328	Pc	32	52.00	-0.1	
LFK	80.50	309	iP	32	29.20	-0.1			iPP	37	28.00		SIO	84.97	45	eP	32	52.50	0.2	
QASM	80.50	296	ePc	32	29.30	-0.2			iPP	37	28.00		WAJH	85.02	301	ePc	32	53.30	0.7	
TNS	80.53	333	ePd	32	29.60	0.3			eS	42	24.00		GRR	85.06	338	iPc	32	53.00	0.5	
KHL	80.57	314	iP	32	29.80	0.1			eSP	43	07.00		LSD	85.06	331	P	32	53.43	0.5	
RDO	80.57	318	iPc	32	30.10	0.6			iSPP	44	00.00		TUL	85.12	45	eP+	32	53.50	0.5	
RZN	80.58	319	iPc	32	30.00	0.2			e	49	20.00			1.3s	61.40nm		5.7mb			
HRI	80.59	306	iPc	32	31.50	1.5			i	53	04.00			Z	21s	13.80um		6.3Msz		
BCK	80.61	312	eP	32	28.90	-1.0	OGA	82.44	330	iPc	32	40.00	0.5	LNO	85.12	45	eP	32	53.50	0.6
VTS	80.63	320	iPc	32	30.00	0.0	ETA	82.48	342	eP	32	40.20	0.9	SMF	85.17	334	iPc	32	53.40	0.3
CSS	80.84	309	eP	32	32.00	0.9		1.4s	380.00nm		6.3mb		LPG	85.17	332	iPc	32	54.20	0.7	
ENN	80.90	335	iPc	32	31.00	-0.1	CDF	82.48	333	P	32	39.33	-0.2	AVF	85.20	334	iPc	32	53.70	0.5
	1.0s	250.00nm		6.2mb		TTG	82.60	322	eP	32	40.20	0.1	AQU	85.23	326	Pc	32	54.50	0.9	
		e	32	46.00				eS	42	50.00		PII	85.27	328	Pd	32	53.10	-0.5		
MEM	81.01	335	Pc	32	31.40	-0.2	SLE	82.61	332	ePc	32	39.80	-0.3	RSP	85.29	331	P	32	52.92	-0.9
MMB	81.14	319	iPc	32	33.00	0.4	VVI	82.64	328	Pd	32	40.20	-0.1	GEN	85.29	330	P	32	51.79	-1.9
EZN	81.16	316	iP	32	32.30	-0.3	FEL	82.68	332	P	32	40.25	-0.4	VLS	85.30	319	eP	32	53.50	-0.4
JARJ	81.19	306	Pd	32	33.00	-0.1	SAX	82.74	331	ePc	32	41.20	0.1	RLO	85.33	44	eP	32	54.90	0.8
PTJ	81.28	326	iPc	32	32.90	-0.4	LIT	82.88	319	iPc	32	41.20	-0.5	DUI	85.35	325	Pc	32	54.50	0.3
BURJ	81.31	306	Pc	32	34.20	0.5	CTI	82.88	329	Pc	32	40.80	-0.9	LPF	85.43	337	iPc	32	55.00	0.6
ZAG	81.34	326	iPc	32	33.50	0.0	ZLA	82.89	332	ePc	32	41.70	0.1	MNS	85.51	326	Pc	32	54.40	-0.5
UCC	81.36	336	P+	32	34.00	0.5	ECB	82.91	343	iPd	32	42.40	0.9	AZI	85.52	326	Pc	32	55.10	0.2
KBA	81.37	329	iPc	32	33.80	-0.1		1.2s	544.00nm		6.5mb		CKI	85.53	330	Pc	32	54.40	-0.5	
	1.1s	273.00nm		6.2mb		BDV	82.91	322	eP	32	41.50	-0.3	BGF	85.57	334	iPc	32	55.50	0.4	
		i	32	49.30		OHR	82.92	321	iPc	32	41.90	0.0X	BNI	85.58	331	Pc	32	55.70	0.3	
		iPP	35	35.60			1.0s	0.26nm		3.3mb X		VAM	85.59	315	eP	32	55.40	0.0		
		i	35	46.70				e	32	54.00		VVO	85.59	45	eP	32	56.00	0.6		
		e(sS)	42	46.50		OSS	82.92	330	eP+	32	42.40	0.5	SDI	85.59	325	Pc	32	55.10	-0.3	
PPCY	81.46	310	eP	32	34.80	0.5	HCY	82.93	323	eP	32	41.50	-0.4	HLW	85.65	307	eP	32	56.00	0.2
ELL	81.50	312	iP	32	34.10	-0.6	ULC	82.97	322	eP	32	42.30	0.2		e	36	32.00			
STU	81.50	332	iPc+	32	34.00	-0.3	ECP	82.99	342	iPd	32	42.80	0.9		e(S)	38	40.00			
	1.0s	290.00nm		6.3mb			1.3s	697.00nm		6.6mb		RRL	85.66	331	P	32	56.20	0.3		
	Z	20s	22.69um	6.5Msz		MOF	83.01	333	P	32	41.85	-0.4	FIN	85.74	330	P	32	55.07	-1.0	
DMU	81.51	343	eP	32	34.80	0.6	KZN	83.07	319	iPc	32	42.00	-0.7	ROB	85.80	330	P	32	55.38	-1.0
	1.1s	174.00nm		6.0mb		VITF	83.09	333	P	32	42.30	-0.2	PLDF	85.83	334	P	32	56.77	0.2	
SRS	81.56	319	iPc	32	35.00	0.2	NEO	83.12	318	eP	32	42.80	-0.1	DOI	85.85	331	P	32	47.10	-9.5X
PRK	81.62	316	eP	32	35.00	0.0	BSF	83.14	333	P	32	42.42	-0.6	SGO	85.88	324	Pc	32	56.30	-0.4
SNF	81.63	335	Pc	32	34.90	0.0	HAU	83.14	333	iPc	32	43.00	0.1	PZZ	85.90	331	P	32	55.89	-1.1
MASJ	81.68	305	Pd	32	36.00	0.4		1.2s	142.80nm		6.0mb		AGO	85.92	334	P	32	57.39	0.5	
IZM	81.73	315	iP	32	35.20	-0.5	LLS	83.19	331	ePc	32	43.50	0.1	GAC	85.93	27	ePd	32	56.70	-0.1
LJU	81.75	327	ePc	32	35.20	-0.4	BBS	83.21	332	P	32	43.13	-0.1	MAF	85.96	334	iPc	32	58.10	1.0
			e(S)	42	44.00		HVAR	83.26	324	iPd	32	42.80	-0.7	RMP	85.98	326	P	32	57.20	0.0
WLF	81.78	334	Pc	32	35.80	0.2	VDL	83.34	330	ePc	32	44.50	0.4	TCF	86.01	335	iPc	32	58.00	0.6
RBL	81.81	328	Pc	32	35.30	-0.7	AYN	83.49	333	ePc	32	45.70	0.8	RDP	86.01	326	P	32	57.30	-0.2
PLE	81.83	323	eP	32	37.10	0.8	LOMF	83.55	302	P	32	44.96	-0.1	STV	86.04	331	P	32	56.20	-1.4
MKRJ	81.85	305	Pd	32	37.30	0.8	MBH	83.56	304	iPc	32	46.50	1.2	MGR	86.11	323	P	32	57.00	-0.9
KNT	81.87	319	iPc	32	36.80	0.5	KMSA	83.65	292	ePc	32	45.70	-0.2	IMI	86.12	330	P	32	57.43	-0.5
GWF	81.88	333	P	32	36.12	-0.2	SAL	83.68	329	Pc	32	45.20	-0.4	TDS	86.14	322	P	32	58.30	0.2
VBV	81.89	327	iPc	32	36.50	0.1	KAP	83.88	313	eP	32	46.90	0.1	DLA	86.15	32	P	32	55.20	-2.8X
DOU	81.90	335	Pc+	32	36.30	0.0	TMA	83.88	331	ePc	32	46.60	-0.3	SAOF	86.18	330	P	32	57.53	-0.7
	1.0s	158.30nm		6.0mb		ATH	83.89	317	iPc	32	46.80	0.0	AUTN	86.22	330	P	32	58.24	-0.4	
	Z	18s	29.70um	6.7Msz		SRFA	83.96	304	iPc	32	48.00	0.7	PYM	86.23	334	P	32	59.09	0.6	
VAY	81.90	320	iPc	32	37.00	0.5	VAL	84.05	344	iP	32	48.00	0.7	FVM	86.23	40	P	32	58.50	0.0
	1.																			

22d 22h

CALN	86.62	331 P	33 00.30	-0.2	CNCB	142.79	58 PKP	39 49.60	-2.3	GBA	63.82	265 Pc	59 08.20	-1.0
FRF	86.88	331 eP	33 01.40	-0.2	CCH	144.37	56 PKP	39 53.50	-0.7		0.9s	7.80nm		4.8mb
CVF	86.89	329 eP	33 01.40	-0.3	ANT	145.99	69 iPKP	39 58.50	2.1	SUF	64.69	333 iP	59 12.50	-1.7
	1.4s	165.50nm		6.1mb	LCCH	150.59	85 ePKP	40 15.00	11.7X		0.5s	5.50nm		4.9mb
CBM	87.07	22 P	33 02.70	0.2	LNV	150.92	86 ePKP	40 10.80	7.0X	ASPA	65.88	190 iPc	59 23.00	0.8
LRG	87.07	331 eP	33 02.70	0.2	JACH	150.95	83 ePKP	40 17.00	13.0X	WDC	66.49	56 eP	59 27.60	1.5
	1.2s	418.40nm		6.5mb	RFL	151.09	84 iPKPc	40 11.80	7.6X	NUR	66.75	332 iP	59 26.20	-1.2
RJF	87.11	335 iPc	33 03.20	0.5		1.0s	65.00nm			SES	67.09	42 eP	59 31.00	1.2
LMR	87.12	331 eP	33 02.90	0.1	SAN	151.25	85 ePKP	40 12.70	8.3X	FFC	68.49	35 eP	59 29.00	-9.4X
RSNY	87.26	27 P	33 03.00	-0.5	PCH	151.44	85 ePKP	40 19.70	15.0X		1.6s	47.00nm		5.3mb
Z	22s	8.99um		6.1msz	FCH	151.47	84 ePKP	40 22.00	16.9X	LRM	69.21	47 eP	59 43.10	-0.3
CAF	87.27	334 iPc	33 04.60	1.1	AIA	151.51	155 ePKP	40 11.50	7.8X	KVN	70.14	55 eP	59 50.00	0.9
SOI	87.55	322 Pc	33 04.10	-0.8	BAO	151.85	26 ePKP	40 07.00	1.1	HFS	70.61	336 eP	59 49.70	-1.6
LFF	87.68	335 iPc	33 06.20	0.8	BMA	159.67	23 ePKP	40 27.10	11.4X		0.5s	5.10nm		4.8mb
LPO	87.77	335 iPc	33 06.70	0.8	RDJ	160.12	21 ePKP	40 17.60	1.6	NAO	70.88	338 P	59 52.00	-1.0
BNH	88.28	25 P	33 07.10	-1.3		S.D. = 0.8	on 473 of 510 obs.				1.0s	12.70nm		4.9mb
MSZ	88.66	163 P	33 24.00	14.3X						TNP	71.28	55 eP	59 55.00	-1.1
MEU	88.86	322 Pd	33 11.60	0.2		? JAN 22, 1989	22h 39m 00.65± 8.87s				0.8s	6.47nm		4.7mb
LVI	89.30	324 Pc	33 13.20	-0.1		44.843 N ± 10.5km	9.745 E ± 97.4km			FRB	71.58	15 eP	59 55.00	-2.1
EPF	89.52	334 iPc	33 14.60	0.3		DEPTH = 10.0km	(geophysicist)			BW06	72.76	48 eP	00 03.50	-1.3
	1.6s	108.20nm		5.9mb		NORTHERN ITALY	(545)				1.0s	3.75nm		4.3mb
TBR	90.38	28 P	33 17.60	-0.7	BDI	0.99	142 P	39 19.50	0.0	KSP	77.15	329 iPc	00 29.80	0.4
GMFN	90.62	28 iP	33 19.70	0.3	PII	1.25	153 P	39 23.90	0.0		1.0s	25.00nm		5.2mb
ARO	90.77	286 iP+	33 22.00	1.5			eSg	39 36.80		CLL	78.00	331 iPc	00 33.10	-0.9
PRIN	90.89	29 P	33 21.20	0.6				39 32.20	0.1		1.2s	33.00nm		5.2mb
TKL	91.23	37 P	33 23.40	1.1	CTI	1.80	47 P	39 32.20	0.1	BRG	78.01	330 eP	00 34.10	0.0
EMON	91.38	340 e(P)	33 23.00	0.1	FVI	2.75	49 P	39 45.50	-0.1		0.6s	10.00nm		5.0mb
BLA	91.39	34 P	33 22.50	-0.6		S.D. = 0.2	on 4 of 4 obs.			PRU	78.50	330 Pc	00 37.50	0.7
ERQQ	91.48	333 e(P)	33 24.00	0.7							1.0s	14.40nm		4.9mb
CVL	91.54	32 P	33 24.10	0.4		JAN 22, 1989	22h 48m 37.74± 0.31s			WIT	78.86	335 eP	00 40.00	1.3
CBN	91.78	32 eP	33 30.00	5.3X		41.840 N ± 5.5km	144.269 E ± 5.8km			MOX	79.04	332 eP	00 39.00	-0.8
ETOR	92.28	335 e(P)	33 27.50	0.3		DEPTH = 33.0km	(normal)			WTS	79.52	335 eP	00 42.00	-0.3
ERUA	92.31	339 e(P)	33 27.00	-0.2		5.0mb (42 obs.)					0.8s	13.00nm		5.0mb
ECHE	93.05	334 e(P)	33 32.00	1.3		HOKKAIDO, JAPAN REGION	(224)			KHC	79.57	330 iPc	00 43.30	0.6
GUD	93.09	336 eP	33 31.00	0.0							1.0s	14.00nm		4.9mb
TOL	93.76	336 iPc	33 34.20	0.3	NIIJ	6.14	223 P	50 08.10	-0.4	WET	79.82	330 eP	00 44.60	0.6
		epPd	33 41.81	24kmX			eS	51 17.20			1.0s	14.00nm		4.9mb
		esPd	33 46.28		KAKJ	6.47	211 P	50 11.00	-2.1	ALQ	79.85	52 eP	00 46.00	1.3
		ePP	37 18.56				eS	51 20.50			1.0s	5.00nm		4.5mb
		ePPP	39 30.00		MAT	7.08	224 iPc	50 21.10	-0.6	GRF	79.97	331 iPc	00 45.50	0.6
		eSKS	44 03.80				(S)	51 42.00			1.0s	32.00nm		5.3mb
		iS	44 30.00		CHJJ	7.09	217 P	50 21.20	-0.7	ENN	80.86	335 eP	00 49.00	-0.5
		ePS	45 46.00				eS	51 37.00			1.0s	28.00nm		5.2mb
		eSS	50 58.00		MTMJ	7.26	226 P	50 24.30	0.0	KBA	81.34	329 ePd	00 51.50	-0.8
EPLA	94.18	338 eP	33 35.70	-0.2	IIDJ	8.06	220 P	50 35.80	0.3		1.0s	14.10nm		4.9mb
EVIA	94.41	335 eP	33 37.50	0.5			eS	52 04.70		SNF	81.60	335 P	00 53.60	0.3
EALH	94.76	333 e(P)	33 39.00	0.5	TSRJ	9.03	229 P	50 49.40	0.6	WLF	81.74	334 P	00 55.80	1.7
EBAN	95.25	335 eP	33 41.50	0.7	MDJ	11.06	289 eP	51 12.00	-4.7X	DOU	81.87	335 P	00 56.30	1.5
ASMO	95.97	335 eP	33 44.50	0.2	CN2	13.95	284 Pd	51 53.80	-1.4	SKO	81.91	321 eP	00 56.00	0.8
AFC	96.01	335 e(P)	33 44.50	0.0	BJI	21.26	275 eP	53 20.50	-2.7	OGA	82.40	330 eP	00 58.80	0.9
EHOR	96.02	336 e(P)	33 44.50	0.2	SSE	21.37	247 eP	53 28.00	3.6X	CDF	82.44	333 eP	00 58.20	0.3
AAPN	96.14	335 eP	33 45.00	0.0		1.0s	0.03nm		1.6mb X		1.0s	9.60nm		4.8mb
ALQJ	96.32	335 eP	33 46.50	0.7	TIA	21.78	264 eP	53 25.30	-3.2X	BSF	83.11	333 eP	01 01.20	-0.2
APHE	96.33	335 eP	33 45.50	-0.4	TIY	24.73	271 eP	53 57.30	-0.1	HAU	83.11	333 eP	01 01.30	0.0
ATEJ	96.47	335 eP	33 46.50	0.0	BTO	25.70	279 eP	54 06.80	0.3	MBH	83.53	304 iPd	01 05.00	1.3
EVAL	96.68	337 e(P)	33 47.50	0.2	WHN	26.52	255 P	54 14.50	0.5	LOR	84.58	334 eP	01 08.60	-0.2
EJIF	97.35	336 e(P)	33 50.00	-0.3	XAN	28.79	266 P	54 34.10	-0.6		1.2s	27.90nm		5.3mb
IFR	99.94	334 iPd	34 03.00	0.6	LZH	31.74	273 eP	55 01.50	0.6	LBF	84.79	334 eP	01 09.80	0.0
NAI	103.84	281 iPdiff	34 22.00	2.0		2.0s	0.08nm		2.3mb X		0.8s	8.00nm		5.0mb
	1.0s	15.00nm		5.8mb	GTA	33.55	281 iPc	55 16.60	0.0	SSF	84.88	334 eP	01 10.30	0.1
LWI	110.31	286 ePd diff	34 50.00	1.2	CD2	34.11	265 eP	55 21.20	-0.3		1.0s	8.00nm		4.9mb
BNG	112.60	299 ePKPc	38 50.00	-4.2X	GVA	34.39	256 P	55 23.60	-0.4	GRR	85.02	338 eP	01 11.40	0.5
	1.1s	8.00nm			WMO	40.85	293 P	56 18.00	0.1		0.8s	8.00nm		5.0mb
		ic	39 25.20		IMA	41.44	33 eP	56 22.00	-0.6	SMF	85.13	334 eP	01 11.80	0.3
BUL	122.12	271 iPKPc	39 12.00	-0.3		1.1s	18.80nm		4.7mb		1.0s	18.00nm		5.2mb
	1.0s	15.50nm			PMR	43.49	40 eP	56 36.70	-2.4	LPG	85.14	332 eP	01 12.40	0.5
KOGH	122.38	317 ePKP	39 13.40	0.5		1.0s	12.50nm		4.6mb		1.0s	18.00nm		5.2mb
TIC	124.21	322 PKP	39 16.00	-0.3	FBA	43.88	35 eP	56 42.20	-0.1	AVF	85.17	334 eP	01 12.00	0.4
KIC	124.33	322 PKP	39 16.28	-0.4	CHTO	44.71	253 eP	56 52.20	2.7		0.8s	17.40nm		5.3mb
	1.2s	41.00nm				1.0s	10.00nm		4.6mb	LPF	85.40	337 eP	01 13.40	0.6
LIC	124.59	322 PKP	39 16.68	-0.4	SHL	45.80	266 iP	56 58.40	0.0		1.2s	17.80nm		5.2mb
	1.3s	67.00nm			NNT	48.40	246 eP	57 20.60	2.0	BGF	85.54	334 eP	01 14.30	0.8
SLR	125.62	266 iPKPc+	39 18.00	-1.0		e	09 01.30				0.8s	4.00nm		4.7mb
	1.2s	78.13nm			GUN	49.00	273 P	57 23.80	0.2	MAF	85.92	334 eP	01 16.40	0.9
Z	19s	8.68um		6.4msz	INK	49.11	29 eP	57 23.00	-0.5		1.0s	26.80nm		5.4mb
FRS	129.99	263 iPKPc	39 31.80	4.8X	KKN	49.51	273 P	57 27.70	0.3	TCF	85.98	335 eP	01 16.20	0.4
	0.4s	10.17nm				0.8s	22.00nm		5.2mb		0.8s	4.00nm		4.7mb
CER	136.24	262 ePKP	39 35.00	-3.9X	PKI	49.53	273 P	57 27.60	-0.1	LSF	86.23	335 eP	01 17.40	0.4
	0.9s	18.46nm				0.7s	12.00nm		5.0mb		0.8s	17.40nm		5.3mb
TUH	136.32	263 ePKP	39 35.50	-3.5X	DMN	49.74	273 P	57 29.40	0.2	MFF	86.43	336 eP	01 18.10	0.2
ARE	140.27	61 ePKP	39 26.00	-21.1X		0.8s	18.00nm		5.2mb		1.0s	16.00nm		5.2mb
ZOBO	142.29	57 PKP	39 47.00	-4.0X	GKN	49.88	274 P	57 30.10	0.0	RJF	87.08	335 eP	01 21.70	0.6
	Z	22s	4.51um	6.2msz		0.8s	12.00nm		5.0mb		1.0s	8.00nm		4.9mb
		eLR	28 38.00		MBC	51.29	18 eP	57 38.00	-2.0	CAF	87.24	334 eP	01 23.00	1.1
LPB	142.51	58 ePKP	39 48.00	-3.2X	YKA	58.56	32 eP	58 32.90	-0.1		1.2s	33.90nm		5.5mb
	Z	24s	3.88um	6.1mszX	WB5	62.09	191 eP	58 56.80	-0.7	LFF	87.65	335 eP	01 24.80	0.9
		LR	30 20.00		KJF	63.17	334 iP	59 03.00	-1.3		1.0s	17.60nm		5.3mb

BAO 151.83 26 ePKP 08 28.70 4.3X
 S.D. = 1.0 on 85 of 90 obs.
 JAN 22, 1989 23h 02m 07.15 ± 0.14s
 38.465 N ± 3.5km 68.694 E ± 2.2km
 DEPTH = 33.0km (normal)
 5.3mb (64 obs.)

TAJIK SSR (715)

Two hundred seventy-four people killed, many injured, extensive damage (VII) and mudslides in the Gissar area. Nearly all the casualties were caused by mudslides which buried Sharora and two nearby villages. Felt (VI) at Gulkhani and Sarkishti; (V) at Dushanbe and Tursunzade; (IV) at Denau and Nurek.

KSH	5.76	78	P	03	34.00	1.2
MAIO	7.64	256	iPd	03	55.00	-4.0X
			eS	05	54.00	
QUE	8.38	190	iPc	04	09.30	-0.2
NDI	12.06	141	iPc	04	58.00	-1.6
	0.9s	71.43nm				5.8mb
			eS	07	09.00	
TEH	14.08	264	eP	05	13.00	-13.5X
WMO	15.27	63	iPd	05	39.00	-3.0X
Z	11s	14.30um				
GKN	16.91	123	P	05	57.60	-5.4X
KKN	17.47	123	P	06	03.60	-6.5X
DMN	17.48	123	P	06	05.00	-5.2X
TAB	17.57	276	eP	06	11.00	-0.2
PKI	17.71	123	P	06	07.40	-5.7X
GUN	17.80	121	P	06	08.20	-6.0X
KER	17.85	263	eP	06	13.00	-1.6
SLY	18.73	268	iPc	06	26.00	0.7
			eS	10	30.00	
BOM	19.83	168	eP	06	38.50	0.5
			eS	10	07.50	
BHD	20.35	263	iPd	06	43.00	-0.3
			ePP	07	09.50	
			ePPP	07	17.00	
			eS	10	36.00	
			eSS	11	22.50	
			eSSS	11	45.00	
			i	14	04.50	
POO	20.36	166	iPc	06	41.50	-2.2
	1.0s	66.00nm				4.9mb
MSL	20.38	272	ePd	06	43.50	-0.2
			ePP	06	57.50	
			ePPP	07	18.50	
			eS	10	37.50	
			eSS	11	25.00	
			eSSS	11	44.00	
			eLO	14	05.50	
			eLR	15	19.00	
LSA	20.51	108	P	06	45.70	0.1
HYB	22.68	155	iPc	07	08.30	1.3
RYD	23.20	240	iPc	07	11.50	-0.5
SHL	23.42	117	iP	07	15.50	1.2
			eS	11	40.50	
GTA	24.17	78	iPc	07	21.10	-0.4
Z	10s	7.70um				5.5mszX
QASM	24.51	247	ePc	07	25.00	0.3
KVT	25.15	286	iP	07	31.70	0.9
GBA	25.95	160	Pc	07	36.50	-1.8
	0.9s	16.00nm				4.6mb
BHL	26.97	271	Pc	07	48.50	0.8
JARJ	27.33	267	Pc	07	52.70	1.7
BURJ	27.48	267	Pc	07	53.20	0.9
BBTK	27.79	284	iPc	07	55.50	0.4
MKRJ	27.83	266	Pd	07	56.50	0.9
LZH	27.97	84	eP	07	57.00	0.1
	2.5s	0.12nm				2.1mb X
CD2	29.67	94	eP	08	13.20	1.1
BCK	29.92	280	eP	08	11.00	-3.3X
ISK	30.40	288	eP	08	18.40	0.1
KHL	30.54	282	iP	08	19.80	0.0
ELL	30.63	279	iP	08	20.60	0.1
CFR	30.70	296	eP	08	21.00	0.1
PSN	30.76	293	eP	08	25.00	3.5X
DST	30.97	285	eP	08	23.00	-0.4
KCT	31.06	286	iP	08	24.40	0.2
CLI	31.28	298	eP	08	27.00	0.9
BNT	31.37	287	iP	08	26.90	0.0
EDC	31.41	286	iP	08	27.00	-0.3

VRI	31.68	297	ePc	08	30.50	0.9
BTO	31.74	73	eP	08	30.60	0.3
ISR	31.84	296	ePc	08	33.00	2.0
MLR	32.24	296	ePc	08	35.50	0.8
IZM	32.26	283	iP	08	34.30	-0.5
XAN	32.56	85	P	08	36.00	-1.4
CHTO	32.76	118	eP	08	40.50	1.2
	1.5s	14.00nm				4.6mb
HHC	32.85	72	eP	08	39.50	-0.5
CJR1	33.85	299	eP	08	49.70	1.3
BDT	33.89	120	eP	08	49.00	0.0
GYA	33.97	99	P	08	50.40	0.5
TIY	34.19	77	eP	08	51.00	-0.6
DEV	34.35	297	iPc	08	55.00	2.3
NUR	35.16	323	iP	08	59.20	-0.3
	0.8s	51.30nm				5.5mb
VAY	35.19	290	iP	09	00.50	0.6
BZS	35.27	297	eP	09	01.50	0.9
KJF	35.28	330	iP	09	00.60	0.1
	0.8s	46.90nm				5.5mb
SUF	35.28	327	iP	09	00.50	0.0
	0.9s	91.90nm				5.7mb
LOE	35.66	117	eP	09	01.80	-2.4
NST	35.76	121	eP	09	06.00	1.0
SKO	35.90	291	iP	09	06.50	0.5
SPC	35.99	303	eP	09	08.00	1.1
	1.5s	1.50nm				3.7mb X
PSZ	36.27	301	eP	09	10.00	0.8
BJI	36.46	72	eP	09	10.50	-0.2
BUD	36.89	301	ePc	09	15.00	0.7
SOD	37.18	335	iP	09	16.60	0.1
SRO	37.34	301	iP	09	19.30	1.3
	0.9s	79.00nm				5.6mb
		e		10	46.80	
ZST	38.12	302	eP	09	24.70	0.1
		e		10	52.00	
WHN	38.13	88	eP	09	25.50	0.6
Z	16s	4.20um				5.3mszX
N	10s	3.50um				
E	12s	3.40um				
TIA	38.22	78	eP	09	25.20	-0.4
UPP	38.39	321	iP	09	26.00	-0.7
	1.0s	100.00nm				5.6mb
KSP	38.49	306	eP	09	27.70	0.0
	1.0s	31.00nm				5.1mb
		e		09	54.00	
		e		10	51.50	
SOP	38.53	301	eP	09	27.00	-1.1
VKA	38.64	302	eP	09	29.00	0.0
	1.0s	49.30nm				5.3mb
		ic		09	30.00	
PTJ	39.17	298	iPc	09	34.00	0.5
PRU	39.66	305	P	09	38.00	0.6
	1.0s	28.90nm				5.0mb
		e		11	25.00	
BRG	39.97	306	iP	09	40.30	0.3
	1.0s	70.00nm				5.4mb
		i		09	50.10	
TDS	40.19	289	P	09	42.00	0.1
KHC	40.36	304	iP	09	43.90	0.6
	1.0s	28.00nm				5.0mb
		e		11	18.50	
HFS	40.39	321	eP	09	42.50	-0.8
	1.0s	59.50nm				5.3mb
CLL	40.54	307	iP	09	44.60	0.0
	1.3s	48.00nm				5.1mb
		i		09	54.70	
MGR	40.64	290	Pc	09	46.20	0.6
TRI	40.71	298	iPc	09	46.40	0.3
RBL	40.72	300	Pd	09	46.60	0.3
KBA	40.78	301	eP	09	46.00	-0.9
	1.1s	46.10nm				5.1mb
		ic		09	47.20	
		i		10	11.80	
		e		11	36.00	
WET	40.81	304	iPd	09	48.50	1.5
	1.0s	19.00nm				4.8mb
ATN	41.27	287	Pc	09	50.90	0.1
HOF	41.33	306	eP	09	52.20	1.0
MOX	41.47	306	iP	09	53.00	0.7
	2.0s	98.00nm				5.2mb
SNY	41.49	67	Pd	09	51.80	-0.7
NRA0	41.52	321	P	09	50.60	-1.9
GRF	41.82	305	eP	09	55.70	0.5
		i		09	57.20	
NAO	41.87	322	P	09	55.20	-0.2
	1.2s	61.00nm				5.2mb

FUR	42.00	303	iPc	09	57.80	1.1
	1.2s	102.00nm				5.4mb
CN2	42.36	64	Pd	09	58.80	-0.9
OGA	42.38	301	eP	09	59.80	-0.2
FIR	42.85	296	eP	10	05.00	1.4
OSS	43.01	301	ePd	10	04.50	-0.6
SSE	43.25	83	P	10	07.00	0.0
SAX	43.44	302	ePd	10	08.20	-0.6
VDL	43.50	300	ePd	10	08.50	-0.7
TNS	43.53	306	ePd	10	10.10	0.9
LLS	43.74	301	ePd	10	10.40	-0.8
SLE	43.91	302	ePd	10	12.40	0.2
TMA	43.99	300	ePd	10	12.20	-0.9
ZLA	44.03	302	ePd	10	13.30	0.0
FEL	44.21	303	P	10	13.85	-0.9
STR	44.24	304	P	10	14.82	0.0
GWf	44.26	304	P	10	15.01	-0.1
WTS	44.31	309	iPc	10	16.20	0.9
	1.0s	44.00nm				5.2mb
		e		12	22.50	
CDF	44.59	304	P	10	16.87	-1.0
MMK	44.61	300	ePd	10	18.00	-0.3
BBS	44.62	302	P	10	17.34	-0.7
IPM	44.74	131	eP	10	19.70	0.5
MOF	44.79	303	P	10	18.34	-1.1
CVF	44.85	295	eP	10	20.30	0.4
DIX	44.98	300	ePd	10	20.50	-0.8
BSF	45.02	303	P	10	20.43	-0.9
ENN	45.04	307	eP	10	21.50	0.2
	0.8s	6.00nm				4.5mb
		e		12	03.00	
WLF	45.08	305	Pc	10	22.90	1.3
HAU	45.28	303	iPc	10	23.20	0.0
	1.4s	43.50nm				5.2mb
EMS	45.31	300	ePd	10	23.20	-0.5
SAOF	45.39	297	P	10	24.40	0.2
VITF	45.47	304	P	10	24.31	-0.4
AUTN	45.48	297	P	10	24.79	-0.4
SBF	45.51	297	eP	10	25.10	-0.1
	1.0s	84.00nm				5.6mb
LPG	45.57	300	eP	10	25.90	0.0
	1.0s	32.00nm				5.2mb
TOUF	45.60	298	P	10	26.16	0.1
MVIF	45.70	297	P	10	26.01	-0.8
DOU	45.99	306	Pc	10	31.10	2.3
		e		10	50.80	
SNF	46.11	307	Pc	10	30.40	0.7
FRF	46.14	297	eP	10	30.10	0.0
	1.0s	60.00nm				5.5mb
LBF	47.07	302	eP	10	36.60	-0.9
	1.0s	20.00nm				5.1mb
LOR	47.08	303	eP	10	36.80	-0.7
	0.9s	13.10nm				4.9mb
SMF	47.25	302	iPc	10	38.40	-0.4
	1.0s	46.00nm				5.4mb
SSF	47.37	302	eP	10	39.00	-0.7
	0.9s	13.10nm				4.9mb
AVF						

22d 23h

MFF 49.91 303 eP 10 58.30 -1.0
1.0s 32.00nm 5.3mb
LPF 50.08 305 eP 11 00.00 -0.7
1.0s 40.00nm 5.4mb
EPF 50.69 298 eP 11 03.90 -1.5
YRH 51.02 312 eP 11 08.00 0.3
ETA 51.98 312 eP 11 14.00 -1.0
ECP 52.22 311 eP 11 15.50 -1.3
1.0s 232.00nm 6.1mb
DAG 52.35 343 iPc 11 17.20 -0.3
1.2s 73.44nm 5.5mb
ECB 52.41 311 eP 11 17.80 -0.4
DCN 52.42 313 eP 11 17.60 -0.7
1.1s 125.00nm 5.8mb
ECHE 52.84 295 e(P) 11 22.10 0.4
MAT 53.95 69 eP 11 29.00 -0.8
GUD 54.68 297 e(P) 11 34.40 -1.0
EBAN 55.43 294 e(P) 11 40.00 -0.6
AFC 55.63 293 e(P) 11 41.00 -1.3
TAF 55.86 290 iPc 11 44.00 0.1
EPLA 56.26 297 e(P) 11 46.00 -0.7
EHOR 56.62 294 e(P) 11 48.40 -0.8
BNG 56.69 246 iPd 11 48.70 -1.3
0.9s 30.00nm 5.3mb
id 12 06.00
EJIF 57.37 293 e(P) 11 53.00 -1.5
IFR 58.45 290 iP 12 02.50 0.1
AVY 60.38 203 iPc 12 16.16 0.5
MBC 65.45 2 eP 12 47.00 -1.4
1.1s 120.00nm 5.9mb
BRW 65.88 15 eP 12 50.60 -0.5
BUL 69.37 220 iPd 13 12.90 -1.0
1.0s 15.00nm 5.0mb
SHGH 69.71 261 eP 13 15.20 -0.8
KOGH 69.77 261 eP 13 10.20 -6.2X
KUK 69.80 262 eP 13 16.00 -0.5
LEGH 69.99 261 eP 13 17.50 -0.2
IMA 70.79 17 eP 13 20.70 -1.3
1.0s 25.00nm 5.2mb
INK 72.25 8 eP 13 30.00 -0.5
FRB 72.63 342 eP 13 32.00 -0.8
TTA 72.81 20 eP 13 33.40 -0.6
FBA 73.08 15 eP 13 35.00 -0.4
KIC 73.10 265 Pc 13 35.80 -0.5
1.1s 186.00nm 6.0mb
TIC 73.15 265 Pc 13 35.98 -0.6
1.2s 178.00nm 5.9mb
LIC 73.41 265 Pc 13 37.50 -0.6
1.1s 159.00nm 5.9mb
PMR 75.67 18 eP 13 49.70 -0.7
0.9s 31.20nm 5.3mb
TOA 75.89 16 eP 13 52.00 0.2
FRS 79.02 217 iPc 14 13.50 4.2X
1.0s 22.00nm 5.1mb
YKA 79.35 2 eP 14 10.70 0.0
YKC 79.37 1 ePc 14 10.00 -0.7
1.0s 55.00nm 5.5mb
SCH 79.56 336 eP 14 12.00 0.0
WB5 84.55 121 eP 14 39.20 0.8
FFC 86.84 355 iPc 14 50.70 1.5
1.2s 69.00nm 5.8mb
ASPA 86.87 124 iPc 14 50.20 0.4
1.5s 29.00nm 5.3mb
QIS 88.61 118 eP 14 58.00 -0.2
EDM 88.67 1 iPc 14 59.80 1.7
RSON 89.72 349 P 15 01.40 -1.7
1.0s 30.00nm 5.5mb
GAC 90.24 336 eP 15 07.50 1.9
RSNY 90.95 335 P 15 16.20 7.3X
SES 91.52 360 ePc 15 13.00 1.5
PNT 92.29 5 ePc 15 16.00 1.0
1.1s 35.00nm 5.7mb
CTA 93.01 113 iPd 15 20.50 1.9
0.8s 34.33nm 5.8mb
GMW 93.76 8 P 15 24.00 2.2
RMW 93.94 7 P 15 24.00 1.2
PNJ 94.02 333 iP 15 22.90 -0.2
LON 94.65 7 P 15 29.20 3.2X
LRM 96.09 1 eP 15 34.30 1.4
BW06 99.12 359 P 15 47.00 0.4
ZOB0 136.24 288 ePKP 21 28.00 -0.1
LPB 136.39 288 ePKP 21 29.00 0.9
CNCB 136.47 287 PKP 21 30.00 1.5
PEL 146.82 267 ePKPd 21 48.60 3.0X
LNV 147.67 266 ePKPc 21 53.00 6.2X
S.D. = 0.9 on 205 of 221 obs.

* JAN 22, 1989 23h 24m 14.82 ± 1.70s
41.725 N ± 15.1km 144.487 E ± 14.6km
DEPTH = 40.7 ± 17.2 km
4.7mb (7 obs.)

HOKKAIDO, JAPAN REGION (224)

AOMJ 3.32 251 eP 25 05.80 0.3
OFUJ 3.41 220 iPd 25 07.20 0.4
S 25 45.20
YAMJ 4.93 225 P 25 28.50 0.2
S 26 25.20
NIIJ 6.17 225 eP 25 45.50 -0.3
eS 26 59.50
KAKJ 6.46 213 eP 25 48.70 -1.1
eS 26 57.80
CHJJ 7.10 219 eP 25 59.00 0.1
eS 27 13.80
MTMJ 7.30 227 eP 26 01.60 -0.2
IIDJ 8.08 222 eP 26 13.20 0.6
eS 27 44.90
TSRJ 9.08 230 eP 26 26.40 0.1
INK 49.13 29 eP 33 01.00 1.1
GUN 49.17 273 P 33 01.20 0.0
0.7s 16.00nm 5.2mb
KKN 49.68 273 P 33 05.30 0.3
0.6s 7.00nm 4.9mb
PKI 49.70 273 P 33 05.40 0.1
DMN 49.91 273 P 33 07.20 0.4
GKN 50.05 274 P 33 07.60 -0.1
GBA 63.98 265 Pd 34 45.80 -0.6
0.8s 2.60nm 4.4mb
SUF 64.87 333 iP 34 49.50 -2.1
0.5s 2.80nm 4.6mb
NUR 66.93 332 iP 35 03.40 -1.3
NAO 71.05 338 P 35 28.80 -1.4
1.0s 5.10nm 4.5mb
FRB 71.65 15 eP 35 33.00 -0.7
KSP 77.33 329 eP 36 07.00 0.4
CLL 78.17 331 iPd 36 11.90 0.7
0.8s 12.00nm 5.0mb
PRU 78.69 330 P 36 15.10 1.1
KHC 79.75 330 P 36 21.00 1.1
GRF 80.15 331 iPc 36 22.70 0.7
0.7s 7.00nm 4.7mb
S.D. = 0.9 on 25 of 25 obs.

* JAN 22, 1989 23h 55m 13.14 ± 2.06s
18.299 N ± 31.6km 94.123 E ± 17.3km
DEPTH = 33.0km (normal)
5.2mb (2 obs.)

BURMA (296)

CHG 4.60 83 eP 56 22.90 0.6
BDT 4.77 102 eP 56 24.00 -0.5
eS 57 17.80
SHL 7.52 344 eP 57 02.80 -0.7
eS 58 27.90
GUN 12.20 323 P 58 09.10 1.2
PKI 12.23 321 P 58 08.40 0.2
0.3s 5.00nm 5.1mb
DMN 12.44 320 P 58 11.00 0.0
0.4s 8.00nm 5.2mb
KKN 12.46 321 P 58 11.80 0.5
GKN 13.01 320 P 58 17.20 -1.3
S.D. = 0.9 on 8 of 8 obs.

* JAN 23, 1989 00h 53m 59.15 ± 1.75s
41.635 N ± 15.2km 144.459 E ± 15.9km
DEPTH = 38.7 ± 15.8 km
4.5mb (2 obs.)

HOKKAIDO, JAPAN REGION (224)

AOMJ 3.27 252 P 54 49.30 0.1
eS 55 27.70
OFUJ 3.33 221 P 54 50.50 0.5
S 55 28.60
YAMJ 4.85 226 P 55 10.60 -1.0
S 56 08.90
NIIJ 6.09 226 eP 55 29.00 -0.1
KAKJ 6.37 213 eP 55 32.00 -1.0
eS 56 41.10
CHJJ 7.02 219 eP 55 43.60 1.5
eS 56 58.00
MAT 7.03 226 (P) 55 42.00 -0.3
0.5s 5.63nm 4.7mb
(S) 56 51.00
MTMJ 7.22 228 eP 55 45.30 0.2

CHG 44.79 254 eP 02 12.00 1.0
GUN 49.15 273 P 02 45.60 0.0
INK 49.22 29 eP 02 45.00 -0.1
KKN 49.67 274 P 02 49.20 -0.2
GKN 50.03 274 P 02 51.50 -0.6
GBA 63.95 265 Pd 04 30.10 -0.6
0.6s 1.70nm 4.3mb
CLL 78.24 331 iP 05 56.00 -0.1
KHC 79.82 330 eP 06 05.40 0.6
S.D. = 0.8 on 16 of 16 obs.

& JAN 23, 1989 01h 00m 37.28s
60.090 N 152.824 W
DEPTH = 95.6km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM 0.07 262 iP 00 50.41 1.1
eS 01 00.82
RDT 0.53 23 iP 00 52.61 -0.5
iS 01 04.81
NNL 0.77 93 eP 00 55.23 0.0
eS 01 09.00
NKA 1.02 50 iP 00 59.04 1.1
SLKM 1.36 71 eP 01 00.91 -1.1
eS 01 19.15
PMR 2.35 49 eP 01 13.00 -1.9
KDC 2.36 176 eP 01 12.00 -2.9
TTA 3.23 333 eP 01 25.10 -1.9
FBA 5.36 24 eP 01 54.10 -2.2
9 obs. associated

* JAN 23, 1989 02h 28m 27.09 ± 0.98s
43.033 N ± 6.7km 13.493 E ± 9.4km
DEPTH = 10.0km (geophysicist)

CENTRAL ITALY (381)

MD 3.0 (SSO).
ALP 0.26 166 iPg 28 32.73 0.1
iSg 28 37.43
CIO 0.30 302 iPg 28 34.12 0.7
iSg 28 39.98
AOI 0.52 9 iPg 28 37.69 0.0
iSg 28 46.82
ASS 0.61 274 P 28 39.10 -0.4
ARV 0.62 319 P 28 39.10 -0.4
eSg 28 50.10
MNS 0.88 223 P 28 48.00 3.9X
eSg 28 59.20
S.D. = 0.6 on 5 of 6 obs.

JAN 23, 1989 02h 29m 05.53 ± 0.91s
43.041 N ± 5.4km 13.549 E ± 9.8km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 3.0 (SSO).

ALP 0.26 176 iPgc 29 11.70 0.6
iSg 29 15.67
CIO 0.33 298 iPgd 29 12.85 0.4
iSg 29 18.29
AOI 0.51 4 iPg 29 16.22 0.4
iSg 29 25.35
ARV 0.64 316 Pd 29 18.00 -0.3
eSg 29 26.40
ASS 0.65 273 Pd 29 18.00 -0.6
eSg 29 28.40
AQU 0.70 189 P 29 18.40 -0.9
eSg 29 30.40
MNS 0.92 225 P 29 21.90 -1.2
eSg 29 36.80
CRE 1.30 297 P 29 31.90 2.2
SDI 1.35 172 P 29 31.70 1.3
eSg 29 56.00
TRI 2.67 3 eP 30 19.70 30.4X
e 30 41.00
FVI 3.59 352 P 30 00.70 -1.7
KBA 4.04 358 iP 30 23.40 14.5X
0.4s 1.60nm
i 30 28.40
S.D. = 1.3 on 10 of 12 obs.

% JAN 23, 1989 02h 59m 18.93 ± 3.74s
44.510 N ± 16.2km 6.738 E ± 28.2km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.5 (GEN).

23d 11h																				
PKI	71.98	301	P	29	10.80	-0.8		KUK	152.30	273	ePKP	37	43.50	7.1X		iS	10	59.90		
KKN	72.15	301	P	29	12.00	-0.5		KIC	156.64	273	PKP	37	54.48	12.2X		iPd	08	57.60		
	0.7s	34.00nm				5.4mb			S.D. = 0.9	on	92	of	115	obs.	eS	10	47.00			
DMN	72.25	301	P	29	12.80	-0.3		%	JAN 23, 1989	12h	17m	19.38±	1.05s		KJF	10.74	68	eP	08	55.00
	0.8s	56.00nm				5.6mb			38.431	N ±10.4km	27.747	E ±	6.7km		SOD	10.88	51	iP	09	00.00
GKN	72.76	301	P	29	15.40	-0.6			DEPTH =	10.0km	(geophysicist)				iS	10	55.00			
	0.6s	29.00nm				5.4mb		TURKEY							ETA	10.92	217	eP	08	59.40
WMQ	75.65	318	P	29	31.80	-0.5										0.7s	229.00nm			6.5mb X
HYB	75.81	289	eP	29	32.50	-1.0										eS	10	50.70		
GBA	76.21	285	Pd	29	35.50	-0.3		IZM	0.38	265	iPg	17	27.50	0.3	UCC	11.18	180	P	09	03.50
	0.7s	8.60nm				4.8mb										iS	10	59.70		
SVW	77.95	23	ePd	29	45.60	0.9		DST	1.36	30	ePn	17	44.50	0.1	ENN	11.24	175	iPnc	09	04.40
TTA	78.89	22	ePd	29	50.30	0.5		KHL	1.40	94	ePn	17	44.70	-0.3		0.7s	37.00nm			5.7mb
POO	80.41	290	iPd	29	56.50	-2.3		EZN	1.78	322	ePn	17	50.00	-0.3		i	09	44.90		
PMR	80.83	25	eP	29	59.50	-0.6		KCT	1.88	14	iPn	17	52.40	0.6	ECB	11.37	217	eP	09	06.00
	1.1s	28.10nm				5.2mb		EDC	1.91	3	iPn	17	51.00	-1.3		0.6s	95.00nm			6.2mb X
IMA	81.55	20	eP	30	03.70	-0.3		BNT	1.93	4	iPn	17	52.90	0.4		eS	11	05.80		
KSH	82.68	311	eP	30	12.50	2.1		YLV	2.48	30	ePn	18	01.00	0.6	MEM	11.40	175	Pd	09	04.60
FBA	83.01	22	eP	30	09.90	-1.5			S.D. = 0.8	on	8	of	8	obs.	ECP	11.42	216	eP	09	06.40
SPA	84.43	180	e(P)	30	09.60	-9.2X										eS	11	06.20		
	0.9s	3.64nm				4.5mb		JAN 23, 1989	14h	06m	27.17±	0.52s		SNF	11.47	181	Pd	09	06.90	
	e			30	26.80				61.949	N ±	3.1km	4.504	E ±	3.1km	CLL	11.63	153	iPn	09	09.30
INK	89.57	21	eP	30	42.50	-1.0			DEPTH =	32.7 ±	3.9	km				1.3s	50.00nm			5.5mb X
WDC	90.33	49	e(P)	30	48.40	0.8			5.2mb	(34 obs.)	4.9Msz	(2 obs.)				i	09	25.00		
PGC	90.71	41	eP	30	50.00	0.8		SOUTHERN NORWAY								iSn	11	08.00		
ORV	91.00	51	e(P)	30	51.60	0.8		ML 5.2	(NAO). Felt strongly in							eSg	12	23.00		
MIN	91.01	50	e(P)	30	49.30	-1.7			the epicentral area.						DOU	11.88	180	Pd	09	12.30
CMB	91.71	52	eP	30	54.60	0.5		FRO	0.26	137	iP+	06	35.40	1.0	TNS	11.96	168	iPd	09	14.70
FRI	92.14	53	e(P)	30	56.80	0.8		FOO	0.44	144	iP+	06	37.50	0.7		iS	11	21.20		
PNT	93.29	41	eP	31	02.00	0.9									MOX	11.99	158	ePn	09	14.00
KVN	93.58	51	iP	31	03.50	0.6		SUE	0.90	172	iPd	06	44.40	0.9		1.1s	44.00nm			5.5mb X
TNP	94.20	52	iP	31	06.00	0.2		HYA	1.13	134	iPd	06	48.80	2.2		Z 14s	3.20um			4.5Msz
	1.0s	14.00nm				5.3mb		BER	1.62	165	iPd	06	53.80	0.0		N 14s	2.70um			
MBC	95.13	14	eP	31	08.00	-1.1		ODD1	2.29	152	iPd	07	04.20	0.7		E 12s	2.40um			
	0.8s	15.00nm				5.5mb		KMY	2.77	172	iPd	07	09.50	-0.7		i	09	16.50		
YKA	96.61	28	eP	31	16.60	0.6		BLS1	2.81	155	iP+	07	11.00	0.2		eSn	11	23.00		
YKC	96.67	28	ePc	31	16.50	0.3		NC2	3.10	100	iPd	07	14.90	0.0		eSg	12	44.00		
	0.5s	5.00nm				5.3mb		NBO	3.15	104	iPd	07	15.70	0.1		LO	14	40.00		
EDM	97.37	37	ePc	31	19.70	0.0		NAO	3.25	108	iPd	07	17.00	0.0	BRG	12.25	151	iPn	09	15.80
LRM	98.01	45	eP	31	22.90	-0.1		LRW	3.31	239	ePc	07	16.30	-1.5		LR	14	50.00		
SES	98.86	40	ePc	31	26.80	0.3		NC3	3.37	99	iPd	07	18.30	-0.5		i	09	29.30		
BW06	100.14	48	ePd	31	24.00	-8.8X		NC4	3.57	101	iPd	07	20.80	-0.7		i	10	01.70		
	1.0s	7.00nm				5.2mb		NRA0	3.60	107	iPn	07	21.20	-0.8		iSn	11	20.80		
APO	116.69	338	ePKP	36	29.70	-0.9		SLL	4.51	105	eP	07	33.90	-1.1		i	12	02.50		
	0.5s	2.70nm					ARO	4.77	103	eP	07	37.50	-1.0		i	12	23.30			
BUL	118.59	244	iPKPc	36	34.90	-0.7		HFS	4.82	108	ePd	07	38.30	-1.0		i	13	10.20		
	0.7s	3.42nm					MCO	5.87	225	iP+	07	51.10	-3.0X	WLF	12.35	175	Pc	09	23.60	
OHR	123.84	317	ePKP	36	45.00	0.0		EDU	6.65	219	iP+	08	01.30	-3.7X	HOF	12.35	157	eP	09	18.50
KHC	124.10	328	iPKPd	36	45.50	0.3		UPP	6.73	102	eP	08	03.60	-2.6X	GRF	12.84	160	eP	09	26.90
BSF	128.39	330	ePKP	36	54.20	0.6		ELO	6.92	221	iP+	08	05.00	-3.9X		Z 19s	2.00um			
	0.8s	8.00nm					EBH	7.05	219	iP+	08	06.80	-3.8X		e	09	29.50			
HAU	128.49	331	ePKP	36	55.30	1.6		ESY	7.08	214	iP+	08	06.90	-4.2X		e	09	36.00		
	0.6s	4.30nm					EDI	7.23	217	iP+	08	09.40	-3.8X		e	09	40.70			
LPG	129.99	328	ePKP	36	57.00	0.0		LOF	7.28	28	iP	08	09.90	-4.0X	KSP	12.88	144	ePn	09	25.80
	0.6s	4.50nm					EBL	7.32	216	iP+	08	10.30	-4.2X	PRU	13.22	151	Pn	09	30.50	
LOR	130.20	332	ePKP	36	57.80	0.9		EAB	7.35	222	iP+	08	10.80	-4.1X		Z 14s	6.00um			
	0.6s	2.70nm					EAU	7.38	217	iP+	08	11.60	-3.6X		N 14s	4.50um				
SSF	130.52	332	ePKP	36	58.90	1.4		UME	7.43	69	eP	08	13.70	-2.2X		E 14s	2.50um			
	1.0s	4.80nm					COP	7.51	143	ePc	08	13.70	-3.3X		e	09	45.50			
FLN	130.97	336	ePKP	36	59.70	1.4		EKA	7.74	214	ePc	08	15.60	-4.7X	FLN	13.51	194	Pn	09	32.50
	0.6s	7.20nm					WIT	9.23	172	iPnc	08	39.70	-1.3X		Sn	11	51.70			
BGF	131.19	332	ePKP	36	59.70	0.9									LDF	13.64	193	Pn	09	33.50
	0.6s	5.40nm					KEF	9.56	80	eP	08	45.00			Sn	11	54.40			
GRR	131.42	336	ePKP	36	59.70	0.5									CDF	13.66	172	Pn	09	37.70
	0.7s	8.80nm					TRO	9.69	31	iP+	08	44.90	-2.4X		Sn	12	00.80			
TCF	131.69	332	ePKP	37	00.70	0.9									WET	13.66	156	eP	09	38.60
	0.6s	3.60nm					NUR	9.81	90	ePd	08	44.80	-4.1X	KHC	13.81	154	iPc	09	39.90	
LPF	131.78	336	ePKP	37	00.90	1.1		PKK	9.91	92	eP	08	45.70	-4.6X		e	09	49.50		
	0.8s	13.40nm					WTS	10.06	172	ePc	08	48.60	-3.7X	GRR	13.92	195	Pn	09	37.80	
BNG	133.41	271	iPKPc	37	03.00	-1.0		DMU	10.08	222	eP	08	47.50	-5.2X	HAU	14.01	175	Pn	09	43.60
	0.6s	8.00nm													Sn	12	01.50			
CNCB	134.82	120	PKP	37	08.50	1.2		SUF	10.09	76	iP	08	49.80	-2.9X		e	09	45.71		
LPB	134.84	120	(PKP)	37	16.00	8.9X									BSF	14.21	174	P	09	45.16
ZOBO	134.93	119	ePKP	37	03.00	-4.5X		KAF	10.23	79	eP	08	51.40	-3.3X	MOF	14.21	173	P	09	45.16
	Z 24s	0.13um				4.6MszX									FUR	14.34	161	iPd	09	49.40
	LR			21	56.00			PRF	10.34	89	eP	08	52.00	-4.1X	BBS	14.62	172	P	09	50.95
TAF	142.42	324	ePKP	37	23.00	2.9X									KRA	14.66	137	ePc	09	49.00
IFR	144.91	325	iPKP	37	23.50	-1.0		YRH	10.37	212	eP	08	52.50	-4.1X		1.0s	56.00nm			5.0mb
AVE	146.33	328	iPKP	37	28.20	1.5										Z 12s	2.80um			
		i		37	40.50			DLE	10.50	219	eP	08	52.80	-5.5X		N 12s	2.40um			
BMA	147.84	152	ePKP	37	33.00	3.6X										i	09	49.80		
		e		37	40.30											i	09	58.40		
TIO	148.04	325	iPKP	37	32.00	2.3X		AKU	10.64	300	eP	09	03.80	3.6X		iS				

SSF	14.93	183	Sn	12 22.60		OHR	23.07	147	eP	11 30.60	0.2	LON	63.43	322	ePc	16 55.00	-0.5
			Pn	09 52.20	-5.1X	VAY	23.34	144	eP	11 32.30	-0.7	LNO	63.51	297	eP	16 55.50	-0.4
			Sn	12 26.50		EVIA	23.74	194	e(P)	11 38.50	1.5	TUL	63.52	297	iP	16 55.10	-1.0
LBF	15.00	181	Pn	09 53.30	-5.0X	DMK	24.49	135	eP	11 48.00	3.8X		1.0s	9.00nm		4.8mb	
			Sn	12 30.20		ASMO	25.15	196	eP	11 52.00	1.4	Z	21s	0.56um		4.7MsZ	
AVF	15.21	183	Pn	09 55.80	-5.1X	AAPN	25.25	196	eP	11 52.50	0.9			LR	37 00.00		
VKA	15.25	149	eP	10 07.00	5.5X	ALOJ	25.44	196	eP	11 55.50	2.1	SIO	63.87	297	eP	16 57.50	-1.0
			eS	12 47.00		APHE	25.54	195	eP	11 55.50	1.2	VVO	63.98	296	eP	16 58.10	-1.1
			i	14 55.80		ISK	25.61	133	eP	11 56.00	1.3	GLD	64.01	306	P	16 58.80	-0.7
			LR	15 36.00		ATEJ	25.62	196	eP	11 56.50	1.4		0.9s	58.95nm		5.7mb	
SMF	15.34	182	Pn	09 57.40	-5.3X	ALE	26.11	344	eP	11 59.00	-0.1	SHW	64.06	322	ePd	16 59.50	-0.2
BGF	15.45	184	Pn	09 58.40	-5.7X		0.9s	17.00nm		4.6mb		GOL	64.11	306	iPc	16 59.30	-1.0
ZST	15.51	147	eP	10 02.70	-2.1X	BBTk	28.00	129	eP	12 25.50	8.6X		0.9s	14.39nm		5.1mb	
			e(S)	12 57.20		KVT	28.19	123	eP	12 20.00	1.6			esP	17 04.50	17kmX	
SPC	15.52	138	eP	10 01.00	-4.1X	IFR	29.11	197	iP	12 26.00	-0.9			esP	17 15.00		
	1.6s	8.50nm			3.7mb X	FRB	31.73	306	eP	12 49.00	-0.6	POO	64.11	99	iPc	16 58.50	-1.7
			i	12 48.00		TAB	35.00	113	eP	13 35.00	16.6X	ACO	64.24	300	ePc	17 00.40	-0.5
OGA	15.57	163	eP	10 11.70	5.9X	SCH	36.26	292	eP	13 27.00	-1.7		0.6s	7.90nm		5.0mb	
MFF	15.61	192	Pn	09 59.60	-6.5X	MBC	37.58	341	eP	13 40.00	0.5	VGB	64.24	320	ePd	17 01.40	0.6
			Sn	12 42.30			0.9s	16.00nm		4.9mb		CN2	64.42	44	eP	17 05.60	3.7X
KBA	15.74	157	ePc	10 07.00	-0.9X	KER	38.48	116	eP	14 01.00	13.3X	OCO	64.55	298	e(P)	16 56.60	-6.3X
	1.0s	33.10nm			4.5mb	MAIO	42.40	101	eP	14 33.00	13.1X	FKO	64.74	298	e(P)	17 00.00	-4.1X
			i	10 13.70		CBM	42.40	284	P	14 18.50	-1.2	TIY	65.08	56	eP	17 06.80	0.4
			i(PP)	10 24.70		INK	46.56	340	ePc	14 51.80	-1.1		E	11s	0.40um		
			i	11 41.10		YKC	47.63	327	iPc	15 01.00	-0.3	MEO	65.65	298	iPc	17 09.20	-0.8
			i	11 50.20			0.7s	22.00nm		5.3mb			1.0s	18.50nm		5.1mb	
			iS	13 15.00		YKA	47.65	327	eP	15 01.60	0.2	DUG	66.40	312	iPd	17 15.40	0.5
			iSSS	13 49.00		WMO	49.57	71	P	15 17.30	0.7	SHL	66.56	80	eP	17 15.80	-0.3
			i	14 07.50			Z	14s	1.30um		5.1MsZ	HYB	67.28	96	eP	17 20.00	-0.6
			i	15 13.40		FFC	50.21	314	iPc	15 21.30	0.0	CD2	67.35	67	eP	17 21.10	0.2
TCF	15.75	186	Pn	10 02.80	-5.1X		1.1s	175.00nm		6.0mb		MSU	67.67	311	iPc	17 23.50	0.5
MAF	15.80	185	Pn	10 02.60	-6.0X	RSON	50.29	305	iPc	15 21.00	-1.0	LBFM	68.36	319	ePd	17 27.50	0.2
LSF	15.82	188	Pn	10 03.40	-5.5X	QUE	50.93	99	eP	15 15.00	-12.3X	ALO	68.69	305	iPc	17 29.30	-0.1
			Sn	12 48.50		IMA	51.28	349	eP	15 29.70	0.2		1.0s	18.75nm		5.1mb	
AGO	15.95	183	P	10 05.09	-5.4X		1.1s	9.40nm		4.7mb				ipP	17 35.90	21kmX	
PLDF	16.02	182	P	10 07.45	-4.0X	FBA	51.79	345	eP	15 33.30	0.1			esP	17 45.00		
FVI	16.11	159	P	10 13.60	1.2X	EDM	55.16	320	iPc	15 57.90	-0.4	MIN	69.19	319	ePc	17 32.40	0.1
SRO	16.18	145	eP	10 21.60	8.2X		0.8s	55.00nm		5.6mb		KVN	69.23	315	iPc	17 32.50	-0.1
			e	13 30.20		TIC	55.64	191	Pc	16 00.36	-1.6			isP	17 48.00		
PYM	16.25	184	P	10 10.15	-4.3X		0.9s	28.00nm		5.3mb		WDC	69.26	319	ePc	17 31.70	-0.8
VAI	16.30	169	P	10 18.10	3.2X	KUK	55.76	186	eP	16 02.00	-0.9	TNP	69.81	314	iPc	17 35.80	-0.4
RBL	16.39	157	P	10 19.00	2.9X	KIC	55.89	191	Pc	16 02.62	-1.2	ORV	69.87	318	P	17 34.80	-1.5
CTI	16.46	162	P	10 22.16	5.1X		0.9s	94.00nm		5.8mb		GBA	70.07	99	Pc	17 34.80	-2.9X
LPG	16.54	174	Pn	10 17.60	-0.6X	LIC	56.05	191	Pc	16 03.50	-1.5		0.9s	8.30nm		4.8mb	
PSZ	16.54	141	eP	10 16.00	-2.0X		0.8s	27.00nm		5.3mb		CMB	70.90	317	ePc	17 43.10	0.5
BUD	16.68	144	eP	10 17.30	-2.4	SES	56.87	316	ePc	16 10.20	-0.4	FRI	71.63	316	eP	17 47.60	0.7
DAG	16.76	342	iPd	10 21.80	1.3		1.2s	151.00nm		5.9mb		BRK	71.65	318	e(P)	17 52.60	5.6X
	0.9s	22.69nm			4.3mb			pP	16 22.00	41kmX	MHC	71.94	317	ePc	17 49.80	0.8	
LBL	16.77	183	P	10 16.54	-4.2X	NDI	57.03	90	eP	16 20.00	8.1X	CLC	71.99	314	eP	17 50.00	0.8
RJF	16.77	187	Pn	10 17.70	-3.1X	BNG	58.34	163	iPc	16 20.00	-1.2	GSC	72.18	313	eP	17 52.00	1.6
			Sn	13 08.60			0.2s	23.00nm		5.9mb		LLA	72.38	317	ePc	17 52.70	1.3
LJU	16.96	155	e(P)	10 35.00	11.8X			id	16 29.50				e	18 07.90			
CAF	17.12	186	Pn	10 20.50	-4.7X	GTA	58.45	65	iPc	16 21.80	-0.1	GYA	72.47	67	P	17 52.00	-0.2
			Sn	13 17.80			Z	16s	1.60um		5.2MsZ	PRI	72.72	316	eP	17 55.70	2.1
LFF	17.18	189	Pn	10 21.40	-4.6X	FVM	59.47	294	P	16 27.70	-1.2	PRS	72.78	317	e(P)	17 54.80	1.1
			Sn	13 20.50			1.3s	52.63nm		5.5mb		TPC	73.00	312	eP	17 57.00	1.9
KBS	17.20	5	iP	10 29.10	3.0X	PNT	60.48	321	ePc	16 35.00	-0.6	SBB	73.09	313	eP	17 56.00	0.3
CEY	17.23	156	e(P)	10 35.00	8.4X		0.8s	46.00nm		5.7mb		GLA	73.51	310	eP	18 00.00	1.9
PTJ	17.39	152	eP	10 30.10	1.4	GKN	61.11	84	P	16 39.90	-0.4	PEC	73.58	312	P	17 58.80	0.3
LPO	17.41	188	Pn	10 24.10	-4.7X		0.8s	16.00nm		5.2mb		PLM	73.96	312	eP	18 02.00	1.1
			Sn	13 24.50		LRM	61.31	315	iPc	16 41.20	-0.5	SYF	73.97	315	eP	18 03.00	2.2
BDI	18.27	166	P	10 40.70	1.1	DPW	61.34	320	ePd	16 41.40	-0.2	BAR	74.51	312	eP	18 06.00	2.1
CJR1	18.71	136	eP	10 41.90	-2.9X	KKN	61.59	84	P	16 43.20	-0.5	CHG	75.65	77	iPc	18 11.00	0.4
EPF	19.11	189	Pn	10 47.40	-2.3		0.6s	18.00nm		5.4mb			0.9s	10.50nm		4.8mb	
			Sn	14 06.20		BTO	61.64	56	eP	16 40.50	-3.3X	BUL	84.04	157	iPd	18 56.80	1.3
BZS	19.13	141	ePc	10 48.00	-1.8	DMN	61.66	84	P	16 44.00	-0.2		0.9s	13.45nm		5.1mb	
DEV	19.28	138	iPc	10 51.00	-0.7		0.7s	26.00nm		5.5mb		AVY	87.59	140	eP	19 25.40	12.3X
EMON	19.82	206	e(P)	10 56.80	-0.8	GUN	61.77	83	P	16 44.80	-0.3	SLR	89.45	159	eP	19 24.00	2.3
CLI	20.20	129	ePc	10 59.00	-2.6X		0.8s	15.00nm		5.2mb		PRY	90.48	160	eP	19 25.50	-1.0
VRI	20.58	131	ePd	11 04.50	-1.0	PK1	61.83	84	P	16 45.00	-0.5		0.7s	9.00nm		5.2mb	
PPE	20.60	129	ePc	11 17.50	11.8X		0.8s	17.00nm		5.2mb		FRS	92.91	162	eP	19 38.00	0.6
STS	20.61	208	e(P)	11 06.20	0.4	HHC	62.03	55	eP	16 45.20	-1.2	WRA	125.71	63	Pdiffd21	55.70	-8.7X
MLR	20.63	133	ePc	11 06.00	-0.2	PGC	62.18	324	eP	16 47.00	-0.1		0.4s	5.00nm			
ERUA	20.79	205	e(P)	11 06.50	-1.1	LSA											

23d 23h

SAN	4.18 168 eP	35 49.30	0.3	BWA	91.07 176 eP	13 31.90	0.0	GUN	55.19 273 PKP	46 48.70	-0.4
MDZ	4.29 146 iP	35 54.60	4.0X	WRA	103.84 162 Pdiffd14	19.20	-10.5X		0.4s	5.00nm	4.9mb
		iS	36 48.60		0.7s	5.50nm		KKN	55.66 274 PKP	46 53.00	0.7
TACH	4.34 171 iPc	35 51.40	0.2	WB5	103.91 162 ePdiff14	19.40	-10.6X		0.5s	6.00nm	4.9mb
		iS	36 39.00	DUG	119.61 298 PKP	19 16.90	-0.1	DMN	55.90 274 PKP	46 54.60	0.5
LNV	4.59 177 eP	35 53.00	-1.8	BW06	119.91 303 PKP	19 16.50	-1.2		0.4s	6.00nm	5.0mb
CNCB	12.95 16 eP	37 53.00	2.2		0.8s	5.36nm		GKN	55.93 274 PKP	46 54.50	0.3
LPB	13.19 15 eP	37 52.00	-1.8	TNP	120.33 294 PKP	19 10.50	-8.1X		0.5s	6.00nm	4.9mb
ZOBO	13.44 15 eP	37 57.00	-0.2	PRI	120.75 290 ePKPc	19 20.60	1.3	HFS	65.68 339 eP	47 58.70	-1.0
	S.D. = 1.2 on 14 of 16 obs.			FRI	120.86 291 ePKPc	19 19.90	0.6	NAO	65.69 341 P	47 59.10	-0.6
				KVN	121.51 294 PKP	19 21.40	0.6		0.6s	1.10nm	4.1mb
JAN 24, 1989 04h 00m 29.63± 0.17s				NUR	121.93 27 ePKP	19 27.00	6.5X	GBA	70.90 269 Pd	48 31.20	-1.6
54.763 S ± 6.0km				CMB	121.99 292 ePKPc	19 22.10	0.6		0.6s	2.00nm	4.4mb
DEPTH = 33.0km (normal)				GCC	122.13 290 ePKP	19 22.70	1.0	KBA	77.53 333 eP	49 11.00	0.2
5.4mb (10 obs.) 5.1Msz (2 obs.)				MHC	122.16 290 iPKPc	19 23.20	1.3		0.5s	5.30nm	4.8mb
SOUTH SANDWICH ISLANDS REGION (153)				BRC	122.88 290 ePKPc	19 24.10	1.0	CDF	77.92 338 eP	49 12.70	-0.1
CENTROID, MOMENT TENSOR (HRV)				LRM	123.56 303 ePKP	19 24.90	0.3	FLN	79.27 343 eP	49 19.70	-0.4
Data Used: GDSN				ORV	123.69 292 ePKP	19 25.80	1.1		0.8s	11.80nm	4.9mb
L.P.B.: 13S, 23C				SUF	124.18 26 ePKP	19 25.00	0.1	LDF	79.37 343 eP	49 19.80	-0.8
Centroid Location:				BDT	124.26 110 ePKP	19 26.80	0.4		0.8s	10.70nm	4.9mb
Origin Time 04:00:31.9 0.6				MIN	124.31 293 ePKPc	19 26.10	0.0	GRR	79.70 343 eP	49 22.40	0.0
Lat 55.12S 0.06 Lon 26.47W 0.17				DMN	124.50 90 PKP	19 26.60	-0.4		0.6s	9.00nm	4.9mb
Dep 15.0 FIX Half-duration 1.7					0.8s	42.00nm		LOR	79.80 340 eP	49 22.80	-0.2
Moment Tensor; Scale 10**17 Nm				GKN	124.52 89 PKP	19 26.10	-0.7		0.6s	3.60nm	4.5mb
Mrr=-0.66 0.06 Mtt= 1.05 0.06					0.8s	49.00nm		LBF	80.04 340 eP	49 24.00	-0.3
Mff=-0.39 0.07 Mrt= 0.85 0.21				PKI	124.65 90 PKP	19 26.90	-0.4	SSF	80.07 340 eP	49 24.90	0.5
Mrf= 0.25 0.14 Mtf= 0.12 0.07					0.8s	44.00nm			1.0s	4.00nm	4.4mb
Principal Axes:				KKN	124.74 90 PKP	19 27.20	-0.1	LPF	80.08 343 eP	49 24.70	0.3
T Vol= 1.43 P1g=23 Azm=353					0.7s	30.00nm			1.0s	8.00nm	4.7mb
N -0.36 12 258				WDC	124.98 292 iPKPc	19 27.10	0.0	AVF	80.36 340 eP	49 26.20	0.2
P -1.06 64 141					e	19 44.60			0.4s	1.30nm	4.3mb
Best Double Couple:Mo=1.2*10**17				GUN	125.17 90 PKP	19 28.20	-0.2	SMF	80.39 339 eP	49 26.20	0.1
NP1:Strike=106 Dip=25 Slip=-59				FFC	125.35 317 ePKP	19 26.00	-1.4		1.0s	6.80nm	4.6mb
NP2: 253 69 -103					1.0s	14.00nm		LPG	80.77 337 eP	49 29.10	0.6
				CHG	125.51 109 iPKPc	19 28.80	0.0		0.5s	5.80nm	4.8mb
AIA	21.17 225 eP	05 13.30	-0.6		1.0s	13.00nm		MAF	81.08 340 eP	49 30.30	0.5
BMA	34.61 331 eP	07 17.80	0.3	KJF	125.80 26 iPKP	19 27.80	-0.2		0.6s	3.60nm	4.5mb
SPA	35.42 180 e(P)	07 24.60	0.3		0.7s	9.30nm		TCF	81.09 340 eP	49 30.00	0.1
	1.0s 63.00nm		5.5mb	SES	126.15 308 ePKP	19 28.00	-1.2		1.0s	6.00nm	4.5mb
Z 20s 1.62um			4.8Msz	SOD	128.12 23 iPKP	19 32.00	-0.3	LSF	81.27 341 eP	49 30.80	0.0
SAN	37.28 287 eP	07 40.00	0.0	LON	128.86 298 PKP	19 34.50	0.0		0.8s	9.40nm	4.8mb
LNV	37.33 285 ePd	07 40.40	0.1	BMW	129.41 297 PKP	19 36.20	0.7	CAF	82.42 340 eP	49 37.40	0.6
PEL	37.53 287 iPd	07 41.00	-1.1	PNT	129.48 302 ePKP	19 36.00	0.5		0.7s	3.30nm	4.5mb
TUH	38.41 75 eP	07 50.50	1.1		1.0s	22.00nm		LFF	82.69 341 eP	49 38.60	0.5
CER	38.44 75 iPd	07 48.70	-1.0	YKC	135.35 319 ePKPc	19 45.60	-0.6		0.6s	3.60nm	4.6mb
	0.4s 4.55nm		4.6mb		0.9s	10.00nm		LPO	82.84 341 eP	49 39.40	0.4
				YKA	135.41 319 PKP	19 46.20	-0.1		0.8s	6.40nm	4.8mb
MAW	41.01 144 iPd	08 13.50	2.9X	GYA	135.86 111 PKP	19 47.80	-0.7		S.D. = 0.6 on 27 of 27 obs.		
	0.9s 54.00nm		5.3mb	CD2	137.69 104 ePKP	19 44.90	-6.8X				
	e 08 34 80			ALE	138.25 353 ePKP	19 51.00	-0.3				
	e 10 11 00				0.6s	7.00nm					
FRS	44.54 78 iPc	08 44.80	5.1X	GTA	141.46 91 PKP	19 52.40	-6.0X				
	1.0s 40.00nm		5.2mb		Z 20s 0.80um		5.5Msz				
	i 09 01 00			LZH	141.52 98 ePKP	19 54.00	-4.7X				
PRY	47.91 77 iPc	09 05.50	-1.2		Z 24s 0.60um		5.3MszX				
	1.0s 37.00nm		5.4mb	MBC	142.92 337 ePKP	19 56.00	-3.6X				
CCH	48.00 305 P	09 08.00	0.4		0.7s 10.00nm						
SLR	49.29 77 iPd	09 16.20	-1.1	WHN	143.20 115 ePKP	19 55.50	-5.9X				
	0.9s 16.81nm		5.1mb	INK	144.99 322 iPKPd	20 02.80	-0.5				
ZOBO	49.91 304 iPd	09 22.60	0.0		0.9s 206.00nm						
	Z 24s 0.63um		4.5MszX	SSE	147.11 123 PKPc	20 10.00	2.0				
	LR 26 04 00			TIY	147.54 105 PKPc	20 08.20	-0.4				
ARE	51.40 300 eP	09 34.00	0.4	BTO	148.14 98 ePKP	20 09.00	-0.5				
BUL	53.90 73 iPc	09 51.20	-0.8	TOA	148.59 308 ePKPd	20 13.90	4.4X				
LIC	63.40 24 Pc	10 58.10	0.2	TIA	149.03 112 ePKP	20 10.80	-0.1				
	0.8s 32.00nm		5.5mb	HHC	149.19 99 PKP	20 11.00	-0.2				
KIC	63.60 24 Pc	10 59.34	0.1	PMR	149.83 307 ePKP	20 16.20	4.9X				
	1.0s 34.00nm		5.4mb		1.0s 55.00nm						
TIC	63.80 24 Pc	11 00.60	0.0	FBA	149.87 313 iPKPd	20 16.00	4.7X				
SHGH	64.42 30 eP	11 12.80	8.2X		1.3s 99.10nm						
KOGH	64.51 29 eP	11 05.80	0.5		e 20 33.70						
KUK	64.57 29 eP	11 06.00	0.3	KDC	150.43 298 ePKP	20 17.60	5.3X				
AVY	65.78 89 eP	11 15.64	1.9	BJI	151.25 105 ePKP	20 20.50	6.4X				
LWI	68.90 62 iPd	11 34.70	1.3	IMA	152.42 315 PKP	20 13.20	-2.0				
BNG	69.85 49 iPd	11 38.90	0.0		1.0s 27.50nm						
	0.5s 34.00nm		5.7mb	BRW	153.09 327 PKP	20 14.00	-1.8				
	ic 11 46 20			TTA	153.22 308 ePKP	20 24.60	8.2X				
MSZ	80.17 191 P	12 36.00	-1.5		S.D. = 0.8 on 71 of 90 obs.			NAH	1.26 209 eP	49 35.00	0.3
TAU	82.57 176 iPd	12 50.20	0.1						iS	49 51.50	
TOO	87.79 174 eP	13 17.00	0.7					NZJ	1.45 44 eP	49 37.00	-0.2
MUN	87.89 149 eP	13 17.00	0.2						S	49 56.30	
BFD	87.96 171 eP	13 09.00	-8.1X	* JAN 24, 1989 04h 37m 16.93± 1.34s				KAGJ	4.43 29 P	50 18.10	-0.8
KLB	88.71 150 eP	13 21.00	0.2	49.871 N ±23.8km 153.742 E ±20.3km				KUMJ	5.61 22 P	50 34.90	-0.5
ADE	89.75 168 iPd	13 26.20	0.4	DEPTH = 33.0km (normal)				SHNJ	7.18 19 eP	50 57.30	0.2
	0.7s 60.27nm		6.0mb	4.7mb (23 obs.)				SSE	7.31 303 P	50 58.00	-0.9
CAN	90.20 176 eP	13 28.70	0.9	KURIL ISLANDS (221)					1.4s 0.13nm	2.4mb X	
COOL	90.31 153 eP	13 28.00	-0.4	YKA	48.19 39 P	45 55.50	-0.1	OZH	9.09 257 Pc	51 22.50	-1.0
				CHG	53.29 255 eP	46 35.00	0.2	NJ2	9.51 302 Pd	51 29.00	-0.3

