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CENTRE FOR SEISMOLOGY  
EUROPE-MEDITERRANEAN



# BULLETIN OF THE SLOVAK SEISMOGRAPHIC STATIONS

BRATISLAVA  
ŠROBÁROVÁ  
HURBANOVO  
AND

SKALNATÉ PLESO  
FOR THE YEAR 1975



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Bulletin  
of the Slovak Seismographic  
Stations Bratislava, Šrobárová,  
Hurbanovo and Skalnaté Pleso  
for the Year 1975

Editor

Klára Mrázová

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## I n t r o d u c t i o n

The seismological bulletin for the year 1975 contains the results of the interpretation of records from the network of seismograph stations on the territory of Slovakia: Bratislava /central station/, Šrobárová, Hurbanovo and Skalnaté Pleso.

The records from the network are collected at the Geophysical Institute of the Slovak Academy of Sciences in Bratislava, where they are analysed. The preliminary results of the interpretation were published in ten-day preliminary bulletins for stations Bratislava, Šrobárová and Skalnaté Pleso. The ten-day preliminary bulletins were exchanged with about twenty seismological institutions from various parts of the world. The times of the onsets of the important earthquake phases appearing on the Bratislava and Šrobárová seismograms were sent to the seismological centre in Strasbourg twice a week by telex. The earthquake data obtained from the Bratislava and Šrobárová seismograms were also punched on cards which were regularly supplied to the International Seismological Centre in Edinburgh.

This annual bulletin contains the final analysis of the records and the completed and revised parameters of earthquakes and explosions. The sources of information regarding epicentres, origin times, depth of foci and shock magnitudes, frequently quoted are as follows: Bulletin of ISC, Vol. 12, 1975; Bulletin of BCIS, 1975; Quarterly Bulletin of the Academy of Sciences of the USSR, 1975. The time standard used throughout is Greenwich Mean Time.

The epicentres of almost all earthquakes or explosions occurring in Czechoslovakia were determined at the Geophysical Institute of the Czechoslovak Academy of Sciences in Prague or at the Geophysical Institute of the Slovak Academy of Sciences in Bratislava.



The processing of data and numerical calculations were carried out according to a program compiled by Mrs. K. Mrázová, using the computer CDC 3300 in the Computing Centre, Bratislava.

For calculating the surface-wave magnitudes the standard calibrating functions [5] were used. Station corrections were ignored, as were the calculations of surface-wave magnitudes at distances less than  $6^\circ$ . Surface wave magnitudes were calculated for earthquakes with focal depths less or equal 80 km. The values of body-wave magnitudes from P waves in the distance interval  $[16^\circ, 100^\circ]$  were calculated on the basis of Q functions [6]. The values of the amplitudes of short period P waves registered on the vertical component are given in nanometers while the values of AEW and ANS for calculating surface-wave magnitudes are given in micrometers.

An earthquake magnitude formula, giving the closest possible fit to surface-wave magnitudes determined by NEIS was developed for the station Šrobárová [8]. The value of station correction for Šrobárová is  $-0.22$  and the standard error  $\pm 0.03$ . For the determination of magnitudes the station correction was not taken into consideration.

For the measurements of microseisms the records of the Mainka horizontal seismograph at the station Hurbanovo were used. The maximum microseismic trace amplitudes were measured on the NS and EW components four times per day at 0 h, 06 h, 12 h, and 18 h GMT. Using a short computer program the trace amplitudes were converted into ground amplitudes /in micrometers/ and tabulated. The period was determined by measuring the length to 0.1 mm of 2-4 whole periods in a well developed maximum group. The periods are given in whole seconds. The trace amplitudes were measured from peak to peak, halved and the corresponding ground motion given to  $0.1 \mu\text{m}$ .

In preparing this bulletin the author has been in different parts assisted by Mrs. N. Hupková, Mrs. Z. Ferechová, Mrs. A. Stranovská and Mrs. J. Šajgalíková. The investigation of macroseismic observations of earthquakes felt on the territory of Slovakia was carried out by Mr. I. Brouček.

The content of this bulletin is in accordance with the recommendations given in [7].

The program has been written in USASI FORTRAN/MASTER [9]. It consists of one main program and 11 procedures. The theoretical travel-time tables [1-4] of important phases (p. 12, 13) are stored on a mass storage file; each phase /except the phases Pg, Pb, Pn and Sg, Sb, Sn/ requires 14 blocks /the block size being 1536 characters/, one block for the case of surface focus and 13 blocks for focal depths expressed in fractions of an Earth's radius / $R = 6338 \text{ km}$ /, measured from the base of the crust /Table 1/. The observed arrival times as well as amplitudes and periods of surface and body waves for all stations were punched on 80 column punched cards. When all punched cards were accumulated for the whole year, they were transferred and stored on a mass storage file.

The program contains the following procedures:

- "DIAZ" for calculating the epicentral distances and azimuths of the observing stations
- "USP" for arranging the epicentral distances into ascending order
- "PAG" for the lay-out of the Bulletin
- "HL" converts the depth of foci given in km into fraction of Earth's radius and according this value is then determined the number of block on the mass storage file, where the theoretical travel-times are stored
- "QML" for determination of surface-wave magnitudes according to the "Prague" formula /Vaněk et al., 1962/. Station corrections are ignored, as are observations at distances less than  $6^\circ$ . MLH is calculated only when the focal depth  $h < 80 \text{ km}$ .



"QMPV" for calculation of body-wave magnitudes on the basis of  $Q$  functions [6], stored on mass storage file in digital form. Body-wave magnitudes are calculated for the distance range  $[16^\circ, 100^\circ]$

Subroutine designated as "PHI", for automatic phase identification. According to this subroutine the travel-time for each phase is compared with all possible theoretical travel-times. From all possible phases it is determined and printed that one, which has the minimum value of  $|O-C|$ . In the case when the minimum value of  $|O-C| \geq 20.0$  s the observed phase is printed without phase identification, i.e. only the observed time is printed and designated by letter i or e. A disadvantage of this subroutine is, that in cases when no other phase fits better according to  $|O-C|$ , there are printed two identical phases /except the P phase/ e.g. two pP phases. In these cases it should be considered as a real phase that one which has smaller residual  $|O-C|$ .

"PHI1" distance range  $[8^\circ, 105^\circ)$

"PHI2"  $[0^\circ, 8^\circ)$  and  $h \leq 33$  km, or when there is no depth determination

"PHI3"  $\Delta \geq 110^\circ$

"PHI4"  $\Delta < 8^\circ$  and  $h > 33$  km

"PHI5"  $105^\circ \leq \Delta < 110^\circ$

The listing of the whole program may be obtained on request from the author.

List of Seismic Phases



P h a s e		
In Bulletin	Usual	
PN, SN	Pn, Sn	longitudinal and transverse waves refracted below the crust
PG, SG	Pg, Sg	waves in the upper crust
PB, SB	Pb, Sb	waves in the lower crust
P, S	P, S	direct longitudinal or transverse waves propagating in the mantle
PKIKP	PKIKP	direct longitudinal wave propagating through the inner core, travel-time branch DF [1]
PKHKP	PKHKP	direct longitudinal wave refracted in the intermediate zone between the inner and outer core; phase symbol according to Bolt [4], travel-time branch GH
PKP2	PKP2	direct longitudinal wave propagating only through the outer core, travel-time branch AB [1]
PP	PP	P waves reflected once at the Earth's surface
PCP	PcP	P waves reflected at the Earth's core boundary
SCS	ScS	S waves reflected at the Earth's core boundary
SKS	SKS	S waves passing through the core as P waves
SKSDE	SKS	transformed back into S waves in the mantle;



the letter DE designates the branch DE according to [1]

PKSAB PKS P wave transformed into S on the refraction when leaving the core; AB, BC and DF designates the branches according to [1]

PKSBC PKS

KPSDF PKS

SKPAB SKP S wave transformed into P on the refraction when leaving the core; AB, BC and DF designates the branches according to [1]

SKPBC SKP

SKPDF SKP

PS, SP PS, SP P and S waves reflected and transformed at the Earth's surface

SS SS S waves reflected once at the Earth's surface

AP pP P waves reflected from the surface as P waves, supposing deep focus earthquake

XP sP S waves reflected from the surface as P waves, supposing deep focus earthquake

XS sS S waves reflected from the surface as S waves, supposing deep focus earthquake

APKP pPKP PKP waves reflected from the surface, supposing deep-focus earthquake

APKIKP pPKIKP PKIKP waves reflected from the surface, supposing deep-focus earthquake

APKIKP pPKP2 PKP2 waves reflected from the surface, supposing deep-focus earthquake

APKIKP pPKHKP PKHKP waves reflected from the surface, supposing deep-focus earthquake

PDIF Pdif P waves diffracted on the core boundary

PKPEX - PKIKP waves /extrapolation of travel-times for the distance range [105, 110)/

LMH, LMV Lm waves of maximum amplitude in the surface wave group, on the horizontal or vertical component

Table 1



Number of blocks on mass storage file	Phase	Distance range	Transformed distance range
1 - 14	P	0 - 105	1 - 106
15 - 28	PKIKP	106 - 180	1 - 75
29 - 42	PKP2	143 - 180	1 - 38
43 - 56	PKHKP	125 - 156	1 - 32
57 - 70	S	0 - 107	1 - 108
71 - 84	SKS	62 - 180	1 - 118
85 - 98	SKSDE	99 - 133	1 - 35
99 - 112	PP	0 - 180	1 - 181
113 - 126	pP	1 - 105	1 - 105
127 - 140	sP	1 - 105	1 - 105
141 - 154	PcP	0 - 100	1 - 101
155 - 168	PS	44 - 147	1 - 104
169 - 182	SP	44 - 147	1 - 104
183 - 196	SKPAB	131 - 148	1 - 18
197 - 210	SKPBC	130 - 140	1 - 11
211 - 224	SKPDF	104 - 180	1 - 77
225 - 238	PKSAB	131 - 148	1 - 18
239 - 252	PKSBC	130 - 140	1 - 11
253 - 266	PKSDF	104 - 180	1 - 77
267 - 280	SS	0 - 180	1 - 181
281 - 294	ScS	0 - 100	1 - 101
295 - 308	sS	19 - 100	1 - 82
309	Pg	0 - 8	1 - 9
310	Pb	0 - 8	1 - 9
311	Pn	0 - 8	1 - 9
312	Sg	0 - 8	1 - 9
313	Sb	0 - 8	1 - 9
314	Sn	0 - 8	1 - 9



Table 1 /Continued/

Number of blocks on mass storage file	Phase	Distance range	Transformed distance range
315 - 328	Qfu	16 - 100	1 - 85
329	Sigfu	6 - 180	1 - 175
330 - 343	HKPKP	0 - 44	1 - 45 +++
344 - 357	pPKIKP	106 - 180	1 - 75
358 - 371	pPKP2	143 - 180	1 - 38
372 - 385	pPKHKP	125 - 156	1 - 32
386 - 399	Pdif	105 - 110	1 - 6
400 - 413	PKPEX	105 - 110	1 - 6


## Remarks:

The line marked +++, here the interval  $\langle 0 - 44 \rangle$  is not the distance range but  $dt/d\Delta$ , as HKPKP means the depth corrections for PKP.

Sigfu ... the calibration functions /Vaněk et al., 1962/.

Qfu ... Q functions [6].

## List of Abbreviations Used in this Bulletin



International  
Seismological  
Centre

A	length of recording arm
Az	azimuth of station with respect to the epicentre
Dc	epicentral distance
Depth	depth of focus in km
Dg	damping constant of the galvanometer
Ds	damping constant of the seismometer
E	poorly distinguishable beginning of a phase
$\xi : 1$	damping ratio
H	origin time
I	impulsive beginning of a phase
K	characteristics of microseisms:
1	disturbance showing microseisms in groups
2	continuous disturbance
3	disturbance of a mixed and irregular character
0	no microseismic movement
0.0	very weak microseismic movement, amplitude less than 0.1 micrometer
TT	disturbance could not be measured because of earthquake
V	disturbance could not be measured because of gusts of wind
...	disturbance could not be measured for other reasons
Kg	moment of inertia of the galvanometer
Ks	moment of inertia of the seismometer
l	reduced pendulum length
MB	body-wave magnitude given by ISC
MLH	surface-wave magnitude
MPV	body-wave magnitude calculated from short period P waves
r	max. deviation due to friction
$\sigma^2$	coupling coefficient



Tg free period of the galvanometer  
 Ts free period of the seismometer  
 Vo static magnification  
 Vm max. dynamic magnification  
 + and - compressional or dilatational motion in a longitudinal wave  
 NE nuclear explosion

Station Instrumentation



Coordinates of the Seismographic Stations

Station	Latitude	Longitude	Altitude	Lithologic foundation
Bratislava	48°10'06"N	17°06'18"E	270 m	Granite
Šrobárová	47°48'48"N	18°18'48"E	150 m	Bed of sand
Hurbanovo	47°52'25"N	18°11'34"E	115 m	Bed of sand
Skalnaté Pleso	49°11'20"N	20°14'32"E	1772 m	Granite

Constants for the Year 1975

HURBANOVO

"MAINKA", horizontal seismograph, M = 210 kg, air damping, mechanical registration

Month	Component	Ts [s]	Vo	r [mm]	ε:1	Paper speed
January-June	N-S	8.1	50.0	0.9	3.6	30 mm/min
	E-W	9.8	51.0	2.0	3.2	
June-December	N-S	8.1	47.1	0.7	3.6	30 mm/min
	E-W	9.2	56.0	1.7	3.4	



## BRATISLAVA

"VEGIK", electromagnetic seismograph with galvanometric registration 1975, Jan. 01 - Dec. 31

Component	$T_s$ [s]	$T_g$ [s]	$D_s$	$D_g$	$\sigma^2$	A [m]	$l$ [m]	$K_1$ [kg m <sup>2</sup> ]	$K_2$ [kg m <sup>2</sup> x 10 <sup>-8</sup> ]	Paper speed
Z	1.4	1.27	0.57	1.42	0.25	0.5	0.094	0.01	0.081	15 mm/min
N-S	1.27	1.15	0.50	1.52	0.085	0.5	0.0934	0.0101	0.077	15 mm/min
E-W	1.27	1.15	0.51	1.51	0.092	0.5	0.0940	0.0098	0.08	15 mm/min

## ŠROBÁROVÁ

"KIRNOS", electromagnetic seismograph with galvanometric registration, class "C" according to [7]  
1975, Jan. 01 - Oct. 31

Component	$T_s$ [s]	$T_g$ [s]	$D_s$	$D_g$	$\sigma^2$	A [m]	$l$ [m]	$K_1$ [kg m <sup>2</sup> ]	$K_2$ [kg m <sup>2</sup> x 10 <sup>-8</sup> ]	Paper speed
Z	20.5	1.20	0.46	7.27	0.204	0.98	0.488	0.362	0.493	15 mm/min
N-S	23.0	1.20	0.41	7.68	0.219	0.98	0.488	0.358	0.502	15 mm/min
E-W	25.3	1.16	0.46	7.81	0.293	0.98	0.499	0.358	0.470	15 mm/min

## ŠROBÁROVÁ

"KIRNOS", electromagnetic seismograph with galvanometric registration, class "C" according to [7]  
1975, Nov. 01 - Dec. 31

Component	$T_s$ [s]	$T_g$ [s]	$D_s$	$D_g$	$\sigma^2$	A [m]	$l$ [m]	$K_1$ [kg m <sup>2</sup> ]	$K_2$ [kg m <sup>2</sup> x 10 <sup>-8</sup> ]	Paper speed
Z	20.9	1.16	0.48	7.85	0.234	0.98	0.488	0.362	0.425	15 mm/min
N-S	21.7	1.20	0.42	7.41	0.245	0.98	0.488	0.358	0.409	15 mm/min
E-W	24.8	1.16	0.50	7.75	0.264	0.98	0.499	0.358	0.406	15 mm/min



SKALNATE PLESO

"VEGIK", electromagnetic seismograph with galvanometric registration

1975, Jan. 01 - Dec. 31

Component	T <sub>s</sub> [s]	T <sub>g</sub> [s]	D <sub>s</sub>	D <sub>g</sub>	$\sigma^2$	V <sub>m</sub> /T <sub>m</sub> = 1.3/	Paper speed
Z	1.9	1.9	0.97	0.90	0.12	4851.5	60 mm/min



List of Quoted Agencies Reporting Epicentral Parameters

Code	Agency
ATH	Athens, Seismological Institute, National Observatory, Athens, Greece
BCIS	Bureau Central International de Seismologie, Strasbourg, France
BRA	Bratislava, Geophysical Institute, Slovak Academy of Sciences, Bratislava, Czechoslovakia
ISC	International Seismological Centre, Newbury, United Kingdom
LJU	Ljubljana, Astronomical and Geophysical Observatory, University of Ljubljana, Ljubljana, Yugoslavia
MOS	Academy Of Sciences of the USSR, Institute of Physics of the Earth, Moscow, USSR
NEIS	National Earthquake Information Service, Denver, Colorado, USA
PRU	Průhonice, Geophysical Institute, Czechoslovak Academy of Sciences, Prague, Czechoslovakia
UPP	Uppsala, Seismological Institute, Uppsala, Sweden
USAEC	US Atomic Energy Commission, Washington, USA
VIE	Vienna, Zentralanstalt für Meteorologie und Geodynamik, Wien, Austria
WAR	Warsaw, Geophysical Institute of the Polish Academy of Sciences, Warsaw, Poland



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## Earthquake Observations

at the Stations Bratislava  
Šrobárová  
Hurbanovo and  
Skalnaté Pleso  
for the Year 1975



No.	Date	Stat. Code	Phase	GMT			RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m	s		A	T	A	T	A	T					
1	JAN 1	SRO BRA	IP IS IMH IP I	0 34 0 37 0 41 0 34 0 35 0 36	7.0 21.0 0.0 16.0 25.0 31.0	3.9 7.0 2.0		5.7	16.0					5.0	17.42 18.30	123.10 121.78	Jordan-Syria Region 36.67 N 36.49 E H = 0 30 1.3 Depth = 35 km MB = 4.8 /ISC/	
2	JAN 1	BRA	IP IAP IXP	4 6 4 6 4 6	16.0 37.0 50.0	-1.7 3.2 9.5									69.76	353.40	Southern Alaska 61.92 N 149.72 W H = 3 55 11.8 Depth = 58 km MB = 5.9 /ISC/	
3	JAN 2	BRA	IP I I	9 10 9 11 9 12	53.0 36.0 4.0	0.3									77.38	30.18	Kurile Islands 46.83 N 151.51 E H = 8 58 56.2 Depth = 12 km MB = 5.4 /ISC/	
4	JAN 2	BRA	IP	19 43	25.0	7.0									74.27	22.58	Off East Coast of Kamohatka 52.97 N 159.44 E H = 19 31 46.0 Depth = 64 km MB = 5.5 /ISC/	
5	JAN 6	BRA	E	10 0	48.0												No determination of epicentre	
6	JAN 6	BRA	IP	19 22	12.0	-0.2									82.54	54.13	Ryukyu Islands 29.20 N 130.32 E H = 19 9 54.1 Depth = 57 km MB = 5.7 /ISC/	
7	JAN 7	BRA	E	8 58	33.0												No determination of epicentre	
8	JAN 8	SRO BRA	IPCP IAP IAP IPP IS IP IPCP I IPP IS	2 11 2 11 2 11 2 15 2 22 2 11 2 11 2 13 2 15 2 22	36.0 46.0 58.0 12.0 10.0 35.0 44.0 29.0 11.0 17.0	-0.6 -8.6 3.4 8.9 1.2 -3.4 3.7 1.2 0.3									87.74 88.58	96.91 96.02	Southern Sumatra 2.99 S 101.68 E H = 1 58 52.5 Depth = 73 km MB = 5.9 /ISC/	

9	JAN 8	SRO HRB BRA	IP I IS I IMH I I IP IAP I I IS I IMH	19 35 19 36 19 37 19 37 19 39 19 38 19 39 19 35 19 35 19 36 19 37 19 38 19 41	0.0 22.0 0.0 0.0 0.0 40.4 44.4 7.0 16.0 52.0 34.0 16.0 7.0 0.0	-0.3 6.2 -2.0 1.4 6.7 2.4 2.7 -11.9		21.0	16.0	25.0	16.0				10.08 5.3 10.16 10.71	160.11 159.71 155.84	Greece 38.24 N 22.65 E H = 19 32 34.1 Depth = 26 km MB = 5.4 /ISC/
10	JAN 8	SRO BRA	EP I EP ES LMH	20 0 20 3 20 0 20 2 20 4	46.0 26.0 55.0 42.0 0.0	2.4 2.7 -11.9									10.24 10.87	159.91 155.70	Greece 38.10 N 22.75 E H = 19 58 16.0 Depth = 33 km MB = 4.5 /ISC/
11	JAN 9	SRO BRA	IP I I I IP IXP IPP E	23 14 23 15 23 15 23 22 23 14 23 14 23 15 23 17	26.0 12.0 38.0 30.0 35.0 47.0 7.0 35.0	-1.1 -0.5 4.3 7.0									20.72 21.54	92.71 92.64	Eastern Caucasus 43.01 N 47.11 E H = 23 9 45.1 Depth = 18 km MB = 5.2 /ISC/
12	JAN 9	BRA	EP	23 44	56.0	0.6									21.54	92.67	Eastern Caucasus 43.00 N 47.10 E H = 23 40 6.3 Depth = 27 km MB = 4.8 /ISC/
13	JAN 10	BRA	EP	1 14	11.0	0.1									21.51	92.79	Eastern Caucasus 42.97 N 47.04 E H = 1 9 23.1 Depth = 36 km MB = 4.6 /ISC/
14	JAN 10	BRA	IP IPP	1 34 1 34	11.0 35.0	-0.7 -1.4									21.54	92.64	Eastern Caucasus 43.01 N 47.11 E H = 1 29 23.0 Depth = 30 km MB = 4.9 /ISC/
15	JAN 11	BRA SRO	I I E I	15 56 15 57 15 57 15 57	7.0 10.0 43.0 50.0										5.09 5.69	242.45 250.25	Northern Italy 45.63 N 10.67 E H = 15 54 27.7 Depth = 45 km /ISC/



No.	Date	Stat. Code	Phase	h	GMT	RES	Z			E-W			N-S		MLH	Delta	Azimuth	Remarks
							A	T		A	T		A	T				
16	JAN 12	BRA	EP	4	44 9.0	-0.9									19.24	103.66	Turkey 40.68 N 42.00 E H = 4 39 46.9 Depth = 47 km MB = 4.8 /ISC/	
17	JAN 14	BRA	EPP	20	8 9.0	11.2									108.90	75.81	Banda Sea 4.93 S 130.09 E H = 19 49 5.0 Depth = 82 km MB = 6.0 /ISC/	
18	JAN 17	SRO	IPKIKP I ISKPDF	9 50 11.0 9 51 18.0 9 53 29.0		3.4 -1.9									148.32	23.85	Tonga 17.86 S 174.57 W H = 9 30 36.6 Depth = 99 km MB = 5.8 /ISC/	
19	JAN 17	BRA	IP I I E	10 20 5.0 10 21 17.0 10 22 17.0 10 26 11.0													No determination of epicentre	
20	JAN 17	BRA	EPP I	10 46 29.0 10 47 8.0		-7.7									104.78	77.51	Ceram Sea 2.86 S 126.16 E H = 10 28 7.0 Depth = 17 km MB = 5.6 /ISC/	
21	JAN 18	BRA	IAPKIKP IAPKP2 E	9 11 12.0 9 11 27.0 9 13 13.0		-2.5 -3.2									151.11	21.18	Tonga 20.54 S 173.63 W H = 8 51 18.7 Depth = 44 km MB = 5.6 /ISC/	
22	JAN 18	BRA	EAPKIKP EAPKP2	9 11 9.0 9 11 29.0		-5.6 -1.3									151.13	23.68	Austria 47.60 N 16.10 E H = 20 9 15.0 Depth = 0 km /ISC/	
23	JAN 19	SRO	IPG ISG E ESG	20 9 30.5 20 9 39.5 20 9 13.0 20 10 9.0		-2.2 -4.7 4.1									0.88 1.51	230.32 262.69	Kashmir-Tibet Border Region 32.39 N 78.50 E H = 8 1 58.0 Depth = 1 km MB = 6.2 /ISC/	

24	JAN 20	BRA	IP IPP	10 52 39.6 10 53 13.0		0.2 0.8									23.65	357.72	Norwegian Sea 71.70 N 14.21 E H = 10 47 29.1 Depth = 24 km MB = 5.0 /ISC/
25	JAN 20	SRO	IP IPCP IPP LMH IP IPCP I IPP	17 43 36.0 17 43 56.0 17 46 44.0 18 18 0.0 17 43 38.0 17 43 50.0 17 45 11.0 17 46 50.0		0.6 15.5 -4.2 1.1 8.2 -0.6									83.08 6.2 83.38	43.85 43.06	Near East Coast of Honshu 35.04 N 141.37 E H = 17 31 7.5 Depth = 6 km MB = 5.8 /ISC/
26	JAN 21	BRA	IPG	11 1 43.0													No determination of epicentre
27	JAN 24	BRA	EP I I I	16 34 59.0 16 35 8.0 16 36 38.0 16 37 14.0		-8.6									7.28	163.91	Albania 41.14 N 19.77 E H = 16 33 4.4 Depth = 46 km MB = 4.5 /ISC/
28	JAN 25	BRA	IP I IPP IPCP I ISGS LMH	2 21 26.0 2 22 29.0 2 24 47.0 2 21 36.0 2 22 32.0 2 32 20.0 3 9 0.0		-2.6 -10.6 1.4 0.8									87.94 88.80	278.38 279.28	Panama-Colombia Border Region 7.18 N 77.76 W H = 2 8 41.8 Depth = 40 km MB = 6.0 /ISC/
29	JAN 27	BRA	IPG	11 2 44.0													No determination of epicentre
30	JAN 29	BRA	IPG	12 10 28.0													No determination of epicentre
31	FEB 2	SRO	EP EPCP E EPP	7 36 49.0 7 36 53.0 7 37 49.0 7 39 45.0		1.0 -5.9 1.1									77.36	15.08	Near Islands 53.00 N 173.47 E H = 7 24 50.0 Depth = 2 km MB = 5.9 /ISC/
32	FEB 2	BRA	IP E E EPS LMH EP EPCP E ESKS LMH	8 55 36.0 8 57 12.0 8 58 57.0 9 6 12.0 9 45 0.0 8 55 36.0 8 55 45.0 8 57 9.0 9 5 40.0 9 45 0.0		0.4 8.2 -0.3 -2.3 -4.2									77.16 77.30	14.30 15.00	Near Islands 53.08 N 173.58 E H = 8 43 39.9 Depth = 10 km MB = 6.0 /ISC/



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z			E-W			N-S			MPV	MLH	Delta	Azimuth	Remarks		
				h	m		s	A	T		A	T		A	T							
33	FEB 2	BRA SRO	EPP ESKPDF EPP I	16	10	16.0	-3.5 -14.5 -0.3										113.89	15.12	Fiji Region 16.97 N 177.33 W H = 15 51 18.9 Depth = 363 km MB = 5.2 /ISC/			
				16	12	0.0																
				16	10	20.0																
				16	11	53.0																
34	FEB 2	SRO BRA	IP EP EPCP	16	29	14.0	2.1 -7.8 -7.5										77.69	34.93	Kurile Islands 44.41 N 147.01 E H = 16 17 28.8 Depth = 136 km MB = 5.3 /ISC/			
				16	29	5.0																
				16	29	15.0																
				1	16	2.0																
35	FEB 3	BRA SRO	EP EAP E EP EAP E	1	16	2.0	-1.7 -0.2 -5.9 -4.4										90.49	294.25	Mexico-Guatemala Border Region 15.68 N 91.72 W H = 1 3 26.6 Depth = 226 km MB = 5.3 /ISC/			
				1	16	59.0																
				1	20	29.0																
				1	16	2.0																
36	FEB 4	SPC SRO	EP EP IXP IPP E ES IP IAP IPP IXS IXS LMH	11	47	2.0	-1.2 0.3 -0.7 6.8 -3.6 -1.3 0.7 7.5 7.3													North-Eastern China 40.66 N 122.63 E H = 11 36 5.8 Depth = 16 km MB = 6.1 /ISC/		
				11	47	15.0																
				11	47	21.0																
				11	49	57.0																
37	FEB 6	BRA SRO	EP EP	18	2	40.0	3.2 -0.8										26.11	354.36	Greenland Sea 73.89 N 8.20 E H = 17 57 4.2 Depth = 33 km MB = 4.5 /ISC/			
				18	2	40.0																
				5	10	36.5																
				5	12	20.0																
38	FEB 7	SRO BRA	EPKIKP IPP EPS IPKIKP EPP	5	10	36.5	-0.1 3.6 1.2 1.4 0.9										122.25	61.85	New Britain Region 7.24 S 149.58 E H = 4 51 41.0 Depth = 9 km MB = 6.2 /ISC/			
				5	22	8.0																
				5	10	39.0																
				5	12	21.0																
39	FEB 7	BRA	IPG ISG	10	49	39.0													No determination of epicentre			
				10	49	42.0																
40	FEB 8	BRA	EPKIKP	3	30	49.0	2.7									147.50	21.10	Tonga 17.02 S 174.56 W H = 3 11 28.9 Depth = 199 km MB = 5.0 /ISC/				

41	FEB 8	BRA SRO	EPKIKP EAPKIKP EPKP2 EAPKIKP	11	50	34.0	2.0 8.9 -0.7 7.8										146.44	18.11	Tonga 15.60 S 173.17 W H = 11 31 0.4 Depth = 70 km MB = 5.1 /ISC/			
				11	51	1.0																
42	FEB 9	BRA	IP E	11	13	16.0	-0.5										77.59	13.91	Near Islands 52.77 N 174.38 E H = 11 1 18.0 Depth = 7 km MB = 5.3 /ISC/			
				11	14	1.0																
43	FEB 9	SRO	EXP ESS	12	40	36.0	1.4 2.5										10.74	144.80	Egean Sea 38.73 N 26.21 E H = 12 37 53.6 Depth = 11 km MB = 4.0 /ISC/			
				12	42	48.0																
44	FEB 9	SRO BRA	EP EP	14	43	32.0	-2.4 -1.4										58.95	123.32	Carlsberg Ridge 3.68 N 64.15 E H = 14 33 36.0 Depth = 34 km MB = 5.0 /ISC/			
				14	43	39.0																
45	FEB 10	BRA	EP E	20	38	12.0													No determination of epicentre			
				20	39	51.0																
46	FEB 10	SPC	EP	21	23	31.6	0.9										59.63	125.92	Carlsberg Ridge 3.71 N 64.10 E H = 21 13 34.5 Depth = 33 km MB = 4.8 /ISC/			
				21	23	31.6																
47	FEB 10	BRA	E	22	13	24.0													No determination of epicentre			
				22	13	24.0																
48	FEB 11	SPC	EP	20	37	56.4	1.2										40.24	83.91	Southern Sinkiang Province 38.58 N 75.29 E H = 20 30 19.1 Depth = 27 km MB = 5.0 /ISC/			
				20	37	56.4																
49	FEB 11	SPC	EP	22	11	48.6	2.4										40.17	83.93	Southern Sinkiang Province 38.61 N 75.20 E H = 22 4 12.5 Depth = 42 km MB = 5.0 /ISC/			
				22	11	48.6																
50	FEB 12	SPC BRA	IP IPP IP E EPP	13	42	36.0	5.7 2.9 2.0 2.6													Alma-Ata Region 43.16 N 78.97 E H = 13 34 51.0 Depth = 4 km MB = 5.3 /ISC/		
				13	44	9.6																
				13	42	51.0																
				13	43	27.0																
51	FEB 15	BRA	EP LXP	6	27	26.0	2.0 -0.7										67.92	154.73	Mozambique Channel 16.47 S 41.45 E H = 6 16 25.7 Depth = 27 km MB = 5.2 /ISC/			
				6	27	35.0																





