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Bulletin No. 6
January 1964

SEISMOLOGICAL BULLETIN
LONG-RANGE SEISMIC
MEASUREMENTS PROGRAM

THE GEOTECHNICAL CORPORATION
3401 SHILOH ROAD
GARLAND, TEXAS



SEISMOLOGICAL BULLETIN

GRAFENBERG, WEST GERMANY
OSLO, NORWAY
LA PAZ, BOLIVIA

The Geotechnical Corporation wishes to acknowledge the cooperation of the following scientific organizations in the collection and production of the data in this bulletin:

Bundesanstalt fur Bodenforschung, Hannover, West Germany (Professor Dr. Hans Closs, Director)

Jordskel, University of Bergen, Bergen, Norway (Professor A. Kvale, Director)

Observatorio San Calixto, La Paz, Bolivia (Father Ramon Cabre, S. J.)

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1. INTRODUCTION

1.1 This bulletin contains seismological data on earthquake phases recorded at three mobile seismological stations being operated by The Geotechnical Corporation (Geotech). The bulletin is intended to be an aid to interested observers in determining the extent of the earthquake data contained in the records from the three teams.

1.2 The bulletin contains the following:

a. Data on all of the phases that have been associated with epicenters reported by the U. S. Coast and Geodetic Survey (USC&GS);

b. Data on the epicenters listed in the bulletin - as reported by the USC&GS;

c. Arrival time, period, amplitude, and distance for phases not associated with USC&GS epicenters.

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1.3 All phases are listed in chronological order, except that unassociated phases are not mixed with a sequence of associated phases. In such cases, the unassociated phases are listed immediately following the associated phases.

2. INSTRUMENTATION

2.1 Instrumentation at the Grafenberg, West Germany (GG GR) and Oslo, Norway (OO NW) sites consists of a short-period vertical Benioff seismometer array. A short-period vertical Johnson-Matheson seismometer array is in operation at La Paz, Bolivia (LZ BV). Each site is also equipped with a three-component Sprengnether long-period seismograph system. Both systems use

phototube amplifiers. The response characteristics of these systems are shown in figures 1, 2, and 3. Figure 4 shows the response characteristics of the long-period system at the OO NW site.

2.2 All data are recorded by 35-mm Film Recorders, Geotech Model 1301A, 14-channel Magnetic Tape Recorders, Ampex Model 314, and 16-mm Film Developocorders, Geotech Model 4000C.

2.3 Precision Timing Systems, Geotech Model 5400 or 5400A, are used for primary timing. Chronometers are used for secondary time. WWV is used for the time standard at LZ BV. GG GR and OO NW use Radio Potsdam. WWV is a National Bureau of Standards radio station located at Beltsville, Maryland. The accuracy of the time program from WWV agrees with the U. S. Naval Observatory.

2.4 Each system is calibrated at least once every 24 hours. In the short-period system calibration, an electromagnetic (EM) calibrator is used to determine the magnification as a function of frequency and a weight-lift calibration is used to verify the EM magnification at 1 cps. In the long-period systems, magnification is determined as a function of frequency using EM calibrators. No method of verification is used. In the EM method of calibration, the seismometer mass is driven by a known sinusoidal force and the magnification is calculated using the relationships between the sinusoidal force and the recorded amplitude.

3. INTERPRETATION OF COLUMN TITLES

3.1 COLUMN HEADINGS

The column titles appearing in this bulletin are defined as follows:

3.1.1 DAY

The date, for the day of the month, is printed each time a new epicenter is listed and each time the station designator changes. Dates are given in Greenwich Civil Time (G. C. T.).

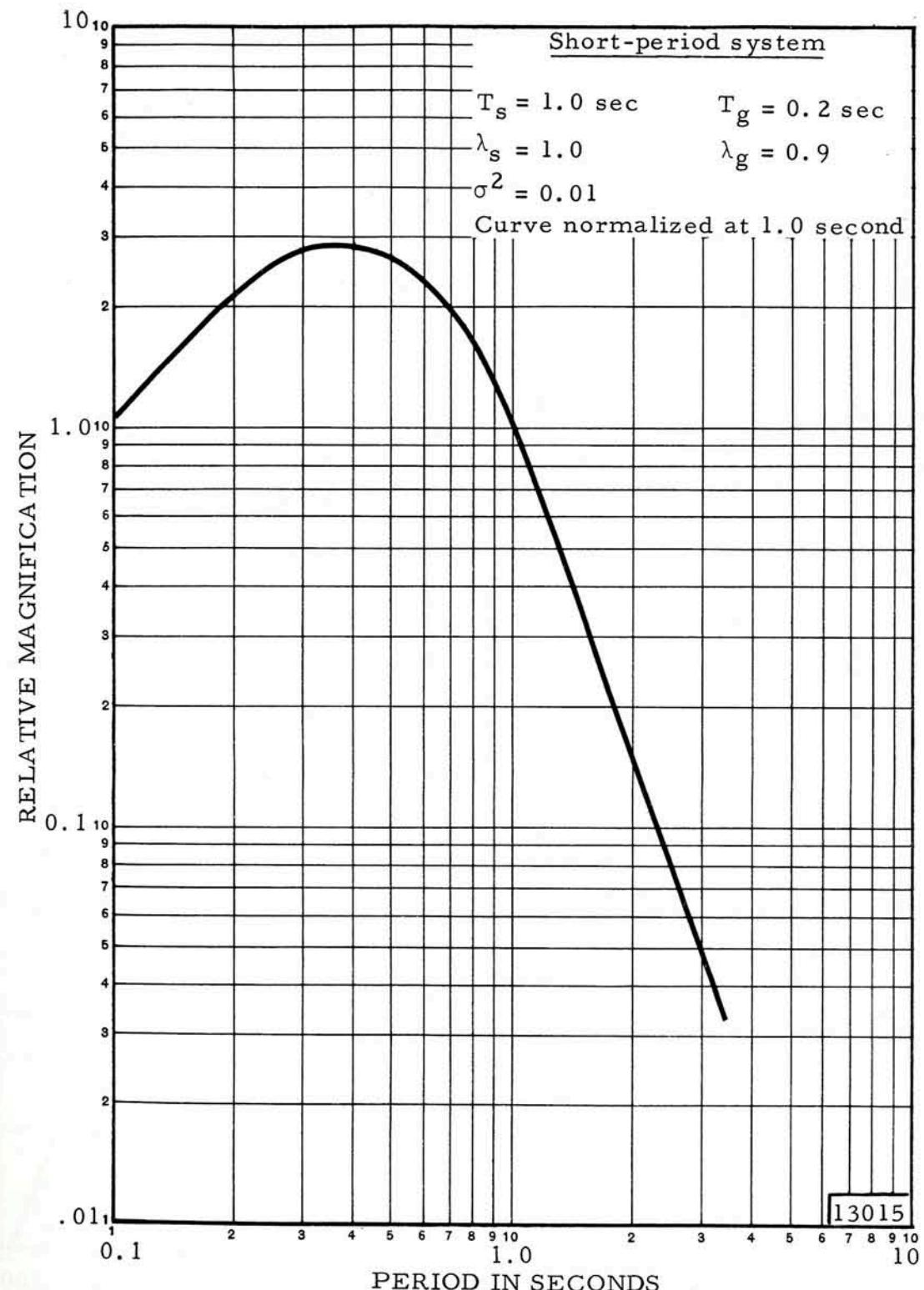


Figure 1. Frequency response of the Benioff short-period seismograph system

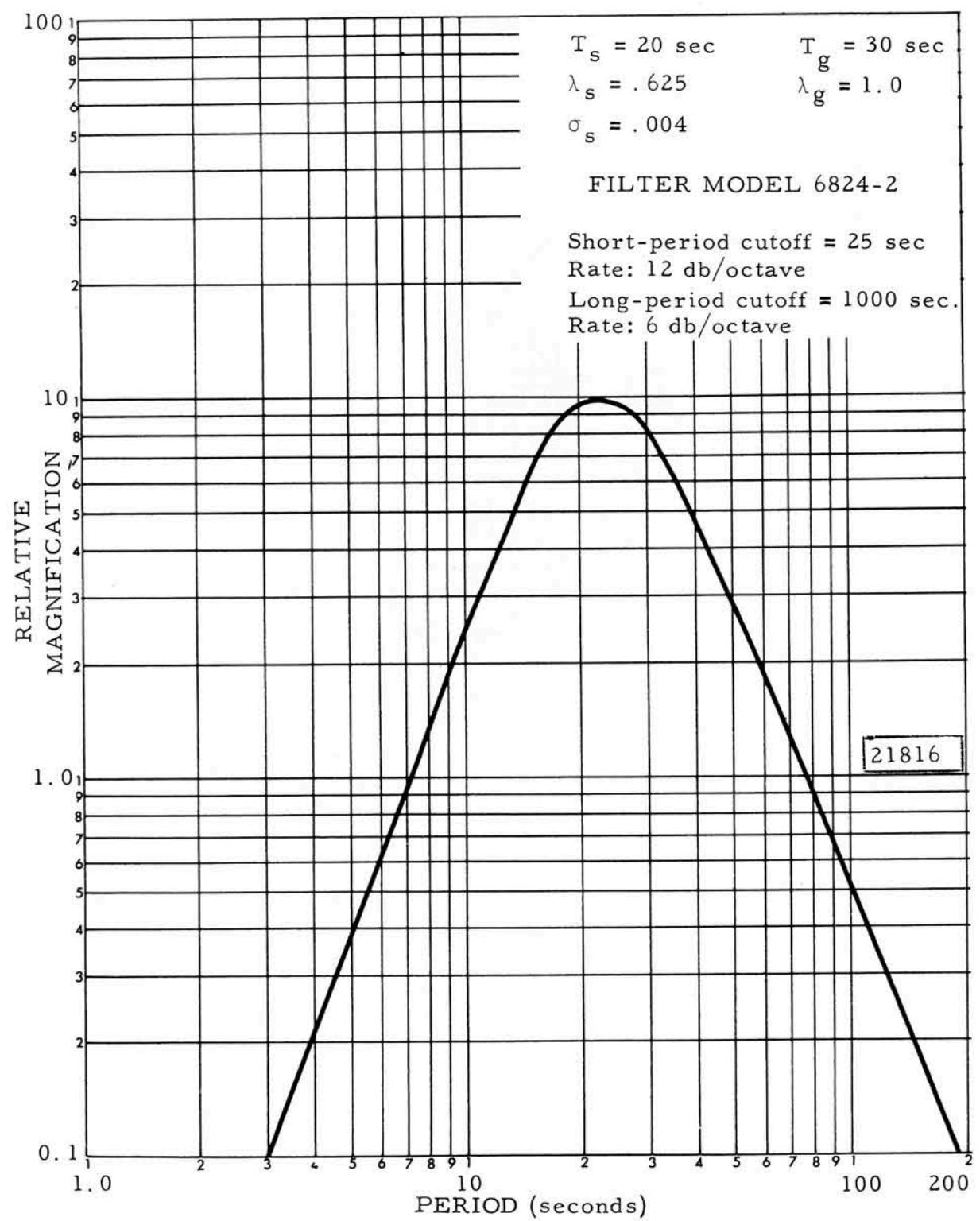


Figure 2. Frequency response of the Sprengnether long-period seismograph system

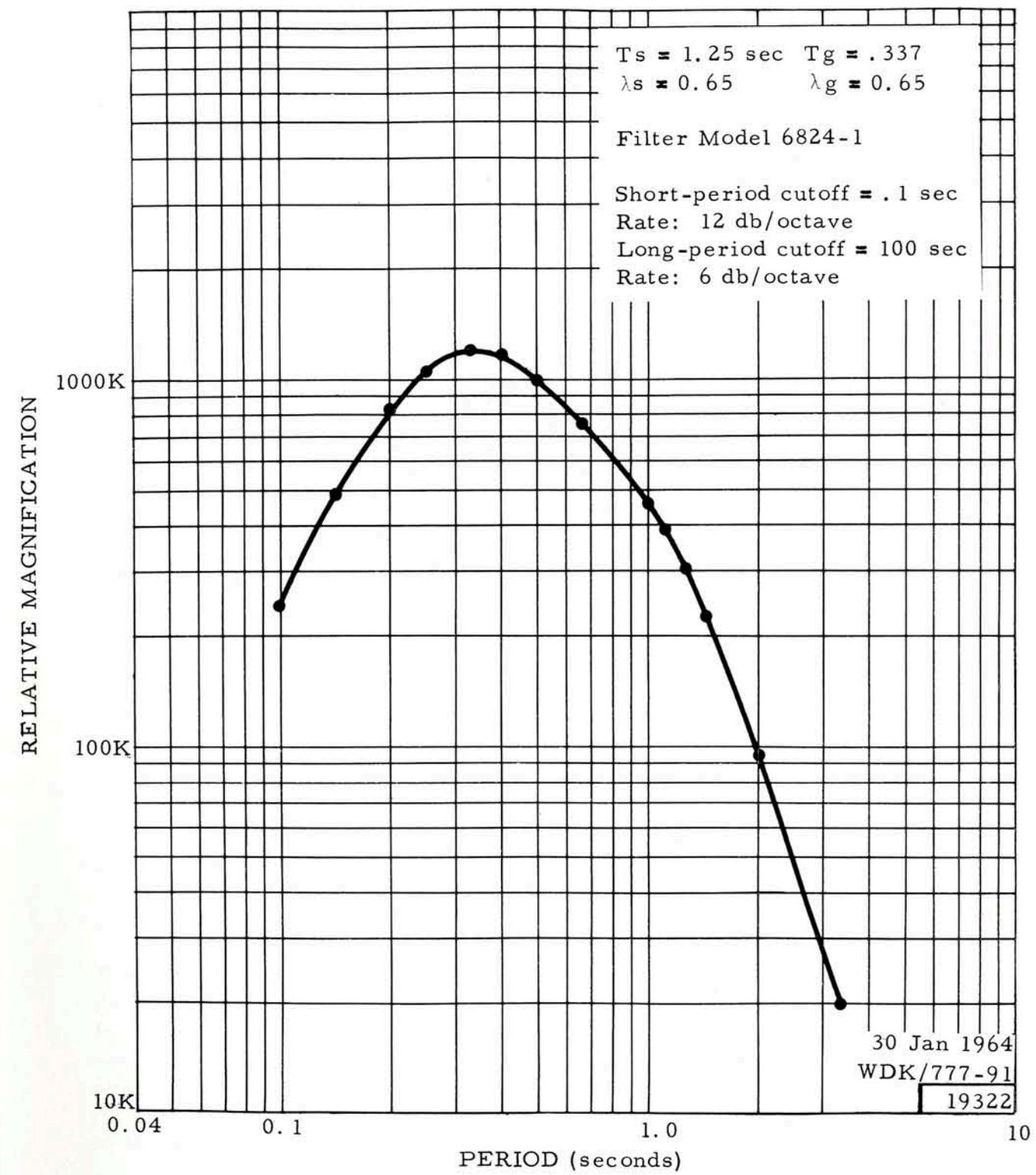


Figure 3. Frequency response of the Johnson-Matheson seismograph system

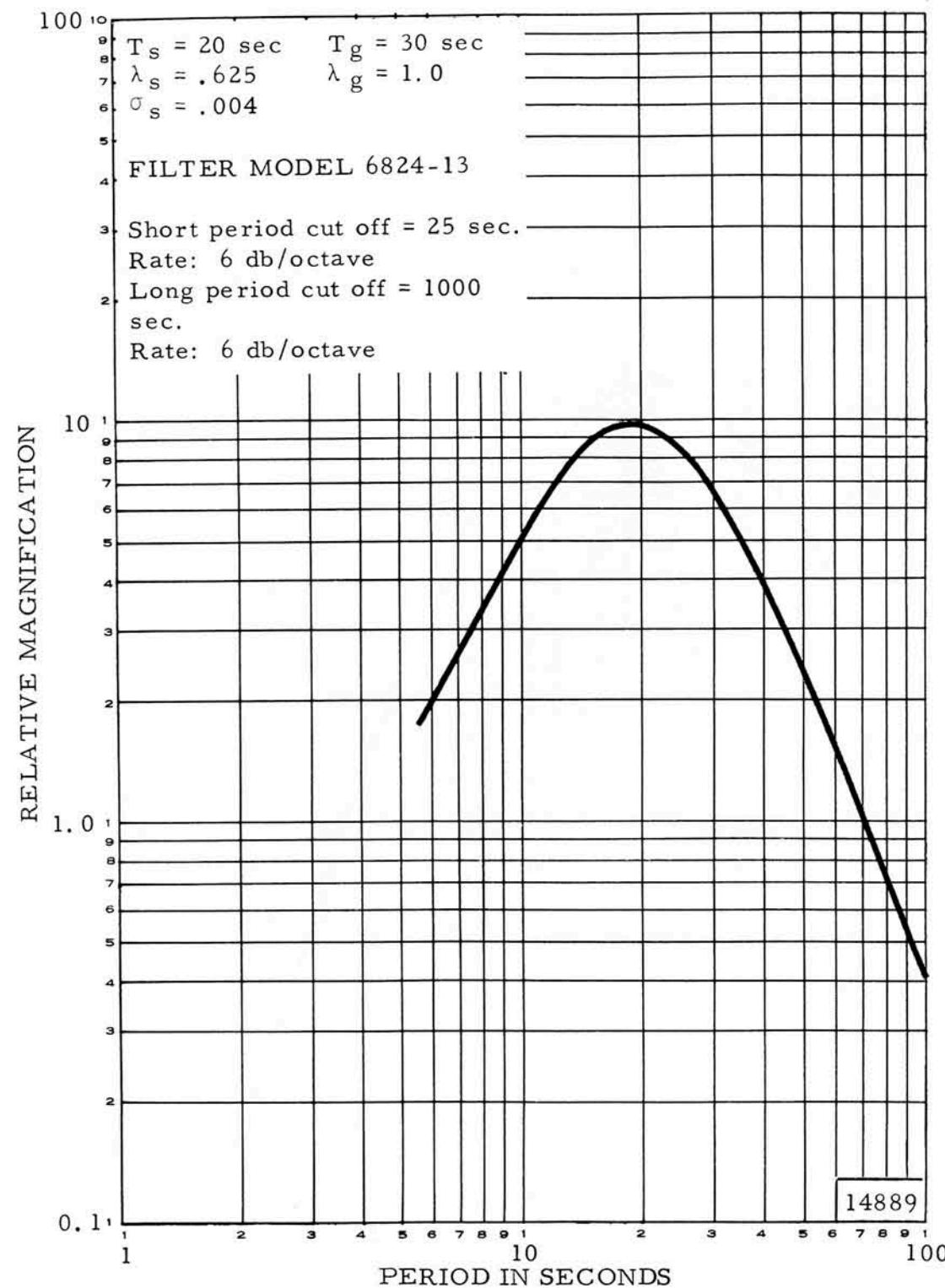


Figure 4. Frequency response of the Sprengnether long-period seismograph system at OONW

3.1.2 STA

The station from which the data were taken. The station designators used in this bulletin are given in the following table:

Site code	Site designation
GG	Grafenberg, West Germany
OO	Oslo, Norway
LZ	La Paz, Bolivia

The locations of the stations are shown in figure 5.

3.1.3 PHASE

Symbols defining the phase type are listed in the phase column. Prefixes to the phase designators are defined as follows:

- a. An "i" (impetus) preceding the phase designates a sharp or sudden beginning of the phase motion. Direction of first motion is discernible on all "i" phases.
- b. An "e" (emersio) preceding the phase designates an emergent phase motion. The direction of the initial break cannot be positively determined.
- c. An "i" or "e" alone designates an unidentified phase of either an impetus or emersio arrival.

3.1.4 TIME

The arrival time of each phase is given in Greenwich Civil Time (G. C. T.). Arrival times indicate that time at which phase motion is first detected. Arrival time is measured to the nearest one-tenth second for initial arrivals recorded by the short-period system, and to the nearest second for all other phases on both systems. The direction of motion for iP arrivals is also noted in this field; either C (compression) or D (dilation) will appear immediately to the right of the tenths of second column.



Figure 5. Bulletin Sites

3.1.5 INST

The seismograph channel from which the data were taken. The symbols used to designate the seismograph channels are given as follows:

Z	Benioff short-period vertical
JZ	Johnson-Matheson short-period vertical
R ¹	Short-period radial (horizontal)
T ¹	Short-period transverse (horizontal)
LZ	Long-period vertical
LR ¹	Long-period radial (horizontal)
LT ¹	Long-period transverse (horizontal)

3.1.6 PER

The period, in seconds, of each phase. When possible, the period is determined from the first full cycle of the phase; otherwise, it is taken as the average period of the first three cycles. The digits 999.9 appearing in the period columns indicate that the signal period could not be measured.

3.1.7 AMP

This column contains the amplitude of the phase given in millimicrons ($m\mu$) of ground displacement. The digit in parenthesis indicates the power to which the multiplier 10 is to be raised. For instance:

$$\begin{aligned} 30.0 (2) &= 30 \times 10^2 = 3000 m\mu \\ 30.0 (1) &= 30 \times 10^1 = 300 m\mu \\ 30.0 (0) &= 30 \times 10^0 = 30.0 m\mu \end{aligned}$$

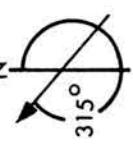
All amplitudes are corrected for instrument response and are reported as one-half the peak-to-peak value. Amplitudes are measured from the largest pulse within the first 3 or 4 cycles whenever possible. The digits 99.9 (9) appearing in the amplitude columns indicate either a "clipped" signal or a trace amplitude too large to measure. When amplitudes are not calculated because of insufficient calibration data, the amplitude columns are left blank.

¹ Table 1 gives the instrument orientation of the horizontal seismometers.

Table 1. Bulletin site information

Site code	Site designation	Seismometer orientation (Azimuth from true north in degrees*)				Elevation in km	Rock type
		Radial	Trans-	Site coordinates in deg., min., sec	vers		
GG GR	Grafenberg, West Germany	140	230	N 49 41	32	0.53	Limestone
OO NW	Oslo, Norway	138	228	E 11 12	55	0.56	Glacial Drift
LZ BV	La Paz, Bolivia	141	231	S 16 15	31	3.99	Limestone

* When earth moves in direction shown, trace moves up.



3.1.8 DIST

This is the distance from the recording station to the epicenter. All reported distances are calculated based on geocentric coordinates. Distance is given to the nearest one-tenth of a degree for distances up to six degrees. Beyond six degrees, calculations are made to the nearest one degree. Distances computed for unassociated data are determined from the S-P intervals. In some instances, surface groups are recorded which have traveled the major arc from the epicenter to the station. In such cases, the major arc distance is given.

3.1.9 MAG

The magnitudes provided are body wave magnitudes, m_b , as defined by Gutenberg and Richter.² They are determined only from the short-period vertical component of the P phase (initial arrival). The following equation is used:

$$m_b = \log_{10} (A/T) + Q$$

where

m_b = Body wave magnitude

A = One-half P-P earth amplitude of P phase, in microns

T = Period of P phase, in seconds

Q = Depth-distance factor for PZ given by Gutenberg and Richter², for distances greater than 16° .

Magnitude computations for distances less than 16° are based on extensions of the Q table. Points from 10° to 16° were read from a curve in the Gutenberg-Richter paper, and an inverse cube relationship was used to extrapolate from 2° to 10° .

The average magnitude (sum of station magnitudes/number of stations) is listed on the last line of an epicenter print-out.

When possible, magnitudes are computed for foreshocks and aftershocks as well as for the main event.

² Gutenberg, B., and Richter, C. F., 1956, Magnitude and energy of earthquakes; Amn. Geofis., vol 9, pp. 1-15.

3.2 ADDITIONAL INFORMATION

The notation FS located between the phase and the time columns calls attention to a foreshock recorded before the main event.

The notation AS located between these columns calls attention to an aftershock recorded after the main event.

4. INTERPRETATION OF UNITED STATES COAST AND GEODETIC SURVEY DATA

The epicenter data reported by the USC&GS precedes each list of associated phases. This information appears as follows:

Line 1 (from left to right)

First group:	Day of the month
Second group:	Origin time of the event
Third group:	Geographic coordinates of the epicenter
Fourth group:	Geographic description

NOTE

An asterisk (*) following the origin time indicates epicenters believed accurate to $1/2^{\circ}$ in latitude and longitude and to 50 km in depth.

Line 2 (from left to right)

First group:	Depth (h) of the hypocenter in kilometers
Second group:	Magnitude (MAG) as determined by Pasadena (PAS), Berkeley (BRK), Palisades (PAL), or USC&GS (CGS)

NOTE

MAG. (CGS) is m_b of Gutenberg and Richter from the P phase only. The magnitude quoted is an average value determined from data forwarded by cooperating Standard stations and other observatories.

5. REMARKS

The Geotechnical Corporation routinely receives and preprocesses data collected from three overseas field stations. Information on background levels, magnification levels, operational procedures, available records, and other data can be provided to interested organizations. Requests for such information should be made to the attention of:

The Geotechnical Corporation
3401 Shiloh Road
Garland, Texas 75041
Attn: Mr. J. M. Whalen

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	04 22	13*	43.7 N 126.3 W	OFF COAST OF OREGON				
	H =033 KM	MAG	3.70-	CGS				
1	05 14	26*	37.4 N 142.7 E	E. COAST HONSHU, JAPAN				
	H =033 KM	MAG	4.10-	CGS				
1	09 14	01.8	19.1 S 169.5 E	NEW HEBRIDES ISLANDS				
	H =247 KM	MAG	4.40-	CGS				
1	09 43	59.5	18.2 N 105.9 W	OFF CST JALISCO, MEXICO				
	H =033 KM	MAG	4.40-	CGS				
1	09 45	28.7	23.9 S 67.4 W	NORTHERN CHILE				
	H =200 KM	MAG	4.10-	CGS				
1	LZ eP		09 47 18.0	JZ	.4	2.3 (1)	8.0	4.77
	eL		09 48 44	R	0.8	1.9 (1)		
1	LZ eP		11 05 37.3	JZ	.8	1.0 (1)		
1	LZ eP		11 26 58.2	JZ	1	1.3 (1)		
1	12 21	55.4	06.8 S 129.8 E	BANDA SEA				
	H =096 KM	MAG	5.70-	CGS				
1	LZ eP ¹		12 41 36.2	JZ	1.5	1.0 (2)	151.0	
	eP ²		12 41 41	JZ	1.3	3.1 (2)		
	eP ²		12 41 43	LZ	17	1.2 (2)		
	e		12 41 49	JZ	1.1	1.5 (2)		
	e		12 42 12	JZ	1.5	3.3 (2)		
	e		12 42 12	LZ	21	2.2 (2)		
1	LZ eP		14 10 51.7	JZ	.4	3.3 (0)		
1	LZ eL		14 13 28	LT	19	2.7 (3)		
1	14 16	28.*	41.4 S 74.4 W	NEAR COAST SOUTHERN CHILE				
	H =033 KM	MAG	4.70-	CGS				
1	LZ eP		14 21 57.0	JZ	1.1	1.5 (1)	26.0	4.50
1	LZ tP		14 18 51.0C	JZ	.4	8.0 (1)	1.6	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	14 18	53.9	04.3 S 105.9 W	GALAPAGOS ISLANDS				
	H =033 KM	MAG	4.60-	CGS				
1	LZ eP		14 26 19.0	JZ	1	1.3 (1)	39.0	4.62
	eS		14 32 20	LT	13	1.5 (3)		
	eSS		14 35 11	LT	23	2.9 (3)		
	eLQ		14 36 15	LT	24	1.8 (3)		
	eLR		14 37 45	LZ	23	1.4 (3)		
1	LZ eS		14 19 13	R	0.5	3.1 (1)	1.6	
1	15 49	47.9	55.9 S 27.1 W	SANDWICH ISLANDS				
	H =033 KM	MAG	5.40-	CGS				
1	LZ eP		15 58 45.2	JZ	.9	8.6 (1)	51.0	5.72
	eL		16 17 06	LZ	25	2.8 (2)		
1	LZ tP		16 19 28.7C	JZ	.6	6.1 (1)		
1	16 43	08.*	37.7 N 112.5 W	SOUTHERN UTAH				
	H =015 KM							
1	LZ eP		16 44 26.9	JZ	1	2.9 (1)		
1	LZ e		16 44 40	JZ	.9	2.8 (1)		
1	17 26	43.5	45.4 N 151.9 E	KURILE ISLANDS				
	H =045 KM	MAG	6.00-	PAL				
1	LZ eP ¹		17 46 02.3	JZ	1.6	6.6 (1)	135.0	
	eSKP		17 49 08	LZ	17	7.6 (2)		
	e		17 50 57	LZ	26	1.1 (3)		
	eSS		18 06 47	LT	22	1.6 (3)		
	eLR		18 34 30	LZ	23	1.3 (3)		
1	LZ eP		17 53 23.9	JZ	.8	1.0 (1)		
1	LZ tP		18 00 41.5D	JZ	.3	1.4 (2)	1.9	
	eS		18 01 06	R	0.7	3.3 (1)		
1	19 45	45.*	23.0 N 105.9 W	SINALOA, MEXICO				
	H =033 KM	MAG	4.00-	CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	20	02	32.5	03.2 S 139.7 E	WESTERN NEW GUINEA			
				H =033 KM MAG	6.30+	CGS		
1	LZ	eP+1	20 22 12.1	JZ	.9	3.4 (1)	146.0	
		e	20 22 36	JZ	1	4.9 (1)		
		eL	21 13 45	LZ	26	2.0 (2)		
1	21	04	28.5	45.5 N 151.8 E	KURILE ISLANDS			
				H =040 KM MAG	4.20+	CGS		
1	22	42	27.0	45.5 N 151.7 E	KURILE ISLANDS			
				H =045 KM MAG	4.70+	CGS		
1	23	40	44.1	45.5 N 151.9 E	KURILE ISLANDS			
				H =060 KM MAG	4.50+	CGS		
2	00	11	15.*	06.1 S 105.1 W	SOUTHWEST OF GALAPAGOS IS.			
				H =033 KM MAG	4.40+	CGS		
2	03	01	53.5	53.0 N 159.6 E	KAMCHATKA			
				H =040 KM MAG	4.90+	CGS		
2	05	21	00.5	54.6 N 161.5 E	KAMCHATKA			
				H =033 KM MAG	4.90+	CGS		
2	06	32	58.9	21.6 S 68.2 W	CHILE BOLIVIA BORDER			
				H =110 KM MAG	5.10+	CGS		
2	17	28	35.5	36.4 N 71.1 E	HINDU KUSH			
				H =233 KM MAG	4.80+	CGS		
2	18	16	12.3	03.1 S 130.0 E	CERAM			
				H =033 KM MAG	4.30+	CGS		
2	19	15	23.9	08.4 S 157.1 E	SOLOMON ISLANDS			
				H =033 KM MAG	5.50+	CGS		
2	19	48	37.9	35.0 N 118.4 W	KERN COUNTY, CALIFORNIA			
				H =014 KM MAG	4.40+	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	LZ	eP	22 12 00.7	JZ	1	4.2 (1)		
3	00	45	20.4	05.9 S 146.7 E	NORTH EAST NEW GUINEA			
				H =034 KM MAG	4.60+	CGS		
3	00	59	33.8	08.5 S 157.4 E	SOLOMON ISLANDS			
				H =061 KM MAG	4.80+	CGS		
3	LZ	eP	01 11 34.0	JZ	.2	3.2 (1)	2.0	
		eS	01 12 00	R	0.7	8.6 (0)		
3	03	18	02.4	23.4 S 180.0	FIJI ISLANDS REGION			
				H =509 KM MAG	4.50+	CGS		
3	LZ	eL	04 29 09	LZ	18	1.5 (2)		
3	LZ	tP	04 36 34.7D	JZ	.4	2.5 (1)	0.3	
		eS	04 36 41	R	0.4	1.2 (1)		
3	05	20	33.*	19.4 S 69.2 W	NORTHERN CHILE			
				H =062 KM MAG	4.10+	CGS		
3	LZ	eP	05 21 23.7	JZ	.9	1.1 (1)	3.2	3.91
		e	05 21 29	JZ	1	2.1 (2)		
		eL	05 22 14	JZ	.8	8.6 (1)		
		eL	05 22 14	LR	20	6.9 (2)		
3	06	14	24.4	06.9 S 128.7 E	BANDA SEA			
				H =033 KM				
3	LZ	eP	06 59 27.0	JZ	.8	1.0 (1)		
3	07	14	54.2	07.1 S 129.0 E	BANDA SEA			
				H =157 KM				
3	LZ	eP+1	07 34 28.2	JZ	1.4	2.4 (1)	151.0	
		e	07 34 33	JZ	1.4	1.0 (2)		
		eP+2	07 35 10	JZ	1	1.6 (1)		
3	LZ	eL	13 01 34	LZ	26	2.7 (2)		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	LZ	eP eS	13 23 50.0 13 24 23	JZ R	•2 0.3	7.7 (1) 2.5 (1)	26	
3	13 27 44.5		05.0 S 77.3 W	NORTHERN PERU				
	H =033 KM	MAG	4.20-	CGS				
3	LZ	eP	13 29 25.4	JZ	•7	8.0 (1)		
3	LZ	e	13 34 16	JZ	1.2	1.3 (1)		
3	LZ	eL	14 12 55	LZ	20	1.0 (2)		
3	14 41 47.*		44.8 N 151.5 E	KURILE ISLANDS				
	H =033 KM	MAG	4.00-	CGS				
3	16 37 19.4		36.0 N 71.3 E	HINDU KUSH				
	H =123 KM	MAG	4.50-	CGS				
3	17 20 54.0		52.8 N 173.1 E	RAT ALEUTIAN ISLANDS				
	H =033 KM	MAG	4.90-	CGS				
3	LZ	eP	18 12 48.2C	JZ	•9	1.8 (2)		
3	21 24 56.3		20.4 S 178.2 W	FIJI ISLANDS				
	H =520 KM	MAG	5.30-	CGS				
3	GG	eP+1	21 43 57.0	Z	0.9	1.6 (1) 150.0		
3	LZ	eP	21 45 05.1	JZ	1	1.3 (1)		
3	21 48 05.6		53.0 S 21.2 E	BOUVET ISLAND REGION				
	H =033 KM							
3	LZ	eP e	21 59 55.3 22 00 11	JZ	1	2.0 (1) 77.0	5.11	
3	GG	eL	22 39 51	LZ	30	2.3 (1) 3.5 (2) 103.0		
3	LZ	eL	21 51 44	LZ	16	6.1 (2)		
3	22 12 09.*		01.5 S 79.3 W	ECUADOR				
	H =033 KM	MAG	4.40-	CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	LZ	eP eL	22 16 20.5 22 23 05	JZ LZ	•9 17	5.9 (0) 1.8 (2)	18.0	3.75
4	03 41 22.6		03.4 S 149.2 E	BISMARCK SEA				
	H =033 KM	MAG	4.30-	CGS				
4	GG	eLR	04 45 06	LZ	25	4.7 (2) 122.0		
4	OO	eLR	04 47 22	LZ	23	7.6 (2) 114.0		
4	LZ	eL	04 51 08	LZ	21	3.9 (2) 138.0		
4	GG	eL	04 25 39	LZ	24	3.2 (2)		
4	10 38 58.8		21.6 N 121.8 E	OFF SOUTH COAST OF TAIWAN				
	H =033 KM	MAG	4.70-	CGS				
4	00	eL	11 19 20	LR	31	9.7 (2) 81.0		
4	GG	eLR	11 31 43	LZ	21	2.6 (2) 86.0		
4	16 17 16.5		44.4 N 150.8 E	KURILE ISLANDS				
	H =050 KM	MAG	4.70-	CGS				
4	00	eP	16 28 24.4	Z	0.8	4.0 (0) 70.0	4.45	
4	16 44 16.9		21.7 N 121.8 E	OFF SOUTH COAST OF TAIWAN				
	H =033 KM							
4	00	eL	17 25 20	LR	32	8.0 (2) 81.0		
4	GG	eLQ eLR	17 31 03 17 37 20	LR LZ	20 15	3.6 (2) 109.0 3.8 (2)		
4	00	eL	17 35 16	LZ	17	1.5 (3)		
4	17 40 23.3		05.5 S 150.0 E	NEW BRITAIN				
	H =117 KM	MAG	5.20-	CGS				
4	21 12 09.3		52.9 S 20.9 E	BOUVET ISLAND REGION				
	H =033 KM							
4	LZ	eP	21 24 00.0	JZ	•9	1.7 (1) 77.0	5.09	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	e		21 24 05	JZ	.9	2.4 (1)		
	eLQ		21 44 40	LT	24	2.0 (2)		
	eLR		21 49 10	LZ	29	4.4 (2)		
4	22 45 47*		01.9 S 102.3 E	SUMATRA				
			H =033 KM					
5	01 31 27.0		61.9 N 149.5 W	CENTRAL ALASKA				
			H =072 KM MAG		4.60+	CGS		
5	03 05 44.1		20.6 S 179.0 W	FIJI ISLANDS				
			H =650 KM MAG		4.60+	CGS		
5	07 06 40.2		54.6 N 161.2 W	ALASKA PENINSULA				
			H =033 KM MAG		4.10+	CGS		
5	07 11 26.5		37.6 S 72.5 W	NEAR COAST CENTRAL CHILE				
			H =061 KM MAG		4.30+	CGS		
5	LZ eP		07 16 14.7	JZ	1	1.7 (1)	22.0	4.38
5	08 57 22.3		32.5 N 141.7 E	SOUTH OF HONSHU, JAPAN				
			H =033 KM MAG		4.80+	CGS		
5	LZ eP+1		09 17 08.0	JZ	1	7.5 (0)	148.0	
5	eP+2		09 17 20	JZ	1.3	3.9 (1)		
5	09 08 16.2		17.0 N 60.6 W	LEEWARD ISLANDS				
			H =033 KM MAG		4.20+	CGS		
5	10 11 53.0		26.6 S 175.7 W	KERMADEC ISLANDS REGION				
			H =031 KM MAG		5.10+	CGS		
5	12 00 05.0		53.8 N 165.3 W	FOX ALEUTIAN ISLANDS				
			H =063 KM MAG		4.80+	CGS		
5	13 57 18.3		41.1 N 109.3 W	UTAH WYOMING BORDER				
			H =015 KM MAG		3.90+	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5	LZ	eLR	14 37 30	LZ	33	6.0 (2)	68.0	
5	15 17 43.6		43.1 N 144.4 E	HOKKAIDO JAPAN				
			H =110 KM MAG		4.30+	CGS		
5	15 49 13.*		00.4 N 78.2 W	COLUMBIA ECUADOR BORDER				
			H =033 KM MAG		4.10+	CGS		
5	LZ	eP eS	16 00 44.5 16 01 25	JZ R	.2 .2	3.0 (0) 9.3 (0)	3.2	
5	16 25 52.6		61.4 S 154.9 E	MACQUARIE ISLAND REGION				
			H =033 KM					
5	LZ	eP eSKS eS eLQ eLR	16 39 14.5 16 50 00 16 50 30 17 04 45 17 10 40	JZ LT LR LR LZ	1.3 15 20 37 32	1.1 (1) 2.9 (2) 5.2 (2) 3.8 (3) 3.1 (3)	95.0	5.16
5	GG	eSS	17 09 50	LT	30	5.9 (2)	157.0	
		eLQ eLR	17 26 02 17 46 32	LT LZ	20 30	6.2 (2) 7.1 (2)		
5	00	eSS eSSS eLQ eLR eL eL	17 10 55 17 17 22 17 41 00 17 52 05 18 06 04 18 06 04	LR LR LR LZ LR LZ	25 22 37 28 21 20	9.6 (2) 1.6 (3) 2.2 (3) 1.1 (3) 2.0 (3) 7.0 (2)	163.0	
5	17 15 14.*		29.8 S 105.2 W	EASTER ISLAND REGION				
			H =033 KM MAG		4.50+	CGS		
5	LZ	eP	17 22 04.4	JZ	1	1.0 (1)	36.0	4.63
5	17 50 45.3		51.1 N 179.6 W	ANDREANOF ALEUTIAN ISLANDS				
			H =033 KM MAG		4.30+	CGS		
5	18 33 54.7		08.0 S 74.5 W	CENTRAL PERU				
			H =150 KM MAG		5.20+	CGS		
5	LZ	eP	18 36 16.5	JZ	.9	1.0 (2)	10.0	5.40

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5	GG	eL	18 38 32	LZ	15	3.0 (3)		
		eP	18 46 54.0	Z	1.2	4.0 (1)	93.0	5.52
						Avg.		5.46
5	20 25 50.4	21.5 S 69.8 W	NORTHERN CHILE					
	H = 079 KM	MAG	4.20-	CGS				
5	LZ	eP	20 27 11.5	JZ	.5	2.5 (1)	5.4	4.79
5	LZ	eP	22 52 45.2	JZ	.8	4.5 (0)		
5	LZ	eLR	23 18 42	LZ	26	2.1 (2)		
5	LZ	eP	23 21 21.2	JZ	.9	6.8 (0)		
5	23 46 10.7	52.3 S 28.6 E	PRINCE EDWARD ISLANDS REG.					
	H = 033 KM							
5	LZ	eP	23 58 25.5	JZ	1	8.2 (1)	82.0	5.72
	eP		23 58 26	LZ	13	1.3 (3)		
	e		23 58 59	JZ	1.3	2.5 (2)		
6	LZ	ePP	00 01 27	JZ	1.4	6.5 (1)	82.0	
	ePP		00 01 29	LZ	17	7.4 (2)		
	eS		00 08 39	LR	19	99.9 (9)		
	eS		00 08 41	T	3.2	2.0 (2)		
	eSS		00 13 50	LR	26	4.9 (3)		
	eSSS		00 17 50	LR	28	6.5 (3)		
	eLR		00 20 45	LZ	30	5.1 (3)		
6	GG	eP	00 00 12.0	Z	0.8	6.1 (0)	103.0	5.42
	eP		00 00 12	LZ	17	3.5 (2)		
	ePP		00 04 21	Z	1.2	3.2 (1)		
	ePP		00 04 21	LZ	18	1.4 (3)		
	eSKS		00 10 50	LR	23	1.0 (3)		
	e		00 11 04	LR	27	1.3 (3)		
	eSP		00 14 22	LZ	22	2.5 (3)		
	eSS		00 19 01	LR	28	6.3 (3)		
	eL		00 28 05	LZ	24	2.9 (3)		
6	00	ePP	00 05 41	LZ	8	2.9 (3)	114.0	
	ePS		00 15 20	LR	26	4.0 (3)		
	ePPS		00 16 25	LR	19	1.5 (3)		
	eSS		00 21 30	LR	31	4.4 (3)		
	eLQ		00 35 40	LR	17	1.5 (3)		
	eLR		00 43 43	LZ	29	5.8 (3)		
	eL		00 55 05	LR	19	5.0 (3)		
	eL		00 55 05	LZ	20	3.5 (3)		
	eL		00 55 05	LZ	21	7.1 (3)		
						Avg.		5.57

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	LZ	eP	02 19 35.0	JZ	.5	1.9 (1)		
6	05 54 42.7	27.2 N 127.3 E	RYUKYU ISLANDS					
	H = 110 KM	MAG	5.70-	CGS				
6	GG	eP	06 07 01.8	Z	1.3	3.5 (2)	85.0	6.12
	e		06 17 23	LZ	20	5.3 (2)		
	eL		06 36 20	LZ	38	9.3 (2)		
6	LZ	eP'1	06 14 35.1	JZ	1.3	3.6 (1)	162.0	
	eP'2		06 15 18	JZ	1.4	5.1 (1)		
6	00	eLR	06 37 42	LZ	20	3.8 (2)	78.0	
6	LZ	eP	11 03 23.6	JZ	.5	4.2 (1)	2.8	
	eS		11 03 59	T	0.6	8.4 (1)		
6	LZ	eP	13 10 58.0	JZ	.4	4.7 (1)		
6	15 07 09.6	44.2 N 82.6 E	SINKIANG PROVINCE, CHINA					
	H = 033 KM	MAG	4.50-	CGS				
6	GG	eP	15 15 42.5	Z	0.6	1.4 (1)	47.0	5.19
6	LZ	eP'1	15 26 40.7	JZ	.9	1.7 (0)	143.0	
6	16 06 35.0	30.4 N 138.3 E	SOUTH OF HONSHU, JAPAN					
	H = 426 KM	MAG	4.10-	CGS				
6	16 12 45.5	23.8 S 67.7 W	NO. CHILE ARGENTINA BORDER					
	H = 206 KM	MAG	4.40-	CGS				
6	LZ	eP	16 14 33.6	JZ	.5	1.8 (1)	8.0	4.55
	eL		16 16 21	R	0.9	9.4 (0)		
6	19 35 09.8	44.3 N 114.7 W	CENTRAL IDAHO					
	H = 033 KM	MAG	4.70-	CGS				
6	23 06 32.1	06.8 N 73.6 W	COLOMBIA					
	H = 036 KM	MAG	4.50-	CGS				
6	LZ	eP	23 11 38.4	JZ	.6	2.0 (1)	23.0	4.76
6	23 37 53.*	19.3 N 108.3 W	REVILLA GIGEDO IS. REGION					
	H = 033 KM	MAG	4.10-	CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	LZ	eP	23 39 28.7	JZ	.3	5.6 (1)		
6	LZ	eP	23 44 32.5	JZ	.4	2.1 (1)		
6	23 45 23.4	50.9 N 157.3 E H =033 KM MAG	SOUTHERN KAMCHATKA 5.60- CGS					
6	00	eP	23 56 03.0	Z	0.7	2.5 (1)	65.0	5.46
		eP	23 56 03	LZ	21	1.2 (3)		
7	00	ePPP	00 00 05	LZ	21	9.1 (2)	65.0	
		eS	00 04 41	L+	23	1.0 (3)		
		eSS	00 09 16	L+	22	1.3 (3)		
		eLQ	00 12 40	LR	17	1.9 (3)		
		eLR	00 15 15	LZ	38	9.4 (3)		
6	GG	eP	23 57 07.5	Z	0.7	2.2 (1)	76.0	5.30
		eP	23 57 08	LZ	23	1.1 (3)		
		e	23 57 25	Z	1.0	4.4 (1)		
		e	23 57 52	Z	0.8	4.2 (1)		
7	GG	e	00 01 51	LR	22	6.8 (2)	76.0	
		eS	00 06 46	L+	19	1.0 (3)		
		eSS	00 12 15	L+	30	1.4 (3)		
		eLQ	00 21 05	LR	41	4.6 (3)		
		eLR	00 24 57	LZ	36	6.4 (3)		
		eL	00 33 56	L+	20	8.6 (3)		
		eL	00 33 56	LR	21	7.8 (3)		
		eL	00 33 56	LZ	21	1.0 (4)		
7	LZ	eP ¹	00 04 32.3	JZ	1.1	4.9 (1)	130.0	
		eP ¹	00 04 33	LZ	17	2.2 (2)		
		ePP	00 06 46	LZ	20	6.9 (2)		
		ePKS	00 07 56	LR	20	7.6 (2)		
					Avg.	5.38		
6	23 47 11.4	34.4 N 116.5 W H =014 KM MAG	SAN BERNARDINO, CALIFORNIA 4.40- CGS					
7	01 50 09.*	19.2 S 169.4 E H =150 KM	NEW HEBRIDES ISLANDS					
7	02 08 19.1	56.8 S 147.7 E H =033 KM	SOUTH OF TASMANIA					
7	02 15 00.6	18.0 S 178.0 W H =593 KM MAG	Fiji ISLANDS 5.00- CGS					
7	GG eP ¹	02 33 45.2	Z	0.7	9.8 (0)	148.0		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
7	03	22 00.*	07.0 N 73.6 W H =033 KM MAG	COLOMBIA	4.20- CGS			
7	LZ	eP	03 27 04.5	JZ	.9	1.6 (1)	24.0	4.52
7	04 41 53.*	18.6 N 105.4 W H =033 KM MAG	OFF COAST JALISCO, MEXICO 3.80- CGS					
7	04 50 37.*	29.8 N 98.7 E H =046 KM MAG	EASTERN TIBET 5.00- CGS					
7	05 18 24.5	58.8 S 149.4 E H =033 KM	MACQUARIE ISLANDS REGION					
7	LZ	eLQ	06 00 15	LR	35	1.0 (3)	99.0	
		eLR	06 04 35	L+	35	9.5 (2)		
7	GG	eL	06 36 58	LR	32	5.9 (2)	154.0	
7	08 46 48.0	54.0 N 165.5 W H =080 KM MAG	FOX ALEUTIAN ISLANDS 4.70- CGS					
7	10 40 42.9	03.0 S 139.0 E H =047 KM MAG	WESTERN NEW GUINEA 5.00- CGS					
7	LZ	eP ¹	11 00 23.0	JZ	.9	6.2 (1)	147.0	
7	11 06 21.*	18.6 N 155.9 W H =033 KM MAG	S. OF HAWAII IS. + HAWAII 4.40- CGS					
7	11 55 34.2	39.2 N 114.2 W H =039 KM MAG	EASTERN NEVADA 3.60- CGS					
7	LZ	e	12 18 50	LR	37	1.1 (3)	70.0	
		e	12 19 35	LZ	19	2.3 (2)		
		eL	12 31 50	LZ	16	1.5 (2)		
7	LZ	eP	12 12 08.5	JZ	.7	2.1 (1)		
7	12 32 54.5	56.8 S 26.1 W H =033 KM MAG	SANDWICH ISLANDS 5.60- CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
7	LZ	eP	12 41 59.2	JZ	.6	8.1 {1}	51.0	5.87
	eL		12 59 23	LZ	16	1.6 (3)		
7	GG	eLR	13 34 20	LZ	21	4.8 (2)	111.0	
7			12 53 47.8					
			39.1 N 114.2 W	EASTERN NEVADA				
			H =033 KM MAG	CGS				
7	GG	eP	13 12 15.0	Z	0.4	2.2 {1}	2.2	
	eS		13 12 43	Z	0.4	7.5 {1}		
7			14 00 23.*					
			02.0 N 73.1 W	SOUTHERN COLOMBIA				
			H =046 KM MAG	CGS				
7			15 06 47.*					
			15.2 S 167.2 E	NEW HEBRIDES ISLANDS				
			H =099 KM					
7	LZ	eP	16 40 10.0	JZ	.3	1.5 {1}		
7			17 22 27.*					
			06.2 N 72.5 W	COLOMBIA				
			H =213 KM MAG	CGS				
7	LZ	eP	17 27 24.3	JZ	.5	3.3 (0)	23.0	4.19
	ePP		17 27 58	JZ	.7	1.2 (1)		
7			20 04 36.*					
			39.3 N 73.8 E	TADZHIK S.S.R.				
			H =033 KM MAG	CGS				
7	GG	eP	20 12 49.0	Z	0.6	1.0 {1}	45.0	4.87
7			20 52 04.9					
			04.6 S 103.3 E	NEAR WEST COAST OF SUMATRA				
			H =089 KM MAG	CGS				
7	LZ	eP	21 13 10.0	JZ	.4	2.0 {1}		
7	LZ	eL	21 14 17	R	0.7	4.9 (0)		
7			23 12 33.4					
			18.3 S 173.4 W	TONGA ISLANDS				
			H =033 KM MAG	CGS				
7	LZ	eLR	23 58 37	LZ	25	5.1 (2)	99.0	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8			00 15 56.*					
			03.0 N 101.0 W	WEST OF GALAPAGOS ISLANDS				
			H =033 KM MAG	CGS				
8	LZ	eLR	00 34 12	Lz	22	2.0 (2)	37.0	
8			02 11 18.*					
			51.4 N 179.0 W	ANDREANOF ALEUTIAN ISLANDS				
			H =033 KM MAG	CGS				
8			04 23 46.3					
			05.0 S 144.3 E	EASTERN NEW GUINEA				
			H =072 KM MAG	CGS				
8	LZ	eP†	04 43 06.7	JZ	1	6.3 (0)	141.0	
8			05 47 31.8					
			54.4 N 161.8 E	ALASKA PENINSULA				
			H =033 KM MAG	CGS				
8	LZ	eP	09 13 05.8	JZ	.4	1.4 {1}		
8	LZ	eL	09 14 16	R	0.6	5.5 (0)		
8			10 04 31.6					
			46.1 N 77.7 W	ONTARIO QUEBEC BORDER				
			H =033 KM MAG	CGS				
8			11 58 42.5					
			18.8 S 173.8 W	TONGA ISLANDS				
			H =033 KM MAG	CGS				
8	LZ	eLR	12 44 40	LZ	25	2.5 (2)	99.0	
8			13 42 41.3					
			52.3 N 173.5 E	RAT ALEUTIAN ISLANDS				
			H =033 KM MAG	CGS				
8			14 34 52.*					
			19.3 S 69.0 W	CHILE BOLIVIA BORDER				
			H =199 KM MAG	CGS				
8			16 02 30.0					
			06.9 S 129.4 E	BANDA SEA				
			H =108 KM					
8	LZ	eP†1	16 22 14.2	JZ	.8	3.4 {1}	151.0	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	19	44 13.*	69.3 N 15.0 W	JAN MAYEN	ISLAND REGION			
			H = 033 KM MAG		4.70-	CGS		
8	18	46 50.4	44.1 N 127.5 W	OFF COAST	OF OREGON			
			H = 033 KM MAG		4.20-	CGS		
8	22	30 49.7	03.7 S 119.4 E	CELEBES				
			H = 090 KM MAG		5.20-	CGS		
8	LZ	eP ¹	22 50 43.7C	JZ	1.9	4.3 (2)	159.0	
		eP ¹	22 50 44	LZ	12	1.0 (3)		
		eP ²	22 51 18	JZ	1.5	2.9 (2)		
		ePP	22 54 57	JZ	2.1	1.6 (2)		
		ePP	22 55 00	LZ	15	5.0 (2)		
		e	23 03 20	LZ	16	3.1 (2)		
8	GG	eSSS	23 08 11	LT	16	4.6 (2)	105.0	
		eL	23 28 21	LZ	25	2.4 (2)		
8	00	eL	23 28 28	LZ	30	1.0 (3)	102.0	
8								
8								
8	23	13 56.1	06.9 S 155.3 E	SOLOMON ISLANDS	REGION			
			H = 101 KM MAG		4.20-	CGS		
9	LZ	eP	01 49 28.5	JZ	.4	5.7 (1)		
9	02	59 21.6	41.7 N 141.9 E	N. COAST	HOKKAIDO, JAPAN			
			H = 050 KM MAG		5.00-	CGS		
9	00	eP	03 10 28.0	Z	1.0	3.7 (1)	70.0	5.33
9	GG	eP	03 11 23.5	Z	0.9	3.5 (1)	79.0	5.29
						AVG.	5.31	
9	03	10 58.3	44.3 N 114.6 W	CENTRAL	IDAHO			
			H = 033 KM MAG		4.50-	CGS		
9	GG	eL	08 38 40	LZ	40	3.1 (3)		
9	LZ	eP	09 14 49.1	JZ	.5	3.5 (0)	2.0	
9		eS	09 15 15	R	0.6	1.1 (1)		
9	LZ	eP	10 13 17.8	JZ	.5	2.0 (1)		
9	LZ	eL	10 25 40	LZ	25	3.9 (2)		
9	GG	eL	10 44 25	LZ	28	3.7 (2)		
9	11	11 55.6	44.2 N 114.8 W	CENTRAL	IDAHO			
			H = 033 KM MAG		3.60-	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
9	11	47 45.0	31.1 S 64.4 W	CORDOBA PROV.	ARGENTINA			
			H = 119 KM MAG		4.30-	CGS		
9	LZ	eP ^e	11 51 17.5	JZ	.4	9.6 (0)	15.0	4.42
			11 54 10	JZ	1.2	3.3 (1)		
9	LZ	tP	13 24 00.3D	JZ	.4	99.9 (9)		
9	18	31 52.4	45.5 N 150.9 E	KURILE ISLANDS				
			H = 040 KM MAG		5.60-	CGS		
9	00	eP	18 42 54.5	Z	1.2	9.1 (1)	69.0	5.72
		eP	18 42 58	LZ	22	3.0 (3)		
		eS	18 52 00	LR	25	3.2 (3)		
		eSCS	18 52 55	LT	21	3.8 (3)		
		eSS	18 56 37	LT	29	8.9 (3)		
		eL	19 00 00	LR	27	8.4 (3)		
		eL	19 04 00	LR	47	4.0 (4)		
9	GG	eP	18 43 53.6	Z	0.8	1.9 (2)	79.0	6.10
		tP	18 43 54 C	LZ	21	2.7 (3)		
		ePP	18 46 55	LZ	20	1.6 (3)		
		ePPP	18 48 53	LZ	20	1.1 (3)		
		eS	18 53 53	LR	24	2.4 (3)		
		eSS	18 59 51	LT	32	4.3 (3)		
		eLQ	19 03 30	LR	40	8.4 (3)		
		eLR	19 17 35	LZ	23	99.9 (9)		
9	LZ	eP ^t	18 51 12.6	JZ	1.4	1.1 (2)	136.0	
		eP ^t	18 51 13	LZ	13	6.2 (2)		
		ePP	18 53 59	LZ	16	9.8 (2)		
		ePP	18 54 00	JZ	2.1	6.1 (1)		
		eSKP	18 54 40	JZ	1.5	5.4 (1)		
		eSKP	18 54 40	LZ	26	1.9 (3)		
		e	18 54 59	JZ	1.5	9.5 (1)		
		eSP	19 03 45	LZ	27	1.2 (3)		
						Avg.	5.91	
9	18	38 11.*	14.9 N 87.9 W	HONDURAS				
			H = 033 KM MAG		4.70-	CGS		
9	LZ	eL	20 35 30	LZ	24	1.1 (3)		
9	20	57 01.6	48.6 N 153.1 E	KURILE ISLANDS				
			H = 148 KM MAG		4.80-	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
9	21	19 38.*	01.2 S H =033 KM	89.9 W MAG	4.00-	GALAPAGOS ISLANDS CGS		
9	21	23 08.*	20.0 S H =649 KM	178.3 W MAG	4.00-	FIJI ISLANDS CGS		
9	21	47 09.*	42.6 S H =061 KM	174.8 E MAG	5.50-	E. SOUTH IS., NEW ZEALAND CGS		
10	00	e	00 02 00	LZ	23	9.4 (2)		
10	00	e	00 11 13	LR	20	1.8 (3)		
10	00	eL	00 16 35	LT	27	2.4 (3)		
10	00	eLR	00 27 30	LR	28	99.9 (9)		
10	03	34 20.*	39.0 N H =016 KM	21.1 E MAG	4.30-	NORTHERN GREECE CGS		
10	04	50 53.4	42.0 N H =033 KM	142.6 E MAG	5.75-6.00	S. COAST HOKKAIDO, JAPAN BKS		
10	00	eP	05 02 03.8	Z	0.8	2.6 (2)	70.0	6.32
10	GG	eP	05 02 57.4	Z	0.8	1.7 (2)	79.0	6.07
		eP	05 02 58	LZ	26	8.5 (2)		
		ePP	05 05 43	Z	1.2	3.4 (1)		
		ePS	05 13 25	LT	33	2.8 (3)		
		eSS	05 18 12	LT	30	2.1 (3)		
		eLR	05 31 30	LZ	36	5.1 (3)		
10	LZ	eP ¹	05 10 27.1	JZ	1.2	5.0 (1)	143.0	
		eP ¹	05 10 28	LZ	17	4.1 (2)		
		e	05 12 00	JZ	1.2	3.3 (1)		
		eSKP	05 13 59	JZ	1.6	9.5 (1)		
		eSKP	05 13 59	LZ	17	4.3 (2)		
		eSP	05 23 47	LZ	17	3.8 (2)		
		eSS	05 32 18	LR	18	9.8 (2)		
		eLR	05 59 30	LZ	37	3.3 (3)		
					Avg.		6.19	
10	LZ	eP	05 02 17.8	JZ	*2	5.7 (0)		
10	05	37 22.*	15.8 S H =234 KM	70.3 W MAG	4.20-	SOUTHERN PERU CGS		
10	LZ	tP	05 37 38.4D	JZ	999.9	99.9 (9)	1.8	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eP	05 37 39	LZ	13	9.2 (2)		
		eL	05 38 03	LT	999.9	99.9 (9)		
10	10	52 45.6	44.8 N H =033 KM	149.6 E MAG	4.50-	KURILE ISLANDS CGS		
10	GG	eP	11 04 48.7	Z	0.9	1.6 (1)	79.0	5.00
10	11	08 04.*	07.1 S H =126 KM	119.1 E FLORES SEA				
10	11	56 33.4	44.1 N H =058 KM	150.8 E MAG	4.10-	KURILE ISLANDS CGS		
10	LZ	eP	14 17 54.2	JZ	1	9.4 (0)		
10	16	52 36.2	15.4 S H =033 KM	175.0 W MAG	5.00-	TONGA ISLANDS REGION CGS		
10	16	57 26.5	45.4 N H =050 KM	150.0 E MAG	5.40-	KURILE ISLANDS CGS		
10	00	eP	17 08 24.4	Z	0.9	1.4 (1)	69.0	5.01
		eS	17 17 25	LT	17	3.6 (2)		
		eSS	17 22 28	LT	27	5.5 (2)		
		eLQ	17 25 40	LR	30	1.1 (3)		
		eLR	17 35 42	LZ	26	2.2 (3)		
10	GG	eP	17 09 24.5	Z	0.7	3.4 (1)	79.0	5.39
		e	17 10 10	Z	0.7	2.9 (1)		
		e	17 25 55	LT	24	3.1 (2)		
		e	17 30 06	LZ	23	4.4 (2)		
		eL	17 35 17	LZ	45	1.0 (3)		
10	LZ	eP ¹	17 16 41.0	JZ	2	9.4 (1)	137.0	
		eSKP	17 20 12	JZ	1.9	6.2 (1)		
				Avg.			5.20	
10	LZ	eL	19 03 40	LZ	34	1.7 (3)		
10	19	21 58.*	02.8 N H =033 KM	127.0 E MOLUCCA SEA				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
10	LZ	e	19 30 30	L+	33	4.3 (3)		
10	LZ	eLR	19 37 00	LZ	32	8.8 (3)		
10	LZ	eL	19 39 40	LR	26	2.7 (3)		
10	LZ	eL	19 39 40	LZ	24	6.2 (3)		
10	LZ	eL	19 39 40	L+	27	4.2 (3)		
10	21 52 47.6		06.9 S 129.4 E	BANDA SEA				
			H = 117 KM MAG	5.50-				CGS
10	LZ	eP+1	22 12 25.3	JZ	.8	1.4 (1) 151.0		
		eP+2	22 12 31	JZ	.7	1.6 (2)		
		e	22 13 19	JZ	.7	6.8 (1)		
11	00 40 21.*		16.4 N 98.3 W	OAXACA, MEXICO				
			H = 033 KM MAG	4.50-				CGS
11	06 39 55.*		15.1 S 172.9 W	SAMOA ISLANDS				
			H = 033 KM MAG	4.20-				CGS
11	GG eP+1		06 59 31.0	Z	1.3	2.9 (1) 145.0		
11	07 34 15.2		03.6 N 82.7 W	SOUTH OF PANAMA				
			H = 033 KM MAG	4.10-				CGS
11	LZ eP		07 39 31.0	JZ	.9	3.0 (1) 24.0	4.80	
	e		07 42 46	LR	21	2.3 (2)		
	eL		07 48 27	LZ	21	5.0 (2)		
11	LZ eP		08 49 57.6	JZ	1	2.2 (1)		
11	09 24 15.6		14.1 S 169.6 E	NEW HEBRIDES ISLANDS				
			H = 033 KM MAG	4.90-				CGS
11	10 23 10.9		11.4 S 90.9 E	INDIAN OCEAN				
			H = 033 KM					
11	LZ eP+1		10 42 50.2	JZ	1.3	1.3 (2) 146.0		
	e		10 43 03	JZ	1.5	1.3 (2)		
11	LZ eP		13 20 23.0	JZ	.5	8.5 (0)		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11	LZ	eL	13 21 52	L+	0.9	1.9 (1)		
11	LZ	eL	13 22 30	LZ	15	4.7 (2)		
11	14 09 17.*		32.3 N 142.0 E	SOUTH OF HONSHU, JAPAN				
			H = 109 KM MAG	4.30-				CGS
11	21 23 54.2		40.4 S 72.6 W	SOUTHERN CHILE				
			H = 033 KM MAG	4.50-				CGS
11	22 02 03.*		08.6 S 123.4 E	FLORES SEA				
			H = 070 KM MAG	5.50-				CGS
12	06 00 13.2		53.2 N 166.3 W	FOX ALEUTIAN ISLANDS				
			H = 033 KM MAG	5.50-				CGS
12	00 eP		06 10 58.3	Z	1.1	4.8 (1) 66.0	5.54	
	eS		06 19 41	LR	21	8.8 (2)		
	eSCS		06 20 49	L+	20	1.1 (3)		
	eSS		06 24 09	LR	17	5.4 (2)		
	eLQ		06 27 44	L+	17	1.0 (3)		
	eLR		06 32 25	LZ	33	3.7 (3)		
12	GG eP		06 12 07.6	Z	0.9	4.6 (1) 77.0	5.52	
	eP		06 12 08	LZ	24	2.0 (2)		
	e		06 19 50	L+	13	3.9 (2)		
	eS		06 21 52	L+	17	5.7 (2)		
	ePS		06 22 46	L+	15	4.7 (2)		
	e		06 28 10	L+	20	4.2 (2)		
	eLQ		06 32 30	L+	26	1.0 (3)		
	eLR		06 38 08	LZ	32	2.6 (3)		
	eL		06 50 00	L+	22	2.1 (3)		
	eL		06 50 00	LR	23	1.2 (3)		
	eL		06 50 00	LZ	24	1.7 (3)		
						Avg.	5.53	
12	06 40 34.1		03.5 N 82.9 W	SOUTH OF PANAMA				
			H = 033 KM MAG	4.20-				CGS
12	11 06 03.6		38.8 N 118.0 W	CENTRAL NEVADA				
			H = 015 KM					
12	08 37 49.*		44.1 N 149.5 E	KURILE ISLANDS				
			H = 040 KM MAG	4.30-				CGS

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	11	13	19•6	05•4 S H =229 KM	146•8 E MAG	NEAR COAST CGS	N.E. NEW GUINEA	
12	12	45	51•1	31•5 N H =067 KM	49•4 E MAG	WESTERN IRAN CGS		
12	12	36	18•7	56•0 S H =033 KM	27•6 W MAG	SANDWICH ISLANDS CGS		
12	GG	eP	12 52 26•8	Z	1•0	6•1 (1)	34•0	5•42
12		eL	13 01 00	LT	17	3•3 (2)		
12	00	eP	12 53 09•4	Z	0•7	1•2 (1)	39•0	4•86
						Avg.		5•14
12	GG	eP	13 14 26•5	Z	0•3	3•8 (0)	1•7	
		eS	13 14 50	T	0•3	1•6 (1)		
12	GG	eP	13 16 12•0	Z	0•3	1•1 (1)	1•5	
		eS	13 16 31	T	0•4	3•7 (1)		
12	14	21	51•5	10•9 S H =094 KM	74•6 W MAG	CENTRAL PERU CGS		
12	14	28	20•0	04•4 S H =022 KM	137•3 E MAG	WESTERN NEW GUINEA CGS		
12	23	33	41•*	19•3 S H =204 KM	69•3 W MAG	NORTHERN CHILE CGS		
13	04	00	48•3	28•9 S H =033 KM	66•2 W MAG	CATAMARCA PROV., ARGENTINA CGS		
13	06	04	48•2	28•7 S H =033 KM	178•0 W MAG	KERMADEC ISLANDS CGS		
13	GG	eP	12 33 14•2	Z	0•3	1•5 (1)	1•6	
		eS	12 33 36	R	0•3	3•4 (1)		
13	13	25	01•9	46•6 N H =020 KM	152•1 E MAG	KURILE ISLANDS CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	13	32	59•2	19•8 S H =190 KM	175•6 W MAG	TONGA CGS	ISLANDS REGION	
13	GG	eP	14 03 54•1	Z	0•5	1•7 (1)	1•1	
		eS	14 04 08	R	0•5	5•7 (1)		
13	17	23	30•1	02•3 N H =033 KM	102•0 W MAG	WEST OF GALAPAGOS ISLANDS CGS		
13	18	49	09•8	11•6 S H =059 KM	166•2 E MAG	SANTA CRUZ ISLANDS CGS		
13	LZ	eP	19 44 21•0	JZ	•5	5•1 (0)		
13	LZ	e	19 44 25	JZ	•6	3•4 (1)		
13	LZ	eL	19 45 47	R	1•0	2•3 (1)		
14	01	11	12•6	52•9 N H =050 KM	159•6 E MAG	EAST COAST KAMCHATKA CGS		
14	GG	eP	01 22 47•5	Z	1•0	8•5 (1)	74•0	5•63
14	LZ	eP	01 30 15•5	JZ	1•2	2•5 (1)	128•0	
14	LZ	eL	01 46 44	LZ	23	6•1 (2)		
14	LZ	eLR	01 47 24	LZ	20	5•8 (2)		
14	LZ	eP	03 32 04•0	JZ	•9	1•1 (1)		
14	04	17	50•5	28•8 S H =089 KM	176•2 W MAG	KERMADEC ISLANDS CGS		
14	LZ	eL	05 00 20	LT	24	3•8 (2)	97•0	
14	08	24	47•*	03•1 S H =344 KM	104•5 E MAG	SUMATRA CGS		
14	08	53	09•9	47•9 N H =565 KM	145•6 E MAG	SEA OF OKHOTSK CGS		
14	LZ	eP	08 59 40•0	JZ	•6	8•0 (1)		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
14	10 10	44.7	15.9 S 173.0 W	TONGA ISLANDS CGS	H = 033 KM MAG	4.50-		
14	10 20	10.3	28.1 S 178.1 W	KERMADEC ISLANDS REGION	H = 195 KM MAG	4.50-	CGS	
14	LZ	eP	12 21 33.2	JZ	.4	3.7 (1)	1.9	
		eS	12 21 58	J	0.5	6.1 (0)		
14	GG	eP	13 35 59.1	Z	0.7	1.0 (2)		
14	GG	eP	14 36 49.5	Z	0.8	5.6 (1)		
14	15 06	35.3	13.6 N 120.5 E	NORTHWEST MINDORO, P. I.	H = 044 KM MAG	4.50-	CGS	
14	15 38	13.8	05.2 S 150.8 E	NEAR N. COAST NEW BRITAIN	H = 169 KM MAG	5.60-	CGS	
14	LZ	eP	15 57 04.0	JZ	.6	1.3 (1)	136.0	
		e	15 57 20	JZ	1	7.9 (1)		
		e	15 58 03	JZ	.8	4.4 (1)		
		eSKP	16 00 35	LZ	25	1.2 (3)		
		eSKP	16 00 36	JZ	1.8	8.4 (2)		
		eSKS	16 04 20	R	2.0	6.0 (1)		
		eSKS	16 06 37	R	2.0	6.0 (1)		
		eSS	16 18 33	LT	33	1.6 (3)		
		eL	16 42 25	LT	23	1.0 (3)		
14	GG	ePP	15 58 40	LZ	19	5.0 (2)	124.0	
		eSKS1	16 03 45	LT	20	4.8 (2)		
		eSKS2	16 04 25	LT	20	1.6 (3)		
		eL	16 15 13	LT	20	5.3 (2)		
15	01 00	02.5	39.0 N 117.9 W	CENTRAL NEVADA	H = 015 KM			
15	02 23	47.4	45.3 N 150.6 E	KURILE ISLANDS	H = 045 KM MAG	5.30-	CGS	
15	GG eL		03 11 50	LZ	20	4.2 (2)	79.0	
15	07 37	22.*	07.6 S 108.6 W	SOUTHWEST OF GALAPAGOS IS.	H = 033 KM MAG	4.40-	CGS	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
15	08 10	57.2	21.3 N 143.4 E	MARIANA ISLANDS REGION	H = 025 KM MAG	4.80-	CGS	
15	08 25	32.*	07.1 S 154.8 E	SOLOMON ISLANDS REGION	H = 055 KM MAG	4.90-	CGS	
15	17 40	01.*	25.2 N 95.5 E	BURMA	H = 078 KM MAG	4.00-	CGS	
15	18 46	32.9	28.4 S 178.4 W	KERMADEC ISLANDS	H = 211 KM MAG	4.70-	CGS	
15	00	eP 1	19 05 50.0	Z	1.2	7.0 (1)	147.0	
15	21 26	43.2	23.7 N 45.0 W	NORTH ATLANTIC OCEAN	H = 033 KM MAG	4.70-	CGS	
15	LZ	eP	21 35 05.5	JZ	1	1.4 (1)	46.0	4.88
		e	21 35 13	JZ	1.3	2.9 (1)		
		eS	21 41 50	LR	16	4.0 (2)		
		eLQ	21 45 42	LR	21	5.5 (2)		
		eLR	21 48 30	LZ	25	1.0 (3)		
15	21 36	05.0	29.1 N 140.8 E	SOUTH OF HONSHU, JAPAN	H = 070 KM MAG	6.75-	PAS	
15	00	fP	21 48 15.5C	Z	0.6	1.9 (2)	81.0	6.18
		eP	21 48 16	LZ	19	1.2 (3)		
		e	21 49 27	Z	1.4	1.6 (2)		
		ePP	21 51 16	Z	1.4	9.0 (1)		
		ePP	21 51 32	LZ	21	9.9 (2)		
		eS	21 58 20	R	1.6	1.8 (2)		
		eS	21 58 20	LT	14	3.1 (3)		
		eSKS	21 58 25	R	1.9	2.7 (2)		
		eSKS	21 58 27	LT	14	2.9 (3)		
		e	22 00 00	LT	15	1.2 (3)		
		eSS	22 03 30	LT	23	2.2 (3)		
		eSSS	22 07 24	LT	21	3.2 (3)		
		eLQ	22 14 20	LR	36	8.0 (3)		
		eLR	22 19 42	LZ	29	8.6 (3)		
		eL	22 24 37	LT	24	1.3 (4)		
		eL	22 24 37	LR	20	7.1 (3)		
		eL	22 24 37	LZ	24	1.4 (4)		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
15	GG	eP	21 48 57.2	Z	1.2	4.5 (2)	90.0	6.51
		eP	21 48 58	LZ	1.9	7.5 (2)		
		e	21 49 11	Z	1.1	1.0 (2)		
		e	21 51 10	LZ	2.3	6.5 (2)		
		e	21 51 21	R	1.5	1.0 (2)		
		e	21 51 38	R	1.8	2.2 (2)		
		e	21 59 14	LT	1.6	1.1 (3)		
		eSKS	21 59 14	T	2.9	7.9 (2)		
		eSKS	21 59 23	T	2.4	2.8 (2)		
		eS	21 59 43	T		1.4 (3)		
		eS	22 00 00	LR	2.0			
		ePS	22 00 47	T	3.1	7.2 (2)		
		ePS	22 00 47	L+	1.7	1.1 (3)		
		eSS	22 06 14	L+	2.6	2.9 (3)		
		eSSS	22 09 55	LT	2.3	1.5 (3)		
		eLQ	22 12 35	LR	2.4	3.0 (3)		
		eLR	22 25 19	LZ	2.4	3.0 (3)		
		eL	22 31 51	LT	2.0	6.9 (3)		
		eL	22 31 51	LR	1.9	9.2 (3)		
		eL	22 31 51	LZ	2.1	8.8 (3)		
15	LZ	tP*1	21 55 47.1C	JZ	999.9	99.9 (9)	150.0	
		eP*1	21 55 49	LZ	2.3	2.1 (3)		
		eSKP	21 59 25	JZ	2.1	5.4 (2)		
		eSKP	21 59 25	LZ	2.1	1.6 (3)		
		ePP	21 59 40	JZ	1.9	3.8 (2)		
		e	22 12 55	R	2.4	7.3 (1)		
		e	22 19 20	LR	1.6	8.1 (2)		
		e	22 20 28	LR	2.2	7.3 (2)		
		eL	22 45 46	LZ	3.1	1.7 (3)		
						Avg.		6.34
15	22 43 14.3	14.6 S 166.8 E H = 055 KM MAG	4.50-	CGS				
15	00 eL	23 58 16	LZ	1.9	4.0 (2)	130.0		
15	23 05 02.*	17.4 S 179.7 E H = 599 KM MAG	4.30-	CGS				
15	23 06 36.*	45.8 N 119.9 W H = 031 KM MAG	4.20-	CGS				
15	LZ eP	23 10 57.1	JZ	.9	4.1 (0)			
15	LZ eP	23 13 11.6	JZ	.6	2.8 (0)			
15	LZ e	23 13 14	JZ	.8	6.1 (1)			
15	LZ e	23 14 23	JZ	1.6	2.3 (1)			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	05 09 57.8		36.8 N 89.5 W H = 018 KM					SOUTHEASTERN MISSOURI
16	LZ eP	05 14 37.3	JZ	.6	7.0 (0)	1.6		
16	LZ eS	05 15 00	R	0.7	8.2 (0)			
16	LZ eP	10 06 18.9	JZ	999.9	99.9 (9)	1.8		
16	eS	10 06 43	R	0.7	3.7 (1)			
16	10 50 36.*		50.5 N 154.0 E H = 203 KM MAG					KURILE ISLANDS REGION
16	11 44 41.8		21.5 S 179.1 W H = 609 KM MAG					FIJI ISLANDS REGION
16	GG eP	12 59 28.7	Z	0.5	1.9 (1)	1.5		
16	eS	12 59 47	R	0.6	5.6 (1)			
16	14 37 37.3		30.4 S 69.5 W H = 033 KM MAG					SAN JUAN PROV., ARGENTINA
16	LZ eP	14 41 04.5	JZ	1	2.5 (1)	14.0	4.81	
16	eS	14 43 39	LR	15	2.1 (2)			
16	eL	14 44 32	LR	25	5.3 (2)			
16	eL	14 44 43	JZ	1.5	4.6 (1)			
16	LZ tP	15 04 24.3D	JZ	.6	2.8 (1)			
16	17 10 41.*		52.5 N 162.9 E H = 033 KM MAG					OFF E. COAST OF KAMCHATKA
16	17 53 39.7		55.3 N 160.1 E H = 033 KM MAG					KAMCHATKA
16	LZ tP	18 18 09.3C	JZ	.4	4.2 (1)	3.2		
16	eS	18 18 50	R	0.7	8.0 (1)			
16	20 56 56.4		17.6 N 61.8 W H = 045 KM MAG					LEEWARD ISLANDS
16	LZ eL	21 14 57	LZ	31	9.0 (2)	34.0		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	OO	eL	21 28 20	LZ	23	3.2 (2)	66.0	
16	GG	eL	21 28 54	LZ	18	2.4 (2)	66.0	
16			23 10 34.4	SEA OF JAPAN				
				H = 380 KM MAG				
				4.10-				
				CGS				
17	00	15 06.5	38.2 N 112.7 W	SOUTHWESTERN UTAH				
				H = 033 KM				
17	00	15 37.6	38.2 N 112.7 W	SOUTHWESTERN UTAH				
				H = 033 KM				
17	00	24 41.*	17.5 N 99.8 W	GUERRERO, MEXICO				
				H = 033 KM MAG				
				4.00-				
				CGS				
17	00	eP	03 05 24.6	Z	1.1	1.2 (2)	69.0	5.85
		eL	03 26 08	LR	33	5.1 (2)		
17	GG	tP	03 06 23.9C	Z	0.9	1.2 (2)	79.0	5.84
		eLQ	03 34 30	LT	34	5.0 (2)		
		eLR	03 39 35	LZ	19	6.7 (2)		
				AVG.				5.84
17	02	54 26.8	21.6 S 169.9 E	LOYALTY ISLANDS REGION				
				H = 033 KM				
17	LZ	ePD	03 09 07	LZ	17	1.6 (2)	112.0	
		ePP	03 13 44	LZ	19	2.9 (2)		
		e	03 14 50	LZ	16	2.3 (2)		
		eS	03 21 37	LR	18	2.3 (2)		
		eSP	03 23 25	LZ	20	3.2 (2)		
		eSS	03 29 31	LR	21	2.7 (2)		
		eLQ	03 40 39	LR	25	3.4 (2)		
		eLR	03 47 05	LZ	26	1.0 (3)		
17	GG	eP ¹	03 14 08.8	Z	1.0	7.5 (1)	147.0	
		eP ¹	03 14 09	LZ	18	1.3 (3)		
		ePP	03 17 42	LZ	19	4.0 (2)		
		ePS	03 27 59	LT	20	2.7 (2)		
		eL	04 09 08	LZ	24	5.3 (2)		
		eL	04 06 39	LR	25	5.3 (2)	138.0	
17	00	eL						
17	03	13 56.3	12.3 S 167.1 E	SANTA CRUZ ISLANDS				
				H = 230 KM MAG				
				4.70-				
				CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
17	03	25 00.6	36.8 N 71.4 E	HINDU KUSH				
				H = 094 KM MAG				
				5.20-				
				CGS				
17	00	eP	03 33 03.3	Z	0.6	1.0 (1)	45.0	4.76
		eP	03 33 25	Z	0.9	5.8 (1)		
17	GG	eP	03 33 05.0	Z	1.1	3.2 (1)	45.0	4.98
				AVG.				4.87
17	06	02 20.*	40.4 N 124.6 W	NEAR HUMBOLDT CTY, CALIF.				
				H = 033 KM MAG				
				4.30-				
				CGS				
17	07	08 28.*	31.1 N 114.2 W	GULF OF CALIFORNIA				
				H = 014 KM MAG				
				4.30-				
				CGS				
17	09	32 51.6	11.4 S 162.4 E	SOLOMON ISLANDS				
				H = 033 KM MAG				
				4.70-				
				CGS				
17	12	14 15.8	24.3 S 177.0 W	TONGA ISLANDS REGION				
				H = 051 KM MAG				
				4.70-				
				CGS				
17	GG	tP	13 21 33.9D	Z	0.7	4.1 (1)	1.3	
		eS	13 21 51	†	0.8	9.6 (1)		
17	13	27 22.*	03.4 S 77.5 W	NORTHERN PERU				
				H = 033 KM MAG				
				4.10-				
				CGS				
17	LZ	eP	13 52 26.3	JZ	.5	2.5 (1)	3.6	
		eS	13 53 10	†	0.8	2.7 (1)		
17	LZ	eL	14 38 11	LR	24	1.6 (2)		
17	17	13 30.3	10.8 S 167.7 E	SANTA CRUZ ISLANDS				
				H = 114 KM				
17	LZ	eP	17 45 07.6	JZ	.9	3.6 (1)		
17	20	15 17.6	39.1 N 114.2 W	EASTERN NEVADA				
				H = 033 KM				
17	22	18 13.*	16.6 N 98.7 W	GUERRERO, MEXICO				
				H = 033 KM MAG				
				4.20-				
				CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	00 10 51*		21.7 S 67.8 W	BOLIVIA CHILE BORDER REG.				
			H = 130 KM MAG	3.80-	CGS			
18	04 14 37.7		30.0 S 177.9 W	KERMADEC ISLANDS				
			H = 047 KM MAG	4.10-	CGS			
18	06 53 01.3		17.9 S 69.5 W	BOLIVIA CHILE PERU REGION				
			H = 157 KM MAG	3.80-	CGS			
18	07 10 22.*		32.5 S 103.7 W	EASTER ISLAND REGION				
			H = 033 KM MAG	4.50-	CGS			
18	GG eL		08 16 05	Lt	27	2.8 (2) 130.0		
18	12 04 40.0		23.1 N 120.5 E	TAIWAN				
			H = 033 KM MAG	6.75-7.00 BKS				
18	00 eP		12 16 41.2	Z	1.4	1.9 (2)	79.0	5.88
	eP		12 16 42	LZ	17	3.4 (3)		
	ePP		12 19 40	Z	1.8	1.9 (2)		
	ePP		12 19 40	LZ	18	1.4 (3)		
	eS		12 26 40	LR	999.9	99.9 (9)		
	eL		12 30 38	LR	19	2.9 (3)		
18	GG		12 17 11.1	Z	1.4	1.2 (2)	84.0	5.86
	eP		12 17 12	LZ	20	99.9 (9)		
	eP		12 19 55	LZ	21	1.8 (3)		
	ePP		12 27 37	LR	24	99.9 (9)		
	e		12 27 48	R	3.0	7.8 (2)		
	eL		12 33 21	Lt	31	99.9 (9)	Avg.	5.87
18	12 32 36.3		23.5 N 122.9 E	OFF EAST COAST OF TAIWAN				
			H = 033 KM MAG	4.80-	CGS			
18	13 43 05.6		23.1 N 120.8 E	SOUTHWESTERN TAIWAN				
			H = 031 KM MAG	4.50-	CGS			
18	14 40 54.6		15.2 N 94.2 W	OFF CST. CHIAPAS, MEXICO				
			H = 033 KM MAG	4.60-	CGS			
18	14 45 39.4		20.6 N 122.1 E	BATAN ISLANDS				
			H = 018 KM MAG	4.90-	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	15 17 47.5		13.5 N 143.8 E	MARIANA ISLANDS				
			H = 033 KM MAG	4.80-	CGS			
18	16 45 54.*		06.9 S 129.3 E	BANDA SEA				
			H = 084 KM					
18	18 44 05.0		25.1 S 176.9 W	KERMADEC ISLANDS REGION				
			H = 033 KM MAG	4.60-	CGS			
18	21 57 14.4		16.1 N 89.3 W	GUATEMALA BRITISH HONDURAS				
			H = 033 KM MAG	3.80-	CGS			
18	LZ eP		22 14 18.1	JZ	.4	1.2 (1)	2.7	
	eS		22 14 53	R	0.7	8.8 (0)		
18	22 36 17.6		18.8 N 69.4 W	DOMINICAN REPUBLIC				
			H = 095 KM MAG	5.30-	CGS			
18	LZ eP		22 43 00.0	JZ	1.2	6.2 (1)	35.0	5.42
	ePP		22 44 28	JZ	1.3	1.2 (2)		
	eS		22 48 25	R	1.6	3.6 (1)		
	ePCS		22 49 23	R	2.7	1.9 (2)		
18	00 eP		22 47 15.2	Z	1.0	3.1 (1)	69.0	5.12
	ePP		22 47 41	Z	1.0	3.1 (1)		
18	GG eP		22 47 20.0	Z	1.2	2.5 (1)	70.0	4.94
	eLR		23 09 00	LZ	30	2.2 (2)		
							AVG.	5.16
19	01 58 24.*		18.5 S 178.3 W	FIJI ISLANDS				
			H = 600 KM MAG	4.10-	CGS			
19	02 27 07.*		39.1 S 72.4 W	NEAR COAST SOUTHERN CHILE				
			H = 033 KM MAG	4.50-	CGS			
19	LZ eP		02 32 10.8	JZ	1	2.5 (1)	23.0	4.63
	eP		02 32 12	LZ	18	2.2 (2)		
	eS		02 36 16	LR	18	1.2 (3)		
	eLR		02 41 15	LZ	25	5.6 (2)		
	eL		02 42 23	LR	18	1.8 (3)		
	eL		02 42 23	Lt	20	1.2 (3)		
	eL		02 42 23	LZ	18	6.4 (2)		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
19	06 49 55.9		58.6 S 25.1 W	SANDWICH ISLANDS				
			H =033 KM					
19	LZ eP	06 59 11.3	JZ	•9	1.6 (1)	53.0	5.00	
	eP	06 59 14	LZ	13	6.6 (2)			
	ePP	07 01 18	JZ	1.4	4.0 (1)			
	e	07 06 37	LZ	23	4.8 (2)			
	eLR	07 12 45	LZ	30	4.5 (2)			
	eL	07 16 52	LR	20	2.4 (3)			
	eL	07 16 52	L+	19	3.3 (3)			
	eL	07 16 52	LZ	22	1.3 (3)			
19	07 00 03.3		09.2 S 158.2 E	SOLOMON ISLANDS				
			H =032 KM MAG	5.70-	CGS			
19	LZ eP	07 14 51.8	JZ	•8	1.4 (1)			
19	GG eL	07 45 28	L+	19	3.4 (2)			
19	07 55 09.*		05.9 S 134.1 E	AROE ISLANDS				
			H =033 KM MAG	4.70-	CGS			
19	08 47 10.*		21.8 N 120.9 E	NEAR SOUTH COAST OF TAIWAN				
			H =018 KM MAG	4.60-	CGS			
19	09 13 53.5		26.9 N 54.0 E	NEAR COAST OF S. IRAN				
			H =033 KM MAG	5.60-	CGS			
19	GG eP	09 21 25.6	Z	0.8	1.2 (2)	40.0	5.66	
	eL	09 30 00	LZ	16	3.0 (2)			
19	00 eP	09 22 05.0	Z	0.8	3.8 (1)	45.0	5.32	
	eLQ	09 28 50	LR	20	5.3 (2)			
	eLR	09 32 10	LZ	19	8.2 (2)			
19	LZ eP'	09 32 55.0	JZ	•9	1.9 (1)	126.0		
	eL	10 13 30	LR	29	3.8 (2)			
				Avg.		5.49		
19	09 34 11.1		04.2 S 152.8 E	SOLOMON ISLANDS				
			H =033 KM MAG	5.10-	CGS			
19	LZ eSKP	09 57 01	JZ	1	2.1 (1)	134.0		
19	GG eP	12 12 01.6	Z	0.4	2.6 (1)	1.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
19	LZ eS eP		12 12 19	JZ	0.4	3.4	{1}	
			15 51 54.2	JZ	•6	5.6	{0}	
19	16 12 50.0		23.0 N 120.4 E	TAIWAN				
			H =033 KM MAG	4.80-	CGS			
19	LZ eP'1	16 32 58.7	JZ	1.1	1.0 (1)	169.0		
19	00 eL	16 53 11	LR	25	6.2 (2)	79.0		
19	17 01 16.*		45.2 N 141.4 E	NORTHERN HOKKAIDO, JAPAN				
			H =136 KM MAG	4.00-	CGS			
19	00 eL	17 36 50	LR	34	7.7 (2)	67.0		
19	GG eL	17 43 15	LR	25	4.5 (2)	76.0		
19	17 10 46.1		44.1 N 145.0 E	E. COAST HOKKAIDO, JAPAN				
			H =033 KM MAG	4.60-	CGS			
19	GG eL	17 51 52	LR	28	6.0 (2)	78.0		
19	23 05 38.*		45.9 N 149.9 E	KURILE ISLANDS				
			H =050 KM MAG	4.10-	CGS			
19	23 22 19.1		18.3 S 176.9 W	FIJI ISLANDS				
			H =048 KM MAG	4.50-	CGS			
19	GG eP'1	23 41 52.4	Z	0.6	1.3 (1)	148.0		
20	00 15 48.4		30.2 S 177.8 W	KERMADEC ISLANDS REGION				
			H =035 KM MAG	4.40-	CGS			
20	02 27 26.*		20.7 S 178.4 W	FIJI ISLANDS REGION				
			H =600 KM MAG	4.30-	CGS			
20	04 46 59.7		08.2 N 126.6 E	E. COAST MINDANAO, P. I.				
			H =110 KM MAG	4.90-	CGS			
20	LZ eP'1	05 06 55.0	JZ	1.1	1.4 (1)	163.0		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	LZ	eP	05 54 41.0	JZ	.9	2.2 {1}		
20	LZ	eP	06 03 00.0	JZ	.5	1.5 {1}		
20			00.9 N 126.2 E	CELEBES REGION				
20	13 46 08.3		H = 033 KM MAG	CGS	4.30-			
20	15 39 41.5		23.2 N 120.3 E	TAIWAN	5.10-			
			H = 049 KM MAG	CGS				
20	LZ	eP	16 13 52.4	JZ	.5	5.0 {1}		
20			20.7 S 169.9 E	LOYALTY ISLANDS REGION				
20	17 08 37.4		H = 141 KM MAG	PAS	6.75-			
20	LZ	ePD	17 23 05	LZ	20	5.7 {2} 112.0		
		ePi	17 26 58	JZ	1	3.4 {1}		
		ePP	17 27 40	LZ	28	1.5 {3}		
		eSP	17 37 12	LZ	26	1.9 {3}		
		ePKP	17 37 59	JZ	1.1	3.2 {1}		
		eL	17 56 00	LZ	28	3.2 {3}		
20	00	ePi	17 27 40.0	Z	0.8	1.9 {1} 137.0		
		ePi	17 27 40	LZ	10	1.5 {3}		
		e	17 27 44	Z	1.2	3.2 {2}		
		e	17 31 04	Z	2.3	9.1 {2}		
		e	17 31 20	L+	17	2.2 {3}		
		e	17 31 52	L+	18	2.6 {3}		
		eSPP	17 42 30	LZ	20	2.2 {3}		
		e	17 43 40	L+	21	3.0 {3}		
		eSS	17 48 15	L+	19	1.4 {3}		
		eSSS	17 53 23	L+	22	4.0 {3}		
		eLR	18 18 00	LZ	25	2.6 {3}		
		eL	18 21 24	L+	25	4.2 {3}		
		eL	18 21 24	LR	25	2.6 {3}		
		eL	18 21 24	LZ	22	4.7 {3}		
20	GG	ePi	17 28 00.3	Z	1.0	3.6 {2} 146.0		
		ePi	17 28 01	LZ	16	99.9 {9}		
		e	17 28 52	Z	1.4	6.3 {2}		
		ePP	17 31 34	LZ	23	1.7 {3}		
		eSKKS	17 37 58	L+	25	1.3 {3}		
		eSS	17 50 24	L+	22	2.7 {3}		
		eLQ	18 15 23	L+	23	2.5 {3}		
		eLR	18 18 42	LZ	34	3.6 {3}		
		eL	18 26 28	L+	25	3.1 {3}		
		eL	18 26 28	LR	22	8.6 {2}		
		eL	18 26 28	LZ	25	3.5 {3}		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	LZ	eP	19 03 56.5	JZ	.5	3.7 {1}	1.7	
20	20 30 12.6	16.8 N 98.5 W	H = 033 KM MAG	COAST GUERRERO, MEXICO	4.30-	CGS		
20	LZ	eP	20 38 19.5	JZ	1.1	4.3 {1}	44.0	5.09
20	20 38 16.5	18.8 N 120.7 E	H = 053 KM MAG	NEAR N. COAST LUZON, P. I.	4.80-	CGS		
20	00	eLR	21 29 48	LZ	20	7.5 {2}	83.0	
20	LZ	eL	21 10 22	LZ	28	2.1 {2}		
20	23 06 26.2	30.0 S 177.9 W	H = 044 KM MAG	KERMADEC ISLANDS REGION	5.10-	CGS		
20	00	ePi	23 26 07.2	Z	0.9	3.0 {1}	148.0	
20	LZ	e	23 32 50	LZ	21	1.5 {2}	98.0	
		eL	23 52 35	LZ	28	3.9 {2}		
21	LZ	eP	02 18 01.5	JZ	.2	5.1 {1}	2.4	
		eS	02 18 32	R	0.3	3.9 {1}		
21	GG	eP	10 15 12.8	Z	0.2	7.4 {0}	3.6	
		eS	10 15 57	T	0.3	1.9 {1}		
21	LZ	eP	10 29 10.2	JZ	.2	1.8 {0}		
21	12 35 00.*	19.7 S 69.1 W	H = 161 KM MAG	NORTHERN CHILE	4.10-	CGS		
21	LZ	eP	12 35 56.5	JZ	.8	1.2 {2}	3.5	4.98
21	GG	eP	13 00 02.9	Z	0.6	5.9 {1}	1.2	
		eS	13 00 20	T	0.6	2.2 {2}		
21	15 43 50.*	16.6 N 86.4 W	H = 033 KM MAG	NEAR NORTH COAST HONDURAS	3.80-	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21	16 14 25.6		15.0 N 60.8 W	LEEWARD ISLANDS				
			H = 082 KM MAG	4.10-		CGS		
21	LZ eP		16 20 47.0	JZ	1	2.5 (1)	32.0	4.93
21	18 57 47.3		41.4 S 87.8 W	OFF COAST SOUTHERN CHILE				
			H = 033 KM MAG	4.50-		CGS		
21	LZ eLR		19 12 05	LZ	23	1.4 (3)	30.0	
21	LZ eP		20 03 56.2	JZ	1.3	3.4 (1)		
21	21 02 20.0		52.2 N 172.4 E	NEAR ISLANDS, ALEUTIAN IS.				
			H = 033 KM MAG	4.60-		CGS		
21	22 18 13.0		10.6 N 125.3 E	NEAR COAST LEYTE, P. I.				
			H = 053 KM MAG	5.20-		CGS		
21	LZ eP'1		22 38 17.5	JZ	1	1.2 (1)	165.0	
	e		22 38 50	JZ	1.4	2.9 (1)		
	eP'2		22 38 57	JZ	1.3	2.9 (1)		
21	00 eL		23 03 49	LR	33	1.3 (3)	92.0	
21	GG eL		23 07 49	LR	33	6.1 (2)	97.0	
21	23 31 42.3		39.2 N 114.2 W	EASTERN NEVADA				
			H = 033 KM MAG	3.90-		CGS		
22	02 15 29.1		45.8 S 75.2 W	NEAR COAST SOUTHERN CHILE				
			H = 033 KM MAG	4.70-		CGS		
22	LZ eLR		02 30 25	LZ	29	1.0 (3)	30.0	
22	GG eLR		03 16 39	LZ	28	2.2 (2)	121.0	
22	LZ eP		04 21 39.1	JZ	1.1	1.4 (1)		
22	LZ e		04 21 55	JZ	1.4	5.2 (1)		
22	06 46 36.4		30.6 S 178.0 W	KERMADEC ISLANDS REGION				
			H = 166 KM MAG	4.00-		CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
22	08 19 58.*		21.6 S 169.7 E	LOYALTY ISLANDS REGION				
			H = 033 KM MAG	4.30-		CGS		
22	09 12 03.4		04.2 S 136.2 E	WESTERN NEW GUINEA				
			H = 071 KM MAG	5.10-		CGS		
22	LZ eP'1		09 31 48.4	JZ	.8	1.9 (1)	148.0	
22	LZ eL		12 18 02	LZ	36	1.7 (3)		
22	GG eP		12 43 36.7	Z	0.6	2.6 (1)	1.7	
	eS		12 43 59	R	0.5	4.0 (1)		
22	13 44 20.*		47.7 N 152.8 E	KURILE ISLANDS				
			H = 033 KM MAG	4.20-		CGS		
22	15 58 46.5		22.4 N 93.6 E	BURMA				
			H = 088 KM MAG	6.10-		CGS		
22	00 eP		16 09 32.3	Z	1.1	1.2 (2)	67.0	5.80
	eL		16 31 30	LR	39	2.2 (3)		
	eL		16 31 30	LR	39	2.2 (3)		
22	GG eP		16 09 41.8	Z	1.2	2.9 (2)	68.0	6.04
	eP		16 09 42	LZ	15	7.8 (2)		
	ePP		16 12 15	LZ	14	6.3 (2)		
	e		16 18 03	LR	21	4.6 (2)		
	e		16 24 32	LZ	30	6.4 (2)		
	eL		16 26 55	LR	27	7.0 (2)		
	eL		16 32 00	LR	35	2.2 (3)		
22	LZ eP'1		16 18 42.4	JZ	1.3	5.8 (1)	162.0	
	e		16 18 59	JZ	1.5	7.5 (1)		
	eP'2		16 19 28	JZ	1.6	2.1 (2)		
	ePP		16 23 09	JZ	1.1	1.4 (1)		
	e		16 23 53	JZ	1.8	5.1 (1)		
					Avg.	5.92		
22	17 41 50.*		04.0 S 133.9 E	S. COAST OF W. NEW GUINEA				
			H = 033 KM					
22	17 58 16.3		20.2 N 147.1 E	MARIANA ISLANDS REGION				
			H = 039 KM MAG	5.10-		CGS		
22	18 48 30.9		07.6 N 126.9 E	EAST COAST MINDANAO, P. I.				
			H = 144 KM MAG	4.20-		CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
22	20 01	33.*	20.0 S 177.6 W	TONGA ISLANDS REGION				
			H =220 KM MAG	3.90- CGS				
22	21 10	56.*	44.5 N 114.5 W	CENTRAL IDAHO				
			H =047 KM MAG	3.90- CGS				
22	21 28	26.*	19.0 N 73.1 W	NEAR WEST COAST OF HAITI				
			H =019 KM MAG	3.80- CGS				
22	21 40	37.*	50.5 N 173.5 W	ANDREANOF ALEUTIAN ISLANDS				
			H =033 KM MAG	4.30- CGS				
22	LZ eP		21 41 22.3	JZ	.8	9.7 (0)		
22	LZ eL		22 05 16	LZ	28	2.4 (2)		
22	22 19	44.1	15.8 S 175.1 W	FIJI ISLANDS REGION				
			H =307 KM MAG	4.10- CGS				
22	22 38	03.*	27.1 N 44.1 W	NORTH ATLANTIC OCEAN				
			H =033 KM MAG	4.20- CGS				
22	LZ eP		22 46 50.9	JZ	.8	7.3 (0) 49.0	4.73	
22	23 59	43.6	13.7 S 165.9 E	NEW HEBRIDES ISLANDS				
			H =033 KM MAG	6.00- CGS				
23	LZ eP		00 18 31.5	JZ	.9	2.7 (1) 119.0		
	ePP		00 19 50	LZ	18	7.4 (2)		
	e		00 30 29	LT	14	2.5 (3)		
	eLR		00 56 50	LZ	24	3.4 (3)		
23	00 eP		00 18 52	LZ	14	5.7 (2) 129.0		
	ePP		00 21 02	LZ	13	2.1 (3)		
	ePKS		00 22 11	LT	14	2.2 (3)		
	eSS		00 38 28	LR	19	9.0 (2)		
	e		00 40 42	LR	16	1.3 (3)		
	e		00 42 48	LR	20	9.1 (2)		
	eSSS		00 43 19	LT	20	1.4 (3)		
	eL		01 01 36	LR	28	2.3 (3)		
23	GG eP		00 18 58	LZ	14	2.2 (3) 139.0		
	ePP		00 21 45	LZ	16	3.2 (3)		
	eSPP		00 34 10	LZ	20	2.0 (3)		
	eL		01 12 00	LZ	20	2.2 (3)		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	01 42	35.*	18.5 N 107.4 W	REVILLA GIGEDO IS. REGION				
			H =033 KM MAG	3.80- CGS				
23	02 49	22.*	17.7 S 178.6 W	Fiji ISLANDS				
			H =520 KM MAG	3.60- CGS				
23	03 04	50.*	44.4 N 114.5 W	CENTRAL IDAHO				
			H =033 KM MAG	4.10- CGS				
23	05 17	26.1	30.6 N 137.3 E	SOUTH OF HONSHU, JAPAN				
			H =478 KM MAG	4.00- CGS				
23	05 56	34.*	08.4 S 13.3 W	ASCENSION ISLAND				
			H =033 KM MAG	4.00- CGS				
23	LZ eL		06 21 57	Lz	28	5.5 (2) 54.0		
23	09 12	54.*	53.6 N 158.2 E	KAMCHATKA				
			H =033 KM MAG	3.90- CGS				
23	10 03	22.*	17.8 N 147.0 E	MARIANA ISLANDS				
			H =033 KM MAG	4.20- CGS				
23	LZ eP		11 26 28.1	JZ	.5	3.4 (0) 5.4		
	eS		11 27 32	T	0.9	3.2 (1)		
23	11 38	52.*	02.5 S 80.1 W	NEAR COAST OF ECUADOR				
			H =418 KM MAG	3.60- CGS				
23	13 43	46.7	28.7 N 139.4 E	BONIN ISLANDS				
			H =417 KM MAG	4.00- CGS				
23	GG eP		14 47 37.8	Z	0.2	3.0 (1) 0.1		
	eS		14 47 41	R	0.2	1.1 (2)		
23	15 19	31.6	36.9 N 71.2 E	HINDU KUSH REGION				
			H =028 KM MAG	4.40- CGS				
23	16 08	55.5	11.5 N 122.5 E	PANAY ISLAND, P.I.				
			H =047 KM MAG	4.50- CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	GG	eLQ	16 59 20	LR	30	5.6 (2)	95.0	
		eLR	17 05 33	LZ	18	3.9 (2)		
23	LZ	eP	16 31 00.8D	JZ	.3	5.5 (1)	1.6	
		eS	16 31 23	JZ	.6	1.3 (1)		
23	LZ	eP	16 50 20.0	JZ	.5	1.5 (1)	3.4	
		eS	16 51 02	R	1.3	4.6 (1)		
		eP	17 44 50.9	JZ	.4	3.2 (0)		
		eS	17 45 33	R	1.3	1.6 (1)		
24	02 40 00.1	04.2 S 154.2 E	NEW BRITAIN REGION					
		H =416 KM	MAG	4.30-	CGS			
24	LZ	eP†	02 58 30.9	JZ	1.4	5.3 (1)	133.0	
24	03 35 36.*	78.4 N 19.5 W	NORTHERN GREENLAND					
		H =033 KM	MAG	4.20-	CGS			
24	03 52 29.3	05.9 S 154.0 E	NEW BRITAIN REGION					
		H =085 KM						
24	05 31 31.2	64.4 N 126.5 W	MACKENZIE MTS., CANADA					
		H =033 KM	MAG	3.90-	CGS			
24	06 42 53.9	60.4 N 146.5 W	NEAR COAST S. ALASKA					
		H =033 KM	MAG	3.70-	CGS			
24	LZ	eP	06 46 33.0	JZ	.3	3.2 (0)		
24	LZ	eL	06 48 02	R	.6	5.7 (0)		
24	LZ	eP	07 20 01.8	JZ	.2	2.6 (1)	1.5	
		eS	07 20 22	R	.3	2.5 (1)		
24	LZ	eP	09 10 07.5	JZ	.2	2.3 (1)	1.9	
		eS	09 10 33	R	.3	1.2 (1)		
24	10 00 47.*	35.6 N 74.4 E	HINDU KUSH REGION					
		H =215 KM						
24	10 33 24.*	23.5 S 179.9 E	SOUTH OF FIJI ISLANDS					
		H =550 KM	MAG	4.30-	CGS			
24	GG	eP	12 21 35.7	Z	0.5	4.3 (1)	1.3	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eS	12 21 53	R	0.5	6.4 (1)		
24	13 33 55.2	05.6 S 146.7 E	NEAR COAST NE NEW GUINEA					
		H =141 KM						
24	15 17 03.0	15.0 S 173.1 W	TONGA ISLANDS					
		H =033 KM	MAG	4.50-	CGS			
24	17 17 45.5	38.7 N 129.4 E	NEAR EAST COAST OF KOREA					
		H =542 KM	MAG	5.30-	CGS			
24	00	eP	17 27 55.1	Z	0.9	1.0 (2)	69.0	5.41
		e	17 28 08	Z	0.9	4.5 (1)		
		eSP	17 30 37	Z	1.0	3.8 (1)		
24	GG	eP	17 28 41.6	Z	0.8	99.9 (9)	76.0	
		ePP	17 30 40	LZ	14	4.0 (2)		
		ePP	17 30 42	Z	0.7	4.6 (1)		
		eS	17 37 35	LT	15	9.9 (2)		
		eSPS	17 41 54	LT†	35	7.6 (2)		
		eSSS	17 46 10	LT†	23	2.8 (2)		
		eL	18 03 15	LZ	17	5.5 (2)		
24	LZ	eP	17 36 34.8	JZ	1.3	1.3 (2)		
24	LZ	eL	17 37 43	JZ	1.5	9.6 (1)		
24	19 53 25.7	17.8 S 178.5 W	FIJI ISLANDS					
		H =584 KM	MAG	4.40-	CGS			
24	21 12 23.2	21.7 S 176.2 W	TONGA ISLANDS					
		H =032 KM	MAG	4.80-	CGS			
24	21 31 24.2	44.5 N 150.3 E	KURILE ISLANDS					
		H =033 KM	MAG	4.70-	CGS			
24	00	eP	21 42 33.3	Z	1.0	3.8 (1)	70.0	5.39
24	GG	eP	22 08 55	LR	27	9.8 (2)		
		21 43 31.4	Z	0.6	1.9 (1)	80.0	5.19	
		22 16 00	LZ	20	3.5 (2)			
					Avg.	5.29		
24	21 44 46.*	23.6 S 179.9 E	FIJI ISLANDS					
		H =535 KM	MAG	4.50-	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
OFF SOUTH COAST OF JAVA								
24	22 44 01.*		07.1 S 106.0 E	H = 094 KM MAG	5.50-	CGS		
NEW BRITAIN REGION								
25	02 00 06.0		06.3 S 145.6 E	H = 134 KM				
25	03 40 34.9		16.1 S 173.8 W	H = 033 KM MAG	4.30-	CGS		
25	03 46 39.9		01.2 N 85.3 W	H = 033 KM MAG	3.70-	CGS		
25	LZ eP		03 51 54.2	JZ	1	3.0 (1)	24.0	4.75
25	GG eL		04 30 43	LZ	40	5.7 (2)	93.0	
25	04 09 13.*		20.2 N 143.8 E	H = 033 KM MAG	4.40-	CGS		
25	07 04 32.8		22.6 S 179.7 W	H = 600 KM MAG	5.10-	CGS		
25	LZ eL		08 00 45	LZ	24	2.9 (3)	102.0	
25	07 13 30.8		28.5 N 86.8 E	H = 044 KM MAG	4.50-	CGS		
25	12 09 08.8		28.3 S 176.5 W	H = 017 KM MAG	4.50-	CGS		
25	15 09 17.3		05.2 S 153.1 E	H = 064 KM MAG	4.60-	CGS		
25	17 35 05.*		17.0 N 86.9 W	H = 033 KM MAG	3.90-	CGS		
25	18 43 27.*		17.1 N 87.2 W	H = 033 KM MAG	3.80-	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
NEAR N. COAST OF VENEZUELA								
25	19 48 49.1		10.1 N 69.4 W	H = 041 KM MAG	4.50-	CGS		
KAMCHATKA								
25	21 41 59.9		52.7 N 157.3 E	H = 033 KM MAG	4.70-	CGS		
25	21 46 56.*		22.6 S 179.9 W	H = 350 KM MAG	4.40-	CGS		
25	22 09 00.8		05.3 S 153.2 E	H = 042 KM MAG	4.80-	CGS		
25	22 46 18.*		17.0 N 86.6 W	H = 033 KM MAG	3.90-	CGS		
25	00 eP		23 00 28.1	Z	0.7	6.4 (0)		
25	23 07 29.3		20.8 S 178.8 W	H = 580 KM MAG	4.50-	CGS		
26	09 09 33.9		16.3 S 71.7 W	H = 116 KM MAG	6.10-	CGS		
26	LZ eP		09 10 26.4	JZ	.5	99.9 (9)	3.1	
26	GG eP		09 10 28	LZ	999.9	99.9 (9)		
26	eP		09 22 57.7	Z	0.9	1.0 (2)	98.0	6.33
26	eP		09 22 58	LZ	15	5.4 (2)		
26	ePP		09 26 54	Z	1.4	9.0 (1)		
26	eSKS		09 33 30	L+	26	5.2 (3)		
26	eS		09 34 25	L+	25	2.5 (3)		
26	eSS		09 41 00	L+	20	1.0 (3)		
26	eL		09 56 00	LZ	26	1.6 (3)		
26	eL		10 05 10	L+	20	2.6 (3)		
26	eL		10 05 10	LR	20	1.0 (3)		
26	eL		10 05 10	LZ	20	2.5 (3)		
26	00 eP		09 23 11	LZ	12	4.1 (2)	101.0	
26	ePP		09 27 15	LZ	20	7.4 (2)		
26	eSKS		09 33 40	L+	18	3.0 (3)		
26	eS		09 35 00	L+	20	3.4 (3)		
26	eSP		09 36 05	LZ	18	2.7 (3)		
26	eL		09 52 22	LZ	22	3.1 (3)		
26	eLR		09 55 52	LZ	32	6.2 (3)		
26	eL		10 05 35	L+	20	3.5 (3)		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
	eL		10 05 35	LZ	21	2.5 (3)			27	00	eL	01 43 20	LZ	25	2.1 (3)			
	eL		10 05 35	LZ	20	4.5 (3)						01 43 20	LZ	35	2.0 (3)	65.0	Avg.	
26	10 02 15.0		23.1 N 120.4 E	TAIWAN					27	02 46 33.4		60.9 S 155.2 E	SOUTH OF MACQUARIE ISLAND					
			H =037 KM MAG	4.90-								H =033 KM						
26	12 05 54.3		40.8 N 140.1 E	NEAR W. CST. HONSHU, JAPAN					27	LZ	fP	03 56 53.5C	JZ	.4	6.1 (1)			
			H =160 KM MAG	4.40-														
26	GG eL		12 19 40	LZ	25	1.8 (2)			27	05 07 00.3		13.1 S 166.5 E	NEW HEBRIDES ISLANDS					
26	LZ eP		15 25 15.5	JZ	.2	2.2 (1)	1.6					H =046 KM MAG	4.20-					
	eS		15 25 37	R	0.4	9.8 (0)			27	05 29 27.*		29.2 N 97.2 E	SOUTHERN TIBET					
26	19 53 18.8		06.9 N 73.0 W	COLOMBIA								H =033 KM MAG	4.90-					
			H =160 KM MAG	3.80-					27	06 19 19.*		47.3 N 152.1 E	KURILE ISLANDS					
26	LZ eP		19 58 14.2	JZ	.7	4.5 (0)	23.0	4.10				H =033 KM MAG	4.40-					
	epP		19 58 48	JZ	.8	7.8 (0)			27	10 32 13.*		19.9 S 115.4 W	NORTHWEST OF EASTER ISLAND					
26	20 55 08.*		17.2 N 86.1 W	NORTH OF HONDURAS								H =033 KM MAG	4.20-					
			H =033 KM MAG	3.80-					27	11 21 14.*		17.0 N 87.0 W	NORTH OF HONDURAS					
				CGS								3.80-	CGS					
27	01 12 23.5		00.0 17.9 W	MID ATLANTIC OCEAN					27	GG eP		12 51 26.1	Z	0.3	1.1 (1)	1.6		
			H =033 KM MAG	5.30-						eS	12 51 48	T	0.3	1.9 (1)				
27	LZ eP		01 21 35.4	JZ	1.8	2.6 (2)	52.0	5.90	27	GG eP		13 57 08.6	Z	0.3	1.1 (1)	1.4		
	e		01 22 04	JZ	1.7	1.5 (2)				eS	13 57 26	T	0.4	6.1 (1)				
27	ePCP		01 22 17	JZ	1.6	1.4 (2)			27	LZ eP		14 45 52.6	JZ	.8	1.3 (1)			
	ePP		01 23 38	JZ	1.9	2.2 (2)												
27	eS		01 29 01	LR	23	1.0 (3)			27	15 36 56.*		10.6 S 166.1 E	SANTA CRUZ ISLANDS					
	eLQ		01 32 36	LR	18	8.4 (2)						H =165 KM MAG	4.30-					
27	eLR		01 36 41	LZ	25	1.6 (3)						CGS						
	eP		01 21 56.3	Z	1.3	3.0 (1)	55.0	5.17	27	17 51 47.3		52.5 N 160.8 E	NEAR E. COAST KAMCHATKA					
27	GG		01 22 00	LZ	18	2.2 (2)						H =033 KM MAG	4.10-					
	eP		01 24 05	LZ	14	2.8 (2)						CGS						
27	ePP		01 25 16	LZ	16	3.6 (2)												
	e		01 29 37	LZ	20	1.7 (3)			27	00	e	18 12 50	LZ	27	4.3 (2)	64.0		
27	eS		01 30 32	LZ	26	8.4 (2)				eL	18 22 50	LZ	23	8.8 (2)				
	e		01 31 59	LZ	19	4.0 (2)				eL	18 27 35	LZ	23	7.3 (2)				
27	eSCS		01 35 14	LR	25	5.6 (2)												
	eLQ		01 38 45	LZ	29	1.4 (3)												
27	eLR		01 43 20	LZ	24	2.6 (3)												
	eL		01 43 20	LR	19	2.0 (3)												