JAN 24, 1989 04h 49m 12.61± 0.61s
 27.327 N ± 4.8km 128.362 E ± 3.9km
 DEPTH = 68.1 ± 4.9 km
 5.3mb (30 obs.)
 RYUKYU ISLANDS (238)
 Felt (11 JMA) at Naze and (1
 JMA) at Naha.
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 9S, 15C
 Centroid Location:
 Origin Time 04:49:18.1 1.2
 Lat 26.92N 0.13 Lon 128.79E 0.14
 Dep 39.7 8.7 Half-duration 1.5
 Mament Tensor; Scale 10**16 Nm
 Mrr= 3.77 0.47 Mtt= 1.07 0.56
 Mff=-4.84 0.76 Mrt= 3.32 0.87
 Mrf=-0.53 0.78 Mtf=-2.27 0.54
 Principal Axes:
 T Vol= 6.27 P1g=53 Azm= 16
 N -0.62 37 204
 P -5.65 4 111
 Best Double Couple:Mo=6.0*10**16
 NP1:Strike=168 Dip=52 Slip= 41
 NP2: 50 59 134

MAT	Z 12s	1.50um		DSI	78.56 300 eP	01 09.00	0.6	* JAN 24, 1989 05h 06m 27.88±1.40s
	12.41	40 iPc	52 17.90	NAO	78.66 334 P	01 06.90	-1.6	36.432 N ±11.8km 71.076 E ±7.7km
	1.0s	45.00nm	5.3mb		0.8s	41.90nm	5.4mb	DEPTH = 112.2 ± 16.3 km
		(S)	54 40.00	MBH	79.71 298 iPc	01 15.00	0.3	4.3mb (8 obs.)
WHN	12.68	288 P	52 13.20	KRA	80.34 322 iPc	01 18.20	0.6	AFGHANISTAN-USSR BORDER REGION (717)
	1.0s	0.10nm	2.6mb X		0.6s	45.00nm	5.6mb	QUE 7.12 210 eP 08 11.20 0.1
	Z 20s	1.10um	4.8Msz	ELL	80.39 306 iP	01 17.10	-1.3	eS 09 29.00
	E 12s	0.70um		SPC	80.61 321 eP	01 20.00	0.6	MAIO 9.34 273 eP 08 41.00 -0.2
		sP	52 28.50	KSP	81.88 324 iPc	01 26.20	0.5	eS 10 19.00
		eS	54 33.50		0.9s	36.00nm	5.3mb	GKN 14.22 122 P 09 44.60 -0.7
SNY	14.99	346 eP	52 42.00	MUD	82.01 331 iPd	01 26.40	0.2	0.6s 31.00nm 4.7mb
	Z 28s	0.90um			0.7s	20.00nm	5.2mb	DMN 14.79 123 P 09 53.40 0.7
	N 24s	0.70um		PNT	82.70 38 ePc	01 30.00	-0.1	0.5s 12.00nm 4.4mb
		eS	55 26.00	LON	82.88 41 P	01 32.00	0.9	KKN 14.79 122 P 09 52.30 -0.4
BJI	16.22	325 eP	52 58.50	ZST	82.90 321 i(P)	01 31.40	0.3	0.6s 18.00nm 4.5mb
	Z 20s	0.91um		BRG	83.09 324 iP	01 32.70	0.7	PKI 15.02 122 P 09 56.00 0.3
		pP	53 12.00		1.5s	38.00nm	5.1mb	0.5s 9.00nm 4.3mb
CN2	16.61	353 Pc	53 04.00	VAY	83.22 313 eP	01 31.40	-1.5	GBA 23.44 164 Pd 11 28.80 1.0
TIY	16.94	312 P	53 09.30	PRU	83.29 324 Pc	01 34.00	1.0	0.6s 2.60nm 3.8mb
		S	56 18.00	CLL	83.32 325 iP	01 33.60	0.4	CHG 30.13 118 eP 12 38.10 8.9X
MDJ	17.28	3 eP	53 11.00	EDM	83.61 32 ePc	01 35.10	0.4	HFS 43.16 322 eP 14 18.40 -0.1
XAN	18.00	297 P	53 19.80	SKO	83.62 314 iPc	01 35.50	0.6	0.4s 2.30nm 4.3mb
HHC	19.33	319 P	53 34.00		1.1s	70.00nm	5.6mb	NAO 44.64 323 P 14 30.00 -0.4
GYA	19.37	272 P	53 36.20	KHC	84.30 323 iPc	01 39.00	0.8	0.6s 2.20nm 4.1mb
BTO	20.12	316 eP	53 43.00		1.0s	10.00nm	4.8mb	MBC 67.40 3 eP 17 13.00 0.5
		PP	54 06.00	MOX	84.42 325 iP	01 39.00	0.2	INK 73.96 9 eP 17 53.00 1.0
		eS	57 31.00		1.8s	69.00nm	5.4mb	WB5 81.88 122 eP 18 35.10 -1.0
PJG	20.60	128 e(P)	53 44.80	OHR	84.48 314 eP	01 36.30	-3.0	WRA 81.90 122 Pd 18 35.70 -0.6
GUA	20.67	128 e(P)	53 40.80	HOF	84.49 325 iPc	01 39.40	0.3	0.3s 0.70nm 3.9mb
CD2	21.78	285 eP	53 59.50	GRF	85.20 325 iPc	01 43.90	1.2	S.D. = 0.7 on 13 of 14 obs.
LZH	22.57	299 eP	54 09.00		1.1s	44.00nm	5.4mb	? JAN 24, 1989 05h 28m 49.21±1.84s
	2.0s	0.11nm	1.9mb X	KBA	85.63 322 iPd	01 45.20	0.1	3.107 S ±20.5km 130.859 E ±20.8km
KMI	23.08	270 Pd	54 15.00		1.3s	20.00nm	5.0mb	DEPTH = 33.0km (normal)
GTA	26.60	304 eP	54 44.20	FUR	86.10 323 eP	01 48.60	1.4	4.6mb (3 obs.)
CHG	28.31	259 iPd	55 02.20	FVI	86.23 321 P	01 47.70	-0.1	CERAM (272)
	1.0s	30.50nm	4.9mb	SES	86.50 34 ePc	01 49.60	0.4	AAI 2.72 258 ePc 29 32.50 1.0
BDT	28.89	256 eP	55 07.60	OGA	87.03 322 iPd	01 52.80	0.8	MTN 9.68 178 eP 31 08.00 -1.3
WMO	36.53	308 P	56 12.50		1.2s	26.00nm	5.3mb	eS 32 55.00
GUN	37.51	281 P	56 22.10	FFC	87.56 27 iPc	01 54.40	0.3	WB5 17.02 169 eP 32 45.60 -0.9
PKI	37.98	281 P	56 25.20		0.9s	45.00nm	5.6mb	eS 35 46.50
KKN	38.05	281 P	56 26.40	WLF	87.77 327 P	01 55.70	0.5	WRA 17.08 169 Pd 32 47.00 -0.2
DMN	38.23	281 P	56 27.90	EKA	87.84 335 P	01 55.00	-0.4	0.5s 3.50nm 3.7mb
GKN	38.58	281 P	56 30.20		2.2s	94.90nm	5.6mb	OIS 19.33 154 eP 33 17.00 2.2
WB5	47.29	172 eP	57 41.10	ARN	88.16 48 P	01 58.70	1.3	eS 36 43.00
		e	57 53.20	DOU	88.23 328 Pc	01 57.70	0.3	ASPA 20.65 172 iPc 33 29.00 0.2
WRA	47.35	172 Pd	57 41.50	FRB	88.26 7 ePc	01 57.60	0.3	0.8s 56.00nm 5.0mb
	0.5s	2.60nm	4.4mb	LRM	88.68 38 eP	02 01.20	1.2	eS 37 14.90
OIS	48.83	166 eP	57 52.00	KVN	89.44 46 P	02 04.40	0.7	PKI 53.34 308 P 38 07.20 -1.0
GBA	49.31	265 Pc	57 56.20	TNP	90.56 46 P	02 10.40	1.5	0.6s 6.00nm 4.8mb
	1.0s	38.70nm	5.4mb		1.0s	5.00nm	4.8mb	S.D. = 1.5 on 7 of 7 obs.
CTA	50.22	158 eP	58 15.00	BW06	92.23 39 P	02 17.30	0.8	? JAN 24, 1989 05h 47m 08.28±1.11s
	1.0s	38.00nm	11.2X		1.1s	7.44nm	5.0mb	44.560 S ±15.6km 78.560 W ±29.4km
POO	50.63	272 iPd	58 08.00	GLA	95.11 49 P	02 30.80	1.1	DEPTH = 10.0km (geophysicist)
	0.9s	20.17nm	5.2mb		S.D. = 0.9 on 95 of 100 obs.			4.6mb (1 obs.)
WARB	53.23	182 eP	58 12.60	? JAN 24, 1989 04h 58m 14.12±4.11s				OFF COAST OF SOUTHERN CHILE (143)
MAIO	58.11	297 eP	59 02.00	10.837 S ±42.8km 128.792 E ±17.0km				LNV 11.95 30 eP 50 00.70 -0.8
TTA	59.53	31 eP	59 10.40	DEPTH = 167.8 ± 24.8 km				TACH 12.39 31 eP 50 08.00 0.5
BRW	59.53	21 ePc	59 11.20	4.6mb (2 obs.)				PCH 12.58 32 eP 50 10.90 0.8
IMA	60.49	27 ePc	59 17.00	TIMOR SEA (290)				SAN 12.67 32 ePd 50 11.70 0.4
	1.3s	30.70nm	5.3mb	MTN	3.04 131 eP	59 03.30	0.1	PEL 12.94 31 iPd 50 13.80 -1.1
KDC	61.62	37 eP	59 24.10		eS	00 03.00		ARE 28.64 14 eP 53 06.00 -1.4
PMR	62.84	32 eP	59 32.00	KNA	4.88 180 iPd	59 27.30	0.2	CCH 29.04 25 eP 53 13.00 2.0
	1.2s	35.20nm	5.3mb		eS	01 07.00		CNCB 29.07 21 eP 53 14.00 2.5X
FBA	63.02	28 eP	59 34.20	WB5	10.47 150 eP	00 41.00	-0.1	LPB 29.30 21 eP 53 16.00 2.5X
INK	67.84	23 ePc	00 04.90		eS	03 01.80		Z 24s 1.55um 4.5MszX
MBC	68.74	14 ePc	00 09.50	WRA	10.51 150 Pd	00 41.30	-0.3	LR 01 40.00
	0.8s	39.00nm	5.4mb		0.5s	12.20nm	4.7mb	ZOBO 29.55 21 P 53 15.00 -0.9
SOD	69.45	336 iP	00 14.40	MBL	13.39 219 eP	01 25.00	6.2X	LR 01 48.00
KJF	70.21	333 iP	00 18.20		eS	04 17.00		TUL 81.61 346 eP 59 28.00 0.6
	0.5s	12.60nm	5.1mb	OIS	14.20 134 eP	01 22.00	-6.9X	1.3s 7.30nm 4.6mb
ALE	70.25	1 eP	00 19.00		eS	04 14.00		LNO 81.61 346 eP 59 45.10 17.9X
	1.0s	31.00nm	5.2mb	WARB	15.40 187 eP	01 38.40	-5.5X	LIC 82.75 74 P 59 34.00 0.2
SUF	71.43	332 iP	00 25.80		eS	05 07.00		KIC 83.05 74 P 59 35.00 -0.4
NUR	72.99	330 iP	00 35.60	NANU	17.23 226 iPc	02 05.70	-0.5	TIC 83.06 74 P 59 35.40 0.0
	0.5s	14.00nm	5.1mb		0.3s	7.00nm	4.5mb	ALO 83.09 337 eP 59 28.00 -7.4X
	Z 18s	0.40um	4.7Msz	FORR	19.92 182 iPd	02 37.70	2.9X	POO 145.29 129 ePKP 06 46.00 -2.0
		LR	11 10.00	MRWA	21.85 211 eP	02 54.50	0.5	MAIO 147.32 90 ePKP 06 53.00 2.0
DAG	74.20	353 iPd	00 42.00		e	03 22.00		CHG 154.24 175 ePKP 07 05.00 3.4X
	0.6s	9.33nm	4.9mb		eS	07 40.00		S.D. = 1.3 on 14 of 19 obs.
UPP	76.39	331 iP	00 55.00		eS	07 40.00		& JAN 24, 1989 07h 21m 25.00s
BBTK	77.03	308 iPc	01 00.00		S.D. = 0.6 on 6 of 10 obs.			40.332 N 123.522 W
YKA	77.49	25 P	01 02.40					
YKC	77.54	25 eP	01 02.00					
HRI	77.57	301 eP	01 03.00					
HFS	77.91	332 eP	01 03.50					
	0.9s	40.10nm	5.4mb					
VRI	78.39	316 ePd	01 08.00					

24d 07h

DEPTH = 21.0km
 NORTHERN CALIFORNIA (36)
 <BRK>. ML 3.1 (BRK). Felt (IV)
 at Miranda and (III) at
 Garberville, Phillipville and
 Whitethorn.

FHC	0.59	323	iPc	21	36.20	-0.3
			iS	21	45.10	
WDC	0.79	71	iPc	21	38.80	-1.1
			eS	21	50.00	
LTCM	1.08	96	eP	21	42.80	-2.0
MIN	1.47	89	iPc	21	48.20	-2.3
LBFM	1.60	50	eP	21	51.50	-1.0
ORV	1.74	116	iPc	21	51.40	-2.9
			i	22	11.50	
BRK	2.64	158	ePc	22	05.10	-2.2
PCC	2.96	162	ePc	22	08.40	-3.4
MHC	3.33	153	ePc	22	15.10	-2.0
CMB	3.35	132	eP	22	15.60	-1.7
ARN	3.36	152	eP	22	14.70	-2.8
GCC	3.51	160	eP	22	15.90	-3.6
SAO	3.92	155	eP	22	22.00	-3.3
KVN	4.37	105	eP	22	28.70	-3.3

14 obs. associated

JAN 24, 1989 08h 03m 43.04± 0.66s
 42.370 N ± 6.0km 20.109 E ± 5.6km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)
 MD 2.5 (TTG).

PVY	0.25	336	ePg	03	48.90	0.6
			eSg	03	54.20	
IVA	0.52	343	ePg	03	53.90	0.2
			eSg	04	03.00	
TTG	0.63	276	iPg	03	54.60	-1.1
			iSg	04	05.00	
ULC	0.76	238	ePg	03	58.40	0.5
			eSg	04	08.50	
BDV	0.95	265	ePg	04	01.00	-0.2
			eSg	04	17.60	
SKO	1.07	111	ePn	04	02.20	-0.9
			iSn	04	19.80	
HCY	1.20	274	ePg	04	05.30	0.0
			eSg	04	24.00	
BRY	1.27	295	ePg	04	06.70	0.0
			eSg	04	27.00	
OHR	1.36	157	ePn	04	09.00	0.9

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

JAN 24, 1989 08h 34m 42.67± 0.31s
 28.923 N ± 5.7km 142.451 E ± 4.5km
 DEPTH = 37.3km (4 depth phases)
 4.9mb (14 obs.) 4.5Msz (6 obs.)

BONIN ISLANDS REGION (212)

KAKJ	7.51	346	eP	36	30.80	-1.7
			eS	37	57.30	
IIDJ	7.58	331	eP	36	36.90	3.3X
			eS	37	52.80	
CHJJ	7.68	339	P	36	34.20	-0.7
			eS	37	59.40	
MAT	8.39	336	iPd	36	44.30	-0.5
	1.0s	53.00nm				5.6mb X
			eS	38	17.00	
MTMJ	8.58	334	eP	36	47.90	0.4
YAMJ	9.44	348	eP	36	57.40	-1.9
OFUJ	10.15	357	eP	37	02.70	-6.3X
			eS	38	50.00	
GUMO	15.42	171	eP	38	23.00	3.7X
SSE	18.54	282	eP	39	02.00	3.7X
	Z	18s	0.40um			4.5MszX
	N	12s	0.50um			
			eS	42	32.00	
MDJ	18.71	330	eP	39	00.70	0.5
	Z	15s	1.70um			
SNY	20.01	315	eP	39	14.30	-0.6
	Z	14s	0.90um			4.3MszX
	N	14s	1.00um			
	E	14s	0.60um			
			sP	39	26.00	
CN2	20.14	322	eP	39	16.00	-0.3
	Z	16s	1.50um			4.4MszX
	E	13s	1.20um			
			pP	39	21.00	19kmX
			eS	43	00.00	

NJ2	20.57	285	Pc	39	20.50	-0.3
	Z	12s	1.20um			4.5MszX
			S	43	12.00	
OZH	21.63	265	eP	39	33.50	1.9
TIA	22.51	295	P	39	40.00	-0.3
	Z	22s	0.90um			4.2Msz
	N	13s	0.80um			
	E	13s	0.80um			
			eS	43	41.00	
BAG	23.66	243	eP	39	53.00	1.1
			eS	44	12.00	
BJI	24.25	304	eP	39	56.50	-0.7
	Z	20s	1.20um			4.4Msz
	E	14s	0.69um			
			eS	44	15.00	
WHN	24.43	281	eP	39	58.50	-0.6
	N	14s	1.90um			
TIY	26.48	297	eP	40	18.70	0.3
	E	15s	1.30um			
			sP	40	30.00	
			eS	44	43.00	
HHC	27.85	304	eP	40	30.80	0.0
BTO	28.92	302	eP	40	39.50	-1.0
	N	15s	0.80um			
	E	15s	1.40um			
XAN	28.97	289	P	40	40.00	-0.9
GYA	31.71	274	P	41	04.80	-0.6
LZH	33.17	293	eP	41	16.50	-1.6
	Z	2.0s	0.05nm			2.1mb X
	Z	18s	1.00um			4.6Msz
CD2	33.49	283	P	41	19.70	-1.0
	N	15s	2.00um			
			eS	46	32.00	
KMI	35.47	273	Pd	41	38.50	0.5
			pP	41	50.00	41km
GTA	36.50	298	eP	41	45.80	-0.7
	Z	20s	0.90um			4.5Msz
CHG	40.84	266	iPc	42	22.20	-0.5
	1.1s	18.99nm				4.7mb
BDT	41.41	263	eP	42	28.20	0.9
MTN	42.94	196	eP	42	37.00	-2.8X
WMO	45.72	304	P	43	02.10	0.0
	Z	20s	0.70um			4.6Msz
			S	49	41.00	
WB5	49.14	190	eP	43	27.00	-1.9
WRA	49.21	190	Pd	43	27.90	-1.5
	1.2s	41.60nm				5.3mb
GUN	49.35	283	P	43	31.70	0.7
PKI	49.84	283	P	43	34.70	0.0
	1.0s	43.00nm				5.4mb
KKN	49.89	283	P	43	35.30	0.3
DMN	50.09	283	P	43	36.80	0.3
	0.8s	62.00nm				5.7mb
GKN	50.39	284	P	43	39.00	0.4
ASPA	52.93	190	iPd	43	55.40	-2.2
	1.4s	12.00nm				4.7mb
	Z	22s	0.38um			4.4MszX
			LR	03	58.00	
PMR	54.78	33	P	44	09.70	-1.0
	1.0s	45.00nm				5.5mb
FBA	55.63	29	P	44	17.10	0.3
NDI	56.47	287	iP	44	22.50	-0.9
BRS	56.86	169	iP	44	19.00	-7.1X
			i	44	31.60	44km
INK	61.28	25	eP	44	55.00	-1.2
POO	62.90	277	iPd	45	10.50	2.7
MBC	64.07	15	eP	45	15.00	0.4
	1.1s	28.00nm				5.3mb
MAIO	68.26	300	eP	45	44.00	1.9
YKA	70.43	29	P	45	54.90	0.1
YKC	70.49	29	eP	45	55.00	-0.1
GMW	72.27	45	P	46	06.80	0.7
BMW	72.42	46	P	46	08.40	1.3
SOD	72.79	339	iP	46	11.30	2.5
			i	46	22.00	35km
			i	46	10.60	0.6
RMW	72.91	45	P	46	11.80	0.1
LON	73.20	46	P	46	11.80	0.1
PNT	73.46	43	eP	46	14.00	0.9
	1.0s	14.00nm				4.9mb
DAG	73.92	356	iPd	46	28.00	12.8X
	1.0s	18.00nm				
KJF	74.21	336	eP	46	19.00	1.9
EDM	75.22	37	ePc	46	23.00	-0.2
WDC	75.32	52	e(P)	46	34.20	10.3X
SUF	75.64	335	iP	46	26.00	0.7
	0.7s	2.80nm				4.4mb
ORV	76.48	52	e(P)	46	29.10	-1.5

NUR	77.54	333	eP	46	37.00	1.1
SES	77.86	39	eP	46	38.00	0.0
			pP	46	47.00	29km
CMB	77.94	53	eP	46	37.90	-0.8
FRI	78.90	54	e(P)	46	44.10	0.2
KVN	79.06	51	P	46	45.20	0.2
LRM	79.38	43	eP	46	47.10	0.4
FFC	80.07	32	eP	46	51.00	1.2
	1.2s	28.00nm				5.1mb
TNP	80.13	52	P	46	50.60	-0.2
	1.0s	4.17nm				4.4mb
HFS	81.84	337	eP	46	59.10	0.0
	0.5s	1.70nm				4.3mb
DUG	82.04	48	P	47	00.30	-0.4
NAO	82.29	338	P	47	01.60	0.2
	1.0s	9.40nm				4.8mb
BW06	82.75	45	P	47	05.00	0.5
	1.0s	7.50nm				4.7mb
MSU	83.34	50	P	47	06.80	-0.8
FRB	84.45	13	eP	47	05.00	-7.3X
VRI	85.51	321	ePc	47	26.00	8.0X
GLD	87.15	46	P	47	32.50	6.0X
CLL	88.57	331	eP	47	33.00	0.2
KHC	89.92	329	P	47	40.50	1.2
ZOBO	149.19	73	(PKP)	54	30.00	4.3X
	Z	21s	0.17um			4.8Msz
			eLR	44	40.00	
LPB	149.34	73	ePKP	54	31.00	5.2X
CNCB	149.57	73	PKP	54	32.00	5.7X
CCH	151.39	73	(PKP)	54	36.00	7.3X

S.D. = 1.0 on 68 of 83 obs.

JAN 24, 1989 08h 37m 04.54± 0.44s
 44.395 N ± 3.5km 7.315 E ± 4.8km
 DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)
 ML 2.5 (GEN).

STV	0.15	177	Pd	37	08.53	0.4
			S	37	10.61	
PZZ	0.19	306	Pc	37	09.34	0.5
			S	37	12.21	
AUTN	0.41	168	Pg	37	13.06	0.1
			Sg	37	18.00	
ROB	0.41	104	Pc	37	13.40	0.4
			S	37	19.30	
SAOF	0.44	157	Pg	37	13.36	-0.2
			Sg	37	19.13	
AURF	0.51	179	Pg	37	14.62	-0.2
			Sg	37	21.53	
MVIF	0.51	193	Pg	37	14.84	-0.1
			Sg	37	21.79	
IMI	0.64	139	iP	37	17.18	-0.2
			S	37	25.86	
RRL	0.65	324	Pd	37	17.35	-0.3
			S	37	26.07	
FIN	0.67	106	P	37	17.79	-0.1
			S	37	26.56	
RSP	0.76	357	P	37	19.13	-0.3
			S	37	29.44	

S.D. = 0.4 on 11 of 11 obs.

* JAN 24, 1989 09h 08m 23.58± 1.39s
 46.876 N ± 13.5km 15.204 E ± 9.9km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

ML 2.9 (VKA), 2.6 (KBA), MD 2.9

iSg 09 40.00
ZST 1.84 44 iP 09 42.30 46.8X
PSZ 3.35 70 iPg 09 16.90 -0.2
S.D. = 0.9 on 7 of 10 obs.

* JAN 24, 1989 09h 50m 17.37±0.98s
42.301 N ±10.7km 20.279 E ±7.7km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.5 (TTG).

PVY 0.37 323 iPgc 50 25.50 0.5
TTG 0.77 280 eSg 50 32.00
eSg 50 31.10 -1.2
ULC 0.84 247 ePg 50 34.50 0.9
eSg 50 45.00
SKO 0.92 110 ePg 50 41.00 6.0X
iSg 50 56.00
BDV 1.08 270 ePg 50 37.20 -0.4
eSg 50 54.00
OHR 1.25 162 iPg 50 46.30 5.6X
iSg 51 04.00
HCY 1.33 277 ePg 50 42.00 0.1
eSg 51 01.00
BRY 1.41 296 ePg 50 43.50 0.2
eSg 51 04.50
VAY 1.97 119 ePn 50 51.00 -0.2
S.D. = 0.8 on 7 of 9 obs.

JAN 24, 1989 09h 56m 09.92±0.66s
40.656 N ±7.2km 15.716 E ±5.5km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

SGO 0.33 253 P 56 16.30 -0.4
eSg 56 21.00
MGR 0.53 193 P 56 20.90 0.2
TOS 1.10 154 P 56 34.10 3.5X
BRT 1.15 78 P 56 31.00 -0.5
eSg 56 47.60
DUI 1.38 317 P 56 35.50 0.2
eSn 56 55.80
SDI 1.78 307 P 56 41.00 0.1
HVAR 2.58 12 iPn 56 57.10 4.7X
iSn 57 35.00
OHR 3.88 82 ePn 57 11.30 0.3
S.D. = 0.4 on 6 of 8 obs.

? JAN 24, 1989 09h 59m 16.45±0.95s
39.070 N ±8.8km 27.652 E ±9.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM 0.74 205 iPg 59 31.00 0.0
eSg 59 44.00
DST 0.93 54 ePn 59 34.00 -0.2
EZN 1.27 307 ePn 59 40.00 -0.1
KCT 1.30 25 iPn 59 40.70 0.2
S.D. = 0.3 on 4 of 4 obs.

? JAN 24, 1989 10h 07m 33.21±7.26s
32.510 S ±45.7km 71.930 W ±36.2km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

ROCH 0.90 121 iP 07 50.20 -0.4
LCCH 1.01 163 ePd 07 59.20 6.9X
iS 08 04.40
JACH 1.14 99 iP 07 54.60 0.0
iS 08 10.00
PEL 1.22 121 iP 07 55.70 -0.3
iS 08 11.00
TACH 1.41 144 iPc 07 58.50 -0.5
iS 08 14.50
SAN 1.42 132 eP 07 59.20 0.1
LNV 1.51 163 eP 07 59.30 -0.9
iS 08 12.50
FCH 1.60 121 iP 08 02.00 0.1
iS 08 21.60
PCH 1.62 133 eP 08 02.50 0.4
CHCH 1.78 143 eP 08 06.00 1.8
iS 08 27.00
S.D. = 0.9 on 9 of 10 obs.

* JAN 24, 1989 10h 32m 03.23±0.66s
22.881 N ±7.2km 99.611 E ±11.1km

DEPTH = 33.0km (normal)
4.5mb (5 obs.)
BURMA-CHINA BORDER REGION (297)
ML 4.3 (BJI).

KMI 3.63 51 Pn 32 58.50 -0.2
Pg 33 05.00
Sg 33 52.00
CHG 4.09 189 iPn 33 05.70 0.6
iPg 33 20.50
iSg 34 14.60
BDT 5.64 186 ePg 33 50.80 23.9X
eSg 35 04.00
LOE 5.80 160 eP 33 35.00 5.8X
ePg 33 48.00
eSg 35 02.00
CD2 8.81 24 eP 34 13.40 2.1
QIZ 10.30 110 eP 34 33.20 1.4
eS 36 25.00
GUN 13.38 295 P 35 11.50 -2.2X
PKI 13.67 293 P 35 14.90 -2.6X
0.6s 5.00nm 4.5mb
XAN 13.80 34 eP 35 12.30 -6.5X
DMN 13.94 293 P 35 17.40 -3.6X
GKN 14.45 294 P 35 24.40 -3.2X
GTA 16.48 1 eP 35 53.30 -0.3
E 12s 0.70um
TIY 18.44 34 eP 36 16.80 -1.2
BJI 22.12 36 P 36 56.50 -0.9
WB5 54.38 139 eP 41 28.20 -1.2
WRA 54.41 139 Pd 41 28.90 -0.7
0.9s 1.90nm 4.1mb
KJF 61.77 332 iP 42 20.80 0.1
0.7s 9.30nm 5.0mb
SUF 62.35 330 iP 42 25.20 0.7
0.7s 2.80nm 4.5mb
NAO 69.72 329 P 43 11.50 -0.1
0.9s 4.30nm 4.5mb
S.D. = 1.1 on 12 of 19 obs.

% JAN 24, 1989 10h 34m 54.30±1.94s
32.788 S ±13.5km 70.454 W ±18.8km
DEPTH = 33.0km (normal)
CHILE-ARGENTINA BORDER REGION (127)

JACH 0.16 312 iPc 35 00.60 -0.1
iS 35 21.10
PEL 0.40 209 iPd 35 05.00 1.4
iS 35 28.50
ROCH 0.50 248 iPd 35 05.50 0.3
iS 35 29.90
FCH 0.56 166 eP 35 06.00 0.0
iS 35 30.10
TACH 0.95 205 eP 35 11.50 0.1
iS 35 41.00
LNV 1.41 214 iP 35 16.00 -1.9
iS 35 49.00
S.D. = 1.4 on 6 of 6 obs.

% JAN 24, 1989 10h 52m 41.08±3.11s
44.470 N ±11.6km 6.660 E ±23.3km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.1 (GEN).

PZZ 0.32 84 P 52 47.85 0.1
S 52 51.13
RRL 0.46 11 P 52 50.63 0.2
S 52 56.41
STV 0.53 115 P 52 52.22 0.4
S 52 58.94
RSP 0.80 32 P 52 56.60 -0.1
ROB 0.89 101 P 52 58.21 0.1
S 53 08.80
IMI 1.05 122 P 53 00.79 -0.1
FIN 1.14 103 P 53 01.90 -0.6
S.D. = 0.4 on 7 of 7 obs.

% JAN 24, 1989 11h 48m 47.17±1.09s
39.311 N ±10.4km 28.724 E ±18.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST 0.30 346 iPg 48 53.20 -0.3
eSg 48 58.10
KCT 0.98 343 iPn 49 06.10 0.3
KHL 1.17 147 ePn 49 09.00 0.0

EDC 1.23 328 ePn 49 10.00 0.0
YLV 1.35 21 iPn 49 12.10 0.0
S.D. = 0.3 on 5 of 5 obs.

& JAN 24, 1989 13h 58m 35.70s
59.882 N 153.386 W
DEPTH = 129.6km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM 0.29 47 iP 58 53.35 0.9
eS 59 08.17
PDB 0.42 257 iP 58 53.57 -0.9
eS 59 07.95
RDT 0.85 35 iP 58 56.69 -0.9
eS 59 13.89
NNL 1.06 80 iP 58 59.62 0.2
CNPM 1.15 107 iP 58 59.44 -0.9
eS 59 17.58
NKA 1.37 50 eP 59 03.62 0.9
eS 59 22.52
SPU 1.46 26 eP 59 02.78
eS 59 24.33
CRP 1.52 23 iP 59 03.78 -0.7
eS 59 25.97
SLKM 1.70 67 eP 59 05.23 -1.3
PMS 2.33 52 eP 59 12.58 -1.7
eS 59 41.23
PTE 2.38 64 eP 59 12.94 -1.9
eS 59 40.74
PWL 2.69 66 eP 59 17.64 -1.3
eS 59 47.98
PLRM 2.70 49 eP 59 17.41 -1.6
KNK 2.87 56 eP 59 18.97 -2.3
eS 59 52.14
GHO 2.89 47 eP 59 18.79 -2.8
SML 3.14 50 eP 59 21.81 -3.0
TTA 3.31 339 eP 59 24.53 -2.6
SGAM 4.13 78 eP 59 35.73 -2.3
18 obs. associated

* JAN 24, 1989 14h 39m 01.64±2.12s
11.715 S ±13.1km 165.984 E ±18.5km
DEPTH = 83.0 ±14.0 km
4.4mb (3 obs.)
SANTA CRUZ ISLANDS (184)

HNR 6.35 290 ePc 40 34.00 -0.6
0.9s 336.13nm 5.7mb X
eS 41 46.00
VSG 6.64 291 eP 40 39.00 0.5
eS 41 58.00
DZM 10.31 178 iPc 41 29.00 0.2
WB5 31.44 251 eP 45 17.70 0.2
WRA 31.48 251 Pd 45 18.20 0.4
0.9s 5.30nm 4.3mb
ASPA 32.71 244 eP 45 28.10 -0.4
1.1s 7.00nm 4.4mb
Z 21s 0.20um 3.8Msz
LR 57 22.40

CHG 72.71 294 eP 50 23.10 0.1
SPA 78.36 180 e(P) 50 53.40 -1.0
1.0s 7.00nm 4.5mb
PKI 87.16 299 P 51 40.40 -0.1
KKN 87.33 299 P 51 41.10 -0.1
DMN 87.43 299 P 51 41.80 0.1
GKN 87.93 299 P 51 43.40 -0.6
BNG 146.99 260 iPKPc 58 36.50 1.3
0.6s 11.00nm
ic 58 49.90
S.D. = 0.7 on 13 of 13 obs.

JAN 24, 1989 16h 16m 33.28±0.64s
44.775 N ±7.7km 114.018 W ±6.1km
DEPTH = 5.0km (geophysicist)
WESTERN IOAHD (33)
ML 3.5 (BUT).

CCMT 0.83 80 iPc 16 49.50 -0.4
BGMT 1.48 71 ePn 17 00.60 -0.2
LRM 1.52 46 ePnc 17 02.30 0.9
BUT 1.61 39 ePg 17 06.80 4.2X
eSn 17 29.50
eSg 17 33.50
LCCM 1.85 54 ePn 17 06.20 0.2
DMMT 2.28 23 ePn 17 12.80 0.5
MEMT 2.31 68 ePn 17 12.20 -0.6

24d 16h

LNOR 3.20 292 e(P) 17 24.50 -0.8
 BW06 3.80 120 eP 17 33.80 -0.2
 KVN 6.48 209 e(P) 18 12.50 0.7
 S.D. = 0.7 on 9 of 10 obs.

? JAN 24, 1989 16h 19m 53.66±5.06s
 39.364 N ±11.6km 26.112 E ±46.1km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

EZN 0.49 20 iPg 20 03.70 0.1
 eSg 20 08.80
 IZM 1.32 137 iPn 20 18.10 0.1
 EDC 1.67 53 ePn 20 22.00 -1.0
 KCT 1.94 62 iPn 20 28.30 1.3
 DST 1.96 82 ePn 20 27.00 -0.4
 S.D. = 1.2 on 5 of 5 obs.

* JAN 24, 1989 16h 24m 14.29±1.82s
 0.380 S ±17.0km 122.595 E ±18.7km
 DEPTH = 93.2 ± 22.6 km
 4.4mb (3 obs.)

MINAHASSA PENINSULA (265)

MNI 2.88 51 ePc 24 57.90 -1.2
 eS 25 48.50
 TSM 6.43 315 eP 25 47.50 -0.6
 AAI 6.49 120 eP 25 51.50 2.5
 WB5 22.55 150 eP 29 06.80 -0.7
 WRA 22.59 150 P 29 08.00 0.1
 0.8s 2.30nm 3.6mb
 ASPA 25.62 155 eP 29 34.70 -2.1
 CHG 30.06 311 eP 30 17.50 0.5
 GUN 45.06 312 P 32 23.80 0.5
 0.6s 24.00nm 5.2mb X
 PKI 45.24 311 P 32 24.80 0.2
 0.7s 6.00nm 4.5mb
 KKN 45.45 311 P 32 26.50 0.4
 0.7s 9.00nm 4.7mb
 DMN 45.49 311 P 32 26.90 0.4
 GKN 46.05 311 P 32 31.00 0.2
 0.7s 15.00nm 5.0mb X
 HYB 46.82 294 eP 32 36.60 -0.3
 S.D. = 1.3 on 13 of 13 obs.

% JAN 24, 1989 18h 57m 39.84±2.23s
 31.445 N ±13.9km 35.685 E ±20.3km
 DEPTH = 10.0km (geophysicist)

DEAD SEA REGION (373)

MKRJ 0.11 341 P 57 42.70 -0.1
 MASJ 0.28 6 P 57 45.80 0.0
 QUTJ 0.31 118 Pd 57 46.40 0.0
 KFNJ 0.42 359 Pd 57 48.10 -0.2
 BURJ 0.77 5 Pd 57 55.50 0.6
 JARJ 0.82 16 Pc 57 55.50 -0.3
 S.D. = 0.4 on 6 of 6 obs.

* JAN 24, 1989 19h 32m 51.38±2.82s
 15.930 N ± 8.3km 60.753 W ±31.4km
 DEPTH = 15.0 ± 14.9 km

LEEWARD ISLANDS (92)

ML 3.2 (FDF).

SFG 0.53 307 eP 33 01.70 -0.2
 S 33 09.80
 BBL 0.81 240 eP 33 06.35 -0.2
 S 33 19.00
 DOG 0.84 277 eP 33 07.42 0.3
 SEG 0.86 303 eP 33 07.37 -0.1
 S 33 20.30
 MDN 0.87 226 eP 33 08.30 0.6
 PAG 0.90 276 ePd 33 08.25 0.1
 S 33 21.60
 DTMT 0.90 220 eP 33 08.04 -0.2
 eS 33 28.57
 DSVT 0.92 221 eP 33 15.06 6.6X
 eS 33 34.98
 FDF 1.25 198 ePd 33 13.07 -1.1
 S 33 30.90
 MVM 1.37 186 iPc 33 14.92 -1.0
 S 33 33.30
 BIM 1.44 192 iPd 33 18.99 2.1
 S 33 35.00
 MGH 1.61 299 eP 33 19.90 0.6
 eS 33 41.17
 S.D. = 1.0 on 11 of 12 obs.

JAN 24, 1989 19h 51m 15.64±0.62s
 13.324 N ±10.1km 89.510 W ± 7.6km
 DEPTH = 73.5 ± 4.7 km
 4.6mb (3 obs.)

EL SALVADOR (73)

Felt (111) at San Salvador.

SSS 0.47 41 iPd 51 27.60 -1.1
 eS 51 37.60
 YUP 0.92 342 iPc 51 34.40 0.7
 REC 1.48 318 iPc 51 41.20 0.2
 TER 1.50 311 ePd 51 40.10 -1.1
 GCG 1.60 322 iPc 51 44.80 2.2
 S 52 05.20
 MMG 1.66 317 ePc 51 43.80 0.3
 FUG 1.71 311 iPc 51 43.50 -0.6
 BVA 1.73 321 iPd 51 45.00 0.5
 MRL 1.74 354 iPd 51 46.20 1.7
 LHG 1.97 305 iPd 51 46.50 -1.1
 JAT 2.29 296 ePd 51 52.00 0.1
 SOG2 2.43 305 ePc 51 53.50 -0.6
 SOG 2.48 306 iPc 51 54.80 -0.1
 KKG 2.95 304 iPc 52 00.25 -1.0
 TPX 3.10 301 iP 52 08.00 4.8X
 SCX 4.54 319 (P) 52 55.50 32.1X
 SJS 6.32 122 iPc 52 50.50 2.2
 LCR2 6.46 123 iP 52 48.70 -1.8
 JCR 7.15 118 iPc 52 35.20 -24.6X
 LRM 37.76 334 eP 58 28.10 1.7
 FFC 42.45 349 iPc 59 05.30 0.6
 0.5s 6.00nm 4.7mb
 EDM 44.08 340 ePc 59 18.00 0.0
 SCH 45.06 18 eP 59 25.00 -0.8
 YKA 52.26 346 P 00 21.00 -0.3
 FRB 52.46 12 eP 00 21.00 -1.7
 INK 61.78 343 eP 01 28.00 -0.6
 MBC 64.89 352 eP 01 48.00 -0.8
 0.7s 7.00nm 4.7mb
 APO 85.00 29 eP 03 43.50 -0.4
 0.5s 1.50nm 4.3mb
 WB5 137.54 255 ePKP 10 35.00 1.3
 WRA 137.56 255 PKPd 10 35.30 1.5
 0.6s 1.80nm
 GKN 138.53 8 PKP 10 35.40 -0.1
 GUN 138.77 6 PKP 10 36.30 0.1
 0.6s 7.00nm
 KKN 138.82 7 PKP 10 36.00 -0.2
 DMN 138.98 7 PKP 10 36.30 -0.2
 PKI 139.05 7 PKP 10 36.20 -0.5
 0.6s 4.00nm
 HYB 147.26 21 ePKP 10 51.10 0.4
 GBA 150.28 26 PKPd 10 55.10 -0.2
 0.8s 3.40nm
 S.D. = 1.1 on 34 of 37 obs.

? JAN 24, 1989 19h 55m 58.51±2.56s
 35.095 N ±28.7km 30.954 E ±18.3km
 DEPTH = 10.0km (geophysicist)

EASTERN MEDITERRANEAN SEA (371)

PPCY 1.16 100 eP 56 21.00 0.8
 ELL 1.86 333 ePn 56 42.00 11.3X
 CSS 1.96 93 eP 56 32.00 -0.1
 BCK 2.38 353 ePn 56 39.60 1.4
 IKL 2.50 62 ePn 56 38.50 -1.3
 CIN 3.41 318 ePn 56 52.00 -0.7
 iSg 57 30.00
 S.D. = 1.6 on 5 of 6 obs.

JAN 24, 1989 20h 03m 39.00±0.29s
 42.226 N ± 2.2km 142.691 E ± 2.2km
 DEPTH = 50.3 ± 2.7 km
 5.6mb (77 obs.) 5.4MsZ (12 obs.)

HOKKAIDO, JAPAN REGION (224)

Minor damage (IV JMA) at Urakawa. Felt (III JMA) at Hiroo, Obihiro, Iwamizawa and Tomokamai; (II JMA) at Kushiro, Sopporo and Muroran. Also felt (III JMA) at Hachinohe, (II JMA) at Miyako and Morioka and (I JMA) at Aomori, Honshu.
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 11S, 24C
 Centroid Location:
 Origin Time 20:03:39.9 0.3

Lat 42.47N 0.03 Lon 142.01E 0.05
 Dep 55.5 2.6 Half-duration 2.2
 Moment Tensor; Scale 10**17 Nm
 Mrr= 1.54 0.07 Mtt=-1.56 0.10
 Mff= 0.03 0.12 Mrt= 0.10 0.10
 Mrf=-0.93 0.10 Mtf= 1.16 0.11

Principal Axes:

T Vol= 2.03 Plg=60 Azm=105
 N 0.22 28 305
 P -2.25 8 210

Best Double Couple: Mo=2.1*10**17
 NP1: Strike=271 Dip=44 Slip= 47
 NP2: 143 59 124

URA 0.09 136 iP+ 03 45.20 -1.2
 S 03 50.00
 HOO 0.47 83 eP 03 00.00 -49.9X
 OBI 0.80 29 iPd 03 54.50 0.4
 S 04 06.20
 MRR 1.27 275 iPd 04 01.50 0.8
 iS 04 17.80
 SAP 1.30 310 iP 04 02.00 0.9
 iS 04 19.80
 KUS 1.47 59 iPd 04 02.50 -0.9
 iS 04 20.70
 HAK 1.50 255 iPd 04 04.50 0.6
 S 04 23.70
 HAC 1.91 208 iPd 04 09.50 -0.2
 S 04 33.00
 AOM 2.01 226 P 04 11.70 0.6
 eS 04 36.00
 AOMJ 2.41 227 P 04 17.40 0.6
 MIY 2.64 192 iPd 04 20.30 0.4
 iS 04 49.40
 MRK 2.78 205 iPd 04 23.70 1.7
 S 04 55.70
 OFUJ 3.24 194 iP+ 04 27.80 -0.8
 eS 05 06.10
 YAMJ 4.53 208 iP+ 04 47.00 0.3
 NIJ 5.73 211 iP+ 05 03.80 0.1
 KAKJ 6.32 199 iP+ 05 08.40 -3.5X
 S 06 19.10
 MAT 6.65 213 iPd 05 16.70 0.1
 eS 06 30.00
 MTMJ 6.78 215 iP+ 05 19.10 0.6
 CHJJ 6.80 206 iP+ 05 16.60 -2.1
 S 06 30.00
 IIDJ 7.70 211 P 05 30.50 -0.7
 TSRJ 8.48 220 P 05 43.10 1.2
 WKYJ 9.75 217 P 05 57.50 -1.9
 MDJ 9.83 288 eP 06 02.30 1.8
 Z 20s 12.40um
 N 11s 8.50um
 eP 06 10.00
 eS 06 15.00
 S 07 55.00
 SS 08 10.00
 YONJ 10.06 229 P 06 04.60 0.9
 TKSJ 10.68 222 P 06 11.20 -0.8
 SHNJ 12.18 232 eP 06 33.50 1.3
 CN2 12.72 283 Pc 06 41.00 1.6
 Z 16s 14.70um
 N 10s 7.50um
 sP 06 48.00
 eS 09 00.00
 SNY 14.22 275 Pd 07 00.00 1.0
 Z 27s 9.10um
 N 11s 2.60um
 E 10s 1.90um
 sP 07 10.00
 S 09 40.00
 DL2 16.34 265 P 07 26.00 -0.4
 Z 17s 3.60um
 E 15s 5.30um
 BJI 20.07 273 eP 08 07.50 -3.2X
 Z 16s 5.60um 5.0MsZ X
 N 13s 3.00um
 eS 11 42.00
 eScP 15 58.00
 SSE 20.46 244 Pc 08 12.20 -2.6
 1.0s 0.22nm 2.4mb X
 N 14s 3.40um
 E 14s 4.90um
 pP 08 24.00 51kmX
 eS 11 55.00
 sS 12 12.00
 TIA 20.66 262 P 08 13.70 -3.2X

24d 23h

JAN 24, 1989 23h 24m 24.41±0.48s
8.568 N ± 7.0km 82.831 W ± 5.2km
DEPTH = 31.3 ± 3.0 km
4.7mb (6 obs.)

PANAMA-COSTA RICA BORDER REGION (80)
MD 4.7 (HDC). Minor damage (V)
at Canoa, Costa Rica. Felt (V)
at David, Panama; (III) at Perez
Zeledan and in the Central
Valley, Costa Rica.

PBC 0.25 234 iPd 24 31.70 0.3
CTCR 0.33 12 iP 24 31.50 -1.1
DVD 0.40 109 iPc 24 33.50 0.1
i 24 39.00
i 24 48.00
TIG 0.65 315 iPc 24 37.30 -0.1
S 24 51.50
CDM 1.35 317 iPc 24 47.50 -0.1
QPS 1.53 303 iPc 24 49.40 -0.5
S 25 12.60
IRZ2 1.75 323 iPc 24 53.70 0.4
HDC2 1.93 319 iPc 24 56.00 0.2
S 25 23.50
PTCR 1.99 308 iPc 24 56.40 -0.3
POA2 2.13 319 iP 24 58.90 0.1
EPA 2.24 309 ePc 25 00.30 0.2
CAO 2.51 297 ePc 25 03.90 -0.1
JUD 3.11 301 iPc 25 14.10 1.5
UPA 3.28 83 iPc 25 17.00 2.1
RIN3 3.34 312 iPc 25 17.30 1.4
III 18.87 303 (P) 28 49.00 4.0X
TPP 21.16 84 eP 29 14.95 5.5X
JSC 25.63 3 P 29 56.50 3.6X
ARE 27.28 156 eP 30 14.00 5.4X
ZOBO 28.65 149 eP 30 20.00 -1.3

Z 24s 0.45um 4.0mszx
S 36 00.00
LR 41 18.00

LPB 28.89 150 eP 30 32.00 8.8X
eLR 41 36.00

CNCB 29.18 150 eP 30 30.00 4.0X
FVM 30.08 348 P 30 32.80 -0.4

1.3s 26.32nm 4.9mb
ALO 34.03 324 eP 31 08.00 -0.1
1.0s 3.75nm 4.3mb

GOL 36.98 331 P 31 33.00 -0.1
1.0s 22.50nm 5.0mb
PLM 39.92 313 P 31 56.70 -1.0

BW06 41.36 330 P 32 10.00 0.5
1.0s 10.00nm 4.5mb

RSON 43.11 350 P 32 22.50 -0.9
0.9s 10.92nm 4.6mb

LRM 45.01 331 eP 32 39.80 0.7
SES 47.82 336 eP 33 01.00 0.0
FFC 48.51 345 eP 33 06.00 -0.2

0.8s 13.00nm 5.0mb
EDM 50.91 337 ePc 33 23.50 -1.2
FRB 56.03 8 eP 34 10.00 7.8X

YKA 58.57 343 P 34 19.90 -0.4
INK 68.26 342 eP 35 35.00 11.0X
MBC 70.49 351 eP 35 38.00 0.4

KHC 87.76 41 eP 37 21.10 9.4X
GUN 142.13 16 PKP 43 52.00 -4.5X
CHG 152.74 356 ePKP 44 29.00 15.8X

S.D. = 0.8 on 28 of 39 obs.

? JAN 24, 1989 23h 26m 34.80±5.38s
35.355 N ± 38.8km 21.571 E ± 36.2km
DEPTH = 33.0km (normal)

MEDITERRANEAN SEA (400)
ML 3.4 (ATH).

VAM 2.15 88 ePb 27 13.50 4.5X
ATH 3.13 33 ePb 27 24.00 1.1

NPS 3.31 90 ePb 27 31.50 6.0X
NEO 4.16 18 ePn 27 36.30 -1.3

KAP 4.58 86 ePn 27 43.50 0.0
KZN 4.95 2 ePn 27 48.30 -0.5

OHR 5.78 354 ePn 28 01.00 0.5
KSL 6.56 81 ePn 28 11.00 -0.5

S.D. = 1.1 on 6 of 8 obs.

* JAN 25, 1989 00h 07m 25.85±1.04s
41.460 N ± 12.6km 20.088 E ± 8.3km
DEPTH = 10.0km (geophysicist)

ALBANIA (391)

ML 3.0 (SKO). MD 3.1 (TTG).

OHR 0.64 123 iPg 07 37.70 -1.0
iSg 07 47.20

QLC 0.80 309 ePg 07 40.40 -1.1
eSg 07 54.20

SKO 1.13 63 iPg 07 47.50 0.4
iSg 08 02.00

PVY 1.14 356 ePg 07 46.20 -1.0
eSg 08 04.50

TTG 1.15 328 ePg 07 46.50 -0.8
eSg 08 05.20

BDV 1.25 312 ePg 07 49.40 0.3
eSg 08 11.00

HCY 1.54 310 ePg 07 54.20 0.8
eSg 08 18.00

BRY 1.84 322 ePn 07 59.40 1.5
eSn 08 26.00

VAY 1.87 93 ePn 07 59.00 0.8
eSn 08 02.40 3.2X

PLE 1.94 345 ePn 08 29.20
eSn 08 29.20

S.D. = 1.1 on 9 of 10 obs.

? JAN 25, 1989 01h 33m 06.73±2.03s
47.463 N ± 43.7km 152.338 E ± 26.0km
DEPTH = 33.0km (normal)

4.8mb (7 obs.)
KURIL ISLANDS (221)

INK 41.34 33 eP 40 50.50 0.1
YKA 50.67 37 P 42 04.30 -0.1

GUN 54.42 274 P 42 33.10 -0.2
0.6s 6.00nm 4.8mb

KKN 54.90 274 P 42 37.10 0.4
0.6s 9.00nm 5.0mb

PKI 54.95 274 P 42 37.00 -0.2
0.5s 2.00nm 4.4mb

DMN 55.13 274 P 42 38.50 0.1
0.5s 6.00nm 4.9mb

GKN 55.20 275 P 42 38.70 -0.1
0.5s 5.00nm 4.8mb

HFS 67.60 339 eP 44 01.80 0.1
0.5s 4.00nm 4.8mb

NAO 67.66 341 P 44 02.00 -0.1
0.7s 2.20nm 4.4mb

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

% JAN 25, 1989 01h 49m 49.22±2.15s
36.262 N ± 18.8km 29.500 E ± 11.9km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

ELL 0.59 34 iPg 50 01.60 0.4
iSg 50 11.60

BCK 1.48 36 iPn 50 16.10 0.1
KHL 2.06 1 iPn 50 23.50 -0.8

IZM 2.78 321 ePn 50 35.00 0.4
IKL 3.38 89 ePn 50 43.00 -0.1

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

JAN 25, 1989 01h 55m 40.52±0.51s
43.982 N ± 4.8km 8.607 E ± 3.7km
DEPTH = 10.0km (geophysicist)

CORSICA (380)
ML 3.1 (GEN). 2.9 (LDG).

FIN 0.37 309 Pd 55 47.35 -0.7
S 55 51.20

GEN 0.49 28 P 55 48.64 -1.9
CKI 0.50 332 P 55 49.30 -1.4

eSg 55 55.40
IMI 0.52 262 Pc 55 51.20 0.1
S 55 58.33

ROB 0.62 301 Pd 55 51.81 -1.2
S 55 58.88

SAOF 0.76 271 Pg 55 55.44 0.1
Sg 56 06.15

AUTN 0.85 271 Pg 55 57.18 0.1
Sg 56 09.12

SBF 0.86 262 Pg 55 57.10 0.1
Sg 56 08.70

AURF 0.93 265 Pg 55 58.85 0.5
Sg 56 12.13

STV 0.96 286 P 55 58.84 0.0
S 56 11.11

TOUF 0.98 272 Pg 55 59.82 0.5
Sg 56 12.65

BOB 0.99 37 P 55 59.70 0.3
eSg 56 13.60

MVIF 1.05 266 Pg 56 01.23 0.7
Sg 56 15.55

DOI 1.11 299 P 56 00.80 -0.6
eSg 56 15.40

CALN 1.26 260 Pg 56 05.50 1.4
Sg 56 22.10

CVF 1.43 172 Pg 56 05.02 -1.5
Sg 56 23.07

BDI 1.44 86 P 56 06.80 0.1
FRF 1.48 254 Pn 56 06.20 -1.0

Pg 56 07.40
Sg 56 27.50

RSP 1.52 321 P 56 07.64 -0.2
MME 1.52 81 P 56 09.70 1.7

RRL 1.61 306 P 56 09.06 -0.2
LMR 1.65 248 Pn 56 08.30 -1.4

Pg 56 10.10
Sg 56 34.20

ORO 1.70 345 P 56 11.40 0.9
LRG 1.71 253 Pn 56 10.50 0.0

Pg 56 13.20
Sg 56 36.00

BNI 1.75 308 P 56 11.00 -0.2
eSn 56 33.50

LPG 2.01 320 Pn 56 16.90 1.7
LPL 2.03 320 Pn 56 16.90 1.5

BGF 4.81 304 Pn 56 55.20 0.4
S.D. = 1.0 on 28 of 28 obs.

JAN 25, 1989 02h 16m 00.97±0.76s
43.088 N ± 5.7km 13.323 E ± 9.0km
DEPTH = 10.0km (geophysicist)

CENTRAL ITALY (381)
MD 2.2 (SSO).

CIO 0.17 309 iPg 16 05.28 0.4
iSg 16 09.17

SSO 0.22 19 ePg 16 06.39 0.7
iSg 16 11.41

ALP 0.36 149 ePg 16 07.88 -0.5
iSg 16 13.89

ARV 0.50 326 P 16 10.30 -0.7
eSg 16 18.00

AOI 0.50 24 ePg 16 10.81 -0.4
iSg 16 19.50

SDI 1.43 165 P 16 27.50 0.5
S.D. = 0.8 on 6 of 6 obs.

JAN 25, 1989 02h 41m 39.67±1.00s
38.094 N ± 7.8km 73.544 E ± 7.6km
DEPTH = 132.5 ± 13.7 km

4.5mb (10 obs.)
TAJIK-XINJIANG BORDER REGION (719)

KSH 2.34 54 Pg 42 20.00 1.4
Sg 42 45.00

QUE 9.59 217 eP 43 57.50 1.6
NDI 9.87 161 eP 44 01.00 1.5

eS 45 47.00
MAIQ 11.35 265 eP 44 17.00 -2.0

eS 46 17.00
WMO 12.13 57 eP 44 27.20 -1.9

GKN 13.69 134 P 44 48.80 -0.8
0.5s 24.00nm 4.8mb

KKN 14.22 133 P 44 55.20 -1.2
0.5s 9.00nm 4.3mb

QMN 14.26 134 P 44 56.80 -0.1
0.5s 9.00nm 4.3mb

PKI 14.46 133 P 44 59.10 -0.5
0.4s 4.00nm 4.1mb

GUN 14.49 131 P 44 59.20 -0.7
0.5s 7.00nm 4.2mb

GTA 20.51 78 eP 46 10.70 1.6
GBA 24.64 171 P 46 57.00 7.8X

KJF 37.53 329 iP 48 42.00 0.1
0.6s 7.80nm 4.7mb

SUF 37.68 326 iP 48 43.50 0.3
0.4s 4.40nm 4.6mb

NUR 37.76 322 iP 48 44.00 0.1
HFS 43.09 321 eP 49 27.60 -0.1

0.5s 14.10nm 4.9mb
NAO 44.54 322 P 49 38.80 -0.5

0.5s 5.00nm 4.5mb
MBC 65.64 3 eP 52 11.00 0.1

0.6s 9.00nm 4.9mb

YKA	79.54	4	P	53	33.70	1.1
S.D. = 1.2 on 18 of 19 obs.						
JAN 25, 1989 03h 16m 57.79 ± 0.18s						
44.562 N ± 1.6km 6.891 E ± 1.9km						
DEPTH = 10.0km (geophysicist)						
FRANCE (538)						
ML 3.1 (LDG), 3.2 (GEN), MD 2.7 (STR).						
PZZ	0.16	111	Pc	17	02.37	0.8
DOI	0.26	103	P	17	03.50	0.2
			eSg	17	06.80	
RRL	0.37	348	Pd	17	05.22	-0.2
			S	17	10.09	
BNI	0.51	343	P	17	07.60	-0.6
			eSg	17	14.00	
TOUF	0.61	155	Pg	17	09.66	-0.5
RSP	0.64	24	P	17	10.78	0.0
			S	17	19.72	
AUTN	0.68	146	Pg	17	11.18	-0.3
			Sg	17	20.25	
MVIF	0.69	164	Pg	17	11.13	-0.4
			Sg	17	20.71	
AURF	0.74	155	Pg	17	12.17	-0.3
			Sg	17	21.90	
SAOF	0.75	140	Pg	17	12.26	-0.2
			Sg	17	22.55	
ROB	0.75	110	Pc	17	12.52	0.0
SBF	0.80	151	Pg	17	13.20	-0.2
			Sg	17	24.40	
CALN	0.81	180	Pg	17	13.17	-0.4
GANF	0.90	232	Pg	17	14.38	-0.7
LSD	0.92	12	P	17	15.31	-0.2
			S	17	28.15	
LPG	0.94	354	Pg	17	15.70	-0.2
			Sg	17	28.60	
LPL	0.96	353	Pg	17	16.10	-0.1
			Sg	17	29.10	
IMI	0.97	132	Pc	17	16.24	0.0
			S	17	29.22	
CKI	1.00	97	P	17	16.90	0.1
FIN	1.01	110	Pc	17	16.85	0.0
			S	17	30.24	
FRF	1.02	190	Pg	17	16.50	-0.5
			Sg	17	29.60	
VILF	1.10	230	Pg	17	18.96	0.4
TAVF	1.12	213	Pg	17	18.77	0.0
LRG	1.17	199	Pg	17	19.00	-0.6
			Sg	17	32.60	
LMR	1.26	193	Pn	17	20.50	-0.7
			Pg	17	21.20	
			Sg	17	35.90	
ORO	1.31	36	P	17	21.10	-1.0
			eSg	17	37.30	
ORX	1.32	35	P	17	21.19	-1.1
			S	17	37.91	
PUYF	1.34	220	Pg	17	23.00	0.5
			Sg	17	40.26	
TREF	1.43	230	Pg	17	25.76	1.9
PRAF	1.45	239	Pg	17	25.25	1.1
			Sg	17	44.46	
DIX	1.56	13	ePd	17	27.10	1.2
GELF	1.58	222	Pg	17	27.19	1.2
			Sg	17	46.77	
BOB	1.84	83	P	17	32.30	2.6
VAI	1.86	45	P	17	29.90	0.0
			eSg	17	53.20	
TMA	2.08	41	ePd	17	33.00	-0.4
CVF	2.46	144	Pn	17	37.89	-0.7
VDL	2.64	42	ePc	17	41.40	0.0
LLS	2.74	32	ePc	17	43.70	0.9
SMF	2.99	315	Pn	17	46.50	0.4
			Pg	17	53.40	
			Sg	18	32.10	
OSS	3.12	46	ePd	17	48.50	0.4
LBF	3.17	321	Pn	17	48.90	0.3
			Pg	17	56.60	
			Sn	18	26.40	
			Sg	18	36.50	
BSF	3.27	359	Pn	17	49.90	-0.3
AVF	3.33	313	Pn	17	51.20	0.2
			Pg	18	01.30	
			Sn	18	29.80	
			Sg	18	44.80	
SLE	3.39	19	ePc	17	51.50	-0.4
LOR	3.44	323	Pn	17	52.60	0.1

			Pg	18	01.90	
			Sn	18	31.20	
			Sg	18	45.80	
SSF	3.44	318	Pn	17	52.90	0.4
			Pg	18	02.10	
			Sn	18	32.20	
			Sg	18	46.70	
CAF	3.46	278	Pn	17	51.80	-1.0
			Pg	18	02.00	
HAU	3.47	354	Pn	17	52.60	-0.3
MAF	3.47	300	Pn	17	53.30	0.4
BGF	3.47	307	Pn	17	53.10	0.2
			Pg	18	02.10	
			Sg	18	47.30	
TCF	3.72	299	Pn	17	56.70	0.1
CDF	3.86	4	Pn	17	57.70	-0.9
LPO	4.07	274	Pn	18	00.30	-1.2
LSF	4.14	296	Pn	18	02.30	-0.1
S.D. = 0.7 on 54 of 54 obs.						
? JAN 25, 1989 03h 50m 58.13 ± 0.89s						
25.181 S ± 47.4km 175.518 W ± 13.3km						
DEPTH = 33.0km (normal)						
5.1mb (3 obs.) 4.7Msz (1 obs.)						
SOUTH OF TONGA ISLANDS (175)						
RAR	15.01	78	P	54	30.00	0.5
			S	57	06.00	
DZM	16.82	277	iPc	54	54.00	1.2
BRS	28.48	259	eP	56	13.00	-39.4X
RMO	32.12	260	eP	57	25.00	0.2
CAN	32.13	243	eP	57	29.30	4.5X
BWA	32.48	245	eP	57	28.80	0.9
CTA	35.56	270	iPd	57	52.50	-2.0
			0.9s	25.21nm	5.1mb	
ASPA	45.86	261	iPc	59	18.60	-0.7
Z	18s				0.87um	4.7Msz
			LR	17	40.60	
WB5	46.38	266	eP	59	18.00	-5.4X
WRA	46.39	266	P	59	23.00	-0.5
			0.7s	3.90nm	4.5mb	
WARB	51.75	256	eP	59	51.00	-13.8X
NANU	62.47	257	eP	01	21.00	0.2
CHG	93.95	289	iPd	04	16.00	1.8
			1.0s	13.00nm	5.3mb	
YKA	99.80	24	P	04	49.80	10.0X
POO	115.89	279	ePKP	09	21.50	-18.3X
NAO	144.11	355	PKP	10	29.90	-1.6
			0.8s	1.90nm		
SLL	144.20	353	ePKP	10	29.00	-2.7X
			0.7s	5.30nm		
BBTK	152.17	309	ePKP	10	53.00	7.9X
MBH	152.69	286	iPKPd	10	56.00	10.1X
KSP	152.81	343	ePKP	10	54.30	8.8X
			e	11	05.60	
CLL	153.11	348	iPKPd	10	55.10	9.3X
			e	11	06.00	
			eSg	27	26.00	
BRG	153.33	347	e(PKP)	10	55.40	9.2X
			e	11	05.40	
MOX	153.99	350	e(PKP)	10	57.00	9.9X
PRU	154.03	345	ePKP	11	03.50	16.3X
KHC	155.06	346	PKP	11	05.40	16.8X
S.D. = 1.4 on 10 of 25 obs.						
? JAN 25, 1989 04h 25m 20.21 ± 1.26s						
50.293 N ± 23.4km 18.957 E ± 10.1km						
DEPTH = 10.0km (geophysicist)						
POLAND (548)						
ML 2.9 (KRA).						
KRA	0.68	110	iPc	25	33.70	0.1
			eSg	25	44.10	
SPC	1.39	142	iPn	25	45.60	-0.1
			iSg	26	05.60	
KSP	1.79	289	ePn	25	51.20	-0.1
			iPg	25	53.50	
			iS	26	17.70	
ZST	2.43	211	eP	26	12.10	11.6X
			i	26	32.30	
PSZ	2.45	165	eP	26	06.70	5.7X
SRO	2.52	190	eP	26	49.00	47.2X
			e	27	19.00	
PRU	2.86	266	ePg	26	14.00	7.4X
			Sg	26	49.50	
BRG	3.25	282	ePg	26	22.00	9.8X
			eSg	27	06.00	

KHC	3.68	254	ePg	26	18.50	0.1
			Sg	27	17.40	
S.D. = 0.2 on 4 of 9 obs.						
? JAN 25, 1989 05h 14m 53.89 ± 1.82s						
21.340 S ± 15.2km 67.159 W ± 26.6km						
DEPTH = 223.2 ± 14.8 km						
CHILE-BOLIVIA BORDER REGION (124)						
ANT	3.82	231	iP	15	55.00	0.1
CCH	4.05	14	iPc	15	57.00	-1.0
CNCB	4.57	350	iPc	16	05.50	0.8
LPB	4.86	349	iPc	16	09.30	1.1
			0.9s	87.39nm		
ZOBO	5.13	350	iPc	16	11.60	-0.1
ARE	6.35	319	eP	16	26.00	-1.0
			eS	17	37.00	
YKA	91.59	340	P	27	36.00	0.1
S.D. = 1.1 on 7 of 7 obs.						
% JAN 25, 1989 05h 59m 42.68 ± 3.50s						
44.515 N ± 15.8km 6.771 E ± 27.6km						
DEPTH = 10.0km (geophysicist)						
FRANCE (538)						
ML 2.0 (GEN).						
PZZ	0.24	92	P	59	48.40	0.6
			S	59	51.74	
RRL	0.41	1	P	59	51.26	0.2
			S	59	56.60	
STV	0.48	124	P	59	52.68	0.2
			S	59	59.19	
RSP	0.72	28	P	59	56.71	-0.3
ROB	0.82	105	P	59	58.33	-0.2
			S	00	01.21	
FIN	1.08	106	P	00	02.48	-0.5
S.D. = 0.5 on 6 of 6 obs.						
JAN 25, 1989 06h 51m 15.37 ± 1.30s						
22.725 N ± 8.8km 121.691 E ± 8.3km						
DEPTH = 9.7 ± 6.0 km						
4.3mb (3 obs.)						
TAIWAN REGION (243)						
TWG	0.58	280	iPd	51	27.40	0.3
			eS	51	33.90	
TWF1	0.72	330	iPd	51	28.30	-1.3
			eS	51	36.70	
TWD	1.35	356	eP	51	39.80	-0.4

25d 07h

YKA 84.13 23 P 03 49.50 1.9
S.D. = 1.1 on 26 of 30 obs.

& JAN 25, 1989 07h 03m 25.80s
63.540 N 150.054 W
DEPTH = 147.3km
CENTRAL ALASKA (1)
<AGS-P>

FBA 1.69 35 eP 03 57.24 -0.3
eS 04 20.06
GHO 1.85 163 iP 03 58.35 -1.1
iS 04 23.49
SML 1.91 155 iP 03 58.53 -1.6
iS 04 25.06
PME 1.98 166 eP 03 59.92 -0.9
eS 04 26.01
PLRM 2.00 167 eP 03 59.84 -1.3
eS 04 26.38
KNK 2.26 160 eP 04 02.45 -1.9
eS 04 31.56
TOA 2.29 127 iP 04 07.30 2.6
PMS 2.32 174 iP 04 03.87 -1.1
eS 04 32.64
CRP 2.48 204 eP 04 04.73 -2.5
PWL 2.81 163 eP 04 10.01 -1.2
eS 04 42.82
KLU 2.81 135 eP 04 14.91 3.7
GLI 3.01 151 eP 04 12.26 -1.4
iS 04 47.81
SLKM 3.04 182 eP 04 13.22 -1.0
eS 04 47.84
RDT 3.18 201 eP 04 15.09 -0.8
FID 3.26 147 eP 04 15.59 -1.4
eS 04 53.29
KNIM 3.39 160 eP 04 16.37 -2.2
eS 04 54.02

16 obs. associated

* JAN 25, 1989 07h 05m 09.61 ± 1.18s
6.001 S ± 21.9km 149.002 E ± 15.1km
DEPTH = 72.1 ± 10.1 km
4.3mb (2 obs.)

NEW BRITAIN REGION (192)

LAT 2.09 252 eP 05 44.00 0.8
RAB 3.63 60 iPd 06 04.40 -0.2
PMG 3.85 208 iPc- 06 07.00 -0.7
0.8s 358.21nm
eS 06 53.00
WB5 19.82 225 eP 09 36.00 -1.2
WRA 19.88 224 Pd 09 37.00 -0.8
0.4s 3.30nm 4.0mb
BRS 21.57 171 iP 09 56.00 1.0
ASPA 22.80 218 iPd 10 08.20 1.1
0.4s 10.00nm 4.6mb
Z 22s 0.10um 3.2MszX
eS 14 10.60
LR 17 59.90
S.D. = 1.3 on 7 of 7 obs.

? JAN 25, 1989 07h 12m 47.52 ± 1.12s
23.981 S ± 10.8km 69.937 W ± 14.4km
DEPTH = 33.0km (normal)

NORTHERN CHILE (123)
Felt (III) at Antofagasta.

ANT 0.52 302 iPd 12 58.40 0.0
iS 13 05.90
CNCB 7.37 15 eP 14 37.00 1.0
i 14 43.70
CCH 7.46 29 eP 14 44.00 6.8X
LPB 7.61 13 P 14 47.00 7.7X
1.0s 40.00nm 5.4mb
ARE 7.62 349 eP 14 35.00 -4.4X
eS 14 55.00
ZOBO 7.86 13 P 14 42.00 -1.0
TCA 8.73 148 ePd 14 54.50 0.0
S.D. = 1.4 on 4 of 7 obs.

? JAN 25, 1989 07h 18m 10.15 ± 6.52s
9.239 S ± 58.4km 120.398 E ± 30.5km
DEPTH = 217.5 ± 25.0 km
4.8mb (4 obs.)

SUMBA ISLAND REGION (287)

KNA 10.42 129 iPc 20 36.10 0.6

MTN 11.13 110 iPc 22 40.00
0.3s 89.00nm 5.6mb X
eS 22 52.00
eS 20 53.00 -0.9

MBL 11.86 183 eP 23 04.00
eS 21 22.00 0.8
NAMU 14.05 199 eP 23 55.00
eS 21 58.20 -0.2

WB5 17.15 130 iPd 25 17.00
WRA 17.17 130 Pd 21 58.50 -0.1
0.4s 6.70nm 4.4mb

WARB 17.86 161 iPc 21 52.60 -13.3X
ASPA 19.30 140 iPd 22 21.70 0.9
0.6s 26.00nm 4.9mb

OIS 21.68 123 iPd 22 45.20 0.8
0.4s 19.00nm 5.0mb

FORR 22.67 163 eP 22 53.00 -0.8
0.4s 10.00nm 4.7mb

BRS 35.48 125 iPd 24 47.30 -0.6
S.D. = 0.9 on 10 of 11 obs.

% JAN 25, 1989 08h 35m 03.84 ± 0.72s
43.415 N ± 5.2km 5.434 E ± 5.2km
DEPTH = 10.0km (geophysicist)

NEAR SOUTH COAST OF FRANCE (379)

MD 2.5 (STR).

GELF 0.03 189 Pg 35 05.47 -0.4
TREF 0.21 350 Pg 35 07.99 -0.5
PUYF 0.23 59 Pg 35 07.90 -0.8
PRAF 0.43 334 Pg 35 13.25 0.5
VILF 0.48 25 Pg 35 13.07 -0.6
TAVF 0.50 66 Pg 35 13.35 -0.6
Sg 35 21.07

GANF 0.68 30 Pg 35 17.86 0.6
CALN 1.11 72 Pg 35 25.14 0.4
Sg 35 41.80

MVIF 1.34 68 Pn 35 28.76 0.2
Sg 35 48.08

TOUF 1.45 65 Pn 35 30.36 0.1
Sg 35 50.84

AURF 1.45 70 Pn 35 30.58 0.3
Sg 35 50.79

AUTN 1.56 67 Pn 35 32.58 0.7
Sg 35 54.67

SAOF 1.64 69 Pn 35 32.85 0.0
S.D. = 0.6 on 13 of 13 obs.

& JAN 25, 1989 09h 30m 56.93s
38.459 N 118.328 W
DEPTH = 6.9km

CALIFORNIA-NEVADA BORDER REGION (40)

<REN>. MD 3.5 (REN).