No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta Azimuth	Remarks
				h	m s		A	T	A	T	A	T				
52	FEB 15	SPC BRA	EAP EAP	10 26 10 26	48.0 49.0	-2.8 -3.0								14.28 14.37	157.37 145.94	Grete 35.77 N 26.95 E H = 10 23 21.0 Depth = 46 km MB = 4.7 /ISC/
53	FEB 15	SPC	E	17 43	43.0											No determination of epicentre
54	FEB 16	BRA	-IP E	8 31 8 31	10.0 37.0											No determination of epicentre
55	FEB 17	SPC BRA	EP -IP	3 49 3 49	29.0 41.0	1.8 0.6								68.79 70.94	87.35 84.68	Burma 17.65 N 97.84 E H = 3 38 20.2 Depth = 6 km MB = 5.5 /ISC/
56	FEB 17	SRO BRA	EPB EPG ESG E IPN	14 25 14 25 14 26 14 26 14 25	31.8 39.8 23.8 45.8 29.0	-0.7 1.3 4.3 -1.9								3.13 3.35	197.26 181.16	Yugoslavia 44.82 N 17.01 E H = 14 24 36.2 Depth = 0 km /ISC/
57	FEB 18	BRA	IPG	11 4	24.0											No determination of epicentre
58	FEB 20	BRA	IP IAP IPP	14 49 14 49 14 49	3.0 9.0 24.0	-0.8 -1.0 -0.9							20.47	95.63	Eastern Caucasus 42.49 N 45.18 E H = 14 44 25.0 Depth = 23 km MB = 4.7 /ISC/	
59	FEB 22	BRA	EPOP EPP IPP	1 0 1 4 1 4	45.0 28.0 37.0	5.9 -0.5 8.5							94.31	301.93	Gurero, Mexico 17.40 N 100.48 W H = 0 47 22.5 Depth = 44 km MB = 5.3 /ISC/	
60	FEB 22	BRA SRO	+IP IPP ESCS ISP LMH +IP EPP E IXS IPS E LMH	8 48 8 51 8 58 8 58 9 28 8 48 8 51 8 53 8 58 8 58 9 30	14.0 11.0 26.0 53.0 0.0 15.0 24.0 4.0 36.0 24.0 44.0 0.0	1.3 -5.0 -4.4 -3.5 1.2 6.4 0.8 19.8	2.0					5.9	79.88 80.08	10.46 11.20	Andreanof Islands 51.32 N 179.44 W H = 8 36 6.8 Depth = 42 km MB = 6.3 /ISC/	

61	FEB 22	SRO	-IPKIKP IPKP2 IPP E E E -IPKIKP IPKP2 E	22 23 22 24 22 27 22 29 22 40 22 42 22 23 22 24 22 31	44.0 10.0 44.0 40.0 12.0 24.0 44.0 11.0 11.0	-0.2 1.6 -1.0 -0.5 1.9								153.46 153.64	36.89 34.26	South of Fiji 24.98 S 178.88 W H = 22 4 33.5 Depth = 333 km MB = 6.1 /ISC/
62	FEB 26	BRA SRO	IP EAP EP EAP E	4 56 4 56 4 56 4 56 4 10	41.0 47.0 40.0 48.0 46.0	0.6 -0.2 -2.4 -1.2							41.51 41.76	7.55 7.49	North of Severnaya Zemlya 84.98 N 98.50 E H = 4 48 53.2 Depth = 23 km MB = 5.3 /ISC/	
63	FEB 27	BRA	EPKIKP EPP	14 42 14 44	44.0 15.0	1.0 -2.5							121.05	61.00	New Britain Region 6.07 S 148.21 E H = 14 23 58.5 Depth = 72 km MB = 5.8 /ISC/	
64	FEB 27	BRA	ISKPBC	19 1	18.0	8.6							147.17	28.26	Fiji Region 17.84 S 178.53 W H = 18 42 52.9 Depth = 574 km MB = 5.8 /ISC/	
65	FEB 28	BRA SRO	+IP EP	15 27 15 27	40.0 44.0	-0.6 -0.4							85.40 86.16	324.20 325.06	Southern Nevada, N.E. Topgalant 37.11 N 116.06 W H = 15 15 0.1 /ABC/	
66	FEB 28	BRA	E E	19 53 19 54	54.0 18.0								8.45	150.74	Greece 40.66 N 22.52 E H = 19 51 9.0 Depth = 29 km MB = 4.4 /ISC/	
67	MAR 1	BRA	EP IPP	0 3 0 5	59.0 38.0											No determination of epicentre
68	MAR 2	SPC BRA SRO	EP IPP EAP EAP E	14 31 14 32 14 31 14 31 14 46	3.0 37.8 20.0 20.0 8.0	1.2 -0.9 -0.5 -2.5							40.18 41.47 41.72	7.62 7.50 7.44	North of Severnaya Zemlya 85.01 N 98.00 E H = 14 23 26.2 Depth = 27 km MB = 5.1 /ISC/	
69	MAR 3	BRA SRO	EP EP IAP	9 54 9 54 9 54	28.0 36.0 42.0	-0.4 2.5 -4.4							69.49 70.32	273.08 274.09	Leeward Islands 17.21 N 60.99 W H = 9 43 22.6 Depth = 44 km MB = 5.0 /ISC/	



No.	Date	Stat. Code	Phase	h	GMT	RES	Z			E-W			N-S			MPV	MLH	Delta	Azimuth	Remarks
							A	T		A	T		A	T						
70	MAR 3	SRO SRO BRA	IP IPP EAP EP IAP IPP	9 55 9 57 9 56 9 55 9 56 9 57	31.0 20.0 24.0 46.0 25.0 22.0	2.3 14.5 4.0 -0.2 -1.5 -4.2											38.59 39.91 40.70	89.77 86.69 86.28	Hindu Kush Region 36.45 N 70.92 E H = 9 48 22.5 Depth = 187 km MB = 5.3 /ISC/	
71	MAR 3	BRA	E E E	23 24 23 24 23 24	23.0 23.0 23.0	14.2											145.81	26.47	Fiji Region 16.23 S 178.01 W H = 23 4 57.0 Depth = 256 km MB = 4.5 /ISC/	
72	MAR 4	BRA	E E E	11 35 11 37 11 37	43.0 1.0 1.0	13.6											108.85	75.82	Banda Sea 4.90 S 130.05 E H = 11 17 49.0 Depth = 29 km MB = 5.6 /ISC/	
73	MAR 4	BRA	E	12 5	43.0														No determination of epicentre	
74	MAR 5	SRO BRA	EP IPP ISKS I EP E IPP ESKS ISP	0 36 0 40 0 47 0 50 0 36 0 39 0 40 0 47 0 49	23.0 43.0 3.0 43.0 27.0 54.0 48.0 6.0 54.0	2.2 3.1 3.3 3.1 2.7 3.0 -0.3											103.70 104.42	78.23 77.21	Ceram Sea 2.39 S 126.15 E H = 0 22 17.0 Depth = 7 km MB = 6.1 /ISC/	
75	MAR 5	BRA	-IP	14 0	13.0	-0.8											81.26	273.88	Venezuela 9.13 N 69.87 W H = 13 47 58.3 Depth = 25 km MB = 5.5 /ISC/	
76	MAR 7	SRO BRA	IPB E ISG LMH EPN IPB IPB IPB IPG ISB	4 14 4 15 4 16 4 17 4 14 4 15 4 15 4 15 4 15 4 16	49.0 27.0 43.0 40.0 52.0 8.0 10.0 13.0 35.0 31.0	-0.6 19.5 3.5 3.4 5.4 8.4 13.5 -2.2		15.7	8.0	6.6	8.0						6.07 6.95	104.97 105.23	Romania 45.93 N 26.73 E H = 4 13 3.0 Depth = 2 km MB = 4.9 /ISC/	

77	MAR 7	SRO BRA	+IP EPP ES LMH IP EPP	7 11 7 13 7 17 7 29 7 11 7 13	43.0 11.0 23.0 0.0 50.0 22.0	1.5 8.1 7.0 1.0 7.8		11.4	12.0	10.8	12.0						35.78 36.66	110.88 110.05	Southern Iran 27.47 N 56.25 E H = 7 4 43.3 Depth = 31 km MB = 5.8 /ISC/
78	MAR 7	BRA	EP	14 33	58.0	-4.7											36.67	110.02	Southern Iran 27.48 N 56.27 E H = 14 26 57.9 Depth = 39 km MB = 5.1 /ISC/
79	MAR 7	BRA	+IP	15 12	40.0	-0.7											85.39	324.22	Southern Nevada, N.E. Cabrillo 37.13 N 116.08 W H = 15 0 0.2 /AEC/
80	MAR 8	BRA	E	5 28	43.0												46.87	346.59	Queen Elizabeth Islands 79.52 N 95.30 W H = 5 20 39.7 Depth = 27 km MB = 4.4 /ISC/
81	MAR 8	BRA	EP	8 45	51.0	0.2											24.92	259.34	North Atlantic Ocean 39.62 N 14.80 W H = 8 40 29.4 Depth = 33 km MB = 4.7 /ISC/
82	MAR 9	BRA	E E E E E LMH	17 22 17 22 17 22 17 22 17 22 16 37	7.0 7.0 7.0 7.0 7.0 0.0	12.0											145.90	18.54	Tonga 15.13 S 173.53 W H = 17 2 12.0 Depth = 5 km MB = 4.6 /ISC/
83	MAR 12	BRA	EPG ISG	17 28 17 29	32.0 7.0	5.9 7.9											2.51	201.97	Yugoslavia 45.83 N 15.76 E H = 17 27 36.0 Depth = 26 km /ISC/
84	MAR 13	BRA SRO	E EPP LMH EPP EPP E E LMH	15 41 15 45 16 34 15 45 15 46 15 53 15 53 16 37	17.0 52.0 0.0 58.0 14.0 8.0 56.0 0.0	-6.5 -4.9 11.1		16.4	15.0	0.0	0.0						110.68 111.30	248.11 248.77	Near Coast of Central Chile 29.89 S 71.40 W H = 15 26 47.0 Depth, = 28 km MB = 6.1 /ISC/
85	MAR 13	SPG SRO BRA	IPKIP IPKSDP IPKIP EPPKIP I	19 5 19 8 19 15 19 15 19 15	0.0 30.0 5.0 3.0 9.0	5.0 0.7 0.7 0.2		22.4	20.0	17.3	20.0						143.88 145.74 146.13	51.42 50.34 48.26	Loyalty Islands Region 21.75 S 170.53 E H = 18 45 29.9 Depth = 86 km MB = 6.0 /ISC/

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No.	Date	Stat. Code	Phase	GMT		RES O-C	Z			E-W			N-S			MPV	MLH	Delta	Azimuth	Remarks
				h	m		s	A	T	A	T	A	T	A	T					
86	MAR 14	SPC BRA	EP EAP	2 6	32.0	1.0										25.10 25.48	342.01 344.50	Jan Mayen Island Region 71.58 N 4.10 W H = 2 1 8.7 Depth = 33 km MB = 4.7 /ISC/		
87	MAR 14	SPC	EP EPCP EPCP	5 27 5 27 5 27	5.9 24.0 33.2	2.4 9.2 17.5									76.32	31.44	Kurile Islands 46.44 N 153.12 E H = 5 15 14.0 Depth = 19 km MB = 5.1 /ISC/			
88	MAR 14	BRA	E	7 47	12.0													No determination of epicentre		
89	MAR 14	SPC	I	17 17	17.2													No determination of epicentre		
90	MAR 16	SRO BRA	E E E EPP ES E	8 41 8 42 8 42 8 39 8 41 8 43	54.0 30.0 40.0 54.0 46.0 28.0	0.2 5.0									9.33 10.14	140.09 137.02	Turkey 40.36 N 26.14 E H = 8 37 16.3 Depth = 5 km MB = 4.3 /ISC/			
91	MAR 17	SRO SPC BRA	E I EPP EP IPP I	2 11 2 12 2 9 2 9 2 9 2 10	43.0 10.0 13.1 1.0 13.0 25.0	6.6 -5.8 -1.7									9.19 9.63 9.99	140.10 152.62 137.00	Turkey 40.48 N 26.03 E H = 2 6 39.1 Depth = 2 km MB = 4.5 /ISC/			
92	MAR 17	SRO SPC BRA	EP E LMV EAP IP E I	5 13 5 16 5 17 5 13 5 16 5 16	31.0 10.0 .0.0 42.3 25.0 55.0	0.6 1.0 -4.5									9.15 9.60 9.96	140.42 152.96 137.28	Egean Sea 40.48 N 25.95 E H = 5 11 16.5 Depth = 22 km MB = 4.9 /ISC/			
93	MAR 17	BRA	IPP E	5 20 5 23	28.0 33.0	3.2									10.15	136.54	Turkey 40.40 N 26.24 E H = 5 17 47.1 Depth = 5 km MB = 4.8 /ISC/			
94	MAR 17	SRO	EP E LMV	5 37 5 39 5 41	31.0 59.0 0.0	-1.7									9.21	139.91	Turkey 40.48 N 26.08 E H = 5 35 17.6 Depth = 30 km MB = 5.0 /ISC/			

95	MAR 17	BRA	LMH IP E	5 41 5 37 5 40	0.0 37.0 33.0	-6.8									10.02	136.82	No determination of epicentre	
96	MAR 17	SRO	IPG ISG	11 2 11 2	10.0 13.0										111.66	68.65	West Irian 2.57 S 138.26 E H = 22 11 2.0 Depth = 34 km MB = 5.5 /ISC/	
97	MAR 18	BRA SRO	EPS LMH	22 40 23 20	3.0 0.0	16.2									95.90 96.71	270.22 271.07	Northern Peru 4.26 S 77.01 W H = 17 21 24.7 Depth = 111 km MB = 6.2 /ISC/	
98	MAR 20	BRA	IP	7 42	45.0	1.9									79.83	10.56	Andreanof Islands 51.35 N 179.61 W H = 7 30 38.6 Depth = 52 km MB = 5.3 /ISC/	
99	MAR 20	BRA	I	11 10	28.0										3.14	321.67	Czechoslovakia 50.59 N 14.05 E H = 11 8 7.0 /FRU/	
100	MAR 20	SPC	I I	15 0 15 0	40.1 51.5													No determination of epicentre
101	MAR 21	BRA	IPKIKP	4 42	44.0	-0.4									144.30	48.14	New Hebrides 20.16 S 169.55 E H = 4 23 21.2 Depth = 107 km MB = 5.4 /ISC/	
102	MAR 22	SPC	IPN ISN	3 27 3 28	48.5 11.4													No determination of epicentre
103	MAR 22	BRA	E	10 15	22.0													No determination of epicentre
104	MAR 22	SPC	I I I	11 59 11 59 11 59	10.7 34.2 41.5													No determination of epicentre
105	MAR 23	BRA	IPCP LMH	7 45 8 17	6.0 0.0	-1.8									83.27	63.53	Taiwan Region 22.68 N 122.84 E H = 7 32 37.7 Depth = 29 km MB = 6.1 /ISC/	





No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
106	MAR 24	BRA SPC	IPN EPN EPB	2 34 2 34 2 35	15.0 46.6 1.4	2.3 1.1 3.9								3.30 5.61	237.21 241.82	Austria 46.31 N 13.10 E H = 2 33 18.7 Depth = 19 km MB = 4.0 /ISC/	
107	MAR 24	SPC	EP	5 41	36.5	3.8								41.42	99.86	Pakistan 29.61 N 68.71 E H = 5 33 46.7 Depth = 26 km MB = 5.4 /ISC/	
108	MAR 24	SPC	I	15 33	43.4											No determination of epicentre	
109	MAR 27	HRB BRA	EXP LMH IP I IS LMV	5 17 5 23 5 17 5 18 5 19 5 26	35.0 0.0 31.0 47.0 27.0 0.0	4.3 -4.1 -2.0		17.0	10.0	21.5	8.0		5.4	9.35 10.06	139.63 136.79	Turkey 40.45 N 26.12 E H = 5 15 7.9 Depth = 15 km MB = 5.5 /ISC/	
110	MAR 27	BRA	EP E E	19 45 19 47 19 48	6.0 41.0 35.0	-4.2								10.02	136.82	Turkey 40.48 N 26.08 E H = 19 42 42.5 Depth = 5 km MB = 5.9 /ISC/	
111	MAR 28	SPC	E	2 38	49.3											No determination of epicentre	
112	MAR 28	BRA SPC	IP EP	2 43 2 43	8.0 21.8	-8.8 3.2								79.73 80.08	324.27 326.21	Eastern Idaho 42.04 N 112.41 W H = 2 31 6.3 Depth = 5 km MB = 5.8 /ISC/	
113	MAR 29	BRA	IP IAP	9 44 9 44	30.0 42.0	-2.8 -2.9								44.62	129.75	Eastern Gulf of Aden 13.27 N 50.79 E H = 9 36 23.0 Depth = 44 km MB = 5.3 /ISC/	
114	MAR 30	BRA	EPP	13 5	51.0	-3.6								10.07	135.54	Turkey 40.57 N 26.36 E H = 13 3 17.6 Depth = 0 km MB = 4.5 /ISC/	
115	MAR 30	BRA	EPP	22 50	12.0	-3.0								102.28	185.04	Bonvet Island Region 54.24 S 8.70 E H = 22 32 1.8 Depth = 0 km MB = 5.6 /ISC/	

116	MAR 31	BRA	I E	8 30 8 32	23.0 17.0									6.92	108.59	Romania 45.57 N 26.46 E H = 8 28 45.8 Depth = 139 km MB = 4.6 /ISC/
117	MAR 31	BRA	IP IPP	10 14 10 16	11.0 8.0	4.3 9.0								48.39	62.43	Mongolia 46.66 N 91.31 E H = 10 5 22.0 Depth = 6 km MB = 5.2 /ISC/
118	MAR 31	BRA	EAPKIKP	11 2	20.0	0.9								153.23	25.14	Tonga Region 23.11 S 174.89 W H = 10 42 20.2 Depth = 44 km MB = 5.2 /ISC/
119	APR 2	SPC	EPB ESB	3 38 3 38	23.1 41.2											No determination of epicentre
120	APR 2	SPC	IPCP EPP	8 56 8 59	17.2 23.0	-2.3 -1.1								81.96	46.62	South of Honshu 33.67 N 140.60 E H = 8 43 59.6 Depth = 65 km MB = 5.3 /ISC/
121	APR 2	SPC	EFKP2	10 51	25.5	-6.3								151.24	30.54	Tonga Region 23.07 S 175.15 W H = 10 31 36.0 Depth = 68 km MB = 5.4 /ISC/
122	APR 4	BRA	IP IXP E	5 18 5 19 5 21 5 22	37.0 4.0 16.0 13.0	-12.1 -2.3								10.66	158.76	Greece 38.11 N 21.98 E H = 5 16 16.5 Depth = 56 km MB = 5.4 /ISC/
123	APR 4	BRA	EPN ESG	9 12 9 14	10.0 22.0	-10.2 18.9								5.84	228.44	Northern Italy 44.13 N 11.04 E H = 9 10 50.3 Depth = 0 km /ISC/
124	APR 4	BRA	EPKIKP	11 31	52.0	-9.2								159.41	40.34	Kermadec Islands Region 31.23 S 178.31 W H = 11 12 7.5 Depth = 41 km MB = 5.5 /ISC/
125	APR 4	BRA	IP	17 52	35.0	-12.5								73.52	152.80	Malagasy 21.24 S 45.13 E H = 17 41 16.1 Depth = 32 km MB = 5.3 /ISC/



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta Azimuth	Remarks
				h	m		A	T	A	T	A	T				
126	APR 5	BRA	IP	9	46	48.0	0.9								80.42	Venezuela 10.08 N 69.65 W H = 9 34 37.6 Depth = 36 km MB = 5.5 /ISC/
127	APR 5	BRA	IP LMV	17	4	29.0	0.9								75.09	Off East Coast of Kamchatka 52.25 N 160.09 E H = 16 52 43.0 Depth = 3 km MB = 5.4 /ISC/
128	APR 5	BRA	IP LMV	18	1	36.0	-0.8								74.74	Off East Coast of Kamchatka 52.51 N 159.62 E H = 17 50 1.7 Depth = 43 km MB = 5.4 /ISC/
129	APR 5	BRA	EPCP	20	51	7.0	4.4								84.23	Near North Coast of Colombia 10.23 N 75.55 W H = 20 38 24.0 Depth = 2 km MB = 5.5 /ISC/
130	APR 6	BRA	EP LMH	10	7	0.0	0.5								75.12	Off East Coast of Kamchatka 52.19 N 160.00 E H = 9 55 21.0 Depth = 50 km MB = 5.5 /ISC/
131	APR 6	BRA	EP LMH	10	46	39.0	2.1		15.6	16.0	31.2	16.0	6.7	75.00	Off East Coast of Kamchatka 52.30 N 159.90 E H = 10 34 57.5 Depth = 36 km MB = 5.6 /ISC/	
132	APR 7	BRA	EP	8	13	42.0	0.6							86.28	Southern Sumatra 1.64 S 99.72 E H = 8 1 3.0 Depth = 43 km MB = 5.4 /ISC/	
133	APR 8	BRA	EP	6	39	27.0	0.6							81.30	Near East Coast of Honshu 37.75 N 141.75 E H = 6 27 14.3 Depth = 53 km MB = 5.5 /ISC/	
134	APR 9	BRA	EPKIKP EAPKIKP	6	45	4.0	2.9							121.99	New Britain Region 4.06 S 152.75 E H = 6 26 22.2 Depth = 131 km MB = 6.1 /ISC/	
135	APR 11	BRA	E	10	9	35.0										No determination of epicentre

136	APR 11	BRA	IP	10	59	14.0	-0.8							78.11	0.27	Unimak Island Region 54.10 N 163.34 W H = 10 47 15.0 Depth = 17 km MB = 5.5 /ISC/
137	APR 12	BRA	EP	16	49	18.0	-2.9							9.78	187.16	Stoilly 38.45 N 15.56 E H = 16 47 3.4 Depth = 178 km MB = 4.2 /ISC/
138	APR 13	BRA	EP EPP E	1	47	45.0	-2.1							97.82	72.53	Mindanao 5.66 N 125.38 E H = 1 34 37.4 Depth = 235 km MB = 5.5 /ISC/
139	APR 13	BRA	E I	6	27	40.0										No determination of epicentre
140	APR 15	BRA	EP	9	59	25.0	0.2							75.43	267.85	Near Coast of Venezuela 9.42 N 61.47 W H = 9 47 44.8 Depth = 52 km MB = 5.3 /ISC/
141	APR 16	SPC BRA	EP LMV IP EPP E EAP EPP	1	32	57.0	0.9							26.43	338.57	Jan Mayen Island Region 71.49 N 10.36 W H = 1 27 18.9 Depth = 15 km MB = 6.0 /ISC/
142	APR 16	SPC	EAPKIKP EKP2	14	27	51.4	-2.1							151.21	30.29	Tonga Region 23.00 S 175.04 W H = 14 7 58.5 Depth = 36 km MB = 5.2 /ISC/
143	APR 16	SPC	EAPKIKP	15	59	32.8	-2.7							149.49	26.54	Tonga 20.75 S 173.78 W H = 15 39 43.5 Depth = 33 km MB = 4.8 /ISC/
144	APR 16	SPC BRA	IP IPCP IP I I LMH	21	45	7.8	1.2	261	1.2					75.27	29.43	Kurile Islands 48.31 N 154.86 E H = 21 33 23.2 Depth = 20 km MB = 5.7 /ISC/



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z			E-W			N-S			MPV	MLH	Delta	Azimuth	Remarks
				h	m		s	A	T		A	T		A	T					
145	APR 17	SPC	EFKP2	1	35	48.0	-1.6									151.17	30.47	Tonga Region 23.00 S 175.14 W H = 1 15 55.0 Depth = 76 km MB = 4.8 /ISC/		
146	APR 17	BRA	IFKP2 IAPKHKP	4	25	37.0 4 26 7.0	0.9 0.9									145.78	18.84	Tonga 15.05 S 173.73 W H = 4 6 11.0 Depth = 140 km MB = 4.5 /ISC/		
147	APR 19	BRA	IP	13	54	19.0	-0.0									46.83	122.57	Arabian Sea 14.30 N 56.45 E H = 13 45 54.0 Depth = 66 km MB = 5.2 /ISC/		
148	APR 19	BRA	IP	20	24	10.0	-1.7									46.77	122.45	Arabian Sea 14.40 N 56.49 E H = 20 15 48.0 Depth = 74 km MB = 5.3 /ISC/		
149	APR 20	SPC BRA	EP EP IPP	9	5	11.6 9 5 16.0 9 7 16.0	2.7 -1.8 7.5									45.62 46.76	126.69 122.40	Arabian Sea 14.43 N 56.51 E H = 8 56 54.0 Depth = 72 km MB = 5.0 /ISC/		
150	APR 20	BRA	IFKIKP IAPKIKP IPP I ESP EFKIKP EPP LMV	11	59	52.0 12 0 4.0 12 2 10.0 12 5 13.0 12 12 22.0 11 59 57.6 12 2 30.8 12 53 0.0	0.4 2.3 -9.0 -4.7 1.9 -2.5									132.46	259.58	Southern Pacific Ocean 36.40 S 98.82 W H = 11 40 40.0 Depth = 31 km MB = 5.8 /ISC/		
151	APR 20	BRA	IP I LMH	17	48	4.0 17 49 25.0 18 31 0.0	1.3									79.97	51.01	Kyushu 33.14 N 131.29 E H = 17 35 52.0 Depth = 12 km MB = 5.5 /ISC/		
152	APR 20	BRA	IP	19	0	19.0	-1.3									75.25	22.88	Off East Coast of Kamchatka 51.96 N 159.69 E H = 18 48 34.0 Depth = 1 km MB = 5.1 /ISC/		
153	APR 20	BRA	EAP IPP	21	31	22.0 21 33 13.0	-2.8 9.1									46.69	122.45	Arabian Sea 14.46 N 56.44 E H = 21 22 47.2 Depth = 36 km MB = 4.7 /ISC/		

154	APR 21	BRA	EP	2	34	28.0	2.8									46.77	122.53	Arabian Sea 14.36 N 56.44 E H = 2 25 58.0 Depth = 41 km MB = 4.9 /ISC/
155	APR 21	BRA	IP	6	20	43.0	-3.8									30.74	281.79	North Atlantic Ridge 45.30 N 28.04 W H = 6 14 32.0 Depth = 29 km MB = 4.9 /ISC/
156	APR 22	BRA	IP	.0	43	16.0	0.1									46.56	122.45	Arabian Sea 14.57 N 56.36 E H = 0 34 49.5 Depth = 33 km MB = 4.7 /ISC/
157	APR 22	BRA	IP I	3	47	17.0 3 48 14.0 3 49 29.0	0.3									45.69	123.91	Arabian Sea 14.67 N 54.96 E H = 3 39 0.0 Depth = 60 km MB = 4.9 /ISC/
158	APR 22	SPC BRA	EP EP E	18	34	0.5 18 34 4.0 18 36 31.0	3.2 -2.3									45.66 46.80	126.63 122.35	Arabian Sea 14.42 N 56.57 E H = 18 25 41.0 Depth = 61 km MB = 5.0 /ISC/
159	APR 22	SPC BRA	EP EP IAP	20	29	51.3 20 29 58.0 20 30 4.0	1.6 0.8 -2.6									26.04 26.85	353.28 355.30	Greenland Sea 74.70 N 9.10 E H = 20 24 17.8 Depth = 33 km MB = 4.6 /ISC/
160	APR 22	SPC BRA	EP EPP IP I I	21	43	46.7 21 45 33.5 21 43 55.4 21 44 40.0 21 46 4.0	1.5 1.1 1.3									45.62 46.76	126.66 122.37	Arabian Sea 14.44 N 56.53 E H = 21 35 26.2 Depth = 33 km MB = 5.1 /ISC/
161	APR 22	SPC BRA	EP EPP IP EPP	22	26	10.8 22 28 8.0 22 26 16.4 22 28 15.0	1.3 10.9 -1.9 6.6									45.82 46.95	126.78 122.50	Arabian Sea 14.23 N 56.57 E H = 22 17 48.9 Depth = 33 km MB = 4.9 /ISC/
162	APR 23	BRA	EP I I	1	10	31.0 1 14 16.0 1 14 58.0	-4.1									10.06	137.24	Turkey 40.40 N 26.04 E H = 1 8 8.4 Depth = 20 km MB = 4.4 /ISC/
163	APR 23	SPC BRA	EP EP	5	20	0.0 5 20 16.0	3.0 0.1									41.16 43.47	70.42 67.84	Kazakhstan-Sinkiang 45.66 N 82.41 E H = 5 12 13.0 Depth = 25 km MB = 4.9 /ISC/