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
27	LZ	eP e eS	18 42 22.3 18 42 50 18 43 15	JZ JZ T	.4 .6 0.9	6.8 (0) 3.0 (1) 1.5 (1)	465		28	12 57 07.9		43.2 N H =041	111.4 W KM MAG	EASTERN IDAHO				
27									28	13 03 41.5		14.2 S H =021	72.1 W KM MAG	SOUTHERN PERU				
27	20 19 30.6		23.1 S 179.4 E	FIJI ISLANDS					28	14 09 17.1		36.5 N H =207	70.9 E KM MAG	HINDU KUSH				
			H =526 KM MAG	CGS					28	GG eP eP e e e		14 17 09.6 14 17 10 14 19 34 14 23 30 14 17 11.0 14 17 11	Z LZ LT LZ Z LT	999.9 17 1.2 (4) 25 99.9 (9) 99.9 (9) 17 2.7 (3)	99.9 (9) 44.0			
28	00 02 25.7		41.0 N 141.5 E	OFF E. CST. HONSHU JAPAN					28	GG eP eS		14 10 20.0 14 10 38	Z T	0.6 0.5	5.3 (1) 6.3 (1)		1.3	
28	LZ	eP	04 02 34.5	JZ	.7	4.3 (0)			28	16 26 05.6		07.0 S 124.5 E	H =407 KM MAG	BANDA SEA				
28	LZ	e	04 02 45	JZ	.9	1.9 (1)												
28	LZ	e	04 06 16	JZ	1.3	2.0 (1)			28	17 46 16.2		45.3 N 149.8 E	H =033 KM MAG	KURILE ISLANDS				
28	04 56 48.6		43.3 N 125.9 W	OFF COAST OF OREGON					28	18 30 43.9		61.2 N 147.8 W	H =172 KM MAG	SOUTHERN ALASKA				
			H =017 KM MAG	CGS					28	19 10 54.*		55.8 N 165.7 E	H =033 KM MAG	KOMANDORSKIE IS. REGION				
28	05 43 22.1		06.3 S 148.7 E	NEW BRITAIN REGION														
			H =033 KM MAG	CGS					29	02 30 00.*		21.5 S 68.8 W	H =136 KM MAG	CHILE BOLIVIA BORDER				
28	GG	ePP ePS eSS eSSS eLQ eLR eL eL eL	06 04 10 06 14 00 06 21 21 06 25 51 06 35 00 06 43 22 06 55 22 06 55 22 06 55 22	LZ LT LT LT LR LZ LT LR LZ	18 19 22 22 30 32 22 23 22	2.1 (2) 3.7 (2) 4.4 (2) 6.7 (2) 4.7 (2) 5.0 (2) 1.8 (3) 1.1 (3) 1.9 (3)	124.0		29	LZ eP eL eL		02 31 16.9 02 32 16 02 32 16	JZ R LR	.8 0.7 19	6.3 (1) 6.0 (1) 2.3 (2)	5.2 4.86		
28	06 17 09.3		20.5 S 177.8 W	FIJI ISLANDS					29	05 45 48.*		38.7 N 73.2 E	H =187 KM MAG	HINDU KUSH REGION				
			H =473 KM MAG	CGS														
28	07 29 28.*		17.7 S 176.7 W	FIJI ISLANDS REGION														
			H =417 KM MAG	CGS														
28	09 00 46.9		21.7 N 121.6 E	OFF EAST COAST OF TAIWAN														
			H =033 KM															
28	00 eL		09 42 25	LR	25	3.2 (2)	81.0		29									
			09 51 55	LZ	16	7.0 (2)												

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29	LZ	eP eS	07 24 24.3 07 25 01	JZ R	.7 1.0	5.6 (1) 7.8 (1)	2.9		30	LZ	eL	02 57 10	LR	25	1.6 (2)		
29	08 47 30.*	03.0 N 125.7 E H = 133 KM MAG	CELEBES SEA CGS						30	05 39 44.6	24.5 N 108.6 W H = 049 KM MAG	GULF OF CALIFORNIA CGS					
29	13 07 18.*	02.2 S 139.5 E H = 033 KM MAG	N. COAST W. NEW GUINEA CGS						30	GG	eL	06 25 25	LZ	15	1.7 (2) 89.0		
29	LZ	eP*1	13 27 00.6	JZ	.8	1.7 (1) 147.0			30	LZ	eP eS	05 59 51.2 06 00 13	JZ	.5 0.7	3.4 (0) 7.6 (0)		
29	17 29 08.0	55.1 N 161.7 E H = 078 KM MAG	NEAR E. COAST OF KAMCHATKA CGS						30	LZ	eP	06 25 01.7	JZ	.6	5.7 (0)		
29	LZ	eP eS	18 30 29.7C 18 31 32	JZ †	.4 0.8	2.8 (1) 1.1 (1)	5.3		30	09 06 02.*	11.4 N 121.6 E H = 033 KM MAG	SULU SEA CGS					
29	18 37 29.*	06.8 S 130.7 E H = 033 KM	MOLUCCA PASSAGE						30	12 23 10.3	32.7 N 47.8 E H = 033 KM	WESTERN IRAN					
29	GG	eL	19 53 23	LZ	14	5.7 (2) 114.0			30	12 39 23.8	01.7 N 99.6 E H = 133 KM MAG	NORTHERN SUMATRA CGS					
29	LZ	eP eS	21 19 24.1 21 19 55	JZ R	.4 0.6	3.2 (1) 2.0 (1)	2.4		30	17 20 13.4	23.4 N 143.3 E H = 033 KM MAG	VOLCANO ISLANDS REGION CGS					
29	22 32 20.9	41.7 N 141.9 E H = 056 KM MAG	S. COAST HOKKAIDO JAPAN CGS						30	LZ	eP*1 eL	17 40 02.2 18 41 30	JZ LR	1.2 25	2.1 (1) 149.0 1.6 (2)		
29	GG	eL	22 36 40	LZ	15	3.0 (2)			30	17 45 54.6	37.3 N 29.9 E H = 041 KM MAG	NEAR S.W. COAST OF TURKEY CGS					
30	01 11 16.6	06.9 N 72.6 W H = 151 KM MAG	NORTHERN COLOMBIA CGS						30	GG	eP	17 50 12.0	Z	1.0	1.6 (1) 18.0	4.15	
30	02 33 55.*	20.1 S 69.5 W H = 033 KM MAG	NORTHERN CHILE CGS						30	00	eP eS eL	17 51 29.8 17 56 13 17 59 26	Z LR LR	0.9 16 23	3.0 (1) 27.0 3.8 (3) 2.8 (3)	4.94	
30	LZ	eP eS	02 34 52.4 02 35 23	JZ †	.4 0.5	1.9 (2) 8.1 (1)	4.0	5.80	30	21 23 58.*	49.2 N 150.6 E H = 292 KM MAG	SEA OF OKHOTSK CGS				Avg.	4.54

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30	00	eP	22 44 29.5	Z	0.7	1.0 (1)		
31	00 14	58.4	36.3 N 71.4 E H = 127 KM MAG			NORTHEASTERN AFGHANISTAN		
31	04 17	12.4	61.5 N 151.9 W H = 033 KM MAG			SOUTHERN ALASKA		
31	GG eL		04 50 10	LZ	14	1.0 (3)	68.0	
	eL		04 53 35	LZ	15	1.7 (3)		
31	LZ eL		05 07 09	LR	30	2.8 (2)	101.0	
31	06 46	07.*	16.9 N 99.0 W H = 056 KM MAG			GUERRERO, MEXICO		
31	08 06	38.5	47.0 N 138.8 E H = 433 KM MAG			SEA OF JAPAN		
31	09 23	21.*	37.5 N 23.2 E H = 075 KM MAG			SOUTHERN GREECE		
31	12 30	31.*	23.8 N 121.0 E H = 033 KM MAG			TAIWAN		
31	16 40	09.8	42.2 N 142.1 E H = 049 KM MAG			S. COAST HOKKAIDO, JAPAN		
31	17 07	43.*	51.3 N 124.7 W H = 014 KM MAG			VANCOUVER ISLAND REGION		
31	21 46	31.7	00.2 S 77.9 W H = 033 KM MAG			CENTRAL ECUADOR		
31	LZ	eP	21 50 48.7	JZ	.8	1.7 (1)	18.0	4.26
	eL		21 56 30	LT	21	5.2 (2)		
	eL		21 56 38	R	1.2	5.4 (1)		

Bulletin No. 26
February 1964

SEISMOLOGICAL BULLETIN
LONG-RANGE SEISMIC
MEASUREMENTS PROGRAM

THE GEOTECHNICAL CORPORATION
3401 SHILOH ROAD
GARLAND, TEXAS



SEISMOLOGICAL BULLETIN

LONG-RANGE SEISMIC MEASUREMENTS PROGRAM

AFTAC Project No:	VT/4051
ARPA Order No:	104-60
ARPA Code No:	8100
Contractor:	The Geotechnical Corporation Garland, Texas
Contract No:	AF 33(657)-12145

Bulletin No. 26

February 1964

September 1964

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SEISMOLOGICAL BULLETIN
LONG-RANGE SEISMIC MEASUREMENTS PROGRAM
1. INTRODUCTION

1.1 This bulletin contains seismological data on earthquake phases recorded at seven of the 40 mobile seismological stations being operated by The Geotechnical Corporation (Geotech) under Project VT/4051, Contract AF 33(657)-12145, the Long-Range Seismic Measurements (LRSM) Program. The bulletin is intended to be an aid to interested observers in determining the extent of the earthquake data contained in the records from the 40 teams.

1.2 The bulletin contains the following:

a. Data on all of the phases that have been associated with epicenters reported by the U. S. Coast & Geodetic Survey (USC&GS);

b. Data on the epicenters listed in the bulletin - as reported by the USC&GS;

c. Arrival time, period, amplitude, and distance for phases not associated with USC&GS epicenters.

1.3 All phases are listed in chronological order, except that unassociated phases are not mixed with a sequence of associated phases. In such cases, the unassociated phases are listed immediately following the associated phases.

2. INSTRUMENTATION

2.1 Instrumentation at each of the LRSM bulletin sites, with the exception of Mould Bay, Canada (NP NT), and Hawaii Island (HW IS), consists of a three-component Benioff short-period seismograph system and a three-component

Sprengnether long-period seismograph system. Both systems use phototube amplifiers. The response characteristics of these systems are shown in figures 1 and 2. A 14-element short-period vertical Benioff seismometer array is in operation at HW IS. A 7-element short-period Johnson-Matheson vertical seismometer array is in operation at NP NT. The response characteristics of this system are shown in figure 3. HW IS and NP NT also operate a three-component Sprengnether long-period seismograph system. The short-period and long-period seismograph systems at Jena, Louisiana (JE LA) became operational on 6 February 1964 and 12 February 1964, respectively.

2.2 All data are recorded by 35-mm Film Recorders, Geotech Model 1301A, and by 14-channel Magnetic-Tape Recorders, Ampex Model 314. Also in operation at HW IS and NP NT are 16-mm film Develocorders, Geotech Model 4000C.

2.3 Precision Timing Systems, Geotech Model 5400 or 5400A, are used for primary timing. Chronometers are used for secondary time. The primary and secondary timing systems use WWV for the time standard. WWV is a National Bureau of Standards Radio Station located at Beltsville, Maryland. The accuracy of the time program from WWV agrees with the U. S. Naval Observatory.

2.4 Each system is calibrated at least once every 24 hours. In the short-period system calibration, an electromagnetic (EM) calibrator is used to determine the magnification as a function of frequency and a weight-lift calibration is used to verify the EM magnification at 1 cps. In the long-period systems, magnification is determined as a function of frequency using EM calibrators. No method of verification is used. In the EM method of calibration, the seismometer mass is driven by a known sinusoidal force and the magnification is calculated using the relationships between the sinusoidal force and the recorded amplitude.

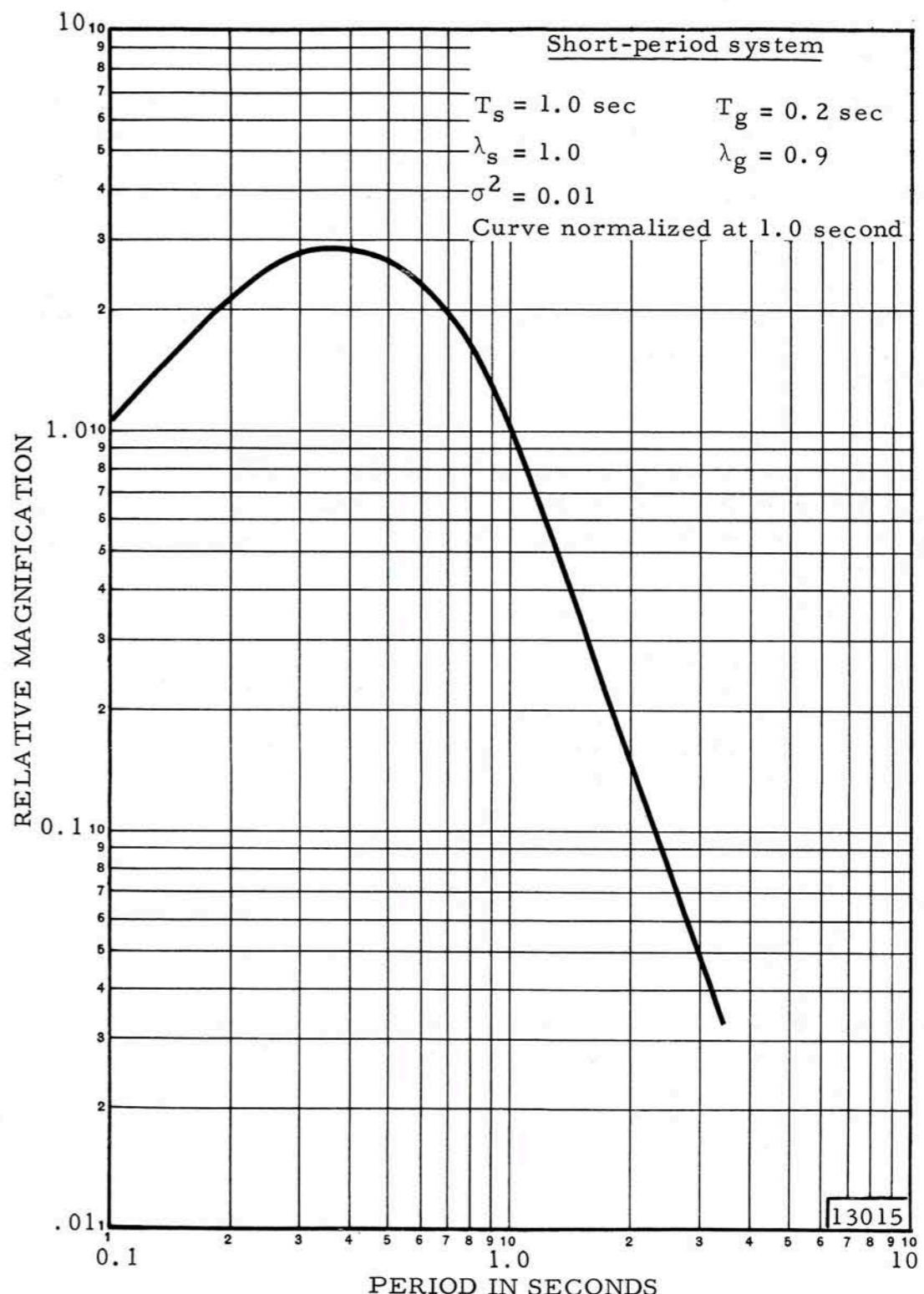


Figure 1. Frequency response of the Benioff short-period seismograph system

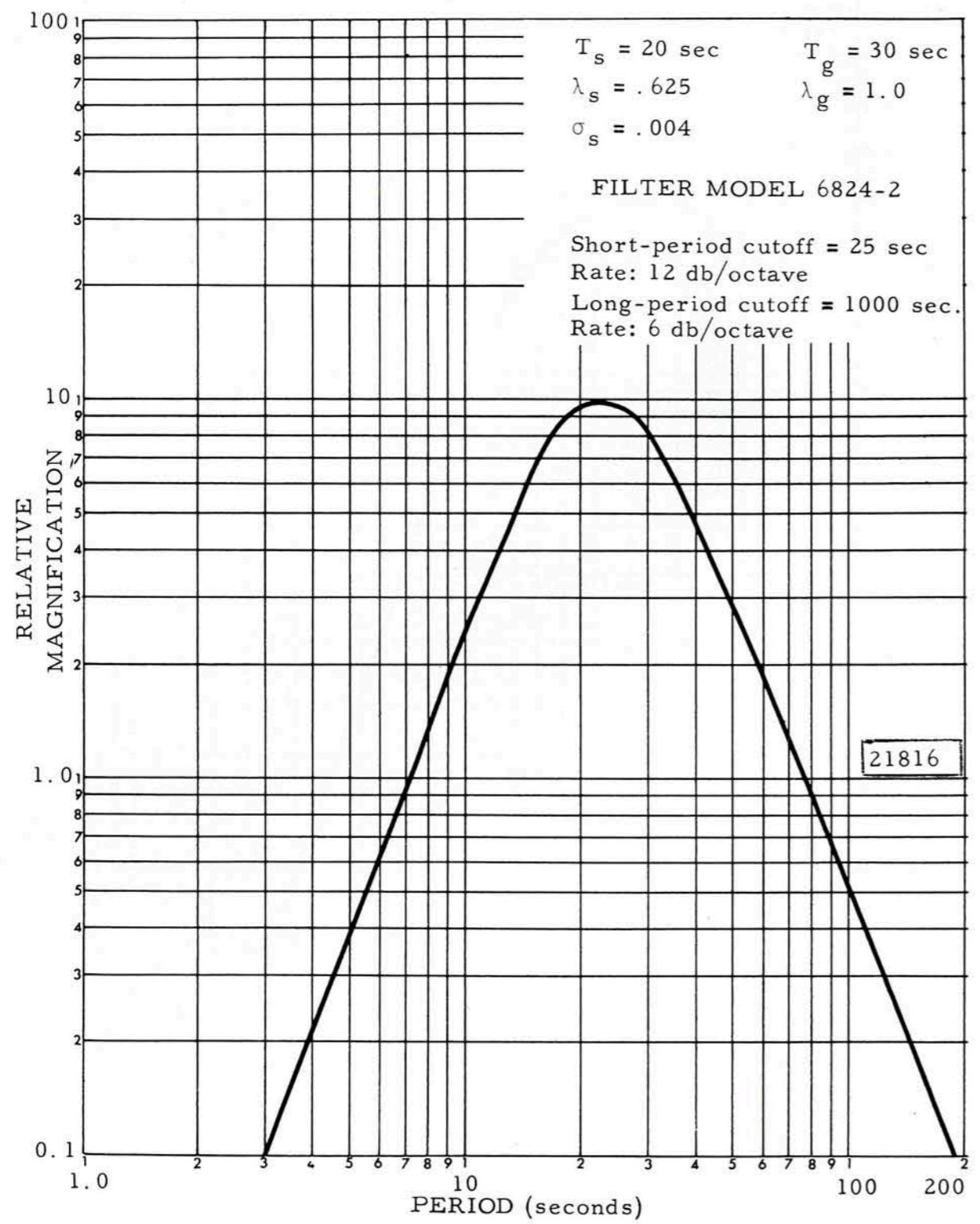


Figure 2. Frequency response of the Sprengnether long-period seismograph system

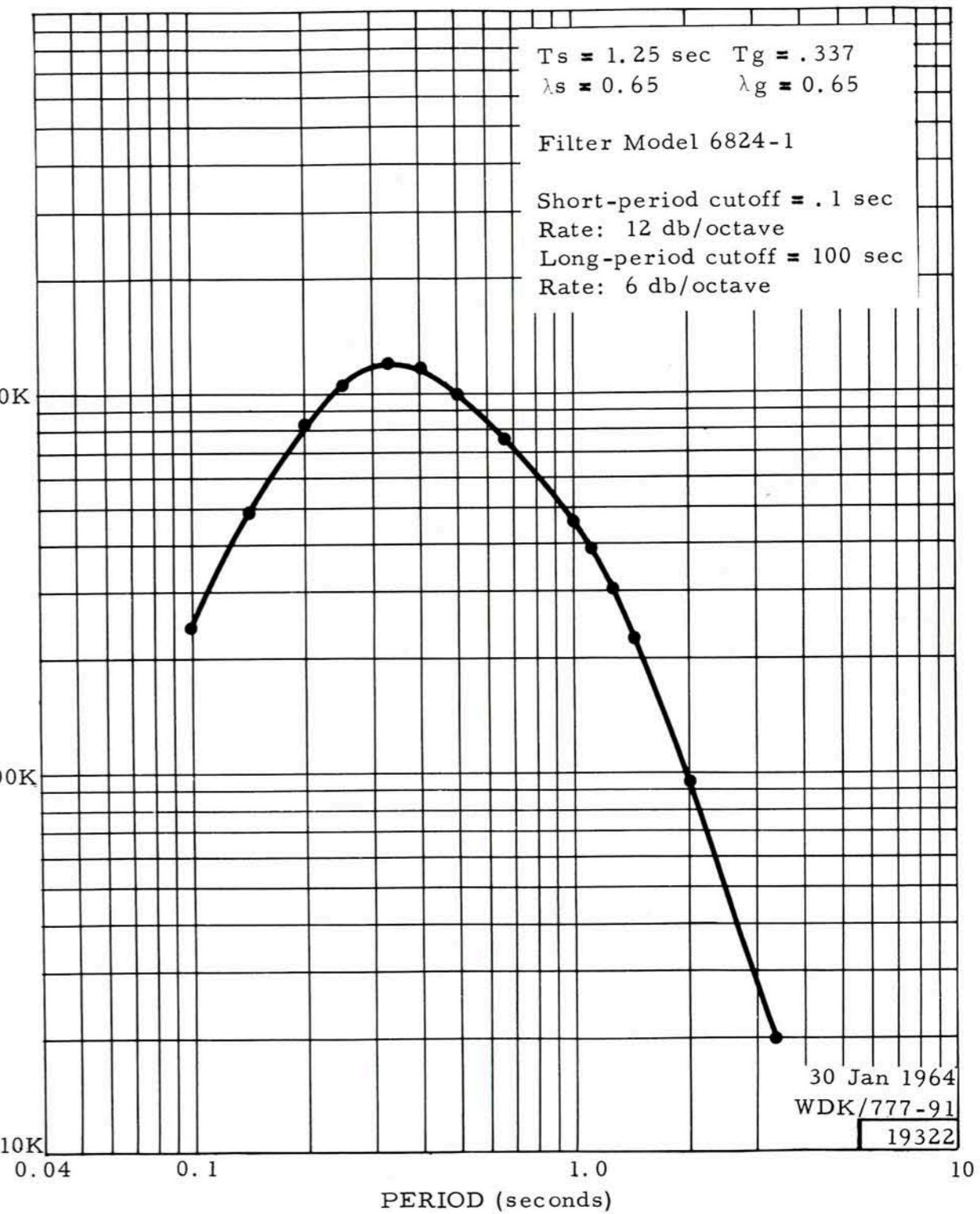


Figure 3. Frequency response of the Johnson-Matheson seismograph system

3. INTERPRETATION OF COLUMN TITLES

3.1 COLUMN HEADINGS

The column titles appearing in this bulletin are defined as follows:

3.1.1 Day

The date, for the day of the month, is printed each time a new epicenter is listed and each time the station designator changes. Dates are given in Greenwich Civil Time (GCT).

3.1.2 Sta

The station from which the data were taken. The station designators used in this bulletin are given in the following table:

<u>Site Code</u>	<u>Site Designation</u>
MV	Marysville, California
LC	Las Cruces, New Mexico
DH	Delhi, New York
RK	Red Lake, Ontario
JE	Jena, Louisiana
HW	Hawaii Island
NP	Mould Bay, Canada

The locations of the sites are shown in figures 4 and 5.

3.1.3 Phase

Symbols defining the phase type are listed in the phase column. Prefixes to the phase designators are defined as follows:

a. An "i" (impetus) preceding the phase designates a sharp or sudden beginning of the phase motion. Direction of first motion is discernible on all "i" phases.

b. An "e" (emersio) preceding the phase designates an emergent phase motion.

c. An "i" or "e" alone designates an unidentified phase of either an impetus or emersio arrival.

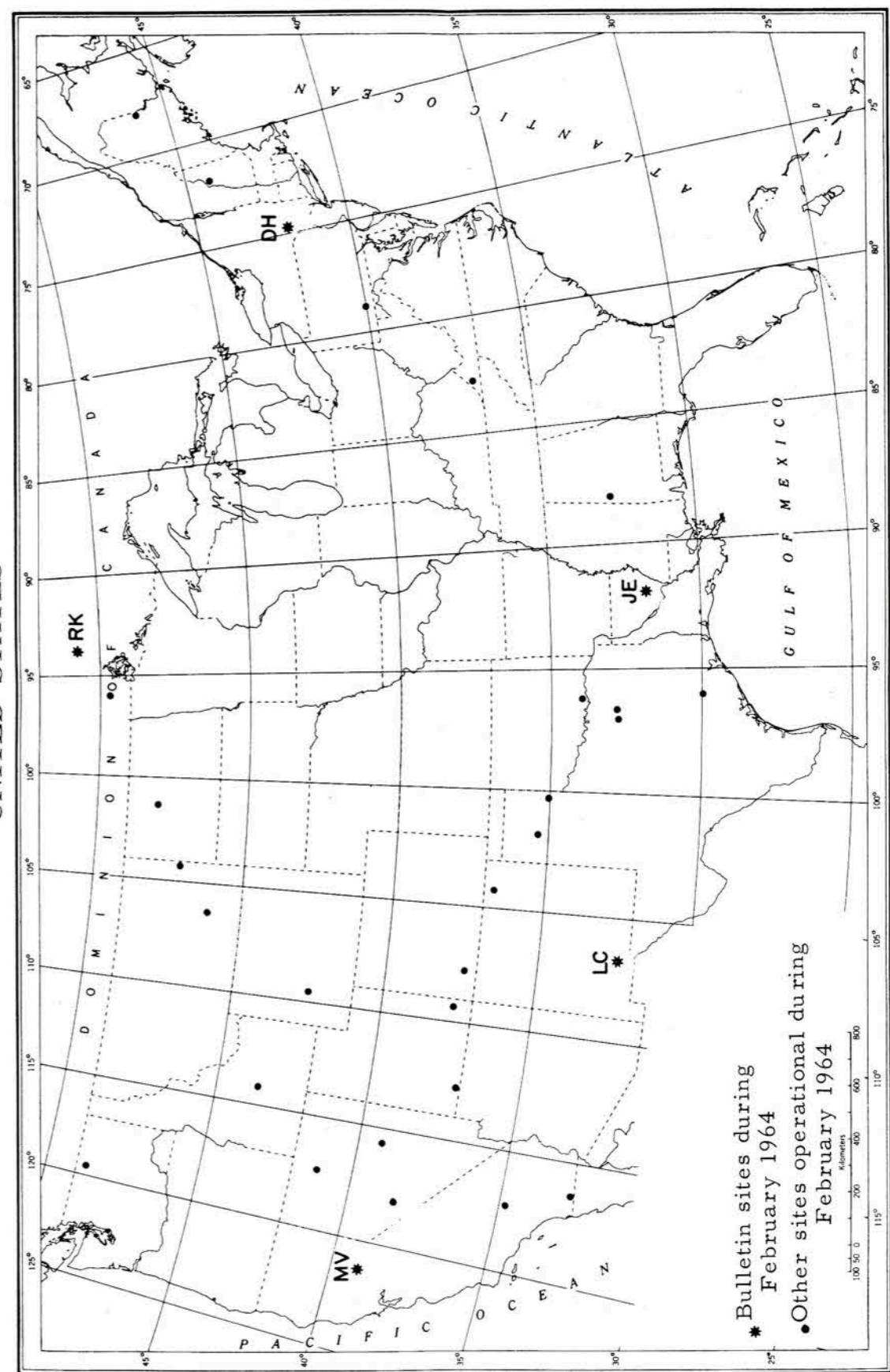


Figure 4. LRSM sites inside the continental United States and Canada during February 1964

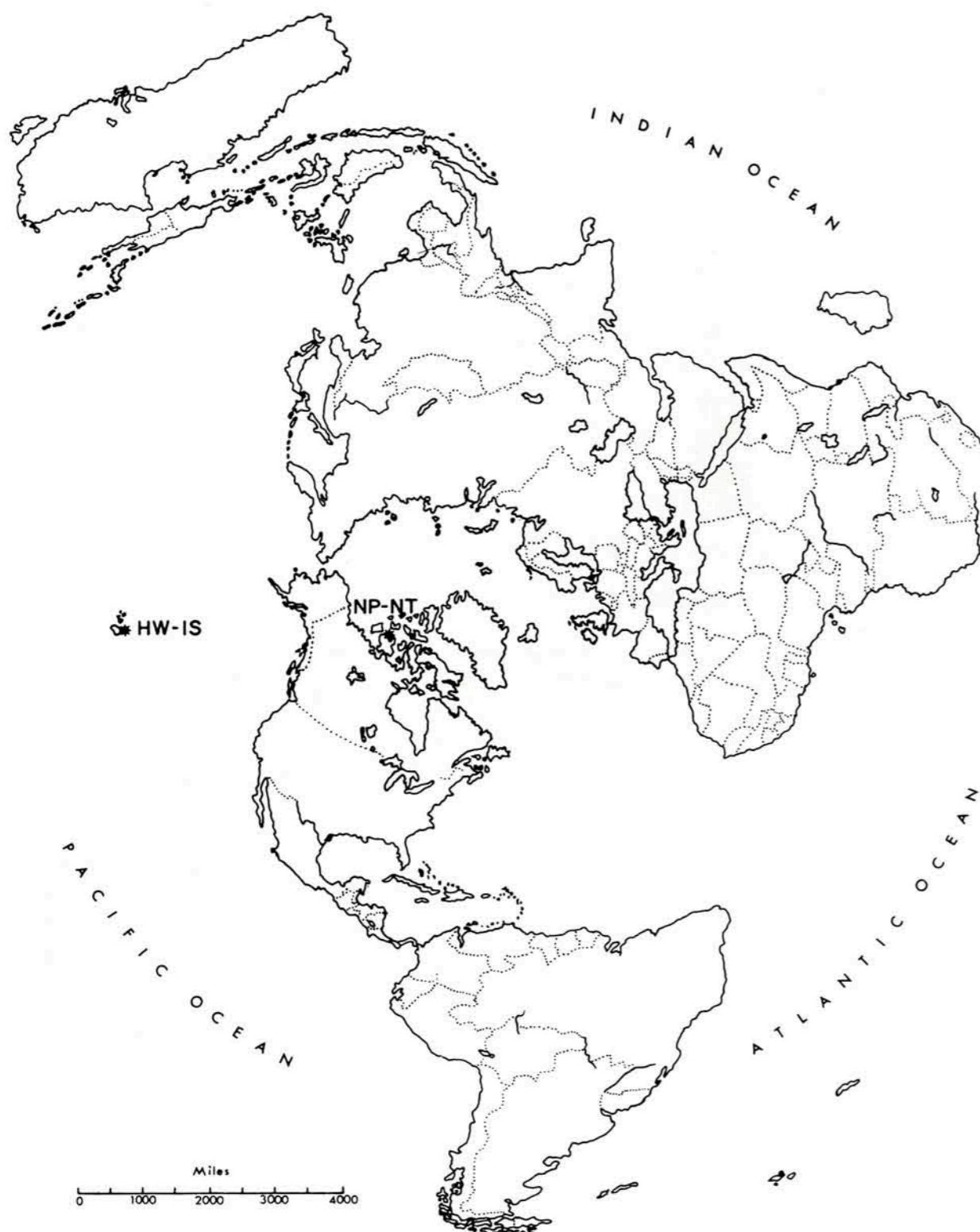


Figure 5. LRSM bulletin sites outside the continental United States during February 1964

3.1.4 Time

The arrival time of each phase is given in Greenwich Civil Time (GCT). Arrival times indicate that time at which phase motion is first detected. Arrival time is measured to the nearest 1/10 second for initial arrivals recorded by the short-period system, and to the nearest second for all other phases on both systems. The direction of motion for iP arrivals is also noted in this field; either C (compression) or D (dilation) will appear immediately to the right of the tenths of second column.

3.1.5 Inst

The seismograph channel from which the data were taken. The symbols used to designate the seismograph channels are given as follows:

Z	Benioff short-period vertical
JZ	Johnson-Matheson short-period vertical
R ¹	Short-period radial (horizontal)
T ¹	Short-period transverse (horizontal)
LZ	Sprengnether long-period vertical
LR ¹	Sprengnether long-period radial (horizontal)
LT ¹	Sprengnether long-period transverse

3.1.6 Per

The period, in seconds, of each phase. When possible, the period is determined from the first full cycle of the phase; otherwise it is taken as the average period of the first three cycles. The digits 999.9 appearing in the period columns indicate that the signal period could not be measured.

3.1.7 Amp

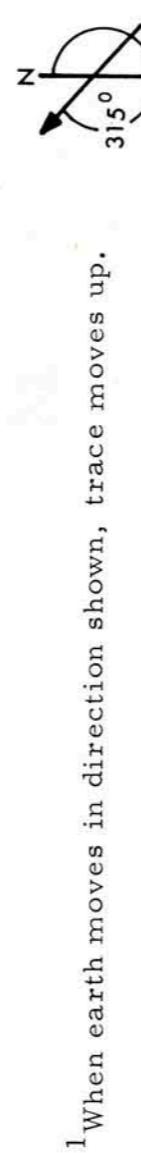
This column contains the amplitude of the phase given in millimicrons ($m\mu$) of ground displacement. The digit in parenthesis indicates the power to which the multiplier 10 is to be raised. For instance:

$$\begin{aligned} 30.0 (2) &= 30 \times 10^2 = 3000 m\mu \\ 30.0 (1) &= 30 \times 10^1 = 300 m\mu \\ 30.0 (0) &= 30 \times 10^0 = 30.0 m\mu \end{aligned}$$

¹Table 1 gives the instrument orientation of the horizontal seismometers.

Table 1. LRSM bulletin site information

Site code	Site designation	Horizontal seismometer orientation (azimuth from true north in degrees)						Elevation in km	Rock type
		Radial	Trans-	Site coordinates in deg, min, sec	Site coordinates in deg, min, sec	Trans-	Site coordinates in deg, min, sec		
LC NM	Las Cruces, New Mexico	124	214	N 32 24	W 106 58	08	N 32 24	1.59	Limestone
RK ON	Red Lake, Ontario	058	148	N 50 50	W 93 40	20	N 50 50	0.37	Granite
MV CL	Marysville, California	295	025	N 39 12	W 121 17	47	N 39 12	0.18	Volcanics
HW IS	Hawaii Island	235	325	N 19 58	W 155 42	20	N 19 58	0.71	Basalt
JE LA	Jena, Louisiana	112	202	N 31 47	W 92 00	05	N 31 47	0.05	Sandstone
NP NT	Mould Bay, Canada	356	086	N 76 15	W 119 22	08	N 76 15	0.06	Alluvium
DH NY	Delhi, New York	095	185	N 42 14	W 74 53	18	N 42 14	0.65	Sandstone



¹When earth moves in direction shown, trace moves up.

All amplitudes are corrected for instrument response and are reported as one-half the peak-to-peak value. Amplitudes are measured from the largest pulse within the first 3 or 4 cycles whenever possible. The digits 99.9 (9) appearing in the amplitude columns indicate either a "clipped" signal or a trace amplitude too large to measure. When amplitudes are not calculated because of insufficient calibration data, the amplitude columns are left blank.

3.1.8 Dist

This is the distance from the recording station to the epicenter. All reported distances are calculated based on geocentric coordinates. Distance is given to the nearest 1/10 of a degree for distances up to 6 degrees. Beyond 6 degrees, calculations are made to the nearest 1 degree. Distances computed for unassociated data are determined from the S-P intervals. In some instances, surface groups are recorded which have traveled the major arc from the epicenter to the station. In such cases, the major arc distance is given.

3.1.9 Mag

The magnitudes provided are body wave magnitudes, m_b , as defined by Gutenberg and Richter.² They are determined only from the short-period vertical component of the P phase (initial arrival). The following equation is used:

$$m_b = \log_{10} (A/T) + Q$$

where

m_b = body wave magnitude

A = 1/2 p-p earth amplitude of P phase, in microns

T = Period of P phase, in seconds

Q = Depth-distance factor for PZ given by Gutenberg and Richter², for distances greater than 16°.

Magnitude computations for distances less than 16° are based on AFTAC extensions of the "Q" tables. Points from 10° to 16° were read from a curve in the Gutenberg-Richter paper, and an inverse cube relationship was used to extrapolate from 2° to 10°.

²Gutenberg, B., and Richter, C. F., 1956, Magnitude and energy of earthquakes: Ann. Geofis. vol. 9, pp. 1-15.

The average magnitude (sum of station magnitudes/number of stations) is listed on the last line of an epicenter print-out.

When possible, magnitudes are computed for foreshocks and aftershocks as well as for the main event.

3.2 ADDITIONAL INFORMATION

The notation FS located between the phase and the time columns calls attention to a foreshock recorded before the main event.

The notation AS located between these columns calls attention to an aftershock recorded after the main event.

4. INTERPRETATION OF UNITED STATES COAST AND GEODETIC SURVEY DATA

The epicenter data reported by the USC&GS precedes each list of associated phases. This information appears as follows:

Line 1 (from left to right)

First group:	Day of the month
Second group:	Origin time of the event
Third group:	Geographic coordinates of the epicenter
Fourth group:	Geographic description

NOTE

An asterisk (*) following the origin time indicates epicenters believed accurate to $1/2^\circ$ in latitude and longitude and to 50 km in depth.

Line 2 (from left to right)

First group:	Depth (h) of the hypocenter in kilometers
Second group:	Magnitude (MAG) as determined by Pasadena (PAS), Berkeley (BRK), Palisades (PAL), or USC&GS (CGS)

NOTE

MAG (CGS) is m_b of Gutenberg and Richter from the P phase only. The magnitude quoted is an average value determined from data forwarded by cooperating standard stations and other observatories.

5. REMARKS

The Geotechnical Corporation routinely receives and preprocesses data collected from the 40 field stations of the LRSM Program. Information on background levels, magnification levels, operational procedures, available records, and other data can be provided to VELA-UNIFORM participants and other interested organizations. Requests for such information should be made to the attention of:

HQ USAF (AFTAC)
VELA Seismological Center
Washington, D. C. 20333

ATTN: Captain Nicholas A. Orsini

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG		
1	01	29 52.*	32.3 N 115.6 W	BAJA CALIFORNIA						
			H =014 KM							
1	01	47 52.1	51.8 N 170.8 W	FOX ALEUTIAN ISLANDS						
			H =034 KM MAG	CGS	5.20-					
1	MV	eP	01 54 54.4	Z	0.8	5.4 (0)	36.0	4.47		
		eS	02 00 44	LR	23	4.9 (2)				
		eLQ	02 03 35	LT	15	1.2 (3)				
		eLR	02 09 09	LZ	18	1.1 (3)				
1	RK	eP	01 56 13.5	Z	1.0	10.0 (0)	46.0	4.73		
		e	01 56 19	Z	1.2	5.2 (1)				
		eS	02 03 10	LR	20	3.7 (2)				
		eSS	02 06 40	LR	21	9.1 (2)				
		eLQ	02 08 10	LR	15	5.7 (2)				
		eLR	02 12 00	LZ	25	99.9 (9)				
1	LC	eP	01 56 43.0	Z	0.9	2.4 (1)	50.0	5.13		
		eP	01 56 45	LZ	10	3.7 (2)				
		eS	02 04 15	LR	24	6.6 (2)				
		eSS	02 07 37	LR	22	7.6 (2)				
		eL	02 11 30	LR	27	9.0 (2)				
1	DH	eP	01 58 04.5	Z	0.5	7.4 (0)	61.0	5.04		
		e	01 58 13	Z	1.0	3.9 (1)				
		eL	02 21 10	LZ	22	1.2 (3)				
1	HW	eL	02 01 42	LR	18	3.9 (3)	34.0			
					AVG.	4.88				
1	02	34 06.0	40.7 N 145.0 E	SOUTH OF HOKKAIDO, JAPAN						
			H =034 KM MAG	CGS	4.70-					
1	LC	eP	02 46 23.5	Z	0.9	4.8 (0)	82.0	4.53		
1	09	20 04.3	27.5 N 141.4 E	BONIN ISLANDS REGION						
			H =069 KM MAG	CGS	4.50-					
1	HW	eP	11 12 19.6	Z	0.2	3.6 (1)	0.1			
		eS	11 12 24	R	0.3	9.2 (2)				
1	11	28 19.4	27.4 N 87.8 E	EASTERN NEPAL						
			H =033 KM MAG	CGS	4.80-					
1	11	47 28.8	03.5 S 78.0 W	PERU ECUADOR BORDER						
			H =033 KM MAG	CGS	5.00-					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	LC	eP	11 55 43.0	Z	0.8	2.9 (1)	45.0	5.20
1	13	17 03.7	11.3 S 162.1 E	SOLOMON ISLANDS REGION				
			H =050 KM MAG	CGS	4.60-			
1	LC	eP	18 02 06.7	Z	0.4	2.2 (0)	2.5	
		eS	18 02 41	T	0.4	9.1 (0)		
1	LC	eL	18 15 00	LZ	23	3.5 (2)		
1	19	51 43.*	33.0 N 115.9 W	IMPERIAL COUNTY, CALIF.				
			H =014 KM					
1	LC	eP	20 50 26.5	Z	0.3	1.1 (1)	1.4	
		eS	20 50 45	T	0.3	2.7 (1)		
1	22	53 15.0	19.4 N 66.3 W	OFF N. COAST PUERTO RICO				
			H =037 KM MAG	CGS	4.50-			
1	DH	eP	22 58 46.8	Z	1.0	2.9 (1)	24.0	4.74
		e	22 58 57	Z	0.8	4.9 (1)		
		eS	23 02 42	T	1.2	7.5 (1)		
		eS	23 02 42	LR	25	6.1 (2)		
		eL	23 04 21	LR	35	1.0 (3)		
1	LC	eP	23 00 33.4	Z	0.9	2.1 (1)	38.0	4.95
		e	23 00 49	Z	0.9	6.4 (1)		
1	MV	eP	23 02 15.4	Z	0.6	4.4 (0)	51.0	4.61
		e	23 02 29	Z	1.0	8.8 (0)		
		eL	23 19 20	LR	18	3.7 (2)		
					AVG.	4.76		
2	01	48 16.*	61.6 N 149.7 W	KENAI PENINSULA				
			H =033 KM MAG	CGS	3.80-			
2	02	48 17.0	19.9 S 177.4 W	FIJI ISLANDS REGION				
			H =334 KM MAG	CGS	4.10-			
2	LC	eP	03 00 18.5	Z	1.0	2.5 (0)	85.0	4.00
2	05	41 13.0	21.9 S 169.5 E	LOYALTY ISLANDS REGION				
			H =033 KM					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
2	HW	eP	05 44 22.2	Z	0.2	7.8 (1)	0.1				eLR	09 37 47	LZ	32	8.3 (2)			
		eS	05 44 26	R	0.2	6.7 (2)					eL	09 41 20	LR	24	7.1 (2)			
2	06 31 54.4		06.0 N 82.5 W	OFF SOUTH COAST OF PANAMA	H =044 KM MAG	4.80-	CGS				eL	09 41 20	LT	24	2.4 (2)			
											eL	09 41 20	LZ	25	8.2 (2)			
2	LC	eP	06 38 41.3	Z	1.3	4.0 (1)	35.0	5.19	2	LC	ePP	09 13 33	Z	1.0	2.5 (0)	107.0		
		eP	06 38 42	LZ	18	1.8 (2)					ePS	09 23 00	LR	20	4.0 (2)			
		ePP	06 40 05	LZ	16	7.1 (2)					eLR	09 43 55	LZ	22	1.8 (2)			
		ePP	06 40 07	Z	1.5	2.1 (1)			2	HW	eS	09 16 08	LR	25	1.4 (3)	75.0		
		e	06 41 32	Z	2.0	3.2 (1)					eLQ	09 26 17	LR	24	6.7 (2)			
		eS	06 43 47	LR	25	4.3 (2)					eLR	09 29 50	LZ	25	1.1 (3)			
		e	06 44 25	LR	22	1.1 (3)					eL	09 32 06	LR	24	1.5 (3)			
		eL	06 46 26	LZ	21	4.2 (2)					eL	09 32 06	LT	24	1.1 (3)			
		eLR	06 48 35	LZ	30	1.2 (3)					eL	09 32 06	LZ	24	1.9 (3)			
		eL	06 50 30	LR	24	1.3 (3)			2	DH	eLQ	09 38 18	LR	33	1.4 (3)	112.0		
		eL	06 50 30	LT	25	3.3 (2)					eLR	09 54 05	LZ	28	1.3 (3)			
		eL	06 50 30	LZ	30	1.2 (3)					eL	09 57 32	LR	24	1.3 (3)			
2	DH	eL	06 47 45	LR	34	3.0 (3)	37.0				eL	09 57 32	LT	22	6.5 (2)			
		eL	06 51 15	LR	24	3.1 (3)					eL	09 57 32	LZ	24	1.2 (3)			
		eL	06 51 15	LT	22	1.0 (3)			2	LC	eP	11 49 42.0	Z	0.6	0.5 (0)			
		eL	06 51 15	LZ	23	9.3 (2)				2	12 15 10.*	43.2 N 111.6 W	EASTERN IDAHO					
2	MV	eS	06 47 47	LR	24	7.6 (2)	48.0					H =033 KM						
		eLR	06 55 49	LZ	27	7.5 (2)			2	MV	eP	12 15 43.5	Z	0.4	1.2 (0)	2.8		
2	HW	eLR	07 05 02	LZ	27	7.6 (2)	72.0				eS	12 16 17	T	0.5	6.0 (0)			
									2	LC	eP	14 31 16.5	Z	0.3	0.4 (0)			
2	06 58 16.5		39.1 N 114.2 W	EASTERN NEVADA	H =033 KM				2	LC	eL	14 33 13	T	0.7	1.7 (0)			
									2	DH	eP	16 26 21.0	Z	0.9	2.3 (1)			
2	MV	eP	07 01 08.0	Z	0.3	1.3 (0)			2	LC	eP	21 25 18.6	Z	0.2	1.5 (1)	1.4		
											eS	21 25 36	T	0.2	8.8 (0)			
2	08 22 44.1		35.1 N 99.7 W	WESTERN OKLAHOMA	H =033 KM				3	01 46 27.9	13.0 N 88.0 W	EL SALVADOR						
											H =061 KM MAG	4.10-	CGS					
2	LC	eP	08 24 40.2	Z	0.2	0.5 (0)	6.0	3.87	3	02 00 47.3	14.4 N 92.6 W	OFF COAST CHIAPAS, MEXICO						
		eL	08 26 03	R	0.3	1.8 (0)					H =034 KM MAG	4.30-	CGS					
2	08 54 48.3		24.2 N 122.6 E	NEAR EAST COAST OF TAIWAN	H =028 KM MAG	5.00-	CGS		3	LC	eP	02 05 40.5	Z	0.9	1.1 (1)	22.0	4.28	
											eL	02 13 33	LR	18	5.9 (2)			
2	MV	eP	09 08 01.3	Z	0.7	1.7 (0)	93.0	4.58	3	02 46 06.*	31.1 N 114.8 W	GULF OF CALIFORNIA						
		eS	09 19 14	LR	22	2.9 (2)					H =014 KM MAG	4.00-	CGS					
		eLQ	09 32 53	LT	26	4.9 (2)												

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	LC	eP	02 47 42.9	Z	0.7	3.7 (0)	7.0	4.46
	eL		02 49 32	R	0.8	7.5 (0)		
	eL		02 49 55	LR	17	6.7 (2)		
3	05 55 44.9		43.2 N 111.1 W	IDAHo WYOMING BORDER				
			H =033 KM MAG	4.10-		CGS		
3	06 48 49.6		11.5 N 61.7 W	WINDWARD ISLANDS REGION				
			H =093 KM MAG	4.10-		CGS		
3	08 33 49.*		30.8 N 114.1 W	GULF OF CALIFORNIA				
			H =014 KM					
3	LC	eP	08 35 28.9	Z	0.8	2.3 (0)	7.0	4.19
	eL		08 37 25	R	0.9	4.7 (0)		
	eL		08 37 30	LZ	16	2.3 (2)		
3	08 39 57.*		30.7 N 114.6 W	GULF OF CALIFORNIA				
			H =014 KM					
3	LC	eP	08 41 38.4	Z	0.7	6.8 (0)	7.0	4.72
	eL		08 43 30	R	0.8	5.2 (0)		
	eL		08 43 35	LZ	16	7.0 (2)		
3	08 43 36.3		31.5 N 114.2 W	GULF OF CALIFORNIA				
			H =014 KM MAG	4.60-		CGS		
3	LC	eP	08 45 10.0	Z	0.7	7.4 (0)	7.0	4.76
	eP		08 45 33	LZ	21	6.4 (2)		
	eL		08 46 59	LZ	27	99.9 (9)		
	eL		08 47 05	R	0.9	7.0 (1)		
3	MV	eP	08 46 10.2	Z	0.9	5.5 (0)	10.0	4.99
	e		08 47 00	Z	1.0	7.0 (0)		
	eL		08 48 50	LZ	19	4.2 (3)		
	eL		08 49 07	T	1.7	5.6 (1)		
3	DH	eLQ	09 01 00	LT	15	5.8 (3)	33.0	
	eLR		09 03 30	LZ	15	7.6 (3)		
3	HW	eL	09 01 00	LZ	24	1.1 (3)	39.0	
					Avg.		4.87	
3	09 15 42.*		31.3 N 114.2 W	GULF OF CALIFORNIA				
			H =014 KM					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	LC	eP	09 17 20.0	Z	0.7	7.4 (0)	7.0	4.76
	eL		09 19 17	R	1.0	3.2 (1)		
	eL		09 19 21	LZ	14	2.9 (3)		
3	10 21 20.3		39.8 N 120.1 W	LASSEN COUNTY, CALIFORNIA				
			H =015 KM MAG	3.40-		CGS		
3	MV	eP	10 21 41.2	Z	999.9	99.9 (9)	1.1	
3	13 51 07.4		31.3 N 114.3 W	GULF OF CALIFORNIA				
			H =014 KM MAG	4.20-		CGS		
3	LC	eP	13 52 44.6	Z	0.6	1.6 (1)	7.0	5.18
	e		13 53 23	Z	0.9	2.5 (1)		
	eL		13 54 35	R	0.9	1.6 (1)		
	eL		13 54 40	LZ	14	2.4 (3)		
3	MV	eL	13 56 33	Z	1.3	1.4 (1)	10.0	
	eL		13 56 38	LZ	18	4.6 (2)		
3	17 34 52.8		17.2 N 98.8 W	GUERRERO, MEXICO				
			H =033 KM MAG	4.10-		CGS		
3	LC	eL	17 45 36	LZ	12	7.0 (2)	17.0	
3	18 54 33.*		49.1 N 155.7 E	KURILE ISLANDS REGION				
			H =033 KM MAG	4.30-		CGS		
3	18 54 49.*		49.6 N 156.7 E	KURILE ISLANDS				
			H =040 KM MAG	4.60-		CGS		
3	MV	eP	19 04 30.0	Z	0.6	6.7 (0)	57.0	4.85
3	LC	eP	19 05 59.0	Z	0.5	3.7 (0)	70.0	4.65
							AVG.	4.75
3	LC	eP	19 49 39.0	Z	0.3	0.9 (0)		
3	LC	eL	19 51 33	R	0.8	6.0 (0)		
3	20 05 47.6		23.2 S 179.8 W	SOUTH OF FIJI ISLANDS				
			H =509 KM MAG	4.40-		CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	LC	eP eS	20 09 48.9 20 10 06	Z R	0.4 0.4	2.4 (1) 4.7 (0)	1.2	
3	21	04 10.*	34.6 N 136.3 E H = 047 KM MAG	SOUTHERN HONSHU, JAPAN 4.30- CGS				
3	LC	eP eS	22 00 35.9 22 01 07	Z R	0.2 0.6	1.1 (0) 5.1 (0)	2.4	
3	23	12 26.7	31.0 N 114.3 W H = 014 KM	GULF OF CALIFORNIA				
3	LC	eP eL eL	23 14 06.9 23 16 00 23 16 01	Z LZ R	0.6 19 0.9	5.2 (0) 4.5 (2) 1.6 (1)	7.0	4.67
4	LC	eP	02 24 51.2	Z	0.4	0.4 (0)		
4	LC	eL	02 26 45	R	0.7	1.2 (0)		
4	05	40 23.3	31.1 N 114.3 W H = 014 KM MAG	GULF OF CALIFORNIA 4.50- CGS				
4	LC	eP e e eL	05 42 01.6 05 42 15 05 42 40 05 44 00	Z LT Z T	0.6 28 0.7 0.7	1.0 (1) 3.8 (2) 1.7 (1) 2.5 (1)	7.0	4.97
4	MV	eP eL eL	05 42 48.0 05 45 34 05 45 43	Z LR R	0.8 24 1.3	1.0 (0) 8.1 (2) 1.3 (1)	10.0	4.34
4	RK	eP e eL	05 45 48.0 05 46 37 05 53 47	Z Z LT	0.9 1.3 21	3.8 (0) 1.9 (1) 4.4 (2)	25.0	4.09
4	DH	eL	05 59 50	LT	17	8.9 (2)	33.0	
					Avg.	4.46		
4	06	24 50.*	04.0 S 80.4 W H = 164 KM MAG	PERU ECUADOR BORDER 4.00- CGS				
4	RK	eP	06 34 11.8	Z	0.7	3.7 (0)	56.0	4.33
4	RK	eP	06 28 31.6	Z	0.2	1.1 (0)	2.5	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eS	06 29 03	R	0.3	8.4 (0)		
4		07 38 02.8	03.8 S 80.8 W H = 061 KM MAG	PERU ECUADOR BORDER 4.40- CGS				
4	RK	eP	07 47 32.3	Z	0.7	7.3 (0)	56.0	4.82
4	09	31 29.5	31.1 N 114.4 W H = 014 KM MAG	GULF OF CALIFORNIA 4.10- CGS				
4	LC	eP eL	09 33 09.4 09 35 03	Z T	0.7 0.8	1.8 (0) 3.6 (0)	7.0	4.15
4	10	02 21.4	48.2 N 154.4 E H = 040 KM MAG	KURILE ISLANDS 4.80- CGS				
4	MV	eP ePCP eS eL	10 12 16.9 10 13 06 10 20 28 10 29 35	Z Z LR LR	0.6 0.8 23 35	4.4 (0) 4.3 (0) 1.8 (2) 2.8 (2)		
4	RK	eP eL	10 13 00.6 10 38 37	Z LT	0.9 24	1.3 (1) 1.8 (2)	65.0	5.05
4	LC	eP e eL	10 13 42.8 10 13 55 10 37 03	Z Z LZ	1.1 1.2 32	6.2 (0) 9.8 (0) 2.6 (2)	72.0	4.53
4	DH	eP	10 14 28.0	Z	0.8	6.0 (0)	80.0	4.54
4	HW	eL	10 24 47	LT	25	5.6 (2)	49.0	
							AVG.	4.69
4	10	17 00.*	50.3 N 177.8 E H = 040 KM MAG	RAT ALEUTIAN IS. REGION 4.20- CGS				
4	11	27 30.*	22.4 S 66.1 W H = 201 KM MAG	JUJUY PROVINCE, ARGENTINA 4.30- CGS				
4	RK	eP	11 39 02.0	Z	0.6	4.1 (0)	77.0	4.34
4	DH	eP eS	16 12 12.7 16 12 33	Z R	0.3 0.4	1.1 (1) 24.9 (4)		
4	DH	eP eS	17 15 30.7 17 15 50	Z R	0.2 0.4	4.6 (0) 1.5 (1)		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
4	DH	eP	18 05 06.9	Z	0.2	1.3 (1)	1.7	
		eS	18 05 30	R	0.5	3.2 (1)		
4	LC	eP	20 57 31.2	Z	0.3	1.5 (1)	1.5	
		eS	20 57 51	R	0.4	2.6 (1)		
4	RK	eP	21 00 45.3	Z	0.2	1.1 (0)		
4	RK	e	21 02 06	T	0.4	1.9 (1)		
4	RK	eL	21 02 38	T	0.4	3.2 (1)		
4	DH	eP	21 06 00.5	Z	0.3	7.3 (0)	0.6	
		eS	21 06 08	T	0.4	2.8 (1)		
4	HW	eP	21 29 53.0	Z	0.2	3.9 (1)	0.5	
		eS	21 30 01	R	0.2	1.2 (2)		
4	RK	eP	21 33 30.5	Z	0.2	2.3 (0)	2.4	
		eS	21 34 00	R	0.3	2.7 (1)		
4								Avg.
4								5.09
4	22 52 04.*		05.6 S 105.5 E	SOUTHERN SUMATRA				
			H =033 KM	MAG	5.00-	CGS		
4	MV	eP†	23 11 06.5	Z	1.0	7.0 (0)	126.0	
5	02 38 14.*		20.5 S 68.8 W	NORTHERN CHILE				
			H =033 KM	MAG	4.10-	CGS		
5	04 13 27.*		14.3 S 73.7 W	SOUTHERN PERU				
			H =166 KM	MAG	3.10-	CGS		
5	09 51 36.*		15.9 S 174.1 W	TONGA ISLANDS REGION				
			H =104 KM	MAG	3.70-	CGS		
5	11 18 16.3		30.4 S 177.9 W	KERMADEC ISLANDS				
			H =114 KM	MAG	4.90-	CGS		
5	MV	eP	11 30 50.0	Z	1.2	1.7 (1)	87.0	4.92
5	11 30 15.7		36.5 N 141.0 E	CENTRAL HONSHU, JAPAN				
			H =046 KM	MAG	6.25-	PAS		
5	MV	eP	11 41 43.9	Z	0.9	9.6 (0)	73.0	4.79
		eP	11 41 46	LZ	14	1.1 (3)		
		e	11 41 57	Z	1.4	1.3 (2)		
		eL	12 03 39	LZ	25	3.1 (3)		
5	RK	eP	11 42 24.7	Z	0.9	2.1 (1)	81.0	5.08
		e	11 42 39	Z	1.0	4.4 (1)		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eS	11 52 28	L†	21	1.1 (3)		
		ePS	11 53 20	L†	21	1.1 (3)		
		eSS	11 57 50	L†	23	1.9 (3)		
5	LC	eP	11 42 53.5	Z	0.8	5.2 (0)	87.0	4.72
		e	11 43 48	Z	1.0	2.4 (1)		
5	HW	eS	11 47 59	L†	23	3.6 (3)	57.0	
		eL	11 54 29	LZ	22	3.7 (3)		
		eL	11 56 10	LZ	30	1.2 (4)		
5	DH	eSKS	11 54 30	LR	28	2.2 (3)	95.0	
		eSS	12 01 08	L†	22	1.0 (3)		
		eL	12 18 55	L†	26	2.7 (3)		
								Avg.
								5.09
5	11 35 18.6		19.7 S 179.8 W	Fiji Islands Region				
			H =414 KM	MAG	5.50-	CGS		
5	HW	eP	11 43 04.6	Z	1.0	5.7 (2)	46.0	5.89
		eS	11 49 14	L†	20	2.8 (3)		
5	MV	tP	11 46 45.4C	Z	1.0	1.5 (2)	80.0	5.64
		eP	11 46 46	LZ	26	5.7 (2)		
		e	11 51 05	LR	19	1.6 (3)		
		e	11 51 11	R	4.6	5.0 (2)		
		e	11 51 35	R	4.4	4.4 (2)		
		eS	11 56 14	T	2.8	1.5 (2)		
		eS	11 56 15	LR	20	8.5 (2)		
		eSS	12 01 21	L†	20	2.5 (3)		
5	LC	eP	11 47 17.0	Z	0.7	99.9 (9)	87.0	
		e	11 56 27	Z	0.7	2.4 (0)		
								Avg.
								5.76
5	RK	eP	11 58 13.7	Z	0.8	6.0 (0)		
5	12 48 40.9		16.6 S 179.6 W	Fiji Islands Region				
			H =475 KM	MAG	4.00-	CGS		
5	15 23 24.*		23.8 N 126.4 E	Ryukyu Islands Region				
			H =045 KM	MAG	4.20-	CGS		
5	16 15 08.1		03.8 S 141.3 E	New Guinea				
			H =110 KM	MAG	4.50-	CGS		
5	16 21 50.3		03.7 S 140.0 E	Western New Guinea				
			H =055 KM					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5	LC	eP eS	17 12 42.0 17 13 20	Z T	0.3 0.3	6.7 (0) 1.5 (1)	3.0	
5	19 45 58.0	35.1 N 118.8 W	KERN COUNTY, CALIFORNIA	H = 014 KM MAG	4.10-	CGS		
5	MV	eP eL	19 47 08.6 19 48 12	Z R	0.5 0.5	3.3 (0) 7.9 (0)	4.6	3.92
5	20 18 10.5	35.4 N 118.6 W	KERN COUNTY, CALIFORNIA	H = 014 KM				
5	MV	eP eL	20 19 17.8 20 20 20	Z T	0.4 0.5	1.8 (0) 5.0 (0)	4.4	
5	21 13 19.0	23.7 S 68.8 W	NORTHERN CHILE	H = 090 KM MAG	4.60-	CGS		
5	RK	eP	21 52 44.5	Z	0.9	1.3 (1)		
5	RK	e	21 53 08	Z	1.0	1.9 (1)		
5	RK	e	21 53 19	Z	0.8	1.6 (1)		
5	23 54 37.8	52.9 N 168.4 W	FOX ALEUTIAN ISLANDS	H = 045 KM MAG	4.40-	CGS		
6	04 35 56.8	06.8 N 73.1 W	NORTHERN COLOMBIA	H = 140 KM MAG	5.00-	CGS		
6	DH	eP	04 42 41.5	Z	0.5	4.0 (1)	35.0	5.48
6	LC	eP eSCP	04 43 22.7 04 48 57	Z Z	0.9 0.7	6.6 (1) 1.8 (0)	40.0	5.35
6	RK	eP	04 44 15.9	Z	0.6	1.7 (1)	47.0	4.89
6	MV	eP	04 45 08.0	Z	0.6	4.4 (0)	54.0	4.51
						AVG.	5.05	
6	07 43 40.4	52.2 N 171.2 W	FOX ALEUTIAN ISLANDS	H = 033 KM MAG	4.40-	CGS		
6	MV	eP eL	07 50 45.5 07 58 47	Z LZ	0.8 25	2.1 (0) 4.3 (2)	36.0	4.07

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	RK	eP eL	07 52 02.0 08 06 27	Z LT	0.7 21	1.1 (1) 2.6 (2)	46.0	4.94
6	LC	eP	07 52 31.2	Z	0.9	1.8 (0)	50.0	4.02
6	HW	eLR	07 59 40	LZ	25	7.3 (2)	34.0	
							Avg.	4.34
6	07 53 48.8	37.5 N 113.2 W	SOUTHWESTERN UTAH	H = 015 KM				
6	08 00 35.0	27.4 N 144.3 E	BONIN ISLANDS REGION	H = 040 KM MAG	4.60-	CGS		
6	MV	eP	08 12 31.0	Z	1.0	5.2 (0)	76.0	4.50
6	RK	eP e	08 13 16.7 08 13 26	Z Z	0.9 0.8	9.8 (0) 1.2 (1)	87.0	4.96
							Avg.	4.73
6	08 02 28.1	42.1 N 112.4 W	SOUTHERN IDAHO	H = 033 KM				
6	09 40 16.*	47.8 N 152.4 E	KURILE ISLANDS	H = 065 KM MAG	4.30-	CGS		
6	MV	eP e eS	10 15 20.8 10 15 26 10 15 33	Z Z R	0.2 0.3 0.4	1.6 (0) 7.2 (0) 4.2 (0)		
6	LC	eP	11 12 07.4	Z	1.0	2.4 (0)		
6	11 13 35.4	42.0 N 112.4 W	SOUTHERN IDAHO	H = 033 KM				
6	13 07 25.2	55.7 N 155.8 W	KODIAK ISLAND REGION	H = 033 KM MAG	6.75-7.00 PAS			
6	MV	eP eP e ePP e eL eSCS	13 13 15.8 13 13 16 13 13 40 13 14 15 13 18 23 13 21 30 13 24 02	Z LZ Z Z Z R R	1.0 999.9 1.3 1.7 2.3 13.0 3.1	3.1 (1) 99.9 (9) 1.0 (2) 2.6 (2) 1.7 (2) 3.9 (4) 7.5 (2)	28.0	5.04
6	HW	eP	13 14 21.5	Z	0.9	6.5 (1)	36.0	5.49

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eP	13 14 22	LZ	999.9	99.9 (9)		
		e	13 15 05	Z	1.4	4.0 (2)		
		e	13 19 50	LZ	999.9	99.9 (9)		
		eSS	13 22 10	LR	999.9	99.9 (9)		
		eL	13 23 25	LZ	999.9	99.9 (9)		
6	RK	eP	13 14 27.0	Z	0.9	4.7 (1)	36.0	5.35
6		ePP	13 16 01	Z	1.9	6.7 (2)		
6	LC	eP	13 15 08.5	Z	1.5	1.7 (2)	41.0	5.61
		e	13 15 57	Z	1.5	3.0 (2)		
		eSCP	13 20 59	Z	2.6	3.5 (2)		
		eL	13 26 55	T	20.0	7.6 (4)		
6	DH	eP	13 16 33.2	Z	0.9	5.5 (1)	52.0	5.52
		eP	13 16 34	LZ	999.9	99.9 (9)		
		ePP	13 18 37	LZ	22	99.9 (9)		
		eS	13 23 57	R	4.0	3.5 (3)		
		eS	13 23 57	LR	999.9	99.9 (9)		
		eSS	13 26 15	LR	999.9	99.9 (9)		
		eSCS	13 26 20	R	4.0	2.6 (3)		
					Avg.		5.43	
6			13 13 45.2	55.8 N 155.9 W	KODIAK ISLAND REGION			
				H =033 KM MAG	5.40-	CGS		
6	MV	eP	13 19 37.0	Z	1.1	3.6 (1)	28.0	5.05
6	HW	eP	13 20 41.0	Z	1.0	1.2 (2)	36.0	5.73
6	RK	eP	13 20 54.0	Z	1.0	8.2 (1)	36.0	5.55
		e	13 20 54	LT	999.9	99.9 (9)		
		e	13 27 13	R	3.1	2.3 (3)		
6	LC	eP	13 21 29.0	Z	1.1	9.2 (1)	41.0	5.46
		e	13 21 36	Z	1.2	9.7 (1)		
		e	13 23 16	Z	3.3	1.0 (3)		
		ePPP	13 23 31	Z	3.2	7.7 (2)		
6	DH	eP	13 23 05.5	Z	1.3	1.6 (2)	52.0	5.83
		ePCP	13 24 15	Z	1.3	1.1 (2)		
		ePP	13 24 53	Z	1.9	3.4 (2)		
		eL	13 34 00	R	3.5	2.1 (3)		
		eL	13 35 51	R	4.5	2.4 (4)		
					Avg.		5.52	
6	HW	eP	13 50 42.5	Z	0.2	1.9 (1)	4.3	
6		eS	13 51 36	R	0.5	1.9 (2)		
6	HW	eP	13 57 12.6	Z	0.3	1.5 (1)	3.2	
6		eS	13 57 55	R	0.4	9.3 (1)		
6			14 13 10.8	04.0 S 103.9 W	W. OF GALAPAGOS ISLANDS			
				H =033 KM MAG	5.00-	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	LC	eP	14 20 12.5	Z	1.2	2.5 (1)	36.0	4.96
6	MV	eP	14 21 32.0	Z	1.4	3.3 (1)	46.0	5.12
						Avg.		5.04
6			14 43 45.0	18.8 S 169.3 E	NEW HEBRIDES ISLANDS			
				H =237 KM MAG	4.50-	CGS		
6	LC	eP	15 00 32.6	56.1 N 154.3 W	KODIAK ISLAND REGION			
				H =033 KM MAG	4.40-	CGS		
6			15 08 09.2	Z	1.0	6.0 (0)	40.0	4.25
6			15 19 38.1	10.5 S 120.7 E	SUMBA ISLAND REGION			
				H =043 KM MAG	4.90-	CGS		
6	RK	eP	15 38 46.5	Z	0.7	2.1 (1)	131.0	
6		eSKP	15 42 04	Z	0.8	9.3 (0)		
6	DH	eP	15 39 14.5	Z	0.8	5.1 (1)	146.0	
6	LC	eL	15 38 26	T	0.4	1.7 (0)		
6	LC	eP	15 42 08.5	Z	1.3	7.2 (0)		
6			15 57 17.*	55.4 N 160.8 W	ALASKA PENINSULA			
				H =033 KM MAG	4.10-	CGS		
6			19 08 57.8	24.0 N 126.4 E	RYUKYU ISLANDS REGION			
				H =033 KM MAG	4.80-	CGS		
6	DH	eP	20 20 41.5	Z	1.0	4.7 (1)		
6	MV	eP	20 31 38.0	Z	0.3	5.2 (0)	1.3	
6		eS	20 31 54	T	0.3	1.0 (1)		
6			20 32 54.9	33.5 S 178.4 W	KERMADEC ISLANDS REGION			
				H =033 KM MAG	5.00-	CGS		
6	MV	eL	21 13 08	LZ	23	2.1 (2)	90.0	
6			20 51 06.*	39.2 N 31.0 W	AZORES REGION			
				H =033 KM MAG	4.30-	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	LC	eP	20 52 14.3	Z	0.2	9.0 (0)	1.4	
		eS	20 52 32	T	0.2	1.2 (1)		
6	RK	eP	21 47 40.9	Z	0.2	2.3 (0)	2.2	
		eS	21 48 09	R	0.3	1.2 (1)		
6	DH	eP	22 52 33.5	Z	1.4	1.4 (2)		
6	MV	eP	23 11 20.7	Z	0.2	1.6 (0)	1.5	
		eS	23 11 38	R	0.3	3.1 (0)		
7	00 10 43.*		56.0 N 155.5 W	KODIAK ISLAND REGION				
			H =033 KM MAG	4.30-		CGS		
7	MV	eP	01 22 30.5	Z	0.3	9.2 (0)	0.3	
		eS	01 22 36	R	0.3	2.8 (1)		
7	06 31 21.8		05.8 S 154.0 E	SOLOMON ISLANDS REGION				
			H =077 KM MAG	4.60-		CGS		
7	DH	eL	07 32 15	LR	31	2.0 (2)	124.0	
7	08 34 09.6		23.8 N 126.4 E	RYUKYU ISLANDS REGION				
			H =045 KM MAG	4.80-		CGS		
7	09 30 09.*		19.7 N 147.6 E	MARIANA ISLANDS REGION				
			H =033 KM MAG	4.60-		CGS		
7	09 34 27.2		14.8 S 167.5 E	NEW HEBRIDES ISLANDS				
			H =159 KM MAG	4.40-		CGS		
7	LC	eP	11 08 43.5	Z	1.0	4.8 (0)		
7	RK	eP	11 10 52.6	Z	0.8	3.2 (1)		
7	HW	eP	11 36 01.5	Z	0.3	4.5 (1)	0.9	
		eS	11 36 14	R	0.3	1.6 (2)		
7	11 57 19.*		17.2 N 93.0 W	CHIAPAS, MEXICO				
			H =245 KM MAG	3.70-		CGS		
7	12 58 53.6		39.8 N 142.8 E	OFF E. COAST HONSHU, JAPAN				
			H =045 KM MAG	5.40-		CGS		
7	MV	eP	13 10 03.0	Z	1.0	1.0 (1)	70.0	4.79

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eL	13 10 15	Z	1.3	9.8 (1)		
7	RK	eP	13 10 42.5	Z	1.0	3.2 (1)	77.0	5.28
		e	13 10 54	Z	0.9	4.3 (1)		
		eS	13 20 28	LR	25	3.6 (2)		
		eSS	13 25 20	LR	17	3.1 (2)		
		eL	13 34 18	LR	35	4.7 (2)		
7	LC	eP	13 11 18.5	Z	1.1	2.0 (1)	84.0	5.13
		e	13 11 30	Z	1.0	5.7 (1)		
7	DH	eP	13 11 57.0	Z	1.0	7.6 (1)	91.0	5.94
		eL	13 49 30	LR	25	6.6 (2)		
7	HW	eL	13 24 30	LZ	25	8.6 (2)	56.0	
						AVG.	5.28	
7	13 20 11.2		41.9 N 112.2 W	NORTHERN UTAH				
			H =033 KM					
7	MV	eP	19 30 56.0	Z	0.5	1.9 (0)	2.5	
		e	19 31 01	Z	0.5	2.1 (1)		
7	MV	eS	19 31 26	T	0.5	1.2 (1)	2.5	
7	LC	eP	20 51 51.6	Z	0.3	9.0 (0)	1.5	
		eS	20 52 12	T	0.3	1.7 (1)		
7	21 38 22.1		23.8 N 126.5 E	RYUKYU ISLANDS REGION				
			H =045 KM MAG	4.20-		CGS		
7	22 07 50.1		35.3 N 118.8 W	KERN COUNTY, CALIFORNIA				
			H =014 KM MAG	4.50-4.75		BKS		
7	MV	eP	22 08 57.7	Z	0.6	2.8 (1)	4.4	4.78
		eL	22 10 00	T	999.9	99.9 (9)		
7	LC	eP	22 10 20.5	Z	0.5	1.8 (0)	11.0	4.68
						AVG.	4.73	
7	22 10 52.7		35.4 N 118.7 W	KERN COUNTY, CALIFORNIA				
			H =014 KM MAG	4.50-4.75		BKS		
7	MV	eP	22 12 03.0	Z	0.7	4.0 (1)	4.3	4.87
		eL	22 13 02	T	0.8	1.8 (2)		
7	LC	eP	22 13 12.0	Z	1.0	9.6 (0)	10.0	5.19
		eL	22 17 08	Z	1.0	8.4 (0)		
7	RK	eP	22 16 06.5	Z	0.8	1.2 (1)	24.0	4.48
		eL	22 22 43	LR	13	8.1 (2)		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
							Avg.	4.84
7	23 12 53.0		19.2 S 168.6 E	NEW HEBRIDES ISLANDS				
			H = 042 KM MAG	4.00-		CGS		
8	00 29 48.*		19.0 S 180.0	FIJI ISLANDS REGION				
			H = 600 KM MAG	4.00-		CGS		
8	03 37 22.8		32.9 N 115.7 W	IMPERIAL COUNTY, CALIF.				
			H = 014 KM					
8	05 29 21.0		34.2 N 118.6 W	LOS ANGELES COUNTY, CALIF.				
			H = 014 KM MAG	4.10-		CGS		
8	MV eL		05 43 02	LZ	35	3.8 (2)		
8	06 22 09.2		44.3 N 114.6 W	IDAHO				
			H = 033 KM MAG	4.30-		CGS		
8	MV eP		06 24 04.5	Z	0.6	2.2 (0)	7.0	4.21
	e		06 24 13	Z	1.0	1.0 (1)		
	eL		06 25 52	Z	1.0	1.5 (1)		
8	06 28 08.*		45.4 N 151.4 E	KURILE ISLANDS				
			H = 033 KM MAG	4.30-		CGS		
8	06 28 25.9		36.8 N 50.3 E	NORTHERN IRAN				
			H = 033 KM MAG	4.70-		CGS		
8	RK eP		06 41 10.5	Z	0.8	1.1 (1)	87.0	5.08
8	09 55 59.9		09.2 N 126.2 E	E. COAST MINDANAO, P.I.				
			H = 057 KM MAG	5.70-		CGS		
8	09 59 17.4		14.4 N 91.3 W	NEAR SOUTH COAST GUATEMALA				
			H = 033 KM MAG	4.10-		CGS		
8	JE eP		10 03 21.4	Z	1.1	5.7 (1)	18.0	4.65

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	RK eP		10 04 18.3	Z	0.5	2.6 (0)	23.0	3.96
			H = 060 KM MAG	0.8		6.4 (0)	36.0	4.54
			Avg.					4.38
8	11 17 46.5		52.3 N 175.6 E	RAT ALEUTIAN ISLANDS				
			H = 060 KM MAG	5.40-		CGS		
8	HW eP		11 25 11.1	Z	0.6	1.6 (2)	39.0	6.03
	eL		11 35 17	LR	28	4.0 (3)		
8	MV eP		11 25 53.5	Z	0.6	4.4 (0)	45.0	4.45
	eSCP		11 31 22	Z	1.2	3.9 (1)		
	eS		11 32 43	LT	21	5.1 (2)		
	eSS		11 35 28	LT	28	1.2 (3)		
	eLQ		11 36 25	LR	20	2.2 (2)		
	eLR		11 39 05	LZ	27	4.7 (2)		
8	RK iP		11 26 57.0D	Z	0.8	4.8 (1)	53.0	5.54
	e		11 27 11	Z	0.8	4.8 (1)		
	ePCP		11 28 03	Z	0.8	2.1 (1)		
	eSCP		11 31 56	Z	0.9	3.4 (1)		
	eS		11 34 20	T	1.7	5.6 (1)		
	eS		11 34 25	LT	35	6.2 (2)		
	eSCS		11 36 38	T	1.3	3.5 (1)		
	eSCS		11 36 38	LR	18	2.7 (2)		
	eLQ		11 39 00	LR	20	4.5 (2)		
	eLR		11 43 05	LT	35	1.6 (3)		
8	LC eP		11 27 34.6	Z	0.9	1.6 (1)	58.0	5.07
	e		11 27 48	Z	1.0	2.6 (1)		
	ePCP		11 28 36	Z	0.9	1.8 (1)		
	eSCP		11 32 19	Z	1.0	4.7 (0)		
8	DH eP		11 28 40.0	Z	0.6	4.1 (1)	68.0	5.60
	eL		11 51 08	LR	34	1.1 (3)		
						Avg.		5.36
8	11 52 27.*		53.7 N 159.0 E	KAMCHATKA				
			H = 033 KM MAG	4.40-		CGS		
8	11 54 23.1		29.0 N 82.2 E	NEPAL				
			H = 033 KM					
8	DH eL		12 48 25	LZ	25	8.4 (2)	106.0	
8	DH eL		14 46 10	LZ	25	7.8 (2)		
8	RK eL		14 50 29	LT	32	2.3 (2)		
8	MV eL		15 03 00	LZ	35	2.5 (2)		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	17	12 05.*	28.6 N 44.0 W	NORTH ATLANTIC OCEAN				
			H =033 KM MAG	4.40± CGS				
8	LC	eP	17 21 28.9	Z	0.9	6.5 (0)	53.0	4.59
8	DH	eL	17 25 41	LZ	23	2.0 (3)	28.0	
8	RK	eL	17 32 00	LR	28	2.6 (2)	43.0	
8	GG	eL	17 34 10	LZ	25	2.9 (2)	47.0	
8	MV	eL	17 42 55	LZ	32	3.8 (2)	63.0	
8	RK	eP	17 12 11.1	Z	0.3	1.9 (0)	3.4	
	eS		17 12 54	R	0.4	4.4 (1)		
8	18	54 51.2	28.4 S 62.6 E	MASCARENE ISLANDS REGION				
			H =033 KM					
8	LC	eP	20 26 58.4	Z	0.3	4.4 (0)	3.0	
	eS		20 27 35	T	0.4	1.0 (1)		
8	22	16 08.7	45.9 N 151.3 E	KURILE ISLANDS				
			H =045 KM MAG	4.70± CGS				
8	RK	eP	22 27 07.2	Z	0.9	1.0 (1)	69.0	4.87
9	02	00 07.3	16.5 S 179.2 W	FIJI ISLANDS REGION				
			H =480 KM MAG	5.30± CGS				
9	HW	eP	02 07 25.5	Z	0.6	3.2 (2)	43.0	5.99
9	MV	eP	02 11 13.0	Z	1.2	1.2 (2)	77.0	5.29
	e		02 11 48	Z	1.4	2.4 (1)		
	epP		02 13 02	Z	1.5	1.9 (1)		
	ePP		02 14 14	Z	1.5	1.9 (1)		
9	LC	eP	02 11 42.9	Z	0.8	2.9 (1)	85.0	5.01
9	RK	eP	02 12 58.8	Z	0.7	5.0 (0)	100.0	5.06
	ePP		02 17 02	Z	1.0	2.5 (0)		
	e		02 18 14	Z	1.5	1.4 (1)		
					Avg.		5.33	
9	02	29 17.*	60.6 N 150.8 W	KENAI PENINSULA				
			H =099 KM MAG	3.80± CGS				
9	04	00 04.*	53.5 N 159.5 E	NEAR EAST COAST KAMCHATKA				
			H =040 KM MAG	4.20± CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
9	06	07 30.*	25.6 N 36.4 E	RED SEA				
			H =033 KM					
9	LC	eP	07 55 25.5	Z	0.8	1.4 (0)		
9	MV	e	08 55 10	LT	20	3.0 (2)		
9	MV	eL	09 10 00	LZ	18	2.2 (2)		
9	10	49 21.*	12.3 N 90.6 W	OFF SOUTH COAST GUATEMALA				
			H =033 KM MAG	3.90± CGS				
9	RK	eP	10 56 40.5	Z	0.7	1.2 (0)	39.0	3.76
9	11	03 04.*	41.5 N 128.2 W	OFF COAST OF N. CALIFORNIA				
			H =014 KM MAG	4.30± CGS				
9	MV	eP	11 04 25.7	Z	1.0	3.4 (0)	5.7	3.88
	eL		11 05 10	LZ	14	1.7 (2)		
	eL		11 05 31	T	1.0	3.0 (0)		
9	12	24 07.*	48.6 N 155.0 E	KURILE ISLANDS				
			H =033 KM MAG	4.00± CGS				
9	16	08 00.4	03.1 N 96.5 E	NEAR WEST COAST OF SUMATRA				
			H =033 KM MAG	5.10± CGS				
10	00	18 52.1	11.6 S 166.2 E	SANTA CRUZ ISLANDS				
			H =066 KM MAG	4.30± CGS				
10	00	26 30.*	06.3 N 125.8 E	SOUTH COAST MINDANAO, P.I.				
			H =033 KM MAG	5.40± CGS				
10	03	48 05.*	36.4 N 71.0 E	HINDU KUSH				
			H =249 KM MAG	4.10± CGS				
10	MV	eP	05 48 19.0	Z	0.3	2.0 (1)	3.1	
	eS		05 48 57	R	0.4	2.1 (1)		
10	HW	eP	07 06 45.7	Z	0.2	1.3 (2)	0.5	
	eS		07 06 54	T	0.3	4.1 (2)		
10	09	56 44.9	20.9 S 178.6 W	FIJI ISLANDS REGION				
			H =575 KM MAG	4.60± CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
10	LC	eP	10 08 23.0	Z	1.0	3.6 (0)	87.0	4.06
10	LC	eP	11 21 36.2	Z	0.7	1.2 (0)		
10			17 27 07.*	06.1 S 104.1 E H =126 KM MAG	5.50-	NEAR WEST COAST OF SUMATRA CGS		
10	MV	eP*	17 46 02.5	Z	0.9	5.6 (0)	128.0	
	eL		18 34 10	LZ	27	3.1 (2)		
10	RK	eP*	17 46 11.0	Z	0.7	3.6 (0)	133.0	
10	LC	eP*	17 46 26.5	Z	1.0	3.6 (0)	141.0	
10			17 27 58.*	06.1 S 104.1 E H =033 KM MAG	5.50-	NEAR S. COAST OF SUMATRA CGS		
10	MV	eP*	17 47 03.0	Z	0.9	1.8 (1)	128.0	
	e		17 47 16	Z	1.2	3.1 (1)		
10	RK	eP*	17 47 11.0	Z	0.8	1.4 (1)	133.0	
10	LC	eP*	17 47 14.0	Z	0.9	2.8 (0)	141.0	
10	DH	eLR	18 47 50	LZ	22	4.3 (2)	144.0	
10	RK	e	17 47 26	Z	0.9	1.3 (1)		
10	LC	eP	17 49 04.0	Z	0.2	2.2 (0)	2.5	
10	RK	e	17 49 32	Z	0.7	1.2 (0)		
10	LC	eS	17 49 35	R	0.4	3.9 (0)	2.5	
10	RK	e	17 50 36	Z	1.5	4.8 (1)		
10	RK	e	17 50 50	Z	1.0	1.6 (1)		
10	RK	e	17 50 50	LZ	24	1.7 (2)		
10	MV	eL	19 22 50	Z	0.2	4.6 (1)	1.7	
10	DH	eP	19 37 19.5	Z	0.2	1.1 (2)		
	eS		19 37 43	R	0.2	1.5 (1)	1.4	
10	LC	eP	20 36 33.0	Z	0.2	1.5 (1)		
	eS		20 36 52	R	0.2	1.3 (1)		
10			22 12 21.0	38.7 N 68.3 E H =046 KM MAG	4.80-	TADZHIK S.S.R. CGS		
10			23 45 58.4	59.8 S 150.3 E H =033 KM		MACQUARIE ISLAND REGION		
11			00 41 42.6	10.9 N 141.3 E H =033 KM MAG	5.10-	MARIANA ISLANDS REGION CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11			01 50 02.*	49.4 N 155.1 E H =033 KM MAG	4.40-	KURILE ISLANDS CGS		
11			02 34 26.8	19.5 S 174.0 W H =033 KM MAG	4.90-	TONGA ISLANDS REGION CGS		
11	LC	eP	02 46 41.3	Z	1.2	2.1 (1)	83.0	5.16
11			03 49 10.6	27.9 N 128.0 E H =078 KM MAG	4.80-	RYUKYU ISLANDS CGS		
11			06 34 31.3	44.8 N 149.3 E H =125 KM MAG	4.20-	KURILE ISLANDS CGS		
11	LC	eP	09 25 21.7	Z	0.4	0.8 (0)	3.4	
	eS		09 26 04	R	0.4	7.0 (0)		
11	RK	eP	12 30 53.9	Z	0.5	1.7 (0)	2.2	
	eS		12 31 20	R	0.6	1.8 (1)		
11			12 49 37.*	00.2 S 126.1 E H =033 KM MAG	5.30-	MOLUCCA PASSAGE CGS		
11	DH	eP	13 59 40.6	Z	0.3	2.1 (1)	1.9	
	eS		14 00 06	T	0.5	8.5 (1)		
11	MV	eP	15 27 38.1	Z	0.4	3.1 (0)	2.4	
	eS		15 28 09	T	0.4	7.8 (0)		
11			18 21 05.5	15.9 S 173.1 W H =033 KM MAG	5.20-	SAMOA ISLANDS REGION CGS		
11	MV	eP	18 32 38.5	Z	1.8	6.2 (1)	73.0	5.34
	eLQ		18 51 10	LR	23	8.4 (2)		
11			18 57 55	LZ	19	4.9 (2)		
11	LC	eP	18 33 08.4	Z	1.9	9.3 (1)	80.0	5.36
11	HW	eL	18 37 39	LT	20	1.9 (3)	40.0	
11	RK	eL	19 01 48	LT	24	6.3 (2)	96.0	
11	DH	eL	19 17 55	LZ	19	5.1 (2)	107.0	
					Avg.			5.35
11			19 00 18.*	07.1 S 154.5 E H =078 KM		SOLOMON ISLANDS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11	LC	eP eS	21 25 32.9 21 25 41	ZR	0.4 0.6	6.9 (0) 1.6 (1)	0.5	
11	21 29 52.4		10.2 S 161.3 E H = 095 KM MAG	SOLOMON ISLANDS REGION 5.00- CGS				
11	MV	eP	21 42 28.0	Z	0.9	1.3 (1)	87.0	4.99
11	LC	eP eS	22 35 29.2 22 35 49	ZR	0.2 0.4	1.4 (1) 7.0 (0)	1.3	
12	01 36 12.5		15.6 S 174.0 W H = 045 KM MAG	SAMOA ISLANDS REGION 4.60- CGS				
12	08 19 24.1		39.8 N 53.4 E H = 033 KM MAG	TURKMEN S.S.R. 5.20- CGS				
12	HW	eL	10 41 24	LZ	20	2.1 (2)		
12	LC	eP e eS	10 41 36.5 10 41 43 10 42 13	Z Z T	0.4 0.5 0.4	2.6 (0) 4.5 (0) 6.7 (0)	3.0	
12	11 24 06.*		46.8 N 37.7 W H = 033 KM MAG	NORTH ATLANTIC OCEAN 4.30- CGS				
12	RK	eP eS	12 11 14.9 12 11 45	ZR	0.3 0.5	2.6 (0) 2.3 (1)	2.5	
12	RK	eL	12 40 01	LR	23	2.7 (2)		
12	16 14 30.7		43.3 N 126.0 W H = 033 KM MAG	OFF COAST OF OREGON 4.10- CGS				
12	DH	eP eS	16 31 17.0 16 31 42	ZR	0.3 0.4	2.6 (1) 5.3 (1)	2.0	
12	RK	eP eS	17 20 28.1 17 21 16	ZR	0.3 0.5	3.5 (0) 1.4 (1)	3.9	
12	17 51 11.3		43.6 N 147.2 E H = 033 KM MAG	KURILE ISLANDS REGION 4.60- CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	MV	eP eS	19 39 03.6 19 39 21	ZR	0.3 0.4	1.9 (0) 5.1 (0)	1.3	
12	20 31 53.2		03.5 S 146.6 E H = 033 KM MAG	ADMIRALTY ISLANDS REGION 5.40- CGS				
12	MV	eP eSKS ePS eSS eL	20 45 16.4 20 56 00 20 57 42 21 02 45 21 11 15	Z LR LR LR LR	1.3 19 21 23 30	1.4 (1) 1.0 (3) 2.0 (3) 2.8 (3) 8.1 (3)	94.0	5.17
12	LC	ePP eSP e eLR	20 50 30 20 59 55 21 05 48 21 20 50	LZ LZ LZ LZ	19 24 26 99.9	1.5 (2) 9.8 (2) 1.1 (3) 99.9 (9)	106.0	
12	HW	ePPS e eLQ eLR	20 50 49 20 54 30 20 57 02 20 59 40	LR LZ LT LZ	25 29 24 99.9	7.9 (3) 1.8 (3) 1.1 (4) 99.9 (9)	61.0	
12	DH	eSKP eSPP e eLQ eLR	20 54 20 21 04 30 21 05 48 21 18 25 21 26 35	LZ LZ LT LT LR	14 18 24 30 37	3.4 (2) 7.4 (2) 3.0 (3) 9.6 (2) 4.8 (3)	127.0	
12	RK	ePS eSS eSSS eLQ	21 00 35 21 06 54 21 10 49 21 17 10	LT LT LT LR	28 23 24 37	1.0 (3) 3.4 (3) 2.3 (3) 5.0 (3)	111.0	
12	JE	eSP eSSS eLR	21 01 46 21 12 50 21 26 57	LZ LR LZ	21 23 28	1.5 (3) 2.4 (3) 3.9 (3)	118.0	
12	21 08 00.*		20.3 S 175.7 W H = 033 KM MAG	TONGA ISLANDS 4.40- CGS				
12	RK	eP eS	21 30 40.5 21 31 11	ZR	0.3 0.5	2.6 (0) 1.8 (1)		
12	22 33 59.2		15.3 S 174.4 W H = 033 KM MAG	SAMOA ISLANDS REGION 5.00- CGS				
12	MV	eP ePS eLR	22 45 31.0 22 55 41 23 07 08	Z LT LZ	1.9 26 25	1.0 (2) 5.7 (3) 5.8 (3)	73.0	5.54