MNA 0.14 101 iP 30 59.60 -0.4
KVN 0.62 17 iP 31 08.20 -1.1
SVP 0.85 151 iP 31 12.60 -1.2
TNP 0.95 113 iP 31 15.40 -0.1
MZP 1.06 135 iP 31 16.55 -0.9
PPK 1.08 162 eP 31 17.21 -0.5
MGM 1.21 147 eP 31 19.17 -0.8

LCH 1.34 156 eP 31 21.65 -0.3
GMN 1.43 144 iP 31 23.14 -0.5
HCR 1.50 98 eP 31 23.80 -0.8
GVN 1.65 151 iP 31 26.25 -0.3

CMB 1.67 256 eP 31 27.10 0.3
KRNA 1.70 114 eP 31 26.31 -1.0
BMTN 1.77 131 eP 31 27.60 -0.9

MCA 1.99 155 eP 31 30.90 -0.5
YMT5 2.15 136 eP 31 33.60 -0.3
BGB 2.19 130 eP 31 33.70 -0.7

YMT4 2.19 137 eP 31 33.91 -0.5
YMT6 2.21 136 eP 31 33.83 -0.8
GLR 2.22 124 eP 31 34.00 -0.9

YMT3 2.26 137 eP 31 34.27 -1.1
PANV 2.28 154 eP 31 35.10 -0.6
TPU 2.28 111 eP 31 34.90 -0.9

GMR 2.31 118 eP 31 35.50 -0.7
LSM 2.37 136 eP 31 36.40 -0.5
MTI 2.53 107 eP 31 37.40 -1.9

SPRG 2.67 131 eP 31 40.20 -1.0
ORV 2.70 295 eP 31 40.60 -1.0
PRN 2.80 111 eP 31 41.64 -1.5

NOP 2.90 143 eP 31 43.80 -0.7
DLM 2.96 106 eP 31 43.80 -1.6

31 obs. associated

% JAN 25, 1989 10h 03m 48.86 ± 0.90s
40.055 N ± 8.3km 28.193 E ± 7.4km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

KCT 0.23 33 iPg 03 53.70 -0.1
EDC 0.39 319 iPg 03 56.00 -0.8
eSg 04 02.00

DST 0.56 143 ePg 03 59.60 -0.7
eSg 04 08.60
YLV 1.04 60 iPn 04 09.20 0.7

EZN 1.45 262 ePn 04 16.00 0.9
S.D. = 1.1 on 5 of 5 obs.

JAN 25, 1989 10h 14m 33.48 ± 0.15s
27.985 S ± 2.9km 26.734 E ± 3.3km
DEPTH = 5.0km (geophysicist)

5.5mb (48 obs.) 4.4Msz (1 obs.)

REPUBLIC OF SOUTH AFRICA (584)

Minor damage in the Welkom area.
Also felt by people in high-rise
buildings at Durban.

SEK 0.86 113 iPc 14 50.40 -0.1
BFS 1.08 2 iPd 14 53.50 -0.9

PRY 1.24 32 iPc 14 57.20 0.1
KIM 1.88 246 iPd 15 07.00 0.2
KSR 2.12 4 iPd 15 10.60 0.4

BPI 2.14 33 iPc 15 10.00 -0.5
FRS 2.15 215 iPd 15 14.30 3.8X
EVA 2.55 55 iPc 15 11.20 -5.2X

0.5s 267.61nm
S 15 47.00
SLR 2.63 32 iPd 15 17.50 0.0

0.6s 1420.00nm
S 15 48.00
MDL 3.26 147 eP 15 27.00 0.6

BFT 3.74 53 iPd 15 32.20 -1.1
JOZ 4.77 85 iPc 15 38.50 -9.2X
0.9s 554.62nm
S 16 20.00

GRM 5.31 181 iPc 15 54.00 -1.5
0.6s 1413.33nm 6.8mb X
PSR 6.02 199 iPd 16 04.50 -0.8

POF 6.12 255 iPc 16 05.10 -1.7
S 17 09.00
SUR 6.74 228 iPd 16 15.50 -0.3

0.7s 2698.63nm 7.4mb X
S 17 28.50

BUL 7.99 13 iPn 16 29.00 -4.2X
iSn 17 55.00
iSg 18 40.00

CER 8.35 228 iPc 16 33.00 -5.1X
S 18 03.00

TUH 8.41 229 iPc 16 35.00 -3.9X
S 17 58.50
BLE 9.11 228 iPd 16 45.00 -3.5X

S 18 21.00
WIN 10.25 300 iPc 17 02.00 -2.5X
1.0s 1030.00nm 7.2mb X
S 18 56.50

LSZ 12.72 6 iPc 17 33.00 -5.0X
e 18 16.50
iSn 19 49.00

iSg 21 46.50
SONG 13.53 26 iPc 17 46.00 -2.8X
iSn 20 05.40

iSg 21 29.20
PTZ 14.32 18 iPd 17 53.20 -6.0X
i 18 05.30

iSn 20 25.50
CLK 14.43 34 iPn 17 55.90 -4.7X
iSn 20 31.40

iLR 21 50.90
KMZ 14.48 356 iPd 17 56.00 -5.3X
i 19 24.00
iSn 20 29.00

AVY 21.25 69 eP 19 22.86 -0.2
LWI 25.68 5 iPd 20 06.50 0.1

LEGH 42.34 318 eP 22 30.50 0.3
SHGH 42.48 318 eP 22 30.00 -1.4
KOGH 42.73 318 eP 22 33.50 0.0

KUK 42.88 318 eP 22 34.00 -0.7
KIC 45.71 314 Pd 22 56.38 -1.1

LIC	0.9s	171.00nm	6.0mb	SMF	77.12	344 eP	26 29.00	-0.4	0.9s	11.00nm	5.3mb			
	45.79	313 Pd	22 56.80	-1.3		48.10nm		5.6mb	WRA	95.36	116 P	28 04.00	3.5X	
TIC	1.0s	123.00nm	5.9mb	SLE	77.17	347 ePc	26 30.10	-0.4	0.8s	1.70nm	4.6mb			
	46.10	313 Pd	22 59.78	-0.8	TCF	77.19	343 eP	26 29.80	-0.1	DAG	108.15	350 iPd	diff 28 50.00	-6.5X
KOD	0.9s	389.00nm	6.4mb	BGF	0.9s	29.40nm		5.4mb	0.5s	10.56nm	6.2mb			
SPA	62.06	60 eP	24 57.00	-1.1	1.2s	36.80nm		5.4mb	FVM	127.23	298 PKP	33 40.50	-0.3	
	62.17	180 ePd	24 57.00	-1.1	LSF	77.34	342 eP	26 30.40	-0.3	RSON	130.17	314 PKP	33 44.50	-1.5
BMA	1.1s	57.74nm	5.7mb	FEL	77.37	347 P	26 30.50	-0.4	YKA	137.23	335 PKP	33 49.00	-10.0X	
		e	25 36.20		AVF	77.37	344 eP	26 30.60	-0.2	INK	137.97	349 ePKP	33 48.00	-12.2X
GBA	64.18	57 Pd	25 09.90	-1.8	1.2s	90.40nm		5.8mb	ALO	139.77	292 ePKP	34 00.50	-4.3X	
	1.1s	62.50nm	5.7mb	LBF	77.40	344 eP	26 30.20	-0.8	SES	141.06	317 ePKP	34 02.00	-4.5X	
POO	64.94	50 eP	25 15.50	-1.1	0.9s	21.90nm		5.3mb	EDM	141.34	322 ePKPd	34 00.00	-6.9X	
VAO	65.79	256 eP	25 21.60	-0.6	MOF	77.52	347 P	26 31.01	-0.7	BW06	141.86	305 PKP	34 01.50	-6.9X
TIO	66.96	329 iP	25 28.00	-1.5	BSF	77.57	346 P	26 31.37	-0.7	IMA	141.90	0 ePKP	34 05.70	-1.9
HYB	67.48	54 eP	25 32.00	-0.9	SSF	77.59	344 eP	26 31.50	-0.5	FBA	142.91	356 ePKP	34 05.30	-3.9X
OHR	68.97	355 iP	25 42.60	0.9	0.9s	21.20nm		5.3mb	0.9s	10.40nm				
	1.2s	0.26nm	3.3mb	X	KHC	77.66	351 iPd	26 33.00	0.6	LRM	143.29	310 ePKP	34 07.90	-2.9X
AVE	69.03	330 iP	25 42.00	-0.2	0.9s	12.00nm		5.0mb	MSU	144.33	298 PKP	34 11.60	-1.2	
VAY	69.06	357 iP	25 42.70	0.5	LOR	77.69	344 eP	26 32.00	-0.6	DUG	144.64	301 PKP	34 11.80	-1.3
QUE	69.44	37 eP	25 45.50	0.5	0.9s	27.80nm		5.4mb	TTA	145.01	2 ePKP	34 12.90	0.0	
SKO	69.78	356 iP	25 46.80	0.2	WET	77.77	351 iPc	26 33.70	0.7	TOA	145.56	354 ePKP	34 14.10	0.2
	1.0s	60.00nm	5.7mb	HAU	1.2s	26.00nm		5.2mb	PMR	146.28	356 ePKP	34 15.00	0.0	
AFC	70.85	335 e(P)	25 53.50	0.1	77.83	346 eP	26 32.90	-0.4	DPW	146.36	316 PKP	34 16.50	0.8	
MAIO	70.99	28 eP	25 53.00	-1.2	77.93	356 eP	26 33.60	-0.1	GLA	146.63	288 ePKP	34 18.00	1.5	
EPRU	71.25	333 e(P)	25 55.00	-0.7	1.0s	43.00nm		5.5mb	SVW	146.84	2 ePKP	34 18.50	2.5X	
SBA	71.78	172 Pc	26 00.00	1.6	e	26 33.90			TPC	147.66	290 ePKP	34 20.00	1.8	
ECHE	72.02	338 e(P)	26 00.80	0.6	CDF	78.02	347 P	26 34.04	-0.4	BAR	148.17	288 ePKP	34 23.00	4.0X
CVF	72.11	346 P	26 00.19	-0.5	MFF	78.12	341 eP	26 35.00	0.1	GSC	148.25	293 ePKP	34 23.00	3.9X
MLR	73.13	359 iPd	26 07.00	0.3	1.1s	126.90nm		5.9mb	TNP	148.32	298 PKP	34 23.80	4.5X	
BRD	73.15	0 ePc	25 56.50	-10.2X	IPM	78.37	78 ePd	26 37.20	0.2	PLM	148.34	289 ePKP	34 23.00	3.6X
LMR	73.36	345 eP	26 07.50	-0.5	0.9s	68.10nm		5.7mb	RMW	148.73	317 PKP	34 19.90	0.4	
	0.9s	19.60nm	5.2mb	PRU	78.38	352 P	26 36.80	0.6	MCW	148.75	320 PKP	34 24.00	4.6X	
VR1	73.50	360 ePd	26 09.00	0.3	GWf	78.50	347 P	26 36.97	0.0	RVR	148.76	290 ePKP	34 24.00	4.2X
LRG	73.51	345 eP	26 08.60	-0.3	GRF	78.55	350 iPd	26 37.60	0.3	KVN	148.85	300 PKP	34 21.30	1.2
	0.9s	30.70nm	5.4mb	GKN	0.9s	53.00nm		5.6mb	CLC	148.86	294 ePKP	34 24.00	4.0X	
FRF	73.54	345 eP	26 08.50	-0.6	1.1s	85.00nm		5.7mb	LON	149.06	316 PKP	34 20.20	0.2	
	0.9s	22.90nm	5.2mb	DMN	78.61	50 Pd	26 37.50	-0.7	SBB	149.11	291 ePKP	34 25.00	4.5X	
SBF	73.65	346 eP	26 09.20	-0.6	1.1s	85.00nm		5.7mb	PGC	149.12	320 ePKP	34 26.00	6.1X	
	0.9s	42.50nm	5.5mb	PKI	78.67	50 Pd	26 38.00	-0.7	GMW	149.28	318 PKP	34 21.50	1.3	
CALN	73.67	345 P	26 09.89	-0.1	1.0s	59.00nm		5.6mb	MWC	149.32	291 ePKP	34 25.00	4.0X	
AURF	73.70	346 P	26 09.94	-0.2	78.86	51 Pd	26 38.80	-1.0	PAS	149.42	290 ePKP	34 26.00	5.2X	
SAOF	73.75	346 P	26 10.04	-0.2	1.1s	83.00nm		5.7mb	SHW	149.57	315 PKP	34 22.80	1.9	
MVIF	73.75	345 P	26 10.28	-0.2	KKN	78.91	50 Pd	26 39.30	-0.7	ISA	149.58	293 ePKP	34 24.00	2.9X
AUTN	73.78	346 P	26 09.59	-1.2	KSP	79.02	353 eP	26 40.00	0.2	KDC	150.25	359 ePKP	34 26.70	5.4X
TOUF	73.84	345 P	26 10.96	-0.1	HOF	79.06	350 iPc	26 40.50	0.5	FR1	150.43	296 ePKPd	34 28.50	6.3X
GUD	74.06	336 e(P)	26 12.00	-0.3	1.0s	16.00nm		5.0mb	e	34 34.70				
PTJ	74.18	352 eP	26 13.50	0.7	BRG	79.32	352 iP	26 42.20	0.8	e	34 57.40			
CEY	74.22	351 eP	26 14.00	1.0	1.1s	21.00nm		5.1mb	CMB	150.79	299 ePKPd	34 29.80	7.0X	
NDI	74.24	45 iPc	26 14.00	0.6	GUN	79.39	51 Pd	26 42.40	-0.4	e	34 38.10			
EPLA	74.27	334 e(P)	26 13.50	0.1	MOX	79.42	350 iPc	26 42.50	0.5	SYP	150.90	291 ePKP	34 20.00	-3.2X
VOY	74.58	351 iP	26 15.60	0.4	1.4s	31.00nm		5.1mb	BCH	150.93	293 PKP	34 30.80	7.6X	
EPF	74.72	340 eP	26 15.70	-0.3	WLF	79.44	347 Pd	26 43.50	1.5	PHAM	151.12	294 PKP	34 30.00	6.6X
RBL	75.03	351 Pc	26 18.70	1.0	MEKA	79.45	114 eP	26 43.00	0.2	LBFM	151.13	306 PKP	34 30.20	6.7X
FV1	75.29	350 Pc	26 20.30	1.2	LPF	79.68	341 eP	26 42.90	-0.5	MIN	151.20	304 ePKP	34 30.40	6.9X
LPG	75.36	346 eP	26 19.70	-0.2	1.1s	48.80nm		5.4mb	PRI	151.30	295 ePKP	34 31.10	7.3X	
TMA	75.50	347 ePc	26 20.10	-0.5	CLL	79.87	351 iPc	26 46.20	1.9	ORV	151.33	302 ePKP	34 30.00	6.5X
KBA	75.68	351 iPd	26 22.10	0.5	1.5s	37.00nm		5.1mb	e	34 37.90				
	1.0s	43.00nm	5.5mb	LDF	79.94	342 eP	26 44.10	-0.7	LLA	151.46	296 ePKP	34 31.70	7.9X	
VDL	75.75	348 ePc	26 22.10	0.1	0.8s	18.80nm		5.1mb	e	34 40.00				
DIX	75.77	346 ePc	26 22.10	-0.1	GRR	79.95	342 eP	26 44.30	-0.5	ARN	151.81	297 PKP	34 32.50	8.1X
PSZ	75.80	355 eP	26 22.00	-0.1	0.9s	42.50nm		5.4mb	WDC	151.82	304 ePKPd	34 30.70	6.5X	
OSS	75.82	348 ePc	26 22.70	0.3	DOU	80.18	346 P	26 46.80	0.8	PRS	151.84	295 ePKP	34 32.40	8.0X
OGA	75.84	349 eP	26 23.00	0.5	FLN	80.19	342 eP	26 45.30	-0.8	S.D. = 0.8 on 157 of 208 obs.				
LBL	75.94	343 P	26 23.06	0.2	1.1s	24.40nm		5.1mb	JAN 25, 1989 10h 18m	36.94 ± 2.53s				
CAF	75.97	342 eP	26 22.90	-0.2	MEM	80.37	347 Pc	26 48.40	1.4	41.796 N ± 7.1km	144.290 E ± 7.3km			
	0.9s	57.90nm	5.7mb	SNF	80.64	346 Pc	26 49.80	1.3	DEPTH = 24.3 ± 18.5 km					
LPO	75.99	342 eP	26 22.80	-0.3	SHL	82.22	56 iP	26 57.60	0.1	4.9mb (23 obs.)	4.7Msz (1 obs.)			
	0.8s	21.40nm	5.3mb	CHTO	83.90	65 iP	27 07.00	1.0	HOKKAIDO, JAPAN REGION				(224)	
LLS	76.21	348 ePc	26 24.10	-0.5	1.0s	22.50nm		5.4mb	SAP	2.53	301 eP	19 24.00	6.7X	
LFF	76.35	341 eP	26 24.80	-0.4	86.30	253 Pd	27 19.90	1.1	eS	19 53.00				
	1.0s	76.00nm	5.8mb	LPB	86.53	253 iPc	27 21.00	1.2	AOMJ	3.20	249 P	19 29.00	2.1	
RJF	76.47	342 eP	26 25.60	-0.3	1.0s	120.00nm		6.0mb	OFUJ	3.37	217 P	19 29.90	0.7	
	0.9s	36.00nm	5.5mb	ZOBO	86.67	253 P	27 21.00	0.3	S	20 08.70				
VKA	76.47	353 iP(P)	26 26.60	0.8	Z	20s	0.15um	4.4Msz	YAMJ	4.87	223 P	19 51.00	0.4	
PYM	76.49	343 P	26 26.27	0.2	EKA	86.85	343 P	27 21.00	1.1	NIJ	6.12	224 eP	20 08.10	0.0
SAX	76.51	348 ePc	26 26.20	-0.2	1.9s	119.20nm		5.8mb	KAKJ	6.44	211 P	20 11.00	-1.6	
PLDF	76.54	344 P	26 26.07	-0.2	UPP	87.84	355 iP	27 24.70	0.2	eS	21 20.10			
AGO	76.74	343 P	26 27.63	0.3	NUR	88.18	359 eP	27 27.00	0.9	MAT	7.06	224 iPc	20 21.30	-0.1
ZLA	76.91	347 ePc	26 28.90	0.6	NRA0	89.27	353 P	27 33.40	2.0	eS	21 40.00			
MAF	77.04	343 eP	26 29.20	0.2	ARE	89.42	252 iPc	27 34.50	1.0	CHJJ	7.07	217 eP	20 20.70	-0.8
	1.2s	92.20nm	5.8mb	NAO	89.43	352 P	27 32.60	0.4	eS	21 38.70				
SPC	77.04	356 eP	26 30.00	0.9	1.0s	20.20nm		5.3mb	MTMJ	7.24	226 P	20 24.30	0.3	
FUR	77.06	349 iPd	26 29.60	0.5	SUF	90.39	360 iP	27 36.70	0.2	IIDJ	8.04	220 P	20 35.40	0.3
	1.0s	188.00nm	6.2mb	KJF	91.88	0 eP	27 44.00	0.7	eS	22 05.50				
BBS	77.07	347 P	26 29.33	0.1	ASPA	93.04	119 iPc	27 50.60	0.7					

DEPTH = 10.0km (geophysicist)																
4.7mb (8 obs.)																
CHAGOS ARCHIPELAGO REGION (426)																
GBA	20.29	26 P	01 57.50 -0.9	PMS	2.56	185 eS	52 25.75	NIIJ	0.89	43 P	49 14.50 -0.1					
	0.9s	4.10nm	3.8mb			eP	51 58.19 0.3			S	49 26.00					
POO	23.75	13 eP	02 28.50 -4.5X	KLU	2.72	146 eS	52 35.35	IIDJ	1.14	194 P	49 19.00 0.1					
BOM	23.89	10 e(P)	02 45.00 10.7X			eS	52 00.52 0.4			S	49 34.50					
		eS	07 08.00	PTE	2.93	180 eP	52 03.36 0.7	S.D. = 0.5 on 5 of 5 obs.								
HYB	24.17	24 eP	02 37.30 0.2	PWL	2.95	173 eP	52 03.83 0.7	JAN 25, 1989 19h 09m 31.74 ± 0.53s								
DMN	35.96	26 P	04 23.20 0.4			eS	52 38.13	42.156 N ± 3.8km 13.636 E ± 5.7km								
	0.9s	19.00nm	5.0mb	SPU	2.95	209 eP	52 04.62 1.5	DEPTH = 10.0km (geophysicist)								
PKI	36.06	26 P	04 23.70 0.0	SLKM	3.33	190 eP	52 08.54 0.4	CENTRAL ITALY (381)								
GKN	36.11	25 P	04 24.00 0.1			eP	52 09.46 0.7	MD 3.3 (SSO).								
	1.0s	20.00nm	4.9mb	13 obs. associated				AZI				0.22	222 Pd	09 37.10 0.5		
KKN	36.19	26 P	04 25.00 0.3	& JAN 25, 1989 17h 04m 12.60s				SDI				0.47	163 Pd	09 41.30 0.0		
	0.9s	16.00nm	4.9mb	46.680 N 121.686 W									eSg	09 47.00		
GUN	36.56	26 P	04 28.40 0.5	DEPTH = 4.3km				ALP				0.63	356 iPg	09 43.45 -1.0		
	0.9s	19.00nm	4.9mb	WASHINGTON (29)									iSg	09 54.06		
SHL	37.74	36 eP	04 42.20 4.5X	<SEA>. CL 2.7 (SEA).				MNS				0.75	288 P	09 47.00 0.6		
CHG	38.06	51 eP	04 40.40 0.2	WPW	0.10	79 iPd	04 14.57 -0.2	RMP				0.78	244 P	09 46.20 -0.7		
CHTO	38.06	51 eP	04 39.00 -1.2	GLK	0.13	155 iPc	04 15.29 0.0						eSg	09 58.30		
	1.0s	3.00nm	4.0mb	FMW	0.25	2 iPd	04 17.46 -0.3	DUI				0.79	129 P	09 47.10 0.0		
MAIO	41.71	349 eP	05 12.00 1.6	CWZ	0.29	230 iPd	04 18.66 0.1	RDP				0.79	240 P	09 46.80 -0.4		
		eS	11 34.00	RVC	0.33	323 iPd	04 18.87 -0.3						eSg	09 58.00		
CD2	48.91	41 eP	06 10.20 2.3	KOSW	0.41	238 iP	04 20.63 -0.2	CIO				1.10	341 ePg	09 51.32 -1.1		
WMO	51.37	18 eP	06 24.50 -2.0	LMW	0.42	269 iPc	04 20.90 -0.1						iSg	10 09.06		
GTA	52.60	30 eP	06 35.20 -0.7	TDL	0.49	228 iPd	04 21.86 -0.6	SSQ				1.15	352 e(Pg)	09 53.81 0.6		
XAN	54.27	42 P	06 48.30 0.1			eS	04 29.01						iSg	10 15.03		
VR1	62.60	328 ePc	07 46.00 -0.2	ASR	0.53	173 eP	04 22.81 -0.5	ASS				1.16	322 P	09 53.40 -0.1		
WRA	65.69	110 P	08 07.00 0.1	GHW	0.54	312 eP	04 22.70 -0.7	AOI				1.39	359 ePg	09 57.55 0.3		
	0.8s	4.90nm	4.7mb	SOSW	0.54	215 iP	04 22.46 -1.0						iSg	10 20.45		
WB5	65.71	110 eP	08 07.00 0.0	STD	0.58	220 iP	04 23.33 -0.8	ARV				1.44	339 P	09 59.00 1.2		
SUF	74.57	341 eP	09 00.00 -0.2	ESD	0.58	214 eP	04 23.46 -0.8						eSn	10 20.00		
HFS	77.53	335 eP	09 16.40 -0.5	YEL	0.58	217 iPd	04 23.56 -0.7	SFI				2.20	324 P	10 14.30 5.6X		
	0.4s	0.70nm	4.1mb	ERK	0.59	231 iP	04 23.48 -0.9	TRI				3.55	1 eP	10 40.10 12.1X		
S.D. = 1.0 on 19 of 22 obs.				NAC	0.59	84 eP	04 23.96 -0.5						i	11 37.90		
? JAN 25, 1989 15h 11m 19.90 ± 0.93s				HSR	0.61	214 eP	04 24.03 -0.8	PTJ				4.10	23 eP	10 49.50 13.7X		
44.552 N ± 8.2km 6.832 E ± 8.2km				CZM	0.62	247 eP	04 24.41 -0.5						i	11 46.90		
DEPTH = 10.0km (geophysicist)				SHW	0.62	218 iP	04 24.15 -0.8	KBA				4.93	358 e(Pn)	10 51.50 3.8X		
FRANCE (538)				JLK	0.62	211 iP	04 24.10 -1.0						i	11 10.80		
ML 2.1 (GEN).				APW	0.66	268 eP	04 25.08 -0.8						i	11 42.70		
FOUF	0.04	238 P	11 22.05 0.1	FL2	0.67	224 iP	04 24.97 -1.0	S.D. = 0.8 on 12 of 16 obs.								
		Sg	11 23.55	TWW	0.72	50 iPd	04 26.18 -0.9	JAN 25, 1989 21h 28m 49.53 ± 0.92s								
PZZ	0.20	104 P	11 24.63 0.3	GULW	0.76	175 eP	04 26.97 -0.8	43.391 N ± 5.4km 5.417 E ± 6.3km								
		S	11 28.09	RMW	0.78	354 iPd	04 27.04 -1.2	DEPTH = 10.0km (geophysicist)								
RRL	0.37	355 P	11 27.49 -0.1	EBC	0.80	73 iPc	04 27.68 -0.9	NEAR SOUTH COAST OF FRANCE (379)								
		S	11 32.94	YAKW	0.81	101 eP	04 28.02 -0.8	MD 3.0 (STR).								
STV	0.47	131 P	11 29.15 -0.3	TBM	0.89	56 eP	04 29.27 -1.0	GELF				0.01	135 Pg	28 51.38 -0.1		
		S	11 35.48	RVW	0.90	234 eP	04 28.93 -1.5						TREF	0.23	354 Pg	28 53.88 -0.7
S.D. = 0.4 on 4 of 4 obs.				GL2	0.94	140 eP	04 29.89 -1.2	PUYF				0.25	56 Pg	28 53.96 -0.9		
? JAN 25, 1989 16h 07m 53.73 ± 4.14s				APM	0.94	180 eP	04 30.08 -1.1	PRAF				0.45	337 Pg	28 58.96 0.3		
44.532 N ± 20.7km 6.753 E ± 33.8km				SPW	0.95	337 eP	04 30.76 -0.5	VILF				0.51	25 Pg	28 59.03 -0.8		
DEPTH = 10.0km (geophysicist)				MXC	0.97	96 eP	04 30.47 -1.0	TAVF				0.52	64 Pg	28 59.51 -0.5		
FRANCE (538)				CPW	1.04	287 iP	04 31.25 -1.5						Sg	29 06.81		
ML 2.2 (GEN).				BMW	1.08	260 eP	04 32.13 -1.4	GANF				0.70	30 Pg	29 03.50 0.1		
FOUF	0.02	98 P	07 56.30 0.7	HTW	1.13	357 iPd	04 32.62 -1.6	CALN				1.13	71 Pg	29 11.21 0.4		
		Sg	07 57.80	GMW	1.15	320 eP	04 32.70 -1.9						Sg	29 26.49		
PZZ	0.25	96 P	07 58.92 -0.2	VLMM	1.17	192 eP	04 33.93 -1.1	MVIF				1.36	68 Pn	29 14.68 0.1		
		S	08 02.31	BLH	1.18	349 eP	04 33.58 -1.6						Sg	29 33.62		
RRL	0.39	3 P	08 01.66 -0.1	BRVW	1.18	99 eP	04 34.49 -0.8	TOUF				1.47	64 Pn	29 16.52 0.3		
		S	08 06.76	VTG	1.20	76 eP	04 34.65 -0.8	AURF				1.47	70 Pn	29 16.22 0.0		
STV	0.50	125 P	08 03.53 -0.4	VLL	1.22	180 eP	04 35.16 -0.7						Sg	29 36.42		
		S	08 09.80	BVW	1.25	83 eP	04 35.41 -0.9	FOUF				1.51	40 P	29 17.30 0.8		
S.D. = 0.8 on 4 of 4 obs.				SMW	1.30	300 eP	04 36.10 -1.2						(Sg)	29 37.30		
& JAN 25, 1989 16h 51m 16.54s				VGB	1.33	151 eP	04 36.92 -0.7	AUTN				1.58	67 Pn	29 17.93 0.1		
63.782 N 149.073 W				PGO	1.33	204 eP	04 36.93 -0.7						Sg	29 39.67		
DEPTH = 126.5km				MDW	1.33	92 eP	04 36.64 -1.0	STV				1.62	58 P	29 18.72 0.4		
CENTRAL ALASKA (1)				HDW	1.35	317 eP	04 36.00 -2.0						S	29 40.72		
<AGS-P>.				NLO	1.36	245 eP	04 37.08 -1.2	PZZ				1.65	47 P	29 19.49 0.7		
SML	2.01	170 eP	51 50.77 -0.2	VFP	1.37	173 eP	04 37.73 -0.9						S	29 43.33		
		eS	52 17.43	TDH	1.39	183 eP	04 37.52 -1.4	SAOF				1.66	68 Pn	29 18.89 0.0		
GHO	2.02	178 iP	51 51.08 0.0	ONR	1.45	279 eP	04 38.55 -1.0	DOI				1.73	49 P	29 19.70 -0.1		
		eS	52 18.31	52 obs. associated				* JAN 25, 1989 17h 48m 57.59 ± 0.84s								
TOA	2.14	140 eP	51 55.10 2.5	& JAN 25, 1989 17h 04m 12.60s				36.589 N ± 8.0km 138.244 E ± 6.9km								
		eS	52 17.85	46.680 N 121.686 W				DEPTH = 10.0km (geophysicist)								
PME	2.16	179 eP	51 54.81 2.0	WASHINGTON (29)				HONSHU, JAPAN (227)								
		eS	52 21.78	<SEA>. CL 2.7 (SEA).				MG 1.8 (JMA). Felt (1 JMA) at								
PLRM	2.20	181 eP	51 53.30 0.1					Motsumiuro.								
		eS	52 21.78	MAT	0.05	211 iP+	48 59.30 -0.5	BNI				1.89	28 Pd	29 25.10 2.8X		
KNK	2.40	173 eP	51 55.92 0.1			iS	49 00.30						eSn	29 49.70		
		eS	52 21.78	MTMJ	0.35	269 iPd	49 05.20 0.3	ROB				1.99	62 P	29 24.46 0.8		
		eS	52 21.78			S	49 10.50						S	29 48.57		
		eS	52 21.78	CHJJ	0.81	131 P	49 13.60 0.3	FIN				2.18	67 P	29 26.60 0.2		
		eP	51 55.92 0.1			S	49 24.10	RSP				2.20	36 P	29 30.00 3.2X		
		eP	51 55.92 0.1			S	49 24.10	CKI				2.31	62 P	29 28.40 0.1		

KRNA	80.77	45 P	01 31.80	0.1
GMR	80.97	46 P	01 32.50	-0.2
HCR	80.99	45 P	01 33.00	0.1
TPU	81.19	46 P	01 33.70	-0.2
WRN	81.43	45 P	01 34.80	-0.2
MTI	81.49	46 P	01 35.40	0.1
PRN	81.50	46 P	01 35.90	0.5
BMW	81.51	35 P	01 35.10	0.0
NPN	81.70	46 P	01 36.80	0.4
SRG	81.73	46 P	01 36.90	0.4
DLM	81.82	46 P	01 37.40	0.4
SHW	81.89	36 P	01 37.70	0.6
GMW	82.40	34 P	01 39.20	-0.3
LON	82.46	36 P	01 39.00	-0.8
TTA	82.82	10 P	01 40.50	-0.8
	1.0s	20.00nm		4.6mb
RMW	82.88	35 P	01 41.80	-0.1
PMR	82.96	14 P	01 40.60	-1.3
	0.6s	12.32nm		4.7mb
MCW	83.07	34 P	01 42.90	0.1
SNW	83.42	280 eP	01 46.40	1.2
MAW	83.48	200 eP	01 45.30	0.8
	0.8s	41.00nm		5.1mb
MSU	84.02	46 P	01 48.40	0.4
GYA	84.92	300 P	01 53.00	0.6
DPW	85.11	36 P	01 52.30	-0.5
PNT	85.15	34 iPc	01 53.20	0.3
	0.8s	40.00nm		5.1mb
IMA	86.11	10 P	01 56.20	-1.1
	0.8s	2.84nm		4.1mb X
FBA	86.16	13 iP	01 55.80	-1.6
	0.8s	27.59nm		5.0mb
		eP	04 10.20	634kmX
XAN	86.20	308 iPd	01 59.10	0.8
ALD	86.52	52 iP	02 00.50	0.5
	1.1s	19.14nm		4.7mb
		eP	04 12.00	615km
LRM	87.40	40 eP	02 03.70	-0.3
BW06	87.78	44 P	02 05.30	-0.5
	0.7s	15.35nm		4.9mb
CHG	88.81	290 iPd	02 11.10	0.4
	1.0s	17.50nm		4.9mb
GOL	89.29	48 iP	02 12.50	-0.3
		eP	04 21.00	592kmX
GLD	89.41	48 P	02 13.40	0.1
	1.3s	60.34nm		5.3mb
SES	90.44	36 eP	02 17.00	-0.6
INK	92.25	15 eP	02 24.20	-1.3
YKA	94.73	25 P	02 36.30	-0.6
BUL	133.40	216 ePKP	08 29.20	-0.1
		iSKP	11 01.90	
DMU	143.82	8 ePKP	08 44.90	-2.0
	0.5s	32.00nm		
DCN	144.31	9 ePKP	08 46.00	-1.7
KSP	145.30	343 ePKP	08 50.20	0.6
CLL	145.68	347 iPKPd	08 51.30	1.2
		eSg	29 29.00	
HRI	145.70	303 ePKP	08 53.00	2.1
JARJ	145.82	301 PKPd	08 52.60	1.5
BRG	145.88	346 ePKP	08 51.40	0.9
	1.3s	16.00nm		
MLR	145.92	328 ePKPd	08 52.00	1.1
BURJ	145.98	301 PKPd	08 52.70	1.4
MASJ	146.15	300 PKPc	08 53.20	1.6
MKRJ	146.25	300 PKPd	08 54.10	2.3
DSI	146.47	200 ePKP	08 54.00	2.0
MBH	147.32	297 iPKPd	08 56.70	3.3X
KHC	147.58	345 ePKP	08 57.70	4.4
DOU	148.07	356 PKP	08 57.90	3.9X
WLF	148.37	354 PKP	08 58.00	3.6
CDF	149.48	352 ePKP	09 01.30	5.0X
FLN	149.49	2 ePKP	09 00.90	4.7X
LDF	149.67	2 ePKP	09 01.20	4.7X
GRR	149.84	3 ePKP	09 01.90	5.2X
HAU	149.99	353 ePKP	09 02.40	5.4X
BSF	150.11	353 ePKP	09 02.70	5.4X
LPF	150.19	3 ePKP	09 02.80	5.6X
LOR	150.94	356 ePKP	09 04.60	6.1X
SSF	151.16	357 ePKP	09 05.20	6.4X
LBF	151.21	356 ePKP	09 05.00	6.1X
MFF	151.66	2 ePKP	09 06.00	6.5X
BGF	151.70	358 ePKP	09 06.40	6.9X
TCF	151.98	359 ePKP	09 06.70	6.7X
LSF	152.03	360 ePKP	09 06.70	6.7X
	S.D. = 0.9	on 150 of 168 obs.		

58.775 N 143.051 W				
DEPTH = 10.0km (geophysicist)				
4.5mb (1 obs.)				
GULF OF ALASKA (15)				
<AGS-P>. ML 4.1 (PMR).				
RAGM	1.82	334 iP	59 37.78	-5.2
		iS	59 58.00	
YKU	1.88	64 eP	59 39.20	-4.7
SGAM	2.05	329 iP	59 41.23	-5.1
		eS	00 05.83	
BCPM	2.11	54 iP	59 41.57	-5.7
CVA	2.24	324 iP	59 43.04	-6.1
CTGM	2.36	21 iP	59 45.26	-5.7
		iS	00 12.16	
HIN	2.39	314 iP	59 45.71	-5.6
GLB	2.70	352 iP	59 49.65	-6.1
VLZ	2.88	326 iP	59 51.73	-6.5
VZW	2.89	324 iP	59 51.79	-6.6
KLU	3.08	333 iP	59 55.00	-6.1
PWL	3.39	310 iP	59 58.93	-6.5
HYT	3.48	51 P	00 00.90	-5.9
TOA	3.68	336 iPc	00 04.20	-5.5
KNK	3.78	317 eP	00 04.67	-6.4
SML	4.02	321 eP	00 07.62	-6.8
SLKM	4.03	299 eP	00 07.26	-7.3
PMS	4.10	310 eP	00 08.76	-6.8
PMR	4.15	316 iPd	00 10.00	-6.1
PWA	4.46	313 eP	00 14.10	-6.5
SIT	4.47	109 eP	00 12.10	-8.5
RDT	5.07	295 eP	00 22.03	-7.3
KDC	5.09	262 eP	00 23.30	-6.2
CRP	5.21	303 eP	00 24.16	-7.2
ILIM	5.23	289 eP	00 25.10	-6.4
DWY	5.57	17 P	00 30.10	-6.3
FBA	6.54	342 eP	00 41.80	-8.2
SVW	6.73	296 eP	00 45.70	-7.1
TTA	7.57	309 eP	00 56.40	-8.1
IMA	8.81	331 eP	01 13.00	-8.8
INK	10.45	20 eP	01 38.00	-6.2
	0.8s	1.60nm		4.5mb
YKA	14.38	63 P	02 29.40	-7.4
	32 obs.	associated		
? JAN 26, 1989 07h 02m 49.83± 4.26s				
26.489 S ±44.8km 179.320 W ±21.6km				
DEPTH = 486.9 ± 50.6 km				
4.3mb (6 obs.)				
SOUTH OF FIJI ISLANDS (171)				
CAN	28.48	244 eP	08 08.30	2.1
BWA	28.82	246 eP	08 07.70	-1.5
WB5	42.90	269 eP	10 04.50	-1.5
WRA	42.90	269 P	10 06.00	0.0
	0.5s	1.20nm		3.7mb
PRS	82.97	44 ePc	14 24.30	0.4
PRI	83.29	44 ePc	14 26.20	0.6
LLA	83.42	44 eP	14 26.20	0.1
BKS	83.45	42 eP	14 26.80	0.6
	0.8s	28.00nm		4.9mb
MHC	83.46	43 ePc	14 26.70	0.2
FRI	84.42	44 eP	14 31.20	0.1
CMB	84.66	43 ePc	14 32.20	-0.1
ORV	84.97	41 eP	14 34.10	0.4
WDC	85.04	40 ePc	14 34.30	0.3
TNP	86.65	44 iP	14 42.10	0.0
KVN	86.70	43 eP	14 42.10	-0.2
CHTO	91.16	290 eP	15 05.00	1.9
	1.0s	2.00nm		4.0mb
ALO	92.06	52 eP	15 06.00	-1.3
	1.0s	2.75nm		4.2mb
BW06	94.13	44 eP	15 16.00	-0.6
	1.0s	2.50nm		4.3mb
FBA	94.32	13 eP	15 16.50	-0.2
	1.0s	4.50nm		4.6mb
UPP	144.65	345 iPKP	21 30.20	-0.8
NAO	144.98	351 PKP	21 31.50	-0.1
	0.7s	12.20nm		
HFS	145.19	349 ePKP	21 31.70	-0.2
	0.4s	12.20nm		
BNG	152.20	221 iPKPc	21 52.50	8.3X
	0.2s	20.00nm		
		ic	22 05.00	
KSP	152.91	338 iPKPc	21 52.70	8.7X
	S.D. = 1.0	on 22 of 24 obs.		

46.347 N ±21.2km 153.851 E ±11.4km				
DEPTH = 33.0km (normal)				
4.8mb (14 obs.)				
KURIL ISLANDS (221)				
MDJ	17.09	273 eP	30 58.50	-0.8
CN2	20.18	273 eP	31 35.00	-0.9
HHC	30.83	275 eP	33 16.60	-0.1
TIY	31.65	269 eP	33 24.40	0.6
IMA	33.84	36 eP	33 42.70	0.0
XAN	35.99	266 eP	34 00.70	-0.6
FBA	36.16	38 eP	34 02.50	0.2
	0.8s	10.50nm		4.8mb
LZH	38.41	273 eP	34 22.00	0.3
GTA	39.54	280 eP	34 31.00	-0.1
CD2	41.36	266 eP	34 46.20	0.2
INK	41.72	32 eP	34 47.50	-0.9
GYA	42.13	259 P	34 52.00	-0.4
YKA	50.94	37 P	36 01.80	0.5
CHG	52.52	258 eP	36 14.00	0.1
KKN	56.03	276 P	36 40.00	0.3
	0.8s	12.00nm		5.0mb
EDM	56.23	46 ePd	36 39.90	-0.7
DMN	56.27	276 P	36 41.90	0.4
	0.8s	22.00nm		5.2mb
GKN	56.34	277 P	36 41.70	-0.2
FFC	60.72	40 eP	37 11.50	-0.3
	1.2s	19.00nm		5.1mb
FRB	65.26	19 eP	37 41.00	-0.6
HFS	69.01	340 eP	38 03.50	-1.8
	0.4s	2.80nm		4.7mb
NAO	69.05	342 P	38 04.80	-0.8
	1.0s	8.60nm		4.8mb
CLL	77.04	336 eP	38 52.00	-0.5
	1.2s	15.00nm		4.9mb
		eSg	55 00.00	
VRI	77.07	325 eP	38 49.00	-3.8X
MLR	77.69	325 ePc	38 58.50	2.1
KHC	78.82	335 iPc	39 03.00	0.6
	1.0s	7.00nm		4.6mb
GRF	78.99	336 eP	39 04.10	0.8
	1.0s	8.00nm		4.7mb
KBA	80.73	334 e(P)	39 13.00	0.1
	1.2s	13.00nm		4.8mb
		e	39 16.00	
LOR	83.13	340 eP	39 25.80	0.6
	0.9s	6.50nm		4.7mb
SSF	83.41	340 eP	39 27.20	0.6
SMF	83.72	340 eP	39 29.10	0.9
	1.0s	14.80nm		5.1mb
LPG	84.05	337 eP	39 33.60	3.4X
	1.0s	8.00nm		4.8mb
MAF	84.42	340 eP	39 31.90	0.2
	0.9s	4.90nm		4.7mb
	S.D. = 0.8	on 31 of 33 obs.		
? JAN 26, 1989 09h 13m 21.45± 1.04s				
20.720 S ±30.7km 173.690 E ±16.2km				
DEPTH = 33.0km (normal)				
4.4mb (2 obs.)				
VANUATU ISLANDS REGION (185)				
DZM	6.88	257 iPd	15 03.10	0.3
BRS	20.21	247 eP	17 59.40	3.0X
RMO	23.54	251 eP	18 31.00	1.3
CTA	25.71	267 eP	18 52.00	1.4
		iS	23 24.00	
TAU	31.26	219 eP	19 36.00	-4.4X
WB5	36.83	264 eP	20 28.00	-0.6
WRA	36.84	264 Pd	20 26.80	-1.9
	1.3s	5.30nm		4.3mb
ASPA	36.88	258 iPd	20 27.20	-1.8
SPA	69.41	180 e(P)	24 28.10	0.0
	1.0s	6.00nm		4.6mb
CHG	83.08	293 eP	25 46.00	0.4
CMB	85.08	46 eP	25 54.50	-0.9
LZH	86.85	310 e(P)	25 59.00	-5.3X
YKA	100.08	27 Pdif	27 08.60	4.0X
KSP	145.07	335 ePKP	33 01.50	4.6X
CLL	145.92	338 ePKP	33 00.00	1.7
BRG	145.95	337 e(PKP)	33 06.60	8.2X
	1.3s	22.00nm		
ZST	146.74	331 ePKP	33 13.70	14.0X
KHC	147.50	335 ePKP	33 05.50	4.5X
BNG	150.91	240 ePKPd	33 11.30	4.0X
	0.7s	6.00nm		
	S.D. = 1.4	on 10 of 19 obs.		

& JAN 26, 1989 06h 59m 11.45s

* JAN 26, 1989 08h 27m 01.58± 0.96s

S.D. = 1.4 on 10 of 19 obs.

26d 09h

? JAN 26, 1989 09h 16m 38.10 ± 1.32s
 17.926 S ± 22.3km 178.962 W ± 16.4km
 DEPTH = 598.6 ± 18.3 km
 5.2mb (4 obs.)

FIJI ISLANDS REGION (181)

AFI 7.98 61 eP 18 37.80 0.0
 (S) 20 45.60
 DZM 14.32 251 iPc 19 42.00 2.3
 HNR 22.14 290 (P) 20 50.00 -2.8
 BRS 27.68 245 iPc 21 42.90 1.3
 COD 29.31 239 iPc 21 53.20 -2.5
 RMO 31.01 248 eP 22 11.00 0.9
 CAN 33.28 232 eP 22 29.70 0.6
 BWA 33.38 234 eP 22 28.10 -1.9
 CMS 34.56 240 iPd 22 40.90 1.2
 TOO 36.75 231 iPd 22 58.70 1.0
 TAU 37.88 222 iPd 23 06.50 -0.2
 STK 38.16 241 iPd 23 10.80 1.6
 0.5s 20.00nm 4.9mb
 BFD 38.81 232 eP 23 05.00 -9.4X
 WRA 44.11 260 Pd 23 56.00 -0.5
 0.7s 10.90nm 4.5mb
 ASPA 44.28 254 iPc 23 58.30 0.5
 0.8s 140.00nm 5.5mb
 iS 29 47.60
 FORR 49.49 245 iPd 24 36.00 -1.0
 0.4s 65.00nm 5.5mb
 KNA 49.95 264 eP 24 40.00 -0.5
 WARB 50.78 251 eP 24 32.00 -14.6X
 NANU 61.21 254 iPd 25 58.00 -0.3
 SPA 72.19 180 e(P) 27 02.50 -2.3
 1.0s 4.50nm 4.0mb X
 KSP 144.98 343 iPKP 35 09.50 0.3
 CLL 145.36 347 iPKPd 35 10.20 0.4
 0.7s 27.00nm
 BRG 145.55 346 iPKP 35 11.10 0.9
 0.7s 14.00nm
 PRU 146.22 344 ePKP 35 12.50 1.2
 KHC 147.26 345 ePKP 35 16.00 3.0X
 DOU 147.78 356 iPKP 35 16.90 3.1X
 KBA 149.21 343 ePKPc 35 19.50 3.2X
 0.8s 4.80nm
 FLN 149.22 2 ePKP 35 19.70 3.7X
 0.6s 9.00nm
 LDF 149.40 2 ePKP 35 20.00 3.7X
 0.6s 4.30nm
 GRR 149.58 2 ePKP 35 20.60 4.1X
 0.7s 13.20nm
 LPF 149.93 3 ePKP 35 21.50 4.4X
 0.6s 9.70nm
 LOR 150.65 356 ePKP 35 23.20 5.0X
 0.9s 10.40nm
 SSF 150.87 357 ePKP 35 23.90 5.3X
 0.6s 2.70nm
 LBF 150.92 356 ePKP 35 23.70 5.0X
 MFF 151.39 2 ePKP 35 24.70 5.4X
 TCF 151.70 358 ePKP 35 25.50 5.7X
 S.D. = 1.5 on 22 of 36 obs.

JAN 26, 1989 10h 08m 59.44 ± 0.73s
 51.023 N ± 6.5km 5.812 E ± 5.2km
 DEPTH = 10.0km (geophysicist)

NETHERLANDS (540)

ML 2.7 (BNS), 3.3 (LDG).
 ENN 0.27 165 iPgd 09 06.10 1.1
 0.5s 56.00nm
 iSg 09 09.90
 MEM 0.43 163 iPd 09 08.94 0.7
 iS 09 14.84
 KLL 0.49 140 iPgd 09 09.20 -0.2
 Sg 09 15.40
 SNF 1.10 243 iPc 09 22.00 2.0
 iS 09 38.60
 WTS 1.16 32 iPgc 09 21.00 0.0
 0.4s 56.00nm
 iSg 09 36.40
 KOE 1.36 115 ePn 09 23.10 -1.2
 Sg 09 41.10
 WLF 1.38 171 iPd 09 25.50 0.9
 iS 09 43.40
 TNS 1.86 114 ePn 09 33.10 1.4
 eSn 09 55.60
 CDF 2.78 159 Pg 09 52.80 7.9X
 Sg 10 25.40
 HAU 3.04 173 Pg 09 55.90 7.4X

Sg 10 34.00
 BSF 3.26 168 Pn 09 51.00 -0.7
 Pg 10 01.20
 Sg 10 40.50
 LOR 3.97 200 Pn 10 01.10 -0.6
 Pg 10 14.50
 Sg 11 05.20
 LBF 4.22 197 Pn 10 04.40 -0.8
 Sn 10 50.20
 Sg 11 13.20
 SSF 4.24 202 Pn 10 05.00 -0.6
 Pg 10 21.00
 Sg 11 14.50
 LDF 4.55 240 Pn 10 09.90 0.1
 SMF 4.57 197 Pn 10 08.80 -1.4
 Sg 11 23.40
 FLN 4.66 243 Pn 10 11.30 -0.1
 Sn 11 03.40
 GRR 5.07 241 Pn 10 16.70 -0.5
 Sn 11 12.60
 S.D. = 1.0 on 16 of 18 obs.

? JAN 26, 1989 10h 15m 01.21 ± 1.28s
 3.846 N ± 17.1km 96.638 E ± 14.5km
 DEPTH = 93.3 ± 15.9 km
 4.3mb (1 obs.)

NORTHERN SUMATERA (706)

BSI 2.12 321 eP 15 35.60 0.0
 eS 16 09.50
 PSI 2.55 117 iP 15 41.50 0.0
 IPM 4.44 80 eP 16 11.20 3.7X
 e 17 06.70
 SNG 5.16 50 eP 16 17.50 0.0
 GUN 26.04 338 P 20 33.00 5.1X
 WB5 43.93 124 eP 23 00.50 -0.3
 WRA 43.94 124 Pd 23 01.10 0.3
 0.6s 3.30nm 4.3mb
 S.D. = 0.4 on 5 of 7 obs.
 ? JAN 26, 1989 10h 26m 01.88 ± 2.36s
 43.180 N ± 18.3km 146.880 E ± 22.3km
 DEPTH = 33.0km (normal)
 4.5mb (1 obs.)

KURIL ISLANDS (221)

KUSJ 1.59 268 iPd 26 26.30 -1.7
 eS 26 40.80
 HOOJ 2.76 254 P 26 45.80 1.1
 ASAJ 3.22 288 P 26 52.20 1.0
 MRRJ 4.34 262 P 27 06.90 -0.3
 OFUJ 5.68 226 eP 27 26.20 0.1
 eS 28 24.10
 HFS 70.14 337 eP 37 12.40 -0.1
 0.3s 1.40nm 4.5mb
 S.D. = 1.3 on 6 of 6 obs.

AUSTRIA (546)

JAN 26, 1989 10h 42m 56.14 ± 0.31s
 47.022 N ± 3.2km 16.989 E ± 3.3km
 DEPTH = 10.0km (geophysicist)
 ML 3.7 (VKA), 3.6 (KBA), 3.4 (ZAG). Felt in Ajko, Vas and Zola Counties, Hungary.
 TIH 0.63 101 iPg 43 09.80 1.0
 ZST 1.18 4 iPn 43 17.60 -0.5
 0.5s 0.28nm
 i 43 23.50
 iSg 43 32.80
 SRO 1.20 48 iPn 43 18.70 0.3
 i(Sn) 43 36.30
 VKA 1.32 340 iPgc 43 20.90 0.3
 i 43 22.20
 iSg 43 38.80
 i 43 43.00
 PTJ 1.33 213 iPg 43 20.50 -0.2
 iSg 43 37.50
 ZAG 1.39 210 iPg 43 21.50 -0.1
 iSg 43 40.00
 BUD 1.46 71 ePn 43 23.00 0.5
 VBY 1.94 219 iPnc 43 28.90 -0.5
 iSn 43 52.30
 LJU 1.96 241 iPnc 43 33.20 3.5X
 iSn 43 59.00
 PSZ 2.17 64 ePn 43 33.40 0.6
 CEY 2.19 235 ePn 43 32.90 -0.2

i 43 41.00
 eSg 44 07.40
 KMR 2.20 299 ePn 43 37.00 3.8X
 iPg 43 41.60
 iSg 44 11.40
 BLY 2.28 177 eP 43 35.80 1.4
 eS 44 08.80
 VOY 2.36 246 ePn 43 35.20 -0.4
 ePg 43 41.00
 eSg 44 13.70
 RBL 2.42 257 P 43 40.90 4.4X
 eSn 44 16.60
 KBA 2.49 273 ePn 43 37.50 -0.1
 0.4s 37.20nm
 iPgc 43 42.70
 i 43 53.70
 i(Sn) 44 07.80
 iSg 44 15.10
 i 44 17.70
 TRI 2.59 241 ePn 43 38.40 -0.4
 iPg 43 43.60
 iSn 44 10.00
 iSb 44 19.00
 iSg 44 21.10
 FVI 2.92 263 P 43 43.30 -0.1
 SPC 3.08 44 iPnc 43 45.50 -0.3
 i 43 54.70
 e 44 49.20
 KHC 3.11 314 iPn 43 47.10 0.9
 Pg 43 57.00
 Sg 44 35.20
 PRU 3.39 332 Pn 43 49.00 -1.1
 Pg 43 59.30
 Sg 44 44.50
 WET 3.48 309 iPnd 43 52.10 0.7
 BZS 3.50 112 ePd 43 51.50 -0.2
 KRA 3.61 32 eP 44 09.20 15.9X
 e 44 17.30
 CTI 3.81 257 P 44 04.30 8.0X
 KSP 3.85 353 ePn 43 56.40 -0.3
 iS 44 59.00
 HVAR 3.86 186 iPd 43 57.30 0.4
 SSR 3.96 121 ePc 43 56.00 -2.2
 OGA 4.09 270 ePn 44 03.10 2.9X
 BRG 4.35 334 ePn 44 02.00 -1.7
 ePg 44 18.00
 eSg 45 11.00
 GRF 4.68 307 e(Pn) 44 08.60 0.1
 e 44 11.30
 e 45 01.20
 e(Sg) 45 23.70
 CLL 5.03 330 iPn 44 12.70 -0.6
 iSg 45 32.20
 MOX 5.07 318 e(Pn) 44 16.00 2.0
 eSn 45 10.00
 e 45 23.00
 eSg 45 35.00
 MEM 8.09 300 P 44 57.00 0.7
 S.D. = 0.9 on 28 of 34 obs.

? JAN 26, 1989 11h 10m 16.76 ± 1.54s
 44.717 N ± 7.8km 6.851 E ± 18.5km
 DEPTH = 10.0km (geophysicist)

FRANCE (538)

ML 2.2 (GEN).
 RRL 0.21 347 P 10 21.44 0.0
 S 10 24.51
 PZZ 0.28 140 P 10 22.58 -0.1
 S 10 26.85
 RSP 0.52 33 P 10 27.37 0.0
 S 10 34.56
 STV 0.58 144 P 10 28.66 0.1
 S 10 36.22
 S.D. = 0.1 on 4 of 4 obs.
 JAN 26, 1989 13h 55m 01.63 ± 0.13s
 47.520 N ± 3.2km 154.331 E ± 2.3km
 DEPTH = 28.2km (15 depth phases)
 5.6mb (72 obs.) 5.6MsZ (17 obs.)
 KURIL ISLANDS (221)
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 14S, 30C
 Centroid Location:
 Origin Time 13:55: 8.0 0.4
 Lat 47.66N Lon 154.08E 0.05

Dep 37.8 2.1 Half-duration 3.2	TTA 31.29 42 P 01 20.00 -1.1	E 17s 4.10um
Moment Tensor; Scale 10**17 Nm	SVW 31.34 46 eP 01 28.80 7.3X	pP 03 36.00 33km
Mrr= 5.65 0.13 Mtt= 0.31 0.18	TIY 32.01 268 Pc 01 27.50 -0.1	PP 05 07.00
Mff=-5.96 0.17 Mrt=-0.17 0.28	E 16s 9.50um	eS 09 53.00
Mrf= 2.73 0.30 Mtf=-3.36 0.19	pP 01 37.00 33km	sS 10 10.00
Principal Axes:	BTO 32.23 274 eP 01 28.00 -1.6	HON 46.26 107 P 03 40.00 13.8X
T Val= 6.42 Plg=72 Azm=237	N 12s 3.10um	Z 20s 9.15um 5.7MsZ
N 1.45 14 19	E 12s 10.50um	DAV 47.17 221 eP 03 21.00 -12.4X
P -7.86 10 112	PP 02 35.50	ALE 48.89 6 ePc 03 45.70 -0.5
Best Double Couple:Mo=7.1*10**17	S 06 38.00	YKA 0.6s 31.00nm 5.5mb
NP1:Strike=219 Dip=37 Slip= 114	IMA 32.70 37 P 01 33.00 -0.4	YKC 49.81 37 P 03 54.00 0.6
NP2: 10 57 73	1.0s 36.25nm 5.2mb	1.0s 23.00nm 5.2mb
YSS 7.92 271 P 57 00.00 2.3	BRW 32.90 27 P 01 35.40 0.5	LSA 51.06 273 iPc 04 04.90 1.0
KUSJ 8.09 240 P 56 56.60 -3.5X	ANP 34.18 241 eP 01 48.00 1.4	N 13s 1.40um
eS 58 25.00	PMR 34.47 45 eP 01 52.00 3.4X	eS 11 20.00
ASAJ 8.84 252 P 57 12.50 2.0	Z 20s 6.00um 5.3MsZ	LOE 52.29 253 eP 04 15.50 2.7X
HOOJ 9.36 241 P 57 15.80 -1.8	GUM0 34.74 196 eP 01 54.50 3.1X	CHG 53.10 257 iPc 04 18.90 0.0
SAP 10.19 249 eP 57 28.00 -1.0	WHN 34.93 256 iPc 01 52.20 -0.7	1.1s 110.76nm 5.7mb
MRRJ 10.68 246 P 57 34.00 -1.7	6.0s 1.00nm 2.9mb X	eS 11 52.00
AOMJ 12.21 240 eP 57 53.50 -2.9X	Z 14s 7.70um 5.6MsZ X	TSM 53.21 227 ePc 04 19.90 0.3
OFUJ 12.49 232 eP 57 54.20 -6.0X	N 12s 2.70um	BMW 53.63 58 P 04 22.00 -0.5
S 00 07.90	E 12s 4.10um	RMW 53.90 57 P 04 24.70 0.3
YAMJ 14.02 233 eP 58 15.70 -4.8X	S 07 17.00	PNT 54.09 54 eP 04 25.00 -0.8
NIIJ 15.26 233 P 58 32.50 -4.2X	FBA 35.04 39 ePc 01 54.00 0.5	0.8s 40.00nm 5.5mb
CHJJ 16.16 230 P 58 45.80 -2.4X	TOA 35.84 44 eP 02 01.50 1.1	BDT 54.19 256 eP 04 27.30 0.6
MTMJ 16.40 234 P 58 47.40 -3.9X	OZH 36.12 244 iPc 02 04.00 1.0	NST 54.60 253 iPc 04 13.50 -16.3X
IIDJ 17.16 231 P 58 58.30 -2.6X	5.0s 2.00nm 3.3mb X	KSH 55.16 292 P 04 32.00 -1.9
MDJ 17.39 270 eP 59 03.00 -0.7	Z 17s 4.20um 5.3MsZ X	E 12s 11.90um
Z 18s 27.30um	E 16s 4.20um	EDM 55.18 47 iPc 04 33.40 -0.4
E 13s 14.50um	pP 02 14.00 34km	VGB 55.58 58 P 04 37.20 0.5
eP 59 06.00	S 07 32.00	DPW 55.68 55 P 04 37.10 -0.4
S 02 10.00	XAN 36.41 265 iPc 02 04.90 -0.6	GUN 55.76 275 Pc 04 38.40 -0.2
TSRJ 18.17 235 P 59 12.10 -1.3	5.0s 0.80nm 2.9mb X	DAG 55.91 358 iPc 04 37.00 -1.6
WKYJ 19.36 233 eP 59 27.50 -0.4	N 14s 13.40um	0.7s 11.64nm 5.0mb
YONJ 19.86 239 eP 59 33.50 0.3	LZH 38.70 272 Pc 02 25.00 0.2	KKN 56.24 276 Pc 04 41.90 0.0
TKSJ 20.39 236 eP 59 39.10 0.3	5.0s 973.00nm 5.8mb X	PKI 56.30 275 Pc 04 42.10 -0.4
CN2 20.47 270 eP 59 36.00 -3.6X	Z 17s 9.30um 5.7MsZ X	DMN 56.48 276 Pc 04 43.60 -0.1
E 15s 15.50um	N 14s 4.80um	GKN 56.54 276 Pc 04 43.80 -0.2
SHK 20.78 239 iPc 59 43.00 0.2	E 16s 5.90um	NNT 57.14 251 iPc 04 48.50 0.4
1.1s 394.94nm 5.7mb	i 02 58.00 150kmX	LBFM 57.37 63 P 04 50.00 0.2
SHNJ 21.9B 241 eP 59 55.00 0.1	PP 03 58.00	WDC 57.44 64 ePc 04 50.20 0.2
SNY 22.51 267 iPc 00 00.00 0.0	eS 08 19.00	e 04 58.10 26km
Z 18s 32.00um 5.8MsZ	GTA 39.67 279 iPc 02 32.10 -0.7	SES 58.00 49 eP 04 53.00 -0.9
N 15s 10.30um	5.5s 0.80nm 2.7mb X	ORV 58.70 64 eP 04 58.20 -0.6
E 15s 16.30um	Z 16s 10.10um 5.8MsZ X	SOD 58.83 339 iP 04 57.10 -2.3
S 04 05.00	E 15s 8.00um	BRK 59.27 66 e(P) 05 03.60 0.8
KUMJ 23.28 238 eP 00 09.10 1.4	sP 02 43.00	FFC 59.61 41 iPc 05 05.00 0.0
KAGJ 24.24 236 eP 00 19.10 2.0	PP 04 07.00	1.2s 80.00nm 5.7mb
DL2 25.19 262 Pc 00 25.00 -1.1	PcP 04 39.60	ARN 60.04 66 P 05 08.70 0.5
Z 16s 5.30um 5.1MsZ X	S 08 27.50	LRM 60.07 54 ePc 05 08.70 0.1
N 13s 7.40um	sS 08 48.00	e 05 23.20 53kmX
E 14s 3.10um	ScS 12 37.00	e 05 18.10 26km
BJI 28.32 269 eP 00 53.00 -1.7	INK 40.55 33 iPc 02 40.80 1.3	CMB 60.32 65 eP 05 10.00 -0.1
6.0s 0.41nm 2.3mb X	0.8s 8.00nm 4.5mb X	e 05 18.10 26km
Z 16s 19.60um 5.8MsZ X	GZH 40.73 248 P 02 42.00 0.5	SNG 60.71 247 eP 05 13.50 0.7
N 15s 9.00um	N 20s 9.80um	eS 13 31.90
ePP 01 48.00	E 18s 5.50um	PRS 60.79 67 ePc 05 12.70 -0.5
eS 05 40.00	eS 08 46.00	LLA 60.87 67 eP 05 13.50 -0.3
TIA 29.65 261 eP 01 06.10 -0.7	HKC 40.79 246 eP 02 44.00 2.1	KJF 61.04 336 iP 05 13.20 -1.4
Z 20s 7.30um 5.3MsZ	eS 09 03.00	1.0s 38.00nm 5.5mb
N 14s 4.60um	BAG 41.64 233 ePc+ 02 48.00 -1.2	eS 13 28.00
E 15s 7.80um	eS 09 06.00	eSS 17 52.00
S 05 54.00	CD2 41.77 265 iPc 02 50.30 0.2	NDI 61.06 282 iPc 05 15.00 -0.2
SSE 30.15 249 P+ 01 10.00 -1.3	Z 16s 9.40um 5.8MsZ X	0.8s 33.58nm 5.5mb
1.2s 94.00nm 5.5mb	N 16s 9.40um	KVN 61.07 63 eP 05 15.00 -0.4
Z 20s 4.70um 5.1MsZ	E 16s 7.00um	eP 05 23.00 26km
N 20s 12.50um	eS 09 04.00	PRI 61.35 67 ePc 05 18.30 1.1
E 20s 5.60um	GYA 42.69 258 iPc 02 58.00 0.3	FRI 61.40 65 eP 05 16.60 -0.7
S 06 08.00	N 15s 3.90um	GDH 61.74 11 ePd 05 18.00 -1.2
sS 06 18.00	E 15s 3.90um	1.0s 24.00nm 5.3mb
eSS 07 48.00	S 09 17.00	e 13 48.00
ePcS 08 04.00	OCP 42.84 231 eP 03 12.00 13.2X	TNP 62.22 63 iP 05 23.10 -0.1
NJ2 31.02 253 Pc 01 19.00 0.1	MBC 43.59 20 eP 03 05.00 0.7	1.1s 38.96nm 5.4mb
N 13s 2.90um	0.6s 13.00nm 4.9mb	eP 05 31.00 26km
E 13s 6.60um	WMO 45.42 291 iPc 03 18.50 -1.0	SUF 62.65 336 iP 05 23.80 -1.5
S 06 20.00	Z 16s 21.00um 6.2MsZ X	0.4s 13.70nm 5.4mb
sS 06 32.00	N 14s 14.30um	PANV 63.38 64 P 05 30.90 0.1
HHC 31.07 274 Pc 01 18.00 -1.4	pP 03 26.00 25km	TMBR 63.40 63 P 05 31.00 0.1
Z 14s 13.00um 5.7MsZ X	OIZ 45.91 247 Pc 03 25.00 1.5	YMT5 63.45 64 P 05 31.40 0.2
N 14s 4.50um	5.0s 1.50nm 3.2mb X	CLC 63.46 65 eP 05 30.00 -1.1
E 13s 10.00um	N 18s 2.70um	DUG 63.46 59 P 05 31.80 0.5
sP 01 28.00	E 18s 3.40um	1.2s 25.21nm 5.2mb
PP 02 20.00	ePcP 05 00.50	YMT4 63.49 64 P 05 31.50 0.1
S 06 20.00	eS 10 01.00	YMT2 63.50 64 P 05 31.50 0.0
SS 08 06.00	KMI 46.20 260 P+ 03 26.00 0.0	YMT6 63.51 64 P 05 31.80 0.3
	5.0s 1.30nm 3.1mb X	BW06 63.62 55 iP 05 32.00 -0.3
	N 17s 7.80um	1.2s 68.49nm 5.6mb

26d 15h

PRU	10.44	342	e	18 10.40	
			eP	17 44.50	-1.1
			e	20 08.80	
MOX	11.86	335	e(P)	18 04.00	-0.8
BSF	11.95	314	eP	18 04.70	-1.4
	0.5s		2.90nm		4.5mb
HAU	12.29	314	eP	18 08.10	-2.5X
	0.5s		6.40nm		4.8mb
SMF	13.11	305	eP	18 19.90	-1.5
	0.5s		2.90nm		4.3mb
LBF	13.17	306	eP	18 20.90	-1.3
	0.4s		1.70nm		4.2mb
LOR	13.37	307	eP	18 24.30	-0.4
	0.5s		3.20nm		4.3mb
DSI	15.43	119	e(P)	18 47.00	-4.5X
PRNI	15.96	123	eP	18 54.00	-4.4X
MBH	16.28	125	iP	18 59.50	-2.8X
HFS	20.32	352	eP	19 50.70	1.1
	0.5s		5.50nm		4.1mb
NUR	20.61	7	iP	19 53.50	0.9
NRA0	21.18	349	P	19 58.40	0.0
NAO	21.37	348	P	20 01.20	0.9
	0.7s		4.80nm		4.0mb
EKA	21.38	323	P	20 04.00	3.7X
	1.1s		16.40nm		4.3mb
SUF	22.93	8	iP	20 18.30	2.7X
	0.6s		8.10nm		4.3mb
KJF	24.55	9	eP	20 32.00	0.8
	0.5s		11.20nm		4.6mb X
BNG	35.58	182	iPd	22 15.80	6.0X
	0.4s		8.00nm		5.0mb X
GKN	54.17	82	P	24 38.20	0.3
DMN	54.73	82	P	24 42.60	0.5
PKI	54.98	82	P	24 44.20	0.2
YKA	71.26	339	P	26 35.20	4.6X

S.D. = 1.1 on 83 of 105 obs.

& JAN 26, 1989 15h 24m 10.82s
60.178 N 153.023 W
DEPTH = 122.6km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM	0.10	162	iP	24 27.14	0.9
			iS	24 41.31	
RDT	0.50	37	iP	24 28.70	-0.7
			iS	24 42.79	
PDB	0.71	237	iP	24 30.02	-0.7
			iS	24 44.57	
NNL	0.88	98	eP	24 32.06	-0.1
NKA	1.05	57	eP	24 34.78	1.0
CNPM	1.11	125	iP	24 33.78	-0.8
SPU	1.11	25	iP	24 33.93	-0.7
CRP	1.17	21	eP	24 34.90	-0.4
			eS	24 53.64	
SLKM	1.43	75	iP	24 36.94	-1.1
SVW	1.58	307	iP	24 38.81	-1.0
PMS	2.01	56	eP	24 43.87	-1.2
			eS	25 08.90	
PTE	2.09	69	eP	24 44.27	-1.7
PWA	2.13	45	eP	24 45.26	-1.2
PLRM	2.37	52	eP	24 48.05	-1.5
PWL	2.42	72	eP	24 48.32	-1.9
KDC	2.45	173	eP	24 47.78	-2.8
KNK	2.56	59	eP	24 49.83	-2.2
GHO	2.56	50	eP	24 50.02	-2.1
			eS	25 19.98	
SML	2.81	52	eP	24 52.92	-2.5
TTA	3.11	334	eP	24 58.38	-1.0
VZW	3.31	72	eP	25 00.62	-1.4
VLZ	3.43	71	eP	25 02.58	-1.0
KLU	3.72	66	eP	25 04.81	-2.7
TOA	3.84	57	eP	25 07.60	-1.6
YKA	18.39	66	P	28 16.50	-2.0

25 obs. associated

& JAN 26, 1989 16h 26m 50.04s
60.014 N 151.789 W
DEPTH = 48.9km
KENAI PENINSULA, ALASKA (14)
<AGS-P>. ML 3.5 (PMR).

NNL	0.25	83	iP	26 59.58	0.9
CNPM	0.56	150	iP	27 01.35	-0.8
			iS	27 10.96	
ILIM	0.59	277	iP	27 01.90	-0.6
			iS	27 11.84	

RDT	0.64	332	iP	27 02.65	-0.5
			iS	27 13.17	
NKA	0.78	20	iP	27 06.15	1.2
SLKM	0.93	57	iP	27 05.61	-1.3
SEW	1.18	85	iP	27 09.89	-0.5
SPU	1.18	354	iP	27 09.80	-0.7
			iS	27 25.90	
PDB	1.23	260	iP	27 10.11	-1.1
			iS	27 26.26	
CRP	1.27	352	iP	27 11.47	-0.4
			eS	27 29.09	
PTE	1.61	57	eP	27 15.21	-1.3
			eS	27 34.33	
PMS	1.65	41	iP	27 16.59	-0.5
PWA	1.89	29	eP	27 19.34	-1.1
PWL	1.91	62	iP	27 18.84	-1.9
			eS	27 41.45	
PLRM	2.05	38	iP	27 21.24	-1.4
PMR	2.05	38	iPc	27 21.20	-1.5
PME	2.11	39	eP	27 22.23	-1.3
KNK	2.16	48	iP	27 22.70	-1.6
			eS	27 49.21	
SVW	2.19	302	eP	27 22.70	-2.0
GHO	2.25	37	eP	27 24.19	-1.5
KDC	2.30	189	eP	27 23.50	-2.7
SML	2.47	42	iP	27 26.91	-1.8
HIN	2.67	79	eP	27 28.09	-3.4
VZW	2.79	66	eP	27 30.14	-3.1
VLZ	2.92	65	eP	27 31.91	-3.1
CVA	3.06	77	eP	27 34.14	-2.8
KLU	3.24	60	iP	27 36.97	-2.7
			eS	28 13.38	
SGAM	3.32	79	eP	27 38.27	-2.5
			eS	28 13.87	
TOA	3.44	50	eP	27 40.70	-1.9
TTA	3.56	327	eP	27 42.20	-2.0
GLB	4.17	66	eP	27 48.99	-3.8
FBA	5.24	19	eP	28 05.60	-2.3
IMA	6.14	353	eP	28 18.90	-1.6

33 obs. associated

* JAN 26, 1989 17h 19m 40.55±0.68s
9.895 S ± 8.1km 119.029 E ± 9.4km
DEPTH = 33.0km (normal)
4.1mb (2 obs.)
SUMBA ISLAND REGION (287)

MKS	4.67	5	iPd	20 51.00	0.5
TRT	6.68	289	ePc	21 18.70	-0.3
			eS	22 16.30	
NANU	13.03	194	eP	22 46.00	-0.1
			eS	24 58.00	
MEKA	16.64	182	eP	23 34.00	1.1
			eS	26 22.00	
WARB	17.73	157	eP	23 33.00	-13.7X
			eS	26 40.00	
WB5	17.83	126	eP	23 48.20	0.3
			eS	26 57.50	
WRA	17.84	126	Pd	23 48.40	0.4
	0.9s		2.60nm		3.4mb
MRWA	19.43	188	eP	24 10.40	3.1X
			eS	27 25.00	
ASPA	19.73	136	eP	24 10.10	-0.5
	0.6s		43.00nm		4.9mb
			i	24 14.00	
BWA	36.32	137	eP	26 41.90	-1.4

S.D. = 0.9 on 8 of 10 obs.

JAN 26, 1989 17h 37m 57.51±0.93s
47.584 N ± 7.2km 6.971 E ± 8.0km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.5 (LDG).

LOMF	0.25	203	Pg	38 01.11	-1.8
BSF	0.28	334	Pg	38 02.97	-0.4
			Sg	38 07.13	
MOF	0.29	22	Pg	38 04.04	0.4
HAU	0.60	315	Pg	38 08.40	-1.2
			Sg	38 16.10	
FEL	0.76	67	Pg	38 12.87	0.4
			Sg	38 23.99	
CDF	0.85	14	Pg	38 13.92	-0.1
			Sg	38 26.03	
VITF	0.92	314	Pg	38 14.27	-0.8
			Sg	38 26.23	
LBF	2.12	255	Pg	38 35.30	1.7

			Sg	39 01.00	
LOR	2.14	263	Pg	38 35.40	1.7
			Sg	39 01.30	
SMF	2.33	247	Pg	38 38.60	2.0X
			Sg	39 07.20	
SSF	2.41	259	Pg	38 40.70	3.0X

S.D. = 1.4 on 9 of 11 obs.

? JAN 26, 1989 18h 17m 48.48±4.28s
46.363 N ± 27.5km 3.758 E ± 16.8km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.6 (LDG).

SMF	0.29	11	Pg	17 54.90	0.4
			Sg	17 58.60	
AVF	0.51	327	Pg	17 58.60	-0.2
			Sg	18 04.70	
LBF	0.64	14	Pg	18 00.90	-0.4
			Sg	18 08.80	
BGF	0.66	288	Pg	18 01.70	0.1
			Sg	18 09.70	
SSF	0.72	346	Pg	18 02.90	0.2
			Sg	18 11.10	

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

* JAN 26, 1989 18h 22m 29.51±0.90s
31.752 N ± 18.6km 67.178 E ± 11.2km
DEPTH = 33.0km (normal)
4.2mb (3 obs.)
AFGHANISTAN (709)

MAIO	7.83	308	eP	24 24.00	0.0
			eS	26 36.00	
NDI	9.21	107	eP	24 51.00	8.0X
			eS	26 23.00	
GKN	15.60	99	P	26 08.00	-0.7
	0.4s		7.00nm		4.2mb
DMN	16.12	100	P	26 15.80	0.3
KKN	16.20	99	P	26 16.80	0.3
	0.5s		4.00nm		3.8mb
PKI	16.38	100	P	26 18.80	-0.1
GUN	16.67	98	P	26 22.80	0.2
	0.5s		13.00nm		4.3mb
HYB	17.61	141	eP	26 34.00	0.0

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

JAN 26, 1989 18h 38m 52.96±0.78s
35.367 N ± 8.2km 118.715 W ± 9.1km
DEPTH = 5.0km (geophysicist)
CENTRAL CALIFORNIA (39)
ML 3.0 (NEIS).