No.	Date	Stat. Code	Phase	GMT		RES	Z		E-W		N-S		MPV	MLF	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
164	APR 23	BRA	EP	8	25	1.0								46.74	122.34	Arabian Sea 14.47 N 56.54 E H = 8 16 29.9 Depth = 18 km MB = 4.9 /ISC/	
165	APR 23	BRA	IP	8	26	13.0								46.88	122.31	Arabian Sea 14.37 N 56.64 E H = 8 17 41.0 Depth = 79 km MB = 5.1 /ISC/	
166	APR 23	BRA	IPCP IPPP LMH	11 28 11 31 12 14	10.0 52.0 0.0	1.3 -5.3								94.12	300.13	Near Coast of Guerrero, Mexico 16.47 N 98.86 W H = 11 14 49.0 Depth = 17 km MB = 5.9 /ISC/	
167	APR 23	BRA	EPKHKP	15	0	58.0	4.3							151.28	21.54	Tonga 20.75 S 173.76 W H = 14 41 8.3 Depth = 39 km MB = 5.1 /ISC/	
168	APR 23	BRA	EP	15	10	37.0	-4.3							46.55	121.93	Arabian Sea 14.80 N 56.67 E H = 15 2 16.0 Depth = 42 km MB = 5.0 /ISC/	
169	APR 23	BRA	IPG ISB	16 20 16 21	22.3 4.7	-3.3 2.6								3.34	238.47	Austria 46.35 N 13.00 E H = 16 19 19.1 Depth = 0 km /ISC/	
170	APR 24	BRA	EP EXP	23 0 23 1	50.0 14.0	-8.9 -5.0								11.41	157.36	Southern Greece 37.48 N 22.60 E H = 22 58 16.6 Depth = 68 km MB = 4.8 /ISC/	
171	APR 25	BRA	EP EXP	14 35 14 35	2.0 26.0	-0.6 6.1								75.35	22.88	Off East Coast of Kamchatka 51.87 N 159.75 E H = 14 23 21.8 Depth = 42 km MB = 4.9 /ISC/	
172	APR 27	BRA	I	8	5	21.0								148.42	17.68	Tonga Region 17.50 S 172.49 W H = 7 46 8.1 Depth = 33 km MB = 4.8 /ISC/	

173	APR 28	BRA	IP EPP I	2 7 2 8 2 9	41.0 47.0 17.0	0.5 0.3								31.91	103.84	Iran 33.27 N 54.88 E H = 2 1 15.4 Depth = 29 km MB = 5.2 /ISC/
174	APR 28	BRA	IP IPP I LMH	11 15 11 17 11 19 11 35	12.0 9.0 12.0 0.0	-1.7 5.1								47.02	81.08	Kashmir-Tibet Border Region 35.80 N 79.86 E H = 11 6 43.7 Depth = 33 km MB = 5.8 /ISC/
175	APR 30	BRA	IP IXP I	23 48 23 49 23 51	59.0 35.0 16.0	1.0 12.4								46.70	122.33	Arabian Sea 14.51 N 56.52 E H = 23 40 34.0 Depth = 66 km MB = 5.2 /ISC/
176	MAY 4	BRA	IP IXP EPP LMH	9 44 9 44 9 47 10 19	20.0 44.0 32.0 0.0	1.0 14.6 3.4								81.91	41.36	Off East Coast of Honshu 37.20 N 142.09 E H = 9 32 0.0 Depth = 24 km MB = 5.8 /ISC/
177	MAY 5	BRA	IP IPP I LMH	5 28 5 30 5 32 5 59	35.0 44.0 5.0 0.0	-0.9 -0.4								57.15	75.48	Chinghai Province 33.13 N 92.84 E H = 5 18 46.3 Depth = 8 km MB = 5.6 /ISC/
178	MAY 5	BRA	IPKIKP IPKHKP IPKP2 IAPKP2 I EPP	20 47 20 47 20 48 20 48 20 49 20 51	47.3 56.0 8.0 38.0 26.0 44.0	-0.6 4.2 -0.1 15.2 2.2								152.63	27.39	South of Fiji 22.87 S 176.15 W H = 20 28 4.2 Depth = 50 km MB = 5.6 /ISC/
179	MAY 6	BRA	IP I IPP ISCS LMH	10 31 10 31 10 34 10 41 11 14	2.5 46.0 33.0 45.0 0.0	-1.6 3.3 -0.7								86.93	44.84	South of Honshu 31.09 N 141.95 E H = 10 18 20.1 Depth = 25 km MB = 5.6 /ISC/
180	MAY 9	BRA	IPKIKP IPKP2 EPP	18 54 18 55 18 59	58.0 49.0 19.0	-0.7 6.7 -6.4								160.42	44.83	South of Kermadec Islands 32.91 S 179.21 W H = 18 35 4.8 Depth = 48 km MB = 5.5 /ISC/
181	MAY 10	BRA	EAPKIKP IPP E LMH	14 46 14 47 14 51 15 41	31.0 34.0 14.0 0.0	-4.9 -6.8		4.6	18.0	4.2	18.0			117.04	242.46	Central Chile 38.03 S 72.78 W H = 14 27 44.0 Depth = 30 km MB = 6.2 /ISC/



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z			E-W			N-S			MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T	A	T						
182	MAY 11	BRA	E ES IMH	7 7 7	11 18 47	5.0 14.0 0.0	-2.5										76.63	26.15	Kurile Islands 49.34 N 156.14 E H = 6 56 40.0 Depth = 15 km MB = 5.5 /ISC/	
183	MAY 12	BRA	IP I	10 10	23 24	37.0 34.0	-4.2										76.76	26.14	Kurile Islands 49.23 N 156.25 E H = 10 11 51.8 Depth = 37 km MB = 5.5 /ISC/	
184	MAY 12	BRA	IPG	11	4	40.0													No determination of epicentre	
185	MAY 13	BRA	IPKIKP IAFKP2 E	9 9 9	53 54 55	46.5 11.0 28.0	-0.5 -1.4										151.66	22.57	Tonga 21.25 S 174.16 W H = 9 34 1.2 Depth = 25 km MB = 4.9 /ISC/	
186	MAY 13	BRA	IP IXP IPP	21 21 21	32 32 36	33.1 55.7 55.7	0.6 7.3 9.9										101.75	75.04	Molucca Passage 1.03 N 126.02 E H = 21 18 42.0 Depth = 37 km MB = 5.8 /ISC/	
187	MAY 14	BRA	IP IPOP IPOP E	14 14 14 14	12 12 12 13	38.5 44.0 50.0 29.0	-2.7 -0.7 5.3										85.47	324.54	Southern Nevada, N.E. 37.22 N 116.47 W H = 14 0 0.4 /AEC/	
188	MAY 14	BRA	EP EXP EPP E	22 22 22 22	30 31 32 33	39.0 12.0 15.0 9.0	2.3 0.8 -0.6										40.90	86.76	Hindu Kush Region 36.08 N 70.90 E H = 22 23 2.7 Depth = 97 km MB = 5.3 /ISC/	
189	MAY 16	BRA	EPB ISG E	19 19 19	42 43 44	23.0 17.0 41.0	2.6 7.2										3.27	216.73	Yugoslavia 45.51 N 14.32 E H = 19 41 21.6 Depth = 17 km /ISC/	
190	MAY 17	SPC	EP	16	26	18.0	5.2										35.97	112.87	Southern Iran 27.61 N 57.83 E H = 16 19 16.6 Depth = 66 km MB = 4.9 /ISC/	
191	MAY 18	SPC	IP EAP ES	15 15 16	53 54 2	47.0 14.0 44.0	-0.2 -0.4 9.3										67.74	355.36	Central Alaska 63.17 N 150.25 W H = 15 42 59.3 Depth = 108 km MB = 5.3 /ISC/	

192	MAY 18	SPC	IP EAP	22 22	45 46	56.8 24.3	1.0 3.4										76.19	35.83	Kurile Islands 44.35 N 147.83 E H = 22 34 16.5 Depth = 96 km MB = 5.2 /ISC/
193	MAY 19	SPC	EPKHKP EPKHKP	0 0	13 13	39.0 41.0	4.4 1.7										149.60 151.39	26.90 21.94	Tonga 20.91 S 173.93 W H = 23 53 54.1 Depth = 43 km MB = 5.4 /ISC/
194	MAY 19	BRA	EXP E SPC	3 3 3	29 32 29	12.0 57.0 9.0	9.7 1.0										10.54 10.95	156.90 171.30	Greece 38.34 N 22.34 E H = 3 26 20.4 Depth = 26 km MB = 4.7 /ISC/
195	MAY 19	BRA	E	13	17	48.0													No determination of epicentre
196	MAY 19	SPC	EP EPP ESP EP EPP	19 19 20 19 19	56 57 3 56 58	9.3 50.0 6.0 30.0 30.0	2.4 -4.8 8.3 5.8 14.3										45.87 48.07	84.24 81.19	Kashmir-Tibet Border Region 35.12 N 80.84 E H = 19 47 42.0 Depth = 6 km MB = 5.5 /ISC/
197	MAY 19	SPC	IP	22	53	54.0	1.1										74.81	27.23	Kurile Islands Region 49.72 N 157.38 E H = 22 42 16.9 Depth = 57 km MB = 5.4 /ISC/
198	MAY 20	SPC	EPKHKP IPKHKP EAPKHKP EPKFP2	14 14 14 14	50 51 52 51	57.0 4.2 29.5 30.0	-1.4 5.8 0.2 6.9										151.65 153.71	38.91 34.51	South of Fiji 25.09 S 178.96 W H = 14 31 51.4 Depth = 372 km MB = 5.1 /ISC/
199	MAY 20	BRA	E	19	18	0.0													No determination of epicentre
200	MAY 22	SPC	IP EPP	3 3	26 29	36.2 10.0	1.2 16.1										61.92	85.34	Burma-India Border Region 23.86 N 94.09 E H = 3 16 18.3 Depth = 51 km MB = 5.3 /ISC/
201	MAY 22	SPC	IP	7	0	10.0	0.5										80.43	49.59	Southern Honshu 33.19 N 136.68 E H = 6 48 40.1 Depth = 401 km MB = 4.9 /ISC/
202	MAY 23	SPC	EPG	14	22	40.8													No determination of epicentre





No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
203	MAY 23	SPC BRA	IP IP	15 15	24 24	22.0 30.0	-2.2 4.2							76.74 77.03	342.01 340.19	Queen Charlotte Islands Region H = 51.49 N 131.01 W Depth = 15 12 29.3 km MB = 5.1 /ISC/	
204	MAY 23	SPC	EP	15	56	8.0	-0.5							80.75	66.00	Taiwan Region 22.76 N 122.60 E H = 15 43 54.9 Depth = 20 km MB = 5.3 /ISC/	
205	MAY 23	SPC SRO BRA	IP IPP ESCS LMV IP IPGP IPP IS LMH IPCP IPCP I IPP ISKS LMH	16 16 16 16 16 16 16 16 16 16 16 16 16 16 16	14 17 24 58 14 14 17 24 51 14 14 16 17 24 59	5.0 28.4 42.0 0.0 10.6 34.6 40.0 26.6 0.0 20.9 36.0 24.0 33.0 27.0 0.0	-0.3 16.8 11.7 -3.8 14.6 14.3 -4.4 -1.6 13.5 2.7 -9.3		22.0 4.4	20.0 10.0	24.0 2.6	20.0 10.0	6.7 6.2	80.80 82.55 83.12	66.03 64.49 63.68	Taiwan Region 22.70 N 122.61 E H = 16 1 48.5 Depth = 1 km MB = 5.8 /ISC/	
206	MAY 24	SPC SRO BRA	EAPKIKP EAPKIKP E IAPKIKP IAPKIKP I IPKSBG	2 2 2 2 2 2 2	13 13 13 13 13 14 17	26.0 18.0 50.0 30.0 39.0 30.0	6.0 1.0 6.2 15.2 0.3							144.68 146.56 146.87	46.08 44.75 42.59	Tonga 20.78 S 173.82 W H = 1 53 38.3 Depth = 19 km MB = 5.0 /ISC/	
207	MAY 24	SPC BRA	EAPKIKP EAPKIP2	6 6	14 14	4.0 21.0	-4.2 4.6							149.49 151.27	26.54 21.57	Tonga 20.75 S 173.78 W H = 5 54 16.2 Depth = 33 km MB = 5.1 /ISC/	
208	MAY 24	BRA	IPKIKP IPKIP2 IAPKHKP ISKPDF	23 23 0 0	59 59 1 2	32.0 47.0 38.0 7.0	0.9 7.6 -1.7 -4.9							146.92	28.34	Fiji Region 17.62 S 178.66 W H = 23 40 54.8 Depth = 563 km MB = 5.3 /ISC/	

No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
209	MAY 25	BRA	IP I	1 1	41 43	7.0 28.0	3.4							46.70	122.69	Arabian Sea 14.35 N 56.30 E H = 1 32 36.1 Depth = 33 km MB = 4.9 /ISC/	
210	MAY 25	SPC BRA	IP IAP IPGP I IPP I ES LMH EP IXS LMH	19 19 19 19 19 19 19 19 19 19 19	16 16 16 17 18 20 25 54 16 26 54	6.5 15.0 29.0 17.0 56.0 53.0 47.0 0.0 16.0 4.0 0.0	0.7 -3.6 3.6 -2.4 5.3 3.0 3.8		3.0	16.0	2.0	16.0		73.55 74.34	354.60 352.88	Gulf of Alaska 57.33 N 150.18 W H = 19 4 33.3 Depth = 26 km MB = 5.6 /ISC/	
211	MAY 25	SPC BRA	EP IP IXP IPGP	20 20 20 20	38 38 39 40	31.1 38.0 8.0 17.0	1.9 -0.0 7.1 5.5							45.51 46.63	126.96 122.66	Arabian Sea 14.42 N 56.28 E H = 20 30 14.0 Depth = 61 km MB = 4.9 /ISC/	
212	MAY 26	SPC BRA	EAPKIKP IAPKIKP IAPKIKP	4 4 4	55 55 56	38.4 44.0 8.0	2.2 3.4 -1.1							123.53 125.82	56.84 54.25	Solomon Islands 6.80 S 155.60 E H = 4 36 50.9 Depth = 103 km MB = 5.6 /ISC/	
213	MAY 26	BRA	IP IPP IS LMH EP IS IXS EP	9 9 9 10 9 9 9 9	17 18 22 2 17 22 23 18	44.0 48.0 14.0 0.0 53.0 19.0 11.0 5.0	0.6 13.5 -11.3 3.8 -16.8 18.9 1.6							28.22 28.88 30.47	257.29 258.91	North Atlantic Ocean 35.98 N 17.56 W H = 9 11 51.6 Depth = 34 km MB = 6.5 /ISC/	
214	MAY 26	SPC	EP	18	9	16.0	0.8							41.04	80.04	Kirgiz SSR-Sinkiang 40.26 N 77.93 E H = 18 1 35.1 Depth = 50 km MB = 5.0 /ISC/	
215	MAY 26	BRA SPC	IP IP	20 20	25 25	26.6 48.8	-0.4 1.7							28.19 30.44	257.40 258.73	North Atlantic Ocean 36.04 N 17.56 W H = 20 19 33.2 Depth = 17 km MB = 5.5 /ISC/	
216	MAY 26	BRA SPC	IP IXP EXP	22 22 22	6 7 7	54.0 24.0 28.0	-3.1 15.1 -1.0							28.16 30.40	257.43 259.76	North Atlantic Ocean 36.07 N 17.54 W H = 22 1 5.2 Depth = 29 km MB = 4.6 /ISC/	





Nc.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
217	MAY 27	SPC	IP	6	53	7.0	-0.1							76.60	35.65	Kurile Islands 44.10 N 148.34 E H = 6 41 20.6 Depth = 54 km MB = 5.1 /ISC/	
218	MAY 27	BRA	IPKHKP IAPKHKP IAPKP2	9	31	12.0	4.9							151.14	25.74	Tonga 21.20 S 175.88 W H = 9 11 35.9 Depth = 151 km MB = 5.1 /ISC/	
219	MAY 27	BRA	IPCP IPF ES	10	32	16.0	2.8							99.75	77.86	Northern Sulawesi 0.75 N 122.61 E H = 10 18 38.9 Depth = 97 km MB = 6.0 /ISC/	
220	MAY 28	SPC BRA	EKPK2 IAPKHKP I	3	15	0.0	-0.8							145.56 147.22	21.72 16.93	Samoa Region 16.23 S 172.34 W H = 2 55 21.6 Depth = 21 km MB = 5.0 /ISC/	
221	MAY 29	SPC BRA	EPKHKP IPKHKP IPKP2 EPKSDF	7	0	52.0	4.4							148.62 150.69	38.88 34.73	South of Fiji 22.37 S 179.57 E H = 6 42 11.7 Depth = 597 km MB = 5.6 /ISC/	
222	MAY 29	SPC BRA	EP EP EAP EPP	15	56	18.3	-0.1							80.83 83.06	49.30 47.04	Near South Coast of Honshu 33.04 N 137.24 E H = 15 44 45.3 Depth = 385 km MB = 5.1 /ISC/	
223	MAY 29	BRA	IP IAP IPP I E EAP	23	4	34.0	0.4							28.43	256.70	North Atlantic Ocean 35.63 N 17.56 W H = 22 58 38.6 Depth = 24 km MB = 4.8 /ISC/	
224	MAY 30	BRA	IPG I I I	9	58	31.0	-0.5							30.69	258.10	No determination of epicentre	

Nc.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
225	MAY 30	SPC SRO	IP IPP LMV IP IPCP IPP IS LMH IP IPCP IPP ES LMH	17	55	13.2	-3.1							61.90	81.14	Burma 26.55 N 96.92 E H = 17 45 0.0 Depth = 53 km MB = 5.7 /ISC/	
226	JUN 2	BRA	EPN ESB ISG	19	6	29.0	-11.9							5.48	274.43	Germany 48.30 N 8.90 E H = 19 5 16.0 Depth = 21 km /ISC/	
227	JUN 2	SPC SRO BRA	EAPKIKP EPKIKP I E LMH IAPKHKP I I	19	52	33.2	-1.0							144.41 146.29	46.89 45.60	New Hebrides Region 20.78 S 173.24 E H = 19 32 53.0 Depth = 19 km MB = 5.3 /ISC/	
228	JUN 2	SPC BRA	EAPKIKP EPKIKP I	20	2	25.0	-1.0							146.53	46.94 43.51	New Hebrides Region 20.73 S 173.17 E H = 19 42 42.6 Depth = 33 km /ISC/	
229	JUN 3	SPC BRA	IP IPCP IP EPP	0	48	3.0	3.3							61.87	81.11	Burma 26.59 N 96.91 E H = 0 37 42.5 Depth = 43 km MB = 5.1 /ISC/	
230	JUN 3	SPC BRA	IP IPCP IPP IP IPP	3	33	57.1	0.2							61.90	81.09	Burma 26.59 N 96.95 E H = 3 23 35.0 Depth = 11 km MB = 5.4 /ISC/	
231	JUN 3	SPC	EPGP EPP	5	34	19.0	1.3							92.75	71.05	Philippine Islands Region 10.24 N 126.55 E H = 5 21 7.1 Depth = 36 km MB = 5.4 /ISC/	



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		s	A	T	A	T	A					
232	JUN 3	BRA	IP I E	14 32 14 33 14 34	38.0 20.0 5.0	-2.6								85.39	324.63	Southern Nevada, N.E. 37.33 N 116.52 W H = 14 20 0.2 /AEC/	
233	JUN 3	BRA	IXP IPGP I E	14 52 14 52 14 53 14 54	41.0 5.0 20.0 44.0	0.4 8.8								85.41	324.17	Southern Nevada, N.E. 37.09 N 116.03 W H = 14 40 0.1 /ISC/	
234	JUN 3	SRO BRA	IPGP ISKS LMH IPGP IAP IXP I E EPP	18 21 18 32 19 6 18 21 18 21 18 22 18 23 18 25	41.0 5.0 0.0 47.0 53.0 14.0 38.0 38.0	0.5 -5.0 3.7 -2.2 14.1 3.6		2.2	20.0	3.0	20.0		5.8	94.37 95.01	67.77 68.82	Philippine Islands Region 10.21 N 126.43 E H = 18 8 23.2 Depth = 41 km MB = 5.7 /ISC/	
235	JUN 4	SRO	IXP IPP IS ISS LMH IAP IXP IPP I E LMH	2 33 2 34 2 39 2 42 2 51 2 33 2 33 2 34 2 35 2 43 2 51	10.0 49.0 45.0 57.0 0.0 8.0 20.0 59.0 26.0 38.0 0.0	-0.4 2.9 3.4 -2.4 -4.6 3.7 5.4				5.0	9.0		5.8	46.29 47.04	81.46 81.01	Kashmir-Tibet Border Region 35.83 N 79.92 E H = 2 24 32.9 Depth = 31 km MB = 5.6 /ISC/	
236	JUN 4	BRA	EPKP2 IAPKIKH	4 52 4 52	8.0 17.0	0.6 3.6								145.57	48.20	Loyalty Islands Region 21.26 S 170.24 E H = 4 32 29.0 Depth = 26 km MB = 5.4 /ISC/	
237	JUN 5	BRA SRO	ESKS ISKS	20 53 20 53	20.0 32.0	2.8 11.4								99.66 100.37	256.24 257.04	Peru-Bolivia Border Region 16.46 S 69.20 W H = 20 29 38.3 Depth = 204 km MB = 5.5 /ISC/	
238	JUN 6	BRA	IPKHKP I ISKPDF	1 27 1 27 1 29	14.0 50.0 47.0	-0.1 0.6								149.54	31.13	Fiji Region 20.61 S 179.14 W H = 1 8 40.3 Depth = 647 km MB = 5.8 /ISC/	

239	JUN 6	BRA	IPKP2 IPKP2	6 6 6 6	26.0 41.0	-1.0 14.0								145.39	25.64	Fiji Region 15.68 S 177.68 W H = 5 47 34.2 Depth = 415 km MB = 5.4 /ISC/
240	JUN 6	BRA	IPGP IAP IPP	16 2 16 2 16 5	2.0 20.0 17.0	-1.7 1.4 -2.0								84.91	60.35	Ryukyu Islands Region 23.45 N 126.61 E H = 15 49 31.2 Depth = 67 km MB = 5.4 /ISC/
241	JUN 7	BRA SPC SRO	IP IPGP IP IPGP	8 59 8 59 8 59 8 59	0.0 20.0 1.0 12.0	1.0 17.4 1.8 6.3								85.20 85.25 85.90	331.45 333.60 332.30	Near Coast of Northern California 40.59 N 124.18 W H = 8 46 20.4 Depth = 6 km MB = 5.4 /ISC/
242	JUN 8	SPC BRA	EP EPP IP	3 34 3 35 3 34	8.2 25.8 29.0	-0.6 -7.9 0.8								36.78 39.10	66.50 64.08	Eastern Kazakhstan 49.75 N 78.08 E H = 3 26 57.6 Depth = 0 km MB = 5.5 /ISC/
243	JUN 9	BRA	IPG	11 3	20.0											No determination of epicentre
244	JUN 9	SPC BRA	EP EPP EAP E	18 43 18 45 18 44 18 45	58.2 25.0 20.0 50.0	1.9 2.8 -0.6								36.87 39.03	87.04 83.60	Afghanistan-USSR Border Region 38.80 N 70.32 E H = 18 36 47.4 Depth = 21 km MB = 5.1 /ISC/
245	JUN 10	SPC	EP	3 43	9.2	2.3								80.88	65.96	Taiwan Region 22.69 N 122.72 E H = 3 30 53.6 Depth = 26 km MB = 5.0 /ISC/
246	JUN 10	SPC	EP	6 11	46.0	-0.4								35.74	275.30	Azores Region 40.58 N 29.54 W H = 6 4 46.3 Depth = 16 km MB = 5.0 /ISC/
247	JUN 10	SPC SRO BRA	IPKIKP IPKIKP IPKP2 I IAPKP2 IPKSDP	9 18 9 18 9 19 9 19 9 21 9 22	52.0 53.0 0.0 17.0 14.0 26.0	1.6 -0.4 -3.2 13.8 -0.6 -1.2								145.43 147.28 147.36	32.30 30.28 28.01	Fiji Region 17.98 S 178.33 W H = 9 0 19.5 Depth = 593 km MB = 5.5 /ISC/
248	JUN 10	SRO	IPG	12 23	51.0											No determination of epicentre





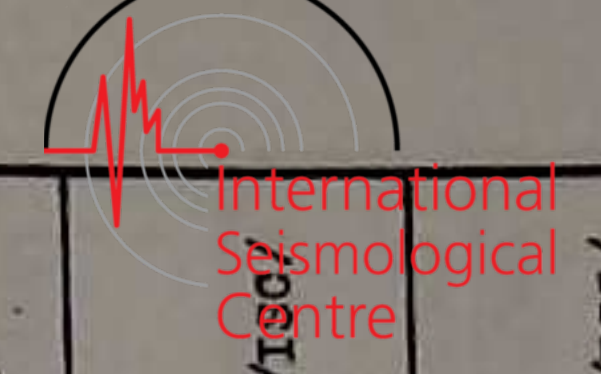


No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		s	A	T	A	T	A					
267	JUN 12	SPC	EP	14	43	6.5	0.6							77.19	36.92	Off Coast of Hokkaido 42.94 N 147.34 E H = 14 31 13.0 Depth = 29 km MB = 4.9 /ISC/	
268	JUN 12	SPC	EP	23	32	56.7	-0.5							77.19	36.48	Kurile Islands 43.17 N 147.83 E H = 23 21 0.0 Depth = 1 km MB = 5.2 /ISC/	
		SRO	IPCP	23	33	10.6	2.2							79.06	35.09		
		BRA	LMH	1	13	0.0	-14.5		0.9	12.0	1.3	12.0	5.6	79.23	34.36		
		BRA	EP	23	33	6.0	-2.4										
		BRA	IPCP	23	33	18.0	0.9										
269	JUN 13	SPC	EPG	3	1	24.7										No determination of epicentre	
		ISG	ISG	3	1	39.5											
270	JUN 13	SPC	EP	6	21	34.6	-0.2							90.45	70.66	Samar 12.28 N 125.37 E H = 6 8 37.2 Depth = 49 km MB = 5.7 /ISC/	
		EPP	EPP	6	25	15.5	3.5							92.76	68.32		
		ESCS	ESCS	6	32	35.7	9.4										
		BRA	IPCP	6	21	48.0	1.7										
		BRA	IS	6	32	36.0	-7.8										
		BRA	LMH	7	2	0.0	0.9										
271	JUN 13	SPC	EP	13	8	57.0	0.8									Kurile Islands 43.01 N 147.29 E H = 12 57 5.0 Depth = 38 km MB = 5.0 /ISC/	
		EPP	EPP	13	11	43.0	-8.6										
272	JUN 13	SPC	IP	18	20	2.5	-1.6									Kurile Islands 13.26 N 147.39 E H = 18 8 17.8 Depth = 72 km MB = 5.9 /ISC/	
		E	ISKS	18	23	20.0	-4.6										
		SRO	LMV	18	30	0.2	1.6										
		BRA	IP	18	57	0.0	1.9										
		BRA	ISKS	18	20	16.0	1.6										
		BRA	LMH	19	3	0.0	1.4										
		BRA	IP	18	20	17.0	15.0	90									
		BRA	IXP	18	20	58.0	2.0										
		BRA	I	18	21	37.0	-3.4										
		BRA	IPP	18	23	19.0	0.6										
		BRA	ISKS	18	30	16.0	0.6										
		BRA	LMH	19	3	0.0	0.6										
273	JUN 13	SPC	EP	19	26	4.0	0.6									Kurile Islands 43.18 N 148.00 E H = 19 14 7.4 Depth = 11 km MB = 4.6 /ISC/	

No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		s	A	T	A	T	A					
274	JUN 13	SPC	EP	19	52	20.0	1.3							76.98	36.36	Kurile Islands 43.41 N 147.82 E H = 19 40 26.2 Depth = 24 km MB = 5.1 /ISC/	
275	JUN 13	SPC	EP	2	4	27.0	-1.1							76.99	36.30	Kurile Islands 43.44 N 147.89 E H = 19 52 33.0 Depth = 7 km MB = 5.2 /ISC/	
276	JUN 14	SPC	EP	0	11	59.0	1.7							76.85	36.23	Kurile Islands 43.59 N 147.86 E H = 0 0 8.2 Depth = 44 km MB = 5.0 /ISC/	
277	JUN 14	SPC	IP	1	59	44.6	1.6							77.10	36.37	Kurile Islands 43.30 N 147.89 E H = 1 47 49.8 Depth = 24 km MB = 5.1 /ISC/	
		BRA	EP	1	59	49.0	-5.2							79.14	34.25		
		BRA	E	2	0	49.0	0.7										
278	JUN 14	SPC	EP	2	8	24.5	0.7							77.08	36.49	Kurile Islands 43.26 N 147.74 E H = 1 56 29.4 Depth = 15 km MB = 4.9 /ISC/	
279	JUN 14	SPC	EP	2	26	27.0	1.8							77.81	36.73	Off Coast of Hokkaido 42.52 N 148.00 E H = 2 14 25.8 Depth = 9 km MB = 4.9 /ISC/	
280	JUN 14	SPC	IP	3	11	12.1	0.6							77.02	36.47	Kurile Islands 43.32 N 147.72 E H = 2 59 16.0 Depth = 6 km MB = 5.3 /ISC/	
		SRO	IP	3	11	26.0	4.2							78.89	35.08		
		BRA	EP	3	11	22.0	-0.7							79.06	34.35		
		BRA	IPCP	3	11	46.0	14.4										
281	JUN 14	SPC	EPCP	4	19	12.0	-1.4							76.97	36.36	Kurile Islands 43.42 N 147.81 E H = 4 7 11.8 Depth = 39 km MB = 5.0 /ISC/	
282	JUN 14	SPC	EAPKHP	4	25	6.0	-2.8							149.34	26.59	Tonga 20.61 S 173.86 W H = 4 5 17.2 Depth = 33 km MB = 5.0 /ISC/	
		BRA	EAPKHP	4	25	10.0	-1.7							151.12	21.65		
		BRA	EFKP2	4	25	22.0	5.2										
283	JUN 14	SPC	EFCIKP	4	32	20.0	1.3							156.67	42.75	Kermadec Islands 30.31 S 177.87 W H = 4 12 28.8 Depth = 44 km MB = 5.7 /ISC/	
		BRA	EFKIKP	4	32	22.0	0.6							158.79	38.15		



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
284	JUN 14	SPC	EXP	4	53	49.0	6.0							77.06	36.41	Kurile Islands 43.32 N 147.82 E H = 4 41 37.3 Depth = 33 km MB = 4.5 /ISC/	
285	JUN 14	SPC	EP	4	54	55.0	2.6							77.01	36.28	Kurile Islands 43.43 N 147.92 E H = 4 43 1.7 Depth = 38 km MB = 5.0 /ISC/	
286	JUN 14	SPC	EAP	5	14	54.0	-1.3							77.03	36.32	Kurile Islands 43.39 N 147.89 E H = 5 2 57.0 Depth = 12 km MB = 5.0 /ISC/	
287	JUN 14	SPC SRO BRA	EP IFCP EXP EP	8 55 8 55 8 55 8 55	7 3 18 0 27 0 19 0	7.3 18.0 27.0 19.0	1.5 0.9 -0.3 2.0							76.91 78.78 78.95	36.59 35.20 34.48	Kurile Islands 43.35 N 147.50 E H = 8 43 14.0 Depth = 26 km MB = 5.0 /ISC/	
288	JUN 14	SPC	EP	17	23	5.2	-1.5							77.04	36.61	Kurile Islands 43.23 N 147.57 E H = 17 11 15.4 Depth = 34 km MB = 5.3 /ISC/	
289	JUN 14	SPC SRO BRA	IP IFCP ES IP ISKS LMH EP E	17 49 17 50 17 59 18 27 17 49 17 49	6 6 5 0 21 0 0 0 16 0 49 0	6.6 5.0 21.0 0.0 16.0 49.0	2.6 -4.9 0.8		10.0	18.0	19.0	18.0		77.22 79.08 79.26	36.58 35.18 34.46	Kurile Islands 43.10 N 147.74 E H = 17 37 7.0 Depth = 3 km MB = 5.1 /ISC/	
290	JUN 14	SPC SRO BRA	IP IFCP ES IP ISKS LMH IP LXP I IXS LMH	18 49 18 49 18 59 18 50 19 0 19 31 18 50 18 50 18 51 19 0 19 33	53 4 56 7 43 0 2 0 8 0 0 0 4 2 40 0 0 0 25 0 0 0	53.4 56.7 43.0 2.0 8.0 0.0 4.2 40.0 0.0 25.0 0.0	1.2 -6.7 8.0 -0.4 -0.5 0.8 17.2 4.3		11.0	12.0	11.0	12.0	6.6 6.7	36.39 35.00 34.27	Kurile Islands 43.47 N 147.72 E H = 18 38 3.3 Depth = 48 km MB = 5.7 /ISC/		