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	HW	eS	22 47 41	LR	12	8.0 (3)	40.0	
		eL	22 50 55	LZ	26	1.1 (4)		
	RK	eSS	23 05 04	LR	21	2.1 (3)	96.0	
eLQ		23 15 26	LT	25	9.3 (2)			
12	JE	eLR	23 16 50	LZ	33	2.6 (3)	92.0	
13			26.5 N 124.3 E	RYUKYU ISLANDS REGION				
			H = 125 KM MAG	4.00-	CGS			
13			24.9 N 124.9 E	RYUKYU ISLANDS REGION				
			H = 094 KM MAG	4.30-	CGS			
13			08.8 N 102.5 W	NORTHWEST OF GALAPAGOS IS.				
			H = 033 KM MAG	4.60-	CGS			
13			08.6 N 102.6 W	NORTHWEST OF GALAPAGOS IS.				
			H = 033 KM MAG	4.70-	CGS			
13			07.9 N 102.8 W	NORTHWEST OF GALAPAGOS IS.				
			H = 033 KM MAG	4.20-	CGS			
13			07.0 N 73.0 W	NORTHERN COLOMBIA				
			H = 148 KM MAG	3.70-	CGS			
13			03.5 S 146.6 E	ADMIRALTY ISLANDS REGION				
			H = 033 KM MAG	4.90-	CGS			
13			86.1 N 11.1 E	SVALBARD REGION				
			H = 033 KM MAG	4.20-	CGS			
13			34.9 N 72.7 E	HINDU KUSH REGION				
			H = 070 KM MAG	4.60-	CGS			
13	LC	eP	08 30 04.0	Z	1.0	2.4 (0)		
			08 35 24	Z	1.5	1.0 (1)		
13	LC	e						
13			18.3 N 103.3 W	MICHOACAN, MEXICO				
			H = 078 KM MAG	3.50-	CGS			
13	LC	eP	08 53 29.7	Z	1.0	3.6 (0)	14.0	3.69

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	RK	eL	08 55 15	LZ	23	1.7 (2)		
		eL	08 57 40	LZ	18	8.3 (0)		
	RK	eL	09 06 30	LR	18	9.0 (1)	33.0	
13	10 03 50.6	26.1 N 100.9 E	YUNNAN PROVINCE, CHINA					
		H = 334 KM MAG	7.0 -	CGS				
13	RK	eL	10 53 35	LR	29	2.3 (2)	102.0	
	HW	eLR	10 59 22	LZ	28	2.2 (3)	93.0	
	MV	eL	11 02 24	LZ	22	2.6 (2)	104.0	
	DH	eLR	11 04 25	LZ	28	4.7 (2)	112.0	
	LC	eLR	11 06 30	LZ	27	3.4 (2)	116.0	
	JE	eL	11 10 48	LZ	24	3.0 (2)	121.0	
13	11 21 46.7	18.1 S 56.8 W	BOLIVIA BRAZIL BORDER					
		H = 033 KM MAG	5.30-	CGS				
13	JE	eP	11 31 51.0	Z	1.0	5.7 (1)	60.0	5.59
	DH	eP	11 32 08.0	Z	0.9	2.0 (1)	62.0	5.28
	LC	eP	11 32 53.1	Z	1.0	4.8 (0)	69.0	4.55
	RK	eP	11 33 30.0	Z	1.2		76.0	
		eL	11 56 50	LR	30	3.1 (2)		
	MV	eP	11 34 10.5	Z	1.3	2.8 (1)	83.0	5.24
						Avg.	5.22	
13	11 42 16.5	18.3 S 173.8 W	TONGA ISLANDS REGION					
		H = 033 KM MAG	4.30-	CGS				
13	13 53 31.1	39.4 N 72.7 E	TADZHIK S.S.R.					
		H = 144 KM						
13	RK	eP	14 06 12.1	Z	0.9		89.0	
		eL	14 35 15	LT	33	2.9 (2)		
	JE	eL	14 46 33	LR	30	4.5 (2)	107.0	
	LC	eL	14 51 07	LZ	32	2.3 (2)	109.0	
13	15 15 51.*	05.2 S 105.2 W	SOUTHWEST OF GALAPAGOS IS.					
		H = 033 KM MAG	4.00-	CGS				
13	LC	eP	17 52 08.5	Z	0.3	0.9 (0)	2.9	
		e	17 52 14	Z	0.3	1.8 (0)		
		eS	17 52 45	T	0.4	3.3 (0)		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	19 46 40.*		40.5 N 78.2 W	SOUTH CENTRAL PENNSYLVANIA				
			H =015 KM					
13	DH eP eL		19 47 31.5 19 48 09	Z †	0.2 0.2	2.4 (1) 7.2 (1)	3.0	4.88
13	20 16 07.*		05.7 S 149.1 E	NEW BRITAIN				
			H =148 KM					
13	LC eP eS		21 08 58.8 21 09 18	Z †	0.2 0.3	1.3 (1) 3.9 (0)	1.5	
13	22 23 25.6		51.8 N 177.6 W	ANDREANO OF ALEUTIAN ISLANDS				
			H =033 KM MAG	CGS				
14	03 57 09.0		07.4 N 73.5 W	NORTHEASTERN COLOMBIA				
			H =090 KM MAG	CGS				
14	06 30 01.*		49.5 N 155.5 E	KURILE ISLANDS				
			H =040 KM MAG	CGS				
14	06 56 02.3		37.2 N 141.7 E	EAST COAST HONSHU, JAPAN				
			H =033 KM MAG	CGS				
14	07 37 26.*		44.2 N 146.9 E	KURILE ISLANDS				
			H =033 KM MAG	CGS				
14	12 07 22.1		43.6 N 126.0 W	OFF COAST OF OREGON				
			H =033 KM MAG	CGS				
14	14 35 22.*		19.8 S 68.0 W	BOLIVIA				
			H =279 KM MAG	CGS				
14	14 57 41.*		16.1 S 73.2 W	SOUTHERN PERU				
			H =100 KM MAG	CGS				
14	15 51 12.1		29.2 N 54.5 E	SOUTHERN IRAN				
			H =047 KM MAG	CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
14	16 29 45.0		05.1 S 151.7 E	NEW BRITAIN				
			H =055 KM MAG	CGS				
15	MV eP e		02 06 56.5 02 07 02 02 07 27	Z Z †	0.5 0.5 0.5	1.3 (0) 1.5 (1) 6.7 (0)	2.2	
15	04 46 05.0		07.6 S 75.7 W	CENTRAL PERU				
			H =033 KM MAG	CGS				
15	07 40 38.*		14.1 N 92.7 W	NEAR COAST CHIAPAS, MEXICO				
			H =076 KM MAG	CGS				
15	10 06 50.3		05.3 S 151.9 E	NEW BRITAIN				
			H =056 KM					
15	10 54 15.6		03.1 N 79.5 W	OFF WEST COAST OF COLOMBIA				
			H =033 KM MAG	CGS				
15	13 07 26.1		52.7 N 168.2 W	FOX ALEUTIAN ISLANDS				
			H =050 KM MAG	CGS				
15	14 00 07.8		18.7 S 177.8 W	FIJI ISLANDS				
			H =332 KM MAG	CGS				
15	DH eP eS		15 18 26.5 15 18 52	Z R	0.3 0.4	2.0 (1) 8.4 (1)	2.0	
15	MV eP eS		15 48 10.0 15 48 52	Z †	0.5 0.5	5.9 (0) 6.1 (1)	3.5	
15	16 33 08.0		04.8 S 152.4 E	NEW BRITAIN				
			H =071 KM MAG	CGS				
15	MV eLR DH eL		17 15 00 17 37 55	LZ LZ	30 23	7.4 (2) 4.4 (2)	90.0 117.0	
15	LC eP eS		18 04 59.5 18 05 18	Z †	0.4 0.3	2.0 (1) 1.1 (1)	1.4	
15	19 12 16.6		22.8 N 120.6 E	SOUTHERN FORMOSA				
			H =017 KM MAG	CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
15	DH	eP eS	21 23 36.5 21 23 47	Z R	0.4 0.5	8.3 (0) 2.2 (1)	0.8	
15	22 01 58.4		08.7 S 157.1 E H = 052 KM MAG	SOLOMON ISLANDS REGION CGS				
15	MV	eP e eS	22 29 20.0 22 29 26 22 29 48	Z Z T	0.5 0.5 0.5	1.3 (1) 2.1 (1) 1.1 (1)	2.2	
16	00 17 15.7		30.1 N 51.2 E H = 037 KM MAG	SOUTHWESTERN IRAN CGS				
16	NP	fP	00 28 48.2C	JZ	.8	1.5 (1)	74.0	5.02
16	01 37 28.0		13.9 S 167.0 E H = 107 KM MAG	NEW HEBRIDES ISLANDS CGS				
16	01 47 54.*		22.4 S 67.6 W H = 232 KM MAG	SOUTHERN BOLIVIA CGS				
16	MV	eL	04 58 15	LZ	18	4.1 (2)		
16	05 03 13.5		29.8 N 138.7 E H = 421 KM MAG	SOUTH OF HONSHU, JAPAN CGS				
16	10 03 37.7		07.6 S 75.9 W H = 031 KM MAG	CENTRAL PERU CGS				
16	NP	fP	10 16 23.8C	JZ	.9	2.3 (1)	87.0	5.36
16	10 16 20.8		18.2 S 168.1 E H = 033 KM MAG	NEW HEBRIDES ISLANDS CGS				
16	10 46 24.7		14.6 N 92.4 W H = 033 KM MAG	NEAR CST. CHIAPAS, MEXICO CGS				
16	LC	eP	10 51 17.6	Z	0.8	2.0 (1)	22.0	4.57

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	12	36	20.5	50.1 N 157.0 E H = 033 KM MAG	4.20-	SOUTHERN KAMCHATKA REGION CGS		
16	HW	eP eS	13 10 49.0 13 10 57	Z R	0.5 0.5	7.5 (1) 2.9 (2)	0.5	
16	15	32	03.*	21.5 S 178.4 W H = 600 KM MAG	3.80-	FIJI ISLANDS REGION CGS		
16	17	47	29.*	38.5 S 74.8 W H = 033 KM MAG	4.60-	NEAR COAST CENTRAL CHILE CGS		
16	LC	eP eS	19 38 28.7 19 38 46	Z T	0.3 0.4	1.5 (1) 4.5 (0)	1.2	
16	21	01	22.0	44.0 N 147.1 E H = 080 KM MAG	4.60-	KURILE ISLANDS REGION CGS		
16	21	34	32.3	05.6 S 152.0 E H = 049 KM MAG	5.60-	NEW BRITAIN CGS		
16	MV	eP eL	21 47 34.5 22 16 05	Z LZ	1.5 32.5	5.8 (1) 1.2 (3)	91.0	5.64
16	NP	fP eL	21 47 51.2C 22 25 37	JZ LZ	1.2 20	7.1 (1) 3.7 (2)	95.0	5.98
16	HW	eL	22 00 30	LZ	30	1.2 (3)	57.0	
16	LC	ePKKP	22 04 57	Z	1.2	9.8 (0)	103.0	
							AVG.	5.81
17	MV	eP eS	00 03 14.0 00 03 30	Z T	0.3 0.4	2.5 (0) 9.4 (0)	1.2	
17	02	30	41.8	19.1 S 69.3 W H = 150 KM MAG	4.30-	NORTHERN CHILE CGS		
17	MV	eP eS	04 38 40.0 04 39 00	Z R	0.2 0.2	4.8 (0) 6.5 (0)	1.5	
17	05	50	41.8	23.1 N 120.6 E H = 033 KM MAG	4.90-	SOUTHERN FORMOSA CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
17	NP	eP	06 02 16.3	JZ	1.6	6.6 (0)	74.0	4.78
17	MV	eP	06 04 03.3	Z	1.0	5.1 (0)	95.0	4.91
						Avg.		4.84
17	09 27 59.2	30.0 S 72.4 W	OFF COAST OF CENTRAL CHILE					
	H =033 KM MAG	4.50-	CGS					
17	LC	eP	09 39 22.1	Z	0.8	7.5 (0)	70.0	4.78
17	12 19 02.9	47.2 N 8.5 E	SWITZERLAND					
	H =033 KM MAG	4.60-	CGS					
17	15 07 31.3	38.9 N 141.8 E	NEAR E. CST. HONSHU JAPAN					
	H =072 KM MAG	3.50-	CGS					
17	16 43 06.9	22.6 S 179.3 E	FIJI ISLANDS					
	H =547 KM MAG	4.90-	CGS					
17	LC	eP	19 58 03.1	Z	0.3	1.9 (1)	1.5	
	eS	19 58 23	T		0.4	1.4 (1)		
17	LC	eP	20 56 07.0	Z	0.4	3.4 (0)	5.1	
	eS	20 57 08	T		0.5	4.3 (0)		
17	22 16 59.3	20.4 S 168.9 E	LOYALTY ISLANDS REGION					
	H =033 KM							
18	00 37 07.0	17.5 N 121.3 E	Luzon, PHILIPPINE ISLANDS					
	H =056 KM MAG	4.50-	CGS					
18	01 31 21.8	16.2 S 166.4 E	NEW HEBRIDES ISLANDS REG.					
	H =077 KM MAG	4.80-	CGS					
18	03 48 35.6	27.5 N 91.1 E	BHUTAN					
	H =030 KM MAG	5.60-	CGS					
18	04 42 47.7	15.5 S 175.0 W	TONGA ISLANDS REGION					
	H =289 KM MAG	4.80-	CGS					
18	MV	eP	04 53 52.7	Z	0.8	6.8 (1)	74.0	5.43

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	LC	eP	04 54 32.0	Z	0.7	1.6 (1)	81.0	4.95
	ePP	04 55 44	Z	1.0	6.1 (0)	Avg.	5.19	
18	04 45 42.0	14.2 N 146.5 E	MARIANA ISLANDS					
	H =078 KM MAG	5.00-	CGS					
18	MV	eP	04 58 00.0	Z	0.8	1.5 (1)	83.0	5.06
	eL	05 26 45	LZ	19	1.7 (2)			
18	LC	eP	04 59 03.7	Z	0.8	2.2 (0)	96.0	4.75
	eL	05 31 15	LZ	22	1.4 (2)			
18	HW	eL	05 10 43	LZ	28	5.2 (2)	55.0	
18	RK	eL	05 37 49	LT	17	2.2 (2)	97.0	
18	DH	eL	05 44 07	LZ	17	3.5 (2)	112.0	
18	JE	eL	05 46 50	LZ	17	3.7 (2)	108.0	
						Avg.	4.90	
18	05 56 16.*	26.4 S 179.4 W	FIJI ISLANDS REGION					
	H =028 KM MAG	4.30-	CGS					
18	06 39 39.3	44.2 N 149.7 E	KURILE ISLANDS					
	H =033 KM MAG	4.40-	CGS					
18	08 01 49.*	38.8 N 28.5 W	AZORES					
	H =033 KM MAG	4.60-	CGS					
18	RK	eP	08 10 13.2	Z	1.0		46.0	
18	08 43 21.*	11.1 N 102.2 W	NORTHWEST OF GALAPAGOS IS.					
	H =033 KM MAG	4.70-	CGS					
18	09 07 30.1	09.2 N 103.0 W	N.W. OF GALAPAGOS ISLANDS					
	H =033 KM MAG	4.00-	CGS					
18	09 11 52.*	15.4 S 175.1 W	TONGA ISLANDS REGION					
	H =287 KM MAG	3.80-	CGS					
18	09 31 11.6	34.7 N 85.4 W	N. GEORGIA ALABAMA BORDER					
	H =033 KM MAG	4.40-	CGS					
18	JE	eP	09 32 42.2	Z	0.2	1.7 (1)	6.0	5.35

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	DH	eL	09 34 19	R	0.3	9.8 (1)	11.0	5.05
		eP	09 34 12.2		0.3	3.3 (0)		
		eL	09 37 03		0.5	1.8 (1)		
18	RK	eP	09 35 06.8	Z	0.5		17.0	
		eL	09 40 04		0.7	7.2 (0)		
18	LC	eL	09 40 31	R	0.7	3.6 (0)	18.0	
						Avg.		5.20
18	LC	eP	09 48 32.5	Z	1.4	1.1 (1)		
		eP	10 01 46.2		1.0	9.5 (0)		
		e	10 03 27		1.2	1.5 (1)		
18	10	35 20.1	10.3 S 161.2 E	SOLOMON ISLANDS				
			H = 073 KM MAG		4.90-			
18	MV	eP	10 47 59.5	Z	1.0	8.5 (0)	87.0	4.78
		eS	10 58 40		20	2.3 (2)		
		eLR	11 14 48		29	5.3 (2)		
18	HW	eL	10 58 55	LZ	28	1.1 (3)	52.0	
		eL	11 19 41		35	8.9 (2)	97.0	
18	LC	eL	11 25 25	LT	29	5.7 (2)	107.0	
		eL	11 26 25		28	2.8 (2)	110.0	
18	RK	eL	11 42 30	LZ	19	3.8 (2)	122.0	
		eL						
18	11	11 16.8	36.2 N 71.0 E	HINDU KUSH				
			H = 226 KM					
18	12	19 20.6	38.8 N 28.4 W	AZORES	4.60-	CGS		
			H = 033 KM MAG					
18	RK	eP	12 27 44.2	Z	0.8		46.0	
		eP	12 29 38.2		0.9	0.9 (0)	62.0	
		eL	12 50 20		36	2.4 (2)		
18	MV	eP	12 42 20.0	Z	0.4			
		eP	12 46 12.0		0.8	5.2 (0)		
		eL	13 36 22		22	3.8 (2)		
18	DH	eL	13 39 50	LZ	34	3.9 (2)		
		eL	13 40 40		55	1.0 (3)		
18	LC	eL	13 45 30	LZ	30	3.9 (2)		
		eP	13 47 03.0		0.7	1.2 (0)		
18	13	54 14.9	58.7 N 152.2 W	KODIAK ISLAND REGION	4.40-	CGS		
			H = 033 KM MAG					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	RK	eP	15 14 10.5	Z	0.5			
		eS	16 12 55.0		0.2	1.2 (1)	1.7	
18	17	08 10.2	36.3 N 70.7 E	HINDU KUSH	H = 223 KM MAG	5.00-	CGS	
18	19	09 35.1	23.5 S 179.2 W	SOUTH OF FIJI ISLANDS	H = 361 KM MAG	4.00-	CGS	
18	DH	eP	19 10 25.6	Z	0.2	1.6 (1)	1.5	
		eS	19 10 47		0.3	4.3 (1)		
18	DH	eP	19 47 34.0	Z	0.3	10.0 (0)	1.6	
		eS	19 47 59		0.4	2.5 (1)		
18	LC	eP	20 29 04.5	Z	0.2	2.3 (1)	1.4	
		eS	20 29 23		0.2	1.2 (1)		
18	22	43 52.5	45.0 N 150.6 E	KURILE ISLANDS	H = 040 KM MAG	4.50-	CGS	
18	22	45 35.1	14.2 S 174.9 W	SAMOA ISLANDS REGION	H = 033 KM MAG	4.60-	CGS	
19	00	34 14.5	38.9 N 28.5 W	AZORES	H = 033 KM MAG	4.50-	CGS	
19	03	04 42.3	46.0 N 152.0 E	KURILE ISLANDS	H = 033 KM MAG	4.10-	CGS	
19	06	29 12.1	17.1 S 70.7 W	SOUTHERN PERU	H = 134 KM MAG	4.00-	CGS	
19	06	33 36.5	38.9 N 28.6 W	AZORES	H = 033 KM MAG	4.50-	CGS	
19	LC	eL	07 06 27	LZ	20	9.6 (1)	62.0	
		eP	09 10 46.3		0.7	1.2 (0)		
19	09	15 29.4	09.6 S 107.3 E	OFF SOUTH COAST OF JAVA	H = 048 KM MAG	5.00-	CGS	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
19	MV	eP ⁱ	09 34 34.5	Z	0.9	2.7 (0)	128.0	
19	LC	eP ⁱ	09 34 55.3	Z	1.0	2.4 (0)	141.0	
		eL	10 26 35	LZ	18	1.2 (2)		
19	JE	eP ⁱ 1	09 35 22.6	Z	0.7	2.2 (1)	152.0	
19								FIJI ISLANDS REGION
19			09 58 41.*		25.3 S 179.2 E			
					H = 600 KM MAG	4.40-		CGS
19			15 25 58.9		21.4 S 70.7 W	NEAR COAST OF N. CHILE		
					H = 080 KM MAG	5.20-		CGS
19	LC	eP	15 36 23.4	Z	1.2	3.1 (1)	64.0	5.18
		e	15 36 37	Z	1.4	2.9 (1)		
		eL	15 58 48	LZ	25	1.9 (2)		
19	MV	eP	15 37 43.0	Z	0.8	3.2 (0)	77.0	4.27
						Avg.	4.72	
19	LC	eP	18 12 36.2	Z	0.2	9.2 (0)	1.6	
		eS	18 12 56	T	0.3	9.0 (0)		
19	LC	eP	21 24 33.5	Z	1.0	1.5 (1)		
19			21 27 53.9		08.2 S 108.3 W	SOUTHWEST OF GALAPAGOS IS.		
					H = 033 KM MAG	4.60-		CGS
19			23 49 45.2		18.7 S 169.2 E	NEW HEBRIDES ISLANDS		
					H = 207 KM MAG	4.70-		CGS
20			02 30 21.5		58.4 N 154.8 W	ALASKA PENINSULA		
					H = 079 KM MAG	4.50-		CGS
20	NP	eP	02 35 08.8	JZ	.3	1.3 (0)	22.0	3.78
20			02 47 14.9		51.7 N 175.6 E	RAT ALEUTIAN ISLANDS		
					H = 033 KM MAG	4.60-		CGS
20	NP	eP	02 54 03.7	JZ	.5	5.0 (0)	35.0	4.70
20			03 26 58.0		51.5 N 175.8 E	ALEUTIAN NEAR ISLANDS		
					H = 033 KM MAG	4.70-		CGS

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	NP	eP	03 33 46.8	JZ	1.8	1.4 (1)	35.0	4.95
		e	03 37 51	JZ	1.2			
20	03 29 37.*		44.4 N 114.6 W	CENTRAL IDAHO				
			H = 033 KM MAG	3.70-				CGS
20	03 51 40.2		51.5 N 175.8 E	ALEUTIAN NEAR ISLANDS				
			H = 033 KM MAG	4.50-				CGS
20	NP	eP	03 58 28.7	JZ	.8	5.1 (0)	35.0	4.51
20	07 22 24.7		09.5 S 74.6 W	CENTRAL PERU				
			H = 102 KM MAG	4.50-				CGS
20	NP	eP	07 35 12.3	JZ	.5	6.4 (0)	90.0	5.01
20	08 35 36.2		46.6 N 152.5 E	KURILE ISLANDS				
			H = 050 KM MAG	4.80-				CGS
20	NP	eP	08 43 46.7	JZ	.6	3.9 (0)	45.0	4.42
20	RK	eP	08 46 27.1	Z	0.8	1.5 (1)	67.0	5.13
20	DH	eP	08 47 52.3	Z	0.9	3.7 (1)	82.0	5.36
20	HW	eL	08 58 11	LZ	30	2.4 (2)	50.0	
						Avg.		4.97
20	09 06 59.*		17.7 S 178.8 W	FIJI ISLANDS				
			H = 604 KM MAG	3.80-				CGS
20	09 53 51.1		44.6 N 150.0 E	KURILE ISLANDS				
			H = 050 KM MAG	5.20-				CGS
20	NP	eP	10 02 22.2	JZ	.5	6.4 (0)	47.0	4.86
		e	10 02 32	JZ	1.4	9.8 (1)		
		eS	10 09 15	T	2.4	5.6 (2)		
20	RK	eP	10 04 58.6	Z	0.8	3.7 (1)	70.0	5.42
		e	10 05 09	Z	0.9	1.1 (2)		
20	LC	eP	10 05 38.0	Z	0.8	5.7 (0)	77.0	4.60
		eL	10 35 50	LZ	19	5.9 (2)		
20	DH	eP	10 06 20.6	Z	0.9	4.4 (1)	85.0	5.54
		eL	10 37 21	LR	21	5.5 (2)		
20	JE	eP	10 06 25.1	Z	0.7	2.3 (1)	85.0	5.38

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
20	HW	e	10 06 36	Z	0.9	4.4 (1)			
		e	10 16 54	LR	16	1.2 (3)			
		eL	10 38 28	LR	21	1.1 (3)			
	eL	10 17 28	LZ	28	8.0 (2)	51.0			
		10 23 00	LZ	15	4.9 (2)	63.0			
	MV	eL				Avg.	5.16		
20									
20	09	54 13.*	09.5 N 84.6 W	W. COAST OF COSTA RICA					
			H =033 KM MAG	CGS	4.30-				
	HW	eP	09 56 21.2	Z	0.2	7.3 (1)	0.1		
		eS	09 56 24	T	0.3	2.6 (2)			
	20								
20	10	57 43.6	14.1 S 76.0 W	NEAR COAST SOUTHERN PERU					
			H =067 KM MAG	CGS	4.50-				
	RK	eP	11 08 26.7	Z	0.7	3.6 (0)	66.0	4.52	
	20	NP	eL	LZ	24	4.5 (2)			
20	12	03 18.7	14.5 N 93.0 W	NEAR COAST CHIAPAS, MEXICO					
			H =049 KM MAG	CGS	4.40-				
	JE	eP	12 07 19.0	Z	1.0	6.6 (1)	18.0	4.77	
		eP	12 07 21	LZ	15	1.2 (3)			
	20	eL	12 15 56	LT	24	2.8 (3)			
		eP	12 08 07.0	Z	0.4	3.3 (0)	22.0	4.07	
		eP	12 08 10	LZ	15	5.3 (2)			
		eL	12 15 30	LZ	16	1.6 (3)			
		eP	12 13 44.0	JZ	1	1.1 (1)	63.0	4.88	
		ePCP	12 14 37	JZ	1	6.6 (0)			
20	NP	eL	12 41 08	LZ	26	8.5 (2)			
		eLQ	12 20 11	LT	28	1.2 (3)	32.0		
		eLR	12 22 04	LZ	19	5.9 (3)			
	DH	eL	12 20 21	LT	28	3.3 (3)	35.0		
		eL	12 30 55	LZ	24	3.1 (2)	60.0		
	20					Avg.	4.57		
20	NP	eP	15 37 30.3	JZ	.8	1.6 (1)			
		e	15 39 00	JZ	1.6	2.0 (1)			
	20								
20	18	22 16.*	17.2 S 179.0 W	FIJI ISLANDS					
			H =585 KM MAG	CGS	3.90-				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	20	19 49.*	39.4 N 114.2 W	EASTERN NEVADA				
			H =014 KM MAG	CGS	3.70-			
20	LC	eL	22 01 45	LZ	25	1.3 (2)		
20	23	40 06.*	31.5 S 70.0 W	SAN JUAN PROV. ARGENTINA				
			H =078 KM MAG	CGS	4.40-			
21	00	05 40.*	30.4 N 142.9 E	BONIN ISLANDS REGION				
			H =033 KM MAG	CGS	4.40-			
21	01	04 00.6	34.4 N 58.1 E	IRAN				
			H =033 KM MAG	CGS	5.00-			
21	MV	eP	01 45 47.0	Z	0.2	7.4 (0)	0.2	
		eS	01 45 52	R	0.2	2.5 (1)		
21	02	28 58.*	41.2 N 31.0 W	AZORES REGION				
			H =033 KM MAG	CGS	4.10-			
21	03	01 38.*	31.4 N 114.1 W	GULF OF CALIFORNIA				
			H =014 KM MAG	CGS	4.70-			
21	LC	eP	03 03 41.2	Z	0.5	3.2 (0)	6.0	4.33
		eL	03 05 31	T	1.0	1.1 (1)		
21	RK	eP	03 06 59.3	Z	0.7	3.3 (0)	25.0	4.14
		e	03 07 08	Z	0.9	1.5 (1)		
21	MV	eL	03 07 12	Z	1.0	3.5 (0)	10.0	
21	JE	eL	03 14 00	LZ	15	4.4 (2)	19.0	
21	DH	eL	03 20 20	LR	18	2.4 (2)	33.0	
						Avg.	4.23	
21	03	15 08.*	15.0 N 92.8 W	NEAR COAST CHIAPAS, MEXICO				
			H =033 KM MAG	CGS	3.80-			
21	LC	eP	03 20 21.8	Z	0.7	3.1 (0)	21.0	3.75
21	JE	eL	05 17 20	LZ	25	4.6 (2)		
21	07	24 08.*	12.8 N 87.9 W	OFF S. COAST OF HONDURAS				
			H =062 KM MAG	CGS	3.90-			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21			07 40 17*	45.1 N 149.9 E	KURILE ISLANDS			
			H =033 KM MAG	4.00-	CGS			
21	HW	eP	08 31 56.3	Z	999.9	99.9 (9)		
21	JE	eP	11 12 07.0	Z	1.0	1.8 (1)		
21	RK	eP	12 15 09.5	Z	0.3	0.8 (0)	2.5	
	eS		12 15 42	R	0.4	3.4 (1)		
21			12 18 42*	42.9 N 151.4 E	KURILE ISLANDS			
			H =033 KM MAG	4.30-	CGS			
21			13 11 21*	18.8 S 169.3 E	NEW HEBRIDES ISLANDS			
			H =234 KM MAG	4.60-	CGS			
21			13 51 47*	06.8 S 80.9 W	NEAR COAST NORTHERN PERU			
			H =033 KM MAG	4.30-	CGS			
21			13 53 06*	06.7 S 105.5 E	SUNDA STRAIT			
			H =033 KM MAG	5.20-	CGS			
21			17 14 45*	38.3 N 28.7 W	AZORES			
			H =033 KM MAG	4.80-	CGS			
21	RK	eP	17 23 11.2	Z	1.0	1.1 (1)	47.0	4.85
21	MV	eP	17 25 48.0	Z	1.0	3.5 (0)	69.0	4.42
21	JE	eL	17 40 40	LZ	17	2.9 (2)	51.0	
					Avg.		4.63	
21			21 52 12*	07.7 S 79.5 W	NEAR CST. NORTHERN PERU			
			H =036 KM MAG	4.30-	CGS			
22			01 47 32*	36.9 S 176.9 E	NORTH ISLAND, NEW ZEALAND			
			H =203 KM MAG	5.10-	CGS			
22	MV	eP	02 00 30.0	Z	1.0	5.2 (0)	95.0	4.72
22			03 31 25*	37.1 N 116.5 W	SOUTHERN NEVADA			
			H =033 KM					
22			05 58 32*	63.5 N 130.7 W	YUKON TERRITORY, CANADA			
			H =033 KM MAG	4.20-	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
22			08 50 35.0	30.1 S 177.3 W	KERMADEC ISLANDS			
			H =033 KM MAG	5.10-	CGS			
22	HW	eP	08 59 55.5	Z	1.0	1.2 (2)	54.0	5.90
22	MV	eP	09 03 15.3	Z	1.0	1.4 (1)	86.0	4.98
	e		09 03 30	Z	1.2	1.9 (1)		
22	LC	eP	09 03 37.0	Z	1.0	1.2 (1)	91.0	5.16
					Avg.		5.34	
22			14 11 38*	01.3 S 127.2 E	HALMAHERA REGION			
			H =033 KM MAG	4.40-	CGS			
22			16 04 35.6	30.1 N 138.8 E	SOUTH OF HONSHU, JAPAN			
			H =411 KM MAG	4.80-	CGS			
22	MV	eP	16 15 54.0	Z	0.9	9.6 (0)	79.0	4.50
22	RK	eP	16 16 36.0	Z	0.8	1.2 (1)	87.0	4.78
	eP		16 18 13	Z	0.7	3.3 (0)		
22	LC	eP	16 17 00.0	Z	0.8	6.9 (0)	92.0	4.65
					Avg.		4.64	
22			17 50 56.2	48.5 N 154.9 E	KURILE ISLANDS			
			H =060 KM MAG	5.30-	CGS			
22	RK	eP	18 01 30.5	Z	0.5	9.3 (0)	65.0	5.09
22	RK	eP	17 51 03.5	Z	0.2	2.1 (0)	2.2	
	eS		17 51 33	R	0.2	1.2 (1)		
22	RK	eP	19 03 37.5	Z	0.3	1.6 (0)	3.9	
	eS		19 04 26	R	0.5	4.1 (1)		
22			21 16 27.5	24.1 N 123.2 E	RYUKYU ISLANDS			
			H =048 KM MAG	5.20-	CGS			
22	MV	eP	21 29 37.0	Z	1.0	5.2 (0)	93.0	4.88
					Avg.		4.90	
22	RK	eP	23 05 51.0	Z	0.8	5.5 (0)		
23			00 06 59.0	48.6 N 154.7 E	KURILE ISLANDS			
			H =033 KM MAG	5.00-	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	MV	eP	00 16 52.2	Z	0.6	99.9 (9)	58.0	
23	RK	eP	00 17 36.5	Z	0.5	3.3 (0)	65.0	4.73
23	DH	eP	00 19 02.8	Z	0.7	9.2 (0)	80.0	4.79
						AVG.		4.76
23	MV	eP	02 34 23.7	Z	0.2	0.8 (0)	1.5	
	eS		02 34 43	T	0.3	1.7 (0)		
23	04 35 18.1		17.2 S 74.2 W			NEAR COAST SOUTHERN PERU		
			H =033 KM MAG			4.30- CGS		
23	07 39 43.*		59.9 N 150.0 E			EASTERN SIBERIA		
			H =033 KM MAG			4.10- CGS		
23	10 23 13.*		54.7 N 159.8 E			NEAR E. COAST OF KAMCHATKA		
			H =033 KM MAG			4.20- CGS		
23	12 26 40.4		15.4 S 173.8 W			SAMOA ISLANDS		
			H =096 KM MAG			4.60- CGS		
23	MV	eP	12 38 02.6	Z	0.9	1.2 (1)	73.0	4.75
23	HW	eP	14 43 22.2	Z	0.4	1.4 (1)		
23	HW	eL	14 45 58	R	0.5	1.1 (2)		
23	15 53 41.*		34.8 S 68.9 W			MENDOZA PROV., ARGENTINA		
			H =156 KM MAG			4.60- CGS		
23	DH	eP	16 05 17.3	Z	1.0	1.8 (1)	77.0	4.81
23	RK	eP	16 06 13.8	Z	0.8	1.9 (1)	88.0	5.07
23	MV	eP	16 06 15.5	Z	1.0	3.5 (0)	88.0	4.24
						AVG.		4.70
23	MV	eP	16 19 10.8	Z	0.3	1.3 (0)	0.9	
	eS		16 19 23	T	0.3	8.7 (0)		
23	19 40 52.*		38.5 N 28.6 W			AZORES REGION		
			H =033 KM MAG			4.50- CGS		
23	RK	eP	19 49 16.2	Z	0.7	2.2 (0)	46.0	4.24

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	22	41 06.3	39.2 N 23.7 E			AEGEAN SEA		
			H =033 KM MAG			4.50- CGS		
23	DH	eP	22 52 23.0	Z	0.8	5.7 (0)	70.0	4.65
	eLR		23 15 28	LZ	20	4.1 (2)		
	eL		23 22 37	LR	24	8.3 (2)		
	eL		23 22 37	LT	21	6.2 (2)		
	eL		23 22 37	LZ	21	7.9 (2)		
23	RK	eP	22 52 45.0	Z	0.9	7.0 (0)	75.0	4.63
	eL		23 16 20	LR	20	3.0 (2)		
23	JE	e	23 13 20	LT	32	1.0 (3)	87.0	
	eL		23 21 40	LR	33	1.6 (3)		
						Avg.		4.59
23	23 09 05.*		00.9 N 85.2 W			OFF COAST OF ECUADOR		
			H =033 KM MAG			3.90- CGS		
23	RK	eP	23 18 00.0	Z	0.7	2.2 (0)	50.0	4.21
23	MV	eS	23 25 00	LR	29	3.9 (2)	50.0	
	eL		23 31 00	LZ	26	3.9 (2)		
	eL		23 35 15	LR	20	1.1 (3)		
	eL		23 35 15	LT	21	8.0 (2)		
	eL		23 35 15	LZ	21	6.9 (2)		
24	01 13 37.*		21.0 S 67.9 W			SOUTHERN BOLIVIA		
			H =326 KM MAG			4.10- CGS		
24	02 29 12.*		13.0 N 87.2 W			HONDURAS NICARAGUA BORDER		
			H =083 KM MAG			3.90- CGS		
24	05 02 13.5		24.8 S 179.7 W			SOUTH OF FIJI ISLANDS		
			H =290 KM MAG			4.40- CGS		
24	MV	eP	05 14 11.5	Z	0.9	6.8 (0)	84.0	4.47
24	RK	eP	05 18 56.6	Z	0.8	5.5 (0)		
24	08 21 32.2		07.7 N 73.1 W			NORTHERN COLOMBIA		
			H =041 KM MAG			3.80- CGS		
24	MV	eP	09 04 07.2	Z	0.2	3.3 (0)	0.6	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eS	09 04 17	R	0.3	2.7 (1)		
24	09 52 18.7		07.3 S 67.8 E	CHAGOS ARCHIPELAGO REGION	H =033 KM MAG	5.20-	CGS	
24	NP ePP		10 11 26	JZ	1.5	2.0 (1) 111.0		
	e		10 11 34	JZ	1.5	3.0 (1)		
24	MV eP+1		10 12 00.1	Z	0.9	1.7 (1) 147.0		
	ePP		10 15 23	Z	1.5	2.0 (1)		
24	JE eP+1		10 12 06.6	Z	1.1	2.3 (1) 149.0		
24	RK ePP		10 14 04	Z	1.4	1.0 (1) 134.0		
24	10 53 51.7		35.8 N 116.6 W	SAN BERNARDINO, CALIF.	H =014 KM			
24	11 32 13.*		39.3 N 40.1 E	EASTERN TURKEY	H =033 KM MAG	4.80-	CGS	
24	NP eP		11 32 41.5	JZ	1	4.5 (0)		
24	RK eP		11 32 42.1	Z	0.8	6.9 (0)		
24	13 39 00.6		31.2 N 131.3 E	NEAR S. CST. KYUSHU, JAPAN	H =033 KM MAG	4.20-	CGS	
24	14 51 46.2		15.5 S 174.0 W	SAMOA ISLANDS	H =087 KM MAG	4.50-	CGS	
24	16 18 18.*		31.6 S 177.8 W	KERMADEC ISLANDS REGION	H =377 KM			
24	18 44 32.5		14.2 S 167.2 E	NEW HEBRIDES ISLANDS	H =169 KM MAG	4.90-	CGS	
24	DH eP		19 50 32.1	Z	0.3	1.3 (1) 1.7		
	eS		19 50 56	R	0.3	3.3 (1)		
24	19 59 33.7		19.2 S 169.4 E	NEW HEBRIDES ISLANDS	H =244 KM MAG	4.70-	CGS	
24	20 56 44.5		30.4 N 137.1 E	SOUTH OF HONSHU, JAPAN	H =504 KM MAG	3.70-	CGS	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
24	23 07 01.*		38.8 N 23.4 E	AEGEAN SEA	H =055 KM MAG	3.80-	CGS	
24	23 30 24.6		39.2 N 23.8 E	AEGEAN SEA	H =016 KM MAG	4.40-	CGS	
25	RK eL		00 12 47	LR	23	2.6 (2) 75.0		
25	00 34 32.0		44.7 S 37.5 E	PRINCE EDWARD ISLAND REG*	H =033 KM MAG	6.70-	CGS	
25	NP eP+1		00 54 09.2	JZ	1.4	3.9 (1) 147.0		
	eLR		01 54 54	LZ	24	4.9 (2)		
25	RK eP+1		00 54 10.2	Z	1.6	1.0 (2) 147.0		
	eLQ		01 49 40	LR	23	2.1 (2)		
	eLR		01 53 22	LR	27	1.8 (2)		
25	MV eP+1		00 54 31.9	Z	1.5	3.0 (1) 163.0		
	eL		01 53 25	LZ	28	2.8 (2)		
25	HW eL		01 54 01	LZ	27	5.0 (2) 153.0		
25	LC eP		01 54 14.7	Z	1.6	1.1 (2)		
25	02 28 55.5		09.1 S 110.7 E	OFF SOUTH COAST OF JAVA	H =081 KM			
25	RK eP		02 48 07.4	Z	0.7	4.5 (0) 134.0		
25	DH eP+1		02 48 31.8	Z	0.9	1.4 (1) 147.0		
25	JE eP+1		02 48 40.0	Z	0.8	4.0 (1) 149.0		
25	03 08 24.*		49.7 S 112.1 E	SOUTH OF AUSTRALIA	H =033 KM			
25	NP eP+1		03 28 09.1	JZ	1.2	1.9 (1) 147.0		
25	04 04 29.0		32.1 N 137.7 E	SOUTH OF HONSHU, JAPAN	H =374 KM MAG	4.80-	CGS	
25	NP eP		04 14 12.5	JZ	4	3.0 (1) 62.0	5.21	
25	08 13 14.*		21.8 S 115.8 W	EASTER ISLAND REGION	H =033 KM MAG	4.10-	CGS	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
25	09 44 36.*		22.2 S 62.6 W	BOLIVIA ARGENTINA BORDER				
	H =470 KM MAG	4.10-	CGS					
25	10 04 37.5		45.4 N 151.3 E	KURILE ISLANDS				
	H =050 KM MAG	4.30-	CGS					
25	13 36 45.6		36.0 N 83.9 E	SINKIANG PROVINCE, CHINA				
	H =042 KM							
25	15 18 32.9		05.6 S 151.8 E	NEW BRITAIN REGION				
	H =042 KM MAG	5.00-	CGS					
25	HW eL		15 47 51	LZ	26	4.3 (2)	58.0	
25	20 57 30.6		11.5 N 142.0 E	SOUTHWEST OF GUAM				
	H =016 KM MAG	4.70-	CGS					
25	21 26 57.*		26.5 N 111.4 W	GULF OF CALIFORNIA				
	H =033 KM MAG	4.80-	CGS					
25	LC eP		21 28 43.0	Z	0.6	1.7 (1)	7.0	5.11
	eL		21 31 01	R	0.8	2.2 (1)		
25	RK eP		21 32 43.9	Z	0.8	8.3 (0)	28.0	4.55
	e		21 33 52	LR	20	6.7 (2)		
	eL		21 41 55	LT	17	3.5 (2)		
					Avg.	4.83		
25	23 23 33.3		30.1 S 177.9 W	KERMADEC ISLANDS				
	H =051 KM MAG	4.80-	CGS					
25	23 31 25.7		25.9 S 178.8 W	KERMADEC ISLANDS REGION				
	H =296 KM MAG	4.50-	CGS					
26	DH eL		00 30 23	LZ	18	6.6 (2)	117.0	
26	07 31 24.5		76.8 N 22.8 E	SVALBARD REGION				
	H =033 KM MAG	4.10-	CGS					
26	08 51 30.*		56.0 S 148.4 E	MACQUARIE ISLAND REGION				
	H =033 KM MAG	4.80-	CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
26	RK eP	i	09 11 05.0	Z	0.8	4.0 (0)	144.0	
	e		09 16 21	Z	0.7	4.4 (0)		
26	09 09 21.7		56.2 N 155.4 W	KODIAK ISLAND REGION				
	H =033 KM MAG	4.50-	CGS					
26	09 16 55.2		27.3 N 54.5 E	SOUTHERN IRAN				
	H =033 KM MAG	4.60-	CGS					
26	MV eP		09 45 08.0	Z	0.2	2.4 (0)	1.5	
	eS		09 45 27	R	0.2	1.9 (1)		
26	12 31 21.9		07.1 N 73.2 W	NORTHERN COLOMBIA				
	H =137 KM MAG	4.10-	CGS					
26	RK eP		12 39 39.5	Z	0.5	4.1 (0)	47.0	4.37
26	DH eP		15 30 53.5	Z	0.3	6.2 (0)	1.6	
	eS		15 31 14	R	0.4	1.8 (1)		
26	DH eP		17 02 26.5	Z	0.3	6.2 (0)	1.8	
	eS		17 02 51	R	0.4	2.0 (1)		
26	18 14 37.9		04.4 N 126.2 E	TALAUD ISLANDS REGION				
	H =132 KM MAG	5.30-	CGS					
26	DH eP		19 04 16.8	Z	0.3	6.2 (0)	1.6	
	eS		19 04 38	R	0.4	2.3 (1)		
26	DH eP		20 11 44.7	Z	0.4	6.0 (0)	1.4	
	eS		20 12 03	R	0.4	1.5 (1)		
26	20 32 53.6		40.2 N 124.6 W	COAST HUMBOLDT, CALIF.				
	H =027 KM MAG	4.60-	CGS					
26	MV eP		20 33 35.8	Z	0.5	1.1 (1)	2.7	
	eP		20 33 36	LZ	23	2.3 (2)		
	e		20 34 25	LT	999.9	99.9 (9)		
26	LC eP		20 34 55	LZ	14	6.5 (3)		
	eL							
26	20 36 45.2		Z	1.1	1.4 (1)	16.0	4.03	
	eL		20 42 06	Z	3.0	1.0 (2)		
26	RK eP		20 38 04.5	Z	0.8	6.8 (0)	24.0	4.20
	eL		20 45 20	LT	22	2.1 (3)		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
26	DH	eP	20 40 01.7	Z	1.0	1.6 (1)	37.0	4.78
	eL		20 52 20	LT	19	7.8 (2)		
	eL		20 54 00	LZ	25	6.9 (2)		
					Avg.		4.33	
26	RK	eP	20 57 02.5	Z	1.2	1.0 (1)		
26	RK	eP	21 05 49.0	Z	0.2	3.1 (0)	2.2	
	eS		21 06 17	R	0.2	2.0 (1)		
26	DH	eP	21 13 08.6	Z	0.3	1.2 (1)	1.8	
	eS		21 13 32	R	0.3	3.0 (1)		
26	21 17 08.1		20.7 S 174.4 W	TONGA ISLANDS				
			H =033 KM MAG	5.00-	CGS			
26	MV	eP	21 29 02.3	Z	1.0	5.2 (0)	78.0	4.52
	eS		21 38 50	LR	20	3.0 (2)		
	eLQ		21 49 10	LR	25	3.3 (2)		
	eLR		21 54 17	LZ	21	5.0 (2)		
26	LC	eP	21 29 31.8	Z	1.2	9.8 (0)	84.0	4.82
	e		21 29 50	Z	1.2	3.5 (1)		
26	RK	eL	22 05 47	LR	22	3.5 (2)	100.0	
	eL		22 07 50	LR	23	5.8 (2)		
26	DH	eLR	22 14 09	LZ	23	8.8 (2)	111.0	
	eL		22 18 00	LR	19	6.6 (2)		
	eL		22 18 00	LT	19	6.1 (2)		
	eL		22 18 00	LZ	19	1.0 (3)		
					Avg.		4.67	
26	22 59 25.*		64.5 N 10.8 W	EAST OF ICELAND				
			H =033 KM MAG	4.40-	CGS			
26	23 11 04.4		11.7 S 166.3 E	SANTA CRUZ ISLANDS REGION				
			H =064 KM MAG	4.70-	CGS			
26	MV	eP	23 23 29.5	Z	0.7	6.2 (0)	84.0	4.76
27	02 32 23.7		07.6 S 39.6 E	NEAR COAST OF TANGANYIKA				
			H =033 KM					
27	MV	eP*1	02 52 04.5	Z	1.0	6.9 (0)	144.0	
27	DH	eLR	03 33 18	LZ	27	5.7 (2)	113.0	
27	06 28 36.*		04.5 S 143.4 E	NORTH EAST NEW GUINEA				
			H =037 KM MAG	5.20-	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
27	MV	eP	08 37 39.3	Z	0.2	8.1 (0)	1.3	
	eS		08 38 07	Z	0.2	3.6 (1)		
27	09 02 22.8		44.0 N 79.2 E	KAZAKH S.S.R.				
			H =033 KM MAG	4.50-	CGS			
27	RK	eP	09 14 56.0	Z	0.6	1.9 (0)	85.0	4.41
	e		09 15 00	Z	0.6	1.1 (1)		
27	11 35 32.4		18.9 N 104.0 W	NEAR COAST COLIMA, MEXICO				
			H =033 KM MAG	4.50-	CGS			
27	MV	eP	11 40 55.8	Z	1.2	2.5 (1)	25.0	4.72
	ePP		11 41 22	Z	1.1	4.4 (0)		
	ePCP		11 44 36	Z	1.0	3.4 (0)		
	eL		11 47 10	LT	27	9.9 (2)		
	eL		11 47 41	LT	23	9.0 (2)		
	eL		11 47 41	LR	25	4.8 (2)		
	eL		11 47 41	LZ	12	6.0 (2)		
	eLR		11 50 00	LZ	16	1.0 (3)		
27	RK	eP	11 42 03.2	Z	1.0	1.1 (1)	33.0	4.72
	eSCS		11 52 44	T	3.0	2.2 (2)		
27	DH	eL	11 57 30	LZ	15	7.4 (3)	34.0	
	eL		11 58 00	LR	15	3.3 (3)		
	eL		11 58 00	LT	15	1.2 (3)		
	eL		11 58 00	LZ	15	7.4 (3)		
27	HW	eL	11 57 40	LZ	20	5.1 (2)	49.0	
					Avg.		4.72	
27	13 15 27.1		05.3 N 123.7 E	CELEBES SEA				
			H =092 KM					
27	RK	eP	14 13 54.8	Z	0.6	2.2 (1)		
27	15 10 48.4		21.7 N 94.4 E	CENTRAL BURMA				
			H =102 KM MAG	6.40-	CGS			
27	RK	ePD	15 24 56.0	Z	0.8	5.6 (0)	107.0	
	e		15 29 04	Z	0.6	1.3 (1)		
	eSKS		15 36 08	LT	15	5.2 (2)		
	ePS		15 39 10	LR	21	4.5 (2)		
	ePKKP1		15 40 17	Z	0.6	1.9 (0)		
	e		15 40 17	LR	20	5.5 (2)		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
27	MV	ePKP2	15 40 32	Z	0.8	1.1 (1)		
		e	15 40 57	Z	0.6	1.1 (1)		
		eSS	15 44 25	LR	22	1.3 (3)		
		eL	15 56 25	LT	39	2.9 (3)		
		ePD	15 25 19.0	Z	0.7	1.7 (0)	111.0	
		eP†	15 29 12	Z	0.8	2.1 (1)		
		ePP	15 29 40	LZ	17	3.7 (2)		
		eSKP	15 32 38	Z	0.9	1.3 (1)		
		e	15 39 47	LZ	17	9.4 (2)		
		eLQ	16 00 00	LT	50	4.8 (3)		
		eL	16 00 45	LR	28	3.7 (2)		
		eL	16 00 45	LZ	26	3.2 (2)		
		eL	16 00 45	LT	50	4.8 (3)		
		eLR	16 06 20	LZ	45	4.5 (3)		
27	DH	eP†	15 29 21.7	Z	0.8	3.5 (1)	116.0	
		ePP	15 30 28	Z	1.7	6.8 (1)		
		ePS	15 40 05	LT	25	6.1 (2)		
		eSS	15 45 57	LR	22	1.8 (3)		
		eLQ	16 01 35	LR	28	9.8 (2)		
		eLR	16 04 10	LZ	25	1.0 (3)		
		eL	16 21 38	LT	24	1.8 (3)		
		eL	16 21 38	LR	24	1.0 (3)		
		eL	16 21 38	LZ	21	2.7 (3)		
		e	15 36 50	LZ	21	5.5 (2)	100.0	
		eLQ	15 51 08	LR	30	1.4 (3)		
		eLR	15 58 10	LZ	35	3.5 (3)		
		eL	15 59 40	LR	24	1.8 (3)		
		eL	15 59 40	LZ	27	2.6 (3)		
		eL	15 59 40	LT	27	2.8 (3)		
27	DH	eP	16 01 08.7	Z	0.3	9.2 (0)	1.9	
		eS	16 01 33	R	0.3	2.2 (1)		
		eP	18 48 14.0	Z	0.2	3.8 (0)		
		eS	18 48 40	R	0.3	9.0 (0)		
27	20 36 48.1	44.9 N 151.0 E H = 065 KM MAG	KURILE ISLANDS	CGS				
27	RK	eP	20 47 49.0	Z	0.9	3.5 (0)	69.0	4.34
27	21 15 45.*	52.7 N 152.6 E H = 533 KM MAG	SEA OF OKHOTSK	CGS	3.80-			
27	23 31 58.*	51.1 N 179.8 E H = 033 KM MAG	RAT ALEUTIAN ISLANDS	CGS	3.90-			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
27			23 57 32.6		60.4 N 153.2 W H = 165 KM MAG	4.50-	SOUTHERN ALASKA CGS	
28			01 09 44.1		43.5 N 110.3 W H = 033 KM MAG	3.40-	WESTERN WYOMING CGS	
28			02 32 33.8		14.6 S 167.5 E H = 139 KM		NEW HEBRIDES ISLANDS	
28			06 52 50.*		53.1 N 158.2 E H = 090 KM MAG	4.30-	KAMCHATKA CGS	
28			15 11 01.*		24.4 S 179.9 E H = 590 KM MAG	4.30-	SOUTH OF FIJI ISLANDS CGS	
28	LC	eP	15 52 46.2	Z	0.3	0.9 (0)	2.4	
		eS	15 53 15	T	0.5	2.6 (0)		
28			17 47 05.9		18.2 N 94.3 E H = 043 KM MAG	5.30-	NEAR WEST COAST OF BURMA CGS	
28	NP	eP	17 59 30.4	JZ	.5	7.8 (0)	84.0	5.06
		eL	18 34 15	LZ	22	2.9 (2)		
28	HW	eLR	18 36 57	LZ	33	6.3 (2)	102.0	
28			20 46 00.1		13.3 N 144.7 E H = 033 KM MAG	5.20-	MARIANA ISLANDS CGS	
28	NP	eP	20 57 59.3	JZ	.4	8.1 (0)	79.0	5.04
28	MV	eP	20 58 32.5	Z	0.7	5.2 (0)	85.0	4.77
							AVG.	4.90
29			04 31 41.4		53.5 N 90.9 E H = 033 KM MAG	4.50-	SOUTHERN SIBERIA CGS	
29			07 04 18.3		47.0 N 150.9 E H = 110 KM MAG	4.60-	KURILE ISLANDS CGS	
29			07 27 31.9		15.5 S 178.7 W H = 407 KM MAG	4.00-	FIJI ISLANDS REGION CGS	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29	LC	eP	07 39 19.5	Z	0.6	3.7 (0)	84.0	4.29
29	07 38 49.0	05.9 N 82.5 W H = 024 KM MAG	OFF SOUTH COAST OF PANAMA	4.30-	CGS			
29	LC	eP	07 45 39.0	Z	1.0	5.0 (0)	35.0	4.41
29	07 51 55.1	38.2 S 74.5 W H = 033 KM MAG	NEAR COAST CENTRAL CHILE	4.20-	CGS			
29	LC	eP	08 03 41.0	Z	0.9	0.9 (0)	76.0	3.84
29	14 04 59.1	07.4 N 73.3 W H = 114 KM MAG	NORTHERN COLOMBIA	4.40-	CGS			
29	DH	eP	14 11 42.6	Z	0.6	7.7 (0)	35.0	4.77
29	LC	eP	14 12 23.0	Z	0.9	2.5 (1)	40.0	5.02
					Avg.			4.89
29	DH	eP eS	14 58 01.8	Z	0.3	1.0 (1)	1.7	
			14 58 24	R	0.4	5.0 (1)		
29	15 20 12.8	34.8 N 141.7 E H = 034 KM MAG	OFF E. COAST HONSHU, JAPAN	5.10-	CGS			
29	LC	eP	15 32 48.5	Z	1.0	3.8 (0)	87.0	4.51
29	HW	eS	15 37 43	LT	22	1.6 (3)	57.0	
		eLQ	15 43 28	LR	23	1.0 (3)		
		eLR	15 46 00	LZ	25	6.6 (2)		
29	DH	e	15 48 30	LR	24	1.0 (3)	96.0	
		eL	16 12 23	LR	24	6.9 (2)		
					Avg.			5.13
29	DH	eP eS	18 12 31.7	Z	0.3	2.3 (1)	1.8	
			18 12 56	R	0.3	5.5 (1)		
29	18 24 20.4	15.0 S 167.4 E H = 110 KM	NEW HEBRIDES ISLANDS					
29	DH	eP	18 36 31.2	Z	0.3	3.4 (0)	1.4	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29	DH	eS	18 36 49	T	0.4	3.5 (1)	1.4	
29	19 42 43.9	29.9 N 139.1 E H = 322 KM MAG	SOUTH OF HONSHU, JAPAN	4.40-	CGS			
29	LC	eP	19 55 19.0	Z	0.7	3.1 (0)	92.0	4.36
29	LC	eP eS	20 07 12.3	Z	0.2	8.9 (0)	1.5	
			20 07 32	R	0.3	9.3 (0)		
29	20 13 41.6	18.2 S 172.8 W H = 033 KM MAG	TONGA ISLANDS	5.10-	CGS			
29	LC	eP	20 25 55.0	Z	0.7	5.7 (0)	81.0	4.65
29	DH	eP eS	21 10 27.0	Z	0.4	9.7 (0)	1.8	
			21 10 52	T	0.5	1.8 (1)		
29	23 49 40.8	08.5 S 112.7 E H = 073 KM MAG	NEAR SOUTH COAST OF JAVA	5.80-	CGS			
1	NP	eP ¹ ePKKP	00 07 57.8	JZ	.9	3.9 (0)	107.0	
1	LC	eP ¹ e	00 08 43.0	Z	0.8	2.2 (1)		
		eSKP1	00 08 56	Z	0.9	2.3 (0)	137.0	
		eSKP2	00 12 16	Z	0.9	3.1 (1)		
		eSCSPKP	00 12 24	Z	1.0	1.9 (1)		
1	DH	eP ¹ eSS	00 24 14	Z	0.8	0.7 (0)		
		eSS	00 09 12.4	Z	1.3	9.7 (2)	146.0	
		eSSS	00 31 13	LT	27	1.8 (3)		
		eSSS	00 36 35	LT	28	2.0 (3)		
1	RK	eSKP1 eSKP2	00 12 01.4D	Z	0.8	1.0 (2)	132.0	
		eSKP2	00 12 07	Z	0.9	5.9 (1)		
		eSKKS	00 25 26	LT	18	4.2 (2)		
		e	00 30 41	LT	20	9.3 (2)		
		eL	00 56 03	LT	35	1.0 (3)		
1	MV	e eSS	00 26 33	LZ	22	4.1 (2)	123.0	
		eSS	00 26 58	LR	28	5.5 (2)		
		eL	00 48 45	LR	28	4.4 (2)		

March 1964

SEISMOLOGICAL BULLETIN
WEST GERMANY, NORWAY, BOLIVIA

THE GEOTECHNICAL CORPORATION
3401 SHILOH ROAD
GARLAND, TEXAS



SEISMOLOGICAL BULLETIN

GRAFENBERG, WEST GERMANY
OSLO, NORWAY
LA PAZ, BOLIVIA

The Geotechnical Corporation wishes to acknowledge the cooperation of the following scientific organizations in the collection and production of the data in this bulletin:

Bundesanstalt fur Bodenforschung, Hannover, West Germany (Professor Dr. Hans Closs, Director)

Jordskel, University of Bergen, Bergen, Norway (Professor A. Kvale, Director)

Observatorio San Calixto, La Paz, Bolivia (Father Ramon Cabre, S. J.)

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SEISMOLOGICAL BULLETIN

Grafenberg, West Germany Oslo, Norway La Paz, Bolivia

1. INTRODUCTION

1.1 This bulletin contains seismological data on earthquake phases recorded at three mobile seismological stations being operated by The Geotechnical Corporation (Geotech). The bulletin is intended to be an aid to interested observers in determining the extent of the earthquake data contained in the records from the three teams.

1.2 The bulletin contains the following:

- a. Data on all of the phases that have been associated with epicenters reported by the U. S. Coast and Geodetic Survey (USC&GS);
- b. Data on the epicenters listed in the bulletin - as reported by the USC&GS;
- c. Arrival time, period, amplitude, and distance for phases not associated with USC&GS epicenters.

1.3 All phases are listed in chronological order, except that unassociated phases are not mixed with a sequence of associated phases. In such cases, the unassociated phases are listed immediately following the associated phases.

2. INSTRUMENTATION

2.1 Instrumentation at the Grafenberg, West Germany (GG-GR), and Oslo, Norway (OO-NW) sites consists of a short-period vertical Benioff seismometer array. A short-period vertical Johnson-Matheson seismometer array is in operation at La Paz, Bolivia (LZ-BV). Each site is also equipped with a three-component Sprengnether long-period seismograph system. Both systems use phototube amplifiers. The response characteristics of these systems are shown in figures 1, 2, and 3.

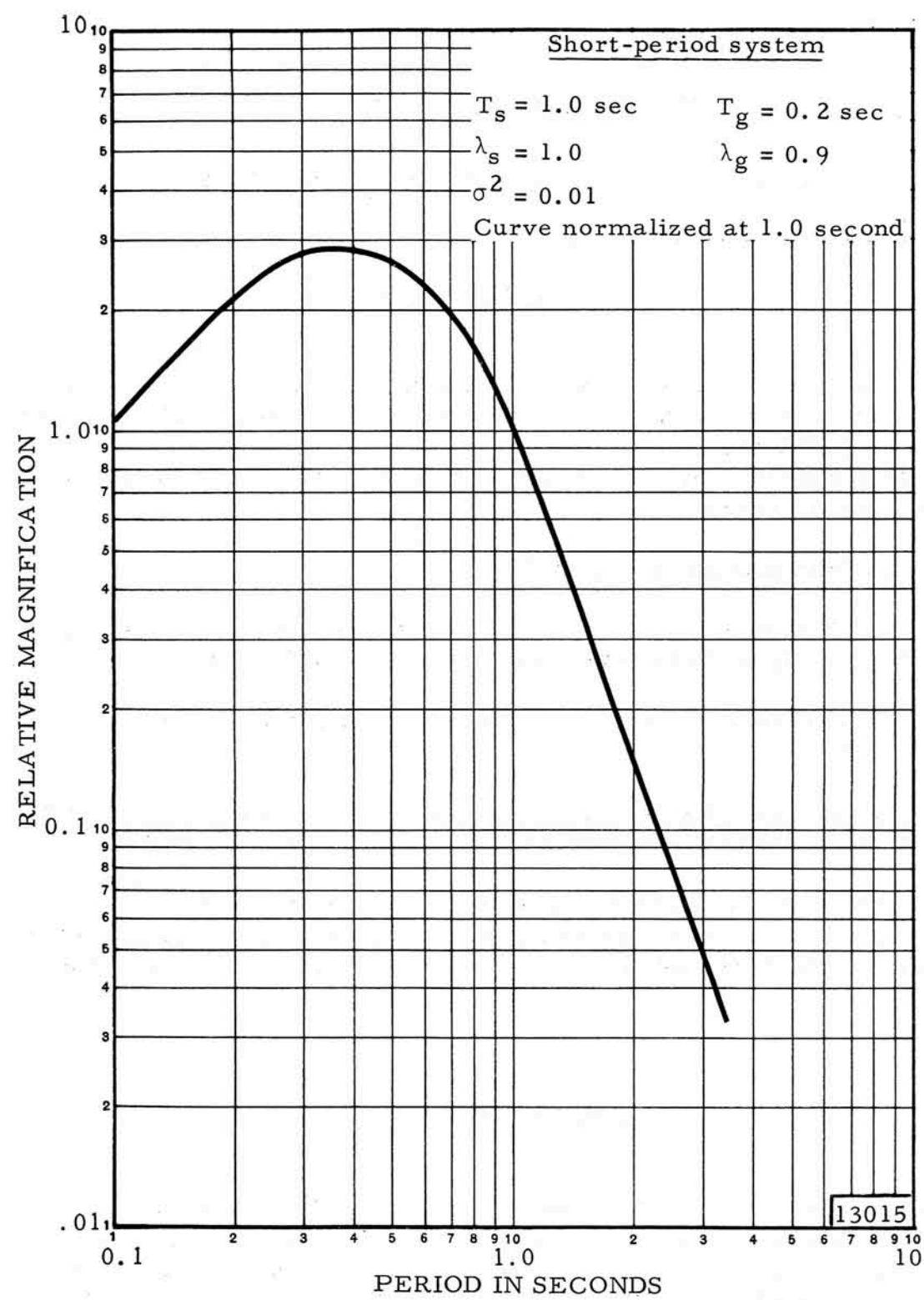


Figure 1. Frequency response of the Benioff short-period seismograph system

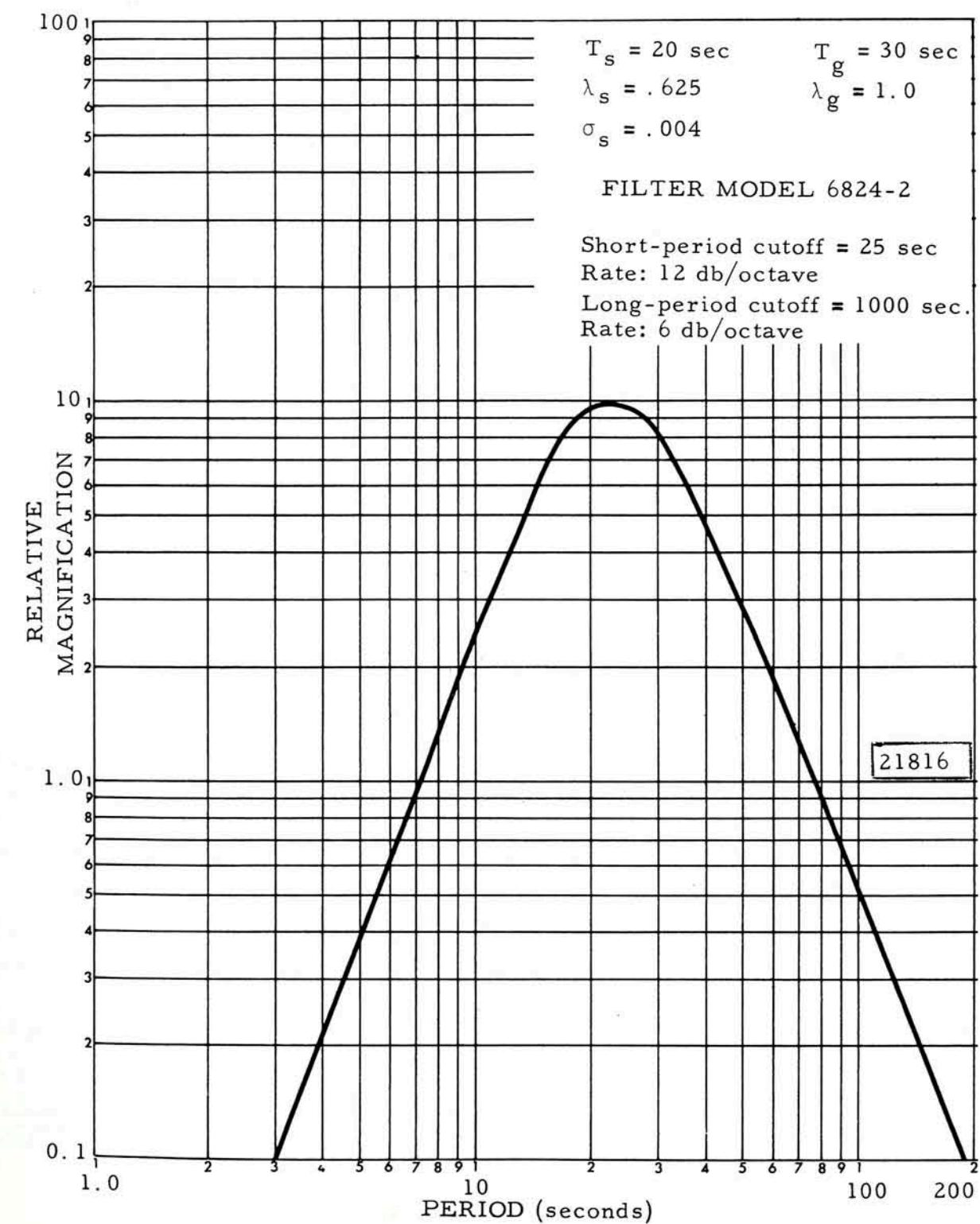


Figure 2. Frequency response of the Sprengnether long-period seismograph system

RELATIVE MAGNIFICATION

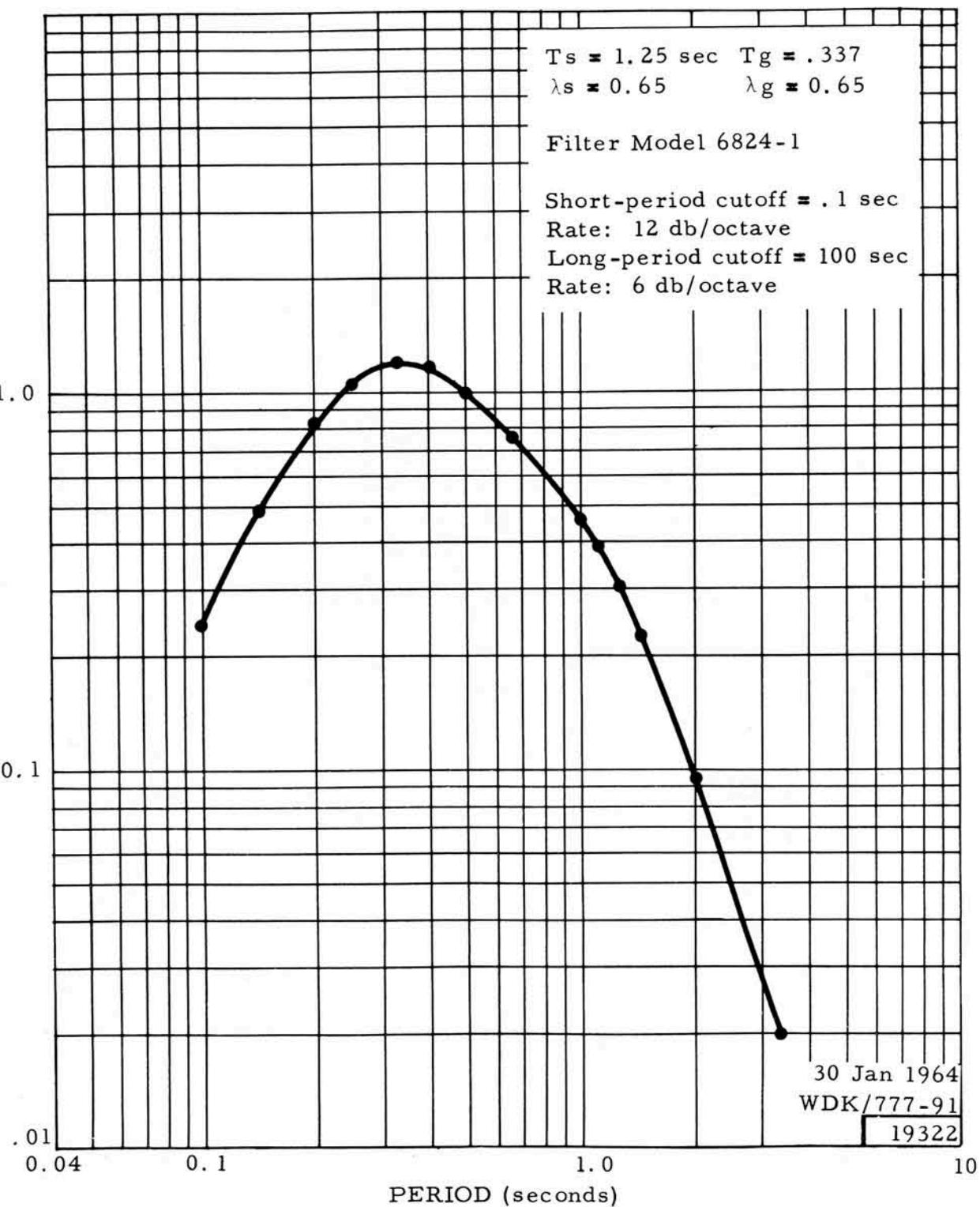


Figure 3. Frequency response of the Johnson-Matheson seismograph system

2.2 All data are recorded by 35-mm Film Recorders, Geotech Model 1301A, 14-channel Magnetic Tape Recorders, Ampex Model 314, and 16-mm film Developocorders, Geotech Model 4000C.

2.3 Precision Timing Systems, Geotech Model 5400 or 5400A, are used for primary timing. Chronometers are used for secondary timing. WWV is used for the time standard at LZ-BV. GG-GR and OO-NW use Radio Potsdam. WWV is a United States National Bureau of Standards Radio Station located at Beltsville, Maryland. The accuracy of the time program from WWV agrees with U. S. Naval Observatory time.

2.4 Each system is calibrated at least once every 24 hours. In the short-period system calibration, an electromagnetic (EM) calibrator is used to determine the magnification as a function of frequency and a weight-lift calibration is used to verify the EM magnification at 1 cps. In the long-period systems, magnification is determined as a function of frequency using EM calibrators. No method of verification is used. In the EM method of calibration, the seismometer mass is driven by a known sinusoidal force and the magnification is calculated using the relationships between the sinusoidal force and the recorded amplitude.

3. INTERPRETATION OF COLUMN TITLES

The column titles appearing in this bulletin are defined as follows:

3.1 DAY

The date, for the day of the month, is printed each time a new epicenter is listed and each time the station designator changes. Dates are given in Greenwich Civil Time (GCT).

3.2 STA

The station from which the data were taken. The station designators used in this bulletin are given in the following table:

<u>Site designator</u>	<u>Site location</u>
GG-	Grafenberg, West Germany
OO-	Oslo, Norway
LZ-	La Paz, Bolivia

The locations of the stations are shown in figure 4.

3.3 PHASE

Symbols defining the phase type are listed in the phase column. Prefixes to the phase designators are defined as follows:

- a. An "i" (impetus) preceding the phase designates a sharp or sudden beginning of the phase motion. Direction of first motion is discernible on all "i" phases.
- b. An "e" (emersio) preceding the phase designates an emergent phase motion. The direction of the initial break cannot be positively determined.
- c. An "i" or "e" alone designates an unidentified phase of either an impetus or emersio arrival.

3.4 TIME

The arrival time of each phase is given in Greenwich Civil Time (GCT). Arrival times indicate that time at which phase motion is first detected. Arrival time is measured to the nearest one-tenth second for initial arrivals recorded by the short-period system, and to the nearest second for all other phases on both systems. The direction of motion for iP arrivals is also noted in this field; either C (compression) or D (dilation) will appear immediately to the right of the tenths of second column.

3.5 INST

The seismograph channel from which the data were taken. The symbols used to designate the seismograph channels are given as follows:

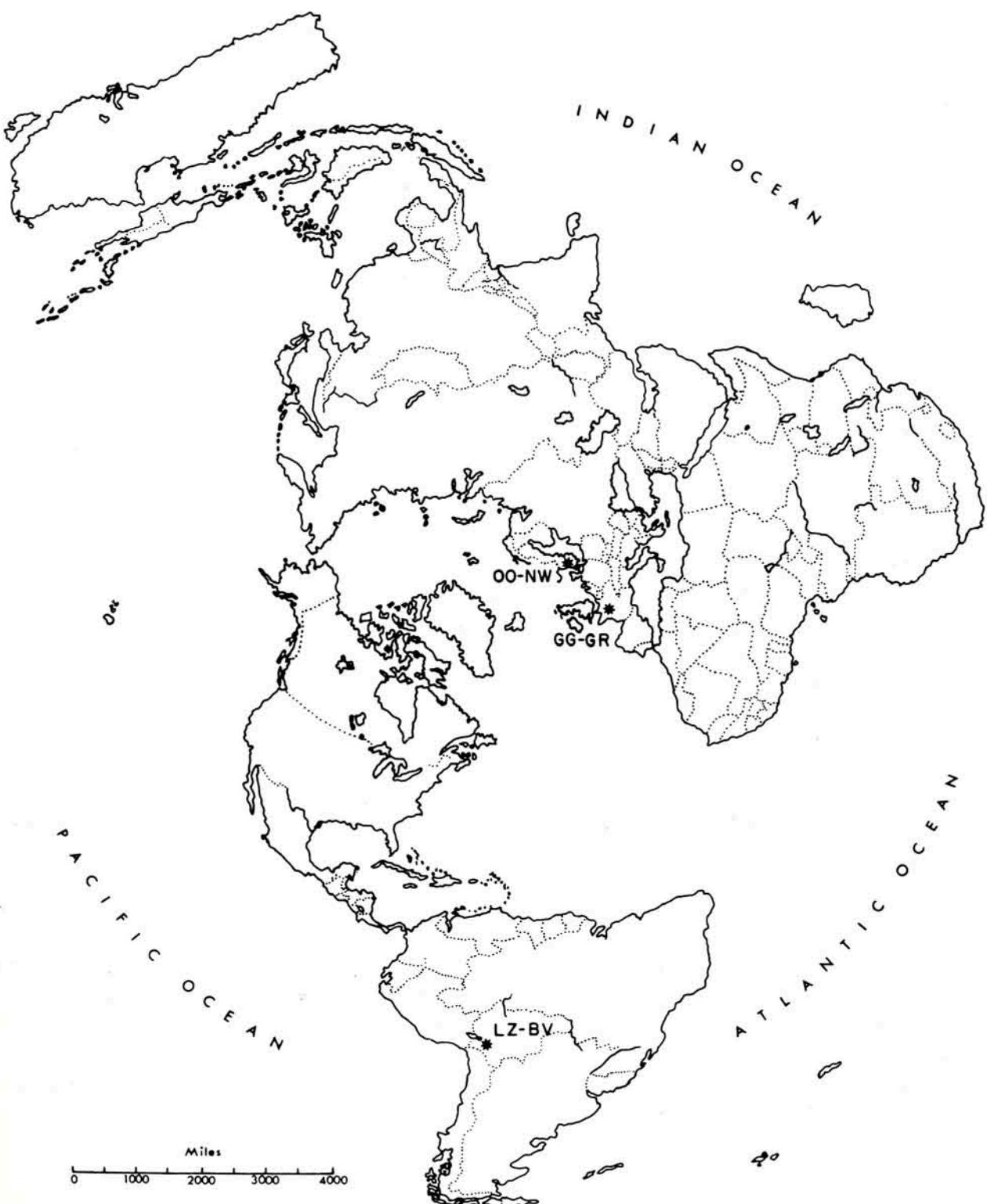


Figure 4. Bulletin sites

SZ ¹	Short-period vertical
SR ¹	Short-period radial (horizontal)
ST ¹	Short-period transverse (horizontal)
LZ	Long-period vertical
LR ¹	Long-period radial (horizontal)
LT ¹	Long-period transverse (horizontal)

3.6 PER

The period, in seconds, of each phase. When possible, the period is determined from the first full cycle of the phase; otherwise, it is taken as the average period of the first three cycles. The digits 999.9 appearing in the period columns indicate that the signal period could not be measured.

3.7 AMP

This column contains the amplitude of the phase given in millimicrons ($m\mu$) or microns (μ) of ground displacement. All amplitudes are given in tenths of units. All amplitudes are corrected for instrument response and are reported as one-half the peak-to-peak value. If the amplitude is reported in microns, a U appears in the column to the right of the tenths column. The column is left blank if the amplitude is reported in millimicrons. Amplitudes are measured from the largest pulse within the first 3 or 4 cycles whenever possible. The digits 999.9 appearing in the amplitude columns indicate either a "clipped" signal or a trace amplitude too large to measure. When amplitudes are not calculated because of insufficient calibration data, the amplitude columns are left blank.

3.8 DIST

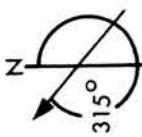
This is the distance from the recording station to the epicenter. All reported distances are calculated based on geocentric coordinates. Distance is given to the nearest one-tenth of a degree. Distance computed for unassociated data are determined from the S-P intervals. In some instances, surface groups are recorded which have traveled the major arc from the epicenter to the station. In such cases, the major arc distance is given.

¹ Table 1 gives the instrument orientation of the horizontal seismometers.

Table 1. Bulletin site information

Site designator	Site location	Horizontal seismometer orientation (azimuth from true north in degrees ¹)		Site coordinates in deg, min, sec	Elevation in km	Rock type
		Radial	Trans- verse			
GG-GR	Grafenberg, West Germany	140	230	N 49° 41' 32" E 11° 12' 55"	0.53	Limestone
OO-NW	Oslo, Norway	138	228	N 61° 03' 17" E 10° 51' 58"	0.56	Glacial drift
LZ-BV	La Paz, Bolivia	141	231	S 16° 15' 31" W 68° 28' 47"	3.99	Limestone

¹ When earth moves in direction shown, trace moves up.



3.9 MAG

The magnitudes provided are body wave magnitudes, m_b , as defined by Gutenberg and Richter². They are determined only from the short-period vertical component of the P phase (initial arrival). The following equation is used:

$$m_b = \log_{10} (A/T) + Q$$

where

m_b = body wave magnitude
 A = one-half p-p earth amplitude of P phase
 in microns
 T = period of P phase, in seconds
 Q = depth-distance factor for PZ given by
 Gutenberg and Richter², for distances
 greater than 16° .

Magnitude computations for distances less than 16° are based on extensions of the Q tables. Points from 10° to 16° were read from a curve in the Gutenberg-Richter paper, and an inverse cube relationship was used to extrapolate from 2° to 10° .

The average magnitude (sum of station magnitudes/number of stations) is listed on the last line of an epicenter print-out.

4. INTERPRETATION OF UNITED STATES COAST AND GEODETIC SURVEY DATA

The epicenter data reported by the USC&GS precedes each list of associated phases. This information appears as follows:

Line 1 (from left to right)

First group:	Day of the month
Second group:	Origin time of the event
Third group:	Geographic coordinates of the epicenter
Fourth group:	Geographic description

NOTE

An asterisk (*) following the origin time indicates epicenters believed accurate to $1/2^\circ$ in latitude and longitude and to 50 km in depth.

Line 2 (from left to right)

First group:	Depth (h) of the hypocenter in kilometers
Second group:	Magnitude (MAG) as determined by Pasadena (PAS), Berkeley (BRK), Palisades (PAL), or USC&GS (CGS)

NOTE

MAG (CGS) is m_b of Gutenberg and Richter from the P phase only. The magnitude quoted is an average value determined from data forwarded by cooperating standard stations and other observatories.

5. REMARKS

The Geotechnical Corporation routinely receives and preprocesses data collected from three overseas field stations. Information on background levels, magnification levels, operational procedures, available records, and other data can be provided to interested organizations. Requests for such information should be made to the attention of:

THE GEOTECHNICAL CORPORATION
 3401 Shiloh Road
 Garland, Texas 75041

ATTN: Mr. J. M. Whalen

² Gutenberg, B., and Richter, C. F., 1956, Magnitude and energy of earthquakes: Ann. Geofis., vol. 9, p. 1-15.

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	02	40	21.6	7.1 S	155.4 E	SOLOMON ISLANDS		
				H=100 KM	MAG 4.80	CGS		
1	04	05	39.9	45.9 N	142.1 E	NORTHERN HOKKAIDO, JAPAN		
				H=275 KM	MAG 4.30	CGS		
1	GG-	eP	07 36 43.0	SZ	0.2	5.2		
	eS		36 48	ST	0.2	111.0		
1	08	02	03.8	18.8 N	120.6 E	Luzon, PHILIPPINE ISLANDS		
				H= 50 KM	MAG 4.80	CGS		
1	09	00	02.3	21.2 S	65.7 W	SOUTHERN BOLIVIA		
				H= 90 KM	MAG 4.20	CGS		
1	LZ-	eP	09 01 36.5	SZ	0.6	104.0	5.6	5.29
	e		01 57	SZ	0.6	66.9		
	eL		02 36	SR	0.7	8.8		
1	11	22	22.9	45.3 N	150.6 E	KURILE ISLANDS		
				H= 33 KM	MAG 4.40	CGS		
1	GG-	eP	11 34 25.7	SZ	1.1	40.6	79.0	5.30
1	12	54	37.3	7.8 N	122.5 E	MINDANAO, P.I.		
				H= 31 KM				
2	LZ-	eP	03 38 21.6	SZ	0.3	31.0		6.4
	eS		38 29	SR	0.3	19.3		
2	LZ-	eP	04 58 13.0	SZ	0.4	12.9	2.2	
	eS		58 42	SR	0.6	18.7		
2	07	29	24.0	39.7 N	111.8 W	CENTRAL UTAH		
				H= 33 KM	MAG 3.90	CGS		
2	10	55	44.2	17.8 N	67.1 W	SOUTH OF PUERTO RICO		
				H= 33 KM	MAG 3.60	CGS		
2	LZ-	eP	11 04 10.6	SZ	0.6	72.4	3.6	
	eS		04 54	ST	0.9	38.7		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	11	57	17.4*	23.5 S	116.6 W	EASTER ISLAND REGION		
				H= 33 KM	MAG 4.70	CGS		
2	LZ-	eP	12 05 29.5	SZ	1.4	47.4		
	eS		12 00	LT	25	602.0		
	eL		15 40	LR	19	410.1		
2	12	39	17.6	13.9 N	91.1 W	NEAR COAST OF GUATEMALA		
				H=130 KM	MAG 4.60	CGS		
2	LZ-	eP	12 46 25.5	SZ	1.0	25.6		
	e		48 42	SZ	1.6	60.6		
	e		49 00	SZ	1.7	106.8		
	eL		55 11	LT	21	380.7		
2	16	09	46.1	12.5 N	88.0 W	NEAR S. COAST OF EL SALVADOR		
				H= 63 KM	MAG 4.40	CGS		
2	16	16	10.7	55.4 N	166.6 E	KOMANDORSKIE ISLANDS REGION		
				H= 33 KM	MAG 4.50	CGS		
2	17	19	58.4	1.7 S	77.5 W	ECUADOR		
				H= 82 KM	MAG 4.60	CGS		
2	LZ-	eP	17 23 54.9	SZ	0.6	45.2		
	eL		29 10	SZ	1.3	124.0		
2	18	13	58.5	13.5 N	90.5 W	NEAR COAST OF GUATEMALA		
				H= 73 KM	MAG 3.60	CGS		
2	18	39	12.2	41.1 N	142.6 E	OFF E. COAST HONSHU, JAPAN		
				H= 29 KM	MAG 4.80	CGS		
2	GG-	eP	18 51 21.0	SZ	1.0	21.2	80.0	5.00
2	19	32	41.7	18.9 S	174.8 W	TONGA ISLANDS		
				H=105 KM	MAG 5.30	CGS		
2	LZ-	ePP	19 50 16	SZ	1.8	118.7		
2	GG-	eP'1	19 52 17.5	SZ	0.8	44.0	148.9	
	eL		55 05	LR	18	478.1		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	01	24	17.6	18.8 S	177.7 W	FIJI ISLANDS		
				H=552 KM	MAG 4.00	CGS		
3	03	56	56.1	33.1 S	179.9 W	KERMADEC ISLANDS REGION		
				H=128 KM				
3	07	04	15.2	43.8 N	128.4 W	OFF COAST OF OREGON		
				H= 33 KM	MAG 4.30	CGS		
3	LZ-	eP	08 05 45	JZ	0.7	18.3		
3	GG-	eS	11 02 36	ST	0.5	153.9	0.3	
3	LZ-	eP	12 25 41	JZ	0.3	2.5	2.6	
	eS	26 17	SR	0.4	2.1			
3	00-	eLR	13 18 45	LZ	30	546.6		
3	15	12	14.9	30.4 S	177.9 W	KERMADEC ISLANDS REGION		
				H= 33 KM	MAG 4.30	CGS		
3	GG-	eP	15 36 03.7	SZ	0.2	39.0	0.6	
	eS	36 12	SR	0.2	128.7			
3	17	03	55.*	45.3 N	153.7 E	KURILE ISLANDS		
				H= 33 KM	MAG 4.50	CGS		
3	17	20	55.5	6.0 S	154.6 E	SOLOMON ISLANDS REGION		
				H=422 KM	MAG 4.80	CGS		
3	18	53	59.8	14.8 S	167.2 E	NEW HEBRIDES ISLANDS REGION		
				H=129 KM				
3	00-	eLR	19 16 50	LZ	30.0	192.9		
3	19	37	06.7	37.3 N	140.9 E	NEAR E. CST. HONSHU JAPAN		
				H= 80 KM	MAG 4.40	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	19	50	13.*	37.3 N	76.9 E	SINKIANG PROVINCE CHINA		
				H=256 KM				
3	00-	e	19 54 40	LZ	18.0	623.6		
3	20	02	33.1	40.3 N	125.1 W	NEAR COAST N. CALIFORNIA		
				H= 33 KM	MAG 4.80	CGS		
3	00-	eL	20 37 27	LZ	30	771.8	72.8	
3	00-	e	20 04 50	LZ	24.0	426.6		
3	00-	e	20 06 50	LZ	22	662.1		
3	00-	e	20 12 45	LT	32	565.2		
3	00-	e	20 27 20	LR	26	310.4		
3	21	39	31.	4.8 N	125.5 E	CELEBES SEA		
				H= 77 KM	MAG 4.90	CGS		
3	00-	eP	21 52 55.3	SZ	0.9	5.5	97.4	5.13
3	LZ-	eP*1	21 59 26.8	SZ	1.4	71.2	162.2	
	eP*2	22 00 15.0	SZ	1.0	19.2			
4	00	48	09.*	44.1 N	30.4 W	AZORES REGION		
				H= 33 KM	MAG 4.20	CGS		
4	GG-	eL	00 59 25	LZ	20	272.7	28.7	
4	01	17	26.*	43.9 N	29.7 W	AZORES REGION		
				H= 33 KM	MAG 4.50	CGS		
4	02	22	31.5	71.3 N	5.7 W	SVALBARD REGION		
				H= 33 KM	MAG 3.80	CGS		
4	02	58	29.2	43.6 N	28.9 W	AZORES REGION		
				H= 33 KM	MAG 4.50	CGS		
4	GG-	eL	03 11 00	LZ	18	331.1	28.0	
4	03	17	22.7	20.9 S	168.6 E	LOYALTY ISLANDS REGION		
				H= 33 KM	MAG 4.60	CGS		
4	04	06	27.6	7.1 S	129.5 E	BANDA SEA		
				H=120 KM	MAG 5.30	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
4	LZ-	eP ⁰¹	04 26 03.9	SZ	1.0	25.6	150.8	
	eP ⁰²		26 10.0	SZ	1.0	153.8		
	e		26 48	SZ	0.9	51.5		
4	05 03 38.1		53.8 N 167.9 W FOX ALEUTIAN ISLANDS					
			H= 33 KM	MAG 4.30	CGS			
4	06 08 58.6		33.8 S 179.6 W KERMADEC ISLANDS REGION					
			H= 47 KM					
4	07 17 41.2		4.2 N 123.1 E CELEBES SEA					
			H=588 KM	MAG 5.00	CGS			
4	LZ- eL		08 45 35	LZ	25.0	173.6	163.5	
4	GG- eL		09 15 10	LZ	18.0	331.1		
4	12 59 10.*		42.5 N 29.0 W AZORES REGION					
			H= 33 KM	MAG 4.20	CGS			
4	LZ- eP		13 10 21.2	SZ	1.5	21.3	68.8	5.02
4	GG- eLR		13 13 00	LZ	24	502.5	28.5	
4	13 11 16.*		25.8 N 110.5 W GULF OF CALIFORNIA					
			H= 33 KM	MAG 3.90	CGS			
4	15 24 07.6		6.3 S 130.2 E BANDA SEA					
			H=171 KM	MAG 5.70	CGS			
4	LZ- eP ⁰¹		15 43 46.0	SZ	0.8	4.8	150.9	
4	16 16 30.9		43.6 N 29.3 W AZORES REGION					
			H= 33 KM	MAG 4.80	CGS			
4	LZ- eP		16 27 36.8	SZ	1.5	42.7	69.5	5.29
4	GG- eLR		16 30 18	LZ	22	499.0	28.2	
4	17 02 59.8		10.9 S 164.5 E SOLOMON ISLANDS REGION					
			H= 33 KM	MAG 4.70	CGS			
4	17 33 43.3		43.3 N 46.1 E EASTERN CAUCASUS					
			H= 58 KM					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
4	GG- eP		17 39 00.0	SZ	1.0	17.5	24.7	4.54
	eL		47 34	SZ	2.2	197.3		
4	OO- eP		17 39 22.9	SZ	0.5	5.3	27.5	4.46
					Avg.		4.50	
4	LZ- eP		20 53 50.6	SZ	1.0	40.3		
4	21 31 49.*		34.8 N 23.9 E OFF S.W. COAST OF CRETE					
			H= 40 KM	MAG 4.20	CGS			
4	GG- eP		21 35 55.5	SZ	1.3	22.4	17.6	4.18
4	OO- eP		21 37 33.3	SZ	0.5	15.9	27.6	4.98
					Avg.		4.58	
4	22 34 06.3		6.8 S 129.8 E BANDA SEA					
			H=108 KM	MAG 5.20	CGS			
4	23 34 22.5		19.3 S 175.6 W TONGA ISLANDS REGION					
			H=222 KM	MAG 4.00	CGS			
4	23 53 19.4		11.8 N 125.6 E LEYTE, PHILIPPINE ISLANDS					
			H= 91 KM	MAG 5.70	CGS			
5	00 01 19.6		11.5 N 126.0 E NEAR COAST OF LEYTE, P.I.					
			H= 40 KM	MAG 4.70	CGS			
5	GG- eLR		00 48 05	LZ	19.0	251.0	96.7	
5	00- eL		00 05 00	LZ	24.0	273.6		
5	02 23 49.9		50.6 N 156.5 E SOUTHERN KAMCHATKA					
			H= 60 KM	MAG 4.70	CGS			
5	03 42 34.7		18.9 S 169.4 E NEW HEBRIDES ISLANDS REGION					
			H=249 KM	MAG 4.60	CGS			
5	LZ- eP		05 43 46.5	SZ	0.3	16.2	2.0	
	eS		44 13	ST	0.4	27.3		
5	06 00 41.3		45.2 S 96.4 E INDIAN OCEAN					
			H= 40 KM	MAG 5.50	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5	LZ-	eLQ	06 52 38	LR	35.0	904.0	117.3	
	eLR		07 03 34	LZ	27	1913.6		
	eL		06 11	LZ	25	1787.9		
	eL		06 11	LR	25	1846.3		
	eL		06 11	LT	24	1836.7		
5	OO-	eLR	07 01 33	LZ	33	462.7	126.2	
	eL		10 20	LR	25	944.5		
	eL		10 20	LT	25	496.8		
	eL		10 20	LZ	25	1148.9		
5	GG-	eLR	07 02 00	LZ	28	261.9	119.9	
	eL		16 08	LT	21	837.1		
	eL		16 08	LR	22	511.3		
	eL		16 08	LZ	20	575.7		
5	07 42 42.8		35.9 N 140.4 E NEAR E. COAST HONSHU, JAPAN					
			H= 85 KM MAG 4.20 CGS					
5	10 01 41.5		11.3 S 162.4 E SOLOMON ISLANDS REGION					
			H= 33 KM MAG 4.60 CGS					
5	10 05 37.2		11.2 S 162.2 E SOLOMON ISLANDS REGION					
			H= 38 KM MAG 5.10 CGS					
5	LZ-	eL	11 05 45	LZ	25.0	439.4	122.9	
5	LZ-	eP	11 05 48.0	SZ	0.5	5.9		
5	OO-	eL	11 20 50	LZ	23	362.3		
5	11 42 52.5		39.4 N 125.1 W OFF COAST N. CALIFORNIA					
			H= 33 KM MAG 4.30 CGS					
5	LZ-	eP	12 03 16.5	SZ	0.5	8.8		
5	LZ-	eL	12 04 33	ST	1.0	23.2		
5	12 40 52.8		39.2 N 114.2 W EASTERN NEVADA					
			H= 33 KM MAG 3.40 CGS					
5	GG-	eP	13 12 05.8	SZ	0.3	11.6	1.4	
	eS		12 24	SR	0.3	35.0		
	eP		13 23.7	SZ	0.3	17.5		
	eS		13 42	SR	0.3	24.7		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5			12.1 N 88.1 W OFF COAST OF EL SALVADOR					
			H= 53 KM MAG 4.30 CGS					
5	LZ-	eP	15 07 22.5	SZ	0.3	10.0	1.9	
	eS		07 48	ST	0.4	3.3		
5	20 31 57.4		16.4 S 173.0 W TONGA ISLANDS REGION					
			H= 33 KM MAG 4.70 CGS					
5	GG-	eP'1	20 51 35	LZ	17.0	38.3	146.6	
	eL		21 46 38	LZ	25	21.7		
5	LZ-	eL	21 18 46	LZ	25	175.4	98.8	
5	LZ-	eP	21 40 42.7	SZ	0.4	4.5	4.5	
	eS		41 38	ST	0.9	17.2		
5	22 27 22.7		52.8 N 170.0 W FOX ALEUTIAN ISLANDS					
			H= 33 KM MAG 4.10 CGS					
6	00-	eP	00 47 51.2	SZ	0.9	33.1		
6	02 36 36.3		41.1 N 142.5 E OFF N.E. COAST HONSHU, JAPAN					
			H= 34 KM MAG 4.80 CGS					
6	00-	eLR	03 15 50	LT	20	230.8	70.9	
6	02 55 12.*		12.4 N 87.6 W NEAR W. COAST OF NICARAGUA					
			H= 100 KM MAG 3.90 CGS					
6	LZ-	eP	05 13 12.0	SZ	0.6	59.6		
6	GG-	eL	08 43 00	LZ	25	21.7		
6	12 54 35.9		4.2 S 134.6 E NEAR CST. WESTERN NEW GUINEA					
			H= 33 KM					
6	GG-	eP	14 56 21.5	SZ	0.3	36.2	1.3	
	eS		56 39	SR	999.9	9999.9		
6	GG-	eP	14 57 33.5	SZ	0.3	34.2	1.4	
	eS		57 51	SR	0.4	48.7		
6	18 57 16.1		6.1 S 154.4 E NEW BRITAIN REGION					
			H= 74 KM MAG 6.00 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	LZ-	eP	19 16 24.2	SZ	0.5	11.8	132.1	
	eL		20 00 40	LZ	30	659.3		
6	00-	ePP	19 17 20	LZ	20	337.8	118.8	
	eSP		27 05	LZ	27	391.5		
	eSS		33 20	LT	25	237.3		
	e		37 20	LT	25	363.9		
	e		44 40	LT	35	407.8		
	eLQ		48 25	LT	20	217.1		
	eLR		51 10	LR	35	1344.3		
6	GG-	ePP	19 18 15	LZ	20	361.6	126.7	
	eLQ		20 00 00	LT	40	1032.3		
	eLR		03 45	LZ	32	1283.2		
6	20 42 55.8		19.5 S 174.5 E	FIJI ISLANDS REGION				
			H= 56 KM	MAG 4.60 CGS				
6	21 05 50.2		19.7 S 70.5 W	NORTHERN CHILE				
			H= 50 KM	MAG 5.30 CGS				
6	LZ-	eP	21 06 54.1	SZ	0.5	76.3	3.9	4.98
	eP		06 55	LZ	12	9999.9		
	eL		07 40	LR	999.9	9999.9		
6	23 51 28.5		22.9 S 173.1 E	LOYALTY ISLANDS REGION				
			H= 54 KM	MAG 4.60 CGS				
7	01 46 21.1		21.4 S 179.3 W	FIJI ISLANDS REGION				
			H=593 KM	MAG 4.10 CGS				
7	03 34 25.2		20.2 S 177.8 W	FIJI ISLANDS REGION				
			H=481 KM	MAG 4.20 CGS				
7	04 51 05.*		18.6 S 70.4 W	NORTHERN CHILE				
			H=112 KM	MAG 4.50 CGS				
7	LZ-	eP	04 51 57.0	SZ	0.4	9.0	3.0	4.15
	eL		52 30	SR	0.5	29.5		
	eL		52 30	LZ	18	395.9		
7	07 25 03.9		3.5 N 97.1 E	NORTHERN SUMATRA				
			H= 82 KM	MAG 5.30 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
7	07 44 08.1		71.7 N 164 W	JAN MAYEN ISLAND REGION				
			H= 33 KM	MAG 4.50 CGS				
7	GG-	eL	08 56 00	LZ	30.0	386.7		
7	00-	e	09 55 45	LT	17	167.0		
7	00-	e	09 57 10	LT	25	237.3		
7	09 58 57.1		70.8 N 204 E	JAN MAYEN ISLAND REGION				
			H= 33 KM					
7	LZ-	eLQ	10 46 44	LR	14.0	441.2	99.1	
	eLR		53 40	LZ	36	5085.0		
7	00-	e	10 02 20	LT	25.0	458.9		
7	00-	e	10 06 05	LT	20	287.4		
7	00-	eL	10 11 40	LR	30	685.1		
7	00-	eL	10 18 25	LZ	35	866.4		
7	LZ-	eP	10 39 28.9	SZ	1.0	19.2		
7	GG-	eP	10 54 05	LZ	17	191.1		
7	GG-	e	10 59 50	LT	20	619.6		
7	11 01 12.1		4.1 S 130.3 E	BANDA SEA				
			H= 33 KM	MAG 4.20 CGS				
7	GG-	eL	11 15 20	LZ	25.0	390.9		
7	13 09 17.*		26.1 N 125.5 E	RYUKYU ISLANDS				
			H=161 KM	MAG 3.80 CGS				
7	LZ-	eP	16 54 08.8	SZ	0.5	13.7	2.3	
	eS		54 38	ST	0.8	6.8		
7	21 06 06.9		5.6 S 152.7 E	NEW BRITAIN				
			H= 62 KM	MAG 4.80 CGS				
7	23 06 27.7		61.6 N 151.4 W	SOUTHERN ALASKA				
			H= 72 KM	MAG 4.40 CGS				
7	23 13 25.4		19.9 S 177.9 W	FIJI ISLANDS				
			H=534 KM	MAG 4.50 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	01	35 48.1	44° S 168°4 E	SOUTH ISLANDS NEW ZEALAND				
			H= 33 KM	MAG 5.60	CGS			
8	LZ-	ePP	01 53 50	LZ	20.0	215.8	100.7	
	eSKS		02 00 18	LT	20	395.2		
	e		01 27	LR	20	262.4		
	ePS		02 52	LT	20	1006.0		
	e		09 13	LT	25	890.1		
	eSSS		12 10	LT	24	581.8		
	eLQ		18 19	LR	40	752.1		
	eLR		23 11	LZ	23	3451.0		
8	00-	ePP	02 00 00	LZ	24	279.2	158.3	
	eSKKS		06 50	LT	20	349.3		
	e		10 25	LT	30	493.0		
	e		21 05	LT	23	744.5		
	e		28 05	LT	25	1177.0		
	eLQ		45 40	LR	45	3291.9		
	eLR		59 45	LZ	28	2279.9		
8	GG-	ePP	02 00 53	LZ	15	246.0	163.4	
	e		12 00	LR	23	306.7		
	eSSS		27 25	LT	19	520.8		
	eL		59 00	LZ	28	344.6		
8	04	55 28.1	60.4 N 153.3 W	KENAI PENINSULA REGION				
			H=158 KM	MAG 4.20	CGS			
8	06	26 12.*	22.3 S 67.1 W	SOUTHERN BOLIVIA				
			H=302 KM	MAG 3.90	CGS			
8	LZ-	eP	06 27 44.2	SZ	0.7	42.1	6.2	4.48
	eL		29 09	SR	0.8	20.7		
8	10	37 20.*	6.7 S 125.9 E	BANDA SEA				
			H=540 KM					
8	LZ-	eP	10 41 51.4	SZ	0.4	10.3	3.1	
	eS		42 32	SR	0.4	6.0		
8	GG-	eP	11 31 37.6	SZ	0.4	6.3	3.6	
	eS		32 21	ST	0.5	10.6		
8	11	55 49.7	46. S 146.8 E	SOUTH OF TASMANIA				
			H= 33 KM					
8	LZ-	eP	13 48 21.4	SZ	0.5	54.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	16	25 27.*	26.7 S 112.0 W	EASTER ISLAND REGION				
			H= 33 KM	MAG 4.60	CGS			
8	17	20 04.2	51.7 N 178.0 E	RAT ALEUTIAN ISLANDS				
			H= 33 KM	MAG 4.10	CGS			
8	17	39 35.*	4.7 S 152.7 E	NEW BRITAIN				
			H= 83 KM	MAG 4.40	CGS			
8	LZ-	eL	17 43 15	LR	27.0	729.9		
8	17	44 02.*	10.9 S 161.8 E	SOLOMON ISLANDS				
			H=100 KM	MAG 4.70	CGS			
8	LZ-	eLR	17 46 05	LZ	20.0	647.6		
8	17	51 06.5	4.6 S 152.6 E	NEW BRITAIN REGION				
			H= 69 KM	MAG 4.70	CGS			
8	LZ-	eP	18 05 06.0	SZ	0.5	57.9		
8	19	12 44.3	21. N 105.5 W	JALISCO, MEXICO				
			H= 33 KM	MAG 4.10	CGS			
8	19	44 36.	21.3 N 105.2 W	JALISCO, MEXICO				
			H= 33 KM	MAG 4.00	CGS			
8	23	05 04.6	5.1 S 151.3 E	NEW BRITAIN				
			H=156 KM	MAG 4.70	CGS			
9	00-	eL	01 23 40	LT	18.0	223.0		
9	GG-	eL	01 26 35	LZ	28	97.3		
9	02	06 30.7	37.6 N 118.4 W	MONO COUNTY, CALIFORNIA				
			H= 14 KM	MAG 3.90	CGS			
9	LZ-	tP	05 23 42.0C	SZ	0.6	50.2		
9	LZ-	tP	06 09 32.9C	SZ	0.3	51.9	1.7	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eS	09 56	ST	0.6	19.2		
9	09 48 49.8		4.8 N 32.8 W MID ATLANTIC OCEAN					
			H= 33 KM MAG 4.80 CGS					
9	LZ- eP		09 56 32.4	SZ	1.0	61.3	41.0	5.32
	e		56 38	SZ	0.9	60.2		
	eL		10 08 10	LZ	34	60.1		
9	GG- eL		10 15 55	LZ	21	141.2	58.1	
9	OO- eL		10 19 39	LT	32	356.1	65.0	
9	10 27 33.1		36.2 N 71.5 E HINDU KUSH					
			H=132 KM MAG 4.80 CGS					
9	LZ- eP		10 39 43.2	SZ	0.4	4.9	4.4	
	eS		40 38	SR	0.6	7.3		
9	LZ- eP		12 11 19.4	SZ	0.7	4.0	4.8	
9	12 11 31.*		22. S 179.1 W FIJI ISLANDS					
			H=492 KM					
9	LZ- eS		12 12 16	ST	0.8	16.7	4.8	
9	14 53 26.3		61.4 N 146.6 W SOUTHERN ALASKA					
			H= 33 KM MAG 3.90 CGS					
9	LZ- eP		17 16 42.9	SZ	0.3	13.6	1.8	
	eS		17 08	ST	0.7	14.1		
9	19 41 01.3		36.5 N 70.9 E HINDU KUSH					
			H=181 KM					
9	OO- eP		19 48 54.8	SZ	0.8	17.5	44.5	4.60
9	20 49 55.5		35.2 N 118.7 W KERN COUNTY CALIFORNIA					
			H= 14 KM MAG 4.30 CGS					
10	LZ- eP		01 37 12.7	SZ	0.5	5.9		
10	OO- eL		02 24 54	LZ	27	209.8		
10	GG- eL		02 33 35	LZ	18	298.0		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
10	07 02 08.*		6.3 S 104.4 E NEAR W. COAST OF SUMATRA					
			H= 62 KM MAG 5.20 CGS					
10	09 04 13.6		19.2 N 108.6 W OFF COAST OF JALISCO MEXICO					
			H= 33 KM MAG 4.30 CGS					
10	LZ- eP		09 13 32.6	SZ	1.0	24.8	52.9	5.13
10	11 26 57.4		25. S 69.2 W NORTHERN CHILE					
			H= 46 KM MAG 4.40 CGS					
10	LZ- eP		11 29 12.4	SZ	0.5	4.4	8.7	4.81
	eL		31 23 ST	ST	0.9	29.0		
10	12 38 11.7		8.1 S 117.8 E FLORES SEA					
			H= 33 KM					
10	GG- eP		13 03 11.7	SZ	0.4	33.1	1.4	
	eS		03 30 SR	SR	0.4	33.1		
10	LZ- eP		13 43 20.5	SZ	0.4	5.0	2.2	
	e		43 24 SZ	SZ	0.7	30.6		
	eS		43 50 ST	ST	0.5	24.4		
10	13 59 54.8		1.9 N 127.5 E MOLUCCA PASSAGE					
			H=117 KM MAG 5.60 CGS					
10	00- e		14 17 50 LT	LT	24.0	268.8	100.8	
	eSKS		23 55 LT	LT	18	561.4		
	eLR		51 03 LZ	LZ	30	2357.6		
	eL		56 15 LR	LR	25	1715.2		
	eL		56 15 LT	LT	25	1024.3		
	eL		56 15 LZ	LZ	25	2726.1		
10	GG- ePP		14 18 15 LZ	LZ	14	266.6	105.0	
	ePS		27 40 LT	LT	24	375.0		
	eL		51 10 LR	LR	28	417.5		
10	LZ- eP ¹		14 19 43.5 SZ	SZ	1.2	12.7	159.0	
	eP ²		20 20.0 SZ	SZ	0.9	44.3		
	eP ²		20 20 LZ	LZ	18	143.1		
	eSKP		23 06 SZ	SZ	1.4	40.2		
	e		24 41 LZ	LZ	17	280.9		
	eSPP		37 16 LZ	LZ	25	261.2		
	e		45 30 LZ	LZ	25	261.2		
	e		45 48 LT	LT	23	445.2		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eL		15 15 30	LZ	45±0	805±0		
	eL		20 14	LZ	20	197±6		
10	LZ= eP		15 40 17±0	SZ	0±6	15±7		
10	LZ= eP		18 09 11±2	SZ	0±5	8±8		
10	LZ= eP		19 34 00±4	SZ	0±3	56±3	2±0	
	eS		34 27	SR	0±4	20±9		
10	20 11 32±8		17±9 S 168±2 E NEW HEBRIDES ISLANDS					
			H= 31 KM MAG 3.90 CGS					
10	21 46 37±*		6±9 S 125±6 E BANDA SEA					
			H= 514 KM MAG 5.20 CGS					
10	22 48 53±7		18±2 S 70±6 W CHILE PERU BORDER					
			H= 132 KM MAG 4.40 CGS					
10	LZ= eP		22 49 41±2	SZ	0±5	44±3	2±8	
	eL		50 27	LZ	18	501±3		
	eL		50 38	SR	0±5	37±6		
10	23 10 24±4		6±8 S 129±4 E BANDA SEA					
			H= 141 KM MAG 5.10 CGS					
10	LZ= eP±1		23 30 05±0	SZ	0±9	36±0	151±1	
11	00 09 02±7		42±5 N 45±0 E GEORGIA S.S.R.					
			H= 29 KM MAG 4.60 CGS					
11	00± eP		00 14 48±1	SZ	0±7	13±6	27±6	4±79
	eL		23 27	LT	24	672±1		
	eL		23 53	SZ	1±9	114±1		
11	GG= eL		00 22 35	LZ	30	244±0	24±4	
11	01 06 00±4		1±8 N 127±1 E MOLUCCA PASSAGE					
			H= 58 KM MAG 5.60 CGS					
11	GG= ePP		01 24 29	LZ	12±0	266±3	105±0	
	eSKS		30 40	LT	14	315±9		
	ePS		33 43	LT	22	280±6		
	eLQ		02 02 25	LT	25	287±0		
	eLR		05 50	LT	30	650±5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11	LZ= eP±1		01 25 56±7	SZ	1±6	189±6	159±0	
	e		26 08	SZ	2±0	221±8		
	e		26 18	SZ	1±4	72±4		
	eP±2		26 33±0	SZ	1±5	172±5		
	ePP		30 11	SZ	1±3	55±0		
	ePP		30 14	LZ	20	184±5		
	e		44 40	LZ	17	268±2		
	eSS		50 20	LR	20	224±5		
11	OO- eSKS		01 30 10	LT	14	413±3	100±8	
	eSS		38 30	LT	27	287±4		
	eLG		51 23	LR	40	1750±6		
	eLR		57 57	LZ	35	2539±6		
11	04 39 31±*		36±7 N 33±4 W AZORES REGION					
			H= 33 KM MAG 4.30 CGS					
11	LZ= eP		04 49 51±3	SZ	0±9	27±7	62±2	5±40
11	04 59 46±*		54±7 N 169±9 W ALEUTIAN FOX ISLANDS REGION					
			H= 33 KM MAG 4.20 CGS					
11	05 50 51±9		38±2 S 74±3 W NEAR COAST OF S. CHILE					
			H= 33 KM MAG 4.70 CGS					
11	LZ= eP		05 55 50±0	SZ	1±4	63±2	22±5	4±86
	eP		55 55	LZ	15	495±7		
	ePP		56 24	SZ	1±5	62±1		
	eS		59 57	LR	18	1561±2		
	eLR		06 05 11	LT	17	2345±4		
11	00- eL		06 58 00	LZ	18	384±2	120±4	
11	06 41 08±*		57±9 N 158±6 W ALASKA PENINSULA					
			H= 127 KM MAG 4.40 CGS					
11	07 19 29±*		2±5 S 76±6 W PERU ECUADOR BORDER					
			H= 162 KM MAG 3.90 CGS					
11	GG= eP		08 01 25±1	SZ	0±4	48±0		
11	LZ= e		08 08 36	LZ	18	300±7		
11	LZ= eP		08 49 52±5	SZ	1±0	12±4		
11	GG= eL		13 10 20	LR	21	231±4		
11	18 23 19±6		31±9 N 132±4 E NEAR E. CST. KYUSHU JAPAN					
			H= 33 KM MAG 4.70 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11	GG-	eL	19 08 30	LT	23.0	150.4	83.5	
11	19 19 06.2	46.9 N H= 33 KM	8.5 E SWITZERLAND					
11	GG-	eP	19 19 55.5	SZ	0.4	17.2	3.3	4.44
	e	20 29	SZ	0.8	79.0			
	e	20 53	ST	0.5	187.3			
11	LZ-	eP	23 13 26.5	SZ	0.3	6.0		
11	23 34 21.*	27.7 N H= 42 KM	57.5 E SOUTHERN IRAN					
			H= 42 KM	MAG 4.60	CGS			
11	GG-	eP	23 42 12.0	SZ	1.1	41.2	41.4	5.12
	eL	54 27	LT	50	723.0			
11	00-	eP	23 42 37.7	SZ	0.5	7.7	45.6	4.87
	eS	49 17	LT	20	344.5			
	eSS	52 35	LT	23	400.5			
	eL	58 48	LT	30	648.4			
12	LZ-	eL	00 34 05	LR	20	89.8	129.0	Avg. 4.99
12	03 55 14.	23.4 N H= 33 KM	121.6 E NEAR E. COAST OF TAIWAN					
			MAG 5.20	CGS				
12	00-	eP	04 07 35	LZ	17.0	89.2	79.2	
	eS	17 05	LR	30	252.2			
	eLQ	32 00	LR	50	987.4			
	eLR	37 20	LZ	35	868.5			
12	GG-	eL	04 39 00	LR	31	375.1	84.7	
12	04 30 21.1	22.9 S H= 378 KM	179.2 W FIJI ISLANDS REGION					
			MAG 4.60	CGS				
12	05 39 03.*	5.2 N H= 33 KM	127.5 E TALAUD ISLANDS REGION					
12	LZ-	eL	06 16 15	LZ	25.0	139.7		
12	LZ-	eP	08 20 53.5	SZ	0.3	37.6	1.8	
	eS	21 17	SR	0.6	10.6			
12	LZ-	eP	09 14 08.0	SZ	0.8	13.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	10 37 04.3	21.9 S H= 561 KM	179.5 W FIJI ISLANDS REGION					
			MAG 4.10	CGS				
12	GG-	eP	12 44 08.5	SZ	0.3	14.4	1.6	
	eS	44 30	SR	0.4	25.6			
12	GG-	eP	12 58 59.4	SZ	0.4	31.7	1.4	
	eS	59 17	SR	0.4	49.0			
	eP	13 01 13.5	SZ	0.5	36.9			
	eS	01 32	SR	0.4	64.2			
12	16 12 15.5	18.2 S H= 33 KM	167.4 E NEW HEBRIDES ISLANDS					
			MAG 4.30	CGS				
12	LZ-	eP	17 01 04.5	SZ	0.5	8.6		
12	18 35 18.*	20.1 N H= 33 KM	109.0 W REVILLA GIGEDO ISLANDS REG.					
			MAG 3.90	CGS				
12	19 32 20.2	36.4 N H= 85 KM	140.4 E NEAR E. COAST HONSHU+ JAPAN					
			MAG 4.30	CGS				
12	22 32 56.7	13.5 N H= 33 KM	122.9 E NEAR S. CST. OF LUZON+ P.I.					
			MAG 5.30	CGS				
12	00-	eS	22 56 40	LT	30.0	412.8	88.6	
	eSS	23 02 35	LT	32	760.9			
	eLQ	13 10	LR	45	1338.3			
	eLR	19 05	LT	35	2039.9			
12	GG-	eL	23 09 05	LZ	25	256.9	93.3	
12	22 56 22.	5.6 S H= 40 KM	153.0 E SOLOMON ISLANDS					
13	01 20 18.*	33.2 N H= 40 KM	83.4 W CENTRAL GEORGIA					
			MAG 4.40	CGS				
13	03 46 59.*	25.5 N H= 33 KM	142.5 E VOLCANO ISLANDS					
			MAG 4.70	CGS				
13	LZ-	eP	04 06 49.5	SZ	1.0	34.1	149.7	