ABL	0.66	219	eP	39 06.40	0.2
BCH	1.14	261	eP	39 13.70	-1.1
BLP	1.60	240	eP	39 21.80	-0.2
PANV	1.67	51	eP	39 21.80	-1.3
GMN	2.26	31	eP	39 31.00	-0.8
PLM	2.53	142	eP	39 36.50	1.0
TNP	2.96	23	eP	39 40.60	-1.1
CMB	2.98	334	eP	39 42.50	0.7
KVN	3.71	7	eP	39 55.00	2.7

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

* JAN 26, 1989 19h 48m 16.38±1.81s
38.569 N ± 14.4km 22.235 E ± 14.3km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.2 (ATH).

NEO	1.07	46	ePb	48 37.30	0.8
ATH	1.31	117	ePb	48 40.50	-0.1
KZN	1.77	348	ePn	48 47.50	0.2
PLG	2.03	27	ePn	48 50.30	-0.8
VAY	2.76	5	ePn	49 01.40	0.0
OHR	2.77	337	ePn	49 02.80	1.2
SKO	3.45	350	ePn	49 10.00	-1.3

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

* JAN 26, 1989 21h 17m 26.38±3.06s
2.369 N ± 13.9km 126.754 E ± 19.0km
DEPTH = 104.1 ± 28.5 km
4.9mb (7 obs.)
MOLUCCA PASSAGE (266)

TSM	8.86	282	eP	19 33.70	0.4
WB5	23.34	162	eP	22 24.50	-1.8

WRA 23.39 162 Pd 22 26.50 -0.3
 0.4s 4.40nm 4.2mb
 OIS 26.04 152 eP 22 50.00 -1.7
 ASPA 26.80 165 eP 22 59.70 1.0
 Z 17s 0.31um 3.9Mszx
 LR 36 02.70
 WARB 28.38 180 eP 23 00.20 -12.8X
 BDT 31.01 300 eP 23 36.50 0.2
 CHG 31.76 303 iPd 23 42.80 -0.1
 0.9s 26.26nm 5.0mb
 XAN 35.64 334 iPc 24 15.30 -0.8
 STK 36.86 159 eP 24 27.00 0.6
 BJI 38.71 347 eP 24 42.50 0.8
 LZH 39.68 330 eP 24 52.50 2.4X
 BWA 41.88 153 eP 25 09.90 1.9
 CAN 42.89 153 eP 25 16.70 0.5
 GTA 44.27 330 eP 25 27.00 -0.5
 GUN 46.55 307 P 25 46.10 0.1
 PKI 46.78 306 P 25 47.50 -0.3
 0.6s 8.00nm 4.7mb
 KKN 46.98 307 P 25 49.20 0.0
 0.7s 18.00nm 5.0mb
 DMN 47.04 306 P 25 49.70 -0.1
 0.8s 23.00nm 5.0mb
 GKN 47.58 307 P 25 53.80 -0.1
 0.7s 15.00nm 4.9mb
 HYB 49.61 291 eP 26 09.00 -0.4
 GBA 49.99 286 Pc 26 09.70 -2.6X
 0.6s 8.20nm 4.9mb
 WMO 53.85 326 P 26 41.40 0.5
 S.D. = 0.9 on 20 of 23 obs.

JAN 26, 1989 21h 18m 15.75± 0.41s
 44.580 N ± 3.3km 7.284 E ± 4.1km
 DEPTH = 10.0km (geophysicist)
 NORTHERN ITALY (545)
 ML 2.5 (GEN), 2.1 (LDG).

PZZ 0.15 240 P 18 19.10 -0.3
 S 18 21.36
 STV 0.34 175 P 18 22.41 -0.4
 S 18 26.92
 FOUF 0.36 262 P 18 22.60 -0.6
 Sg 18 27.30
 RRL 0.49 314 P 18 25.44 -0.4
 S 18 39.29
 ROB 0.51 124 P 18 26.00 -0.1
 S 18 33.00
 RSP 0.57 358 P 18 27.09 -0.3
 S 18 35.09
 SBF 0.73 171 Pg 18 31.00 0.9
 Sg 18 39.10
 FIN 0.76 119 P 18 30.41 -0.2
 S 18 40.72
 IMI 0.80 147 P 18 30.69 -0.6
 S 18 41.11
 LPG 0.99 338 Pg 18 35.20 0.4
 Sg 18 47.30
 LPL 1.01 338 Pg 18 35.70 0.6
 Sg 18 48.70
 FRF 1.12 204 Pg 18 37.30 0.6
 Sg 18 50.80
 LRG 1.31 211 Pg 18 40.10 0.2
 Sg 18 57.80
 S.D. = 0.6 on 13 of 13 obs.

* JAN 26, 1989 22h 59m 20.85± 1.14s
 36.162 N ± 13.3km 21.810 E ± 8.8km
 DEPTH = 33.0km (normal)
 SOUTHERN GREECE (368)
 ML 3.7 (ATH).

VAM 2.08 110 ePn 59 56.00 1.8
 ATH 2.36 40 ePn 00 02.00 3.9X
 NPS 3.22 105 ePb 00 17.50 7.2X
 NEO 3.33 19 ePn 00 13.10 1.2
 KZN 4.14 360 ePn 00 24.50 1.1
 PLG 4.40 17 ePn 00 27.00 -0.1
 KAP 4.40 96 ePn 00 25.80 -1.3
 OHR 5.00 351 ePn 00 35.00 -0.7
 LCI 5.15 325 P 00 36.30 -1.4
 eSn 01 29.10
 TDS 5.56 311 P 00 44.10 0.7
 BRT 5.93 324 P 00 47.60 -1.1
 eSn 01 48.20
 KSL 6.29 88 ePn 00 52.50 -1.2
 MGR 6.33 311 P 00 54.60 0.3

SGO 6.73 313 P 01 00.40 0.5
 S.D. = 1.2 on 12 of 14 obs.
 * JAN 26, 1989 23h 16m 52.27± 0.84s
 52.795 N ± 19.1km 170.728 W ± 9.3km
 DEPTH = 33.0km (normal)
 4.7mb (7 obs.)

FOX ISLANDS, ALEUTIAN ISLANDS (9)
 ADK 3.77 258 eP 17 51.00 1.6
 KDC 11.51 57 eP 19 36.70 -0.4
 TTA 12.79 32 eP 20 00.00 5.6X
 INK 23.46 34 eP 22 00.50 1.5
 YKA 30.59 49 P 23 06.80 2.0
 KVN 38.23 89 eP 24 10.00 -0.8
 FRB 49.11 35 eP 25 38.00 0.1
 KJF 62.47 351 iP 27 14.00 0.0
 0.6s 7.80nm 5.0mb
 SUF 64.06 351 iP 27 24.50 0.0
 0.5s 2.30nm 4.5mb
 NUR 66.38 352 eP 27 39.00 -0.4
 NAO 66.73 359 P 27 41.00 -0.6
 0.6s 2.60nm 4.5mb
 HFS 67.37 358 eP 27 45.00 -0.7
 0.4s 7.80nm 5.2mb
 GUN 75.79 297 P 28 36.60 -0.3
 0.5s 6.00nm 4.8mb
 KKN 76.21 298 P 28 38.70 -0.4
 0.5s 3.00nm 4.6mb
 PKI 76.31 297 P 28 38.90 -1.0
 GKN 76.38 298 P 28 39.40 -0.6
 0.5s 3.00nm 4.6mb
 DMN 76.45 298 P 28 40.60 0.1
 PSI 88.08 272 iPd 29 40.60 -0.1
 SEK 152.02 324 ePKP 36 46.00 7.4X
 S.D. = 0.9 on 17 of 19 obs.

? JAN 26, 1989 23h 58m 06.96± 2.25s
 34.690 S ± 24.0km 179.408 W ± 12.0km
 DEPTH = 142.5 ± 23.4 km
 4.7mb (2 obs.)

SOUTH OF KERMADEC ISLANDS (179)
 HBZ 3.44 212 P 59 00.00 -0.4
 S 59 50.00
 WTZ 4.39 220 P 59 11.00 -1.9
 S 00 12.00
 GBZ 4.44 248 Pd 59 13.60 0.0
 GNZ 4.45 207 P 59 15.00 1.2
 S 00 13.00
 TAZ 4.83 222 P 59 20.50 1.7
 S 00 21.00
 WEL 8.03 213 eP 00 26.00 24.1X
 S 01 34.00
 COB 8.91 222 P 00 20.00 6.3X
 S 01 55.00
 MSZ 13.93 221 P 01 18.20 -1.0
 S 03 48.00
 RMO 28.51 278 eP 03 52.00 1.0
 CTA 33.59 287 iPd 04 35.00 -0.5
 0.9s 16.81nm 4.8mb
 OIS 38.68 280 eP 05 18.00 -0.4
 ASPA 41.89 272 eP 05 45.60 0.8
 Z 23s 0.23um 4.0Mszx
 LR 21 15.30
 WRA 43.27 277 Pd 05 55.60 -0.4
 0.8s 9.70nm 4.5mb
 WB5 43.28 278 iPd 05 55.80 -0.2
 WARB 46.81 265 eP 06 10.40 -13.7X
 FRI 90.37 44 eP 10 52.80 -0.1
 CMB 90.73 43 eP 10 54.30 -0.3
 WDC 91.38 40 eP 10 57.40 -0.1
 FRS 111.79 203 ePKP 17 50.00 83.6X
 SEK 112.32 206 e(PKP) 17 31.00 63.3X
 BNG 145.60 213 iPKPc 17 33.90 3.6X
 0.5s 28.00nm
 ic 17 47.40
 KJF 146.14 339 iPKP 17 30.20 0.6
 0.8s 24.90nm
 SUF 147.71 338 iPKP 17 34.10 1.9X
 0.5s 9.90nm
 NUR 149.84 336 iPKP 17 40.20 4.6X
 0.7s 24.00nm
 MBH 150.67 270 e(PKP) 17 46.00 8.2X
 PRNI 150.75 271 ePKP 17 46.00 8.0X
 LIC 151.20 168 PKP 17 49.50 10.5X
 0.6s 19.00nm

KIC 151.38 169 PKP 17 49.78 10.5X
 0.8s 20.00nm
 KOGH 151.53 178 ePKP 17 51.00 11.4X
 TIC 151.61 168 PKP 17 50.28 10.6X
 0.7s 17.00nm
 KUK 151.62 178 ePKP 17 51.00 11.3X
 NAO 153.03 349 PKP 17 48.00 7.7X
 0.7s 12.70nm
 HFS 153.15 345 ePKP 17 47.40 7.0X
 0.8s 19.90nm
 S.D. = 1.0 on 16 of 33 obs.

JAN 27, 1989 00h 19m 10.57± 0.59s
 39.999 N ± 5.5km 27.833 E ± 5.5km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

EDC 0.35 4 iPg 19 18.00 0.2
 iSg 19 24.00
 BNT 0.36 11 iPg 19 19.00 1.0
 KCT 0.47 58 iPg 19 21.00 0.8
 iSg 19 28.00
 DST 0.73 122 iPg 19 25.50 0.6
 eSg 19 37.50
 EZN 1.17 262 ePn 19 31.90 -0.5
 CTT 1.23 21 ePn 19 33.50 0.0
 YLV 1.31 64 iPn 19 35.00 0.2
 ISK 1.42 41 ePn 19 34.00 -2.3
 PRK 1.42 239 eP 19 37.30 0.9
 IZM 1.66 196 iPn 19 39.20 -0.7
 DMK 1.82 358 ePn 19 41.40 -0.8
 RDO 2.09 304 eP 19 46.70 0.6
 KHL 2.13 141 ePn 19 51.20 4.5X
 KDZ 2.47 313 iP 19 57.00 5.5X
 DIM 2.69 320 eP 20 00.00 5.4X
 RZN 2.90 307 eP 20 04.00 6.1X
 PLG 3.38 278 eP 20 13.60 9.1X
 PVL 3.72 331 eP 20 20.50 10.7X
 BBTK 3.79 91 iPd 20 23.50 13.1X
 iS 21 16.00
 S.D. = 1.1 on 12 of 19 obs.

* JAN 27, 1989 00h 47m 27.93± 2.56s
 36.305 N ± 21.6km 71.083 E ± 10.6km
 DEPTH = 65.3 ± 32.4 km
 4.7mb (4 obs.)
 AFGHANISTAN-USSR BORDER REGION (717)

QUE 7.01 211 eP 49 12.50 2.1
 eS 50 31.50
 NDI 9.19 144 eP 49 44.00 3.7X
 eS 51 22.00
 MAIO 9.36 273 eP 49 41.00 -1.6
 eS 51 19.00
 GKN 14.14 122 P 50 46.30 -0.2
 0.5s 24.00nm 4.9mb
 DMN 14.71 122 P 50 54.10 0.0
 0.6s 33.00nm 4.8mb
 KKN 14.72 121 P 50 54.10 0.0
 0.5s 16.00nm 4.6mb
 PKI 14.94 122 P 50 57.20 0.1
 GUN 15.06 120 P 50 58.60 -0.1
 GBA 23.31 164 Pc 52 29.10 -1.8
 0.4s 2.40nm 4.0mb
 YKA 81.44 3 P 59 40.20 1.5
 S.D. = 1.6 on 9 of 10 obs.

JAN 27, 1989 00h 56m 48.42± 0.70s
 39.115 N ± 8.3km 99.584 W ± 6.4km
 DEPTH = 5.0km (geophysicist)
 KANSAS (480)
 mbLg 2.6 (TUL). Felt at Polco.

CNK 1.50 74 iP 57 15.80 -0.3
 SNK 1.55 95 iP 57 16.60 -0.2
 MLK 2.09 89 P 57 25.00 0.4
 TCK 2.24 82 P 57 26.50 -0.2
 LCNE 2.25 13 P 57 27.00 0.2
 BENE 2.55 64 P 57 33.10 2.0X
 TUL 4.40 136 P 57 57.10 -0.2
 S 58 49.55
 GOL 4.52 279 ePn 57 59.30 -0.1
 e(S) 58 49.50
 RLO 4.67 128 P 58 01.60 0.4
 S.D. = 0.3 on 8 of 9 obs.

% JAN 27, 1989 00h 59m 20.22± 0.79s

27d 00h

39.976 N ± 6.2km		27.840 E ± 5.7km		KRA	3.63	32	eP	56 04.00	3.4X	SKO	5.99	146	iPn	56 33.30	-0.7		
DEPTH = 10.0km (geophysicist)							i	56 14.00		E	10s		1.12um				
TURKEY (366)							i	56 19.00					i	57 26.00			
EDC	0.37	3	iPg	59 28.00	0.2	CTI	3.78	257	P	55 49.60	-13.3X		iSn	57 42.50			
			iSg	59 34.00		CEI	3.81	78	eP	56 17.00	13.9X		e	58 15.00			
BNT	0.38	9	iPg	59 28.50	0.4	KSP	3.84	354	ePnd	56 03.70	0.1		LR	58 56.00			
KCT	0.48	55	iPg	59 30.50	0.5				iPg	56 19.50		GEN	6.18	248	P	56 48.58	11.9X
			iSg	59 37.50					iSn	56 50.50		MMK	6.27	264	eP	56 39.50	1.3
DST	0.71	121	iPg	59 34.50	0.2	HVAR	3.86	185	iPnd	56 05.50	1.6	VTs	6.29	133	iPd	56 38.00	-0.3
			eSg	59 46.50					iSg	57 08.00		ORX	6.36	261	P	56 49.09	9.7X
EZN	1.17	263	ePn	59 42.10	0.0	SSR	3.99	121	iPd	56 05.00	-0.7	ORO	6.36	261	P	56 39.00	-0.4
CTT	1.25	21	ePn	59 43.00	-0.5	OGA	4.06	270	ePn	56 09.20	2.3	MLR	6.43	101	ePd	56 41.50	1.2
YLV	1.31	63	iPn	59 44.00	-0.5	PLE	4.08	154	iPnc	56 07.70	0.5	TNS	6.47	303	iPc	56 40.90	0.0
ISK	1.43	40	ePn	59 46.00	-0.2				eSn	56 56.00		OHR	6.53	153	ePn	56 38.00	-3.7X
S.D. = 0.5 on 8 of 8 obs.						AOI	4.20	215	ePn	56 08.87	0.1	GWF	6.55	291	P	56 41.41	-0.6
JAN 27, 1989 03h 55m 04.45 ± 0.29s						DEV	4.28	103	iPc	56 10.00	0.2	SGO	6.57	191	P	56 41.60	-0.6
47.026 N ± 2.4km						BRY	4.28	164	ePn	56 10.40	0.4	CKI	6.60	250	P	56 42.86	0.3
DEPTH = 22.1 ± 3.2 km									eSn	56 59.50		DIX	6.64	265	eP	56 44.50	1.1
4.4mb (6 obs.)						BRG	4.33	334	ePn	56 10.00	-0.5	CDF	6.67	286	P	56 42.38	-1.3
AUSTRIA (546)						RSM	4.42	227	P	56 13.80	2.0	MOF	6.70	281	P	56 43.82	-0.4
ML 4.6 (VIE), 4.3 (ZAG), MD 4.6						SSO	4.49	215	e(Pn)	56 10.81	-2.0	FIN	6.74	248	P	56 42.94	-1.7
(KBA). Minor damage in Ajka, Vas						ARV	4.52	220	Pc	56 13.00	-0.3	PGB	6.81	128	iPc	56 45.00	-0.7
and Zala Counties, Hungary.						CJR1	4.54	91	eP	56 11.30	-2.3	VRI	6.86	96	ePc	56 53.00	6.8X
TIH	0.66	101	iPg	55 16.70	-0.6	GRF	4.65	307	iPnc	56 15.50	0.3	LOMF	6.90	276	P	56 46.25	-0.7
ZST	1.18	5	iPn	55 25.70	0.1				e(Sn)	57 05.95		ROB	6.92	250	P	56 46.32	-0.8
UZD	1.21	110	iPn	55 27.00	1.0	IVA	4.65	152	ePn	56 15.50	0.2	BSF	6.93	280	P	56 45.70	-1.7
SRO	1.22	49	iPn	55 27.00	0.8	SAL	4.67	255	P	56 26.90	11.6X	ISR	6.94	102	eP	56 50.00	2.6X
			e(Sn)	55 45.30		OSS	4.68	268	P	56 17.70	2.0	MGR	6.96	189	P	56 46.90	-0.8
VIE	1.28	342	iPg-	55 28.10	1.0	CIO	4.68	216	ePn	56 14.85	-0.8	LSD	6.97	261	P	56 49.61	1.6
			iSg	55 46.50		HOF	4.70	316	iPd	56 16.60	0.8	EMS	6.97	266	eP	56 48.00	0.0
			i	55 49.80		HCY	4.71	166	ePn	56 17.50	1.5	RSP	6.99	258	P	56 47.14	-1.1
VKA	1.31	341	iPgd	55 28.50	1.0	SFI	4.74	231	P	56 16.20	-0.1	VAY	6.99	143	ePn	56 47.50	-0.6
			iSg	55 47.70		PGD	4.84	231	P	56 17.40	-0.5	PVL	7.05	120	eP	56 47.00	-1.9
PTJ	1.32	211	iPgd	55 28.40	0.8	ALP	4.87	211	e(Pn)	56 18.87	0.5	IMI	7.09	247	P	56 47.55	-1.9
			i(Sg)	55 45.70		TTG	4.88	159	ePn	56 19.10	0.7	LPG	7.23	262	Pn	56 50.10	-1.6
ZAG	1.38	209	iPg	55 30.00	1.6	PVY	4.93	153	ePn	56 19.40	0.3	DOI	7.23	253	P	56 52.30	0.7
			iSg	55 48.50		BDV	4.93	163	ePn	56 20.50	1.5	LPL	7.24	262	Pn	56 50.30	-1.4
BUD	1.49	71	iPn	55 31.00	1.0	ASS	4.98	219	P	56 19.90	0.0	HAU	7.24	282	Pn	56 50.30	-1.3
VBY	1.92	218	iPnc	55 37.30	1.0	CLL	5.01	330	iPn	56 20.20	0.1			Sg	59 02.20		
			iSn	56 00.20		MOX	5.05	318	iPn	56 22.00	1.3	CVF	7.27	235	Pn	56 51.70	-0.3
LJU	1.93	240	iPnc	55 37.50	1.0				iSg	57 40.30		STV	7.29	251	P	56 52.79	0.4
			i	55 41.30					e(Sn)	57 18.00		MMB	7.29	136	eP	56 52.00	-0.4
			iSn	56 07.00					eSn	57 18.00		PZZ	7.33	253	P	56 51.15	-1.8
CEY	2.17	234	ePnc	55 40.40	0.5				eSn	57 18.00		TDS	7.38	184	P	56 52.50	-1.0
			i	55 49.00					eSn	57 18.00		RRL	7.38	257	P	56 53.92	0.1
			eSn	56 14.90					eSn	57 18.00		SBF	7.40	248	Pn	56 53.70	-0.1
KMR	2.16	299	iPnt	55 42.00	2.2				ePn	56 20.50		PLD	7.41	129	eP	56 53.00	-0.9
			iPg	55 47.20					eSn	57 20.00		BNI	7.41	258	P	56 56.00	1.9
			iSn	56 08.30					eSn	57 20.50		VITF	7.50	283	P	56 54.06	-1.1
			iSg	56 16.40					iPn	56 20.20		KZN	7.57	151	eP	56 56.60	0.3
PSZ	2.19	65	iPn	55 41.00	0.7				0.6s	63.00nm	5.3mb X	WLF	7.66	294	P	56 57.70	0.3
BLY	2.28	176	Pn	55 42.50	1.0				iSg	57 40.30		RZN	7.71	131	eP	56 57.00	-1.4
			Sn	56 17.50					iPn	56 22.00		KLL	7.89	301	iPnd	57 01.80	1.1
VOY	2.33	246	iPnc	55 42.70	0.5				3.00um			DIM	7.90	126	eP	56 56.00	-4.8X
			ePg	55 48.10					iPg	56 40.00		FRF	8.04	248	Pn	57 01.90	-0.9
			eSn	56 13.40					eSn	57 18.00		MEM	8.06	300	P	57 03.70	0.7
RBL	2.39	257	P	55 44.00	0.9				i	57 20.00		KDZ	8.11	128	eP	57 02.00	-1.7
			eSn	56 18.90					i	57 31.00		PLG	8.15	142	eP	57 04.20	-0.1
KBA	2.46	273	ePnc	55 44.50	0.3				iSg	57 44.00		ENN	8.17	301	ePnd	57 06.00	1.5
			iPg	55 50.30					LR	58 25.00			0.5s			5.3mb X	
			i	55 52.70					LO	03 58.00				e	58 35.00		
			iSn	56 13.00		FIR	5.15	233	iPnc	56 25.00	2.8X	LMR	8.24	247	Pn	57 03.40	-2.1
			i	56 25.30					iSn	57 09.00				Sn	58 33.00		
TRI	2.56	240	iPnc	55 46.40	0.9				i	57 22.00		WTS	8.26	311	ePn	57 06.00	0.3
			iPg	55 51.90										e	59 17.50		
			iSn	56 18.30										e	59 48.50		
			iSb	56 27.00		MDI	5.15	259	P	56 24.80	2.6X				57 05.20	-0.8	
			iSg	56 29.00		VDL	5.16	267	eP	56 24.90	2.4	LRG	8.28	248	Pn	57 05.20	-0.8
FVI	2.89	263	P	55 51.30	1.3	SAX	5.19	275	eP	56 23.30	0.3	RDO	8.53	130	eP	57 08.70	-0.8
KHC	3.09	314	iPn	55 55.00	2.1	MME	5.21	239	P	56 23.00	-0.3	DOU	8.75	295	P	57 07.00	-5.5X
			ePg	56 00.00		ULC	5.32	161	ePn	56 26.30	1.6			e	57 48.00		
			Sg	56 41.40		BDI	5.35	239	P	56 27.40	2.3	LBF	8.86	274	Pn	57 13.00	-1.2
SPC	3.10	44	iPnd	55 54.10	0.9	LLS	5.44	271	eP	56 26.90	0.4			Pg	57 54.00		
			i	56 20.00		MNS	5.55	215	Pd	56 27.30	-0.5	LOR	8.92	276	Pn	57 14.60	-0.4
			i(Sg)	56 40.00		PII	5.60	236	P	56 26.30	-2.2	SMF	8.99	272	Pn	57 14.70	-1.2
VVI	3.29	253	P	56 04.80	9.0X	DRA	5.62	112	eP	56 34.00	5.2X			Sn	58 53.30		
			(Sn)	56 53.40		AZI	5.63	208	P	56 30.70	1.9	SSF	9.18	275	Pn	57 17.40	-1.1
BEO	3.30	131	iPn	55 56.70	0.8	TMA	5.64	264	eP	56 30.30	1.0	AVF	9.31	274	Pn	57 20.00	-0.3
			iSg	56 54.70		DUI	5.65	199	P	56 29.00	-0.3	BGF	9.68	272	Pn	57 23.70	-1.8
PRU	3.3																

TUL	66.00	61 ePd+	45 36.00	-0.8	Z	21s	11.00um	6.1MsZ				eS	56 02.00		
	1.3s	30.20nm		5.3mb					46 23.90	32km	VBY	75.39 338 eP	46 42.20	8.8X	
	Z	22s	44.00um	6.6MsZ	CVL	72.15	48 eP	46 14.20	-0.5	LPF	75.42 350 eP	46 33.50	0.0		
			e	45 45.50	30km	KHC	72.25	340 iPc	46 15.90	0.7		1.1s	29.30nm	5.2mb	
			LR	07 00.00				i	46 24.50	28km	TRI	75.50 339 i(P)d	46 42.60	8.6X	
COP	66.16	343 iP	45 42.00	4.5X				S	55 30.00			e(PP)	49 33.00		
RLO	66.17	60 eP	45 36.00	-1.9	VRI	72.26	330 ePc	46 23.00	7.8X			i(SP)	56 58.00		
VVO	66.48	61 eP	45 38.90	-1.0	TEH	72.26	308 eP	46 20.00	4.4X			e(SS)	01 40.00		
FVM	66.89	56 P	45 41.20	-1.3	WET	72.37	341 eP	46 16.40	0.5			iLR	11 08.00		
PMG	66.92	199 e(P)	45 46.00	3.2X				i	46 25.20	28km	LOR	75.62 346 eP	46 34.40	-0.3	
WAR	67.78	337 e(P)	45 56.00	8.2X	SNF	72.38	347 ePd	46 24.70	8.9X			1.4s	26.10nm	5.1mb	
		eS	54 46.00		CBN	72.40	47 e(P)	46 15.00	-1.2	SSF	75.86 347 eP	46 36.10	0.0		
ELC	68.01	56 eP	45 48.10	-1.5				e	46 24.00	29km	LBF	75.88 346 eP	46 35.90	-0.3	
RSNY	68.08	41 P	46 00.00	10.1X	TAB	72.44	313 eP-	46 18.00	1.4	BBTK	75.91 324 eP	46 28.50	-8.1X		
	Z	20s	27.12um	6.5MsZ	ZST	72.44	338 eP	46 16.30	0.1			i	46 40.00	38km	
MAIO	68.11	303 eP	45 50.00	-0.3				i	46 25.60	30km	ISK	75.98 327 eP	46 37.00	0.2	
		eS	54 40.00		VKA	72.54	338 ePc	46 25.00	8.2X	AVF	76.15 347 eP	46 37.60	-0.1		
EKA	68.36	352 P	45 50.00	-1.4				3.0s	604.00nm	6.1mb		1.5s	33.40nm	5.1mb	
OLY	68.41	58 eP	45 50.00	-2.1	Z	13s	6.10um			6.1MsZ	PPI	76.20 248 eP	46 47.50	9.2X	
QUE	69.37	293 eP	45 57.50	-0.8				i	48 38.00	663kmX	SMF	76.23 346 eP	46 37.90	-0.3	
		eS	55 00.00					i	49 16.70		BGF	76.44 347 eP	46 39.20	-0.1	
SNG	69.63	252 eP	46 02.00	2.3				LR	21 00.00		TRT	76.55 233 iPc	46 40.40	0.1	
		eS	55 05.50		SRO	72.54	337 iP	46 18.00	1.2			1.0s	103.90nm	5.8mb	
WIT	69.81	346 ePc	46 02.50	2.2				e	46 26.50	27km	MFF	76.75 349 eP	46 41.30	0.3	
		e	46 10.50	26km	AFI	72.65	156 e(P)	46 24.00	6.1X	TCF	76.79 347 eP	46 41.30	0.0		
DMU	70.03	355 eP	46 01.70	0.0				(S)	55 48.00		MAF	76.81 347 eP	46 41.80	0.4	
KRA	70.06	336 eP	46 01.90	0.0	BUD	72.69	336 eP	46 17.50	-0.2	AGO	76.90 347 P	46 42.87	0.9		
	1.7s	245.00nm		6.0mb	DOU	72.74	347 P	46 21.40	3.4X	LSD	76.91 344 P	46 46.14	3.8X		
	Z	20s	15.10um	6.2MsZ	MLR	72.82	331 ePc	46 19.50	0.8	PLDF	76.92 346 P	46 42.75	0.6		
	N	20s	17.40um		WLF	72.96	345 P	46 23.40	4.2X	RDO	76.95 329 eP	46 42.50	0.3		
			i	46 10.20	27km	ISR	72.98	330 eP	46 24.00	4.4X	GBA	77.12 275 Pd	46 43.30	-0.2	
			i	46 14.90		SOP	73.04	338 eP	46 20.40	0.6		0.8s	23.70nm	5.3mb	
			eS	55 14.00		KMR	73.17	340 iP+	46 21.70	1.1	RSP	77.20 344 P	46 47.78	4.1X	
KSP	70.09	339 ePc	46 02.00	-0.1				i	46 29.20	24km	PYM	77.22 347 P	46 44.58	0.8	
	1.4s	123.00nm		5.8mb	HYB	73.41	277 eP	46 21.50	-0.9	SKO	77.29 333 eP	46 53.00	8.9X		
		id	46 11.00	29km				iPP	49 08.40			N	17s	10.50um	
CLL	70.27	341 iPc	46 02.40	-0.7				1.4s	250.00nm	6.0mb		E	18s	13.90um	
	1.7s	61.00nm		5.4mb	GWF	73.41	344 P	46 21.66	-0.3				i	56 38.00	
	Z	17s	9.50um	6.1MsZ	TIH	73.50	337 eP	46 30.80	8.4X				LR	25 24.00	
			iPp	46 11.30	29km	UZD	73.63	336 eP	46 32.00	8.8X	CRX	77.33 74 (P)	46 45.30	0.2	
			eS	55 13.00		KVT	73.69	322 iP	46 23.30	-0.4	TTG	77.41 334 eP	46 45.50	0.8	
BRG	70.51	341 eP	46 04.40	-0.3	BUC	73.78	330 eP	46 33.00	9.0X			eS	56 32.00		
	1.7s	140.00nm		5.8mb	PRM	73.78	53 eP	46 23.50	-0.8	RRL	77.50 344 P	46 50.55	5.1X		
	Z	21s	11.00um	6.1MsZ	BZS	73.83	334 eP	46 24.50	0.1	CTA	77.52 197 iPd	46 49.30	3.8X		
	N	19s	7.50um		BUC1	73.86	330 ePc	46 30.00	5.5X			1.3s	56.73nm	5.4mb	
	E	19s	19.00um		CDF	74.01	344 P	46 25.74	0.2				i	46 52.90	12kmX
			epP	46 11.90	24km	LHS	74.13	51 P	46 25.20	-1.1	VAY	77.61 332 eP	46 46.00	0.2	
			e	49 26.00		MTN	74.18	214 eP	46 27.00	0.3		i	46 55.00	29km	
			eS	55 20.00				e	46 36.00	29km	LBL	77.70 346 P	46 46.87	0.6	
WTS	70.59	346 ePc	46 05.50	0.4	KBA	74.26	340 iPd	46 27.50	0.4	FIR	77.84 340 eP	46 57.00	10.0X		
	1.2s	114.00nm		5.9mb				1.5s	304.00nm	6.1mb			iS	56 44.00	
			i	46 14.00	27km			i	46 36.70	30km	RJF	77.84 348 eP	46 47.40	0.3	
DCN	70.60	355 eP	46 04.90	-0.2	PSI	74.30	251 ePc	46 26.00	-1.5	PZZ	77.85 344 P	46 50.75	3.4X		
DLE	70.62	354 eP	46 05.20	0.0	VITF	74.40	345 P	46 27.67	0.1	ROB	77.93 343 P	46 49.93	2.3		
DBN	70.70	347 e(P)	46 16.00	10.2X	FEL	74.42	344 P	46 27.53	-0.5	FIN	77.96 343 P	46 50.75	3.0		
SPC	70.81	336 eP	46 08.00	1.3	HAU	74.55	345 eP	46 28.50	-0.1	DZM	77.98 178 iPc	46 53.60	5.5X		
			i	46 16.40	27km	MOF	74.58	344 P	46 28.85	0.0	STV	78.07 343 P	46 51.88	3.4X	
RSCP	71.06	54 eP	46 07.30	-1.0	FLN	74.64	350 eP	46 28.70	-0.4	CAT	78.15 347 eP	46 49.70	0.9		
	Z	18s	44.52um	6.8MsZ	BSF	74.65	345 P	46 28.98	-0.3			1.6s	49.70nm	5.3mb	
MOX	71.15	342 eP	46 08.00	-0.5	LDF	74.77	349 eP	46 29.40	-0.4	PLG	78.25 331 eP	46 52.40	3.0		
			i	46 18.00	32km	BEO	74.86	334 eP	46 30.00	-0.4	OHR	78.27 333 eP	46 45.00	-4.5X	
			eS	55 25.00		PTJ	74.86	338 eP	46 28.10	-2.4			i	46 57.90	44kmX
			eSS	00 00.00		SLY	74.89	312 ePd	46 28.50	-2.2			i	47 32.30	
			eLO	04 00.00				iPcP	46 42.50		SAOF	78.28 343 P	46 50.68	1.1	
			eLR	08 40.00				ePP	49 19.50		LFF	78.29 348 eP	46 50.20	0.7	
PRU	71.25	340 eP	46 09.00	-0.1				i	50 12.50		AUTN	78.30 343 P	46 51.04	1.1	
	Z	16s	16.50um	6.4MsZ				iPPP	51 06.50		IMI	78.30 343 P	46 52.50	2.8	
	N	14s	14.00um					eS	56 07.00		TOUF	78.31 343 P	46 51.26	1.3	
	E	14s	11.50um					iScS	56 22.50		AURF	78.42 343 P	46 51.35	1.0	
			e	46 17.00	26km	OGA	74.90	341 eP	46 31.80	1.0	SBF	78.42 343 eP	46 50.60	0.2	
HOF	71.42	342 eP	46 10.00	-0.2				i	46 40.70	29km		1.6s	87.00nm	5.5mb	
			i	46 19.00	29km	BBS	74.90	344 P	46 30.90	0.3	LPO	78.49 348 eP	46 51.30	0.6	
IPM	71.60	250 ePc	46 13.60	1.9	ZAG	74.94	338 eP	46 34.00	3.2X	CALN	78.62 344 P	46 51.56	0.0		
	0.8s	27.10nm		5.4mb	LJU	75.02	339 e(P)	46 38.00	6.7X	KZN	78.77 332 eP	47 01.00	8.7X		
GBTN	71.63	53 eP	46 10.50	-1.2				e(S)	56 05.00		FRF	78.84 344 eP	46 53.00	0.4	
ENN	71.91	346 eP	46 13.50	0.4	GRR	75.05	350 eP	46 31.10	-0.3			1.4s	38.30nm	5.2mb	
	1.5s	394.00nm		6.2mb	POO	75.10	281 eP	46 28.50	-3.7X	IISM	78.91 73 iP	46 54.50	1.2		
			i	46 22.00	27km			iS	56 04.00		LRG	78.99 344 eP	46 54.10	0.7	
BLA	71.98	49 P	46 12.90	-0.9	LOMF	75.12	344 P	46 31.57	-0.4	LMR	79.09 344 eP	46 54.50	0.6		
	1.2s	126.87nm		5.8mb	VOY	75.16	339 e(P)	46 35.40	3.2X	OIS	79.28 204 eP	46 54.00	-1.2		
MEM	72.05	346 Pc	46 14.40	0.5	MSL	75.17	314 ePd	46 31.50	-0.8			e	47 03.00	29km	
		e	46 22.80	27km				ePP	49 27.00		CVF	79.44 342 P	46 56.44	0.5	
TNS	72.07	344 ePd	46 14.50	0.4				ePPP	51 09.50		KOD	79.86 273 eP	46 57.00	-1.9	
PSZ	72.08	336 eP	46 15.70	1.4				eS	56 12.00				eS	56 57.00	
UCC	72.09	347 eP	46 23.00	8.9X	CEY	75.34	339 e(P)c	46 33.00	-0.1	WB5	79.91 209 eP	46 59.20	0.6		
GRF	72.14	342 iPd	46 14.00	-0.5	BOM	75.37	282 eP	46 30.50	-3.1X						

SRO	1.11	52	iPn	28 19.70	1.1	WRA	73.64	126	Pd	15 03.90	0.9	SOUTH OF MARIANA ISLANDS (210)		
			i(Sn)	28 38.10			0.8s		2.60nm		4.3mb	CENTROID, MOMENT TENSOR (HRV)		
UZD	1.20	116	iPn	28 20.20	0.1	YKA	86.24	6	P	16 14.40	4.5X	Data Used: GDSN		
VKA	1.23	338	e(Pg)	28 21.00	0.4		S.D. = 1.1	an	7	af	11	abs.	L.P.B.: 10S, 21C	
			iSg	28 39.50								Centroid Location:		
PTJ	1.43	211	ePg	28 20.00	-3.9X	&	JAN 27, 1989	12h	47m	58.59s		Origin Time 14:29:31.7 0.9		
			eSg	28 35.90			46.040 N			118.700 W		Lat 12.11N 0.09 Lon 143.54E 0.08		
LJU	2.03	239	e(Pn)	28 33.00	0.6		DEPTH = 10.2km					Dep 15.0 FIX Half-duration 1.6		
			eSn	28 59.10			WASHINGTON			(29)		Moment Tensor; Scale 10**16 Nm		
VBY	2.03	218	ePn	28 35.90	3.5X		<SEA>			CL 2.8 (SEA).		Mrr=-4.80 0.40 Mlt=-0.91 0.51		
			eSn	29 03.40								Mff= 5.71 0.52 Mrt= 4.23 1.40		
PSZ	2.10	67	ePn	28 36.30	2.8X	WG2	0.11	265	iP	48 01.60	0.1	Mrf= 0.10 1.76 Mltf=-2.73 0.42		
CEY	2.27	233	eP	28 34.50	-1.4	LNOR	0.34	120	iP	48 05.74	0.2	Principal Axes:		
			e(Sn)	29 08.00					eS	48 11.10		T Val= 6.87 Plg= 8 Azm= 66		
VOY	2.42	244	ePn	28 39.80	1.7	ETP	0.49	330	iPd	48 08.32	-0.3	N 0.83 34 331		
			eSn	29 13.30		WIW	0.57	314	eP	48 09.65	-0.4	P -7.70 55 168		
RBL	2.47	255	P	28 39.90	1.2				eS	48 18.10		Best Double Couple: Mo=7.3*10**16		
			eSn	29 17.40		PRW	0.71	284	ePd	48 12.39	-0.2	NP1:Strike=189 Dip=47 Slip= -41		
KBA	2.51	270	ePnd	28 38.00	-1.4				eS	48 24.00		NP2: 309 61 -129		
			iPg	28 44.20		RSW	0.71	300	eP	48 12.21	-0.4	GUA 1.77 39 eP 29 54.30 -0.9		
			i	29 13.10		PATW	0.76	258	eP	48 12.94	-0.4	eS 30 20.00		
TRI	2.66	239	iSg	29 19.90		GBL	0.77	317	eP	48 13.36	-0.2	eS 30 20.00		
			eP	29 08.70	27.3X	OTH	0.79	333	eP	48 13.41	-0.4	GUMO 1.78 37 eP 29 54.80 -0.5		
			e	29 21.40		CRF	0.92	329	eP	48 16.31	0.2	PJG 1.78 37 iPc 29 54.90 -0.5		
FVI	2.96	261	P	28 50.80	5.2X	MDW	0.93	308	eP	48 15.88	-0.5	JAY 14.90 192 ePc 32 56.50 -0.2		
			eSn	29 30.10		WAH2	0.93	321	eP	48 16.46	0.1	DAV 18.62 256 eP 33 48.00 4.1X		
KHC	3.05	312	Pn	28 47.20	0.2	BRVW	1.00	297	eP	48 17.13	-0.5	LMG 21.38 168 eP 34 13.00 -1.2		
			Sg	29 32.20		BVW	1.12	314	eP	48 19.20	-0.5	PMG 21.70 171 eP 34 15.00 -2.1		
PRU	3.30	331	eP	28 59.00	8.5X	MXC	1.23	297	eP	48 20.86	-0.6	BAG 22.85 283 eP 34 30.00 1.2		
			Sg	29 44.00		YAKW	1.36	291	eP	48 23.07	-0.5	MAT 24.78 349 (P) 34 46.00 -1.2		
			S.D. = 1.3	on 12 of 18 obs.		EPH	1.45	335	eP	48 24.44	-0.4	0.8s 17.16nm 4.7mb		
							17 obs. associated					Z 20s 1.06um 4.3MsZ		
? JAN 27, 1989	10h	37m	54.69±1.06s			JAN 27, 1989	13h	01m	26.62±0.70s			HNR 26.82 142 eP 35 04.00 -2.3		
	39.104 N ± 9.0km		27.646 E ± 10.6km				63.124 N ± 6.7km		150.813 W ± 7.1km			MTN 27.83 207 eP 35 15.00 -0.6		
	DEPTH = 10.0km		(geophysicist)				DEPTH = 112.4 ± 18.3 km					KNA 31.46 209 eP 35 48.00 0.1		
	TURKEY		(366)				CENTRAL ALASKA		(1)			CTA 32.14 176 iPd 35 53.50 -0.4		
IZM	0.77	203	iPg	38 09.40	-0.3							1.0s 48.50nm 5.4mb		
			eSg	38 21.40		PWA	1.54	163	iPc	01 55.20	0.8	QIS 32.77 187 iPd 35 58.80 -0.6		
DST	0.91	56	iPn	38 12.80	0.6	PMR	1.73	152	iPc	01 56.50	-0.2	WB5 33.16 196 iPd 36 02.40 -0.4		
EZN	1.25	306	ePn	38 18.50	0.6				eS	02 19.20		WRA 33.23 196 Pd 36 03.00 -0.4		
EDC	1.25	8	ePn	38 17.00	-1.0							0.6s 15.20nm 5.1mb		
			S.D. = 1.3	on 4 of 4 obs.								ASPA 36.89 195 iPd 36 34.90 0.2		
												1.0s 28.00nm 5.0mb		
												Z 21s 1.26um 4.7MsZ		
JAN 27, 1989	11h	01m	44.99±0.65s									LR 50 59.60		
	40.365 N ± 5.5km		29.273 E ± 5.2km									BJI 36.92 324 eP 36 34.50 -0.1		
	DEPTH = 10.0km		(geophysicist)									Z 20s 0.60um 4.4MsZ		
	TURKEY		(366)									GYA 37.63 298 P 36 43.00 2.0		
YLV	0.22	21	iPg	01 49.70	0.0							TIY 37.82 318 Pc 36 42.90 0.5		
GBZT	0.44	17	ePg	01 54.00	0.0							N 12s 0.40um		
			iSg	02 00.50								XAN 38.46 310 P 36 47.90 0.1		
KCT	0.71	261	iPg	01 58.70	-0.3							RMQ 38.73 173 eP 36 49.00 -1.0		
			eSg	02 08.00								HHC 40.17 321 eP 37 02.20 0.2		
ISK	0.72	347	ePg	01 58.70	-0.4							BRS 40.28 168 iPc 37 03.20 0.3		
			iSg	02 08.20								eS 47 24.00		
GPA	0.80	95	iPn	02 00.30	-0.2							MBL 40.61 216 iPd 37 06.10 0.4		
DST	0.91	213	iPn	02 02.80	0.4							DZM 40.65 147 iPd 37 05.90 -0.2		
CTT	1.01	321	ePn	02 04.20	0.1							CD2 41.34 303 iPc 37 12.20 0.5		
BNT	1.03	270	iPn	02 05.20	0.7							WARB 41.60 203 iPd 37 00.70 -13.0X		
EDC	1.08	270	ePn	02 04.00	-1.3							0.5s 26.00nm		
DMK	1.85	322	ePn	02 18.00	1.0							SNG 42.78 267 eP 37 26.30 2.7X		
EZN	2.32	258	ePn	02 27.00	3.1X							LZH 43.09 310 eP 37 27.00 0.9		
			S.D. = 0.7	on 10 of 11 obs.								1.5s 44.00nm 5.0mb		
												CHTO 43.60 285 eP 37 31.50 1.2		
* JAN 27, 1989	11h	03m	30.78±1.22s									1.0s 2.75nm 4.0mb X		
	30.988 N ± 19.5km		78.655 E ± 9.1km									KSI 43.83 252 ePc 37 33.20 1.1		
	DEPTH = 33.0km		(normol)									e 39 39.00		
	3.7mb		(3 obs.)									STK 43.84 183 eP 37 31.70 -0.2		
	NORTHERN INDIA		(308)									NANU 44.24 219 eP 37 36.00 0.8		
	ML 4.1 (NDI).											PSI 45.38 262 iPc 37 46.00 1.4		
NDI	2.61	209	iPnd	04 12.30	0.7							MEKA 45.68 212 eP 37 47.00 0.2		
			eSn	04 41.50								BWA 46.54 175 eP 37 51.50 -2.0		
			eSg	04 44.70								ADE 47.12 186 iPd 37 58.30 0.3		
OUE	10.12	268	eP	05 56.50	-0.6							0.9s 67.23nm 5.7mb		
SHL	12.84	112	eP	06 32.80	-1.1							CAN 47.48 174 eP 38 00.30 -0.6		
			eS	08 53.00								BFD 49.09 181 eP 38 03.00 -10.3X		
POO	13.14	200	eP	06 52.50	14.7X							TOO 49.50 178 eP 38 17.00 0.5		
			iS	08 56.50								LSA 51.70 298 P 38 34.90 0.9		
HYB	13.51	180	ePc	06 35.50	-7.1X							TAU 54.90 177 eP 38 57.00 0.2		
GBA	17.34	184	Pc	07 23.10	-8.8X							GUN 56.11 295 P 39 06.40 0.0		
			0.7s	2.90nm	3.5mb							PKI 56.51 295 P 39 08.40 -0.8		
KOD	20.68	183	eP	08 10.00	-0.9							0.6s 21.00nm 5.3mb		
CHTO	21.99	119	eP	08 24.00	0.2							KKN 56.63 295 P 39 09.30 -0.7		
			0.9s	2.34nm	3.6mb							0.8s 26.00nm 5.3mb		
WB5	73.61	126	eP	15 03.80	0.9							DMN 56.78 295 P 39 10.50 -0.6		
												0.8s 28.00nm 5.3mb		

28d 01h

5.0mb (3 obs.) 4.5msz (1 obs.)
SOUTH OF TONGA ISLANDS (175)

RAR 14.78 76 P 52 01.00 0.4
S 54 31.00
DZM 17.21 278 iPc 52 32.60 0.9
RMO 32.37 260 eP 55 02.00 1.0
CTA 35.90 271 iPd 55 29.70 -1.7
0.9s 25.21nm 5.1mb
PMG 39.22 287 eP 55 52.00 -7.3X
ASPA 46.12 261 iPd 56 55.80 0.5
1.3s 24.00nm 5.0mb
Z 20s 0.56um 4.5msz
LR 14 35.80
WB5 46.68 266 eP 56 58.00 -1.8
MTN 51.97 274 eP 57 37.00 -3.6X
PNT 89.49 33 eP 01 26.00 -1.0
0.7s 6.00nm 5.0mb
BDT 93.69 287 iPc 01 48.10 1.1
0.9s 23.60nm 5.6mb X
CHG 94.41 289 iPc 01 51.00 0.7
1.0s 25.00nm 5.6mb X
LWI 143.87 223 ePKPc 08 11.90 5.1X
HFS 144.98 352 ePKP 08 02.20 -4.8X
0.4s 1.30nm
JVI 152.60 290 iPKPd 08 30.50 10.8X
ZNT 152.84 291 iPKP 08 29.70 9.6X
MBH 153.13 286 iPKPd 08 31.00 10.4X
KSP 153.34 344 iPKPd 08 29.00 8.8X
CLL 153.61 348 iPKPd 08 29.20 8.6X
BRG 153.85 347 iPKP 08 29.80 8.9X
0.8s 18.00nm
MLR 153.93 325 ePKP 08 30.00 8.6X
KHC 155.57 346 ePKP 08 34.40 11.0X
S.D. = 1.4 on 9 of 21 obs.

* JAN 28, 1989 03h 16m 44.05±1.62s
14.411 N ± 7.1km 59.300 W ± 15.6km
DEPTH = 33.0km (normal)
WINDWARD ISLANDS (95)
ML 3.9 (FDF).

MVM 1.55 275 iPc 17 09.54 -0.2
S 17 29.20
BIM 1.72 274 iPc 17 12.11 0.0
S 17 32.90
FDF 1.82 280 iPc 17 13.37 -0.2
S 17 36.00
DTMT 2.15 293 eP 17 18.68 0.4
eS 17 44.62
SVV 2.15 240 eP 17 17.67 -0.7
eS 17 43.29
DSVT 2.16 292 eP 17 18.76 0.3
eS 17 44.82
SVB 2.21 239 eP 17 18.29 -0.8
eS 17 43.73
BBL 2.38 298 eP 17 22.01 0.4
S 17 48.90
PAG 2.80 305 eP 17 27.80 0.2
S 17 59.80
GRW 3.21 226 eP 17 34.05 0.7
eS 18 11.42
TRN 4.27 209 eP 17 48.91 0.6
eS 18 33.31
TBH 4.27 204 eP 17 50.27 1.9
eS 18 33.28
TCE 4.40 213 eP 17 54.22 3.9X
TPP 4.58 208 eP 17 50.93 -1.9
YKA 61.63 334 P 27 00.00 -0.7
S.D. = 1.0 on 14 of 15 obs.

? JAN 28, 1989 03h 21m 05.04±5.85s
14.266 N ± 12.4km 59.475 W ± 49.4km
DEPTH = 33.0km (normal)
WINDWARD ISLANDS (95)
ML 3.5 (FDF).

MVM 1.41 282 iPc 21 28.35 -0.2
S 21 47.70
BIM 1.57 279 eP 21 31.01 0.1
S 21 52.00
FDF 1.69 286 eP 21 32.14 -0.5
S 21 54.90
SVB 1.99 240 eP 21 37.10 0.1
eS 22 02.46
DTMT 2.05 298 eP 21 38.27 0.3
eS 22 03.43

DSVT 2.07 298 eP 21 38.56 0.4
eS 22 03.62
BBL 2.30 303 eP 21 42.00 0.5
S 22 08.00
MGG 2.42 313 eP 21 43.00 -0.2
PAG 2.76 310 eP 21 47.50 -0.4
S 22 19.20
S.D. = 0.4 on 9 of 9 obs.

? JAN 28, 1989 04h 14m 19.89±15.62s
33.329 S ± 18.1km 72.881 W ± 125.6km
DEPTH = 33.0km (normal)

OFF COAST OF CENTRAL CHILE (134)

LNV 1.38 117 iPc 14 43.00 0.1
iS 14 58.00
ROCH 1.61 78 iP 14 46.50 -0.1
TACH 1.66 102 eP 14 46.30 -0.7
iS 15 06.00
PEL 1.85 85 iPc 14 50.00 0.1
iS 15 09.50
SAN 1.86 94 iPc 14 50.10 0.1
iS 15 10.80
CHCH 1.95 109 iPc 14 51.70 0.3
PCH 2.00 99 iPd 14 52.00 -0.1
JACH 2.03 72 iP 14 52.40 -0.1
FCH 2.17 91 iP 14 55.20 0.5
iS 15 22.00
S.D. = 0.4 on 9 of 9 obs.

% JAN 28, 1989 04h 39m 21.25±1.42s
39.775 N ± 22.4km 26.553 E ± 7.1km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

EZN 0.18 286 iPg 39 25.20 -0.1
iSg 39 31.40
EDC 1.16 60 ePn 39 42.00 -0.9
KCT 1.46 71 iPn 39 47.70 0.0
IZM 1.48 158 ePn 39 37.00 -11.0X
DST 1.61 95 ePn 39 50.00 0.2
CTT 1.98 46 ePn 39 56.00 0.8
S.D. = 0.9 on 5 of 6 obs.

JAN 28, 1989 05h 27m 16.07±0.65s
40.017 N ± 6.4km 23.909 E ± 4.7km
DEPTH = 10.0km (geophysicist)

GREECE (364)

MD 3.5 (ATH).

PLG 0.50 315 iPbc 27 24.90 -1.4
NEO 0.88 217 iPbd 27 33.00 -0.1
eSb 27 45.00
MMB 1.58 355 iPc 27 44.00 -0.2
VAY 1.65 322 iPn 27 45.00 -0.2
KZN 1.66 281 iPnc 27 45.00 -0.5
RDO 1.68 47 eP 27 44.70 -0.9
eSg 28 06.30
RZN 1.78 20 iPc 27 47.00 -0.2
EZN 1.87 95 ePn 27 48.40 0.1
KK8 1.95 342 iPc 27 49.00 -0.6
PRK 1.98 112 ePb 27 54.40 4.4X
KDZ 1.99 35 iPc 27 49.00 -1.2
PLD 2.17 16 eP 27 55.00 2.3
PGB 2.54 4 eP 27 59.00 1.0
OHR 2.61 296 ePn 28 00.20 1.1
VTS 2.63 349 iPc 28 00.00 0.6
SKO 2.70 317 ePn 28 02.00 1.6
i 28 06.50
EDC 3.05 83 ePn 28 10.00 4.8X
VLS 3.17 236 ePb 28 10.20 3.3X
PVL 3.37 18 iPc 28 09.00 -0.8
KCT 3.42 85 ePn 28 11.00 0.5
DMK 3.43 57 ePn 28 10.00 -0.6
CTT 3.62 70 ePn 28 12.10 -1.3
DST 3.66 95 iPn 28 14.50 0.5
ISR 5.47 20 eP 29 00.00 20.3X
MLR 5.67 15 eP 28 43.00 0.5
BZS 5.84 344 ePc 28 42.00 -2.8
VRI 6.20 19 ePc 28 51.00 1.1
CLI 6.98 20 eP 29 02.00 1.2
S.D. = 1.2 on 24 of 28 obs.

% JAN 28, 1989 07h 00m 48.10±0.90s
33.655 S ± 9.3km 70.659 W ± 12.6km
DEPTH = 33.0km (normal)

CHILE-ARGENTINA BORDER REGION (127)

PCH 0.13 74 iP 00 55.50 1.3
iS 01 08.00
SAN 0.20 359 iP 00 57.80 3.0X
iS 01 13.00
TACH 0.23 270 iP 00 57.20 2.1
iS 01 11.00
CHCH 0.28 179 iP 00 55.50 -0.2
iS 01 08.00
FCH 0.45 43 iPd 00 57.50 -0.8
iS 01 12.70
PEL 0.51 358 iPc 00 59.30 0.4
iS 01 15.20
LNV 0.69 244 iPc 00 59.50 -1.9
iS 01 15.00
ROCH 0.74 337 iP 01 02.50 0.2
iS 01 21.80
JACH 0.97 3 iP 01 04.40 -1.1
iS 01 23.10
S.D. = 1.5 on 8 of 9 obs.

JAN 28, 1989 07h 26m 55.46±0.21s
33.257 N ± 4.3km 141.484 E ± 3.8km
DEPTH = 53.4km (7 depth phases)
5.3mb (35 obs.)

OFF EAST COAST OF HONSHU, JAPAN (229)

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 11S, 24C

Centroid Location:

Origin Time 07:26:54.4 0.4

Lat 33.01N 0.05 Lon 141.86E 0.05

Dep 15.0 FIX Half-duration 2.3

Moment Tensor; Scale 10¹⁷ Nm

Mrr=-2.18 0.07 Mtt=0.11 0.07

Mff=-2.29 0.10 Mrt=-0.47 0.22

Mrf=2.01 0.25 Mtf=-0.62 0.08

Principal Axes:

T Val=3.09 Plg=65 Azm=239

N 0.02 14 3

P -3.11 20 98

Best Double Couple: Mo=3.1*10¹⁷

NP1: Strike=212 Dip=28 Slip=122

NP2: 356 66 74

KAKJ 3.13 340 P 27 40.90 -2.6
S 28 20.50
CHJJ 3.46 324 eP 27 46.80 -1.3
eS 28 29.30
IIDJ 3.69 308 P 27 52.10 0.6
MAT 4.24 322 eP 27 59.00 -0.1
eS 28 48.00
NIIJ 4.46 334 P 28 00.50 -1.7
eS 28 54.30
MTMJ 4.49 319 eP 28 01.80 -0.9
TSRJ 5.08 298 eP 28 11.40 0.4
SHK 7.43 282 eP 28 45.50 1.6
MDJ 14.62 324 eP 30 15.50 -5.1X

Z 18s 18.90um
S 33 03.00
CN2 16.35 315 Pc 30 42.00 -0.8
Z 15s 17.60um
E 12s 14.00um
eS 33 42.00

SNY 16.56 306 iPc 30 45.00 -0.4
Z 12s 10.90um
N 11s 9.40um
E 11s 5.40um

DL2 17.00 295 P 30 54.00 3.0X
Z 14s 17.90um
N 14s 26.50um
E 15s 14.90um

SSE 17.32 268 P+ 30 54.00 -1.0
8.0s 2.30nm 2.4mb X
Z 14s 17.80um 4.6msz X
N 14s 13.50um
E 12s 11.20um

sP 31 12.00
PcP 33 22.00
S 35 12.00
sS 35 30.00

NJ2 19.09 273 Pd 31 19.00 2.4
N 13s 6.00um
E 14s 9.70um

sP 31 35.50
ANP 19.17 250 eP+ 31 05.00 -12.6X
eS 35 12.00

PJG 19.82 170 e(P) 31 24.80 0.3

GUMO	19.82	170	e(P)	31	23.80	-0.7	N	11s	4.00um		FRI	77.04	54	eP	38	43.40	-1.1			
	1.3s	601.31nm				5.7mb	E	11s	2.50um		HFS	77.55	336	eP	38	46.40	-0.4			
GUA	19.88	170	e(P)	31	25.00	-0.1			ScS	44	50.00			1.4s	90.00nm		5.6mb			
	0.8s	250.75nm				5.6mb	LSA	42.74	279	P	34	50.70	1.0	Z	18s	5.29um	5.9Msz			
TIA	20.22	285	eP	31	27.20	-1.4									LR	12	28.00			
	Z	15s	38.00um			5.9MszX	N	13s	2.70um											
	N	13s	12.10um				E	15s	3.50um											
	E	13s	34.60um						eS	41	18.10			BHD	77.80	302	ePd	38	52.00	3.3X
			sP	31	47.80		NNT	43.24	252	eP	34	51.00	-2.3	NAO	77.98	338	P	38	48.80	-0.4
BJI	21.36	296	eP	31	38.00	-2.1	SNG	45.85	245	eP	35	16.20	1.9		1.2s	42.60nm		5.3mb		
	N	14s	9.40um				MTN	46.90	194	iPd	35	21.70	-0.7	ISA	78.59	55	eP	38	54.00	0.9
	E	13s	6.00um				GUN	47.70	279	P	35	28.70	-0.5	CLC	79.11	54	eP	38	56.00	0.1
			ePP	32	02.00		PKI	48.21	279	P	35	34.00	0.9	SBB	79.57	55	eP	39	02.00	3.6X
			eS	35	34.00		KKN	48.24	279	P	35	34.00	0.8	MWC	79.66	56	eP	38	58.00	-1.1
QZH	21.62	253	eP	31	35.00	-7.8X	DMN	48.45	279	P	35	35.70	0.8	GSC	79.93	54	eP	39	03.00	2.6X
	Z	14s	10.10um			5.4MszX	GKN	48.69	280	P	35	37.30	0.7	RVR	80.26	56	eP	39	03.00	0.9
	N	14s	5.90um				BRW	49.87	22	eP	35	47.60	2.7X	BW06	80.28	45	P	39	01.00	-1.3
			eS	35	33.00		IMA	49.93	29	eP	35	46.30	0.7		1.5s	25.74nm		4.9mb		
WHN	23.17	271	P	31	58.00	-0.1								FRB	80.43	13	eP	39	05.00	2.6X
	Z	16s	24.50um			5.8MszX	PSI	50.06	242	ePd	35	50.00	3.0X	PLM	80.97	56	eP	39	01.00	-5.1X
	N	13s	12.20um				KNA	50.22	196	eP	35	46.00	-2.1	TPC	81.11	55	eP	39	08.00	1.4
	E	13s	16.40um				PMR	51.65	35	eP	35	59.70	1.2	BAR	81.47	57	eP	39	10.00	1.5
			S	36	00.00									VRI	81.65	320	ePc	39	13.00	3.9X
TIIY	24.02	289	eP	32	06.00	-0.4	KSH	52.09	297	eP	36	05.50	3.2X	KRA	82.26	326	eP	39	15.90	3.7X
	E	13s	16.20um												0.9s	32.00nm		5.3mb		
HHC	24.97	296	eP	32	16.00	0.5	FBA	52.29	31	P	36	04.00	0.7	Z	16s	3.70um		5.8MszX		
	Z	18s	11.90um			5.4Msz								N	16s	4.60um				
	N	13s	5.40um				CTA	53.24	174	iPd	36	18.10	7.3X			e	39	30.50	51km	
	E	13s	5.60um													eS	49	34.00		
			S	36	36.00		WB5	53.27	188	eP	36	08.90	-2.1	MLR	82.31	320	eP	39	14.00	1.3
			sS	36	50.00		WRA	53.34	188	Pc	36	09.40	-2.1	GLA	82.55	55	eP	39	15.00	0.9
BAG	25.24	233	eP	32	15.00	-3.3X								SPC	82.71	326	eP	39	20.00	5.2X
			eS	36	42.00		QIS	53.54	182	eP	36	12.00	-0.9	RSO	83.17	32	P	39	16.30	-0.6
BTO	26.10	295	P	32	26.00	0.0									1.0s	31.50nm		5.3mb		
	E	14s	16.00um			14kmX	HON	54.41	86	P	36	36.00	16.5X	KSP	83.34	329	eP	39	18.50	0.7
			pP	32	30.00										1.4s	49.00nm		5.3mb		
			sS	37	09.00		Z	20s	5.85um					BHL	83.52	306	P	39	23.50	4.4X
QCP	26.21	230	eP	32	28.00	1.0	NDI	54.53	284	eP	36	20.50	0.2			S	49	46.00		
HKC	26.44	253	P	32	31.00	1.9								PSZ	83.76	325	eP	39	21.30	1.2
			S	37	17.00		ASPA	57.07	188	iPd	36	37.50	-1.0	JARJ	84.29	305	Pd	39	28.10	5.1X
GZH	26.72	255	Pd	32	37.00	5.3X								BRG	84.33	330	iPd	39	27.20	4.4X
	Z	16s	8.00um			5.4MszX									2.0s	80.00nm		5.4mb		
	N	14s	10.20um				Z	22s	2.13um							eP	39	41.00	47km	
	E	12s	4.90um													eS	49	50.00		
XAN	27.06	281	iPd	32	34.40	-0.4	LNK	57.73	26	eP	36	40.50	-2.2	CLL	84.40	330	ePd	39	23.00	-0.1
	9.0s	1.10nm				2.5mb X	HYB	58.24	271	eP	36	47.50	0.5		1.5s	51.00nm		5.4mb		
	N	14s	13.30um											Z	17s	4.50um		5.9MszX		
GYA	30.85	267	P	33	10.80	1.9	RMQ	59.82	172	eP	36	57.00	-0.6	BUD	84.49	325	e(P)	39	24.00	0.4
	N	13s	3.40um				DZM	59.95	153	iPd	36	58.30	-0.4	SRO	84.60	325	eP	39	28.60	4.5X
	E	13s	7.10um				MBC	60.13	16	eP	36	57.00	-2.2	GOL	84.65	45	P	39	25.30	0.3
			S	38	12.00									Z	19s	1.42um		5.4Msz		
LZH	30.96	286	eP	33	08.50	-1.3	GBA	61.05	268	Pc	37	04.80	-1.4	GLD	84.71	45	P	39	25.50	0.3
	Z	16s	18.40um			5.8MszX									1.7s	165.22nm		5.8mb		
	N	14s	7.70um				BRS	61.26	169	iPc	37	06.60	-0.8	PRU	84.73	329	eP	39	25.50	0.7
	E	14s	13.40um											Z	20s	2.80um		5.6Msz		
			i	33	30.00	94kmX	POO	61.64	274	eP	37	10.50	0.2	N	16s	4.20um				
			PPP	34	20.00		QUE	62.19	289	eP	37	11.50	-2.5	E	14s	3.50um				
			eS	38	05.00											e	39	28.10	8kmX	
QIZ	31.60	251	eP	33	12.00	-3.4X	MAIO	65.42	298	iP	37	39.20	4.3X	ZST	84.89	326	eP	39	29.70	4.1X
	N	15s	5.00um											TIH	85.45	325	eP	39	32.00	3.6X
	E	15s	4.80um				YKA	67.05	29	P	37	44.50	-0.3	MOX	85.47	331	ePd	39	32.00	3.5X
CD2	31.94	276	eP	33	16.60	-1.7	BWA	67.64	174	eP	37	49.00	0.2		1.4s	31.00nm		5.3mb		
	N	14s	13.50um											Z	17s	2.70um		5.7MszX		
	E	14s	19.90um				ADE	67.92	182	e(P)	37	52.80	2.3	N	18s	2.00um				
GTA	33.90	293	Pc	33	35.60	0.2	CAN	68.58	173	eP	38	05.80	11.2X	E	18s	2.60um				
	6.0s	1.10nm				3.0mb X										e	39	46.50	50km	
	Z	14s	10.80um			5.7MszX	DAG	69.54	355	iPd	38	02.00	2.0			ePP	42	51.00		
	E	13s	8.50um													eS	50	00.00		
			pP	33	50.00	57km	KJF	69.94	335	eP	38	02.00	-0.6			LQ	15	10.00		
			sP	33	57.00											LR	23	40.00		
			PP	34	42.00		PNT	70.86	43	eP	38	10.00	1.5	BEO	85.64	322	eP	39	33.00	3.6X
			ScS	43	59.00		EDM	72.28	38	eP	38	15.50	-1.5	KHC	85.79	329	iPd	39	34.30	4.1X
KMI	34.63	267	Pd-	33	44.00	2.1	WDC	73.31	52	e(P)	38	23.50	0.4		1.0s	9.00nm		4.9mb		
	6.0s	1.30nm				3.0mb X	TAB	74.00	305	e(P)	38	32.00	4.6X			e	39	49.30	52km	
	N	14s	7.70um				MIN	74.04	52	e(P)	38	28.00	0.4	GRF	86.37	330	eP	39	33.60	0.6
	E	14s	6.40um				ORV	74.51	53	eP	38	29.40	-0.7		Z	19s	3.00um		5.7Msz	
			pP	33	53.00	31kmX	SES	75.03	39	eP	38	35.00	2.0			e	39	36.50	9kmX	
			PP	35	11.00		CMB	76.04	54	eP	38	37.80	-1.1	ALQ	86.98	50	eP	39	36.00	-0.5
			eS	39	05.00		PRS	76.24	56	e(P)	38	40.30	0.2		1.3s	24.04nm		5.3mb		
LOE	38.98	256	eP	34	18.00	-0.4	UPP	76.37	334	iP	38	43.30	3.0X	Z	21s	3.58um		5.8Msz		
CHG	40.56	260	iPd	34	31.50	0.1	LRM	76.82	44	eP	38	42.70	-0.7	KBA	87.43	327	ePd	39	41.00	2.6X
	1.1s	41.14nm				5.1mb	FFC	76.85	32	eP	38	42.50	-0.6		0.8s	6.20nm		4.9mb		
			eS	42	12.00											i	39	57.00	56km	
			e	42	22.20		KVN	77.03	52	P	38	44.00	-0.6			e	40	16.00		
NST	41.20	255	eP	34	41.50	4.9X	MSL	77.04	305	eP	38	45.50	1.0			e	40	19.50		
WMO	42.70	301	P	34	50.20	1.4										e	43	02.00		
	Z	15s	5.30um			5.6MszX										e	43	17.50		

NEW BRITAIN REGION (192)					KDC					LJU						
DZM	21.43	141	iPc	19 04.00 -0.1	1.43	149	iP	25 57.38 -1.3	1.07	30	eSg	01 20.70	e(Pg)	01 10.10	-0.2	
BRS	21.63	178	iPc	18 59.90 -6.0X	CNPM	1.45	67	iP	25 58.23 -0.7	eSg	01 26.00					
MTN	21.86	249	eP	19 08.00 -0.3	NNL	1.68	50	eP	26 17.96	eSg	01 28.50					
WB5	22.28	229	eP	19 27.70 15.2X				26 01.71 -0.1	RBL	1.33	354	P	01 14.30	-0.4		
ASPA	25.04	223	iPd	19 59.90 20.6X	RDT	1.75	24	eP	26 01.77 -1.0	eSg	01 35.80					
	1.1s			79.00nm				26 24.25	FVI	1.63	335	P	01 17.70	-1.1		
NST	55.62	293	eP	23 48.00 -3.8X	NKA	2.20	36	eP	26 09.06 0.5	eSg	01 42.30					
LZH	61.34	316	(P)	24 23.00 -8.7X	SVW	2.31	338	iP	26 08.42 -1.6	PTJ	1.73	62	eP	01 20.20	-0.2	
GUN	71.95	302	P	25 39.30 -0.1	SPU	2.38	22	eP	26 09.63 -1.4	KBA	1.98	352	iPgc	01 26.30	2.1	
	0.9s			34.00nm	SLKM	2.39	49	eP	26 10.12 -1.0	iSg	01 51.80					
PKI	72.25	301	P	25 40.70 -0.5	CRP	2.44	20	eP	26 10.82 -1.1	S.D.	= 1.2	on	8 of 9 obs.			
	1.0s			19.00nm	SEW	2.51	62	eP	26 10.86 -1.7							
KKN	72.42	301	P	25 41.80 -0.3	PTE	3.08	50	eP	26 18.48 -1.8	? JAN 28, 1989	14h 21m	15.19 ± 1.41s				
	0.8s			18.00nm	PMS	3.12	42	iP	26 19.64 -1.4	3.041 S ± 21.8km	130.109 E ± 25.2km					
DMN	72.52	301	P	25 42.50 -0.2				26 54.68	DEPTH = 33.0km (normal)							
	1.0s			45.00nm	MTU	3.32	70	iP	26 22.04 -1.6	4.8mb (1 obs.)						
GKN	73.03	301	P	25 45.50 -0.1	PWA	3.33	35	eP	26 22.03 -1.6	CERAM (272)						
	1.0s			34.00nm	PWL	3.35	54	eP	26 22.06 -2.1	PCI	10.48	281	eP	23 46.70	0.4	
GBA	76.50	285	Pc	26 07.00 1.6	KNIM	3.39	64	iP	26 22.32 -2.3	WB5	17.24	166	eP	25 14.10	-1.2	
	0.9s			6.30nm	PLRM	3.52	40	eP	26 23.63 -2.6	i			25 18.30			
S.D.	= 0.8	on	8 of 13 obs.		PME	3.58	40	eP	26 24.73 -2.4	eS			28 20.80			
					KNK	3.63	46	eP	26 25.44 -2.5	ASPA	19.72	153	eP	25 46.00	0.9	
* JAN 28, 1989	11h 56m	38.98 ± 1.84s			GHO	3.72	39	eP	26 26.44 -2.7	0.7s	28.00nm		25 57.10	0.4		
33.079 S ± 13.0km	69.039 W ± 17.4km			GLI	3.90	58	eP	26 28.59 -2.9	eS			29 45.80				
DEPTH = 10.0km (geophysicist)				SML	3.94	42	eP	26 29.33 -2.8	CTA	23.14	138	eP	26 31.00	11.4X		
CHILE-ARGENTINA BORDER REGION (127)				TTA	4.09	346	eP	26 32.11 -2.2	CHG	37.58	307	eP	28 28.20	-0.5		
FCH	1.08	256	iP	56 58.80 -0.7	FID	4.12	61	eP	26 31.24 -3.3	GUN	52.50	309	P	30 28.00	-0.1	
				VZW	4.21	57	eP	26 33.40 -2.5	S.D.	= 1.0	on	6 of 7 obs.				
PCH	1.35	246	iP	57 03.20 -0.7	VLZ	4.34	57	eP	26 35.81 -1.7							
				SGAM	4.63	67	eP	26 39.25 -2.3	JAN 28, 1989	15h 28m	39.55 ± 0.33s					
JACH	1.37	286	iPc	57 04.00 -0.1	KLU	4.69	54	eP	26 40.28 -2.1	41.943 N ± 3.7km	20.093 E ± 2.8km					
				RAGM	4.86	69	eP	26 42.57 -2.2	DEPTH = 13.2 ± 2.7 km							
PEL	1.38	267	iPd	57 04.00 -0.3	TOA	4.92	47	eP	26 43.21 -2.3	ALBANIA (391)						
								32 obs. associated	MD 3.6 (TTG).							
SAN	1.41	254	eP	57 05.30 0.6	? JAN 28, 1989	12h 33m	41.10 ± 1.01s		ULC	0.63	272	iPgc	28 51.80	-0.1		
CHCH	1.59	237	iPc	57 07.40 0.1	39.233 N ± 9.8km	27.765 E ± 9.7km			eSg			29 01.20				
				DEPTH = 10.0km (geophysicist)				PVY	0.66	352	iPgc	28 51.50	-0.9			
RTCB	1.60	7	iPc	57 06.80 -0.7	TURKEY (366)			eSg			29 00.50					
ROCH	1.66	273	iPd	57 09.00 0.5	DST	0.76	61	eP	33 55.40 -0.7	TTG	0.79	308	iPgc	28 54.00	-0.5	
					IZM	0.92	205	iP	33 59.00 0.3	IVA	0.94	351	iPgc	28 56.50	-0.7	
TACH	1.69	250	iP	57 08.40 -0.3	eSg			34 13.00	iSg			29 06.20				
LNV	2.17	246	eP	57 16.50 0.9	KCT	1.11	24	iPn	34 02.80 0.8	OHR	0.99	147	iPgc	28 57.00	-1.0	
				EZN	1.26	298	ePn	34 04.10 -0.4	iSg			29 11.80				
RTRS	2.92	353	iPc	57 27.00 0.7	YLV	1.82	42	iPn	34 15.80 3.1X	BDV	1.00	290	iPgc	28 58.40	0.2	
S.D.	= 0.7	on	11 of 11 obs.		S.D.	= 1.2	on	4 of 5 obs.	iSg			29 15.40				
* JAN 28, 1989	12h 03m	29.37 ± 0.60s		* JAN 28, 1989	12h 42m	37.85 ± 3.36s		SKO	1.00	88	iPgc	28 57.00	-1.3			
3.379 S ± 10.3km	149.362 E ± 9.9km			17.540 N ± 28.3km	61.865 W ± 19.1km			0.5s	1540.00nm							
DEPTH = 33.0km (normal)				DEPTH = 33.0km (normal)				NKY	1.19	317	eP	29 10.50				
4.8mb (3 obs.)				LEEWARD ISLANDS (92)				eSg			29 01.00	-0.5				
BISMARCK SEA (203)				ML 3.2 (FDF).				HCY	1.29	294	eP	29 20.50				
RAB	2.92	106	eP	04 14.00 -0.5	ANG	0.38	175	eP	42 46.54 -0.2	iSg			29 24.30			
PMG	6.38	200	eP	05 06.00 2.4X	eS			42 50.73	PLE	1.48	340	eP	29 06.20	0.3		
OIS	19.54	208	eP	07 56.00 -1.4	NEV	0.78	239	eP	42 52.39 -0.1	eSg			29 29.00			
WB5	21.98	221	eP	08 04.00 -18.4X	eS			43 03.33	BRY	1.49	310	iPgd	29 06.20	0.1		
				SKI	0.86	256	eP	42 53.44 -0.1	eSg			29 30.00				
RMQ	22.99	181	eP	08 32.00 -0.3	eS			43 03.75	VAY	1.96	108	iPn	29 12.00	-0.7		
BRS	24.10	173	iPd	08 43.00 -0.1	MGH	0.88	202	eP	42 54.03 0.1	KZN	2.07	142	eP	29 14.80	0.4	
				eS			43 04.99	LCI	2.28	226	P	29 17.60	0.2			
DZM	24.90	140	iPc	08 52.10 1.1	SKDB	0.91	261	eP	42 54.29 0.0	eSn			29 56.30			
ASPA	25.10	215	iPd	08 54.20 1.4	eS			43 04.68	VTS	2.40	73	iP	29 19.00	-0.3		
	1.4s			30.00nm	BSK	0.95	258	eP	42 54.97 0.1	BRT	2.42	245	P	29 25.50	6.1X	
				eS			43 05.96	eSn			30 02.70					
GUN	68.46	302	P	14 31.50 0.3	SEG	1.18	163	eP	42 58.30 0.2	MMB	2.74	96	iPd	29 24.00	0.0	
	0.8s			13.00nm	eS			43 12.40	BEO	2.89	5	ePn	29 31.50	5.5X		
PKI	68.77	301	P	14 32.70 -0.4	PAG	1.51	173	eP	43 03.20 0.2	eSg			30 15.00			
KKN	68.93	301	P	14 34.10 0.1	S			43 21.60	HVAR	2.96	296	iPn	29 27.40	0.4		
DMN	69.03	301	P	14 34.80 0.2	BBL	2.04	169	eP	43 10.30 -0.3	PLG	2.98	121	iPd	29 27.00	-0.3	
GKN	69.54	301	P	14 37.10 -0.5	S			43 35.00	PGB	3.08	77	eP	29 29.00	0.2		
	0.6s			4.00nm	S.D.	= 0.2	on	9 of 9 obs.	SSR	3.16	22	iPc	29 53.00	23.2X		
YKA	95.77	28	P	16 56.90 3.7X	? JAN 28, 1989	14h 00m	50.04 ± 3.70s		RZN	3.46	93	iPc	29 34.00	-0.4		
S.D.	= 0.9	on	11 of 14 obs.	45.116 N ± 27.2km	13.762 E ± 15.7km			BLY	3.52	324	ePn	29 37.40	2.5			
* JAN 28, 1989	12h 25m	32.68s		DEPTH = 10.0km (geophysicist)				Sn			30 15.40					
58.986 N	153.856 W			NORTHERN ITALY (545)				NEO	3.55	137	eP	29 34.40	-1.1			
DEPTH = 104.3km				MD 2.2 (TRI). ML 1.9 (KBA).				TDS	3.65	233	P	29 39.60	2.7			
KODIAK ISLAND REGION (13)								VLS	3.78	174	eP	29 38.40	-0.3			
<AGS-P>								BZS	3.83	16	ePd	29 39.00	-0.4			
PDB	0.82	348	iP	25 51.05 -0.8	TRI	0.59	0	iPgd	01 01.00 -1.0	SGO	3.86	251	P	29 40.20	0.4	
				iSg				01 08.70	MGR	3.88	244	P	29 41.10	1.0		
ILIM	1.19	22	iP	25 55.15 -0.7	CEY	0.78	37	eP	01 14.50 9.3X	eSn			30 26.90			
				VOY	0.92	6	eP	01 08.30 0.6	KDZ	3.99	92	iPd	29 40.00	-1.7		

VOY 6.08 314 ePn 14 26.40 -0.2
 eSn 15 39.00
 RBL 6.52 316 P 14 32.00 -0.8
 FVI 7.03 314 P 14 39.30 -0.6
 KBA 7.06 319 eP 14 40.50 0.0
 0.6s 7.40nm 5.0mb X
 e 14 52.50
 i(S) 16 46.00
 BOB 8.29 293 P 14 57.60 0.0
 KHC 8.53 330 Pc 15 01.90 1.0
 S.D. = 0.8 on 47 of 52 obs.