291	JUN 14	SPC	EP	19	1	33.0	2.3							76.87	36.18	Kurile Islands 43.60 N 147.94 E H = 18 49 38.5 Depth = 22 km MB = 5.3 /ISC/
292	JUN 14	SPC	EP	20	43	28.0	1.9							76.92	36.33	Kurile Islands 43.48 N 147.81 E H = 20 31 35.8 Depth = 37 km MB = 4.9 /ISC/
293	JUN 14	SPC	EP	20	47	16.0	1.0							77.14	36.16	Kurile Islands Region 43.38 N 148.16 E H = 20 35 21.0 Depth = 20 km MB = 5.1 /ISC/
294	JUN 14	SPC	EP	21	0	16.0	0.3							57.68	350.36	Beaufort Sea 71.94 N 132.77 W H = 20 50 26.9 Depth = 40 km MB = 5.1 /ISC/
295	JUN 14	SPC	E	22	5	33.0										No determination of epicentre
296	JUN 14	SPC SRO BRA	IP IPP IP ISCS IP LXP	23 48 23 51 23 48 23 59 23 48 23 49	43 3 48 3 54 2 18 0 55 0 10 0	43.3 48.3 54.2 18.0 55.0 10.0	0.5 -1.9 1.7 -1.3 1.1 -1.4							81.03 82.92 83.19	43.26 41.82 41.03	Off East Coast of Honshu 36.31 N 143.30 E H = 23 36 30.8 Depth = 42 km MB = 6.0 /ISC/
297	JUN 15	SPC SRO BRA	IP IS IXS LMV IP ISKS LMH IP IAP I IS LMH	0 31 0 41 0 41 1 8 0 31 0 41 10 9 0 31 0 31 0 33 0 41 1 14	28 1 14 0 33 0 0 0 31 0 34 0 9 0 34 0 55 0 43 0 31 0 14 0	28.1 14.0 33.0 0.0 31.0 34.0 9.0 34.0 55.0 43.0 31.0 14.0	4.8 9.7 -1.8 -2.6 -3.8 -0.5 2.6 4.9 0.0 1.5 -1.9		26.0	12.0	22.0	12.0	6.9 78.71 78.83	36.42 35.02 34.30	Kurile Islands 43.50 N 147.65 E H = 0 19 36.7 Depth = 65 km MB = 6.0 /ISC/	
298	JUN 15	SPC SRO BRA	IP EXP IP	2 21 2 21 2 21	7 0 46 0 16 3	7.0 46.0 16.3	0.0 1.5 -1.9		24.0	15.0	43.0	15.0	7.0	77.77 79.64 79.81	36.89 35.49 34.75	Off Coast of Hokkaido 42.47 N 147.79 E H = 2 9 16.0 Depth = 71 km MB = 5.3 /ISC/



No.	Date	Stat. Code	Phase	h	m	s	RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
								A	T	A	T	A	T					
299	JUN 15	SPC	EP EPP	4	56	31.2	-0.0								100.26	58.32	Western Caroline Islands H = 11.89 N 141.43 E Depth = 4 42 50.8 km MB = 5.5 /ISC/	
300	JUN 15	SPC	EP	6	14	19.7	0.0								76.75	36.28	Kurile Islands H = 43.65 N 147.73 E Depth = 6 2 31.2 km MB = 4.9 /ISC/	
301	JUN 15	SPC	EP	7	27	32.0	0.1								76.94	36.25	Kurile Islands H = 43.50 N 147.91 E Depth = 7 15 37.0 km MB = 5.1 /ISC/	
302	JUN 15	SPC	EP	8	59	3.0	-1.0								76.98	36.27	Kurile Islands H = 43.46 N 147.92 E Depth = 8 47 13.7 km MB = 4.9 /ISC/	
303	JUN 15	SPC	EP	10	58	31.0	0.3								76.85	36.13	Kurile Islands H = 43.64 N 147.98 E Depth = 10 46 38.0 km MB = 4.8 /ISC/	
304	JUN 16	BRA	EPA2	0	49	37.0	-0.3								146.98	20.62	Tonga H = 16.45 S 174.43 W Depth = 0 30 11.6 km MB = 5.3 /ISC/	
305	JUN 16	SPC	EAP	21	20	57.0	-3.0								77.10	36.42	Kurile Islands H = 43.28 N 147.83 E Depth = 21 8 58.9 km MB = 4.5 /ISC/	
306	JUN 16	SPC	EPAKP EPP LMV EAPKIP IPP I EPAKP EPP ESKDE	22	54	8.0	5.4								116.21	61.64	Bismarck Sea H = 3.10 S 148.00 E Depth = 22 35 23.4 km MB = 6.2 /ISC/	
		SRO		23	43	0.0	-1.7								118.00	60.50		
		BRA		23	2	34.0	0.3								118.52	59.22		
		BRA		22	55	33.0	5.9											
		BRA		23	1	15.0	1.3											

No.	Date	Stat. Code	Phase	h	m	s	RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
								A	T	A	T	A	T					
307	JUN 17.	SPC	EP	21	41	29.0	1.9								77.41	41.69	Near East Coast of Honshu H = 40.18 N 142.33 E Depth = 21 29 37.2 km MB = 5.0 /ISC/	
308	JUN 18	SPC	IPOP	4	23	32.0	-0.5								86.22	73.13	Mindoro H = 13.96 N 12.65 E Depth = 4 11 2.9 km MB = 5.3 /ISC/	
309	JUN 18	SPC	EP	5	55	57.0	1.1								77.09	40.74	Off East Coast of Honshu H = 40.97 N 143.19 E Depth = 5 44 5.5 km MB = 5.2 /ISC/	
310	JUN 18	SPC	EP	13	46	58.0	3.3								77.58	36.98	Off Coast of Hokkaido H = 42.58 N 147.56 E Depth = 13 35 2.0 km MB = 4.9 /ISC/	
311	JUN 18	BRA	EPA IPG IPG ISG I	15	39	12.0	-0.5								2.93	232.89	Austria H = 46.35 N 13.73 E Depth = 15 38 23.8 km MB = 5.4 /ISC/	
		BRA		15	39	21.0	-1.2											
		BRA		15	39	27.0	4.8											
		SPC		15	40	3.0	2.4											
		SPC		15	41	12.3	-4.3											
312	JUN 18	SPC	EPAKP EPAKP EPP EPAKP EPAKP IPP EPAKP ISKPAB	16	51	16.3	5.1											
		SPC		16	51	27.4	2.7											
		SPC		16	54	7.0	-0.9											
		SRO		16	54	42.0	1.2											
		BRA		16	51	30.0	1.9											
		BRA		16	54	18.0	-1.5											
		BRA		16	51	33.0	4.2											
		BRA		16	54	48.0	-2.4											
313	JUN 19	SRO	IPN IPG ISG LMH ESN IPN IPG ISB LMH	10	12	56.0	3.8											
		SRO		10	13	16.0	-6.2											
		HRB		10	14	38.0	-8.4											
		BRA		10	15	0.0	0.0											
		BRA		10	14	0.0	-8.1											
		BRA		10	12	50.0	-4.4											
		BRA		10	13	44.0	18.6											
		BRA		10	14	41.0	7.5											
		BRA		10	15	0.0	0.0											
314	JUN 19	SPC	IP IXF	13	12	41.4	-0.3											
		SRO		13	12	44.0	0.1											
		SRO		13	12	44.0	0.1											



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
315	JUN 22	SPC	EP	2	36	1.1								85.66	47.56	South of Honshu 30.07 N 142.15 E H = 2 24 0.7 Depth = 53 km MB = 5.9 /ISC/	
		SRO	ESCS	2	47	-3.3								87.54	46.11		
		BRA	IPCP	2	36	2.7								87.87	45.25		
316	JUN 22	SPC	EP	2	47	-5.4			11.4	16.0	24.0	16.0					
				3	13	0.0											
				2	36	50.0											
317	JUN 22	SPC	EP	2	37	6.0											
				2	47	15.0											
				3	17	0.0											
318	JUN 23	SRO	EP	4	36	32.5											
				9	25	42.0											
				1.1													
319	JUN 23	BRA	IPN	13	18	56.6											
				13	19	8.6											
				13	19	26.6											
320	JUN 24	BRA	EAPKIP	21	35	12.0											
				21	35	24.0											
				-0.6													
321	JUN 25	BRA	IPG	12	32	27.0											
				1.7													
				-0.2													

No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
322	JUN 26	BRA	IP	6	11	33.0											
				0.1													
				79.73	3.63												
323	JUN 26	SRO	IPCP	10	4	28.0											
				15.7													
				84.12	47.91												
324	JUN 26	BRA	IP	10	14	0.0											
				0.9													
				84.47	47.10												
325	JUN 26	BRA	EXP	10	4	12.0											
				1.2													
				85.38	324.49												
326	JUN 29	SRO	IP	10	5	45.0											
				3.7													
				86.14	325.35												
327	JUN 29	SRO	IPCP	10	7	33.0											
				-1.1													
				79.63	34.47												
328	JUN 30	SRO	IP	12	42	38.8											
				-1.8													
				87.98	48.83												
329	JUN 30	SRO	IP	12	42	44.8											
				0.6													
				74.61	48.83												
330	JUN 30	SRO	IP	12	42	56.8											
				12.6													
				74.98	48.15												
331	JUN 30	SRO	IP	12	43	5.8											
				0.5													
				79.63	34.47												
332	JUN 30	SRO	IP	12	43	23.8											
				0.2													
				86.14	325.35												
333	JUN 30	SRO	IP	12	42	48.0											
				0.2													
				79.63	34.47												
334	JUN 30	SRO	IP	13	19	6.0											
				9.7													
				87.98	48.83												
335	JUN 30	SRO	IP	13	19	36.0											
				0.2													
				74.61	48.83												
336	JUN 30	SRO	IP	13	19	49.0											
				0.2													
				74.61	48.83												
337	JUN 30	SRO	IP	10	48	24.0											
				-1.0													
				74.61	48.83												
338	JUN 30	SRO	IP	10	48	56.0											
				19.4													
				74.61	48.83												
339	JUN 30	SRO	IP	10	50	16.0											
				-5.2													
				74.61	48.83												
340	JUN 30	SRO	IP	10	51	10.0											
				-6.4													
				74.61	48.83												
341	JUN 30	SRO	IP	10	57	16.0											
				-0.4													
				74.61	48.83												
342	JUN 30	SRO	IP	11	19	0.0											
				0.4													
				74.61	48.83												
343	JUN 30	SRO	IP	10	48	27.4											
				-4.8													
				74.61	48.83												
344	JUN 30	SRO	IP	10	50	24.6											
				1.2													
				74.61	48.83												
345	JUN 30	SRO	IP	10	51	24.4											
				-2.0													
				74.61	48.83												
346	JUN 30	SRO	IP	10	57	21.4											
				1.0													
				74.61	48.83												
347	JUN 30	SRO	IP	11	25	0.0											
				74.61	48.83												
348	JUN 30	SRO	IP	17	42	17.0											
				74.61	48.83												
349	JUN 30	SRO	IP	11	4	12.4											
				74.61	48.83												
350	JUN 30	SRO	IP	13	29	18.0											
				0.9													
				74.61	48.83												
351	JUN 30	SRO	IP	13	29	34.0											
				13.6													
				74.61	48.83												
352	JUN 30	SRO	IP	13	31	26.0											
				14.5													
				74.61	48.83												



No.	Date	Stat. Code	Phase	GMT h m s	RES O-C	Z			E-W			N-S		MPV	MLH	Delta	Azimuth	Remarks
						A	T		A	T		A	T					
330	JUN 30	SRO	ES	15 31 18.0	-18.2									5.1	9.68	164.14	Greece 38.44 N 21.67 E H = 15 27 28.1 Depth = 47 km MB = 4.3 /ISC/	
331	JUN 30	SRO BRA	ESS I E	18 43 12.0 18 46 22.0 18 45 51.0 18 47 27.0	3.7										9.66 10.25	164.39 159.72	Greece 38.45 N 21.61 E H = 18 40 32.0 Depth = 41 km MB = 4.3 /ISC/	
332	JUN 30	BRA SRO	EP E EP ESKS LMH	19 6 9.0 19 7 51.0 19 6 14.0 19 16 14.0 19 36 0.0	0.7 1.5 -7.1										76.78 77.54	324.64 325.43	Yellowstone National Park 44.73 N 110.68 W H = 18 54 14.3 Depth = 7 km MB = 5.3 /ISC/	
333	JUN 30	SRO	E E	23 5 14.0 23 8 14.0													No determination of epicentre	
334	JUL 4	SRO BRA	EPKHKP EAPK2 EPKHKP EAPKHKP	11 45 15.0 11 45 35.0 11 45 15.0 11 45 22.0	0.7 1.4 0.6 2.8										151.53 151.53	25.09 22.56	Tonga 21.13 S 174.19 W H = 11 25 24.6 Depth = 15 km MB = 5.6 /ISC/	
335	JUL 7	SRO	IP ISKS LMH	19 41 30.0 19 51 50.0 20 17 0.0	-10.5 -14.3										90.49	49.10	Volcano Islands Region 25.94 N 141.24 E H = 19 28 44.5 Depth = 64 km MB = 5.6 /ISC/	
336	JUL 8	BRA SRO	EAP EPP ES LMH IPCP ISKS LMH	9 50 37.0 9 54 4.0 10 1 13.0 10 36 0.0 9 50 37.4 10 1 13.4 10 20 0.0	-4.3 -4.6 -6.7 2.6 11.7										90.87 91.68	318.47 319.37	Gulf of California 29.49 N 113.40 W H = 9 37 28.9 Depth = 36 km MB = 5.6 /ISC/	
337	JUL 8	SRO BRA	+IP IS LMH +IP IS LMH	12 15 9.0 12 23 49.0 12 31 0.0 12 15 19.0 12 23 58.0 12 49 0.0	-1.5 5.1 3.5 4.7										65.36 66.14	84.84 64.14	Burma 21.42 N 94.62 E H = 12 4 38.0 Depth = 112 km MB = 5.9 /ISC/	

338	JUL 8	SRO BRA	IPCP IPPP ISCS LMH IP IPPP ISCS LMH	22 58 57.0 23 2 25.0 23 9 29.0 23 37 0.0 22 58 54.0 23 2 16.0 23 9 31.0 23 39 0.0	0.4 12.1 -1.0 -0.6 0.7 -1.5													South of Honshu 32.84 N 142.43 E H = 22 46 15.8 Depth = 20 km MB = 5.8 /ISC/	
339	JUL 9	SRO BRA	EP EXP	11 46 49.0 11 47 4.0	2.9 3.5														Kurile Islands 43.33 N 147.35 E H = 11 34 45.0 Depth = 31 km MB = 5.1 /ISC/
340	JUL 10	SRO BRA	IP I I IS LMH EPCP IXP I I IS LMH	18 42 40.6 18 44 50.6 18 50 52.6 18 53 50.0 19 35 0.0 18 42 50.0 18 43 20.0 18 44 29.0 18 47 41.0 18 53 55.0 19 26 0.0	-0.4 -4.5 5.8 4.9 -5.1														Mindanao 6.51 N 126.65 E H = 18 29 15.8 Depth = 81 km MB = 5.9 /ISC/
341	JUL 11	SRO BRA	IPKIKP IPP ISKPBC ISP LMH -IPKIKP ISKPAB IPKSDP I	19 13 32.0 19 15 48.0 19 16 48.0 19 25 52.0 20 11 0.0 19 13 32.0 19 14 28.0 19 16 50.0 19 17 11.0 19 19 47.0	1.7 -6.1 0.3 -1.5 0.9 -0.3 5.0														Solomon Islands 10.34 S 161.20 E H = 18 54 28.1 Depth = 88 km MB = 5.8 /ISC/
342	JUL 12	BRA	IPKIKP IAPKIKP IPKASAB I	17 27 35.0 17 28 26.0 17 31 17.0 17 31 59.0	1.0 15.5 -2.9														New Hebrides 14.77 S 167.28 E H = 17 8 24.3 Depth = 136 km MB = 5.6 /ISC/
343	JUL 12	BRA	IPKIKP IAPKIKP IPK2 EPP	19 24 35.0 19 24 47.0 19 25 8.0 19 29 3.0	0.4 -3.8 -2.5 11.4														Kermadec Islands 29.17 S 177.33 W H = 19 4 44.2 Depth = 54 km MB = 5.5 /ISC/







No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
360	JUL 20	SPG	EPKIKP IPP LMV IFKIKP LMH IFKIKP IAFKIKP I IPP LMH	14 56 14 58 15 54 14 56 16 00 14 56 14 56 14 57 14 58 15 52	34.6 20.8 0.0 40.0 0.0 37.0 56.0 28.0 28.0 0.0	3.3 4.7 5.2 1.3 4.2 -3.1		82.0	18.0	30.0	18.0			123.11 124.94 125.41	57.23 56.09 54.67	Solomon Islands 6.64 S 155.09 E H = 14 37 40.6 Depth = 54 km MB = 6.5 /ISC/	
361	JUL 20	SPG	EPKIKP EPP IAFKIKP IFKIKP IAFKIKP I E LMH	20 13 20 15 20 13 20 13 20 13 20 14 20 21 21 14	28.0 19.0 41.0 31.0 37.0 19.0 19.0 0.0	6.6 10.5 1.3 5.2 -3.6							123.60 125.43 125.90	57.45 56.32 54.89	Solomon Islands 7.15 S 155.21 E H = 19 54 29.1 Depth = 49 km MB = 6.1 /ISC/		
362	JUL 20	SPG	IFKIKP EPP IAFKIKP IFKIKP EPP	23 24 23 25 23 24 23 24 23 26	14.0 56.0 25.0 16.0 7.0	4.5 2.9 -5.2 2.0 -1.2							122.87 124.69 125.17	57.65 56.51 55.10	Solomon Islands 6.63 S 154.66 E H = 23 5 19.8 Depth = 58 km MB = 6.3 /ISC/		
363	JUL 21	SPG	IFKIKP +IFKIKP IPP -IFKIKP IAFKIKP	2 22 2 23 2 24 2 22 2 23	57.0 1.0 49.0 58.0 19.0	5.5 5.9 -0.5 2.1 3.7							123.36 125.19 125.65	57.10 55.96 54.52	Solomon Islands 6.78 S 155.32 E H = 2 4 2.0 Depth = 67 km MB = 5.7 /ISC/		
364	JUL 21	SPG	IFKIKP +IFKIKP +IFKIKP IAFKIKP IPP	2 57 2 57 2 57 2 58 2 59	54.0 57.0 52.0 7.0 53.0	5.9 5.4 -0.4 -3.8 3.3							123.45 125.29 125.75	57.05 55.91 54.47	Solomon Islands 6.84 S 155.41 E H = 2 38 57.8 Depth = 63 km MB = 6.2 /ISC/		
365	JUL 21	SPG	EAPKIKP EAPKIKP EAPKIKP EAPKIKP	4 28 4 28 4 28 4 29	54.0 57.0 56.0 8.0	-1.5 -2.0 3.3 8.1							123.19 125.02 125.49	57.93 56.80 55.37	Solomon Islands 7.03 S 154.65 E H = 4 9 53.0 Depth = 22 km MB = 5.5 /ISC/		
366	JUL 22	SPG	EP	13 35	52.0	2.2							43.82	133.01		Eastern Gulf of Aden 13.66 N 51.63 E H = 13 27 47.0 Depth = 50 km MB = 4.8 /ISC/	



367	JUL 22	SPG	EPKIKP IFKIKP LMH	19 39 19 39 20 24	12.0 11.0 30.0	3.5 -1.0		2.0	18.0	3.0	18.0		6.1	123.94 125.77	57.01 55.87	Solomon Islands 7.23 S 155.71 E H = 19 20 14.3 Depth = 39 km MB = 5.5 /ISC/
368	JUL 23	SPG	EP	3 13	30.0	1.3							61.52	61.51	Burma 26.58 N 96.36 E H = 3 3 11.0 Depth = 22 km MB = 5.2 /ISC/	
369	JUL 23	SRO	E EAPKIKP	23 44 23 41	21.0 55.0	-0.2							125.43 125.90	56.56 55.12	Solomon Islands 7.26 S 155.05 E H = 23 22 44.4 Depth = 43 km MB = 5.6 /ISC/	
370	JUL 24	BRA	E E	0 30 0 32	49.0 34.0											No determination of epicentre
371	JUL 24	SPG	E	2 49	26.7											No determination of epicentre
372	JUL 24	BRA	E E	2 59 3 0	31.0 40.0											No determination of epicentre
373	JUL 24	BRA	E	3 47	29.0											No determination of epicentre
374	JUL 24	BRA	IPG	11 0	0.0											No determination of epicentre
375	JUL 24	BRA	IPG	17 6	39.0											No determination of epicentre
376	JUL 24	BRA	E	19 12	1.0											No determination of epicentre
377	JUL 24	SPG	EPKIKP EAPKIP2 ERA	19 20 19 22 19 20 19 22	30.0 49.0 50.0 50.0	6.0 4.8 3.0 -2.5							149.85 151.91	38.64 34.38	South of Fiji 23.42 S 179.72 W H = 19 1 41.6 Depth = 563 km MB = 5.6 /ISC/	
378	JUL 25	SPG	IP IPGP +IP IFGP E E IP IPGP I	10 52 10 52 10 52 10 52 10 53 10 54 10 52 10 54 10 54	14.5 30.0 19.0 35.0 26.0 44.0 18.0 30.0 36.0	0.2 3.1 -0.9 3.8 -4.0 -2.8	124	0.9					76.14 77.14 77.52	0.39 358.53 359.25	Alaska Peninsula 55.04 N 160.41 W H = 10 40 23.0 Depth = 1 km MB = 5.6 /ISC/	



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
379	JUL 25	SRO BRA	EKFP2 I IAPKIKP	11 45 11 46 11 45 11 45	36.0 12.0 35.0 53.0	7.0 5.1 1.5								145.56 145.77	38.84 36.69	F1J1 Region 18.31 S 176.39 E H = 11 25 58.6 Depth = 88 km MB = 4.6 /ISC/	
380	JUL 25	SRO	IP IS	19 19 19 21	32.0 20.0	-1.1 -2.5								9.75	163.27	Greece 38.41 N 21.87 E H = 19 17 12.3 Depth = 38 km MB = 4.8 /ISC/	
381	JUL 25	SRO BRA SPC	LMH EXP EXP	19 24 19 19 19 19	30.0 48.0 58.0	-6.4 -3.1			1.9	8.0	2.7	8.0	4.6	10.35 10.84	158.70 173.20	Off Coast of Hokkaido 42.96 N 146.93 E H = 22 47 46.0 Depth = 45 km MB = 4.9 /ISC/	
382	JUL 28	BRA	EP	22 59	37.0	1.1								77.01	37.17	Moluca Sea 0.01 S 125.01 E H = 2 59 38.1 Depth = 71 km MB = 5.4 /ISC/	
383	JUL 28	BRA	E	7 19	14.0											No determination of epicentre	
384	JUL 28	BRA	E	7 32	15.0											No determination of epicentre	
385	JUL 28	SRO BRA	IPKIKP IAPKIKP IAPKIKP I	9 3 9 4 9 4 9 6	50.0 3.0 13.0 12.0	-1.6 -1.8 8.2								124.85 125.33	56.87 55.45	Solomon Islands 6.93 S 154.51 E H = 8 44 55.6 Depth = 39 km MB = 5.5 /ISC/	
386	JUL 28	BRA	E	11 11	13.0									14.48	144.13	Dodecanese Islands 35.89 N 27.50 E H = 11 4 30.4 Depth = 60 km MB = 4.2 /ISC/	
387	JUL 29	SPC SRO BRA	IP IP EPP ISP EP EPP	2 49 2 49 2 51 2 56 2 49 2 51	20.2 39.0 27.0 30.0 34.0 25.0	3.0 11.1 8.6 2.1 -0.1 -0.5								45.90 47.25	88.71 86.02	Kashmir-Tibet Border Region 32.57 N 78.49 E H = 2 40 51.2 Depth = 0 km MB = 5.5 /ISC/	
388	JUL 29	BRA	IPG	11 5	39.0												No determination of epicentre

389	JUL 29	SRO BRA SPC	EXP E E EAP	15 10 15 13 15 11 15 10	52.0 24.0 15.0 52.3	7.7 3.4								13.88 14.54 14.75	156.65 153.44 164.64	Crete 34.84 N 24.95 E H = 15 7 12.8 Depth = 47 km MB = 4.7 /ISC/	
390	JUL 29	SRO BRA	E E I	20 18 20 17 20 17	20.0 15.0 54.0									6.35 6.85	172.94 165.71	Albania 41.51 N 19.35 E H = 20 13 48.7 Depth = 43 km /ISC/	
391	JUL 29	SPC	EAP	21 23	48.0	-4.3								58.80	222.53	North of Ascension Island 1.30 S 15.09 W H = 21 13 44.8 Depth = 33 km MB = 4.8 /ISC/	
392	JUL 29	SRO BRA	I I I I E E EP	22 23 22 24 22 23 22 24 22 25 22 25 22 27 22 23	20.0 30.0 37.0 55.0 20.0 35.0 46.0 9.0	-15.4 -4.2								6.23 6.74	172.54 165.24	Albania 41.63 N 19.39 E H = 22 21 9.1 Depth = 43 km /ISC/	
393	JUL 30	SPC SRO BRA	E EPP E LMH E IPP I ESKS	9 35 9 35 9 43 10 28 9 35 9 36 9 40 9 42	8.0 53.0 41.0 30.0 27.0 15.0 5.0 26.0	-12.3 3.7 10.9								106.45 107.83	86.38 85.34	Timor 10.09 S 123.84 E H = 9 17 12.4 Depth = 13 km MB = 5.7 /ISC/	
394	JUL 30	BRA	EP I I I	10 57 10 59 11 0 11 3	38.0 11.0 8.0 11.0												No determination of epicentre
395	JUL 30	BRA	IP I I I	11 48 11 49 11 51 11 55	32.0 23.0 29.0 8.0												No determination of epicentre
396	JUL 30	BRA	IP	15 9	14.0												No determination of epicentre
397	JUL 30	SPC SRO	EP I I	16 28 16 32 16 33	26.0 8.5 33.0	1.7								12.91 13.02	134.48 124.87	Turkey 39.45 N 32.13 E H = 16 25 17.0	



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks	
				h	m		A	T	A	T	A	T						
		BRA	LMH I I	16 34 16 32 16 33	0.0 20.0 35.0				7.3	9.0	7.0	9.0		5.2	13.90	123.30	Depth = 2 km MB = 4.5 /ISC/	
398	JUL 31	SPC	EPKIKP	8 58	37.2	1.9								146.73	23.27		Samoa Region 17.59 S 172.89 W H = 8 38 57.2 Depth = 25 km MB = 5.1 /ISC/	
399	AUG 1	BRA SPC SRO	E E IP -IP IXS LMH	20 32 20 33 20 32 20 32 20 43 21 8	30.0 24.0 53.5 56.0 37.0 0.0	1.3 0.9 2.3							6.0	85.28 85.43 86.00	329.09 331.26 329.95		Northern California 39.50 N 121.47 W H = 20 20 13.8 Depth = 14 km MB = 5.7 /ISC/	
400	AUG 2	BRA	I I IP ESKS LMH -IP ISKS LMH	10 30 10 31 10 33 10 40 11 20 10 30 10 40 11 6	25.0 1.0 1.0 16.0 19.0 0.0 21.0 28.0 0.0	-2.9 -3.2 -6.0 0.2 0.4			5.2	20.0	3.9	20.0		78.72	359.08		South of Alaska 53.48 N 161.39 W H = 10 18 19.7 Depth = 46 km MB = 6.0 /ISC/	
401	AUG 2	BRA	EP E	21 11 21 14	43.0 34.0	0.1												Northern California 39.41 N 121.68 W H = 20 59 3.0 Depth = 5 km MB = 5.3 /ISC/
402	AUG 2	BRA	E	21 12	25.0									4.47	177.63		Yugoslavia 43.70 N 17.36 E H = 21 11 34.4 Depth = 33 km MB = 5.3 /ISC/	
403	AUG 3	BRA	E	11 56	46.0													No determination of epicentre
404	AUG 3	SRO	ES LMH	12 25 12 58	1.0 30.0	-4.2			4.0	20.0	4.0	20.0	6.1	103.68	261.77		Near Coast of Peru 15.67 S 75.06 W H = 11 59 23.8 Depth = 37 km MB = 5.4 /ISC/	
405	AUG 4	SRO	E	16 53	49.0													No determination of epicentre