DAY	STA	PHASE	TIME	INST	PER	AMPL.	DIST	MAG
13	LZ-	eB eS	03 48 07.0 48 44	SZ ST	0.3 0.4	12.5 53.5	218	
13	04 26 23.5	4.1 S 105.1 W WEST OF GALAPAGOS ISLANDS H= 33 KM MAG 4.60 CGS						
13	LZ-	ePCS eLQ eLR	04 39 50 42 25 44 35	LT LT LR	15.0 25 26	447.7 2084.1 1436.3	37.9	
13	OO-	eL	05 17 40	LZ	37	692.0	105.9	
13	GG-	eL	05 20 00	LZ	30	366.0	109.9	
13	LZ-	eL	05 46 30	LR	20.0	182.9		
13	LZ-	eP	05 50 46.0	SZ	0.2	3.7		
13	05 51 31.2	52.1 N 170.0 W FOX ALEUTIAN ISLANDS H= 33 KM MAG 4.60 CGS						
13	06 19 02.5	17.7 S 178.7 W FIJI ISLANDS H=522 KM MAG 4.60 CGS						
13	LZ-	eP eS	07 46 29.0 46 44	SZ SR	0.6 0.5	10.5 2.4	1.2	
13	08 13 51.6	8.9 N 69.8 W WESTERN VENEZUELA H= 33 KM MAG 4.10 CGS						
13	08 38 32.*	24. S 179.0 E SOUTH OF FIJI ISLANDS H=512 KM MAG 4.50 CGS						
13	11 54 06.1	12.9 N 90.4 W NEAR COAST OF GUATEMALA H=128 KM MAG 4.90 CGS						
13	LZ-	e e eL	12 01 13 07 20 11 40	SZ LR LR	0.9 23 32	19.4 177.2 922.1	36.2	
13	GG-	eL	12 39 40	LZ	22	136.8	87.6	
13	12 57 26.	37.1 S 74.9 W OFF COAST OF SOUTHERN CHILE H= 54 KM MAG 4.60 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL.	DIST	MAG
13	13	35 33.3	7. S 155.5 E	SOLOMON ISLANDS REGION H= 95 KM MAG 4.50 CGS				
13	LZ-	eL	15 49 10	LT	40.0	1379.7		
13	LZ-	eP eS	18 46 04.0 46 44	SZ ST	0.5 0.7	47.3 19.7	3.2	
13	18 51 15.	13.7 N 90.7 W	NEAR COAST OF GUATEMALA H= 64 KM MAG 4.40 CGS					
13	LZ-	eS e	19 04 00 06 50	LR	20.0	182.9	37.0	
13	eL	09 22	LT	28	491.2			
13	GG-	eL	19 34 00	LR	30	672.4		
13	LZ-	eP eS	19 00 07.0 00 55	SZ SR	0.3 0.6	2.5 5.4	4.0	
13	21 08 12.1	14.5 N 90.9 W	NEAR COAST OF GUATEMALA H= 33 KM MAG 4.80 CGS					
13	LZ-	eP eS eLQ eLR	21 15 13.9 21 00 25 56 29 28	SZ LR LR LZ	0.9 22 34 20	11.0 131.7 625.6 794.2	37.7 4.66	
13	GG-	eL	21 53 40	LZ	24	165.3	86.7	
13	LZ-	e	23 19 20	LZ	21.0	731.6		
13	LZ-	eLR	23 54 30	LT	42	1149.8		
14	LZ-	eP	01 21 27.7	SZ	0.6	85.9		
14	02 14 02.	7.8 S 75.4 W	PERU H= 33 KM MAG 4.20 CGS					
14	02 37 24.6	47.1 N 8.3 E	SWITZERLAND H= 33 KM MAG 4.70 CGS					
14	GG-	eP e eL	02 38 13.2 38 25 39 08	SZ LT LT	0.4 19 18	64.4 1218.9 4941.2	3.2 5.01	
14	00-	eP	02 40 42.5	SZ	0.4	3.7	14.1	4.35
14	e	40 55	SZ	0.8	27.6			
14	e	43 22	LT	17	2263.7			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eL	45 36	SR	2.0	339.0		
		eL	46 39	LZ	1.4	2138.4		
					Avg.	4.68		
14	02 51 04.1		18.7 N 145.6 E MARIANA ISLANDS					
			H=136 KM MAG 5.00 CGS					
14	LZ- eP ^{0.1}		03 10 36.1	SZ	0.7	9.3	147.4	
14	LZ- eL		04 22 19	LZ	20.0	573.6		
14	06 51 58.6		6.2 S 92.1 E ANDAMAN ISLANDS REGION					
			H= 33 KM MAG 4.70 CGS					
14	00- eL		07 35 12	LZ	22.0	188.8	91.1	
14	LZ- eP		07 03 18.6	SZ	0.8	11.6		
14	11 25 13.3		51.5 N 170.1 W FOX ALEUTIAN ISLANDS					
			H= 33 KM MAG 4.20 CGS					
14	11 44 53.8		20.6 S 178.5 W FIJI ISLANDS					
			H=561 KM MAG 4.70 CGS					
14	GG- eP ^{0.1}		12 03 33.1	SZ	0.8	26.8	150.0	
14	GG- eP eS		12 10 55.1 11 39	SZ SR	0.4 0.5	22.2 5.3	3.6	
14	12 16 53.4		20.6 S 178.2 W FIJI ISLANDS REGION					
			H=260 KM MAG 4.10 CGS					
14	LZ- eP		14 58 02.4	SZ	0.8	9.3		
14	15 05 54.4		13.7 S 172.3 E NEW HEBRIDES ISLANDS REGION					
			H=611 KM MAG 5.10 CGS					
14	15 12 22.4		15.9 N 60.5 W LEEWARD ISLANDS REGION					
			H= 31 KM MAG 5.40 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
14	LZ-	eP	15 18 58.6	SZ	0.7	18.3	32.9	5.09
		e	19 07	SZ	1.1	91.3		
		eS	24 23	LZ	30	841.3		
		eLR	32 19	LZ	20	4412.4		
14	00-	eP	15 23 16.7	SZ	1.0	40.2	67.2	5.51
		e	26 30	SZ	0.7	17.1		
		eS	32 15	LZ	25	853.6		
		eLR	43 50	LZ	28	1753.1		
		eL	46 38	LZ	22	1935.9		
		eL	46 38	LZ	21	1827.4		
		eL	46 38	LZ	21	2820.5		
14	GG-	e	15 41 06	LZ	32	550.7	66.2	
		eL	43 35	LZ	25	463.0		
		eLR	46 30	LZ	20	879.5		
		Avg.						5.30
14	LZ- eP		16 23 27.6	SZ	0.5	10.3	1.8	
		eS	23 52	ST	0.5	7.1		
14	16 36 52.1		1.9 S 12.9 W MID ATLANTIC OCEAN					
		H= 33 KM MAG 5.40 CGS						
14	LZ- eP		16 46 34.3	SZ	1.5	62.1	56.5	5.42
		e	54 27	LZ	23	373.1		
		eL	17 03 27	LZ	35	1493.6		
14	GG- e		16 51 46	LZ	20	622.5	55.4	
		eSP	54 45	LZ	32	929.8		
		eLR	17 09 42	LZ	20	1456.8		
14	00- eLQ		17 03 45	LZ	28	1228.4	65.4	
		eLR	09 22	LZ	31	1552.7		
		eL	12 42	LZ	21	1827.4		
		eL	12 42	LZ	17	1562.1		
		eL	12 42	LZ	25	2010.0		
14	LZ- eP		16 37 59.2	SZ	0.4	9.5	6.1	
		eS	38 02	SR	0.5	3.6		
14	17 42 25.3		37.7 N 118.7 W MONO COUNTY CALIFORNIA					
		H= 14 KM						
14	18 43 27.4		1.8 S 13.2 W MID ATLANTIC OCEAN					
		H= 33 KM MAG 4.70 CGS						
14	LZ- e		19 01 13	LZ	19.0	456.8	56.3	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
14	OO-	eL	10 02	LT	20.0	667.5		
		eLQ	19 10 23	LR	18	299.4	65.4	
		eLR	17 37	LZ	25	1286.4		
		eL	21 30	LR	19	1426.9		
		eL	21 30	LT	20	1257.5		
		eL	21 30	LZ	20	933.0		
14	GG-	LZ-eP	19 04 47.3	SZ	0.5	17.7		
		eL	20 13 08	LR	20	1120.5		
		eLR	20 16 37	LZ	20	1346.8		
		eP	20 45 48.9	SZ	0.5	29.3	3.6	
		eS	46 34	ST	0.5	30.8		
		eP	23 07 18.0	SZ	1.5	98.1		
		eP	23 11 50	LZ	20	439.7		
		e						
14		52.1 N 170.6 W ANDREANOF ALEUTIAN ISLANDS						
							H= 33 KM MAG 4.10 CGS	
14	OO-	eLQ	23 13 38	LT	27.0	803.9		
		eL	23 14 30	LR	30	1201.0		
		eL	23 16 45	LZ	20	714.6		
		eL	23 18 48	LZ	22	746.7		
		eLR		LT	23	1454.1		
		eL	23 19 45	LR	22	1201.6		
		eL	23 19 45	LR	22	1201.6		
		eL	23 19 45	LZ	24	1464.1		
15		37.5 S 73.3 W CENTRAL CHILE						
								H= 33 KM MAG 4.60 CGS
15	GG-	eP	02 37 01.0	SZ	0.5	15.1	4.0	
		eS	37 42	SR	0.5	17.2		
15		1.2 N 126.2 E MOLUCCA PASSAGE						
								H= 43 KM
15		47.6 N 8.3 E SWITZERLAND GERMANY BORDER						
								H= 33 KM
15	GG-	eP	05 24 05.0	SZ	0.5	50.3	3.5	
		eS	24 43	ST	0.6	93.4		
15		49.7 N 78.0 E KAZAKH S.S.R.						
								H= KM MAG 5.60 CGS

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
15	OO-	eP	08 07 18.5	SZ	0.5	47.7	38.1	5.47
		GG-	eP	08 07 54.9	SZ	0.6	62.8	41.9
						Avg.	5.49	
15		53.0 N 157.3 E KAMCHATKA						
								H= 170 KM MAG 4.80 CGS
15	GG-	eP	11 56 54.5	SZ	0.3	25.8	1.3	
		eS	57 13	ST	0.4	77.0		
		eP	58 04.0	SZ	0.5	20.9		
		eS	58 22	ST	0.5	55.4		
15		2.7 S 77.7 W ECUADOR						
								H= 94 KM MAG 4.30 CGS
15	GG-	e	16 41 06	LR	32.0	550.7		
		eL	16 43 35	LZ	25	463.0		
		eLR	16 46 30	LZ	20	879.5		
15		19 40 51.*	42.2 N 44.6 E GEORGIAN S.S.R.					
								H= 33 KM MAG 4.10 CGS
15	LZ-	eL	20 52 20	LZ	18	1485.9	117.8	
15	GG-	eL	20 13 08	LR	20.0	1120.5		
		eLR	20 16 37	LZ	20	1346.8		
15		21 17 46.1	17.9 N 120.0 E NEAR W. COAST OF LUZON, P.I.					
								H= 33 KM MAG 4.80 CGS
15	LZ-	22 30 26.	36.2 N 7.6 W. OF STRAIT OF GIBRALTAR					
								H= 27 KM MAG 6.87 CGS
		eP	22 42 22.5	SZ	0.5	192.2	77.6	6.40
		eP	42 23	LZ	21	4407.5		
		e	44 35	LZ	20	1764.9		
		eS	52 20	LR	22	9999.9		
		e	58 10	LR	25	9999.9		
eL	23 00 00	LR	22	5268.4				
15	LZ-	eP	23 24 46.0	SZ	0.3	1.2	1.0	
		eS	24 59	ST	0.4	2.6		
16		01 05 17.6	36.9 N 95.5 E TSINGHAI PROVINCE, CHINA					
								H= 33 KM MAG 5.90 CGS

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	LZ-	eP+1	01 25 11.1	SZ	1.2	68.0	155.0	
16			03 28 11.7	38° N 72° E TADZHIK S.S.R. H=132 KM MAG 5.20 CGS				
16	LZ-	eLQ eLR	04 52 10 56 20	LR LR	28 23	232.2 624.7	139.8	
16			06 06 51.3	13.5 N 88.3 W NEAR COAST OF EL SALVADOR H= 92 KM MAG 3.90 CGS				
16			07 04 35.*	52° N 166.9 W FOX ALEUTIAN ISLANDS H= 45 KM MAG 4.10 CGS				
16	LZ-	eP eS	08 21 22.5 21 54	SZ ST	0.5 0.7	118 15.4	2.5	
16			08 44 32.8	44.8 N 146.8 E KURILE ISLANDS H=140 KM MAG 5.70 CGS				
16	LZ-	eP eS	09 03 38.5 03 46	SZ SR	0.6 1.0	3.5 15.9	.5	
16	LZ-	eP eS	11 22 46.0 23 14	SZ ST	0.4 0.7	8.7 7.7	2.2	
16			13 30 35.*	47.5 N 8.3 E SWITZERLAND GERMANY BORDER H= 33 KM MAG 4.20 CGS				
16	GG-	eP e eL	13 31 17.5 31 30 32 14	SZ SZ ST	0.4 0.4 0.5	7.6 23.0 84.0	2.9	
16			14 55 55.*	8.3 S 118.6 E SUMBAWA REGION H= 33 KM				
16			14 58 23.4	11.5 S 166.1 E SANTA CRUZ ISLANDS H= 69 KM MAG 4.80 CGS				
16			17 24 25.*	52.6 N 157.2 E SOUTHERN KAMCHATKA H=171 KM MAG 4.40 CGS				
16			18 59 28.*	9.6 S 166.4 E SANTA CRUZ ISLANDS H= 33 KM MAG 4.50 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16			20 30 49.*	27.3 N 110.9 W GULF OF CALIFORNIA H= 33 KM MAG 4.60 CGS				
16			20 40 47.9	19.5 N 65.3 W NORTHEAST OF PUERTO RICO H= 33 KM MAG 4.40 CGS				
16	LZ-	eL	21 02 59	LZ	19.0	255.6	35.7	
16			21 39 42.5	20.6 S 178.7 W FIJI ISLANDS H=578 KM MAG 4.90 CGS				
16			00- eP*	21 57 54.9	SZ	0.7	5.4	139.0
16	LZ-	eL	22 08 00	LT	23.0	524.3		
16	LZ-	eL	23 59 44	LR	27	122.4		
17			00 13 08.4	7.5 N 73.3 W COLOMBIA H=148 KM MAG 3.70 CGS				
17			01 04 22.*	1.0 N 121.0 E NORTHERN CELEBES H= 82 KM MAG 5.30 CGS				
17			01 33 46.*	45.2 N 150.4 E KURILE ISLANDS H= 40 KM MAG 4.10 CGS				
17			02 04 58.2	53.5 N 163.3 E OFF EAST COAST OF KAMCHATKA H= 20 KM MAG 4.80 CGS				
17			02 35 44.*	57.5 N 155.7 W KODIAK ISLAND REGION H= 33 KM MAG 4.20 CGS				
17	LZ-	eL	03 21 25	LT	26	419.3	102.1	
17			05 01 57.*	8.9 S 108.8 W SOUTHWEST OF GALAPAGOS IS. H= 33 KM MAG 4.50 CGS				
17	LZ-	eP eL	05 09 35.8 23 31	SZ LT	1.0 25	6.2 504.8	40.0	4.26
17			07 41 04.*	23.9 S 65.9 W JUJUY PROVINCE, ARGENTINA H= 76 KM MAG 4.30 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
17	LZ-	eP	07 43 12.0	SZ	0.5	3584	880	5.40			eLQ	05 00 09	LR	28.0	539.87			
		eL	44 37	ST	0.6	110					eLR	01 46	LR	23	2937.83			
		eL	56 22	LT	19	362.6			18	LZ-	eP*	04 55 50.9	SZ	0.7	24.5	131.0		
17	LZ-	eL	09 46 02	LT	20.0	334.62					e	58 34	SZ	1.5	289.8			
17			12 05 10.*	27. N 54.1 E	SOUTHERN IRAN						eL	05 12 30	LR	40	749.67			
			H= 33 KM						18			05 17 13.2	20.2 S 178.4 W	FIJI ISLANDS				
												H= 566 KM	MAG 3.90	CGS				
17			14 29 43.6	5.6 S 151.6 E	NEW BRITAIN				18			07 20 02.*	48.8 N 155.0 E	KURILE ISLANDS				
			H= 54 KM	MAG 4.90	CGS							H= 55 KM	MAG 4.60	CGS				
17			18 05 52.*	15.8 S 173.3 W	TONGA ISLANDS REGION				18	GG-	eL	10 03 00	LT	23.0	926.3			
			H= 33 KM	MAG 4.60	CGS													
17	LZ-	eLQ	18 48 30	LR	29.0	462.1	99.3		18	GG-	eP	14 06 35.7	SZ	0.5	16.5		1.1	
											eS	06 49	SR	0.4	9999.9			
17	LZ-	eP	22 57 50.8	SZ	0.4	32.5			18	16 43 24.*	45.7 N 14.1 E	NORTHWESTERN YUGOSLAVIA						
												H= 33 KM	MAG 4.60	CGS				
18	00 10 34.8		17.3 S 175.1 W	TONGA ISLANDS REGION					18	GG-	eP	16 44 31.0	SZ	0.5	10.3		4.4 4.42	
			H= 268 KM	MAG 4.80	CGS						e	44 48	SZ	0.6	11.9			
18	01 52 10.2		6.8 N 73.1 W	COLOMBIA							eL	45 48	ST	0.5	23.8			
			H= 181 KM	MAG 3.90	CGS				18	LZ-	eP	17 04 42.6	SZ	0.7	14.3			
18	LZ-	eP	01 57 04.4	SZ	0.6	29.8	23.4	5.05	18	LZ-	eP	18 20 18.6	SZ	0.5	5.9			
18	04 37 26.9		52.5 N 153.6 E	SEA OF OKHOTSK					18	18 57 27.3	29.9 S 71.0 W	NORTHERN CHILE						
			H= 440 KM	MAG 5.60	CGS							H= 50 KM	MAG 4.50	CGS				
18	00-	eP	04 47 09.5	SZ	0.7	9999.9	63.0		18	LZ-	eL	19 05 03	LZ	27.0	1430.8	13.8		
			eP	47 10	LZ	19	1458.3											
			ePP	48 41	SZ	1.0	176.7		18	19 52 39.3	10.5 S 161.6 E	SOLOMON ISLANDS						
			ePP	48 42	LZ	17	1426.9					H= 85 KM	MAG 5.00	CGS				
			ePP	49 18	LZ	15	3342.9											
			ePP	49 33	SZ	1.2	169.9		19	03 28 57.	18.6 S 69.9 W	NORTHERN CHILE						
			ePP	51 48	LZ	17	1333.3					H= 127 KM	MAG 3.90	CGS				
			eS	54 58	LT	23	1560.9											
			eS	55 05	ST	1.6	118.2											
			eSCS	56 16	LT	20	1139.6											
			eSS	57 22	LR	28	2084.5											
			eSS	59 08	LR	20	999.1											

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
19	LZ-	eP	03 29 47.0	SZ	0.5	23.6		2.7
		e	30 03	SZ	0.5	44.3		
		eL	30 38	ST	0.7	52.4		
19	04 45 50.9	21.9 S 179.5 E FIJI ISLANDS						
	H=613 KM MAG 4.70 CGS							
19	08 43 40.5	20.3 S 178.3 W FIJI ISLANDS						
	H=504 KM MAG 4.50 CGS							
19	LZ-	eP	09 14 29.1	SZ	0.3	5.0	1.9	
		eS	14 54	ST	0.6	10.6		
19	09 42 34.9	14.7 N 56.3 E ARABIAN SEA						
	H= 33 KM							
19	LZ-	eP	10 15 17.0	SZ	0.3	5.0		
19	LZ-	eL	10 16 50	LZ	23	324.8		
19	11 05 04.*	35.3 N 135.7 E HONSHU, JAPAN						
	H=365 KM MAG 4.20 CGS							
19	11 50 54.2	28.4 N 139.6 E BONIN ISLANDS REGION						
	H=450 KM MAG 4.40 CGS							
19	LZ-	eP	12 20 57.7	SZ	0.3	7.5	1.7	
		eS	22 21	ST	0.5	4.8		
19	LZ-	eP	14 54 58.5	SZ	0.3	6.2	1.6	
		eS	55 21	SR	0.5	13.5		
19	LZ-	eP	15 53 36.0	SZ	0.4	5.0	0.6	
		eS	53 45	ST	0.5	7.5		
19	21 44 03.8	15.1 S 172.6 W SAMOA ISLANDS REGION						
	H= 33 KM MAG 5.60 CGS							
19	LZ-	eP	21 57 45	LZ	17.0	318.9	98.9	
		ePP	22 01 45	LZ	14	626.9		
		eSKS	09 35	LR	23	795.1		
		e	11 20	LR	18	747.7		
		eSS	16 10	LR	27	1104.5		
		eLQ	25 55	LR	30	4858.2		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
19	00-	eLR	29 40	LZ	30.0			
		eP ⁰	22 03 12.0	SZ	1.0	16.8	134.0	
		ePKS	06 53	LZ	18	928.6		
		eSS	23 45	LR	27	1038.6		
		eSSS	28 08	LR	24	797.0		
		eLQ	38 55	LR	29	1091.0		
		eLR	47 00	LZ	24	903.0		
		eL	23 10 55	LR	19	1797.8		
		eL	10 55	LZ	18	607.1		
		eL	10 55	LZ	18	1408.0		
19	GG-	eP ⁰ 1	22 03 43.2	SZ	1.0	115.0	145.4	
		eP ⁰ 1	03 46	LZ	17	1060.6		
		e	09 27	LZ	14	507.0		
		e	28 22	LZ	15	423.8		
		e	37 20	LR	32	591.3		
		eL	43 37	LR	25	570.5		
		eL	56 10	LR	32	1025.0		
19	22 29 03.2	15.3 S 72.9 W SOUTHERN PERU						
	H=115 KM MAG 4.70 CGS							
19	LZ-	eP	22 30 11.0	SZ	0.5	103.5		
		e	30 26	SZ	999.9	9999.9		
		eL	31 05	ST	999.9	9999.9		
20	00 06 34.*	7.4 N 79.9 W NEAR SOUTH COAST OF PANAMA						
	H= 93 KM MAG 3.90 CGS							
20	LZ-	eP	00 12 01.0	SZ	0.6	14.0	26.1	4.68
20	01 16 12.8	62.2 S 155.8 E BALLENY ISLANDS REGION						
	H= 33 KM							
20	00-	eLQ	02 33 32	LR	29.0	287.1	163.4	
		eLR	42 52	LZ	24	301.0		
20	GG-	eL	02 36 30	LZ	32	288.7	156.9	
20	01 35 01.*	18.6 S 177.4 W FIJI ISLANDS REGION						
	H=334 KM MAG 3.60 CGS							
20	LZ-	eL	02 52 20	LZ	15.0	165.6		
20	03 15 45.6	28.2 N 55.0 E SOUTHERN IRAN						
	H= 43 KM MAG 5.80 CGS							

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	04 21	08.1	6.1 S 150.4 E NEW BRITAIN					
			H= 34 KM MAG 4.90 CGS					
20	06 35	51.6	12.9 N 89.9 W NEAR COAST OF SAN SALVADOR					
			H=125 KM MAG 4.20 CGS					
20	LZ-	e	06 42 58	SZ	1.0	15.5	35.9	
20	06 55	28.1	2. S 79.7 W ECUADOR					
			H= 71 KM MAG 5.30 CGS					
20	LZ-	eP	06 59 35.8	SZ	1.0	24.8	18.0	4.37
	e	59 37	SZ	1.0	192.5			
	eP	59 40	LZ	15	331.2			
	ePP	59 51	SZ	1.1	131.5			
	e	07 02 22	SZ	1.5	96.6			
	eS	03 05	LR	22	383.2			
	eL	04 50	LR	20	376.7			
	eL	05 52	SZ	1.5	151.8			
20	LZ-	eP	13 08 48.0	SZ	0.7	16.3	3.7	
	eS	09 33	SR	0.5	7.3			
20	LZ-	eP	15 55 58.0	SZ	0.7	4.0		
20	LZ-	eL	15 58 05	ST	0.9	13.6		
20	LZ-	eP	16 27 11.5	SZ	0.5	10.3	.1	
	eS	27 14	ST	0.5	3.3			
20	LZ-	eP	16 47 01.0	SZ	0.5	23.6	.7	
	eS	47 11	ST	0.5	4.7			
20	18 55	10.8	7. S 115.2 E BALI SEA					
			H=121 KM MAG 5.40 CGS					
20	00- eL		19 43 55	LT	35.0	614.2	103.0	
20	19 00	52.7	23.6 N 94.4 E NORTHWESTERN BURMA					
			H= 86 KM MAG 5.70 CGS					
20	LZ-	eP	19 01 30.8	SZ	0.5	11.8	2.5	
	e	01 34	SZ	0.3	6.2			
	eS	02 02	SR	0.7	8.1			
20	19 15	16.3	19.8 S 173.6 W TONGA ISLANDS					
			H= 33 KM MAG 4.70 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	LZ-	eP	19 37 14.8	SZ	0.3	90.1	2.8	
	eS	37 51	ST	0.3	9999.9			
21	LZ-	eP	00 16 28.4C	SZ	0.4	42.5	2.3	
	eS	16 58	ST	0.6	9.0			
21	02 01	06.9	23.4 S 66.3 W JUJUY PROVINCE, ARGENTINA					
			H=207 KM MAG 3.90 CGS					
21	LZ-	eL	03 08 44	LZ	30.0	268.9		
21	03 42	19.6	6.4 S 127.9 E BANDA SEA					
			H=367 KM					
21	GG-	ePD	03 56 20	LZ	18.0	317.1	112.0	
	epPD	58 10	LZ	21	527.7			
	eP ⁰	04 00 12.9	SZ	1.0	22.2			
	ePP	01 11	SZ	1.9	494.3			
	ePP	01 11	LZ	20	1190.1			
	epPP	02 23	SZ	1.5	130.8			
	e	03 00	LZ	20	3817.5			
	eSKS	06 25	LT	20	1826.6			
	eS	08 11	LR	21	3063.7			
	ePS	10 40	LR	24	2932.0			
	eLQ	26 47	LR	31	9316.7			
	eLR	43 31	LZ	21	3122.8			
21	00-	e	04 00 36	LT	23	676.8	108.5	
	epPP	02 26	LZ	23	2379.0			
	e	04 34	LT	24	1051.4			
	eSKS	06 10	LT	22	2649.3			
	eL	34 05	LR	999.9	9999.9			
21	LZ-	eP ⁰ 1	04 01 30.0C	SZ	0.9	277.2	152.3	
	eP ⁰ 1	01 31	LZ	8	848.0			
	epP ⁰	03 12	LZ	22	1772.1			
	e	03 12	ST	1.0	79.1			
	e	11 39	LT	24	3093.9			
	e	15 00	LZ	19	5385.8			
	eSS	24 28	LR	20	3076.3			
	eSS	26 39	LR	27	5073.1			
21	05 50	03.*	8.7 S 109.2 W S.W. OF GALAPAGOS ISLANDS					
			H= 33 KM MAG 4.20 CGS					
21	07 02	24.7	34.2 S 70.7 W CENTRAL CHILE					
			H= 90 KM MAG 4.40 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21	LZ-	eP	07 06 31.5	SZ	0.9	61.0	18.0	4.82
12.1 N 141.9 E MARIANA ISLANDS REGION								
21	07 46 39.*		H= 33 KM MAG 5.20 CGS					
27.1 N 54.1 E SOUTHERN IRAN								
21	10 25 32.9		H= 33 KM					
22.3 N 143.7 E MARIANA ISLANDS REGION								
21	10 44 01.*		H= 33 KM MAG 4.90 CGS					
15.4 S 174.1 W SAMOA ISLANDS REGION								
21	10 57 03.7		H=153 KM MAG 4.10 CGS					
21	GG-	eP	13 03 49.1	SZ	0.3	25.0	2.1	
	eS		04 17	SR	0.4	9999.9		
21	GG-	eP	13 04 51.2	SZ	0.4	32.2	1.4	
	eS		05 09	SR	0.4	44.5		
21	15 08 14.3		H= 83 KM MAG 5.00 CGS					
18.7 N 103.1 W NEAR CST. MICHOACAN, MEXICO								
21	LZ-	eP	15 16 51.0	SZ	1.0	15.5	48.6	4.88
	e		24 56	LT	20	718.5		
	eLQ		30 39	LT	28	4096.1		
	eLR		32 10	LZ	25	906.3		
21	00-	eP	15 20 44	LZ	15	652.3	84.8	
	eS		30 59	LR	18	1311.4		
	eL		49 15	LT	36	704.4		
21	GG-	eP	15 21 12	LZ	16.2	401.5	90.6	
	eP		21 13.1	SZ	1.2	35.9		5.45
	ePP		24 55	LZ	15	313.2		
	e		32 01	LR	20	506.6		
	eSS		38 15	LR	20	542.8		
	e		43 52	LR	25	896.5		
	eL		51 55	LT	37	1319.8		
				Avg.				5.16
21	16 27 11.7		H= 33 KM MAG 5.60 CGS					
27.6 S 177.2 W KERMADEC ISLANDS REGION								

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
21	00-	eP+1	16 46 48.5	SZ	0.7	70.3	146.1		
	e		47 10	SZ	1.0	59.7			
	e		47 17	SZ	0.9	51.8			
	eL		17 37 17	LZ	35	457.0			
21	GG-	e	16 47 35	SZ	0.9	103.4	157.0		
21	LZ-	eL	17 13 15	LZ	23	664.5	98.4		
21	GG-	eL	16 43 10	LZ	34.0	282.5			
21	GG-	eLR	16 49 00	LZ	25	457.5			
22	00 44 39.*		28.3 N 111.8 W NEAR COAST SONORA, MEXICO						
	H= 33 KM MAG 3.90 CGS								
22	00 52 38.8		54. N 160.5 E KAMCHATKA						
	H= 30 KM MAG 5.00 CGS								
22	00-	eP	01 03 02.5	SZ	0.5	24.6	62.8	5.55	
22	GG-	eP	01 04 11.4	SZ	0.7	37.8	73.5	5.51	
							Avg.	5.53	
22	LZ-	eP	03 12 14.0	SZ	0.9	19.4			
22	05 32 07.7		2.7 S 126.4 E CERAM SEA						
	H= 33 KM MAG 5.10 CGS								
22	06 22 15.*		61.3 N 147.8 W EAST OF ANCHORAGE, ALASKA						
	H= 62 KM MAG 4.50 CGS								
22	07 05 39.7		5.5 S 77.1 W NORTHERN PERU						
	H=147 KM MAG 5.10 CGS								
22	LZ-	eP	07 08 43.4	SZ	0.6	8.7	13.6	4.32	
	e		08 46	SZ	0.8	46.7			
	eP		08 56	LZ	15	281.5			
	eS		11 12	LZ	20	342.1			
22	00-	eL	07 59 50	LZ	19	524.3	93.8		
22	08 35 06.4		35.7 S 72.9 W NEAR COAST OF CENTRAL CHILE						
	H= 33 KM MAG 5.10 CGS								
22	LZ-	eP	08 39 36.7	SZ	1.1	179.0	19.8	5.24	
	eP		39 37	LZ	19	4070.8			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
22	GG-	e	40 46	SZ	1.8	517.5		
		eS	43 19	LT	1.7	7391.5		
		eL	45 21	LT	2.6	4631.1		
		e	08 53 33	LR	3.0	1106.8	112.8	
		eL	09 15 13	LZ	1.7	197.7		
		eLR	32 50	LZ	2.7	633.6		
22	OO-	ePS	09 05 00	LT	2.1	549.3	117.7	
		eLQ	30 12	LR	3.0	215.1		
		eLR	41 05	LZ	2.0	396.0		
22	12 17 11.*	18.5 N 145.1 E MARIANA ISLANDS REGION						
		H=533 KM MAG 4.30 CGS						
22	LZ- e	12 36 59	SZ	0.8	14.0	147.9		
22	13 03 10.*	6.7 N 72.8 W NORTHERN COLOMBIA						
		H=179 KM MAG 3.80 CGS						
22	13 39 02.*	3.2 N 98.0 E NORTHERN SUMATRA						
		H= 33 KM						
22	15 56 21.3	38.7 N 118.8 W WALKER LAKE, NEVADA AREA						
		H= 33 KM MAG 3.80 CGS						
22	16 30 55.9	38.7 N 118.8 W WALKER LAKE, NEVADA AREA						
		H= 21 KM MAG 4.50 CGS						
22	16 39 54.5	38.9 N 118.8 W WALKER LAKE, NEVADA AREA						
		H= 33 KM						
22	LZ- eP	16 57 03.5	SZ	0.4	35.0			
22	17 51 19.5	14.2 S 75.6 W SOUTHERN PERU						
		H= 86 KM MAG 4.30 CGS						
22	18 14 52.2	39. N 118.7 W WALKER LAKE, NEVADA AREA						
		H= 33 KM						
22	18 17 45.8	39.1 N 118.7 W WALKER LAKE, NEVADA AREA						
		H= 33 KM						

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
22	LZ-	eP	18 34 03.3	SZ	0.5	8.8		
22	20	12 17.9	13.2 N 125.4 E	OFF NORTH COAST SAMAR, P.I.				
				H=204 KM				
22	LZ-	eP	21 04 13.5	SZ	0.4	20.0	2.6	
	e	04 35	SZ	0.6	19.3			
	eS	04 47	ST	0.6	21.6			
23	00	45 01.*	20.2 S 176.5 W	TONGA ISLANDS				
				H= 33 KM MAG 4.40 CGS				
23	LZ-	e	00 56 42	LT	27.0	988.8		
23	LZ-	eL	01 01 10	LZ	28	255.7		
23	01	02 36.1	9.3 S 108.2 E	OFF SOUTH COAST OF JAVA				
				H= 50 KM				
23	LZ-	eP	03 30 52.8	SZ	0.1	12.4	*8	
	eS	31 03	ST	0.5	3.4			
23	03	35 44.9	1.2 S 78.7 W	ECUADOR				
				H= 68 KM MAG 4.20 CGS				
23	LZ-	eP	03 39 55.2	SZ	0.7	10.2	18.0	4.13
	e	40 40	ST	1.8	31.2			
	e	42 40	SZ	3.0	156.1			
23	06	12 25.*	16.4 N 105.1 W	OFF COAST OF MEXICO				
				H= 33 KM MAG 4.00 CGS				
23	07	36 24.3	37.2 N 72.3 E	HINDU KUSH				
				H=143 KM MAG 4.40 CGS				
23	07	55 14.1	77. N 132.2 W	ARCTIC OCEAN				
				H= 16 KM MAG 3.90 CGS				
23	09	17 47.3	31.8 S 179.5 E	KERMADEC ISLANDS REGION				
				H=464 KM MAG 4.20 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	09	43	50+*	46°2 N 149°6 E	KURILE ISLANDS			
				H= 33 KM	MAG 4.50	CGS		
23	11	20	51+5	27°8 S 72°4 W	OFF COAST OF CENTRAL CHILE			
				H= 37 KM	MAG 4.40	CGS		
23	LZ-	eP	11 23 40+0	SZ	1.0	12+4	12+1	4.93
23	LZ-	eP	11 20 58+5	SZ	0.4	3+7		
23	LZ-	eL	11 22 18	ST	0.5	1+6		
23	LZ-	eP	11 52 13+6	SZ	0.2	9+2	2+3	
		eS	52 42	SR	0.4	6+6		
23	LZ-	eP	13 29 56+5	SZ	0.4	17+5	2+0	
		eS	30 23	SR	0.6	8+6		
23	13	40	26+3	38°3 N 73°7 E	HINDU KUSH			
				H=126 KM	MAG 5.40	CGS		
23	00-	eP	13 48 25+3	SZ	0.8	85+2	44+4	5.45
		eS	54 46	LT	20	283+1		
		eSS	58 05	LT	21	293+6		
		eLQ	14 04 01	LT	23	306+5		
		eLR	06 12	LZ	22	203+7		
23	GG-	eP	13 48 32+6	SZ	1.0	67+7	45+1	5.26
		ePP	49 07	SZ	0.9	39+1		
		eL	58 55	LZ	17	329+4	AVG.	5.35
23	LZ-	eL	15 27 30	LZ	22+0	286+6		
23	15	32	57+0	38°7 N 118°9 W	WALKER LAKE, NEVADA AREA			
				H= 33 KM	MAG 3.90	CGS		
23	LZ-	eP	22 21 25+5	SZ	0.5	4+4		
23	LZ-	eP	22 22 32+0	SZ	0.4	1+2	4+5	
		eS	23 28	SR	1+7	20+1		
23	LZ-	eL	22 23 36	ST	0.5	1+7		
23	22	28	45+6	19°3 N 121°0 E	NEAR N. CST. LUZON, P.I.			
				H= 33 KM				
23	22	41	15+8	17°6 S 123°2 E	DAMPIER LAND, W. AUSTRALIA			
				H= 33 KM				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	LZ-	eP+1	23 00 51+0	SZ	1+1	21+9	144+4	
		e	01 36	SZ	1+2	42+5		
		ePP	04 17	SZ	1+5	27+6		
23	GG-	eL	23 49 10	LZ	29	159+3	117+4	
23	00-	eL	23 13 09	LR	24+0	164+7		
24	00	27	14+7	17°1 S 178°4 W	TONGA ISLANDS REGION			
				H=554 KM				
24	LZ-	eP	00 29 21+0	SZ	0+5	5+9		
24	01	58	42+7	25°2 N 140°6 E	VOLCANO ISLANDS REGION			
				H=181 KM	MAG 4.60	CGS		
24	LZ-	eP+1	02 18 18+0	SZ	0+7	18+3	151+4	
24	LZ-	eP	04 24 04+0	SZ	0+5	5+9		
24	06	36	19+5	5+2 S 78°6 W	NORTHERN PERU			
				H= 33 KM	MAG 4.00	CGS		
24	08	28	10+4	19°2 N 65°9 W	NORTH OF PUERTO RICO			
				H= 58 KM	MAG 4.40	CGS		
24	09	37	56+2	51°1 N 129°6 W	VANCOUVER ISLAND REGION			
				H= 22 KM	MAG 4.20	CGS		
24	00-	eL	10 24 06	LT	18+0	144+7		
24	LZ-	eP	11 02 10+0	SZ	0+5	4+4		
24	LZ-	e	11 02 15	SR	0+4	3+8		
24	LZ-	e	11 03 15	SZ	1+2	29+7		
24	LZ-	e	11 03 50	SZ	1+4	34+5		
24	11	57	09+2	24°7 S 65°0 W	JUJUY PROVINCE, ARGENTINA			
				H= 95 KM	MAG 4.40	CGS		
24	LZ-	eP	11 59 17+6	SZ	0+7	44+9	9+0	5+44
		eL	12 02 00	LT	20	1533+2		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
24	GG-	eP	13 37 07.4	SZ	0.6	39.1	183	
	eS		37 25	SR	0.6	60.4		
	eP		40 18.4	SZ	0.4	76.6		
	eS		40 36	SR	0.5	68.1		
24	14 41 55.*		11.7 N 143.9 E MARIANA ISLANDS REGION					
			H= 51 KM	MAG 4.60	CGS			
24	LZ-	eP	17 21 35.2	SZ	0.4	8.7	1.7	
	eS		21 58	SR	0.3	7.4		
24	17 38 08.2		27.7 S 68.7 W CATAMARCA PROV. ARGENTINA					
			H= 76 KM	MAG 4.50	CGS			
24	LZ-	eP	17 40 56.0	SZ	0.5	1.4	11.4	4.14
	e		41 03	SR	0.5	4.8		
	eL		43 23	SZ	1.2	59.5		
	eL		44 45	LZ	22	2908.6		
24	GG-	eL	18 32 50	LT	28	173.0	104.5	
24	00-	eL	18 36 20	LZ	27	117.3	109.0	
24	20 33 16.7		45.2 N 151.4 E KURILE ISLANDS REGION					
			H= 33 KM	MAG 4.60	CGS			
24	22 20 26.2		36.1 N 141.5 E NEAR E. COAST HONSHU, JAPAN					
			H= 50 KM	MAG 4.30	CGS			
24	00-	eL	23 01 14	LT	25	160.8	75.2	
24	GG-	eL	23 12 00	LZ	15	140.5	83.9	
24	22 48 12.*		15.4 S 75.1 W NEAR COAST OF SOUTHERN PERU					
			H= 50 KM					
24	23 57 10.*		38.7 N 118.7 W WALKER LAKE, NEVADA AREA					
			H= 33 KM	MAG 3.50	CGS			
25	LZ-	eP	02 14 27.0	SZ	0.3	7.5		
25	02 43 23.5		36.3 N 140.9 E NEAR E. COAST HONSHU, JAPAN					
			H= 67 KM	MAG 4.80	CGS			
25	00-	eP	02 54 58.4	SZ	0.7	25.5	74.8	5.23
	eL		03 18 07	LR	35	221.1		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
25	GG-	eP	02 55 46.6	SZ	0.8	38.0	83.5	5.48
	e		55 59	SZ	1.0	81.8		
	eL		03 31 25	LR	26	277.3		
25	LZ-	eP	03 03 03.0	SZ	0.5	3.3	147.1	
	e		03 15	SZ	1.1	49.2		
					Avg.	5.35		
25	03 45 07.5		6.9 N 72.9 W NORTHERN COLOMBIA					
			H= 171 KM	MAG 3.70	CGS			
25	04 52 07.8		36.3 N 141.1 E NEAR E. CST. OF HONSHU, JAP.					
			H= 60 KM	MAG 4.70	CGS			
25	00-	eP	05 03 44.0	SZ	0.7	40.3	74.9	5.44
	eL		28 50	LR	30	153.6		
25	GG-	eP	05 04 31.9	SZ	0.9	31.4	83.6	5.36
	eL		42 10	LZ	17	399.3		
					Avg.	5.40		
25	07 48 36.*		8.7 S 108.1 W S.W. OF GALAPAGOS ISLANDS					
			H= 33 KM	MAG 4.20	CGS			
25	08 46 13.		40.4 N 124.8 W NEAR CST. NORTH CALIFORNIA					
			H= 33 KM	MAG 4.50	CGS			
25	08 57 11.7		31.6 S 69.5 W SAN JUAN PROVINCE, ARGENTINA					
			H= 123 KM	MAG 4.20	CGS			
25	LZ-	eP	09 00 43.0	SZ	0.8	38.4	15.3	4.73
	e		00 46	SZ	0.8	24.4		
	eL		13 25	LZ	13	547.6		
25	10 08 06.8		7.7 N 75.3 W NORTHERN COLOMBIA					
			H= 48 KM	MAG 4.80	CGS			
25	LZ-	eP	10 13 24.5	SZ	0.7	15.2	24.7	4.66
	e		13 38	SZ	0.7	13.7		
25	10 34 41.*		44.9 N 149.5 E KURILE ISLANDS					
			H= 33 KM	MAG 4.10	CGS			
25	00-	eL	11 04 03	LR	17	130.9	69.2	
25	LZ-	eP	10 48 48.0	SZ	0.5	2.2		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
25	11	13 08.7	14.6 S 167.4 E	NEW HEBRIDES ISLANDS REGION				
			H=170 KM	MAG 4.10 CGS				
25	11	33 48.4	19.7 S 175.9 W	TONGA ISLANDS REGION				
			H=170 KM	MAG 4.60 CGS				
25	12	44 59.4	7.5 S 74.3 W	CENTRAL PERU				
			H=156 KM	MAG 3.80 CGS				
25	15	32 26.	20.1 S 168.8 E	LOYALTY ISLANDS REGION				
			H= 33 KM	MAG 4.70 CGS				
25	GG-	eP ⁰ 1	15 52 03.4	SZ	0.6	14.6	145.5	
25	20	17 24.7	5.8 S 104.0 E	NEAR SOUTH COAST OF SUMATRA				
			H= 33 KM	MAG 5.40 CGS				
26	01	16 08.8	10.3 N 122.6 E	NEAR S. CST. PANAY, P.I.				
			H= 53 KM					
26	01	43 04.*	21.5 S 174.6 W	TONGA ISLANDS				
			H= 33 KM	MAG 4.30 CGS				
26	GG-	e	02 01 25	LZ	15.0	169.5	151.5	
		e	03 30	LZ	14	253.5		
		e	07 30	LZ	30	243.6		
		e	11 50	LZ	25	234.5		
		e	14 18	LT	20	277.9		
		e	58 30	LR	27	985.9		
		eL	03 05 30	LZ	23	3296.6		
		eLR	02 02 10	LZ	40	591.4	140.3	
26	00-	eP ⁰	03 08	LZ	30	388.3		
		ePKS	06 27	LR	25	360.9		
		e	07 34	LR	27	542.7		
		e	13 04	LZ	20	471.5		
		eL	44 04	LZ	22	456.8		
26	02	04 20.2	11.3 N 142.0 E	MARIANA ISLANDS				
			H= 33 KM	MAG 4.90 CGS				
26	GG-	e	02 23 32	LZ	17.0	343.9	105.6	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eSKS	29 08	LT	16.0	671.1		
		eSP	32 03	LZ	16	1053.1		
		e	38 10	LT	26	1379.8		
		e	42 41	LT	27	927.5		
		eLQ	48 16	LR	21	595.1		
26	LZ-	eP ⁰ 1	02 24 14.0	SZ	1.7	46.5	150.0	
		eP ⁰ 2	24 25.0	SZ	1.9	171.6		
		eP ⁰ 2	24 30	LZ	22	918.5		
		eL	03 16 10	LZ	23	714.4		
26	00-	eSKS	02 28 30	LT	15	889.1	98.3	
		ePS	31 05	LT	25	678.3		
		eSS	35 37	LT	20	1257.5		
		eSSS	39 43	LT	23	755.6		
		eLR	55 17	LR	25	1650.2		
26	04	40 17.2	47.1 N	8.3 E	SWITZERLAND			
			H= 33 KM					
26	GG-	eP	04 41 17.6	SZ	0.7	32.0	3.2	4.46
		e	41 21	SZ	0.6	53.8		
		eL	42 00	ST	0.5	38.3		
26	05	25 02.8	5.1 S	76.6 W	NORTHERN PERU			
			H=100 KM	MAG 4.80 CGS				
26	LZ-	eP	05 28 11.0	SZ	0.4	1.4	13.6	3.67
26	06	30 51.1	13.7 N	120.6 E	NEAR S.W. CST. LUZON, P.I.			
			H=118 KM					
26	GG-	eP	06 37 44.0	SZ	0.4	12.0	.1	
		eS	37 47	SR	0.4	46.5		
26	07	13 04.5	46.4 N	145.1 E	SEA OF OKHOTSK			
			H=180 KM	MAG 4.60 CGS				
26	07	43 39.1	39.1 N	10.7 W	NEAR W. CST. OF PORTUGAL			
			H= 33 KM	MAG 4.50 CGS				
26	GG-	eP	07 47 58.2	SZ	0.6	12.2	18.8	4.32
		eL	52 33	LR	30	635.3		
26	GG-	eP	08 02 16.0	SZ	0.4	6.0	.6	
		eS	02 25	SR	0.5	69.4		
26	GG-	eL	08 13 02	LZ	25	234.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
26	09	15 33.4	8.3 N 121.8 E	NEAR W. CST. MINDANAO ISL.				
			H= 59 KM					
26	12	15 47.*	6.8 S 129.3 E	BANDA SEA				
			H= 156 KM	MAG 5.30	CGS			
26	LZ-	eP ¹ eP ² ePP ²	12 35 21.0 35 26.0 36 10	SZ SZ SZ	1.0 1.2 0.9	21.9 186.2 62.6	151.1	
26	GG-	iP	13 04 24.1D	SZ	0.3	29.2	1.3	
26	LZ-	eP eS	13 14 29.0 14 51	SZ ST	0.3 0.5	6.1 5.6	1.8	
26			4.4 S 104.7 W	SOUTHWEST OF GALAPAGOS IS.				
			H= 33 KM	MAG 4.90	CGS			
26	LZ-	eP eP ePP ePP e eS eSS eL eS ePS e eSS eLQ eLR eL eL eL eL	13 37 10.0 37 11 38 36 38 36 39 43 43 05 45 35 48 00 13 56 11 57 54 14 02 00 03 50 14 15 21 20 25 04 25 04 25 04 13 58 29 14 22 20	SZ LZ LZ LZ SZ LT LT LT LT LZ LR LT LR LT LZ LZ LZ LZ LZ	1.6 13 10 2.0 3.3 23 999 9 999 9 20 23 23 29 37 36 24 25 26 22 28	106.6 547.6 2181.5 125.3 345.1 1580.5 9999.9 9999.9 225.7 676.8 531.0 1414.0 1881.7 2549.9 2269.3 3288.7 1208.8 403.3 1438.6	37.4 5.39 106.0	
26	LZ-	eP	15 03 37.2	SZ	0.7	7.2		
26			4.7 S 104.6 W	S.E.W. OF GALAPAGOS ISLANDS				
			H= 33 KM	MAG 4.20	CGS			
26	LZ-	eP	16 15 00.0	SZ	0.5	2.0		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
26	LZ-	e	16 15 03	SZ	0.6	8.6	88.6	
26	19	37 27.6	39.3 N 143.3 E	OFF EAST COAST HONSHU, JAPAN				
			H= 33 KM	MAG 4.70	CGS			
26	00-	eP eL	19 48 54.4 20 17 25	SZ LR	0.9 27	22.4 655.68	72.8	5.20
26	GG-	eP eL	19 49 46.2 20 28 24	SZ LZ	0.9 19	35.9 153.1	81.8	5.39
							AVG.	5.29
26	21	28 06.	4.6 N 95.8 E	NEAR WEST COAST OF SUMATRA				
			H= 33 KM	MAG 5.50	CGS			
26	LZ-	eP	22 22 46.0	SZ	1.5	38.9		
27	03	37 40.8	30.4 S 71.5 W	CENTRAL CHILE				
			H= 48 KM	MAG 4.20	CGS			
27	LZ-	eP	03 41 04.5	SZ	1.2	12.0	14.4	4.25
27	04	30 33.	25.9 N 95.8 E	NORTHERN BURMA				
			H= 93 KM	MAG 5.40	CGS			
27	LZ-	eP ¹	04 50 27.2	SZ	1.4	44.6	162.5	
27	08	01 30.5	11.5 S 166.2 E	SANTA CRUZ ISLANDS				
			H= 93 KM	MAG 4.50	CGS			
27	LZ-	eP eS	09 37 37.0 37 59	SZ SR	0.4 0.9	26.5 28.2		1.6
27	GG-	iP eS	11 38 42.2D 38 59	SZ ST	0.4 0.4	32.2 21.6		1.3
27	GG-	eP eS	40 32.2 40 50	SZ ST	0.3 0.4	62.6 84.4		
27	GG-	eL	12 17 50	LZ	22	171.9		
27	13	33 54.1	19. S 167.5 E	NEW HEBRIDES ISLANDS				
			H= 33 KM	MAG 4.80	CGS			
27	17	12 36.3	9.2 N 84.0 W	OFF S. COAST OF COSTA RICA				
			H= 33 KM	MAG 4.20	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
27	LZ-	eL	17 30 20	LZ	18.0	82780	29.6	
27	GG-	eL	17 59 25	LZ	19	245.0	86.4	
27 17 27 35.5 9.4 N 83.9 W OFF S. COAST OF COSTA RICA H= 33 KM MAG 4.20 CGS								
27	LZ-	e	17 45 55	LZ	20.0	761.3		
27	LZ-	e	18 03 40	LT	35	3202.7		
27	LZ-	eP	18 28 52.5	SZ	1.0	46.0	4.6	
	eS		29 48	ST	999.9	9999.9		
27 19 12 50.7 36.8 N 71.2 E HINDU KUSH H=206 KM MAG 5.60 CGS								
27	20 22 10.6		23.7 S 179.9 E SOUTH OF FIJI ISLANDS H=520 KM MAG 5.00 CGS					
27	00-	eP ¹	20 40 39.4	SZ	1.0	45.8	141.9	
	eP ¹		40 40	LZ	19	358.0		
	e		40 46	SZ	0.9	19.2		
	eP ¹		42 40	LZ	25	186.9		
	eSP ¹		43 32	SZ	1.0	29.1		
	eSP ¹		43 34	LZ	15	225.1		
	ePKS		44 29	LT	17	207.5		
	ePKS		46 25	LT	15	325.3		
	eSKSP		53 05	LZ	20	330.1		
27	GG-	eP ¹	20 41 08.1	SZ	0.8	17.0	152.6	
	eP ¹		41 09	LZ	20	295.8		
	eP ¹		41 22.0	SZ	1.0	80.4		
	eP ¹		43 07	LZ	20	650.9		
	eP ¹		43 25	SZ	1.4	95.7		
	ePP		46 45	LZ	17	481.5		
	eSS		21 03 50	LR	21	815.3		
27 23 03 41.7 27.2 N 89.3 E BHUTAN H= 32 KM MAG 6.30 CGS								
27	00-	eP	23 14 01.7	SZ	0.7	6.2	61.0	4.82
	eL		34 35	LT	39	311.0		
27	GG-	eL	23 37 24	LR	29	936.1	62.3	
27	LZ-	iP	23 35 13.4D	SZ	0.3	5.3	2.5	
	eS		35 45	ST	0.4	9.1		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	03	33 44.5	35.9 N 114.9 W SOUTHERN NEVADA H= 5 KM					
28 03 36 12.7 61.1 N 147.6 W PRINCE WILLIAM SOUND ALASKA H= 20 KM MAG 8.50 CGS								
28	00-	iP	03 45 58.4C	SZ	0.7	16.5	57.1	5.17
	eP		46 00	LZ	999.9	9999.9		
	eL		04 04 32	SR	20.0	419.4U		
28	GG-	eP	03 47 14.3	SZ	0.6	24.0	68.3	5.52
	eP		47 16	LZ	999.9	9999.9		
	e		47 21	SZ	0.8	183.6		
	e		04 08 45	SZ	1.0	126.4		
	eL		11 40	SR	29.0	419.4U		
	e		12 24	SZ	1.1	85.1		
	e		13 54	SZ	0.8	54.4		
	e		14 03	SZ	1.1	234.1		
	e		15 46	SZ	1.5	608.5		
28	LZ-	eP	03 49 55.5	SZ	0.9	9.7	98.9	5.51
	e		49 59	SZ	1.1	51.5		
	eP		50 00	LZ	999.9	9999.9		
	e		50 28	SZ	1.1	87.7		
	e		50 41	SZ	1.1	185.7		
	e		57 20	ST	1.7	883.8		
	ePKKP		04 06 11	SZ	1.9	829.5		
	eL		25 00	ST	33.0	419.4U		
						Avg.	5.40	
28	GG-	eP	04 33 49.9	SZ	1.0	91.9		
28	04	54 07.9	59.8 N 149.4 W PRINCE WILLIAM SOUND ALASKA H= 25 KM MAG 6.10 CGS					
28	00-	eP	05 04 02.8	SZ	0.8	157.7	58.5	6.09
28	GG-	eP	05 05 17.8	SZ	0.8	173.4	69.7	6.18
						Avg.	6.13	
28	GG-	eP	05 16 50.6	SZ	1.1	70.9		
28	05	31 05.4	58.1 N 150.1 W PRINCE WILLIAM SOUND ALASKA H= 33 KM MAG 5.30 CGS					
28	05	33 52.6	60.2 N 146.2 W PRINCE WILLIAM SOUND ALASKA H= 20 KM MAG 5.60 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	00-	eP	05 43 44.4	SZ	0.9	41.6	57.8	5.47
28	05 35	38.4	57.2 N 153.0 W	PRINCE WILLIAM SOUND: ALASKA	H= 33 KM	MAG 5.70	CGS	
28	00-	eP	05 45 52.5	SZ	0.8	24.6	61.4	5.38
	e	45 55	SZ	1.0	116.6			
28	GG-	eP	05 47 05.0	SZ	0.8	40.8	72.7	5.51
	e	47 08	SZ	0.9	150.3	AVG.	5.44	
28	05 44	54.9	60.1 N 148.4 W	PRINCE WILLIAM SOUND: ALASKA	H= 33 KM	MAG 4.90	CGS	
28	06 08	44.2	60.1 N 148.6 W	PRINCE WILLIAM SOUND: ALASKA	H= 20 KM	MAG 5.60	CGS	
28	00-	eP	06 18 37.1	SZ	1.0	29.1	58.1	5.26
28	GG-	eP	06 19 52.1	SZ	1.0	63.2	69.3	5.70
						AVG.	5.48	
28	06 24	10.1	58.6 N 149.4 W	PRINCE WILLIAM SOUND: ALASKA	H= 15 KM	MAG 4.70	CGS	
28	06 29	17.4	57.7 N 150.8 W	PRINCE WILLIAM SOUND: ALASKA	H= 20 KM	MAG 5.10	CGS	
28	GG-	eP	06 40 42.3	SZ	0.9	26.5	72.0	5.31
28	06 32	38.6	60.1 N 147.6 W	PRINCE WILLIAM SOUND: ALASKA	H= 33 KM	MAG 5.50	CGS	
28	00-	eP	06 42 28.9	SZ	0.8	12.3	58.0	4.99
28	GG-	eP	06 43 44.2	SZ	0.8	37.4	69.2	5.52
						AVG.	5.25	
28	06 36	55.2	57.9 N 151.5 W	PRINCE WILLIAM SOUND: ALASKA	H= 33 KM	MAG 5.10	CGS	
28	06 41	28.0	59.9 N 147.8 W	PRINCE WILLIAM SOUND: ALASKA	H= 15 KM	MAG 5.50	CGS	
28	GG-	eP	06 52 36.9	SZ	0.8	27.2	69.4	5.44

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	06	43 57.4	58.3 N 151.3 W	PRINCE WILLIAM SOUND: ALASKA	H= 25 KM	MAG 6.10	CGS	
28	00-	eP	06 54 03.9	SZ	1.4	218.2	60.2	6.03
28	GG-	eP	06 55 17.8	SZ	1.0	143.6	71.4	5.98
						Avg.	6.00	
28	06 50	48.9	57.1 N 152.3 W	PRINCE WILLIAM SOUND: ALASKA	H= 33 KM	MAG 5.00	CGS	
28	00-	eP	07 01 06.5	SZ	0.6	19.1	61.4	5.40
28	GG-	eP	07 02 15.5	SZ	0.5	13.0	72.7	5.22
						Avg.	5.31	
28	06 53	35.6	58.8 N 149.5 W	PRINCE WILLIAM SOUND: ALASKA	H= 20 KM	MAG 5.70	CGS	
28	00-	eP	07 03 38.1	SZ	0.9	25.6	59.5	5.26
28	GG-	eP	07 04 52.4	SZ	0.9	44.2	70.7	5.53
						Avg.	5.39	
28	07 09	12.0	60. N 147.5 W	PRINCE WILLIAM SOUND: ALASKA	H= 33 KM	MAG 5.40	CGS	
28	07 10	21.4	58.8 N 149.5 W	PRINCE WILLIAM SOUND: ALASKA	H= 20 KM	MAG 6.20	CGS	
28	00-	eP	07 20 24.1	SZ	1.1	72.0	59.5	5.63
	e	23 41	SZ	1.5	159.3			
28	GG-	eP	07 21 38.2	SZ	0.7	62.9	70.7	5.79
	e	21 45	SZ	1.4	670.4			
						Avg.	5.71	
28	07 24	21.7	59.3 N 149.8 W	PRINCE WILLIAM SOUND: ALASKA	H= 20 KM	MAG 5.00	CGS	
28	07 28	20.5	57.9 N 150.4 W	PRINCE WILLIAM SOUND: ALASKA	H= 20 KM	MAG 5.00	CGS	
28	07 30	29.6	57.4 N 151.7 W	PRINCE WILLIAM SOUND: ALASKA	H= 15 KM	MAG 5.70	CGS	
28	00-	eP	07 40 44.9	SZ	0.6	8.7	61.1	5.06
28	GG-	eP	07 41 57.6	SZ	0.8	47.6	72.3	5.63
						Avg.	5.34	
28	00-	eP	07 33 12.5	SZ	1.0	29.1		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28			58°3 N 150°2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.80	CGS			
28	07	47 47.1						
28	07	48 47.8	57° N 153°3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 5.00	CGS			
28	00-	eP	07 49 57.1	SZ	1.0	33.3		
28	00-	e	07 50 05	SZ	1.4	277.7		
28	07	52 00.8	57.1 N 154.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.80	CGS			
28	07	55 08.4	58.4 N 150.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4.50	CGS			
28	07	59 40.7	57.9 N 150.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4.40	CGS			
28	00-	eP	08 05 41.4	SZ	0.7	8.2		
28	00-	e	08 10 02	SZ	1.0	16.6		
28	00-	e	08 11 04	SZ	1.4	59.5		
28	08	13 09.5	59.6 N 148.8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.40	CGS			
28	08	30 11.7	60.5 N 147.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.70	CGS			
28	08	32 33.7	61.0 N 143.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.50	CGS			
28	08	33 47.	58.1 N 151.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 5.60	CGS			
28	08	39 54.9	57.5 N 151.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 5.40	CGS			
28	GG-	eP	08 51 20.8	SZ	0.8	27.2	72.2	5.37
28	08	42 31.3	60.3 N 147.2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.70	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	08	47 06.3	59.5 N 148.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.50	CGS			
28	08	52 44.6	60.3 N 147.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.20	CGS			
28	08	54 25.*	57.0 N 154.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.90	CGS			
28	08	55 12.1	58.3 N 149.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.60	CGS			
28	08	55 22.8	56.7 N 151.9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 5.10	CGS			
28	GG-	eP	09 06 53.6	SZ	0.8	34.0	73.1	5.45
28	08	59 03.7	57.4 N 151.8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 5.10	CGS			
28	09	01 00.5	56.5 N 152.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 6.20	CGS			
28	00-	fP	09 11 20.5C	SZ	1.2	153.8	62.0	6.07
28	GG-	eP	09 12 32.9	SZ	1.2	176.8	73.3	5.98
							Avg.	6.02
28	09	05 56.4	56.6 N 153.2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 5.30	CGS			
28	00-	eP	09 16 15.5	SZ	0.6	31.3	62.0	5.67
28	GG-	eP	09 17 27.4	SZ	0.8	34.0	73.3	5.43
							Avg.	5.55
28	09	13 56.6	59.4 N 151.2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 35 KM	MAG 5.20	CGS			
28	00-	e	09 24 53	SZ	0.9	25.6	59.1	
28	09	17 52.6	57.4 N 151.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4.90	CGS			
28	GG-	eP	09 29 20.8	SZ	0.7	14.2	72.3	5.14
28	09	20 28.6	59.8 N 149.9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.30	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	09	26	16.5	61.3 N	148.8 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 33 KM	MAG 4.40	CGS		
28	09	28	36.7	56.7 N	153.9 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 33 KM	MAG 4.00	CGS		
28	09	34	01.5	56.8 N	152.3 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 20 KM	MAG 5.00	CGS		
28	09	45	07.8	59.1 N	151.5 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 33 KM	MAG 4.20	CGS		
28	09	52	55.7	59.7 N	146.6 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 30 KM	MAG 6.20	CGS		
28	00-	eP	10 02 48.1	SZ	0.9	16.0	58.3	5.05
28	GG-	eP	10 04 02.9	SZ	0.8	17.0	69.5	5.17
				Avg.				5.11
28	09	58	23.*	58.8 N	150.1 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 33 KM	MAG 4.60	CGS		
28	09	58	24.*	57.0 N	153.3 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 20 KM	MAG 4.90	CGS		
28	10	08	42.7	43.0 N	101.6 W	NEBRASKA SOUTH DAKOTA BORDER		
				H= 16 KM	MAG 5.10	CGS		
28	10	15	41.9	59.6 N	149.4 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 20 KM	MAG 4.80	CGS		
28	10	17	27.7	60.3 N	146.6 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 15 KM	MAG 4.40	CGS		
28	10	17	48.5	56.6 N	152.2 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 15 KM	MAG 5.10	CGS		
28	10	20	30.*	57.7 N	152.2 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 33 KM	MAG 4.30	CGS		
28	10	25	34.*	58.8 N	149.8 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 33 KM	MAG 4.70	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	10	33	00.2	57.7 N	152.2 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 35 KM	MAG 5.20	CGS		
28	GG-	eP	10 44 23.1	SZ	0.7	22.8	72.1	5.31
28	10	35	31.2	60.9 N	143.7 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 25 KM	MAG 5.10	CGS		
28	10	35	38.9	57.2 N	152.4 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 33 KM	MAG 6.30	CGS		
28	00-	eP	10 45 52.4	SZ	0.9	80.1	61.4	5.84
28	GG-	eP	10 47 05.3	SZ	0.7	157.2	72.6	6.15
				Avg.				5.99
28	10	49	23.2	59.1 N	148.3 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 15 KM	MAG 4.60	CGS		
28	10	53	44.8	60.1 N	147.6 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 20 KM	MAG 4.80	CGS		
28	10	57	18.1	60.6 N	144.7 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 33 KM	MAG 4.70	CGS		
28	10	59	16.3	57.4 N	151.6 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 30 KM	MAG 5.20	CGS		
28	11	02	22.7	58.2 N	149.9 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 30 KM	MAG 4.80	CGS		
28	11	04	16.3	58.0 N	151.4 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 33 KM	MAG 4.70	CGS		
28	11	07	13.2	58.3 N	150.7 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 33 KM	MAG 4.60	CGS		
28	11	08	26.	60.1 N	148.4 W	PRINCE WILLIAM SOUND	ALASKA	
				H= 15 KM	MAG 5.60	CGS		
28	00-	eP	11 18 20.0	SZ	0.8	24.6	58.1	5.29
28	GG-	eP	11 19 35.4	SZ	0.9	79.5	69.3	5.86
				Avg.				5.57

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	OO-	eP	11 15 02.6	SZ	1.0	8.3		
28	11 24 57.5		56.4 N 149.7 W PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 5.00 CGS				
28	OO-	eP	11 35 17.7	SZ	0.7	16.5	61.9	5.32
28	11 30 09.8		5 N 122.3 E NORTHERN CELEBES	H=140 KM MAG 5.80 CGS				
28	LZ-	eP ¹ eP ²	11 49 58.0	SZ	1.7	651.2	161.1	
28	50 41.0	SZ	1.5	657.8				
28	11 32 19.		59. N 149.5 W PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 4.90 CGS				
28	11 50 01.9		58.2 N 149.8 W PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 5.30 CGS				
28	OO-	eP	12 00 07.8	SZ	0.8	14.7	60.1	5.10
28	GG-	eP	12 01 21.5	SZ	0.7	20.0	71.3	5.28
						Avg.		5.19
28	11 56 48.3		57.6 N 151.8 W PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.50 CGS				
28	12 03 16.5		60.3 N 146.6 W PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 5.10 CGS				
28	12 20 49.8		56.5 N 154.0 W PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 6.50 CGS				
28	OO-	eP	12 31 10.0	SZ	0.7	80.8	62.2	5.99
28	GG-	eP	12 32 22.5	SZ	1.2	201.2	73.5	6.01
		e	37 14	SZ	0.9	36.5		
						Avg.		6.00
28	12 31 29.8		59.1 N 149.6 W PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 4.70 CGS				
28	12 48 34.*		60.5 N 145.9 W PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.30 CGS				
28	13 01 14.2		60.1 N 147.0 W PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 5.10 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	GG-	eP	13 12 21.0	SZ	0.6	9.9	69.2	5.12
		e	12 27	SZ	0.9	50.3		
28	13 27 38.5		60.3 N 147.1 W PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 4.90 CGS				
28	13 44 11.		57.5 N 152.3 W PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 4.40 CGS				
28	13 47 37.		57. N 152.8 W PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 5.00 CGS				
28	13 54 19.9		62.1 N 147.1 W PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 4.60 CGS				
28	14 01 57.6		56.5 N 154.4 W PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 5.10 CGS				
28	OO-	eP	14 12 18.3	SZ	0.6	17.8	62.2	5.40
28	GG-	eP	14 13 30.0	SZ	0.6	27.3	73.5	5.45
		e	13 32	SZ	0.6	9.9		
		e	13 41	SZ	0.9	32.0		
						Avg.		5.42
28	14 18 16.1		58. N 149.7 W PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 4.80 CGS				
28	14 33 13.6		57.8 N 152.1 W PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 4.90 CGS				
28	14 46 19.2		57.8 N 151.3 W PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.80 CGS				
28	14 46 33.6		56.7 N 153.6 W PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.90 CGS				
28	14 47 37.1		60.4 N 146.5 W PRINCE WILLIAM SOUND, ALASKA	H= 10 KM MAG 6.30 CGS				
28	OO-	eP	14 57 27.1	SZ	0.7	19.1	57.6	5.24
28	GG-	eP	14 58 42.2	SZ	1.2	64.0	68.8	5.69

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
			58 44	SZ	1.0	166.4	Avg.	5.46
28	14	49 13.7	60.4 N 147.1 W	PRINCE WILLIAM SOUND, ALASKA	H= 10 KM	MAG 6.50	CGS	
28	00- eP	14 59 07.0	SZ	1.2	92.1	57.7	5.69	
28	GG- eP	15 00 20.0	SZ	1.4	396.3	68.9	6.41	
					Avg.		6.05	
28	15	20 28.6	57.4 N 151.3 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM	MAG 4.70	CGS	
28	15	22 36.4	60.4 N 146.8 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM	MAG 4.70	CGS	
28	GG- eP	15 26 50.0	SZ	2.0	148.6			
28	00- eP	15 27 20.3	SZ	1.5	37.7			
28	00- e	15 27 24	SZ	1.5	88.0			
28	15	27 30.1	61. N 149.0 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM	MAG 4.70	CGS	
28	GG- eP	15 28 32.0	SZ	1.8	141.5			
28	00- eP	15 28 57.4	SZ	1.5	70.4			
28	15	34 10.4	59.5 N 146.7 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM	MAG 4.40	CGS	
28	15	36 22.3	58.3 N 150.9 W	PRINCE WILLIAM SOUND, ALASKA	H= 25 KM	MAG 4.70	CGS	
28	15	39 44.1	56. N 159.7 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM	MAG 4.10	CGS	
28	15	42 53.5	60.6 N 147.1 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM	MAG 4.10	CGS	
28	15	43 45.3	57.6 N 151.6 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM	MAG 4.50	CGS	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	15	51 50.7	58.8 N 149.9 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM	MAG 4.50	CGS	
28	15	55 25.8	59.7 N 146.3 W	PRINCE WILLIAM SOUND, ALASKA	H= 10 KM	MAG 4.70	CGS	
28	16	04 33.8	57.5 N 150.8 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM	MAG 4.60	CGS	
28	16	15 02.9	59.6 N 149.6 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM	MAG 4.00	CGS	
28	16	26 16.9	57.5 N 150.9 W	PRINCE WILLIAM SOUND, ALASKA	H= 30 KM	MAG 5.00	CGS	
28	16	44 35.9	59.3 N 147.8 W	PRINCE WILLIAM SOUND, ALASKA	H= 25 KM	MAG 5.30	CGS	
28	17	14 59.	59.5 N 148.6 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM	MAG 4.30	CGS	
28	17	47 17.	60.4 N 145.7 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM	MAG 4.70	CGS	
28	17	49 49.7	57.7 N 150.2 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM	MAG 4.90	CGS	
28	18	02 54.9	59.5 N 149.3 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM	MAG 4.60	CGS	
28	GG- eP	18 14 03.5	SZ	0.7	14.7	70.0	5.13	
28	18	24 02.2	60.1 N 149.5 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM	MAG 4.00	CGS	
28	18	46 53.4	60.5 N 148.4 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM	MAG 4.30	CGS	
28	19	01 51.5	60.1 N 146.9 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM	MAG 4.50	CGS	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	19 21	38.8	61.6 N 146.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 45 KM	MAG 4.60	CGS			
28	19 29	02.4	58.1 N 150.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.40	CGS			
28	19 45	21.4	56.4 N 152.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.50	CGS			
28	20 05	45.*	60.6 N 144.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.00	CGS			
28	LZ- eL		20 53 18	LR	16.0	9999.9	97.3	
28	20 29	08.6	59.8 N 148.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 40 KM	MAG 6.60	CGS			
28	OO- eP		20 39 00.6	SZ	1.4	346.2	58.4	6.19
28	GG- eP		20 40 16.0	SZ	1.5	227.3	69.7	5.98
	e		40 20	LR	999.9	9999.9		
	e		50 00	LR	999.9	9999.9	Avg.	6.08
28	LZ- eP		20 46 15.3	SZ	1.1	10.0		
28	GG- eP		21 08 07.0	SZ	2.2	200.6		
28	OO- eP		21 08 47.8	SZ	1.6	117.9		
28	OO- e		21 08 55	SZ	1.8	191.4		
28	21 15	17.4	58.2 N 150.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4.70	CGS			
28	21 37	48.7	59.6 N 145.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.40	CGS			
28	21 57	54.3	56.4 N 152.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.40	CGS			
28	22 09	43.2	58. N 153.2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.70	CGS			
28	22 13	22.9	57.5 N 152.9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4.40	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	22 16	20.8	59.8 N 148.8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.90	CGS			
28	22 22	03.1	60.3 N 145.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.60	CGS			
28	22 28	47.	58.2 N 150.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 5.20	CGS			
28	GG- eP		22 40 08.0	SZ	0.9	36.5	71.4	5.45
28	22 47	00.1	61.2 N 145.2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.60	CGS			
28	23 14	46.7	57.6 N 151.2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.10	CGS			
28	23 21	05.7	61.5 N 146.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.80	CGS			
28	23 24	55.5	60. N 149.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.40	CGS			
28	23 46	22.	57.5 N 151.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 5.00	CGS			
29	00 12	32.3	56.8 N 153.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.50	CGS			
29	00 15	11.	59.9 N 146.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.40	CGS			
29	00 21	03.8	58.4 N 150.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.20	CGS			
29	00- eP		00 25 52.0	SZ	1.3	41.1		
29	00 43	14.*	58.7 N 153.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 3.90	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29	00	51	05.7	60.4 N 145.1 W	PRINCE WILLIAM SOUND, ALASKA		H= 15 KM MAG 4.20 CGS	
29	00	51	45.*	60.6 N 150.0 W	PRINCE WILLIAM SOUND, ALASKA		H= 33 KM MAG 4.60 CGS	
29	00	53	05.8	57.4 N 151.5 W	PRINCE WILLIAM SOUND, ALASKA		H= 25 KM MAG 5.10 CGS	
29	01	09	36.4	59.8 N 149.2 W	PRINCE WILLIAM SOUND, ALASKA		H= 20 KM MAG 5.20 CGS	
29	00-	eP	01 19 31.7	SZ	1.3	115.1	58.5	5.75
29	GG-	eP	01 20 46.6	SZ	0.8	52.7	69.7	5.68
					Avg.		5.71	
29	01	29	33.7	57.5 N 151.3 W	PRINCE WILLIAM SOUND, ALASKA		H= 20 KM MAG 4.60 CGS	
29	00-	eP	01 39 46.6	SZ	0.6	12.5	61.0	5.20
29	GG-	eP	01 40 59.3	SZ	0.9	50.3	72.2	5.59
					Avg.		5.39	
29	01	48	18.5	56.3 N 153.7 W	PRINCE WILLIAM SOUND, ALASKA		H= 20 KM MAG 4.80 CGS	
29	00-	eP	01 58 40.6	SZ	0.9	36.1	62.4	5.52
29	GG-	eP	01 59 52.6	SZ	0.7	20.7	73.6	5.26
					Avg.		5.39	
29	02	07	41.6	56.5 N 152.6 W	PRINCE WILLIAM SOUND, ALASKA		H= 20 KM MAG 4.50 CGS	
29	02	14	02.4	59.5 N 149.1 W	PRINCE WILLIAM SOUND, ALASKA		H= 20 KM MAG 4.70 CGS	
29	02	16	29.8	58.3 N 149.7 W	PRINCE WILLIAM SOUND, ALASKA		H= 25 KM MAG 4.90 CGS	
29	02	19	13.2	59. N 149.2 W	PRINCE WILLIAM SOUND, ALASKA		H= 20 KM MAG 4.70 CGS	
29	02	25	25.1	57. N 151.7 W	PRINCE WILLIAM SOUND, ALASKA		H= 20 KM MAG 5.20 CGS	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29	GG-	eP	02 36 54.5	SZ	0.7	14.7	72.7	5.16
29	02	31	59.*	60.2 N 148.2 W	PRINCE WILLIAM SOUND, ALASKA		H= 20 KM MAG 4.70 CGS	
29	03	07	19.5	59.7 N 148.8 W	PRINCE WILLIAM SOUND, ALASKA		H= 30 KM MAG 5.00 CGS	
29	GG-	eP	03 18 28.0	SZ	0.5	8.9	69.8	5.08
29	03	15	17.*	57.9 N 150.9 W	PRINCE WILLIAM SOUND, ALASKA		H= 33 KM MAG 3.90 CGS	
29	03	25	24.7	60.4 N 144.7 W	PRINCE WILLIAM SOUND, ALASKA		H= 15 KM MAG 4.30 CGS	
29	03	38	38.1	60.7 N 149.1 W	PRINCE WILLIAM SOUND, ALASKA		H= 40 KM MAG 5.10 CGS	
29	03	52	26.5	59.7 N 148.8 W	PRINCE WILLIAM SOUND, ALASKA		H= 15 KM MAG 4.40 CGS	
29	04	01	21.9	59.8 N 148.5 W	PRINCE WILLIAM SOUND, ALASKA		H= 15 KM MAG 4.10 CGS	
29	04	12	15.7	60.2 N 145.5 W	PRINCE WILLIAM SOUND, ALASKA		H= 15 KM MAG 5.20 CGS	
29	GG-	eP	04 23 22.0	SZ	0.6	7.4	68.9	5.03
29	LZ-	eL	23 27	SZ	0.6	27.3		
29			04 59 49	LT	40	1058.2	97.6	
29	04	51	53.3	56.8 N 152.4 W	PRINCE WILLIAM SOUND, ALASKA		H= 40 KM MAG 4.80 CGS	
29	05	00	29.3	60.3 N 147.4 W	PRINCE WILLIAM SOUND, ALASKA		H= 40 KM MAG 4.30 CGS	
29	05	08	25.8	56.7 N 152.7 W	PRINCE WILLIAM SOUND, ALASKA		H= 20 KM MAG 4.60 CGS	

DAY	STA PHASE	TIME	INST	PER	AMPL	DIST	MAG
29	05 13 42.4	59.5 N 147.4 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 33 KM	MAG 3.90	CGS			
29	05 21 09.8	57.1 N 150.4 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 20 KM	MAG 4.40	CGS			
29	05 37 47.4	56.9 N 153.3 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 25 KM	MAG 4.80	CGS			
29	05 51 58.	58.3 N 150.5 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 15 KM	MAG 4.70	CGS			
29	06 04 44.5	56.1 N 154.3 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 30 KM	MAG 5.80	CGS			
29	00- eP	06 15 06.5	SZ	1.1	63.3	62.6	5.64
29	GG- eP	06 16 18.0	SZ	1.1	44.0	73.9	5.35
	e	16 20	LR	24	419.4U		
	e	19 08	LR	20	419.4U		
	eS	26 00	LR	999 9	9999.9U		
	eSS	30 50	LR	20	419.4U		
	eL	41 30	LR	28	419.4U		
				Avg.	5.49		
29	06 29 39.4	58.1 N 149.8 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 33 KM	MAG 5.00	CGS			
29	06 36 16.*	59.9 N 146.0 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 20 KM	MAG 4.30	CGS			
29	06 38 09.*	58.6 N 148.9 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 33 KM	MAG 4.60	CGS			
29	06 48 52.3	58.1 N 150.6 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 33 KM	MAG 4.80	CGS			
29	06 53 19.5	56.1 N 154.5 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 25 KM	MAG 4.80	CGS			
29	00- eP	07 03 42.5	SZ	0.8	12.6	62.6	5.09
29	07 05 17.1	59. N 150.2 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 25 KM	MAG 4.70	CGS			

DAY	STA PHASE	TIME	INST	PER	AMPL	DIST	MAG
29	07 18 08.	57. N 151.8 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 25 KM	MAG 4.80	CGS			
29	07 37 22.8	55.9 N 154.8 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 33 KM	MAG 4.00	CGS			
29	07 39 40.7	57.1 N 152.0 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 20 KM	MAG 4.50	CGS			
29	07 52 46.4	56.1 N 154.2 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 25 KM	MAG 4.90	CGS			
29	00- eP	08 03 09.1	SZ	1.1	45.4	62.6	5.51
	e	03 16	SZ	1.0	94.0		
29	GG- eP	08 04 20.5	SZ	1.1	44.0	73.9	5.36
	e	04 26	SZ	1.0	65.3		
	e	06 50	SZ	1.0	23.7		
				Avg.	5.43		
29	08 06 03.7	56.6 N 152.4 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 25 KM	MAG 4.50	CGS			
29	08 07 52.3	56.5 N 152.6 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 20 KM	MAG 4.90	CGS			
29	08 11 54.*	61.4 N 146.4 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 20 KM	MAG 4.20	CGS			
29	08 18 42.*	60.1 N 146.6 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 33 KM	MAG 3.90	CGS			
29	08 31 30.	60.2 N 148.5 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 15 KM	MAG 4.40	CGS			
29	08 44 52.	59. N 148.1 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 33 KM	MAG 4.20	CGS			
29	08 50 03.6	56.7 N 152.1 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 33 KM	MAG 4.30	CGS			
29	09 00 09.1	60.3 N 148.6 W	PRINCE WILLIAM SOUND, ALASKA				
		H= 20 KM	MAG 3.70	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29			09 06 44.8	56.6 N 152.2 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 4.80 CGS		
29			09 15 55.4	58.4 N 150.5 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 4.60 CGS		
29			09 22 01.*	59.6 N 149.8 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.30 CGS		
29			09 28 58.*	60.5 N 151.2 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 4.30 CGS		
29			10 08 02.4	60. N 148.6 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 5.00 CGS		
29	GG-	eP	10 19 13.0	SZ	0.9	54.8	69.4	5.67
	ePP		21 48	SZ	1.0	23.7		
29			10 13 48.	60.6 N 146.3 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 4.60 CGS		
29			10 38 29.*	59.2 N 155.1 W	PRINCE WILLIAM SOUND, ALASKA	H= 10 KM MAG 4.10 CGS		
29	LZ-	eP	10 40 12.4	SZ	0.5	12.1	2.3	
	eS		40 40	SR	0.9	25.1		
29			10 42 42.8	57.9 N 151.7 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 3.90 CGS		
29			10 49 40.3	58.2 N 150.4 W	PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 5.20 CGS		
29	LZ-	eL	11 48 53	LT	30	852.0	99.5	
29			11 11 44.8	56.2 N 152.7 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.20 CGS		
29			11 17 14.*	58.5 N 151.2 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 3.90 CGS		
29	LZ-	e	11 29 16	LR	24.0	1409.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29			11 31 56					
29			11 31 56.8	60.6 N 148.7 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 4.00 CGS		
29			LZ- eP	11 34 08.3	SZ	0.2	20.3	
29			11 44 04.3	60. N 149.1 W	PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 4.90 CGS		
29	GG-	eP	11 55 12.6	SZ	0.6	27.3	69.5	5.52
29	LZ-	eL	11 50 15	LT	28.0	2086.9		
29			11 54 41.	58.8 N 151.1 W	PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 4.50 CGS		
29			11 56 33.	58. N 151.6 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 5.10 CGS		
29			12 03 03.8	60.9 N 143.2 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 4.70 CGS		
29			12 12 09.7	57.2 N 152.0 W	PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 4.60 CGS		
29			12 18 02.*	60.2 N 146.1 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.00 CGS		
29			12 33 10.1	59.2 N 153.8 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 4.80 CGS		
29			12 48 05.9	59.9 N 145.6 W	PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 4.50 CGS		
29			13 07 48.*	60.3 N 147.1 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.10 CGS		
29			14 24 15.7	57.5 N 152.4 W	PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 4.70 CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29			14 43 09.4*	60.2 N 146.6 W	PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 3.90 CGS		
29			14 51 30.2	60. N 148.9 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 4.40 CGS		
29			15 07 13.1	54.3 N 157.0 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 4.90 CGS		
29			15 30 33.9	57.2 N 152.0 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.40 CGS		
29			15 39 28.6	56.1 N 154.4 W	PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 4.20 CGS		
29			15 51 43.6	60.4 N 146.9 W	PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 4.40 CGS		
29			16 09 15.3	60.3 N 146.6 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 4.80 CGS		
29			16 16 22.4	58.8 N 150.5 W	PRINCE WILLIAM SOUND, ALASKA	H= 25 KM MAG 4.70 CGS		
29			16 18 29.3	60.4 N 146.0 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 4.90 CGS		
29	OO-	eL	16 50 10	LZ	26.0	963.3	57.6	
29	LZ-	eL	17 05 23	LR	18	930.1	97.9	
29			16 33 20.*	56. N 149.9 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.60 CGS		
29			16 40 57.9	59.7 N 147.0 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 5.80 CGS		
29	OO-	eP	16 50 51.8	SZ	1.0	35.1	58.4	5.35
29	GG-	eP	16 52 08.5	SZ	1.1	83.8	69.5	5.78
	e		52 10	LT	22	253.8		
	ePP		54 44	SZ	1.2	57.4		
	eS		17 01 22	LT	22	1573.6		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	G		05 25	L	23.0	2084.5		
	eLQ		09 05	LT	17	1096.4		
	eLR		14 30	LT	30	3513.3		
							Avg.	5.56
29			16 45 33.6	59.8 N 146.9 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 5.30 CGS		
29	00-	eP	16 55 25.0	SZ	1.0	15.6	58.3	4.99
29	GG-	eP	16 56 42.0	SZ	0.9	21.7	69.4	5.27
							Avg.	5.13
29			16 53 26.6	60.3 N 146.1 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 5.20 CGS		
29	00-	eP	17 03 16.1	SZ	0.5	8.8	57.7	5.05
29	GG-	eP	17 04 32.0	SZ	0.6	18.9	68.8	5.44
							Avg.	5.24
29	00-	eP	17 20 42.5	SZ	1.8	111.6		
29			17 26 00.2	56.4 N 153.3 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.10 CGS		
29			17 38 12.5	59.9 N 147.0 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 4.40 CGS		
29			17 53 02.2	59.9 N 146.1 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 5.00 CGS		
29			17 55 30.2	60. N 146.1 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 4.90 CGS		
29			17 57 56.8	60. N 147.0 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.50 CGS		
29	GG-	eP	18 57 41.5	SZ	1.0	14.7		
29			18 58 37.1	59.8 N 146.7 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 4.50 CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29	GG-	e	19 01 20	LT	18.0	369.9		
29	GG-	e	19 06 00	LT	22	1776.7		
29	19 09 03.3		60.1 N 146.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.60	CGS			
29	GG-	e	19 09 35	LT	16.0	1598.4		
29	GG-	eL	19 11 42	LT	25	467.3		
29	19 31 46.1		59.9 N 148.2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.60	CGS			
29	19 45 24.		56.4 N 152.8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.10	CGS			
29	LZ-	eP	19 57 11.0	SZ	1.3	10.2		
29	LZ-	eP	20 17 18.5	SZ	0.7	66.3		
29	LZ-	e	20 17 25	ST	0.5	7.3		
29	20 30 03.*		59.9 N 145.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.00	CGS			
29	20 34 43.*		57.0 N 153.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.40	CGS			
29	20 59 25.6		59.2 N 153.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.60	CGS			
29	21 03 11.5		60.6 N 144.8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.30	CGS			
29	21 09 30.*		59.5 N 152.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.00	CGS			
29	21 40 32.7		6.7 S 155.1 E	SOLOMON ISLANDS				
			H= 68 KM	MAG 5.30	CGS			
29	GG-	eP ¹	21 59 32.5	SZ	1.0	36.2	127.5	
29	LZ-	eP ¹	21 59 42.0	SZ	1.7	199.3	131.2	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eSKP		22 03 03	SZ	2.2	198.6		
	eL		42 07	LZ	15	923.6		
	eLR		43 45	LZ	25	2300.7		
29	00-	eLQ	22 33 50	LR	45	1338.3	119.6	
	eLR		42 40	LZ	30	897.3		
29	LZ-	eP	21 58 36.8	SZ	0.4	1.7		
29	LZ-	e	21 59 17	SR	0.4	5.5		
29	22 35 38.5		60.3 N 146.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.30	CGS			
29	22 47 19.		60.3 N 145.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.40	CGS			
29	LZ-	eP	22 54 36.2	SZ	0.4	5.3		
29	23 08 28.6		56.1 N 153.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.60	CGS			
29	00-	eP	23 10 01.0	SZ	0.5	7.3		
29	23 25 35.1		59.2 N 152.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.10	CGS			
29	23 27 55.3		59.7 N 148.2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 30 KM	MAG 4.60	CGS			
29	23 40 54.8		61.1 N 151.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4.70	CGS			
29	23 49 28.6		59.9 N 147.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.80	CGS			
29	23 55 51.9		58.9 N 150.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.70	CGS			
29	LZ-	eP	23 57 26.5	SZ	0.2	2.6		
29	LZ-	e	23 57 29	SZ	0.6	7.4		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30			00 08 25*	60°2 N 146°3 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 33 KM	MAG 3.70	CGS		
30			00 17 57.7	59°3 N 149°0 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 20 KM	MAG 4.50	CGS		
30			00 26 15.7	58°9 N 150°2 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 20 KM	MAG 4.60	CGS		
30			00 53 55.8	60° N 146°3 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 4.20	CGS		
30			01 17 11.3	58°8 N 148°9 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 20 KM	MAG 4.40	CGS		
30			01 32 09.5	59°8 N 146°6 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 4.60	CGS		
30			01 40 54.5	60°3 N 145°3 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 4.50	CGS		
30			01 41 38.6	60°6 N 144°3 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 33 KM	MAG 4.70	CGS		
30			01 57 54.3	57°6 N 150°1 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 20 KM	MAG 4.80	CGS		
30			02 18 06.3	56°6 N 152°9 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 25 KM	MAG 6.60	CGS		
30	OO-	eP	02 28 25.5	SZ	0.9	96.1	62.0	5.98
		eP	28 26.0	SZ	999.9	9999.9		
30	GG-	eP	02 29 37.5	SZ	1.0	101.9	73.3	5.81
		e	29 38	LT	23	2335.1		
		e	31 33	SR	2.5	614.8		
		e	32 20	LT	20	2253.1		
		eS	39 20	LR	999.9	9999.9		
30	LZ-	eP	02 31 52.7	SZ	1.3	10.6	100.4	5.28
		eP	31 58	LZ	20	1160.8		
		ePP	35 52	LZ	18	2942.4		
		eSKS	42 30	LR	20	9341.7		
		ePS	45 18	LR	20	10.9U		
		eSS	50 20	LR	25	7263.9		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30			02 41 59.6	56°5 N 153°0 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 30 KM	MAG 4.90	CGS		
30	GG-	eP	02 53 31.0	SZ	0.9	17.4	73.4	5.07
30	LZ-	eP	02 43 06.7	SZ	1.0	21.89		
30			02 43 35.6	56°7 N 154°0 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 20 KM	MAG 4.70	CGS		
30			02 45 26.9	59°7 N 149°8 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 10 KM	MAG 4.70	CGS		
30			03 12 17.1	56° N 153°6 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 33 KM	MAG 4.10	CGS		
30	GG-	eP	03 31 16.0	SZ	1.1	192.9		
30	OO-	eP	03 32 52.0	SZ	0.6	16.3		
30	GG-	e	03 34 32	SR	4.0	1258.1		
30			03 35 12.*	61°2 N 151°1 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 30 KM	MAG 4.40	CGS		
30			04 01 36.*	56°4 N 152°8 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 33 KM	MAG 4.30	CGS		
30			04 04 48.5	59°1 N 148°4 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 20 KM	MAG 4.20	CGS		
30			04 20 16.3	60°3 N 146°3 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 5 KM	MAG 4.90	CGS		
30			04 22 43.1	59°5 N 146°3 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 4.50	CGS		
30			04 46 06.1	57°6 N 151°2 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 33 KM	MAG 4.70	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30	05	04	15.*	60.4 N	145.0 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 33 KM	MAG 3.80	CGS		
30	05	14	21.5	56.2 N	154.4 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 33 KM	MAG 4.50	CGS		
30	05	32	30.*	56.9 N	151.7 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 33 KM	MAG 4.30	CGS		
30	06	28	58.*	59.7 N	148.6 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 15 KM	MAG 4.10	CGS		
30	06	28	59.1	59.6 N	146.4 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 33 KM	MAG 4.10	CGS		
30	07	08	54.5	58.3 N	149.3 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 20 KM	MAG 4.50	CGS		
30	07	09	34.	59.9 N	145.7 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 15 KM	MAG 6.20	CGS		
30	00-	eP	07 19 28.0	SZ	1.0	23.4	58.0	5.17
30	GG-	eP	07 20 42.1	SZ	0.7	16.9	69.2	5.31
	e		20 43	LT	14	538.7		
	ePP		23 15	SZ	1.5	83.2		
	e		23 15	LT	16	399.6		
	eS		29 55	LT	16	1998.0		
	eSS		34 30	LR	22	4507.0		
	eL		43 20	LR	25	8529.3		
30	LZ-	ePP	07 27 25	LZ	14	1326.2	97.6	
	eSKS		34 00	LR	18	858.7		
	eL		53 55	LT	25	162.1		
				AVG.		5.24		
30	07	37	01.*	59.7 N	145.3 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 33 KM	MAG 4.20	CGS		
30	07	52	44.*	59.9 N	146.5 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 20 KM	MAG 4.00	CGS		
30	07	56	29.1	56.3 N	154.4 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 20 KM	MAG 5.00	CGS		
30	00-	eP	08 06 53.5	SZ	0.5	8.8	62.4	5.17