JAN 28, 1989 16h 26m 08.29±0.66s
 37.767 N ± 6.7km 2.566 W ± 5.8km
 DEPTH = 10.0km (geophysicist)
 SPAIN (377)
 MG 2.6 (MDD). Felt (III) in the
 Golerero area.

ENIJ 0.84 161 ePg 26 24.60 0.0
 eSg 26 35.70
 EVIA 0.87 3 iPgc 26 25.10 0.0
 eSg 26 37.50
 EALH 0.91 84 ePg 26 25.70 0.0
 AFC 0.93 237 ePg 26 26.30 0.1
 eSg 26 39.00
 EBAN 1.04 293 iPgc 26 28.30 0.3
 eSg 26 42.30
 EHOR 2.12 272 ePn 26 43.80 -0.5
 eSn 27 10.70
 S.D. = 0.3 on 6 of 6 obs.

& JAN 28, 1989 16h 45m 39.30s
 52.264 N 115.176 W
 DEPTH = 5.0km (geophysicist)
 ALBERTA PROVINCE, CANADA (24)
 <PGC-P>. ML 3.4 (PGC).

EDM 1.47 48 eP 46 05.30 -1.2
 MNB 1.97 269 iPnc 46 13.80 -0.2
 Sg 46 40.60
 SLEB 2.14 240 Pn 46 16.40 0.0
 DOWB 2.20 251 Pn 46 17.40 0.4
 SES 3.20 124 Pn 46 30.50 -0.7
 Sn 47 07.00
 PNT 4.08 225 eP 46 41.20 -2.5
 DMMT 5.64 163 ePn 47 03.70 -2.3
 HRY 5.97 157 ePn 47 06.90 -3.6
 SXM 6.65 155 ePn 47 17.90 -2.3
 LRM 6.69 163 ePn 47 16.90 -4.0
 BGMT 7.33 162 ePn 47 25.80 -4.1
 CCMT 7.51 167 ePn 47 27.60 -4.7
 FFC 8.25 67 eP 47 37.00 -5.4
 0.8s 3.60nm 4.7mb
 YKA 10.26 1 P 48 07.30 -2.9
 14 obs. associated

& JAN 28, 1989 16h 59m 12.96s
 59.435 N 153.027 W
 DEPTH = 87.9km
 SOUTHERN ALASKA (2)
 <AGS-P>.

ILIM 0.65 3 iP 59 28.27 -0.8
 iS 59 40.26
 PDB 0.69 301 iP 59 28.77 -0.7
 iS 59 41.35
 CNPM 0.92 84 iP 59 31.20 -0.7
 NNL 1.07 54 eP 59 33.89 0.3
 RDT 1.18 15 iP 59 34.28 -0.8
 iS 59 50.69
 NKA 1.59 34 eP 59 41.52 1.4
 KDC 1.72 170 iP 59 40.16 -1.6
 SLKM 1.77 51 eP 59 42.25 -0.4
 SPU 1.82 15 eP 59 42.72 -0.5
 CRP 1.89 13 eP 59 43.98 -0.3
 SEW 1.93 68 eP 59 44.34 -0.3
 SVW 2.12 324 eP 59 46.56 -0.7
 PTE 2.46 53 eP 59 50.59 -1.3
 PMS 2.50 42 eP 59 51.74 -0.8
 eS 00 20.96
 PWL 2.75 57 eP 59 53.99 -1.8
 iS 00 24.52
 KNIM 2.82 69 iP 59 54.36 -2.4
 PLRM 2.90 40 eP 59 56.81 -1.0
 KNK 3.01 47 eP 59 57.71 -1.8
 GHO 3.10 39 eP 59 59.09 -1.6

GLI 3.30 61 eP 00 00.31 -3.1
 iS 00 35.90
 SML 3.32 42 eP 00 00.57 -3.2
 HIN 3.42 71 eP 00 03.32 -1.8
 FID 3.53 65 eP 00 03.27 -3.4
 VZW 3.61 60 eP 00 05.71 -2.1
 VLZ 3.74 60 eP 00 08.56 -0.9
 TTA 3.79 339 eP 00 08.82 -1.5
 SGAM 4.07 71 eP 00 12.10 -2.0
 KLU 4.08 57 eP 00 11.96 -2.3
 TOA 4.30 49 eP 00 17.50 0.2
 RAGM 4.31 74 eP 00 16.10 -1.4
 30 obs. associated

& JAN 28, 1989 17h 15m 07.44s
 60.262 N 152.678 W
 DEPTH = 101.0km
 SOUTHERN ALASKA (2)
 <AGS-P>.

ILIM 0.23 218 iP 15 21.66 1.1
 iS 15 33.22
 RDT 0.34 23 iP 15 21.94 -0.7
 iS 15 34.69
 NNL 0.73 107 eP 15 25.60 0.2
 NKA 0.86 55 iP 15 27.80 1.1
 PDB 0.90 239 iP 15 26.32 -0.8
 iS 15 41.09
 CNPM 1.04 135 eP 15 27.74 -0.9
 CRP 1.04 14 iP 15 28.18 -0.7
 eS 15 45.29
 SLKM 1.24 78 iP 15 30.23 -0.8
 iS 15 48.23
 SEW 1.62 94 eP 15 34.01 -1.6
 SVW 1.68 302 eP 15 34.74 -1.7
 PMS 1.82 56 eP 15 37.42 -0.8
 iS 16 00.41
 PTE 1.90 70 iP 15 37.59 -1.7
 iS 16 00.79
 PWA 1.95 43 eP 15 38.95 -0.9
 eS 16 02.72
 PLRM 2.19 51 eP 15 41.05 -1.9
 PWL 2.23 73 eP 15 41.22 -2.4
 eS 16 08.21
 PME 2.25 51 eP 15 42.09 -1.7
 KNK 2.37 59 eP 15 43.24 -2.2
 eS 16 11.62
 GHO 2.37 49 eP 15 43.87 -1.7
 eS 16 12.28
 KNIM 2.46 86 iP 15 43.51 -3.2
 KDC 2.52 178 eP 15 44.87 -2.6
 SML 2.62 52 eP 15 46.72 -2.2
 GLI 2.83 75 eP 15 49.54 -2.1
 FID 3.11 78 eP 15 51.40 -4.0
 eS 16 26.34
 VZW 3.12 72 eP 15 52.68 -3.0
 VLZ 3.24 72 eP 15 53.93 -3.3
 KLU 3.53 67 iP 15 58.32 -2.9
 TOA 3.65 57 eP 16 00.99 -2.0
 27 obs. associated

% JAN 28, 1989 18h 31m 58.24±0.79s
 40.138 N ± 7.2km 28.273 E ± 6.1km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)
 KCT 0.13 30 iPg 32 02.50 1.1
 BNT 0.35 309 iPg 32 05.00 -0.4
 eSg 32 12.00
 EDC 0.38 304 iPg 32 05.00 -1.0
 iPg 32 12.00
 DST 0.60 153 iPg 32 09.60 -0.8
 eSg 32 17.60
 YLV 0.94 63 iPn 32 16.50 0.2
 CTT 1.02 7 ePn 32 17.70 0.3
 ISK 1.10 33 ePn 32 18.00 -0.9
 EZN 1.53 259 ePn 32 27.00 1.4
 S.D. = 1.1 on 8 of 8 obs.

& JAN 28, 1989 19h 33m 13.20s
 61.280 N 150.686 W
 DEPTH = 49.8km
 SOUTHERN ALASKA (2)
 <AGS-P>.

PWA 0.54 46 iP 33 24.48 -0.5
 PMS 0.55 93 iP 33 24.69 -0.4

NKA 0.60 207 iP 33 27.05 1.3
 SPU 0.67 262 iP 33 26.32 -0.4
 iS 33 36.99
 CRP 0.71 270 iP 33 26.99 -0.4
 iS 33 38.33
 SLKM 0.81 163 iP 33 27.64 -0.9
 iS 33 39.39
 PLRM 0.81 67 iP 33 27.59 -0.9
 iS 33 39.39
 PME 0.87 66 iP 33 28.61 -0.7
 iS 33 41.13
 PTE 0.91 117 iP 33 29.06 -0.8
 iS 33 42.83
 GHO 0.98 59 iP 33 30.14 -0.8
 iS 33 43.96
 KNK 1.08 82 P 33 31.67 -0.6
 iS 33 46.52
 RDT 1.10 231 iP 33 31.83 -0.7
 iS 33 47.02
 PWL 1.22 109 iP 33 33.06 -1.1
 iS 33 50.65
 SML 1.25 64 iP 33 33.53 -1.1
 iS 33 51.13
 NNL 1.28 194 eP 33 35.28 0.3
 eS 33 51.39
 SEW 1.33 152 iP 33 35.18 -0.5
 ILIM 1.64 224 iP 33 39.63 -0.6
 CNPM 1.78 189 iP 33 41.04 -1.1
 VZW 2.01 95 eP 33 43.66 -1.8
 VLZ 2.11 92 eP 33 45.10 -1.6
 PDB 2.29 231 iP 33 48.35 -0.9
 eS 34 15.37
 KLU 2.30 83 eP 33 47.40 -2.1
 TOA 2.30 67 eP 33 48.93 -0.6
 eS 34 19.30
 SVW 2.40 268 eP 33 49.35 -1.5
 CVA 2.52 105 eP 33 49.40 -3.1
 SGAM 2.79 104 eP 33 52.93 -3.5
 TTA 3.00 306 eP 33 57.87 -1.6
 RAGM 3.08 104 eP 33 56.93 -3.6
 FBA 3.86 19 eP 34 10.77 -0.8
 29 obs. associated

% JAN 28, 1989 19h 49m 42.61±0.84s
 45.199 N ± 5.7km 7.707 E ± 7.2km
 DEPTH = 10.0km (geophysicist)
 NORTHERN ITALY (545)
 ML 2.4 (GEN).

RSP 0.32 262 P 49 49.73 0.4
 S 49 54.27
 LSD 0.47 304 P 49 52.30 0.1
 S 49 58.18
 ORX 0.47 24 P 49 52.18 -0.1
 S 49 57.92
 RRL 0.71 247 P 49 56.25 -0.5
 S 50 03.61
 PZZ 0.82 212 P 49 58.38 -0.2
 S 50 07.18
 ROB 0.91 173 P 50 00.36 0.3
 S 50 10.75
 S.D. = 0.4 on 6 of 6 obs.

JAN 28, 1989 19h 54m 39.19±0.97s
 10.796 S ± 4.4km 166.009 E ± 4.8km
 DEPTH = 112.9 ± 8.5 km
 4.9mb (10 obs.)

SANTA CRUZ ISLANDS (184)
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 11S, 19C
 Centroid Location:
 Origin Time 19:54:43.1 1.2
 Lat 10.49S 0.10 Lon 165.23E 0.11
 Dep 88.8 6.2 Half-duration 1.5
 Moment Tensor: Scale 10¹⁶ Nm
 Mrr= 3.94 0.44 Mtt= 0.82 1.45
 Mff=-4.76 1.31 Mrt= 2.47 0.56
 Mrf=-3.75 0.59 Mtf=-1.33 0.64
 Principal Axes:
 T Vol= 6.66 Plg=57 Azm= 37
 N -0.49 25 174
 P -6.17 20 274
 Best Double Couple: Ma=6.4+10¹⁶
 NP1: Strike= 39 Dip=34 Slip= 140
 NP2: 164 69 63

28d 19h

HNR 6.12 282 iPd 56 08.00 -0.7
0.9s 732.77nm 5.9mb X
iS 57 19.00
VSG 6.39 283 iP 56 13.00 0.6
iS 57 24.00
DZM 11.22 178 iP 57 17.20 -0.3
iS 59 16.40
PAA 11.32 292 eP 57 19.00 0.2
PMG 18.61 273 eP 58 50.00 -0.7
BRS 20.68 215 iPc 59 13.20 1.1
i 59 28.40
CTA 21.14 242 iPd 59 17.00 0.2
0.6s 50.67nm 5.1mb
iS 03 10.00
RMO 22.56 224 eP 59 31.00 0.3
e 59 48.00
OIS 27.17 246 eP 00 13.00 -1.1
CMS 27.80 219 eP 00 20.00 0.4
e 00 46.00
BWA 28.48 212 eP 00 24.80 -1.0
CAN 28.90 210 eP 00 30.00 0.4
STK 30.80 223 eP 00 47.00 0.6
WB5 31.77 250 eP 00 54.00 -1.0
WRA 31.81 250 Pd 00 53.40 -1.9
1.0s 22.80nm 4.9mb
TOO 32.42 211 eP 01 01.00 0.6
e 01 24.00
ASPA 33.14 243 iPd 01 05.40 -1.5
0.8s 41.00nm 5.3mb
BFD 33.71 215 eP 01 02.00 -9.6X
MTN 34.18 263 iPc 01 15.40 -0.5
ADE 34.59 222 iPc 01 20.40 1.2
1.0s 46.00nm 5.3mb
WARB 40.16 242 iPd 02 01.70 -4.2X
0.4s 13.00nm 5.1mb
FORR 40.39 235 eP 02 08.00 0.3
PCI 46.90 279 eP 03 02.40 2.0
MEKA 47.35 244 iPd 03 04.50 0.7
NANU 49.54 250 eP 03 21.60 1.0
MDJ 64.25 332 eP 05 05.00 0.7
CN2 65.66 329 Pc 05 12.50 -0.9
BJI 68.45 321 eP 05 30.50 -0.5
TIY 69.55 317 eP 05 37.80 -0.2
XAN 70.15 312 Pc 05 41.10 -0.5
HHC 71.81 319 P 05 52.00 0.4
CHTO 72.36 294 eP 05 55.00 -0.1
1.1s 5.59nm 4.3mb
e 06 18.00
CD2 72.66 307 eP 05 56.60 -0.1
BTO 72.67 319 eP 05 58.30 1.6
LZH 74.78 312 e(P) 06 09.00 -0.1
GTA 79.07 314 Pc 06 33.20 0.4
SPA 79.27 180 e(P) 06 33.10 -0.3
1.0s 5.00nm 4.3mb
IMA 82.20 15 iP 06 50.00 1.3
FBA 83.01 18 iP 06 52.00 -0.7
0.8s 20.69nm 5.1mb
PRI 83.17 51 eP 06 55.30 1.0
WDC 83.25 47 eP 06 54.80 0.3
ORV 83.66 48 eP 06 56.60 0.0
MIN 83.84 47 eP 06 57.40 -0.3
CMB 83.98 50 eP 06 58.50 0.2
FRI 84.17 51 eP 06 59.50 0.4
MWC 84.62 54 eP 07 01.00 -0.8
SBB 84.94 53 eP 07 03.00 -0.2
RVR 85.10 54 eP 07 04.00 0.1
PLM 85.33 55 eP 07 05.00 -0.3
CLC 85.44 52 eP 07 06.00 0.3
GSC 85.92 53 eP 07 03.00 -5.1X
KVN 86.00 49 iP 07 09.10 0.6
TPC 86.19 54 eP 07 09.00 -0.4
TNP 86.38 50 iP 07 10.00 -0.4
1.1s 9.74nm 4.7mb
GUN 86.42 299 P 07 11.30 0.3
PKI 86.75 299 P 07 12.70 0.1
GLA 86.90 56 eP 07 13.00 0.2
KKN 86.91 299 P 07 13.70 0.5
DMN 87.02 299 P 07 14.20 0.4
GKN 87.51 299 P 07 15.80 -0.2
WMO 89.10 315 P 07 23.20 0.0
GBA 91.13 284 Pc 07 32.60 -0.3
0.8s 1.90nm 4.4mb
YKA 94.63 27 P 07 47.10 -1.0
KJF 119.23 341 ePKP 13 15.00 -1.0
APO 126.22 343 ePKP 13 28.80 -0.9
0.4s 2.90nm
BUL 128.01 234 iPc 13 34.10 -0.4

ETER 145.33 338 e(PKP) 14 05.50 0.1
BNG 147.16 261 iPc 14 09.10 -0.2
0.9s 45.00nm
ic 14 11.70
ic 14 37.00
ETOR 148.29 343 e(PKP) 14 14.00 3.6X
GUD 149.03 345 e(PKP) 14 14.00 2.3X
S.D. = 0.7 on 65 of 70 obs.
? JAN 28, 1989 21h 27m 53.83 ± 2.45s
9.098 N ± 38.8km 121.743 E ± 25.2km
DEPTH = 33.0km (normal)
4.9mb (6 abs.)
SULU SEA (253)
PPR 3.05 283 P 28 41.00 0.2
1.0s 85.00nm
TRT 19.00 209 ePc 32 22.80 7.3X
0.7s 51.80nm 4.9mb
WB5 31.36 157 iPc 34 15.30 1.4
WRA 31.41 157 Pd 34 16.00 1.7
0.5s 5.20nm 4.6mb
NANU 32.05 191 eP 34 20.40 0.6
0.4s 12.00nm 5.1mb
OIS 34.31 149 iPc 34 39.40 -0.1
ASPA 34.66 160 iPc 34 44.10 1.5
0.6s 11.00nm 5.0mb
WARB 35.39 172 iPc 34 46.40 -2.3
0.3s 5.00nm 4.9mb
MEKA 35.63 185 eP 34 51.00 0.2
CTA 37.73 140 iPc 35 06.90 -1.6
0.6s 13.33nm 5.0mb
MRWA 38.49 188 eP 35 14.00 -0.8
FORR 40.18 172 eP 35 28.10 -0.7
S.D. = 1.4 on 11 of 12 obs.
* JAN 28, 1989 23h 32m 19.03 ± 0.92s
2.774 S ± 10.1km 101.602 E ± 12.2km
DEPTH = 103.8 ± 9.4 km
4.6mb (10 obs.)
SOUTHERN SUMATERA (274)
KSI 1.31 131 iPd 32 42.00 -1.5
iS 32 54.50
e 38 00.00
KLI 3.85 123 eP 33 19.00 1.7
eS 33 48.10
e 34 38.00
KGM 5.06 20 eP 33 49.00 15.1X
IPM 7.33 355 ePc 34 06.00 0.9
0.6s 20.80nm 4.9mb
CHTO 21.61 353 eP 36 56.00 -6.1X
2.0s 23.26nm 4.2mb
GBA 28.97 305 Pd 38 10.60 -0.4
0.6s 2.60nm 4.0mb
WARB 33.46 136 iPc 38 45.80 -4.5X
0.4s 1.00nm 4.0mb
PKI 33.96 334 P 38 54.70 -0.3
GUN 34.05 335 P 38 55.90 0.1
0.4s 16.00nm 5.2mb
DMN 34.13 333 P 38 56.20 -0.2
KKN 34.21 334 P 38 56.60 -0.4
0.4s 5.00nm 4.7mb
GKN 34.68 333 P 39 00.60 -0.3
0.4s 5.00nm 4.8mb
WB5 36.22 120 eP 39 13.00 -0.9
WRA 36.23 121 Pd 39 13.30 -0.6
0.6s 5.90nm 4.7mb
ASPA 37.50 126 iPc 39 24.90 0.2
1.0s 26.00nm 5.1mb
eS 45 06.10
NDI 39.07 325 eP 39 37.50 -0.1
OIS 41.03 118 iPd 39 53.60 -0.3
STK 47.44 132 eP 40 46.00 0.8
BUL 73.08 250 iPd 43 40.70 0.3
0.8s 7.46nm 4.6mb
SLR 73.78 244 iPc 43 45.20 0.8
MLR 81.96 317 eP 44 17.00 -11.8X
S.D. = 0.8 on 17 of 21 obs.
* JAN 29, 1989 00h 20m 36.26 ± 1.07s
12.843 N ± 11.8km 44.802 W ± 22.9km
DEPTH = 10.0km (geophysicist)
4.4mb (2 obs.) 3.8MsZ (1 obs.)
NORTH ATLANTIC RIDGE (403)

ZOBO 36.99 219 P 27 48.20 -0.4
Z 20s 0.18um 3.8MsZ
LR 39 48.00
LPB 37.18 219 P 27 50.00 0.0
CNCB 37.32 218 P 27 51.80 0.4
LNO 51.14 306 e(P) 29 41.00 -0.5
TUL 51.15 306 eP 29 41.10 -0.5
1.2s 5.90nm 4.4mb
SIO 51.52 306 e(P) 29 44.10 -0.3
HFS 63.50 28 eP 31 08.30 -0.3
0.6s 1.40nm 4.3mb
SES 65.09 320 eP 31 21.00 1.7
YKA 69.39 332 P 31 46.00 -0.1
S.D. = 0.8 on 9 of 9 obs.
JAN 29, 1989 01h 37m 18.55 ± 2.37s
6.914 N ± 12.4km 72.883 W ± 17.6km
DEPTH = 135.2 ± 25.1 km
4.7mb (7 obs.)
NORTHERN COLOMBIA (99)
HOBC 4.12 232 iPd 38 20.85 -0.1
CLMC 4.74 231 iPd 38 29.05 -0.3
DIAC 4.88 223 iPd 38 31.70 0.4
HOQC 5.07 228 iPd 38 32.70 -1.1
ANCC 5.21 230 iPd 38 35.10 -0.5
SALC 5.45 224 iPd 38 38.60 -0.4
PURC 5.73 217 iP 38 44.80 1.7
UPA 6.90 288 e(P) 39 14.00 15.5X
eS 40 09.00
ZOBO 23.51 168 P 42 18.00 0.0
LPB 23.77 169 eP 42 24.00 3.6X
i 42 54.30
CNCB 24.06 168 P 42 24.00 0.7
JSC 28.31 345 eP 43 03.00 1.6
FVM 34.78 335 iP 43 59.00 1.1
0.6s 18.21nm 5.0mb
RLO 35.47 328 eP 44 02.70 -1.1
LNO 35.69 327 eP 44 05.20 -0.3
TUL 35.69 327 eP 44 05.20 -0.4
0.6s 8.20nm 4.7mb
SIO 35.84 326 eP 44 06.40 -0.5
MEO 36.46 323 eP 44 11.50 -0.6
ALQ 41.60 317 eP 44 55.00 0.0
GOL 43.77 323 iP 45 13.00 0.4
0.8s 20.83nm 4.9mb
RSON 47.11 342 iP 45 38.50 -0.1
0.6s 7.63nm 4.6mb
BW06 48.15 324 iP 45 46.80 -0.3
1.0s 5.25nm 4.3mb
KVN 51.71 315 eP 46 14.00 -0.3
SES 53.73 331 eP 46 31.00 2.2
YKC 63.20 340 eP 47 33.50 -0.7
0.7s 8.00nm 4.8mb
YKA 63.26 340 P 47 34.10 -0.5
LIC 67.36 86 P 48 00.90 -0.8
KIC 67.63 86 P 48 03.00 -0.4
INK 73.02 340 eP 48 35.00 0.1
MBC 73.76 350 eP 48 39.00 -0.1
0.6s 7.00nm 4.6mb
WRA 150.59 241 PKPc 56 55.20 4.2X
0.5s 2.50nm
WB5 150.59 241 ePKP 56 55.50 4.5X
S.D. = 0.9 on 28 of 32 obs.
& JAN 29, 1989 02h 30m 19.60s
33.010 N 117.840 W
DEPTH = 6.0km (geophysicist)
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 3.2 (PAS).
SCI 0.59 267 iPd 30 30.40 -1.1
CIS 0.62 310 eP 30 31.40 -0.5
CPE 0.64 102 eP 30 31.50 -0.8
PLM 0.89 67 iPc 30 37.10 -0.1
BAR 1.04 108 eP 30 37.90 -1.7
PEC 1.05 33 iPd 30 38.20 -1.6
RVR 1.05 21 eP 30 38.40 -1.5
GLA 2.53 88 eP 30 58.00 -4.0
KVN 6.03 358 eP 31 55.00 3.3
9 obs. associated
? JAN 29, 1989 02h 43m 11.57 ± 8.72s
47.382 N ± 28.6km 1.289 W ± 104.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.4 (LDG).

29d 07h

NUR	65.97	331	iP	28	17.70	-0.8
HFS	70.06	335	eP	28	43.20	-0.6
	0.4s	5.00nm			4.7mb	
NAO	70.42	336	P	28	45.20	-0.9
	0.8s	5.00nm			4.4mb	
FRB	73.16	13	eP	29	01.00	-1.1
GRF	79.13	329	eP	29	36.30	0.5
	0.8s	6.00nm			4.4mb	
LOR	83.89	332	eP	30	00.50	-0.1
	0.8s	4.00nm			4.3mb	
FLN	84.08	335	eP	30	01.20	-0.3
LBF	84.09	331	eP	30	01.50	-0.2
LDF	84.11	335	eP	30	01.40	-0.3
SSF	84.19	332	eP	30	02.20	0.1
LPG	84.30	329	eP	30	03.40	0.3
	0.7s	3.70nm			4.3mb	
SMF	84.43	331	eP	30	03.50	0.2
AVF	84.48	332	eP	30	03.80	0.3
	0.5s	3.60nm			4.4mb	
GRR	84.52	335	eP	30	03.70	0.0
LPF	84.90	335	eP	30	05.80	0.2
MAF	85.25	332	eP	30	08.10	0.7
	0.7s	5.50nm			4.5mb	
TCF	85.32	332	eP	30	08.30	0.5
LSF	85.59	333	eP	30	09.50	0.4
	0.5s	6.10nm			4.7mb	
MFF	85.86	334	eP	30	10.70	0.3
RJF	86.41	332	eP	30	13.70	0.5
CAF	86.54	332	eP	30	14.90	1.0
	0.6s	2.70nm			4.3mb	
LFF	87.00	332	eP	30	16.90	0.9
LPO	87.07	332	eP	30	17.20	0.9
	S.D. = 0.8	on	40	of	41	obs.
	JAN 29, 1989	07h	30m	32.12 ± 1.04s		
	37.664 N ± 7.5km		15.291 E ± 8.0km			
	DEPTH = 10.0km		(geophysicist)			
	SICILY		(398)			
	One person injured and minor		damage in the Mt. Etna region.			
ATN	0.51	15	P	30	42.70	0.2
			eSg	30	52.60	
MNO	0.54	300	P	30	42.00	-1.1
			eSg	30	52.10	
MEU	0.63	207	P	30	44.30	-0.6
			eSg	30	52.10	
GIB	1.05	288	P	30	52.10	0.1
			eSg	31	07.40	
MCT	1.32	269	P	30	58.10	1.5
			eSg	31	15.30	
FAI	1.34	254	P	30	56.50	-0.3
			eSg	31	16.70	
USI	1.96	303	P	31	06.90	1.1
CVT	1.98	271	P	31	06.70	0.7
TDS	2.15	22	P	31	08.90	0.4
			eSn	31	34.40	
ERC	2.17	281	P	31	07.60	-1.3
			eSn	31	34.50	
LVI	2.36	279	P	31	11.20	-0.3
			eSn	31	39.80	
MGR	2.48	5	P	31	12.20	-1.0
OHR	5.48	49	e(P)	32	04.00	8.1X
	S.D. = 1.0	on	12	of	13	obs.
	% JAN 29, 1989	08h	27m	35.42 ± 0.66s		
	40.382 N ± 6.1km		29.220 E ± 5.2km			
	DEPTH = 10.0km		(geophysicist)			
	TURKEY		(366)			
YLV	0.22	32	iPg	27	40.20	0.0
KCT	0.67	259	iPg	27	48.70	-0.1
ISK	0.69	350	iPg	27	49.30	0.2
			iSg	27	58.30	
GPA	0.84	96	ePn	27	51.50	-0.1
DST	0.90	211	iPn	27	52.90	0.2
CTT	0.97	322	iPn	27	53.80	-0.1
BNT	0.99	269	iPn	27	55.20	0.9
EDC	1.04	268	iPn	27	54.00	-1.0
	S.D. = 0.6	on	8	of	8	obs.
	? JAN 29, 1989	09h	38m	36.27 ± 1.72s		
	21.091 S ± 16.8km		68.025 W ± 33.9km			
	DEPTH = 33.0km		(normal)			
	CHILE-BOLIVIA BORDER REGION		(124)			
ANT	3.41	220	eP	39	28.50	0.0

CCH	4.10	26	P	39	38.40	-0.1
CNCB	4.26	1	eP	39	42.00	1.0
LPB	4.53	359	P	39	45.00	0.2
ZOBO	4.80	359	P	39	47.50	-1.1
			(S)	40	45.00	
	S.D. = 1.1	on	5	of	5	obs.
	% JAN 29, 1989	09h	49m	10.87 ± 0.89s		
	39.084 N ± 7.6km		27.644 E ± 9.1km			
	DEPTH = 10.0km		(geophysicist)			
	TURKEY		(366)			
Izm	0.75	204	iPg	49	25.40	-0.1
			eSg	49	35.40	
DST	0.92	55	iPn	49	28.90	0.3
EZN	1.26	306	ePn	49	34.60	0.3
EDC	1.27	8	iPn	49	34.00	-0.5
KCT	1.29	25	iPn	49	34.70	0.0
	S.D. = 0.5	on	5	of	5	obs.
	* JAN 29, 1989	12h	29m	20.76 ± 2.17s		
	40.364 N ± 11.6km		126.817 W ± 20.0km			
	DEPTH = 10.0km		(geophysicist)			
	4.3mb (1 obs.)					
	OFF COAST OF NORTHERN CALIFORNIA (34)					
FHC	2.20	78	eP	29	57.50	-0.4
NWRM	3.59	121	eP	30	17.40	-0.2
LTCM	3.59	91	eP	30	18.00	0.3
LBFM	3.86	74	eP	30	22.00	0.3
MIN	3.98	89	eP	30	23.30	0.0
ORV	4.17	99	eP	30	25.50	-0.3
ARN	5.11	124	eP	30	38.00	-1.2
CMB	5.51	113	eP	30	46.50	1.6
KVN	6.85	98	eP	31	04.00	0.1
LON	7.35	28	eP	31	09.00	-1.6
PNT	10.30	27	eP	31	53.00	1.4
BW06	13.15	74	eP	32	34.50	4.1X
EDM	15.79	31	iP	33	08.20	3.6X
ALQ	17.00	102	eP	33	32.00	11.7X
	1.0s	5.00nm				
FFC	21.92	41	eP	34	15.00	-0.8
	1.0s	12.00nm			4.3mb	
YKA	23.35	14	P	34	30.50	0.7
	S.D. = 1.0	on	13	of	16	obs.
	? JAN 29, 1989	12h	55m	04.50 ± 5.42s		
	31.335 S ± 40.9km		68.558 W ± 35.5km			
	DEPTH = 117.5 ± 58.9 km					
	SAN JUAN PROVINCE, ARGENTINA (137)					
RTCB	0.26	234	iPd	55	21.20	-0.4
			S	55	33.00	
CFA	0.38	135	ePd	55	22.00	0.2
RTCV	0.52	178	iPd	55	22.80	0.2
			S	55	36.00	
RTRS	1.40	326	iPc	55	31.00	0.1
			S	55	50.00	
TCA	3.39	91	ePc	55	56.70	-0.1
			S	56	29.50	
	S.D. = 0.5	on	5	of	5	obs.
	% JAN 29, 1989	13h	23m	14.82 ± 0.90s		
	29.326 N ± 10.6km		113.896 E ± 9.5km			
	DEPTH = 33.0km		(normal)			
	EASTERN CHINA		(664)			
	ML 4.1 (BJI).					
WHN	1.28	18	Pn	23	38.00	1.6
			Pg	23	39.00	
			Sg	23	57.50	
NJ2	5.06	56	ePg	24	43.00	12.6X
QZH	6.05	135	ePn	24	43.80	-0.5
GZH	6.23	185	ePn	24	48.50	1.6
			Pg	25	09.00	
			Sg	26	19.00	
XAN	6.33	319	Pg	25	13.30	25.0X
			Sn	26	03.20	
			Sg	26	33.10	
SSE	6.55	73	ePn	24	50.00	-1.4
GYA	7.01	248	Pn	24	57.20	-0.7
			Sn	26	15.60	
TIA	7.38	21	ePn	25	07.90	4.9X
CD2	8.92	283	eP	25	23.80	-0.7
	S.D. = 1.6	on	6	of	9	obs.

? JAN 29, 1989	13h	29m	54.15 ± 5.63s			
14.384 N ± 16.4km		59.452 W ± 49.0km				
DEPTH = 17.9 ± 10.9 km						
WINDWARD ISLANDS					(95)	
ML 3.6 (FDF).						
MVM	1.41	277	iPc	30	18.87	-0.1
BIM	1.57	275	eP	30	21.58	0.2
			S	30	42.60	
FDF	1.68	282	eP	30	22.85	-0.1
			S	30	45.30	
SVV	2.01	238	eP	30	27.70	0.0
			eS	30	54.31	
SVB	2.07	238	eP	30	28.52	0.0
			eS	30	53.90	
BBL	2.26	300	eP	30	31.00	-0.3
MGG	2.36	311	eP	30	32.50	-0.1
PAG	2.70	308	eP	30	38.00	0.4
			S	31	09.20	
	S.D. = 0.3	on	8	of	8	obs.
	* JAN 29, 1989	14h	59m	03.06 ± 0.55s		
	13.572 N ± 8.6km		120.337 E ± 13.5km			
	DEPTH = 33.0km		(normal)			
	4.8mb (7 obs.)					
	MINDORO, PHILIPPINE ISLANDS (250)					
PPR	4.09	203	iPd	00	03.00	-1.8
			eS	00	59.00	
BJI	26.62	353	eP	04	40.00	-0.4
GUN	35.10	299	P	05	57.00	1.1
	0.5s	10.00nm			5.0mb	
PKI	35.40	299	P	05	58.00	-0.5
	0.5s	4.00nm			4.6mb	
KKN	35.57	299	P	06	00.70	0.9
DMN	35.67	299	P	06	01.60	0.9
WBS	35.99	157	eP	06	04.80	1.7
WRA	36.04	157	Pd	06	04.20	0.7
	0.7s	1.70nm			4.1mb	
GKN	36.18	299	P	06	05.60	0.7
	0.5s	2.00nm			4.3mb	
ASPA	39.32	160	eP	06	31.00	0.0
KJF	79.04	334	iP	11	04.70	-0.5
	0.5s	18.20nm			5.3mb	
SUF	79.97	332	iP	11	09.50	-0.7
	0.3s	4.10nm			4.9mb	
NUR	81.09	330	iP	11	15.80	-0.3
INK	83.34	21	eP	11	27.00	-0.7
NAO	87.47	332	P	11	47.40	-1.0
	0.8s	6.60nm			4.9mb	
	S.D. = 1.0	on	15	of	15	obs.
	JAN 29, 1989	15h	20m	22.23 ± 0.61s		
	43.228 N ± 6.2km		0.343 W ± 7.2km			
	DEPTH = 10.0km		(geophysicist)			
	PYRENEES		(378)			
	ML 3.5 (LDG). Felt (IV) in the		Ossou Valley and (III) at Louvie			
	Juzon and Lourdes, France.					
EPF	0.54	111	Pg	20	31.60	-1.5
			Sg	20	38.50	
ECRI	1.71	250	iPn	20	54.50	2.2
LPO	1.83	37	Pn	20	54.20	0.3
			Pg	20	59.00	
			Sg	21	24.80	
LFF	1.88	24	Pn	20	55.80	1.1
			Pg	21	00.60	
			Sg	21	26.20	
CAF	2.43	45	Pn	21	01.80	-0.8
			Pg	21	09.70	
			Sg	21	42.70	
EROO	2.47	167	ePg	21</		

		Sn	22 00.10		SUE	1.73	340	iP+	38 48.40	0.1		e	42 25.00				
		Sg	22 18.00					eS	39 08.20			e	42 39.00				
MAF	3.64	34	Pn	21 20.50	0.7	HYA	1.74	4	iPd	38 48.70	0.3	e	43 25.00				
			Pg	21 33.20		NAO	2.81	58	P	39 04.50	0.7	WLF	9.80	179	P	40 42.50	0.7
			Sg	22 20.40		NRA0	3.09	63	iPd	39 08.00	0.3	ECP	10.04	229	eP	40 45.10	0.0
ECHE	3.67	188	ePg	21 31.80	11.6X			iPb	39 13.10			eS	42 30.00				
			eSg	22 10.00				iPg	39 17.10		ECB	10.05	231	eP	40 45.10	-0.3	
GUD	3.84	229	ePn	21 21.30	-1.5			iS	39 42.90			eS	42 30.00				
			eSn	22 03.30				iSg	39 51.10		GRF	10.23	160	iPnc	40 49.70	1.8	
BGF	4.03	33	Pn	21 24.20	-1.0	MOL	3.24	13	iP	39 09.30	-0.5		e(Sn)	42 54.60			
			Pg	21 40.00		UDD	3.93	77	iPn	39 20.30	0.7	SUF	10.31	63	iP	40 46.40	-2.5X
			Sg	22 33.00				i	39 25.10			0.4s	12.10nm		5.7mb X		
AVF	4.42	35	Pg	21 47.00	16.1X			i	39 30.40		KSP	10.44	141	eP	40 52.00	1.3	
			Sg	22 44.60				i	40 21.00				e(S)	42 30.00			
SMF	4.53	40	Pn	21 31.70	-0.7	RGS	4.20	29	eP	39 22.60	-0.9	PRU	10.68	149	P	40 54.00	0.0
			Sg	22 47.80				eS	40 09.00				e	42 54.00			
LPF	4.83	354	Pg	21 55.20	18.6X	DEL	5.16	122	iPn	39 40.60	3.5X	WET	11.07	156	iP	41 00.20	0.8
			Sn	22 30.00				iSn	40 38.90			CDF	11.08	175	Pn	40 59.60	0.1
			Sg	22 59.20				i	41 02.40				Sn	43 00.60			
LRG	4.89	85	Pn	21 39.00	1.4	MYV	5.37	46	iPn	39 38.40	-1.7	KHC	11.24	153	P	41 03.00	1.3
FRF	5.10	84	Pn	21 41.40	0.8			iSg	39 55.40				e	43 07.90			
GRR	5.17	356	Pn	21 40.60	-0.9	EDU	5.58	243	eP	40 59.40		KJF	11.31	56	eP	40 59.00	-3.5X
			Pg	22 02.30				eS	39 44.10	1.0		0.6s	15.60nm		5.5mb X		
			Sg	23 10.50				eS	40 43.70				eS	43 05.00			
						ESY	5.79	236	ePd	39 46.50	0.5		eSg	44 08.00			
								eS	40 49.10		FLN	11.34	202	Pn	41 00.80	-2.1	
						NSS	5.84	26	iP	39 45.50	-1.2		Sn	42 58.90			
								eS	40 43.70		LDF	11.43	201	Pn	41 02.20	-2.0	
						UPP	5.94	81	iPn	39 47.90	-0.1		Sn	43 02.50			
								i	39 53.50		MAU	11.46	179	Pn	41 06.20	1.6	
								i	40 11.10		TRO	11.62	23	eP	41 03.00	-3.7X	
								iSn	40 53.50			eS	42 54.50				
						ELO	5.94	244	ePc	39 49.00	0.8	BSF	11.64	177	Pn	41 08.30	1.1
								eS	40 52.40		GRR	11.77	203	Pn	41 06.30	-2.5X	
						EBH	5.98	242	ePc	39 50.00	1.4	LPF	12.14	203	Pn	41 11.70	-2.2
						EDI	6.04	238	iPc	39 50.30	0.9		Sn	43 18.00			
								eS	40 54.80		SOD	12.15	40	iP	41 08.40	-5.4X	
						EBL	6.07	237	ePd	39 50.60	0.7		i	43 03.70			
						EAU	6.20	239	eP	39 51.70	-0.1		iS	43 15.00			
						EAB	6.39	244	ePd	39 55.20	0.7	LOR	12.26	187	Pn	41 14.60	-0.8
								eS	41 02.60			Sn	43 25.80				
						EKA	6.42	234	P	39 56.00	1.1	KRA	12.37	133	eP	41 21.10	4.3X
								0.4s	22.40nm			e	41 31.30				
						WIT	6.65	176	ePn	40 01.50	5.4mb X	SSF	12.48	188	Pn	41 17.90	-0.5
								e	40 08.00	3.3X		Sn	43 31.00				
						WTS	7.48	176	iPnd	40 10.80	1.1	LBF	12.53	186	Pn	41 18.60	-0.5
								0.7s	240.00nm			Sn	43 33.00				
								i	40 16.00		VKA	12.74	147	iP	41 35.40	13.6X	
								i	40 22.00			0.4s	22.50nm				
								iSn	41 37.80			i	43 41.40				
						BNS	8.52	175	iPnd	40 24.70	0.4		i	44 08.70			
								0.5s	239.00nm			i	45 43.20				
								Sg	40 57.20		AVF	12.76	188	Pn	41 22.00	-0.2	
						ENN	8.69	180	iPnd	40 26.80	0.2	SMF	12.88	187	Pn	41 22.80	-0.9
								0.5s	27.00nm			Sn	43 39.00				
								i	40 34.40		BGF	13.04	190	Pn	41 25.00	-0.8	
								eSn	42 03.00			Sn	43 43.60				
						UCC	8.71	187	P	40 28.40	1.5	KBA	13.14	157	eP	41 28.50	1.2
								S	42 04.00			0.7s	5.10nm		4.8mb		
						MEM	8.85	180	iP	40 28.80	0.0		i	41 29.50			
								iS	42 05.60			i	41 41.80				
						YRH	8.86	226	eP	40 28.00	-1.0		i	44 56.20			
								eS	42 01.00		TCF	13.36	191	Pn	41 29.80	-0.3	
						DMU	8.99	237	eP	40 30.10	-0.7		Sn	43 49.00			
								eS	42 06.30		MFF	13.36	198	Pn	41 27.80	-2.3	
						SNF	9.00	187	iP	40 31.40	0.6		Sn	43 48.70			
								S	42 09.80		MAF	13.39	190	Pn	41 29.80	-0.7	
						CLL	9.08	151	ePn	40 31.00	-0.9	LSF	13.47	193	Pn	41 30.50	-1.1
								eSn	42 32.00			Sn	43 52.00				
						DLE	9.27	234	eP	40 34.70	0.1	FVI	13.50	159	P	41 34.50	2.7X
								eS	42 12.10		AGO	13.52	188	P	41 31.77	-0.4	
						TNS	9.35	170	ePc	40 37.40	1.7	PLDF	13.56	187	P	41 32.19	-0.6
								eS	42 19.00		KEV	13.63	32	eP	41 34.00	0.4	
						MOX	9.39	157	iPn	40 37.00	0.7	RBL	13.79	157	P	41 40.10	4.3X
								0.6s	25.00nm		PYM	13.82	189	P	41 35.44	-0.8	
						DOU	9.40	185	Pc	40 36.40	0.1	LPL	13.95	178	Pn	41 40.50	2.4X
								i	40 46.30		LBL	14.32	188	P	41 42.50	-0.2	
								iS	42 18.00		RJF	14.41	193	Pn	41 42.80	-1.0	
								i	43 00.90			Sn	44 15.00				
						NUR	9.43	75	iP	40 35.30	-1.6	CAF	14.73	191	Pn	41 47.50	-0.5
								iS	42 15.00			Sn	44 24.00				
						DCN	9.53	236	eP	40 38.20	0.0	PTJ	14.83	152	eP	41 50.50	1.1
								eS	42 20.70		LFF	14.86	195	Pn	41 48.80	-0.9	
						ETA	9.57	230	eP	40 39.00	0.2	LPO	15.06	193	Pn	41 51.70	-0.6
						BRG	9.72	149	ePn	40 40.00	-0.8	EPF	16.79	194	Pn	42 14.20	-0.4
								e	41 09.00		VRI	18.42	128	ePc	42 42.00	7.2X	

S.D. = 1.3 on 16 of 22 obs.

JAN 29, 1989 15h 26m 24.39± 1.02s

37.756 N ± 10.4km 19.830 E ± 5.5km

DEPTH = 26.2 ± 5.7 km

4.1mb (1 obs.)

IONIAN SEA

(399)

ML 4.0 (ATH).

VLS	0.73	55	ePg	26 38.00	-0.5									
			eSg	26 50.60										
KZN	2.96	30	iPbd	27 12.10	1.3									
NEO	3.08	59	ePn	27 12.10	-0.3									
ATH	3.08	85	eP											

29d 22h

ETOR 3.04 7 eSg 43 13.00
 GUD 3.11 337 ePn 42 40.20 0.6
 EVAL 3.35 268 ePn 42 41.50 0.9
 eSn 43 16.10
 ePn 42 42.40 -1.5
 eSn 43 21.40
 EPLA 3.58 310 ePn 42 46.00 -1.1
 eSn 43 27.50
 EROQ 3.79 36 ePn 42 50.10 0.0
 eSn 43 34.00
 EPF 5.67 22 Pn 43 16.40 -0.4
 Pg 43 39.60
 Sn 44 13.80
 Sg 44 50.00
 PTO 5.76 307 e(Pn) 44 05.00 47.0X
 e(Sn) 44 52.80
 LPO 7.43 21 Pn 43 39.70 -1.8
 CAF 7.92 24 Pn 43 46.20 -2.1
 BGF 9.62 23 Pn 44 08.60 -3.3X
 S.D. = 1.3 on 18 of 20 obs.

% JAN 29, 1989 23h 15m 59.36±0.94s
 39.147 N ± 8.1km 27.781 E ± 9.3km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 DST 0.80 55 iPg 16 15.30 0.4
 eSg 16 26.00
 IZM 0.85 209 iPg 16 15.60 -0.2
 KCT 1.19 22 iPn 16 21.60 0.1
 EDC 1.20 3 iPn 16 21.00 -0.7
 EZN 1.31 301 ePn 16 24.10 0.5
 S.D. = 0.7 on 5 of 5 obs.

? JAN 29, 1989 23h 22m 15.83±6.24s
 31.485 N ± 26.6km 35.612 E ± 54.2km
 DEPTH = 10.0km (geophysicist)
 DEAD SEA REGION (373)
 MKRJ 0.07 20 Pd 22 17.80 -0.5
 MASJ 0.26 20 Pd 22 21.30 0.0
 KFJN 0.38 8 Pc 22 23.30 -0.3
 QUTJ 0.39 119 P 22 23.70 -0.1
 BURJ 0.74 10 Pc 22 31.20 0.9
 JARJ 0.80 21 Pd 22 32.00 0.6
 S.D. = 0.7 on 6 of 6 obs.

* JAN 29, 1989 23h 53m 05.58±0.86s
 7.013 S ± 8.7km 129.749 E ± 10.0km
 DEPTH = 133.0 ± 8.9 km
 4.5mb (4 obs.)
 BANDA SEA (280)
 MTN 5.95 167 eP 54 31.00 -1.7
 eS 55 23.00
 KUG 6.85 242 ePc 54 46.50 1.7
 KNA 8.74 186 iPc 55 07.00 -3.3X
 0.3s 40.00nm 5.6mb X
 eS 56 38.00
 OIS 16.51 146 eP 56 51.00 0.2
 eS 59 41.00
 MBL 17.02 213 eP 56 56.00 -1.1
 ASPA 17.03 167 eP 56 55.20 -2.0
 eS 59 52.30
 PMG 17.39 99 eP 57 02.00 0.4
 WARB 19.29 188 iPc 57 18.90 -3.8X
 0.4s 6.00nm 4.3mb
 eS 00 40.00
 NANU 20.66 220 eP 57 37.10 0.6
 eS 01 23.00

MEKA 22.22 207 eP 57 53.00 0.9
 FORR 23.76 184 eP 58 08.00 1.1
 STK 27.10 157 eP 58 38.00 0.2
 CHTO 39.76 311 iP 00 27.00 -0.1
 0.8s 5.12nm 4.3mb
 GUN 54.77 311 P 02 23.60 -0.7
 0.6s 15.00nm 5.1mb
 PKI 54.94 311 P 02 24.40 -1.2
 KKN 55.16 311 P 02 26.00 -0.9
 DMN 55.19 311 P 02 27.40 0.1
 0.6s 7.00nm 4.7mb
 GKN 55.75 311 P 02 30.00 -1.2
 YKA 107.87 26 PKP 11 19.90 1.5
 CNCB 150.54 144 ePKP 12 41.00 2.0
 i 12 47.20
 LPB 150.69 143 PKP 12 42.00 2.9X
 ZOBO 150.88 143 PKPc 12 47.00 7.4X

S.D. = 1.3 on 18 of 22 obs.
 * JAN 30, 1989 00h 52m 29.71±1.44s
 10.761 N ± 22.3km 86.936 W ± 18.8km
 DEPTH = 33.0km (normal)
 4.2mb (1 obs.)
 OFF COAST OF COSTA RICA (77)
 JUD 1.49 113 ePc 52 54.70 0.2
 S 53 19.40
 RIN3 1.53 89 eP 52 55.50 0.4
 S 53 21.30
 JTS 2.01 103 ePc 53 02.00 0.1
 S 54 32.00
 CAO 2.09 120 ePc 53 02.20 -0.9
 EPA 2.43 108 eP 53 07.30 -0.6
 PTCR 2.65 111 ePc 53 10.70 -0.5
 HDC2 2.86 105 ePc 53 14.30 0.2
 IRZ2 3.09 104 ePd 53 17.20 -0.5
 DVD 4.99 117 ePc 53 45.80 1.5
 UPA 7.50 103 (P) 55 09.00 49.3X
 LNO 26.30 344 e(P) 58 03.30 -0.7
 TUL 26.30 344 eP 58 04.00 -0.1
 1.0s 7.30nm 4.2mb
 RLO 26.33 345 e(P) 58 04.20 -0.3
 YKA 55.36 345 P 02 03.80 1.2
 WARB 144.79 240 ePKP 12 08.40 2.8X
 0.4s 1.00nm
 S.D. = 0.8 on 13 of 15 obs.

& JAN 30, 1989 01h 00m 15.34s
 59.656 N 152.660 W
 DEPTH = 84.2km
 SOUTHERN ALASKA (2)
 <AGS-P>.

ILIM 0.45 341 iP 00 28.70 -0.7
 eS 00 40.05
 CNPM 0.74 100 iP 00 31.19 -0.8
 eS 00 43.39
 PDB 0.79 280 iP 00 31.64 -0.8
 eS 00 44.15
 >NNL 0.79 60 iP 00 32.67 0.2
 eS 00 46.11
 RDT 0.93 8 iP 00 33.37 -0.8
 eS 00 47.52
 SLKM 1.49 54 eP 00 40.23 -0.9
 eS 01 00.26
 SPU 1.56 11 iP 00 41.47 -0.6
 CRP 1.64 9 eP 00 42.80 -0.4
 eS 01 04.26
 KDC 1.92 177 eP 00 45.44 -1.3
 PTE 2.18 55 eP 00 49.11 -1.2
 eS 01 15.05
 PMS 2.21 43 iP 00 50.13 -0.7
 eS 01 15.84
 PWA 2.43 33 eP 00 53.37 -0.3
 PWL 2.47 59 eP 00 52.53 -1.8
 eS 01 20.45
 MTU 2.55 80 eP 00 54.06 -1.4
 KNK 2.72 48 eP 00 56.19 -1.6
 GHO 2.81 39 eP 00 57.88 -1.1
 SML 3.03 43 eP 01 00.49 -1.6
 GLI 3.03 64 eP 00 58.89 -3.2
 VLZ 3.47 62 eP 01 05.92 -2.2
 KLU 3.80 58 iP 01 10.35 -2.4
 SGAM 3.83 74 eP 01 09.83 -3.3
 TOA 4.01 49 eP 01 13.85 -1.8
 22 obs. associated

& JAN 30, 1989 02h 28m 04.48s
 62.496 N 148.186 W
 DEPTH = 44.8km
 CENTRAL ALASKA (1)
 <AGS-P>. ML 3.3 (PMR).

SML 0.69 186 iP 28 17.34 -0.8
 GHO 0.81 206 iP 28 18.55 -1.1
 eS 28 31.15
 PME 0.96 205 iP 28 20.72 -1.0
 eS 28 34.90
 PLRM 1.01 207 iP 28 21.15 -1.3
 eS 28 36.87
 PMR 1.01 207 iPc 28 21.20 -1.2
 TOA 1.02 112 iPd 28 22.70 0.1
 KNK 1.09 187 iP 28 23.05 -0.6
 eS 28 38.72

PWA 1.16 224 iPc 28 24.00 -0.6
 PMS 1.41 208 iP 28 27.60 -0.6
 KLU 1.47 132 iP 28 28.35 -0.6
 eS 28 48.87
 VLZ 1.63 146 eP 28 29.99 -1.1
 VZW 1.64 151 eP 28 30.32 -1.0
 PWL 1.64 183 iP 28 30.89 -0.5
 eS 28 52.05
 PTE 1.69 194 iP 28 31.61 -0.3
 eS 28 53.46
 GLI 1.70 162 iP 28 31.00 -1.2
 FID 1.93 154 eP 28 34.84 -0.6
 eS 28 58.18
 KNIM 2.17 174 eP 28 37.39 -1.4
 eS 29 07.22
 SLKM 2.22 207 eP 28 39.55 0.0
 CRP 2.25 238 eP 28 39.50 -0.6
 HIN 2.26 158 eP 28 38.99 -1.1
 SPU 2.26 236 eP 28 39.28 -0.9
 CVA 2.28 148 eP 28 39.60 -0.7
 GLB 2.32 115 eP 28 40.53 -0.5
 FBA 2.42 4 iPc 28 41.00 -1.4
 >NNL 2.88 213 eP 28 48.92 -0.1
 ILIM 3.34 226 eP 28 54.24 -1.4
 TTA 3.63 280 ePd 28 57.60 -2.1
 SVW 3.79 252 ePc 28 59.30 -2.6
 DWY 4.25 65 P 29 07.00 -1.4
 IMA 4.31 329 ePc 29 07.00 -2.4
 KDC 5.23 206 eP 29 18.00 -4.0
 31 obs. associated

? JAN 30, 1989 03h 51m 02.47±1.64s
 47.539 N ± 32.0km 154.396 E ± 24.9km
 DEPTH = 33.0km (normal)
 4.4mb (2 obs.)
 KURIL ISLANDS (221)

YKA 49.77 37 P 59 53.50 0.2
 CHG 53.15 257 eP 00 19.00 -0.4
 CHTO 53.15 257 eP 00 19.00 -0.3
 1.0s 2.50nm 4.1mb
 GUN 55.80 275 P 00 39.00 -0.1
 KKN 56.28 276 P 00 43.10 0.7
 DMN 56.52 276 P 00 44.40 0.3
 GKN 56.58 276 P 00 44.60 0.2
 1.0s 34.00nm 5.3mb X
 SUF 62.65 336 iP 01 25.50 0.0
 NAO 68.04 342 P 01 59.60 -0.6
 0.8s 4.90nm 4.7mb
 S.D. = 0.5 on 9 of 9 obs.

* JAN 30, 1989 04h 03m 07.78±0.85s
 23.127 S ± 12.1km 67.095 W ± 10.9km
 DEPTH = 332.6 ± 13.2 km
 CHILE-ARGENTINA BORDER REGION (127)

ANT 3.10 259 iPc 04 07.30 0.1
 iS 04 43.50
 CCH 5.79 9 P 04 34.70 -1.8
 CNCB 6.34 352 P 04 44.00 0.8
 LPB 6.63 352 P 04 47.90 1.4
 ZOBO 6.89 352 P 04 50.00 0.2
 ARE 7.82 327 eP 05 00.00 -0.5
 eS 06 27.00
 TCA 8.48 165 ePd 04 59.10 -9.1X
 ITB1 11.72 100 e(P) 05 47.50 -0.1
 ITB7 11.97 102 e(P) 05 50.10 -0.4
 VAO 18.52 94 ePc 07 02.10 -0.4
 e 07 05.20
 e 07 06.50
 BMA 21.14 93 eP 07 29.40 1.3
 IISM 51.25 322 iPd 11 40.00 -0.6
 KUK 71.35 75 eP 14 00.50 6.3X
 GBA 145.11 99 PKPc 22 17.70 9.7X
 0.6s 2.40nm
 S.D. = 1.1 on 11 of 14 obs.

& JAN 30, 1989 04h 06m 22.78s
 38.824 N 111.614 W
 DEPTH = 24.0km
 5.0mb (25 obs.) 4.8Msz (2 obs.)
 UTAH (478)
 <SLC-P>. ML 5.4 (SLC). Slight
 domage (VI) of Aurora, Emery,
 Ferran, Kooshore, Solino,
 Sterling and Woles. Felt (V) at
 Axtell, Bicknell, Centerfield,

Chester, Clowson, Cleveland,
Elmo, Elsinore, Ephraim,
Fairview, Fillmore, Glenwood,
Hanksville, Hiawatha, Hinckley,
Huntington, Junction, Loa,
Lyman, Manti, Scipio, Sigurd,
Spring City, Teasdale and
Wellington. Felt strongly in
much of Utah. Also felt in
northern Arizona, western
Colorado and southwestern
Wyoming.
CENTROID, MOMENT TENSOR (HRV)
Dolo Used: GDSN
L.P.B.: 9S, 18C
Centroid Location:
Origin Time 04:06:32.7 1.0
Lat 39.29N 0.10 Lon 112.09W 0.08
Dep 24.0 FIX Half-duration 1.9
Moment Tensor: Scale 10**16 Nm
Mrr=-1.00 0.62 Mtt=-8.00 0.99
Mff= 9.00 0.84 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf=-7.39 0.80
Principal Axes:
T Val= 11.76 Plg= 0 Azm=250
N -1.00 90 180
P -10.76 0 160
Best Double Couple:Ma=1.1*10**17
NP1:Strike=295 Dip=90 Slip=180
NP2: 25 90 0

MSU	0.54	235	iP	06	33.70	0.0
DUG	1.65	326	iPd	06	50.40	-0.4
BW06	4.25	21	eP	07	27.70	-0.1
TNP	4.46	262	eP	07	30.50	-0.3
GOL	4.92	78	ePc	07	38.50	1.1
GLD	5.05	77	ePc	07	40.50	1.4
KVN	5.06	275	eP	07	39.00	-0.3
MNA	5.14	268	e(P)	07	40.50	0.2
			ePg	07	58.90	
			iSg	09	04.00	
GSC	5.44	231	eP	07	44.00	-0.5
CLC	5.63	240	eP	07	47.00	-0.3
ALO	5.66	132	ePc	07	46.70	-1.1
TPC	5.91	219	eP	07	50.00	-1.1
CCMT	6.16	352	ePd	07	56.00	1.3
ISA	6.32	242	eP	07	56.00	-0.9
GLA	6.32	205	eP	07	57.00	0.1
SBB	6.47	232	eP	07	59.00	-0.1
PEC	6.65	224	eP	08	01.30	-0.3
FRI	6.66	257	eP	08	02.00	0.4
			iPg	08	26.00	
RVR	6.69	226	eP	08	02.00	-0.1
PLM	6.92	219	eP	08	08.00	2.6
MWC	6.93	230	eP	08	06.00	0.4
CMB	6.93	266	ePc	08	06.40	0.9
			iPg	08	31.50	
			iSg	10	05.40	
LCCM	7.01	358	ePd	08	07.90	1.2
LRM	7.02	355	eP	08	07.70	0.8
PAS	7.05	231	eP	08	07.00	-0.1
BUT	7.22	355	eP	08	11.50	1.9
BAR	7.38	215	eP	08	12.00	0.2
PRI	7.68	252	eP	08	17.40	1.4
			iPg	08	47.40	
			i	10	25.50	
ORV	7.71	279	ePc	08	16.50	0.1
LLA	7.72	256	eP	08	16.80	0.4
MIN	7.86	284	ePc	08	19.20	0.5
HRV	7.88	359	eP	08	19.60	0.7
SYP	7.97	240	eP	08	23.00	2.9
MHC	8.05	263	iPc	08	23.25	2.1
			e	10	32.55	
			eS	10	36.60	
			eLQ	10	50.30	
			e	10	59.80	
			eLR	11	34.15	
SAO	8.05	258	ePnc	08	22.50	1.4
			e	08	30.75	
SAO	8.05	258	iPg	08	55.60	34.5
PRS	8.14	255	ePc	08	22.80	0.5
BKS	8.40	267	ePc	08	27.40	1.4
			e(S)	10	28.00	
			e(LQ)	10	43.00	
GCC	8.40	261	e(P)	08	26.90	1.0
ZSP	8.41	267	ePc	08	28.10	2.1
BRK	8.42	267	ePc	08	27.50	1.3

PCC	8.59	264	ePc	08	30.00	1.5
WDC	8.60	285	eP	08	28.70	-0.1
VIPM	8.81	313	eP	08	34.32	2.5
JBO	9.01	320	eP	08	36.16	1.7
ETP	9.40	327	eP	08	40.72	1.1
VGB	9.53	317	eP	08	43.00	1.4
RSW	9.57	325	eP	08	43.67	1.5
GBL	9.67	326	eP	08	45.15	1.6
OTH	9.68	327	eP	08	44.67	1.1
VBEM	9.69	313	eP	08	45.86	1.9
FHC	9.72	286	ePc	08	45.80	1.5
MDW	9.82	325	eP	08	47.11	1.6
CRF	9.82	327	eP	08	46.65	1.2
WRD	9.83	328	eP	08	46.67	1.0
WAH2	9.84	326	eP	08	47.21	1.4
DPW	10.23	334	eP	08	51.40	0.2
LON	10.90	320	eP	09	01.00	0.7
MED	11.20	107	eP	09	03.70	-0.7
SES	11.58	2	eP	09	13.00	3.5
	1.1s	309.00nm			6.5mb X	
			pP	09	23.00	
PCO	11.78	96	eP	09	11.30	-1.0
FKO	11.91	103	eP	09	14.00	-0.1
GMW	11.93	321	eP	09	15.50	1.2
PNT	11.96	334	eP	09	15.00	0.4
SIO	12.57	99	ePc	09	22.10	-0.9
TUL	12.92	98	iP	09	26.80	-0.8
	1.2s	169.50nm			6.1mb X	
Z	18s	8.49um			4.4MsZ	
			e	11	00.00	
			LR	14	09.00	
LNO	12.92	98	ePc	09	26.30	-1.2
PGC	13.01	323	eP	09	29.00	0.3
VVO	13.15	100	eP	09	29.50	-1.1
RLO	13.44	96	ePc	09	32.70	-1.8
EDM	14.45	356	eP	09	46.00	-1.6
FVM	16.63	86	eP	10	13.20	-2.7
FFC	17.19	19	eP	10	19.00	-3.8
	1.1s	19.60nm			4.2mb	
RSON	17.44	41	eP	10	21.10	-4.8
	1.0s	150.00nm			5.1mb	
RSCP	20.96	91	eP	11	05.70	-0.7
	1.0s	100.00nm			5.2mb	
IIC	21.79	147	(P)	11	23.50	8.2
CRX	21.94	149	iPd	11	26.50	9.8
IIT	22.86	146	iPd	11	36.50	10.7
III	22.95	149	(P)	11	34.25	7.6
LVVM	23.11	141	iPc	11	37.50	9.7
ELF	23.21	69	P	11	17.60	-11.1
LDN	23.31	70	P	11	19.00	-10.6
YKC	23.75	357	ePc	11	33.50	-0.2
	1.0s	55.00nm			5.0mb	
YKA	23.77	357	P	11	34.80	0.9
ACX	24.17	152	(P)	11	28.00	-10.2
BLA	24.57	84	eP	11	43.00	1.0
	1.0s	140.00nm			5.5mb	
OXX	25.27	145	(P)	11	58.50	9.5
CBN	26.71	80	eP	12	11.50	9.5
			e	12	42.00	
			e	18	54.00	
INY	26.79	71	P	12	14.00	11.4
			S	17	16.00	
			Lg	20	26.00	
			LR	22	32.00	
HYT	27.30	332	P	12	00.20	-7.1
GAC	27.44	64	eP	12	08.00	-0.5
GMTN	28.67	74	eP	12	25.10	5.4
PNJ	28.69	74	eP	12	22.10	2.3
			LR	21	41.80	
TOA	31.40	329	eP	12	46.00	2.2
PMR	32.37	327	eP	12	53.50	1.3
	1.4s	34.90nm			5.1mb	
FBA	33.52	333	eP	13	02.90	0.7
FRB	35.61	31	ePc	13	19.50	-0.6
TTA	35.85	327	eP	13	23.00	0.7
IMA	36.23	332	ePd	13	26.30	0.8
	1.5s	72.90nm			5.4mb	
BRW	39.76	339	ePd	13	55.10	0.3
GDH	43.07	26	iPd	14	23.00	1.1
	1.0s	20.00nm			4.8mb	
			e	23	20.00	
ARE	66.59	138	eP	17	16.00	2.4
KEV	67.59	14	eP	17	27.00	8.0
EKA	68.22	36	P	17	31.00	7.9
	0.9s	10.00nm			4.9mb	
ZOBO	68.26	135	P	17	25.00	0.5
Z	20s	0.47um			4.7MsZ	

						LR	45	04.00	
LPB	68.48	135	P	17	26.00	0.3			
Z	18s		0.69um			4.9MsZ			
						LR	45	10.00	
CNCB	68.77	135	eP	17	28.00	0.3			
SOD	69.50	16	iP	17	39.40	8.6			
NAO	70.19	26	P	17	43.80	8.7			
	0.9s		14.50nm			5.1mb			
CCH	70.26	134	P	17	39.50	3.0			
HFS	71.67	25	eP	17	44.00	-0.1			
	0.4s		1.30nm			4.3mb			
KJF	72.41	17	iP	17	57.80	9.4			
	0.8s		35.20nm			5.4mb			
UPP	73.16	24	iP	18	01.50	8.6			
SUF	73.28	19	eP	18	01.00	7.5			
	0.8s		15.70nm			5.1mb			
FLN	73.63	40	eP	17	55.30	-0.5			
GRR	73.69	41	eP	17	55.40	-0.7			
LPF	73.82	41	eP	17	56.20	-0.7			
	0.9s		14.40nm			5.0mb			
LDf	73.92	40	eP	17	56.90	-0.6			
	0.8s		10.70nm			4.9mb			
DOU	75.20	37	P	18	12.50	7.7			
	0.9s		22.50nm			5.2mb			
			e	18	27.30				
MFF	75.22	42	eP	18	04.30	-0.7			
MEM	75.49	36	P	18	06.60	0.1			
WLF	76.22	36	P	18	13.00	2.4			
			e	18	20.40				
LSF	76.32	41	eP	18	10.30	-1.0			
TCF	76.64	41	eP	18	12.00	-1.1			
	0.8s		8.50nm			4.8mb			
SSF	76.77	39	eP	18	12.80	-1.0			
BGF	76.78	40	eP	18	12.80	-1.1			
	0.7s		12.50nm			5.1mb			
LFF	76.79	42	eP	18	13.40	-0.5			
	0.9s		9.80nm			4.8mb			
LOR	76.80	39	eP	18	13.20	-0.8			
	0.8s		9.40nm			4.9mb			
MAF	76.87	41	eP	18	13.90	-0.5			
AVF	76.87	40	eP	18	13.30	-1.0			
	0.8s		5.30nm			4.6mb			
RJF	76.95	42	eP	18	13.90	-0.9			
	0.8s		9.10nm			4.9mb			
LBF	77.05	39	eP	18	14.30	-1.1			
LPO	77.20	42	eP	18	15.50	-0.7			
	0.8s		9.10nm			4.9mb			
CAF	77.49	42	eP	18	17.00	-0.9			
	0.8s		6.70nm			4.7mb			
BSF	77.82	37	eP	18	19.10	-0.6			
MOX	77.94	33	e(P)	18	20.00	-0.2			
CLL	78.02	32	eP	18	20.00	-0.6			
BRG	78.74	32	e(P)	18	34.00	9.5			
PRU	79.67	32	eP	18	30.80	1.2			
			e	18	39.50				
KSP	79.71	31	eP	18	31.50	1.7			
KHC	79.92	33	eP	18	34.00	3.0			
KBA	81.38	35	ePd	18	46.00	7.1			
	0.8s		5.70nm			4.7mb			
			e	18	53.00				
			e	19	05.00				
			e	19	12.00				
ZST									

30d 04h

QIS	0.7s	19.18nm	4.6mb		
20.09	215	iPc	44 42.70	0.6	
MTN	22.09	246	eP	45 02.00	0.3
DZM	22.78	143	iPc	45 08.00	-0.4
WB5	23.00	226	iPd	45 11.70	1.2
BRS	23.08	178	iPc	45 12.40	1.2
KNA	25.32	241	eP	45 32.00	0.0
ASPA	25.89	220	iPd	45 37.00	-0.2
0.4s	48.00nm			5.5mb	
COO	26.23	180	eP	45 41.00	0.8
WARB	32.48	225	iPd	46 30.50	-4.9X
0.3s	25.00nm			5.3mb	
FORR	34.62	217	iPd	46 53.00	-0.5
0.4s	66.00nm			5.6mb	
MBL	35.27	239	iPd	46 58.00	-1.1
MEKA	38.78	232	iPd	47 28.20	-0.2
0.3s	13.00nm			5.0mb	
COOL	39.16	224	iPc	47 30.90	-0.6
0.3s	3.00nm			4.3mb	
KLB	41.94	226	iPc	47 53.00	-1.2
0.4s	5.00nm			4.3mb	
MRWA	42.01	230	eP	47 54.00	-0.8
BAL	42.18	227	eP	47 55.00	-1.1
CHTO	56.77	296	iP	49 47.00	0.1
0.9s	2.77nm			3.9mb	
GUN	70.91	301	P	51 19.30	0.4
PKI	71.22	301	P	51 20.90	0.1
0.6s	13.00nm			4.8mb	
KKN	71.39	301	P	51 21.70	0.1
0.6s	32.00nm			5.2mb	
DMN	71.49	301	P	51 22.80	0.5
0.6s	30.00nm			5.2mb	
GKN	71.99	301	P	51 25.40	0.3
0.6s	22.00nm			5.1mb	
GBA	75.79	285	Pd	51 46.10	-0.7
0.5s	2.70nm			4.2mb	
YKA	95.40	28	P	53 23.70	0.6
S.D.	= 0.8	on 29	of 31	obs.	

% JAN 30, 1989 05h 48m 49.67±0.85s
32.403 S ± 6.7km 117.130 E ± 10.6km
DEPTH = 10.0km (geophysicist)

WESTERN AUSTRALIA (590)

NWAO	0.53	171	iPd	49 00.40	0.0
			iS	49 07.30	
MUN	0.89	298	iPd	49 06.80	0.1
			iS	49 18.10	
KLB	0.97	34	iPc	49 08.10	0.0
			iS	49 20.20	
BAL	1.83	348	eP	49 22.00	0.6
			eS	49 46.00	
MRWA	3.32	343	eP	49 42.00	-0.7
			eS	50 29.00	
S.D.	= 0.7	on 5	of 5	obs.	

JAN 30, 1989 06h 20m 35.50±1.35s
14.636 S ± 6.5km 167.200 E ± 9.7km
DEPTH = 227.4 ± 11.0 km
4.9mb (12 obs.)