406	AUG 6	SPC BRA	EP IP IXP E	0 59 1 0 1 0 1 2	52.0 8.0 26.0 17.0	0.1 -2.5 7.5								21.75 23.64	102.17 96.60			Eastern Caucasus 40.71 N 48.70 E H = 0 54 59.7 Depth = 20 km /ISC/
407	AUG 6	BRA SPC SRO	I I IP EP EP	4 3 4 3 4 3 4 3	12.0 8.7 9.0	0.7 0.2 -2.4								85.40 85.54 86.11	329.23 331.40 330.09			Northern California 39.46 N 121.70 W H = 3 50 28.1 Depth = 5 km MB = 5.0 /ISC/
408	AUG 6	SPC BRA	EP EAP	4 49 4 49	16.0 27.0	0.3 -2.9								86.58 87.31	136.84 134.37			South Indian Ocean 25.79 S 69.48 E H = 4 36 34.7 Depth = 33 km MB = 4.8 /ISC/
409	AUG 6	BRA	E	6 13	9.0									69.88	351.63			Southern Alaska 61.50 N 146.34 W H = 6 3 26.9 Depth = 47 km /ISC/
410	AUG 6	BRA	IP	8 59	48.0													No determination of epicentre
411	AUG 6	BRA	IP	12 1	19.0													No determination of epicentre
412	AUG 6	BRA	IP	12 14	15.0													No determination of epicentre
413	AUG 6	BRA	IP	12 57	33.0													No determination of epicentre
414	AUG 6	BRA	ISG	13 17	24.0	5.5								1.59	249.85			Austria 47.60 N 14.90 E H = 13 16 26.0 /VIE/
415	AUG 6	BRA	IP EXP I E EXS IAP IP EPP	18 9 18 10 18 10 18 12 18 16 18 10 18 10 18 11	42.0 0.0 34.0 16.0 40.0 1.0 1.0 50.0	-3.8 3.0 11.7 0.5 -1.0 0.0								43.93	272.31			North Atlantic Ridge 33.80 N 39.25 W H = 18 1 39.5 Depth = 27 km MB = 5.3 /ISC/
416	AUG 6	BRA	IPKIP2	20 34	1.0	-7.2								149.54	30.73			Fiji Region 20.53 S 178.94 W H = 20 15 20.1 Depth = 648 km MB = 4.9 /ISC/



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z			E-W			N-S			MPV	MLH	Delta	Azimuth	Remarks
				h	m		s	A	T		A	T		A	T					
417	AUG 6	SPC	IP EPP	21 48	47.4	0.7										73.09	41.32	Eastern Sea of Japan 43.90 N 139.33 E H = 21 37 39.8 Depth = 229 km MB = 5.5 /ISC/		
418	AUG 6	SPC BRA	IPP IPKHKP EPP E	22 44 22 43 22 44 22 49	8.6 16.0 34.0 2.0	-2.1 3.1 7.1										114.59 116.91	63.03 60.64	Admiralty Islands Region 2.51 S 146.03 E H = 22 24 31.6 Depth = 33 km MB = 6.2 /ISC/		
419	AUG 7	BRA SRO	EP IP	15 34 15 34	46.0 56.0	-0.9 3.3										19.72 20.28	241.31 244.09	Straits of Gibraltar 36.40 N 4.42 W H = 15 30 22.5 Depth = 94 km MB = 5.1 /ISC/		
420	AUG 7	SPC SRO	EPKHKP IPKHKP IPKHKP IPKP2	20 30 20 30 20 31 20 31	51.3 58.0 0.0 16.0	0.2 6.9 4.0 2.6										149.69 151.56	37.04 35.20	South of Fiji 22.92 S 179.01 W H = 20 12 14.2 Depth = 617 km MB = 5.3 /ISC/		
421	AUG 8	BRA	IPP	17 23	35.0	12.3										83.14	63.83	Taiwan Region 22.59 N 122.50 E H = 17 7 41.1 Depth = 3 km MB = 5.0 /ISC/		
422	AUG 9	BRA	IP E E	9 46 9 48 9 48	58.0 1.0 20.0													No determination of epicentre		
423	AUG 9	SPC	ESG	10 58	21.2	0.2										1.47	323.47	Poland 50.36 N 18.88 E H = 10 57 32.5 MB = 3.2 /WAR/		
424	AUG 10	BRA	EP IPP I ISKS ESKSD EPS EP IPP IXS IMH E IPP	10 39 10 43 10 44 10 49 10 50 10 52 10 39 10 43 10 51 10 56 10 39 10 43	23.0 32.0 20.0 41.0 23.0 47.0 29.0 41.0 45.0 0.0 36.0 48.6	1.1 -7.9 -1.0 -9.4 -1.4 4.3 -3.8 -5.5 -8.6										102.58	250.10	Jujuy Province, Argentina 22.73 S 66.62 W H = 10 25 45.4 Depth = 187 km MB = 6.1 /ISC/		
		SPC	E IPP					4.6	16.0	1.2	8.0					104.88	252.53	No determination of epicentre		

No.	Date	Stat. Code	Phase	GMT		RES O-C	Z			E-W			N-S			MPV	MLH	Delta	Azimuth	Remarks
				h	m		s	A	T		A	T		A	T					
425	AUG 10	SPC SRO BRA	EPCP EPP EPCP EPP EPP	17 42 17 45 17 42 17 46 17 46	2.0 59.0 9.0 13.0 17.0	1.0 0.9 0.7 1.9 1.3										96.41 98.05 98.70	73.31 71.99 71.01	Philippine Islands Region 5.95 N 127.11 E H = 17 28 43.3 Depth = 112 km MB = 5.7 /ISC/		
426	AUG 11	BRA	E	1 31	31.0														No determination of epicentre	
427	AUG 12	BRA	EPCP EAP	9 3 9 5	39.0 10.0	3.3 9.5										84.46	47.05	South of Honshu 31.89 N 138.18 E H = 8 51 40.8 Depth = 382 km MB = 4.5 /ISC/		
428	AUG 12	BRA	IPG	11 4	19.0														No determination of epicentre	
429	AUG 12	SPC SRO BRA	EP IPCP IAP EPP ESCS IP IAP IPP ES IP IPCP E EAP ESCS	14 32 14 32 14 34 14 35 14 42 14 34 14 36 14 42 14 32 14 33 14 33 14 34 14 42	43.7 52.2 14.2 57.0 30.4 54.0 10.0 14.0 42.0 55.0 7.0 43.0 43.0 49.0	0.5 4.1 0.0 -2.3 -4.0 1.3 -14.0 -0.1 1.1 0.5 9.3 17.1 -3.7									81.93	49.44	South of Honshu 32.07 N 137.88 E H = 14 21 5.9 Depth = 399 km MB = 5.6 /ISC/			
430	AUG 13	SPC BRA	EKFP2 EAPKHKP	1 2 1 2	16.0 18.0	-5.0 3.2										149.69 151.49	27.27 22.33	Tonga 21.06 S 174.09 W H = 0 42 22.4 Depth = 2 km MB = 5.0 /ISC/		
431	AUG 14	SPC	IP EAP EPP	18 21 18 21 18 24	30.6 45.6 32.0	1.2 -1.0 0.2										79.36	44.27	Near East Coast of Honshu 37.13 N 141.11 E H = 18 9 28.6 Depth = 62 km MB = 5.5 /ISC/		
432	AUG 15	SPC BRA	IP IAP IPP ES IMV -IP EXP EPP	7 39 7 40 7 42 7 49 8 15 7 40 7 40 7 43	51.6 0.3 32.0 21.2 0.0 1.0 28.0 7.0	1.2 -2.3 -2.6 9.4 0.0 1.2 11.2 18.9									72.76	18.88	Komandorsky Islands Region 54.92 N 167.87 E H = 7 28 24.5 Depth = 41 km MB = 5.8 /ISC/			
																74.38	17.02	No determination of epicentre		



No. Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
			h	m		A	T	A	T	A	T					
433	AUG 16	BRA	7 49 8 16 7 40 7 43 7 49 5 18	43.0 50.0 2.0 22.0 38.0 0.0	-7.2			26.0	16.0	58.0	16.0	7.0	74.47	17.67	Yugoslavia 46.27 N 14.51 E H = 0 31 58.8 Depth = 48 km /ISC/	
434	AUG 16	BRA	0 32 0 33 0 33 0 33 0 33 0 34	49.5 12.6 17.6 23.6 38.0 4.0	2.8 2.4 7.4 13.4 12.7 -2.8			24.0	16.0	29.0	16.0	6.8	2.60 3.02 4.85	223.92 240.70 235.11		
435	AUG 17	BRA	7 42 7 42 7 43 7 45	51.6 57.0 6.0 24.0	-0.7 2.7 -3.4 -1.9								150.11	31.36	Fiji Region 21.18 S 179.03 W H = 7 24 16.9 Depth = 624 km MB = 5.5 /ISC/	
436	AUG 17	SPC	3 49 3 50 3 49 3 50 3 53 3 49 3 50	32.4 40.4 30.0 45.0 9.0 38.0 50.0	0.2 4.0 0.5 -0.2 1.7 -1.3 4.8								139.53	47.06	New Hebrides 15.71 S 167.54 E H = 1 29 26.4 Depth = 100 km MB = 5.0 /ISC/	
437	AUG 17	BRA	6 32 6 33	39.0 9.0	1.7 -15.9									145.85 147.64 147.65	26.59 21.98 24.28	Tonga 17.28 S 175.00 W H = 3 30 21.6 Depth = 268 km MB = 5.4 /ISC/
438	AUG 17	BRA	11 42 11 42 11 43 11 42 11 42	4.0 55.0 13.0 9.0 48.0	-0.3 -2.1 15.9 -5.4 -13.5								161.31	45.11	Kermadec Islands 33.70 S 178.70 W H = 6 13 5.1 Depth = 231 km /ISC/	
439	AUG 17	BRA	21 11	31.0												Czechoslovakia 51.00 N 14.90 E H = 11 41 12.1 Depth = 28 km /ISC/
																No determination of epicentre

No. Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
			h	m		A	T	A	T	A	T					
440	AUG 17	BRA	22 11	25.0												No determination of epicentre
441	AUG 18	SRO	3 24 3 25 3 24 3 22 3 25	18.0 22.0 59.0 22.0 37.0									9.38 9.84 10.18	140.75 153.01 137.64		Turkey 40.26 N 26.06 E H = 3 19 52.5 Depth = 46 km MB = 3.6 /ISC/
442	AUG 19	BRA	10 49 10 49	5.0 36.0	5.4 -0.6								161.68	47.24		South of Kermadec Islands 34.40 S 179.10 W H = 10 26 50.0 Depth = 207 km /ISC/
443	AUG 19	BRA	11 18	47.0												No determination of epicentre
444	AUG 19	BRA	15 10 15 10 15 11 15 12 15 10	12.0 34.0 31.0 34.0 17.0	0.6 1.9 1.7 -4.4								91.48 92.36 93.41	296.36 297.25		Oaxaca, Mexico 16.24 N 94.07 W H = 14 57 11.6 Depth = 79 km MB = 5.6 /ISC/
445	AUG 19	BRA	20 32	34.0	-4.4											Oaxaca, Mexico 16.64 N 97.86 W H = 20 19 12.0 Depth = 55 km MB = 5.1 /ISC/
446	AUG 20	SRO	5 36 5 36 5 36	25.0 23.0 32.0	7.2 4.9 -1.3								149.96 150.10	33.77 31.35		Fiji Region 21.17 S 179.03 W H = 5 17 41.4 Depth = 631 km MB = 4.9 /ISC/
447	AUG 20	BRA	11 58	56.0												No determination of epicentre
448	AUG 20	SPC	20 37 20 37 20 39 20 37 20 37 20 41 20 37 20 37 20 38 20 39 20 41 20 47	30.3 35.0 45.8 37.0 41.0 29.0 31.9 38.9 44.9 50.9 32.0 53.0	2.7 -2.9 -0.5 5.3 -4.6 11.3 -0.1 6.9 -1.1 -3.3 13.7								147.66 149.51 149.62	34.07 32.09 29.70		Fiji Region 20.42 S 178.39 W H = 20 18 51.4 Depth = 576 km MB = 5.6 /ISC/



No.	Date	Stat. Code	Phase	h	m	s	RES O-C	Z			E-W			N-S			MPV	MLH	Delta	Azimuth	Remarks
								A	T		A	T		A	T						
449	AUG 21	BRA	IPKP2	8	56	44.0	-2.6										147.11	28.37	FIJI Region 17.81 S 178.61 W H = 8 37 59.9 Depth = 549 km MB = 4.8 /ISC/		
450	AUG 21	BRA	IPKIKP E E	10 10 10	5 8 9	44.4 13.0 57.0	6.4										125.30	54.78	Solomon Islands 6.60 S 154.95 E H = 9 46 43.1 Depth = 54 km MB = 5.6 /ISO/		
451	AUG 21	SRO BRA	IMH EXP EXS E	15 15 15 15	34 31 34 35	28.0 46.0 25.0 13.0	12.9 -3.9										7.75 8.26	171.51 165.46	Albania 40.14 N 19.80 E H = 15 29 18.5 Depth = 46 km MB = 4.3 /ISC/		
452	AUG 22	BRA	IP E	17 17	37 38	48.0 21.0													No determination of epicentre		
453	AUG 22	BRA	TAP EAP	19 19	49 49	36.0 54.0	-13.9 4.1										84.86	47.32	South of Honshu 31.41 N 138.20 E H = 19 36 25.2 Depth = 411 km MB = 4.8 /ISC/		
454	AUG 22	BRA	IP IAP E EPP EP EP	19 19 20 20 19 19	59 59 0 2 59 59	24.0 30.0 15.0 9.0 25.0 37.0	-0.2 -4.6 0.0 0.7										69.11 69.24 71.10	211.46 212.69 214.25	South Atlantic Ridge 15.68 S 13.31 W H = 19 48 19.4 Depth = 33 km MB = 4.6 /ISC/		
455	AUG 23	BRA	IP I I	1 1 1	6 7 8	48.0 51.0 6.0													No determination of epicentre		
456	AUG 23	SPC SRO	EPP E E EPKIKP EPP EPKIKP EPP I	4 4 4 4 4 4 4	25 20 21 25 24 25 26	2.0 45.0 17.0 20.0 13.0 31.0 27.0	-0.7 -7.2 -1.5 1.6 11.7										110.09 111.76 112.39	70.73 69.61 68.47	West Iran 3.22 S 137.63 E H = 4 5 57.8 Depth = 48 km MB = 5.6 /ISC/		
457	AUG 23	SPC BRA EPP	EP IP E EPP	9 9 9 9	5 6 6 6	58.0 12.0 33.0 51.0	1.3 0.3 -18.9										28.47 30.15	19.91 20.41	Novaya Zemlya 73.34 N 54.50 E H = 8 59 57.9 Depth = 0 km MB = 6.3 /ISC/		

458	AUG 23	SPC BRA	IP EPCP IAP IXP IP I EPP ES IP IS	14 14 14 14 14 14 14 14 14 14	2 2 3 3 2 3 4 5 11 12	30.6 52.3 4.7 24.3 39.0 12.0 30.0 52.0 41.0 1.0	1.6 3.9 3.3 8.4 -0.2 0.1 -16.2 -1.1 1.6 7.6	0.8	3.0	6.0	3.0	6.0	3.0	6.0	5.6	30.21	19.79	Near East Coast of Kamohatka 54.71 N 160.07 E H = 13 51 23.0 Depth = 131 km MB = 5.7 /ISC/	
459	AUG 23	SPC SRO	IP EPCP IAP IXP IP I EPP ES IP IS	15 15 15 16 15 15 15 15 15 15	19 19 23 6 20 20 27 43 44	51.0 57.0 41.0 0.0 0.0 33.0 24.0 12.0 12.0	3.1 1.6 -3.5 1.8 8.8		2.0	20.0	3.0	20.0	3.0	20.0	5.8	92.48 94.14 94.78	71.70 70.31 69.37	Leyte 10.04 N 125.86 E H = 15 6 42.4 Depth = 68 km MB = 5.8 /ISC/	
460	AUG 23	BRA	IP E	21 21	43 44	12.0 12.0	0.5										42.07	145.59	Ethiopia 10.52 N 39.75 E H = 21 35 21.2 Depth = 33 km MB = 4.9 /ISC/
461	AUG 24	BRA	IP	1	16	48.0	0.6										75.25	269.66	Near Coast of Venezuela 10.75 N 62.65 W H = 1 5 15.1 Depth = 111 km MB = 5.1 /ISC/
462	AUG 24	BRA	ESG ESG E	12 12 12	24 24 25	30.0 45.0 15.0	2.3 17.3										2.31	261.59	Austria 47.78 N 13.71 E H = 12 23 11.2 Depth = 0 km /ISC/
463	AUG 24	SPC BRA	EPKHKP EPKIKP EAPKP2	14 14 14	8 8 9	30.0 30.0 27.0	1.4 2.0 8.4										152.13 154.10	34.34 29.57	South of FIJI 24.60 S 176.59 W H = 13 48 48.1 Depth = 96 km MB = 5.0 /ISC/





No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m s		A	T	A	T	A	T					
464	AUG 24	BRA	IP IPCP E	16 17 16 17 16 18	9.0 18.0 18.0	1.7 -1.0								76.72	15.84	Near Islands 53.07 N 170.98 E H = 16 5 14.1 Depth = 10 km MB = 5.0 /ISC/	
465	AUG 25	BRA SPC	IPCP I IPCP	4 10 4 11 4 10	12.0 18.0 18.3	2.6 0.6								88.05 89.93	278.17 280.49	Near West Coast of Colombia 6.96 N 77.67 W H = 3 57 18.1 Depth = 27 km MB = 5.2 /ISC/ No determination of epicentre	
466	AUG 25	ERA	E	7 28	5.0											No determination of epicentre	
467	AUG 25	BRA	EPKIKP	8 30	12.0	-6.7								126.09	54.09	Solomon Islands 6.96 S 155.86 E H = 8 11 25.2 Depth = 77 km MB = 5.4 /ISC/	
468	AUG 25	BRA	EP	14 42	0.0	-0.7								78.98	13.08	Rat Islands 51.64 N 176.22 E H = 14 29 59.3 Depth = 39 km MB = 4.9 /ISC/	
469	AUG 25	BRA	IP IAP IPP E ESKS EAP IPP IS LMH	21 55 21 56 21 59 22 2 22 6 21 56 22 0 22 7 22 10	59.0 23.0 53.0 14.0 20.0 25.0 7.0 28.0 0.0	8.1 5.1 -11.7 0.6 4.0 -2.9 2.9							101.67 102.36	254.28 255.06	Northern Chile 19.26 S 69.15 W H = 21 42 8.5 Depth = 101 km MB = 5.7 /ISC/		
470	AUG 26	SPC BRA	IP IP E	5 22 5 22 5 25	34.8 44.0 20.0	0.7 -1.7								77.08 79.20	40.73 38.58	Off East Coast of Honshu 40.98 N 143.10 E H = 5 10 43.7 Depth = 44 km MB = 5.2 /ISC/ No determination of epicentre	
471	AUG 26	BRA	IPG	11 3	5.0											No determination of epicentre	
472	AUG 26	SRO BRA	IAPKHKP EAPKIKP IAPKHKP IAPKIKP I E	11 26 11 26 11 26 11 26 11 27 11 28 11 28	38.0 44.0 38.0 38.0 20.0 20.0 11.8	1.7 3.3 1.7 15.2							145.42 145.45	26.81 24.63	Fiji Region 15.57 S 177.09 W H = 11 6 57.2 Depth = 22 km MB = 5.2 /ISC/		

473	AUG 26	SPC BRA	EPKHKP EPP IFKIKP EPKP2 EAPKHKP EAPKP2 EPP	12 39 12 43 12 39 12 39 12 39 12 40 12 43	13.0 12.5 11.0 28.0 44.0 23.0 23.0	4.4 17.3 2.0 -3.4 -2.1 20.0 16.7							151.34 153.30	33.96 29.25	South of Fiji 23.80 S 176.76 W H = 12 19 33.1 Depth = 120 km MB = 5.3 /ISC/	
474	AUG 26	BRA	E	14 51	5.0											No determination of epicentre
475	AUG 26	BRA SPC	IPCP IAP E EPCP	20 19 20 19 20 20 20 19	12.0 14.0 11.0 19.0	1.3 -1.9 2.0							92.59 93.99	295.53 297.99	Near Coast of Chiapas, Mexico 14.85 N 94.12 W H = 20 5 58.2 Depth = 19 km MB = 4.9 /ISC/	
476	AUG 29	BRA	EPKIKP ESKPDF	7 23 7 26	16.0 13.0	16.0 -1.3							139.68	46.81	New Hebrides 15.76 S 167.77 E H = 7 3 56.0 Depth = 199 km MB = 5.4 /ISC/	
477	AUG 29	SPC SRO BRA	EP EP E LMH EAP	10 28 10 28 10 33 11 9 10 28	12.0 24.0 8.0 0.0 28.0	-0.7 1.1 -1.9		2.9	16.0	1.7	16.0		77.66 79.54 79.77	40.55 39.13 38.39	Off East Coast of Honshu 40.60 N 143.72 E H = 10 16 15.5 Depth = 18 km MB = 5.1 /ISC/ No determination of epicentre	
478	AUG 29	BRA	EPG	10 50	55.0											No determination of epicentre
479	AUG 29	BRA	EPKIKP	11 19	28.0	4.4							139.71	46.80	New Hebrides 15.78 S 167.79 E H = 11 0 19.5 Depth = 199 km MB = 5.3 /ISC/	
480	AUG 29	BRA	EXP	20 51	49.0	-0.4							74.91	93.59	Niobar Islands Region 8.86 N 94.29 E H = 20 39 58.6 Depth = 23 km MB = 4.9 /ISC/ No determination of epicentre	
481	AUG 31	BRA	E	14 7	49.0											No determination of epicentre
482	AUG 31	BRA	E	16 36	28.0											No determination of epicentre





No.	Date	Stat. Code	Phase	GMT h m s	RES O-C	Z			E-W			N-S			MLH	Delta	Azimuth	Remarks
						A	T		A	T		A	T					
483	AUG 31	SRO BRA	E E E E	23 51 29.0 23 53 53.0 23 54 53.0 23 51 50.0 23 54 17.0	-17.1									6.82 7.57	148.06 143.43		Greece-Bulgaria Border Region 41.92 N 23.14 E H = 23 49 58.0 Depth = 47 km /ISC/  No determination of epicentre	
484	SEP 1	SPC	IP	8 41 39.0													Western Iran 33.34 N 49.10 E H = 23 15 52.0 Depth = 10 km MB = 4.9 /ISC/	
485	SEP 1	SPC	IP I	23 21 38.0 23 21 49.0	5.3									26.64	115.70		South of Honshu 30.12 N 140.42 E H = 10 16 40.7 Depth = 34 km MB = 5.1 /ISC/	
486	SEP 2	SPC	IPCP	10 29 17.0	0.4									84.78	48.78		South of Honshu 30.04 N 140.20 E H = 10 23 27.3 Depth = 34 km MB = 5.4 /ISC/	
487	SEP 2	SRO	EP LMH	10 36 8.0 11 10 0.0	-0.4			4.1	24.0			5.9	86.61	47.52		South of Honshu 30.15 N 140.01 E H = 10 57 51.0 Depth = 49 km MB = 5.4 /ISC/		
488	SEP 2	SPC	EP	11 10 22.0	1.9								84.55	49.05		Savu Sea 10.13 S 121.70 E H = 15 31 58.9 Depth = 65 km MB = 5.9 /ISC/		
489	SEP 2	SRO	E	15 49 12.0									106.42	86.98		No determination of epicentre		
490	SEP 3	BRA	IPG	11 3 7.0													No determination of epicentre	
491	SEP 4	SPC	I	19 19 19.0													No determination of epicentre	
492	SEP 4	SPC BRA	IPKHKP EAFKP2 IPKIKP EPKHKP EAFKP2	23 59 52.0 0 2 2.0 23 59 49.0 23 59 58.0 0 2 7.0	6.5 1.7 7.0 -1.3								149.74 151.84	40.68 36.56		South of Fiji 23.79 S 179.23 E H = 23 41 0.5 Depth = 533 km MB = 5.2 /ISC/		

493	SEP 5	SPC	ES E	0 40 51.0 0 41 29.0	-9.9									5.61	126.84		Romania 45.64 N 26.65 E H = 0 39 24.6 Depth = 146 km /ISC/
494	SEP 5	BRA	IPB ISB	4 46 44.0 4 46 58.0	-0.5 -5.0									1.38	188.71		Yugoslavia 46.80 N 16.80 E H = 4 46 18.0 Depth = 33 km /ISC/
495	SEP 5	SPC	I	19 0 14.0													No determination of epicentre
496	SEP 6	SPC	IP	4 53 32.0	0.1									50.34	89.57		Nepal 29.21 N 81.95 E H = 4 44 33.1 Depth = 12 km MB = 5.1 /ISC/
497	SEP 6	SPC SRO HRB BRA	IP I IP E LMH IP I LMH IP EPP I LMH	9 24 26.0 9 27 17.0 9 24 31.0 9 27 27.0 9 29 0.0 9 24 38.0 9 25 20.0 9 28 0.0 9 24 33.6 9 25 18.0 9 27 24.0 9 35 0.0	-4.7 -6.9 -1.1 -14.4 11.5			50.0	12.0	35.0	12.0	6.1	18.19 18.78 18.88 19.67	118.23 111.43 111.42 110.65		Turkey 38.51 N 40.77 E H = 9 20 19.0 Depth = 32 km MB = 6.0 /ISC/	
498	SEP 6	BRA	IP IAP E	10 17 36.0 10 17 39.0 10 18 21.0	-0.4 -7.8									19.52	110.83		Turkey 38.55 N 40.58 E H = 10 13 10.3 Depth = 47 km MB = 4.9 /ISC/
499	SEP 6	SPC SRO BRA	IP I IP I I IP I ESS	10 56 28.0 10 57 18.0 10 56 39.0 10 57 19.0 10 59 31.0 10 56 48.0 10 57 27.0 11 0 39.0	0.0 3.9 3.1 -9.2								18.25 18.84 19.73	118.26 111.48 110.70		Turkey 38.46 N 40.82 E H = 10 52 16.6 Depth = 47 km MB = 5.1 /ISC/	
500	SEP 6	BRA	E E	12 1 51.0 12 2 11.0													No determination of epicentre



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
501	SEP 6	SPC	IP	12	15	0.0								18.19	119.01	Turkey 38.33 N 40.56 E H = 12 10 43.0 Depth = 2 km MB = 4.8 /ISC/	
		SRO	IP	12	15	7.0							18.76	112.19			
		BRA	ES	12	18	43.0				4.0	12.0	3.4	12.0	19.64	111.37		
502	SEP 6	SPC	LMH	12	24	0.0										Turkey 38.44 N 40.48 E H = 12 24 2.1 Depth = 44 km MB = 4.4 /ISC/	
		BRA	IP	12	15	15.0											
		BRA	IPP	12	15	24.0											
503	SEP 6	SPC	E	12	16	15.0										Turkey 38.38 N 40.42 E H = 22 42 52.0 Depth = 32 km MB = 4.3 /ISC/	
		BRA	ES	12	18	58.0											
		BRA	EPOP	12	19	30.0											
504	SEP 7	SPC	EP	12	28	11.0										Yugoslavia 45.84 N 15.74 E H = 16 22 49.7 Depth = 0 km /ISC/	
		BRA	EP	22	47	1.0											
		BRA	IP	22	47	18.0											
505	SEP 8	SPC	E	22	48	19.0										No determination of epicentre	
		BRA	IP	16	23	34.2											
		BRA	IPG	16	23	47.2											
506	SEP 9	SPC	ISB	16	24	8.2										Southern Sinkiang Province 40.07 N 78.67 E H = 18 32 31.0 Depth = 11 km MB = 5.3 /ISC/	
		SRO	I	16	24	38.0											
		BRA	I	15	25	17.0											
507	SEP 9	SPC	IPB	16	23	39.0										No determination of epicentre	
		BRA	ESG	16	24	15.0											
		BRA	IPB	16	24	14.0											
508	SEP 10	SPC	ISG	16	25	23.0										No determination of epicentre	
		BRA	I	16	26	31.0											
		BRA	EXP	18	40	44.0											
509	SEP 11	SPC	IPG	19	0	13.4										No determination of epicentre	
		BRA	IPG	18	40	44.0											
		BRA	EPOP	18	42	38.0											
510	SEP 11	SPC	IAP	18	40	24.0										South of Tonga 24.92 S 175.30 W H = 10 44 23.7 Depth = 38 km MB = 5.1 /ISC/	
		SRO	I	18	41	40.0											
		BRA	IP	18	40	35.0											
511	SEP 12	SPC	I	18	52	1.0										Off Coast of Mexico 7.05 N 104.18 W H = 22 0 1.3 Depth = 66 km MB = 6.3 /ISC/	
		BRA	LMH	19	0	0.0											
		BRA	EXP	18	40	44.0											
512	SEP 12	SPC	IPG	18	42	38.0										Southern Greece 36.27 N 21.90 E H = 13 10 19.6 Depth = 43 km MB = 4.9 /ISC/	
		BRA	IPG	20	0	20.0											
		BRA	IP	20	0	31.0											
513	SEP 13	SPC	I	20	0	40.0										Near East Coast of Kamchatka 51.89 N 157.27 E H = 15 28 39.6 Depth = 119 km MB = 5.5 /ISC/	
		BRA	I	20	0	40.0											
		BRA	I	20	0	40.0											
514	SEP 14	SPC	IPG	19	0	13.4										No determination of epicentre	
		BRA	IPG	18	40	24.0											
		BRA	IPG	18	41	40.0											
515	SEP 14	SPC	I	18	52	1.0										Greece 38.47 N 22.02 E H = 14 30 37.6 Depth = 40 km MB = 4.8 /ISC/	
		BRA	I	19	0	0.0											
		BRA	EXP	18	40	44.0											

No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
508	SEP 10	SPC	IP	12	15	0.0											Turkey 38.33 N 40.56 E H = 12 10 43.0 Depth = 2 km MB = 4.8 /ISC/
		SRO	IP	12	15	7.0											
		BRA	ES	12	18	43.0				4.0	12.0	3.4	12.0	19.64	111.37		
509	SEP 11	SPC	LMH	12	24	0.0										Turkey 38.44 N 40.48 E H = 12 24 2.1 Depth = 44 km MB = 4.4 /ISC/	
		BRA	IP	12	15	15.0											
		BRA	IPP	12	15	24.0											
510	SEP 12	SPC	E	12	16	15.0										Turkey 38.38 N 40.42 E H = 22 42 52.0 Depth = 32 km MB = 4.3 /ISC/	
		BRA	ES	12	18	58.0											
		BRA	EPOP	12	19	30.0											
511	SEP 12	SPC	EP	12	28	11.0										Yugoslavia 45.84 N 15.74 E H = 16 22 49.7 Depth = 0 km /ISC/	
		BRA	EP	22	47	1.0											
		BRA	IP	22	47	18.0											
512	SEP 12	SPC	E	22	48	19.0										No determination of epicentre	
		BRA	IP	16	23	34.2											
		BRA	IPG	16	23	47.2											
513	SEP 13	SPC	ISB	16	24	8.2										Southern Sinkiang Province 40.07 N 78.67 E H = 18 32 31.0 Depth = 11 km MB = 5.3 /ISC/	
		SRO	I	16	24	38.0											
		BRA	I	15	25	17.0											
514	SEP 14	SPC	IPB	16	23	39.0										No determination of epicentre	
		BRA	ESG	16	24	15.0											
		BRA	IPB	16	24	14.0											
515	SEP 14	SPC	ISG	16	25	23.0										No determination of epicentre	
		BRA	I	16	26	31.0											
		BRA	EXP	18	40	44.0											