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30	08	05	50.	60.2 N	147.6 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 35 KM	MAG 4.30	CGS		
30	08	34	37.3	57. N	152.6 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 20 KM	MAG 4.20	CGS		
30	08	40	10.7	56.5 N	153.0 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 20 KM	MAG 4.30	CGS		
30	08	53	17.9	56.3 N	153.1 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 33 KM	MAG 4.30	CGS		
30	09	23	05.	59.9 N	145.6 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 33 KM	MAG 4.50	CGS		
30	09	52	32.8	57.8 N	152.2 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 15 KM	MAG 4.10	CGS		
30	09	57	32.5	60.9 N	145.1 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 15 KM	MAG 4.60	CGS		
30	10	13	29.1	58.8 N	148.4 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 20 KM	MAG 4.10	CGS		
30	10	15	51.7	60.4 N	146.6 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 15 KM	MAG 4.40	CGS		
30	10	31	22.	60.5 N	149.6 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 30 KM	MAG 4.40	CGS		
30	10	35	42.*	60.4 N	146.9 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 33 KM	MAG 3.80	CGS		
30	10	47	06.*	61.5 N	146.8 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 35 KM	MAG 4.30	CGS		
30	10	59	27.6	58.4 N	149.2 W	PRINCE WILLIAM SOUND, ALASKA		
				H= 25 KM	MAG 5.00	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30	11	03 35.4	58.9 N 149.9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 5.00	CGS			
30	11	05 47.4	60.4 N 146.8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.40	CGS			
30	11	24 57.4	58.2 N 150.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.30	CGS			
30	11	35 18.8	61.5 N 147.9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4.40	CGS			
30	11	48 40.4	56.4 N 152.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 5.20	CGS			
30	00-	eP	11 59 03.0	SZ	1.0	23.4	62.2	5.31
30	GG-	eP	12 00 14.5	SZ	0.6	16.5	73.4	5.25
						Avg.		5.28
30	11	52 13.9	60.1 N 146.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.40	CGS			
30	12	05 43.5	60.1 N 147.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 5.00	CGS			
30	12	14 28.4	58. N 151.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 5.00	CGS			
30	GG-	eP	12 25 49.4	SZ	0.7	5.8	71.7	4.75
30	12	22 24.*	57.3 N 150.2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.30	CGS			
30	12	38 16.	59.7 N 146.9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 30 KM	MAG 5.00	CGS			
30	12	55 12.5	59.7 N 147.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 30 KM	MAG 4.60	CGS			
30	13	03 34.9	56.5 N 152.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 5.30	CGS			
30	GG-	eP	13 15 07.6	SZ	0.6	9.8	73.3	5.03

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30	00-	eS	13 22 20					
		eSCS	23 47	L	19.0	1185.2	62.1	
		eLQ	29 57	L	18	788.1		
		eLR	37 02	L	23	1093.3		
30	LZ-	e	13 28 10	LR	18	1826.8		
		eL	14 01 30	LR	18	936.7	100.2	
30	00-	eP	13 03 59.8	SZ	0.6	12.5		
30	13	18 24.*	56.8 N 152.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.10	CGS			
30	13	32 18.5	56.4 N 152.6 W	PRINCE WILLIAM SOUND, ALASKA				
30	00-	eP	13 42 41.6	SZ	0.6	25.0	62.2	5.57
30	GG-	eP	13 43 53.4	SZ	0.7	11.7	73.4	5.04
						Avg.		5.30
30	13	41 02.*	60.5 N 146.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.20	CGS			
30	13	51 03.*	56.6 N 151.9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.00	CGS			
30	13	58 20.*	60.2 N 145.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.90	CGS			
30	14	10 48.6	57.4 N 152.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 30 KM	MAG 5.10	CGS			
30	14	25 16.	60.4 N 147.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.30	CGS			
30	14	53 17.*	60. N 146.8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4.10	CGS			
30	15	07 49.3	58.7 N 149.6 W	PRINCE WILLIAM SOUND, ALASKA				
30	00-	eP	15 17 51.4	SZ	0.6	14.3	59.6	5.19
30	GG-	eP	15 19 05.6	SZ	0.8	31.3	70.8	5.42
						Avg.		5.30

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30	15 46 13*		57°7 N 151°8 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.20 CGS					
30	00- eP		15 47 25.8	SZ	0.8	12.6		
30	15 53 51.4		57° N 152°6 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.40 CGS					
30	16 09 28.4		56°6 N 152°1 W PRINCE WILLIAM SOUND, ALASKA H= 25 KM MAG 5.50 CGS					
30	00- eP		16 19 46.8	SZ	0.6	26.8	61.9	5.59
	eP		19 49	LZ	20	656.1		
	ePP		22 12	LZ	16	456.7		
	eS		28 16	LT	20	1209.1		
	eLQ		35 44	LT	22	1718.1		
	eLR		41 12	LZ	23	2118.8		
30	GG- eP		16 20 59.0	SZ	1.0	76.4	73.2	5.69
	eP		21 00	LZ	17	788.4		
	ePP		23 45	LZ	20	423.8		
	ePPP		25 19	LZ	19	468.1		
	eS		30 30	LT	19	2232.1		
	eSS		35 25	LT	19	1275.5		
	eL		38 56	LZ	20	1582.5		
30	LZ- eSKS		16 33 50	LR	18	702.5	99.9	
	ePS		36 30	LR	18	858.7		
	eL		17 00 10	LR	27	599.6		
				Avg.		5.64		
30	16 32 07.2		57°3 N 152°0 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.30 CGS					
30	16 38 26.5		60°1 N 150°7 W PRINCE WILLIAM SOUND, ALASKA H= 15 KM MAG 4.40 CGS					
30	16 43 45.5		59°7 N 148°7 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.60 CGS					
30	16 53 07.7		56°6 N 152°2 W PRINCE WILLIAM SOUND, ALASKA H= 15 KM MAG 5.00 CGS					
30	00- eP		17 03 25.8	SZ	0.9	23.0	61.9	5.37
30	GG- eP		17 04 40.6	SZ	0.7	14.6	73.2	5.16
				Avg.		5.26		
30	17 04 21.*		56°7 N 152°5 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.30 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30			59°6 N 146°5 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.20 CGS					
30			60°7 N 145°5 W PRINCE WILLIAM SOUND, ALASKA H= 15 KM MAG 4.60 CGS					
30			61°5 N 150°0 W PRINCE WILLIAM SOUND, ALASKA H= 40 KM MAG 4.30 CGS					
30			60°4 N 146°0 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.80 CGS					
30			24°2 S 176°4 W TONGA ISLANDS REGION H= 33 KM MAG 4.60 CGS					
30			60°5 N 143°8 W PRINCE WILLIAM SOUND, ALASKA H= 15 KM MAG 4.70 CGS					
30			55°1 N 168°6 W FOX ALEUTIAN ISLANDS H= 30 KM MAG 4.20 CGS					
30			57°9 N 151°1 W PRINCE WILLIAM SOUND, ALASKA H= 30 KM MAG 4.50 CGS					
30			57°3 N 150°7 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.30 CGS					
30			59°4 N 145°1 W PRINCE WILLIAM SOUND, ALASKA H= 15 KM MAG 4.50 CGS					
30	00- eP		20 42 42.1	SZ	1.0	8.5	58.4	4.73
30			21 04 01.1					
30			58°2 N 150°3 W PRINCE WILLIAM SOUND, ALASKA H= 20 KM MAG 5.20 CGS					
30			58°5 N 150°6 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.60 CGS					
30			59°9 N 147°6 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.50 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30			22 05 03.9	60°2 N 145°5 W PRINCE WILLIAM SOUND ALASKA	H= 15 KM MAG 4.40 CGS			
30			22 21 25.2	60°3 N 146°9 W PRINCE WILLIAM SOUND ALASKA	H= 15 KM MAG 4.70 CGS			
30			22 37 14.4	58°4 N 149°8 W PRINCE WILLIAM SOUND ALASKA	H= 33 KM MAG 4.60 CGS			
30			23 03 34.5	57°3 N 152°7 W PRINCE WILLIAM SOUND ALASKA	H= 20 KM MAG 5.00 CGS			
30	LZ-	eP	23 32 22.1	SZ	0.8	6.5		
30			23 33 31.6	56°1 N 153°0 W PRINCE WILLIAM SOUND ALASKA	H= 33 KM MAG 4.10 CGS			
30			23 36 56.	59°9 N 145°8 W PRINCE WILLIAM SOUND ALASKA	H= 30 KM MAG 4.80 CGS			
30	GG-	eP	23 49 46.6	SZ	0.7	14.6		
30			23 51 46.	59°6 N 147°4 W PRINCE WILLIAM SOUND ALASKA	H= 33 KM MAG 4.60 CGS			
31	OO-	eP	00 01 39.8	SZ	0.7	8.5	58.5	4.88
31	LZ-	eL	00 38 11	LR	19	570.7	98.4	
30	GG-	eL	23 52 45	LT	19.0	212.5		
31	OO	14 11.7	45°3 N 151°0 E KURILE ISLANDS	H= 60 KM MAG 5.30 CGS				
31	OO-	eP	00 25 11.9	SZ	0.7	46.8	69.2	5.58
	eP	25 14	LZ	22		817.2		
	eS	34 14	LR	25		1246.2		
	eSCS	35 20	LR	23		993.8		
	eSS	39 00	LT	30		3072.3		
	eLQ	45 55	LR	37		5225.7		
	eLR	48 45	LZ	31		2314.7		
31	GG-	eP	00 26 11.2	SZ	0.9	104.0	79.1	5.74
	eP	26 12	LZ	20		819.5		
	e	27 11	SZ	1.0		58.8		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		e	36 14	LT	24.0	1401.9		
		e	42 05	LT	27	1499.0		
		eLQ	54 12	LT	34	4288.9		
		eLR	57 44	LZ	24	1846.9		
31	LZ-	ePi	00 33 30.9	SZ	1.0	15.3	136.1	
		eSKS	37 13	SR	1.7	46.5		
		eL	01 19 35	LR	28	1637.8		
					Avg.	5.66		
31	LZ-	eP	00 29 32.9	SZ	1.3	17.6		
31	00 44 53.*	59°5 N 146°3 W PRINCE WILLIAM SOUND ALASKA	H= 15 KM MAG 4.50 CGS					
31	00-	eP	01 07 56.1	SZ	0.7	17.0		
31	GG-	eP	01 08 57.8	SZ	1.0	35.2		
31	02 11 07.1	43°6 N 126°6 W OFF COAST OF OREGON	H= 33 KM MAG 4.50 CGS					
31	00-	eP	02 53 55.3	SZ	0.8	7.5		
31	GG-	eP	04 31 23.9	SZ	0.7	14.6		
31	00-	eP	04 35 08.8	SZ	0.7	8.5		
31	00-	eL	04 48 02	LR	35	407.3		
31	GG-	eL	04 54 11	LZ	32	294.1		
31	00-	eL	05 12 20	LT	25	159.7		
31	05 42 22.4	56°2 N 153°4 W PRINCE WILLIAM SOUND ALASKA	H= 33 KM MAG 4.30 CGS					
31	07 15 10.6	59°8 N 148°0 W PRINCE WILLIAM SOUND ALASKA	H= 33 KM MAG 3.90 CGS					
31	LZ-	tP	07 55 11.0D	SZ	0.5	102.3		
31	LZ-	eL	07 56 16	ST	1.0	10.8		
31	08 40 52.2	59°8 N 148°6 W PRINCE WILLIAM SOUND ALASKA	H= 36 KM MAG 4.70 CGS					
31	09 01 30.2	50°8 N 130°2 W VANCOUVER ISLAND REGION	H= 15 KM MAG 6.00 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
31	GG-	eP	09 13 11.5	SZ	0.7	1785	74.6	5.17
		eL	37 00	LZ	34	7063.5		
31	LZ-	eP	09 14 11.2	SZ	1.0	32.8	85.8	5.40
		ePP	17 21	SZ	1.5	14.6		
		ePP	17 36	LZ	15	745.3		
		e	24 44	LR	15	4638.5		
		eLQ	43 24	LR	32	6992.7		
		eLR	47 11	LZ	34	11.5U		
					Avg.	5.28		
31	09 33 11.5		36.3 N 28.8 E NEAR COAST OF TURKEY					
			H= 57 KM MAG 4.70 CGS					
31	GG-	eP	09 37 24.2	SZ	0.8	45.2	18.5	4.76
		e	37 38	SZ	0.9	40.7		
31	11 18 13.2		57.0 N 152.9 W PRINCE WILLIAM SOUND, ALASKA					
			H= 20 KM MAG 4.50 CGS					
31	11 19 18.*		60.0 N 146.5 W PRINCE WILLIAM SOUND, ALASKA					
			H= 15 KM MAG 4.90 CGS					
31	11 53 14.4		56.5 N 152.3 W PRINCE WILLIAM SOUND, ALASKA					
			H= 25 KM MAG 4.80 CGS					
31	LZ-	e	12 30 40	LT	25	461.5	100.0	
		eL	38 35	LT	26	566.3		
		eP	19 08.9	SZ	0.8	6.5		
31	12 30 35.7		58.4 N 150.9 W PRINCE WILLIAM SOUND, ALASKA					
			H= 25 KM MAG 3.80 CGS					
31	12 40 32.*		59.6 N 148.1 W PRINCE WILLIAM SOUND, ALASKA					
			H= 33 KM MAG 4.20 CGS					
31	12 53 43.6		56.7 N 152.2 W PRINCE WILLIAM SOUND, ALASKA					
			H= 33 KM MAG 4.30 CGS					
31	15 20 28.9		22.8 S 66.8 W JUJUY PROVINCE, ARGENTINA					
			H= 219 KM MAG 4.50 CGS					
31	17 04 39.		17.7 S 178.8 W FIJI ISLANDS					
			H= 540 KM MAG 4.40 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
31			18 20 33.*					
			H= 33 KM MAG 4.20 CGS					
31			18 30 21.*					
			H= 33 KM MAG 4.30 CGS					
31	GG-	eP	21 15 21.6	SZ	0.7	17.4		
31			21 20 38.2					
			H= 15 KM MAG 4.60 CGS					
31	OO-	eL	21 39 07	LZ	19.0	48.8		
31	GG-	eL	21 50 12	LT	17	299.0		
31			22 50 36.*					
			H= 33 KM MAG 3.90 CGS					
31	OO-	eP	23 46 47.4	SZ	0.8	12.1		

April 1964

SEISMOLOGICAL BULLETIN
WEST GERMANY, NORWAY, BOLIVIA

THE GEOTECHNICAL CORPORATION
3401 SHILOH ROAD
GARLAND, TEXAS



SEISMOLOGICAL BULLETIN

GRAFENBERG, WEST GERMANY
OSLO, NORWAY
LA PAZ, BOLIVIA

The Geotechnical Corporation wishes to acknowledge the cooperation of the following scientific organizations in the collection and production of the data in this bulletin:

Bundesanstalt fur Bodenforschung, Hannover, West Germany (Professor Dr. Hans Closs, Director)

Jordskel, University of Bergen, Bergen, Norway (Professor A. Kvale, Director)

Observatorio San Calixto, La Paz, Bolivia (Father Ramon Cabre, S. J.)

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SEISMOLOGICAL BULLETIN

 GRAFENBERG, WEST GERMANY
 OSLO, NORWAY
 LA PAZ, BOLIVIA

1. INTRODUCTION

1.1 This bulletin contains seismological data on earthquake phases recorded at three mobile seismological stations being operated by The Geotechnical Corporation. The bulletin is intended to be an aid to interested observers in determining the extent of the earthquake data contained in the records from the three teams.

1.2 The bulletin contains the following:

a. Data on all of the phases that have been associated with epicenters reported by the U. S. Coast and Geodetic Survey (USC&GS);

b. Data on the epicenters listed in the bulletin - as reported by the USC&GS;

c. Arrival time, period, amplitude, and distance for phases not associated with USC&GS epicenters.

1.3 All phases are listed in chronological order, except that unassociated phases are not mixed with a sequence of associated phases. In such cases, the unassociated phases are listed immediately following the associated phases.

2. INSTRUMENTATION

2.1 Instrumentation at the Grafenberg, West Germany (GG-GR), and Oslo, Norway (OO-NW) sites consists of a short-period vertical Benioff seismometer

array. A short-period vertical Johnson-Matheson seismometer array is in operation at La Paz, Bolivia (LZ-BV). Each site is also equipped with a three-component Sprengnether long-period seismograph system. Both systems use phototube amplifiers. The response characteristics of these systems are shown in figures 1, 2, and 3.

2.2 All data are recorded by 35-mm Film Recorders, Geotech Model 1301A, 14-channel Magnetic-Tape Recorders, Ampex Model 314, and 16-mm film Developocorders, Geotech Model 4000C.

2.3 Precision Timing Systems, Geotech Model 5400 or 5400A, are used for primary timing. Chronometers are used for secondary timing. WWV is used for the time standard at LZ-BV. GG-GR and OO-NW use Radio Potsdam. WWV is a United States National Bureau of Standards Radio Station located at Beltsville, Maryland. The accuracy of the time program from WWV agrees with U. S. Naval Observatory time.

2.4 Each system is calibrated at least once every 24 hours. In the short-period system calibration, an electromagnetic (EM) calibrator is used to determine the magnification as a function of frequency and a weight-lift calibration is used to verify the EM magnification at 1 cps. In the long-period systems, magnification is determined as a function of frequency using EM calibrators. No method of verification is used. In the EM method of calibration, the seismometer mass is driven by a known sinusoidal force and the magnification is calculated using the relationships between the sinusoidal force and the recorded amplitude.

3. INTERPRETATION OF COLUMN TITLES

The column titles appearing in this bulletin are defined as follows:

3.1 DAY

The date, for the day of the month, is printed each time a new epicenter is listed and each time the station designator changes. Dates are given in Greenwich Civil Time (GCT).

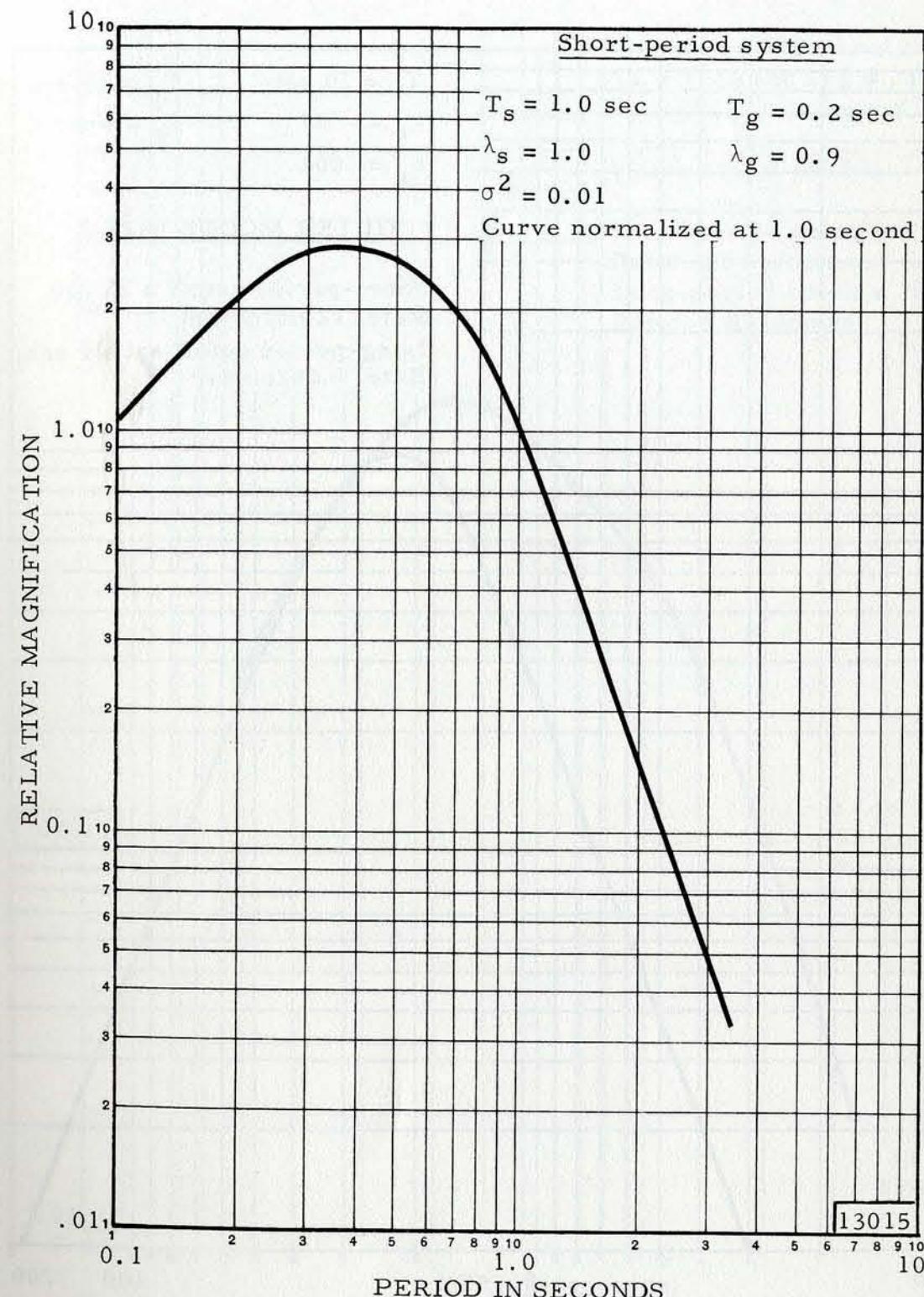


Figure 1. Frequency response of the Benioff short-period seismograph system

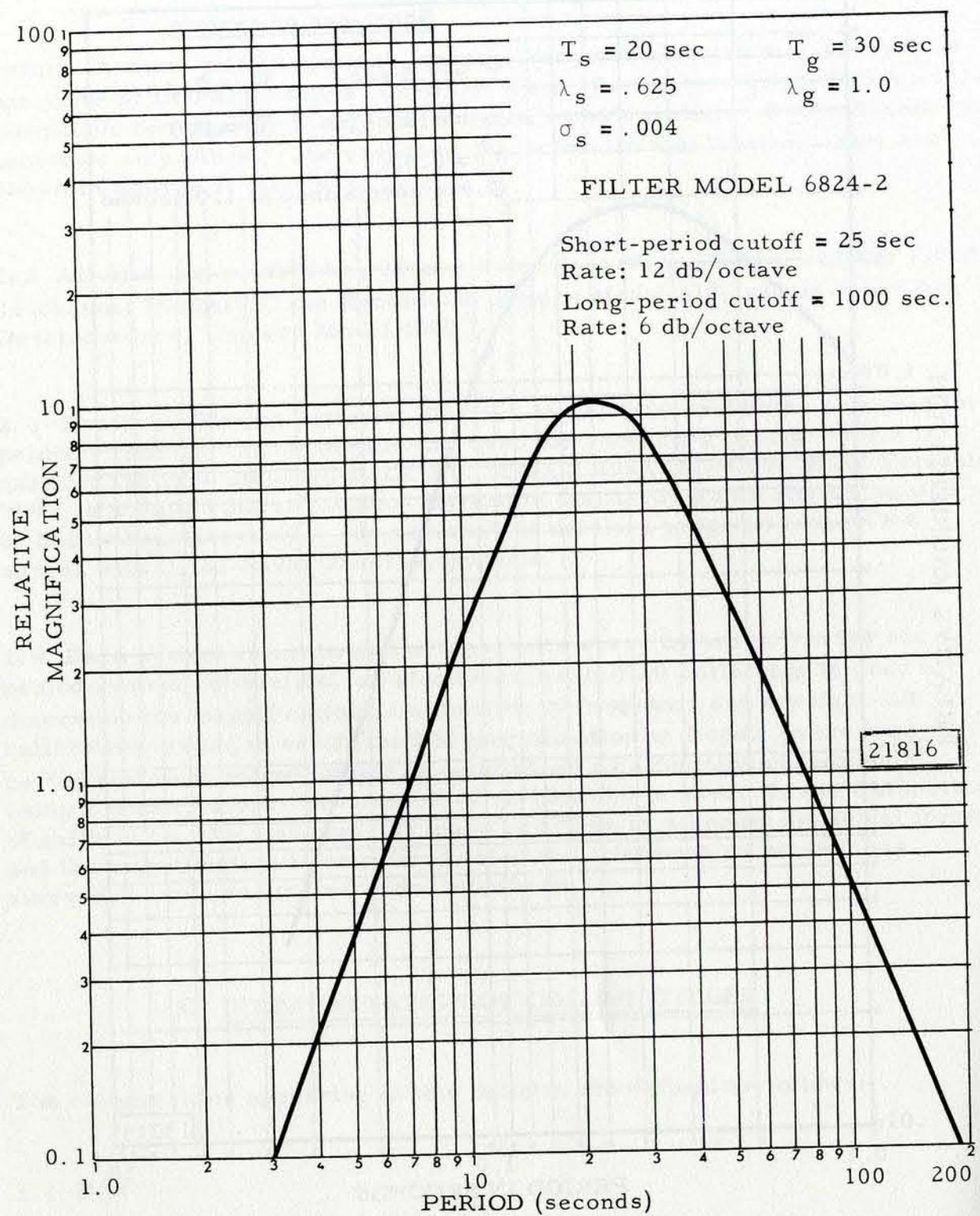


Figure 2. Frequency response of the Sprengnether long-period seismograph system

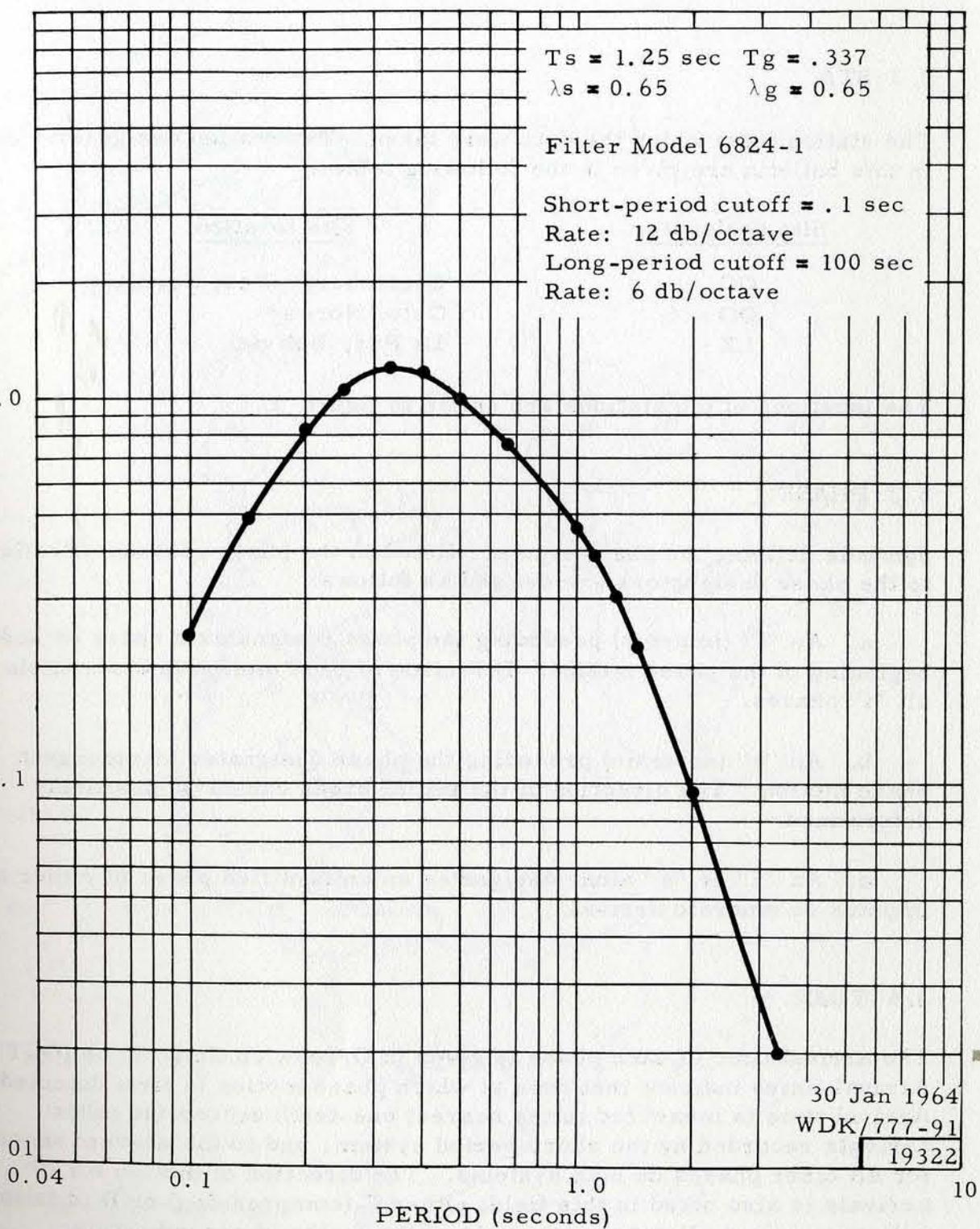


Figure 3. Frequency response of the Johnson-Matheson seismograph system

3.2 STA

The station from which the data were taken. The station designators used in this bulletin are given in the following table:

<u>Site designator</u>	<u>Site location</u>
GG -	Grafenberg, West Germany
OO -	Oslo, Norway
LZ -	La Paz, Bolivia

The locations of the stations are shown in figure 4.

3.3 PHASE

Symbols defining the phase type are listed in the phase column. Prefixes to the phase designators are defined as follows:

a. An "i" (impetus) preceding the phase designates a sharp or sudden beginning of the phase motion. Direction of first motion is discernible on all "i" phases.

b. An "e" (emersio) preceding the phase designates an emergent phase motion. The direction of the initial break cannot be positively determined.

c. An "i" or "e" alone designates an unidentified phase of either an impetus or emersio arrival.

3.4 TIME

The arrival time of each phase is given in Greenwich Civil Time (GCT). Arrival times indicate that time at which phase motion is first detected. Arrival time is measured to the nearest one-tenth second for initial arrivals recorded by the short-period system, and to the nearest second for all other phases on both systems. The direction of motion for iP arrivals is also noted in this field; either C (compression) or D (dilation) will appear immediately to the right of the tenths of second column.

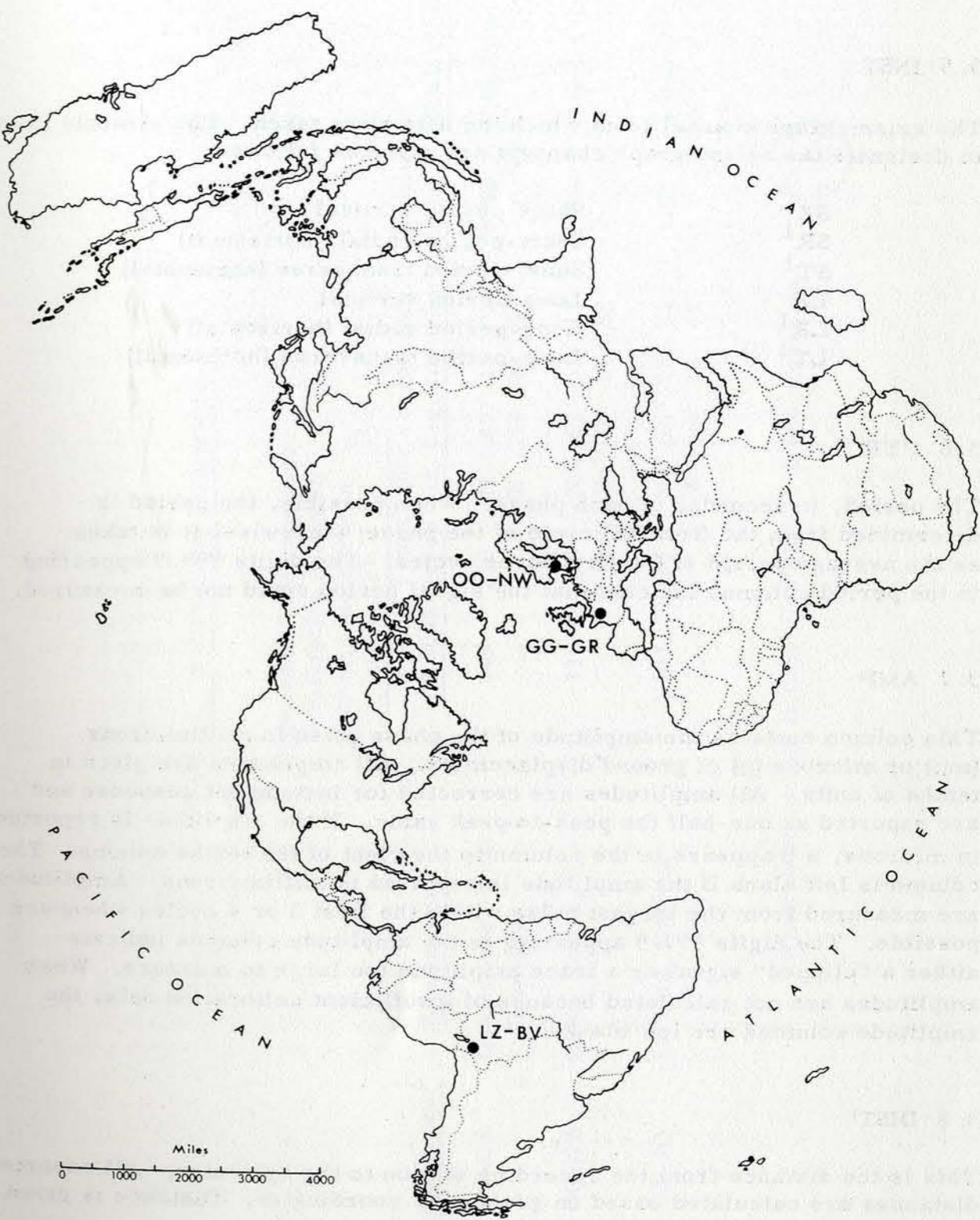


Figure 4. Bulletin sites

3.5 INST

The seismograph channel from which the data were taken. The symbols used to designate the seismograph channels are given as follows:

SZ	Short-period vertical
SR ¹	Short-period radial (horizontal)
ST ¹	Short-period transverse (horizontal)
LZ	Long-period vertical
LR ¹	Long-period radial (horizontal)
LT ¹	Long-period transverse (horizontal)

3.6 PER

The period, in seconds, of each phase. When possible, the period is determined from the first full cycle of the phase; otherwise, it is taken as the average period of the first three cycles. The digits 999.9 appearing in the period columns indicate that the signal period could not be measured.

3.7 AMP

This column contains the amplitude of the phase given in millimicrons ($m\mu$) or microns (μ) of ground displacement. All amplitudes are given in tenths of units. All amplitudes are corrected for instrument response and are reported as one-half the peak-to-peak value. If the amplitude is reported in microns, a U appears in the column to the right of the tenths column. The column is left blank if the amplitude is reported in millimicrons. Amplitudes are measured from the largest pulse within the first 3 or 4 cycles whenever possible. The digits 999.9 appearing in the amplitude columns indicate either a "clipped" signal or a trace amplitude too large to measure. When amplitudes are not calculated because of insufficient calibration data, the amplitude columns are left blank.

3.8 DIST

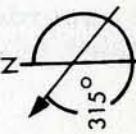
This is the distance from the recording station to the epicenter. All reported distances are calculated based on geocentric coordinates. Distance is given

¹Table 1 gives the instrument orientation of the horizontal seismometers.

Table 1. Bulletin site information

Site designator	Site location	Trans - Site coordinates			Elevation in km	Rock type
		Radial verse	in deg, min, sec	in deg, min, sec		
GG-GR	Grafenberg, West Germany	140	230	N 49 41 32	0. 53	Limestone
OO-NW	Oslo, Norway	138	228	E 11 12 55		
LZ-BV	La Paz, Bolivia	141	231	S 16 15 31	0. 56	Glacial drift
					3. 99	Limestone

¹When earth moves in direction shown, trace moves up.



to the nearest one-tenth of a degree. Distances computed for unassociated data are determined from the S-P intervals. In some instances, surface groups are recorded which have traveled the major arc from the epicenter to the station. In such cases, the major arc distance is given.

3.9 MAG

The magnitudes provided are body wave magnitudes, m_b , as defined by Gutenberg and Richter². They are determined only from the short-period vertical component of the P phase (initial arrival). The following equation is used:

$$m_b = \log_{10} (A/T) + Q$$

where

m_b = body wave magnitude
 A = one-half p-p earth amplitude of
 P phase in microns
 T = period of P phase, in seconds
 Q = depth-distance factor for PZ given by
 Gutenberg and Richter², for distances
 greater than 16°

Magnitude computations for distances less than 16° are based on extensions of the Q tables. Points from 10° to 16° were read from a curve in the Gutenberg-Richter paper, and an inverse cube relationship was used to extrapolate from 2° to 10°.

The average magnitude (sum of station magnitudes/number of stations) is listed on the last line of an epicenter print-out.

4. INTERPRETATION OF UNITED STATES COAST AND GEODETIC SURVEY DATA

The epicenter data reported by the USC&GS precedes each list of associated phases. This information appears as follows:

²Gutenberg, B., and Richter, C. F., 1956, Magnitude and energy of earthquakes: Ann. Geofis., vol. 9, p. 1-15

Line 1 (from left to right)

First group:	Day of the month
Second group:	Origin time of the event
Third group:	Geographic coordinates of the epicenter
Fourth group:	Geographic description

NOTE

An asterisk (*) following the origin time indicates epicenters believed accurate to 1/2° in latitude and longitude and to 50 km in depth.

Line 2 (from left to right)

First group:	Depth (h) of the hypocenter in kilometers
Second group:	Magnitude (MAG) as determined by Pasadena (PAS), Berkeley (BRK), Palisades (PAL), or USC&GS (CGS)

NOTE

MAG (CGS) is m_b of Gutenberg and Richter from the P phase only. The magnitude quoted is an average value determined from data forwarded by cooperating standard stations and other observatories.

5. REMARKS

The Geotechnical Corporation routinely receives and preprocesses data collected from three overseas field stations. Information on background levels, magnification levels, operational procedures, available records, and other data can be provided to interested organizations. Requests for such information should be made to the attention of:

THE GEOTECHNICAL CORPORATION
 3401 Shiloh Road
 Garland, Texas
 ATTN: Mr. J. M. Whalen 75041

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	00	01	10.6	60.4 N 146.4 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 10 KM	MAG 4.90	CGS		
1	GG- eP		00 12 16.1	SZ	0.8	13.8	68.8	5.20
1	00- eL		00 08 49	LZ	26.0	111.4		
1	00 36 32.*		58.3 N 150.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.30	CGS			
1	01 12 17.*		60.3 N 145.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.20	CGS			
1	01 21 05.*		60.6 N 149.2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4.60	CGS			
1	01 54 09.3		59.7 N 146.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.30	CGS			
1	02 14 09.*		59.5 N 146.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.90	CGS			
1	03 05 49.9		60.1 N 146.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.40	CGS			
1	03 23 17.2		57.2 N 151.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 5.10	CGS			
1	00- eP		03 33 29.6	SZ	0.7	10.1	61.3	5.06
	eP		33 40	LZ	28	118.8		
	e		37 45	LR	25	130.7		
	eLQ		49 15	LR	24	353.9		
	eLR		57 46	LZ	24	460.0		
1	GG- eP		03 34 50.0	SZ	1.0	29.2	72.5	5.29
1	GG- eS		03 44 10	LR	22	359.9	7.2	
1	GG- eS		03 44 10	LT	20	414.8	72.5	
	eSS		48 39	LT	16	263.6		
	eLQ		54 56	LT	33	962.4		
	eLR		04 08 05	LZ	21	830.2		
	eL		09 40	LR	20	1171.8		
	eL		09 40	LT	20	829.7		
	eL		09 40	LZ	19	936.3		
1	LZ- eSP		03 50 09	LZ	10	890.3	99.7	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	e		04 03 30	LZ	24.0	335.5		
	eLQ		07 49	LT	30	585.8		
	eLR		15 00	LZ	35	1455.3		
							AVG.	5.17
1	03 43 47.*		59.9 N 146.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.80	CGS			
1	04 26 52.7		2.8 S 80.1 W	ECUADOR				
			H= 35 KM	MAG 4.50	CGS			
1	LZ- eP		04 31 02.2	SZ	1.1	69.6	17.6	4.74
	ePP		31 19	SZ	1.5	68.2		
	e		35 05	SZ	1.2	18.0		
	ePCP		35 31	SZ	1.3	21.2		
	eL		36 11	LZ	27	1704.0		
1	04 32 40.7		58.7 N 150.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.80	CGS			
1	04 49 26.*		57.2 N 151.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.80	CGS			
1	04 54 00.*		59.5 N 147.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.90	CGS			
1	05 33 02.9		59.9 N 146.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.50	CGS			
1	00- eL		06 04 58	LZ	24	122.6	58.1	
1	GG- eL		06 11 00	LZ	24	137.8	69.2	
1	LZ- eL		06 24 49	LZ	31	530.8	97.8	
1	06 16 21.*		60.2 N 147.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.80	CGS			
1	06 39 48.5		60.4 N 146.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 10 KM	MAG 4.40	CGS			
1	07 26 03.*		59.6 N 150.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.10	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	07 56	08*	56.6 N 151.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.90	CGS			
1	08 09	01*	56.6 N 151.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4.40	CGS			
1	08 13	51*	37.8 N 135.8 E	SEA OF JAPAN				
			H=386 KM	MAG 4.00	CGS			
1	08 28	09*	60. N 147.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.40	CGS			
1	08 33	22.	59.9 N 146.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 10 KM	MAG 4.50	CGS			
1	08 54	04*	56.7 N 152.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4.10	CGS			
1	00- eP		09 10 33.5	SZ	0.8	9.6		
1	LZ- eP		09 18 10.9	SZ	0.8	14.8		
1	10 23	10.*	56.8 N 153.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.10	CGS			
1	10 45	14.*	59.1 N 148.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.00	CGS			
1	11 01	25.5	60.4 N 146.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 10 KM	MAG 4.60	CGS			
1	13 33	23.*	59.7 N 148.2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.50	CGS			
1	13 54	31.9	57.5 N 151.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.90	CGS			
1	15 22	38.3	57.3 N 152.9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.80	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	16 29	09.	59.7 N 146.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.70	CGS			
1	17 23	12.1	56.1 N 155.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.40	CGS			
1	00- eL		17 57 40	LZ	32	240.9	62.7	
1	LZ- tP eS		17 25 55.6D 26 12	SZ SR	0.3 0.5	22.9 7.2	1.6	
1	17 38	00.*	17.4 S 168.9 E	NEW HEBRIDES ISLANDS				
			H=227 KM	MAG 4.40	CGS			
1	18 48	32.9	60. N 142.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.40	CGS			
1	LZ- eP		18 55 40.0	SZ	1.0	10.9		
1	20 07	24.*	56.6 N 153.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.40	CGS			
1	20 13	08.3	58.3 N 149.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 5.10	CGS			
1	22 00	58.7	58.9 N 150.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.60	CGS			
1	23 37	08.*	51. N 157.1 E	SOUTHERN KAMCHATKA				
			H= 33 KM	MAG 4.50	CGS			
2	00 16	45.*	60.9 N 148.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.10	CGS			
2	01 11	55.*	5.9 N 95.7 E	NEAR COAST NORTHERN SUMATRA				
			H=132 KM	MAG 5.20	CGS			
2	00- eP eP eS		01 24 01.5 24 06 34 22	SZ LZ ST	0.6 17 2.0	6.6 2224.3 115.3	82.4	4.64

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	GG-	eS	34 33	LR	999.9	9999.9		
		eL	53 25	LZ	999.9	9999.9		
		eP	01 24 12.0	SZ	1.0	67.8	82.0	5.40
		eP	24 13	LZ	16	3106.6		
		eS	34 10	LR	20	9999.9		
		eSCS	34 25	ST	2.5	4048.1		
		e	37 35	SZ	0.5	162.2		
		eL	44 30	LZ	22	7268.6		
		eP ⁰¹	01 31 45.0	SZ	1.3	14.1	161.4	
		e	31 48	SZ	1.0	100.8		
eP ⁰¹	31 55	LZ	12	842.6				
ePP	36 18	SZ	2.0	229.7				
e	39 00	LR	18	1654.1				
e	45 00	LR	14	5964.5				
			Avg.		5.02			
2	LZ-	eP	01 57 10.7	SZ	0.4	3.5		
2	02 15 09.*	56.4 N 152.5 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.30 CGS						
2	LZ-	eP	02 39 53.3	SZ	0.5	8.3		
2	02 40 31.*	60.1 N 148.2 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 3.70 CGS						
2	LZ-	e	02 41 26	SR	0.8	1.8		
2	03 09 45.*	5.5 N 95.7 E NEAR COAST NORTHERN SUMATRA H=108 KM						
2	LZ-	eP ⁰¹	03 29 38.3	SZ	1.2	9.0	161.2	
	eP ⁰²	30 22.0	SZ	1.0	10.9			
2	LZ-	eP	03 41 15.6	SZ	0.5	22.9	2.5	
	eS	42 07	SR	1.0	35.9			
2	03 49 00.*	12.5 N 87.8 W NEAR WEST COAST OF NICARAGUA H= 32 KM MAG 4.20 CGS						
2	03 50 25.1	56.2 N 153.0 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.30 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	LZ-	eP	03 54 10.5	SZ	0.4	9.7	213	
	eS	54 40	ST	0.7	6.0			
2	04 43 17.2	25.8 S	13.8 W	SOUTH ATLANTIC OCEAN				
	H= 33 KM	MAG 5.00	CGS					
2	LZ-	eP	04 52 22.2	SZ	0.7	23.0	51.6	5.25
2	05 25 24.*	60.1 N	147.8 W	PRINCE WILLIAM SOUND, ALASKA				
	H= 33 KM	MAG 3.80	CGS					
2	05 32 03.*	58.8 N	159.5 W	PRINCE WILLIAM SOUND, ALASKA				
	H= 33 KM	MAG 4.10	CGS					
2	06 07 17.*	58.9 N	150.5 W	PRINCE WILLIAM SOUND, ALASKA				
	H= 33 KM	MAG 3.90	CGS					
2	06 18 16.*	60.4 N	146.8 W	PRINCE WILLIAM SOUND, ALASKA				
	H= 20 KM	MAG 4.00	CGS					
2	06 53 31.5	6.9 S	125.5 E	BANDA SEA				
	H=485 KM	MAG 4.80	CGS					
2	LZ-	eP ⁰²	07 12 51.5	SZ	0.7	9.2	153.2	
	e	12 54	ST	0.8	3.5			
	eP ⁰²	14 40	SZ	1.3	21.2			
2	LZ-	eP	06 59 19.2	SZ	0.5	4.5		
2	07 38 31.*	2. N	125.6 E	NORTHERN CELEBES				
	H= 82 KM	MAG 5.00	CGS					
2	LZ-	eP ⁰¹	07 58 25.5	SZ	1.0	8.7	160.2	
2	07 57 18.*	60.1 N	147.9 W	PRINCE WILLIAM SOUND, ALASKA				
	H= 33 KM	MAG 4.50	CGS					
2	08 27 13.5	56.6 N	152.4 W	PRINCE WILLIAM SOUND, ALASKA				
	H= 33 KM	MAG 4.30	CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	08 31	36*	55°8' N 154°3' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.20	CGS			
2	09 04	51*	57°9' N 151°1' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.80	CGS			
2	09 23	58*	60°4' N 146°2' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.90	CGS			
2	09 57	54.5	56°5' N 152°8' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.90	CGS			
2	00- eP		10 08 15.3	SZ	1.0	43.7	62.1	5.59
2	GG- eS		10 18 55	LT	20	312.7	73.3	
	eSS		24 00	LT	20	156.3		
	eL		35 08	LT	37	626.2		
2	10 09	47.	56°7' N 152°6' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.20	CGS			
2	LZ- eP		10 53 44.0	SZ	0.7	12.9		
2	10 58	09.1	59°3' N 150°0' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4.60	CGS			
2	11 41	10.7	58°8' N 149°6' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 5.40	CGS			
2	12 14	59.*	60°1' N 145°3' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.00	CGS			
2	12 19	09.*	56°3' N 152°2' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.30	CGS			
2	12 20	25.*	60°9' N 148°1' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 10 KM	MAG 4.10	CGS			
2	00- eP		12 51 13.0	SZ	1.3	53.5		
2	GG- eP		12 52 26.5	SZ	1.1	69.8		
2	13 28	38.6	60°2' N 147°6' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.40	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	14 22	03.*	60°5' N 149°0' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.30	CGS			
2	14 57	43.1	57°4' N 150°3' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.00	CGS			
2	15 25	41.5	9°5' N 82°7' W	COSTA RICA PANAMA BORDER				
			H= 33 KM	MAG 3.90	CGS			
2	15 56	52.6	5°8' N 125°8' E	MINDANAO, PHILIPPINE ISLANDS				
			H= 179 KM	MAG 5.70	CGS			
2	00- eP		16 10 01.1	SZ	0.7	8.3	96.7	5.22
	eP		10 07	LZ	16	156.9		
	e		11 03	SZ	0.8	12.3		
	e		13 34	SZ	0.9	9.6		
	ePP		14 05	LZ	16	254.9		
	eS		21 00	LR	28	89.4		
	eSS		28 11	LR	28	378.3		
	eLQ		40 35	LR	45	2666.9		
	eLR		43 51	LZ	36	2202.6		
2	GG- eP		16 10 26.9	SZ	0.8	13.4	101.1	5.56
	ePP		14 36	SZ	0.9	21.7		
	ePP		14 41	LZ	18	182.1		
	eS		22 00	LR	32	855.2		
	e		29 30	LR	20	571.6		
	eL		46 33	LR	37	1177.3		
2	LZ- eP*1		16 16 38.2	SZ	2.0	66.8	162.6	
	eP*1		16 40	LZ	15	469.8		
	e		16 43	SZ	1.5	116.9		
	eSP*2		18 47	SZ	2.0	114.8		
	ePP		21 00	SZ	2.8	89.1		
	eSS		41 10	LR	15	2258.7		
	e		42 05	LR	17	1390.8		
							Avg.	5.39
2	16 40	19.*	25°5' N 112°5' W	BAJA CALIFORNIA				
			H= 33 KM	MAG 4.10	CGS			
2	LZ- eP		17 10 07.5C	SZ	0.4	15.9		
2	LZ- e		17 10 26	SZ	0.9	7.8		
2	LZ- eL		17 11 10	ST	0.7	12.2		
2	LZ- eP		17 42 54.0	SZ	0.5	2.0	1.9	
	eS		43 19	SR	0.5	22.4		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	18	17 32*	56°8' N 151°2' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.40 CGS				
2	18	25 21.	60° N 147°8' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 40 KM	MAG 4.60 CGS				
2	19	03 52.*	60°4' N 145°3' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.10 CGS				
2	19	28 22.*	12°4' N 143°5' E	MARIANA ISLANDS				
			H= 33 KM	MAG 4.70 CGS				
2	19	38 24.7	60°7' N 145°8' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.40 CGS				
2	19	40 19.9	59°6' N 144°8' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.70 CGS				
2	20	09 42.	59°8' N 147°0' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 10 KM	MAG 5.00 CGS				
2	21	09 36.*	58°8' N 144°8' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.20 CGS				
2	22	07 20.6	60°4' N 147°2' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 10 KM	MAG 4.40 CGS				
2	22	34 31.7	59°8' N 144°3' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 5.00 CGS				
2	00-	eP	22 44 29	LZ	18	134.0	58.0	
		eS	52 28	LR	16	445.1		
		eL	23 01 41	LR	18	276.6		
2	GG-	eS	22 54 53	LT	16	681.0	69.1	
		eS	54 53	LR	17	631.3		
		eSS	59 09	LT	19	308.1		
		eL	23 11 40	LT	23	547.8		
2	LZ-	eSKS	22 58 40	LR	15	359.1	96.9	
		eL	23 20 30	LR	22	328.6		
2	23	27 52.4	56°4' S 25°1' W	SANDWICH ISLANDS REGION				
			H= 33 KM	MAG 6.00 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	LZ-	eP	23 36 59.2	SZ	1.4	203.0	51.7	5.89
		e	38 33	SZ	1.8	56.8		
		e	40 54	SZ	0.8	24.7		
		eS	44 20	ST	1.8	72.1		
2	23	29 59.3	60°5' N 146°3' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 3.90 CGS				
3	00	37 38.5	58.2' N 148.9' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 5.00 CGS				
3	01	14 40.	59.3' N 148.3' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.40 CGS				
3	GG-	eL	01 29 24	LZ	26.0	169.8		
3	01	40 26.5	59.3' N 147.7' W	PRINCE WILLIAM SOUND, ALASKA				
3	LZ-	eL	02 31 30	LR	15	380.3	98.4	
3	LZ-	eP	03 13 18.7	SZ	0.2	9.7	4.0	
		eS	14 08	SR	0.8	2.7		
3	LZ-	eP	03 47 30.0	SZ	1.1	7.7		
3	04	12 41.9	4° N 96.6° E	NEAR WEST COAST OF SUMATRA				
			H= 70 KM	MAG 5.80 CGS				
3	GG-	eP	04 25 06.3	SZ	0.8	46.9	84.0	5.56
		e	26 25	SZ	1.1	41.9		
		eS	35 26	LT	19	1479.2		
		e	44 31	LR	23	415.3		
		ePKKS	46 14	LR	24	557.5		
		eL	57 41	LT	34	475.7		
3	00-	eP	04 25 07.9	SZ	0.8	29.6	84.5	5.36
		eP	25 10	LZ	22	373.7		
		eS	35 26	LR	18	691.7		
		eSS	40 42	LR	21	296.1		
		e	42 46	LR	23	277.5		
		eL	52 55	LR	26	403.2		
3	LZ-	eP+1	04 32 37.5	SZ	1.7	159.4	161.0	
		e	32 55	SZ	1.8	113.7		
		eP+2	33 21.0	SZ	0.7	60.5		
		e	33 38	SZ	1.6	225.2		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	ePKS		35 52	ST	1.6	1985		
	ePP		37 00	SZ	1.4	2443		
	ePPP		41 00	LZ	22	105964		
	e		46 31	SZ	2.1	4982		
	e		51 05	LR	22	45783		
	e		05 00 15	LR	15	71883		
	e		04 15	LR	22	32886		
	eLR		30 00	LZ	25	75885		
					Avg.	5.46		

3 04 51 27.* 57° N 154°0 W ALASKA AFTERSHOCK
H= 33 KM MAG 4.30 CGS

3 04 54 49.2 43.8 N 143.3 E HOKKAIDO, JAPAN
H= 33 KM MAG 4.70 CGS

3 05 56 23.5 15.4 N 94.1 W OFF COAST OF OAXACA, MEXICO
H= 33 KM MAG 4.20 CGS

3 00- eL 06 40 48 LZ 26.0 125.0 83.7

3 06 23 11.3 60° N 149°5 W PRINCE WILLIAM SOUND, ALASKA
H= 33 KM

3 06 56 10.* 60.7 N 149.4 W PRINCE WILLIAM SOUND, ALASKA
H= 33 KM MAG 3.90 CGS

3 08 38 42.8 59.6 N 144.7 W PRINCE WILLIAM SOUND, ALASKA
H= 10 KM MAG 5.40 CGS

3	00- eP	08 48 38.0	SZ	1.2	6482	58.2	5.53
	eP	48 41	LZ	13	41781		
	e	52 23	LR	15	18283		
	e	56 36	SZ	1.5	4981		
	eSP	56 48	LZ	14	34387		
	eSSS	09 02 50	LR	20	25486		
	eL	07 57	LZ	27	51580		
3	GG- eP	08 49 52.7	SZ	0.9	4385	69.3	5.62
	e	58 58	SZ	1.0	2286		
	eS	59 03	LT	15	38386		
	eS	59 03	LR	15	24586		
	eL	09 17 48	LT	20	65488		
3	LZ- eLR	09 24 00	LR	16	18785	97.1	

Avg. 5.57

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	08 46 27.*		57.9 N 150.5 W PRINCE WILLIAM SOUND, ALASKA H= 15 KM MAG 5.50 CGS					
3	08 47 34.8		27.9 S 178.1 W KERMADEC ISLANDS H= 33 KM MAG 4.80 CGS					
3	00- eP*1		09 07 11.0	SZ	0.8	4.9	146.3	

3 09 04 33.5 4.9 S 152.1 E NEW BRITAIN
H= 82 KM MAG 4.80 CGS

3 09 48 16.* 57.1 N 150.5 W PRINCE WILLIAM SOUND, ALASKA
H= 33 KM MAG 4.40 CGS

3 LZ- eP 10 27 11.2 SZ 0.8 9.8

3 10 46 52.* 59.3 N 147.0 W ALASKA AFTERSHOCK
H= 33 KM MAG 3.70 CGS

3 11 09 28.* 56.7 N 152.3 W PRINCE WILLIAM SOUND, ALASKA
H= 33 KM MAG 3.80 CGS

3 LZ- eP 11 21 32.0C SZ 0.4 32.7 4.5
eS 22 25 SR 0.7 24.8

3 12 53 36.4 60.3 N 147.1 W PRINCE WILLIAM SOUND, ALASKA
H= 15 KM MAG 4.20 CGS

3	GG- eP	13 30 57.0	SZ	0.2	70.3	1.3
	eS	31 14	SR	999.9	9999.9	
	eP	38 08.0	SZ	0.5	10.3	
	eS	38 26	SR	0.6	37.6	

3 13 46 38. 8.7 S 78.7 W NEAR COAST OF CENTRAL PERU
H= 82 KM MAG 4.60 CGS

3	LZ- eP	13 49 36.0	SZ	1.0	6.5	12.5	4.29
	eL	53 15	LR	13	429.4		
	eL	53 35	SZ	1.4	36.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3			13 52 02*	58°9' N 147°3' W	PRINCE WILLIAM SOUND, ALASKA			
				H= 33 KM				
3	GG-	eP	14 03 17.5	SZ	0.5	12.3	1.1	
		eS	03 33	SR	0.5	63.7		
3			17 21 10.*	1°9' N 102°2' W	NORTHWEST GALAPAGOS ISLANDS			
				H= 33 KM	MAG 4.80 CGS			
3	LZ-	eP	17 28 27.5	SZ	1.5	53.6	37.9	5.12
		eSS	37 18	LR	15	676.0		
		eL	39 20	LR	21	447.8		
3	LZ-	eP	18 07 29.5	SZ	0.5	15.6		
3			19 08 15.2	14°9' S 167°1' E	NEW HEBRIDES ISLANDS			
				H= 95 KM	MAG 4.90 CGS			
3	LZ-	eP	19 30 30.0	SZ	0.2	1.8		
3			19 57 53.3	60°1' N 148°0' W	PRINCE WILLIAM SOUND, ALASKA			
				H= 20 KM	MAG 4.80 CGS			
3			20 23 25.*	57° N 146°1' W	PRINCE WILLIAM SOUND, ALASKA			
				H= 25 KM	MAG 4.60 CGS			
3			20 47 25.*	60°6' N 140°9' W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 4.50 CGS			
3			22 15 48.3	57°1' N 151°9' W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 5.10 CGS			
3			22 33 42.2	61°6' N 147°6' W	PRINCE WILLIAM SOUND, ALASKA			
				H= 40 KM	MAG 6.00 CGS			
3	OO-	eP	22 43 24.5	SZ	1.0	50.4	56.6	5.50
3	GG-	eP	22 44 38.1	SZ	0.8	84.1	67.8	5.87
		eP	44 40	LZ	20	490.7		
		ePP	47 10	LZ	21	390.4		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		ePP	47 11	SZ	1.1	67.5		
		e	47 37	SZ	1.0	54.7		
		eS	53 35	LR	18	2036.4		
		e	58 48	LR	27	2085.6		
		23 01 52	LT	24	2573.0			
		eLQ	06 17	LR	29	2388.9		
		eLR	09 30	LZ	28	4241.7		
							AVG.	5.68
4	LZ-	e	00 51 50	LZ	12.0	767.5		
4	LZ-	e	00 58 20	LR	14	1105.2		
4	LZ-	e	01 06 40	LR	37	1402.0		
4	LZ-	eL	01 22 35	LR	35	6483.0		
4		01 58 41.*	58°4' N 146°8' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.40 CGS				
4		02 35 05.1	44°2' N 146°0' E	KURILE ISLANDS				
			H= 62 KM	MAG 4.30 CGS				
4		04 34 56.9	60°3' N 146°5' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 5 KM	MAG 5.00 CGS				
4		04 54 01.7	60°1' N 146°7' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 40 KM	MAG 5.60 CGS				
4	OO-	eP	05 03 51.0	SZ	1.4	20.0	57.9	4.96
4	GG-	eP	05 05 05.5	SZ	2.0	1025.7	69.1	6.54
		eP	05 10	LZ	13	1403.2		
		ePP	07 35	LZ	14	946.1		
		ePPP	09 40	LZ	19	1524.3		
		eSS	18 48	LR	21	2631.3		
		eL	21 25	LR	21	2019.3		
							Avg.	5.75
4		05 10 34.4	57°3' N 149°4' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.60 CGS				
4		06 10 30.*	59°8' N 146°1' W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.70 CGS				
4		06 43 20.2	12°5' N 87°7' W	OFF WEST COAST OF NICARAGUA				
			H= 41 KM	MAG 4.30 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
4	06	53	25.9	60.4 N 146.0 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 4.80	CGS		
4	06	57	12.*	5.5 N 95.3 E	NORTHERN SUMATRA			
				H= 157 KM	MAG 4.60	CGS		
4	LZ-	eP	08 10 08.0	SZ	1.1	12.8	3.5	
		eS	10 51	ST	0.8	5.5		
4	GG-	eP	08 14 43.0	SZ	0.4	49.0		
4	08	40	29.8	56.5 N 152.6 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 5.30	CGS		
4	00-	eP	08 50 50.5	SZ	0.8	14.9	62.1	5.23
4	GG-	eP	08 52 02	LZ	16	974.6	73.3	
		eP	52 02.9	SZ	1.0	38.2		5.41
		ePP	54 50	LZ	15	702.8		
		eS	09 01 36	LT	20	3619.2		
		eSS	06 33	LT	20	2177.7		
		eL	12 50	LT	31	3029.8		
				AVG.		5.32		
4	09	10	55.1	56.9 N 152.7 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 5.90	CGS		
4	00-	eP	09 21 13.8	SZ	0.6	17.5	61.7	5.41
4	LZ-	eP	09 24 41.0	SZ	0.7	4.3	100.3	5.17
				AVG.		5.29		
4	LZ-	eP	09 32 24.2	SZ	0.2	21.0	4.5	
		eS	33 20	SR	1.0	40.6		
4	LZ-	eP	09 34 34.6	SZ	0.3	1.7	2.5	
		eS	35 07	SR	1.0	14.0		
4	09	49	28.*	56.9 N 151.7 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 33 KM	MAG 4.20	CGS		
4	GG-	eP	10 22 22.0	SZ	0.6	119.0		
4	10	37	36.*	59.8 N 150.0 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 10 KM	MAG 4.30	CGS		
4	11	10	07.*	59.9 N 149.3 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 33 KM	MAG 4.80	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
4	12	04	49.*	58.6 N 148.9 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 33 KM	MAG 4.40	CGS		
4	LZ-	eP	13 06 07.5	SZ	0.4	5.3	3.4	
		eS	06 50	SR	0.7	6.2		
4	13	49	45.4	56.6 N 153.9 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 25 KM	MAG 4.20	CGS		
4	15	08	12.3	59.6 N 146.9 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 4.70	CGS		
4	15	55	10.*	19.1 S 169.4 E	NEW HEBRIDES ISLANDS			
				H= 153 KM	MAG 4.20	CGS		
4	17	33	08.*	14.1 N 92.2 W	NEAR SOUTH COAST GUATEMALA			
				H= 33 KM	MAG 3.60	CGS		
4	17	46	08.6	56.3 N 154.4 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 25 KM	MAG 6.50	CGS		
4	00-	eP	17 56 31.0	SZ	1.1	174.2	62.4	6.11
		eP	56 32 C	LZ	999.9	9999.9		
		ePS	18 05 21	SR	2.7	506.7		
4	GG-	eP	17 57 42.5	SZ	1.1	101.0	73.7	5.74
		eP	57 43	LZ	22	657.0		
		ePCP	57 47	SZ	0.8	114.0		
		e	58 53	LZ	14	4697.7		
		ePP	18 00 26	LZ	23	3340.1		
		e	07 14	LZ	23	5010.1		
4	LZ-	e	18 16 10	SZ	0.8	3.2	101.0	
				Avg.		5.92		
4	17	59	43.3	56.4 N 154.5 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 25 KM	MAG 5.50	CGS		
4	00-	eP	18 10 04.5	SZ	1.0	92.7	62.3	5.89
		e	10 20	SZ	0.9	117.8		
		ePCP	10 47	SZ	0.8	52.4		
4	GG-	eP	18 11 16.6	SZ	0.9	85.4	73.6	5.76
		ePCP	11 28	SZ	0.9	31.4		
				Avg.		5.82		
4	18	15	52.4	56.2 N 154.5 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 25 KM	MAG 5.00	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
4	00-	eP	18 26 22.0	SZ	1.0	40.3	62.5	5.51
4	GG-	eP	18 27 26.7	SZ	0.8	20.7	73.8	5.18
						AVG.		5.34
4	18 18 02.*	19.7 S 175.3 W TONGA ISLANDS						
		H= 57 KM MAG 4.30 CGS						
4	00-	eP	18 25 45.6	SZ	1.1	34.8		
4	18 41 28.*	56.4 N 153.0 W PRINCE WILLIAM SOUND, ALASKA						
		H= 33 KM MAG 4.40 CGS						
4	LZ-	e	20 00 00	LZ	13.0	1242.8		
4	20 01 44.8	59.5 N 147.6 W PRINCE WILLIAM SOUND, ALASKA						
		H= 33 KM MAG 4.80 CGS						
4	LZ-	e	20 04 05	LZ	24.0	1263.1		
4	LZ-	e	20 10 40	LR	26	3920.6		
4	LZ-	eL	20 13 20	LR	21	5389.2		
4	21 38 14.	10.5 N 122.1 E OFF WEST COAST NEGROS, P.I.						
		H= 33 KM MAG 5.30 CGS						
4	LZ-	eP ^{0.1}	21 58 22.0	SZ	1.5	14.6	168.2	
4	22 16 54.5	59.4 N 145.2 W PRINCE WILLIAM SOUND, ALASKA						
		H= 10 KM MAG 5.10 CGS						
4	00-	eP	22 26 52.2	SZ	0.7	14.0	58.5	5.10
5	00 16 42.*	58.4 N 152.2 W PRINCE WILLIAM SOUND, ALASKA						
		H= 33 KM MAG 4.10 CGS						
5	01 22 13.3	56.2 N 153.5 W PRINCE WILLIAM SOUND, ALASKA						
		H= 25 KM MAG 5.40 CGS						
5	00-	eP	01 32 35.4	SZ	0.7	30.0	62.4	5.54
		eP	32 36	LZ	21	2371.2		
		e	32 38	SZ	0.8	33.4		
		e	32 43	SZ	0.9	77.5		
		ePP	34 55	LZ	23	802.1		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		ePPP	36 31	LZ	20.0	1015.4		
		eLR	41 14	LZ	21	3212.6		
5	GG-	eP	01 33 47.2	SZ	0.7	26.1	73.7	5.35
		eP	33 48	LZ	20	1836.8		
		ePCP	33 55	SZ	0.9	80.9		
		e	34 50	LZ	17	492.8		
		ePP	36 32	LZ	19	1053.3		
		eS	43 18	LT	20	5810.2		
		eSS	48 27	LR	23	3024.8		
		e	51 53	LZ	23	3175.8		
		eLQ	54 54	LT	24	3411.1		
		eLR	02 01 48	LZ	26	5612.2		
5	LZ-	eP	01 36 03.0	SZ	1.1	5.1	100.6	5.03
						Avg.		5.30
5	01 36 54.*	58.4 N 151.2 W PRINCE WILLIAM SOUND, ALASKA						
		H= 33 KM MAG 4.20 CGS						
5	LZ-	e	01 40 15	LZ	15.0	682.5		
5	01 41 45.	56.2 N 153.3 W PRINCE WILLIAM SOUND, ALASKA						
		H= 35 KM MAG 5.20 CGS						
5	00-	eP	01 52 05.5	SZ	0.8	23.8	62.4	5.36
		e	52 13	SZ	0.7	28.0		
5	GG-	eP	01 53 16.4	SZ	0.5	4.4	73.7	4.70
		e	53 17	SZ	0.7	20.3		
		ePCP	53 25	SZ	0.8	41.5		
						Avg.		5.03
5	01 44 50.3	36.4 N 139.9 E CENTRAL HONSHU, JAPAN						
		H= 67 KM MAG 4.70 CGS						
5	LZ-	e	01 46 40	LR	20.0	2395.3		
5	LZ-	e	01 49 22	LR	18	2992.4		
5	LZ-	eL	01 51 13	LZ	21	933.3		
5	02 36 10.8	60.1 N 145.8 W PRINCE WILLIAM SOUND, ALASKA						
		H= 15 KM MAG 4.90 CGS						
5	03 47 57.*	56.7 N 151.3 W PRINCE WILLIAM SOUND, ALASKA						
		H= 25 KM MAG 4.60 CGS						
5	03 55 34.*	59.7 N 146.6 W PRINCE WILLIAM SOUND, ALASKA						
		H= 33 KM MAG 4.00 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5	04	11 48*	59.9 N 148.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.40	CGS			
5	04	57 15.4	60.1 N 147.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 10 KM	MAG 4.10	CGS			
5	05	30 13.*	14.2 N 91.6 W	GUATEMALA				
			H= 111 KM	MAG 4.00	CGS			
5	LZ-	eL	05 45 00	LZ	30.0	1464.6	37.9	
5	07	13 24.4	56.5 N 154.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4.20	CGS			
5	07	29 03.5	60.4 N 146.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.40	CGS			
5	07	44 51.*	60. N 144.8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.20	CGS			
5	08	13 12.4	56.9 N 152.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.50	CGS			
5	08	59 02.*	56.2 N 154.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.70	CGS			
5	10	22 12.*	60. N 149.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.80	CGS			
5	GG-	eP	10 31 12.3	SZ	0.4	20.1	1.5	
		eS	31 31	ST	0.5	75.3		
5	10	41 01.*	25. S 68.4 W	CHILE ARGENTINA BORDER				
			H= 92 KM	MAG 4.20	CGS			
5	LZ-	eP	10 43 05.0	SZ	0.5	12.5	8.7	4.99
		e	43 51	SZ	0.7	40.3		
		e	44 07	SR	0.9	29.4		
		eL	44 30	LZ	13	440.4		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5	LZ-	eL	10 49 30	LZ	15.0	530.8		
5	LZ-	e	10 58 35	LZ	20	398.4		
5	LZ-	e	11 04 55	LR	18	1354.8		
5	LZ-	e	11 07 40	LR	17	1199.5		
5	LZ-	e	11 13 00	LR	20	773.8		
5	LZ-	e	11 18 30	LT	18	725.3		
5	11	18 38.9	41.9 S 83.7 W	OFF COAST OF SOUTHERN CHILE				
			H= 33 KM	MAG 5.30	CGS			
5	LZ-	eP	11 24 37.5	SZ	1.5	82.8	28.7	5.28
5	OO-	eL	12 21 22	LT	31	291.4	127.6	
5	GG-	eL	12 23 11	LZ	24	330.7	123.2	
5	LZ-	eL	11 20 40	LT	20.0	445.1		
5	12	30 04.*	58.9 N 154.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 10 KM	MAG 4.10	CGS			
5	12	59 15.*	61.4 N 147.2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.60	CGS			
5	13	30 55.*	56.3 N 150.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.00	CGS			
5	13	44 17.*	56.3 N 153.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.00	CGS			
5	13	48 47.3	60.2 N 145.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.10	CGS			
5	14	05 40.*	57.6 N 150.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.60	CGS			
5	LZ-	eP	15 06 07.5	SZ	0.5	4.1	3.2	
		eS	06 48	SR	0.5	2.4		
5	15	21 47.*	60.7 N 149.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.80	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5			15 49 30*	56° N 154°3 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 25 KM	MAG 4.10	CGS		
5			16 49 04*	58°7 N 151°7 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 20 KM	MAG 4.40	CGS		
5			17 16 10*	55°9 N 149°9 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 33 KM	MAG 4.10	CGS		
5			17 40 43*	56°3 N 152°9 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 10 KM	MAG 4.90	CGS		
5			17 42 07	59°6 N 144°9 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 5.10	CGS		
5	GG-	eP	17 53 16.6	SZ	0.9	21.4	69.3	5.29
	eL		18 24 45	LR	18	125.6		
5	OO-	eL	18 13 46	LZ	20	87.2	58.2	
5	LZ-	eP	19 09 02.0	SZ	0.5	1.4	1.0	
	eS		09 17	SR	0.7	1.5		
5			19 28 18.1	60°2 N 146°7 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 5.80	CGS		
5	OO-	eP	19 38 10.0	SZ	1.5	96.2	57.8	5.61
	eP		38 10	LZ	14	448.4		
	ePP		40 19	LZ	22	112.6		
	eS		46 18	LR	28	438.8		
	eSS		50 00	LT	16	206.2		
	eLQ		56 15	LR	28	675.1		
	eLR		20 02 11	LZ	20	377.9		
5	GG-	eP	19 39 24.8	SZ	1.3	117.9	69.0	5.90
	eP		39 25	LZ	14	435.8		
	e		41 46	SZ	0.9	12.8		
	e		41 47	LZ	15	202.3		
	eS		48 39	LR	21	481.2		
	eS		48 39	LT	13	438.1		
	eSS		53 05	LR	28	562.2		
	eL		20 01 26	LZ	28	457.9		
5	LZ-	eL	20 15 00	LZ	25	207.7	98.2	
					Avg.	5.75		
5	OO-	eP	19 35 51.6	SZ	0.5	3.0		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5			19 50 41.3	57° N 152°3 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 20 KM	MAG 4.40	CGS		
5	OO-	eP	20 08 00.2	SZ	0.9	15.7		
5	LZ-	eP	20 53 30.0	SZ	0.6	7.4		
5			21 26 32.1	60°6 N 145°6 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 20 KM	MAG 4.00	CGS		
5			22 22 45.	28.1 S 178°2 W	KERMADEC ISLANDS			
				H= 31 KM	MAG 4.50	CGS		
5	LZ-	eP	22 23 40.5	SZ	0.4	1.7		
	eS		24 24	ST	0.8	13.4		
6	LZ-	eP	00 08 12.0	SZ	0.3	5.3		
6			01 22 44.*	23.4 S 180.0	FIJI ISLANDS REGION			
				H= 568 KM	MAG 4.50	CGS		
6			01 51 49.*	59.4 N 146°8 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 4.30	CGS		
6			02 34 37.*	19. S 175°5 W	TONGA ISLANDS			
				H= 177 KM	MAG 4.20	CGS		
6			02 37 57.*	46.5 N 10°1 E	NORTHERN ITALY			
				H= 33 KM				
6	GG-	eP	02 38 51.7	SZ	0.4	5.7		
	eL		39 36	SR	0.4	45.5		
6	LZ-	eP	03 55 54.7	SZ	0.3	24.7		
	eS		56 20	SR	0.6	4.1		
6			04 57 32.*	56.8 N 151°5 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 33 KM	MAG 4.20	CGS		
6	LZ-	eP	07 15 58.5	SZ	1.0	57.0		
6	LZ-	e	07 25 15	LR	20	457.2		
6	LZ-	eLQ	07 38 30	LZ	30	369.8		
6	LZ-	eLR	07 42 10	LZ	20	314.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6		eL	07 58 00	LZ	32.0	132.4		
6		08 21 25.*	57.4 N 152.3 W	PRINCE WILLIAM SOUND, ALASKA H= 5 KM MAG 4.80 CGS				
6		09 03 12.9	59.5 N 145.3 W	PRINCE WILLIAM SOUND, ALASKA H= 15 KM MAG 4.40 CGS				
6		09 16 34.*	46.8 N 152.6 W	PRINCE WILLIAM SOUND, ALASKA H= 30 KM MAG 4.30 CGS				
6		00- eP	09 27 32.9	SZ	0.8	9.6		
6		09 29 32.*	59.7 N 146.6 W	PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 3.80 CGS				
6	LZ-	eP eS	10 35 44.0 36 17	SZ SR	0.4 0.4	1.7 1.1	2.5	
6		10 42 36.3	59.9 N 145.6 W	PRINCE WILLIAM SOUND, ALASKA H= 15 KM MAG 4.80 CGS				
6	00- eS eL	11 00 32 13 30	ST SR	18.0 23.0	139.0U 312.4U	58.0		
6	GG- eL	11 21 09	LZ	21	166.0	69.2		
6		10 56 29.*	59.8 N 147.9 W	PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.00 CGS				
6		10 59 05.9	56.3 N 154.4 W	PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.20 CGS				
6		12 07 54.*	58.2 N 150.6 W	PRINCE WILLIAM SOUND, ALASKA H= 20 KM MAG 4.10 CGS				
6	GG- eL	12 58 47	LZ	31.0	279.1			
6		13 45 10.5	52.5 N 173.9 W	ANDREANOF ALEUTIAN ISLANDS H= 115 KM MAG 4.70 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6		14 50 57.3	56.7 N 152.1 W	PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.00 CGS				
6		15 01 32.*	58.1 N 154.4 W	PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 3.80 CGS				
6		15 12 28.7	21.8 S 68.8 W	NORTHERN CHILE H= 114 KM MAG 4.20 CGS				
6	LZ-	eP	15 13 52.0	SZ	0.5	87.7	5.5	5.24
6		15 29 05.*	60.4 N 146.5 W	PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.00 CGS				
6	LZ-	eP eS	15 58 59.0 59 32	SZ SR	0.4 0.6	3.5 2.60	2.5	
6		16 00 29.*	56.4 N 152.4 W	PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 3.90 CGS				
6		16 07 48.3	5.4 N 75.8 W	COLOMBIA H= 54 KM MAG 4.10 CGS				
6	LZ-	eP	16 12 50.0	SZ	0.6	3.7	22.7	3.97
6		16 10 52.2	45.2 N 150.9 E	KURILE ISLANDS H= 33 KM MAG 4.50 CGS				
6	00- eP eLQ eLR	16 21 57.1 43 20 44 35	SZ LR LZ	0.7 40 25	28.4 417.2 216.7	69.3	5.46	
6	GG- eP eL	16 22 56.2 56 10	SZ LZ	0.5 22	33.5 139.2	79.2	5.55	
						AVG.	5.50	
6		16 50 42.*	57.5 N 154.8 W	PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.10 CGS				
6	LZ-	eP	17 08 25.0	SZ	0.4	1.7		
6		17 35 50.6	59.9 N 147.8 W	PRINCE WILLIAM SOUND, ALASKA H= 15 KM MAG 4.90 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	00-	eL	18 05 50	LR	2060	11160	5863	
6	18 03	56.4	56.4 N 151.8 W	PRINCE WILLIAM SOUND ALASKA				
			H= 20 KM	MAG 4.70	CGS			
6	18 59	12.*	60. N 147.1 W	PRINCE WILLIAM SOUND ALASKA				
			H= 33 KM	MAG 4.10	CGS			
6	19 40	44.5	56. N 153.9 W	PRINCE WILLIAM SOUND ALASKA				
			H= 25 KM	MAG 4.20	CGS			
6	LZ-	eP	21 27 35.0	SZ	0.5	2.0	4.5	
		eS	28 30	ST	0.6	3.9		
6	LZ-	eP	22 42 57.0	SZ	0.6	2.4	3.5	
		eS	43 41	SR	0.9	5.0		
6	22 57	53.3	57.1 N 153.3 W	PRINCE WILLIAM SOUND ALASKA				
			H= 15 KM	MAG 4.20	CGS			
6	LZ-	eL	23 23 30	LZ	25.0	830.8		
6	00-	eL	23 40 00	LT	30	245.8		
6	23 43	01.7	5.1 S 154.0 E	NEW IRELAND REGION				
			H= 116 KM	MAG 4.80	CGS			
6	GG-	eL	23 48 10	LZ	30.0	371.9		
7	LZ-	eP	00 16 08.4	SZ	0.4	42.4	1.6	
		eS	16 30	ST	0.5	21.4		
7	01 43	28.7	58.5 N 154.5 W	PRINCE WILLIAM SOUND ALASKA				
			H= 30 KM	MAG 5.10	CGS			
7	00-	eL	02 08 50	LZ	20	218.7	60.2	
7	GG-	eL	02 12 35	LZ	23	167.0	71.5	
7	LZ-	eL	02 25 00	LR	20	515.9	101.6	
7	03 17	43.*	59.6 N 145.5 W	PRINCE WILLIAM SOUND ALASKA				
			H= 15 KM	MAG 4.00	CGS			
7	03 53	57.*	61.1 N 148.7 W	PRINCE WILLIAM SOUND ALASKA				
			H= 33 KM	MAG 4.20	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
7	04	35 18.6	58.3 N 149.7 W	PRINCE WILLIAM SOUND ALASKA				
			H= 15 KM	MAG 4.70	CGS			
7	04 54	42.*	58.1 N 157.4 W	PRINCE WILLIAM SOUND ALASKA				
			H= 33 KM	MAG 4.50	CGS			
7	05 34	56.*	60. N 146.7 W	PRINCE WILLIAM SOUND ALASKA				
			H= 20 KM	MAG 4.10	CGS			
7	06 02	00.*	60. N 145.7 W	PRINCE WILLIAM SOUND ALASKA				
			H= 33 KM	MAG 4.00	CGS			
7	08 03	13.7	58.2 N 152.2 W	PRINCE WILLIAM SOUND ALASKA				
			H= 30 KM	MAG 4.40	CGS			
7	08 10	48.*	60. N 146.9 W	PRINCE WILLIAM SOUND ALASKA				
			H= 33 KM	MAG 4.10	CGS			
7	08 57	08.2	12.2 S 167.1 E	NEW HEBRIDES ISLANDS				
			H= 260 KM	MAG 4.70	CGS			
7	LZ-	eP	10 16 57.5	SZ	0.4	2.8	1.2	
		eS	17 12	ST	0.5	3.5		
7	10 41	29.3	17.9 N 68.0 W	MONA PASSAGE				
			H= 98 KM	MAG 4.10	CGS			
7	GG-	eP	11 12 13.4	SZ	0.3	51.6	0.1	
		eS	12 15	ST	0.3	291.1		
7	GG-	eP	12 57 45.0	SZ	0.5	25.6		
7	13 18	18.9	1 N 123.2 E	NORTHERN CELEBES				
			H= 150 KM	MAG 5.90	CGS			
7	GG-	ePP	13 36 31	SZ	1.0	28.2	104.0	
		e	46 30	LZ	20	200.0		
		e	55 50	LR	22	676.0		
7	LZ-	eP ⁰¹	14 10 00	LR	25	115.2		
		eP ⁰²	13 38 05.4	SZ	1.3	127.3	160.2	
			38 46.0	SZ	1.5	126.7		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
7		e	39 20	SZ	1.4	4887		
7	00-	eL	13 59 08	LR	28	337.5	100.6	
7	14 22 30.*		6.8 S 155.1 E SOLOMON ISLANDS H= 35 KM MAG 4.60 CGS					
7	00-	eP	15 04 20.5	SZ	0.2	3.8	.5	
	eS		04 28	SR	0.2	12.5		
7	15 31 23.*		45.1 N 111.2 W SOUTHWESTERN MONTANA H= 33 KM MAG 3.20 CGS					
7	16 19 59.*		60.7 N 148.0 W PRINCE WILLIAM SOUND+ ALASKA H= 33 KM MAG 3.80 CGS					
7	16 28 38.*		59.6 N 145.0 W PRINCE WILLIAM SOUND+ ALASKA H= 33 KM MAG 4.20 CGS					
7	LZ-	eP	16 50 10.0	SZ	0.5	10.4	.1	
	eS		50 13	SR	0.5	5.5		
7	17 50 09.4		2.2 N 83.2 W OFF WEST COAST OF COLOMBIA H= 33 KM MAG 4.50 CGS					
7	LZ-	eP	17 55 27.5	SZ	1.0	41.6	23.4	4.87
	e		55 35	SR	0.6	7.5		
7	18 02 24.7		57.3 N 151.1 W PRINCE WILLIAM SOUND+ ALASKA H= 20 KM MAG 4.80 CGS					
7	GG-	eL	18 37 00	LZ	30	235.3	72.4	
7	18 10 30.*		60.1 N 147.2 W PRINCE WILLIAM SOUND+ ALASKA H= 33 KM					
7	18 17 09.*		57. N 153.4 W PRINCE WILLIAM SOUND+ ALASKA H= 33 KM MAG 4.10 CGS					
7	00-	eLQ	18 18 35	LT	22.0	201.8		
7	00-	eLR	18 24 05	LZ	27	439.9		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
7			19 09 04.*		38.5 N 118.7 W WALKER LAKE AREA+ NEVADA H= 15 KM MAG 4.10 CGS			
7	LZ-	eP	19 24 30.0	SZ	0.6	1.69		
7	19 28 24.7		55.7 N 151.9 W PRINCE WILLIAM SOUND+ ALASKA H= 20 KM MAG 5.60 CGS					
7	GG-	eP	19 40 01.8	SZ	0.9	30.4	74.0	5.29
7	00-	eP	20 38 50.8	SZ	0.8	36.3		
7	23 25 40.7		51.4 N 168.5 W FOX ALEUTIAN ISLANDS H= 50 KM MAG 4.70 CGS					
8	00 13 18.7		56.2 N 149.4 W PRINCE WILLIAM SOUND+ ALASKA H= 33 KM MAG 4.30 CGS					
8	00 36 21.2		57.2 N 152.6 W PRINCE WILLIAM SOUND+ ALASKA H= 20 KM MAG 4.80 CGS					
8	LZ-	eP	01 46 39.0	SZ	0.5	10.3		
8	LZ-	e	01 47 15	SZ	1.5	19.2		
8	02 04 06.5		46.1 N 152.8 E KURILE ISLANDS H= 40 KM MAG 4.90 CGS					
8	00-	eP	02 15 09.0	SZ	1.0	34.1	68.8	5.37
8	GG-	eP	02 16 09.2	SZ	0.9	39.1	78.9	5.36
	eL		47 30	LZ	40	231.2		
							AVG.	5.36
8	02 10 36.1		46.1 N 152.8 E KURILE ISLANDS H= 40 KM MAG 4.30 CGS					
8	03 38 56.1		16. N 94.9 W NEAR COAST OF OAXACA+ MEXICO H= 33 KM MAG 4.30 CGS					
8	04 00 01.1		60. N 149.5 W PRINCE WILLIAM SOUND+ ALASKA H= 33 KM MAG 4.10 CGS					
8	04 35 18.*		59.4 N 147.6 W PRINCE WILLIAM SOUND+ ALASKA H= 33 KM MAG 4.00 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	04 56 53.2		9.7 N 125.6 E MINDANAO & PHILIPPINE ISLANDS					
			H=126 KM MAG 5.00 CGS					
8	LZ- eP		06 21 19.0	SZ	0.5	260		
8	06 45 38.*		38.4 N 141.2 E NORTHERN HONSHU, JAPAN					
			H= 33 KM MAG 4.00 CGS					
8	08 08 11.8		6.8 S 68.9 E CHAGOS ARCHIPELAGO REGION					
			H= 33 KM MAG 5.70 CGS					
8	GG- eP		08 19 55.5	SZ	1.0	50.9	75.2	5.45
8	00- eP		08 20 25.2	SZ	0.8	7.5	81.2	4.72
					Avg.			5.08
8	LZ- eP		08 52 42.5	SZ	0.3	1.3	•5	
	eS		52 50	SR	0.3	6.8		
8	09 43 51.*		60.3 N 146.8 W PRINCE WILLIAM SOUND, ALASKA					
			H= 5 KM MAG 4.20 CGS					
8	LZ- eP		09 46 08.5	SZ	0.4	2.6		
8	09 54 16.6		60.5 N 141.0 W PRINCE WILLIAM SOUND, ALASKA					
			H= 20 KM MAG 4.30 CGS					
8	10 58 09.1		45.8 N 150.8 E KURILE ISLANDS					
			H= 40 KM MAG 5.50 CGS					
8	00- eP		11 09 10.0	SZ	0.6	21.4	68.7	5.39
8	GG- eP		11 10 09.0	SZ	0.6	42.5	78.6	5.60
	eP		10 10	LZ	20	1829.1		
	eS		20 00	LR	28	1727.8		
	eSS		25 10	LT	30	2622.7		
8	LZ- eP		11 17 27.0	SZ	1.1	12.7	136.0	
	e		17 42	SZ	1.5	48.1		
	eSKP		20 55	SZ	1.3	24.4		
					Avg.			5.49
8	LZ- eP		12 09 39.0	SZ	0.8	16.2		
8	14 12 29.5		35.1 N 24.3 E NEAR CRETE					
			H= 71 KM MAG 5.00 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	GG- eP		14 16 31.0	SZ	1.5	677.6	17.5	5.63
	e		19 55	ST	2.5	477.7		
8	00- eP		14 18 09.3	SZ	0.5	9999.9	27.4	
	eS		22 52	ST	0.9	11.5		
8	16 01 11.*		15.6 S 72.7 W SOUTHERN PERU					
			H=103 KM MAG 4.00 CGS					
8	LZ- eP		16 02 20.4	SZ	0.6	6.1	4.01	4.01
	e		02 22	SZ	0.4	20.9		
	eS		02 52	SR	0.3	24.5		
8	16 46 38.*		60.3 N 147.8 W PRINCE WILLIAM SOUND, ALASKA					
			H= 33 KM MAG 3.90 CGS					
8	17 32 27.*		59.7 N 146.2 W PRINCE WILLIAM SOUND, ALASKA					
			H= 33 KM MAG 3.80 CGS					
8	GG- eL		18 33 00	LR	36.0	196.6		
8	GG- eL		18 58 17	LR	20	424.2		
8	18 58 50.5		56.9 N 149.9 W PRINCE WILLIAM SOUND, ALASKA					
			H= 35 KM MAG 4.80 CGS					
8	GG- eP		19 10 26.5	SZ	0.8	30.6	72.6	5.38
8	19 33 19.		59.6 N 147.0 W PRINCE WILLIAM SOUND, ALASKA					
			H= 15 KM MAG 5.10 CGS					
8	LZ- eL		20 21 40	LT	35	689.6	98.2	
8	19 50 16.8		60.4 N 145.9 W PRINCE WILLIAM SOUND, ALASKA					
			H= 10 KM MAG 5.30 CGS					
8	GG- eP		20 01 23.0	SZ	0.6	14.4	68.7	5.34
8	00- eP		20 08 03.0	SZ	1.3	82.1		
8	20 49 53.*		59.3 N 148.6 W PRINCE WILLIAM SOUND, ALASKA					
			H= 33 KM MAG 4.20 CGS					
8	22 54 28.*		60.4 N 146.5 W PRINCE WILLIAM SOUND, ALASKA					
			H= 33 KM MAG 3.70 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	23	27	12.7					
			37.8 S	73.6 W	NEAR COAST OF CENTRAL CHILE			
			H= 33 KM	MAG 4.50	CGS			
8	LZ-	eP eL	23 32 07.0 36 20	SZ LT	2.0 17	153.9 463.2	21.9	5.05
8	23	50	37.*					
			21.9 S	178.2 W	FIJI ISLANDS REGION			
			H=323 KM	MAG 4.20	CGS			
9	GG-	eL	00 30 28	LT	17.0	214.3		
9	LZ-	eL	00 33 20	LZ	24	250.3		
9	00	46	53.*					
			49.1 N	127.5 W	VANCOUVER ISLAND REGION			
			H= 33 KM	MAG 4.10	CGS			
9	00	55	56.*					
			6.3 N	125.1 E	MINDANAO, PHILIPPINE ISLANDS			
			H= 33 KM	MAG 5.30	CGS			
9	LZ-	eL	01 59 00	LT	25.0	249.2		
9	03	45	07.*					
			60.1 N	145.9 W	PRINCE WILLIAM SOUND, ALASKA			
			H= 33 KM	MAG 3.80	CGS			
9	04	15	23.					
			13.5 N	89.9 W	EL SALVADOR			
			H= 89 KM	MAG 5.00	CGS			
9	LZ-	eP e	04 22 22.3 28 10	SZ LZ	1.4 10	23.9 425.1	36.4	4.92
9	05	43	24.*					
			60. N	148.2 W	PRINCE WILLIAM SOUND, ALASKA			
			H= 33 KM	MAG 4.10	CGS			
9	LZ-	eP	06 05 47.0	SZ	0.4	18		
9	LZ-	e	06 05 49	SZ	0.5	3.0		
9	06	53	16.*					
			60. N	148.9 W	PRINCE WILLIAM SOUND, ALASKA			
			H= 25 KM	MAG 4.20	CGS			
9	08	19	55.*					
			58. N	149.1 W	PRINCE WILLIAM SOUND, ALASKA			
			H= 33 KM	MAG 3.70	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
9	GG-	eL	08 57 00	LR	37.0	364.0	71.5	
9	10	37	15.*					
			59.1 N	148.4 W	PRINCE WILLIAM SOUND, ALASKA			
			H= 20 KM	MAG 4.10	CGS			
9	LZ-	eP eS	11 43 37.7 44 07	SZ SR	0.5 0.6	36.9 16.0	2.3	
9	12	33	23.9					
			59.5 N	148.9 W	PRINCE WILLIAM SOUND, ALASKA			
			H= 20 KM	MAG 4.70	CGS			
9	LZ-	eL	13 19 05	LT	38	15.0U	99.1	
9	13	06	15.2					
			59.6 N	146.1 W	PRINCE WILLIAM SOUND, ALASKA			
			H= 15 KM	MAG 5.10	CGS			
9	00-	eP	13 16 12.1	SZ	0.9	13.1	58.4	4.96
9	GG-	eP	13 17 25.9	SZ	0.7	14.3	69.5	5.21
		eP	17 26	LZ	16	250.0		
		eS	26 39	LT	17	424.7		
		eSS	31 00	LR	20	309.1		
							AVG.	5.08
9	13	22	29.6					
			56.8 N	152.0 W	PRINCE WILLIAM SOUND, ALASKA			
			H= 33 KM	MAG 4.70	CGS			
9	14	14	36.5					
			59.8 N	146.0 W	PRINCE WILLIAM SOUND, ALASKA			
			H= 10 KM	MAG 4.30	CGS			
9	16	11	31.5					
			58.1 N	152.5 W	PRINCE WILLIAM SOUND, ALASKA			
			H= 30 KM	MAG 4.40	CGS			
9	00-	eL	16 38 00	LZ	25	99.1	60.5	
9	17	14	45.*					
			60.1 N	146.1 W	PRINCE WILLIAM SOUND, ALASKA			
			H= 33 KM	MAG 3.90	CGS			
9	18	25	01.*					
			59.8 N	147.1 W	PRINCE WILLIAM SOUND, ALASKA			
			H= 33 KM	MAG 4.20	CGS			
9	18	43	20.1					
			39. N	118.8 W	WALKER LAKE AREA, NEVADA			
			H= 15 KM					
9	19	43	16.*					
			22.1 S	69.8 W	NORTHERN CHILE			
			H= 54 KM	MAG 4.50	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
9	LZ-	eP	19 44 52.0	SZ	0.8	11.3	5.9	4.42
	eS		45 53	SR	0.6	20.0		
	eL		48 28	SZ	2.0	71.8		
9	21 20 03.*		60.8 N 146.8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.10	CGS			
9	21 54 42.1		18.5 S 71.5 W	SOUTHERN PERU				
			H= 39 KM	MAG 5.20	CGS			
9	LZ-	eP	21 55 39.0	SZ	2.5	824.6	3.6	5.32
	eP		55 40	LZ	18	15.5U		
	e		55 42	SZ	0.4	95.5		
	eL		58 20	LZ	13	5897.8		
9	GG-	eL	22 44 03	LZ	29	189.5	99.3	
9	22 12 31.*		59.8 N 155.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.40	CGS			
9	00-	eL	22 45 01	LZ	29	128.5	59.0	
9	LZ-	eP	22 18 09.0	SZ	0.3	1.7		
9	LZ-	e	22 18 13	SZ	0.5	10.2		
9	LZ-	eP	22 36 19.5	SZ	0.2	1.5	5.1	
	eS		37 21	SR	999.9	9999.9		
9	23 16 04.*		46.3 N 149.6 E	KURILE ISLANDS				
			H= 45 KM	MAG 4.50	CGS			
10	00 29 46.2		60.3 N 147.1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.00	CGS			
10	LZ-	eP	00 40 53.0	SZ	0.3	1.0	4.0	
	e		40 58	SZ	0.4	4.3		
	eS		41 42	ST	0.6	3.1		
10	01 08 00.2		58.4 N 150.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 5.50	CGS			
10	00-	eP	01 18 07.9	SZ	0.7	17.0	60.0	5.20
	eP		18 12	LZ	17	166.1		
	eL		33 50	LT	20	134.8		
10	GG-	eP	01 19 21.6C	SZ	0.8	54.5	71.2	5.69
	eP		19 22	LZ	17	228.6		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	ePP		22 02	LZ	15.0	160.9		
	eS		28 51	LT	23	408.3		
	eSS		33 23	LT	19	290.9		
	eL		45 30	LZ	24	328.9		
							Avg.	5.44
10	LZ-	eP	01 21 16.0	SZ	0.3	2.6	.6	
	e		21 21	SZ	0.3	6.0		
	eS		21 24	ST	0.4	5.8		
10	02 07 57.*		13.8 N 91.2 W	NEAR COAST OF GUATEMALA				
			H= 26 KM	MAG 3.60	CGS			
10	02 46 35.*		58.5 N 148.8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.70	CGS			
10	LZ-	eP	04 04 09.0	SZ	0.4	8.6		
10	LZ-	eP	04 41 53.0	SZ	0.3	6.8	4.3	
	e		41 57	SZ	0.4	3.4		
	eS		42 46	SR	0.6	8.4		
10	04 44 08.		15.7 S 172.8 W	SAMOA ISLANDS REGION				
			H= 32 KM	MAG 4.20	CGS			
10	LZ-	eP	05 22 47.0	SZ	0.4	9.5	2.5	
	eS		23 19	ST	0.5	7.8		
10	LZ-	eP	06 11 55.2	SZ	0.9	15.3		
10	LZ-	e	06 11 58	SZ	0.5	22.5		
10	06 46 16.*		60.1 N 146.9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.00	CGS			
10	07 04 11.*		60.2 N 147.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.00	CGS			
10	LZ-	eP	07 20 43.4	SZ	0.5	10.2		
10	10 00 53.*		17.6 N 104.6 W	OFF COAST OF COLIMA, MEXICO				
			H= 33 KM	MAG 3.80	CGS			
10	LZ-	eP	10 07 42.0	SZ	0.3	3.4	3.9	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG			
11			10 20 40*	60°8 N 143°5 W	PRINCE WILLIAM SOUND, ALASKA						
				H= 20 KM	MAG 4.20	CGS					
11			11 36 00.5	60.4 N 146.4 W	PRINCE WILLIAM SOUND, ALASKA						
				H= 15 KM	MAG 4.80	CGS					
11			12 16 41.1	56.6 N 151.0 W	PRINCE WILLIAM SOUND, ALASKA						
				H= 20 KM	MAG 4.80	CGS					
11	GG-	eP	12 54 11.0	SZ	0.4	28.6	1.4				
11	OO-	e	13 34 48	LZ	22	1854.3					
11	OO-	eP	13 34 50.0	SZ	0.8	72.6					
11	OO-	e	13 38 50	LZ	17	1103.3					
11	OO-	eL	13 43 10	LR	17	2303.7					
11	OO-	eL	13 50 38	LZ	18	3093.1					
11	LZ-	eP	15 00 14.5	SZ	0.2	10.5	3.3				
		e	00 29	SZ	0.3	10.6					
		eS	00 57	ST	0.5	41.7					
11	LZ-	eP	15 31 27.0	SZ	0.7	4.3					
11			16 00 42.8	40.5 N 25.0 E	AEGEAN SEA						
				H= 33 KM	MAG 5.10	CGS					
11	GG-	eP	16 03 50	LZ	20	374.1	13.4				
		eP	03 54.0	SZ	1.2	73.0					
		eL	07 20	LZ	27	11.2U					
11	OO-	eP	16 05 39.0	SZ	0.7	61.0	22.3	5.13			
		ePP	05 50	LZ	15	249.2					
		e	07 25	LR	22	206.7					
		eS	09 45	LR	13	3486.7					
				AVG.		5.27					
11			16 10 25.*	58.1 N 149.8 W	PRINCE WILLIAM SOUND, ALASKA						
				H= 20 KM	MAG 4.30	CGS					
11	LZ-	eL	16 53 30	LZ	35	1664.5	99.1				
		eL	57 00	LZ	20	324.5					
11	LZ-	eP	17 16 21.0	SZ	0.5	31.3	2.3				
		eS	16 51	ST	999.9	9999.9					
11			17 51 16.*	56. N 152.7 W	PRINCE WILLIAM SOUND, ALASKA						
				H= 33 KM	MAG 4.20	CGS					
11	LZ-	eP	18 58 48.5	SZ	0.4	25.6	1.9				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG		
			05		59 15	SR	0.6	11.6		
11			22 02 38.2	60.2 N 146.9 W	PRINCE WILLIAM SOUND, ALASKA					
				H= 20 KM	MAG 4.50	CGS				
11			23 11 22.8	60.1 N 146.5 W	PRINCE WILLIAM SOUND, ALASKA					
				H= 20 KM	MAG 4.60	CGS				
11			23 34 35.*	59.5 N 147.0 W	PRINCE WILLIAM SOUND, ALASKA					
				H= 33 KM	MAG 4.50	CGS				
12			01 11 58.*	53. N 160.4 E	NEAR EAST COAST OF KAMCHATKA					
				H= 33 KM						
12			01 15 38.*	60. N 144.9 W	PRINCE WILLIAM SOUND, ALASKA					
				H= 30 KM	MAG 4.40	CGS				
12			01 24 31.2	56.6 N 152.2 W	PRINCE WILLIAM SOUND, ALASKA					
				H= 22 KM	MAG 5.60	CGS				
12	GG-	eP	01 36 02.5	SZ	1.0	130.6	73.2	5.93		
		eP	36 04	LZ	15	3393.9				
		eS	45 35	LT	20	6587.1				
		e	50 30	LT	18	4813.9				
		e	54 05	LZ	23	5799.6				
		eLQ	02 00 00	LR	19	2559.5				
		eLR	03 45	LZ	22	6524.5				
12	LZ-	eP	01 38 18.0	SZ	1.0	6.5	100.0	5.22		
				Avg.		5.57				
12			02 06 20.*	60.9 N 149.5 W	PRINCE WILLIAM SOUND, ALASKA					
				H= 20 KM	MAG 4.20	CGS				
12			02 33 39.*	26.5 S 113.7 W	EASTER ISLAND REGION					
				H= 33 KM	MAG 4.60	CGS				
12	GG-	eP	03 32 37.5	SZ	0.5	6.7	1.4			
		eS	32 55	ST	0.4	51.8				
12			03 38 53.*	56.4 N 152.3 W	PRINCE WILLIAM SOUND, ALASKA					
				H= 33 KM	MAG 4.00	CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	LZ-	eP eS	04 21 22.1 21 55	SZ SR	0.4 1.0	11.4 9.5	286		12	12 36 23.*		56.4 N 151.4 W PRINCE WILLIAM SOUND, ALASKA					
								H= 30 KM MAG 5.00 CGS									
12		05 44 23.*			58.8 N 148.9 W PRINCE WILLIAM SOUND, ALASKA				12	12 48 02.2		56.6 N 151.3 W PRINCE WILLIAM SOUND, ALASKA					
					H= 33 KM MAG 4.00 CGS							H= 33 KM MAG 5.10 CGS					
12	LZ-	eP	05 49 42.0	SZ	1.5	68.2			12	00- eL		13 22 25	LT	21	574.2	61.9	
12		06 00 46.4			13.6 S 166.0 E NEW HEBRIDES ISLANDS				12	13 11 02.*		39. N 118.8 W WALKER LAKE AREA, NEVADA					
					H= 33 KM MAG 5.00 CGS							H= 15 KM MAG 3.90 CGS					
12	LZ-	eP	06 42 30	LZ	15.0	960.6			12	14 35 39.2		61.2 N 151.1 W PRINCE WILLIAM SOUND, ALASKA					
12	LZ-	e	06 48 55	LR	19	1677.2											
12	LZ-	e	06 51 25	LR	24	1788.0			12	15 08 09.5		61.2 N 147.4 W ALASKA AFTERSHOCK					
12	LZ-	eL	07 00 00	LR	20	895.2						H= 20 KM MAG 3.60 CGS					
12		07 33 44.*			59.3 N 147.5 W PRINCE WILLIAM SOUND, ALASKA				12	LZ- eP		15 32 09.0	SZ	0.6	8.6		
					H= 25 KM MAG 3.60 CGS												
12	GG- eP eS		07 52 12.5 52 19	SZ SR	0.5 0.2	8.9 47.7	•9		12	15 37 50.*		43.2 N 111.4 W SOUTHEASTERN IDAHO					
												H= 15 KM					
12		09 34 44.1			56.6 N 152.1 W PRINCE WILLIAM SOUND, ALASKA				12	17 22 02.2		60.2 N 145.6 W PRINCE WILLIAM SOUND, ALASKA					
					H= 20 KM MAG 5.10 CGS							H= 20 KM MAG 5.00 CGS					
12	GG- eS e eLQ eLR		09 55 55 10 00 55 10 40 15 00	LT LR LT LZ	20 20 35 25	419.1 229.9 322.4 617.9	73.2		12	00- eP		17 31 52.2	SZ	0.8	11.5	57.7	4.96
									12	GG- eP eL		17 33 07.1 56 20	SZ LZ	0.6 35	13.9 622.7	68.9	5.29
																Avg.	5.12
12	LZ- eP		09 38 47.6	SZ	0.9	9.7			12	18 50 41.*		56.5 N 152.7 W PRINCE WILLIAM SOUND, ALASKA					
												H= 33 KM MAG 4.20 CGS					
12		11 10 54.8			33.9 S 179.8 W KERMADEC ISLANDS				12	20 28 50.*		57.5 N 152.1 W PRINCE WILLIAM SOUND, ALASKA					
					H= 89 KM MAG 5.40 CGS							H= 33 KM MAG 4.60 CGS					
12		12 06 01.3			42.6 N 45.2 E EASTERN CAUCASUS				12	20 39 06.*		16.4 S 179.8 W WEST OF TONGA ISLANDS					
					H= 33 KM MAG 4.80 CGS							H= 509 KM MAG 3.60 CGS					
12	OO- eP		12 11 47.3	SZ	0.7	11.6	27.6	4.72	12	21 02 16.*		58.6 N 154.3 W PRINCE WILLIAM SOUND, ALASKA					
												H= 33 KM MAG 4.00 CGS					
12		12 14 55.*			34. N 131.9 E NEAR S. COAST HONSHU, JAPAN												
					H= 70 KM MAG 4.40 CGS												