VANUATU ISLANDS (186)

DZM	7.43	185	iPd	22 20.10	-2.1
			iS	23 41.10	
HNR	8.78	305	eP	22 40.00	0.3
			eS	24 16.00	
VSG	9.07	305	eP	22 45.00	1.5
			eS	24 27.00	
BRS	18.48	224	iPc	24 37.90	0.9
			i	24 42.40	
CTA	20.71	252	iPc	25 01.30	1.9
			0.7s	10.96nm	4.5mb
RMO	20.88	233	eP	25 02.00	0.9
COO	21.21	219	eP	25 06.00	1.7
STK	29.01	229	iPc	26 17.10	0.7
			0.5s	24.00nm	5.1mb
			i	29 19.00	
TOO	29.89	216	iPd	26 25.20	1.1
WB5	31.75	256	eP	26 38.90	-1.6
ASPA	32.65	249	iPc	26 46.80	-1.5
			0.4s	30.00nm	5.3mb
			eS	31 46.60	
ADE	32.65	227	iPd	26 49.20	1.0
			0.8s	22.39nm	4.8mb
TAU	32.95	207	iPc	26 51.50	0.9
MTN	35.06	268	eP	27 08.00	-0.8
KNA	37.07	263	eP	27 25.10	-0.6

FORR	39.27	239	iPc	27 44.00	0.2
	0.4s	64.00nm		5.5mb	
WARB	39.56	247	iPc	27 41.50	-4.7X
	0.4s	7.00nm		4.5mb	
COOL	45.11	241	eP	28 30.00	-1.1
KLB	48.09	241	eP	28 53.00	-1.3
NWAO	48.74	239	eP	28 58.50	-0.8
MRWA	49.30	244	eP	29 02.70	-0.9
NANU	49.41	253	eP	29 04.30	-0.1
	0.7s	43.00nm		5.0mb	
MUN	49.45	240	eP	29 04.00	-0.7
MDJ	68.17	332	eP	31 11.50	-1.5
CN2	69.53	329	Pc	31 20.00	-1.4
XAN	73.58	313	Pc	31 44.80	-0.8
CHG	74.98	294	eP	31 54.20	0.3
SPA	75.46	180	ePc	31 55.80	-0.2
	1.0s	9.00nm		4.5mb	
GTA	82.55	314	eP	32 34.60	0.2
GUN	89.29	299	P	33 07.60	-0.3
	1.0s	24.00nm		5.1mb	
PKI	89.59	299	P	33 09.10	-0.2
	0.8s	15.00nm		5.0mb	
KKN	89.77	299	P	33 09.80	-0.1
	0.8s	14.00nm		4.9mb	
DMN	89.86	298	P	33 10.30	-0.1
GKN	90.37	299	P	33 11.80	-0.8
GBA	93.14	283	Pd	33 25.40	0.1
	0.7s	2.90nm		4.5mb	
KJF	123.22	340	iPKP	39 05.80	-0.2
	0.7s	28.00nm			
SUF	124.73	339	ePKP	39 08.00	-1.0
	0.6s	10.10nm			
BUL	126.59	231	iPKPc	39 13.40	-0.7
NUR	126.76	338	iPKP	39 12.30	-0.7
APO	130.21	343	ePKP	39 18.70	-0.9
	0.4s	9.20nm			
NAO	130.80	345	PKP	39 20.80	0.1
	0.7s	2.60nm			
KSP	136.92	333	ePKP	39 32.50	-0.2
BRG	137.90	335	e(PKP)	39 36.30	1.8
	1.0s	10.00nm			
CLL	137.94	336	e(PKP)	39 36.00	1.5
PRU	138.31	334	ePKP	39 35.50	0.2
KHC	139.37	333	PKP	39 39.90	2.6X
KBA	141.00	331	ePKPd	39 41.00	0.6
	1.0s	7.00nm			
CDF	142.46	338	ePKP	39 39.20	-3.7X
HAU	143.14	338	ePKP	39 41.20	-2.7X
ORX	144.48	335	PKP	39 44.36	-2.0
FLN	144.49	346	ePKP	39 44.20	-1.9
LDF	144.56	345	ePKP	39 44.60	-1.7
LOR	144.63	340	ePKP	39 45.40	-1.1
LBF	144.84	340	iPKPc	39 46.10	-0.8
SSF	144.92	340	iPKPc	39 46.60	-0.4
GRR	144.93	346	iPKPc	39 46.20	-0.7
LSD	144.96	335	PKP	39 47.23	-0.2
LPG	145.09	336	iPKPc	39 48.10	0.4
RSP	145.17	335	PKP	39 47.14	-0.4
SMF	145.18	340	iPKPc	39 47.20	-0.2
AVF	145.21	340	iPKPc	39 47.30	-0.1
LPF	145.31	346	iPKPc	39 47.50	0.0
FIN	145.52	333	PKP	39 47.43	-0.7
RRL	145.55	335	PKP	39 49.07	0.7
BGF	145.58	341	iPKPc	39 48.70	0.6
ROB	145.60	333	PKP	39 47.95	-0.3
PZZ	145.76	334	PKP	39 47.84	-0.8
STV	145.87	334	PKP	39 48.46	-0.3
IMI	145.90	333	PKP	39 48.97	0.2
MAF	145.97	341	iPKPc	39 50.10	1.4
SAOF	145.98	333	PKP	39 49.29	0.4
TCF	146.02	341	iPKPc	39 50.00	1.1
AUTN	146.03	333	PKP	39 49.90	0.7
TOUF	146.09	334	PKP	39 49.90	0.6
SBF	146.13	333	iPKPc	39 50.10	0.9
AURF	146.16	333	PKP	39 49.90	0.7
MVIF	146.23	334	PKP	39 50.09	0.7
LSF	146.26	342	iPKPc	39 50.50	1.3
MFF	146.41	344	ePKP	39 51.00	1.6
CALN	146.46	334	PKP	39 51.22	1.4
CVF	146.49	330	PKP	39 50.92	1.2
FRF	146.71	334	iPKPc	39 51.80	1.8
LRG	146.92	334	ePKP	39 52.50	2.2X
LMR	146.96	334	iPKPc	39 52.50	2.1X
RJF	147.12	341	ePKP	39 53.20	2.6X
CAF	147.28	340	iPKPc	39 53.80	2.9X
BNG	147.51	255	iPKPc	39 54.80	2.6X
	0.3s	33.00nm			

					ic	39 57.80	
					ic	40 42.40	
LFF	147.69	342	iPKPc	39 54.70	3.2X		
LPO	147.78	341	iPKPc	39 55.40	3.7X		
EPF	149.53	341	iPKPc	40 00.20	5.7X		
STS	151.61	353	e(PKP)	40 04.40	6.8X		
ETOR	152.28	342	e(PKP)	40 06.20	7.5X		
GUD	153.01	345	e(PKP)	40 08.00	8.2X		
S.D.	= 1.0	on 78	of 93	obs.			

? JAN 30, 1989 06h 24m 40.39±21.25s
29.370 S ± 156. km 71.146 W ± 119. km
DEPTH = 33.0km (normol)

NEAR COAST OF CENTRAL CHILE (135)

ROCH	3.59	178	eP	25 35.50	0.2		
			iS	26 06.00			
PEL	3.78	174	iPd	25 37.00	-0.8		
			iS	26 09.20			
FCH	4.01	170	ePd	25 41.70	0.3		
			eS	26 15.00			
SAN	4.09	174	eP	25 41.20	-1.0		
			e	26 18.50			
PCH	4.27	173	eP	25 45.00	0.2		
			i	26 24.00			
TACH	4.27	178	eP	25 45.10	0.3		
			iS	26 24.00			
TCA	5.99	111	ePd	26 09.10	-0.1		
			(S)	27 06.20			
S.D.	= 0.7	on 7	of 7	obs.			

* JAN 30, 1989 06h 27m 08.59±1.13s
28.260 S ± 9.5km 68.126 W ± 13.9km
DEPTH = 107.1 ± 48.4 km

LA RIOJA PROVINCE, ARGENTINA (138)

RTCB	3.27	190	iPc	27 58.20	-0.8		
			S	28 24.20			
CFA	3.34	182	ePc	27 58.20	-1.7		
RTCV	3.61	186	iPd	28 02.80	-0.8		
TCA	4.34	136	iPd	28 15.00	1.4		
ANT	4.98	335	e(P)	28 22.00	-0.3		
ROCH	5.31	207	iP	28 30.50	3.3X		
PEL	5.34	204	iPc	28 27.50	0.1		
FCH	5.38	200	eP	28 30.00	1.8		
SAN	5.62	202	eP	28 31.00	-0.1		
PCH	5.72	200	iPd	28 33.50	0.8		
TACH	5.89	203	eP	28 35.30	0.4		
LNV	6.34	206	iP	28 39.50	-1.5		
VBA	11.04	154	e(P)	29 43.20	-1.4		
ZOBO	11.93	0	P	30 26.00	29.0X		
Z	22s		0.32um				
			LR	35 44.00			
VAO	19.77	79	eP	31 47.50	14.8X		
WB5	127.43	207	ePKP	46 19.00	16.0X		
S.D.	= 1.3	on 12	of 16	obs.			

JAN 30, 1989 07h 45m 44.54±0.40s
7.882 N ± 2.8km 72.070 W ± 1.9km
DEPTH = 39.8 ± 3.4 km
5.4mb (65 obs.) 4.5Msz (1 obs.)

NORTHERN COLOMBIA (99)

Felt strongly in the states of
Merido, Tachiro, Trujillo and
Zulio, Venezuela.

UAV	1.17	52	iPnd	46 04.90	0.1

LLAV	5.80	63	eP	47 10.40	-0.1	DUG	48.51	318	P	54 26.10	0.3	EKA	71.61	34	Pd	57 03.60	-0.2
UPA	7.46	279	ePd	47 33.50	-0.3	DLM	48.60	314	P	54 26.70	0.1		1.1s	45.30nm			5.4mb
	0.6s	22.67nm				PRN	48.73	314	P	54 27.80	0.2	GRR	71.69	42	iPc	57 04.00	-0.4
		S		48 54.00		NPN	48.76	314	P	54 28.00	0.2		0.9s	53.70nm			5.5mb
PSO	8.46	218	eP	47 46.50	-1.5	PEC	48.90	309	P	54 28.30	-0.5	EPF	71.81	47	iPc	57 05.30	0.0
DVD	10.29	274	(P)	48 09.50	-3.3X	SRG	48.96	314	P	54 29.90	0.6		0.7s	41.30nm			5.5mb
TCE	10.56	74	eP	48 15.51	-1.0	SPRG	48.98	313	P	54 29.50	0.1	MFF	71.90	44	iPc	57 05.50	-0.2
		eS		50 08.00		NOP	49.00	312	P	54 29.40	-0.1		0.8s	84.30nm			5.8mb
TPP	10.76	76	eP	48 18.14	-1.1	MTI	49.01	314	P	54 30.10	0.4	FLN	71.99	41	iPc	57 06.00	-0.2
		eS		50 20.46		JON	49.09	312	P	54 30.30	0.1		0.8s	70.90nm			5.7mb
TRN	10.88	75	eP	48 18.22	-2.6	GMR	49.22	313	P	54 31.60	0.3	LDf	72.20	42	iPc	57 07.10	-0.3
		eS		50 11.00		TPU	49.25	314	P	54 31.80	0.2		0.7s	33.00nm			5.4mb
GRW	11.10	67	eP	48 24.96	1.1	CPX	49.26	313	P	54 32.10	0.5	LFF	72.31	45	eP	57 08.00	-0.1
TBH	11.17	76	eP	48 22.62	-2.1	LSM	49.34	312	P	54 32.50	0.3		0.9s	60.20nm			5.6mb
MGP	11.17	25	iP	48 20.00	-4.8X	GLR	49.34	313	P	54 32.50	0.2	LPO	72.60	46	iPc	57 09.60	-0.3
SJG	11.69	29	iP	48 27.60	-4.2X	AMR	49.34	312	P	54 32.30	0.1		0.7s	56.00nm			5.6mb
CSB	11.84	29	iP	48 29.70	-4.2X	WRN	49.37	314	P	54 32.70	0.2	RJF	72.90	45	iPc	57 11.20	-0.4
SVB	11.91	62	eP	48 31.26	-3.5X	GWY	49.40	312	P	54 32.30	-0.5		0.9s	47.10nm			5.5mb
		eS		50 35.51		CDH1	49.42	313	P	54 33.00	0.2	LSF	73.01	44	iPc	57 11.90	-0.4
FDF	12.69	57	eP	48 41.50	-3.7X	YMT3	49.46	312	P	54 33.30	0.2	AIA	73.16	177	eP	57 19.50	6.9X
BBL	12.85	53	eP	48 50.00	2.6X	QSM	49.46	311	P	54 32.70	-0.3	CAF	73.25	46	iPc	57 13.30	-0.4
PAC	12.99	50	eP	49 00.00	10.7X	YMT6	49.48	312	P	54 33.50	0.2	TCF	73.48	44	iPc	57 14.70	-0.3
ARE	24.19	179	iPd	50 58.30	-0.6	YMT4	49.51	312	P	54 34.10	0.6	MAF	73.72	44	eP	57 16.30	-0.1
	1.2s	287.50nm				YMT2	49.51	312	P	54 33.90	0.4		0.9s	50.70nm			5.5mb
ZOBO	24.31	171	P	51 01.50	1.1	YMT5	49.53	313	P	54 33.70	0.0	BGF	73.95	44	iPc	57 17.30	-0.4
	18s	1.29um				TMBR	49.54	313	P	54 33.90	0.1	PYM	73.99	45	P	57 17.96	-0.1
		S		55 28.00		YMT1	49.57	312	P	54 34.60	0.6	AGO	74.10	44	P	57 18.14	-0.5
		LR		00 04.00		FMT	49.67	312	P	54 34.70	0.0	LBL	74.11	45	P	57 18.72	0.1
LPB	24.57	171	P	51 04.80	2.0	PANV	49.81	312	P	54 35.80	-0.1	AVF	74.32	44	iPc	57 19.30	-0.5
	1.0s	120.00nm				BMTN	49.83	313	P	54 36.00	-0.1		0.9s	39.30nm			5.4mb
		S		55 34.00		MCA	50.04	312	P	54 37.50	0.1	PLDF	74.43	45	P	57 19.97	-0.6
		LR		00 28.00		HCR	50.08	314	P	54 38.10	0.1	SSF	74.45	43	iPc	57 20.10	-0.5
CNCB	24.86	171	P	51 06.00	0.3	LCH	50.54	312	P	54 41.10	-0.3		0.8s	27.40nm			5.3mb
OXX	25.72	293	iPc	51 14.50	1.1	TNP	50.58	314	P	54 41.40	-0.4	SMF	74.64	44	iPc	57 21.20	-0.5
CCH	25.78	167	eP	51 16.40	2.4	SVP	50.85	313	P	54 43.90	0.0		0.9s	55.60nm			5.5mb
HBF	26.09	344	P	51 18.30	1.9	LRM	51.31	325	eP	54 47.20	-0.1	LOR	74.71	43	iPc	57 21.50	-0.6
SGS	26.37	344	P	51 20.40	1.4	KVN	51.61	314	P	54 49.10	-0.5		0.7s	51.60nm			5.6mb
IISM	26.93	297	iPc	51 26.25	2.0	FRI	51.97	311	ePc	54 50.50	-1.6	LBF	74.76	44	iPc	57 21.70	-0.8
JSC	27.60	343	P	51 31.00	0.8				55 14.10			0.9s	31.70nm			5.3mb	
LHS	27.67	344	P	51 30.90	0.1	PR1	52.38	310	ePc	54 55.40	0.0	SNF	75.28	40	Pc	57 25.20	-0.1
PRM	27.75	341	P	51 32.30	0.7	FFC	52.47	339	iPc	54 54.10	-1.5	DOU	75.44	40	Pc	57 26.10	-0.1
TKL	29.65	340	P	51 49.30	0.6		0.8s	15.00nm				0.7s	37.80nm			5.5mb	
GBTN	29.80	340	P	51 50.00	-0.1	LLA	52.76	310	ePc	54 56.90	-1.2		e		58 16.20		
BLA	30.17	347	P	51 53.50	0.2	PRS	52.99	310	ePc	54 58.50	-1.2	TOA	75.65	332	ePc	57 28.00	0.7
	0.7s	30.27nm				SES	53.30	330	eP	55 06.00	4.2X	VITF	76.21	42	P	57 30.25	-0.3
CVL	30.52	350	P	51 56.50	0.2	MHC	53.54	311	ePc	55 03.60	-0.3	LRG	76.23	47	eP	57 30.60	-0.2
CBN	30.57	352	eP	51 57.00	0.3	GCC	53.70	311	ePc	55 04.50	-0.3	LMR	76.33	47	iPc	57 31.20	-0.2
PRIN	32.43	356	P	52 13.70	0.7	BRK	54.18	311	ePc	55 07.90	-0.5		1.0s	28.00nm			5.2mb
OLY	32.73	330	P	52 15.00	-0.7	ORV	54.23	314	ePc	55 08.50	-0.3	ENN	76.34	40	iPc	57 31.20	-0.1
TBR	33.18	357	P	52 20.00	0.5	MIN	54.60	314	ePc	55 09.80	-1.9		0.9s	68.00nm			5.6mb
FVM	34.26	334	P	52 29.50	0.5	LBFM	55.19	316	P	55 14.80	-1.2		i		57 34.00		
	1.0s	50.00nm				WDC	55.35	314	e(P)	55 13.80	-3.2X	MEM	76.38	40	Pc	57 31.70	0.2
VVO	34.89	325	eP	52 33.00	-1.4	DPW	55.74	324	P	55 19.30	-0.4	WLF	76.41	41	Pc	57 31.80	0.1
RLO	35.09	327	eP	52 35.20	-0.9	FRB	55.82	2	eP	55 18.00	-1.9	HAU	76.44	43	eP	57 31.60	-0.3
LNO	35.33	326	eP	52 37.50	-0.5	VGB	56.18	321	P	55 23.30	0.4		1.0s	24.00nm			5.1mb
TUL	35.33	326	eP	52 37.70	-0.4	EDM	56.18	331	iPc	55 20.90	-1.9	FRF	76.44	47	eP	57 31.90	-0.1
	0.6s	25.40nm				FHC	56.46	314	eP	55 24.40	-0.6		0.9s	29.40nm			5.3mb
SIO	35.50	325	eP	52 38.60	-1.0	PNT	57.27	325	eP	55 31.00	0.4	LPG	76.59	45	iPc	57 33.90	0.7
DLA	35.83	348	P	52 42.45	0.2		1.1s	43.00nm				0.8s	42.90nm			5.5mb	
LDN	35.92	349	P	52 44.90	1.8	LON	57.37	321	P	55 30.70	-0.7	RRL	76.59	46	P	57 33.93	0.8
ELF	36.10	348	P	52 43.55	-1.0	RMW	57.69	322	P	55 32.40	-1.2	LOMF	76.73	43	P	57 33.08	-0.6
BNH	36.57	1	P	52 49.20	0.7	GMW	58.32	322	P	55 36.80	-1.2	BSF	76.73	43	P	57 32.86	-0.8
RSNY	36.59	357	P	52 49.00	0.3	YKC	62.58	339	ePc	56 05.50	-1.2	PZZ	76.80	46	P	57 34.44	0.3
	1.2s	20.69nm					0.9s	33.00nm				MVIF	76.82	47	P	57 29.38	-4.9X
EMM	36.93	5	P	52 52.50	1.0	YKA	62.64	339	P	56 06.30	-0.8	FBA	76.85	335	ePc	57 33.50	-0.4
MIM	37.31	4	P	52 55.50	0.8	TIC	66.46	86	Pc	56 31.62	-1.1	LSD	76.87	45	P	57 35.36	0.7
GAC	37.80	356	eP	53 00.00	1.3		1.0s	72.00nm				TOUF	76.89	47	P	57 29.80	-5.0X
CBM	39.06	4	P	53 10.30	1.0	LIC	66.49	87	Pc	56 32.10	-0.9	RSP	76.93	46	P	57 35.47	0.6
PEL	40.82	178	iPc	53 24.50	0.5		1.0s	130.00nm				AURF	76.94	47	P	57 29.99	-4.9X
BMA	40.87	139	eP	53 29.10	4.5X	KIC	66.76	86	Pc	56 33.92	-0.8	STV	76.95	46	P	57 35.16	0.2
ALO	41.47	316	ePc	53 29.80	0.2		1.0s	179.00nm				PMR	76.95	331	ePc	57 34.80	0.4
	1.4s	22.09nm				TOL	68.14	50	iPd	56 42.50	-0.5		1.0s	22.50nm			5.1mb
STJ	42.84	19	eP	53 40.50	0.1		1.0s	60.00nm				WIT	76.96	38	eP	57 36.00	1.4
GLD	43.43	322	P	53 46.00	0.4	GUD	68.17	49	e(P)	56 42.70	-0.6	MOF	76.96	43	P	57 34.19	-0.7
	1.1s	61.72nm				AFC	68.19	53	e(P)	56 43.60	0.1	WTS	76.99	39	iPc	57 35.20	0.4
GOL	43.49	322	P	53 46.10	-0.1	DCN	68.78	36	iPc	56 46.20	-0.4		0.8s	61.00nm			5.7mb
	0.9s	41.67nm					0.8s	182.00nm				AUTN	77.02	47	P	57 30.57	-4.9X
RSON	46.45	341	P	54 08.00	-1.3	DMU	69.14	35	iPc	56 48.60	-0.2	SBF	77.02	47	iPc	57 35.20	-0.1
	0.8s	28.17nm					0.7s	86.00nm					1.0s	60.00nm			5.6mb
GLA	46.78	309	P	54 12.80	0.6	DLE	69.19	36	eP	56 48.60	-0.5	CDF	77.08	42	P	57 35.17	-0.4
SCH	47.00	4	ePc	54 13.80	0.2	ETOR	69.78	49	e(P)	56 53.20	0.1	SAOF	77.11	47	P	57 30.79	-5.0X
	0.6s	65.00nm				KUK	71.10	86	eP	57 00.50	-1.0	GWf	77.33	42	P	57 36.97	0.1
MSU	47.24	317	P	54 16.00	0.0	KOGH	71.24	86	eP	57 02.00	-0.4	ROB	77.3				

DEPTH = 0.3km	MTN	8.86 170 iPc	35 07.10	0.1	0.4s	4.00nm	4.6mb
MONTANA (456)		eS	36 51.00		CNCB	150.73 144 PKP	41 49.00 7.0X
<BUT>. CL 3.8 (BUT). Felt (IV)	WB5	16.39 164 eP	36 44.30	-0.1	LPB	150.88 143 ePKP	41 41.00 -1.0
at Three Forks and (III) at		i	36 47.80		ZOBO	151.07 143 ePKP	41 44.00 1.5
Harrison, Manhattan and Willow		e	39 33.00		S.D. = 1.2 on 26 of 30 obs.		
Creek. Also felt sharply at	QIS	19.07 150 eP	37 20.00	4.7X	JAN 30, 1989 13h 35m 20.58 ± 0.64s		
Trident.	ASPA	19.93 168 iPd	37 27.60	3.4X	6.860 S ± 9.5km 155.541 E ± 7.1km		
		0.8s	40.00nm	4.9mb	DEPTH = 68.5 ± 6.9 km		
LCCM		eS	41 21.70		4.3mb (1 obs.)		
MEMT	CTA	22.73 136 eP	37 52.00	0.0	SOLOMON ISLANDS (193)		
LRM	CHG	37.80 308 eP	40 13.20	7.5X	Felt (II) at Arowa,		
BUT	GUN	52.76 310 P	42 04.00	-0.5	Bougainville.		
BGMT	DMN	53.21 309 P	42 08.10	0.4	PAA	0.56 355 iPd	35 34.00 -0.1
HRV	GKN	53.76 309 P	42 11.80	0.1		eS	35 46.00
DMMT	S.D. = 0.4 on 7 of 10 obs.				RAB	4.28 308 eP	36 33.00 8.3X
CCMT	& JAN 30, 1989 13h 03m 36.53s					0.8s	83.58nm
BW06	59.478 N					eS	37 36.00
LNOR	141.664 W				VSG	4.77 120 eP	36 31.00 -0.6
DPW	DEPTH = 19.6km				HNR	5.06 121 eP	36 36.00 0.4
EDM	SOUTHEASTERN ALASKA (19)					eS	37 35.00
GLD	<AGS-P>.				PMG	8.68 252 eP	37 26.50 0.6
KVN	YKU	0.99 85 eP	03 56.93	2.1	WB5	24.29 236 eP	40 32.80 -0.1
TNP	BCPM	1.13 64 eP	03 56.32	-0.9		e	40 43.20
FFC		eS	04 09.80		CHG	61.33 296 eP	45 31.00 -0.3
0.7s		3.60nm	4.9mb X		CHTO	61.33 296 eP	45 31.60 -0.9
RSON	KAIM	1.47 289 eP	04 01.36	-0.6		1.0s	2.25nm
YKA	CTGM	1.50 6 iP	03 59.83	-2.8	GUN	75.51 301 P	46 59.20 -1.0
18 obs. associated	SGAM	2.06 301 eP	04 14.05	3.5	DMN	76.09 301 P	47 04.20 0.9
	GLB	2.24 333 iP	04 12.92	-0.3	GKN	76.60 301 P	47 06.60 0.6
* JAN 30, 1989 12h 01m 39.10 ± 1.54s	GLD	2.48 55 P	04 16.00	-0.7	HYB	79.74 289 eP	47 22.50 -0.7
34.346 N ± 13.4km 139.117 E ± 11.6km	HYT	3.18 289 eP	04 27.76	1.2	GBA	80.14 285 Pc	47 25.40 0.1
DEPTH = 10.1 ± 4.3 km	KNIM	8 obs. associated			INK	89.40 21 eP	48 11.00 0.4
NEAR S. COAST OF HONSHU, JAPAN (230)	JAN 30, 1989 13h 22m 12.44 ± 1.02s				YKA	95.96 28 P	48 41.70 0.8
MG 3.9 (JMA). Felt (III) JMA) on	6.950 S ± 7.2km 129.514 E ± 9.5km				S.D. = 0.7 on 14 of 15 obs.		
Nii-jima and (I JMA) on Oshima.	DEPTH = 167.2 ± 11.0 km				% JAN 30, 1989 13h 41m 08.60 ± 0.75s		
OSH	4.8mb (6 abs.)				15.063 N ± 8.7km 61.113 W ± 23.8km		
0.47 27 iPd	BANDA SEA (280)				DEPTH = 33.0km (normal)		
iS	AAI	3.50 338 eP	23 09.00	1.7	LEEWARD ISLANDS (92)		
IIDJ	MTN	6.07 165 iPd	23 40.30	-0.8	ML 3.2 (FDF).		
1.50 319 iPd		S	02 24.70		FDF	0.33 186 iPd	41 18.31 1.5
CHJJ		S	02 30.30			S	41 37.30
1.70 357 iPd	KNA	8.78 185 iPd	24 16.00	-1.1	CRM	0.36 148 iPd	41 18.68 1.5
S		0.3s	171.00nm	6.0mb X	BIM	0.54 176 iPd	41 18.25 -1.6
KAKJ		eS	25 49.00		MVM	0.55 157 iPd	41 18.77 -1.1
2.05 25 P		eS	25 16.80	-4.1X	MGG	0.87 347 eP	41 25.50 1.0
S	WB5	13.69 160 iPd	25 16.80	-4.1X	DOG	1.08 333 eP	41 27.29 -0.2
MTMJ	QIS	16.69 145 iPc	25 55.80	-2.3	PAG	1.11 330 eP	41 27.60 -0.3
2.48 335 P		eS	28 48.00			S	41 49.80
S	MBL	16.95 213 eP	26 01.00	-0.2	DEG	1.24 2 eP	41 28.97 -0.8
TSRJ		eS	29 05.00			S	41 54.50
2.83 296 P	ASPA	17.15 166 iPc	26 02.80	-0.9	S.D. = 1.4 on 8 of 8 obs.		
NIIJ		0.9s	177.00nm	5.4mb	? JAN 30, 1989 14h 13m 58.13 ± 6.10s		
2.89 358 P	Z	17s	0.40um	3.2mszx	58.064 N ± 47.2km 6.302 E ± 17.1km		
WKYJ		eS	29 03.40		DEPTH = 0.0km (geophysicist)		
2.92 269 P		LR	33 22.30		SOUTHERN NORWAY (535)		
S	PMG	17.63 99 eP	26 10.50	1.2	MD 2.4 (BER). Probable		
TKSJ	WARB	19.32 188 iPc	26 23.10	-4.0X	explosion.		
4.22 266 P		0.6s	34.00nm	4.9mb	KMY	1.28 335 iP	14 22.90 0.2
eS		eS	29 55.00			iSg	14 37.30
YONJ		eS	26 40.50	0.9	BLS1	1.36 11 iP	14 23.90 -0.3
4.73 282 iPd		eS	26 42.70	0.2		iS	14 38.90
eS		eS	27 27.00	-0.5	ODD1	1.86 5 eP	14 32.10 0.5
SHNJ		eS	27 36.00	0.6		iS	14 53.50
6.64 270 eP		eS	28 12.00		SUE	3.10 346 eP	14 48.50 -0.7
eS		eS	32 44.00			eS	15 21.80
04 34.40		eS	27 39.50	0.1	HYA	3.11 359 iP	14 49.80 0.4
KUMJ		eS	28 16.00			eS	15 23.40
7.16 258 P		eS	27 42.60	-0.3	NRA0	3.79 43 iPc	14 59.00 -0.1
KAGJ		eS	28 10.00			iS	15 39.50
7.61 248 P		eS	32 56.00			iSg	15 53.10
S.D. = 0.8 on 13 of 13 obs.		NWA0	28 25 202 eP	-0.4	S.D. = 0.6 on 6 of 6 obs.		
* JAN 30, 1989 12h 13m 07.79 ± 1.24s		ADE	29.14 164 iPc	0.4	? JAN 30, 1989 16h 09m 28.03 ± 1.35s		
9.365 S ± 16.0km 119.143 E ± 9.7km			0.9s	20.17nm	50.996 N ± 23.9km 176.938 W ± 16.0km		
DEPTH = 33.0km (normal)		BWA	32.43 150 eP	0.6	DEPTH = 33.0km (normal)		
SUMBA ISLAND REGION (287)		CAN	33.43 150 eP	0.6	4.7mb (3 obs.)		
TRT		CHG	39.54 311 eP	-0.1	ANDREANOF ISLANDS, ALEUTIAN IS. (7)		
6.64 284 ePd		GUN	54.56 311 P	-1.6	ML 3.8 (PMR).		
14 45.70 0.0			0.6s	8.00nm	ADK		
KNA			eS	31 25.60	0.90 10 iPc		
11.33 125 eP			eS	31 33.80	15.55 41 eP		
15 51.00 0.5			eS	31 31.60	09 44.20 -0.1		
MBL			eS	31 31.60	13 09.80 3.6X		
11.75 177 eP			eS	31 31.60			
15 55.00 -1.1			eS	31 31.60			
17 57.00			eS	31 31.60			
MTN			eS	31 31.60			
12.26 107 eP			eS	31 31.60			
16 02.00 -1.1			eS	31 31.60			
18 14.00			eS	31 31.60			
NANU			eS	31 31.60			
13.57 194 eP			eS	31 31.60			
16 21.00 0.6			eS	31 31.60			
18 41.00			eS	31 31.60			
MEKA			eS	31 31.60			
17.17 182 eP			eS	31 31.60			
17 12.00 5.2X			eS	31 31.60			
20 06.00			eS	31 31.60			
WB5			eS	31 31.60			
18.05 127 eP			eS	31 31.60			
17 19.00 1.2			eS	31 31.60			
MRWA			eS	31 31.60			
19.97 188 eP			eS	31 31.60			
17 47.50 7.2X			eS	31 31.60			
21 10.00			eS	31 31.60			
S.D. = 1.2 on 6 of 8 obs.			eS	31 31.60			
? JAN 30, 1989 12h 33m 00.72 ± 2.23s			eS	31 31.60			
4.059 S ± 27.6km 129.615 E ± 36.2km			eS	31 31.60			
DEPTH = 135.2 ± 17.8 km			eS	31 31.60			
4.9mb (1 obs.)			eS	31 31.60			
BANDA SEA (280)			eS	31 31.60			
AAI			eS	31 31.60			
1.46 285 eP			eS	31 31.60			
33 29.10 0.0			eS	31 31.60			

30d 16h

KDC	15.71	55 eP	13 09.40	1.2
ITA	16.42	35 eP	13 20.20	2.8
IMA	19.19	29 ePc	13 52.30	0.8
	1.5s	17.40nm		4.1mb
FBA	20.54	36 eP	14 03.70	-2.2
MBC	33.53	21 eP	16 04.00	-2.1
KVN	42.19	83 e(P)	17 32.00	12.7X
BW06	45.30	73 eP	17 44.50	0.0
FRB	52.74	32 eP	18 39.00	-2.2
GUN	73.09	293 P	20 57.60	0.5
	0.6s	15.00nm		5.2mb
KKN	73.52	294 P	20 59.80	0.3
PKI	73.61	294 P	21 00.60	0.4
GKN	73.73	294 P	21 00.80	0.2
	0.8s	8.00nm		4.8mb
DMN	73.76	294 P	21 01.40	0.5

S.D. = 1.6 on 13 of 15 obs.

? JAN 30, 1989 16h 20m 40.11 ± 2.64s
46.696 N ± 52.6km 153.477 E ± 33.6km
DEPTH = 33.0km (normal)
4.7mb (4 obs.)

KURIL ISLANDS (221)

YKA	50.82	37 P	29 38.80	-0.1
GUN	55.26	275 P	30 12.60	-0.2
	0.4s	3.00nm		4.7mb
PKI	55.79	275 P	30 16.50	-0.1
DMN	55.98	276 P	30 17.90	0.0
GKN	56.05	276 P	30 18.40	0.1
	0.6s	8.00nm		4.9mb
HFS	68.60	340 eP	31 40.40	-0.9
	0.4s	1.40nm		4.4mb
NAO	68.64	341 P	31 41.60	0.0
	0.9s	6.30nm		4.7mb
KHC	78.40	334 eP	32 39.80	1.2

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

JAN 30, 1989 16h 36m 33.66 ± 0.58s
39.652 N ± 6.2km 18.736 E ± 4.8km
DEPTH = 10.0km (geophysicist)

SOUTHERN ITALY (390)
MD 3.8 (ATH). ML 3.5 (TTG).

LCI	0.91	319 Pc	36 51.60	0.6
		eSn	37 06.50	
BRT	1.70	317 P	37 06.40	3.0X
		eSn	37 32.80	
TDS	1.85	271 P	37 08.10	2.4
VLS	2.06	135 ePn	37 08.00	-0.8
		eSn	37 38.10	
QHR	2.15	47 iPnd	37 11.80	1.8
ULC	2.34	9 ePn	37 16.30	3.5X
		eSn	37 44.20	
KZN	2.42	73 ePn	37 15.40	1.4
		eSn	37 49.00	
MGR	2.49	282 P	37 16.90	2.0
BDV	2.63	1 ePn	37 16.20	-0.7
		eSn	37 50.00	
SGO	2.78	290 P	37 25.20	6.2X
HCV	2.80	356 ePn	37 18.30	-1.0
		eSn	37 52.00	
TTG	2.80	8 ePq	37 19.00	-0.3
		eSn	37 53.80	
ATN	2.96	241 P	37 21.10	-0.4
PVY	3.09	17 ePn	37 25.50	2.1
		eSn	38 03.00	
SKO	3.10	41 iPn	37 23.00	-0.4
		i	37 30.00	
		iSn	37 56.50	
BRY	3.25	358 ePn	37 25.50	-0.3
		eSn	38 03.30	
VAY	3.37	59 ePn	37 28.00	0.7
		i	37 37.30	
NEO	3.49	94 ePn	37 30.00	0.9
MNO	3.59	243 P	37 36.80	6.0X
PLG	3.69	77 ePn	37 31.50	-0.5
DUI	3.82	303 P	37 47.00	13.1X
HVAR	3.92	335 iPn	37 36.00	0.8
MEU	3.93	231 P	37 33.40	-2.0
		eSn	38 17.20	
SDI	4.27	300 P	37 47.10	6.9X
ALP	4.99	310 eP	37 51.72	1.2
ASS	5.71	309 P	38 03.70	3.2X
ARV	5.80	313 P	38 02.40	0.6
PRK	5.85	92 ePn	38 01.00	-1.4
VBY	6.39	337 e(Pn)	38 10.10	0.0

PTJ	6.57	343 eSn	39 19.20	
		e(P)	38 10.40	-2.3
CEY	6.86	334 ePn	38 16.00	-0.7
		eSn	39 33.50	
TRI	7.07	330 e(Pn)	38 04.00	-15.7X
		e	38 14.50	
		e(Sn)	39 33.70	
		i	40 38.00	
		iLQ	40 45.50	
LJU	7.09	336 e(Pn)	38 18.50	-1.5
		eSn	39 37.10	
VOY	7.30	332 iPnd	38 21.50	-1.5
		eSn	39 40.10	
FVI	8.19	330 P	38 34.40	-0.8
		eSn	40 03.20	

S.D. = 1.3 on 27 of 35 obs.

* JAN 30, 1989 17h 12m 41.05 ± 2.28s
27.335 S ± 12.3km 179.808 W ± 9.9km
DEPTH = 458.0 ± 25.3 km
4.8mb (8 obs.)

KERMADEC ISLANDS REGION (177)

DZM	13.55	290 iPc	15 37.10	-1.0
WEL	14.61	196 eP	15 47.00	-2.0
		eS	18 19.00	
BRS	24.33	264 iPc	17 23.40	0.9
COO	24.95	256 iPc	17 30.30	2.3
RMO	28.01	264 iPd	17 56.60	1.4
TAU	30.82	231 iPd	18 20.90	1.6
TOO	30.86	242 eP	18 21.00	1.2
CTA	31.83	276 iPd	18 28.60	0.4
	0.5s	77.46nm		5.4mb
STK	33.74	253 eP	18 45.00	0.8
ADE	36.11	247 iPd	19 05.10	1.1
	0.5s	32.39nm		5.0mb
QIS	37.58	271 eP	19 16.00	-0.2
ASPA	41.76	264 iPc	19 50.40	0.1
		eS	25 36.40	
WARB	47.52	259 iPc	20 29.30	-5.8X
	0.3s	10.00nm		4.7mb
MTN	47.98	277 eP	20 37.00	-1.7
KNA	48.90	273 eP	20 45.00	-0.7
COOL	51.20	251 eP	21 01.40	-1.2
	0.3s	10.00nm		4.6mb
KLB	53.88	249 eP	21 21.00	-1.0
	0.4s	3.00nm		4.0mb
MEKA	54.44	256 iPd	21 25.10	-1.0
BAL	54.98	250 eP	21 28.50	-1.3
	0.4s	13.00nm		4.6mb
MUN	55.09	249 eP	21 29.70	-0.8
MRWA	55.92	252 eP	21 35.50	-0.9
NANU	58.25	259 eP	21 52.20	-0.3
	0.4s	20.00nm		4.9mb
MAW	74.61	201 eP	23 34.50	1.4
PRS	83.88	44 ePc	24 23.00	0.6
GCC	83.95	43 ePc	24 23.10	0.4
PCC	84.03	42 ePc	24 23.30	0.3
SAO	84.12	43 e(P)	24 23.60	0.1
PRI	84.20	44 ePc	24 24.90	0.8
BRK	84.35	42 e(P)	24 24.50	-0.1
MHC	84.37	43 ePc	24 25.50	0.6
FRI	85.33	44 ePc	24 29.70	0.3
CMB	85.58	43 ePc	24 30.80	0.1
WDC	85.96	40 ePc	24 32.20	-0.2
TNP	87.56	45 iP	24 39.20	-1.2
	0.8s	17.65nm		4.9mb
KVN	87.61	43 iP	24 40.20	-0.4
FBA	95.24	13 eP	25 15.00	0.2
KKN	106.22	293 PKP	30 16.70	2.4X
	0.6s	7.00nm		
FRB	123.54	30 ePKP	30 45.00	-0.9
KJF	129.11	342 ePKP	31 09.00	-6.4X
SUF	140.71	341 iPKP	31 11.10	-7.3X
	0.3s	2.70nm		
NUR	142.90	340 iPKP	31 18.50	-3.7X
UPP	145.35	345 iPKPc	31 26.10	-0.3
NAO	145.75	351 PKP	31 27.40	0.4X
	0.6s	6.60nm		
HFS	145.93	348 ePKP	31 27.50	0.2
	0.4s	24.90nm		
BNG	151.27	221 iPKPc	31 44.30	7.2X
	0.2s	10.00nm		
		id	31 54.20	
BRG	154.27	340 i(PKP)	32 05.10	25.0X
	0.8s	10.00nm		

S.D. = 1.0 on 38 of 46 obs.

JAN 30, 1989 17h 52m 21.18 ± 0.53s
3.115 N ± 7.2km 123.196 E ± 8.9km
DEPTH = 494.8 ± 8.2 km
4.6mb (13 obs.)

CELEBES SEA (262)

MNI	2.34	135 ePc	53 28.00	-0.2
		eS	54 21.00	
TSM	5.23	282 iPd	53 52.00	1.2
	1.3s	786.80nm		5.6mb
KKM	7.54	293 ePc	54 12.40	-1.6
	0.9s	106.90nm		5.0mb
AAI	8.40	143 ePd	54 23.60	0.7
TRT	15.05	224 iPc	55 32.70	0.2
	0.9s	92.30nm		5.4mb
MTN	17.71	154 iPd	55 59.60	0.8
		e	58 56.00	
JAY	18.37	108 ePc	56 04.00	-1.3
WB5	25.35	155 eP	57 07.90	-1.8
		eS	00 56.00	
SSE	27.90	356 eP	57 32.50	0.5
QIS	28.51	146 iPc	57 37.00	-0.4
	0.9s	53.00nm		5.1mb
ASPA	28.59	159 iPc	57 37.50	-0.7
	0.6s	10.00nm		4.5mb
		iS	01 47.80	
WARB	29.32	174 iPd	57 39.70	-4.7X
	0.4s	4.00nm		4.3mb
MEKA	29.90	188 eP	57 49.00	-0.4
TIA	33.41	351 eP	58 18.20	-0.9
FORR	34.10	172 eP	58 24.60	-0.3
TIY	35.82	345 iPc	58 39.70	0.3
BJI	37.30	351 eP	58 51.50	0.1
STK	38.95	155 iPd	59 06.00	1.0
	0.3s	13.00nm		4.9mb
ADE	40.59	160 iPd	59 19.80	1.5
	0.6s	29.33nm		5.0mb
BRS	41.63	139 iPc	59 26.50	-0.3
		i	01 11.60	
GTA	41.91	333 Pd	59 29.60	0.6
GUN	43.29	309 P	59 40.60	0.3
	0.4s	8.00nm		4.6mb
PKI	43.50	308 P	59 42.40	0.4
	0.4s	2.00nm		4.0mb
KKN	43.70	308 P	59 43.20	-0.2
	0.4s	3.00nm		4.2mb
DMN	43.76	308 P	59 44.60	0.7
	0.4s	2.00nm		4.0mb
GKN	44.30	308 P	59 48.60	0.5
CAN	45.24	150 eP	59 56.20	1.1
GBA	46.37	286 Pd	00 01.80	-2.2
	0.5s	1.90nm		3.9mb

S.D. = 1.0 on 27 of 28 obs.

& JAN 30, 1989 18h 29m 41.30s
33.880 N 118.470 W
DEPTH = 3.0km
SOUTHERN CALIFORNIA (43)
<PAS>P>. ML 3.1 (PAS). Felt in
the Los Angeles area.

CIS	0.48	173 iPc	29 50.50	-0.3
SBB	0.97	33 iPd	29 58.70	-1.7
PEC	1.09	89 eP	30 00.50	-2.0
ABL	1.15	328 eP	30 01.80	-1.8
PLM	1.44	111 eP	30 05.80	-2.7
BLP	1.74	294 eP	30 11.30	-1.2
BCH	1.86	315 eP	30 13.70	-0.8
KVN	5.17	3 e(P)	31 01.00	-0.6

8 obs. associated

* JAN 30, 1989 19h 04m 19.78 ± 0.87s
44.362 N ± 10.0km 7.336 E ± 7.6km
DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)
ML 2.0 (GEN).

STV	0.12	184 P	04 23.13	0.3
		S	04 25.05	
PZZ	0.22	310 P	04 24.56	-0.1
		S	04 27.86	
ROB	0.39	100 P	04 28.15	0.4
		S	04 34.27	
IMI	0.60	138 P	04 31.54	-0.5
		S	04 40.08	
FIN	0.64	103 P	04 32.57	-0.2
		S	04 41.59	

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

* JAN 30, 1989 20h 15m 27.18 ± 1.03s
0.721 S ± 8.1km 100.491 E ± 14.6km
DEPTH = 84.5 ± 13.5 km
4.6mb (3 obs.)

SOUTHERN SUMATERA (274)

Table with columns: Station ID, Time, Depth, Azimuth, Dip, Strike, etc. Includes stations KSI, PSI, KGM, IPM, KLI, PKI, GUN, KKN, GKN, BUL.

S.D. = 0.4 on 9 of 10 obs.

& JAN 30, 1989 20h 17m 31.68s
37.554 N 118.462 W
DEPTH = 11.1km
CALIFORNIA-NEVADA BORDER REGION (40)
<REN>. MD 2.9 (REN).

Table with columns: Station ID, Time, Depth, Azimuth, Dip, Strike, etc. Includes stations PPK, LCH, MGM, TNP, SGV, KVN, CMB, LSM.

* JAN 30, 1989 21h 01m 18.88 ± 0.74s
60.463 S ± 8.3km 152.893 E ± 23.1km
DEPTH = 10.0km (geophysicist)
4.5mb (2 obs.)

WEST OF MACQUARIE ISLAND (701)

Table with columns: Station ID, Time, Depth, Azimuth, Dip, Strike, etc. Includes stations DRV, TAU, SBA, ASPA, Z, CTA, WB5, AIA, CHG, CHTO, MA10, VAY, OHR, ISR, SKO, VRI, MLR, MBC.

S.D. = 1.1 on 12 of 17 obs.

? JAN 30, 1989 21h 01m 59.80 ± 6.57s
34.042 S ± 33.6km 70.611 W ± 20.8km
DEPTH = 90.9 ± 46.1 km
CHILE-ARGENTINA BORDER REGION (127)

Table with columns: Station ID, Time, Depth, Azimuth, Dip, Strike, etc. Includes stations CHCH, PCH, TACH, SAN, LNV.

Table with columns: Station ID, Time, Depth, Azimuth, Dip, Strike, etc. Includes stations FCH, PEL, LCCH, ROCH, JACH.

S.D. = 0.2 on 10 of 10 obs.

? JAN 30, 1989 21h 33m 06.72 ± 2.27s
56.022 N ± 75.3km 164.229 E ± 31.2km
DEPTH = 33.0km (normal)
4.9mb (4 obs.)

KOMANDORSKY ISLANDS REGION (4)

Table with columns: Station ID, Time, Depth, Azimuth, Dip, Strike, etc. Includes stations TTA, IMA, YKA, CHG, CHTO, GUN, KKN, PKI, GKN, DMN.

S.D. = 0.5 on 9 of 10 obs.

? JAN 30, 1989 22h 34m 46.45 ± 11.30s
10.349 N ± 57.0km 60.351 W ± 71.6km
DEPTH = 10.0km (geophysicist)

TRINIDAD (98)

Table with columns: Station ID, Time, Depth, Azimuth, Dip, Strike, etc. Includes stations TBH, TRN, TPP, TCE, GRW.

S.D. = 0.9 on 4 of 5 obs.

? JAN 30, 1989 23h 45m 59.67 ± 1.32s
37.594 N ± 10.1km 1.653 W ± 12.4km
DEPTH = 10.0km (geophysicist)

SPAIN (377)

Table with columns: Station ID, Time, Depth, Azimuth, Dip, Strike, etc. Includes stations EALH, ENIJ, EVIA, EBAN.

S.D. = 1.1 on 4 of 4 obs.

& JAN 31, 1989 00h 38m 33.00s
35.100 N 119.090 W
DEPTH = 29.0km
CENTRAL CALIFORNIA (39)
<PAS-P>. ML 3.4 (PAS), 3.5 (BRK).

Table with columns: Station ID, Time, Depth, Azimuth, Dip, Strike, etc. Includes stations ABL, ISA, BCH, SYP, SBB, BLP, PKEM, PHAM, CLC, PRI, FRI.

Table with columns: Station ID, Time, Depth, Azimuth, Dip, Strike, etc. Includes stations PEC, QSM, PANV, LLA, PRS, GWY, SAO, PLM, NOP, YMT3, JON, LSM, ARN, MHC, MHC, CMB, TNP, KVN, GLA.

30 obs. associated

JAN 31, 1989 00h 46m 18.61 ± 1.02s
6.142 S ± 4.5km 149.005 E ± 5.3km
DEPTH = 59.8 ± 9.3 km
5.4mb (15 obs.)

NEW BRITAIN REGION (192)

CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 28C
Centroid Location:
Origin Time 00:46:22.6 0.5
Lat 6.37S 0.04 Lon 149.11E 0.05
Dep 37.6 3.3 Half-duration 2.2
Moment Tensor: Scale 10**17 Nm
Mrr= 2.06 0.08 Mtt=-2.42 0.09
Mff= 0.36 0.12 Mrt= 0.51 0.18
Mrf=-0.13 0.14 Mtr= 0.36 0.09
Principal Axes:
T Vol= 2.12 P1g=83 Azm= 25
N 0.40 2 278
P -2.52 6 187
Best Double Couple: Mo=2.3*10**17
NP1: Strike=275 Dip=39 Slip= 87
NP2: 99 52 93

Table with columns: Station ID, Time, Depth, Azimuth, Dip, Strike, etc. Includes stations LAT, LMG, PMG, MNDI, TZZ, JAY, HNR, CTA, Z, OIS, MTN, WB5, GUA, GUMD, PJG, RMO, KNA, ASPA, Z, DZM, COO, CMS, STK, BWA.

LMG	6.01	229	eP	32	29.50	-1.6	PMS	4.17	291	eP	41	50.80	-1.4	KSH	54.55	9	P	18	00.00	-0.4		
PMG	7.09	231	eP	32	47.00	1.0	DWY	4.20	13	P	41	51.80	-0.9				pP	18	08.00	26kmX		
VSG	8.14	122	P	33	02.00	1.4	SIT	4.37	129	eP	41	52.20	-2.8	MSL	55.32	337	ePd	18	05.50	-0.5		
CTA	16.32	202	eP	34	50.00	0.5	CNPM	4.94	269	eP	42	02.65	-0.5	TAB	55.73	341	eP	18	08.00	-1.1		
DZM	21.59	143	iPc	35	47.90	-1.7	FBA	5.73	332	eP	42	12.80	-1.6	GYA	56.54	44	iPc	18	14.20	-0.9		
MTN	22.72	248	eP	36	02.00	1.3	KDC	6.12	253	ePc	42	18.10	-1.7	CD2	57.77	38	iPc	18	22.80	-0.8		
KNA	25.87	244	eP	36	32.00	1.2	TTA	7.55	299	eP	42	37.70	-2.2	WMO	61.33	17	iP	18	47.50	-0.5		
ASPA	26.00	222	iPc	36	31.80	-0.3	INK	9.05	19	eP	42	59.00	-1.7		4.0s		1.34nm			3.4mb X		
	1.7s		32.00nm			4.6mb	YKA	13.15	67	P	44	00.70	4.3	Z	16s		1.87um			5.3mszX		
MBL	35.75	240	eP	37	57.00	-1.1	FRB	32.89	52	eP	47	20.00	-2.7				S	27	10.00			
NANU	39.98	240	eP	38	33.10	-0.4								LZH	61.60	34	P	18	49.50	-0.6		
SNG	53.38	283	eP	40	37.20	18.2X									5.0s		0.81nm			3.1mb X		
CHG	57.98	296	eP	40	52.40	0.3								BAG	61.71	62	eP	18	50.00	-1.2		
CHTO	57.98	296	eP	40	52.50	0.4								GTA	62.13	29	P	18	52.40	-1.1		
	0.9s		4.26nm			4.6mb								Z	23s		2.00um			5.2mszX		
SHL	66.32	301	eP	41	48.20	0.3								XAN	63.06	39	iPc	18	56.00	-3.7X		
GUN	72.13	301	P	42	23.20	-0.7								ASPA	63.85	109	iPc	19	04.10	-1.0		
YKA	95.59	28	P	44	23.10	0.4								Z	18s		2.09um			5.3msz		
APO	116.42	339	ePKP	49	39.00	-2.3											LR	44	14.70			
	0.4s		0.80nm											WRA	64.66	105	Pc	19	09.90	-0.5		
CLL	122.94	331	ePKP	49	55.00	1.0									1.5s		69.00nm			5.6mb		
KHC	124.03	329	ePKP	49	55.40	-0.9								WB5	64.69	105	iPc	19	10.00	-0.6		
CNCB	134.33	119	PKP	50	18.00	0.5								ADE	67.31	122	iPd	19	27.30	0.0		
LPB	134.34	119	PKP	50	18.00	0.6									0.7s		20.55nm			5.4mb		
ZOBO	134.43	118	PKP	50	18.00	0.2								TIY	67.64	38	iPc	19	28.50	-0.7		
CCH	135.67	121	ePKP	50	20.50	0.7								N	16s		0.30um					
TIO	148.03	326	iPKP	50	44.50	3.6X											S	28	30.30			
	S.D. = 1.1	on	24	of	26	abs.								BTO	68.21	34	eP	19	32.00	-0.8		
														SHGH	69.02	282	eP	19	38.00	-0.1		
? JAN 31, 1989	04h	02m	38.13±	7.75s										LEGH	69.06	282	eP	19	40.00	1.6		
	6.561	S	±65.4km	147.539	E	±44.2km								HHC	69.23	35	eP	19	39.00	-0.1		
	DEPTH =	33.0km	(normal)											KOGH	69.26	282	eP	19	40.00	0.3		
	4.5mb	(1	abs.)											KUK	69.41	282	eP	19	40.50	0.0		
	EAST PAPUA NEW GUINEA REGION	(207)												QIS	69.47	107	eP	19	40.00	-0.8		
														SSE	69.49	48	P+	19	40.00	-0.7		
LAT	0.54	260	iPd	02	50.50	1.1									1.0s		24.00nm			5.3mb		
LMG	2.41	165	eP	03	16.50	0.3	GBA	30.10	22	P	14	42.00	0.2	Z	16s		0.90um			5.1mszX		
PMG	2.86	188	eP	03	24.00	1.6								N	14s		0.70um					
WB5	18.41	223	eP	06	51.80	-0.8	POO	33.76	13	eP	15	13.00	-1.0				i	19	50.00			
ASPA	21.47	216	iPd	07	27.10	1.0								TIA	69.61	42	eP	19	41.00	-0.4		
	0.4s		9.00nm			4.5mb								Z	20s		1.00um			5.1msz		
	S.D. = 1.4	on	5	of	5	abs.								OHR	69.72	325	eP	19	37.20	-4.8X		
% JAN 31, 1989	04h	56m	37.78±	1.43s										SKO	69.95	326	iP	19	42.00	-1.3		
	18.273	N	±14.4km	67.133	W	±14.0km									1.6s		60.00nm			5.5mb		
	DEPTH =	33.0km	(normal)											VR1	70.10	332	ePc	19	46.00	1.8		
	MONA PASSAGE	(89)												MLR	70.18	331	ePd	19	45.50	0.7		
MCP	0.15	8	iP	56	44.00	0.1								BJ1	71.37	38	Pc+	19	51.50	-0.4		
MGP	0.27	171	iP	56	45.00	-0.1	BPI	37.67	246	iPc	15	46.00	-1.3		6.0s		0.62nm			2.9mb X		
CSB	0.93	89	iP	56	54.60	0.1								BZS	72.38	329	eP	19	58.00	0.2		
SJG	0.95	100	iP	56	55.50	0.7	PRY	38.29	245	iPd	15	53.00	0.5		KIC	73.60	281	Pc	20	05.60	0.0	
LPR	1.20	88	iP	56	57.60	-0.8									0.8s		37.00nm			5.5mb		
	S.D. = 0.8	on	5	of	5	abs.								BFS	38.89	245	iPc	15	55.00	-2.5		
& JAN 31, 1989	06h	40m	47.42s												1.0s		180.00nm			5.7mb		
	59.979	N		141.506	W									KLI	39.01	80	eP	15	59.50	1.0		
	DEPTH =	12.0km												LWI	39.16	285	iPc	16	02.00	2.0		
	SOUTHEASTERN ALASKA	(19)												SNG	40.22	60	eP	16	07.40	-1.1		
	<AGS-P>	ML 4.0	(PMR)	Felt (IV)											e		17	41.80				
	at Icy Bay.													GRM	40.60	236	iPd	16	12.00	0.5		
BCPM	0.94	91	iP	41	04.13	-1.1									1.5s		138.89nm			5.4mb		
			iS	41	17.26		NDI	44.31	14	iPc	16	42.00	0.3									
CTGM	0.99	5	iP	41	05.18	-1.0	QUE	44.57	1	iPc+	16	44.00	0.0		PTJ	75.52	326	eP	20	16.50	0.3	
			eS	41	20.01										SPC	75.53	331	iP	20	17.00	0.6	
YKU	1.00	115	iPd	41	05.90	-0.2									SRO	75.54	329	iP	20	16.60	0.5	
RAGM	1.64	286	eP	41	16.06	-0.1									VBY	75.65	326	e(P)	20	16.80	0.0	
			eS	41	39.73										CAN	75.68	123	eP	20	16.60	-0.8	
GLB	1.85	323	iP	41	18.73	-0.6									CTA	75.70	107	iPc	20	17.90	0.2	
			eS	41	44.22											1.4s		109.30nm			5.7mb	
SGAM	1.92	287	eP	41	19.96	-0.2									CEY	76.25	325	eP	20	20.50	0.2	
			eS	41	45.73										KRA	76.28	331	ePd	20	19.60	-0.7	
HYT	2.16	65	P	41	23.40	-0.4										1.2s		50.00nm			5.5mb	
CVA	2.19	287	eP	41	23.52	-0.6										e			20	20.50		
HIN	2.53	282	eP	41	29.36	0.4										e			20	32.10		
KLU	2.65	307	iP	41	30.25	-0.5										SOP	76.35	328	eP	20	21.10	0.4
VLZ	2.65	298	eP	41	29.85	-0.8										LJU	76.38	326	eP	20	21.00	0.0
			eS	42	03.12											ZST	76.40	329	eP	20	20.70	-0.3
VZV	2.72	296	eP	41	30.48	-1.3											e		23	16.50		
TOA	3.11	315	iPc	41	37.10	-0.2										VOY	76.72	325	e(P)	20	22.70	-0.3
PWL	3.50	288	eP	41	41.74	-1.0										VKA	76.85	328	iP	20	23.70	0.2
KNK	3.71	296	eP	41	45.30	-0.4											3.0s		336.00nm		5.9mb	
SML	3.81	302	eP	41	46.51	-0.6											76.95	40	iPc	20	23.50	-0.7
PTE	3.83	287	eP	41	45.66	-1.7											Z	19s		0.80um	5.1msz	
GHO	4.05	300	eP	41	50.37	-0.2											N	20s		0.60um		
PMR	4.07	297	eP	41	50.70	-0.1											E	19s		0.70um		
																		S	30	16.00		
																		e(P)	20	26.00	-2.3	
																		1.5s		46.40nm	5.4mb	
				</																		

GKN 50.24 319 P 14 12.50 0.0
 S.D. = 1.4 on 12 of 19 obs.

* JAN 31, 1989 11h 26m 34.21 ± 0.76s
 16.886 N ± 8.3km 147.091 E ± 14.7km
 DEPTH = 33.0km (normol)
 4.6mb (4 obs.)

MARIANA ISLANDS REGION (215)

PJG 3.92 214 eP 27 34.00 0.4
 GUA 3.94 213 eP 27 33.60 -0.3
 0.3s 124.68nm
 eS 28 22.60

WB5 38.61 199 eP 33 55.20 -1.1
 WRA 38.68 199 Pd 33 56.50 -0.3
 0.7s 3.70nm 4.3mb

CHG 45.76 280 eP 34 56.50 1.8
 MBL 46.30 216 eP 34 58.50 -0.3
 WARB 47.20 205 eP 35 01.50 -4.4X
 0.4s 2.00nm 4.5mb

FORR 50.85 201 eP 35 35.00 1.1
 GUN 57.15 293 P 36 21.10 0.2
 PKI 57.58 292 P 36 23.40 -0.5

KKN 57.68 292 P 36 24.20 -0.3
 DMN 57.85 292 P 36 25.50 -0.2
 GKN 58.24 293 P 36 28.10 -0.2

GBA 66.98 278 P 37 25.30 -1.0
 1.0s 5.90nm 4.6mb
 INK 70.52 23 eP 37 40.00 -7.4X

FFC 87.90 33 eP 39 21.00 -0.7
 0.8s 7.00nm 5.0mb

ZOBO 146.27 94 PKP 46 14.80 1.3
 CNCB 146.46 95 PKP 46 16.00 2.2X
 S.D. = 0.9 on 15 of 18 obs.

* JAN 31, 1989 12h 29m 55.80 ± 1.30s
 20.830 S ± 11.0km 169.754 E ± 8.4km
 DEPTH = 113.0 ± 10.7 km
 4.8mb (6 obs.)

VANUATU ISLANDS (186)

DZM 3.32 248 iPc 30 46.00 -1.0
 iS 31 22.20

PVC 3.36 336 iP 30 47.70 0.2
 iS 31 29.00

RMO 20.03 250 iPc 34 24.20 2.1
 0.6s 41.00nm 5.0mb

CTA 22.03 268 iPc 34 44.20 2.1
 0.8s 8.58nm 4.2mb

BWA 23.19 230 eP 34 54.90 1.5
 CAN 23.25 227 eP 34 57.00 3.1X

WB5 33.15 265 eP 36 21.80 -1.7
 WRA 33.17 265 Pd 36 22.40 -1.3
 0.7s 4.30nm 4.4mb

ASPA 33.25 258 ePc 36 23.60 -0.8
 0.5s 21.00nm 5.2mb

SPA 69.30 180 ePd 40 52.00 -0.6
 1.0s 31.00nm 5.1mb

e 40 59.50 24kmX
 CN2 76.06 329 P 41 31.70 -0.7

XAN 79.54 312 iPc 41 52.00 0.2
 CHG 79.75 295 iPd 41 54.90 1.8
 0.8s 9.70nm 4.7mb

PRS 86.35 49 ePd 42 27.00 0.5
 SYP 86.48 51 eP 42 34.00 6.6X

MHC 86.65 48 ePd 42 28.40 0.3
 PRI 86.76 49 eP 42 29.30 0.7

WDC 87.64 45 eP 42 32.90 0.3
 MWC 87.75 52 eP 42 34.00 0.5

ORV 87.83 46 eP 42 33.60 0.1
 FRI 87.84 49 ePd 42 33.50 -0.1

CMB 87.86 48 ePd 42 33.20 -0.6
 BAR 88.10 54 eP 42 35.00 0.0

ISA 88.10 51 eP 42 35.00 0.0
 SBB 88.13 52 eP 42 35.00 -0.2

MIN 88.14 45 eP 42 34.70 -0.5
 RVR 88.16 53 eP 42 35.00 -0.2

PLM 88.26 53 eP 42 36.00 0.0
 GTA 88.56 313 eP 42 37.20 0.0

CLC 88.81 51 eP 42 39.00 0.6
 GSC 89.16 52 eP 42 40.00 -0.1

TPC 89.19 53 eP 42 40.00 -0.2
 GLA 89.66 54 eP 42 43.00 0.6

PKI 94.64 298 PKP 43 05.60 -0.2
 KKN 94.83 298 PKP 43 06.10 -0.4

DMN 94.91 298 PKP 43 06.60 -0.4
 GKN 95.43 298 PKP 43 08.70 -0.5
 BRG 144.50 333 iPc 49 18.50 -1.7
 1.2s 17.00nm

e 49 44.00
 CLL 144.55 335 iPc 49 18.20 -2.0
 PRU 144.90 332 PKP 49 19.50 -1.4

MOX 145.62 335 ePKP 49 22.30 0.2
 KHC 145.96 332 iPc 49 23.40 0.6
 e 49 49.50

SKO 146.01 316 ePKP 49 23.00 0.0
 GRF 146.53 334 ePKP 49 24.30 0.7
 0.6s 6.00nm

OHR 146.84 315 ePKP 49 25.30 0.8
 BNG 147.62 244 ePKc 49 25.50 -1.0
 0.6s 20.00nm

ic 49 29.10
 MEM 147.64 341 PKc 49 27.30 2.0
 DOU 148.52 342 PKP 49 30.10 3.3X

CDF 149.09 337 ePKP 49 30.90 3.0X
 BSF 149.75 337 ePKP 49 32.60 3.7X
 HAU 149.76 338 ePKP 49 32.70 3.9X

FLN 151.05 347 ePKP 49 35.40 4.8X
 ORX 151.08 333 PKP 49 35.12 4.1X
 LDF 151.13 346 ePKP 49 35.50 4.7X

LOR 151.25 340 ePKP 49 36.20 5.2X
 LBF 151.46 339 ePKP 49 36.70 5.3X
 GRR 151.49 347 ePKP 49 36.50 5.2X

SSF 151.54 340 ePKP 49 37.00 5.5X
 LSD 151.57 334 PKP 49 37.69 5.8X
 LPG 151.70 334 ePKP 49 37.80 5.7X

RSP 151.77 333 PKP 49 36.97 4.9X
 SMF 151.80 339 ePKP 49 37.40 5.5X
 LPF 151.86 347 ePKP 49 37.40 5.5X

FIN 152.10 331 PKP 49 37.28 4.9X
 RRL 152.16 334 PKP 49 38.71 6.0X
 ROB 152.18 331 PKP 49 37.69 5.1X

BGF 152.20 340 ePKP 49 38.40 6.0X
 TCF 152.64 341 ePKP 49 39.30 6.2X
 SBF 152.72 331 ePKP 49 39.20 5.9X

LSF 152.87 342 ePKP 49 39.60 6.2X
 CVF 153.02 328 ePKP 49 40.10 6.4X
 LMR 153.55 332 ePKP 49 41.20 6.8X

S.D. = 1.0 on 45 of 72 obs.

% JAN 31, 1989 13h 17m 34.38 ± 0.97s
 39.127 N ± 8.4km 27.626 E ± 9.9km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

IZM 0.78 201 iPg 17 49.40 -0.2
 eSg 18 00.40

DST 0.91 58 iPn 17 52.20 0.3
 EZN 1.22 305 ePn 17 57.70 0.6
 EDC 1.23 8 ePn 17 56.00 -1.3

KCT 1.25 26 iPn 17 58.30 0.6
 S.D. = 1.1 on 5 of 5 obs.

& JAN 31, 1989 13h 59m 23.20s
 61.390 N 147.514 W
 DEPTH = 16.5km

SOUTHERN ALASKA (2)
 <AGS-P>. ML 3.3 (PMR).

KNK 0.45 273 iP 59 32.22 -0.2
 eS 59 38.97

VZW 0.57 125 iP 59 33.85 -0.6
 eS 59 42.31

SML 0.57 317 iP 59 33.93 -0.5
 eS 59 42.39

VLZ 0.63 114 iP 59 34.38 -0.9
 eS 59 43.52

PWL 0.67 217 iP 59 35.06 -0.9
 eS 59 44.56

PME 0.77 289 iP 59 36.77 -0.9
 eS 59 46.82

KLU 0.77 82 iP 59 36.84 -1.0
 eS 59 47.16

GHO 0.78 300 iP 59 36.86 -1.1
 eS 59 47.91

PLRM 0.80 285 iP 59 37.08 -1.2
 eS 59 48.20

HIN 1.11 153 iP 59 42.78 -0.9
 eS 59 58.11

PWA 1.16 284 iP 59 42.74 -1.7
 CVA 1.21 134 iP 59 44.27 -0.9

SGAM 1.44 127 iP 59 47.32 -1.2
 eS 00 07.81

SLKM 1.59 237 iP 59 49.80 -0.9
 SEW 1.60 217 eP 59 49.01 -1.8

RAGM 1.71 125 eP 59 51.91 -0.7
 GLB 1.78 87 eP 59 52.46 -1.1

NKA 1.92 252 eP 59 56.10 0.6
 eS 00 19.17

SPU 2.20 267 iP 59 57.90 -1.7
 CRP 2.24 269 eP 59 58.95 -1.4

NNL 2.30 236 eP 00 00.36 -0.6
 RDT 2.52 253 iP 00 02.10 -2.1

CNPM 2.63 226 eP 00 04.26 -1.4
 ILIM 2.98 246 iP 00 08.56 -2.1

CTGM 3.02 95 eP 00 10.47 -0.9
 FBA 3.53 358 iPc 00 16.40 -2.0

SVW 3.93 269 iPc 00 20.80 -3.3
 TTA 4.27 295 eP 00 26.30 -2.8

KDC 4.44 217 eP 00 28.30 -3.0
 HYT 4.89 92 P 00 36.50 -1.3

IMA 5.43 332 eP 00 43.70 -1.8
 35 obs. associated

% JAN 31, 1989 14h 15m 21.81 ± 0.97s
 39.260 N ± 9.1km 27.723 E ± 9.5km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

DST 0.78 64 iPg 15 36.30 -0.8
 IZM 0.93 203 iPg 15 39.40 -0.2
 eSg 15 52.40

EDC 1.09 6 ePn 15 41.00 -1.3
 KCT 1.10 26 iPn 15 42.70 0.2

EZN 1.22 298 ePn 15 44.90 0.4
 YLV 1.82 44 ePn 15 55.20 1.7

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

JAN 31, 1989 15h 18m 09.01 ± 0.60s
 36.596 N ± 4.5km 25.815 E ± 5.5km
 DEPTH = 15.1 ± 5.6 km
 4.3mb (5 obs.)

DODECANESE ISLANDS (369)
 ML 3.9 (ATH).

NPS 1.34 187 ePb 18 34.50 1.4
 KAP 1.52 133 ePb 18 38.00 2.4
 eSb 19 03.30

VAM 1.77 228 ePb 18 39.50 0.3
 IZM 2.14 32 iPn 18 48.40 3.8X

ATH 2.16 310 ePg 18 50.00 5.0X
 PRK 2.67 8 ePn 18 52.20 0.0

EZN 3.25 7 iPn 19 00.00 -0.4
 ELL 3.29 86 iPn 19 06.00 4.8X

NEO 3.39 324 ePn 19 02.60 0.2
 KHL 3.42 59 eP 19 13.20 10.4X

DST 3.74 36 eP 19 16.00 8.7X
 BCK 3.92 76 ePn 19 09.00 -0.9

EDC 4.08 23 eP 19 16.00 3.9X
 KCT 4.16 28 eP 19 14.00 0.7

PLG 4.21 334 ePb 19 18.50 4.5X
 RDO 4.55 357 ePn 19 18.50 -0.3

YLV 4.85 34 eP 19 29.00 5.9X
 KZN 4.88 321 ePn 19 24.00 0.4

VAY 5.35 333 ePn 19 29.50 -0.7
 OHR 5.97 321 ePn 19 40.10 1.2

SKO 6.35 329 iPn 19 48.00 3.7X
 BBTk 6.36 57 eP 19 51.00 6.5X

31d 15h

BNG 32.70 194 iPc 24 43.00 0.1
 0.5s 5.00nm 4.7mb
 TIC 41.00 231 P 25 52.20 -0.9
 KIC 41.05 230 P 25 52.50 -1.0
 0.8s 9.00nm 4.6mb
 LIC 41.33 231 P 25 55.00 -0.8
 GKN 49.79 82 P 27 03.50 0.3
 DMN 50.33 82 P 27 08.10 0.6
 KKN 50.39 82 P 27 08.40 0.5
 PKI 50.59 82 P 27 09.70 0.1
 GUN 50.82 82 P 27 11.60 0.3
 GBA 51.35 103 Pc 27 15.20 0.2
 0.6s 1.80nm 4.2mb
 S.D. = 1.0 on 24 of 42 obs.

? JAN 31, 1989 15h 22m 24.73±5.42s
 43.399 N ±36.3km 5.461 E ±13.5km
 DEPTH = 10.0km (geophysicist)
 NEAR SOUTH COAST OF FRANCE (379)
 ML 2.7 (STR).

PUYF 0.22 53 Pg 22 29.08 -0.4
 TREF 0.23 346 Pg 22 29.26 -0.5
 PRAF 0.46 332 Pg 22 34.16 0.1
 TAVF 0.49 63 Pg 22 34.51 -0.1
 VILF 0.49 22 Pg 22 34.37 -0.3
 GANF 0.60 28 Pg 22 39.29 1.0
 FOUF 1.40 40 P 22 53.40 2.1X
 (Sg) 23 12.05
 S.D. = 0.7 on 6 of 7 obs.

* JAN 31, 1989 16h 21m 29.02±1.72s
 12.976 S ±11.4km 167.033 E ±15.9km
 DEPTH = 226.6 ± 14.7 km
 4.4mb (4 obs.)
 SANTA CRUZ ISLANDS (184)

HNR 7.79 296 eP 23 20.00 -0.4
 eS 25 04.00
 DZM 9.06 183 iPc 23 37.00 0.1
 iS 25 19.00
 RMO 21.79 229 iPd 26 04.30 0.7
 WARB 40.09 245 iPd 28 38.90 -5.3X
 0.4s 5.00nm 4.3mb
 CHTO 74.15 294 eP 32 43.00 0.2
 1.0s 2.00nm 3.8mb
 SPA 77.11 180 e(P) 32 58.30 -0.4
 0.9s 9.55nm 4.5mb
 FBA 84.76 18 iP 33 39.20 0.8
 0.8s 7.24nm 4.5mb
 epP 34 28.00 199kmX
 GUN 88.35 299 PKP 33 57.70 0.6
 PKI 88.66 299 PKP 33 59.00 0.4
 KKN 88.83 299 PKP 33 59.40 0.2
 DMN 88.93 299 PKP 33 58.60 -1.1
 GKN 89.44 299 PKP 34 02.20 0.3
 YKA 96.10 27 P 34 32.60 1.1
 KJF 121.61 340 iPKP 39 56.50 -0.1
 0.6s 13.00nm
 SUF 123.13 340 iPKP 39 59.50 0.0
 0.6s 7.10nm
 NUR 125.16 338 iPKP 40 04.20 0.7
 0.6s 7.80nm
 HFS 128.99 343 ePKP 40 10.60 -0.3
 0.6s 1.50nm
 NAO 129.16 345 PKP 40 12.00 0.8
 0.7s 3.00nm
 LDF 142.92 346 ePKP 40 34.60 -2.5
 GRR 143.29 346 ePKP 40 35.40 -2.3
 LPG 143.51 336 ePKP 40 38.60 0.0
 0.7s 3.70nm
 LPF 143.66 346 ePKP 40 37.10 -1.3
 0.7s 6.60nm
 BGF 143.97 341 ePKP 40 38.10 -0.9
 0.7s 5.90nm
 MAF 144.36 341 ePKP 40 39.70 0.0
 0.9s 11.40nm
 TCF 144.41 342 iPKPc 40 39.70 -0.1
 0.7s 10.30nm
 SBF 144.58 334 iPKPc 40 39.90 -0.3
 0.7s 22.00nm
 LSF 144.64 343 ePKP 40 40.30 0.1
 MFF 144.78 345 iPKPc 40 40.80 0.4
 0.8s 30.60nm
 CVF 144.97 331 iPKPc 40 41.20 0.3
 0.6s 5.40nm
 FRF 145.16 335 iPKPc 40 41.80 0.7

0.8s 11.80nm
 LRG 145.36 335 ePKP 40 42.70 1.3
 LMR 145.40 335 iPKPc 40 42.70 1.2
 0.8s 9.10nm
 BNG 147.75 258 iPKPc 40 49.10 2.9X
 0.2s 32.00nm
 id 40 52.80
 STS 149.95 354 ePKP 40 55.30 6.6X
 ETOR 150.66 343 ePKP 40 57.50 7.5X
 GUD 151.37 346 ePKP 40 59.20 8.1X
 S.D. = 0.9 on 31 of 36 obs.
 JAN 31, 1989 16h 40m 28.27±0.73s
 7.961 S ± 4.8km 115.355 E ± 5.9km
 DEPTH = 228.8 ± 8.6 km
 4.7mb (11 obs.)