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		s	A	T	A	T	A					
516	SEP 15	SPC SRO BRA	EAPKIKP IAPKIKP EPKHKP EPKP2 E	17 17 17 17 17	7 7 7 7 8	24.0 26.0 20.0 38.0 47.0	-1.1 -1.9 -0.5 2.7							149.91 151.72 151.73	27.94 25.55 23.01	Tonga 21.38 S 174.35 W H = 16 47 32.8 Depth = 31 km MB = 5.3 /ISC/	
517	SEP 16	SRO BRA	I I I EP E	0 0 0 0 0	29 31 32 29 31	42.0 18.0 18.0 17.0 38.0	-8.4							6.31 6.81	173.18 165.90	Albania 41.54 N 19.31 E H = 0 27 38.1 Depth = 39 km /ISC/	
518	SEP 16	SRO BRA	IPN IPB I ISB LMH IPN IPB IPG ISN ISB ISG I	5 5 5 5 5 5 5 5 5 5 5	7 8 8 9 13 8 8 8 9 9 10 12	58.0 12.0 46.0 38.0 30.0 3.0 15.0 35.0 20.0 47.0 17.0 26.0	1.8 1.6 6.6 -0.2 -3.9 -0.6 -2.8 0.8 11.8			9.5	4.0	4.0	4.0	6.34 6.84	173.07 165.83	Albania 41.51 N 19.33 E H = 5 6 19.1 Depth = 25 km MB = 5.0 /ISC/	
519	SEP 16	SRO BRA	EPKP2 E EPKP2 EAPKP2	12 12 12 12	11 22 11 13	36.0 26.0 39.0 45.0	-2.7 -0.0 6.3							147.50 147.58	29.74 27.46	Fiji Region 18.09 S 177.96 W H = 11 52 48.4 Depth = 527 km MB = 5.1 /ISC/	
520	SEP 16	BRA	EPG ESG	12 12	22 23	21.0 6.0	-2.6 4.2							2.91	235.82	Austria 46.48 N 13.62 E H = 12 21 25.6 Depth = 33 km /ISC/	
521	SEP 16	SRO	EP E I	18 18 18	47 48 49	24.0 4.0 26.0	-12.0							6.33	173.40	Albania 41.52 N 19.28 E H = 18 45 48.2 Depth = 46 km /ISC/	
522	SEP 16	BRA	E I E E	19 19 19 19	18 19 20 21	57.0 51.0 9.0 27.0										No determination of epicentre	

523	SEP 17	SRO BRA SPC	EXP E E LMH EXP ESS E EXP	23 23 23 23 23 23 23 23	7 9 11 15 7 9 11 7	14.0 50.0 14.0 0.0 20.0 39.0 21.0 25.0	3.3 1.0 8.1 0.6			2.0	4.0	1.3	4.0	11.96 12.58 12.98	161.20 157.39 169.83	Southern Greece 36.37 N 23.06 E H = 23 4 7.2 Depth = 35 km MB = 5.0 /ISC/
524	SEP 17	SRO BRA SPC	EAP ES I LMH ES E EP E	23 23 23 23 23 23 23 23	46 48 50 52 48 50 47 50	46.0 38.0 28.0 0.0 30.0 30.0 12.0 0.0	0.6 5.0 -15.8							9.77 10.29 11.03	170.17 165.22 179.28	Greece 38.16 N 20.42 E H = 23 44 19.0 Depth = 15 km MB = 4.5 /ISC/
525	SEP 18	SPC	I I	12 12	54 55	23.0 52.0										No determination of epicentre
526	SEP 18	SPC	I	19	39	6.0										No determination of epicentre
527	SEP 19	SPC BRA	E EPP EPP E	3 3 3 3	54 55 55 56	16.0 2.0 9.0 39.0	0.1 0.1							99.87 100.75	132.65 130.69	Amsterdam - Naturaliste Ridge 34.74 S 81.88 E H = 3 37 11.0 Depth = 27 km MB = 5.9 /ISC/
528	SEP 19	SPC SRO	EP E IPGP IPP I LMH	18 18 18 18 18 18	6 10 6 9 17 44	23.0 50.0 42.0 35.0 39.0 0.0	1.1 0.5 3.6							76.21 78.09	40.44 39.02	Hokkaido Region 41.86 N 142.76 E H = 17 54 37.4 Depth = 52 km MB = 5.6 /ISC/
529	SEP 20	SPC	EAP	5	44	1.0	-0.0			7.1	18.0	13.0	18.0	15.13	145.64	Turkey 36.14 N 30.73 E H = 5 40 20.3 Depth = 40 km MB = 4.0 /ISC/
530	SEP 21	SPC	E E	5 5	48 48	11.0 46.0										No determination of epicentre
531	SEP 21	SRO	EPGP	13	26	17.0	0.5							93.38	296.12	Near Coast of Ohiapas, Mexico 14.73 N 93.81 W H = 13 12 58.0 Depth = 4 km MB = 5.6 /ISC/



No.	Date	Stat. Code	Phase	GMT			RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m	s		A	T	A	T	A	T					
532	SEP 21	SRO	EP E LMH	14 14 14	22 25 38	35.0 20.0 0.0	-8.0			5.7	12.0	3.5	12.0		5.5	29.67	111.19	Iran 31.59 N 51.05 E H = 14 16 37.5 Depth = 28 km MB = 5.2 /ISC/
533	SEP 22	SRO	IAP IXP IS EXP E ES E EP E	0 0 0 0 0 0 0 0 0	48 48 50 48 49 50 52 48 54	18.6 39.0 43.0 36.0 21.0 54.0 27.0 26.0 37.0	-3.3 8.9 -3.2 -3.4 -9.0 3.9									13.93	151.94	Crete 35.20 N 26.26 E H = 0 44 56.4 Depth = 55 km MB = 5.4 /ISC/
534	SEP 23	SPC BRA	IFKP2 IFKIKP	10 10	27 27	31.0 22.0	11.0 2.1									144.83 146.78	33.01 28.80	Fiji Region 17.57 S 178.96 W H = 10 8 41.6 Depth = 539 km MB = 5.2 /ISC/
535	SEP 24	SPC	EP IFCP EPP EPCP EPP IP	1 1 1 1 1 1	7 7 10 7 11 7	32.0 34.0 48.0 43.0 7.0 44.0	0.2 -2.1 0.4 -1.4 4.4 1.3									84.05	46.16	South of Honshu 32.19 N 142.45 E H = 0 55 1.8 Depth = 24 km MB = 5.7 /ISC/
536	SEP 24	SPC BRA SRO	EAPKHP +IAPKIP IAPKIP EPP E	2 2 2 2 2	7 7 7 11 31	34.0 38.0 38.0 15.0 20.0	-0.7 0.2 0.2 -5.9									149.15 150.94 150.95	26.67 21.75 24.24	Tonga 20.45 S 173.96 W H = 1 47 47.0 Depth = 12 km MB = 6.1 /ISC/
537	SEP 24	BRA SRO	EP -IP EXS LMH EP	11 11 11 11 11	13 13 22 43 13	44.0 49.0 43.0 0.0 56.0	-2.2 1.8 -4.4 -3.0		22.8	20.0	11.7	20.0		6.4	65.98 66.15	214.13 215.41	Ascension Island Region 11.83 S 14.46 W H = 11 3 0.4 Depth = 29 km MB = 5.2 /ISC/	
538	SEP 24	BRA	EP	15	45	41.0	-2.8								19.49	110.42	Turkey 38.68 N 40.65 E H = 15 41 17.3 Depth = 38 km MB = 4.6 /ISC/	

539	SEP 24	BRA SRO	EP EPP LMV EPP LMH	17 17 18 17 18	32 36 12 36 14	32.0 29.0 0.0 35.0 0.0	-15.2 -2.4 -3.1									92.58	313.09	Gulf of California 25.20 N 109.26 W H = 17 19 37.8 Depth = 33 km MB = 5.5 /ISC/
540	SEP 26	SPC	E	18	58	14.0												No determination of epicentre
541	SEP 29	SPC BRA	EP IP	13 13	53 53	40.0 52.0	1.3 0.0									67.42 69.56	87.98 85.28	Burma 18.24 N 96.40 E H = 13 42 41.0 Depth = 11 km MB = 5.2 /ISC/
542	SEP 29	SPC BRA	EPCP EP	14 14	50 50	8.0 19.0	2.4 3.4									99.84 102.09	79.21 76.97	Molucca Sea 0.46 S 124.80 E H = 14 36 26.5 Depth = 61 km MB = 5.7 /ISC/
543	SEP 29	SPC	EKCP2	19	9	15.0	1.5									152.99	33.06	South of Tonga 25.15 S 175.62 W H = 18 49 7.1 Depth = 42 km MB = 5.3 /ISC/
544	SEP 30	SPC SRO BRA	EPCP EPCP IP	18 18 18	30 30 30	42.0 47.0 49.0	0.6 0.9 0.5									88.43 89.50 90.35	99.19 97.71 96.82	Southern Sumatra 4.85 S 102.26 E H = 18 17 53.1 Depth = 63 km MB = 5.5 /ISC/
545	OCT 1	SPC SRO	EP EPP -IP E IS LMH	3 3 3 3 3 4	42 46 42 47 53 32	50.0 25.0 55.0 0.0 43.0 0.0	-4.1 0.7 -4.2 -5.7									88.43 89.49	99.26 97.79	Southern Sumatra 4.90 S 102.20 E H = 3 29 58.9 /USCGS/
546	OCT 1	SPC ERA	IXP EXP IAP	4 4 4	26 26 26	30.0 31.0 33.0	3.2 4.2 -0.6									88.27 90.19	99.34 96.97	Southern Sumatra 4.83 S 102.04 E H = 4 13 27.0 Depth = 19 km MB = 5.8 /ISC/
547	OCT 2	SPC	EP EXP	11 11	18 18	30.0 57.0	0.4 -1.9									76.54	37.74	Hokkaido Region 43.05 N 145.94 E H = 11 6 46.1 Depth = 77 km MB = 5.6 /ISC/
548	OCT 3	SPC SRO	EP MAP IPP IXS LMH	5 5 5 5 5	21 22 23 28 45	57.0 43.0 19.0 0.0	1.8 1.5 -0.5		36.7	16.0	52.0	16.0		6.6	39.45 40.46	101.23 97.92	Pakistan 30.27 N 66.33 E H = 5 14 24.4 Depth = 14 km MB = 5.4 /ISC/	



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z			E-W			N-S			MPV	MLH	Delta	Azimuth	Remarks	
				h	m		s	A	T		A	T		A	T						
549	OCT 3	SFC	IP	10	5	21.0	2.1									77.34	15.88	Near Islands 51.55 N 174.94 E H = 9 53 21.0 Depth = 2 km MB = 5.1 /ISC/			
550	OCT 3	SFC	EAP	17	39	9.0	-3.2									39.39	100.96	Pakistan 30.44 N 66.41 E H = 17 31 35.6 Depth = 24 km MB = 5.5 /ISC/			
			EXP	17	39	28.0	12.9														
			EPP	17	40	45.0	5.0														
551	OCT 3	SFC	EP	17	39	15.0	1.3														
			IPP	17	41	0.0	9.0														
			IJS	17	45	31.0	-1.3														
			LMH	17	57	0.0	2.3														
			EXP	17	39	33.0	11.3														
552	OCT 4	SFC	LMH	18	2	0.0	-3.1														
			EP	18	39	29.0	-3.1														
553	OCT 6	SFC	IPB	9	46	10.0	-0.2														
			ISN	9	46	30.0	3.0														
554	OCT 7	SFC	EPKIKP	22	43	29.0	1.2														
			EPP	22	46	16.0	12.6														
			EAPKHKP	22	43	35.0	-2.6														
			E	22	44	27.0	-7.7														
			IPP	22	46	7.0	-2.6														
			LMH	22	43	36.0	16.2														
			EAPKHKP	22	46	33.0	-2.6														
			IPP	22	47	54.0	-3.0														
			I	22	49	30.0	4.1														
			E	22	53	52.0	-3.5														
555	OCT 7	SFC	LMH	23	42	0.0	-3.0														
			IP	8	38	19.5	4.1														
556	OCT 8	SFC	E	8	40	15.0	-3.5														
			LMV	9	9	0.0	-3.0														
557	OCT 8	SFC	+IP	8	38	23.0	-3.0														
			E	8	42	7.0	4.1														
558	OCT 10	SFC	IJS	8	46	47.0	4.1														
			LMH	9	7	0.0	-3.5														
559	OCT 11	SFC	IP	8	38	19.5	-3.5														
			E	8	40	15.0	-1.9														
560	OCT 11	SFC	LMV	9	9	0.0	-3.0														
			+IP	8	38	23.0	-3.0														
561	OCT 11	SFC	E	8	42	7.0	4.1														
			IJS	8	46	47.0	4.1														
562	OCT 11	SFC	LMH	9	7	0.0	-3.5														
			IP	10	51	15.0	-3.5														
563	OCT 11	SFC	E	10	51	15.0	-3.5														
			E	16	9	16.0	-3.5														

No.	Date	Stat. Code	Phase	GMT		RES O-C	Z			E-W			N-S			MPV	MLH	Delta	Azimuth	Remarks	
				h	m		s	A	T		A	T		A	T						
555	OCT 7	BRA	-IP EPP	13 13	28 31	54.0 6.0	0.4 -2.4									62.69	235.45	232.58	Central Mid-Atlantic Ridge 0.89 N 26.49 W H = 13 18 45.3 Depth = 27 km MB = 5.5 /ISC/		
556	OCT 8	SFC	EP	8	22	31.0	-2.3														
			IP	8	22	46.0	-0.5														
557	OCT 8	SFC	IAP	8	22	58.0	-4.0														
			E	10	51	15.0	-3.5														
558	OCT 10	SFC	IFKP2	6	9	2.0	-6.5														
			EPKHKP	6	9	5.0	4.0														
559	OCT 11	SFC	E	16	9	16.0	-3.5														
			E	14	54	27.0	-1.3														
560	OCT 11	SFC	EP	14	54	32.0	-0.3														
			EP	14	54	32.0	-0.3														
561	OCT 11	SFC	IPKIKP	14	55	7.0	1.8														
			EAPKIKP	14	55	12.2	0.9														
			EAPKP2	14	55	36.2	-1.1														
			IPKIKP	14	55	8.0	0.3														
			E	14	57	20.0	1.5														
562	OCT 11	SFC	IPP	14	59	12.0	-1.6														
			IPKIKP	14	55	6.2	-1.6														
563	OCT 11	SFC	IAPKP2	14	55	36.0	-1.6														
			I	14	57	24.0	-1.6														
564	OCT 11	SFC	E	15	2	51.0	-3.5														
			LMH	16	3	0.0	-3.5														
565	OCT 11	SFC	IPKHKP	15	14	51.0	-2.0														
			EPKSAB	15	17	27.0	-4.9														
566	OCT 11	SFC	EAPKIKP	18	20	0.0	8.5														
			EPKIKP	18	19	44.0	-0.1														
567	OCT 11	SFC	EPP	18	21	4.0	-2.3														
			EPKIKP	18	19	45.0	-0.2														





No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
564	OCT 12	SRO LMH BRA E	EP LMH EXP E	8 25 8 30 8 26 8 30	40.0 0.0 7.0 24.0	-3.8 1.9								10.50 11.15	158.68 154.63		Southern Greece 37.91 N 23.12 E H = 8 23 12.6 Depth = 35 km MB = 4.9 /ISC/
565	OCT 13	BRA	EPKIKP	22 32	27.0	1.0								154.85	27.33		South of Tonga 24.96 S 175.31 W H = 22 12 37.1 Depth = 33 km MB = 5.1 /ISC/
566	OCT 14	BRA	IPG ISG	11 3 11 3	2.0 3.5												No determination of epicentre
567	OCT 14	SPC	EPKIKP	19 31	50.0	4.9								152.39	33.71		South of Fiji 24.72 S 176.18 W H = 19 12 5.0 Depth = 105 km MB = 5.1 /ISC/
568	OCT 15	BRA	IPG ISG	11 4 11 4	7.5 10.2												No determination of epicentre
569	OCT 16	SPG BRA	EAPKIKP EPKIKP	3 57 3 57	35.0 24.0	-3.4 -6.3								152.53 154.46	32.89 27.97		South of Tonga 24.69 S 175.74 W H = 3 37 41.9 Depth = 33 km MB = 5.3 /ISC/
570	OCT 16	SPC	E	10 30	27.0												No determination of epicentre
571	OCT 17	SPC BRA	E EPP E I E	3 49 3 50 3 49 3 50 3 53	28.0 27.0 41.2 11.0 3.0	-6.1								107.75 109.98	80.81 78.68		Banda Sea 7.54 S 128.76 E H = 3 31 51.8 Depth = 106 km MB = 6.1 /ISC/
572	OCT 17	SPC BRA	IP IP	19 50 19 50	45.0 47.5	1.6 -0.4								73.42 74.18	353.96 352.25		Gulf of Alaska 57.39 N 149.03 W H = 19 39 12.5 Depth = 31 km MB = 5.5 /ISC/
573	OCT 18	SPC BRA	IP IP I I E LMH	9 5 9 5 9 6 9 6 9 14 9 15	42.0 54.0 6.0 15.0 36.0 27.0	3.0 -1.2	489	1.0				6.2		26.69 28.47	23.79 24.28		Novaya Zemlya 70.84 N 53.53 E H = 8 59 56.5 Depth = 0 km MB = 6.7 /ISC/

No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
574	OCT 18	BRA	IPG	12 14	41.0												No determination of epicentre
575	OCT 20	SPC BRA	EPK2 +IPKIKP	22 45 22 45	3.0 6.0	1.9 1.7								144.28 146.16	29.98 25.66		Fiji Region 16.42 S 177.45 W H = 22 25 28.5 Depth = 33 km MB = 5.7 /ISC/
576	OCT 21	SPC BRA	IP +IP E E E ESCS	12 5 12 6 12 8 12 12 12 16 12 17	57.0 15.0 24.0 0.0 2.0 3.0	-0.2 2.7 13.2								28.56 30.24	20.11 20.59		Novaya Zemlya 73.32 N 54.93 E H = 11 59 57.7 Depth = 0 km MB = 6.6 /ISC/
577	OCT 21	SPC	EPGP LMV	17 25 18 7	20.0 0.0	2.0								88.62	73.83		Panay 11.66 N 121.69 E H = 17 12 20.0 Depth = 1 km MB = 5.5 /ISC/
578	OCT 21	SPC	I I	21 41 21 42	48.0 9.5												No determination of epicentre
579	OCT 21	BRA SPC	IP I I EP E E ES E	23 2 23 3 23 4 23 3 23 3 23 4 23 4	37.6 0.0 19.0 0.0 27.0 16.0 55.0	-12.8 -11.7 5.3 0.3 18.9								5.06 6.39	177.55 199.05		Yugoslavia 43.11 N 17.40 E H = 23 1 24.0 Depth = 45 km /ISC/
580	OCT 21	SPC	EPGP EXP	23 19 23 19	16.0 44.0	0.3 18.9								88.56	73.92		Panay 11.65 N 121.58 E H = 23 6 22.0 Depth = 26 km MB = 5.5 /ISC/
581	OCT 24	BRA	ESG	17 35	35.0	-5.2								4.62	262.93		Austria 47.40 N 10.35 E H = 17 33 7.6 Depth = 19 km /ISC/
582	OCT 26	SPC	EPGP	10 54	55.0	0.8								95.77	73.17		Mindanao 6.54 N 126.81 E H = 10 41 33.2 Depth = 61 km MB = 5.9 /ISC/
583	OCT 28	BRA	EPP	7 12	43.0	-8.6								105.16	252.64		Near Coast of Northern Chile 22.91 S 70.48 W H = 6 54 22.1 Depth = 39 km MB = 5.8 /ISC/

International  
Seismological  
Centre



No.	Date	Stat. Code	Phase	GMT			RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m	s		A	T	A	T	A	T					
584	OCT 28	BRA	+IP E I	14 42	37.0		-3.6								85.39	324.53	Southern Nevada, N. E. 37.28 N 116.41 W H = 14 30 0.2 /ISC/	
585	OCT 29	BRA	+IP E	4 54	32.0		0.5								39.53	63.51	Eastern Kazakhstan 49.92 N 78.91 E H = 4 46 57.3 Depth = 0 km MB = 5.8 /ISC/	
586	OCT 29	BRA	EPKP2	6 50	31.0		2.8								147.60	19.44	Tonga 16.90 S 173.63 W H = 6 31 4.6 Depth = 214 km MB = 4.1 /ISC/	
587	OCT 30	BRA	IP IXP E	1 53	28.0		1.9								78.13	38.26	Hokkaido Region 42.05 N 142.66 E H = 1 41 32.1 Depth = 62 km MB = 5.9 /ISC/	
588	OCT 30	BRA	EPKIP E	10 24	28.0		3.0								148.25	44.21	Loyalty Islands Region 22.42 S 173.74 E H = 10 4 45.9 Depth = 34 km MB = 5.4 /ISC/	
589	OCT 30	BRA	EPCP	12 27	10.0		1.8								93.04	67.56	Philippine Islands Region 12.54 N 126.15 E H = 12 13 54.6 Depth = 25 km MB = 5.7 /ISC/	
590	OCT 31	BRA	+IP IPCP EPP E LMH	8 41	10.2		-1.7								93.01	67.71	Philippine Islands Region 12.47 N 126.01 E H = 8 28 2.4 Depth = 48 km MB = 6.5 /ISC/	
591	OCT 31	BRA	EPG	10 51	7.0												No determination of epicentre	
592	NOV 1	BRA	IP EPCP	1 0	22.8		-1.6								78.46	0.38	Unimak Island Region 53.75 N 163.52 W H = 0 48 26.1 Depth = 41 km MB = 5.7 /ISC/	

593	NOV 1	BRA	EAP E E	1 31	47.0		-3.5								102.78	52.03	Marianas 13.82 N 144.79 E H = 1 17 34.2 Depth = 117 km MB = 6.0 /ISC/
594	NOV 1	BRA	IPKIP EAPKP2 E	6 33	50.0		1.8								147.89	27.51	Fiji Region 18.39 S 177.88 W H = 6 14 54.0 Depth = 405 km MB = 5.8 /ISC/
595	NOV 1	BRA	EPKIP	19 0	12.0		2.2								148.13	17.86	Tonga Region 17.23 S 172.65 W H = 18 40 30.8 Depth = 33 km MB = 5.7 /ISC/
596	NOV 4	BRA	E	11 3	46.0												No determination of epicentre
597	NOV 4	SPC BRA	EP IP EPCP EPP	12 17	28.0		-0.3								73.23	19.30	Komandorsky Islands Region 54.34 N 167.54 E H = 12 5 55.9 Depth = 15 km MB = 5.4 /ISC/
598	NOV 5	BRA SPC	IPCP EP	2 11	43.0		-0.4								87.96	277.13	Northern Colombia 6.33 N 76.84 W H = 1 58 53.7 Depth = 35 km MB = 5.4 /ISC/
599	NOV 5	SPC	IPG ISG	8 33	55.0												No determination of epicentre
600	NOV 5	SPC BRA	EP IP	10 51	42.0		0.4								74.09	97.21	Niobar Islands Region 7.39 N 94.39 E H = 10 40 6.0 Depth = 26 km MB = 5.3 /ISC/
601	NOV 5	BRA SPC	IP EP	17 6	19.0		-2.3								67.90	212.21	South Atlantic Ridge 14.29 S 13.52 W H = 16 55 24.0 Depth = 33 km MB = 4.8 /ISO/
602	NOV 6	SPC BRA	IP IP	1 18	32.5		0.4								77.33	15.03	Rat Islands 51.79 N 176.21 E H = 1 6 40.2 Depth = 43 km MB = 5.4 /ISC/
603	NOV 6	BRA	IP	10 1	49.0		3.9								76.22	94.54	Niobar Islands Region H = 9 50 1.0 Depth = 56 km MB = 4.8 /ISC/





No.	Date	Stat. Code	Phase	GMT		RES O-C	Z			E-W			N-S			MPV	MLH	Delta	Azimuth	Remarks
				h	m		s	A	T	A	T	A	T	A	T					
604	NOV 6	SPC BRA	IPCP -IPCP	12 49	20.0	0.2											90.71 93.02	70.00 67.66	Philippine Islands Region 12.50 N 126.06 E H = 12 36 17.3 Depth = 30 km MB = 6.1 /ISC/	
605	NOV 8	SPC BRA	EPCP EPP EPCP EPP	15 6 15 10 15 6 15 10	49.0 42.0 59.0 59.0	0.1 -0.9 -0.1 -2.3											95.66 97.96	73.11 70.80	Mindanao 6.66 N 126.79 E H = 14 53 32.6 Depth = 96 km MB = 5.6 /ISC/	
606	NOV 8	SPC BRA	EKP2 EKP2	18 12 18 12	19.0 17.0	5.5 -4.1											147.00 148.89	30.60 26.09	Fiji Region 19.11 S 176.80 W H = 17 52 41.0 Depth = 118 km MB = 5.0 /ISC/	
607	NOV 9	SPC BRA E	EP EP E	20 47 20 47 20 21	43.0 53.0 20.0	-0.5 -1.3											89.07 91.38	69.91 67.56	Philippine Islands Region 13.83 N 125.07 E H = 20 34 51.8 Depth = 44 km MB = 5.8 /ISC/	
608	NOV 11	SPC BRA	EP EAP IP	4 36 4 37 4 36	28.0 48.0 38.5	0.3 1.1 -0.8											73.29 75.32	35.93 33.89	Sea of Okhotsk 46.73 N 145.46 E H = 4 25 32.3 Depth = 350 km MB = 5.4 /ISC/	
609	NOV 11	SPC	EP	9 6	11.0	1.2											76.88	39.72	Hokkaido Region 41.71 N 144.03 E H = 8 54 19.5 Depth = 35 km MB = 5.4 /ISC/	
610	NOV 11	SPC	EP	9 8	24.0	-0.8											77.03	39.51	Hokkaido Region 41.69 N 144.37 E H = 8 56 33.0 Depth = 30 km MB = 5.5 /ISC/	
611	NOV 12	SPC	EP	9 7	9.0	2.0											14.12	153.06	Dodecanese Islands 36.28 N 28.11 E H = 9 3 48.8 Depth = 64 km MB = 5.3 /ISC/	
612	NOV 12	BRA	EP	17 56	37.0	0.9											25.35	345.79	Jan Mayen Island Region 71.77 N 2.40 W H = 17 51 10.6 Depth = 33 km MB = 4.6 /ISC/	

613	NOV 12	SPC	EPP	18 14	55.0	5.6											96.78	75.72	Talau Islands 4.13 N 125.49 E H = 17 57 26.2 Depth = 61 km MB = 5.4 /ISC/
614	NOV 12	SPC BRA	EP EP	23 43 23 43	57.0 52.0	2.5 -6.6											24.87 25.31	343.39 345.90	Jan Mayen Island Region 71.76 N 2.20 W H = 23 38 33.5 Depth = 33 km MB = 4.8 /ISC/
615	NOV 13	BRA	EPKIKP	1 51	13.0	-2.9											148.56	17.38	Tonga Region 17.60 S 172.30 W H = 1 31 37.0 Depth = 33 km MB = 4.6 /ISC/
616	NOV 13	SPC BRA	EP IP E	3 5 3 5 3 10	52.0 52.0 52.0	0.3 -5.5											76.86 77.91	1.76 359.87	Alaska Peninsula 54.30 N 162.68 W H = 2 53 57.0 Depth = 5 km MB = 5.3 /ISC/
617	NOV 13	SPC	EP IPP	3 11 3 11	10.0 27.0	3.1 7.3											15.87	172.04	Mediterranean Sea 33.42 N 22.84 E H = 3 7 20.5 Depth = 0 km MB = 5.1 /ISC/
618	NOV 13	SPC	I	4 54	3.0														No determination of epicentre
619	NOV 13	BRA	IPG	12 18	35.7														No determination of epicentre
620	NOV 13	BRA	EAPKHP	14 5	1.0	-4.9											148.97	18.50	Tonga Region 18.13 S 172.80 W H = 13 45 15.3 Depth = 33 km MB = 4.9 /ISC/
621	NOV 13	SPC	EAP	19 21	29.0	-6.3											48.91	128.14	Arabian Sea 11.06 N 57.39 E H = 19 12 39.0 Depth = 49 km MB = 4.8 /ISC/
622	NOV 13	BRA	EPG ESG	19 57 19 58	28.0 40.0	9.3 -1.2											6.30	239.20	Northern Italy 44.68 N 9.51 E H = 19 55 13.0 Depth = 2 km /ISC/
623	NOV 14	SPC	EAP	9 42	30.0	-2.1											85.38	333.79	Near Coast of Northern California 40.55 N 124.47 W H = 9 29 45.0 Depth = 45 km MB = 5.1 /ISC/





No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m		A	T	A	T	A	T					
624	NOV 15	BRA	IP	15	41 48.6	-0.5								94.62	303.76	Michoacan, Mexico 18.23 N 102.22 W H = 15 28 31.7 Depth = 44 km MB = 6.0 /ISC/	
625	NOV 15	BRA	EPCP EPP	20 52 20 56	43.0 25.0	3.2 1.7								92.59	67.53	Samar 12.91 N 125.88 E H = 20 39 29.8 Depth = 35 km MB = 6.0 /ISC/	
626	NOV 16	BRA	IPN IPB IPG ISG E	13 5 13 6 13 6 13 7 13 9	57.0 18.0 31.5 45.0 29.0	-3.9 3.1 1.6 -6.8								6.26	239.68	Northern Italy 44.75 N 9.52 E H = 13 4 25.1 Depth = 20 km MB = 4.8 /ISC/	
627	NOV 19	BRA	EPKKP EAPKIKP	3 53 3 53	27.0 45.0	-0.2 14.5								125.22	55.41	Solomon Islands 6.82 S 154.48 E H = 3 34 26.0 Depth = 10 km MB = 5.6 /ISC/	
628	NOV 19	BRA	EP	4 53	2.0	1.8								34.62	354.72	North of Svalbard 81.96 N 4.70 W H = 4 46 10.7 Depth = 23 km MB = 5.3 /ISC/	
629	NOV 19	BRA	IPKIKP IPKHKP IPKP2 IAPKIKP IAPKHKP IPKSDP	6 37 6 37 6 37 6 39 6 39 6 40	19.5 26.0 39.0 26.0 36.0 32.2	0.6 3.2 -1.4 -3.2 4.7 -19.7								151.98	37.01	South of Fiji 24.01 S 179.09 E H = 6 18 33.7 Depth = 551 km MB = 5.7 /ISC/	
630	NOV 19	BRA	+IP	11 17	54.5	-0.8								73.48	20.93	Near East Coast of Kamohatka 54.35 N 161.30 E H = 11 6 27.1 Depth = 57 km MB = 5.5 /ISC/	
631	NOV 20	BRA	IPCP EAP	1 3 1 3	2.0 20.2	0.8 1.1								90.13	96.36	Southern Sumatra 4.38 S 102.46 E H = 0 50 6.1 Depth = 69 km MB = 5.4 /ISC/	
632	NOV 20	BRA	+IP IPCP	15 12 15 12	39.2 45.6	-1.5 1.3								85.43	324.47	Southern Nevada, N. E. 37.22 N 116.37 W H = 15 0 0.1 /ISC/	