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	00	55 01*	59°5 N 144°7 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 3.90	CGS			
13	00	57 43.5	1 N 123°0 E	NORTHERN CELEBES				
			H= 97 KM	MAG 5.40	CGS			
13	LZ-	eP ⁰²	01 18 16.4	SZ	0.8	6.5	160.4	
13	LZ-	eP eS	01 01 15.1 01 40	SZ ST	0.2 0.5	32.8 10.7	1.8	
13	01	14 21.1	40° N 51°9 E	CASPIAN SEA				
			H= 33 KM	MAG 4.80	CGS			
13	00-	eP eL	01 20 51.5 33 22	SZ LZ	0.8 25	11.5 156.7	32.7	4.82
13	GG-	eL	01 32 40	LZ	26	234.3	30.1	
13	01	17 36.*	56°6 N 157°0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.00	CGS			
13	03	02 46.3	23°7 S 179°0 W	SOUTH OF FIJI ISLANDS				
			H=360 KM	MAG 4.50	CGS			
13	03	20 04.5	27°6 N 90°2 E	BHUTAN				
			H= 52 KM	MAG 5.40	CGS			
13	05	23 58.*	6°2 N 72°5 W	EASTERN COLOMBIA				
			H=228 KM	MAG 3.40	CGS			
13	06	23 34.1	19°5 S 177°7 W	TONGA ISLANDS REGION				
			H=574 KM	MAG 4.40	CGS			
13	07	06 40.*	59°7 N 147°4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.90	CGS			
13	07	28 36.*	58°9 N 149°8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4.00	CGS			
13	08	30 03.6	45°3 N 18°1 E	NORTHERN YUGOSLAVIA				
			H= 33 KM					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	GG-	eP	08 31 36.0	SZ	0.4	99.9	6.4	5.89
		eP	31 39	LZ	14	1634.9		
		eL	32 50	ST	0.5	9999.9		
		eL	32 51	LT	11	9999.9		
13	00-	eP	08 33 50.0	SZ	0.7	7.7	16.3	3.98
		eP	33 51	LZ	16	1407.4		
		eL	37 30	LR	999.9	9999.9		
		eL	39 30	SZ	2.1	429.0		
13	LZ-	eL	09 12 15	LR	34	867.2	99.0	
						Avg.	4.93	
13	08	41 53.9	58°4 N 151°2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.80	CGS			
13	08	45 24.6	22°3 N 142°1 E	BONIN ISLANDS REGION				
			H=309 KM	MAG 5.10	CGS			
13	LZ-	eP ⁰¹	09 04 38.6	SZ	0.8	6.5	150.5	
13	11	24 04.*	7°1 S 129°2 E	BANDA SEA				
			H=126 KM					
13	11	26 52.1	6°9 N 126°6 E	NEAR E. COAST MINDANAO, P.I.				
			H=110 KM					
13	11	36 30.*	43°3 N 110°8 W	WESTERN WYOMING				
			H= 15 KM	MAG 3.70	CGS			
13	GG-	e	12 37 00	LZ	17.0	718.7		
13	GG-	e	12 46 20	LT	14	1445.3		
13	LZ-	e	12 50 00	LR	20	426.2		
13	GG-	e	12 51 20	LR	28	1278.7		
13	LZ-	e	12 52 12	LR	32	665.5		
13	GG-	eL	13 00 00	LR	34	3869.9		
13	LZ-	eL	13 07 27	LT	34	1044.2		
13	LZ-	eP	13 51 46.4	SZ	0.6	8.6		
13	14	05 00.	57°6 N 151°2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 5.50	CGS			
13	GG-	eP	14 16 24.2	SZ	0.7	16.6	72.1	5.20
13	LZ-	eL	14 20 22	LT	22.0	343.1		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	LZ-	eL	14 24 05	LZ	24.0	408.8		
13	GG-	eP	16 12 38.2	SZ	0.3	59.6		
13	16 14 06.3		56.6 N 152.1 W PRINCE WILLIAM SOUND, ALASKA					
			H= 33 KM MAG 5.10 CGS					
13	GG-	e	16 31 30	LR	35	8559.4	73.2	
		eS	35 10	LT	18	621.7		
		eL	54 05	LZ	25	556.9		
13	00-	eS	16 32 48	LT	17	363.2	61.9	
		eL	40 00	LR	15	319.1		
13	LZ-	eP	17 30 11.9	SZ	999.9	9999.9		
13	17 43 26.*		61.1 N 147.4 W PRINCE WILLIAM SOUND, ALASKA					
			H= 35 KM MAG 4.40 CGS					
13	LZ-	eP	18 09 45.4	SZ	0.4	5.3	2.8	
		eS	10 22	ST	0.5	15.7		
13	18 14 21.4		59.2 N 147.1 W PRINCE WILLIAM SOUND, ALASKA					
			H= 20 KM MAG 4.30 CGS					
13	19 16 48.6		57.3 N 153.2 W PRINCE WILLIAM SOUND, ALASKA					
			H= 23 KM MAG 4.80 CGS					
13	LZ-	eP	19 55 53.0	SZ	0.7	36.0		
13	21 25 33.		57.5 N 153.9 W PRINCE WILLIAM SOUND, ALASKA					
			H= 30 KM MAG 5.50 CGS					
13	00-	eP	21 35 46.1	SZ	0.7	30.4	61.2	5.52
		e	35 57	SZ	0.7	22.3		
13	GG-	eP	21 36 58.8	SZ	0.7	22.1	72.5	5.31
		eL	22 03 00	LZ	25	194.9		
					Avg.	5.41		
13	21 43 16.5		59.4 N 143.1 W PRINCE WILLIAM SOUND, ALASKA					
			H= 33 KM MAG 5.10 CGS					
13	00-	eL	22 12 37	LZ	36	892.0	58.2	
13	LZ-	e	22 02 10	LZ	24.0	467.3		
13	LZ-	eP	22 08 29.5	SZ	0.5	103.6		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13			22 49 56.*	51.6 N 178.8 E RAT ALEUTIAN ISLANDS				
			H= 33 KM MAG 4.40 CGS					
13			23 48 53.*	61.0 N 149.3 W PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM MAG 4.10 CGS					
14			01 04 28.8	49.4 N 155.5 E KURILE ISLANDS				
			H= 60 KM MAG 5.20 CGS					
14	GG-	eP	01 16 15.7	SZ	0.6	13.9	76.6	5.09
		eL	40 50	LR	45	619.6		
		eL	47 00	LZ	27	439.6		
14	00-	eLQ	01 34 50	LR	45	668.8	66.3	
		eLR	37 40	LZ	45	934.4		
14	LZ-	eL	01 52 20	LZ	25	600.6	131.5	
14			02 28 25.*	15.8 S 177.0 W TONGA ISLANDS REGION				
			H= 362 KM MAG 4.10 CGS					
14			02 42 05.*	14.1 N 91.3 W NEAR COAST OF GUATEMALA				
			H= 126 KM MAG 3.90 CGS					
14			05 01 59.1	41.0 S 80.8 E KERGUELEN ISLANDS REGION				
			H= 33 KM					
14			05 43 30.*	6.8 N 72.9 W NORTHERN COLOMBIA				
			H= 168 KM MAG 3.80 CGS					
14	GG-	eL	06 15 00	LZ	15.0	281.7	81.1	
14			06 07 20.3	20.8 S 69.1 W NORTHERN CHILE				
			H= 116 KM MAG 4.00 CGS					
14			06 19 38.*	60.2 N 146.8 W PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM MAG 4.10 CGS					
14			06 35 30.1	39.0 N 14.5 E TYRRHENIAN SEA				
			H= 306 KM MAG 4.30 CGS					
14	GG-	eP	06 38 00.0	SZ	1.0	66.8	10.9	4.83
14	00-	eP	06 40 01.4	SZ	0.5	35.4	22.2	4.96
					Avg.	4.89		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
14			06 53 36*	56°2 N 154°6 W	PRINCE WILLIAM SOUND ALASKA			
				H= 33 KM	MAG 4.10	CGS		
14			07 59 25.4	61°4 N 147°0 W	PRINCE WILLIAM SOUND ALASKA			
				H= 33 KM	MAG 4.40	CGS		
14			08 08 25.*	61° N 145°3 W	PRINCE WILLIAM SOUND ALASKA			
				H= 33 KM	MAG 3.90	CGS		
14	LZ-	eLQ	08 46 10	LT	25.0	70261	97.8	
		eLR	52 45	LZ	23	64568		
14	GG-	eP	08 37 00.4	SZ	0.4	46.0		
14	LZ-	eP	08 51 41.3	SZ	0.6	17.0	4.3	
		eS	52 34	SR	1.0	22.8		
14	LZ-	eP	08 56 59.0	SZ	0.4	463		
		eS	57 09	SR	0.6	23.2	7	
14			08 58 41.9	17.5 S 167.9 E	NEW HEBRIDES ISLANDS			
				H= 33 KM	MAG 4.60	CGS		
14			09 48 11.*	56° N 150°0 W	PRINCE WILLIAM SOUND ALASKA			
				H= 25 KM	MAG 4.30	CGS		
14	GG-	eL	10 06 35	LR	30	59167	73.5	
		eL	14 50	LZ	25	30663		
14			10 09 02.*	60.5 N 146.1 W	PRINCE WILLIAM SOUND ALASKA			
				H= 33 KM	MAG 3.80	CGS		
14			10 58 11.*	59.9 N 146.8 W	PRINCE WILLIAM SOUND ALASKA			
				H= 20 KM	MAG 4.10	CGS		
14			15 55 10.9	61.3 N 147.3 W	PRINCE WILLIAM SOUND ALASKA			
				H= 30 KM	MAG 5.40	CGS		
14	00-	eP	16 05 02.0	SZ	1.0	40.9	56.8	5.41
		eL	22 33	LT	35	80967		
14	GG-	eP	16 06 18.7	SZ	0.8	23.0	68.0	5.34
		eL	31 02	LZ	30	73966		
				Avg.		5.37		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
14			16 05 46.*	59.9 N 146.0 W	PRINCE WILLIAM SOUND ALASKA			
				H= 33 KM	MAG 4.40	CGS		
14			16 18 54.*	8.6 S 117.3 E	SUMBAWA ISLAND REGION			
				H= 58 KM	MAG 5.30	CGS		
14			16 59 30.1	61.4 N 150.8 W	PRINCE WILLIAM SOUND ALASKA			
				H= 35 KM	MAG 5.10	CGS		
14			21 33 37.3	61.0 N 147.3 W	PRINCE WILLIAM SOUND ALASKA			
				H= 40 KM	MAG 4.20	CGS		
14	LZ-	eP	22 06 33.5	SZ	0.4	58.3		5
		eS	06 40	SR	0.5	37.3		
14			22 29 31.1	59.9 N 145.6 W	PRINCE WILLIAM SOUND ALASKA			
				H= 23 KM	MAG 4.50	CGS		
14	LZ-	eL	23 22 58	LR	30	497.4	97.6	
14			22 46 25.*	19.8 S 176.7 W	TONGA ISLANDS			
				H= 235 KM	MAG 4.30	CGS		
14			22 55 31.3	58.0 N 152.6 W	PRINCE WILLIAM SOUND ALASKA			
				H= 30 KM	MAG 5.40	CGS		
14	00-	eP	23 05 41.2	SZ	0.7	9.3	60.6	4.98
		e	05 45	SZ	1.0	40.9		
		eS	13 58	LR	36	764.9		
		eLQ	21 17	LR	35	1934.9		
		eLR	26 37	LZ	28	1805.6		
14	GG-	eP	23 06 54.2	SZ	0.6	11.6	71.9	5.10
		eP	07 00	LZ	14	342.8		
		ePCP	07 01	SZ	0.8	46.0		
		ePPS	17 02	LR	18	794.2		
		eLQ	31 14	LT	25	1661.6		
		eLR	33 00	LZ	28	2501.2		
				Avg.		5.04		
14	LZ-	eP	23 15 23.0	SZ	1.0	6.5		
15			00 58 15.*	17.8 S 178.3 W	FIJI ISLANDS			
				H= 450 KM	MAG 4.00	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
15	03	53	08.*	59.7 N 145.2 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 3.70 CGS		
15	08	23	27.4	57.4 N 149.5 W	PRINCE WILLIAM SOUND, ALASKA	H= 15 KM MAG 4.90 CGS		
15	09	24	11.*	60. N 148.6 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 3.70 CGS		
15	11	20	31.*	57.8 N 150.4 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 3.90 CGS		
15	13	37	02.7	43.1 N 111.5 W	IDAHO WYOMING BORDER	H= 33 KM		
15	14	19	24.*	58.6 N 149.9 W	PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.10 CGS		
15	15	02	28.*	45.2 S 167.0 E	W. SOUTH IS., NEW ZEALAND	H= 33 KM MAG 4.90 CGS		
15	15	30	47.1	56.5 N 154.4 W	PRINCE WILLIAM SOUND, ALASKA	H= 35 KM MAG 5.50 CGS		
15	00-	eP	15 41 06.1	SZ	0.8	77.8	62.2	5.90
		eP	41 07	LZ	20	1386.5		
		e	41 18	SZ	0.9	138.3		
		eS	49 34	LT	23	2268.0		
		eSCS	50 54	LR	23	1708.8		
		eLQ	57 52	LT	27	2375.8		
		eLR	16 04 40	LZ	26	3397.8		
15	GG-	eP	15 42 17.8	SZ	0.8	100.1	73.5	5.86
		eP	42 19	LZ	19	1471.2		
		ePP	45 00	LZ	21	500.9		
		ePPP	46 50	LZ	18	401.3		
		e	51 51	LZ	22	3441.5		
		eSS	56 46	LT	17	974.6		
		eL	58 30	LT	21	1466.1		
		eL	16 06 54	LZ	28	1596.6		
15	LZ-	eSKS	15 55 17	LR	20	1046.0	101.2	
		ePS	58 05	LR	24	868.4		
		eSS	16 03 23	LR	27	1346.4		
		eSKKS	08 08	LR	24	1215.8		
		eL	16 13	LT	32	2011.5		

Avg. 5.88

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
15	LZ-	eP eS	15 49 50.3 49 59	SZ ST	0.2 0.3	45.9 17.5		
15	16	35	57.5	21.7 N 88.0 E	INDIA EAST PAKISTAN BORDER	H= 36 KM MAG 5.50 CGS		
15	00-	eP eL	16 46 44.8 17 09 38	SZ LT	0.8 28	15.5 1503.9		
15	16	52	26.	37.7 S 107.5 E	OFF NORTH IS., NEW ZEALAND	H= 41 KM MAG 5.50 CGS		
15	LZ-	eP	17 55 53.7	SZ	1.1	18.0		
15	20	30	35.9	56.8 N 154.2 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 4.70 CGS		
15	00-	eP eL	20 40 55.9 21 07 21	SZ LR	0.7 22	10.9 474.6		
15	GG-	eL	21 01 17	LT	18	2114.2		73.2
15	00-	eP	20 59 31.5	SZ	0.9	10.1		
15	21	35	18.2	19.7 S 175.6 W	TONGA ISLANDS	H= 172 KM MAG 4.20 CGS		
15	22	40	45.5	45.3 N 18.1 E	NORTHERN YUGOSLAVIA	H= 33 KM MAG 4.60 CGS		
15	GG-	eP eL	22 42 19.4 42 52	SZ SR	0.4 0.5	8.3 36.6		6.4 4.81
16	00	05	13.*	56.4 N 149.2 W	PRINCE WILLIAM SOUND, ALASKA	H= 20 KM MAG 3.90 CGS		
16	01	04	34.5	37. N 142.7 E	OFF EAST COAST HONSHU, JAPAN	H= 38 KM MAG 5.10 CGS		
16	00-	eP eP	01 16 11.8 16 12	SZ LZ	0.9 16	23.6 491.8		
		e	17 31	SZ	0.9	16.8		
		ePP	19 01	LZ	16	368.8		
		ePPP	20 50	LZ	19	233.7		
		eS	25 55	LR	19	845.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
16	GG-	eS	25 55	LT	18.0	996.6			
		e	28 18	LR	17	265.8			
		eSS	30 27	LR	17	303.7			
		e	34 26	LT	18	893.5			
		eL	39 35	LR	35	1608.2			
		eP	01 16 59.5	SZ	1.0	30.2	83.6	5.37	
		eP	17 02	LZ	16	397.3			
		eS	27 24	LR	17	815.9			
		eS	27 24	LT	18	650.5			
		eL	49 05	LR	23	2691.6			
		eL	57 25	LR	17	4623.9			
		eL	57 25	LT	16	3996.1			
eL	57 25	LZ	16	5057.2					
LZ-	eP+1	01 24 11.7	SZ	0.9	19.5	145.5			
e	24 45	SZ	1.6	207.4					
eL	02 14 22	LR	29	404.0					
			AVG.		5.25				
16	02 35 48.9	21.5 S 170.5 E LOYALTY ISLANDS REGION H=110 KM MAG 4.60 CGS							
16	GG- eP+1	02 55 21.1	SZ	0.9	65.1	147.4			
16	03 19 34.8	57.2 N 151.4 W PRINCE WILLIAM SOUND, ALASKA H= 10 KM MAG 5.00 CGS							
16	04 16 41.*	31.6 N 113.6 W GULF OF CALIFORNIA H= 33 KM MAG 4.50 CGS							
16	04 56 47.*	31.8 N 113.7 W GULF OF CALIFORNIA H= 19 KM MAG 4.75 CGS							
16	06 20 08.2	30.8 N 113.9 W GULF OF CALIFORNIA H= 33 KM MAG 4.87 CGS							
16	06 21 32.3	45.1 N 151.3 E KURILE ISLANDS H= 33 KM MAG 4.80 CGS							
16	00- eP	06 32 38.0	SZ	0.8	41.5	69.4	5.56		
16	GG- eP	06 33 37.4	SZ	0.9	51.1	79.4	5.46		
			AVG.		5.51				
16	06 45 44.*	32.5 N 113.2 W SOUTHERN ARIZONA H= 33 KM MAG 4.10 CGS							

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16			07 03 34.*					31.3 N 113.7 W GULF OF CALIFORNIA H= 33 KM MAG 4.75 CGS
16			07 37 35.8					59.6 N 146.9 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.30 CGS
16			09 18 12.*					31.1 N 113.8 W GULF OF CALIFORNIA H= 29 KM MAG 4.75 CGS
16			11 20 25.*					14. N 90.0 W GUATEMALA H= 209 KM MAG 3.70 CGS
16			11 45 36.9					23.8 S 180.0 SOUTH OF FIJI ISLANDS H= 530 KM MAG 4.50 CGS
16			11 56 04.5					58.3 N 150.7 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.40 CGS
16			12 11 15.7					58.2 N 152.5 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.50 CGS
16			12 46 09.9					45.3 N 150.4 E KURILE ISLANDS H= 33 KM MAG 4.60 CGS
16	LZ- eP		13 14 06.3	SZ	0.5	9.3		
16	LZ- eL		13 15 33	SR	0.8	5.4		
16			13 43 08.9					52.1 N 169.4 W FOX ALEUTIAN ISLANDS H= 33 KM MAG 4.90 CGS
16	00- eP		13 54 00.0	SZ	1.0	20.8	67.2	5.21
	eP		54 02	LZ	16	370.0		
	eS		14 03 05	LT	19	339.6		
	e		07 45	LT	27	521.4		
	e		10 50	LR	25	664.6		
	eL		13 00	LR	42	1148.6		
16	GG- eP		13 55 09.2	SZ	1.1	74.6	78.6	5.59
	eP		55 11	LZ	18	238.8		
	eSKS		14 05 25	LT	20	419.1		
	eSS		10 20	LT	33	452.8		
16	LZ- eL		14 37 39	LR	18	368.6	109.3	
			Avg.					5.40

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	14	05 14.9	7.6 S 155.7 E	SOLOMON ISLANDS				
			H= 78 KM	MAG 5.40	CGS			
16	14	12 37.6	52.3 N 169.9 W	FOX ALEUTIAN ISLANDS				
			H= 40 KM	MAG 3.90	CGS			
16	14	21 36.2	57.6 N 150.9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.60	CGS			
16	14	31 16.3	61.4 N 149.2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.60	CGS			
16	17	08 27.*	59.5 N 147.8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.50	CGS			
16	19	26 57.4	56.4 N 152.9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 30 KM	MAG 5.50	CGS			
16	00-	eP	19 37 17.1	SZ	0.7	85.0	62.2	6.00
		eP	37 20	LZ	20	3687.7		
		eS	45 45	LT	999.9	9999.9		
16	GG-	eP	19 38 29.0	SZ	0.8	55.2	73.5	5.61
		eP	38 31	LZ	20	2803.7		
		ePP	41 17	LZ	19	2106.1		
		eS	48 00	LT	21	5219.3		
		eSS	52 55	LT	18	8847.2		
		eL	56 20	LZ	25	5230.2		
16	LZ-	ePP	19 44 57	LZ	19	1031.0	100.3	
		eSKS	51 20	LR	20	2814.5		
		ePS	54 00	LR	20	3612.9		
		ePPS	55 00	LR	18	2363.6		
		Avg.					5.80	
16	20	12 36.8	56.6 N 152.8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 5.00	CGS			
16	21	25 46.*	58.9 N 148.8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM					
16	LZ-	eP	23 00 11.8	SZ	0.9	9.7		
17	01	15 01.*	3.7 N 127.7 E	TALAUD ISLANDS				
			H= 34 KM					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
17	GG-	eP	01 22 53.5	SZ	0.6	11.4	317	
		eS	23 32	ST	0.6	23.1		
17	02	22 18.*	60.3 N 146.9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.60	CGS			
17	02	58 27.	36.7 N 140.5 E	HONSHU, JAPAN				
			H= 68 KM	MAG 4.90	CGS			
17	00-	eP	03 09 59.0	SZ	0.6	26.1	74.3	5.30
17	GG-	eP	03 10 47.1	SZ	0.9	21.1	83.0	5.17
17	LZ-	eP*1	03 18 05.0	SZ	1.6	41.4	147.2	
						Avg.	5.23	
17	GG-	eL	03 56 20	LR	52.0	1084.6		
17	04	03 55.9	59.6 N 144.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.90	CGS			
17	04	16 59.4	59.6 N 144.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.90	CGS			
17	04	44 37.*	22.5 S 10.8 W	SOUTH ATLANTIC OCEAN				
			H= 33 KM	MAG 5.30	CGS			
17	LZ-	eP	04 54 04.0	SZ	1.5	34.1	54.5	5.16
17	00-	eP	04 57 11.7	SZ	1.1	15.4	85.1	5.04
						Avg.	5.10	
17	04	49 30.5	56.4 N 152.9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 5.30	CGS			
17	00-	eP	04 59 51.0	SZ	0.6	20.9	62.2	5.47
		eP	59 54	LZ	22	1128.2		
		ePP	05 02 00	LZ	20	452.8		
		ePPP	03 40	LZ	17	639.3		
		e	08 30	LZ	19	2043.1		
17	GG-	eP	05 01 02.0	SZ	0.7	16.4	73.5	5.16
		eP	01 03	LZ	16	1397.5		
		ePP	03 50	LZ	17	703.0		
		ePPP	05 35	LZ	20	329.8		
		eS	10 30	LT	23	1885.5		
		eSS	15 25	LT	20	1886.3		
		e	19 02	LT	16	1065.6		
		eL	25 08	LT	35	2533.9		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
							Avg.	5.31
17	GG-	eP	05 56 13.5	SZ	1.2	42.2		
17	06 00 00.2		6.6 S 154.9 E SOLOMON ISLANDS H= 85 KM MAG 5.40 CGS					
17	00-	eP ⁰ eL	06 18 42.0 59 35	SZ LZ	0.8 40	22.2 981.5	119.4	
17	LZ-	eP ⁰ e ePKS	06 18 56.8 19 07 22 33	SZ SZ SR	0.7 1.7 2.0	2.8 179.4 129.7	131.4	
17	LZ-	eP eS	06 20 26.8 20 49	SZ SR	0.3 0.3	17.6 17.1	1.7	
17	06 53 43.6		44.1 N 114.3 W SOUTH CENTRAL IDAHO H= 33 KM MAG 3.60 CGS					
17	07 26 39.*		61.1 N 149.4 W PRINCE WILLIAM SOUND ALASKA H= 33 KM MAG 4.40 CGS					
17	09 09 07.8		57.7 N 151.4 W PRINCE WILLIAM SOUND ALASKA H= 20 KM MAG 5.40 CGS					
17	00-	eP e	09 19 19.2 21 07	SZ SZ	1.0 1.1	29.1 25.7	60.8	5.33
17	GG-	eP	09 20 32.8	SZ	1.1	67.8	72.0	5.63
						Avg.	5.48	
17	09 28 46.6		20.7 S 69.6 W NEAR COAST OF NORTHERN CHILE H= 33 KM MAG 4.20 CGS					
17	LZ-	eP	09 29 54.0	SZ	0.8	98.9	4.5	5.19
17	09 59 52.4		60.4 N 145.9 W PRINCE WILLIAM SOUND ALASKA H= 20 KM MAG 4.90 CGS					
17	11 48 44.7		60. N 145.5 W PRINCE WILLIAM SOUND ALASKA H= 33 KM MAG 4.40 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
17	12 06 00.*		60.4 N 145.0 W PRINCE WILLIAM SOUND ALASKA H= 33 KM MAG 3.80 CGS					
17	LZ-	eP	13 37 20.5	SZ	0.9	13.7		
17	14 23 31.*		1.6 S 133.4 E NEAR COAST OF W. NEW GUINEA H= 33 KM					
17	14 44 20.8		16.2 S 167.7 E NEW HEBRIDES ISLANDS H= 65 KM MAG 4.20 CGS					
17	GG- eS	eP eS	17 00 49.1 01 17	SZ SR	0.4 0.4	23.0 29.0	2.3	
17	18 11 45.6		38.9 N 20.9 E CENTRAL GREECE H= 45 KM MAG 4.10 CGS					
17	00-	eP	18 16 49.4	SZ	1.2	19.2	23.0	4.42
17	GG-	eL	18 19 15	LR	20	565.5	12.8	
17	20 52 16.1		24.8 S 70.3 W NORTHERN CHILE H= 65 KM MAG 4.20 CGS					
17	LZ-	eP e	20 54 21.4 54 31	SZ SZ	0.5 0.6	2.9 48.6	8.7	4.52
18	00 13 24.4		59.6 N 144.8 W PRINCE WILLIAM SOUND ALASKA H= 33 KM MAG 4.50 CGS					
18	GG-	eL	00 38 38	LZ	40	269.1	69.3	
18	LZ-	eP	00 19 48.7	SZ	0.5	65.3		
18	LZ-	e	00 20 08	SZ	0.6	43.9		
18	LZ-	eL	00 21 06	ST	0.6	29.5		
18	01 32 18.4		56.4 N 152.8 W PRINCE WILLIAM SOUND ALASKA H= 33 KM MAG 5.00 CGS					
18	C2 57 28.*		44.7 N 130.2 W OFF COAST OF OREGON H= 33 KM MAG 3.70 CGS					
18	03 06 43.5		56.7 N 148.9 W PRINCE WILLIAM SOUND ALASKA H= 33 KM MAG 4.50 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	LZ-	eP eS	04 31 28.4 31 49	SZ ST	0.4 0.5	9999.9 11.6	1.6	
18	LZ-	eP eS	04 35 59.8 36 24	SZ SR	0.3 0.4	35.5 11.5	1.8	
18	05 27 44.6 45.5 N 151.1 E KURILE ISLANDS H= 33 KM MAG 5.30 CGS							
18	00-	eP eP e ePCP eS eSS eL eL	05 38 47.2 38 48 38 51 39 08 47 57 52 43 56 00 59 30	SZ LZ SZ SZ LR LT LR LR	0.8 20 1.0 0.9 25 27 25 45	14.8 196.6 79.3 25.7 286.6 708.5 525.5 2187.6	69.0	5.14
18	GG-	eP eP eSCS eL	05 39 47.5 39 53 50 02 06 07 25	SZ LZ LR LT	0.9 23 27 35	29.9 206.2 310.4 1179.8	79.0	5.26
18	LZ-	eL	06 33 18	LZ	30	546.1	135.9	Avg. 5.20
18	05 55 40.5 45.4 N 151.5 E KURILE ISLANDS H= 33 KM MAG 4.90 CGS							
18	06 27 02.2 45.6 N 151.3 E KURILE ISLANDS H= 50 KM MAG 4.10 CGS							
18	07 10 58.5 60.8 N 145.2 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.20 CGS							
18	07 16 36.4 59.1 N 147.7 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.30 CGS							
18	07 44 03.* 60.2 N 147.6 W ALASKA AFTERSHOCK H= 33 KM MAG 3.90 CGS							
18	07 45 47.6 56.5 N 153.0 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.30 CGS							
18	07 47 03.3 57.4 N 149.8 W PRINCE WILLIAM SOUND, ALASKA H= 30 KM MAG 5.10 CGS							

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	07 58 26.9 29. N 129.8 E RYUKYU ISLANDS H= 33 KM MAG 4.90 CGS							
18	LZ- eL 09 14 55 LZ 25.0 178.9 158.9							
18	GG- GG- OO- OO- GG- GG- GG-	e e e eL e eL	08 34 39 08 39 23 08 40 25 08 43 46 08 45 28 08 47 52 08 50 48	LT LT LR LR LT LT LZ	22.0 26 25 22 20 23 23	713.1 3729.3 780.4 1276.7 1502.9 1277.7 825.1		
18	10 54 27.* 54.3 N 179.7 W ANDREANOF ALEUTIAN ISLANDS H= 33 KM MAG 4.20 CGS							
18	11 57 47.* 45.4 N 151.5 E KURILE ISLANDS H= 33 KM MAG 4.20 CGS							
18	12 41 39.* 57.4 N 154.1 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 3.80 CGS							
18	15 14 42.9 57.4 N 152.3 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.50 CGS							
18	16 19 06.* 20.7 N 141.8 E MARIANA ISLANDS REGION H= 300 KM MAG 4.30 CGS							
18	17 16 44.* 57.1 N 150.6 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.00 CGS							
18	17 32 19.* 56.9 N 151.2 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.20 CGS							
18	17 56 16.2 15. S 174.3 W SAMOA ISLANDS REGION H= 90 KM MAG 4.20 CGS							
18	19 25 23.* 58.9 N 148.7 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 3.90 CGS							

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	20	08 19.7	56.1 N 153.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.90 CGS				
18	00-	eP	20 18 44.6	SZ	0.7	8.0	62.6	4.97
18	GG-	eP	20 19 55	LZ	22	119.4	73.8	
		eS	29 31	LT	25	467.3		
		eSS	34 33	LT	21	256.5		
		eL	37 12	LT	20	838.3		
		eL	42 25	LT	20	733.5		
18	20	16 16.3	56.1 N 153.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 30 KM	MAG 4.90 CGS				
18	00-	eP	20 26 38.0	SZ	0.7	6.0	62.6	4.82
		e	26 42	LT	19	168.5		
		eS	35 06	LR	22	680.7		
		eSCS	36 12	LR	22	649.7		
		eL	41 15	LR	25	933.7		
18	GG-	eP	20 27 50	LZ	20	369.8	73.8	
18	00-	eP	21 57 58.5	SZ	0.8	4.7		
18	23	38 03.4	59.3 N 147.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 5.10 CGS				
19	00	09 49.*	55.9 N 155.8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.80 CGS				
19	LZ-	eP	03 54 59.8	SZ	1.6	45.9		
19	03	56 13.7	15.4 S 173.7 W	TONGA ISLANDS				
			H= 51 KM	MAG 4.20 CGS				
19	GG-	eP [†] 1	04 15 48.0	SZ	0.7	5.4	145.6	
		eL	05 00 33	LZ	33	542.4		
19	00-	ePPS	04 30 00	LR	28	276.0	134.3	
		eSS	35 26	LR	33	834.2		
		eL	05 00 50	LT	29	219.6		
19	LZ-	e	04 03 17	LT	14.0	1903.9		
19	LZ-	e	04 07 07	LT	29	1179.8		
19	LZ-	e	04 10 00	LR	29	2310.8		
19	LZ-	e	04 13 16	LT	29	2637.2		
19	05	13 01.6	41.7 S 83.9 W	OFF COAST OF SOUTHERN CHILE				
			H= 33 KM	MAG 5.50 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
19	LZ-	eP	05 18 59.0	SZ	1.4	98.8	28.6	5.38
	e		19 00	LT	19	383.4		
	e		20 20	SZ	1.9	116.0		
	eL		25 00	LR	21	4887.7		
	eL		28 22	SR	9.0	2160.5		
19	00-	e	05 51 54	LT	23	662.3	127.5	
	eSS		56 17	LT	24	444.6		
	eL		06 14 10	LZ	34	1150.4		
19	GG-	eL	06 11 05	LZ	28	372.9	123.2	
19	06	34 14.*	60.6 N 147.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.10 CGS				
19	08	35 31.6	17.7 S 167.8 E	NEW HEBRIDES ISLANDS				
			H= 15 KM	MAG 4.60 CGS				
19	11	03 39.2	5.7 N 76.5 W	NORTHERN COLOMBIA				
			H= 113 KM	MAG 4.00 CGS				
19	LZ-	eP	11 08 39.1	SZ	0.6	2.7	23.2	3.82
19	13	17 11.4	3.7 S 79.4 W	PERU ECUADOR BORDER REGION				
			H= 134 KM	MAG 4.30 CGS				
19	LZ-	eP	13 20 59.0	SZ	0.9	6.5	16.4	3.93
19	GG-	eL	14 04 50	LZ	45	321.1	93.2	
19	14	12 21.9	60.5 S 58.3 W	NEAR SOUTH SHETLAND ISLANDS				
			H= 33 KM	MAG 5.40 CGS				
19	LZ-	eP	14 20 34.4	SZ	1.0	92.2	44.8	5.57
	e		20 36	LR	22	644.7		
	e		21 10	SZ	1.3	191.8		
	e		26 21	SZ	1.8	71.9		
	eS		27 11	LR	20	9999.9		
	eS		27 16	ST	1.6	45.0		
	eL		27 25	ST	2.2	220.6		
	eL		30 53	ST	4.5	1075.3		
19	00-	eP [†]	14 31 30	LZ	20	48.5	132.3	
	e		34 30	LZ	25	577.0		
	e		42 15	LR	19	651.0		
	eSS		51 35	LR	22	1499.4		
	e		53 45	LR	20	1934.6		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
19	e		56 00	LR	26.0	1666.2		
	eL		15 02 30	LR	30	720.6		
	eL		06 30	LR	999.9	9999.9		
	GG- ePKS		14 34 40	LT	40	1074.0	123.2	
	eSP		42 57	LZ	23	309.0		
19	18 51 10.9		60.2 N 148.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.70	CGS			
19	19 41 31.3		13.8 S 75.3 W	SOUTHERN PERU				
			H= 96 KM	MAG 4.40	CGS			
19	LZ- eP		19 43 14.9D	SZ	0.5	9999.9	7.0	
19	LZ- eP		20 28 18.5	SZ	0.8	13.4		
19	21 34 16.5		7.3 S 128.3 E	BANDA SEA				
			H=130 KM					
19	LZ- eP*1		21 53 58.3	SZ	0.8	17.3	151.3	
20	01 18 58.8		8. N 82.7 W	NEAR SOUTH COAST OF PANAMA				
			H= 16 KM	MAG 4.10	CGS			
20	03 34 45.1		59.7 N 144.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 30 KM	MAG 4.70	CGS			
20	GG- eL		04 09 05	LZ	35	75.5	69.2	
20	00- eL		03 47 20	LZ	30.0	76.1		
20	08 07 54.8		60.2 N 147.0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.30	CGS			
20	10 51 13.*		22.9 S 69.2 W	NORTHERN CHILE				
			H= 78 KM	MAG 4.60	CGS			
20	LZ- eP		10 52 51.2	SZ	1.1	87.4	6.6	5.20
	e		53 21	SR	999.9	9999.9		
	eL		54 33	LR	16	1339.4		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	10 52 05.*		18.6 S 72.0 W	NEAR COAST OF SOUTHERN PERU				
			H= 33 KM					
20	11 56 41.6		61.4 N 147.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 30 KM	MAG 6.50	CGS			
20	00- eP		12 06 23.4	SZ	1.1	170.4	56.7	5.99
20	GG- eP		12 07 39.3	SZ	1.1	130.6	67.9	5.96
	e		10 05	SR	1.2	118.0		
	ePP		10 10	LZ	15	492.0		
	eS		16 40	LT	18	1366.1		
	eSS		20 40	LT	18	1428.2		
	eLQ		26 00	LT	32	2379.8		
	eLR		32 30	LZ	999.9	9999.9		
20	LZ- ePP		12 14 27	LZ	20	361.1	98.9	
	eSKS		20 58	LR	17	878.3		
	eSP		23 15	LZ	20	490.1		
	eSS		29 00	LR	37	2115.8		
	eL		45 30	LR	34	4333.9		
							Avg.	5.97
20	13 43 40.5		7.3 S 128.1 E	BANDA SEA				
			H=128 KM	MAG 5.50	CGS			
20	15 40 28.		61.5 N 147.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 30 KM	MAG 5.00	CGS			
20	LZ- eP		16 17 23.5	SZ	0.5	14.6		
20	16 18 26.4		60.7 N 145.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 4.90	CGS			
20	GG- eS		16 38 45	LT	20.0	285.8	68.3	
	eSS		42 50	LT	20	228.6		
	eL		51 10	LZ	35	264.2		
20	LZ- eLQ		17 04 50	LT	25	154.8	97.7	
	eLR		10 05	LZ	26	261.3		
20	16 49 41.8		61.4 N 147.3 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.20	CGS			
20	18 37 34.2		35.2 N 24.5 E	CRETE				
			H= 78 KM	MAG 4.50	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	GG-	eP	18 41 35.4	SZ	1.0	55.6	17.4	4.72
20	19 25 48.*		61.4 N 147.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.80 CGS				
20	20 31 23.*		4.7 S 143.1 E	NORTH EAST NEW GUINEA				
			H= 98 KM					
20	21 15 19.4		6.9 S 129.3 E	BANDA SEA				
			H= 91 KM	MAG 3.40 CGS				
20	22 30 38.		4.2 S 102.1 E	SOUTHERN SUMATRA				
			H= 33 KM	MAG 5.30 CGS				
21	LZ-	eP	02 18 10.7	SZ	0.5	36.4	5.9	
		eS	19 20	ST	0.6	19.3		
21	04 38 44.2		18.4 N 98.1 W	PUEBLA, MEXICO				
			H= 70 KM	MAG 4.50 CGS				
21	05 01 35.7		61.5 N 147.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 40 KM	MAG 6.00 CGS				
21	00-	eP	05 11 25	LZ	17.0	154.4	56.6	
		eP	11 27.0	SZ	0.7	20.3	5.26	
		e	11 32	SZ	0.8	33.8		
		eS	19 10	LT	22	493.3		
		eL	25 40	LZ	25	312.5		
21	GG-	eP	05 12 32.5	SZ	1.0	38.9	67.8	5.44
		eS	21 30	LT	18	496.7		
		eSS	25 40	LT	21	335.8		
		eL	29 25	LZ	24	311.1		
21	LZ-	eLR	05 50 30	LR	35	681.1	98.9	
					Avg.		5.35	
21	06 04 37.*		60.4 N 157.2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3.90 CGS				
21	07 01 53.*		4.8 S 142.8 E	EASTERN NEW GUINEA				
			H= 62 KM					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21	LZ-	eP	07 26 35.5	SZ	999.9	9999.9		
21	GG-	eP	08 08 34.2	SZ	999.9	9999.9		
21	LZ-	eP	09 42 05.0	SZ	0.4	54.1	2.0	
		eS	42 31	ST	0.7	35.7		
21	GG-	eP	10 45 24.0	SZ	0.5	14.7	1.7	
		eS	45 46	SR	0.4	20.7		
21	LZ-	eP	10 57 31.6	SZ	0.5	6.2		
21	12 11 32.9		44.2 N 114.3 W	CENTRAL IDAHO				
			H= 33 KM	MAG 3.60 CGS				
21	LZ-	eP	13 07 53.4	SZ	999.9	9999.9	1.6	
		e	08 25	SR	0.6	17.0		
21	15 25 55.*		17.5 S 70.6 W	SOUTHERN PERU				
			H= 125 KM	MAG 3.90 CGS				
21	19 00 53.7		53. N 160.5 E	NEAR EAST COAST OF KAMCHATKA				
21	00-	eP	19 11 24.8	SZ	0.8	4.9	63.7	4.67
21	LZ-	eP	21 35 05.8	SZ	0.7	40.5		
21	GG-	eP	23 20 44.3	SZ	0.7	22.1		
21	GG-	eL	23 22 31	LT	19	101.6		
21	GG-	eL	23 22 50	SR	0.9	65.2		
22	00 22 10.2		40.5 N 125.1 W	NEAR COAST OF NO. CALIFORNIA				
			H= 33 KM	MAG 4.70 CGS				
22	LZ-	eL	00 57 45	ST	0.7	9.7		
22	LZ-	eL	03 02 20	LR	29	114.0		
22	09 46 54.2		56.1 N 34.9 W	NORTH ATLANTIC OCEAN				
22	00-	eP	09 52 02.7	SZ	0.8	4.9	24.0	4.06
22	LZ-	eL	10 22 27	LR	23	117.9	77.4	
22	LZ-	eP	10 02 17.8	SZ	0.3	6.1	2.3	
		eS	02 48	SR	0.3	5.2		
22	11 14 43.*		57.8 N 149.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.20 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
22	14 56 53.1		12.4 N 95.7 E	ANDAMAN ISLANDS REGION				
			H= 33 KM	MAG 5.00	CGS			
22	19 37 53.2		16.1 S 173.4 W	TONGA ISLANDS				
			H= 33 KM	MAG 5.00	CGS			
22	GG- eP ⁰ 1 eL		19 57 33.9 20 41 10	SZ LR	1.3 35	42.8 414.6	146.3	
22	20 00 22.8		15.5 S 167.5 E	NEW HEBRIDES ISLANDS				
			H= 123 KM	MAG 5.00	CGS			
22	00- eP ⁰ eSS e eL		20 19 21.1 39 12 43 16 56 56	SZ LR LR LR	0.7 30 28 40	54.9 520.1 656.9 1062.2	131.5	
22	20 29 20.3		58.6 N 150.0 W	PRINCE WILLIAM SOUND ALASKA				
			H= 33 KM	MAG 5.10	CGS			
22	23 04 13.8		13.2 S 167.1 E	NEW HEBRIDES ISLANDS				
			H= 218 KM	MAG 4.00	CGS			
23	01 31 40.3		6.7 S 155.0 E	SOLOMON ISLANDS				
			H= 72 KM	MAG 5.00	CGS			
23	LZ- eP ⁰ e		01 50 47.9 50 57	SZ SZ	1.2 1.0	7.4 9.5	131.3	
23	01 51 10.6		32.1 N 138.7 E	SOUTH OF HONSHU JAPAN				
			H= 33 KM	MAG 4.80	CGS			
23	LZ- eP ⁰ 1 e		02 11 03.5 11 11	SZ SZ	1.5 1.3	15.0 21.9	150.7	
23	00- eL		02 27 50	LR	35	850.5	78.0	
23	GG- eL		02 30 53	LR	45	627.0	86.2	
23	03 06 42.6		56.8 N 149.6 W	PRINCE WILLIAM SOUND ALASKA				
			H= 33 KM	MAG 3.90	CGS			
23	03 13 55.7		60.9 N 144.3 W	PRINCE WILLIAM SOUND ALASKA				
			H= 35 KM	MAG 4.20	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	03 32 50.3		5.3 S 134.0 E	ARU ISLANDS REGION				
			H= 33 KM	MAG 6.40	CGS			
23	00- ePD eP ⁰ eP ⁰ ePP ePP ePPP eSKS eSP		03 47 21 50 53 51 13.0 52 03 52 04 54 23 57 44 04 01 22	LZ LZ SZ SZ LZ LZ LT LZ	23.0 13 1.0 1.5 11 20 21 999.9	1424.0 1018.8 16.3 132.3 16.4U 3952.2 4570.0 9999.9	110.2	
23	GG- ePD eP ⁰ eP ⁰ ePP ePP eSKP eSKS eSKKS eSP		03 47 43 51 28 51 32.2 52 35 52 36 55 10 58 15 59 28 04 02 05	LZ LZ SZ SZ LZ LZ LT LZ	23 13 1.5 1.2 18 11 23 24 25	473.1 507.7 75.3 85.6 1856.8 6067.9 1682.7 1716.2 5130.2	114.8	
23	LZ- eP ⁰ 1 eP ⁰ 1 ePP ePPP e eL		03 52 36.7 52 37 D 56 05 59 38 04 16 55 43 59	SZ LZ LZ LZ LT LZ	1.2 21 21 22 28 25	240.0 9999.9 5113.1 2560.0 7024.5 5994.6	149.1	
23	07 03 21.6		60.8 S 19.8 W	SANDWICH ISLANDS REGION				
			H= 33 KM	MAG 5.40	CGS			
23	LZ- eP		07 13 02.1	SZ	0.8	27.5	56.4	5.34
23	07 34 34.*							
23	08 27 01.6		43.3 N 126.5 W	OFF COAST OF OREGON				
			H= 33 KM	MAG 4.30	CGS			
23	LZ- eP eS		09 27 06.6 27 29	SZ ST	0.4 0.5	25.2 43.6	1.6	
23	10 32 47.9		6.6 S 155.1 E	SOLOMON ISLANDS REGION				
			H= 60 KM	MAG 5.30	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	LZ-	eP ¹	10 51 56.8	SZ	1.3	17.5	131.3	
	e		52 07	SZ	1.0	9.5		
	eL		11 36 12	LZ	25	283.9		
23	11 25 55.*		60.9 N 144.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.00 CGS				
23	14 23 43.2		36.9 N 37.9 E	TURKEY				
			H= 57 KM	MAG 4.80 CGS				
23	GG-	eP	14 28 46.9	SZ	0.7	13.8	23.1	4.49
	e		28 50	SZ	1.2	154.1		
	eP		28 50	LZ	20	122.0		
	e		32 57	LZ	20	708.1		
	eL		36 42	LT	25	1162.4		
23	00- eL		14 34 40	LT	30.0	1004.1		
23	14 56 30.9		57.3 N 151.9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 5.30 CGS				
23	GG-	eP	15 07 57.6	SZ	1.0	50.1	72.5	5.52
23	15 47 15.*		59.9 N 147.5 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 4.10 CGS				
23	GG-	eP	17 14 47.2	SZ	1.2	34.2		
23	18 44 58.7		16.6 N 99.0 W	OFF COAST GUERRERO, MEXICO				
			H= 46 KM	MAG 4.00 CGS				
23	LZ-	eP	19 03 10.9	SZ	0.8	4.0		
23	20 45 20.7		14. N 124.4 E	NEAR EAST COAST LUZON, P. I.				
			H= 45 KM					
23	GG-	eL	21 31 23	LR	28.0	614.6	93.7	
23	21 08 42.		52.7 N 160.9 E	NEAR EAST COAST OF KAMCHATKA				
			H= 33 KM	MAG 4.80 CGS				
23	00- eP		21 19 14.2	SZ	1.6	155.2	64.1	5.89
	eL		42 17	LR	25	739.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	LZ-	eP	21 47 06.2	SZ	0.5	4.5	266	
	eS		47 39	SZ	0.8	9.1		
24	00 42 33.9		52.7 N 160.9 E	NEAR EAST COAST OF KAMCHATKA				
			H= 33 KM	MAG 4.90 CGS				
24	GG-	eP	00 54 13.4	SZ	1.0	39.5	74.8	5.33
	eL		01 24 56	LZ	25	149.5		
24	00- eL		01 19 52	LR	25	288.1	64.1	
24	03 18 16.3		20.1 S 177.8 W	FIJI ISLANDS				
			H= 393 KM	MAG 3.70 CGS				
24	00- eL		04 19 40	LR	35.0	917.1	138.6	
24	03 49 57.8		38. N 21.8 E	SOUTHERN GREECE				
			H= 92 KM	MAG 4.10 CGS				
24	03 51 05.		59.5 N 144.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 5.20 CGS				
24	04 23 05.1		56.6 N 151.7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.10 CGS				
24	LZ- eL		04 42 35	LR	27.0	514.3		
24	05 26 28.9		3.9 S 138.8 E	WESTERN NEW GUINEA				
			H= 118 KM					
24	05 56 10.1		5.1 S 144.2 E	NORTH EAST NEW GUINEA				
			H= 106 KM	MAG 6.30 CGS				
24	00- eP ¹		06 14 39.6	SZ	1.0	15.9	114.2	
	eP ¹		14 40	LZ	15	1349.4		
	e		23 03	LR	33	3357.8		
	eSP		25 16	LZ	20	3097.9		
24	GG- eP ¹		06 14 51.1	SZ	0.5	17.0	120.5	
	ePP		16 25	SZ	1.1	118.7		
	ePP		16 27	LZ	16	1982.0		
	ePPP		19 12	LZ	16	1023.0		
	e		21 40	LT	15	1466.4		
	e		22 32	LT	14	2059.8		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		e	24 08	LR	25.0	3873.9		
		e	25 43	LZ	23	4493.1		
24	LZ-	eP*	06 15 24.3	SZ	0.6	2.1	141.3	
		e	15 26	SZ	1.0	183.7		
		eP*	15 27	LZ	21	3171.1		
		e	17 44	SZ	1.1	153.7		
		ePP	18 38	LZ	18	4303.2		
		e	28 16	LT	21	3336.0		
		eSPP	31 07	LZ	28	6929.3		
		e	37 54	LZ	24	7237.4		
		eL	07 00 56	LZ	20	4087.0		

AVG. 5.05

24 08 19 41.* 28. S 69.0 W CHILE ARGENTINA BORDER
H= 30 KM MAG 4.20 CGS

24 08 57 09.8 58.7 N 149.5 W PRINCE WILLIAM SOUND, ALASKA
H= 33 KM MAG 4.50 CGS

24 11 13 23.1 23.1 S 175.9 W TONGA ISLANDS
H= 33 KM MAG 4.50 CGS

24 14 30 07.2 29.3 N 130.1 E RYUKYU ISLANDS REGION
H= 31 KM MAG 4.80 CGS

24 14 40 28.3 13.3 N 88.8 W NEAR COAST OF EL SALVADOR
H= 158 KM MAG 5.10 CGS

24	LZ-	eP	14 47 18.2	SZ	1.3	54.9	35.6	5.15
		e	47 53	LZ	12	726.7		
		ePCP	49 42	SZ	1.5	130.4		
		eS	52 32	LT	21	3990.7		
		e	53 15	SZ	1.6	424.8		
		eL	57 20	ST	2.0	122.1		
		eL	58 12	LT	27	3984.7		

24	00-	eP	14 52 38.0	SZ	0.9	19.7	83.1	4.93
		ePP	55 52	SZ	1.6	117.9		
		e	15 02 47	LR	22	612.6		

		eSS	08 05	LR	20	833.5		
		eL	13 00	LR	21	394.0		

24	GG-	eP	14 52 54.5	SZ	1.0	27.4	86.3	5.09
		eP	52 55	LZ	18	321.4		
		e	53 46	LZ	19	382.9		
		ePP	56 13	LZ	18	267.8		
		ePP	56 21	SZ	1.4	65.3		
		e	57 00	LZ	24	264.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eSS	15 08 35	LR	25.0	635.3		
		e	16 28	LR	26	924.4		
		e	18 13	LR	24	1130.4		
		e	19 16	LR	23	1146.6		
		eL	21 05	LT	24	513.7		
		eL	30 10	LR	18	1392.9		
		eL	30 10	LZ	19	2348.8		
		eL	30 10	LT	19	1636.1		

AVG. 5.05

24 19 50 22.3 51.7 N 176.9 W ANDREANOF ALEUTIAN ISLANDS
H= 50 KM MAG 4.60 CGS

25 00 17 56.* 60.3 N 147.0 W ALASKA AFTERSHOCK
H= 33 KM MAG 3.90 CGS

25 00 51 08. 59.9 N 147.1 W PRINCE WILLIAM SOUND, ALASKA
H= 33 KM MAG 4.10 CGS

25 01 11 44.3 37.8 N 30.0 E SOUTHWESTERN TURKEY
H= 44 KM MAG 4.50 CGS

25	00-	eS	01 21 51	LR	15	370.5	26.2
		eL	25 00	LT	18	368.7	
	GG-	eL	01 22 00	LZ	19	280.8	18.0

25 01 59 14.* 60. N 145.1 W ALASKA AFTERSHOCK
H= 33 KM MAG 4.00 CGS

25 03 48 36.* 37.3 S 94.5 W OFF COAST OF CENTRAL CHILE
H= 33 KM MAG 4.50 CGS

25	LZ-	eP	03 54 53.6	SZ	0.9	68.2	31.1	5.51
		eL	04 02 25	LZ	26	1220.7		

25 04 53 15.* 36.6 N 141.4 E NEAR E. COAST HONSHU, JAPAN
H= 33 KM MAG 3.60 CGS

25 05 36 42.2 6.7 S 155.0 E SOLOMON ISLANDS
H= 72 KM MAG 5.10 CGS

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
25	05 56 40.8		45.6 N 149.1 E KURILE ISLANDS					
			H= 33 KM MAG 4.10 CGS					
25	07 01 20.*		59.8 N 145.3 W ALASKA AFTERSHOCK					
			H= 33 KM MAG 3.80 CGS					
25	09 43 30.7		59.9 N 144.9 W PRINCE WILLIAM SOUND ALASKA					
			H= 30 KM MAG 5.00 CGS					
25	00- eP		09 53 21.6	SZ	1.0	29.9	57.9	5.28
	eL		10 14 09	LR	25	256.3		
25	GG- eP		09 54 35.9	SZ	0.8	19.4	69.1	5.26
	eL		10 17 50	LZ	30	261.0		
25	LZ- eL		10 34 46	LR	27	259.0	97.3	
					Avg.		5.27	
25	LZ- eP		10 27 40.1	SZ	0.5	11.2		
25	11 07 52.*		49.8 N 155.6 E KURILE ISLANDS REGION					
			H= 80 KM MAG 4.60 CGS					
25	11 34 29.*		57.6 N 150.8 W ALASKA AFTERSHOCK					
			H= 33 KM MAG 4.20 CGS					
25	11 46 14.		15.6 S 70.4 W SOUTHERN PERU					
			H= 215 KM MAG 4.00 CGS					
25	LZ- iP		11 46 55.3C	SZ	0.3	9999.9	1.9	
	eL		47 22	LR	19	803.7		
25	12 44 09.6		35.2 N 27.6 E DODECANESE ISLANDS REGION					
			H= 27 KM MAG 4.50 CGS					
25	GG- eP		12 48 29.8	SZ	0.7	62.9	18.8	4.96
	eL		52 02	LZ	18	269.1		
	eLQ		53 10	L†	30	717.2		
	eLR		56 25	LZ	12	1400.1		
25	00- eP		12 49 58.0	SZ	0.6	8.5	28.0	4.70
	eLQ		57 15	L†	35	192.2		
	eLR		13 01 30	LZ	18	72.8		
					Avg.		4.83	
25	13 36 06.8		15.6 S 69.4 W BOLIVIA					
			H= 265 KM MAG 4.00 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
25	LZ- iP		13 36 45.5C	SZ	0.3	9999.9	1.1	
25	GG- eL		13 57 05	LZ	50.0	659.4		
25	16 10 01.3		59.9 N 146.1 W PRINCE WILLIAM SOUND ALASKA					
			H= 33 KM MAG 4.60 CGS					
25	00- eL		16 38 42	LR	35	144.2	58.1	
25	GG- eL		16 44 00	LZ	43	175.9	69.2	
25	18 11 24.*		60.7 N 145.3 W ALASKA AFTERSHOCK					
			H= 33 KM MAG 3.70 CGS					
25	18 37 58.1		24.4 N 125.3 E RYUKYU ISLANDS					
			H= 33 KM MAG 5.30 CGS					
25	00- eP		18 50 11.5	SZ	0.6	8.5	79.9	4.83
	eLQ		19 14 25	LR	48	709.6		
	eLR		19 45	LR	30	1102.5		
25	GG- eP		18 50 37.4	SZ	1.1	28.4	85.9	5.25
	e		19 11 20	LZ	28	214.1		
	eL		16 50	LR	55	796.9		
25	LZ- eP*1		18 58 03.6	SZ	1.4	32.6	164.7	
	eL		19 59 49	LR	34	451.2		
					Avg.		5.04	
25	GG- eL		21 04 10	LZ	23.0	96.0		
25	21 29 30.4		19.8 N 71.2 W NEAR N. CST. DOMINICAN REP.					
			H= 35 KM MAG 4.30 CGS					
26	01 17 12.*		14.9 N 92.5 W NEAR COAST CHIAPAS MEXICO					
			H= 45 KM MAG 4.20 CGS					
26	GG- eL		04 43 25	LZ	50.0	824.2		
26	10 09 19.*		17.3 N 98.1 W OAXACA MEXICO					
			H= 33 KM MAG 3.90 CGS					
26	GG- eP		11 57 16.7	SZ	0.3	12.3	1.4	
	eS		57 35	ST	0.4	43.1		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
26	13 59 27.7		5.8 S 105.0 E	SOUTHERN SUMATRA				
			H= 90 KM	MAG 5.60 CGS				
26	00- eL		14 49 21	LT	35.0	716.6	97.0	
26	14 46 17.*		14.1 S 167.9 E	NEW HEBRIDES ISLANDS REGION				
			H=195 KM					
26	14 52 07.6		20.6 S 178.0 W	FIJI ISLANDS REGION				
			H=490 KM	MAG 5.10 CGS				
26	GG- eP ¹ eP ² e		15 11 02.9 11 24.0 13 12	SZ	0.9 1.0 1.4	12.8 20.0 66.2	150.1	
26	LZ- eP eS		20 48 43.5 49 10	SZ SR	0.3 0.4	47.8 33.5	2.0	
26	22 17 02.2		28.1 S 178.2 W	KERMADEC ISLANDS				
			H= 37 KM	MAG 4.10 CGS				
26	22 34 48.6		60.4 S 24.6 W	SOUTH OF SANDWICH ISLANDS				
			H= 33 KM	MAG 4.80 CGS				
26	LZ- eP e eL		22 44 13.2 52 14 23 01 20	SZ LZ LZ	0.9 20 38	22.9 310.5 1239.5	54.2 5.21	
27	01 37 12.1		3 N 98.1 E	OFF WEST COAST OF SUMATRA				
			H= 33 KM	MAG 5.30 CGS				
27	00- eL		02 22 20	LT	30.0	840.0	88.4	
27	GG- eL		02 27 40	LR	26	291.2	87.8	
27	LZ- eL		02 54 43	LZ	25	430.8	159.4	
27	03 53 47.1		57.4 N 152.4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.30 CGS				
27	04 21 15.9		8.6 S 148.1 E	EASTERN PAPUA				
			H=110 KM	MAG 4.50 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
27	06 44 25.1		60.1 S 151.0 E	BALLENY ISLANDS REGION				
			H= 33 KM	MAG 5.00 CGS				
27	LZ- eP eSKS eSS eL		06 57 57.0 07 08 45 16 11 30 18	SZ LT LT LZ	1.3 22 35 30	9.5 754.5 1897.5 4602.2	97.5	5.27
27	00- eP ¹		07 04 35	LZ	15	384.2	160.6	
	e		10 44	LZ	12	1291.9		
	eSKS		15 40	LR	30	1116.4		
	e		19 13	LR	27	1418.8		
	ePPS		22 02	LR	25	2037.9		
	e		28 23	LT	25	1353.9		
	e		30 02	LZ	25	3888.3		
	eLQ		57 50	LR	60	29.5U		
	eLR		08 03 06	LZ	36	8703.7		
27	GG- eP ²		07 04 44	LZ	18	134.5	155.0	
	ePPP		12 10	LZ	14	594.5		
	e		35 20	LR	27	2373.4		
	eLQ		48 03	LT	35	3111.9		
	eLR		59 04	LR	50	8047.5		
27	LZ- eP eS		07 18 16.6 18 45	SZ SR	0.5 0.5	13.1 33.6	2.1	
27	09 09 07.*		16.6 N 94.8 W	OAXACA, MEXICO				
			H= 33 KM	MAG 3.50 CGS				
27	12 07 53.*		4. N 31.1 W	MID ATLANTIC OCEAN				
			H= 33 KM	MAG 4.70 CGS				
27	GG- eL		12 35 00	LZ	26.0	200.8	57.9	
27	14 36 18.*		19.8 S 170.1 E	NEW HEBRIDES ISLANDS				
			H=274 KM					
27	LZ- e		16 17 37	LZ	16.0	236.8		
27	LZ- e		16 25 03	LR	19	340.4		
27	LZ- eL		16 29 07	LZ	30	767.0		
27	LZ- eP		18 30 35.9	SZ	0.8	8.9		
27	19 09 39.		60.5 N 146.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.40 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
27			20 25 04*	59°8' N 148°4' W	PRINCE WILLIAM SOUND, ALASKA			
				H= 33 KM	MAG 4.30	CGS		
28	LZ-	eL	07 02 04	LR	24.0	227.4		
28	08 38 12.*	59.6 N 149.9 W	ALASKA AFTERSHOCK					
		H= 33 KM	MAG 3.90	CGS				
28	12 21 25.6	59° N 138°7' W	NEAR COAST OF S. E. ALASKA					
		H= 33 KM	MAG 4.60	CGS				
28	00- eL	12 52 03	LT	35	532.1	58.0		
28	GG- eL	12 54 06	LT	30	550.4	68.9		
28	LZ- eL	13 09 47	LT	30	309.3	94.0		
28	13 34 10.4	57.6 N 150.0 W	PRINCE WILLIAM SOUND, ALASKA					
		H= 33 KM	MAG 4.40	CGS				
28	14 55 25.5	11.9 S 166.2 E	SANTA CRUZ ISLANDS					
		H= 42 KM	MAG 4.20	CGS				
28	15 11 30.4	12.3 S 166.1 E	SANTA CRUZ ISLANDS REGION					
		H= 72 KM						
28	19 33 33.5	16.6 S 70.0 W	SOUTHERN PERU					
		H= 116 KM	MAG 4.20	CGS				
28	LZ- eP	19 34 04.4D	SZ	0.3	9999.9	1.5		
	eS	34 31	SR	0.4	9999.9			
	eL	34 35	LR	23	225.9			
28	LZ- eP	20 38 03.5	SZ	0.7	69.9			
28	LZ- eL	20 39 08	LZ	15	800.5			
28	LZ- e	20 39 56	SZ	1.1	87.7			
28	22 56 18.8	56.7 N 152.0 W	ALASKA AFTERSHOCK					
		H= 33 KM	MAG 4.10	CGS				
29	00 44 43.8	32.4 S 71.1 W	CENTRAL CHILE					
		H= 79 KM	MAG 4.50	CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29	LZ- eP	00 48 28.4	SZ	1.2	89.4	16.3	4.85	
	e	48 50	SZ	0.9	81.6			
	eL	52 18	ST	2.4	150.7			
	eL	53 39	LZ	25	712.1			
29	02 11 36.6	32.4 N 129.0 E	NEAR W. COAST KYUSHU, JAPAN					
		H= 33 KM	MAG 4.60	CGS				
29	00- eL	02 51 45	LR	27	502.5	74.2		
29	GG- eL	02 56 02	LR	27	961.0	81.4		
29	03 52 43.*	60. N 147.4 W	PRINCE WILLIAM SOUND, ALASKA					
		H= 33 KM	MAG 4.00	CGS				
29	04 08 01.2	3.4 S 77.7 W	PERU ECUADOR BORDER					
		H= 56 KM	MAG 4.30	CGS				
29	LZ- eP	04 11 47.4	SZ	0.8	14.0	15.7	4.25	
	e	11 53	SZ	1.0	33.5			
	eL	16 25	LT	25	1445.6			
29	04 21 06.7	39.3 N 23.7 E	AEGEAN SEA					
		H= 33 KM	MAG 5.10	CGS				
29	GG- eP	04 24 25.2	SZ	1.4	105.9	13.7	5.39	
	e	24 32	SZ	1.1	102.9			
	eL	26 57	LT	38	9999.9			
29	00- eP	04 26 12.7	SZ	1.3	254.7	23.2	5.53	
	eP	26 13	LZ	17	476.2			
	e	26 21	SZ	1.2	341.8			
	eS	30 24	LT	20	3709.7			
	eLQ	31 53	LR	32	3284.7			
	eL	34 46	ST	2.7	315.6			
	eLR	35 04	LZ	17	4076.4			
29	LZ- eL	05 05 11	LR	45	1197.0	101.8		
						AVG.	5.46	
29	05 47 45.*	12.8 S 167.1 E	SANTA CRUZ ISLANDS					
		H= 150 KM	MAG 4.10	CGS				
29	07 21 30.2	7.2 S 155.7 E	SOLOMON ISLANDS					
		H= 78 KM	MAG 5.20	CGS				
29	08 08 41.*	12.1 N 88.4 W	OFF COAST OF EL SALVADOR					
		H= 33 KM	MAG 3.90	CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29			17 00 02.9	39.2 N 23.7 E AEGEAN SEA	H= 32 KM MAG 4.60 CGS			
29	GG-	eP	17 03 20.0	SZ	0.7	8.7	13.7	4.61
	eLQ		06 50	LT	18	9999.9		
	eL		08 09	SR	3.2	1453.2		
	eLR		09 12	LZ	16	3742.7		
29	00-	eP	17 05 09.2	SZ	0.6	16.0	23.3	4.67
	eP		05 10	LZ	18	104.7		
	ePP		05 40	SZ	0.9	49.3		
	eS		09 26	LR	19	675.1		
	eLQ		11 49	LR	23	1913.2		
	eL		13 25	LT	22	1742.5		
	eL		13 25	LR	23	1913.2		
	eL		13 25	LZ	28	868.1		
	eLR		14 00	LZ	18	1030.0		
				Avg.		4.64		
29	17 37 43.1		58.2 S 15.7 W EAST OF SANDWICH ISLANDS	H= 33 KM MAG 5.60 CGS				
29	LZ-	e	17 47 39	SZ	1.6	151.2	57.1	
	e		54 02	LZ	26	485.4		
	eSP		55 41	LZ	18	607.1		
	eSS		58 55	LT	28	760.8		
	eLQ		18 01 52	LT	15	1981.2		
	eLR		05 22	LT	35	1315.7		
29	00-	eL	18 30 20	LR	35	286.6	120.7	
29	17 59 39.5		17.1 S 72.1 W NEAR COAST OF SOUTHERN PERU	H= 44 KM MAG 4.50 CGS				
29	LZ-	eP	18 00 43.1	SZ	0.9	81.6	3.6	4.76
29	GG-	eL	18 37 47	LZ	22	95.0	98.6	
29	21 53 15.*		11.8 N 87.6 W OFF COAST OF EL SALVADOR	H= 33 KM MAG 4.50 CGS				
30	00 26 00.*		56.9 N 152.2 W ALASKA AFTERSHOCK	H= 33 KM MAG 3.90 CGS				
30	03 41 42.3		15.5 S 174.7 W TONGA ISLANDS	H= 224 KM MAG 4.20 CGS				
30	03 49 57.6		58.9 N 139.0 W SOUTHEASTERN ALASKA	H= 20 KM MAG 3.87 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30	GG-	eP	04 00 55.0	SZ	1.0	46.7	69.1	5.858
	eL		26 15	LZ	28	212.0		
30	00-	eL	04 15 12	LR	33	256.1	58.1	
30	LZ-	eP	04 23 54.3	SZ	0.7	13.5		
30	LZ-	eL	04 25 13	ST	0.8	3.7		
30	04 49 48.		19.7 S 177.8 W FIJI ISLANDS	H= 339 KM MAG 4.00 CGS				
30	05 31 51.1		56.8 N 152.7 W PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.50 CGS				
30	00-	eP	05 42 08.3	SZ	0.8	7.5	61.8	4.90
30	07 37 32.*		16.6 N 85.1 W OFF NORTH COAST OF HONDURAS	H= 33 KM MAG 3.80 CGS				
30	07 57 33.*		3.8 N 101.1 W WEST OF GALAPAGOS ISLANDS	H= 33 KM MAG 4.60 CGS				
30	08 06 23.*		56.2 S 27.6 W SANDWICH ISLANDS	H= 88 KM MAG 4.90 CGS				
30	LZ-	eP	08 15 14.2	SZ	0.8	28.0	50.5	5.29
	e		15 35	SZ	0.9	34.9		
	eL		38 46	LR	27	233.1		
30	LZ-	eP	10 51 20.0	SZ	0.5	10.6		
30	LZ-	eL	10 53 48	LR	19	405.0		
30	11 50 47.4		61.3 N 147.0 W PRINCE WILLIAM SOUND, ALASKA	H= 33 KM MAG 4.40 CGS				
30	LZ-	eP	13 10 30.3D	SZ	0.3	12.0	2.4	
	eS		11 02	SR	0.4	8.8		
30	14 54 03.3		20.3 N 121.1 E OFF NORTH COAST LUZON, P. I.	H= 50 KM MAG 5.70 CGS				
30	16 03 31.4		4.6 S 153.2 E NEW IRELAND REGION	H= 78 KM MAG 5.20 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30	00-	e	16 17 40	LZ	25.0	705±1	117±0	
		ePP	23 17	LZ	30	759±1		
		ePS	33 18	LT	28	1732±3		
		e	40 15	LT	43	2529±8		
		eSSS	43 30	LT	35	1572±1		
		eL	58 40	LT	35	1644±7		
30	GG-	e	16 49 10	LT	25	1101±3	124±8	
		eLQ	56 25	LT	27	1525±1		
		eLR	17 00 50	LT	25	1101±3		
30	16 25 31.*		59° N 148°6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.20 CGS				
30	GG-	eP	17 38 42.5	SZ	1.1	26±6		
30	00-	eP	18 16 39.0	SZ	1.0	25±6		
30	19 06 48.7		12.3 N 124.4 E	SAMAR, PHILIPPINE ISLANDS				
			H=121 KM					
30	00-	eL	20 01 00	LZ	26.0	50±2		
30	23 51 28.*		58° N 150°9 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 3.90 CGS				

May 1964

SEISMOLOGICAL BULLETIN
WEST GERMANY, NORWAY, BOLIVIA

THE GEOTECHNICAL CORPORATION
3401 SHILOH ROAD
GARLAND, TEXAS



SEISMOLOGICAL BULLETIN

GRAFENBERG, WEST GERMANY
OSLO, NORWAY
LA PAZ, BOLIVIA

The Geotechnical Corporation wishes to acknowledge the cooperation of the following scientific organizations in the collection and production of the data in this bulletin:

Bundesanstalt fur Bodenforschung, Hannover, West Germany (Professor Dr. Hans Closs, Director)

Jordskel, University of Bergen, Bergen, Norway (Professor A. Kvale, Director)

Observatorio San Calixto, La Paz, Bolivia (Father Ramon Cabre, S. J.)

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SEISMOLOGICAL BULLETIN

GRAFENBERG, WEST GERMANY
OSLO, NORWAY
LA PAZ, BOLIVIA

1. INTRODUCTION

1.1 This bulletin contains seismological data on earthquake phases recorded at three mobile seismological stations being operated by The Geotechnical Corporation. The bulletin is intended to be an aid to interested observers in determining the extent of the earthquake data contained in the records from the three teams.

1.2 The bulletin contains the following:

a. Data on all of the phases that have been associated with epicenters reported by the U. S. Coast and Geodetic Survey (USC&GS);

b. Data on the epicenters listed in the bulletin - as reported by the USC&GS;

c. Arrival time, period, amplitude, and distance for phases not associated with USC&GS epicenters.

1.3 All phases are listed in chronological order, except that unassociated phases are not mixed with a sequence of associated phases. In such cases, the unassociated phases are listed immediately following the associated phases.

2. INSTRUMENTATION

2.1 Instrumentation at the Grafenberg, West Germany (GG-GR), and Oslo, Norway (OO-NW) sites consists of a short-period vertical Benioff seismometer

array. A short-period vertical Johnson-Matheson seismometer array is in operation at La Paz, Bolivia (LZ-BV). Each site is also equipped with a three-component Sprengnether long-period seismograph system. Both systems use phototube amplifiers. The response characteristics of these systems are shown in figures 1, 2, and 3.

2.2 All data are recorded by 35-mm Film Recorders, Geotech Model 1301A, 14-channel Magnetic-Tape Recorders, Ampex Model 314, and 16-mm Film Developcorders, Geotech Model 4000C.

2.3 Precision Timing Systems, Geotech Model 5400 or 5400A, are used for primary timing. Chronometers are used for secondary timing. WWV is used for the time standard at LZ-BV. GG-GR and OO-NW use Radio Potsdam. WWV is a United States National Bureau of Standards Radio Station located at Beltsville, Maryland. The accuracy of the time program from WWV agrees with U. S. Naval Observatory time.

2.4 Each system is calibrated at least once every 24 hours. In the short-period system calibration, an electromagnetic (EM) calibrator is used to determine the magnification as a function of frequency and a weight-lift calibration is used to verify the EM magnification at 1 cps. In the long-period systems, magnification is determined as a function of frequency using EM calibrators. No method of verification is used. In the EM method of calibration, the seismometer mass is driven by a known sinusoidal force and the magnification is calculated using the relationships between the sinusoidal force and the recorded amplitude.

3. INTERPRETATION OF COLUMN TITLES

The column titles appearing in this bulletin are defined as follows:

3.1 DAY

The date, for the day of the month, is printed each time a new epicenter is listed and each time the station designator changes. Dates are given in Greenwich Civil Time (GCT).

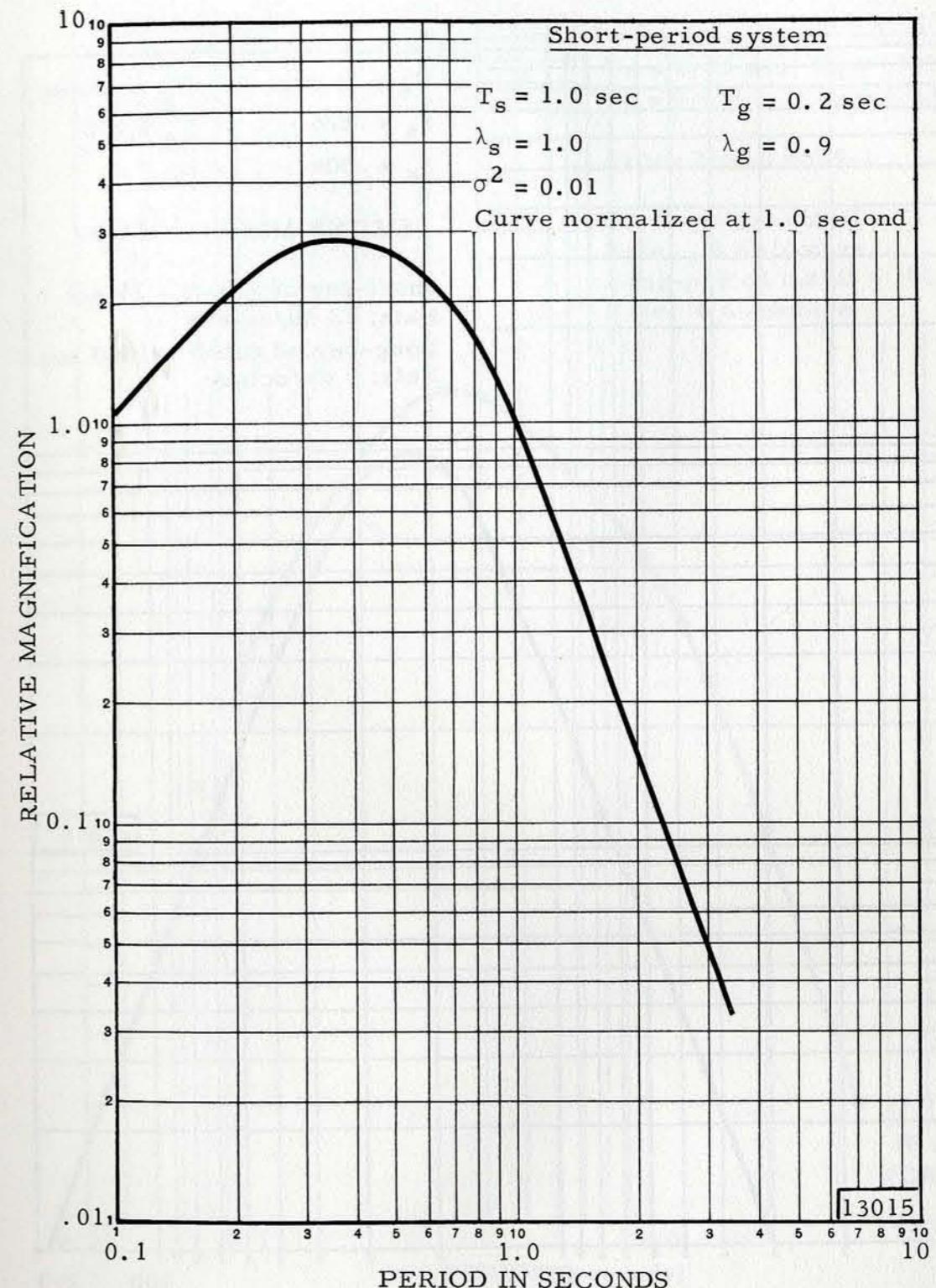


Figure 1. Frequency response of the Benioff short-period seismograph system

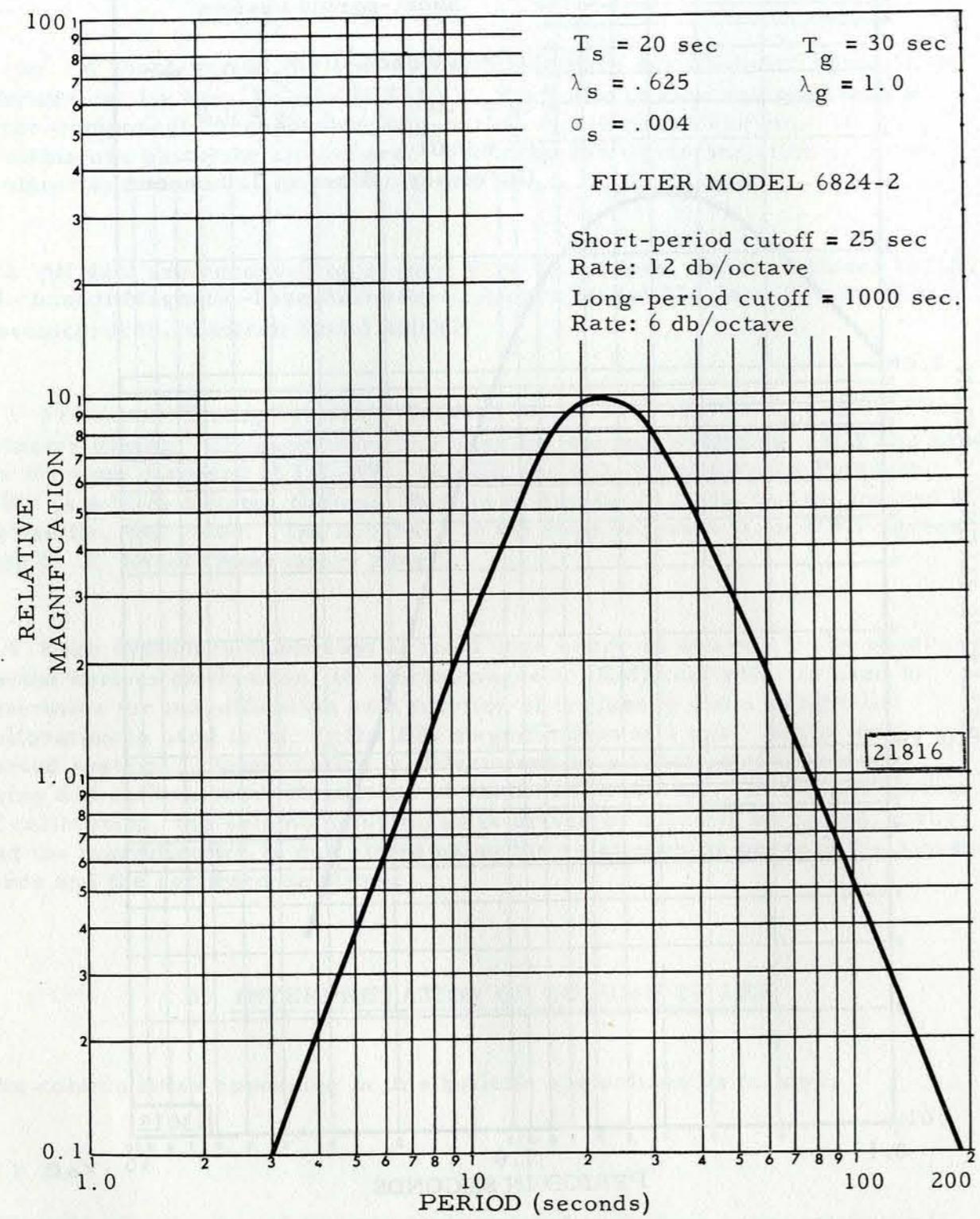


Figure 2. Frequency response of the Sprengnether long-period seismograph system

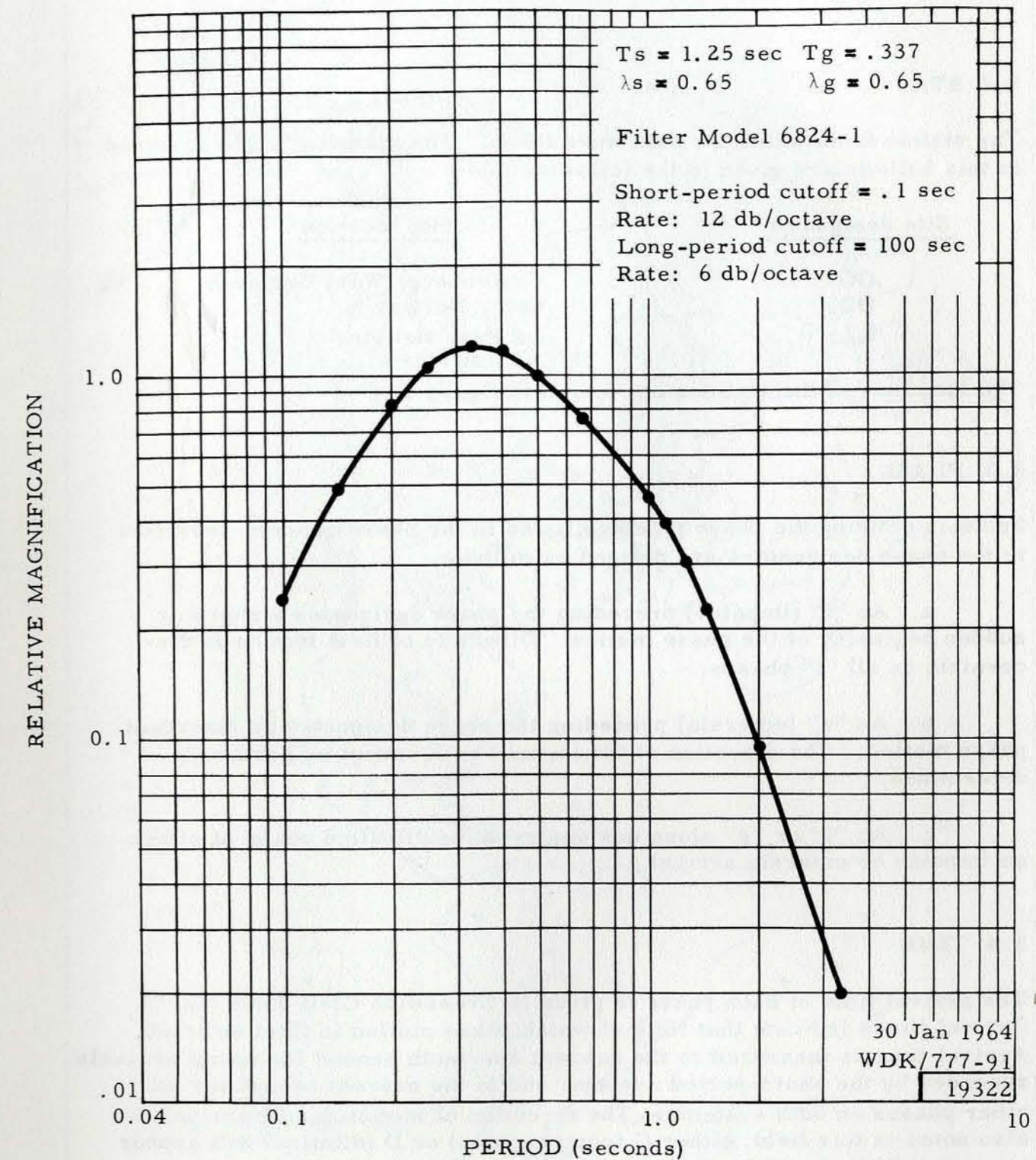


Figure 3. Frequency response of the Johnson-Matheson seismograph system

3.2 STA

The station from which the data were taken. The station designators used in this bulletin are given in the following table:

<u>Site designator</u>	<u>Site location</u>
GG-	Grafenberg, West Germany
OO-	Oslo, Norway
LZ -	La Paz, Bolivia

The locations of the stations are shown in figure 4.

3.3 PHASE

Symbols defining the phase type are listed in the phase column. Prefixes to the phase designators are defined as follows:

a. An "i" (impetus) preceding the phase designates a sharp or sudden beginning of the phase motion. Direction of first motion is discernible on all "i" phases.

b. An "e" (emersio) preceding the phase designates an emergent phase motion. The direction of the initial break cannot be positively determined.

c. An "i" or "e" alone designates an unidentified phase of either an impetus or emersio arrival.

3.4 TIME

The arrival time of each phase is given in Greenwich Civil Time (GCT). Arrival times indicate that time at which phase motion is first detected. Arrival time is measured to the nearest one-tenth second for initial arrivals recorded by the short-period system, and to the nearest second for all other phases on both systems. The direction of motion for iP arrivals is also noted in this field; either C (compression) or D (dilation) will appear immediately to the right of the tenths of second column.

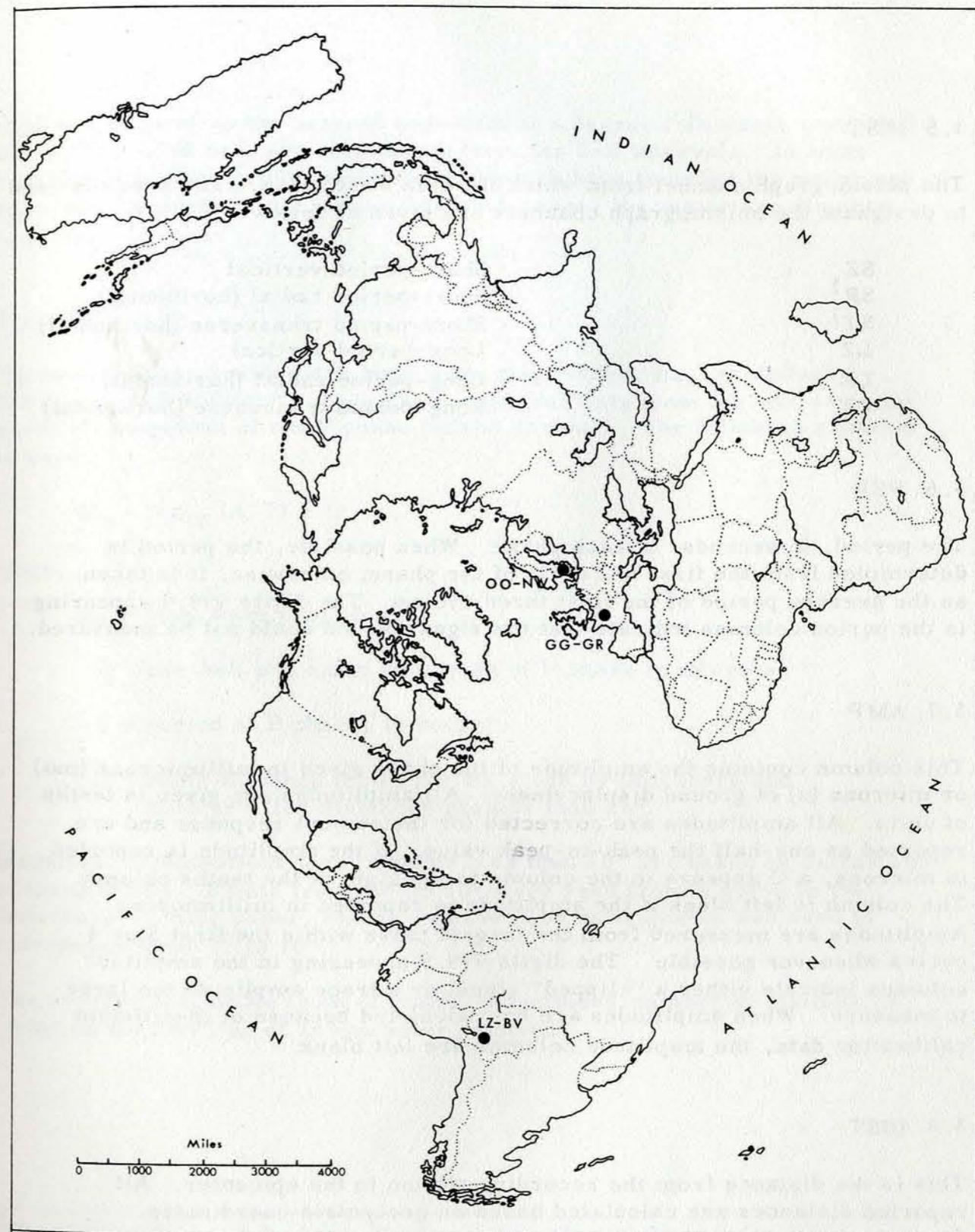


Figure 4. Bulletin sites

3.5 INST

The seismograph channel from which the data were taken. The symbols used to designate the seismograph channels are given as follows:

SZ	Short-period vertical
SR ¹	Short-period radial (horizontal)
ST ¹	Short-period transverse (horizontal)
LZ	Long-period vertical
LR ¹	Long-period radial (horizontal)
LT ¹	Long-period transverse (horizontal)

3.6 PER

The period, in seconds, of each phase. When possible, the period is determined from the first full cycle of the phase; otherwise, it is taken as the average period of the first three cycles. The digits 999.9 appearing in the period columns indicate that the signal period could not be measured.

3.7 AMP

This column contains the amplitude of the phase given in millimicrons (μ) or microns (μ) of ground displacement. All amplitudes are given in tenths of units. All amplitudes are corrected for instrument response and are reported as one-half the peak-to-peak value. If the amplitude is reported in microns, a U appears in the column to the right of the tenths column. The column is left blank if the amplitude is reported in millimicrons. Amplitudes are measured from the largest pulse within the first 3 or 4 cycles whenever possible. The digits 999.9 appearing in the amplitude columns indicate either a "clipped" signal or a trace amplitude too large to measure. When amplitudes are not calculated because of insufficient calibration data, the amplitude columns are left blank.

3.8 DIST

This is the distance from the recording station to the epicenter. All reported distances are calculated based on geocentric coordinates.

¹Table 1 gives the instrument orientation of the horizontal seismometers.

Distance is given to the nearest one-tenth of a degree. Distance computed for unassociated data are determined from the S-P intervals. In some instances, surface groups are recorded which have traveled the major arc from the epicenter to the station. In such cases, the major arc distance is given.

3.9 MAG

The magnitudes provided are body wave magnitudes, m_b , as defined by Gutenberg and Richter². They are determined only from the short-period vertical component of the P phase (initial arrival). The following equation is used:

$$m_b = \log_{10} (A/T) + Q$$

where

m_b = body wave magnitude

A = one-half p-p earth amplitude of P phase in microns

T = period of P phase, in seconds

Q = depth-distance factor for PZ given by Gutenberg and Richter², for distances greater than 16° .

Magnitude computations for distances less than 16° are based on extensions of the Q tables. Points from 10° to 16° were read from a curve in the Gutenberg-Richter paper, and an inverse cube relationship was used to extrapolate from 2° to 10° .

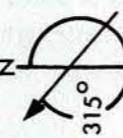
The average magnitude (sum of station magnitudes/number of stations) is listed on the last line of an epicenter print-out.

²Gutenberg, B., and Richter, C. F., 1956, Magnitude and energy of earthquakes: Ann. Geofis., vol. 9, pp. 1-15.

Table 1. Bulletin site information

Site designator	Site location	Horizontal seismometer orientation (Azimuth from true north in degrees ¹)				Rock type
		Radial	Trans- verse	Site coordinates in deg, min, sec	Elevation in km	
GG-GR	Grafenberg, West Germany	140	230	N 49° 41' 32"	0.53	Limestone
OO-NW	Oslo, Norway	138	228	N 61° 03' 17"	0.56	Glacial drift
LZ-BV	La Paz, Bolivia	141	231	S 16° 15' 31"	3.99	Limestone

¹When earth moves in direction shown, trace moves up.



4. INTERPRETATION OF UNITED STATES COAST AND GEODETIC SURVEY DATA

The epicenter data reported by the USC&GS precedes each list of associated phases. This information appears as follows:

Line 1 (from left to right)

First group:	Day of the month
Second group:	Origin time of the event
Third group:	Geographic coordinates of the epicenter
Fourth group:	Geographic description

NOTE

An asterisk (*) following the origin time indicates epicenters believed accurate to $1/2^{\circ}$ in latitude and longitude and to 50 km in depth.

Line 2 (from left to right)

First group:	Depth (h) of the hypocenter in kilometers
Second group:	Magnitude (MAG) as determined by Pasadena (PAS), Berkeley (BRK), Palisades (PAL), or USC&GS (CGS)

NOTE

MAG. (CGS) is m_b of Gutenberg and Richter from the P phase only. The magnitude quoted is an average value determined from data forwarded by cooperating Standard stations and other observatories.