BALI SEA (278)

BKB2 6.83 13 iPc 42 07.50 0.2
 KLI 10.88 286 eP 43 01.50 2.3
 KSI 13.40 288 ePd 43 31.30 0.3
 MBL 13.82 162 eP 43 34.50 -1.6
 0.3s 23.00nm 5.0mb
 eS 45 57.00
 KKM 13.94 4 ePd 43 38.50 0.8
 eS 43 49.00
 NANU 14.52 179 eP 43 43.40 -1.3
 i 43 46.60
 eS 46 17.00
 KNA 15.23 122 eP 43 52.00 -1.5
 eS 46 37.00
 MTN 16.25 109 iPd 44 05.90 0.0
 eS 46 54.00
 PPI 16.67 296 eP 44 09.00 -1.6
 MEKA 18.80 171 iPc 44 33.20 0.3
 0.4s 80.00nm 5.6mb
 eS 47 58.00
 IPM 18.96 311 ePc 44 34.40 -0.3
 0.8s 30.20nm 4.9mb
 PSI 19.51 302 ePc 44 40.60 0.4
 WARB 21.06 151 eP 44 51.00 -4.6X
 0.4s 7.00nm 4.5mb
 eS 45 16.00
 eS 48 49.00
 MRWA 21.15 178 eP 44 58.00 1.6
 eS 45 16.00
 eS 48 54.00
 W85 21.90 125 eP 45 03.50 -0.2
 eS 49 14.30
 WRA 21.91 125 Pc 45 03.80 0.0
 0.6s 7.70nm 4.4mb
 COOL 23.44 167 eP 45 18.40 -0.1
 eS 45 44.00
 eS 49 45.00
 KLB 23.62 175 eP 45 20.70 0.5
 eS 49 50.00
 ASPA 23.66 133 iPd 45 21.20 0.5
 0.6s 28.00nm 5.0mb
 eS 45 49.80
 eS 49 57.30
 BSI 24.06 303 eP 45 25.50 1.1
 NWA0 24.90 176 iPd 45 33.00 1.0
 eS 50 21.00
 eS 46 06.00
 NNT 25.65 323 eP 45 39.00 0.0
 FORR 25.70 154 eP 45 40.00 0.7
 OIS 26.58 121 eP 45 47.00 -0.4
 eS 50 21.00
 eS 46 30.00
 CHTO 31.14 329 eP 46 27.00 -0.8
 1.0s 2.50nm 3.8mb
 STK 34.09 138 eP 46 53.00 -0.1
 GYA 35.24 346 P 47 04.40 1.4
 CD2 40.22 344 iPc 47 45.10 0.9
 BRS 40.32 123 iPc 47 46.40 1.2
 i 47 58.00
 i 48 32.00
 SHL 40.40 326 iP 47 46.40 0.5
 XAN 42.21 352 P 48 00.40 -0.1
 GBA 43.32 299 Pc 48 08.00 -1.6
 1.0s 9.40nm 4.2mb
 HYB 44.25 305 iPd 48 15.90 -1.2
 TIY 45.52 357 eP 48 26.40 -0.4
 GUN 45.65 322 Pd 48 28.40 0.0
 PKI 45.69 322 Pd 48 28.20 -0.5
 0.7s 25.00nm 4.7mb
 DMN 45.90 322 Pd 48 30.10 -0.2
 0.7s 48.00nm 5.0mb

KKN 45.93 322 Pd 48 30.10 -0.3
 0.7s 22.00nm 4.6mb
 GKN 46.47 321 Pd 48 34.20 -0.5
 GTA 49.29 344 eP 48 56.70 0.6
 QUE 59.97 312 eP 50 10.50 -2.7
 MAIO 68.41 314 iPd 51 06.80 -0.8
 NAI 78.49 270 iPd 52 11.00 4.6X
 BUL 84.26 251 iPc 52 36.80 0.7
 YKA 114.69 23 PKP 58 42.50 0.0
 KIC 120.58 273 PKP 58 55.20 0.0
 LIC 120.85 273 PKPc 58 55.80 0.1
 TIC 120.89 273 PKPc 58 55.80 0.0
 VAO 144.70 209 ePKP 59 41.30 1.2
 S.D. = 1.0 on 47 of 49 obs.

JAN 31, 1989 17h 39m 24.10±0.46s
 22.178 N ± 6.4km 107.292 W ± 4.8km
 DEPTH = 10.0km (geophysicist)
 5.2mb (25 obs.) 4.8Msz (1 obs.)
 OFF COAST OF CENTRAL MEXICO (51)

Ms 4.9 (BRK).
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 12S, 27C
 Centroid Location:
 Origin Time 17:39:28.1 0.8
 Lat 22.26N 0.09 Lon 107.50W 0.08
 Dep 15.0 FLX Half-duration 1.7
 Moment Tensor: Scale 10¹⁷ Nm
 Mrr=-0.03 0.05 Mtt=-0.25 0.08
 Mff=0.28 0.08 Mrt=-0.13 0.23
 Mrf=0.35 0.23 Mtf=-1.07 0.06
 Principal Axes:
 T Val= 1.21 Plg=16 Azm=233
 N -0.12 73 29
 P -1.10 6 141
 Best Double Couple: Mo=1.2*10¹⁷
 NP1: Strike=276 Dip=74 Slip=173
 NP2: 8 84 16

MZX 1.30 38 iP 39 45.70 -2.4
 iS 39 57.50
 COLM 4.50 131 iP 40 33.00 -1.0
 CRX 7.64 110 iP 41 23.30 4.9X
 IIC 7.88 106 iP 41 28.00 6.1X
 III 8.26 116 iP 41 29.00 1.9
 ACX 8.77 126 P 41 24.50 -9.5X
 ACX 8.77 126 iP 41 34.50 0.5
 IIT 8.98 109 (P) 41 40.50 3.4X
 IISM 9.81 107 iP 41 49.00 0.7
 LVVM 10.42 101 (P) 42 02.50 5.9X
 GLA 12.72 330 eP 42 28.00 0.2
 ALQ 12.74 3 eP 42 30.00 1.8
 1.4s 127.91nm 5.9mb X
 BAR 13.36 324 eP 42 35.00 -1.4
 PLM 13.98 325 eP 42 44.00 -0.6
 TPC 14.16 329 eP 42 47.00 0.1
 PEC 14.55 325 P 42 51.00 -1.0
 RVR 14.74 325 eP 42 54.00 -0.5
 MWC 15.29 324 eP 43 02.00 0.2
 PAS 15.29 324 eP 43 02.00 0.4
 GSC 15.50 330 eP 43 04.00 -0.4
 SBB 15.52 326 eP 43 05.00 0.4
 SHRG 15.83 336 P 43 10.10 1.4
 NOP 15.90 333 P 43 10.70 1.1
 QSM 16.07 331 P 43 12.50 0.8
 JON 16.14 334 P 43 13.70 1.0
 GWY 16.17 332 P 43 13.60 0.5
 SPRG 16.24 335 P 43 15.30 1.3
 CLC 16.29 329 eP 43 15.00 0.4
 LSM 16.47 334 P 43 18.10 1.2
 LOP 16.53 334 P 43 19.00 1.3
 PANV 16.54 331 P 43 18.30 0.5
 CPX 16.55 335 P 43 19.40 1.5
 VVO 16.55 35 eP 43 17.30 -0.5
 YMT3 16.57 333 P 43 19.30 1.2
 SIO 16.57 33 e(P) 43 17.10 -1.0
 CDH1 16.59 334 P 43 19.80 1.3
 PRN 16.59 338 P 43 20.00 1.5
 SYP 16.59 321 eP 43 18.00 -0.5
 FMT 16.60 332 P 43 19.20 0.7
 YMT2 16.60 333 P 43 19.80 1.3
 ISA 16.60 326 eP 43 18.00 -0.6
 YMT4 16.64 334 P 43 20.00 1.0
 TMBR 16.77 334 P 43 21.90 1.1
 NPN 16.77 339 P 43 22.00 1.2
 MSU 16.81 347 P 43 22.40 1.0

31d 21h

	0.5s	7.70nm		4.9mb	
OIS	35.26	116	iPc	44	58.30 -0.3
HYB	36.36	312	eP	45	07.50 -0.3
GUN	39.77	332	P	45	35.80 -0.9
	0.4s	9.00nm		5.0mb	
DMN	39.89	331	P	45	37.00 -0.5
KKN	39.06	331	P	45	36.80 -1.2
GKN	40.45	330	P	45	36.80 -5.2X
STK	41.41	131	iPd	45	51.00 1.3
BRS	48.75	120	iPc	46	49.40 0.9
			i	46	56.90
MAIO	61.25	318	eP	48	17.00 -2.0
BUL	75.75	251	iPc	49	49.20 -0.1
SLR	75.89	245	eP	49	51.00 1.0
PRY	76.59	244	eP	49	54.50 8.5
VRI	87.54	317	ePd	50	52.50 2.3
MLR	87.99	316	ePc	50	54.50 1.9

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

WB5	18.22	192	eP	55	47.10 0.5
			eS	59	11.50
WRA	18.28	192	Pc	55	48.00 0.6
	0.4s	0.10nm			4.3mb
OIS	18.56	176	eP	55	50.00 -0.7
ASPA	21.99	191	iPd	56	27.80 0.2
	0.7s	28.00nm			4.8mb
CNCB	148.18	127	PKP	11	17.00 0.2
LPB	148.21	126	(PKP)	11	20.00 3.2X
ZOBO	148.33	126	ePKP	11	17.00 -0.2

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

? JAN 31, 1989 22h 14m 32.92 ± 4.90s
 6.558 S ± 32.7km 148.141 E ± 35.7km
 DEPTH = 61.5 ± 14.6 km
 4.4mb (3 obs.)

NEW BRITAIN REGION (192)

LAT	1.14	265	iPd	14	53.00 0.0
LMG	2.34	180	iPc	15	09.00 -0.8
PMG	3.00	199	eP	15	20.00 1.0
OIS	16.19	210	iPc	18	18.70 0.7
WB5	18.82	224	eP	18	49.00 -1.6
WRA	18.88	224	P	18	51.00 -0.3
	0.5s	5.00nm			4.0mb
KNA	21.07	243	iPc	19	14.20 0.0
ASPA	21.83	217	iPd	19	22.70 0.8
	0.5s	40.00nm			5.1mb
			eS	23	19.70
WARB	28.31	224	eP	20	18.00 -4.9X
	0.3s	3.00nm			4.4mb
FORR	30.61	215	eP	20	43.00 -0.4
NANU	35.23	240	eP	21	24.00 0.5

S.D. = 1.0 on 10 of 11 obs.

* JAN 31, 1989 23h 23m 13.48 ± 1.70s
 33.964 S ± 13.9km 70.127 W ± 12.3km
 DEPTH = 127.1 ± 10.8 km
 4.7mb (2 obs.)

CHILE-ARGENTINA BORDER REGION (127)

MDZ	1.52	45	iP	23	43.40 1.4
			iS	24	03.20
RTCV	2.49	33	ePd	23	53.20 -0.8
ZON	2.70	27	iPd	23	56.50 -0.3
			eS	24	30.00
RTCB	2.71	25	iPd	23	57.00 0.0
			S	24	26.00
RTLL	2.98	28	ePd	23	53.20 -7.2X
RTRS	3.82	9	iPd	24	11.20 -0.4
TCA	5.35	62	iPc	24	30.50 -1.9
			S	25	25.80
ITB7	16.43	62	e(P)	26	58.20 0.4
ITB1	16.55	60	e(P)	27	00.50 1.1
ITB	16.60	61	e(P)	27	00.40 0.5
CNCB	17.19	7	P	27	08.00 0.2
LPB	17.45	6	P	27	12.00 1.1
ARE	17.47	356	eP	27	11.00 0.0
ZOBO	17.71	6	P	27	13.80 -0.4
VAO	23.05	68	eP	28	07.50 -0.9
LIC	73.26	70	P	34	32.70 0.0
TIC	73.52	70	P	34	34.10 -0.2
KIC	73.57	70	P	34	34.40 -0.1
	0.6s	12.00nm			4.8mb
ALO	76.52	330	eP	34	51.00 -0.2
	1.0s	10.50nm			4.6mb
SLR	82.50	116	eP	35	24.50 1.0
BUL	85.89	111	iP	35	41.00 0.4
GBA	144.29	117	PKPc	42	35.30 -1.1
	0.7s	2.30nm			
HYB	147.49	113	ePKP	42	45.50 3.8X

S.D. = 0.9 on 21 of 23 obs.

JAN 31, 1989 23h 31m 34.43 ± 1.27s
 1.940 S ± 17.2km 138.185 E ± 29.5km
 DEPTH = 33.0km (normal)
 4.5mb (2 obs.)

NEAR N. COAST OF WEST IRIAN (197)

MTN	12.89	212	iPc	54	37.60 -0.5
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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		
RMW	XX	X	X					X	XX				X	X						XXXX	X	X	X		XX	X	X		X	X			
ROB	X	X	X	XX	X	X	XX		XX	X	X	XX	XXXXXX	X	X	XXXXX	X	X	X	X	XXXX	XXXXXX	X	X	XX	XX	XXXX		X	X	XX		
ROCH	X	XX	X	XX	X	X	X	X	X	XX	X	XX	XXX	X	XXXXXX	X	X				X	X	XXX				XX		X	XX			
RRL	X	X	X	XX	X	X	XX		XX	X	X	XX	XXXXXX	X	XXXXX	X	X	X	X	X	XXXXXXXXXXXX	XX	X	XX	XX	XXXXX		X	X	XX			
RSCP	X		XX						X		X				X				X	XX	X		XX	X	X	X	X		X	XX			
RSM	X	X	X	X	X	XXX	X	XX	XX	X	X	XX	XXX	X								XX	X	X	X	X	X		X	XX			
RSNY	X						X	X	X	X					X					X	X	XX	X	X	X	X	X	X	X	X			
RSON	XXX	X	X	XX	X	X	X	XX	X	X	XX	X	X	X	X	X	X	X	X	XX	XX	X	X	X	X	X	X	X	X	X	X		
RSP	X	X	X	XX	X	X	XX		XX						X	X	X	X	X	X	X	XXXXXXXX	X	XX	XX	XXXXX		X	X	X			
RTCB	X	XX	XX	XX	X	X	XXXX	X	XXXX	XXX	X	X	XX	X	XXXX	XXXXX	X	X	X	XX	X	XX		XX	X	XX	X	X	XXXXXXXX	XXX	XXX		
RTCV	X	XX	XX	XX	X	XXXX	X	XXXX	XXX	X	X	XX	X	XX	XXXX	XXXXX	X	X	X	XX	X	XX	X	XX	X	X	X		XXXXXX	X	X		
RTLL	X	XX	XX	XX	X	X	XXXX	X	XXXX	XXX	X	X	XX	X	XX	XXXX														XX	X	X	
RTRS	X	XX	XX	XX	X	X	XXXX	X	XXXX	XXX	X	X	XX	X	XX	XXXX	XXXXX	X	X	X	XX	X	XX	X	XX	X	X	X	XXXXXXXX	XXX	XX		
RUP									XX	X	X	X	XXX	X	XX	XX																	
RUV	X								X	X			X	X							X	X	X				X	XX			X		
RVC									X	X			X	X																			
RVR	XX	X		XX	X	X	X	X	X	X		X	XX	X	XX	X	XX	X	XXXXXXXX	X	XX	X			X	X	X	X	X	XX	X	XX	
RVW	X								X	X		X	X							X													
RVD	X								X	X		X	XX									X	X	X		X	X				X		
RZN			XX	X	X	XX	X	X	X	XXX	X	X	X	X	X					X			XXXXX	X		X	XX	X	XXX				
SAL			X	X	X		X	XX	X	X	X	X	XX	XXX		X	XX						X	X	X		X						
SALJ			X	X	X	X	X	XXX							X		XX																
SAN	X	XXX	X	X	X	X	X		X	X	X	XX	XX	X	XXX	X	X	X	XX	X	XX	XXX	X	X	XXX			XX	X	XXXX			
SAO	X	X	X	X	X				XXXX				X	X	X	X	XX	X	X	XX	XX	XX			X		X			X	XX		
SAOF	X	X	X			X	XXX		XXXX		X	X	X	XXX		X	XXX	X	X		XXX	XXXXX		X	XXXXX	X	X			X	X		
SAP									X	X			X	X		X	X								X	X	X	X					
SASA	X		X	X			X													XXX		X	X	X									
SAX							X					X	XXX			X	X				X	X	X		XX	X		X					
SBA	X						X				X	X	X			X				X		X								X	X	X	
SBB	X	XX	X		XX	X	X	X	X	X	X	X	X	XX	X	X	X	XXXXX	X	X	XXX	X	XX		XX	X	X	X	X	X	X	XX	XX
SBF	X	X		X	XX		X	XXXXX	XX	XXXX	X	XX	XXXX	XXXX	X	X	XXX			XX	X	X	XXXXXXXX	X	XXXX	XXXX	X	XX	X	X	XXX		
SCH	X		X	X			X	X		XXXX	X		XXX	X	XX				X	X	XX	X	X	X	X	X	X	X	X	X	X		
SCI																					XXXX												
SCX				X	X	X			X	X	XX	X		X		XX	XX				X	X	X	X	XXXXX	XXX	XX		XX	XX			
SDI	X		XX	XX	XX	XX	X	X	XXXX	XX	X	X	X	XX	XX	X				X	X	XXX	X	XX	XX	XX	X	X	XX	XX	XX	XX	
SDN		XX			X			XXXXX	X				X	X	X	X				XX	X		X										
SEG	XX	X	X	X	X			X	X			X									X			X	X	X		X					
SEK								X	XXX	X	X	XX	XXXXXX		X				X	X	X	X	XX		X	X	XXXXXX						
SES	XXXXX	X	X	XXX	X		X	X	X	XXXX	X	XXXX	X	XX	X	XX	X	XX	X	X	XXXXX	X	X	XX	XX	XX	X	XX	X	XX	X	XX	
SFI	X	X	X	XXX	X	X	X	X	XX		X	XX	XXX									XX	X	X		X	X	X					
SGAM			X	X	XXX		X	X	XX	XXXX	X			XXX		X	XX			X	X	X	X	X	X	XX	X	XX	X	X	XX		
SGO	X	X	X	XX		XX	XX		XX	XX	XX	X		XX		X	X	X	X	X	X	X	X	XX	X	XXXX	XX	X	X	X	X	X	
SHGH	X	X	X				X	XXXX	X				X	X	X					X	X	X	X	X	X	X	X	X					
SHI	XX	XX	XX	XX	X	XX	X	XX	X			XX	X	X							X	XXXX	XX				X	X	X	XXX	X		
SHK	X	XX	XX				X	X	X	X	X	X	XX		X	X			XX	X	X	XXXX	XXX		X	X	X	X	XXX	X			
SHL	XXXX	XXXXXX			X	XXXX	XX		XXXX		XXXX	XXXXXXXXXXXXXXXX	X	X	XX				XXXXX		XXXX	XXXXX		XXX	XXX						XXXX		
SHNJ						X		XXX	X			X	X	X		X				X	X	X	X	X	X	X	X	X	X	XXX			
SHW	X	X							X	X	X		X	X		X				X	X	X	X	X	XX	X	X	X	X				
SIO	X	X	X	X	X	X	X	X	XXXX	X	XX	XX	XXX		X	X			X	XX	XX	X	XX	X	XX	X	X	X	X	XX	X	XX	XX
SIT		X	X				X	X	X							X				X			X	X								X	X
SJG	X		XX	X					XX		X	X	X		XX							X	X	XX						XX	X	XX	
SJS						X	X		X	X	X	XXX	X	X	X					X	XX	X	X	X	X					XXX			
SKDB																					XXX		X	X	X		X	X					
SKI		X			X		XX	X	X						X	X	XXX	XX	X		X	X	X		X	X	X	X	X				
SKO	XXX	X	X	XXXX	XXXX	X	XX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	X	XX	XXXX	XXXX	X	XXXX	XXXX	X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X	XXXXXX	XX	XX							
SKT			X	XX		X	XX	XXXX	XX				XXX								X												
SLA	X	X	XX	X	XXX	X	XX		X	X	XX	XXXX		XX	X	X	X				X	X	X	X	X	X	X	XX			XX		
SLE							X					XX	XXX								X	XX		X	XX	X	X	X					
SLKM	X		X	X	XXX		X	XX	XXX	XXX	XX			XXX		X	XX			XX	X	X	X	X	XX	XX	X	XX	X		X	X	
SLL	X		XX	X	XX	XX		XX	X				X	X		X				X	X		X	XX	X								
SLR	X	X	XXXXXXXXXX	XX	XXXX	X		XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	X	XX	XX	X	X	XXXXXXXXXXXX	XXX	X	XX	XXXXXX	X	X	XXXX	XXXXXX	XXX	XX	XX	X		
SLY	X	X	X	X	X	X	XX	X	XX	XX	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
SMF	X	X	X	XXX	XX		XXX	XX	XXXX		XXXX	XXXX	XXXX	X	X	XX	XXXX	XXXX	X	XXXXXXXXXXXX	X	XXXX	XXXX	X	XXXX	XXXXXX	X	XXX	XXXXXX	X	XXX	XX	XXX
SML	X		X	X	XXX		XXXX	XXX	XXXX	XX	X		XXX		X	X				X			XX	X	XX	X	XX	XX	X	XX	XX	XX	
SMMM	X	X													X	X	X						XX	X									
SMW															X	X	X																
SMY	X								X	X	X				X						X		X	X	X	X	X	X	X				
SNF	X	XX	X	X	X	X	XXX	X	XX	XX	XX	XXX	X	XXXX	X	X	XX	XX	XXX		XX	XXX	XX	X	XX	XX	XX	XX	X	X	X	XX	
SNG	X	X	XXX			X	XXX	XX	X	X	XX	X	X			XX			X	X	X	X	XXX	XX	XX	XX	X	XXX	XX	XXXXXXXX		XX	
SNY	X	X	XX	X	X	X	XX	X	XXXXXX	X	X	XX	X	XXX		X	X	X	XX	XX	X	XXX	X	X	XX	X	X	X	X	X	X	XX	
SOD	X	X	XXXXXXXXXX	X	X	XXXX	X	XXXX	X		X	X	XX	XX	X	X	X			XXXX	XX	XXXX	X	X	XX	X	X	XXX		XX	XX	X	
SOH	X		XX	X	XXX	X		X	X			XX								X				XXX	XX								
SOI	X	X	X	XXX	X	XXXXXXXX	X	XX	X	X	X	XXXXXXXX	XXX	X	XX	X						X	X	X	X	X	X	X					
SOP	X	X	X	X	X	X	X	XX	XX																								

STATIONS ADDED SINCE STATION BOOK (OF 85-714.) WAS PRINTED

Code	Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
AAHD	Abu Hadid Egypt opened 1982? HLW code AHD.	23 44 46.8 N (23.7463)	32 45 10.2 E (32.7528)	...	HLW
AAPN	Arroya Pinares Spain	37 18 27.6 N (37.3077)	4 07 15.6 W (4.1210)	1160.0	CRT
AAT	R Alma-Ata Kazakh S.S.R., U.S.S.R.	...	...	...	...
ABH	Alteburg Rheinland-Pfalz, Fed. Rep. of Germany.	49 52 54.0 N (49.8817)	7 32 51.0 E (7.5475)	620.0	KRW
ABHA	Abha Saudi Arabia opened 198811.	18 15 ... N (18.2500)	42 45 ... E (42.7500)	2200.0	RYD
ABR	R El Abro Veracruz, Mexico	19 48 25.2 N (19.8070)	96 32 02.4 W (96.5340)	520.0	IIM
ACHM	Chimeneas Spain	37 06 18.0 N (37.1050)	3 49 46.8 W (3.8297)	862.0	CRT
ACP	R Acatlan Puebla, Mexico	18 12 28.2 N (18.2078)	98 03 34.8 W (98.0597)	1250.0	UNM
AECU	Ecuador Network Ecuador	0 16 13.8 S (0.2705)	78 24 25.2 W (78.4070)	3000.0	QUI
AFAR	Ash Flat Arkansas, U.S.A.	36 08 00.0 N (36.1333)	91 31 52.2 W (91.5312)	239.0	TEIC
AFH	RD Ashford Hill England, United Kingdom	51 20 38.0 N (51.3439)	1 13 11.0 W (1.2197)	91.0	BKN
AFL	R Alpe Falarja Veneto, Italy	...	...	...	TRI
AGAL	Gebel Alisa Egypt opened 1982? HLW code GAL.	23 25 42.6 N (23.4285)	32 49 31.8 E (32.8255)	...	HLW
AGD	D Arta Gratte Djibouti opened 19850509.	11 31 48.0 N (11.5300)	42 49 12.0 E (42.8200)	450.0	ARO GEOS
AGMR	Gebel Marowo Egypt opened 1982? HLW code GMR.	23 32 15.6 N (23.5377)	32 32 25.8 E (32.5405)	...	HLW
AGO	Saint Agoulin Auvergne, France opened 1984?	46 03 08.6 N (46.0524)	3 07 51.8 E (3.1311)	523.0	CFF
AGRW	Gebel Rewraw Egypt opened 1982? HLW code GRW.	23 38 42.0 N (23.6450)	32 48 34.8 E (32.8097)	...	HLW
AGX	D Aguascalientes Aguascalientes, Mexico opened 1988.	21 52 43.2 N (21.8787)	102 18 03.6 W (102.3010)	...	UNM
AKGH	Akasambo Ghona opened 1987.	6 14 36.0 N (6.2433)	0 02 25.0 E (0.0403)	377 0	KUK
AKL	Akola Maharashtra, India	20 07 ... N (20.1167)	77 07 ... E (77.1167)	310.0	NDI
AKRL	Khor El Raml Egypt opened 1982? HLW code KRL.	23 39 36.0 N (23.6600)	32 42 36.0 E (32.7100)	...	HLW
AKSR	Khor Sakr Egypt opened 1982? HLW code KSR.	23 38 13.8 N (23.6372)	33 01 15 0 E (33.0208)	...	HLW
AKUR	Kurkur Egypt opened 1982? HLW code KUR.	23 53 38.4 N (23.8940)	32 46 33.6 E (32.7760)	...	HLW
ALBI	R Allahabad Uttar Pradesh, India	25 29 ... N (25.4833)	81 50 ... E (81.8333)	107 0	NDI
ALJ	Aljibe Spain	36 40 25.2 N (36.6737)	5 36 14 4 W (5.6040)	1091 0	SFS
ALDJ	Loja Spain	37 06 32.4 N (37.1090)	4 06 18.0 W (4.1050)	1340.0	CRT
ALPW	Alpine Wyoming, U.S.A. opened 198601.	43 09 02.3 N (43.1506)	110 59 52.1 W (110.9978)	1792.0	USBR
AMAN	Manam Egypt opened 1982? HLW code MAN.	23 56 00.0 N (23.9333)	32 56 02.4 E (32.9340)	...	HLW
ANAL	New Alisa Egypt opened 1982? HLW code NAL.	23 24 36.0 N (23.4100)	32 40 40.8 E (32.6780)	...	HLW
ANCC	Alto Anchicaya Colombia opened 1987.	3 30 55.2 N (3.5153)	76 52 00.0 W (76.8667)	540.0	UVC
ANGC	R Angal Malleco, Chile	37 47 00.0 S (37.7833)	72 42 30.0 W (72.7083)	...	...
ANGV	R Angostura Venezuela opened 1984.	9 42 18.0 N (9.7050)	69 31 18.1 W (69.5217)	680.0	CAR
ANMR	North Mavawa Egypt opened 1982? HLW code NMR.	23 40 37.2 N (23.6770)	32 32 32.4 E (32.5423)	...	HLW
AOI	Ancona (Monte Canera) Marche, Italy	43 33 00.0 N (43.5500)	13 36 07.2 E (13.6020)	530.0	SSO
APHE	Pica Herrera Spain	36 57 07.2 N (36.9520)	3 41 16.8 W (3.6880)	1360.0	CRT
APKP	F (phase code designation)				

STATIONS ADDED SINCE STATION BOOK (OF 85-714) WAS PRINTED

Code	Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
APM	Augspurger Mountain Washington, U.S.A. opened 198110.	45 44 10.0 N (45.7361)	121 40 50.0 W (121.6806)	865.0	SEA
APW	Alpha Peak Washington, U.S.A.	46 39 06.0 N (46.6517)	122 38 51.0 W (122.6475)	457.0	SEA
ARL	Chiapas, Mexico	17 24 43.2 N (17.4120)	93 07 04.8 W (93.1180)	...	UNM
ARTJ	Al Aritein Jordan opened 1987.	32 14 48.0 N (32.2467)	36 49 42.0 E (36.8283)	1058.0	JSO
AS01	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 39 53.0 S (23.6647)	133 57 03.0 E (133.9508)	550.0	AUST
AS02	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 40 45.0 S (23.6792)	133 56 13.0 E (133.9369)	550.0	AUST
AS03	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 40 28.0 S (23.6744)	133 55 11.0 E (133.9197)	550.0	AUST
AS04	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 39 35.0 S (23.6597)	133 55 45.0 E (133.9292)	550.0	AUST
AS05	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 38 57.0 S (23.6492)	133 56 51.0 E (133.9475)	550.0	AUST
AS06	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 38 51.0 S (23.6475)	133 58 17.0 E (133.9714)	550.0	AUST
AS07	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 39 56.0 S (23.6656)	133 58 11.0 E (133.9697)	550.0	AUST
AS08	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 40 53.0 S (23.6814)	133 57 36.0 E (133.9600)	550.0	AUST
AS09	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 41 58.0 S (23.6994)	133 56 29.0 E (133.9414)	550.0	AUST
AS10	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 41 49.0 S (23.6969)	133 54 50.0 E (133.9139)	550.0	AUST
AS11	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 40 42.0 S (23.6783)	133 53 52.0 E (133.8978)	550.0	AUST
AS12	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 39 59.0 S (23.6664)	133 54 16.0 E (133.9044)	550.0	AUST
AS13	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 39 07.0 S (23.6519)	133 53 40.0 E (133.8944)	550.0	AUST
AS14	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 39 06.0 S (23.6517)	133 54 37.0 E (133.9103)	550.0	AUST
AS15	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 38 08.0 S (23.6356)	133 54 44.0 E (133.9122)	550.0	AUST
AS16	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 38 13.0 S (23.6369)	133 55 48.0 E (133.9300)	550.0	AUST
AS17	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 39 52.0 S (23.6644)	133 59 30.0 E (133.9917)	550.0	AUST
AS18	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 41 24.0 S (23.6900)	133 58 51.0 E (133.9808)	550.0	AUST
AS19	R Alice Springs Array Northern Territory, Australia AUST opened 1986.	23 42 16.0 S (23.7044)	133 57 45.0 E (133.9625)	550.0	AUST
ASAR	R Northern Territory, Australia	...	...	...	AUST
ASKD	Sinn el Kaddab Egypt opened 1982? HLW code SKD	23 39 34.8 N (23.6597)	32 23 04.8 E (32.3847)	...	HLW
ASMO	Sierra Morrones Spain	37 21 28.8 N (37.3580)	3 44 34.8 W (3.7430)	1170.0	CRT
ASPF	Aspremont Provence-Cote d'Azur, France	43 46 05.4 N (43.7682)	7 15 29.9 E (7.2583)	850.0	STR
ASR	Mount Adams--Stagman Ridge Washington, U.S.A.	46 09 02.4 N (46.1507)	121 35 33.6 W (121.5927)	1280.0	SEA
ATEJ	Tejeda Spain	36 54 54.0 N (36.9150)	4 00 50.4 W (4.0140)	1480.0	CRT
ATN	Antennamare (Messina) Sicilia, Italy	38 09 38.0 N (38.1606)	15 27 46.0 E (15.4628)	350.0	ERC
ATZ	Maunt Atzman Israel opened 1986.	32 49 17.8 N (32.8216)	35 16 11.0 E (35.2697)	500.0	JER
AURF	Auriere Provence-Cote d'Azur, France	43 53 14.4 N (43.8873)	7 19 39.0 E (7.3275)	1040.0	STR
AVN	Avellanes Spain Sent to NEIS by MDD.	41 53 01.2 N (41.8837)	0 45 06.6 E (0.7518)	630.0	MRB

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Code	Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
AVOW	Apres Vouz Peak Wyoming, U.S.A. opened 198601.	43 36 39.8 N (43.6111)	110 48 50.3 W (110.8140)	2036.0	USBR
AWAL	West Alisa Egypt opened 1982? HLW code WAL.	23 22 45.0 N (23.3792)	32 34 57.0 E (32.5825)	...	HLW
AWDO	Awoongo Dam No. 3 Queensland, Australia opened 19870701. QDM code AWD.	24 02 52.1 S (24.0478)	151 18 56.5 E (151.3157)	110.0	QDM
AWKL	West Kalabsho Egypt opened 1982? HLW code WKL.	23 25 30.6 N (23.4252)	32 26 49.2 E (32.4470)	...	HLW
AYK	R Aydinlik Turkey opened 198801.	36 09 08.0 N (36.1522)	33 19 37.0 E (33.3269)	50.0	ISK
AYN	Al 'Uyaynoh Saudi Arabia opened 1986.	28 52 12.0 N (28.8700)	36 00 00.0 E (36.0000)	...	RYD
AZI	Avezzano Abruzzo, Italy opened 1987.	41 59 18.4 N (41.9884)	13 26 08.4 E (13.4357)	...	ROM
AZO	R Oaxaca, Mexico	15 57 57.6 N (15.9660)	97 24 28.8 W (97.4080)	...	UNM
BADA	Al Bad Saudi Arabia opened 1986.	28 31 22.8 N (28.5230)	35 00 07.2 E (35.0020)	...	RYD
BAE1	RD Brasilia Array Site E1 Distrito Federal, Brazil opened 197101?	15 39 00.0 S (15.6500)	47 56 49.0 W (47.9469)	1200.0	BDF
BAE2	RD Brasilia Array Site E2 Distrito Federal, Brazil opened 197101?	15 39 00.0 S (15.6500)	47 56 49.0 W (47.9469)	1200.0	BDF
BAE3	RD Brasilia Array Site E3 Distrito Federal, Brazil opened 197101?	15 39 25.0 S (15.6569)	47 55 35.0 W (47.9264)	1200.0	BDF
BAE4	D Brasilia Array Site E4 Distrito Federal, Brazil opened 197101?	15 39 51.0 S (15.6642)	47 54 11.0 W (47.9031)	1260.0	BDF
BAE5	RD Brasilia Array Site E5 Distrito Federal, Brazil opened 197101?	15 40 21.0 S (15.6725)	47 52 51.0 W (47.8808)	1200.0	BDF
BAEE	RD Brasilia Array Site EE Distrito Federal, Brazil opened 197101?	15 44 19.0 S (15.7386)	47 37 12.0 W (47.6200)	1200.0	BDF
BALA	Baldy Mountain Alaska Peninsula, Alaska, U.S.A. PAL code BAL.	55 11 35.6 N (55.1932)	162 47 12.5 W (162.7868)	360.0	PAL
BAS1	RD Brasilia Array Site S1 Distrito Federal, Brazil opened 197101?	15 39 22.0 S (15.6561)	47 59 59.0 W (47.9997)	1200.0	BDF
BAS2	RD Brasilia Array Site S2 Distrito Federal, Brazil opened 197101?	15 40 41.0 S (15.6781)	48 00 25.0 W (48.0069)	1200.0	BDF
BAS3	RD Brasilia Array Site S3 Distrito Federal, Brazil opened 197101?	15 41 55.0 S (15.6986)	48 00 53.0 W (48.0147)	1200.0	BDF
BAS4	RD Brasilia Array Site S4 Distrito Federal, Brazil opened 197101?	15 43 09.0 S (15.7192)	48 01 20.0 W (48.0222)	1200.0	BDF
BAS5	RD Brasilia Array Site S5 Distrito Federal, Brazil opened 197101?	15 44 31.0 S (15.7419)	48 01 50.0 W (48.0306)	1200.0	BDF
BASE	RD Brasilia Array Site SE Distrito Federal, Brazil opened 197101?	15 57 26.0 S (15.9572)	48 04 14.0 W (48.0706)	1200.0	BDF
BAUT	Bautismo Venezuela opened 1984.	10 30 23.4 N (10.5065)	66 28 55.2 W (66.4820)	1976.0	CAR
BAW1	D Brasilia Array Site W1 Distrito Federal, Brazil opened 197101?	15 37 42.0 S (15.6283)	48 00 46.0 W (48.0128)	1200.0	BDF
BAW2	RD Brasilia Array Site W2 Distrito Federal, Brazil opened 197101?	15 37 17.0 S (15.6214)	48 01 07.0 W (48.0186)	1200.0	BDF
BAW3	RD Brasilia Array Site W3 Distrito Federal, Brazil opened 197101?	15 36 46.0 S (15.6128)	48 03 27.0 W (48.0575)	1200.0	BDF
BAW4	RD Brasilia Array Site W4 Distrito Federal, Brazil opened 197101?	15 36 19.0 S (15.6053)	48 04 46.0 W (48.0794)	1200.0	BDF
BAWE	D Brasilia Array Site WE Distrito Federal, Brazil opened 197101?	15 35 28.0 S (15.5911)	48 04 50.0 W (48.0806)	1200.0	BDF
BBB	Bella Bella British Columbia, Canada opened 19861205.	52 11 04.9 N (52.1847)	128 06 47.9 W (128.1133)	14.0	OTTR
BBTK	Belbas Turkey	39 50 32.0 N (39.8422)	32 45 37.0 E (32.7603)	1200.0	

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Code	Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
BBU	Al Budayyi' Bahrain opened 1986.	26 12 54.0 N (26.2150)	50 27 24.0 E (50.4567)	...	BMU
BCI	Bajram Curri Albania	42 21 59.8 N (42.3666)	20 04 03.0 E (20.0675)	...	TIR
BDBC	Bennett Dam British Columbia, Canada	56 10 27.0 N (56.1742)	122 16 57.0 W (122.2825)	700.0	
BDMO	Boandooma Dam Queensland, Australia opened 19800729. QDM code BDM.	26 06 44.3 S (26.1123)	151 26 39.8 E (151.4444)	320.0	ODM
BEB	Belem Para, Brazil opened 1987.	1 27 00.0 S (1.4500)	48 26 42.0 W (48.4450)	15.0	
BECU	Ecuador Network Ecuador	0 28 28.8 S (0.4747)	78 35 46.2 W (78.5962)	3320.0	QUI
BEE	Al Areen Bahrain opened 1986.	26 01 00.0 N (26.0167)	50 31 18.0 E (50.5217)	...	BMU
BERA	Berat Albania	40 42 09.7 N (40.7027)	19 56 57.0 E (19.9494)	...	TIR
BERF	Bertagne Provence-Cote d'Azur, France	43 18 46.8 N (43.3130)	5 41 26.5 E (5.6907)	1030.0	STR
BEVG	Clark Hill Reservoir Georgia, U.S.A.	34 05 21.5 N (34.0893)	82 44 00.0 W (82.7333)	158.0	ATL
BFO	R Black Forest Observatory (Schiltach) Rheinland-Pfalz, Fed. Rep. of Germany opened before 197410.	48 19 52.0 N (48.3311)	8 19 49.0 E (8.3303)	589.0	KRW
BFT	Belfast Transvaal, South Africa opened 1986.	25 41 12.0 S (25.6867)	30 02 36.0 E (30.0433)	1868.0	PRE
BGMT	Barton Gulch Montana, U.S.A. opened 19871021.	45 14 00.0 N (45.2333)	112 02 25.8 W (112.0405)	2172.0	BUT
BGRQ	R Glenroy Queensland, Australia opened 19810216. QDM code BGR.	20 32 57.1 S (20.5492)	147 06 18.7 E (147.1052)	160.0	QDM
BHM	RD Barham England, United Kingdom (Alternate Abbreviation for DIAC)	51 12 46.0 N (51.2128)	1 10 27.0 W (1.1742)	100.0	BKN
BIAC					
BJA	Jaww Bahrain opened 1986.	25 59 30.0 N (25.9917)	50 36 30.0 E (50.6083)	...	BMU
BJU	R Chiapas, Mexico	16 52 36.5 N (16.8768)	93 10 44.8 W (93.1791)	...	IIM
BKE	Bekescsaba Hungary opened 1987.	46 36 45.0 N (46.6125)	17 53 34.8 E (17.8930)	95.0	BUD
BKJ	Big Koniugi Island Alaska Peninsula, Alaska, U.S.A.	55 09 24.0 N (55.1567)	159 33 31.9 W (159.5589)	146.0	PAL
BKO	Bokasso Cameroon opened 19850213.	4 25 04.8 N (4.4180)	9 08 27.6 E (9.1410)	380.0	YND
BKOA	..... Assam, India	25 59 .. N (25.9833)	91 16 .. E (91.2667)	50.0	JHI
BLH	Bold Hill Washington, U.S.A. SEA code BHW.	47 50 12.6 N (47.8368)	122 01 55.8 W (122.0322)	198.0	SEA
BLHA	Black Hill Alaska Peninsula, Alaska, U.S.A. PAL code BLH	55 42 09.0 N (55.7025)	162 03 57.0 W (162.0658)	390.0	PAL
BLLO	Bulolo New Guinea, Papua New Guinea opened 19880610.	7 12 07.2 S (7.2020)	146 37 12.0 E (146.6200)	700.0	PMG
BLPI	Bilaspur Madhya Pradesh, India NDI code BLP.	22 05 .. N (22.0833)	82 25 .. E (82.4167)	85.0	NDI
BLS	Blasjo Norway opened 1985.	59 23 24.0 N (59.3900)	6 26 56.4 E (6.4490)	1170.0	BER
BLS1	Blasjo Norway opened 198610.	59 23 27.6 N (59.3910)	6 49 37.2 E (6.8270)	1160.0	BER
BLS2	Blasjo Norway opened 198610.	59 17 38.4 N (59.2940)	6 55 37.2 E (6.9270)	1190.0	BER
BLS3	Blasjo Norway opened 198610.	59 25 30.0 N (59.4250)	6 30 54.0 E (6.5150)	1130.0	BER
BMNM	Bear Mountains New Mexico, U.S.A. SNM code BMT.	34 16 30.0 N (34.2750)	107 15 36.6 W (107.2602)	1972.0	SNM
BMU	R Al Muharraq Bahrain opened 1986.	26 14 06.0 N (26.2350)	50 39 36.0 E (50.6600)	...	BMU
BMW	Boistfort Mountain Washington, U.S.A. SEA code BOW. USTN opened 1988.	46 28 30.0 N (46.4750)	123 13 41.0 W (123.2281)	870.0	SEA USTN
BNAB	R Banilla British Columbia, Canada opened 19871204.	53 29 36.0 N (53.4933)	130 38 14.0 W (130.6372)	16.0	OTTR

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BN1	Bardonecchia Piemonte, Italy	45 03 09.7 N (45.0527)	6 40 30.7 E (6.6752)	1395.0	ROM
BNM	Borren Site New Mexico, U.S.A. SNM code BAR.	34 08 31.2 N (34.1420)	106 37 40.8 W (106.6280)	2120.0	SNM
BOB	D Bobbio (Coli) Emilia-Romagna, Italy	44 46 01.2 N (44.7670)	9 26 53.5 E (9.4482)	930.0	ROM
BRC1	Bohraich Uttar Pradesh, India NDI code BRC.	27 34 .. N (27.5667)	81 35 .. E (81.5833)	123.0	NDI
BRF	Ar Rifa' Bohroin opened 1986.	26 04 24.0 N (26.0733)	50 35 00.0 E (50.5833)	...	BMU
BRTN	Brown Mountain Tennessee, U.S.A. opened 19860605.	36 21 24.0 N (36.3567)	82 52 04.2 W (82.8678)	630.0	TVA
BRVW	Black Rock Valley Washington, U.S.A. SEA code BRV.	46 29 07.2 N (46.4853)	119 59 29.4 W (119.9915)	925.0	SEA
BSLO	RD Bruslee Queensland, Australia opened 19840302. QDM code BSL.	20 52 01.2 S (20.8670)	146 33 50.4 E (146.5640)	185.0	QDM
BTA	R Bajo Talamanca Costa Rica	...	...	...	HDC
BTE	R Botoke Comeroon opened 19850301.	4 02 52.8 N (4.0480)	9 05 13.2 E (9.0870)	90.0	YND
BTH	R Bethorram Aquitaine, France opened 198608.	43 07 23.0 N (43.1231)	0 12 25.0 W (0.2069)	300.0	
BUE	R Buenovista Veracruz, Mexico	19 26 16.8 N (19.4380)	96 33 32.4 W (96.5590)	200.0	IIM
BUW	RD Bucklebury West England, United Kingdom	51 24 34.0 N (51.4094)	1 13 28.0 W (1.2244)	125.0	BKN
BUWY	R Burn England, United Kingdom	53 44 34.4 N (53.7429)	1 03 59.4 W (1.0665)	5.0	OMB
BVTM	R Michoacan, Mexico UNM code BVT.	18 53 36.0 N (18.8933)	102 15 54.0 W (102.2650)	...	UNM
BVW	Beverly Washington, U.S.A. opened 198609.	46 48 37.8 N (46.8105)	119 52 54.1 W (119.8817)	707.0	SEA
BW01	R Boulder Array Wyoming, U.S.A.	42 47 09.1 N (42.7859)	109 34 49.7 W (109.5805)	2200.0	NEIS
BW02	R Boulder Array Wyoming, U.S.A.	42 47 19.8 N (42.7888)	109 33 49.6 W (109.5638)	2200.0	NEIS
BW03	R Boulder Array Wyoming, U.S.A.	42 47 12.7 N (42.7869)	109 32 46.8 W (109.5463)	2200.0	NEIS
BW04	R Boulder Array Wyoming, U.S.A.	42 46 44.8 N (42.7791)	109 34 18.3 W (109.5717)	2190.0	NEIS
BW05	R Boulder Array Wyoming, U.S.A.	42 46 52.0 N (42.7811)	109 33 50.0 W (109.5639)	2200.0	NEIS
BW06	Boulder Array Wyoming, U.S.A. opened 19860718.	42 46 40.0 N (42.7778)	109 33 20.0 W (109.5556)	2200.0	NEIS USTN
BW07	R Boulder Array Wyoming, U.S.A.	42 46 51.0 N (42.7808)	109 32 30.5 W (109.5418)	2200.0	NEIS
BW08	R Boulder Array Wyoming, U.S.A.	42 46 10.4 N (42.7696)	109 34 51.9 W (109.5811)	2200.0	NEIS
BW09	R Boulder Array Wyoming, U.S.A.	42 46 20.2 N (42.7723)	109 33 50.9 W (109.5641)	2200.0	NEIS
BW10	R Boulder Array Wyoming, U.S.A.	42 46 10.8 N (42.7697)	109 33 13.8 W (109.5538)	2200.0	NEIS
BW11	R Boulder Array Wyoming, U.S.A.	42 45 45.8 N (42.7627)	109 34 26.7 W (109.5741)	2200.0	NEIS
BW12	R Boulder Array Wyoming, U.S.A.	42 45 55.5 N (42.7654)	109 33 36.3 W (109.5601)	2200.0	NEIS
BW13	R Boulder Array Wyoming, U.S.A.	42 45 55.5 N (42.7654)	109 32 46.8 W (109.5463)	2200.0	NEIS
CABA	Caballo Blanco Venezuela opened 1984.	7 51 20.9 N (7.8550)	71 30 07.9 W (71.5022)	1600.0	CAR
CAE	D Coneva Friuli-Venezia Giulia, Italy opened 19830423.	46 00 24.0 N (46.0067)	12 26 12.0 E (12.4367)	870.0	TRI
CAMM	R Veracruz, Mexico IIM code CAM.	19 35 16.8 N (19.5880)	96 27 36.0 W (96.4600)	190.0	IIM
CAY	RD Cayenne French Guiano opened 19850722.	4 57 00.0 N (4.9500)	52 19 12.0 W (52.3200)	25.0	GEOS
CAYA	Cayombe Ecuador opened 198904.	0 04 48.0 N (0.0800)	77 59 00.0 W (77.9833)	4000.0	QUI
CBD	Cypress Bend Missouri, U.S.A. opened 19850621. SLM code CBMO.	36 19 01.2 N (36.3170)	89 39 03.6 W (89.6510)	84.0	SLM
CBT1	Cedar Butte Idaho, U.S.A. opened 19860711.	43 23 15.0 N (43.3875)	112 54 41.4 W (112.9115)	1754.0	USGS

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CBZM	R Michoacan, Mexico UNM code CBZ.	18 00 54.0 N (18.0150)	102 24 18.0 W (102.4050)	...	UNM
CC5	R Preso El Corocal No. 5 Guerrero, Mexico	17 32 24.0 N (17.5400)	99 16 40.8 W (99.2780)	...	IIM
CCMX	Coleta de Campas Michoacan, Mexico Strong-motion station.	18 03 12.0 N (18.0533)	102 45 00.0 W (102.7500)	...	LJC
CDAM	R Ciudad Altamirano Guerrero, Mexico UNM code CDA.	18 21 .. N (18.3500)	100 39 .. W (100.6500)	300.0	UNM
CDFW	Cedar Flats Washington, U.S.A. SEA code CDF.	46 06 58.2 N (46.1162)	122 02 51.0 W (122.0475)	780.0	SEA
CECU	Ecuador Network Ecuador	0 28 34.2 S (0.4762)	77 52 13.2 W (77.8703)	2220.0	QUI
CEDI	Cerro Diablo Venezuela opened 1984.	7 39 14.4 N (7.6540)	71 53 06.0 W (71.8850)	900.0	CAR
CENE	Cerro Negro Venezuela opened 1984.	7 45 50.4 N (7.7640)	71 19 22.1 W (71.3228)	400.0	CAR
CEO	R Cerro Encantado Oaxaca, Mexico	16 14 00.0 N (16.2333)	97 01 06.0 W (97.0183)	3000.0	UNM
CEOS	Cerro El Oso Venezuela opened 198612.	9 01 50.5 N (9.0307)	68 20 02.8 W (68.3341)	800.0	CAR
CFS	Cross Fire Station South Carolino, U.S.A. opened 19880530.	33 16 43.3 N (33.2787)	80 10 09.5 W (80.1693)	26.0	USGS
CFTV	Fuerteventura Canary Islands, Spain opened 198512.	28 24 49.8 N (28.4138)	14 05 00.0 W (14.0833)	540.0	MDD
CGG	Guerrero, Mexico	16 40 30.0 N (16.6750)	98 27 27.0 W (98.4575)	400.0	UNM
CGY	Coligny Transvaal, South Africa opened 1986.	26 20 54.0 S (26.3483)	26 22 30.0 E (26.3750)	...	PRE
CHMZ	Choma Zombio opened 1987.	16 50 .. S (16.8333)	27 04 .. E (27.0667)	1278.0	LSZ
CHOI	Coyote Hollow Idaho, U.S.A. opened 198601.	43 18 45.0 N (43.3125)	111 12 45.9 W (111.2127)	2103.0	USBR
CHOR	Cabbage Hill Oregon, U.S.A. opened 198608. SEA code CHO.	45 35 27.0 N (45.5908)	118 34 45.0 W (118.5792)	1076.0	SEA
CHPM	Chiautla de Tapia Pueblo, Mexico UNM code CHP.	18 17 55.0 N (18.2986)	98 36 47.6 W (98.6132)	1030.0	UNM
CIO	Comerino (Monte d'Ario) Morche, Italy	43 11 42.0 N (43.1950)	13 08 38.4 E (13.1440)	956.0	SSO
CIPM	Pueblo, Mexico UNM code CIP.	17 57 43.2 N (17.9620)	97 51 14.4 W (97.8540)	...	UNM
CJR1	Cluj Romania opened 19851201.	46 45 58.0 N (46.7661)	23 33 05.0 E (23.5514)	345.0	BUC
CLMC	Lago Calimo Colombia (3 8814) (3 8814)	3 52 52.9 N (3 8814)	76 33 46.8 W (76.5630)	1480.0	UVC
CLN6	Carlsbad New Mexico, U.S.A. SNM code CL6	32 31 15.0 N (32.5208)	103 52 45.0 W (103.8792)	1100.0	SNM
CLNB	Carlsbad New Mexico, U.S.A. SNM code CL2B.	32 15 51.6 N (32.2643)	103 52 42.6 W (103.8785)	1045.0	SNM
CMB	D Columbia College Tuolumne County, California, U.S.A. opened 19861106. MNLO code CMBB	38 02 06.0 N (38.0350)	120 23 06.0 W (120.3850)	719.0	BRK DWSS USTN
CMG2	La Cumbre 2 Guatemala opened 1988. GCG code CM2.	14 39 39.0 N (14.6608)	89 47 12.0 W (89.7867)	1710.0	GCG
CMX	(Alternate Abbreviation for COLM)				
CNBA	Chernaburo Island Alaska Peninsula, Alaska, U.S.A. PAL code CNB.	54 49 13.2 N (54.8203)	159 35 18.0 W (159.5883)	90.0	PAL
CNIL	Canil Spain Also sent to NEIS by MDD.	36 22 10.2 N (36.3695)	6 03 06.6 W (6.0518)	80.0	SFS
CNS	Constantine Algeria opened 19870907.	36 22 12.0 N (36.3700)	6 36 45.0 E (6.6125)	670.0	ALG
COAS	Coatepeque El Salvador SSS code COA.	13 53 12.0 N (13.8867)	89 34 19.0 W (89.5719)	1260.0	SSS
COLM	Colima Colima, Mexico opened 1986. UNM code COL.	19 10 51.0 N (19.1808)	103 41 27.5 W (103.6910)	779.3	UNM

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COLW	Colter Canyon Wyoming, U.S.A. opened 198601.	43 57 14.2 N (43.9539)	110 41 45.6 W (110.6960)	2079.0	USBR
COM2	R Comilon 2 Chiapas, Mexico	16 14 30.0 N (16.2417)	92 08 13.8 W (92.1372)	...	UNM
COOL	Coolgardie Western Australia, Australia opened 198808.	30 53 01.8 S (30.8838)	121 08 40.8 E (121.1447)	500.0	AUST
COTA	Cotacachi Ecuador opened 198809.	0 20 06.0 N (0.3350)	78 20 16.2 W (78.3378)	4020.0	
CPO5	(Alternate Abbreviation for CPOT)				
CRNM	Corthoge New Mexico, U.S.A. SNM code CAR.	33 57 09.0 N (33.9525)	106 44 04.2 W (106.7345)	1662.0	SNM
CROR	Criterion Ridge Oregon, U.S.A. opened 198708. SEA code VCR.	44 58 58.2 N (44.9828)	120 59 17.4 W (120.9882)	1015.0	SEA
CRZF	D Crozet Islands Crozet Islands opened 19860201.	46 25 46.7 S (46.4296)	51 51 40.4 E (51.8612)	140.0	STR GEOS
CSO	D Casso Friuli-Venezia Giulia, Italy opened 19880101.	46 16 24.0 N (46.2733)	12 19 26.0 E (12.3239)	1070.0	TRI
CSZ	D Casero Razzo Friuli-Venezia Giulia, Italy opened 19880101.	46 28 23.0 N (46.4731)	12 37 02.0 E (12.6172)	1825.0	TRI
CTAS	R Cauta El Salvador SSS code CTA.	13 44 56.0 N (13.7489)	89 51 55.0 W (89.8653)	355.0	SSS
CTFE	Tenerife--Los Mesas Canary Islands, Spain opened 198301.	28 28 46.4 N (28.4796)	16 15 43.7 W (16.2621)	270.0	MDD
CUPM	Cuyaaco Puebla, Mexico UNM code CUP.	19 36 13.0 N (19.6036)	97 37 07.0 W (97.6186)	2450.0	UNM
CUSS	Cusmapo El Salvador SSS code CUS.	13 54 33.0 N (13.9092)	89 56 50.0 W (89.9472)	678.0	SSS
CVLO	R Collinsville Queensland, Australia opened 19850430. ODM code CVL.	20 35 24.0 S (20.5900)	147 36 32.4 E (147.6090)	102.0	ODM
CVM	R Colonia del Valle Distrito Federal, Mexico	19 22 55.7 N (19.3821)	99 10 42.5 W (99.1785)	...	UNM
CVT	Castelvetrono Sicilia, Italy	37 40 40.8 N (37.6780)	12 47 31.2 E (12.7920)	...	ERC
CVVD	Valverde--Aguarijo Canary Islands, Spain opened 198502.	27 49 15.0 N (27.8208)	17 56 10.0 W (17.9361)	450.0	MDD
CWZ	Cowlitz River Washington, U.S.A. SEA code COW.	46 29 27.6 N (46.4910)	122 00 43.6 W (122.0121)	305.0	SEA
CXP	Puebla, Mexico	18 16 31.4 N (18.2754)	97 08 30.3 W (97.1418)	...	UNM
CZM	Crazy Man Mountain Washington, U.S.A. opened 198004. SEA code CMM	46 26 07.0 N (46.4353)	122 30 21.0 W (122.5058)	620.0	SEA
DEG	La Desirade Guadeloupe opened 198803.	16 18 47.5 N (16.3132)	61 03 35.3 W (61.0598)	575.0	FDF
DGBT	Grand Bay Dominica	15 14 20.4 N (15.2390)	61 19 44.4 W (61.3290)	70.0	TRN
DHWC	Dyer Hill 2 Washington, U.S.A. SEA code DY2.	47 59 06.9 N (47.9853)	119 46 13.0 W (119.7703)	884.0	SEA
DIAC	La Diana Colombia opened 1987	3 17 28.8 N (3.2913)	76 11 50.4 W (76.1973)	1520.0	UVC
DLBO	RD Dalbeg Queensland, Australia opened 19840409. ODM code DLB	20 09 03.6 S (20.1510)	147 15 50.4 E (147.2640)	70.0	ODM
DLG	Dolgoi Island Alaska Peninsula, Alaska, U.S.A.	55 08 27.6 N (55.1410)	161 50 09.0 W (161.8358)	367.0	PAL
DMMT	Dalton Mountain Montana, U.S.A. opened 19871119.	46 51 44.4 N (46.8623)	112 42 52.8 W (112.7147)	2039.0	BUT
DNGO	RD Daongora Queensland, Australia opened 19840229. ODM code DNG.	20 33 18.0 S (20.5550)	146 28 30.0 E (146.4750)	280.0	ODM
DOI	D San Domiano Macro Piemonte, Italy	44 30 12.8 N (44.5036)	7 14 43.4 E (7.2454)	1015.0	ROM
DPI	Dunn Peak Idaho, U.S.A. opened 198710.	47 17 19.2 N (47.2887)	116 53 55.8 W (116.8988)	1709.0	
DPMT	Pointe Michel Dominica	15 15 32.4 N (15.2590)	61 23 06.0 W (61.3850)	50.0	TRN
DPO	Saint-Jean-des-Piles Quebec, Canada	46 40 49.8 N (46.6805)	72 46 38.4 W (72.7773)	167.0	ECTN

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Code	Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
DPW	Davenport Washington, U.S.A. opened 198611. USTN opened 1988.	47 52 14.3 N (47.8706)	118 12 10.2 W (118.2028)	892.0	SEA USTN
DR1	Dominican Republic Network Dominican Republic	19 18 36.6 N (19.3102)	70 41 48.6 W (70.6968)	...	SDD
DR12	Dominican Republic Network Dominican Republic	18 47 15.0 N (18.7875)	69 22 52.2 W (69.3812)	...	SDD
DR3	Dominican Republic Network Dominican Republic	19 16 21.0 N (19.2725)	70 46 07.8 W (70.7688)	...	SDD
DR4	Dominican Republic Network Dominican Republic	19 27 55.8 N (19.4655)	70 21 28.2 W (70.3578)	...	SDD
DR5	Dominican Republic Network Dominican Republic	19 37 59.4 N (19.6332)	70 51 34.8 W (70.8597)	...	SDD
DR6	Dominican Republic Network Dominican Republic	19 13 58.2 N (19.2328)	70 59 29.4 W (70.9915)	...	SDD
DR8	Dominican Republic Network Dominican Republic	18 57 28.8 N (18.9580)	70 01 50.4 W (70.0307)	...	SDD
DRE	D Drenchio Friuli-Venezia Giulia, Italy opened 19821220.	46 10 24.0 N (46.1733)	13 38 36.0 E (13.6433)	810.0	TRI
DRRA	Deer Island Alaska Peninsula, Alaska, U.S.A. PAL code DRR.	54 55 24.6 N (54.9235)	162 16 59.4 W (162.2832)	380.0	PAL
DSC	Scotts Head Dominico	15 12 30.3 N (15.2084)	61 21 54.6 W (61.3652)	50.0	TRN
DSI	Dead Sea--Mitzpe Shalem Israel	31 34 12.0 N (31.5700)	35 22 48.0 E (35.3800)	...	JER
DSIT	F DSIT--State Water Works Division, Ankara, Turkey				
DSVT	Soufriere Village Dominica	15 13 44.4 N (15.2290)	61 22 12.0 W (61.3700)	5.0	TRN
DTMT	Tete Marne Dominico	15 13 58.8 N (15.2330)	61 21 07.2 W (61.3520)	496.0	TRN
DUT	Dutch Harbor Aleutian Islands, Alaska, U.S.A.	53 53 54.0 N (53.8983)	166 32 12.0 W (166.5367)	60.0	GIA
DVD	David Panama opened 198606.	8 26 09.0 N (8.4358)	82 27 02.0 W (82.4506)	20.0	
DWK	..... Meghalaya, India	25 11 12.0 N (25.1867)	92 01 21.6 E (92.0227)	...	JHI
EALH	Alhama de Murcia Spain opened 198601.	37 51 25.8 N (37.8572)	1 25 13.8 W (1.4205)	260.0	MDD
EAP	F (phase code designation)				
EAPC	F (phase code designation)				
EAPD	F (phase code designation)				
EBAN	Bonos de lo Encino Spain opened 198611.	38 09 51.6 N (38.1643)	3 47 08.4 W (3.7857)	460.0	MDD
EBG	Ellensburg Washington, U.S.A. SEA code ELL.	46 54 35.0 N (46.9097)	120 34 06.0 W (120.5683)	805.0	SEA
EBI	Elk Butte Idaho, U.S.A. opened 1987.	46 50 15.0 N (46.8375)	116 07 06.0 W (116.1183)	1765.0	
ECHE	Chero Spain opened 198611.	39 35 22.2 N (39.5895)	0 58 12.0 W (0.9700)	643.0	MDD
ECRI	Cripon Spain opened 198610.	42 36 36.0 N (42.6100)	2 30 40.0 W (2.5111)	807.0	MDD
EJC	R Estacion Juarez Chiapas, Mexico	17 36 16.0 N (17.6044)	93 11 44.0 W (93.1956)	...	UNM
EJIF	Jimena de la Frontera Spain opened 19880520.	36 27 04.8 N (36.4513)	5 28 07.8 W (5.4688)	260.0	MDD
EJIM	C Jimeno de la Frontera Spain 198704-19880519.	36 26 09.0 N (36.4358)	5 27 15.0 W (5.4542)	203.0	MDD
EKB	RD Eskdalemuir Scotland, United Kingdom	55 20 15.0 N (55.3375)	3 10 38.0 W (3.1772)	356.0	BKN
EKC	Ekono Cameroon opened 19841201.	4 12 36.0 N (4.2100)	9 19 37.2 E (9.3270)	450.0	YND
EKR	Elk River Humboldt County, California, U.S.A. opened 19740620; BRK opened 1986. MNLO code EKRT.	40 41 43.2 N (40.6953)	124 08 22.2 W (124.1395)	49.0	BRK
ELMO	Cerro Morro Venezuela opened 1984.	8 00 46.8 N (8.0130)	71 43 00.8 W (71.7169)	2100.0	CAR
ELPA	Fila Poroso Venezuela opened 1984.	7 47 30.1 N (7.7917)	71 43 31.1 W (71.7253)	1285.0	CAR
ELYF	Eloudy Aquitaine, France opened 198502?	43 10 12.0 N (43.1700)	0 59 30.0 W (0.9917)	700.0	PAR
EMEL	Melillo Ceuta and Melillo, Spain opened 198802.	35 18 00.0 N (35.3000)	2 57 24.0 W (2.9567)	85.0	MDD

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Code	Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
EMN	Eldorado Mountains Nevada, U.S.A. opened 19880811.	35 55 17.9 N (35.9216)	114 45 15.2 W (114.7542)	789.5	USGS
EMON	Mondonedo Spain opened 198807.	43 26 10.0 N (43.4361)	7 19 47.4 W (7.3298)	615.0	MDD
EMUT	Emma Park Carbon County, Utah, U.S.A.	39 48 50.4 N (39.8140)	110 48 55.2 W (110.8153)	2268.0	SLC
ENH	RD Enshi Hubei, China (Mainland) opened 1987.	30 16 18.5 N (30.2718)	109 29 12.5 E (109.4868)	...	BJI
ENR	Entracque Piemonte, Italy	44 13 35.8 N (44.2266)	7 25 13.1 E (7.4203)	...	GEN
EPBC	F (phase code designation)				
EPBD	F (phase code designation)				
EPCP	F (phase code designation)				
EPCR	F (phase code designation)				
EPCS	F (phase code designation)				
EPCU	F (phase code designation)				
EPDR	F (phase code designation)				
EPDU	F (phase code designation)				
EPGC	F (phase code designation)				
EPGD	F (phase code designation)				
EPH	Ephrata Washington, U.S.A. opened 198303.	47 21 12.8 N (47.3536)	119 35 46.2 W (119.5962)	628.0	SEA
EPKP	F (phase code designation)				
EPKS	F (phase code designation)				
EPNC	F (phase code designation)				
EPND	F (phase code designation)				
EPP	F (phase code designation)				
EPPP	F (phase code designation)				
EPPS	F (phase code designation)				
EPRU	Pruno Spain opened 198611.	36 57 57.6 N (36.9660)	5 13 52.8 W (5.2313)	560.0	MDD
EPS	F (phase code designation)				
EPSS	F (phase code designation)				
ERK	Elk Rock Washington, U.S.A. SEA code ELK.	46 18 20.0 N (46.3056)	122 20 27.0 W (122.3408)	1270.0	SEA
EROO	Raquetas del Mar Spain opened 198702.	40 49 23.4 N (40.8232)	0 24 31.8 E (0.4088)	284.0	MDD
ERT	C Erto Friuli-Venezia Giulia, Italy 19821124-19880101.	46 16 36.0 N (46.2767)	12 22 36.0 E (12.3767)	775.0	TRI
ERUA	Lo Rua Spain opened 198705.	42 23 33.6 N (42.3927)	7 08 33.0 W (7.1425)	431.0	MDD
ERZT	Erzurum Turkey	39 54 24.1 N (39.9067)	41 15 11.9 E (41.2533)	1955.0	MTAT
ESCP	F (phase code designation)				
ESCS	F (phase code designation)				
ESD	East Dome Washington, U.S.A. SEA code EDM.	46 11 50.4 N (46.1973)	122 09 00.0 W (122.1500)	1609.0	SEA
ESEL	Selva Balearic Islands, Spain opened 198807.	39 46 05.4 N (39.7682)	2 53 39.6 E (2.8943)	231.0	MDD
ESH:P	F (phase code designation)				
ESH:S	F (phase code designation)				
ESPP	F (phase code designation)				
ESSP	F (phase code designation)				
ESSS	F (phase code designation)				
ETER	Terradas Spain opened 198803.	42 18 05.4 N (42.3015)	2 51 19.8 E (2.8555)	238.0	MDD
ETOR	Torete Spain opened 198803.	40 49 10.0 N (40.8194)	2 03 18.6 W (2.0552)	1018.0	MDD
ETW	Entiat Washington, U.S.A. opened 198610.	47 36 16.2 N (47.6045)	120 19 51.6 W (120.3310)	1475.0	SEA
EVIA	Vianos Spain opened 198511.	38 38 13.2 N (38.6370)	2 30 15.0 W (2.5042)	1110.0	MDD
EVV	El Vigia Veracruz, Mexico opened 1988.	18 27 23.4 N (18.4565)	95 20 57.6 W (95.3493)	...	UNM
EXP	F (phase code designation)				
EXPC	F (phase code designation)				
EXPD	F (phase code designation)				
EXS	F (phase code designation)				
EZAM	Zomans Spain opened 198612.	42 08 56.4 N (42.1490)	8 41 42.0 W (8.6950)	398.0	MDD
FAM	Famagusta Cyprus opened 198702.	34 59 46.0 N (34.9961)	34 00 07.0 E (34.0019)	68.0	CSS

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FARM	R Veracruz, Mexico IIM code FAR.	19 37 33.6 N (19.6260)	96 23 34.8 W (96.3930)	...	IIM
FAU	R Forcella Aurine Veneto, Italy	TRI
FDKY	Freedom Kentucky, U.S.A. opened 19870327.	36 47 24.0 N (36.7900)	85 47 39.0 W (85.7942)	306.0	TVA
FG2	Serracapriola Puglia, Italy Sent to NEIS by ROM.	41 48 13.0 N (41.8036)	15 10 17.0 E (15.1714)	200.0	FOG
FG3	Monte Sant'Angelo Puglia, Italy Sent to NEIS by ROM.	41 42 02.5 N (41.7007)	15 57 01.0 E (15.9503)	830.0	FOG
FG4	Condela Puglia, Italy Sent to NEIS by ROM.	41 08 05.0 N (41.1347)	15 31 14.0 E (15.5206)	450.0	FOG
FG5	Orsora di Puglia Puglia, Italy Sent to NEIS by ROM.	41 16 56.0 N (41.2822)	15 16 09.0 E (15.2692)	...	FOG
FG02	Fuego 2 Guatemala opened 198611? GCG code FG2.	14 26 19.2 N (14.4387)	90 50 09.0 W (90.8358)	1335.0	GCG
FGTO	R Fig Tree Queensland, Australia opened 19870803. ODM code FGT.	20 58 12.4 S (20.9701)	147 46 35.4 E (147.7765)	220.0	ODM
FIG	Monte Figo Portugal opened 198501?	37 05 59.0 N (37.0997)	7 49 47.0 W (7.8297)	...	INMG
FIN	Finale Ligure Liguria, Italy	44 12 33.0 N (44.2092)	8 12 30.0 E (8.2083)	590.0	GEN
FIPE	Fila de Piedro Venezuela opened 1984.	7 58 10.9 N (7.9697)	71 15 04.0 W (71.2511)	600.0	CAR
FISA	Fila de Socuraguo Venezuela opened 198612.	11 15 53.3 N (11.2648)	69 20 00.0 W (69.3333)	600.0	CAR
FKO	Franklin Oklohma, U.S.A. opened 1987.	35 15 40.7 N (35.2613)	97 23 10.0 W (97.3861)	351.0	TUL
FL2	Flat Top 2 Washington, U.S.A.	46 11 47.0 N (46.1964)	122 21 01.0 W (122.3503)	1378.0	SEA
FMKY	Fulghom Kentucky, U.S.A. opened 19861030.	36 39 57.6 N (36.6660)	88 54 32.4 W (88.9090)	152.0	BHKY
FONT	Fontmartina Spain Sent to NEIS by MDD.	41 45 42.0 N (41.7617)	2 26 00.0 E (2.4333)	...	...
FORR	Forrest Western Australia, Australia opened 1988.	30 51 .. S (30.8500)	128 06 .. E (128.1000)	...	AUST
FOXC	R Fox Airport Los Angeles County, California, U.S.A. opened 198103. PAS code FOX.	34 43 58.8 N (34.7330)	118 13 50.4 W (118.2307)	716.0	PAS
FRS	Fauresmith Orange Free State, South Africa opened 1985.	29 45 00.0 S (29.7500)	25 19 18.0 E (25.3217)	...	PRE
FSI	Fosdinova Toscana, Italy	44 07 34.0 N (44.1261)	10 01 31.0 E (10.0253)	...	ROM
FSP	False Pass Alaska Peninsula, Alaska, U.S.A.	54 57 12.0 N (54.9533)	163 27 24.0 W (163.4567)	200.0	PAL
FST	C Fort Simpson Northwest Territories, Canada 19860109-19870331.	61 50 24.0 N (61.8400)	121 16 30.0 W (121.2750)	175.0	OTTR
FS11	C Fort Simpson Northwest Territories, Canada 19851006-19860109. Temporary station, replaced by FST	61 47 09.0 N (61.7858)	121 15 32.0 W (121.2589)	175.0	OTTR
FUG	Fuego 3 Guatemala opened 198703.	14 26 52.2 N (14.4478)	90 50 31.2 W (90.8420)	1505.0	GCG
FVI	D Forni Avallri Friuli-Venezia Giulia, Italy	46 35 35.7 N (46.5932)	12 46 51.3 E (12.7809)	...	ROM
GAM	R Garm Tajik S.S.R., U.S.S.R.	...	...	...	...
GANF	Ganagobie Provence-Cote d'Azur, France	43 59 51.3 N (43.9976)	5 54 31.2 E (5.9087)	650.0	STR
GBZT	Gebze Turkey	40 47 20.0 N (40.7889)	29 26 42.0 E (29.4450)	184.0	...
GCAZ	Grand Canyon Arizona, U.S.A. opened 1987.	36 02 38.4 N (36.0440)	112 07 40.8 W (112.1280)	...	FLAG
GECU	Ecuador Network Ecuador	0 19 01.8 S (0.3172)	78 11 22.8 W (78.1897)	4350.0	OUI
GELF	Grande-Etoile Provence-Cote d'Azur, France	43 23 00.9 N (43.3836)	5 25 39.0 E (5.4275)	550.0	STR
GGP	Guagua Pichincho Ecuador opened 198809.	0 10 28.2 S (0.1745)	78 35 45.6 W (78.5960)	4600.0	OUI