633	NOV 21	BRA	+IP EPCP	1 27 1 27	35.0 50.6	-11.8 1.4								87.50	278.43	Panama-Colombia Border Region 7.55 N 77.50 W H = 1 14 56.0 Depth = 0 km MB = 5.8 /ISC/
634	NOV 22	BRA	EP IXP I ES I	10 8 10 8 10 8 10 9 10 11	9.0 24.0 48.0 36.0 3.0	-3.4 -0.5 -12.4								8.52	164.22	Greece-Albania Border Region 39.92 N 20.11 E H = 10 6 8.4 Depth = 34 km MB = 5.1 /ISC/
635	NOV 23	BRA	ESG	10 30	15.0	12.9								3.69	232.04	Northern Italy 45.82 N 12.94 E H = 10 28 0.0 Depth = 0 km /ISC/
636	NOV 23	SPC BRA	IP EPP -IP	23 13 23 16 23 13	36.0 28.0 47.5	-0.1 -1.6 -0.5	171	1.6				5.5		75.60 77.74	42.40 40.26	Hokkaido Region 41.26 N 140.21 E H = 23 2 8.1 Depth = 167 km MB = 5.3 /ISC/
637	NOV 24	SPC BRA	IPKP2 EAPKIKP	3 54 3 54	35.0 38.0	-0.5 -3.4								147.86 149.56	23.67 18.73	Tonga Region 18.74 S 172.78 W H = 3 34 49.3 Depth = 33 km MB = 5.1 /ISC/
638	NOV 24	SPC BRA	EKP2 EAPKIKP	5 56 5 56	24.0 26.0	-0.2 -4.1								147.85 149.55	23.50 18.55	Tonga Region 18.71 S 172.69 W H = 5 36 38.0 Depth = 33 km MB = 5.1 /ISC/
639	NOV 24	SPC	IP EPCP	8 9 8 10	53.0 6.0	-0.2 1.5	200	1.5				6.0		77.01	36.59	Kurile Islands 43.27 N 147.58 E H = 7 57 59.5 Depth = 17 km MB = 5.7 /ISC/
640	NOV 24	SPC	IP	10 3	38.0	0.8								76.99	36.62	Kurile Islands 43.27 N 147.53 E H = 9 51 45.0 Depth = 26 km MB = 5.4 /ISC/
641	NOV 25	SPC	EPKKP	8 25	51.0	7.6								126.11	57.55	Solomon Islands 9.29 S 156.56 E H = 8 6 57.0 Depth = 135 km MB = 5.5 /ISC/
642	NOV 26	SPC BRA	IP E -IP EPP	0 26 0 27 0 26 0 28	34.0 31.0 38.0 35.0	3.1 -1.7 3.7								46.34 47.46	127.09 122.84	Socotra Region 13.67 N 56.66 E H = 0 18 10.0 Depth = 68 km MB = 5.4 /ISC/



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m s		A	T	A	T	A	T					
643	NOV 27	BRA	E	11 3	33.5									148.37	21.29	Tonga 17.89 S 174.43 W H = 10 42 48.1 Depth = 33 km MB = 4.9 /ISC/	
644	NOV 27	SPC BRA	E E	11 21 11 21	33.0 49.5	0.3 -4.0								146.57 148.35	26.41 21.73	Tonga 17.94 S 174.67 W H = 11 1 58.0 Depth = 85 km MB = 5.3 /ISC/	
645	NOV 28	SPC BRA	E E	17 4 17 4	22.0 18.0	2.8 0.6								146.48 148.27	26.65 21.99	Tonga 17.89 S 174.83 W H = 16 44 47.4 Depth = 106 km MB = 5.0 /ISC/	
646	NOV 29	BRA	E	9 32	23.0	-0.0								87.97	277.17	Northern Colombia 6.35 N 76.87 W H = 9 19 30.0 Depth = 14 km MB = 4.9 /ISC/	
647	NOV 29	BRA SPC	E E	11 5 11 6	53.0 17.0	13.5 -5.6								111.31 113.09	202.91 204.65	South Sandwich Island Region 57.79 S 25.51 W H = 10 46 56.0 Depth = 51 km MB = 5.8 /ISC/	
648	NOV 29	SPC BRA	E E	13 54 13 55	57.0 2.0	-4.4 -5.3								111.52 112.31	355.35 352.12	Hawaiian Islands 19.48 N 155.17 W H = 13 35 41.0 Depth = 8 km MB = 5.7 /ISC/	
649	NOV 29	SPC BRA	E E	15 6 15 7	8.0 43.0	-7.5								111.54	355.32	Hawaiian Islands 19.46 N 155.14 W H = 14 47 41.1 Depth = 11 km MB = 5.9 /ISC/	
650	NOV 30	SPC BRA	E E	20 42 20 42 20 43 21 31	18.0 22.0 25.0 0.0	0.5 -1.8	200	1.5	33.8	20.0	40.4	20.0	6.0	78.38 79.53	4.60 2.64	Fox Islands 52.61 N 167.16 W H = 20 30 17.0 Depth = 22 km MB = 5.7 /ISC/	

No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks
				h	m s		A	T	A	T	A	T					
651	DEC 3	BRA SPC	E E	12 0 12 0	14.0 24.0	0.4 -0.6								73.59 75.50	207.93 210.64	South Atlantic Ridge 21.08 S 11.65 W H = 11 48 41.2 Depth = 28 km MB = 5.2 /ISC/	
652	DEC 4	BRA	E	15 11 15 11	20.0 41.0	1.3 -5.1								91.54	296.91	Oaxaca, Mexico 16.54 N 94.56 W H = 14 58 22.0 Depth = 107 km MB = 5.0 /ISC/	
653	DEC 5	BRA	E	14 45	8.0	-1.5								106.40	80.97	Banda Sea 6.30 S 124.72 E H = 14 27 20.2 Depth = 581 km MB = 5.6 /ISC/	
654	DEC 5	SPC BRA	E E	20 26 20 26 20 26	2.0 19.0 11.0	0.8 -0.5 -1.6						6.2		76.31 78.36	37.19 35.08	Kurile Islands 43.54 N 146.38 E H = 20 14 17.9 Depth = 67 km MB = 5.7 /ISC/	
655	DEC 6	SPC BRA	E E	5 25 5 28 5 25	40.0 52.0 55.0	-2.2 2.1 2.8								82.97 85.28	71.54 69.16	Philippine Islands Region 17.48 N 119.71 E H = 5 13 14.7 Depth = 39 km MB = 5.7 /ISC/	
656	DEC 6	BRA	E	13 1 13 1 13 5	0.0 18.0 27.0											No determination of epicentre	
657	DEC 8	SPC	E	15 25 15 25	2.0 13.0											No determination of epicentre	
658	DEC 8	BRA	E	22 59 22 59	24.0 42.0	0.9 3.8								31.57	354.60	Greenland Sea 79.14 N 2.06 E H = 22 53 2.0 Depth = 38 km MB = 5.2 /ISC/	
659	DEC 9	SPC BRA SRO	E E E	9 34 9 34 9 34 10 49	15.0 18.0 36.0 0.0	2.3 -0.7 5.6 -0.0								144.17 145.83 145.91	22.03 17.37 19.56	Samoa 14.92 S 172.88 W H = 9 14 42.4 Depth = 49 km MB = 6.0 /ISC/	
660	DEC 10	SPC	E	3 34 3 35	17.0 10.0	0.5								44.10	90.08	Southern Kashmir Region 32.95 N 76.10 E H = 3 26 5.6 Depth = 5 km MB = 5.3 /ISC/	



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z			E-W			N-S			MPV	MLH	Delta	Azimuth	Remarks
				h	m		s	A	T		A	T		A	T					
661	DEC 11	SPC BRA	EP -IP	16 54 16 55	59.0 8.0	1.5 -0.6											76.47 78.48	34.95 32.86	Kurile Islands 44.57 N 149.05 E H = 16 43 11.7 Depth = 54 km MB = 5.6 /ISC/	
662	DEC 11	BRA	IP	20 30	37.0	-4.8											99.57	263.45	Peru 11.54 S 74.52 W H = 20 17 7.9 Depth = 94 km MB = 5.8 /ISC/	
663	DEC 12	BRA	IPG	11 2	12.0														No determination of epicentre	
664	DEC 12	SPG +IP I		12 59 13 0	56.5 6.0														No determination of epicentre	
665	DEC 14	BRA	+IP	23 24	17.7	1.2											39.42	139.55	Western Arabian Peninsula 14.60 N 42.29 E H = 23 16 49.0 Depth = 41 km MB = 5.3 /ISC/	
666	DEC 14	SPC BRA	EP -IP EPP	23 34 23 34 23 36	54.0 53.7 33.0	4.0 -0.3 3.9											38.85 39.32	144.67 139.52	Western Arabian Peninsula 14.69 N 42.26 E H = 23 27 27.2 Depth = 41 km MB = 5.2 /ISC/	
667	DEC 15	BRA	EPKP2	1 28	33.0	0.6											147.85	24.66	Fiji Region 17.88 S 176.38 W H = 1 8 47.0 Depth = 39 km MB = 5.2 /ISC/	
668	DEC 15	BRA	EP	13 48	14.0	0.4											60.18	232.08	Central Mid-Atlantic Ridge 0.72 N 26.09 W H = 13 38 6.8 Depth = 34 km MB = 5.4 /ISC/	
669	DEC 17	SPC SRO BRA	EP IPGP IPGP IS LMH -IPGP IXP EPP ESKS	5 47 5 47 5 47 5 57 6 24 5 47 5 47 5 50 5 57	9.5 16.0 22.0 8.0 0.0 28.0 46.0 34.0 25.0	-0.2 -5.4 -4.2 4.1 -1.8 8.8 13.6 -2.1										76.63 77.75 78.59	97.53 95.74 94.90	Northern Sumatra 5.25 N 95.83 E H = 5 35 21.4 Depth = 40 km MB = 5.6 /ISC/		

No.	Date	Stat. Code	Phase	GMT		RES O-C	Z			E-W			N-S			MPV	MLH	Delta	Azimuth	Remarks
				h	m		s	A	T		A	T		A	T					
670	DEC 19	SPC SRO BRA	EPKIKP EPP EPP IPP EPP ISKPDF	2 33 2 35 2 33 2 36 2 33 2 36 2 37	44.5 49.0 48.0 16.0 46.0 16.0 16.0	3.5 -19.8 3.5 -5.1 0.8 -7.3 -0.3										132.54 134.41 134.78	50.41 49.18 47.49	Santa Cruz Islands Region 11.74 S 164.81 E H = 2 14 29.6 Depth = 33 km MB = 5.9 /ISC/		
671	DEC 19	BRA	IPG	10 50	46.0														No determination of epicentre	
672	DEC 19	SPG	EP	21 17	16.0														No determination of epicentre	
673	DEC 20	BRA	EPKIKP EAPKIKP	3 3 3 3	19.0 28.0	-1.1 7.0											144.63	50.25	Loyalty Islands 21.11 S 168.64 E H = 2 43 42.0 Depth = 3 km MB = 5.0 /ISC/	
674	DEC 20	SPG	EP	3 50	25.0														No determination of epicentre	
675	DEC 20	BRA SPC	+IP +IP	20 12 20 12	38.0 42.0	-2.7 -0.4											85.39 85.74	324.20 326.38	Southern Nevada, N. E. 37.12 N 116.06 W H = 20 0 0.2 /ISC/	
676	DEC 21	SPC SRO BRA	EP IAP ES -IPGP IAP E LMH -IP IAP I I	11 4 11 6 11 13 11 5 11 6 11 10 11 23 11 4 11 6 11 9 11 35	40.0 33.0 24.0 7.0 49.0 21.0 0.0 52.0 46.0 32.0 55.0	-1.7 -3.0 9.3 0.9 1.8 -0.6 -1.6 -2.2 1.0 -1.3 -1.6										71.07 72.90 72.96	29.44 28.15 27.53	Sea of Okhotsk 51.93 N 151.57 E H = 10 54 17.2 Depth = 546 km MB = 6.0 /ISC/		
677	DEC 21	SRO BRA SPC	EPP ESS E EP I EPP E	16 10 16 12 16 13 16 10 16 13 16 10 16 13	17.0 13.0 13.0 21.0 27.0 36.0 27.0	-2.2 1.0 -1.3 -1.6										9.65 10.25 10.76	164.09 159.44 174.00	Greece 38.47 N 21.67 E H = 16 7 51.1 Depth = 2 km MB = 5.2 /ISC/		
678	DEC 24	BRA	EPG ESG	10 16 10 16	34.0 40.0														No determination of epicentre	



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z			E-W			N-S			MPV	MLH	Delta	Azimuth	Remarks
				h	m		s	A	T	A	T	A	T	A	T					
679	DEC 24	SPC	-IP	11	55	48.5	0.1										35.00	116.17	Southern Iran 27.04 N 55.50 E H = 11 48 57.4 Depth = 36 km	
		SRO	+IP	11	55	55.0	1.4										35.61	112.21	MB = 5.5 /ISC/	
			EPP	11	57	22.0	7.4													
680	DEC 24	BRA	E	12	2	50.0											36.50	111.35		
			E	12	4	22.0														
		E	12	11	0.0															
		EP	12	23	10.0	-4.0														
681	DEC 25	SRO	EAPKIKP	15	16	54.0	-3.8										132.91	50.13	Solomon Islands 10.82 S 163.41 E H = 14 57 34.9 Depth = 33 km	
			EPP	15	19	18.0	1.6													
			LMH	16	12	0.0	0.4													
682	DEC 25	BRA	EAPKIKP	15	16	52.0	4.2										133.29	48.49	MB = 5.5 /ISC/	
			EPP	15	19	34.0	15.0													
		-IP	5	24	12.7	1.3														
		EPP	5	25	34.0	-4.0														
683	DEC 25	SRO	+IP	5	24	31.3	0.4										37.15	65.77	Eastern Kazakhstan 50.02 N 78.86 E H = 5 16 57.2 Depth = 0 km	
			EP	5	24	31.3	0.4													
		SPC	EP	15	48	19.5	0.4													
		BRA	EP	16	12	4.5	0.3													
684	DEC 25	SRO	+IP	16	12	13.4	-1.7										76.79	33.18	Kurile Islands 45.19 N 151.36 E H = 15 36 30.4 Depth = 44 km	
			EP	16	12	13.4	-1.7													
		SPC	EP	16	12	13.4	0.3													
		BRA	EP	16	12	13.4	-1.7													
685	DEC 25	SRO	EP	22	10	6.0	3.7										25.42	325.74	Iceland Region 66.26 N 16.39 W H = 22 4 32.3 Depth = 5 km	
			EP	22	10	6.0	3.7													
		SPC	EP	23	36	59.0	2.7													
		BRA	EP	23	40	49.0	3.8													
686	DEC 26	SRO	EPP	23	41	48.0	2.4										113.50	67.49	New Guinea 4.07 S 142.11 E H = 23 22 20.3 Depth = 102 km	
			E	23	43	37.0	5.3													
			EP	23	37	3.0	-1.2													
			E	23	40	55.0	6.0													
		BRA	IPK	23	44	31.0	1.9											115.22	66.39	
			ISDF	23	51	23.0	1.9													
			LMH	23	51	23.0	1.9													
			E	23	37	7.0	1.9													
687	DEC 27	BRA	EP	15.2	20.0	14.3	20.0													
			EP	15.2	20.0	14.3	20.0													
			EP	15.2	20.0	14.3	20.0													
			EP	15.2	20.0	14.3	20.0													

686	DEC 26	SRO	EPP	23	40	52.4	1.5										145.52	21.93	Samoa Region 16.22 S 172.47 W H = 15 56 39.1 Depth = 33 km	
			IPK	23	41	22.4	3.4													
			E	23	42	0.0	-0.4													
			ESKPDF	23	44	20.0	4.4													
687	DEC 27	BRA	EP	16	16	17.0	0.8													
			LMV	16	58	0.0	2.4													
			E	16	16	15.0	2.4													
			E	16	17	28.0	0.8													
688	DEC 27	SRO	EP	16	16	26.3	-1.2													
			IPK	16	16	26.3	-1.2													
			LMH	16	16	26.3	-1.2													
			E	16	16	19.0	2.3													
689	DEC 27	BRA	EP	4	33	27.0	-4.8													
			ESG	4	34	48.0	8.8													
			EP	12	13	33.0	4.8													
			E	12	13	33.0	4.8													
690	DEC 28	SRO	EP	23	54	19.0	0.2													
			LMH	23	54	19.0	0.2													
			E	23	54	21.0	-0.6													
			E	23	54	21.0	-0.6													
691	DEC 28	BRA	EP	15	42	14.0	-3.7													
			LMH	15	42	14.0	-3.7													
			E	22	4	18.0	1.6													
			E	22	4	18.0	1.6													
692	DEC 29	SRO	EP	3	58	42.0	-3.9													
			LMH	4	0	15.0	6.8													
			E	4	54	0.0	6.8													
			E	4	58	32.0	6.8													
693	DEC 29	BRA	EP	4	0	15.0	6.8													
			LMH	4	12	3.0	6.8													
			E	4	12	3.0	6.8													
			E	4	54	0.0	6.8													



No.	Date	Stat. Code	Phase	GMT		RES O-C	Z		E-W		N-S		MPV	MLH	Delta	Azimuth	Remarks			
				h	m s		A	T	A	T	A	T								
694	DEC 29	BRA	EAFKHP	22	5 0.0	0.4								146.82	17.42	Samoa Region 15.90 S 172.70 W H = 21 45 13.0 Depth = 48 km MB = 4.7 /ISC/				
695	DEC 30	SPC	EFKP2	2	49 13.0	1.7								144.85	21.80	Samoa Region 15.55 S 172.57 W H = 2 29 42.1 Depth = 77 km MB = 5.1 /ISC/				
696	DEC 31	SRO BRA SRO SRO SRO SRO	-IAP E IMH EP IAP E ESS I I IMH IAP	9	48	11.0	-0.9								9.61	164.02	Greece 38.52 N 21.67 E H = 9 45 47.3 Depth = 19 km MB = 5.2 /ISC/			
				9	50	51.0														
				9	53	0.0	-0.9													
				9	48	15.0	0.4													
				9	48	20.4														
				9	49	36.0	8.6													
				9	50	33.0														
				9	51	54.0														
				9	51	36.0														
				9	53	0.0	-1.1													
				9	48	26.0														

## Observations of Microseisms at the Station Hurbanovo



MICROSEISMIC ACTIVITY  
COMPONENT EW

JANUARY 1975

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			2	4	4.7	2	4	5.8	3	6	5.0
2	3	5	10.9	1	6	11.1	1	6	10.1	2	6	10.1
3	1	5	10.9	2	7	13.7	1	6	15.1	2	5	6.5
4	3	6	8.0	1	6	10.1	1	6	11.1	2	5	6.5
5	3	5	6.5	1	6	10.1	3	6	10.1	3	5	5.5
6	1	5	6.5	2	6	18.1	2	6	15.1	3	5	9.8
7	0.0			3	6	5.0	0.0			0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			0.0			0.0			0		
11	0.0			3	6	6.0	3	6	10.1	0.0		
12	0.0			0.0			0.0			0.0		
13	3	6	10.1	1	8	13.3	3	6	10.1	2	6	10.1
14	1	6	16.1	2	6	20.1	2	6	20.1	2	6	11.1
15	1	5	10.9	2	7	13.7	2	6	25.1	2	6	10.1
16	1	6	15.1	2	6	10.1	2	6	26.2	2	6	16.1
17	0.0			0.0			0.0			0		
18	0.0			0.0			0.0			0.0		
19	0			TT			0.0			0		
20	0.0			0.0			0.0			3	7	7.3
21	0.0			0.0			3	6	6.0	0.0		
22	0.0			3	5	8.7	3	5	5.5	3	6	6.0
23	3	6	10.1	2	6	10.1	2	6	6.0	3	5	5.5
24	3	5	5.5	2	6	10.1	2	6	10.1	3	6	5.0
25	0.0			3	5	10.9	0.0			0.0		
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			0.0			0.0		
28	0.0			0.0			0.0			0.0		
29	0			0.0			0.0			0.0		
30	0			0.0			0.0			0.0		
31	0.0			0.0			3	6	10.1	0.0		

MICROSEISMIC ACTIVITY  
COMPONENT NS



JANUARY 1975  
International  
Seismological  
Centre

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			3	8	3.5	3	5	7.3	3	4	5.0
2	3	6	8.1	1	5	5.5	1	5	13.7	1	6	13.0
3	1	5	18.2	2	6	12.2	1	6	8.1	1	5	7.3
4	3	5	4.6	3	5	9.1	3	6	9.0	3	6	8.1
5	3	5	5.5	3	6	8.1	3	5	4.6	3	6	7.3
6	1	6	8.1	2	5	10.0	1	6	8.1	3	5	4.6
7	3	5	4.6	3	5	9.1	3	5	5.5	0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			0.0			0		
10	0.0			3	4	5.0	0.0			0.0		
11	0.0			0.0			3	5	4.6	0.0		
12	0			0.0			3	5	5.5	0.0		
13	3	7	7.3	2	5	9.1	3	6	13.0	1	5	9.1
14	1	6	12.2	2	7	14.7	2	6	16.3	1	6	11.4
15	1	6	9.8	1	6	13.0	2	7	11.0	2	5	13.7
16	2	6	17.1	2	6	13.0	1	7	14.7	2	5	9.1
17	0.0			3	5	9.1	0.0			0		
18	0			0.0			0.0			0.0		
19	0			TT			0			0		
20	0.0			0.0			3	6	6.5	0.0		
21	0.0			3	6	6.5	3	5	4.6	0.0		
22	3	5	4.6	3	5	9.1	3	6	9.8	3	6	8.1
23	3	6	9.0	2	6	12.2	2	7	8.1	2	6	4.9
24	3	5	9.1	3	6	11.4	3	6	8.1	3	6	8.1
25	3	5	8.2	3	5	7.3	0.0			0.0		
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			0.0			0.0		
28	0.0			0.0			3	6	8.1	0		
29	0			0			0.0			0		
30	0.0			3	5	9.1	3	5	4.6	0		
31	0.0			0.0			3	5	9.1	0.0		



MICROSEISMIC ACTIVITY

FEBRUARY 1975

COMPONENT EW

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			3	6	6.0	0.0			3	7	5.5
2	0.0			TT			3	8	7.5	0.0		
3	3	6	5.0	3	7	4.6	3	7	6.4	0.0		
4	0.0			1	6	10.1	TT			3	6	8.0
5	3	4	5.8	1	4	5.8	0.0			0.0		
6	3	7	4.6	3	6	6.0	3	6	6.0	3	5	5.5
7	3	6	5.0	1	3	18.4	3	6	5.0	0.0		
8	3	4	5.8	0.0			0.0			0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			0.0			0.0			0.0		
11	0.0			0.0			0.0			0.0		
12	0.0			0.0			0.0			0.0		
13	0.0			0.0			0.0			0.0		
14	0.0			0.0			0.0			0.0		
15	0.0			...			3	8	10.0	0.0		
16	3	9	7.7	0.0			3	6	5.0	0.0		
17	0.0			2	7	4.6	1	7	8.2	0.0		
18	3	6	6.0	2	6	10.1	1	5	5.5	3	5	5.5
19	3	7	9.2	0.0			0.0			0.0		
20	0.0			2	6	10.1	3	6	6.0	0.0		
21	0.0			2	6	5.0	0.0			3	6	5.0
22	3	5	5.5	1	7	9.2	1	6	10.1	0.0		
23	3	5	6.5	0.0			0.0			3	7	9.2
24	3	6	11.1	2	6	10.1	2	6	10.1	3	5	5.5
25	0.0			0.0			0.0			0.0		
26	0.0			3	5	4.4	0.0			0.0		
27	0.0			2	5	8.7	2	5	10.9	3	5	6.5
28	0.0			3	5	9.8	0.0			0.0		



International  
Seismological  
Centre

MICROSEISMIC ACTIVITY

FEBRUARY 1975

COMPONENT NS

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			3	6	4.9	0.0			0.0		
2	0.0			TT			0.0			0.0		
3	3	6	4.9	3	5	5.5	2	5	4.6	0.0		
4	0.0			1	5	9.1	TT			3	5	4.6
5	3	5	4.6	3	6	4.1	3	4	5.0	0.0		
6	3	5	7.3	3	6	4.1	3	5	4.6	0.0		
7	3	6	8.1	1	6	8.1	3	5	7.3	0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			0.0			0.0			0.0		
11	0.0			0.0			0.0			0.0		
12	0.0			0.0			0.0			0.0		
13	0.0			0.0			0.0			0.0		
14	0.0			0.0			0.0			0.0		
15	0.0			0.0			0.0			0.0		
16	0.0			0.0			0.0			0.0		
17	0.0			0.0			0.0			0.0		
18	0.0			0.0			0.0			0.0		
19	0.0			0.0			0.0			0.0		
20	0.0			0.0			0.0			0.0		
21	3	6	8.1	0.0			0.0			0.0		
22	0.0			1	6	8.1	3	5	4.6	3	5	5.5
23	3	5	4.6	0.0			0.0			3	5	5.5
24	3	5	10.0	1	5	9.1	1	5	9.1	0.0		
25	3	5	4.6	3	5	4.6	0.0			0.0		
26	0.0			3	5	4.6	0.0			0.0		
27	0.0			2	6	4.1	3	6	8.1	3	6	4.9
28	0.0			3	6	8.1	3	5	4.6	0.0		



MICROSEISMIC ACTIVITY  
COMPONENT EW

MARCH 1975

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			0.0			0.0		
2	0.0			0.0			0.0			0.0		
3	0.0			3 6 7.0			3 6 6.0			0.0		
4	3 6 6.0			0.0			0.0			0.0		
5	0.0			3 5 10.9			3 4 7.0			0.0		
6	3 5 13.1			3 6 10.1			3 6 6.0			3 5 9.8		
7	3 5 10.9			3 6 5.0			1 6 10.1			3 5 6.5		
8	0.0			3 6 10.1			0.0			0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			3 4 5.8			3 5 5.5			0.0		
11	0.0			0.0			0.0			0		
12	0.0			3 5 5.5			3 6 11.1			0.0		
13	0.0			0.0			0.0			0.0		
14	0.0			0.0			0.0			0		
15	0.0			0.0			0.0			0.0		
16	0.0			0.0			3 7 11.0			0.0		
17	TT			0.0			3 6 9.1			0.0		
18	0.0			3 7 9.2			0.0			0.0		
19	3 7 8.2			1 7 5.5			1 6 10.1			0.0		
20	0.0			0.0			0.0			0.0		
21	0.0			...			0.0			0.0		
22	0.0			0.0			0.0			0.0		
23	0.0			0.0			0.0			0.0		
24	0.0			3 5 5.5			3 5 5.5			0.0		
25	0.0			2 5 5.5			3 4 5.8			0.0		
26	0.0			...			0.0			0.0		
27	TT			0.0			0.0			0		
28	0.0			0.0			0.0			0.0		
29	0.0			0.0			0.0			0		
30	0.0			0.0			3 6 7.0			0.0		
31	0.0			0.0			0.0			0		

MICROSEISMIC ACTIVITY  
COMPONENT NS

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			0.0			0.0		
2	0.0			0.0			0.0			0.0		
3	0.0			0.0			0.0			0.0		
4	0.0			3 5 4.6			0.0			3 4 5.0		
5	0.0			3 4 5.0			3 5 8.2			0.0		
6	0.0			3 5 5.5			3 5 5.5			3 5 9.1		
7	3 5 5.5			1 5 5.5			3 5 9.1			3 5 7.3		
8	0.0			3 5 5.5			0.0			0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			1 6 6.5			3 5 5.5			0.0		
11	0.0			3 5 4.6			3 5 4.6			0.0		
12	0.0			3 5 5.5			3 5 5.5			0.0		
13	3 5 3.6			3 5 5.5			3 5 8.2			0.0		
14	0.0			3 5 8.2			0.0			0.0		
15	0.0			0.0			0.0			0.0		
16	0.0			0.0			3 6 4.9			0.0		
17	TT			0.0			3 5 9.1			0.0		
18	0.0			3 6 4.9			0.0			0.0		
19	3 5 8.2			1 6 4.1			3 8 7.7			0.0		
20	0.0			1 5 7.3			3 5 9.1			0.0		
21	0.0			...			0.0			0.0		
22	0.0			3 5 4.6			0.0			0.0		
23	0.0			0.0			0.0			0.0		
24	0.0			3 5 4.6			3 5 9.1			0.0		
25	0.0			3 5 4.6			3 5 8.2			3 5 5.5		
26	0.0			...			0.0			0.0		
27	TT			0.0			0.0			0		
28	0.0			0.0			0.0			0		
29	0.0			0.0			0			0.0		
30	0.0			0.0			0			0.0		
31	0.0			0.0			0.0			0.0		



MICROSEISMIC ACTIVITY

APRIL 1975

COMPONENT EW

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			3	6	8.0	0.0		
2	0.0			0.0			0.0			3	5	5.5
3	0.0			0.0			3	6	7.0	0.0		
4	TT			0.0			0.0			0.0		
5	0.0			3	7	4.6	0.0			0.0		
6	0.0			3	6	5.0	3	5	5.5	0.0		
7	0.0			0.0			0.0			3	5	5.5
8	0.0			0.0			0.0			0.0		
9	0.0			0.0			0.0			0		
10	0.0			0.0			0.0			3	5	5.5
11	3	4	4.7	0.0			0.0			0.0		
12	0.0			0.0			0.0			3	6	9.1
13	0.0			0.0			0.0			0.0		
14	0.0			0.0			0.0			0.0		
15	0.0			0.0			0.0			0		
16	TT			0.0			0.0			...		
17	...			3	5	6.5	0.0			0.0		
18	3	6	10.1	3	5	6.5	0.0			0.0		
19	0.0			0.0			0.0			0.0		
20	0.0			0.0			3	5	5.5	0.0		
21	0.0			0.0			3	6	6.0	0.0		
22	0.0			0.0			0.0			0.0		
23	0.0			0.0			3	4	5.8	0.0		
24	3	6	6.0	3	6	9.1	0.0			0.0		
25	...			0.0			0.0			0.0		
26	3	5	5.5	0.0			0.0			0.0		
27	0.0			0.0			3	4	5.8	0.0		
28	0.0			3	4	5.8	0.0			0.0		
29	0.0			3	5	8.7	0.0			0.0		
30	3	5	10.9	3	4	5.8	0.0			0.0		