5. REMARKS

The Geotechnical Corporation routinely receives and preprocesses data collected from three overseas field stations. Information on background levels, magnification levels, operational procedures, available records, and other data can be provided to interested organizations. Requests for such information should be made to the attention of:

THE GEOTECHNICAL CORPORATION
3401 Shiloh Road
Garland, Texas 75041

ATTN: Mr. J. M. Whalen

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	00	17 22*	56.6 N 151.5 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 30 KM	MAG 4.50	CGS			
1	01	10 54*	14.1 N 93.9 E	ANDAMAN ISLANDS				
			H= 33 KM					
1	03	13 03.5	57.4 N 150.0 W	PRINCE WILLIAM SOUND, ALASKA				
1	GG-	eP	03 24 27.0	H= 30 KM	MAG 5.30	CGS		
			SZ	0.8	19.1	72.2	5.19	
1	03	40 36.2	59.7 N 144.1 W	ALASKA AFTERSHOCK				
			H= 20 KM	MAG 4.40	CGS			
1	LZ-	eP	03 52 21.2	SZ	0.3	4.6	1.9	
		eS	52 46	ST	0.5	6.1		
1	04	19 57*	21.1 S 69.0 W	NORTHERN CHILE				
			H= 119 KM	MAG 4.20	CGS			
1	LZ-	eP	04 21 11.5	SZ	1.2	26.1	4.8	4.44
1	06	01 55.4	60.5 N 145.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 5.40	CGS			
1	00-	eP	06 11 43.0	SZ	0.9	29.5	57.4	5.32
		eP	11 46	LZ	17	307.7		
		ePP	13 40	LZ	20	165.4		
		eS	19 37	LT	20	565.8		
		e	26 40	LT	25	405.0		
		eLQ	29 12	LT	35	701.4		
		eLR	33 34	LZ	26	1039.4		
1	GG-	eP	06 12 50.5	SZ	1.0	48.5	68.6	5.61
		eS	22 15	LR	45	18.50		
		e	28 00	LZ	17	219.8		
		eL	37 10	LT	25	712.1		
1	LZ-	eL	06 49 45	LZ	45	1185.1	97.8	
						Avg.	5.46	
1	07	08 12*	57.5 N 150.6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4.50	CGS			
1	07	44 44.9	59.7 N 147.1 W	ALASKA AFTERSHOCK				
			H= 35 KM	MAG 4.80	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	GG-	eP	09 16 38	LR	25*	752.4			2	01 32 12.*		17.1 N 96.0 W	OAXACA + MEXICO				
1	GG-	eL	09 36 35	LR	40	479.9			H= 33 KM	MAG 3.70	CGS						
1	09 51 32.*		18.6 S 69.5 W	NORTHERN CHILE					2	03 24 22.*		43.5 N 110.5 W	WESTERN WYOMING				
			H= 136 KM	MAG 4.20	CGS				H= 15 KM	MAG 4.00	CGS						
1	LZ-	eP	09 52 14.0	SZ	0.5	41.0	2.5		2	04 43 50.*		58.6 N 151.1 W	PRINCE WILLIAM SOUND, ALASKA				
									H= 33 KM	MAG 4.00	CGS						
1	11 23 09.1		44.1 N 148.6 E	KURILE ISLANDS					2	05 15 51.1		4. S 102.8 E	SOUTHERN SUMATRA				
			H= 35 KM	MAG 4.10	CGS				H= 106 KM	MAG 5.40	CGS						
1	14 04 45.1		1.2 N 85.2 W	EAST OF GALAPAGOS ISLANDS					2	08 28 47.*		45.6 N 149.8 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.40	CGS				H= 80 KM	MAG 4.40	CGS						
1	LZ-	eP	14 09 59.2	SZ	0.8	27.2	23.9	4.60	2	LZ-	eP	08 45 19.5	SZ	0.3	15.1		
	eLQ		16 38	LR	45	413.6											
	eLR		18 35	LZ	23	1559.4			2	10 02 42.*		59.4 N 146.5 W	ALASKA AFTERSHOCK				
									H= 33 KM	MAG 4.30	CGS						
1	14 39 58.*		60.4 N 145.1 W	PRINCE WILLIAM SOUND, ALASKA					2	GG-	eP	10 48 54.1	SZ	0.5	49.5	1.4	
			H= 33 KM	MAG 4.30	CGS				eS	49 12	ST	0.6	104.3				
1	15 57 29.*		56. N 167.6 W	FOX ALEUTIAN ISLANDS					2	10 56 00.2		14.9 S 167.3 E	NEW HEBRIDES ISLANDS				
			H= 33 KM	MAG 4.30	CGS				H= 108 KM	MAG 4.00	CGS						
1	16 06 12.*		14.3 S 167.1 E	NEW HEBRIDES ISLANDS					2	GG-	eP	11 34 30.5	SZ	1.1	27.0		
			H= 95 KM						eS								
1	LZ-	eP	16 51 40.8	SZ	0.3	16.9	1.00		2	16 11 00.2		45.5 N 150.3 E	KURILE ISLANDS				
	eS		52 05	SR	0.7	46.0			H= 35 KM	MAG 5.70	CGS						
1	21 24 23.*		6.4 S 127.3 E	BANDA SEA					2	00-	eP	16 22 03.4	SZ	1.0	125.5	68.8	5.96
			H= 472 KM					eP	22 04	LZ	23	2663.8					
1	23 47 35.3		32.3 S 179.5 W	KERMADEC ISLANDS					ePPP	26 22	LZ	20	2345.2				
			H= 33 KM	MAG 4.80	CGS			eS	31 00	LT	19	2900.6					
2	00-	eP12	00 07 31.8	SZ	0.7	6.5	150.4		eL	46 30	LZ	27	16.5U				
	eL		01 05 00	LZ	20	113.5			GG-	16 23 01.3	SZ	0.9	165.9	78.7	6.02		
2	LZ-	eL	00 33 40	LZ	27	469.8	98.3		eP	23 02	LZ	20	4886.4				
								ePP	26 15	LZ	21	2336.3					
								ePPP	27 56	LZ	23	1587.3					
								eS	32 58	LR	24	3655.0					
								eS	32 58	LT	19	2359.0					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		e	33 55	LZ	33.	7891.9		
		eLQ	47 17	LR	34	8764.4		
		eLR	55 38	LZ	25	5868.1		
2	LZ-	e	16 29 38	SZ	1.5	29.2	136.4	
		eP+	29 55	LZ	23	290.9		
		eP+	30 12	SZ	1.5	29.2		
		e	30 23	SZ	1.6	167.6		
		ePP	33 02	LZ	20	2052.1		
		eSKP	33 50	SZ	1.6	106.6		
		e	34 10	SZ	1.7	318.9		
		eSS	51 10	LT	24	3113.9		
		eL	17 10 00	LT	33	9309.5		
		eLR	16 30	LZ	32	9999.9		
					Avg.	5.99		
2	16 33 47.9		27.3 S 178.9 W KERMADEC ISLANDS H=369 KM MAG 4.50 CGS					
2	17 08 57.6		59.7 N 147.0 W ALASKA AFTERSHOCK H= 30 KM MAG 4.80 CGS					
2	LZ- eP		18 33 13.2 SZ 1.0 9.3					
2	19 53 11.*		9.5 N 84.5 W NEAR WEST COAST COSTA RICA H= 44 KM MAG 4.30 CGS					
2	21 01 44.8		8.6 S 110.4 E NEAR SOUTH COAST OF JAVA H=102 KM					
2	22 46 24.*		1.9 N 123.0 E CELEBES SEA H=487 KM MAG 5.20 CGS					
2	23 34 28.*		26.3 N 100.7 E YUNNAN PROVINCE, CHINA H= 33 KM MAG 5.00 CGS					
3	01 54 33.5		40.3 N 141.9 E NEAR E. COAST HONSHU, JAPAN H= 59 KM MAG 4.80 CGS					
3	00- eP		02 05 48.9 SZ 0.5 7.8 71.4 4.92					
3	eL		33 25 LR 26 94.6					
3	LZ- eP		04 08 33.5D SZ 0.3 84.3 1.8					
3	eS		08 57 ST 0.5 21.2					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	04 43 12.4		17.9 S 178.3 W FIJI ISLANDS REGION H=569 KM MAG 3.90 CGS					
3	04 49 36.*		13.7 N 145.6 E MARIANA ISLANDS H=209 KM MAG 4.60 CGS					
3	07 32 56.3		56.5 N 154.8 W PRINCE WILLIAM SOUND, ALASKA H= 30 KM MAG 4.40 CGS					
3	00- eP		07 43 17.0 SZ 0.8 22.2 62.2 5.36					
3	07 58 45.*		58.1 N 151.6 W PRINCE WILLIAM SOUND, ALASKA H= 33 KM MAG 4.20 CGS					
3	LZ- eP		13 11 45.0 SZ 0.5 13.2					
3	LZ- eL		13 12 05 SR 0.8 4.8					
3	13 31 14.1		23.9 S 66.6 W JUJUY PROVINCE, ARGENTINA H=210 KM MAG 4.40 CGS					
3	LZ- eP		13 33 05.9 SZ 0.5 39.8 7.8 4.88					
3	eL		34 31 SR 0.8 29.0					
3	GG- eL		13 52 00 LZ 40. 290.7					
3	LZ- eL		14 54 47 LR 20 287.4					
3	15 28 30.*		17. N 96.0 W OAXACA, MEXICO H= 33 KM MAG 3.70 CGS					
3	15 28 50.		52.2 N 172.1 W ANDREANOF ALEUTIAN ISLANDS H= 30 KM MAG 4.40 CGS					
3	LZ- eP		20 29 40.8 SZ 0.7 7.7					
3	21 31 53.*		59. N 148.5 W PRINCE WILLIAM SOUND, ALASKA H= 25 KM MAG 4.40 CGS					
3	21 39 30.*		61. N 145.8 W ALASKA AFTERSHOCK H= 33 KM MAG 3.90 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
									5	LZ-	eS	02 41 17	SR	0.5	32.3	1.8	
3	22	31	44.3	45.3 N 110.6 W	SOUTHWESTERN MONTANA				5	02	53	10.3	7.3 N 73.3 W	NORTHERN COLOMBIA			
				H= 33 KM	MAG 4.10	CGS							H= 105 KM	MAG 4.80	CGS		
3	23	03	24.*	1 N 123.4 E	NORTHERN CELEBES				5	03	26	46.1	17.7 S 68.9 W	WESTERN BOLIVIA			
				H= 160 KM								H= 33 KM	MAG 4.90	CGS			
4	02	26	35.*	56. N 162.4 W	ALASKA PENINSULA				5	LZ-	eP	03 28 05.4	SZ	0.3	12.1		
				H= 199 KM	MAG 4.50	CGS			5	LZ-	eP	03 28 07	LZ	11	2951.5		
4	09	00	10.*	61.3 N 141.8 W	ALASKA AFTERSHOCK				5	LZ-	eLQ	03 29 20	LR	15	11.1U		
				H= 33 KM	MAG 3.90	CGS			5	LZ-	eLR	03 29 51	LZ	13	9999.9U		
									5	GG-	eL	05 09 17	LZ	20	170.5		
4	12	04	46.1	58.2 N 152.3 W	PRINCE WILLIAM SOUND, ALASKA				5	08	01	48.4	45.5 N 150.1 E	KURILE ISLANDS			
				H= 30 KM	MAG 5.30	CGS						H= 40 KM	MAG 4.90	CGS			
4	LZ-	eL	12 58 07	LZ	32	164.6	100.4		5	00-	eP	08 12 50.5	SZ	1.1	15.8	68.8	5.00
4	17	05	20.*	55.8 S 4.4 W	BOUVET ISLAND REGION				5	LZ-	eP	08 24 36.3	SZ	1.5	26.8		
				H= 33 KM	MAG 5.40	CGS											
4	LZ-	eP	17 15 40.0	SZ	1.0	65.1	62.2	5.73	5	08	42	06.2	52. N 173.8 W	ANDREANOF ALEUTIAN ISLANDS			
	e	22 30	LZ	16	562.9							H= 45 KM	MAG 4.00	CGS			
	eSP	24 20	LZ	20	189.8				5	08	44	59.1	9. S 156.6 E	SOLOMON ISLANDS			
	eLQ	30 55	LT	26	3951.0							H= 33 KM	MAG 5.10	CGS			
	eLR	35 15	LZ	30	6698.6												
4	LZ-	eP	17 13 41.5	SZ	1.0	4.6			5	LZ-	eL	09 07 21	LZ	33.	959.5		
4	19	25	41.*	14.7 S 76.0 W	NEAR COAST OF PERU				5	09	32	12.*	52. N 172.8 W	ANDREANOF ALEUTIAN ISLANDS			
				H= 33 KM	MAG 4.50	CGS						H= 33 KM	MAG 4.30	CGS			
4	LZ-	eP	19 27 29.2	SZ	0.5	16.6	7.4	5.22	5	11	12	52.*	55.8 S 4.3 W	BOUVET ISLAND REGION			
												H= 33 KM					
4	LZ-	eP	21 32 01.5	SZ	1.1	9.4			5	LZ-	eP	11 23 13.1	SZ	1.0	22.1	62.2	5.26
4	LZ-	e	21 56 22	LR	22	317.8					eP	23 14	LZ	9	522.9		
4	LZ-	eL	22 00 55	LZ	21	117.8					eS	31 41	LR	18	475.1		
5	00	21	57.*	60.7 N 147.6 W	PRINCE WILLIAM SOUND, ALASKA						eLQ	38 40	LR	18	386.0		
				H= 33 KM	MAG 4.00	CGS					eLR	42 30	LZ	33	1753.7		
5	02	04	18.*	57.4 N 149.5 W	PRINCE WILLIAM SOUND, ALASKA						eL	45 53	LR	24	1546.6		
				H= 33 KM	MAG 4.40	CGS					eL	45 53	LT	23	1843.9		
											eL	45 53	LZ	25	3220.0		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5	14	38 06.*	43°2 N 87°8 E	SINKIANG PROVINCE, CHINA				
			H= 33 KM	MAG 4.60	CGS			
5	16	13 44.5	58°2 N 149°7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 5.00	CGS			
5	18	03 30.*	39° S 175°2 E	NORTH ISLAND, NEW ZEALAND				
			H= 178 KM					
5	22	41 07.1	61°8 N 156°7 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.70	CGS			
6	00	02 06.8	8°4 S 121°7 E	FLORES SEA				
			H= 33 KM	MAG 5.30	CGS			
6	LZ-	eP [†] 1	00 22 05.8	SZ	1.0	5.8	153.5	
		eP [†] 2	22 19	SZ	0.6	5.5		
6	00	59 53.*	59°6 N 146°8 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 4.10	CGS			
6	01	26 32.*	13°4 N 91°4 W	OFF COAST OF GUATEMALA				
			H= 69 KM	MAG 4.00	CGS			
6	LZ-	eP	02 26 46.3	SZ	0.2	71.6	2.3	
		eS	27 15	SR	0.2	34.0		
6	04	27 02.4	60°7 S 25°2 W	SANDWICH ISLANDS				
			H= 33 KM					
6	LZ-	eP	04 36 27.5	SZ	0.8	14.7	54.1	5.07
		e	36 30	SZ	1.2	145.0		
		eP	36 35	LZ	15	430.1		
		ePS	44 02	LR	26	1025.3		
		e	50 00	LT	25	897.3		
		eLQ	52 00	LT	28	1195.6		
		eLR	53 45	LZ	30	1825.1		
		eL	54 26	LT	23	2306.6		
		eL	54 26	LZ	26	1420.0		
		eL	54 26	LR	23	2652.9		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	04	44 13.*	57°5 N 149°3 W	ALASKA	AFTERSHOCK			
			H= 33 KM	MAG 4.20	CGS			
6	00-	eL	05 18 37	LR	45	1893.4	60.8	
6	GG-	eL	05 21 52	LZ	30	330.7	72.0	
6	00-	eP	07 10 44.9	SZ	0.3	3.8		3.1
		e	10 48	SZ	0.3	16.2		
		eS	11 24	ST	0.4	39.1		
6	08	10 47.5	11°1 S 162°2 E	SOLOMON ISLANDS				
			H= 40 KM	MAG 5.10	CGS			
6	LZ-	eP [†]	08 29 42.5	SZ	0.9	5.2	123.0	
		ePP	31 23	LZ	20	250.2		
		e	39 50	LZ	15	358.4		
		eLR	09 10 40	LZ	20	1001.0		
6	GG-	ePP	08 32 47	LZ	15	313.2	134.7	
		eL	09 18 11	LR	24	1326.1		
6	00-	eSKKP	08 43 28	LZ	22	652.0	125.9	
		eSS	48 46	LR	25	1010.0		
		e	53 50	LT	34	1599.0		
6	LZ-	eP	08 42 23.2	SZ	0.9	38.5		
6	09	38 12.*	59°7 N 142°8 W	ALASKA	AFTERSHOCK			
			H= 33 KM	MAG 4.60	CGS			
6	15	26 35.5	56°7 N 152°1 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 15 KM	MAG 5.40	CGS			
6	00-	eP	15 36 56.1	SZ	0.7	3.4	61.8	4.64
		eP	36 57	LZ	19	515.6		
		ePP	39 21	LZ	15	332.8		
		eS	45 26	LR	23	745.5		
		eS	45 26	LT	20	861.4		
		eSCS	46 50	LR	20	863.3		
		eSS	49 40	LR	18	632.0		
		eLQ	52 15	LR	16	906.5		
		eLR	58 22	LZ	23	1592.2		
		eL	16 07 55	LR	19	2332.0		
		eL	07 55	LT	17	1734.7		
		eL	07 55	LZ	19	3265.9		
6	GG-	eP	15 38 08.2	SZ	0.8	22.0	73.1	5.29
		eP	38 10	LZ	18	475.1		
		e	40 00	LZ	14	267.7		
		ePP	40 53	LZ	21	214.1		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	GG-	eSS	15 52 32	LT	19.	630.4	73.1		7	LZ-	eP	03 20 03.3C	SZ	0.3	50.7	2.7	
	e		56 37	LR	17	885.0				20	34	SZ	0.6	37.0			
	eL		58 17	LR	18	561.2											
	eL		16 02 20	LT	23	512.9											
					Avg.	4.96											
6	LZ-	eP	15 40 36.1	SZ	0.2	3.5	2.8		7	LZ-	eP	03 41 01.9	SZ	1.6	25.7		
	eL		41 12	ST	0.2	14.5											
6	16 54 01.*		35° N 118°9 W KERN COUNTY, CALIFORNIA						7	03 49 53.8		4.6 S 153°5 E NEW IRELAND REGION					
			H= 14 KM									H= 53 KM	MAG 4.60	CGS			
6	17 10 53.7		38° N 142°4 E OFF E. COAST HONSHU, JAPAN						7	04 02 28.7		51.6 N 177°3 W ANDREANOF ALEUTIAN ISLANDS					
			H= 33 KM									H= 25 KM	MAG 5.00	CGS			
6	00-	eP	17 22 26.4	SZ	0.9	23.0	73.7	5.16	7	00-	e	04 27 23	LT	23	178.8	67.5	
	ePS		32 37	LT	16	215.0					eL	35 45	LT	28	398.8		
	eSS		36 35	LT	19	111.4			7	GG-	eL	04 41 48	LZ	30	477.7	78.8	
	eL		40 44	LT	18	150.3						04 58 38	LZ	30	176.6	114.2	
	eL		48 33	LR	30	485.7			7	05 45 29.5		4. S 34°9 E TANGANYIKA					
6	LZ-	eP'1	17 30 27.5	SZ	1.2	13.4	145.3					H= 33 KM	MAG 6.40	CGS			
6	GG-	eL	17 55 50	LR	23	632.2	82.6		7	GG-	eP	05 55 15.0	SZ	1.0	175.3	57.3	6.04
											eP	55 15	LZ	20	5561.3		
6	20 45 14.		45°5 N 151°6 E KURILE ISLANDS								e	55 26	SZ	1.0	244.4		
			H= 40 KM								ePCP	56 06	SZ	1.3	204.3		
6	00-	eP	20 56 19.0	SZ	0.9	16.4	69.1	5.10			ePP	57 28	LZ	23	2724.2		
											ePPP	59 12	LZ	15	5414.6		
6	00-	eP	20 51 29.5	SZ	0.8	20.2					eS	06 03 08	LR	20	7667.6		
6	LZ-	eL	21 16 25	LZ	23	363.6					eSS	06 33	LR	22	6453.8		
6	GG-	eL	21 54 25	LZ	27	97.7			7	00-	eP	05 56 26.6	SZ	999.9	9999.9	67.5	
											eP	56 27	LZ	20	9999.9		
											e	57 49	SZ	1.1	100.4		
7	00 15 48.9		60.1 N 147°4 W ALASKA AFTERSHOCK								ePP	59 07	LZ	23	2283.8		
			H= 33 KM								eSCP	06 00 49	LZ	18	1947.7		
7	00 34 57.2		18.2 S 176.6 W FIJI ISLANDS REGION								e	01 34	SZ	1.4	71.3		
			H=300 KM								e	03 26	SZ	1.3	49.3		
7	GG- eP'1		00 54 07.5	SZ	1.0	37.1	148.0				eS	05 23	LR	24	4357.5		
7	LZ- eP		01 44 25.5	SZ	0.9	5.1					e	10 15	LR	28	4157.2		
7	03 19 18.*		18.7 S 69.7 W NORTHERN CHILE								eL	13 20	LZ	28	9999.9		
			H=120 KM														
									7	LZ-	eP	05 59 31.5	SZ	1.0	5.7	101.7	5.16
											eP	59 36	LZ	14	471.7		
											ePP	06 03 50	LZ	17	872.8		
											eSKS	10 15	LT	21	3513.9		
											eS	11 25	LT	22	9999.9		
											ePS	13 05	LT	24	4579.6		
											ePKKS	18 40	LT	26	4451.2		
											eL	28 00	LT	999	9999.9		
											eLR	33 10	LZ	33	8085.4		
									7	00-	eP	08 09 30	LZ	18.	9999.9	70.5	
											ePP	12 09	SZ	1.3	156.4		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
7	00-	eS	08 18 44	ST	2.5	303.0	70.5		7	11 11 04.9	30.6 N 137.7 E	OFF COAST HONSHU, JAPAN						
	ePS		19 23	ST	3.0	599.2				H=469 KM	MAG 5.10	CGS						
	eL		34 55	SR	15.0	38.1U			7	00-	eP	11 22 15.4	SZ	0.6	9999.9	79.0		
7	GG-	fP	08 10 18.4C	SZ	1.1	393.5	79.2	6.27		eP	24 09	SZ	0.9	23.0				
	eP		10 20	LZ	20	774.83			7	GG-	eP	11 23 00.0	SZ	1.0	90.3	87.0	5.49	
	ePP		13 14	SZ	1.4	253.0			eP	24 47	SZ	1.1	32.7					
	ePP		13 20	LZ	19	5693.5			7	LZ-	eP	11 29 59.5	SZ	0.4	7.6	.8		
	eS		20 10	LT	18	9999.9			eS	30 10	SZ	0.6	58.2					
	eS		20 19	SR	3.4	1087.4			7	12 08 03.6	40.5 N 138.9 E	OFF COAST N. HONSHU, JAPAN						
	e		22 25	SR	4.0	1965.2			H= 33 KM	MAG 4.90	CGS							
	eL		26 00	LT	33	9172.3			7	GG-	eP	12 20 07.7	SZ	0.8	9.4	79.1	4.80	
	eL		39 08	SR	17.3	84.8U			e	24 01	SZ	0.8	15.7					
7	LZ-	fP*1	08 17 53.6C	SZ	999.9	9999.9U	146.1		7	LZ-	eP*1	12 27 44.0	SZ	1.5	25.4	146.1		
	eP*1		17 55	LZ	12	1414.1			7	12 56 03.*	23.9 N 108.8 W	GULF OF CALIFORNIA						
	e		19 38	SZ	1.9	746.7			H= 33 KM	MAG 4.40	CGS							
	e		20 23	SZ	2.0	454.3			7	LZ-	eP	13 05 40.5	SZ	1.9	33.1	56.1	5.04	
	e		20 40	SZ	2.3	678.8			7	13 19 49.*	54.8 N 161.5 W	ALASKA PENINSULA						
	ePP		21 25	LZ	18	4349.8			H= 33 KM	MAG 4.20	CGS							
	e		27 30	LT	13	5718.2			7	17 41 39.8	36. N 70.7 E	HINDU KUSH						
	ePS		31 31	LR	15	3602.3			H= 108 KM	MAG 4.70	CGS							
	ePPS		33 28	LT	16	1321.3			7	19 12 38.*	60.4 N 144.8 W	PRINCE WILLIAM SOUND, ALASKA						
	eL		40 22	LT	21	9999.9			H= 15 KM	MAG 4.50	CGS							
					Avg.	6.16			7	LZ-	eP	19 18 55.4	SZ	1.1	6.7			
7	08 07 04.3		40.2 N 139.4 E		OFF COAST N. HONSHU, JAPAN				7	20 12 49.3	40.5 N 139.0 E	OFF WEST COAST HONSHU, JAPAN						
					H= 15 KM	MAG 5.20	CGS			H= 33 KM	MAG 5.90	CGS						
7	GG-	eP	08 19 10.0	SZ	0.8	15.7	79.6	5.01	7	00-	eP	20 24 02.1	SZ	999.9	9999.9U	70.4		
7	LZ-	eP*1	08 26 50.0	SZ	0.8	10.0	146.0			eP	24 03	LZ	999	9999.9U				
7	08 26 10.7		40.4 N 139.3 E		OFF COAST N. HONSHU, JAPAN					eS	33 15	LT	999	9999.9U				
					H= 33 KM	MAG 5.00	CGS		7	GG-	eP	20 24 53.5	SZ	1.2	172.2	79.1	5.88	
7	LZ-	e	08 43 41	SZ	1.5	33.9	145.9			eP	24 54	LZ	13	3447.1				
	eP*1		45 51	SZ	2.0	181.7				ePP	27 45	LZ	18	1117.7				
7	GG-	eP	08 39 15.5	SZ	0.8	15.7				eS	35 00	LT	18	4128.7				
7	08 51 01.*		40.5 N 138.4 E		SEA OF JAPAN													
					H= 33 KM	MAG 4.30	CGS											
7	09 27 27.*		40.3 N 137.6 E		SEA OF JAPAN													
					H= 33 KM	MAG 4.60	CGS											
7	LZ-	eP*1	09 47 10.6	SZ	1.9	74.6	147.0											
7	09 47 30.*		40.5 N 138.2 E		OFF COAST N. HONSHU, JAPAN													
					H= 25 KM	MAG 4.30	CGS											

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
7	23	12 21•3	32•9 S 178•3 W	KERMADEC ISLANDS				
			H= 33 KM	MAG 4•40	CGS			
8	03	35 59•9	32•7 S 178•3 W	KERMADEC ISLANDS				
			H= 40 KM	MAG 4•50	CGS			
8	03	57 50•1	33•1 S 178•3 W	KERMADEC ISLANDS				
			H= 47 KM	MAG 4•30	CGS			
8	04	10 31•9	32•8 S 178•4 W	KERMADEC ISLANDS				
			H= 33 KM	MAG 4•00	CGS			
8	05	26 47•*	14•3 N 145•1 E	MARIANA ISLANDS				
			H= 33 KM	MAG 4•80	CGS			
8	05	56 14•*	59•2 N 153•9 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 4•40	CGS			
8	06	05 47•*	56•7 N 154•2 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 33 KM	MAG 3•90	CGS			
8	06	22 14•*	9•7 N 125•0 E	MINDANAO, PHILIPPINE ISLANDS				
			H= 379 KM					
8	09	23 33•1	59•4 N 145•4 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 20 KM	MAG 4•50	CGS			
8	10	04 16•*	43•4 N 126•6 W	OFF COAST OF OREGON				
			H= 33 KM	MAG 4•30	CGS			
8	10	27 54•3	24• N 108•6 W	GULF OF CALIFORNIA				
			H= 33 KM	MAG 4•60	CGS			
8	10	52 17•*	3 N 93•2 W	GALAPAGOS ISLANDS				
			H= 33 KM	MAG 4•20	CGS			
8	12	25 54•*	41•4 N 142•4 E	NEAR N.E. CST. HONSHU, JAPAN				
			H= 33 KM	MAG 4•30	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	16	21 49•8	56•7 N 154•0 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 25 KM	MAG 5•30	CGS			
8	00-	eP	16 32 02•5	SZ	0•9	41•8	62•0	5•62
		eP	32 05	LZ	20	917•5		
		e	38 30	LT	23	1106•2		
		eL	46 40	LT	28	1066•9		
8	GG-	eP	16 33 21•0	SZ	0•9	20•1	73•3	5•15
		eP	33 23	LZ	18	807•2		
		ePP	36 05	LZ	20	342•9		
		eS	42 54	LT	22	1335•1		
		eLQ	58 15	LR	25	1022•5		
		eLR	59 49	LZ	28	1976•2		
						Avg.	5•38	
8	20	36 54•1	24•2 S 69•3 W	NORTHERN CHILE				
			H= 78 KM	MAG 4•90	CGS			
8	LZ-	eP	20 38 49•2	SZ	0•6	12•9	7•9	4•85
8	20	37 38•*	54•2 N 165•0 W	FOX ALEUTIAN ISLANDS				
			H= 33 KM	MAG 4•10	CGS			
8	LZ-	eP	20 46 25•0	SZ	0•5	7•2	2•1	
		eS	46 53	ST	0•6	11•4		
8	21	34 40•6	60•8 N 143•6 W	PRINCE WILLIAM SOUND, ALASKA				
			H= 35 KM	MAG 5•40	CGS			
8	00-	eP	21 44 17•1	SZ	1•5	135•3	56•9	5•76
8	GG-	eP	21 45 38•4	SZ	1•2	40•2	68•0	5•39
		eP	45 40	LZ	16	108•9		
		e	54 40	LZ	17	232•5		
		eSS	58 42	LT	22	200•2		
		e	22 03 40	LT	35	636•1		
		eLQ	08 25	LT	28	930•6		
		eLR	11 10	LZ	26	810•8		
						Avg.	5•57	
8	21	45 47•*	1•7 N 126•5 E	MOLUCCA PASSAGE				
			H= 33 KM					
8	21	54 42•*	61•1 N 143•0 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 4•10	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	21	59	21.9	71.1 N H= 25 KM	6.2 W MAG 4.90	JAN MAYEN ISLAND REGION CGS		
8	00-	eP	22 02 12.0	SZ	0.7	12.4	12.2	5.16
8	GG-	eP	22 04 25.5	SZ	0.8	12.3	23.0	4.44
					Avg.	4.80		
8	LZ-	eL	22 19 55	LZ	35.	906.1		
8	22	38	04.*	59.8 N H= 33 KM	146.0 W MAG 3.70	ALASKA AFTERSHOCK CGS		
8	23	40	44.1	52.2 N H= 20 KM	169.5 W MAG 5.20	ANDREANOF ALEUTIAN ISLANDS CGS		
8	00-	eP	23 51 35	LZ	18	533.9	67.1	
	e		52 40	LT	21	196.4		
9	00-	e	00 00 40	LT	21	619.5	67.1	
	e		06 21	LT	25	1085.6		
	eLQ		08 04	LR	25	1347.3		
	eLR		10 28	LR	37	1586.7		
8	GG-	eP	23 52 47.6	SZ	1.2	161.0	78.5	5.93
	eP		52 48	LZ	20	543.0		
9	GG-	e	00 03 00	LZ	17	332.2	78.5	
	e		08 10	LR	35	1190.7		
	e		12 10	LR	25	741.3		
	eL		18 47	LZ	33	1571.7		
8	23	53	21.1	40.4 N H= 47 KM	142.2 E MAG 4.50	OFF COAST N. HONSHU, JAPAN CGS		
9	00-	eP	00 04 32.5	SZ	0.7	18.7	71.4	5.19
9	GG-	eP	00 05 31.0	SZ	0.7	15.6		
9	LZ-	eL	00 07 25	LZ	19	457.3		
9	00	15	26.*	52.0 N H= 33 KM	169.0 W	FOX ALEUTIAN ISLANDS		
9	00	22	49.	40.4 N H= 33 KM	138.8 E MAG 4.60	SEA OF JAPAN CGS		
9	LZ-	eP ¹	00 42 29.0	SZ	1.4	28.2	146.2	
9	01	16	10.*	59.7 N H= 33 KM	146.8 W MAG 3.80	ALASKA AFTERSHOCK CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
9	02	02	28.8	52.2 N H= 25 KM	169.6 W MAG 5.10	ANDREANOF ALEUTIAN ISLANDS CGS			
9	00-	eP	02 13 11.5	SZ	1.1	46.4	67.1	5.55	
	eS		22 20	LR	20	271.9			
	e		27 05	LT	26	406.4			
	eSSS		29 55	LR	25	606.2			
	eLQ		32 05	LR	41	1160.0			
	eLR		35 30	LR	24	543.7			
9	GG-	eP	02 14 30.3	SZ	1.0	83.7	78.5	5.71	
	eS		24 32	LT	20	378.9			
	e		29 58	LT	35	636.1			
	eL		33 25	LZ	27	65.9			
	Avg.							5.63	
9	07	39	35.9	44.5 N H= 33 KM	150.4 E MAG 4.20	KURILE ISLANDS REGION CGS			
9	07	47	02.4	29.6 N H= 34 KM	52.5 E	SOUTHERN IRAN			
9	12	05	24.1	44.5 N H= 33 KM	150.1 E MAG 3.90	KURILE ISLANDS CGS			
9	12	13	04.9	21.6 S H= 33 KM	174.6 W MAG 4.50	WEST OF TONGA ISLANDS CGS			
9	LZ-	eP	12 50 37.1	SZ	0.4	12.3	3.2		
	eS		51 21	ST	0.5	16.0			
9	13	48	05.3	8.1 N H= 60 KM	123.2 E MAG 5.70	MINDANAO, PHILIPPINE ISLANDS CGS			
9	14	05	27.1	45.2 N H= 33 KM	150.0 E MAG 4.60	KURILE ISLANDS CGS			
9	GG-	eL	14 39 40	LZ	27	266.7	78.9		
9	14	18	39.*	45.0 N H= 33 KM	111.1 W	SOUTHWESTERN MONTANA			
9	15	10	12.1	40.7 N H= 25 KM	139.0 E MAG 5.10	SEA OF JAPAN CGS			
9	GG-	eP	15 22 15.8	SZ	1.0	43.1	79.0	5.38	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
9	LZ-	eP#1	15 29 51.8	SZ	1.4	45.9	145.9		10	LZ-	eP#1	05 59 24.2	SZ	1.0	22.9	149.6		
9	LZ-	eL	17 13 43	LZ	25.	291.8				e	59 29	SZ	1.0	97.3				
9	18 16 17.5		13.7 S 166.6 E NEW HEBRIDES ISLANDS						eP#1	59 30	LZ	22	155.0					
			H= 41 KM MAG 5.00 CGS						ePP	06 03 15	LZ	14	235.1					
9	GG-	eL	19 27 03	LZ	26.	143.9	138.0		10	GG-	eL	06 24 50	LZ	35	437.2	90.1		
9	18 53 26.*		59.9 N 147.9 W ALASKA AFTERSHOCK															
			H= 33 KM MAG 3.90 CGS						10	06 27 45.6		4.6 S 153.2 E NEW IRELAND REGION						
												H= 77 KM MAG 4.60 CGS						
9	19 52 14.4		50.7 N 170.3 W ANDREANOF ALEUTIAN ISLANDS						10	GG-	eL	07 30 30	LZ	27.	177.8	124.8		
			H= 33 KM MAG 4.50 CGS						10	LZ-	eL	07 31 20	LT	28	343.9	133.9		
9	20 06 38.*		5.8 S 81.3 W NEAR COAST OF NORTHERN PERU						10	06 29 15.*		52.2 N 169.5 W ANDREANOF ALEUTIAN ISLANDS						
			H= 104 KM MAG 4.40 CGS									H= 35 KM MAG 4.30 CGS						
9	LZ-	eP	20 10 30.2	SZ	1.0	7.6	16.3	38.9	10	LZ-	eP	06 50 23.0	SZ	1.1	15.7			
	e		16 00	LT	27	448.2												
9	21 06 12.2		61.7 N 152.0 W PRINCE WILLIAM SOUND, ALASKA						10	07 50 44.*		1.6 N 126.3 E MOLUCCA PASSAGE						
			H= 25 KM MAG 5.00 CGS									H= 33 KM MAG 5.60 CGS						
9	21 07 41.6		9.2 S 156.7 E SOLOMON ISLANDS REGION						10	08 12 34.5		47. N 142.1 E SAKHALIN ISLAND						
			H= 26 KM MAG 5.40 CGS									H= 18 KM MAG 4.40 CGS						
9	LZ-	eP#1	21 26 50.7	SZ	1.1	20.2	128.6		10	08 34 31.7		7.7 N 75.3 W NORTHERN COLOMBIA						
	eLR		22 03 08	LZ	27	95.3						H= 60 KM MAG 4.20 CGS						
9	LZ-	eL	22 55 15	LZ	22.	119.7			10	LZ-	eP	08 39 48.2	SZ	0.9	10.2	24.7	4.35	
10	02 00 27.*		59.9 N 146.5 W ALASKA AFTERSHOCK							10	09 44 59.*		10.5 N 62.4 W NEAR COAST OF VENEZUELA					
			H= 33 KM MAG 3.60 CGS									H= 45 KM MAG 4.20 CGS						
10	GG-	eL	02 16 48	LZ	27.	177.8			10	10 45 52.3		40.5 N 139.0 E OFF COAST N. HONSHU, JAPAN						
												H= 33 KM MAG 4.80 CGS						
10	05 39 42.6		29. N 141.5 E BONIN ISLANDS REGION						10	LZ-	eP#1	11 05 31.7	SZ	1.0	15.2	146.1		
			H= 62 KM MAG 5.30 CGS															
10									10	LZ-	eP	11 20 26.4	SZ	0.3	16.9	1.7		
										eS	20 49	ST	0.5	14.8				
10									10	11 39 13.*		52.3 N 169.5 W ANDREANOF ALEUTIAN ISLANDS						
												H= 40 KM MAG 4.30 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
10			12 01 24.*	60°7 N 148°4 W	ALASKA AFTERSHOCK			
				H= 33 KM	MAG 3.70	CGS		
10			13 44 03.*	51°4 N 129°2 W	VANCOUVER ISLAND REGION			
				H= 33 KM	MAG 4.10	CGS		
10	LZ- eP		14 10 16.2	SZ	0.8	5.7		
10			14 46 15.*	59°9 N 147°1 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 4.50	CGS		
10			15 40 53.*	60°1 N 146°3 W	PRINCE WILLIAM SOUND, ALASKA			
				H= 15 KM	MAG 4.30	CGS		
11			02 17 01.5	60°8 N 142°2 W	SOUTHEASTERN ALASKA			
				H= 33 KM	MAG 4.70	CGS		
11			02 52 55.6	21°2 S 179°0 W	TONGA ISLANDS REGION			
				H=553 KM	MAG 3.60	CGS		
11			03 31 38.7	60°2 N 147°2 W	ALASKA AFTERSHOCK			
				H= 33 KM	MAG 3.90	CGS		
11			05 29 16.6	24°6 S 179°9 E	Fiji ISLANDS REGION			
				H=515 KM	MAG 4.80	CGS		
11			06 07 41.5	28°3 N 57°4 E	SOUTHERN IRAN			
				H= 62 KM	MAG 4.90	CGS		
11	GG- eP		06 15 19.4	SZ	0.9	24.5	41.0	5.00
	eL		29 48	LZ	30	272.0		
11	OO- eL		06 30 45	LT	35	331.3	45.0	
11			09 45 22.2	58°4 N 152°3 W	ALASKA AFTERSHOCK			
				H= 15 KM	MAG 4.30	CGS		
11			10 03 09.7	45°5 N 151°9 E	KURILE ISLANDS			
				H= 33 KM	MAG 4.70	CGS		
11			16 53 39.1	6°4 N 124°0 E	CELEBES SEA			
				H=567 KM	MAG 5.20	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11			18 22 47.*	56°6 N 154°0 W	ALASKA AFTERSHOCK			
				H= 33 KM	MAG 4.20	CGS		
11			20 10 36.*	60°3 N 146°1 W	ALASKA AFTERSHOCK			
				H= 33 KM	MAG 4.00	CGS		
11			20 38 11.5	17°1 S 174°4 W	TONGA ISLANDS			
				H=104 KM	MAG 4.20	CGS		
12			00 47 09.*	7°1 N 73°2 W	NORTHERN COLOMBIA			
				H=128 KM	MAG 4.00	CGS		
12			01 37 59.5	26°2 S 178°3 E	FIJI ISLANDS REGION			
				H=607 KM	MAG 4.60	CGS		
12			02 04 15.*	56°9 N 151°4 W	ALASKA AFTERSHOCK			
				H= 25 KM	MAG 4.00	CGS		
12			06 42 49.*	49°1 N 177°2 E	RAT ALEUTIAN ISLANDS			
				H= 33 KM	MAG 4.90	CGS		
12			06 45 13.3	22°3 S 176°3 W	TONGA ISLANDS			
				H= 33 KM	MAG 4.50	CGS		
12			06 45 14.1	40°2 N 76°5 W	SOUTHEASTERN PENNSYLVANIA			
				H= 33 KM	MAG 4.50	CGS		
12			07 08 44.6	11° S 126°0 E	TIMOR SEA			
				H= 33 KM	MAG 4.90	CGS		
12			08 27 04.*	7 S 77°2 W	NORTHERN ECUADOR			
				H= 33 KM	MAG 4.00	CGS		
12			10 02 27.1	19°9 S 173°9 W	TONGA ISLANDS			
				H= 33 KM	MAG 5.10	CGS		
12			11 15 35.1	29° N 141°5 E	SOUTH OF HONSHU, JAPAN			
				H= 26 KM	MAG 4.70	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	11	47 32.2	60.1 N 147.0 W	ALASKA AFTERSHOCK					13	05	25 26.1	32.8 S 178.3 W	KERMADEC ISLANDS REGION				
			H= 15 KM	MAG 4.70	CGS							H= 33 KM	MAG 5.30	CGS			
12	GG-	eL	13 29 15	SZ	0.8	16.5			13	LZ-	eP	05 39 08.5	SZ	2.0	55.1	97.1	5.81
									13	GG-	eP*1	05 45 32	LZ	22	623.3	161.7	
12	16	55 46.9	59.5 N 144.8 W	ALASKA AFTERSHOCK							eP*2	46 09	SZ	1.3	70.4		
			H= 33 KM	MAG 4.90	CGS						eSS	06 10 14	LR	23	2721.1		
12	18	16 41.9	56.6 N 152.4 W	ALASKA AFTERSHOCK							e	17 10	LT	24	3377.8		
			H= 10 KM	MAG 5.30	CGS						eL	46 25	LZ	30	2820.9		
12	GG-	eP	18 28 16.6	SZ	0.7	31.2	73.2	5.50	13	07	43 00.*	56.8 N 153.8 W	ALASKA AFTERSHOCK				
		tP	28 17 C	LZ	19	1241.5					eP*1		H= 25 KM	MAG 3.70	CGS		
		ePP	31 00	LZ	20	848.1			13	08	11 00.*	33.1 S 178.0 W	KERMADEC ISLANDS REGION				
		e	33 52	SZ	0.9	128.0					eP*2		H= 15 KM	MAG 4.40	CGS		
		eS	37 46	LT	19	4793.1			13	10	08 54.*	19.7 N 142.7 E	MARIANA ISLANDS REGION				
		eS	37 46	LR	20	817.0					eSS		H= 33 KM	MAG 4.60	CGS		
		eSS	42 42	LR	19	1956.4			13	11	06 16.4	21.8 S 179.6 W	WEST OF TONGA ISLANDS				
		eLQ	47 02	LR	18	3326.6					eLQ		H= 578 KM	MAG 4.60	CGS		
		eLR	53 20	LR	26	3622.1			13	12	18 34.8	36.4 N 121.2 W	MONTEREY COUNTY, CALIFORNIA				
													H= 14 KM	MAG 4.40	CGS		
12	18	28 57.5	56.6 N 152.2 W	ALASKA AFTERSHOCK					13	13	47 32.*	60.6 N 141.4 W	ALASKA AFTERSHOCK				
			H= 20 KM	MAG 4.40	CGS						eSS		H= 33 KM	MAG 3.70	CGS		
12	23	37 50.4	59.4 N 143.1 W	ALASKA AFTERSHOCK					13	15	06 03.*	60. N 145.9 W	ALASKA AFTERSHOCK				
			H= 20 KM	MAG 4.70	CGS						eLQ		H= 33 KM	MAG 4.20	CGS		
12	23	42 23.	59.5 N 143.1 W	ALASKA AFTERSHOCK					13	LZ-	eP	16 38 24.8	SZ	1.1	27.2		
			H= 25 KM	MAG 4.50	CGS						eLQ						
13	00	07 01.8	14.0 S 176.7 W	SAMOA ISLANDS REGION					13	16	42 48.3	32.7 S 178.6 W	KERMADEC ISLANDS REGION				
			H= 33 KM	MAG 4.70	CGS						eLQ		H= 33 KM	MAG 5.10	CGS		
13	00	07 42.1	56.2 N 152.7 W	ALASKA AFTERSHOCK					13	00-	eP*1	17 02 38.4	SZ	0.8	32.8	151.0	
			H= 33 KM	MAG 4.90	CGS						eL	57 47	LR	27	270.2		
13	03	19 43.2	76. N 8.2 E	SVALBARD REGION					13	GG-	eL	17 04 35	LZ	28.	314.1		
			H= 33 KM	MAG 4.50	CGS												

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	20 37 54.*		32°4 S 178°3 W KERMADEC ISLANDS REGION						14	14 19 05.*		59°7 N 144°4 W ALASKA AFTERSHOCK					
			H= 70 KM MAG 4.90 CGS									H= 33 KM MAG 4.50 CGS					
13	OO- eP1'1		20 57 38.3	SZ	1.1	68.5	150.7		14	15 12 04.*		59°8 N 147°0 W ALASKA AFTERSHOCK					
13	GG- eP1'2		20 58 44.0	SZ	1.2	49.0	161.3					H= 33 KM MAG 4.10 CGS					
13	GG- eL		22 00 32	LZ	25.	144.0			14	20 01 01.		21°3 S 179°3 W FIJI ISLANDS REGION					
13	GG- eP		22 44 41.5	SZ	0.6	8.8	1.3					H=606 KM MAG 4.70 CGS					
	eS		44 58	SR	0.6	17.8			15	01 12 40.*		33°4 N 16°0 E NEAR COAST OF LIBYA					
13	23 34 26.1		40°5 N 138°6 E SEA OF JAPAN									H= 33 KM					
			H= 33 KM MAG 4.80 CGS						15	02 13 57.*		12°8 N 87°5 W NEAR WEST COAST OF NICARAGUA					
14	00 52 10.*		33°3 S 178°3 W KERMADEC ISLANDS REGION									H= 51 KM MAG 3.70 CGS					
			H= 33 KM MAG 4.50 CGS						15	02 56 15.*		60°1 N 147°0 W ALASKA AFTERSHOCK					
14	01 05 47.6		32°9 S 178°8 W KERMADEC ISLANDS REGION									H= 33 KM MAG 3.80 CGS					
14	GG- eP		01 07 22.5	SZ	0.7	21.4	3.1		15	04 02 39.*		57°6 N 152°2 W ALASKA AFTERSHOCK					
	eS		08 02	SR	0.5	25.3						H= 20 KM MAG 3.90 CGS					
14	01 52 47.3		33°4 S 71°2 W CENTRAL CHILE						15	05 11 17.*		61°4 N 147°9 W ALASKA AFTERSHOCK					
			H= 69 KM MAG 4.00 CGS									H= 33 KM MAG 3.70 CGS					
14	02 30 32.2		4°5 S 152°9 E NEW IRELAND REGION						15	05 46 33.*		9°8 N 85°5 W NEAR WEST COAST COSTA RICA					
			H= 32 KM MAG 4.90 CGS									H= 33 KM MAG 4.20 CGS					
14	GG- eL		02 34 30	LZ	24.	138.6			15	10 17 45.9		12°4 N 89°0 W OFF COAST OF EL SALVADOR					
												H= 53 KM MAG 4.40 CGS					
14	08 59 41.*		7°6 S 155°9 E SOLOMON ISLANDS						15	10 50 21.*		3°5 S 149°1 E BISMARCK SEA					
			H= 33 KM									H= 44 KM MAG 4.70 CGS					
14	09 54 58.*		18°7 S 174°8 W TONGA ISLANDS						15	00- e		11 26 15	LT	35.	1285.3	114.5	
			H= 47 KM MAG 4.20 CGS							e	30 00	LT	25	719.8			
14	11 30 14.*		15°3 S 70°6 W SOUTHERN PERU							eL	41 20	LR	40	3083.5			
			H=167 KM MAG 4.00 CGS						15	GG- eL		11 50 10	LZ	40	988.4	121.8	
14	13 52 14.4		65°3 N 86°5 W MELVILLE PENINSULA, CANADA														
			H= 33 KM MAG 4.50 CGS						15	12 10 25.4		10°5 N 85°7 W NEAR WEST COAST COSTA RICA					
												H= 33 KM MAG 4.50 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
15	12 59 28.3		13° N 143°9 E	SOUTH OF MARIANA ISLANDS					16	LZ-	eP	10 03 06.6	SZ	1.0	9.3		
			H=110 KM	MAG 4.40	CGS				16								
15	14 02 41.*		57°1 S 58°9 W	S. SHETLAND ISLANDS REGION					16			59°3 N 152°0 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 4.90	CGS								H= 35 KM	MAG 3.70	CGS		
15	19 40 35.*		31°5 N 113°7 W	GULF OF CALIFORNIA					16			49° N 164°4 W	FOX ALEUTIAN ISLANDS				
			H= 33 KM	MAG 5.00	CGS								H= 33 KM	MAG 3.90	CGS		
15	19 56 25.*		31°6 N 114°1 W	GULF OF CALIFORNIA					16			13°6 S 165°6 E	SOLOMON ISLANDS				
			H= 33 KM	MAG 4.60	CGS								H= 62 KM	MAG 4.60	CGS		
15	21 20 42.*		31°2 N 113°2 W	GULF OF CALIFORNIA					16			57°6 N 151°0 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 4.40	CGS								H= 33 KM	MAG 5.40	CGS		
16	01 58 36.4		10°5 S 161°9 E	SOLOMON ISLANDS					16			32°8 S 178°3 W	KERMADEC ISLANDS REGION				
			H= 33 KM	MAG 5.10	CGS								H= 33 KM	MAG 6.00	CGS		
16	02 40 10.*		59°6 N 145°0 W	ALASKA AFTERSHOCK					16	LZ-	eP	16 21 20.8	SZ	2.0	89.0	97.1	6.02
			H= 33 KM	MAG 3.80	CGS					eP		21 21	LZ	20	328.6		
16	GG- eP		05 10 01.9	SZ	0.9	112.1				eSKS		31 56	LT	16	3166.4		
										ePS		34 08	LT	20	2515.0		
16	05 40 11.1		7°1 N 73°2 W	VENEZUELA						eLQ		52 37	LT	27	2248.5		
			H=126 KM	MAG 4.40	CGS					eLR		54 20	LZ	24	2860.2		
16	LZ- eP		05 45 09.4	SZ	0.9	14.6	23.7	4.44	16	GG-	e	16 27 32	SZ	1.5	95.2	161.7	
	ePP		45 43	SZ	0.6	11.8				eP*1		27 43	SZ	1.8	179.9		
16	06 00 58.1		49°9 N 78°3 E	KAZAKH S.S.R.						eP*1		27 50	LZ	18	195.1		
			H= KM	MAG 5.60	CGS					eSKKS		38 52	LT	20	379.6		
16	08 38 54.		36°3 N 71°5 E	HINDU KUSH						eSPP		45 50	LZ	15	1200.7		
			H=122 KM	MAG 5.30	CGS					e		58 57	LT	29	1565.2		
16	GG- eP		08 48 08.6	SZ	1.2	124.6				eL		17 30 20	LZ	27	624.5		
16	GG- e		08 49 14	SZ	1.1	53.3				eL		44 18	LR	20	2106.8		
16	09 51 41.		54° N 164°1 W	UNIMAK ALEUTIAN ISLANDS						eL		44 18	LT	21	1425.1		
			H= 33 KM	MAG 4.70	CGS					eL		44 18	LZ	20	2455.2		
16									16	00-	eP*2	16 27 38.8	SZ	1.1	42.2	151.1	
										eSKKS		38 10	LT	15	556.3		
16										e		46 40	LT	20	854.5		
16										eSS		50 40	LR	18	1088.7		
16										e		17 01 20	LT	16	888.7		
16										eL		20 50	LZ	27	1484.5		
16									16			44°5 N 128°1 W	OFF COAST OF OREGON				
												H= 33 KM	MAG 4.40	CGS			
16									16			42°1 N 132°7 E	SEA OF JAPAN				
												H=427 KM	MAG 4.20	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
16	LZ-	eP	22 51 26.6	SZ	0.7	20.3			17	GG-	eP	14 56 10.0	SZ	1.0	16.1			
17	00	50 17.9	59.4 N 142.7 W	ALASKA AFTERSHOCK					17	LZ-	eP	16 55 52.0	SZ	0.5	4.5	1.5		
17	00-	eP	01 00 10	LZ	15	810.8	58.1		17	17	05 24.8	33.2 S 178.4 W	KERMADEC ISLANDS REGION					
	ePP		02 25	LZ	22	313.3					eS		56 12	ST	0.6	10.4		
	eS		08 10	LR	34	1400.3			17	17	05 24.8	33.2 S 178.4 W	KERMADEC ISLANDS REGION					
	e		12 40	LR	22	672.1												
	eLQ		15 45	LR	38	1154.0			17	00-	eP*1	17 25 15.2	SZ	0.9	7.0	151.5		
	eLR		19 32	LZ	26	3081.0			17	LZ-	eL	17 50 46	LZ	25	253.1	97.1		
17	GG-	eP	01 01 23.4	SZ	1.0	10.7	69.2	4.88										
	eP		01 24	LZ	15	643.2			17	18	25 56.*	33.3 S 178.3 W	KERMADEC ISLANDS REGION					
	eS		10 28	LT	13	1315.7					e		59 32					
	e		15 44	LT	27	593.9			17	GG-	eL	18 27 10	LZ	25.	58.3			
	eLR		24 28	LZ	33	3745.9												
	eL		33 53	LR	17	5388.6			17	19	26 20.6	35.2 N 35.9 W	NORTH ATLANTIC OCEAN					
	eL		33 53	LT	19	4520.4												
	eL		33 53	LZ	19	4960.3			17	GG-	eP	19 33 30	LZ	20	1235.4	37.0		
17	LZ-	ePP	01 07 47	LZ	10	1139.3	96.0				eP		33 31	SZ	1.4	141.4		5.57
	eS		15 01	LT	19	353.8					ePP		34 48	LZ	17	1778.3		
	ePPS		17 25	LR	15	720.4					e		38 40	LT	25	9999.9		
	eL		35 14	LT	37	1079.2					eL		40 50	LR	35	9999.9		
	eL		43 26	LZ	25	1713.6												
17	04	41 44.*	53.9 N 159.7 W	SOUTH OF ALASKA					17	19	26 20.6	35.2 N 35.9 W	NORTH ATLANTIC OCEAN					
			H= 33 KM	MAG 5.50	CGS				17	GG-	eP	19 33 30	LZ	20	1235.4	37.0		
17	GG-	eL	05 19 01	LZ	30	246.5	76.5			eP		33 31	SZ	1.4	141.4			
17	GG-	eP	05 53 25.5	SZ	1.0	37.7				ePP		34 48	LZ	17	1778.3			
17	06	30 01.*	17.7 S 69.6 W	PERU BOLIVIA BORDER REGION						e		38 40	LT	25	9999.9			
			H=149 KM	MAG 3.80	CGS					eL		40 50	LR	35	9999.9			
17	LZ-	eP	06 30 36.1	SZ	0.6	9999.9	1.8											
17	LZ-	eP	07 17 07.3	SZ	0.5	11.0	2.6		18	01	04 30.5	74.3 N 97.4 W	QUEEN ELIZABETH IS. REGION					
	eS		17 40	SR	0.6	14.2												
17	07	52 59.*	7.9 S 74.3 W	CENTRAL PERU					18	04	15 08.4	12. S 73.8 W	CENTRAL PERU					
			H=152 KM	MAG 3.90	CGS													
17	11	15 03.7	19.5 S 176.7 W	TONGA ISLANDS REGION					18	LZ-	eL	04 18 25	LT	14.	1359.9	6.7		
			H=266 KM	MAG 4.30	CGS				18	GG-	eP	10 31 01.0	SZ	0.3	7.7	1.8		
										eS		31 25	SR	0.4	54.2			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
18	GG-	eP	10 40 12.0	SZ	0.8	19.1			19	02	23 45.2	59.4 N 145.2 W	ALASKA	AFTERSHOCK				
18	GG-	e	10 40 28	SR	1.0	226.4	H= 20 KM	MAG 4.30 CGS										
18	LZ-	e	10 51 50	LZ	16	283.1			19	02	28 34.*	59.2 N 143.9 W	ALASKA	AFTERSHOCK				
18	LZ-	e	10 55 52	LT	17	500.3	H= 33 KM	MAG 4.20 CGS										
18	LZ-	eL	10 59 50	LT	20	430.3												
18	13	47 22.7					59.6 N 145.0 W	ALASKA AFTERSHOCK	19	04	18 05.9	18. N 91.8 W	TABASCO, MEXICO					
							H= 20 KM	MAG 4.60 CGS					H= 33 KM	MAG 4.10 CGS				
18	14	12 10.1					21.2 S 174.5 W	TONGA ISLANDS REGION	19	LZ-	eP	05 05 35.2	SZ	999.9	9999.9			
							H= 33 KM	MAG 5.60 CGS	19	LZ-	eL	05 06 46	SR	0.9	41.1			
18	LZ-	ePP	14 29 35	LZ	17	172.6	98.5		19	LZ-	eP	05 31 04.2	SZ	0.5	1.8			
	eSKS	36 30	LT	20		430.3			19	LZ-	eL	05 32 00	LZ	17	125.3			
	eLQ	57 40	LT	22		169.3			19	06	09 04.1	77.7 N 18.3 E	SVALBARD REGION					
	eLR	58 20	LZ	22		1258.7							H= 33 KM	MAG 4.90 CGS				
18	16	01 17.8					49.6 S 123.1 E	SOUTH OF AUSTRALIA	19	00-	eP	06 13 10.0	SZ	1.0	16.3			
							H= 33 KM				eL	16 16	LR	30	2938.1	16.9	4.15	
18	17	38 25.5					18.2 N 147.3 E	MARIANA ISLANDS REGION	19	LZ-	eL	07 00 40	SR	0.5	8.5			
							H= 19 KM	MAG 5.10 CGS				LZ	30	126.7	105.1			
18	LZ-	eP*2	17 58 09.0	SZ	1.0	24.0	145.8		19	06	23 38.7	45. N 112.7 W	SOUTHWESTERN MONTANA					
	eL	18 47 20	LZ	20		853.8							H= 33 KM	MAG 3.80 CGS				
18	18	14 49.*					59.7 N 145.0 W	ALASKA AFTERSHOCK	19	LZ-	eP	07 07 50.6	SZ	0.4	4.6			
							H= 33 KM	MAG 4.00 CGS			eS	08 23	SR	0.7	8.8			
18	00-	eL	18 22 40	LR	36	1519.4			19	07	27 47.	5.8 S 105.5 E	NEAR NORTH COAST OF JAVA					
													H= 37 KM					
18	20	03 04.*					36.5 N 24.0 E	SOUTHERN GREECE	19	10	39 24.8	45.5 N 150.3 E	KURILE ISLANDS					
							H= 33 KM	MAG 4.60 CGS					H= 33 KM	MAG 5.40 CGS				
18	21	12 46.2					59.5 N 142.7 W	ALASKA AFTERSHOCK	19	LZ-	eP*	10 58 37.2	SZ	1.0	3.8			
							H= 25 KM	MAG 4.90 CGS			eSKP	11 02 12	SZ	1.5	21.2	136.4		
19	01	44 34.*					60.4 N 147.5 W	ALASKA AFTERSHOCK			eL	44 40	LZ	30	359.2			
							H= 15 KM	MAG 4.30 CGS										
19	00-	eL							19	00-	eL	11 16 43	LT	27	857.2			
	GG-	eP								19	GG-	eP	12 57 51.0	SZ	0.5	44.7		
	eS											eS	59 12	ST	0.5	50.3	1.3	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
19	13 19	21*	59.7 N 152.3 W	ALASKA	AFTERSHOCK				19	23 22	04*	48.3 N 154.4 E	KURILE	ISLANDS				
			H= 33 KM	MAG 4.20	CGS					H= 50 KM	MAG 4.70	CGS						
19	LZ-	eL	13 40 50	LZ	20.	125.7			19	00-	eP	23 32 53.2	SZ	0.6	8.7	67.1	5.01	
19	14 42	40.7	60.2 N 146.3 W	ALASKA	AFTERSHOCK				20	01 55	24.*	61.3 N 148.3 W	ALASKA	AFTERSHOCK				
			H= 33 KM	MAG 4.90	CGS					H= 33 KM	MAG 4.00	CGS						
19	LZ-	eP	15 21 26.7	SZ	0.4	3.8	2.4		20	02 21	26.4	45. N 112.8 W	SOUTHWESTERN	MONTANA				
	eS		21 58	ST	0.5	4.6												
19	00-	eL	15 22 36	LZ	26	392.0			20	03 25	05.1	9 S 80.4 W	NEAR COAST OF	ECUADOR				
										H= 33 KM	MAG 4.70	CGS						
19	15 30	08.	19.5 S 67.4 W	SOUTHERN	BOLIVIA				20	LZ-	eP	03 29 30.9	SZ	0.6	24.7	19.2	4.65	
			H= 293 KM	MAG 3.90	CGS					eP	29 35	LZ	18	334.5				
19	15 37	35.9	57. N 152.8 W	ALASKA	AFTERSHOCK					e	33 15	LZ	15	588.1				
			H= 25 KM	MAG 4.90	CGS					eLQ	36 40	LT	23	941.0				
19	20 27	24.8	1.2 S 133.8 E	NEAR N. CST.	WEST NEW GUINEA					eLR	37 40	LZ	16	2522.7				
			H= 33 KM															
19	LZ-	eP ¹²	20 47 19.2	SZ	0.9	14.2	152.0		20	00-	eP ¹	05 13 10.5	SZ	1.2	25.6	149.7		
									20	LZ-	eL	05 39 40	LZ	28	166.3	97.6		
19	21 46	56.5	44.9 N 112.7 W	SOUTHWESTERN	MONTANA				20	05 32	13.7	58. N 149.6 W	ALASKA	AFTERSHOCK				
			H= 33 KM	MAG 4.30	CGS						H= 20 KM	MAG 4.90	CGS					
19	23 03	41.8	7 S 80.2 W	NEAR COAST OF	ECUADOR				20	GG-	eL	06 01 00	LZ	27	178.8	71.5		
			H= 54 KM	MAG 5.40	CGS													
19	LZ-	eP	23 08 02.2	SZ	0.5	22.7	19.3	4.71	20	LZ-	eP ¹	06 01 14.8	2.7 S 139.3 E	NEAR N. COAST W.	NEW GUINEA			
	eP		08 04	LZ	999	9999.9						H= 61 KM	MAG 5.80	CGS				
19	00-	eP	23 16 45	LZ	18	3934.4	91.1		20	GG-	eLQ	06 20 51.5	SZ	0.9	103.1	146.7		
	eS		27 35	LT	22	9999.9				eLR	06 56 15	LT	22	857.5	115.8			
19	eL		47 00	LZ	31	1382.0					07 01 15	LZ	32	1524.5				
19	GG-	eP	23 16 49.3	SZ	2.0	269.6	91.4	6.20	20	00-	eP	06 26 05.0	SZ	1.1	15.4			
	eP		16 50	LZ	20	2057.8				LZ-	eL	06 51 44	LZ	28	850.3			
19	e		26 20	LT	22	3555.6												
19	ePKKP		34 01	SZ	0.6	22.5												
19	eL		47 05	LZ	28	4971.5												
							AVG.	5.45										

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	LZ-	eP	09 16 58.2	SZ	0.4	9.6	3.1	
20	09 28 38.5	60.2 N 147.4 W ALASKA AFTERSHOCK H= 33 KM MAG 4.40 CGS						
20	LZ-	eS	09 37 00	SR	0.5	5.8	3.1	
20	LZ-	eP	10 13 02.2	SZ	0.5	26.5		
20	LZ-	eP	11 23 06.3	SZ	0.5	22.7	2.1	
	eS	23 34	SR	0.5	9999.9			
20	LZ-	eP	15 28 05.2	SZ	0.3	5.6	2.2	
	eS	28 36	ST	0.6	8.8			
20	LZ-	eP	17 09 09.9	SZ	0.5	39.8		
20	21 03 18.*	45.9 N 151.7 E KURILE ISLANDS REGION H= 33 KM MAG 4.50 CGS						
20	LZ-	eP	23 06 02.8	SZ	0.3	7	3.2	
	eS	06 43	ST	0.7	7.5			
20	LZ-	eP	23 49 59.6	SZ	0.7	42.5	5.0	
20	23 58 01.3	46.1 N 143.5 E SAKHALIN H=278 KM MAG 4.40 CGS						
20	LZ-	eS	29 51 01	ST	0.9	19.8	5.0	
21	LZ-	eP	00 42 28.3	SZ	0.6	1.1		
21	LZ-	eL	00 44 39	ST	1.4	20.5		
21	01 11 23.4	60.4 N 145.9 W ALASKA AFTERSHOCK H= 15 KM MAG 4.60 CGS						
21	00- eP	01 21 07.0	SZ	1.2	20.3	57.6	5.03	
	eL	43 00	LR	25	223.8			
21	LZ- eL	02 03 37	LZ	22	141.2	97.9		
21	LZ- eP	03 27 48.0	SZ	0.6	1.1	2.8		
	eS	28 23	SR	0.6	2.3			
21	LZ- eP	04 58 12.2	SZ	0.4	3.1	3.0		
	eS	58 50	SR	0.7	2.8			
21	LZ- eP	11 22 51.6	SZ	0.8	4.4			
21	11 41 03.1	43.1 N 141.8 E HOKKAIDO, JAPAN REGION H= 91 KM MAG 4.40 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21	LZ-	eP	11 45 02.0	SZ	0.3	6.3	1.7	
	eS	45 26	SR	0.5	5.60			
21	13 31 50.9	60.2 N 147.2 W ALASKA AFTERSHOCK H= 33 KM MAG 4.20 CGS						
21	-15 36 01.5	59. N 153.5 W ALASKA AFTERSHOCK H= 15 KM MAG 5.30 CGS						
21	00- eP	15 46 05.8	SZ	0.8	5.2			
	e	59 00	LT	24	302.1			
	e	16 02 05	LT	26	1614.2			
	eLR	04 02	LZ	25	1068.2			
	eL	09 00	LR	25	1466.1			
	eL	09 00	LT	25	1096.4			
	eL	09 00	LZ	25	2025.1			
21	LZ- eL	16 22 33	LT	25	580.0	101.2		
	eL	32 25	LZ	25	523.7			
	eL	32 25	LT	25	978.8			
	eL	32 25	LR	25	836.4			
21	GG- e	15 56 45	LT	18.	537.1			
21	LZ- eP	16 07 32.3	SZ	0.3	32.4			
	eS	08 03.0	SR	0.9	68.4	2.3		
21	16 26 38.*	57. N 152.9 W ALASKA AFTERSHOCK H= 33 KM MAG 3.80 CGS						
21	GG- eL	16 46 20	LT	35.	1356.1			
21	GG- eP	17 08 39.0	SZ	0.7	10.7			
21	GG- eP	19 04 20.0	SZ	0.2	28.2			
	eS	04 27	SR	0.2	50.9	.5		
21	LZ- eL	19 07 37	LZ	27	95.0			
21	22 30 11.	59.3 N 145.3 W ALASKA AFTERSHOCK H= 38 KM MAG 4.10 CGS						
21	22 32 33.9	17.5 N 83.9 W CARIBBEAN SEA H= 33 KM MAG 4.90 CGS						
21	LZ- eP	22 39 41	LZ	10.	452.6	36.8		
	e	47 27	LT	16	831.9			
	eL	51 03	LZ	23	635.6			
	eL	52 45	LT	25	1538.1			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21	eL		52 45	LR	19	837.7		
	eL		52 45	LZ	18	752.3		
	00- eP		22 44 25.4	SZ	1.0	17.6	77.1	5.05
	e		49 15	LR	21	307.8		
	eSS		59 23	LR	22	376.2		
	eLR		23 09 00	LZ	30	501.9		
	GG- eP		22 44 42.5	SZ	0.7	8.0	80.1	4.73
	e		45 11	SZ	0.9	12.4		
e		50 30	LZ	20	316.1			
eL		23 10 10	LZ	25	199.4			
				AVG.			4.69	
21	23 10 49.	44.5 N 149.6 E KURILE ISLANDS H= 45 KM MAG 4.70 CGS						
21	00- eP	23 21 54.5	SZ	1.0	17.6	69.6	5.03	
eLR		50 00	LZ	28	315.4			
GG- eP		23 22 52.8	SZ	1.0	48.4	79.4	5.37	
eL		55 00	LT	22	208.2			
				AVG.			5.20	
22	00 26 44.8	34.7 S 179.6 W KERMADEC ISLANDS REGION H= 58 KM MAG 4.50 CGS						
22	00- eP+1	00 46 35.5	SZ	0.9	10.1	152.8		
eL		01 49 20	LZ	23	239.3			
22	LZ- eLR	01 11 38	LZ	23	441.4	97.3		
22	GG- eL	01 52 50	LZ	23	1392.3	163.0		
22	02 38 23.5	33.2 N 116.7 W SAN DIEGO COUNTY, CALIFORNIA H= 33 KM						
22	04 59 26.2	20.3 S 169.4 E LOYALTY ISLANDS H= 144 KM MAG 4.70 CGS						
22	05 12 32.7	28. N 16.1 W CANARY ISLANDS REGION H= 33 KM MAG 4.20 CGS						
22	05 38 40.4	27.7 N 16.0 W CANARY ISLANDS REGION H= 34 KM MAG 4.40 CGS						
22	00- eP	05 45 54.0	SZ	1.0	8.8	37.9	4.51	
22	10 03 42.*	2.7 N 124.8 E CELEBES SEA H= 201 KM MAG 4.90 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
22	12 11 49.3	41.9 N 112.1 W IDAHO UTAH BORDER H= 33 KM						
22	GG- eP	12 52 04.4	SZ	0.6	35.0			
22	00- eL	13 14 05	LZ	30	769.8			
22	GG- eLQ	13 16 55	LT	30	256.1			
22	GG- eLR	13 21 10	LT	26	706.0			
22	LZ- eLQ	13 43 22	LT	28	303.0			
22	LZ- eLR	13 47 03	LZ	27	190.0			
22	LZ- eL	13 50 22	LR	21	602.8			
22	LZ- eL	13 50 22	LT	21	384.5			
22	LZ- eL	13 50 22	LZ	23	441.4			
22	14 07 12.*	8.3 N 126.3 E MINDANAO, PHILIPPINE ISLANDS H= 121 KM MAG 4.60 CGS						
23	LZ- eP	00 06 03.6	SZ	0.7	5.1			
23	00 11 56.*	15. N 56.0 E ARABIAN SEA H= 33 KM						
23	00- eL	00 34 50	LR	19	246.2	56.2		
23	GG- eL	00 37 05	LT	22	126.5	50.1		
23	00 17 07.5	14.6 N 56.3 E ARABIAN SEA H= 33 KM						
23	00- eP	00 26 39.2	SZ	1.2	20.8	56.7	5.04	
eL		44 35	LT	22	260.1			
23	GG- eP	01 01 28.5	SZ	0.6	13.1	2.4		
eS		01 59	ST	0.5	29.0			
23	LZ- eL	01 18 45	LZ	35	399.8			
23	01 57 32.2	28.1 N 110.6 W NEAR COAST OF SONORA, MEXICO H= 33 KM MAG 4.70 CGS						
23	LZ- eP	02 34 46.5	SZ	0.5	9.3			
23	LZ- eL	02 36 06	SR	0.9	7.6			
23	06 29 24.*	57.3 N 150.7 W ALASKA AFTERSHOCK H= 20 KM MAG 4.50 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	06 45 21*		11 07 N 86 06 W	NEAR WEST COAST OF NICARAGUA				
			H= 93 KM	MAG 4.60 CGS				
23	LZ- eL		07 11 05	LZ	30.	262.0	33.0	
23	LZ- eP		06 58 39.1	SZ	1.0	5.9		
23	GG- eP		10 04 28.7	SZ	0.4	46.8	2.5	
	eS		05 00	SR	0.5	43.5		
23	GG- eP		10 29 14.0	SZ	0.5	37.4	2.4	
	eS		29 45	ST	0.5	52.7		
23	11 22 33.3		28 06 N 139 04 E	BONIN ISLANDS REGION				
			H=409 KM	MAG 5.10 CGS				
23	00- eP		11 34 06.5	SZ	0.8	125.3	81.4	5.68
	ePCP		34 17	SZ	0.9	31.2		
	ePP		37 19	SZ	1.0	36.0		
23	GG- eP		11 34 46.5	SZ	1.1	129.1	89.5	5.67
23	LZ- eP ⁰ 1		11 41 37.0	SZ	1.0	17.7	151.5	
	eP ⁰ 2		41 43	SZ	0.8	54.7		
	eP ⁰ 1		43 22	SZ	1.0	45.2		
	eSKKS		51 33	SR	2.0	37.2		
					Avg.		5.67	
23	GG- eL		16 00 55	LZ	26.	118.5		
23	LZ- eP		16 12 41.1	SZ	1.2	10.7		
23	16 42 06.1		16. S 69 00 W	PERU BOLIVIA BORDER REGION				
			H=231 KM	MAG 4.10 CGS				
23	LZ- eP		16 42 42.9	SZ	0.7	53.0	•6	
	eL		43 30	SZ	1.1	76.4		
23	20 40 31.8		45 04 N 149 00 E	KURILE ISLANDS				
			H=103 KM	MAG 4.00 CGS				
23	21 31 03.4		18 04 S 69 02 W	BOLIVIA CHILE BORDER REGION				
			H=128 KM	MAG 4.70 CGS				
23	LZ- eP		21 31 44.5D	SZ	999.9	9999.9	2.2	
	eP		31 45	LZ	13	1023.2		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eS	32 13	LR	15.	9999.9		
24	00 00 50.2		30 01 N 82 01 E	NEPAL				
			H= 33 KM	MAG 5.10 CGS				
24	00- eP		00 10 20.0	SZ	0.8	5.8	55.1	4.67
24	00 40 21.9		60 02 N 148 00 W	ALASKA AFTERSHOCK				
			H= 15 KM	MAG 4.90 CGS				
24	00- eP		00 50 18.6	SZ	1.1	6.1	58.0	4.55
24	03 06 08.*		39 04 S 70 07 W	NEUQUEN PROVINCE ARGENTINA				
			H= 33 KM	MAG 4.00 CGS				
24	LZ- eS		03 15 21	LR	15.	499.0	23.1	
	eL		20 00	LR	22	232.0		
24	00- eL		04 32 29	LZ	24	108.2	119.8	
24	00- eP		03 52 24.7	SZ	1.3	19.0		
24	04 13 05.3		22 06 S 174 01 W	TONGA ISLANDS REGION				
			H= 33 KM	MAG 5.70 CGS				
24	GG- eP ⁰ 1		04 32 53.0	SZ	1.4	38.4	152.6	
	eL		05 26 42	LZ	35	269.9		
24	LZ- eSKS		04 37 11	LT	24	225.0	97.6	
	eL		58 45	LZ	29	1762.4		
24	00- eL		05 19 20	LZ	33	254.2	141.4	
24	GG- eL		04 36 35	LZ	18.	190.6		
24	00- eP		05 32 30.9	SZ	0.6	2.0		
24	06 52 44.4		59 07 N 148 05 W	ALASKA AFTERSHOCK				
			H= 20 KM	MAG 4.60 CGS				
24	09 04 57.		56 07 N 152 09 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 4.00 CGS				
24	10 16 21.5		59 09 N 145 05 W	ALASKA AFTERSHOCK				
			H= 15 KM	MAG 4.30 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
24	10 31 24.1		34.3 N 141.1 E	NEAR E.	COAST HONSHU, JAPAN			
24	00- eP		H= 33 KM MAG 5.20	CGS				
	ePCP		10 43 03.3	SZ	0.8	30.8	76.7	5.39
	ePCP		43 23	SZ	0.8	36.6		
	ePP		43 32	LZ	12	427.4		
	ePP		46 12	SZ	0.9	15.2		
	eS		52 40	LR	19	239.2		
	eLQ		11 01 47	LT	18	411.1		
	eLR		07 00	LR	34	774.9		
24	GG- eP		10 43 59.1	SZ	1.0	43.1	85.3	5.52
	eP		44 05	LZ	14	601.4		
	ePP		47 20	LZ	13	547.3		
	eS		54 20	LT	18	836.9		
	eSS		11 00 00	LT	20	362.5		
	eLQ		04 30	LT	22	439.0		
	eLR		16 10	LT	25	898.2		
24	LZ- eP ¹²		10 51 07.4	SZ	0.9	56.2	147.9	
	eP ¹²		51 12	LZ	14	1436.7		
	e		51 31	SZ	1.9	548.0		
	e		52 55	SZ	1.4	58.3		
	eL		11 41 25	LZ	25	487.6		
				Avg.				5.45

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
24	20 57 38.3		15.9 S 167.6 E	NEW HEBRIDES ISLANDS				
			H= 29 KM MAG 4.40	CGS				
24	22 22 27.6		37. S 177.8 E	NEAR NORTH IS., NEW ZEALAND				
			H=149 KM MAG 4.80	CGS				
25	02 22 57.*		19.8 N 104.8 W	JALISCO, MEXICO				
			H= 33 KM MAG 3.40	CGS				
25	04 59 39.6		30.6 S 178.0 W	KERMADEC ISLANDS				
			H= 33 KM MAG 4.30	CGS				
25	08 32 49.		15.7 S 174.9 W	TONGA ISLANDS REGION				
			H=269 KM MAG 4.50	CGS				
25	10 58 51.2		52.5 N 167.2 W	FOX ALEUTIAN ISLANDS				
			H= 33 KM MAG 4.20	CGS				
25	13 20 32.*		84.4 N 103.9 E	ARCTIC OCEAN				
			H= 33 KM MAG 4.50	CGS				
25	00- eP		14 01 52.5	SZ	0.3	4.5		3.1
	eS		02 32	SR	0.4	5.9		
25	19 44 07.		9.1 S 88.9 E	INDIAN OCEAN				
			H= 33 KM MAG 5.50	CGS				
25	GG- eP		19 57 01.0	SZ	1.6	99.4		
	eP		57 01	LZ	22	113.3		
	eS		20 07 55	LR	25	1168.3		
	eL		28 45	LR	28	1570.9		
25	LZ- eL		20 52 45	LZ	40	3577.3		146.3
25	20 23 32.1		38. N 21.2 E	IONIAN SEA				
25	00- eP		H= 77 KM MAG 4.10	CGS				
			20 28 41.8	SZ	0.8	6.0		24.0
25	LZ- eP		21 41 37.3	SZ	999.9	9999.9		1.8
	eS		42 01	SR	0.4	63.4		
26	LZ- eP		02 22 59.3	SZ	1.0	5.8		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
26	LZ-	eL	02 27 05	LZ	12.0	2775.7			26	LZ-	eP	13 47 30.5	SZ	0.5	7.4		
26	02 37 04.8		2.9 S 130.3 E CERAM SEA H= 33 KM						26	LZ-	eL	13 48 37	SR	1.0	36.7		
26	LZ-	eP	03 23 20.9	SZ	0.3	39.5			26	15 42 34.		56.1 S 27.4 W SANDWICH ISLANDS H= 82 KM MAG 5.40 CGS					
26	05 33 45.*		60.3 N 145.5 W ALASKA AFTERSHOCK H= 33 KM MAG 4.30 CGS						26	LZ-	eP	15 51 26.0	SZ	1.0	50.9	50.5	5.45
26	09 40 57.9		16.5 N 145.9 E MARIANA ISLANDS REGION H= 94 KM MAG 5.50 CGS						26	15 53 20.0	SZ	0.4	4.7				
26	LZ-	eP*1	10 00 31.1	SZ	1.0	19.6	147.0		26	21 58 34.*		60.1 N 147.0 W ALASKA AFTERSHOCK H= 33 KM MAG 4.10 CGS					
26	00-	eP	10 13 46.0	SZ	1.0	15.2			26	23 43 26.*		56.1 S 26.6 W SANDWICH ISLANDS H=153 KM MAG 5.20 CGS					
26	10 59 12.3		56.2 S 27.8 W SANDWICH ISLANDS H=120 KM MAG 7.62 CGS						26	LZ-	eP	23 52 13.5	SZ	1.3	113.3	50.9	5.47
26	LZ-	eP	11 07 58.0	SZ	0.8	123.8	50.4	5.83	26	eS		59 30	LT	14	1114.4		
	eP		08 04	LZ	999	9999.9			27	LZ-	e	00 05 20	LR	15	404.4	50.9	
	e		20 50	SZ	4.0	5909.3			27	eL		07 55	LR	25	349.8		
	e		27 58	SZ	1.0	74.5			27	GG-	eL	00 37 05	LZ	40	181.7	110.0	
	e		38 00	SZ	1.8	72.6			27	00-	eL	00 40 55	LZ	30	87.9	120.5	
	e		45 37	SZ	1.3	25.3			27	LZ-	eP	00 08 07.7	SZ	0.8	30.9		
26	GG-	ePD	11 13 41	SZ	1.0	28.8	110.4		27	00 54 52.		15.6 S 167.8 E NEW HEBRIDES ISLANDS H=157 KM					
26	ePKP		28 32	SZ	0.8	11.3											
26	00-	eP*1	11 17 38.5	SZ	1.3	117.0	120.8		27	00 56 42.5		56.1 S 27.6 W SANDWICH ISLANDS H=105 KM MAG 5.60 CGS					
26	11 52 27.9		8.4 N 77.0 W PANAMA H= 26 KM MAG 5.10 CGS						27	LZ-	eP	01 05 32.2	SZ	999.9	9999.9	50.4	
26	LZ-	eP	11 58 00.0	SZ	1.0	31.3	25.9	4.88	27	eP		05 34	LZ	16	2297.7		
26	00-	eP	11 59 24.0	SZ	1.5	22.3			27	eSCP		10 31	SZ	999.9	9999.9		
26	12 23 28.*		56.1 S 27.7 W SANDWICH ISLANDS H=149 KM MAG 5.40 CGS						27	eS		12 30	LR	16	4262.5		
									27	eS		12 38	ST	1.1	240.1		
									27	eSCS		15 10	ST	1.5	537.8		
									27	eL		16 40	LR	27	1932.9		
									27	00-	eP*1	01 15 16	LZ	18	162.5	120.7	
									27	eP*1		15 21	SZ	1.8	142.8		
									27	ePP		16 52	LZ	20	205.6		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
27	GG-	e	25 45	UR	208	4068			
		ePS	26 45	LT	23	180065			
		eSS	33 30	LT	27	202267			
		eSKS	01 22 32	LT	20	44361	110.3		
		ePS	25 00	LT	17	56667			
		eSS	31 00	LT	22	85667			
27	LZ-	e	01 35 21	SZ	1.6	1568			
	LZ-	eP	02 46 00.4	SZ	0.7	1063			
	LZ-	e	02 47 52	SZ	1.1	2563			
27	14.6 N 93.5 W OFF COAST OF CHIAPAS, MEXICO H= 63 KM MAG 4.40 CGS								
	04 22 38.	00- eP	04 35 04.8	SZ	1.0	1560	8461	4.99	
27	06 16 09.*	16.9 S 70.2 W SOUTHERN PERU H= 116 KM MAG 3.80 CGS							
27	LZ- eP	06 16 42.4	SZ	0.3	1462	168			
	eS	17 10	SR	0.6	1965				
27	06 30 57.7	56.2 S 27.4 W SANDWICH ISLANDS H= 116 KM MAG 5.80 CGS							
27	LZ- eP	06 39 46.2	SZ	0.3	316	50.6	5.70		
	eSCP	44 47	SZ	1.4	5068				
	eS	46 53	SR	0.8	2767				
	e	47 30	LZ	16	304760				
	eL	52 50	LZ	35	253966				
	GG- eL	07 24 20	LT	32	4036	110.3			
27	08 14 42.*	6.7 S 130.6 E BANDA SEA H= 33 KM MAG 5.00 CGS							
27	08 57 07.7	25.7 S 178.4 W FIJI ISLANDS REGION H= 274 KM MAG 3.90 CGS							
27	09 50 03.*	55.9 S 27.4 W SANDWICH ISLANDS H= 52 KM MAG 5.80 CGS							

DAY	STA	PHASE	TIME	INST	PER				
27	LZ-	eP	09 58 57.0	SZ	0.9	3560	50.4	5.31	
27	6.8 N 73.1 W NORTHERN COLOMBIA H= 139 KM MAG 5.00 CGS								
27	LZ- eP	e	11 11 21.0	SZ	0.8	85.5	23.4	5.27	
		eL	11 53	SZ	0.7	69.6			
			16 20	LZ	16	1123.9			
27	11 20 26.8	18.4 S 173.1 W TONGA ISLANDS REGION H= 33 KM MAG 4.60 CGS							
27	13 51 28.3	14.5 N 145.2 E MARIANA ISLANDS H= 96 KM MAG 4.30 CGS							
27	15 48 17.3	21. S 174.5 W TONGA ISLANDS H= 33 KM MAG 4.10 CGS							
27	17 52 08.4	59.1 N 146.4 W ALASKA AFTERSHOCK H= 33 KM MAG 4.00 CGS							
27	19 02 02.4	56.4 S 28.4 W SANDWICH ISLANDS H= 61 KM MAG 6.00 CGS							
27	LZ- eL		19 31 22	LZ	25.	136.3			
27	20 48 44.9	22.3 S 66.3 W BOLIVIA ARGENTINA BRDR. REG. H= 94 KM MAG 3.90 CGS							
27	LZ- eP	eL	20 50 17.6	SZ	0.4	3.1	6.4	4.05	
			51 12	ST	0.5	4.5			
28	LZ- eP	eS	01 14 00.5	SZ	0.5	23.3	1.7		
			14 23	SR	0.5	15.9			
28	01 27 49.*	19.6 N 70.2 W DOMINICAN REPUBLIC H= 33 KM							
28	01 56 58.9	24.5 N 122.0 E NEAR EAST COAST OF TAIWAN H= 41 KM MAG 5.90 CGS							

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	OO-	eP	02 08 56.5	SZ	1.0	14.8	78.4	4.92
		e	17 57	LZ	20	201.2		
		ePS	19 22	LZ	31	828.1		
		e	27 50	LZ	27	1119.2		
		eL	35 14	LR	40	1548.4		
28	LZ-	eP ¹	02 17 05.0	SZ	1.2	16.1	167.2	
		eP ²	18 07	SZ	1.5	26.1		
		e	19 05	SZ	1.2	5.3		
		ePP	21 58	SZ	1.6	23.3		
28	GG-	e	02 19 54	LZ	15	264.3	84.1	
		e	29 45	LZ	24	174.2		
		eL	41 57	LZ	27	310.4		
28	LZ-	eL	03 14 02	LR	36.	243.9		
28	LZ-	eP	03 16 42.5	SZ	0.4	15.8	1.3	
		eS	16 59	SR	0.4	4.6		
28	LZ-	eP	03 32 36.6	SZ	0.5	1.8	4.7	
		eS	33 33	SR	0.5	3.8		
28			03 57 19.		16.8 S	177.7 W	FIJI ISLANDS REGION	
					H=388 KM	MAG 4.40	CGS	
28			06 27 32.8		15.5 N	93.1 W	OFF COAST OF CHIAPAS, MEXICO	
					H= 33 KM	MAG 3.70	CGS	
28			06 32 54.*		7.8 N	126.8 E	MINDANAO, PHILIPPINE ISLANDS	
					H=103 KM	MAG 4.70	CGS	
28			12 33 10.2		8 S	24.7 W	MID ATLANTIC OCEAN	
					H= 33 KM	MAG 5.20	CGS	
28	LZ-	eP	12 41 32.0	SZ	1.3	50.6	45.8	5.30
		eP	41 32	LZ	16	283.1		
		e	42 58	ST	0.9	6.1		
		ePP	43 26	LZ	17	431.5		
		eS	48 12	LZ	20	2103.8		
		eS	48 12	LR	21	1204.7		
		eLQ	53 12	LZ	21	1386.0		
		eLR	54 03	LZ	14	3658.2		
28	GG-	eP	12 43 12	LZ	15	171.5	59.0	
		eS	51 20	LZ	20	842.2		
		eL	13 01 15	LZ	36	2137.0		
28			12 49 57.5		13.4 S	74.9 W	SOUTHERN PERU	
					H=103 KM	MAG 5.20	CGS	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	LZ-	eP	12 51 37.8	SZ	0.6	9999.9		
		eS	52 57	SR	1.0	9999.9	6.8	
28			14 06 58.*		60.2 N	147.7 W	ALASKA AFTERSHOCK	
					H= 33 KM	MAG 3.70	CGS	
28	GG-	eP	16 17 08.8	SZ	0.6	36.1		
		eS	17 27	ST	0.5	47.3	1.3	
28			16 18 04.2		58.3 N	150.6 W	ALASKA AFTERSHOCK	
28	OO-	eP	16 28 11.2	SZ	1.5	23.8		
		eL	48 55	LZ	20	152.9	60.1	5.03
28	GG-	eP	16 29 24.0	SZ	1.1	33.2	71.3	5.31
					Avg.			
28	LZ-	eL	17 19 42	LZ	2.	29.5U		
28			17 51 13.*		1.8 S	103.3 W	WEST OF GALAPAGOS ISLANDS	
					H= 33 KM	MAG 4.20	CGS	
28	LZ-	eL	18 08 46	LZ	22.	359.6		
28	GG-	eL	18 43 30	LZ	27	124.9	107.0	
28	LZ-	e	17 57 59	SZ	1.5	17.4		
28	LZ-	eP	20 28 53.5	SZ	1.0	12.0		
28	GG-	eP	20 52 53.5	SZ	0.3	19.2		
28	GG-	e	20 53 05	SZ	0.4	74.3		
28			21 09 09.5		3.6 S	102.7 W	WEST OF GALAPAGOS ISLANDS	
					H= 33 KM	MAG 4.50	CGS	
28	LZ-	eP	21 16 09.5	SZ	2.1	67.6		
		eL	26 55	LZ	23	675.3	35.9	5.15
28	LZ-	eP	23 20 16.5	SZ	1.2	11.0		
28			23 28 27.9		1.6 N	127.2 E	MOLUCCA PASSAGE	
					H=103 KM	MAG 6.30	CGS	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	LZ-	eP#1	23 48 17.8	SZ	1.5	58.0	158.8	
		eP#2	48 54	SZ	1.0	28.1		
		ePP	52 32	SZ	2.0	38.2		
29	01	11 10.4	37.3 N 114.8 W	SOUTHERN NEVADA				
			H= 33 KM	MAG 3.60	CGS			
29	02	47 38.	53.7 N 167.8 W	FOX ALEUTIAN ISLANDS				
			H= 33 KM	MAG 4.70	CGS			
29	03	34 51.8	60.1 N 146.5 W	ALASKA AFTERSHOCK				
			H= 15 KM	MAG 4.70	CGS			
29	00-	eP	03 44 45.0	SZ	1.0	16.1	57.9	5.01
29	GG-	eL	04 08 50	LZ	40	181.7	69.1	
29	05	08 02.2	44.7 N 149.4 E	KURILE ISLANDS				
			H= 50 KM	MAG 4.70	CGS			
29	00-	eP	05 19 06.7	SZ	0.8	29.9	69.4	5.35
		eL	35 40	LZ	40	550.0		
29	GG-	eP	05 20 05.0	SZ	1.0	140.2	79.2	5.84
					Avg.	5.59		
29	LZ-	eP	05 21 54.0	SZ	0.9	14.3		
29	05	35 10.6	32.4 S 67.3 W	SAN JUAN PROVINCE, ARGENTINA				
			H=132 KM	MAG 4.40	CGS			
29	GG-	eL	05 53 30	LZ	25.	267.0		
29	07	22 01.2	21.9 S 171.5 E	LOYALTY ISLANDS REGION				
			H= 33 KM					
29	00-	eL	08 00 45	LZ	32.	221.0		
29	09	04 27.1	56.2 S 27.7 W	SANDWICH ISLANDS				
			H= 33 KM	MAG 5.80	CGS			
29	LZ-	eP	09 13 24.5	SZ	0.6	52.1	50.4	5.65

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eP	13 25	LZ	20.	226.0		
		ePCP	14 41	SZ	1.5	151.7		
		eS	20 40	LR	12	105.3		
		eL	28 20	LZ	37	84.0		
29	10	17 34.5	60.2 N 146.3 W	ALASKA AFTERSHOCK				
			H= 5 KM	MAG 5.60	CGS			
29	00-	eP	10 27 28.0	SZ	0.7	9.0		
		ePCP	28 20	LZ	44	2962.0		
		eL	30 25	LT	20	491.5		
29	GG-	eP	10 28 42.5	SZ	0.8	15.9		
		eP	28 44	LZ	18	97.5		
		eS	37 53	LT	21	229.1		
		eSS	42 10	LT	21	412.4		
		eL	51 10	LZ	40	1817.0		
29	LZ-	eL	11 09 38	LZ	23	219.0		
					Avg.	98.0		
						5.09		
29	12	25 16.9	18.6 S 177.8 W	FIJI ISLANDS				
			H=462 KM	MAG 4.20	CGS			
29	LZ-	eP	13 34 31.2	SZ	0.5	2.8		
		e	35 06	SR	0.7	9.8		
29	14	45 50.*	56.1 S 27.9 W	SANDWICH ISLANDS				
			H=170 KM	MAG 5.20	CGS			
29	LZ-	eP	14 54 31.4	SZ	0.8	33.2		
					Avg.	50.3		
29	15	33 06.*	56.3 S 28.0 W	SANDWICH ISLANDS				
			H=120 KM	MAG 5.70	CGS			
29	LZ-	eP	15 42 53.0	SZ	1.1	21.2		
29	18	35 02.3	26.2 S 178.3 E	FIJI ISLANDS REGION				
			H=614 KM	MAG 5.40	CGS			
29	18	42 19.3	26.2 S 178.3 E	FIJI ISLANDS REGION				
			H=605 KM	MAG 3.90	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29	19 01	57*	26°1 S 178°3 E	FIJI ISLANDS REGION				
			H=613 KM	MAG 4.10	CGS			
29	20 09	01.*	5 S 134°7 E	HALMAHERA REGION				
			H= 33 KM	MAG 5.10	CGS			
30	03 18	08.3	59°5 N 148°5 W	ALASKA AFTERSHOCK				
			H= KM	MAG 5.50	CGS			
30	14 30	45.3	36°2 N 141°1 E	NEAR E. COAST HONSHU, JAPAN				
			H= 49 KM	MAG 5.40	CGS			
30	00- eP		14 42 23.0	SZ	0.5	18.5	75.0	5.27
	ePP		45 10	SZ	1.6	117.1		
30	GG- eP		14 43 12.0	SZ	1.6	649.9	83.7	6.46
	ePP		46 22	SZ	1.6	108.3		
				Avg.			5.86	
30	17 20	37.6	41°3 N 141°9 E	NEAR E. COAST HONSHU, JAPAN				
			H= 57 KM	MAG 4.80	CGS			
30	00- eP		17 31 47.2	SZ	0.8	33.4	70.5	5.35
30	GG- eP		17 32 40.7	SZ	0.8	21.6	79.6	5.09
				Avg.			5.22	
30	17 23	17.3	9°3 N 126°4 E	NEAR E. CST. MINDANAO, P. I.				
			H= 91 KM	MAG 5.30	CGS			
30	19 24	41.3	28°4 S 69°8 W	CHILE ARGENTINA BORDER REG.				
			H= 84 KM	MAG 4.20	CGS			
30	19 48	08.*	53°5 N 170°6 W	FOX ALEUTIAN ISLANDS				
			H= 97 KM	MAG 4.30	CGS			
30	20 02	22.*	14°6 N 91°8 W	NEAR COAST OF GUATEMALA				
			H= 23 KM	MAG 3.70	CGS			
30	22 34	33.3	56°6 N 152°3 W	ALASKA AFTERSHOCK				
			H= 15 KM	MAG 4.70	CGS			
30	GG- eP		22 46 06.5	SZ	0.8	15.4	73.2	5.12
30	LZ- eP		23 24 21.1	SZ	0.2	24.4	2.1	
	eS		24 49	SR	0.3	19.1		

DAY	STA	PHASE	TIME	INST	PER
31	00	40 36.4	43°5 N 146°8 E	KURILE ISLANDS	
			H= 48 KM	MAG 6.30	CGS
31	00- tP		00 51 43.3C	SZ	999.9
	eS		01 00 50	ST	1.5
	eS		00 50	SR	2.4
	e		07 51	SZ	0.6
	eL		20 30	SZ	22.0
31	GG-	tP	00 52 40.0C	SZ	0.9
	eS		01 02 37	SR	2.5
	eS		02 37	ST	1.6
	e		08 48	SZ	0.8
31	LZ-	eP'	00 59 51.5	SZ	0.7
	eP'		59 52	LZ	13
	e		59 57	SZ	1.0
	e		01 00 10	LZ	30
	ePP		03 00	LZ	21
	ePKS		03 41	SR	1.7
	ePKS		03 41	LR	26
	e		04 04	SZ	2.2
	eSS		21 30	LR	29
	eLQ		40 00	LT	47
	eLR		47 20	LZ	999
31	00	56 42.9	43°6 N 147°1 E	OFF E. COAST HOKKAIDO, JAPAN	
			H= 33 KM	MAG 4.60	CGS
31	04	54 11.1	30°6 S 70°8 W	CHILE ARGENTINA BORDER	
			H= 69 KM	MAG 4.40	CGS
31	LZ-	eP	04 57 36.4	SZ	0.7
	eL		05 01 00	SZ	1.5
31	LZ-	eP	10 08 16.0	SZ	0.3
	eS		09 00	SR	0.3
31	10	24 54.*	53°7 N 158°7 E	SOUTHERN KAMCHATKA	
			H=110 KM	MAG 4.80	CGS
31	GG-	eP	10 36 15.6	SZ	1.1
				45.2	73.4
				5.20	
31	10	30 25.*	19°2 N 69°4 W	DOMINICAN REPUBLIC	
			H= 83 KM	MAG 5.00	CGS
31	LZ-	eP	10 37 13.5	SZ	0.7
				6.7	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
31		13 19 46.5	35°3 N 103°1 E	KANSU PROVINCE, CHINA				
			H= 33 KM	MAG 5.10	CGS			
31	LZ-	eP*1	13 39 45.0	SZ	1.0		6.1	159.6
31		13 56 08.*	23°3 S 177°8 W	FIJI ISLANDS				
			H=204 KM	MAG 3.70	CGS			
31	LZ-	eLR	16 08 10	LZ	28.	1811.5		
31	LZ-	eP	16 45 24.0	SZ	1.0		18.3	
31	LZ-	e	16 45 50	SZ	0.8		18.4	
31	LZ-	e	16 50 22	SZ	1.7		37.1	
31		17 15 26.8	13°6 S 172°1 E	NEW HEBRIDES ISLANDS				
			H= 73 KM	MAG 5.00	CGS			
31	OO-	ePKS	17 38 05	LT	10.	979.6	130.7	
		eSS	54 35	LT	25	562.5		
		eSSS	59 15	LT	25	375.0		
		eLQ	18 17 05	LR	43	1639.3		
		eLR	20 00	LZ	32			
31	GG-	ePKS	17 38 30	LT	12	349.1	140.7	
		e	18 01 42	LT	25	1077.8		
		eL	22 00	LT	37	1026.7		
31		18 34 16.*	13°3 S 171°8 E	NEW HEBRIDES ISLANDS REGION				
			H=111 KM	MAG 4.60	CGS			
31	LZ-	eL	23 48 55	LZ	20.	185.6		

Bulletin No. 30A

June 1964

SEISMOLOGICAL BULLETIN
WEST GERMANY, NORWAY, BOLIVIA

THE GEOTECHNICAL CORPORATION
3401 SHILOH ROAD
GARLAND, TEXAS



SEISMOLOGICAL BULLETIN

GRAFENBERG, WEST GERMANY
OSLO, NORWAY
LA PAZ, BOLIVIA

The Geotechnical Corporation wishes to acknowledge the cooperation of the following scientific organizations in the collection and production of the data in this bulletin:

Bundesanstalt fur Bodenforschung, Hannover, West Germany (Professor Dr. Hans Closs, Director)

Jordskel, University of Bergen, Bergen, Norway (Professor A. Kvale, Director)

Observatorio San Calixto, La Paz, Bolivia (Father Ramon Cabre, S. J.)

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SEISMOLOGICAL BULLETIN

GRAFENBERG, WEST GERMANY
OSLO, NORWAY
LA PAZ, BOLIVIA

1. INTRODUCTION

1.1 This bulletin contains seismological data on earthquake phases recorded at 3 mobile seismological stations being operated by The Geotechnical Corporation. The bulletin is intended to be an aid to interested observers in determining the extent of the earthquake data contained in the records from the three teams.

1.2 The bulletin contains the following:

a. Data on all of the phases that have been associated with epicenters reported by the U. S. Coast and Geodetic Survey (USC&GS);

b. Data on the epicenters listed in the bulletin - as reported by the USC&GS;

c. Arrival time, period, amplitude, and distance for phases not associated with USC&GS epicenters.

1.3 All phases are listed in chronological order, except that unassociated phases are not mixed with a sequence of associated phases. In such cases, the unassociated phases are listed immediately following the associated phases.

2. INSTRUMENTATION

2.1 Instrumentation at the Grafenberg, West Germany (GG-GR), and Oslo, Norway (OO-NW) sites consists of a short-period vertical Benioff seismometer

array. A short-period vertical Johnson-Matheson seismometer array is in operation at La Paz, Bolivia (LZ-BV). Each site is also equipped with a three-component Sprengnether long-period seismograph system. Both systems use phototube amplifiers. The response characteristics of these systems are shown in figures 1, 2, and 3.

2.2 All data are recorded by 35-mm Film Recorders, Geotech Model 1301A, 14-channel Magnetic-Tape Recorders, Ampex Model 314, and 16-mm film Developcorders, Geotech Model 4000C.

2.3 Precision Timing Systems, Geotech Model 5400 or 5400A, are used for primary timing. Chronometers are used for secondary timing. WWV is used for the time standard at LZ-BV. GG-GR and OO-NW use Radio Potsdam. WWV is a United States National Bureau of Standards Radio Station located at Beltsville, Maryland. The accuracy of the time program from WWV agrees with U. S. Naval Observatory time.

2.4 Each system is calibrated at least once every 24 hours. In the short-period system calibration, an electromagnetic (EM) calibrator is used to determine the magnification as a function of frequency and a weight-lift calibration is used to verify the EM magnification at 1 cps. In the long-period systems, magnification is determined as a function of frequency using EM calibrators. No method of verification is used. In the EM method of calibration, the seismometer mass is driven by a known sinusoidal force and the magnification is calculated using the relationships between the sinusoidal force and the recorded amplitude.

3. INTERPRETATION OF COLUMN TITLES

The column titles appearing in this bulletin are defined as follows:

3.1 DAY

The date, for the day of the month, is printed each time a new epicenter is listed and each time the station designator changes. Dates are given in Greenwich Civil Time (GCT).