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GIBL	Gibalbin Spain	36 49 35.4 N (36.8265)	5 57 10.2 W (5.9528)	412.0	SFS
G10	R Monte San Gregorio Sicilia, Italy opened 198902.	37 34 00.0 N (37.5667)	15 06 30.0 E (15.1083)	330.0	ERC
GKN	Garkho Nepal opened 198307.	28 00 10.8 N (28.0030)	84 38 13.2 E (84.6370)	1478.0	DMN
GL2	New Goldendale Washington, U.S.A.	45 57 35.0 N (45.9597)	120 49 22.5 W (120.8229)	1000.0	SEA
GLH	Golan--Tel Oozir Israel opened 1986.	32 42 36.0 N (32.7100)	35 39 36.0 E (35.6600)	...	JER
GLK	Glacier Lake Washington, U.S.A.	46 33 50.2 N (46.5639)	121 36 30.7 W (121.6085)	1320.0	SEA
GMB	Gombarie d'Aspromonte Calabrio, Italy	38 10 03.0 N (38.1675)	15 51 48.0 E (15.8633)	1350.0	ERC
GMG	Grossy Mountain Georgia, U.S.A. opened 198511.	34 51 45.6 N (34.8627)	84 40 13.2 W (84.6703)	1097.0	TEIC
GMO	Grizzlie Mountain Oregon, U.S.A.	44 26 20.8 N (44.4391)	120 57 22.3 W (120.9562)	1689.0	SEA
GR1	D Girifolco Calabrio, Italy	38 49 01.7 N (38.8171)	16 25 12.5 E (16.4201)	480.0	ROM
GR1*	(Alternate Abbreviation for GR1TX)				
GROR	Grindstone Mountain Oregon, U.S.A. opened 198605. SEA code GRO.	45 21 04.5 N (45.3512)	123 39 43.0 W (123.6619)	945.0	SEA
GT2	Goat Mountain Oregon, U.S.A. opened 198509. SEA code VG2.	45 09 20.0 N (45.1556)	122 16 15.0 W (122.2708)	823.0	SEA
GUAC	Guacamayo Venezuela opened 198706.	10 11 31.2 N (10.1920)	67 16 16.0 W (67.2711)	1330.0	CAR
GUAN	Volle Guonope Venezuela opened 1984.	9 57 27.0 N (9.9575)	65 38 52.1 W (65.6478)	1107.0	CAR
GUB	R Gubo Washington, U.S.A. opened 19860731. SEA code GUL.	10 40 .. S (10.6667)	26 26 .. E (26.4333)	...	
GULW	Guler Mountain Washington, U.S.A. opened 19860731. SEA code GUL.	45 55 27.0 N (45.9242)	121 35 44.0 W (121.5956)	1189.0	SEA
GUM2	Guadalojora 2 Jalisco, Mexico	20 40 .. N (20.6667)	103 18 .. W (103.3000)	1543.0	UNM
GUN	Gumba Nepal opened 198503.	27 54 38.2 N (27.9106)	85 52 45.8 E (85.8794)	2900.0	DMN
GUO	R Ooxoco, Mexico	16 05 55.2 N (16.0987)	97 03 39.6 W (97.0610)	244.0	UNM
GWY	Greenwater Valley Inyo County, California, U.S.A. opened 19880401.	36 11 06.6 N (36.1852)	116 40 10.8 W (116.6697)	1540.0	USGS
HAKY	Hodley Quad Kentucky, U.S.A. opened 19870626.	37 06 20.5 N (37.1057)	86 35 05.8 W (86.5849)	169.0	TVA
HAT	Hattorf Hessen, Fed. Rep. of Germany opened before 1981.	50 49 46.9 N (50.8297)	90 56 39.1 E (90.9442)	-592.0	
HDW	Hoodspout Washington, U.S.A.	47 38 54.6 N (47.6485)	123 03 15.2 W (123.0542)	1006.0	SEA
HEA	RD Headley England, United Kingdom	51 21 30.0 N (51.3583)	1 15 50.0 W (1.2639)	114.0	BKN
HHH	Horse Heaven Hills Washington, U.S.A. opened 198703. SEA code HH2.	46 10 18.0 N (46.1717)	119 23 01.0 W (119.3836)	490.0	SEA
HHWY	R High Hayland England, United Kingdom	53 35 12.1 N (53.5867)	1 35 50.6 W (1.5974)	205.0	OMB
HIA	D Heilongjiang, China (Moinland) opened 198703.	49 16 00.0 N (49.2667)	119 44 30.0 E (119.7417)	610.0	BJI
HLBJ	C Hillobot Jordan 1987-19871024.	32 04 39.0 N (32.0775)	36 18 09.0 E (36.3025)	827.0	JSD
HLGA	R Hoflong Assam, India opened 198408.	25 09 36.0 N (25.1600)	93 01 00.0 E (93.0167)	662.0	JHI
HMCY	Holy Mount Cemetery New York, U.S.A. opened 198512. PAL code HMC.	40 57 53.4 N (40.9648)	73 48 11.4 W (73.8032)	245.0	PAL
HMNA	R Homren Assam, India opened 198501.	25 55 24.0 N (25.9233)	92 36 30.0 E (92.6083)	...	JHI
HOBC	El Hobo Colombia opened 1987.	4 21 17.4 N (4.3548)	76 08 07.8 W (76.1355)	1180.0	UVC
HOGH	Ho Ghana opened 1987.	6 36 33.0 N (6.6092)	0 26 42.0 E (0.4450)	372.0	KUK
HONU	R Honeyville Cache County, Utah, U.S.A.	41 36 36.0 N (41.6100)	111 55 01.2 W (111.9170)	1515.0	SLC

CODES

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HOQC	La Horqueta Colombia opened 1987.	3 28 04.8 N (3.4680)	76 38 01.2 W (76.6337)	2220.0	UVC
HQL	Haql Saudi Arabia opened 1986.	29 16 12.0 N (29.2700)	35 03 00.0 E (35.0500)	75.0	RYD
HSR	South Ridge Washington, U.S.A.	46 10 22.2 N (46.1728)	122 10 58.2 W (122.1828)	1774.0	SEA
HUG	Huitzitzil Guatemala opened 198712.	14 01 14.4 N (14.0207)	91 19 24.0 W (91.3233)	...	GCG
HUO	R Hudson Ontario, Canada opened 19861002.	50 04 50.0 N (50.0806)	92 05 53.0 W (92.0981)	367.0	OTTR
HVAR	Hvar Hrvatska (Croatia), Yugoslavia opened 19861001.	43 10 40.8 N (43.1780)	16 26 52.8 E (16.4480)	250.0	ZAG
IAP	F (phase code designation)				
IAPC	F (phase code designation)				
IAPD	F (phase code designation)				
IECU	Ecuador Network Ecuador	0 28 30.0 S (0.4750)	78 18 24.0 W (78.3067)	3720.0	QUI
IHA	Instituto Hidrografico de la Armada Valparaiso, Chile opened 198801.	33 01 32.7 S (33.0257)	71 38 27.9 W (71.6411)	88.5	
IHC	R Ixhuatan Mexico	17 17 26.0 N (17.2906)	93 00 30.0 W (93.0083)	...	IIM
IIA	R Mexico, Mexico	19 08 58.2 N (19.1495)	98 39 30.0 W (98.6583)	...	IIM
IJJ	R Jacatitlan Mexico, Mexico	19 44 02.4 N (19.7340)	99 44 02.4 W (99.7340)	3900.0	IIM
IIO	R Tlaxcala, Mexico	19 35 31.2 N (19.5920)	98 43 26.4 W (98.7240)	...	IIM
IISM	Ciudad Serdan Puebla, Mexico Also sent to NEIS by UNM. IIM and UNM code IIS.	18 59 16.8 N (18.9880)	97 22 36.6 W (97.3768)	...	IIM
IKL	Isikli Turkey opened 198801.	36 14 19.0 N (36.2386)	33 41 07.0 E (33.6853)	120.0	ISK
ILIM	Iliamna Western Alaska, Alaska, U.S.A. AGS code ILL.	60 04 48.6 N (60.0802)	152 57 34.2 W (152.9595)	823.0	AGS
IMI	Imperia Liguria, Italy	43 54 36.6 N (43.9102)	7 53 21.6 E (7.8893)	860.0	GEN
IMM	R Islas Marias Nayarit, Mexico	...	...	...	UNM
IMU	Iron Mountain Millard County, Utah, U.S.A. opened 19880929.	38 37 59.2 N (38.6331)	113 09 30.2 W (113.1584)	1832.0	SLC
IPA	Ipanacu Rio Grande do Norte, Brazil opened 198708.	5 41 45.0 S (5.6958)	36 51 22.0 W (36.8561)	65.0	
IPBC	F (phase code designation)				
IPBD	F (phase code designation)				
IPCP	F (phase code designation)				
IPCR	F (phase code designation)				
IPCS	F (phase code designation)				
IPCU	F (phase code designation)				
IPDR	F (phase code designation)				
IPDU	F (phase code designation)				
IPGC	F (phase code designation)				
IPGD	F (phase code designation)				
IPKP	F (phase code designation)				
IPKS	F (phase code designation)				
IPNC	F (phase code designation)				
IPND	F (phase code designation)				
IPP	F (phase code designation)				
IPPP	F (phase code designation)				
IPPS	F (phase code designation)				
IPS	F (phase code designation)				
IPSS	F (phase code designation)				
ISCP	F (phase code designation)				
ISCS	F (phase code designation)				
ISKP	F (phase code designation)				
ISKS	F (phase code designation)				
ISPP	F (phase code designation)				
ISSP	F (phase code designation)				
ISSS	F (phase code designation)				
ITU	Istanbul Turkey opened 19890102.	41 06 22.2 N (41.1062)	29 00 53.4 E (29.0148)	98.0	IST WWSS
IVAG	Clark Hill Reservoir Georgia, U.S.A.	34 16 19.6 N (34.2721)	82 44 45.6 W (82.7460)	168.0	ATL
IVF	Ivanof Bay Alaska Peninsula, Alaska, U.S.A.	55 53 45.0 N (55.8958)	159 31 48.0 W (159.5300)	275.0	PAL
IXC	R Ixtacomitan Chiapas, Mexico	17 25 38.0 N (17.4272)	93 06 03.0 W (93.1008)	...	UNM
IXP	F (phase code designation)				
IXPC	F (phase code designation)				
IXPD	F (phase code designation)				

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Code	Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
IXS	F (phase code designation)				
JARJ	Jarash Jordan	32 14 15.0 N (32.2375)	35 56 46.8 E (35.9463)	840.0	JSO
JBO	Jordan Butte Oregon, U.S.A. opened 198209.	45 27 41.7 N (45.4616)	119 50 13.2 W (119.8370)	645.0	SEA
JCM	Jocotitlan Mexico, Mexico opened 1988.	19 44 03.0 N (19.7342)	99 45 40.0 W (99.7611)	...	UNM
JDN	R Jardin Chiapas, Mexico	17 09 54.0 N (17.1650)	92 30 00.0 W (92.5000)	920.0	IIM
JHNI	R Jhansi Uttar Pradesh, India	25 27 .. N (25.4500)	78 37 .. E (78.6167)	250.0	NDI
JIL	R Jilotepec Veracruz, Mexico	19 37 50.4 N (19.6307)	96 56 00.0 W (96.9333)	1330.0	IIM
JIZN	Jizon Saudi Arabia opened 198902.	16 57 32.4 N (16.9590)	42 49 30.0 E (42.8250)	100.0	RYD
JLK	June Lake Washington, U.S.A. SEA code JUN.	46 08 48.0 N (46.1467)	122 09 10.8 W (122.1530)	1049.0	SEA
JMU	Jammu Jammu and Kashmir, India	32 43 .. N (32.7167)	74 54 .. E (74.9000)	...	NDI
JTS	Juntas de Abongares Costa Rica opened 198806.	10 17 27.0 N (10.2908)	84 57 09.0 W (84.9525)	340.0	HDC
JVI	Jordan Valley--Mount Mosud Israel	31 55 48.0 N (31.9300)	35 21 00.0 E (35.3500)	...	JER
KAP	Korpathas Greece opened 1988.	35 33 03.0 N (35.5508)	27 10 28.8 E (27.1747)	250.0	ATH
KBB	R Kelsey Bay British Columbia, Canada opened 19860823.	50 23 05.0 N (50.3847)	126 01 39.0 W (126.0275)	1310.0	OTTR
KBC	Kumba Cameroon opened 19841116; moved slightly 19850317. Old position 4.652N, 9.412E, 375m.	4 39 10.8 N (4.6530)	9 24 46.8 E (9.4130)	375.0	YND
KBR	Kanchanaburi Thailand opened 198807.	14 01 .. N (14.0167)	99 32 .. E (99.5333)	28.0	CHG
KHL	Karahalli Turkey opened 198808.	38 19 23.5 N (38.3232)	29 31 23.5 E (29.5232)	940.0	ISK
KKB	Krupnik Bulgaria opened 1988.	41 52 00.1 N (41.8667)	23 04 59.9 E (23.0833)	434.0	SOF
KLP	R Kolpa Himachal Pradesh, India	31 32 .. N (31.5333)	78 15 .. E (78.2500)	2724.0	NDI
KMC	Kampina Cameroon opened 19841214.	4 23 09.6 N (4.3860)	9 34 40.8 E (9.5780)	85.0	YND
KMOR	Kings Mountain Oregon, U S A opened 198209 SEA code KMO.	45 38 07.8 N (45.6355)	123 29 22.2 W (123.4895)	975.0	SEA
KOGH	Koforidua Ghana opened 1987	6 05 10.0 N (6.0861)	0 14 38.0 W (0.2439)	483.0	KUK
KOSW	Kosmos Washington, U S A SEA code KOS	46 27 40.8 N (46.4613)	122 11 25.8 W (122.1905)	828.0	SEA
KOT	Kottamia Egypt	29 55 48.0 N (29.9300)	31 49 48.0 E (31.8300)	...	HLW
KPL	Plackton Scotland, United Kingdom opened 19860418.	57 20 20.8 N (57.3391)	5 39 09.7 W (5.6527)	36.0	BGS
KSL	Kastellorizon Greece opened 1988	36 07 08.4 N (36.1190)	29 35 00.0 E (29.5833)	100.0	ATH
KSZ	R Kasoma Zambia	...	...	...	...
KTD	Kalmit Rheinland-Pfalz, Fed. Rep. of Germany opened before 197410.	49 19 12.6 N (49.3202)	8 05 01.2 E (8.0837)	670.0	KRW
KTK1	R Kautakeino Norway	...	...	...	BER
KTK2	R Kautakeino Norway	...	...	...	BER
KTK3	R Kautakeino Norway	...	...	...	BER
KTK4	R Kautakeino Norway	...	...	...	BER
KTK5	R Kautakeino Norway	...	...	...	BER
KTK6	R Kautakeino Norway	69 00 36.0 N (69.0100)	23 14 09.6 E (23.2360)	340.0	BER
KYR	R Kayrak Turkey opened 198801.	36 21 06.0 N (36.3517)	33 31 31.0 E (33.5253)	1210.0	ISK

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LACI	Laci Greece opened 198704.	41 38 10.7 N (41.6363)	19 42 33.8 E (19.7094)	40.0	TIR
LACU	R La Cuchilla Venezuela opened 1984.	7 52 36.1 N (7.8767)	71 23 26.2 W (71.3906)	800.0	CAR
LADA	R La Danta Venezuela opened 1984.	7 56 20.4 N (7.9390)	71 36 46.8 W (71.6130)	1200.0	CAR
LAGM	R Oaxaca, Mexico UNM code LAG.	16 06 15.0 N (16.1042)	97 04 40.2 W (97.0778)	201.0	UNM
LAGU	R Laguneta Venezuela	9 46 12.0 N (9.7700)	69 45 54.0 W (69.7650)	800.0	CAR
LAL	Leala Alabama, U.S.A. opened 19890328.	34 26 12.0 N (34.4367)	87 20 13.8 W (87.3372)	320.0	TVA
LAPE	R La Pedrera Venezuela opened 1984.	7 33 28.8 N (7.5580)	71 34 32.2 W (71.5756)	327.0	CAR
LAZ	Ladron New Mexico, U.S.A.	34 24 07.2 N (34.4020)	107 08 21.6 W (107.1393)	1853.0	SNM
LAZM	R Lazaro Cardenas Michoacan, Mexico UNM code LAZ.	18 02 09.6 N (18.0360)	102 12 18.0 W (102.2050)	...	UNM
LBL	Laubilhac Auvergne, France	45 13 57.0 N (45.2325)	3 14 49.0 E (3.2469)	...	STR
LCCH	Las Cruces Santiago, Chile opened 19871117.	33 28 31.2 S (33.4753)	71 34 10.8 W (71.5697)	180.0	SAN
LDVG	Clark Hill Reservoir Georgia, U.S.A.	34 08 52.1 N (34.1478)	82 41 00.0 W (82.6833)	162.0	ATL
LEGH	Legon Ghana opened 1987?	5 38 54.0 N (5.6483)	0 10 53.0 W (0.1814)	91.0	KUK
LENM	Lemitar New Mexico, U.S.A. SNM code LEM.	34 09 55.8 N (34.1655)	106 58 27.0 W (106.9742)	1698.0	SNM
LFK	Lefkose Cyprus opened 19870101.	35 16 45.1 N (35.2792)	33 31 57.0 E (33.5325)	690.0	ISK
LFU	La Fuente El Salvador	13 44 55.2 N (13.7487)	89 06 49.8 W (89.1138)	732.0	SSS
LHIS	Lihir Island New Ireland, Papua New Guinea opened 19870622.	3 07 01.2 S (3.1170)	152 37 58.8 E (152.6330)	10.0	PMG
LIBM	Chiapas, Mexico UNM code LIB.	17 17 38.4 N (17.2940)	93 00 43.2 W (93.0120)	...	UNM
LIJA	Lijor Spain opened 198711.	36 53 54.0 N (36.8983)	5 24 42.0 W (5.4117)	970.0	SFS
LIMM	R Veracruz, Mexico IIM code LIM.	19 40 49.2 N (19.6803)	96 31 41.3 W (96.5281)	200.0	IIM
LJS	R Mexico	17 59 34.8 N (17.9930)	93 29 16.8 W (93.4880)	...	IIM
LJY	La Joya New Mexico, U.S.A.	34 20 11.4 N (34.3365)	106 53 45.0 W (106.8958)	1532.0	SNM
LKGA	Lookout Mountain Georgia, U.S.A. opened 19851205.	34 37 24.0 N (34.6233)	85 28 19.8 W (85.4722)	655.0	TVA
LKO	R Korhogo Ivory Coast opened 198906.	9 32 39.8 N (9.5444)	5 35 20.0 W (5.5889)	435.0	LIC
LLAV	El Llanito Venezuela opened 1988.	10 28 30.0 N (10.4750)	66 48 28.8 W (66.8080)	907.0	CAR
LLJ	Guerrero, Mexico	16 33 51.0 N (16.5642)	98 53 04.8 W (98.8847)	...	UNM
LMX	La Mesa de Androde Sonora, Mexico opened 1988.	32 06 31.2 N (32.1087)	114 57 37.8 W (114.9605)	...	ECX
LNO	D Leonard Oklahoma, U.S.A. opened 19881207.	35 54 45.0 N (35.9125)	95 47 21.1 W (95.7892)	-506.0	TUL
LNOR	Linton Mountain Oregon, U.S.A. opened 198608. SEA code LNO. USTN opened 1988.	45 52 15.8 N (45.8711)	118 17 06.0 W (118.2850)	768.0	SEA USTN
LOF	Lofoten Norway opened 198701.	68 07 51.6 N (68.1310)	13 32 31.2 E (13.5420)	80.0	BER
LOHW	Long Hollow Wyoming, U.S.A. opened 198601.	43 36 44.7 N (43.6124)	110 36 13.5 W (110.6037)	2121.0	USBR
LOMF	Lomont du Chomesal Franche Comte, France	47 21 03.0 N (47.3508)	6 49 39.0 E (6.8275)	1000.0	STR
LORO	Los Roques Venezuela opened 1984.	11 57 28.1 N (11.9578)	66 40 27.1 W (66.6742)	20.0	CAR

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LPD	Lampedusa Italy opened 198905.	35 30 41.0 N (35.5114)	12 35 42.2 E (12.5951)	20.0	ERC
LPI	Lipari Lipari Islands, Italy opened 19871211.	38 29 22.0 N (38.4894)	14 56 00.0 E (14.9333)	594.0	ERC
LPL	La Plagne Rhône-Alpes, France opened 198608.	45 30 59.2 N (45.5164)	6 43 56.6 E (6.7324)	2070.0	LDG
LRDO	Loredo Arkansas, U.S.A. opened 198812.	35 58 09.0 N (35.9692)	90 41 43.2 W (90.6953)	137.0	TEIC
LSD	Ceresole Reale Piemonte, Italy	45 27 27.6 N (45.4577)	7 09 20.4 E (7.1557)	2284.0	GEN
LSK	Leskovik Albania	40 09 N (40.1500)	20 36 E (20.6000)	920.0	TIR
LSO	R Little Silver Creek Oklohoma, U.S.A.	.....	.....	.....	TUL
LSR	D Lussori Friuli-Venezia Giulia, Italy opened 19880101.	46 28 33.0 N (46.4758)	13 31 40.0 E (13.5278)	1750.0	TRI
LVGX	Lo Villita Guerrero, Mexico Strong-motion station.	18 02 42.0 N (18.0450)	102 10 30.0 W (102.1750)	.....	LJC
LVI	Isolo di Levanzo Sicilio, Italy	37 59 08.1 N (37.9856)	12 20 14.7 E (12.3374)	20.0	ERC
LVMM	Veracruz, Mexico UNM code LVM.	19 36 05.2 N (19.6014)	96 23 43.8 W (96.3955)	160.0	UNM
LVP	Lakeview Peak Washington, U.S.A.	46 04 06.0 N (46.0683)	122 24 30.0 W (122.4083)	1170.0	SEA
LVVM	Laguna Verde Veracruz, Mexico opened 1988. UNM code LVV.	19 44 16.8 N (19.7380)	96 26 55.8 W (96.4488)	.....	UNM
LXO	R La Grande 3 Quebec, Canada opened 19861216.	53 43 20.4 N (53.7223)	76 01 20.0 W (76.0222)	195.0	OTTR
MAF	Mazirat Auvergne, France opened 19850711.	46 13 17.3 N (46.2215)	2 33 59.2 E (2.5664)	470.0	LDG
MANM	R Veracruz, Mexico IIM code MAN.	19 35 24.0 N (19.5900)	96 25 00.0 W (96.4167)	2.0	IIM
MARA	Morocay Venezuela opened 1984.	10 19 26.0 N (10.3239)	67 36 24.8 W (67.6069)	1200.0	CAR
MARM	R Chiapos, Mexico IIM code MAR.	17 13 04.8 N (17.2180)	92 41 34.8 W (92.6930)	.....	IIM
MBH	Mount Berech Israel	29 46 12.0 N (29.7700)	34 52 48.0 E (34.8800)	.....	JER
MCPO	RD Mount Cooper Queensland, Australia opened 19840223. ODM code MCP.	20 33 07.2 S (20.5520)	146 48 21.6 E (146.8060)	300.0	ODM
MCT	Monte Commarato Sicilio, Italy	37 37 52.0 N (37.6311)	13 38 01.0 E (13.6336)	1565.0	ERC
MDI	Monti di Nese Lombardia, Italy	45 46 38.0 N (45.7772)	9 42 41.0 E (9.7114)	.....	ROM
MDL	Mondileni Cape Province, South Africa opened 1988.	30 42 36.0 S (30.7100)	28 48 00.0 E (28.8000)	1320.0	PRE
MDSJ	Mudoyisat Jordan	31 37 55.2 N (31.6320)	36 15 07.2 E (36.2520)	970.0	JSO
MECU	Ecuador Network (Micotamba) Ecuador	0 32 15.0 S (0.5375)	78 14 39.0 W (78.2442)	4090.0	QUI
MEKA	Meekothorra Western Australia, Australia opened 19860501.	26 36 51.1 S (26.6142)	118 32 01.0 E (118.5336)	390.0	AUST
MEMT	Mount Ellis Montano, U.S.A. opened 19871015.	45 36 14.4 N (45.6040)	110 58 10.8 W (110.9697)	1951.0	BUT
MEU	Monte Lauro Sicilio, Italy	37 06 04.0 N (37.1011)	14 55 48.0 E (14.9300)	985.0	ERC
MEW	McNeil Island Washington, U.S.A. opened 198503.	47 12 07.0 N (47.2019)	122 38 45.0 W (122.6458)	98.0	SEA
MGR	D Marigerati Campania, Italy	40 08 15.4 N (40.1376)	15 33 17.4 E (15.5548)	260.0	ROM
MGRP	R Monte Grappa Veneto, Italy	.....	.....	.....	TRI
MHPO	RD Mount Hope Queensland, Australia opened 19840410. ODM code MHP.	21 23 45.6 S (21.3960)	146 48 07.2 E (146.8020)	200.0	ODM
MILT	Milon Tennessee, U.S.A. opened 198511.	35 50 56.0 N (35.8489)	88 43 58.4 W (88.7329)	146.0	TEIC
MIO	R Marion Island Prince Edward Islands	46 57 30.0 S (46.9583)	37 54 00.0 E (37.9000)	10.0	PRE

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MIV	Mineville/Witherbee New York, U.S.A. opened 198506.	44 04 27.0 N (44.0742)	73 31 48.0 W (73.5300)	...	PAL
MME	Monte Cimone Emilia-Romagna, Italy	44 11 37.0 N (44.1936)	10 42 00.0 E (10.7000)	2160.0	ERC
MMI	F (Mercalli intensity descriptor)				
MML	Mount Malkishua Israel opened 19860501.	32 26 06.3 N (32.4351)	35 24 47.9 E (35.4133)	475.0	JER
MNCI	R Minicay Laccadive Islands, India	7 18 .. N (7.3000)	73 06 .. E (73.1000)	...	NDI
MNGI	R Mangalore Karnataka, India	12 52 .. N (12.8667)	74 52 .. E (74.8667)	...	NDI
MNO	Monte Sora Sicilia, Italy	37 55 52.0 N (37.9311)	14 41 42.0 E (14.6950)	1840.0	ERC
MOC	Mount Cameroon Cameroon opened 19851123.	4 17 13.2 N (4.2870)	9 13 01.2 E (9.2170)	2475.0	YND
MOE	Mantemor-a-Nova Portugal opened 198401?	38 32 05.0 N (38.5347)	8 21 17.0 W (8.3547)	...	INMG
MOH	D Mohaka North Island, New Zealand opened 19870319.	39 07 57.0 S (39.1325)	177 08 52.2 E (177.1478)	245.0	WELH
MOL	Molde Norway opened 198702.	62 34 12.0 N (62.5700)	7 32 52.8 E (7.5480)	98.0	BER
MOLL	Mallejan Venezuela opened 1984.	7 44 06.0 N (7.7350)	71 37 44.4 W (71.6290)	900.0	CAR
MOMI	Momias Spain Also sent to NEIS by MDD.	36 19 18.0 N (36.3217)	5 43 14.4 W (5.7207)	344.0	SFS
MOOW	Moose Ponds Wyoming, U.S.A. opened 198601.	43 44 54.9 N (43.7486)	110 44 41.4 W (110.7448)	2128.0	USBR
MOPM	Molcaxac Puebla, Mexico UNM code MOP.	18 44 .. N (18.7333)	97 55 .. W (97.9167)	1840.0	UNM
MOR1	R Moi Rana Norway	...	...	...	BER
MOR2	R Moi Rana Norway	...	...	...	BER
MOR3	R Moi Rana Norway	...	...	...	BER
MOR4	R Moi Rana Norway	...	...	...	BER
MOR5	R Moi Rana Norway	...	...	...	BER
MOR6	Moi Rana Norway opened 198602.	66 14 13.2 N (66.2370)	14 46 01.2 E (14.7670)	650.0	BER
MORO	Morrocay Venezuela opened 1984.	10 52 19.9 N (10.8722)	68 18 57.6 W (68.3160)	920.0	CAR
MRB	Montserrat Spain (41.5948)	41 35 41.4 N (41.5948)	1 50 13.8 E (1.8372)	890.0	MRB
MRH	D Morewa North Island, New Zealand opened 19870319.	39 29 55.8 S (39.4988)	176 53 27.0 E (176.8908)	4.0	WELH
MRX	D Morelia Michoacan, Mexico opened 1988	19 42 16.2 N (19.7045)	101 11 30.0 W (101.1917)	...	UNM
MSTB	R Mosset British Columbia, Canada opened 19871204.	54 00 12.0 N (54.0033)	132 07 05.0 W (132.1181)	91.0	OTTR
MTAT	F MTA--Mineral Research and Exploration Inst, Ankara				
MTLO	R Montello Veneto, Italy opened 1987.	...	...	...	TRI
MTMW	Mount Mitchell Washington, U.S.A. SEA code MTM.	46 01 31.8 N (46.0255)	122 12 42.0 W (122.2117)	1121.0	SEA
MTO	R Montecristo El Salvador (14.3897)	14 23 23.0 N (14.3897)	89 24 18.0 W (89.4050)	1380.0	SSS
MUDI	Mud Lake Idaho, U.S.A. opened 198601.	43 37 07.9 N (43.6189)	111 04 37.4 W (111.0771)	2124.0	USBR
MUX	Union Juarez Chiapas, Mexico (15.0790)	15 04 44.4 N (15.0790)	92 04 26.4 W (92.0740)	...	UNM
MVIF	Mont Vial Provence-Cote d'Azur, France (43.8963)	43 53 46.8 N (43.8963)	7 09 09.0 E (7.1525)	1480.0	STR
MVO	Moncarvo Portugal opened 198401?	41 09 51.6 N (41.1643)	7 01 43.8 W (7.0288)	...	INMG
MXC	Moxie City Washington, U.S.A. SEA code MOX.	46 34 38.0 N (46.5772)	120 17 35.0 W (120.2931)	540.0	SEA
NAC	Naches Washington, U.S.A. (46.7344)	46 44 03.8 N (46.7344)	120 49 33.2 W (120.8259)	738.0	SEA

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NAIN	C Natchez Trace State Park Tennessee, U.S.A. 19850327-19870306.	35 51 21.6 N (35.8560)	88 14 24.0 W (88.2400)	198.0	TVA
NANS	Nonohuazin El Salvador SSS code NAN.	13 42 54.0 N (13.7150)	89 30 33.0 W (89.5092)	1160.0	SSS
NANU	Nanutorro Western Australia, Australia opened 19871022.	22 33 43.2 S (22.5620)	115 31 44.4 E (115.5290)	80.0	AUST
NDB	R Naden British Columbia, Canada	53 57 18.0 N (53.9550)	132 56 30.0 W (132.9417)	686.0	OTTR
NE01	CD Goteborg Sweden 198302-198601.	57 48 03.6 N (57.8010)	12 07 55.2 E (12.1320)	55.0	NARS
NE02	D Monsted Denmark opened 198302.	56 27 32.4 N (56.4590)	9 10 12.0 E (9.1700)	60.0	NARS
NE03	D Logumkloster Denmark opened 198302.	55 02 42.0 N (55.0450)	9 09 10.8 E (9.1530)	25.0	NARS
NE04	D Witteveen Netherlands opened 198207.	52 48 48.0 N (52.8133)	6 40 06.0 E (6.6683)	17.0	NARS
NE05	D Utrecht Netherlands 198203-198406; reopened 198601.	52 05 16.8 N (52.0880)	5 10 19.2 E (5.1720)	2.0	NARS
NE06	D Dourbes Belgium opened 198207.	50 05 49.2 N (50.0970)	4 35 42.0 E (4.5950)	225.0	NARS
NE07	D Villiers-Adam Ile-de-France, France opened 198311.	49 04 27.8 N (49.0744)	2 13 54.8 E (2.2319)	70.0	NARS
NE08	CD Aiguronde Centre, France 198211-198412.	46 25 12.0 N (46.4200)	1 43 48.0 E (1.7300)	360.0	NARS
NE09	CD Les Eyzies Aquitaine, France 198211-198602.	44 51 07.2 N (44.8520)	0 58 51.6 E (0.9810)	160.0	NARS
NE10	D Arette Aquitaine, France opened 198211.	43 05 09.6 N (43.0860)	0 41 56.4 W (0.6990)	480.0	NARS
NE11	D Ainzon Spain opened 1983.	41 48 50.4 N (41.8140)	1 31 01.2 W (1.5170)	440.0	NARS
NE11*	CD Lo Almunia Spain 198305-198311.	41 20 37.2 N (41.4770)	1 22 19.2 W (1.3720)	370.0	NARS
NE12	CD Valle de los Caidos Spain 198305-198502.	40 38 31.2 N (40.6420)	4 09 18.0 W (4.1550)	1280.0	NARS
NE13	D Puertollano Spain opened 198305.	38 41 06.0 N (38.6850)	4 05 27.6 W (4.0910)	700.0	NARS
NE14	D Granada Spain opened 198305.	37 11 24.0 N (37.1900)	3 35 42.0 W (3.5950)	774.0	NARS
NE15	D Volkenburg Netherlands opened 198406.	50 52 01.2 N (50.8670)	5 47 06.0 E (5.7850)	100.0	NARS
NE16	D Clermont Ferrand Auvergne, France opened 198411.	45 45 46.0 N (45.7628)	3 06 09.0 E (3.1025)	80.0	NARS
NE17	D Toledo Spain opened 198502.	39 52 53.0 N (39.8814)	4 02 55.0 W (4.0486)	480.0	NARS
NE18	D Les Rejoudeaux Limousin, France opened 198602.	45 18 16.0 N (45.3044)	1 30 59.0 E (1.5164)	410.0	NARS
NECR	R Nordeste de Costa Rica Costa Rica	...	...	...	HDC
NEO	Neokhori Greece opened 1988.	39 18 24.0 N (39.3067)	23 13 24.6 E (23.2235)	500.0	ATH
NGI	Nagai Island Alaska Peninsula, Alaska, U.S.A.	55 02 21.6 N (55.0393)	160 04 09.0 W (160.0692)	240.0	PAL
NGJA	Assam, India	26 42 24.0 N (26.7067)	91 40 30.0 E (91.6750)	60.0	JHI
NGNA	Nongstain Meghalaya, India	25 31 18.0 N (25.5217)	91 16 19.2 E (91.2720)	...	JHI
NGP	R Nagpur Maharashtra, India	21 09 ... N (21.1500)	79 03 ... E (79.0500)	311.0	NDI
NLO	Nicolai Mountain Oregon, U.S.A.	46 05 18.0 N (46.0883)	123 27 00.0 W (123.4500)	900.0	SEA
NLW	Nelson Butte Washington, U.S.A. opened 198505. SEA code NEL.	48 04 41.8 N (48.0783)	120 20 17.7 W (120.3383)	1490.0	SEA
NOC	RD Noumea New Caledonia opened 19851209.	22 10 12.0 S (22.1700)	166 15 00.0 E (166.2500)	5.0	NOU GEOS

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Code	Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
NSS	Nomsos Norway opened 198702.	64 31 48.0 N (64.5300)	11 58 01.2 E (11.9670)	102.0	BER
NWC	North Woods Club New York, U.S.A. opened 198610.	43 50 42.0 N (43.8450)	74 09 00.6 W (74.1502)	...	PAL
OBC	Olympics--Bonidu Creek Washington, U.S.A. opened 198007.	48 02 07.1 N (48.0353)	124 04 39.0 W (124.0775)	938.0	SEA
OBH	Olympics--Burnt Hill Washington, U.S.A.	47 19 34.5 N (47.3262)	123 51 57.0 W (123.8658)	383.0	SEA
OC2	Ocos 2 Guatemala opened 1988.	14 33 37.8 N (14.5605)	92 11 09.6 W (92.1860)	5.0	GCG
ODD1	Oddo Norway opened 19871203.	59 54 43.2 N (59.9120)	6 37 40.8 E (6.6280)	684.0	BER
OFK	Olympics--Forks Washington, U.S.A. opened 198007.	47 57 00.0 N (47.9500)	124 21 28.1 W (124.3578)	134.0	SEA
OJEN	Ojen Spain Also sent to NEIS by MDD.	36 06 00.0 N (36.1000)	5 32 13.2 W (5.5370)	804.0	SFS
OLLA	Los Ollas Venezuela opened 1984.	10 01 08.4 N (10.0190)	66 48 14.4 W (66.8040)	947.0	CAR
OLO	Olympics--Lake Quinolt Washington, U.S.A.	47 39 58.1 N (47.6661)	123 48 31.5 W (123.8087)	121.0	
OLT	Olot Spain opened 1986. Sent to NEIS by MDD.	42 08 39.6 N (42.1443)	2 28 27.6 E (2.4743)	700.0	MRB
OLW	Olympio Washington, U.S.A. opened 19860802	47 04 22.0 N (47.0728)	122 55 21.0 W (122.9225)	37.0	
OMWY	R Oxenhope Moor England, United Kingdom	53 47 27.2 N (53.7909)	1 58 47.6 W (1.9799)	438.0	OMB
ONF	Office National des Forets Aquitaine, France opened 198502?	43 05 42.0 N (43.0950)	0 42 57.6 W (0.7160)	30.0	PAR
ONR	Olympics--North River Washington, U.S.A. opened 198007.	46 52 37.5 N (46.8771)	123 46 16.5 W (123.7713)	257.0	SEA
OOW	Octopus West Washington, U.S.A.	47 44 12.0 N (47.7367)	124 11 22.0 W (124.1894)	743.0	SEA
OR1	(Alternate Abbreviation for ORI)				
ORX	Orapo Piemonte, Italy	45 37 57.0 N (45.6325)	7 58 54.0 E (7.9817)	1250.0	GEN
OSCM	Ostuocon Chiapas, Mexico UNM code OSC.	17 24 20.0 N (17.4056)	93 20 05.0 W (93.3347)	...	UNM
OSD	Olympics--Snow Dome Washington, U.S.A.	47 49 15.0 N (47.8208)	123 42 06.0 W (123.7017)	2010.0	SEA
OSG	R Oseberg A Platform Norway opened 1988.	60 29 48.0 N (60.4967)	2 52 33.0 W (2.8758)	-110.0	BER
OSM	R Ostula Michoacan, Mexico	18 29 50.0 N (18.4972)	103 28 19.0 W (103.4719)	...	UNM
OSP	Olympics--Sooes Peak Washington, U.S.A. opened 198310.	48 17 05.5 N (48.2849)	124 35 23.3 W (124.5898)	...	SEA
OTR	Olympics--Tye Ridge Washington, U.S.A.	48 05 00.0 N (48.0833)	124 20 39.0 W (124.3442)	712.0	SEA
PAB	San Pablo de los Montes Spain	9 32 45.0 N (9.5458)	4 20 54.0 W (4.3483)	...	MDD
PACW	Pacific Creek Wyoming, U.S.A. opened 198601	43 54 08.3 N (43.9023)	110 29 07.0 W (110.4853)	2140.0	USBR
PALM	R Palmichal Venezuela opened 1984	10 12 16.6 N (10.2046)	64 26 19.7 W (64.4388)	1100.0	CAR
PALR	Palmo Real Venezuela opened 1984.	11 00 00.0 N (11.0000)	63 54 39.6 W (63.9110)	920.0	CAR
PANV	Panmint Range Inyo County, California, U.S.A. opened 19880401.	36 23 54.0 N (36.3983)	117 05 57.0 W (117.0992)	1830.0	USGS
PATW	Paterson Washington, U.S.A. SEA code PAT.	45 52 50.1 N (45.8806)	119 45 40.1 W (119.7611)	300.0	SEA
PAY	..... Mexico	17 28 18.0 N (17.4717)	93 29 28.8 W (93.4913)	...	UNM
PCB	R Port Clements British Columbia, Canada	53 42 22.0 N (53.7061)	132 34 03.0 W (132.5675)	634.0	OTTR
PCG	Pacoyo Guatemala opened 198705?	14 23 ... N (14.3833)	90 39 ... W (90.6500)	2550.0	GCG
PDCR	Pedra do Cavallo Reservoir Bahia, Brazil opened 19870101.	12 31 52.8 S (12.5313)	39 07 21.0 W (39.1225)	220.0	VAD

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PDU1	Pindiu New Guinea, Papua New Guinea opened 19880616.	6 26 49.2 S (6.4470)	147 30 39.6 E (147.5110)	950.0	PMG
PECU	Ecuador Network Ecuador	0 23 42.0 S (0.3950)	78 36 09.0 W (78.6025)	3550.0	QUI
PENM R	Chiapas, Mexico IIM code PEN.	17 26 09.6 N (17.4360)	93 31 40.8 W (93.5280)	...	IIM
PEO R	Puerto Escondido Oaxaca, Mexico	15 51 04.2 N (15.8512)	97 03 19.8 W (97.0555)	3.0	UNM
PFH	Pahoo Fire House Hawaii, Hawaii, U.S.A. opened 1986.	19 29 48.8 N (19.4969)	154 56 55.0 W (154.9486)	201.0	HON
PGB	Panagyurishte Bulgaria opened 1988.	42 33 00.0 N (42.5500)	24 10 00.1 E (24.1667)	775.0	SOF
PGD	Poggio Sodo Emilio-Romagna, Italy Also sent to NEIS by ROM.	43 52 31.0 N (43.8753)	11 43 17.0 E (11.7214)	1600.0	ERC
PGO	Gresham Oregon, U.S.A. opened 198206.	45 28 00.0 N (45.4667)	122 27 10.0 W (122.4528)	237.0	SEA
PGW	Port Gamble Washington, U.S.A.	47 49 18.8 N (47.8219)	122 35 57.7 W (122.5994)	122.0	SEA
PGY	Peter Gray Mountain New York, U.S.A. opened 198611.	43 42 27.6 N (43.7077)	74 02 42.6 W (74.0452)	...	PAL
PGZ D	Pangaroo North Island, New Zealand opened 198804.	40 37 07.8 S (40.6188)	176 16 25.2 E (176.2737)	60.0	WEL
PII D	Pisa Toscona, Italy	43 43 16.3 N (43.7212)	10 31 25.0 E (10.5238)	50.0	ROM
PINI	Pine Creek Idaho, U.S.A. opened 198601.	43 30 27.4 N (43.5076)	111 20 44.6 W (111.3457)	1932.0	USBR
PINR	Pinar Spain (36.4990) (6.1183)	36 29 56.4 N (36.4990)	6 07 06.0 W (6.1183)	10.0	SFS
PKO	Pickens Oklahoma, U.S.A. opened 19871016.	34 23 50.3 N (34.3973)	95 01 51.8 W (95.0311)	264.0	TUL
PLAT	Plata Spain Also sent to NEIS by MDD.	36 07 15.6 N (36.1210)	5 45 30.6 W (5.7585)	460.0	SFS
PLAV	Platillon Venezuela opened 1984. CAR code PLAT.	9 52 26.4 N (9.8740)	67 30 08.6 W (67.5024)	1830.0	CAR
PLR	Palermo Sicilia, Italy	38 08 38.4 N (38.1440)	13 20 51.6 E (13.3477)	60.0	
PLRO RD	Paularo Friuli-Venezia Giulia, Italy opened 19880101.	46 32 59.0 N (46.5497)	13 08 53.0 E (13.1481)	1420.0	TRI
PN1 R	Preso Penitas No. 1 Chiapas, Mexico	17 28 08.4 N (17.4690)	93 29 16.8 W (93.4880)	...	IIM
PN2 R	Preso Penitas No. 2 Chiapas, Mexico	17 26 16.8 N (17.4380)	93 27 01.8 W (93.4505)	...	IIM
PN3 R	Preso Penitas No. 3 Chiapas, Mexico	17 21 14.4 N (17.3540)	93 36 28.8 W (93.6080)	...	IIM
PN4 R	Preso Penitas No. 4 Chiapas, Mexico	17 10 44.4 N (17.1790)	93 23 42.0 W (93.3950)	...	IIM
PN6	Pavlof North-6 Alaska Peninsula, Alaska, U.S.A.	55 27 07.1 N (55.4520)	161 54 53.3 W (161.9148)	814.0	PAL
POA2	Poas 2 Costa Rica opened 19860506.	10 10 37.8 N (10.1772)	84 15 03.0 W (84.2508)	2500.0	HDC
POBI C	Pantebba Friuli-Venezia Giulia, Italy 19830130-19880101.	46 30 48.0 N (46.5133)	13 16 36.0 E (13.2767)	860.0	TRI
POF	Pofadder Cape Province, South Africa opened 1986.	29 22 54.0 S (29.3817)	19 57 00.0 E (19.9500)	...	PRE
PORM R	Chiapas, Mexico UNM code POR.	17 10 44.4 N (17.1790)	93 23 42.0 W (93.3950)	...	UNM
PPCY	Paphos Cyprus opened 198702.	34 53 05.0 N (34.8847)	32 20 42.0 E (32.3450)	60.0	CSS
PPD	Presidente Prudente Sao Paulo, Brazil opened 198802.	22 01 53.0 S (22.0314)	51 18 43.0 W (51.3119)	406.0	VAO
PS4	Pavlof South-4 Alaska Peninsula, Alaska, U.S.A.	55 21 14.3 N (55.3540)	161 52 05.5 W (161.8682)	520.0	PAL
PSG2	Puerto de San Jose 2 Guatemala opened 1988. GCG code PS2.	13 57 07.8 N (13.9522)	90 48 55.8 W (90.8155)	5.0	GCG
PSR	Paul Souer Dam Cape Province, South Africa opened 1988.	33 40 48.0 S (33.6800)	24 24 36.0 E (24.4100)	360.0	PRE
PTH	Pithoragarh Uttor Pradesh, India	29 33 .. N (29.5500)	80 13 .. E (80.2167)	1669.0	NDI

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PTS	Isola di Pantelleria Italy	36 48 25.9 N (36.8072)	11 59 34.4 E (11.9929)	150.0	ERC
PTT	Piatra Neamt Romania opened 19870115.	46 56 05.0 N (46.9347)	26 23 10.0 E (26.3861)	350.0	BUC
PURC	Volcon Purace Colombia opened 1987.	2 19 19.8 N (2.3222)	76 21 42.0 W (76.3617)	3950.0	UVC
PUYF	Puylobier Provence-Cote d'Azur, France	43 31 56.3 N (43.5323)	5 42 01.1 E (5.7003)	460.0	STR
PVV	Povlof Volcono Alaska Peninsula, Alaska, U.S.A.	55 22 27.1 N (55.3742)	161 47 23.9 W (161.7900)	164.0	PAL
PXD	R Oaxaca, Mexico	15 44 52.2 N (15.7478)	96 18 10.8 W (96.3030)	25.0	UNM
PZZ	Prazzo (Stroppo) Piemonte, Italy	44 30 18.0 N (44.5050)	7 06 04.8 E (7.1013)	1420.0	GEN
QAP	F (phase code designation)				
QASM	Qassim Saudi Arabia opened 198801.	26 05 24.0 N (26.0900)	43 31 58.8 E (43.5330)	675.0	RYD
QDM	F Queensland Dept. of Mines, Australia				
QHW	R Quartz Hill North Island, New Zealand opened 19851015.	41 15 07.0 S (41.2519)	174 41 26.0 E (174.6906)	190.0	WELW
QIS	Mount Iso Queensland, Australia opened 19870615.	20 33 27.7 S (20.5577)	139 36 18.7 E (139.6052)	330.0	AUST
QLP	R Quilpie Queensland, Australia	...	...	...	AUST
QPCP	F (phase code designation)				
QPCS	F (phase code designation)				
QPKP	F (phase code designation)				
QPP	F (phase code designation)				
QPPP	F (phase code designation)				
QPPS	F (phase code designation)				
QPSS	F (phase code designation)				
QRI	Quarto Compania, Italy	40 52 40.8 N (40.8780)	14 08 44.9 E (14.1458)	...	ROM
QSCP	F (phase code designation)				
QSCS	F (phase code designation)				
QSKP	F (phase code designation)				
QSKS	F (phase code designation)				
QSPP	F (phase code designation)				
QSSP	F (phase code designation)				
QSSS	F (phase code designation)				
QUTJ	Outrano Jordan opened 1987.	31 17 55.2 N (31.2987)	36 00 36.0 E (36.0100)	876.0	JSO
QXP	F (phase code designation)				
QXS	F (phase code designation)				
QZA	Quezolopa El Salvador	13 31 26.0 N (13.5239)	88 59 49.0 W (88.9969)	250.0	SSS
RAMW	Rammel Mountain Wyoming, U.S.A. opened 198601.	43 53 20.3 N (43.8890)	110 57 00.8 W (110.9502)	2512.0	USBR
RDO	Rodhapi Greece opened 1988.	41 08 46.2 N (41.1462)	25 32 15.0 E (25.5375)	100.0	ATH
RE1	(Alternate Abbreviation for RCL)				
RECU	Ecuador Network Ecuador	0 38 19.2 S (0.6387)	78 34 03.0 W (78.5675)	4060.0	QUI
REDW	Red Top Meadow Wyoming, U.S.A. opened 198601.	43 21 44.6 N (43.3624)	110 51 06.4 W (110.8518)	2192.0	USBR
REVF	Revere Provence-Cote d'Azur, France	43 44 24.0 N (43.7400)	7 22 03.0 E (7.3675)	700.0	STR
RF1	Roccomonfina Campania, Italy	41 18 01.6 N (41.3004)	13 59 05.2 E (13.9848)	...	ROM
RGS	Rognes Norway opened 19851222.	63 01 15.6 N (63.0210)	10 26 06.0 E (10.4350)	120.0	BER
RIN2	C Rincon de lo Viejo 2 Costo Rica 19870520-19880826. Replaced by RIN3.	10 49 06.6 N (10.8185)	85 20 58.2 W (85.3495)	1400.0	HDC
RIN3	Rincon de lo Viejo 3 Costo Rica opened 19880826.	10 47 27.0 N (10.7908)	85 22 43.2 W (85.3787)	900.0	HDC
RIY	Rijeka Hrvatsko (Croatia), Yugoslavia opened 19890504.	45 20 38.4 N (45.3440)	14 23 09.6 E (14.3860)	75.0	ZAG
ROKY	R Rotten Point Kentucky, U.S.A.	37 55 08.4 N (37.9190)	83 55 33.6 W (83.9260)	...	BHXY
RPW	Rockport Washington, U.S.A.	48 26 54.0 N (48.4483)	121 30 49.0 W (121.5136)	850.0	SEA
RR12	Red Ridge Idaho, U.S.A. opened 19860702.	43 21 50.4 N (43.3640)	111 19 08.4 W (111.3190)	2566.0	REX USTN
RRL	Cesona Torinese Piemonte, Italy	44 55 12.6 N (44.9202)	6 47 04.2 E (6.7845)	2131.0	GEN

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RSM	Repubblica di San Marino San Marino opened 1988.	43 55 39.7 N (43.9277)	12 27 08.4 E (12.4523)	...	ROM
RSP	Reno Superiore Piemonte, Italy	45 09 06.0 N (45.1517)	7 15 25.8 E (7.2572)	1250.0	GEN
RUP	Ruppelstein Rheinland-Pfalz, Fed. Rep. of Germany	49 42 06.0 N (49.7017)	7 03 37.0 E (7.0603)	750.0	KRW
RVC	Mount Rainier--Vaight Creek Washington, U.S.A.	46 56 34.5 N (46.9429)	121 58 17.3 W (121.9715)	1000.0	SEA
RVW	Rose Valley Washington, U.S.A. opened 198102.	46 08 58.2 N (46.1495)	122 44 37.2 W (122.7437)	460.0	SEA
RVX	Roncho Vawling Baja California, Mexico opened 1989.	31 55 56.4 N (31.9323)	115 56 51.0 W (115.9475)	...	ECX
RYD	Riyadh Saudi Arabia opened 1986.	24 43 12.0 N (24.7200)	46 36 30.0 E (46.6100)	650.0	RYD
RZN	Rozhen Bulgaria opened 1988.	41 41 16.8 N (41.6880)	24 42 57.6 E (24.7160)	1730.0	SOF
SADC	RD Saddle Peak Los Angeles County, California, U.S.A. opened 197308. PAS code SAD.	34 04 51.6 N (34.0810)	118 39 54.0 W (118.6650)	732.0	PAS
SAE	Statte Puglia, Italy	40 33 43.0 N (40.5619)	17 12 22.0 E (17.2061)	...	ROM
SALC	Salvajina Colombia	2 58 22.5 N (2.9729)	76 41 42.6 W (76.6952)	1430.0	UVC
SAOF	Soorge Provence-Cote d'Azur, France	43 59 11.0 N (43.9864)	7 33 19.0 E (7.5553)	600.0	STR
SASA	Sond Point Alaska Peninsula, Alaska, U.S.A. PAL code SAS.	55 20 24.0 N (55.3400)	160 29 49.8 W (160.4972)	23.0	PAL
SBG	Sibinol Guatemala opened 198603.	15 07 55.2 N (15.1320)	92 03 12.6 W (92.0535)	2060.0	CGC
SBM	South Baldy New Mexico, U.S.A. SNM code SB.	33 58 30.6 N (33.9752)	107 10 50.4 W (107.1807)	3230.0	SNM
SCSP	F (phase code designation)				
SCX	Son Cristobal de los Cosos Chiapas, Mexico opened 1987.	16 44 09.0 N (16.7358)	92 38 04.2 W (92.6345)	...	UNM
SDI	San Donato Val di Comino Lazio, Italy	41 42 21.0 N (41.7058)	13 48 55.5 E (13.8154)	720.0	ROM
SEJ	R Sejong Station South Shetland Islands, Antarctic	62 13 15.0 S (62.2208)	58 45 10.0 W (58.7528)	18.0	
SFI	Santa Sofia Emilia-Romagna, Italy opened 1987.	43 55 15.6 N (43.9210)	11 51 07.2 E (11.8520)	...	ROM
SGB	Son Diego Bay Alaska Peninsula, Alaska, U.S.A.	55 32 45.0 N (55.5458)	160 27 13.8 W (160.4538)	275.0	
SGI	C San Gemini Italy	...	...	...
SHBJ	Al Shahba Jordan opened 19871024.	32 18 09.0 N (32.3025)	37 34 30.0 E (37.5750)	960.0	JSO
SHGH	Shai Hills Ghana opened 1987	5 55 42.0 N (5.9283)	0 02 31.0 W (0.0419)	84.0	KUK
SIPM	R Chiapas, Mexico UNM code SIP.	17 13 22.8 N (17.2230)	93 09 25.2 W (93.1570)	...	UNM
SJAS	Son Jocinto El Salvador SSS code SJA	13 40 ... N (13.6667)	89 10 ... W (89.1667)	1100.0	SSS
SJID	St. Joe Idaho, U.S.A. opened 198710.	47 21 50.4 N (47.3640)	116 24 40.2 W (116.4112)	1775.0	
SJX	R San Joaquin Baja California, Mexico opened 1986.	31 45 46.2 N (31.7628)	115 57 31.2 W (115.9587)	...	ECX
SKDB	Saint Christopher, Saint Christopher-Nevis	17 23 48.8 N (17.3969)	62 48 30.0 W (62.8083)	...	TRN
SKSP	F (phase code designation)				
SLKY	Flemingsburg Kentucky, U.S.A. opened 19890215.	38 25 26.4 N (38.4240)	83 45 07.2 W (83.7520)	...	BHKY
SLZ	R Solwezi Zambia	...	...	...
SMAM	R Son Morcos Guerrero, Mexico UNM code SMA.	16 47 07.8 N (16.7855)	99 23 53.4 W (99.3982)	...	UNM
SMJM	R Simojovel Chiapas, Mexico IIM code SMJ.	17 08 02.4 N (17.1340)	92 42 54.0 W (92.7150)	...	IIM
SMMM	San Miguel Ometusco Mexico, Mexico opened 1988. UNM code SMM.	19 44 23.4 N (19.7398)	98 44 25.8 W (98.7405)	...	UNM

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SMNM	San Marcial New Mexico, U.S.A. SNM code SMC.	33 46 43.2 N (33.7787)	107 01 09.6 W (107.0193)	1560.0	SNM
SNKA	Sanak Island Alaska Peninsula, Alaska, U.S.A. PAL code SNK.	54 28 26.4 N (54.4740)	162 46 31.2 W (162.7753)	159.0	PAL
SNOW	Snow King Mountain Wyoming, U.S.A. opened 198601.	43 27 44.9 N (43.4625)	110 45 18.8 W (110.7552)	2390.0	USBR
SOG	Santiaguito Guatemala opened 198602? GCG code STG.	14 46 34.8 N (14.7763)	91 35 15.6 W (91.5877)	2950.0	GCG
SOG2	Santiaguito 2 Guatemala opened 198612? GCG code ST2.	14 43 01.8 N (14.7172)	91 34 13.2 W (91.5703)	1560.0	GCG
SOI	D Samo Calabria, Italy	38 04 19.5 N (38.0721)	16 03 17.7 E (16.0549)	...	ROM
SONG	Songo Mozambique opened 198511.	15 36 12.0 S (15.6033)	32 46 42.0 E (32.7783)	900.0	LMM
SOO	R Sioux Lookout Ontario, Canada opened 19870607.	50 04 34.2 N (50.0762)	91 53 16.8 W (91.8880)	358.0	OTTR
SOSW	Source of Smith Creek Washington, U.S.A. SEA code SOS.	46 14 12.0 N (46.2367)	122 08 12.0 W (122.1367)	1270.0	SEA
SQF	Squaw Harbor Alaska Peninsula, Alaska, U.S.A.	55 13 12.0 N (55.2200)	160 33 44.4 W (160.5623)	360.0	PAL
SRFA	Sharaf Saudi Arabia opened 1986.	28 55 48.0 N (28.9300)	35 11 16.8 E (35.1880)	...	RYD
SRNI	Srinagar Jammu and Kashmir, India NDI code SRN.	33 57 .. N (33.9500)	74 45 .. E (74.7500)	...	NDI
SRP	Santa Rosa Puebla, Mexico	18 53 48.0 N (18.8967)	97 46 48.0 W (97.7800)	...	UNM
SRQ	San Roque Spain Also sent to NEIS by MDD.	36 15 27.0 N (36.2575)	5 22 27.0 W (5.3742)	202.0	SFS
SSO	Sasso d'Italia (Macerata) Marche, Italy opened 198705.	43 17 34.8 N (43.2930)	13 25 12.0 E (13.4200)	302.0	SSO
STD	Studebaker Ridge Washington, U.S.A.	46 14 16.0 N (46.2378)	122 13 21.9 W (122.2227)	1268.0	SEA
STEW	Steamboat Mountain Wyoming, U.S.A. opened 198601.	44 02 59.0 N (44.0497)	110 40 54.0 W (110.6817)	2316.0	USBR
STF	Stoffjord A Platform Norway	61 15 21.6 N (61.2560)	1 49 01.2 E (1.8170)	-148.0	BER
SULJ	R Sultano Jordan	31 05 12.0 N (31.0867)	36 04 36.0 E (36.0767)	951.0	JSO
SWO	RD Sudbury Ontario, Canada opened 198705	46 43 58.0 N (46.7328)	80 59 58.0 W (80.9994)	372.0	ECTN
SXG	Socranix Guatemala opened 1986. GCG code SCG.	15 30 21.0 N (15.5058)	90 25 10.8 W (90.4197)	1904.0	GCG
SXT	Sachs Harbour Northwest Territories, Canada opened 19860813	71 59 21.0 N (71.9892)	125 14 23.0 W (125.2397)	77.0	OTTR
SZH	Strazhitsa Bulgaria opened 1988.	43 16 .. N (43.2667)	25 56 .. E (25.9333)	310.0	SOF
SZO	RD Sudbury Ontario, Canada opened 19870124.	46 26 17.0 N (46.4381)	81 29 46.0 W (81.4961)	312.0	ECTN
TAIF	At Ta'if Saudi Arabia opened 198902.	21 17 31.2 N (21.2920)	40 21 14.4 E (40.3540)	1680.0	RYD
TANM	R Chiapos, Mexico UNM code TAN.	16 55 08.4 N (16.9190)	93 06 54.0 W (93.1150)	...	UNM
TARW	Grand Targhee Resort Wyoming, U.S.A. opened 198601.	43 45 49.7 N (43.7638)	110 59 26.9 W (110.9908)	2091.0	USBR
TBM	Table Mountain Washington, U.S.A.	47 10 10.1 N (47.1695)	120 35 54.0 W (120.5983)	1064.0	SEA
TBO	R Thunder Bay Ontario, Canada opened 19870123.	48 38 50.4 N (48.6473)	89 24 30.0 W (89.4083)	468.0	OTTR
TCG	Tocono Guatemala opened 198607.	15 07 22.2 N (15.1228)	92 05 09.0 W (92.0858)	3100.0	GCG
TCO	Three Creek Meadows Oregon, U.S.A. opened 19870827.	44 06 27.0 N (44.1075)	121 36 00.0 W (121.6000)	1975.0	SEA
TCPM	R Tecomochalco Puebla, Mexico UNM code TCP.	18 53 24.0 N (18.8900)	97 41 22.0 W (97.6894)	...	UNM

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Code	Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
TCT	Tennessee City Tennessee, U.S.A. opened 19880310.	36 00 19.2 N (36.0053)	87 33 10.2 W (87.5528)	245.0	TVA
TDH	Tom, Dick, Harry Mountain Oregon, U.S.A. opened 198209.	45 17 23.4 N (45.2898)	121 47 25.2 W (121.7903)	1541.0	SEA
TDL	Tradedollar Lake Washington, U.S.A.	46 21 03.0 N (46.3508)	122 12 57.0 W (122.2158)	1400.0	SEA
TDS	D Terranova di Sibari Calabria, Italy	39 39 31.8 N (39.6588)	16 20 16.3 E (16.3379)	273.0	ROM
TEGH	Temo Ghana opened 1987.	5 38 12.0 N (5.6367)	0 00 05.0 W (0.0014)	14.0	KUK
TEO	R Teotitlan Oaxaca, Mexico	18 08 17.6 N (18.1382)	97 04 30.6 W (97.0752)	1060.0	UNM
TIH	Tihany Hungary opened 1987.	46 54 00.0 N (46.9000)	17 53 34.8 E (17.8930)	187.0	BUD
TLA	Tapachula Chiapas, Mexico	15 01 44.0 N (15.0289)	92 12 00.0 W (92.2000)	...	UNM
TLI	D Talmassons Friuli-Venezia Giulia, Italy opened 19851127.	45 55 18.0 N (45.9217)	13 06 07.0 E (13.1019)	25.0	TRI
TME	Tecomasuche El Salvador	14 01 01.0 N (14.0169)	89 21 20.0 W (89.3556)	616.0	SSS
TMM2	R Technologico de Monterrey 2 Nueva Leon, Mexico	25 41 57.0 N (25.6992)	100 15 58.8 W (100.2663)	...	UNM
TOD	Tromm Hessen, Fed. Rep. of Germany opened before 197410.	49 36 20.4 N (49.6057)	8 48 13.8 E (8.8038)	570.0	KRW
TORT	R La Tortuga Venezuela opened 1984.	10 54 30.2 N (10.9084)	65 18 50.0 W (65.3139)	40.0	CAR
TOUF	Mant Tourneraut Provence-Cote d'Azur, France	44 00 48.6 N (44.0135)	7 14 53.9 E (7.2483)	1830.0	STR
TPAW	Teton Pass Wyoming, U.S.A. opened 198601.	43 29 24.3 N (43.4901)	110 57 02.3 W (110.9506)	2512.0	USBR
TPE	Tepelena Albania opened 198404.	40 17 42.7 N (40.2952)	20 00 39.2 E (20.0109)	240.0	TIR
TPG	R Tlopa Guerrero, Mexico	17 33 38.4 N (17.5607)	98 33 19.8 W (98.5555)	1100.0	UNM
TOTN	Tranquillity Tennessee, U.S.A. opened 19860716.	35 30 57.6 N (35.5160)	84 43 33.0 W (84.7258)	260.0	TVA
TREF	Trevesse Provence-Cote d'Azur, France	43 37 26.8 N (43.6241)	5 23 02.0 E (5.3839)	460.0	STR
TRXW	Triangle-X Ranch Wyoming, U.S.A. opened 198601.	43 44 57.3 N (43.7493)	110 33 36.5 W (110.5601)	2256.0	USBR
TTH	D Torodale Trig North Island, New Zealand opened 19870319.	39 32 28.8 S (39.5413)	176 49 34.2 E (176.8262)	120.0	WELH
TU1	Tuscania Lazio, Italy	42 25 07.0 N (42.4186)	11 52 28.0 E (11.8744)	166.0	ROM
TULC	R Monteloro Colombia	...	...	...	UVC
TUU	R Turnu Rosu Romania opened 19880615.	45 39 09.0 N (45.6525)	24 16 23.0 E (24.2731)	519.0	BUC
TVGG	Rocky Mountain Net Georgia, U.S.A.	34 22 37.9 N (34.3772)	85 18 08.3 W (85.3023)	323.0	ATL
TWB	Tillmans-Whites Bay South Carolina, U.S.A. opened 19880301.	33 06 54.0 N (33.1150)	80 06 09.0 W (80.1025)	9.0	USGS
TWW	Teonoway Washington, U.S.A. opened 198610.	47 08 17.2 N (47.1381)	120 52 04.5 W (120.8679)	1046.0	SEA
TZR	Tezpur Assom, India	26 38 .. N (26.6333)	92 48 .. E (92.8000)	...	JHI
UJZ	R .. Chiapas, Mexico	15 04 30.0 N (15.0750)	92 05 00.0 W (92.0833)	...	UNM
UKAO	RD Ukolunda Queensland, Australia opened 19840328. QDM code UKA.	20 53 56.4 S (20.8990)	147 07 37.2 E (147.1270)	200.0	QDM
UM1	.. India	25 31 .. N (25.5167)	92 44 .. E (92.7333)	...	JHI
UMT	Umtata Cape Province, South Africa opened 198808.	31 35 00.0 S (31.5833)	28 45 18.0 E (28.7550)	800.0	PRE
UON	R La Union Guerrero, Mexico	17 58 12.0 N (17.9700)	101 48 54.0 W (101.8150)	...	UNM
USBR	F U.S. Bureau of Reclamation, Denver	...	...	...	...
USH	RD Wushi Xinjiang, China (Mainland)	41 12 .. N (41.2000)	78 36 .. E (78.6000)	...	...
UTMA	University of Tennessee at Martin Tennessee, U.S.A. opened 198511. Station moved from UTM.	36 17 34.8 N (36.2930)	88 58 33.6 W (88.9760)	108.0	...

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Code	Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
UTSU	R Utsunomiya Tachigi, Honshu, Japan opened 196202. UTSU code UTU.	36 32 49.3 N (36.5470)	139 55 01.4 E (139.9171)	110.0	UTSU
UVC	F Universidad del Valle, Cali				
UYO	Union Valley Oklahomo, U.S.A. opened 19890415.	34 10 00.0 N (34.1667)	94 27 31.7 W (94.4588)	231.0	TUL
UZD	Uzd Hungary opened 1987.	46 35 33.0 N (46.5925)	18 34 54.5 E (18.5818)	207.0	BUD
VACR	Volcan Arenol Costa Rica opened 19860429.	10 28 22.8 N (10.4730)	84 40 39.0 W (84.6775)	360.0	HDC
VASS	Vossouros Rio de Janeiro, Brazil opened 1988.	22 23 58.0 S (22.3994)	43 39 08.0 W (43.6522)	448.0	RDJ
VBY	Vinica-Bojanci Slavenija, Yugoslavia opened 19861030.	45 30 16.2 N (45.5045)	15 15 23.8 E (15.2566)	259.0	LJU
VC1	Catopaxi 1 Ecuador opened 198809.	0 38 20.2 S (0.6389)	78 24 02.4 W (78.4007)	4064.0	QUI
VDF	R Valdeflores Oaxaco, Mexico	16 45 39.6 N (16.7610)	96 49 19.2 W (96.8220)	...	UNM
VEA	Veano Emilia-Romagna, Italy	44 53 21.5 N (44.8893)	9 37 08.4 E (9.6190)	...	GEN
VFP	Flag Point Oregon, U.S.A. opened 198010.	45 19 05.0 N (45.3181)	121 27 54.3 W (121.4651)	1716.0	SEA
VGP	..... Mexico	17 21 25.8 N (17.3572)	93 36 50.4 W (93.6140)	...	UNM
VHTN	C Van Hill Tennessee, U.S.A. 19860114-19860323.	36 23 56.4 N (36.3990)	82 48 07.2 W (82.8020)	658.0	TVA
VIH	Vielha Spain opened 1986.	42 37 43.8 N (42.6288)	0 46 12.0 E (0.7700)	1700.0	MRB
VILF	Villemus Provence-Cote d'Azur, France	43 51 09.0 N (43.8525)	5 42 55.1 E (5.7153)	770.0	STR
VLL	Laurance Lake Oregon, U.S.A. opened 198010.	45 27 48.0 N (45.4633)	121 40 45.0 W (121.6792)	1195.0	SEA
VMO	R Villa Marinera Oaxaco, Mexico	15 51 04.2 N (15.8512)	97 03 49.8 W (97.0638)	3.0	UNM
VNV	R Volcan Villarrica Cautin, Chile	39 22 09.0 S (39.3692)	71 57 10.0 W (71.9528)	...	...
VPT	R Volcan Platanar Costa Rica	.....	.....	...	HDC
VSM	Volcan San Miguel El Salvador	13 25 41.0 N (13.4281)	88 16 27.0 W (88.2742)	2129.0	SSS
VSS	Volcan San Salvador El Salvador	13 44 30.0 N (13.7417)	89 14 30.0 W (89.2417)	1250.0	SSS
VTU	R Volcan Turrialba Costa Rica	.....	.....	...	HDC
VVI	Villo di Villo Veneto, Italy opened 19870610.	45 58 58.4 N (45.9829)	12 25 25.0 E (12.4236)	515.0	ERC
WA4	Burakin Western Australia, Australia opened 19860422.	30 36 07.2 S (30.6020)	117 13 30.0 E (117.2250)	320.0	AUST
WAH2	Wahlake Slope Washington, U.S.A. SEA code WA2	46 45 24.2 N (46.7567)	119 33 45.5 W (119.5626)	230.0	SEA
WAJH	Al Wajh Saudi Arabia opened 19880620.	26 10 30.0 N (26.1750)	36 33 43.2 E (36.5620)	75.0	RYD
WARB	Warburton Western Australia, Australia opened 19870628.	26 11 01.7 S (26.1838)	126 38 34.8 E (126.6430)	460.0	AUST
WBAO	Buaroba No. 3 Queensland, Australia opened 19840706. ODM code WBA.	27 21 09.7 S (27.3527)	152 18 29.5 E (152.3082)	...	ODM
WCBC	Windy Craggy British Columbia, Canada opened 19880610.	59 37 40.1 N (59.6278)	137 42 57.6 W (137.7160)	750.0	OTTR
WEGH	Weijo Ghana opened 1987.	5 35 36.0 N (5.5933)	0 19 37.0 W (0.3269)	180.0	KUK
WELH	F DSIR Hawkes Bay Network, Wellington, NZ				
WEN	Wenatchee Washington, U.S.A.	47 31 46.2 N (47.5295)	120 11 39.0 W (120.1942)	1061.0	SEA
WG2	Wallula Gap Washington, U.S.A. opened 198704.	46 01 50.2 N (46.0306)	118 51 20.0 W (118.8556)	511.0	SEA
WHH	D Whakatou North Island, New Zealand opened 19870301.	38 53 04.2 S (38.8845)	176 29 42.0 E (176.4950)	921.0	WELH
WIGH	Winnebo Ghana opened 1987.	5 21 49.0 N (5.3636)	0 37 08.0 W (0.6189)	64.0	KUK

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WMBO	Mount Brisbane Queensland, Australia opened 19770318. ODM code WMB.	27 06 55.8 S (27.1155)	152 33 00.7 E (152.5502)	160.0	ODM
WMZ	Williams Arizona, U.S.A. opened 19860131.	35 09 29.0 N (35.1581)	112 19 13.0 W (112.3203)	2018.0	FLAG
WNS	Wenas Washington, U.S.A.	46 42 37.0 N (46.7103)	120 34 30.0 W (120.5750)	1000.0	SEA
WON	RD Wolverton North England, United Kingdom	51 19 39.0 N (51.3275)	1 12 03.0 W (1.2008)	104.0	BKN
WPMO	R Pine Mountain Queensland, Australia opened 19770318. ODM code WPM.	27 32 08.5 S (27.5357)	152 44 07.8 E (152.7355)	35.0	ODM
WPO	West Portland Oregon, U.S.A. opened 198610.	45 34 24.0 N (45.5733)	122 47 22.4 W (122.7896)	334.0	SEA
WPW	White Pass Washington, U.S.A.	46 41 53.4 N (46.6982)	121 32 48.0 W (121.5467)	1250.0	SEA
WRCO	Reedy Creek No. 5 Queensland, Australia opened 19840711. ODM code WRC.	27 11 14.6 S (27.1874)	152 39 47.2 E (152.6631)	...	ODM
WSSR	Wesser Bald North Carolina, U.S.A. opened 198511.	35 16 40.2 N (35.2778)	83 34 40.8 W (83.5780)	1390.0	TEIC
WTGO	R Toogoolawah Queensland, Australia opened 19770318. ODM code WTG.	27 08 44.9 S (27.1458)	152 19 59.9 E (152.3333)	130.0	ODM
WTRQ	Thallon Road Queensland, Australia opened 19840523. ODM code WTR.	27 31 43.0 S (27.5286)	152 27 52.2 E (152.4645)	...	ODM
WTV	Waterville Washington, U.S.A. SEA code WAT.	47 41 55.0 N (47.6986)	119 57 15.0 W (119.9542)	900.0	SEA
WTX	Workman Tunnel New Mexico, U.S.A.	34 04 19.8 N (34.0722)	106 56 45.0 W (106.9458)	1555.0	SNM
WWHO	Wivenhoe Hill No. 3 Queensland, Australia opened 19840712. ODM code WWH.	27 22 12.7 S (27.3702)	152 35 13.9 E (152.5872)	...	ODM
XPKP	F (phase code designation)				
XPP	F (phase code designation)				
XSCS	F (phase code designation)				
XSS	F (phase code designation)				
YAKW	Yokima Washington, U.S.A. SEA code YAK.	46 31 15.8 N (46.5211)	120 31 45.2 W (120.5292)	619.0	SEA
YEL	Yellow Rock Washington, U.S.A.	46 12 35.0 N (46.2097)	122 11 16.0 W (122.1878)	1750.0	SEA
YKB0	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 36 21.4 N (62.6059)	114 36 18.1 W (114.6050)	221.6	OTTR
YKB1	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 24 08.6 N (62.4024)	114 36 19.6 W (114.6054)	172.5	OTTR
YKB2	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 25 29.2 N (62.4248)	114 36 19.5 W (114.6054)	180.0	OTTR
YKB3	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 26 55.0 N (62.4486)	114 36 18.7 W (114.6052)	187.6	OTTR
YKB4	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 28 15.9 N (62.4711)	114 36 17.8 W (114.6049)	192.9	OTTR
YKB5	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 35.6 N (62.4932)	114 36 19.1 W (114.6053)	196.7	OTTR
YKB6	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 30 59.5 N (62.5165)	114 36 18.0 W (114.6050)	202.6	OTTR
YKB7	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 32 20.4 N (62.5390)	114 36 19.0 W (114.6053)	204.4	OTTR
YKB8	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 33 41.6 N (62.5616)	114 36 16.9 W (114.6047)	197.9	OTTR
YKB9	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 34 58.6 N (62.5829)	114 36 13.9 W (114.6039)	213.1	OTTR
YKR0	U Yellowknife Array Northwest Territories, Canada 1962-197605.	62 29 35.2 N (62.4931)	114 30 30.8 W (114.5086)	204.9	OTTR
YKR1	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 33.8 N (62.4927)	114 56 44.1 W (114.9456)	170.0	OTTR
YKR2	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 34.0 N (62.4928)	114 53 47.1 W (114.8964)	175.0	OTTR
YKR3	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 34.7 N (62.4930)	114 50 51.8 W (114.8477)	176.8	OTTR

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YKR4	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 33.9 N (62.4927)	114 47 58.2 W (114.7995)	173.4	OTTR
YKR5	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 35.8 N (62.4933)	114 44 59.8 W (114.7499)	182.9	OTTR
YKR6	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 36.0 N (62.4933)	114 42 04.9 W (114.7014)	192.2	OTTR
YKR7	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 36.1 N (62.4934)	114 39 13.2 W (114.6537)	198.9	OTTR
YKR8	(Alternate Abbreviation for YKB5)				
YKR9	R Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 35.6 N (62.4932)	114 33 20.7 W (114.5558)	201.1	OTTR
Y00	R Oaxaca, Mexico	17 45 00.0 N (17.7500)	97 49 30.0 W (97.8250)	1600.0	UNM
YPE	Yupe El Salvador	14 07 18.0 N (14.1217)	89 40 50.0 W (89.6806)	1581.0	SSS
YRH	Rhiw Wales, United Kingdom opened 1984.	52 50 00.6 N (52.8335)	4 37 44.0 W (4.6289)	300.0	BGS
YYYY	Yankie New Guinea, Papua New Guinea opened 19880602.	6 14 31.2 S (6.2420)	145 57 57.6 E (145.9660)	1200.0	PMC
ZA1	Zafferana Sicilia, Italy	37 41 07.0 N (37.6853)	15 05 24.0 E (15.0900)	875.0	
ZAC	R Zacoltic Chiapas, Mexico	17 15 00.0 N (17.2500)	92 45 39.6 W (92.7610)	380.0	IIM
ZHGX	Zihuatenejo Guerrero, Mexico Strong-motion station.	17 36 30.0 N (17.6083)	101 27 54.0 W (101.4650)	...	LJC
ZLA	Zurich--Lagern Switzerland opened 198607.	47 28 55.6 N (47.4821)	8 23 21.3 E (8.3892)	780.0	ZUR
ZOU	D Zaufplan Friuli-Venezia Giulia, Italy opened 19821017.	46 33 24.0 N (46.5567)	12 58 24.0 E (12.9733)	1896.0	TRI
ZZA	R Chiapas, Mexico	15 08 .. N (15.1333)	92 19 .. W (92.3167)	...	UNM

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