International  
Seismological  
Centre  
APRIL 1975

MICROSEISMIC ACTIVITY

COMPONENT NS

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			3	6	8.1	0.0			0		
2	0.0			3	6	4.9	0.0			0.0		
3	0.0			0.0			0.0			0.0		
4	TT			0.0			0.0			0.0		
5	0.0			0.0			3	6	4.1	0.0		
6	0.0			3	4	5.0	3	4	4.0	0.0		
7	...			0.0			0.0			...		
8	...			3	5	4.6	...			...		
9	...			3	4	5.0	0.0			0.0		
10	0.0			3	4	5.0	3	4	5.0	0.0		
11	0.0			3	6	4.1	0.0			0		
12	0.0			0.0			0.0			0.0		
13	...			0.0			0.0			0.0		
14	0.0			3	5	3.6	3	5	4.6	0.0		
15	0.0			3	5	5.5	0.0			3	6	4.1
16	TT			3	5	4.6	0.0			0.0		
17	0.0			3	5	5.5	3	5	4.6	0.0		
18	0.0			0.0			3	5	4.6	3	5	4.6
19	0.0			0.0			0.0			0.0		
20	0			0.0			0			0.0		
21	0.0			3	5	3.6	3	6	4.1	0.0		
22	0.0			3	5	4.6	0.0			0.0		
23	0.0			0.0			0.0			0.0		
24	0.0			3	5	4.6	3	4	5.0	0.0		
25	0.0			3	4	5.0	3	4	5.0	0		
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			0.0			0.0		
28	3	6	4.1	3	6	8.1	3	4	5.0	0.0		
29	0.0			3	5	5.5	3	5	4.6	0.0		
30	3	5	9.1	3	5	5.5	0.0			0.0		



MICROSEISMIC ACTIVITY  
COMPONENT EW

MAY 1975

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			3	7	5.2	0.0			0.0		
2	0.0			0.0			0.0			0.0		
3	0.0			0.0			0.0			0		
4	0.0			0.0			0.0			0		
5	0.0			0.0			0.0			0.0		
6	3	7	5.2	0.0			0.0			0.0		
7	0.0			0.0			0.0			0.0		
8	0.0			0.0			3	6	5.8	0.0		
9	0.0			0.0			3	7	8.7	0.0		
10	0.0			0.0			TT			0		
11	0.0			0 0			0.0			0.0		
12	0.0			2	4	4.5	0.0			0.0		
13	0.0			0.0			0.0			0.0		
14	0.0			0.0			3	6	9.6	0.0		
15	0.0			0.0			0.0			0.0		
16	3	5	5.2	0.0			3	5	4.2	0.0		
17	0.0			0.0			0.0			0.0		
18	0.0			0.0			0.0			0.0		
19	3	6	4.8	0.0			3	6	5.8	0.0		
20	3	5	5.2	0.0			0.0			3	6	6.7
21	3	5	5.2	0.0			0.0			0.0		
22	3	5	4.2	3	6	9.6	3	6	3.8	0.0		
23	0.0			0.0			...			...		
24	...			0.0			0.0			0.0		
25	0.0			0.0			0.0			0.0		
26	0.0			TT			3	6	5.8	0.0		
27	0.0			3	5	5.2	0.0			3	8	7.9
28	0.0			3	6	3.8	3	7	4.4	0.0		
29	0.0			0.0			0.0			3	8	7.9
30	0.0			0.0			0.0			0		
31	0.0			0.0			0.0			0.0		

MICROSEISMIC ACTIVITY  
COMPONENT NS

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			0.0			0.0		
2	0.0			0.0			0.0			0.0		
3	0			0.0			0.0			0.0		
4	3	7	6.2	3	5	3.9	3	5	7.8	0.0		
5	0.0			3	5	3.9	0.0			0.0		
6	3	4	4.3	1	5	4.7	3	5	3.9	0.0		
7	0.0			0.0			3	5	3.9	3	7	3.1
8	0.0			0.0			3	5	3.9	0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			0.0			TT			0		
11	0.0			0			0			0.0		
12	0.0			3	5	3.9	3	5	4.7	0.0		
13	3	5	3.9	2	4	4.3	3	4	3.4	0.0		
14	0.0			3	5	7.8	3	5	3.9	0.0		
15	3	5	4.7	3	6	3.5	3	4	4.3	0.0		
16	0.0			3	6	3.5	0.0			0.0		
17	0.0			0.0			3	5	3.9	0.0		
18	0.0			0.0			0.0			0.0		
19	0.0			3	4	4.3	3	5	7.0	0.0		
20	3	5	3.9	3	6	4.2	0.0			0.0		
21	3	5	3.9	3	5	4.7	3	5	6.2	0.0		
22	0.0			3	5	3.9	3	5	4.7	0.0		
23	0.0			0.0			0.0			0		
24	0.0			0.0			0.0			0.0		
25	0.0			0.0			0			0.0		
26	0.0			TT			0.0			0.0		
27	0.0			0.0			0.0			0.0		
28	3	5	3.9	3	6	5.6	3	7	3.7	0		
29	0.0			3	6	4.2	0.0			0.0		
30	0.0			3	5	3.9	3	6	3.5	0.0		
31	0.0			0.0			0.0			0.0		



MICROSEISMIC ACTIVITY  
COMPONENT EW

JUNE 1975

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			3	4	5.6	0.0			0.0		
2	0.0			0.0			3	6	4.8	0.0		
3	0.0			0.0			0.0			0.0		
4	0.0			3	6	4.8	0.0			0		
5	0.0			0.0			0.0			0.0		
6	0.0			0.0			0.0			0.0		
7	0.0			0.0			3	7	5.2	3	6	5.8
8	0.0			3	7	4.4	0.0			3	6	4.8
9	0.0			0.0			0.0			3	5	7.3
10	0.0			0.0			TT			3	5	5.2
11	3	6	4.8	0.0			0.0			0.0		
12	0.0			0.0			0.0			0.0		
13	0.0			0.0			0.0			TT		
14	0.0			0.0			0.0			0.0		
15	0.0			0.0			0.0			3	6	8.6
16	3	5	5.2	0.0			0.0			0.0		
17	0.0			0.0			0.0			0		
18	0			0.0			0.0			0		
19	0			0.0			0.0			...		
20	...			0.0			0.0			...		
21	...			0.0			0.0			...		
22	...			0.0			0.0			...		
23	0.0			0.0			0.0			0.0		
24	0.0			0.0			0.0			0.0		
25	0.0			0.0			3	6	4.8	0.0		
26	0.0			0.0			3	6	4.8	3	6	9.6
27	0.0			0.0			0.0			0.0		
28	0.0			0.0			0.0			0.0		
29	0			0.0			0.0			0.0		
30	0.0			TT			0.0			0		
				0.0			TT			0		

MICROSEISMIC ACTIVITY  
COMPONENT NS

JUNE 1975  
International  
Seismological  
Centre

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0			0.0			0.0		
2	0.0			3	6	4.2	0.0			0.0		
3	0.0			0.0			3	5	4.7	0.0		
4	0.0			1	6	4.2	0.0			3	7	6.2
5	0.0			3	5	3.9	3	5	6.2	0.0		
6	0.0			0.0			3	6	3.5	0.0		
7	0.0			0.0			0.0			0		
8	0			0			0.0			0.0		
9	0.0			0.0			3	5	3.9	0.0		
10	3	6	6.3	3	6	3.5	TT			0.0		
11	0.0			3	6	6.3	3	5	6.2	0.0		
12	3	6	5.6	0.0			3	5	4.7	0.0		
13	0.0			0.0			0.0			TT		
14	0.0			3	5	3.9	0.0			0.0		
15	0.0			0.0			0.0			0.0		
16	0.0			3	7	3.7	3	5	6.2	0.0		
17	3	6	4.2	3	5	3.9	3	8	4.7	0.0		
18	0.0			3	5	3.9	0.0			0.0		
19	0.0			0.0			0.0			0.0		
20	0.0			3	6	3.5	3	6	3.5	0.0		
21	0.0			0.0			0.0			0.0		
22	0.0			0.0			0.0			0.0		
23	0.0			3	4	4.3	0.0			0		
24	0.0			3	5	3.9	0.0			0.0		
25	0.0			3	6	4.9	0.0			0.0		
26	0.0			3	4	3.4	3	5	4.7	3	7	3.7
27	0.0			3	5	3.9	3	6	3.5	0.0		
28	0.0			0.0			0.0			0.0		
29	0.0			TT			0.0			0		
30	0.0			3	5	3.9	...			...		



MICROSEISMIC ACTIVITY  
COMPONENT EW

JULY 1975

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			0.0			0.0		
2	0.0			3	5	7.3	0.0			0.0		
3	0.0			0.0			0.0			3	6	4.8
4	3	6	4.8	3	6	4.8	0.0			3	6	3.8
5	0.0			0.0			0.0			0.0		
6	0.0			3	6	4.8	0.0			0		
7	0.0			0.0			0.0			0.0		
8	0.0			0.0			TT			0.0		
9	3	7	4.4	0.0			0.0			0.0		
10	3	7	7.8	0.0			0.0			3	6	4.8
11	0.0			0.0			3	7	3.5	0.0		
12	3	5	5.2	3	5	6.3	0.0			0.0		
13	0.0			3	5	6.3	3	6	5.8	0.0		
14	0.0			0.0			0.0			0.0		
15	0.0			0.0			0.0			0.0		
16	0.0			0.0			0.0			0.0		
17	0.0			0.0			0.0			3	5	5.2
18	0.0			0.0			0.0			0.0		
19	0.0			0.0			0.0			0.0		
20	0.0			3	4	5.6	0.0			0.0		
21	0.0			0.0			0.0			0.0		
22	0.0			0.0			0.0			0.0		
23	0.0			0.0			0.0			0.0		
24	0.0			0.0			0.0			0.0		
25	0.0			0.0			0.0			0.0		
26	0			0.0			0.0			0.0		
27	0.0			0.0			0.0			0.0		
28	...			0.0			0.0			...		
29	...			0.0			...			...		
30	0.0			0.0			0.0			0.0		
31	0.0			0.0			0.0			0.0		

MICROSEISMIC ACTIVITY  
COMPONENT NS

JULY 1975  
International  
Seismological  
Centre

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	...			0.0			3	7	3.1	0.0		
2	0.0			3	6	6.3	0.0			0.0		
3	0.0			0.0			0.0			0.0		
4	0.0			1	6	3.5	0.0			0		
5	0.0			0.0			0.0			0.0		
6	0			0.0			3	7	3.7	0		
7	0.0			1	5	3.9	1	4	4.3	0.0		
8	0.0			3	5	4.7	TT			3	5	7.8
9	3	6	7.0	2	6	4.2	3	6	4.2	3	4	4.3
10	0.0			3	5	6.2	3	6	4.2	3	6	4.2
11	0.0			3	5	4.7	3	5	3.9	0.0		
12	0.0			3	5	3.9	3	4	4.3	0.0		
13	0.0			0.0			0.0			0.0		
14	3	7	5.0	3	5	3.9	3	4	5.2	3	5	6.2
15	3	6	5.6	1	6	5.6	3	6	4.2	0.0		
16	3	6	3.5	3	7	6.2	3	6	3.5	3	5	6.2
17	3	5	3.9	3	8	2.9	3	6	7.0	0.0		
18	0.0			3	6	5.6	3	4	7.7	0.0		
19	3	5	6.2	0.0			3	6	5.6	0.0		
20	0.0			0.0			0.0			0.0		
21	0.0			3	5	5.5	3	5	3.9	0.0		
22	0.0			3	5	3.9	0.0			0.0		
23	0.0			3	5	5.5	3	6	4.2	0.0		
24	0.0			3	6	6.3	3	4	4.3	0.0		
25	0.0			1	6	7.0	3	6	5.6	0.0		
26	0.0			3	4	4.3	3	5	6.2	0.0		
27	0.0			0.0			0.0			0.0		
28	3	7	3.1	3	5	6.2	3	5	6.2	0.0		
29	3	4	4.3	3	5	3.9	3	5	6.2	3	5	3.9
30	0.0			3	5	3.9	3	5	4.7	3	5	3.9
31	3	6	3.5	3	5	3.1	3	6	3.5	0.0		



MICROSEISMIC ACTIVITY  
COMPONENT EW

AUGUST 1975

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			0.0			0		
2	0			0.0			0.0			0.0		
3	0.0			0.0			0.0			0.0		
4	0.0			0.0			0.0			0.0		
5	0.0			0.0			0.0			0.0		
6	0.0			0.0			0.0			0.0		
7	0.0			0.0			0.0			0.0		
8	0.0			0.0			3	5	5.2	3	4	5.6
9	0.0			0.0			3	6	4.8	3	6	4.8
10	3	4	5.6	0.0			0.0			0		
11	3	8	7.1	0.0			3	6	5.8	0.0		
12	0.0			0.0			0.0			0.0		
13	3	8	4.7	3	7	4.4	3	7	7.8	0.0		
14	0.0			0.0			0.0			0		
15	0.0			0.0			0.0			0.0		
16	0.0			0.0			0			0.0		
17	0			0.0			0.0			0.0		
18	0			0.0			0.0			0.0		
19	0.0			3	5	5.2	0.0			0.0		
20	0.0			0.0			0.0			0.0		
21	0.0			0.0			0.0			0.0		
22	0.0			0.0			0.0			0.0		
23	0.0			TT			0			0		
24	0.0			0.0			0			0.0		
25	3	5	5.2	0.0			3	6	8.6	0.0		
26	0.0			0.0			3	6	8.6	0.0		
27	0.0			0.0			3	5	6.3	0.0		
28	0.0			0.0			0.0			0.0		
29	0			3	5	10.4	0.0			0.0		
30	0.0			0.0			0.0			0.0		
31	0.0			0.0			0.0			0.0		

MICROSEISMIC ACTIVITY  
COMPONENT NS

AUGUST 1975  
International  
Seismological  
Centre

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			3	5	5.5	3	5	3.9	3	6	4.2
2	3	8	5.3	3	6	5.6	3	7	3.1	0.0		
3	0.0			0.0			0.0			0.0		
4	0.0			3	8	2.9	0.0			3	6	4.2
5	3	6	3.5	1	4	3.4	0.0			0.0		
6	0.0			3	5	3.1	3	7	3.1	0.0		
7	0.0			3	8	5.3	3	7	5.0	3	7	5.0
8	0.0			1	6	4.2	3	5	4.7	0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			0.0			0.0			0.0		
11	0.0			1	7	3.7	3	5	3.9	0.0		
12	0.0			3	5	3.9	3	5	4.7	0.0		
13	0.0			3	5	3.9	3	6	3.5	3	6	7.0
14	3	5	3.1	3	5	3.9	0.0			0.0		
15	0.0			3	7	4.4	0.0			0.0		
16	0.0			0.0			0.0			0.0		
17	0.0			0.0			0.0			0.0		
18	0.0			3	4	4.3	3	5	4.7	0.0		
19	0.0			3	4	3.4	3	4	4.3	0.0		
20	0.0			3	5	3.9	0.0			0.0		
21	0.0			3	4	3.4	0.0			0.0		
22	0.0			3	5	3.9	0.0			0.0		
23	0.0			TT			0.0			0.0		
24	0.0			0.0			0.0			0.0		
25	0.0			0.0			3	6	3.5	0.0		
26	0.0			0.0			0.0			0.0		
27	0.0			3	5	3.9	3	5	6.2	0.0		
28	0.0			3	5	3.9	3	5	3.9	0.0		
29	0.0			3	6	4.9	3	5	5.5	0.0		
30	0.0			0.0			0.0			0.0		
31	0.0			0.0			0.0			0.0		



MICROSEISMIC ACTIVITY  
COMPONENT EW

SEPTEMBER 1975

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			0.0			0.0		
2	0.0			0.0			0.0			3	5	8.4
3	0.0			0.0			0.0			0.0		
4	0.0			3	5	10.4	0.0			0.0		
5	3	5	5.2	0.0			0.0			0.0		
6	0.0			TT			0.0			0.0		
7	0.0			0.0			0.0			0		
8	0.0			0.0			0.0			0.0		
9	0			0.0			0.0			0		
10	0.0			0.0			0.0			0.0		
11	0.0			0.0			0.0			0.0		
12	0.0			0.0			0.0			0		
13	0.0			0			0.0			0.0		
14	0.0			0.0			0.0			0.0		
15	0.0			0.0			0			0		
16	0.0			0			0.0			3	6	4.8
17	0.0			0.0			3	7	4.4	0.0		
18	0.0			0.0			3	6	9.6	3	5	4.2
19	0.0			3	6	3.8	0.0			3	5	5.2
20	3	5	5.2	0.0			3	5	5.2	0.0		
21	3	5	5.2	0.0			3	6	4.8	0		
22	3	5	5.2	2	4	5.6	2	6	8.6	3	6	4.8
23	0.0			0.0			3	5	5.2	0.0		
24	0.0			0.0			0.0			0		
25	3	5	4.2	1	5	4.2	3	5	4.2	3	6	9.6
26	0.0			2	4	5.6	2	4	3.4	0.0		
27	3	4	4.5	2	5	6.3	1	6	4.8	3	5	8.4
28	0.0			3	5	5.2	3	6	9.6	0.0		
29	0.0			3	5	4.2	0.0			0.0		
30	0.0			3	5	5.2	3	6	4.8	3	4	5.6

MICROSEISMIC ACTIVITY  
COMPONENT NS

International  
SEPTEMBER 1975  
Centre

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			1	5	6.2	3	5	7.0	0.0		
2	0.0			3	5	4.7	3	5	3.9	0.0		
3	0.0			0.0			3	4	3.4	0.0		
4	0.0			1	5	3.9	3	6	7.0	0.0		
5	3	4	4.3	3	6	4.2	0.0			0.0		
6	0.0			TT			0.0			0.0		
7	0.0			0.0			0.0			0.0		
8	0.0			3	6	4.2	3	5	4.7	0.0		
9	3	5	4.7	3	5	3.9	3	4	6.0	0.0		
10	0.0			3	5	3.9	3	4	6.9	0.0		
11	0.0			3	6	4.2	3	6	5.6	0.0		
12	0.0			1	5	3.9	3	5	3.9	0.0		
13	0.0			0.0			0.0			3	6	7.0
14	0.0			0.0			3	5	3.1	0		
15	0.0			0.0			0.0			0.0		
16	0.0			3	5	10.9	3	7	3.7	0.0		
17	0.0			3	6	5.6	3	4	6.0	0.0		
18	0.0			3	7	4.4	3	5	7.8	0.0		
19	3	5	3.9	0.0			0.0			0.0		
20	0.0			3	5	3.9	3	6	4.2	0.0		
21	0.0			0.0			0.0			0		
22	0.0			1	5	3.9	3	4	7.7	0.0		
23	0.0			3	6	6.3	3	5	3.9	0.0		
24	3	7	3.7	3	5	7.8	3	6	5.6	0		
25	0.0			3	5	3.9	3	5	3.9	0.0		
26	3	4	4.3	1	5	3.9	3	5	3.9	3	5	3.9
27	3	5	3.9	1	5	7.0	3	4	5.2	3	4	5.2
28	0.0			3	4	5.2	3	6	4.2	0.0		
29	0.0			1	4	5.2	3	5	7.8	3	5	3.9
30	0.0			3	5	3.9	3	5	5.5	0.0		



MICROSEISMIC ACTIVITY  
COMPONENT EW

OCTOBER 1975

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	3	6	4.8	0.0			0.0			3	5	9.4
2	3	8	9.4	0.0			0.0			0.0		
3	3	5	9.4	3	5	5.2	3	5	5.2	3	5	12.6
4	0.0			3	5	5.2	3	4	5.6	3	5	5.2
5	3	5	5.2	3	6	9.5	3	6	4.8	0.0		
6	0.0			2	5	4.2	3	5	8.4	3	5	6.3
7	3	6	3.8	2	5	4.2	3	5	5.2	3	5	8.4
8	0.0			0.0			0.0			0		
9	0.0			0.0			0			0.0		
10	0.0			0			0.0			0.0		
11	0.0			0.0			0.0			...		
12	...			3	3	4.8	0.0			0.0		
13	0.0			3	4	5.6	3	4	4.5	0.0		
14	0.0			0.0			0.0			0.0		
15	0.0			0.0			0.0			0		
16	0.0			0.0			0.0			0.0		
17	0.0			0.0			0.0			0.0		
18	0.0			TT			0.0			0.0		
19	0.0			0.0			3	5	5.2	0.0		
20	0.0			0.0			0.0			0.0		
21	0.0			TT			0.0			0.0		
22	0.0			3	5	5.2	3	5	5.2	3	4	9.0
23	3	6	4.8	0.0			0.0			0.0		
24	3	4	4.5	3	4	5.6	0.0			0.0		
25	0.0			0.0			0.0			0.0		
26	3	4	5.6	3	5	9.4	3	6	4.8	3	6	7.6
27	3	5	10.5	1	5	10.5	1	5	5.2	3	5	6.3
28	3	6	4.8	0.0			3	4	5.6	0.0		
29	0.0			0.0			0.0			0.0		
30	0.0			0.0			0.0			0.0		
31	0.0			TT			0.0			0.0		

MICROSEISMIC ACTIVITY  
COMPONENT NS



International  
Seismological  
Centre  
OCTOBER 1975

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	3	4	5.4	3	5	6.0	3	4	5.4	0.0		
2	3	6	7.2	3	5	5.0	3	4	5.4	0.0		
3	0.0			3	5	5.0	3	4	5.4	0		
4	0.0			0			0.0			...		
5	...			0.0			0.0			...		
6	...			3	4	5.4	0.0			...		
7	...			3	4	6.5	3	5	5.0	0.0		
8	0.0			3	4	5.4	0.0			...		
9	...			0.0			0.0			0		
10	0.0			0.0			0.0			...		
11	...			0.0			0.0			0		
12	0			0			0.0			0		
13	0.0			0.0			0.0			0		
14	0.0			0.0			0.0			0.0		
15	0.0			0.0			0			0		
16	0.0			0.0			0.0			...		
17	...			0.0			0.0			0.0		
18	0.0			TT			0.0			0.0		
19	0.0			0.0			3	5	5.2	0.0		
20	0.0			3	5	5.0	0.0			0.0		
21	0.0			TT			0.0			0.0		
22	0.0			3	4	5.4	3	4	6.5	3	5	8.9
23	0.0			3	5	5.0	0.0			0.0		
24	0.0			3	4	4.3	3	5	5.0	0.0		
25	0.0			0.0			0.0			0.0		
26	0.0			3	5	8.9	1	6	4.5	3	5	5.0
27	3	5	5.0	1	5	6.0	1	5	8.9	3	6	9.0
28	0.0			0.0			0.0			0.0		
29	0.0			0.0			0.0			0		
30	0.0			0.0			0.0			0.0		
31	0.0			0.0			0.0			0.0		



MICROSEISMIC ACTIVITY  
COMPONENT EW

NOVEMBER 1975

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			0.0			0.0		
2	0.0			0.0			0.0			0.0		
3	0.0			0.0			0.0			0.0		
4	3	6	5.7	3	7	8.6	3	6	4.8	0.0		
5	0.0			3	7	4.3	3	6	8.6	0.0		
6	0.0			0.0			0.0			0.0		
7	0.0			0.0			0			0.0		
8	0.0			0.0			0.0			0.0		
9	0.0			3	4	4.5	0.0			3	6	4.8
10	3	5	5.2	0.0			0.0			3	4	5.6
11	0.0			0.0			3	6	9.5	0.0		
12	0.0			0.0			3	4	6.8	3	5	5.2
13	0.0			0.0			3	5	5.2	0.0		
14	0.0			0.0			0.0			0.0		
15	0.0			0.0			3	5	5.2	1	5	6.3
16	1	5	5.2	1	7	7.8	3	5	5.2	0.0		
17	0.0			0.0			0.0			3	4	5.6
18	0.0			0.0			0.0			0.0		
19	0.0			1	5	5.2	3	5	5.2	3	5	6.3
20	3	6	7.6	0.0			0.0			0.0		
21	0.0			0.0			0.0			0.0		
22	0.0			...			0.0			0.0		
23	0.0			3	5	6.3	0.0			0.0		
24	0.0			3	4	5.6	0.0			0.0		
25	0.0			0.0			0.0			0.0		
26	0.0			0.0			0.0			0.0		
27	0.0			0.0			0.0			0.0		
28	0.0			2	5	5.2	1	4	5.6	3	5	5.2
29	3	5	5.2	3	5	8.4	3	5	6.3	0.0		
30	0.0			0.0			3	5	5.2	0.0		

MICROSEISMIC ACTIVITY  
COMPONENT NS

NOVEMBER 1975  
International  
Seismological  
Centre

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			0.0			0.0		
2	0.0			0.0			0.0			0.0		
3	0.0			3	8	5.6	3	5	5.0	0.0		
4	0.0			0.0			3	4	5.4	0.0		
5	0.0			3	6	4.5	3	5	7.0	0.0		
6	0.0			3	5	5.0	0.0			0.0		
7	0.0			0.0			0.0			0.0		
8	0			0.0			0.0			0		
9	0.0			0.0			3	5	5.0	0.0		
10	0.0			3	5	9.9	3	5	5.0	3	4	5.4
11	3	4	5.4	3	4	5.4	1	4	6.5	0.0		
12	0.0			0.0			3	5	5.0	0.0		
13	0.0			3	5	5.0	3	4	5.4	0.0		
14	0.0			3	5	5.0	0.0			0		
15	0.0			3	4	5.4	1	4	5.4	3	5	9.9
16	3	5	5.0	1	5	5.0	3	4	5.4	0.0		
17	3	4	5.4	3	5	5.0	3	4	5.4	0.0		
18	0.0			0.0			0.0			0.0		
19	0.0			1	5	6.0	3	5	9.9	0.0		
20	0.0			3	4	5.4	3	4	5.4	0.0		
21	3	5	5.0	0.0			0.0			0.0		
22	0.0			...			0.0			0.0		
23	0.0			0.0			3	5	5.0	0.0		
24	0.0			3	5	7.0	3	4	5.4	0.0		
25	0.0			3	4	5.4	0.0			0.0		
26	0.0			0.0			0.0			0		
27	0.0			0.0			0.0			0.0		
28	0.0			3	4	5.4	0.0			0.0		
29	0.0			0.0			0.0			0.0		
30	0.0			0.0			0.0			0.0		



MICROSEISMIC ACTIVITY  
COMPONENT EW

DECEMBER 1975

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			0.0			0.0			3	5	5.2
2	3	5	5.2	2	6	9.5	3	5	9.4	0.0		
3	0.0			0.0			0.0			0.0		
4	0.0			0.0			3	5	5.2	3	6	4.8
5	3	6	7.6	2	6	5.7	3	5	5.2	0.0		
6	0.0			0.0			0.0			0.0		
7	3	5	6.3	0.0			3	4	5.6	3	5	5.2
8	1	6	7.6	2	6	5.7	2	5	10.5	0.0		
9	0.0			0.0			0.0			0.0		
10	0.0			3	5	6.3	3	5	5.2	0.0		
11	0.0			0.0			3	4	5.6	3	6	5.7
12	3	5	9.4	1	5	6.3	1	5	10.5	3	6	7.6
13	3	6	9.5	3	6	5.7	3	5	6.3	0.0		
14	3	5	5.2	3	5	5.2	3	5	9.4	2	5	6.3
15	2	5	9.4	2	6	12.4	2	6	10.5	3	5	6.3
16	0.0			3	6	4.8	0.0			0.0		
17	0.0			0.0			0.0			0.0		
18	0.0			0.0			0.0			0.0		
19	0.0			0.0			0.0			0.0		
20	0.0			0.0			3	6	8.6	3	5	6.3
21	3	6	8.6	1	6	4.8	3	6	7.6	TT		
22	1	6	4.8	2	5	6.3	1	5	5.2	3	5	5.2
23	3	5	5.2	3	5	5.2	3	5	5.2	0.0		
24	0.0			0.0			0.0			0.0		
25	0.0			0.0			0.0			0.0		
26	0.0			0.0			TT			0.0		
27	3	5	5.2	1	5	9.4	2	5	10.5	1	5	14.6
28	1	5	10.5	2	6	11.5	2	6	5.7	1	5	8.4
29	3	5	5.2	3	4	5.6	1	6	4.8	3	5	5.2
30	3	6	7.6	2	6	5.7	2	5	10.5	2	6	14.3
31	2	6	11.5	TT			3	6	9.5	3	5	5.2

MICROSEISMIC ACTIVITY  
COMPONENT NS

GMT Date	00 h			06 h			12 h			18 h		
	K	T	A	K	T	A	K	T	A	K	T	A
1	0.0			3	5	7.0	3	4	5.4	0.0		
2	3	5	7.0	1	5	5.0	3	5	6.0	0.0		
3	0.0			3	5	5.0	3	6	4.5	0.0		
4	0.0			1	5	5.0	1	5	6.0	1	5	5.0
5	1	6	9.0	1	6	8.1	1	6	4.5	0.0		
6	0.0			3	5	7.9	3	5	6.0	0.0		
7	0.0			0.0			3	5	5.0	3	4	6.5
8	3	5	8.9	1	6	4.5	3	6	5.4	3	6	5.4
9	0.0			0.0			0.0			0.0		
10	0.0			3	5	5.0	3	5	5.0	0.0		
11	0.0			3	5	7.0	3	5	5.0	3	4	5.4
12	3	5	5.0	3	4	9.7	3	5	8.9	3	4	5.4
13	0.0			3	5	5.0	0.0			0.0		
14	0.0			0.0			3	5	5.0	3	6	5.4
15	3	6	13.5	2	6	9.0	1	5	7.0	3	5	7.9
16	0.0			3	4	5.4	3	5	8.9	0.0		
17	0.0			3	5	7.0	3	4	5.4	0.0		
18	0.0			0.0			3	5	9.9	0.0		
19	0.0			0.0			0.0			0.0		
20	0.0			0.0			0.0			0.0		
21	3	6	4.5	3	5	9.9	3	6	8.1	3	5	7.9
22	3	4	5.4	1	5	9.9	1	6	9.0	3	5	5.0
23	1	5	5.0	1	4	6.5	1	4	5.4	0.0		
24	0.0			0.0			0.0			0.0		
25	0.0			0.0			0.0			0.0		
26	0.0			0.0			TT			0.0		
27	0.0			3	5	6.0	3	4	6.5	3	5	7.9
28	3	5	9.9	1	6	10.8	1	5	6.0	3	5	5.0
29	0.0			3	6	9.0	3	5	8.9	0.0		
30	0.0			2	5	5.0	1	5	7.0	2	5	5.0
31	2	5	9.9	TT			3	5	6.0	0.0		







Date	Origin time	Location	Latitude North	Longitude East	Focal depth/km	Shaken area/km	Epicentral Int. /MCS/	Felt at
November 11	21 45 /BRA/	West Slovakia	48.6°	18.3°			4°	I = 4° Hradište pri Partizánskom /District of Topoľčany/

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