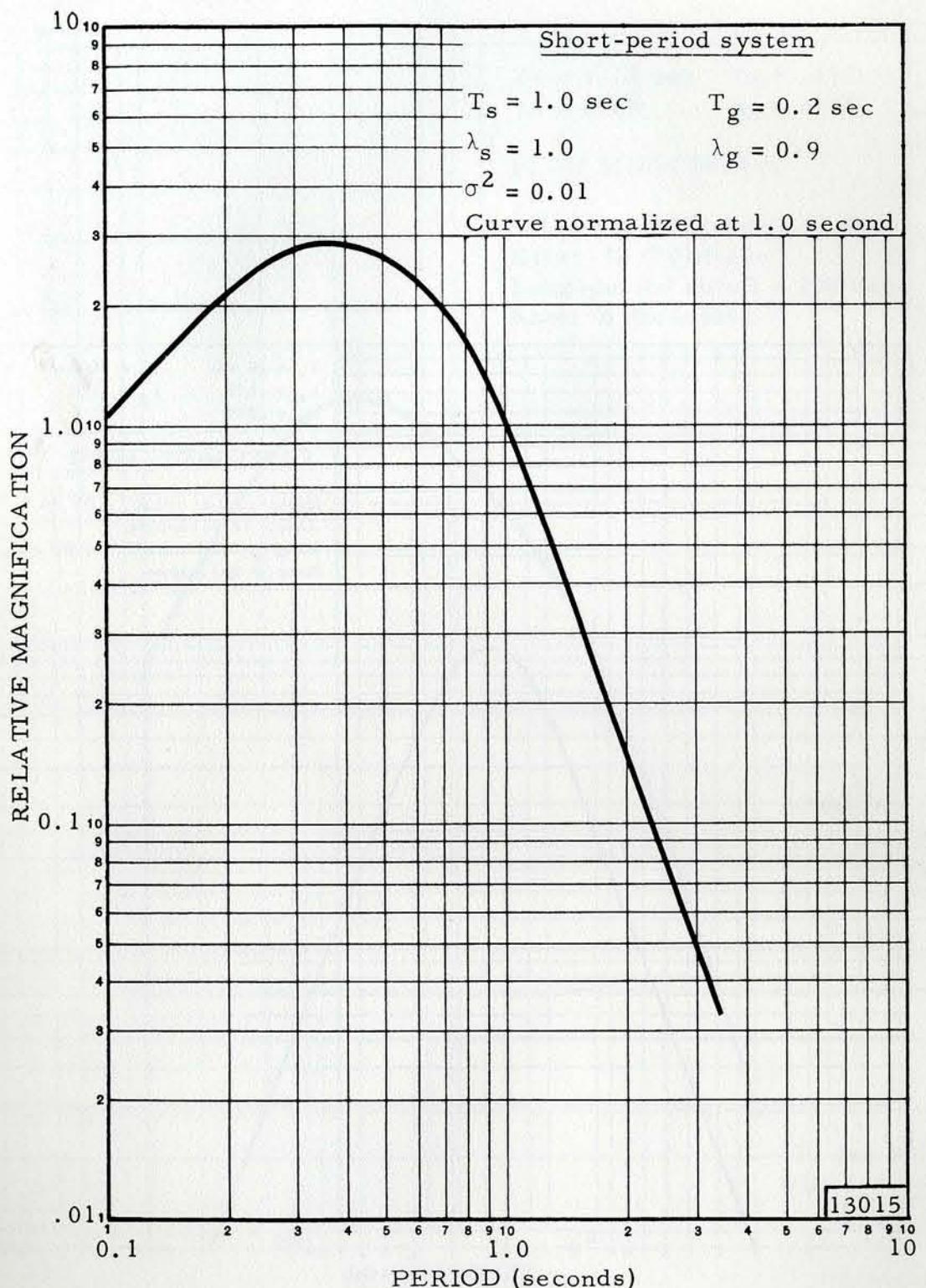


Figure 1. Frequency response of the Benioff short-period seismograph system

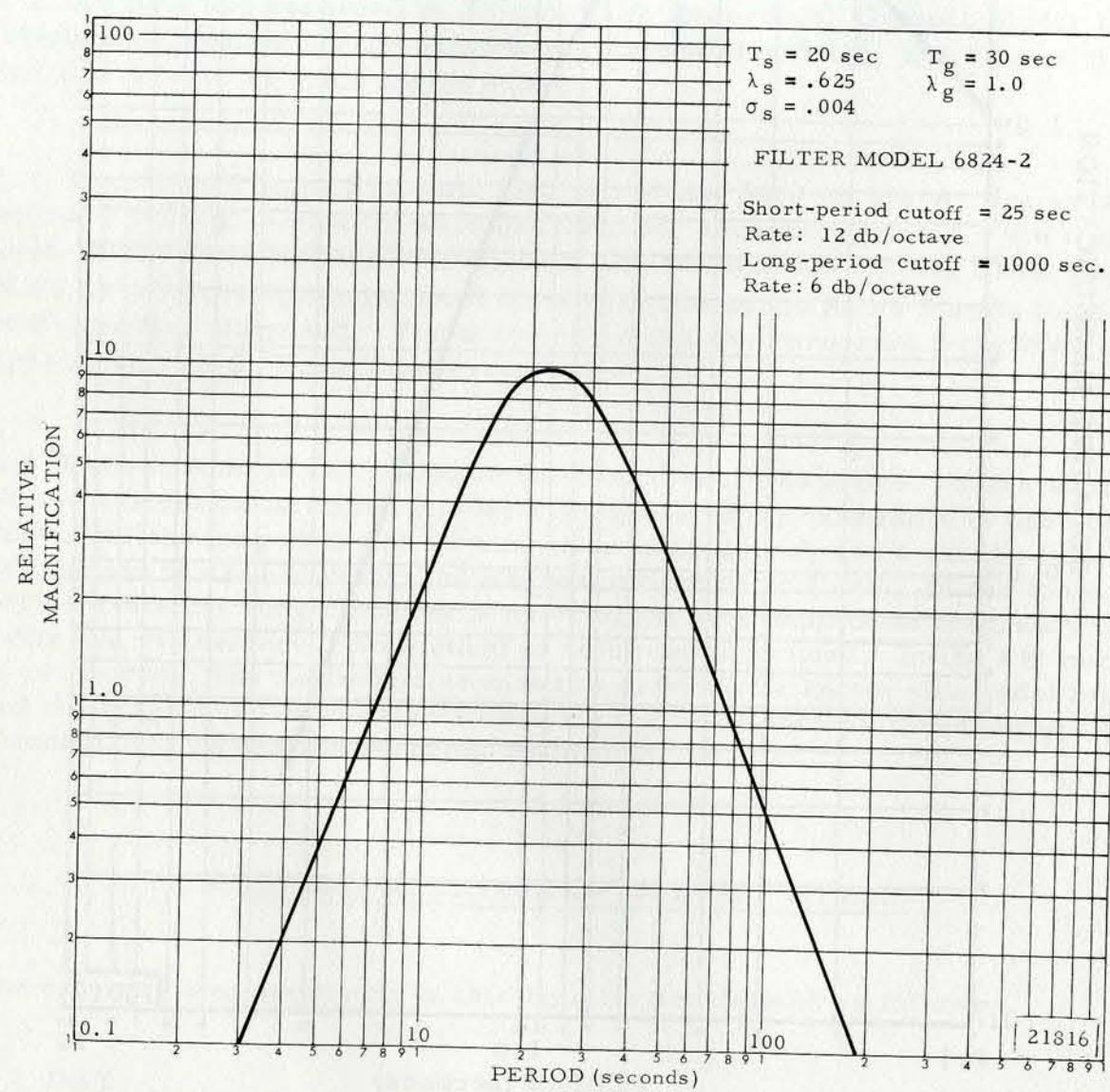


Figure 2. Frequency response of the Sprengnether long-period seismograph system

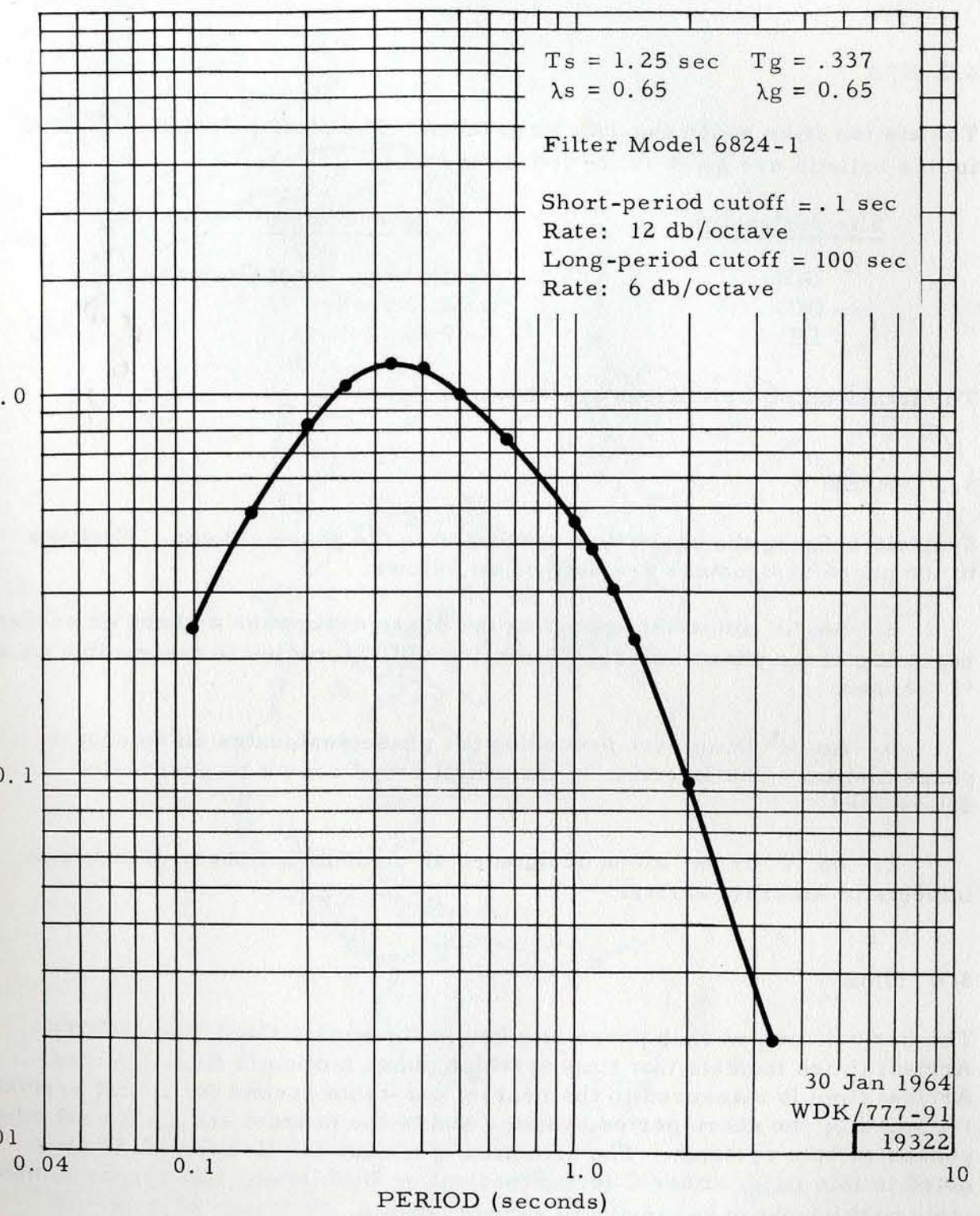


Figure 3. Frequency response of the Johnson-Matheson seismograph system

3.2 STA

The station from which the data were taken. The station designators used in this bulletin are given in the following table:

<u>Site designator</u>	<u>Site location</u>
GG-	Grafenberg, West Germany
OO-	Oslo, Norway
LZ-	La Paz, Bolivia

The locations of the stations are shown in figure 4.

3.3 PHASE

Symbols defining the phase type are listed in the phase column. Prefixes to the phase designators are defined as follows:

- a. An "i" (impetus) preceding the phase designates a sharp or sudden beginning of the phase motion. Direction of first motion is discernible on all "i" phases.
- b. An "e" (emersio) preceding the phase designates an emergent phase motion. The direction of the initial break cannot be positively determined.
- c. An "i" or "e" alone designates an unidentified phase of either an impetus or emersio arrival.

3.4 TIME

The arrival time of each phase is given in Greenwich Civil Time (GCT). Arrival times indicate that time at which phase motion is first detected. Arrival time is measured to the nearest one-tenth second for initial arrivals recorded by the short-period system, and to the nearest second for all other phases on both systems. The direction of motion for iP arrivals is also noted in this field; either C (compression) or D (dilation) will appear immediately to the right of the tenths of second column.

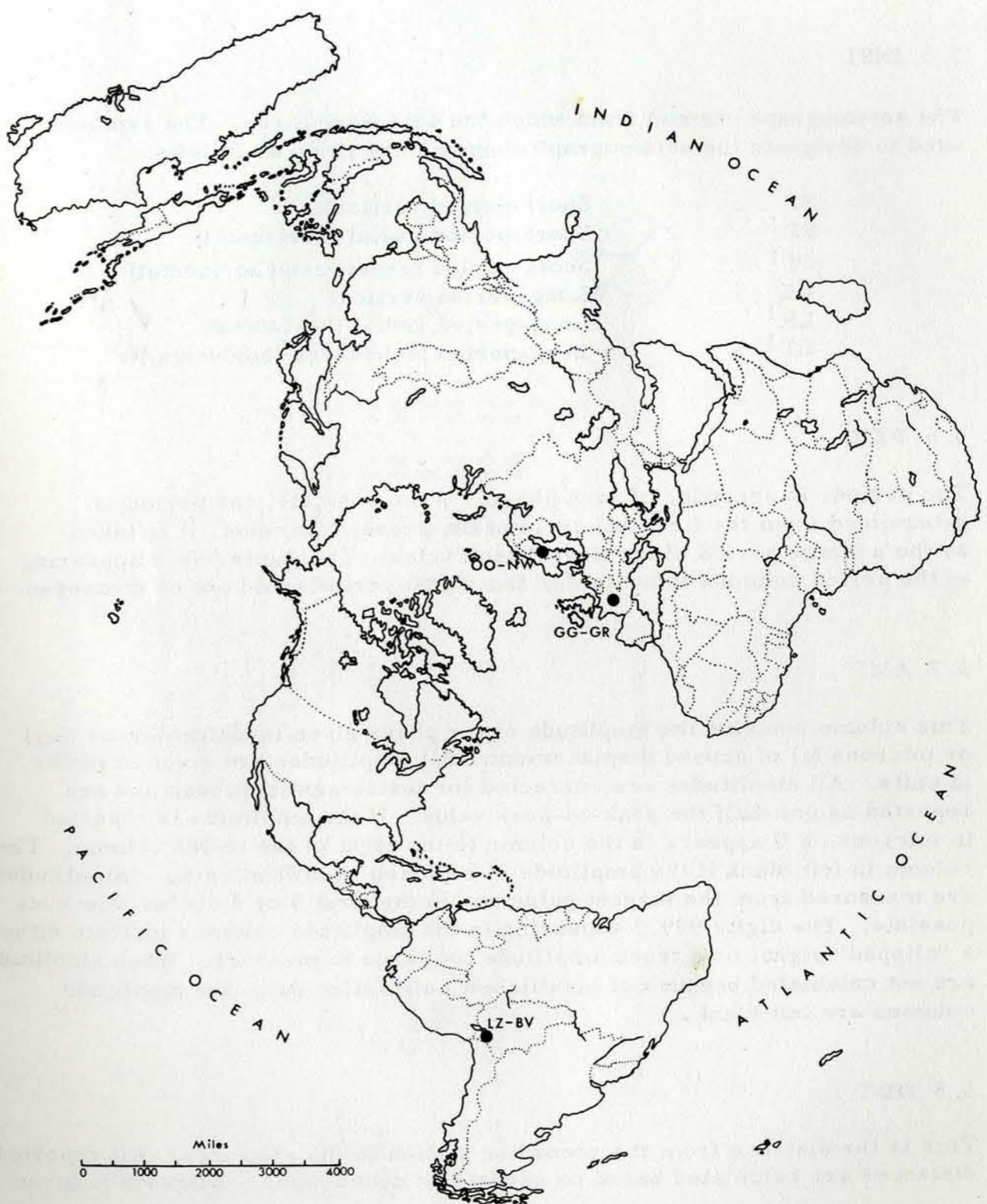


Figure 4. Bulletin sites

3.5 INST

The seismograph channel from which the data were taken. The symbols used to designate the seismograph channels are given as follows:

SZ	Short-period vertical
SR ¹	Short-period radial (horizontal)
ST ¹	Short-period transverse (horizontal)
LZ	Long-period vertical
LR ¹	Long-period radial (horizontal)
LT ¹	Long-period transverse (horizontal)

3.6 PER

The period, in seconds, of each phase. When possible, the period is determined from the first full cycle of the phase; otherwise, it is taken as the average period of the first three cycles. The digits 999.9 appearing in the period columns indicate that the signal period could not be measured.

3.7 AMP

This column contains the amplitude of the phase given in millimicrons ($m\mu$) or microns (μ) of ground displacement. All amplitudes are given in tenths of units. All amplitudes are corrected for instrument response and are reported as one-half the peak-to-peak value. If the amplitude is reported in microns, a U appears in the column to the right of the tenths column. The column is left blank if the amplitude is reported in millimicrons. Amplitudes are measured from the largest pulse within the first 3 or 4 cycles whenever possible. The digits 999.9 appearing in the amplitude columns indicate either a "clipped" signal or a trace amplitude too large to measure. When amplitudes are not calculated because of insufficient calibration data, the amplitude columns are left blank.

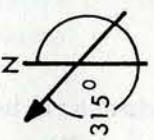
3.8 DIST

This is the distance from the recording station to the epicenter. All reported distances are calculated based on geocentric coordinates. Distance is given

Table 1. Bulletin site information

Site designator	Site location	Horizontal seismometer orientation (azimuth from true north in degrees) ¹		Site coordinates in deg, min, sec	Elevation in km	Rock type
		Radial	verse			
GG-GR	Grafenberg, West Germany	140	230	N 49° 41' 32"	0. 53	Limestone
OO-NW	Oslo, Norway	138	228	E 11° 12' 55"	0. 56	Glacial drift
LZ-BV	La Paz, Bolivia	141	231	S 16° 15' 31"	3. 99	Limestone
				W 68° 28' 47"		

¹When earth moves in direction shown, trace moves up.



¹Table 1 gives the instrument orientation of the horizontal seismometers.

to the nearest one-tenth of a degree. Distances computed for unassociated data are determined from the S-P intervals. In some instances, surface groups are recorded which have traveled the major arc from the epicenter to the station. In such cases, the major arc distance is given.

3.9 MAG

The magnitudes provided are body wave magnitudes, m_b , as defined by Gutenberg and Richter². They are determined only from the short-period vertical component of the P phase (initial arrival). The following equation is used:

$$m_b = \log_{10} (A/T) + Q$$

where

m_b = body wave magnitude

A = one-half p-p earth amplitude of P phase in microns

T = period of P phase in seconds

Q = depth-distance factor for PZ given by Gutenberg and Richter², for distances greater than 16°.

Magnitude computations for distances less than 16° are based on extensions of the Q tables. Points from 10° to 16° were read from a curve in the Gutenberg-Richter paper, and an inverse cube relationship was used to extrapolate from 2° to 10°.

The average magnitude (sum of station magnitudes/number of stations) is listed on the last line of an epicenter print-out.

4. INTERPRETATION OF UNITED STATES COAST AND GEODETIC SURVEY DATA

The epicenter data reported by the USC&GS precede each list of associated phases. This information appears as follows:

²Gutenberg, B., and Richter, C. F., 1956, Magnitude and energy of earthquakes: Ann. Geofis., vol. 9, p. 1-15

Line 1 (from left to right)

First group:

Second group:

Third group:

Fourth group:

Day of the month

Origin time of the event

Geographic coordinates of the epicenter

Geographic description

NOTE

An asterisk (*) following the origin time indicates epicenters believed accurate to 1/2° in latitude and longitude and to 50 km in depth.

Line 2 (from left to right)

First group:

Second group:

Depth (h) of the hypocenter in kilometers
Magnitude (MAG) as determined by Pasadena (PAS), Berkeley (BRK), Palisades (PAL), or USC&GS (CGS)

NOTE

MAG (CGS) is m_b of Gutenberg and Richter from the P phase only. The magnitude quoted is an average value determined from data forwarded by cooperating standard stations and other observatories.

5. REMARKS

The Geotechnical Corporation routinely receives and preprocesses data collected from three overseas field stations. Information on background

levels, magnification levels, operational procedures, available records, and other data can be provided to interested organizations. Requests for such information should be made to the attention of:

THE GEOTECHNICAL CORPORATION
3401 Shiloh Road
Garland, Texas 75041
ATTN: Mr. J. M. Whalen

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
31		18 34 16.*	13°3 S 171°8 E	NEW HEBRIDES ISLANDS REGION				
			H=111 KM	MAG 4.60	CGS			
1		00 27 57.*	53°7 N 166°7 W	FOX ALEUTIAN ISLANDS				
			H= 80 KM	MAG 4.00	CGS			
1		03 46 42.*	45°5 N 150°7 E	KURILE ISLANDS				
			H= 24 KM	MAG 4.30	CGS			
1		04 36 44.*	40°5 N 137°9 E	SEA OF JAPAN				
			H= 32 KM	MAG 4.20	CGS			
1		05 12 28.*	18°1 S 70°6 W	CHILE PERU BORDER				
			H=136 KM					
1	LZ-	eP	05 13 12.1	SZ	0.5	1.7	2.7	
	e		13 25	SZ	0.6	14.8		
	eL		14 22	SR	0.9	38.0		
1		06 05 07.6	14°6 S 167°4 E	NEW HEBRIDES ISLANDS				
			H=176 KM	MAG 5.20	CGS			
1	LZ-	eP	07 08 34.2	SZ	0.5	19.6		
1		08 49 37.1	4°6 N 125°9 E	TALAUD ISLANDS				
			H=113 KM	MAG 5.30	CGS			
1		09 20 58.*	1° S 78°1 W	ECUADOR				
			H= 33 KM	MAG 4.00	CGS			
1		10 12 57.	19° S 169°5 E	NEW HEBRIDES ISLANDS				
			H=248 KM	MAG 4.50	CGS			
1		11 22 02.1	43°6 N 146°9 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.50	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1			13 17 20.7	21° S 175° 7' W	TONGA ISLANDS			
				H= 35 KM	MAG 5.20	CGS		
1	OO-	e	13 51 30	LR	27.0	441.8	139.7	
	e		51 30	LR	27	441.8		
	e		58 51	LR	31	435.8		
	eL		14 23 15	LT	43	1489.1		
1	13 24 07.1		52.9 N 35.0 W	NORTH ATLANTIC OCEAN				
	H= 33 KM	MAG 4.40	CGS					
1	GG-	eP	16 01 23.9	SZ	0.3	21.3		
1	18 31 13.7		43.6 N 147.0 E	OFF E. COAST HOKKAIDO, JAPAN				
	H= 33 KM	MAG 4.70	CGS					
1	OO-	eP	18 42 22.0	SZ	999.9	9999.9	69.8	
	eL		19 06 52	LR	40	535.5		
1	GG-	eP	18 43 19.4	SZ	0.9	45.9	79.4	5.42
1	LZ-	eP	20 28 35.2	SZ	0.8	4.2		
1	LZ-	eL	21 31 54	LZ	17	129.4		
2	LZ-	eP	01 40 48.1	SZ	0.4	21.1		
2	LZ-	eP	07 11 35.7	SZ	1.4	17.3		
2	08 06 42.*		37.7 S 73.3 W	NEAR COAST OF SOUTHERN CHILE				
	H= 33 KM							
2	LZ-	eL	08 21 07	LZ	12.0	476.7		
2	GG-	eP	11 06 14.0	SZ	0.4	12.8		
2	GG-	eP	14 08 56.2	SZ	0.5	30.7		
2	16 09 23.5		59.7 N 144.4 W	ALASKA AFTERSHOCK				
	H= 15 KM	MAG 5.10	CGS					
2	GG-	eL	16 29 40	LZ	15.0	279.2		
2	16 29 41.5		59.7 N 144.2 W	ALASKA AFTERSHOCK				
	H= 10 KM	MAG 4.80	CGS					
2	17 06 41.9		43.9 N 148.8 E	KURILE ISLANDS				
	H= 45 KM	MAG 4.50	CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2			20 44 45.	43.7 N 146.7 E	OFF E. COAST HOKKAIDO, JAPAN			
	H= 39 KM	MAG 4.50	CGS					
2	23 12 37.8		14.7 S 167.0 E	NEW HEBRIDES ISLANDS				
	H= 82 KM	MAG 4.70	CGS					
3	LZ-	eP	00 06 32.8	SZ	0.4	15.8		
3	GG-	eL	00 25 40	LZ	27	81.3		
3	00 44 03.*		55.4 S 24.8 W	SANDWICH ISLANDS				
	H= 33 KM	MAG 5.50	CGS					
3	LZ-	eP	01 00 02.5	SZ	0.4	6.0	2.5	
	e		00 34	SZ	0.4	9.0		
3	02 27 27.*		31.5 N 93.9 W	TEXAS LOUISIANA BORDER				
	H= 33 KM	MAG 4.20	CGS					
3	02 27 45.5		15.5 S 167.9 E	NEW HEBRIDES ISLANDS				
	H= 126 KM							
3	02 49 14.9		25.9 N 95.8 E	NORTHERN BURMA				
	H= 100 KM	MAG 5.50	CGS					
3	GG-	eP	03 00 30	LZ	17.0	181.3	67.3	
	eS		08 50	LR	22	380.7		
	eL		28 05	LZ	30	316.4		
3	LZ-	eP*1	03 09 07.0	SZ	1.3	42.2	162.5	
3	07 28 29.6		28.4 N 142.7 E	SOUTH OF HONSHU, JAPAN				
	H= 33 KM	MAG 4.60	CGS					
3	07 49 30.8		5.2 S 78.6 W	NORTHERN PERU				
	H= 33 KM	MAG 4.20	CGS					
3	00-	eL	07 56 55	LR	25.0	419.4U		
3	09 17 07.*		15.6 N 94.5 W	OFF COAST OF OAXACA, MEXICO				
	H= 59 KM	MAG 3.80	CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	10	27 03.*	22.8 S 66.5 W	ARGENTINA BOLIVIA BORDER				
			H=101 KM	MAG 4.10	CGS			
3	LZ-	eP	10 28 38.0	SZ	0.8	8.4	6.8	4.26
3	11	25 46.*	61.1 N 151.2 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 3.80	CGS			
3	11	41 54.6	19.5 N 108.3 W	OFF COAST OF JALISCO, MEXICO				
			H= 33 KM	MAG 4.10	CGS			
3	12	29 20.8	10.5 N 70.9 W	VENEZUELA				
			H= 33 KM	MAG 4.10	CGS			
3	LZ-	eP	12 34 59.1	SZ	0.6	4.2	26.7	4.26
3	13	50 16.*	40.3 N 126.1 W	NEAR COAST NORTH CALIFORNIA				
			H= 33 KM	MAG 5.40	CGS			
3	14	03 42.4	59.9 N 143.9 W	ALASKA AFTERSHOCK				
			H= 20 KM	MAG 5.10	CGS			
3	LZ-	eP	16 48 52.3	SZ	0.6	26.4		
3	17	54 14.7	18.8 S 173.7 W	TONGA ISLANDS				
			H= 33 KM	MAG 4.80	CGS			
3	GG-	eL	20 09 05	LZ	24.0	82.2		
4	00	15 40.*	33.5 S 177.8 W	KERMADEC ISLANDS				
			H= 31 KM	MAG 4.30	CGS			
4	01	42 19.9	24.5 N 122.1 E	OFF EAST COAST OF TAIWAN				
			H= 33 KM	MAG 5.00	CGS			
4	02	57 07.6	36.4 N 69.3 E	HINDU KUSH				
			H= 33 KM	MAG 4.90	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
4	03	27 05.*	59.7 N 147.3 W	ALASKA AFTERSHOCK				
			H= 45 KM					
4	GG-	eL	04 15 00	LZ	20.0	84.3		
4	GG-	eL	04 19 50	LZ	30	231.3		
4	04	28 54.7	17.5 N 100.8 W	NEAR COAST GUERRERO, MEXICO				
			H= 22 KM	MAG 4.70	CGS			
4	LZ-	eP	04 37 20	LZ	17.0	43.9	46.2	
			37 21.3	SZ	1.8	54.6		
			38 35	LZ	17	219.8		
			44 15	LT	25	601.6		
			48 00	LR	19	818.7		
			50 45	LT	30	1917.9		
			53 25	LZ	20	2874.3		
4	GG-	eL	05 11 43	LZ	40	397.9	90.3	
4	GG-	e	05 08 33	LZ	17.0	261.3		
4	GG-	e	05 41 55	LZ	19	232.7		
4	GG-	e	05 52 42	LR	20	372.6		
4	10	18 15.3	7.8 S 117.6 E	FLORES SEA				
			H= 47 KM	MAG 5.20	CGS			
4	11	17 11.8	6.1 S 149.9 E	NEW BRITAIN				
			H= 54 KM					
4	LZ-	eP*	11 36 30.0	SZ	1.0	3.6	136.0	
			36 41	SZ	1.0	22.1		
			40 01.3	SZ	2.0	105.4		
			12 22 20	LZ	25	618.4		
4	GG-	eL	12 14 40	LZ	35	129.7	124.4	
4	11	46 01.7	9.6 S 76.1 W	CENTRAL PERU				
			H=124 KM	MAG 5.30	CGS			
4	LZ-	eP	11 48 33.5	SZ	1.0	20.2	9.9	4.79
			48 52	SZ	0.7	72.8		
			50 10	LT	18	1695.8		
4	11	53 50.*	14.7 S 176.0 W	TONGA ISLANDS REGION				
			H=303 KM	MAG 3.90	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
4	GG-	LQ	12 21 05	ZE	1080	1030.8	3710	
4	GG-	eLR	12 25 25	LZ	26	1030.8		
4	12 56 02.6		4.9 S 134.2 E	NEAR S. CST. WEST NEW GUINEA				
			H= 33 KM					
4	LZ-	eP+2	13 15 53.0	SZ	2.0	105.4	149.3	
4	LZ-	eP	13 30 34.5	SZ	1.7	39.1		
4	GG-	eL	19 51 30	LZ	18	214.8		
5	00 11 51.9		39.3 N 43.1 E	EASTERN TURKEY				
			H= 33 KM	MAG 4.60 CGS				
5	GG-	eP	00 17 14.0	SZ	1.4	103.0	24.8	5.24
	e		22 05	LZ	14	193.7		
	eL		25 12	LZ	32	441.2		
5	00- e		00 18 28	LZ	25	210.6	29.5	
	e		21 19	LT	40	1909.9		
	eL		23 15	LZ	27	1404.0		
5	01 03 26.*		25.6 S 176.5 W	KERMADEC ISLANDS				
			H= 33 KM	MAG 4.40 CGS				
5	02 36 12.4		42.5 N 84.8 E	SINKIANG PROVINCE, CHINA				
			H= 52 KM	MAG 4.90 CGS				
5	GG-	eP	02 45 00.5	SZ	0.6	30.1	49.6	5.42
5	LZ-	eP+1	02 55 47.0	SZ	0.9	38.9	145.3	
5	03 59 27.*		25.1 N 142.6 E	BONIN ISLANDS				
			H= 33 KM	MAG 4.70 CGS				
5	00- eP		04 12 02.5	SZ	0.6	14.4	85.7	5.24
	eL		41 40	LR	20	130.2		
5	04 08 30.6		56.2 S 27.5 W	SANDWICH ISLANDS REGION				
			H= 33 KM	MAG 5.30 CGS				
5	LZ-	eP	04 17 27.9	SZ	0.7	23.9	50.5	5.25
	ePP		19 16	SZ	0.7	5.9		
5	04 44 48.6		47.8 N 27.3 W	NORTH ATLANTIC OCEAN				
			H= 33 KM	MAG 4.70 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5	GG-	eL	04 57 15	SZ	3280	419.4U	25.3	
5	04 52 04.3		43.2 N 111.3 W	EASTERN IDAHO				
			H= 33 KM	MAG 3.70 CGS				
5	LZ-	eP	05 16 27.0	SZ	0.6	24.6	1.7	
	eS		16 50	ST	0.6	26.5		
5	08 37 54.*		46.2 N 151.9 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.60 CGS				
5	GG-	e	08 54 55	LZ	15.0	161.9		
5	GG-	e	09 01 43	LZ	15	161.9		
5	GG-	e	09 10 50	LT	23	312.7		
5	09 13 20.		16.2 S 177.3 E	FIJI ISLANDS REGION				
			H= 25 KM	MAG 5.20 CGS				
5	LZ-	eL	10 04 07	LZ	27.0	430.9	107.5	
5	GG-	e	09 15 00	LT	20.0	242.0		
5	GG-	eL	09 25 00	LZ	20	282.5		
5	09 50 35.		60.4 N 146.0 W	ALASKA AFTERSHOCK				
			H= 15 KM	MAG 5.20 CGS				
5	00- eP		10 00 25.5	SZ	1.1	26.6	57.6	5.18
	eL		17 00	LR	25	774.63		
5	LZ-	eL	10 42 35	LZ	25	302.6	97.9	
5	LZ-	eP	10 13 12.1	SZ	999.9	9999.9		
5	10 53 22.*		48.3 N 153.5 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.90 CGS				
5	11 18 18.1		4.7 N 75.8 W	WESTERN COLOMBIA				
			H= 62 KM	MAG 4.30 CGS				
5	11 50 25.*		63.1 N 151.1 W	SOUTHERN ALASKA				
			H= 94 KM	MAG 4.20 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5			13 01 28.2	43° N H= 33 KM	45.4 E	EASTERN CAUCASUS		
5	00- eP		13 07 09.8	SZ	4.60	CGS		
5	GG- eP eS		14 59 26.1 59 42	SZ SR	0.5 0.3	23.4 74.6	27.4	4.43
5			16 08 03.*	6.5 S H= 33 KM	125.8 E	BANDA SEA		
5	LZ- eP		16 43 38.0	SZ	0.6	9.2		
5			22 06 53.	58.1 N H= 15 KM	152.1 W	ALASKA AFTERSHOCK		
5	00- eP eSCS		22 17 03.5 26 50	SZ LT	0.8 16	23.7 206.9	60.4	5.32
5	GG- eP eP eS eL		22 18 16.8 18 22 27 40 44 07	SZ LZ LR LR	0.9 13 15 25	28.8 178.2 514.6 672.5	71.7	5.36
5	LZ- eL		22 51 20	LZ	35	328.1	100.3	
6	LZ- eP		00 33 52.5	SZ	0.5	AVG.	27.6	5.34
6			02 33 16.1	8.9 S H= 33 KM	108.7 W	SOUTH PACIFIC OCEAN		
6	LZ- eP eLQ eLR		02 40 50.6 50 00 52 38	SZ LR LZ	1.0 22 20	16.3 363.9 890.9	39.9	4.68
6	GG- eL		03 24 15	LZ	20	114.3	115.9	
6	LZ- eP		03 10 59.0	SZ	1.0	7.2		
6	LZ- eL		03 23 05	LZ	20	464.0		
6			03 44 27.8	8.3 S H= 47 KM	79.3 W	NEAR COAST OF PERU		
6	GG- eL		04 01 17	LZ	20.0	85.7		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6			06 44 35.2	39.5 N H= 33 KM	110.3 W	EASTERN UTAH		
6			08 05 56.4			HINDU KUSH REGION		
6			11 47 38.*			NEAR COAST SOUTH CALIFORNIA		
6			12 46 59.*			EASTERN UTAH		
6	LZ- eP		13 42 39.0	SZ	0.5	21.5		
6			17 15 54.*			BAJA CALIFORNIA		
6	LZ- eP		19 05 45.2	SZ	0.5	5.1		
6	LZ- e		19 07 10	SZ	1.5	28.1		
6			19 07 51.4			EASTER ISLAND REGION		
6	LZ- eP		19 15 57.8	SZ	1.2	37.2	43.8	4.99
6	e		17 00	LR	25	9999.9		
6	ePP		17 44	SZ	1.0	38.0		
6	eS		22 25	LR	23	5783.2		
6	eSSS		26 25	LR	999.9	9999.9		
6	00- ePP		19 29 10	LZ	1	29.4U	129.8	
6	e		47 45	LR	28	988.1		
6	eSSS		51 35	LR	28	846.9		
6	eLQ		20 07 15	LT	32	587.3		
6	eLR		13 14	LZ	25	1498.7		
6	LZ- eL		20 20 00	LZ	21.0	513.8		
6			22 01 45.2			SANDWICH ISLANDS REGION		
6	LZ- eP		22 10 43.3	SZ	0.8	31.5	50.4	5.31

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		ePCP	12 00	SZ	1.0	10.4		
7	05 29 35.*	5.5 S 152.4 E	NEW BRITAIN REGION					
		H= 58 KM	MAG 4.90 CGS					
7	LZ- eP	05 32 43.0	SZ	0.3	1.2			
7	LZ- e	05 32 58	SZ	0.5	6.4			
7	LZ- eL	05 33 34	SR	0.8	36.1			
7	08 22 55.9	3.0 S 130.3 E	CERAM REGION					
		H= 33 KM	MAG 4.80 CGS					
7	LZ- eP*2	08 42 59.0	SZ	1.1	7.0	153.3		
7	13 07 53.2	18.4 S 173.7 W	TONGA ISLANDS					
		H= 33 KM	MAG 4.50 CGS					
7	GG- eP*2	13 27 47.5	SZ	1.1	17.8	148.5		
7	LZ- eP	13 43 53.9	SZ	1.0	8.9			
7	14 49 31.2	36.3 N 141.0 E	NEAR E. COAST HONSHU, JAPAN					
		H= 36 KM	MAG 5.00 CGS					
7	GG- eP	15 01 56.6	SZ	0.8	11.3	83.5	5.05	
	eL	30 10	LR	19	506.7			
7	LZ- eP*2	15 09 12.4	SZ	0.9	5.3	147.1		
7	OO- eL	15 25 12	LR	35	893.0	74.8		
7	LZ- eP	17 44 55.7	SZ	0.4	16.2			
7	LZ- eL	17 46 23	SR	0.8	5.6			
7	GG- eP	19 11 36.2	SZ	0.7	7.1			
7	GG- e	19 15 04	SZ	0.7	14.3			
7	20 10 15.9	30.4 S 67.6 W	LA RIOJA PROVINCE, ARGENTINA					
		H= 29 KM	MAG 5.20 CGS					
7	LZ- eP	20 13 35.5	SZ	0.8	7.0	14.1	4.35	
	e	13 41	SZ	1.3	57.1			
	e	13 46	SZ	1.0	67.1			
	eL	18 08	SR	1.6	353.8			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
7	GG- eL	20 57 27	LR	27.0	397.0	105.9		
7	20 30 55.5	45.3 N 150.9 E	KURILE ISLANDS					
	H= 33 KM	MAG 5.00 CGS						
7	GG- eP	20 42 58.5	SZ	1.0	91.3	79.1	5.69	
	eP	43 00	LZ	20	192.4			
	e	48 50	LR	20	462.2			
7	eL	21 03 07	LZ	25	435.8			
	L	17 00	ZE	20.0	419.4U			
	L	17 00	TE	17.0	419.4U			
	eL	17 00	LR	18	1181.5			
	eL	17 00	LT	17	566.8			
	eL	17 00	LZ	20	549.7			
7	LZ- eP*1	20 50 13.0	SZ	1.5	12.4	136.1		
7	00- eSS	20 55 47	LT	29	688.8	69.2		
	eLQ	21 00 08	LR	30	1062.0			
	eLR	07 05	LZ	28	1046.4			
	eL	09 25	LR	25	2907.9			
	eL	09 25	LT	25	2364.7			
	eL	09 25	LZ	25	1672.0			
7	LZ- eP	22 31 37.0	SZ	0.9	3.3			
7	LZ- eP	23 14 57.4	SZ	0.8	11.2			
8	02 26 42.3	22.1 S 179.5 W	TONGA ISLANDS REGION					
	H= 554 KM	MAG 4.70 CGS						
8	LZ- eP	02 42 42.0	SZ	0.8	1.4			
8	04 22 30.1	51.6 N 175.9 W	ANDREANOF ALEUTIAN ISLANDS					
	H= 27 KM	MAG 4.90 CGS						
8	GG- eL	05 02 53	LZ	27	143.3	78.9		
8	05 44 31.	57.4 N 149.2 W	ALASKA AFTERSHOCK					
	H= 33 KM	MAG 4.60 CGS						
8	10 47 59.9	9.1 N 72.6 W	WESTERN VENEZUELA					
	H= 200 KM	MAG 4.50 CGS						
8	LZ- eP	10 53 13.2	SZ	0.7	12.2	25.5	4.69	
8	15 48 00.	4.9 S 151.3 E	NEW BRITAIN					
	H= 221 KM	MAG 5.10 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL.	DIST	MAG
8	LZ+	e	16 58 04	SR	0.4	1.9		
8	17 56 18.5	6.1 S 153.6 E SOLOMON ISLANDS H= 59 KM MAG 4.50 CGS						
8	LZ+ eP		18 10 43.3	SZ	0.8	70.1		
8	00- eL		19 05 00	LZ	25	154.8		
8	22 53 21.7	17.7 N 145.7 E MARIANA ISLANDS H=163 KM MAG 5.40 CGS						
8	LZ+ eP ⁰¹	23 12 47.8	SZ	1.0	26.7	147.3		
	eP ⁰¹	13 21	SZ	1.4	98.9			
	ePP	16 14	SZ	1.5	38.1			
8	00- eL	23 39 40	LZ	35	240.3	93.6		
8	00- eL	23 39 40	LZ	35	240.3	83.9		
8	GG- eL	23 46 15	LZ	30	127.9	101.8		
9	02 33 39.4	38.2 N 2.5 W SOUTHEASTERN SPAIN H= 33 KM MAG 4.80 CGS						
9	GG- eP	02 37 21.0	SZ	0.9	14.3	15.1	4.38	
	eL	41 30	LZ	18	245.3			
	eL	42 00	SR	2.0	178.5			
9	00- eS	02 43 25	LT	17	74.2	24.4		
	ePCS	45 50	LT	25	71.2			
	eLR	48 45	LT	25	87.0			
9	LZ+ eP	02 34 37.0	SZ	0.9	11.9			
9	04 22 59.8	35.4 S 105.9 W WEST OF CHILE H= 33 KM MAG 4.80 CGS						
9	LZ+ eP	04 30 31.0	SZ	1.5	33.9	38.4	4.89	
	eLQ	38 50	LR	20	709.7			
	eLR	41 10	LZ	27	1585.3			
9	LZ+ eP	06 56 11.5	SZ	0.7	5.0			
9	LZ+ e	06 56 38	SZ	1.6	56.7			
9	GG- eP	07 21 07.0	SZ	1.0	37.4			
9	GG- eL	07 25 38	LZ	20	14.1			
9	09 24 18.*	59.6 N 145.1 W ALASKA AFTERSHOCK H= 33 KM MAG 4.80 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL.	DIST	MAG
9	GG- eL		10 03 40	LZ	25.0	13.9	69.4	
9	LZ- eP		12 20 14.5	SZ	0.9	15.3		
9	00- eL		12 24 34	LZ	23	125.7		
9	LZ- eL		12 32 30	L+	35	601.4		
9	GG- eL		13 10 00	LZ	20	112.4		
9	00- eL		13 13 13	LZ	28	385.6		
9	15 02 21.6	19.2 S 177.6 W FIJI ISLANDS H=556 KM MAG 4.60 CGS						
9	LZ- eP		16 05 14.5	SZ	0.4	10.7	1.7	
	eS	05 38	SZ	0.6	25.5			
9	16 08 00.*	19.4 S 168.9 E NEW HEBRIDES ISLANDS H= 47 KM MAG 4.60 CGS						
9	17 12 18.	51.4 N 178.5 E RAT ALEUTIAN ISLANDS H= 33 KM MAG 4.40 CGS						
9	18 16 13.7	2 S 78.9 W ECUADOR H= 48 KM MAG 4.60 CGS						
9	LZ+ eP		18 20 35.6	SZ	1.0	13.3	19.0	4.17
	eL	26 10	LT	25	5187.1			
	e	26 50	ST	2.5	837.9			
	e	27 28	SZ	2.9	3456.8			
	e	32 35	ST	2.5	766.1			
9	00- eL	19 00 25	LZ	26	197.2	90.1		
9	GG- eL	19 06 52	LZ	18	122.1	90.2		
9	LZ+ eP		19 37 25.4	SZ	0.6	16.1		
10	07 35 57.*	61.3 N 148.8 W ALASKA AFTERSHOCK H= 33 KM MAG 3.90 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
10	LZ=	eP	08 38 20.3	SZ	0.7	5.9		
10	09 33 31.*		22.5 S 64.7 W	ARGENTINA BOLIVIA BORDER				
			H=480 KM					
10	LZ=	eP	09 35 19.3	SZ	0.6	22.5	7.2	4.50
	eL		36 53	ST	1.0	10.8		
10	00-	eP	10 13 50.5	SZ	0.8	19.1		
10	16 25 09.*		12. N 87.9 W	OFF WEST COAST OF NICARAGUA				
			H= 55 KM	MAG 4.20 CGS				
10	17 55 42.9		31.8 N 93.1 E	TIBET				
			H= 71 KM	MAG 5.00 CGS				
10	00-	eL	18 26 55	LR	40	610.5	59.1	
10	GG-	eL	18 29 20	LZ	25	158.2	61.5	
10	18 26 54.5		9.4 S 117.6 E	SUMBAWA REGION				
			H= 33 KM	MAG 5.00 CGS				
10	LZ=	eP ⁰¹	18 46 46.2	SZ	1.0	7.2	153.8	
	eL		19 44 11	LR	26	147.0		
10	19 13 52.		18. S 167.9 E	NEW HEBRIDES ISLANDS				
			H= 47 KM	MAG 5.30 CGS				
10	19 48 30.5		6.1 S 104.9 E	NEAR WEST COAST OF JAVA				
			H= 84 KM	MAG 5.40 CGS				
10	22 16 44.8		5. N 127.4 E	TALAUD ISLANDS REGION				
			H=146 KM	MAG 5.50 CGS				
10	00-	eP	22 30 05.2	SZ	0.7	20.3	98.1	5.72
	e		40 20	LT	15	1725.0		
10	GG-	eP	23 05 00	LR	45	5881.6		
10	LZ=	eP ⁰¹ D	22 30 29.0	SZ	1.1	29.6	102.7	5.96
10		eP ⁰¹	22 36 33.5	SZ	2.3	982.5	160.8	
		ePP	36 35	LZ	14	1751.0		
			41 00	LZ	14	1616.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		e	23 55 00	LZ	15.0	1407.1		
		e	03 25	LZ	20	1532.6		
		eL	32 45	LZ	35	1451.2		
								Avg. 5.84
10	23 25 09.1		59.1 N 153.8 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 5.10 CGS				
11	01 05 20.2		19.5 S 175.4 W	TONGA ISLANDS				
			H=272 KM	MAG 4.50 CGS				
11	LZ=	eP	02 20 59.2	SZ	0.8	13.6		
11	03 11 56.6		65.5 N 168.1 W	BERING STRAIT				
			H= 33 KM	MAG 4.90 CGS				
11	GG-	e	03 30 30	LZ	17.0	228.6	65.1	
	e		34 48	LZ	15	402.4		
	eLQ		40 58	LT	21	729.7		
	eLR		47 35	LT	17	1175.7		
11	07 25 49.*		51.5 N 178.6 E	RAT ALEUTIAN ISLANDS				
			H= 33 KM	MAG 4.30 CGS				
11	10 26 16.8		2.2 S 141.2 E	NEAR N. COAST W. NEW GUINEA				
			H= 67 KM					
11	LZ=	eP ⁰²	10 45 52.5	SZ	0.9	74.6	145.4	
	e		48 44	SZ	0.9	9.7		
11	00-	eL	11 21 00	LT	30	555.9	110.4	
11	10 55 06.2		56. S 27.3 W	SANDWICH ISLANDS				
			H= 33 KM	MAG 5.80 CGS				
11	LZ=	eP	11 04 03.2	SZ	0.8	41.0	50.5	5.43
11	GG-	eL	11 27 30	LZ	30.0	198.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11	13 19 44*		1° 9' S 141° 0' E	NEAR N. COAST W. NEW GUINEA				
	H= 40 KM	MAG 5.30 CGS						
11	LZ- eP ¹²		13 39 24.2	SZ	0.7	11.9	145.7	
11	LZ- eP		13 42 10.5	SZ	1.0	30.9		
11	GG- eL		14 20 15	LZ	25	84.9		
11	LZ- eP		14 50 48.0	SZ	1.0	10.9		
11	15 20 48.*		2° S 141° 2' E	NEAR N. CST. WEST NEW GUINEA				
	H= 33 KM	MAG 5.70 CGS						
11	LZ- eP ¹²		15 40 28.0	SZ	0.9	35.7	145.5	
11	17 01 48.5		2° S 140° 8' E	NEAR N. COAST W. NEW GUINEA				
	H= 18 KM							
11	LZ- eP ¹²		17 21 30.0	SZ	1.5	113.1	145.9	
	eP ¹²		21 30	LZ	15	2020.4		
	e		26 26	SZ	0.9	12.9		
	eSKKS		31 29	SZ	1.0	25.4		
11	GG- e		17 21 40	LZ	15.0	368.4		
11	17 27 13.4		58.1 N 152.9 W	ALASKA AFTERSHOCK				
	H= 30 KM	MAG 5.00 CGS						
11	GG- e		17 31 25	LZ	20	628.7	71.8	
	e		38 00	LT	30	1307.6		
	e		42 10	LT	22	753.8		
	eLQ		59 10	LZ	50	2091.5		
	eLR		18 04 10	LZ	30	1949.9		
11	LZ- eLQ		18 10 35	LR	28	801.2	100.7	
11	17 51 51.5		9.2 S 89.5 E	EAST OF CHAGOS ARCHIPELAGO				
	H= 33 KM							
11	LZ- eP ¹¹		18 11 22.5	SZ	1.0	14.5	146.6	
11	LZ- eP		17 57 34.5	SZ	1.0	9.0		
11	18 32 17.9		33.1 N 137.6 E	NEAR S. COAST HONSHU, JAPAN				
	H=330 KM	MAG 4.80 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11	LZ- eP ¹²		18 51 35.0	SZ	0.7	11.9	151.1	
	e		53 00	SZ	1.0	10.9		
11	19 42 12.8		2° 1 S 141° 2 E	OFF N. COAST WEST NEW GUINEA				
	H= 33 KM							
11	LZ- eP ¹²		20 01 52.0	SZ	1.0	63.6	145.5	
11	LZ- eP		20 12 40.5	SZ	0.8	14.2		
11	GG- eL		20 23 40	LZ	20	85.7		
11	21 28 08.2		55.9 S 27.7 W	SANDWICH ISLANDS				
	H=135 KM	MAG 6.10 CGS						
11	LZ- eP		21 36 52.6	SZ	0.9	67.6	50.3	5.43
	eP		37 20	LZ	22	402.7		
	e		37 20	SZ	1.0	109.8		
	e		42 52	SZ	0.9	18.6		
	eS		43 50	LR	20	1628.8		
	e		44 59	SZ	1.0	13.2		
	eSCS		46 31	SR	2.0	76.5		
	eL		48 37	LZ	32	703.1		
	eLR		53 15	LR	25	1685.4		
11	GG- eL		21 56 22	LZ	17.0	265.8		
11	OO- eL		21 58 20	LT	15	507.3		
11	LZ- eP		22 05 19.3	SZ	1.0	51.1		
11	22 18 19.8		40.3 N 126.5 W	OFF COAST NORTH CALIFORNIA				
	H= 33 KM	MAG 5.40 CGS						
11	OO- e		22 30 10	LT	22	1115.3	73.2	
	e		36 25	LT	30	2041.8		
	e		40 40	LT	24	898.4		
	eL		56 15	LZ	43	4739.3		
12	00 23 05.*		60.1 N 142.9 W	ALASKA AFTERSHOCK				
	H= 33 KM	MAG 4.20 CGS						
12	LZ- eP		00 23 26.5	SZ	0.7	9.9		
12	LZ- eP		03 05 47.8	SZ	0.6	9999.9		
12	00- eL		03 21 20	LR	40	777.7		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	03	33 40*	43°9 N 113°8 W	CENTRAL IDAHO				
			H= 33 KM					
12	06	43 51*5	35° S 111°8 W	EASTER ISLAND REGION				
			H= 33 KM	MAG 4.70 CGS				
12	LZ-	eL	07 03 20	LZ	23.0	1490.1	42.9	
12	07	46 23*6	37°5 N 30°4 E	WESTERN TURKEY				
			H= 33 KM					
12	GG-	eP	07 50 40	LZ	16	217.9	18.4	
		e	54 10	LZ	17	431.9		
		eL	56 20	LT	20	277.9		
12	00-	e	07 56 30	LZ	23	310.4	26.6	
		eL	08 00 05	LT	30	625.0		
12	09	57 22*5	7°4 N 73°3 W	NORTHERN COLOMBIA				
			H= 93 KM	MAG 4.20 CGS				
12	10	50 09*1	2°1 S 141°1 E	NEAR N. CST. WEST NEW GUINEA				
			H= 33 KM	MAG 5.50 CGS				
12	LZ-	eP ¹²	11 09 47.4	SZ	0.9	81.1	145.5	
		eP ¹²	09 50	LZ	12	2562.6		
12	GG-	ePP	11 10 05	LZ	13	297.1	116.4	
		e	18 35	LT	32	325.4		
		eSS	26 15	LT	30	849.9		
		eSSS	30 25	LT	20	500.2		
12	00-	eL	47 25	LZ	40	578.1		
			11 45 00	LZ	40	2398.0	110.2	
12	GG-	eP	13 06 14.5	SZ	0.4	15.7	1.04	
		eS	06 33	SR	0.4	10.1		
12	GG-	eP	14 03 48.1	SZ	0.3	8.1	.4	
		eS	03 54	ST	0.4	42.7		
12	00-	eL	15 41 10	LZ	44	2239.3		
12	15	56 21*3	11°4 N 124°9 E	CEBU, PHILIPPINE ISLANDS				
			H=183 KM	MAG 5.50 CGS				
12	LZ-	eP ¹¹	16 16 08.7	SZ	1.2	25.9	166.1	
		eP ¹²	17 12.0	SZ	1.4	52.6		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	GG-	eP ¹²	16 17 58	SZ	1.5	42.0		
		e	22 46	LT	25	419.4U	96.1	
		e	22 46	LT	25	419.4U		
		e	28 24	LT	24	419.4U		
		e	36 55	LZ	25	419.4U		
		eL	44 00	LZ	23	419.4U		
12	16	44 35.4	2.2 N 83.0 W	OFF COAST OF ECUADOR				
			H= 52 KM	MAG 4.70 CGS				
12	LZ-	eP	16 49 44.5	SZ	0.9	40.5		
		eL	57 55	LZ	22	624.2		
12	GG-	eP	17 25 03.9	SZ	0.5	15.4		
		eS	25 08	ST	0.5	54.5		
12	18	12 20.5	26.5 S 178.3 E	SOUTH OF FIJI ISLANDS				
			H=648 KM	MAG 5.30 CGS				
12	GG-	eP ¹²	18 31 30.5	SZ	0.5	36.1	154.8	
12	00-	eP	18 30 45.0	SZ	0.5	56.5		
		eS	31 12	SR	0.6	22.6		
12	18	53 34.*	45.5 N 149.9 E	KURILE ISLANDS				
			H= 45 KM	MAG 4.60 CGS				
12	LZ-	eP	22 08 24.0	SZ	0.4	13.4		
		eS	09 06	SR	0.6	3.8		
12	22	47 47.2	6.6 S 154.7 E	SOLOMON ISLANDS				
			H= 80 KM	MAG 5.10 CGS				
13	01	13 32.*	58.8 N 149.9 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 4.40 CGS				
13	LZ-	eP	01 34 27.5	SZ	0.6	6.3		
13	02	46 27.*	56.5 N 153.2 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 4.00 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	04	20 53.5	53.6 N 172.1 E	ALEUTIAN NEAR ISLANDS				
			H= 33 KM MAG 5.10 CGS					
13	00-	eSP	04 40 16	LZ	20	137.1	64.7	
	e		44 54	LT	19	282.0		
	e		44 54	LT	19	282.0		
	e		49 20	LZ	19	126.2		
	eL		52 18	LZ	33	1341.2		
13	GG-	e	04 50 56	LT	16	247.2	75.8	
	e		50 56	LT	16	247.2		
	eL		56 58	LZ	33	466.2		
13	LZ-	eL	05 20 14	LZ	27	606.2	120.3	
13	05	04 23.5	1.9 S 141.2 E	OFF N. COAST WEST NEW GUINEA				
			H= 33 KM MAG 5.90 CGS					
13	LZ-	eP ¹²	05 24 03.6	SZ	1.5	218.9	145.6	
13	00-	eL	05 58 16	LR	27	230.2	110.1	
13	GG-	eP	06 33 36.0	SZ	0.1	34.7		
13	LZ-	eP	07 25 05.4	SZ	1.0	22.3		
13	LZ-	eP	07 41 12.5	SZ	0.4	2.9	3.5	
	e		41 55	SR	0.5	13.8		
	e		45 36	SZ	0.6	3.5		
13	LZ-	eP	08 17 49.5	SZ	0.5	25.6		
13	LZ-	eP	08 17 50	LZ	12	1215.9		
13	00-	e	08 22 16	LR	30	537.9		
13	08	23 45.6	10. N 93.0 E	ANDAMAN ISLANDS				
			H= 33 KM MAG 6.10 CGS					
13	GG-	e	08 51 29	LZ	19.0	140.4	77.1	
	eL		58 40	LZ	23	328.5		
13	00-	e	08 26 39	LT	21.0	320.1		
13	08	27 32.	46.2 N 153.3 E	KURILE ISLANDS REGION				
			H= 29 KM MAG 4.50 CGS					
13	GG-	e	08 27 43	LZ	21.0	221.3		
13	08	28 38.7	46.4 N 153.3 E	KURILE ISLANDS				
			H= 33 KM MAG 5.40 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMP		
13	LZ-	eP	08 32 51.0	SZ	0.7	22.0		
13	GG-	e	08 34 22	LT	32	325.4		
13	00-	eL	08 52 51	LZ	40	770.8		
13	LZ-	eL	09 07 35	LZ	36	326.3		
13	GG-	eP	11 05 06.6	SZ	0.4	12.5		
	eS		05 09	SR	0.4	37.1		
13	11	14 26.5	27.3 S 178.0 W	KERMADEC ISLANDS REGION				
			H= 34 KM MAG 4.80 CGS					
13	LZ-	eL	12 00 50	LZ	24.0	808.1	99.1	
13	14	01 40.2	3.9 S 154.3 E	SOLOMON ISLANDS REGION				
			H= 474 KM MAG 5.50 CGS					
13	LZ-	eP	14 22 51.2	SZ	0.9	43.1		
13	17	35 57.8	23. N 94.0 E	BURMA				
			H= 61 KM MAG 5.80 CGS					
13	00-	eP	17 46 46.0	SZ	0.8	4.4	66.9	4.56
13	GG-	eP	17 47 00.6	SZ	12.0	38.2U	68.2	7.26
	eL		18 13 23	LZ	32	250.3		
13	00-	eL	18 16 15	LZ	22	582.3		AVG. 5.91
13	18	43 04.*	6.8 N 73.0 W	NORTHERN COLOMBIA				
			H= 155 KM MAG 4.30 CGS					
13	LZ-	eP	18 48 01.0	SZ	0.6	9.4	2.7	
	eS		48 35	SR	0.6	5.1		
13	20	42 17.7	46.4 N 153.3 E	KURILE ISLANDS REGION				
			H= 51 KM MAG 4.40 CGS					
13	00-	eP	20 53 16.8	SZ	0.8	17.7	68.7	5.14
13	00-	eL	21 24 42	LT	20.0	151.2		
13	22	31 53.5	27.6 S 178.3 W	KERMADEC ISLANDS REGION				
			H= 94 KM MAG 5.20 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	LZ-	eL	23 18 10	LZ	26.0	2095.5	99.3	
13	23 23 04.		59.2 N 136.8 W SOUTHEASTERN ALASKA					
			H= 33 KM MAG 4.20 CGS					
13	00-	eL	23 40 45	LZ	43.0	2096.5		
13	23 46 44.5		19.3 S 176.5 W TONGA ISLANDS					
			H=285 KM MAG 4.40 CGS					
13	GG-	eL	23 46 55	LZ	27.0	430.0		
14	00 56 56.8		48.2 N 154.3 E KURILE ISLANDS					
			H= 40 KM MAG 4.90 CGS					
14	GG-	eP	01 08 50.0	SZ	0.6	27.3	77.4	5.44
14	01 19 57.7		27.5 S 177.5 W KERMADEC ISLANDS REGION					
			H= 33 KM MAG 4.50 CGS					
14	LZ-	eLR	02 06 20	LZ	30.0	453.5	98.6	
14	01 46 52.4		48.8 N 128.4 W VANCOUVER ISLAND REGION					
			H= 33 KM					
14	00-	eL	02 29 06	LR	30.0	367.5		
14	00-	eL	03 51 30	LZ	17	772.3		
14	05 42 09.*		12. N 89.2 W OFF COAST OF EL SALVADOR					
			H= 33 KM MAG 4.10 CGS					
14	LZ-	eLR	06 00 00	LZ	30.0	268.0	34.7	
14	12 15 31.3		38. N 38.5 E SOUTHEASTERN TURKEY					
			H= 8 KM					
14	GG-	eP	12 20 35.2	SZ	1.4	9999.9	22.8	
			eP	LZ	24	1618.1		
			e	SZ	1.3	179.7		
			eS	SR	2.4	831.3		
			eSS	LT	17	9999.9		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
14	LZ-	eLR	28 18	LZ	30.0	9999.9		
		eP ⁰	12 34 17.6	SZ	1.5	12.3	113.1	
		ePP	35 00	LZ	21	171.6		
		eSKS	41 00	LT	16	363.2		
		ePS	44 50	LT	20	628.7		
		eL	13 10 35	LT	40	1271.9		
14	12 38 03.7		38.1 N 38.3 E SOUTHERN TURKEY					
			H= 31 KM MAG 4.70 CGS					
14	GG-	eP	12 43 04.0	SZ	1.2	86.2	22.6	5.07
		ePP	43 36	SZ	1.2	57.5		
14	17 20 17.5		56.7 N 152.1 W SEA OF OKHOTSK					
			H= 33 KM					
14	LZ-	eP	19 12 04.2	SZ	1.0	14.8		
14	19 27 59.4		6.8 S 129.8 E BANDA SEA					
			H= 81 KM MAG 4.70 CGS					
14	LZ-	eP ¹²	19 47 47.0	SZ	1.0	29.7	150.8	
14	23 56 29.9		56.1 S 25.0 W SANDWICH ISLANDS					
			H= 33 KM MAG 5.30 CGS					
15	00 05 31.1		5.4 N 97.0 E NORTHERN SUMATRA					
			H= 33 KM MAG 5.50 CGS					
15	GG-	eP	00 17 57.5	SZ	1.0	51.4		
		eP	17 58	LZ	13	843.5		
		e	18 23	SZ	1.1	46.1		
		e	28 16	LT	23	985.0		
		e	34 25	LT	18	1307.9		
		e	39 54	LT	20	1284.3		
		eLQ	43 33	LT	33	1250.6		
		eLR	51 43	LZ	24	2321.4		
15	LZ-	eP ¹¹	00 25 33.2	SZ	1.9	238.7	162.1	
		eP ¹¹	25 34	LZ	13	1076.7		
		eP ¹²	26 19.0	SZ	1.4	203.3		
		e	27 31	SZ	1.2	40.2		
		ePP	30 00	LZ	17	838.4		
		ePP	30 05	SZ	1.5	61.0		
		eSKS	36 50	LR	12	968.0		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
15	eSKKS		40 43	LT	17.0	1033.0		
	ePPS		43 47	LR	17	657.2		
	e	00 03	47	LT	32	1254.0		
	e	03 47		LT	32	1254.0		
	eL		22 12	LZ	36	3239.9		
	e	00 28	17	LT	21	2646.2	83.4	
	eSS		33 45	LT	24	2352.0		
	eL		45 57	LT	35	9999.9		
15	LZ- eP	00 05	35.1	SZ	0.9	98.0		
15	LZ- e	00 12	58	ST	2.2	79.9		
15	GG- eP	00 56	05.6	SZ	0.8	8.2		
15	LZ- eP	01 27	06.0	SZ	1.1	6.9		
15	LZ- e	01 27	52	SZ	1.0	11.7		
15	LZ- e	01 28	30	SZ	1.2	21.4		
15	LZ- e	01 29	16	SZ	1.3	37.9		
15	02 05	37.1		17.4 S 174.9 W TONGA ISLANDS REGION H=148 KM MAG 4.50 CGS				
15	GG- eL	02 19	00	LZ	25.0	536.0		
15	LZ- eP	04 38	37.0	SZ	0.9	7.0		
15	09 28	04.*		56.7 N 151.6 W ALASKA AFTERSHOCK H= 33 KM MAG 4.40 CGS				
15	09 41	24.2		12.6 N 88.3 W OFF COAST OF SAN SALVADOR H= 56 KM MAG 4.10 CGS				
15	10 53	06.7		40.1 N 138.5 E SEA OF JAPAN H= 15 KM MAG 5.20 CGS				
15	GG- eP	11 05	14.6	SZ	0.8	33.1	79.3	5.36
15	LZ- eP ¹²	11 12	49.5	SZ	1.2	51.0	146.6	
15	11 13	47.*		12.6 N 88.0 W OFF COAST OF EL SALVADOR H= 14 KM MAG 4.10 CGS				
15	11 27	24.*		12.1 N 89.3 W OFF COAST OF EL SALVADOR H= 33 KM MAG 3.60 CGS				
15	12 01	33.1		37.5 N 114.6 W SOUTHERN NEVADA H= 33 KM				

DAY	STA	PHASE	TIME	INST	PER				
15	00-	e	12 21	36	LZ	20.0	926.6		
15	00-	eL	12 26	20	LT	18	4290.2		
15	16 13	32.*			59.1 N 144.6 W ALASKA AFTERSHOCK H= 33 KM MAG 4.40 CGS				
15	16 27	09.9			45.4 N 149.8 E KURILE ISLANDS H= 53 KM MAG 4.60 CGS				
15	GG- eP	19 13	28.6	SZ	0.4	35.3	*3		
	eS	13 40		SR	0.6	178.3			
15	20 19	15.*			58.8 N 150.3 W ALASKA AFTERSHOCK H= 33 KM MAG 5.10 CGS				
15	22 53	04.5			62.1 N 64.9 W BAFFIN ISLAND REGION H= 33 KM MAG 4.10 CGS				
16	04 01	44.3			38.3 N 139.1 E NEAR W. COAST HONSHU, JAPAN H= 57 KM MAG 7.37 CGS				
	00-	eP	04 13	04.7	SZ	0.6	113.5	72.4	6.01
	eP		13 06		LZ	999.9	9999.9		
	eS		22 27		LR	19	9999.9		
	e		22 40		ST	2.5	547.9		
	e		22 40		ST	2.5	547.9		
	e		26 01		SZ	0.5	11.0		
	eSSS		29 54		LT	999.9	9999.9		
	eL		35 05		SR	14.0	38.8U		
	GG- eP	04 13	56		LZ	23	9999.9U	81.1	
	eP		13 56.3		SZ	1.2	349.6		6.15
	e		17 27		SZ	1.6	737.5		
	eSKS		24 07		LT	999.9	9999.9		
	eSKS		24 14		SR	2.0	375.6		
	e		29 16		LZ	32	9999.9		
	eL		41 47		SR	15.0	50.9U		
	LZ- e	04 19	19		SZ	0.4	16.5	147.3	
	e		19 19		SZ	0.4	16.5		
	eP ¹²		21 23.2		SZ	1.2	46.0		
	eP ¹²		21 24		LZ	999.9	9999.9		
	e		35 40		SZ	2.5	374.7		
	e		35 40		SZ	2.5	374.7		
	e		43 28		SZ	1.5	20.7		
	e		45 19		SR	7.5	1989.9		

AVG. 6.08

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	04	17 38.	38.9 N 139.1 E H= 13 KM MAG 5.50	NEAR W. COAST HONSHU, JAPAN				
16	00-	eP	04 29 02.0	SZ	0.7	56.5	71.9	5.77
		ePP	31 38	SZ	0.9	14.1		
		e	43 16	SZ	0.6	24.5		
16	GG-	eP	04 29 53.0	SZ	0.9	99.4	80.5	5.77
		eSP	40 44	SZ	2.5	275.2		
		e	44 06	SZ	0.6	18.6		
16	LZ-	eP ¹²	04 37 22.0	SZ	1.5	319.2	147.0	
		e	58 05	SZ	1.7	33.9		
					Avg.		5.77	
16	04	35 30.2	38.5 N 138.7 E H= 33 KM MAG 5.60	NEAR W. COAST HONSHU, JAPAN				
16	00-	eP	04 46 54.0	SZ	0.6	18.4	72.1	5.29
16	GG-	eP	04 47 43.0	SZ	0.6	16.7	80.7	5.16
16	LZ-	eP ¹²	04 55 12.0	SZ	1.7	214.8	147.4	
		e	56 08	SZ	1.8	76.0		
		ePPP	05 01 57	SZ	1.5	45.6		
					Avg.		5.22	
16	04	40 45.2	38.3 N 138.7 E H= 33 KM MAG 4.80	CGS	NEAR W. COAST HONSHU, JAPAN			
16	LZ-	eP ¹²	05 00 29.0	SZ	1.5	49.7	147.6	
16	04	46 37.9	39. N 139.1 E H= 33 KM MAG 5.40	CGS	NEAR W. COAST HONSHU, JAPAN			
16	GG-	eP	04 58 49.0	SZ	1.0	44.5	80.5	5.35
16	LZ-	eP ¹²	05 06 19.0	SZ	1.4	114.0	146.9	
16	GG-	e	04 48 38	SZ	0.6	20.5		
16	04	50 33.*	39. N 139.0 E H= 33 KM MAG 4.60	CGS	NEAR W. COAST HONSHU, JAPAN			
16	LZ-	eP	04 51 03.2	SZ	0.5	4.4	3.2	
	eS		51 42	ST	0.7	13.1		
16	04	53 08.8	38.5 N 138.7 E H= 20 KM	NEAR W. COAST HONSHU, JAPAN				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	00-	eP	05 04 34.0	SZ	0.7	12.7	72.1	5.10
16	LZ-	eP ¹²	05 12 53.0	SZ	1.1	17.5	147.4	
16	04	55 46.8	38.3 N 138.7 E H= 18 KM MAG 4.20	CGS	NEAR W. COAST HONSHU, JAPAN			
16	04	58 46.	38.7 N 138.9 E H= 33 KM MAG 4.90	CGS	NEAR W. COAST HONSHU, JAPAN			
16	LZ-	eP ¹²	05 18 25.0	SZ	1.1	32.9	147.2	
16	05	11 35.7	39. N 139.0 E H= 33 KM MAG 4.70	CGS	NEAR W. COAST HONSHU, JAPAN			
16	LZ-	eP ¹²	05 31 16.0	SZ	1.0	18.6	147.0	
16	05	22 09.3	38.7 N 139.1 E H= 15 KM MAG 4.80	CGS	NEAR W. COAST HONSHU, JAPAN			
16	GG-	eP	05 34 25.0	SZ	0.9	30.8	80.7	5.28
16	LZ-	eP ¹²	05 41 55.0	SZ	1.4	76.0	147.1	
	e	55 12	SZ	0.5	1.7			
	e	55 12	SZ	0.5	1.7			
16	05	37 53.*	38.8 N 138.9 E H= 33 KM	NEAR W. COAST HONSHU, JAPAN				
16	05	39 24.5	38.8 N 139.0 E H= 35 KM MAG 4.90	CGS	NEAR W. COAST HONSHU, JAPAN			
16	GG-	eP	05 51 36.0	SZ	1.0	44.5	80.6	5.35
16	LZ-	eP ¹²	05 59 05.0	SZ	1.1	43.8	147.1	
16	05	46 37.8	38.5 N 138.9 E H= 33 KM MAG 4.70	CGS	NEAR W. COAST HONSHU, JAPAN			
16	00-	eP	05 58 01.5	SZ	0.7	21.9	72.2	5.30
16	GG-	eP	05 58 52.0	SZ	1.0	40.1	80.8	5.32
16	LZ-	eP ¹²	06 06 19.1	SZ	1.0	7.4	147.3	
					Avg.		5.31	
16	06	17 07.8	38.4 N 138.9 E H= 28 KM MAG 5.10	CGS	NEAR W. COAST HONSHU, JAPAN			
16	GG-	eP	06 29 22.3	SZ	0.6	14.9	80.9	5.13
16	LZ-	eP ¹²	06 36 52.1	SZ	1.9	243.3	147.4	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	06	33 30*	38°6 N 138°5 E NEAR W. COAST HONSHU, JAPAN					
			H= 33 KM MAG 4.10 CGS					
16	06	52 20.5	36°7 N 134°8 E NEAR COAST S. HONSHU, JAPAN					
			H= 33 KM MAG 4.10 CGS					
16	06	53 05.	38°7 N 139°0 E NEAR W. COAST HONSHU, JAPAN					
			H= 15 KM MAG 5.60 CGS					
16	00-	eP	07 04 30.2	SZ	0.9	42.3	72.0	5.53
		ePP	07 05	SZ	1.1	18.1		
16	GG-	eP	07 05 20.3	SZ	1.1	143.0	80.7	5.86
16	LZ-	eP*2	07 12 49.9	SZ	1.1	241.4	147.1	
	e		23 01	SZ	1.5	20.7		
					Avg.		5.69	
16	07	09 00.7	38°3 N 139°0 E NEAR W. COAST HONSHU, JAPAN					
			H= 33 KM MAG 4.90 CGS					
16	00-	eP	07 20 25.0	SZ	0.6	19.9	72.4	5.32
16	GG-	eP	07 21 14.8	SZ	1.0	35.6	81.0	5.29
16	LZ-	eP*1	07 28 43.0	SZ	1.6	40.3	147.4	
					Avg.		5.30	
16	07	14 57.1	38°5 N 139°2 E NEAR W. COAST HONSHU, JAPAN					
			H= 16 KM MAG 5.90 CGS					
16	00-	eP	07 26 23.2	SZ	0.6	61.3	72.3	5.86
16	GG-	eP	07 27 13.3	SZ	1.0	231.7	80.9	6.12
16	LZ-	eP*2	07 34 41.8	SZ	1.7	734.9	147.1	
					Avg.		5.99	
16	07	17 21.5	38°8 N 139°1 E NEAR W. COAST HONSHU, JAPAN					
			H= 20 KM MAG 5.10 CGS					
16	00-	eP	07 29 00.0	SZ	0.8	10.8	71.9	4.97
16	GG-	eP	07 29 36.0	SZ	0.7	22.1	80.6	5.23
16	LZ-	eP*1	07 37 07.0	ST	0.9	10.1	147.0	
					Avg.		5.10	
16	07	27 40.3	38°9 N 139°0 E NEAR W. COAST HONSHU, JAPAN					
			H= 15 KM MAG 4.50 CGS					

DAY	STA	PHASE	TIME	INST	PER	AI	
16	LZ-	eP*2	07 47 25.0	SZ	1.7	22.6	147.0
16	07	51 10.4	38°4 N 138°9 E NEAR W. COAST HONSHU, JAPAN				
			H= 15 KM MAG 4.90 CGS				
16	LZ-	eP*2	08 10 56.2	SZ	1.7	79.1	147.4
16	LZ-	eP	07 57 44.5	SZ	1.0	11.1	
16	08	15 14.2	38°8 N 138°8 E NEAR W. COAST HONSHU, JAPAN				
			H= 15 KM MAG 4.70 CGS				
16	LZ-	eP*2	08 34 59.7	SZ	1.4	41.4	147.2
16	08	22 22.5	31°4 N 132°2 E OFF EAST COAST KYUSHU, JAPAN				
			H= 33 KM MAG 4.20 CGS				
16	08	34 08.7	22° S 175°8 W TONGA ISLANDS				
			H= 33 KM MAG 4.60 CGS				
16	09	00 41.6	20° S 170°2 E NEW HEBRIDES ISLANDS				
			H= 33 KM MAG 4.50 CGS				
16	09	10 22.1	38°4 N 139°1 E NEAR W. COAST HONSHU, JAPAN				
			H= 33 KM MAG 4.70 CGS				
16	LZ-	eP*2	09 30 06.8	SZ	1.6	50.4	147.2
16	09	56 46.1	17°3 S 178°7 W FIJI ISLANDS				
			H= 502 KM MAG 4.30 CGS				
16	10	23 39.7	61°2 N 146°8 W ALASKA AFTERSHOCK				
			H= 40 KM MAG 4.50 CGS				
16	11	11 17.4	38°8 N 138°7 E NEAR W. COAST HONSHU, JAPAN				
			H= 33 KM MAG 4.30 CGS				
16	LZ-	eP*2	11 31 01.5	SZ	1.4	13.8	147.3
16	11	16 03.1	2° S 141°1 E NEAR NORTH COAST NEW GUINEA				
			H= 13 KM MAG 5.90 CGS				
16	LZ-	eP*2	11 35 45.8	SZ	0.7	78.5	145.6

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	LZ-	eP#2	11 35 45.8	SZ	0.7	78.5	147.8	
16	LZ-	eP	11 16 22.8	SZ	0.7	10.5		
16	LZ-	e	11 26 19	SZ	1.4	13.8		
16			11 43 05.6	38.6 N 138.8 E NEAR W. COAST HONSHU, JAPAN	H= 15 KM MAG 4.80 CGS			
16	LZ-	eP#2	12 02 51.0	SZ	1.5	41.4	147.3	
	eL		57 34	LZ	20	367.5		
16	GG-	eL	12 17 40	LZ	28	392.5	80.7	
16	OO-	eL	12 19 40	LZ	28	1279.8	72.0	
16			12 14 51.*	38.4 N 138.3 E NEAR W. COAST HONSHU, JAPAN	H= 33 KM MAG 4.30 CGS			
16	LZ-	eP#1	12 34 37.5	SZ	1.4	17.2	147.8	
16	LZ-	e	12 46 52	LR	26.0	199.5		
16	GG-	eP	12 47 25.4	SZ	0.6	14.9		
16	LZ-	e	12 52 21	LR	20	333.3		
16			13 34 00.*	38.9 N 138.5 E NEAR W. COAST HONSHU, JAPAN	H= 33 KM MAG 4.10 CGS			
16	LZ-	eP	14 27 22.0	SZ	0.5	8.8	3.5	
	eS		28 05	ST	0.7	31.0		
16			15 08 24.*	38.7 N 138.4 E NEAR W. COAST HONSHU, JAPAN	H= 33 KM MAG 4.50 CGS			
16	LZ-	eP	15 54 08.1	SZ	0.7	4.9	4.9	
	eS		55 17	ST	1.0	20.8		
16			17 08 30.8	15.6 N 147.2 E MARIANA ISLANDS	H= 33 KM MAG 4.80 CGS			
16	LZ-	eP#2	17 28 10.7	SZ	1.3	48.1	145.7	
16			17 23 30.4	5.8 S 154.0 E SOLOMON ISLANDS REGION	H= 60 KM MAG 5.70 CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16			18 26 09.*	38.4 N 138.9 E NEAR W. COAST HONSHU, JAPAN	H= 9 KM MAG 4.70 CGS			
16	LZ-	eP	18 28 45.9	SZ	0.8	4.2	2.7	
	eS		29 20	SR	0.9	11.0		
16	GG-	eP	19 04 59.7	SZ	0.4	15.7	1.8	
	eS		05 24	ST	0.5	69.6		
16			19 54 46.5	19.6 N 66.8 W OFF NORTH COAST PUERTO RICO	H= 30 KM MAG 4.70 CGS			
16	LZ-	eL	20 17 17	LZ	15.0		35.7	
16			22 03 14.*	15.3 S 172.8 W SAMOA ISLANDS REGION	H= 33 KM MAG 4.70 CGS			
16	GG-	eP#2	22 22 52.8	SZ	0.7	4.5	145.5	
16	GG-	eP#2	22 22 52.8	SZ	0.7	4.5	145.9	
16	LZ-	eL	22 50 00	LZ	17		99.0	
16			23 32 01.*	15.5 N 92.4 W GUATEMALA MEXICO BORDER REG.	H= 33 KM MAG 3.60 CGS			
17	LZ-	eP	03 01 44.2	SZ	0.3	3.7		
17	LZ-	e	03 01 55	SZ	0.4	15.0		
17	LZ-	eL	03 03 07	ST	0.6	34.6		
17	LZ-	eL	03 03 35	LR	11			
17	LZ-	eP	03 17 48.8	SZ	1.1	6.5		
17			06 04 48.*	16.7 N 100.0 W GUERRERO, MEXICO	H= 33 KM MAG 4.00 CGS			
17	LZ-	eP	06 13 03.2	SZ	1.0	5.5	45.1	4.39
17			07 12 08.*	38.4 N 138.3 E NEAR W. COAST HONSHU, JAPAN	H= 33 KM MAG 4.50 CGS			
17			07 48 58.5	19.6 S 169.0 E NEW HEBRIDES ISLANDS	H= 58 KM MAG 4.50 CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
17	09 11 42*		12° N 87° 2' W NEAR SOUTH COAST NICARAGUA					
			H= 33 KM MAG 4.10 CGS					
17	10 59 27*		60.1 N 149° 5' W ALASKA AFTERSHOCK					
			H= 72 KM MAG 4.10 CGS					
17	GG- eP eS		13 03 18.5	SZ	0.4	35.4	1.3	
			03 36	SR	0.4	65.2		
17	13 38 16.*		45.7 N 26.5 E RUMANIA					
			H=145 KM					
17	LZ- eL		13 49 37	LZ	24.0			
17	LZ- eP		13 55 04.5	SZ	0.8	5.6		
17	15 10 44.3		38.7 N 139.0 E NEAR W. COAST HONSHU, JAPAN					
			H= 27 KM MAG 5.00 CGS					
17	OO- eP		15 22 06.8	SZ	0.8	15.1	72.0	5.10
17	GG- eP		15 22 52.0	SZ	0.6	19.5	80.7	5.24
17	LZ- eP*1		15 30 26.3	SZ	1.4	69.0	147.1	
17	LZ- eP		15 51 01.6	SZ	1.1	8.7		AVG. 5.17
17	LZ- eP eS		16 35 30.0 36 05	SZ ST	0.4 0.6	9.0 6.9	2.8	
17	22 17 37.9		23.8 S 179.7 W FIJI ISLANDS REGION					
			H=504 KM MAG 4.80 CGS					
17	LZ- eP		23 55 45.7	SZ	0.8	2.8		
17	LZ- e		23 57 36	SZ	0.8	2.8		
18	LZ- eL		00 04 28	LZ	21	163.5		
18	02 54 35.8		7.2 N 76.3 W COLOMBIA					
			H= 41 KM MAG 3.90 CGS					
18	LZ- eLR		03 09 18	LZ	17.0	215.7	24.5	
18	05 58 21.2		38.7 N 138.5 E NEAR W. COAST HONSHU, JAPAN					
			H= 33 KM MAG 4.50 CGS					

DAY	STA	PHASE	TIME	INST	PER			
18	LZ- eP*1		06 17 56.5	SZ	0.8	1.4	147.5	
18	08 24 27.*		59.9 N 147.2 W ALASKA AFTERSHOCK					
			H= 33 KM MAG 4.40 CGS					
18	LZ- eP		10 33 08.7	SZ	0.5	8.9		
18	LZ- eS		10 33 41	ST	0.6	30.0		
18	GG- eP eS		12 57 47.9 58 07	SZ ST	0.4 0.5	25.8 53.5	1.3	
18	18 01 47.6		47.5 N 154.9 E KURILE ISLANDS					
			H= 33 KM MAG 5.30 CGS					
18	00- eP e		18 12 43.6 12 55	SZ	1.1	71.0	68.0	5.68
	e		15 08	SR	1.0	57.5		
	eS		21 40	LT	27	281.6		
	eSS		26 19	LT	19	617.6		
	eL		38 27	LR	26	767.7		
	eL		41 38	LR	21	1693.2		
	eL		41 38	LT	23	2016.7		
	eL		41 38	LZ	23	593.5		
	eL		41 38	LZ	21	675.5		
18	GG- eP		18 13 45	LZ	21	217.7	78.2	
	eP		13 46.0	SZ	0.8	27.6	5.33	
	eS		23 49	LT	15	577.9		
	eS		23 49	LR	13	842.4		
	eLR		40 05	LR	39	1294.1		
	eL		51 20	LZ	20	1945.3		
	eL		51 20	LR	16	3819.1		
	eL		51 20	LT	20	1344.9		
18	20 33 53.3		39.3 S 74.7 W OFF COAST OF CENTRAL CHILE					
			H= 26 KM MAG 5.30 CGS					
18	LZ- eP 5P		20 39 04.1 39 05	SZ	1.6	196.6	23.6	5.35
	e		41 00	LZ	12	1021.3		
	e		42 45	SZ	1.5	78.7		
	eLR		48 23	LT	15	3789.4		
	eLR		48 23	LZ	17	2889.3		
18	GG- e		21 06 28	LZ	20.0	389.0		
18	GG- eL		21 27 08	LR	45	795.3		
18	GG- eL		23 59 30	LR	20	675.1		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
19	00	50	24.4	40.7 N	32.9 E	TURKEY		
				H= 33 KM	MAG 4.60	CGS		
19	GG-	eP	00 54 29.0	SZ	0.8	22.1	17.7	4.38
19	OO-	eP	00 55 39.5	SZ	0.7	16.0	24.4	4.68
	eLR		01 00 03	LT	26	424.7		
	e		00 28	SZ	1.1	17.7		
	eL		06 07	LT	18	823.1		
	eL		06 07	LR	19	367.0		
	eL		06 07	LZ	20	348.6		
				AVG.		4.53		
19	01	34	10.9	56.8 N	151.5 W	ALASKA AFTERSHOCK		
				H= 33 KM	MAG 4.50	CGS		
19	GG-	eP	03 43 13.6	SZ	0.9	35.9	3.7	
	eS		43 57	ST	0.6	55.3		
19	LZ-	eP	04 00 58.5	SZ	1.0	55.9		
19	LZ-	e	04 07 06	SZ	1.1	41.7		
19	LZ-	eL	04 08 32	LZ	12	1429.8		
19	LZ-	eP	04 48 30.8	SZ	0.8	5.6		
19	LZ-	eP	08 49 53.7	SZ	0.5	3.5		
19								
19	10	05	36.4	38.8 N	139.3 E	NEAR W. COAST HONSHU, JAPAN		
				H= 30 KM	MAG 5.60	CGS		
19	GG-	eP	10 17 48.6	SZ	1.0	65.4	80.7	5.54
	eLR		48 30	LR	23	1046.6		
19	LZ-	eP ¹²	10 25 17.8	SZ	1.6	292.4	146.9	
19	OO-	eS	10 26 11	LT	22	140.5	72.0	
	eSS		30 50	LT	28	278.7		
	eLR		41 28	LR	30	794.2		
	eL		46 00	LR	21	826.5		
	eL		46 00	LT	24	377.4		
	eL		46 00	LZ	25	361.9		
19	10	34	33.6	22.6 N	121.0 E	TAIWAN		
				H= 33 KM	MAG 5.20	CGS		
19	LZ-	eP ¹¹	10 54 44.3	SZ	1.0	9.3	169.0	
19	OO-	eLR	11 16 14	LR	27	897.9	79.7	

DAY	STA	PHASE	TIME	INST	PER			
	eL		25 17	L*	16.0	9999.9		
	eL		25 17	LR	18	9999.9		
	eL		25 17	LZ	18	9999.9		
19	OO-	eP	11 16 53.0	SZ	0.7	19.6		
19	LZ-	eL	11 24 27	LZ	15	227.8		
19	LZ-	eL	12 07 28	LZ	18	259.1		
19			12 08 53.6	39. N 139.1 E NEAR W. COAST HONSHU, JAPAN				
				H= 15 KM MAG 4.50 CGS				
19			13 25 52.*	22.2 N 143.3 E MARIANA ISLANDS REGION				
				H= 121 KM MAG 4.60 CGS				
19	LZ-	eP ¹²	13 45 30.4	SZ	0.9	4.9	149.4	
19			13 45 13.*	14.1 N 91.4 W NEAR SOUTH COAST GUATEMALA				
				H= 85 KM MAG 3.90 CGS				
19			15 06 07.	24.4 S 68.7 W NORTHERN CHILE				
				H= 49 KM MAG 4.60 CGS				
19	LZ-	eP	15 08 14.5	SZ	0.3	9.7	8.1	4.13
	e		08 23	SZ	0.5	12.4		
	e		08 52	ST	0.8	14.1		
19			17 31 56.2	12.4 N 88.1 W NEAR W. COAST OF NICARAGUA				
				H= 53 KM MAG 4.00 CGS				
19	LZ-	eP	17 38 44.6	SZ	1.0	5.5	34.4	4.42
19	GG-	eLR	18 14 30	LZ	26	115.1	86.6	
19	LZ-	eP	19 32 17.2	SZ	0.9	8.3		
19	OO-	e	21 04 07	LZ	22	225.1		
19								
19			21 07 23.6	38.8 N 139.0 E NEAR W. COAST HONSHU, JAPAN				
				H= 33 KM MAG 4.20 CGS				
19	OO-	eL	21 37 50	LZ	33	456.4	71.9	
	eL		43 25	L*	22	656.0		
	eL		43 25	LR	22	441.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eL	43 25	LZ	23.0	675.5		
19	LZ- eP		22 25 06.3	SZ	0.4	13.1		
20	02 39 04.		57.7 N 151.9 W	ALASKA AFTERSHOCK				
			H= 34 KM	MAG 4.50	CGS			
20	03 44 30.*		8.7 S 148.2 E	PAPUA & NEW GUINEA				
			H= 119 KM					
20	03 49 17.*		18.2 S 170.1 E	NEW HEBRIDES ISLANDS REGION				
			H= 195 KM					
20	04 15 47.		60.9 N 142.9 W	SOUTHERN ALASKA				
			H= 40 KM	MAG 3.80	CGS			
20	05 02 38.*		9.2 N 84.4 W	NEAR WEST COAST COSTA RICA				
			H= 45 KM	MAG 4.30	CGS			
20	LZ- eP		07 19 16.8	SZ	0.5	20.7	2.3	
	eS		19 46	ST	0.5	42.2		
20	LZ- eL		07 37 45	LZ	20	628.7		
20	09 13 35.*		48.4 N 4.7 E	NORTHERN FRANCE				
			H= 33 KM					
20	09 59 08.9		19.9 S 174.1 W	TONGA ISLANDS REGION				
			H= 33 KM	MAG 4.70	CGS			
20	LZ- eLR		10 45 10	LZ	28.0	242.6	98.6	
20	LZ- eP		10 51 53.7	SZ	0.9	4.8		
20	LZ- e		10 52 24	SZ	1.0	18.1		
20	11 12 38.*		3.4 S 139.7 E	WESTERN NEW GUINEA				
			H= 33 KM					
20	LZ- eP*2		11 32 18.5	SZ	1.3	11.7	146.0	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		e	32 31	SZ	1.0	14.5		
20	11 34 26.3		38.5 N 139.1 E	NEAR W. COAST HONSHU, JAPAN				
			H= 32 KM	MAG 4.40	CGS			
20	LZ- eP*2		11 54 09.2	SZ	1.5	32.3	147.2	
20	12 31 49.7		21.2 S 179.2 W	Fiji Islands Region				
			H= 600 KM	MAG 4.40	CGS			
20	LZ- eP		15 50 27.7	SZ	1.1	10.6		
20	16 06 44.3		3.3 S 142.4 E	NEAR COAST N. E. NEW GUINEA				
			H= 33 KM	MAG 5.50	CGS			
20	LZ- eP*1		16 26 17.8	SZ	0.7	5.9	143.8	
20	16 59 09.		40.5 N 142.2 E	NEAR COAST N. HONSHU, JAPAN				
			H= 35 KM	MAG 4.90	CGS			
20	00- eP		17 10 27.2	SZ	0.8	25.5	71.3	5.30
	eL		37 55	LZ	24	275.2		
20	GG- eP		17 11 19.6	SZ	0.9	34.2	80.4	5.27
	eL		43 20	LZ	35	218.6		
							Avg.	5.28
20	17 12 15.2		18.5 N 105.5 W	NEAR COAST JALISCO, MEXICO				
			H= 28 KM	MAG 5.50	CGS			
20	LZ- eP		17 21 10.8	SZ	1.2	32.3	50.2	5.14
20	18 40 47.*		5.3 N 32.6 W	NORTH ATLANTIC OCEAN				
			H= 33 KM	MAG 4.50	CGS			
20	LZ- eP		18 48 31.4	SZ	1.1	72.7	41.5	5.35
20	19 35 23.*		18.8 N 105.4 W	NEAR COAST JALISCO, MEXICO				
			H= 33 KM	MAG 4.50	CGS			
20	LZ- eP		19 44 14.4	SZ	1.1	14.9	50.3	4.84

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	OO-	eL	20 23 53	LZ	21+0	97+5	85+6	
20	GG-	eL	20 25 20	LZ	24	138+6	91+8	
20	LZ-	eP	22 49 56.5	SZ	0.6	11+5		
21	01 33 11.2		51° N 157° E KAMCHATKA					
			H= 51 KM MAG 5.70 CGS					
21	00-	eP	01 43 48.3	SZ	0.6	27.0	65.0	5.50
	eLQ		02 00 20	LR	17	231+6		
	eLR		05 22	LZ	37	797+8		
	eL		13 40	LR	21	731+6		
	eL		13 40	LT	22	213+2		
	eL		13 40	LZ	22	369+9		
21	GG-	eP	01 44 52.9	SZ	0.8	35+0	75.5	5.36
	eLR		02 11 45	LZ	35	655+9		
21	LZ-	eP ¹	01 52 18.3	SZ	0.7	19+4	129.9	
	e		52 33	SZ	1.2	35+5		
	eL		02 40 00	LZ	22	176+8		
					Avg.	5.43		
21	06 54 46.2		14° S 73° W PERU					
			H= 80 KM MAG 5.00 CGS					
21	LZ-	eP	06 56 02.2	SZ	999.9	9999.9	4.8	
	eP		56 03	LZ	18	286+4		
	e		56 42	LZ	11	1898+3		
	eLR		57 23	LZ	17	2664+5		
21	07 42 55.*		30° S 91° W OFF COAST OF CENTRAL CHILE					
			H= 33 KM MAG 4.70 CGS					
21	LZ-	eP	07 48 20.3	SZ	1.0	14+8	25+2	4.56
21	10 07 24.5		3.7 N 82.8 W SOUTH OF PANAMA					
			H= 24 KM					
21	LZ-	eP	10 12 41.2	SZ	0.6	5+2	24+4	4.28
	eLR		22 13	LZ	20	121+6		
21	LZ-	eP	10 23 58.7	SZ	0.5	1+7	1+5	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eS	24 18	S*	0.5	5+8		
21	11 27 46.9		18+3 N 105+3 W OFF COAST OF JALISCO, MEXICO					
			H= 33 KM MAG 4.10 CGS					
21	15 04 28.*		16+4 S 168+1 E NEW HEBRIDES ISLANDS					
			H= 53 KM MAG 5.10 CGS					
21	LZ-	eP	15 39 55.6	SZ	0.8	6+9		
21	15 40 01.9		31+5 S 68+7 W SAN JUAN PROVINCE, ARGENTINA					
			H= 118 KM MAG 4.40 CGS					
21	LZ-	eP ¹	15 43 32.8	SZ	0.7	26+8	15+2	4.62
	e		44 12	SZ	1.4	20+5		
21	LZ-	eP	16 25 22.0	SZ	0.3	1+4	1+6	
	eS		25 43	ST	0.3	2+0		
21	19 14 10.3		12+2 N 143+8 E SOUTH OF MARIANA ISLANDS					
			H= 33 KM MAG 4.70 CGS					
21	LZ-	eP ¹²	19 33 59.0	SZ	1.1	6.5	148+5	
21	21 16 32.2		14° N 46+9 W NORTH ATLANTIC OCEAN					
			H= 51 KM MAG 4.70 CGS					
21	LZ-	eP	21 23 46.0	SZ	1.2	7+5	36+9	4.40
21	22 21 22.7		16+3 S 178+0 E FIJI ISLANDS					
			H= 18 KM MAG 5.00 CGS					
21	LZ-	eL	23 11 50	LZ	27.0	968+0	106+9	
21	OO-	eL	23 26 27	LZ	22	93+1	134+4	
21	GG-	eL	23 31 00	LZ	25	84+4	145+0	
21	GG-	eP	22 40 09.5	SZ	1.0	28+0		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
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21 22 56 00.* 20.8 S 175.6 E FIJI ISLANDS REGION
H= 33 KM MAG 4.70 CGS

22 00 16 27.4 15.7 S 172.8 W SAMOA ISLANDS
H= 33 KM MAG 5.10 CGS

22 LZ- eP 00 30 07 LZ 16.0 165.1 98.9
eSKS 40 52 LT 16 811.9
e 41 59 LZ 18 403.2
e 41 59 LZ 18 403.2
eL 01 02 13 LZ 17 1575.2
22 GG- eP*1 00 36 06.0 SZ 1.5 109.9 145.9
eP*1 36 08 LZ 14 633.1
eL 01 30 20 LR 20 703.5
22 00- ePP 00 38 15 LZ 22 124.1 134.6
eL 01 18 50 LR 22 237.3

22 02 20 35. 36.2 N 139.6 E NEAR E. COAST HONSHU, JAPAN
H= 55 KM MAG 4.80 CGS

22 LZ- eP*1 02 40 18.9 SZ 1.0 10.9 148.1

22 03 03 37.9 10.4 S 161.1 E SOLOMON ISLANDS
H= 70 KM MAG 5.40 CGS

22 LZ- eP* 03 22 31.6 SZ 1.0 8.0 124.2
e 23 08 SZ 0.8 9.6
eL 04 02 06 LZ 37 892.0
22 00- ePP 03 24 38 LZ 17 223.4 124.9
e 33 42 LT 17 380.9
e 40 00 LT 30 192.7
e 40 00 LT 30 192.7
eL 55 00 LR 45 1624.6
22 GG- ePP 03 25 32 LZ 18 308.7 133.6
eLQ 04 09 05 LR 30 1655.1
eLR 11 20 LZ 35 2186.4

22 LZ- eP 05 36 19.0 SZ 1.6 34.6
22 LZ- eP 05 46 04.0 SZ 0.9 24.5
22 LZ- e 05 47 21 SZ 1.2 15.0
22 LZ- eP 06 45 12.6 SZ 1.0 7.3

22 07 30 59.5 18. S 167.6 E NEW HEBRIDES ISLANDS
H= 33 KM MAG 4.70 CGS

DAY	STA	PHASE	TIME	INST	PER
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22 07 42 02.5 24.3 S 176.8 W FIJI ISLANDS REGION
H= 75 KM MAG 5.70 CGS

22 LZ- eL 08 32 32 LZ 15.0 159.5 99.3
22 LZ- eP 08 26 06.0 SZ 1.7 27.7

22 08 32 02.* 62.1 N 148.5 W ALASKA AFTERSHOCK
H= 33 KM MAG 4.10 CGS

22 GG- eP 10 02 22.1 SZ 0.6 39.1
22 12 11 09.4 60. N 146.7 W ALASKA AFTERSHOCK
H= 33 KM MAG 4.00 CGS

22 GG- eP 12 42 31.8 SZ 0.3 11.6 1.7
eS 42 55 SR 0.3 17.1

22 13 40 02.8 25.1 S 177.4 W FIJI ISLANDS REGION
H= 121 KM MAG 5.10 CGS

22 GG- eP 13 40 08.4 SZ 0.3 28.3 .1
eS 40 11 SR 0.3 75.6
22 GG- eP 13 59 41.2 SZ 0.3 13.3 1.4
eS 59 59 SR 0.3 12.0
22 LZ- eP 14 06 21.2 SZ 0.6 2.0
22 LZ- e 14 10 46 SZ 1.5 12.2
22 LZ- e 14 10 53 SR 1.1 7.0

22 14 17 36.5 12.5 S 166.7 E SANTA CRUZ ISLANDS
H= 143 KM MAG 3.80 CGS

22 LZ- eP 15 01 04.1 SZ 0.3 20.6 2.5
eS 01 36.0 SR 0.5 9.2

22 GG- eLR 16 09 40 LZ 28 92.1

22 17 16 57.* 3. S 139.6 E WESTERN NEW GUINEA
H= 78 KM

22 LZ- eP*1 17 36 32.6 SZ 0.9 6.5 146.3

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
22	17 50	44*	54° 9 N 40° 2 W	NORTH ATLANTIC OCEAN				
			H= 33 KM	MAG 4.20 CGS				
22	00- eL		18 02 25	LZ	30	227.5	27.2	
22	GG- eLR		18 04 16	LZ	26	201.5	31.3	
22	21 23	33.6	13° 6 N 120° 3 E	Luzon, PHILIPPINE ISLANDS				
			H= 56 KM	MAG 6.50 CGS				
22	00- eP		21 36 15.4	SZ	0.9	16.9	87.3	5.18
	44 3		+ -4 38	9		11.0	87.0	
22	00- eL		22 09 00	LR	30.0	606.8	87.3	
22	GG- eL		22 18 07	LR	23	394.3	91.7	
22	LZ- eL		23 04 45	LZ	25	165.5	171.1	
23	00 30	11.1	3° 7 S 78° 1 W	SOUTHERN ECUADOR				
			H= 33 KM	MAG 4.60 CGS				
23	LZ- eP		00 33 53.9	SZ	0.8	12.7	15.6	4.24
	eLR		38 43	SZ	1.1	17.6		
23	01 26	37.	43° 3 N 146° 1 E	KURILE ISLANDS				
			H= 77 KM	MAG 7.00 CGS				
23	00- iP		01 37 40.8C	SZ	999.9	9999.9	69.8	
	iP		37 42 C	LZ	999.9	9999.9		
	eS		46 46	ST	2.3	1009.8		
	eS		46 46	SR	2.5	756.9		
	eL		55 10	LZ	26	2123.6		
23	GG- iP		01 38 36.4C	SZ	999.9	9999.9	79.3	
	eP		38 37	LZ	999.9	9999.9		
	e		40 17	SZ	1.0	196.2		
	ePP		41 35	LZ	18	9999.9		
	eS		48 30	LT	999.9	9999.9		
	eS		48 31	SR	2.5	1129.5		
	ePS		49 28	SR	2.5	1010.6		
	eSS		53 27	LT	24	9999.9		
	e		57 33	LT	21	9999.9		
	e		57 33	LT	21	9999.9		
	eL		02 03 13	LZ	999.9	9999.9		
23	LZ- eP ⁰		01 45 50.0	SZ	1.0	31.9	140.1	
	eP ⁰		45 50	LZ	15	1967.3		
	ePP		48 45	LZ	18	2984.2		
	ePP		49 01	SZ	1.5	150.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	e		49 10	LR	23.0	7603.7		
	e		49 10	LR	23	7603.7		
	e		49 19	SZ	1.5	167.0		
	e		49 19	SZ	1.5	167.0		
	e		02 06 30	LT	999.9	9999.9		
23	02 04	41.8	2° 7 S 80° 0 W	ECUADOR				
			H= 58 KM	MAG 5.20 CGS				
23	00- e		02 05 43	SZ	1.5	75.5		
23	GG- eL		03 39 55	LZ	35	4547.7		
23	04 32	19.*	13° 9 N 94° 7 E	ANDAMAN SEA				
			H= 33 KM					
23	04 54	34.8	32° 4 N 117° 2 W	NEAR COAST N. BAJA CALIF.				
			H= 15 KM					
23	05 25	36.8	53° 9 N 163° 2 W	UNIMAK ISLAND REGION				
			H= 60 KM	MAG 4.40 CGS				
23	00- eP		05 36 13.8	SZ	0.9	16.9	65.3	5.09
23	GG- eP		05 37 21.6	SZ	0.8	19.3	76.7	5.10
23	LZ- eP		06 08 44.8	SZ	1.0	105.2		Avg. 5.09
23	LZ- e		06 12 25	SZ	1.4	34.8		
23	LZ- e		06 14 02	SZ	1.6	45.7		
23	LZ- eP		07 42 58.3	SZ	0.4	3.7		
23	08 42	53.*	60° 5 N 144° 9 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 3.90 CGS				
23	LZ- eP		11 23 26.0	SZ	0.8	9.8		
23	GG- eP		13 09 34.7	SZ	0.2	10.7		1.3
	eS		09 51	SR	0.3	15.9		
23	13 53	51.4	2° 6 S 77° 7 W	ECUADOR				
			H= 33 KM	MAG 3.90 CGS				
23	17 01	28.9	18° 9 S 175° 8 W	TONGA ISLANDS REGION				
			H= 204 KM	MAG 4.30 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	19 10	11.4	3° N 126° 6' E	TALAUD ISLANDS				
			H= 33 KM	MAG 5.30	CGS			
23	GG- eP eS		19 37 22.4 37 26	SZ SR	0.3 0.3	6.4 36.7	•1	
23			6.9 N 73° 0 W	COLOMBIA VENEZUELA BORDER				
			H= 151 KM	MAG 4.30	CGS			
23	GG- eL		20 05 20	LZ	25.0	113.9	81.0	
23	LZ- eP eS		21 17 20.6 18 05	SZ SR	0.3 0.5	4.3 21.8	3.5	
23			51.6 N 177.0 W	ANDREANOF ALEUTIAN ISLANDS				
			H= 50 KM	MAG 4.80	CGS			
23	LZ- eP		23 21 23.5	SZ	1.2	11.8		
24	LZ- eP		00 00 13.0	SZ	0.5	2.7		
24			4.1 S 139.1 E	WESTERN NEW GUINEA				
			H= 60 KM					
24			06 21 41.*	3.5 S 77.4 W	PERU ECUADOR BORDER			
			H= 33 KM	MAG 4.00	CGS			
24			06 25 00.*	37.9 N 141.3 E	NEAR E. COAST HONSHU, JAPAN			
			H= 33 KM	MAG 4.20	CGS			
24	LZ- eP		07 51 21.5	SZ	0.5	6.1		
24	LZ- eP		10 42 57.8	SZ	0.7	5.6		
24	GG- e		12 38 42	ST	0.5	25.0		
24			32.2 N 129.4 E	NEAR W. COAST KYUSHU, JAPAN				
			H= 48 KM	MAG 4.40	CGS			
24	GG- eL		13 40 20	LR	20	1279.3	81.8	
24			7.1 S 155.6 E	SOLOMON ISLANDS				
			H= 123 KM	MAG 5.00	CGS			

DAY	STA	PHASE	TIME	INST	PER		
24		01.13.*	17.3 N 100.4 W	OFF COAST GUERRERO, MEXICO			
			H= 33 KM	MAG 4.40	CGS		
24	LZ- eP		17 11 39.5	SZ	0.5	8.2	
24	LZ- eP eS		19 06 35.0 07 29	SZ SR	0.4 0.4	1.7 1.9	4.5
24			15.4 N 93.3 W	NEAR COAST CHIAPAS, MEXICO			
			H= 33 KM	MAG 3.90	CGS		
25			10.8 S 164.8 E	SANTA CRUZ ISLANDS REGION			
			H= 24 KM	MAG 3.50	CGS		
25			14.5 N 93.4 W	NEAR COAST CHIAPAS, MEXICO			
			H= 69 KM	MAG 4.80	CGS		
25	LZ- eP		10 49 01.5	SZ	0.6	9.2	
25	LZ- eL		10 50 34	SZ	0.8	5.1	
25			60.3 N 149.1 W	ALASKA AFTERSHOCK			
			H= 70 KM	MAG 4.60	CGS		
25			22.8 S 63.5 W	SALTA PROVINCE, ARGENTINA			
			H= 525 KM	MAG 4.30	CGS		
25			12.2 S 165.6 E	SANTA CRUZ ISLANDS			
			H= 86 KM				
25	LZ- eP		13 03 51.4	SZ	0.5	34.2	
25	LZ- eP		14 11 20.5	SZ	1.0	9.4	
25	LZ- eP eS		15 39 33.8D 40 00	SZ SR	0.4 0.8	44.2 38.3	
25			16.1 N 145.3 E	MARIANA ISLANDS			
			H= 293 KM	MAG 4.90	CGS		
26	LZ- eP		01 00 13.3	SZ	0.6	7.1	
26			55.9 S 27.6 W	SANDWICH ISLANDS			
			H= 55 KM	MAG 5.50	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
26	LZ-	eP	01 41 45.0	SZ	0.7	17.5	50.3	5.12	27	GG+	eP	02 37 32.0	SZ	1.0	19.4	46.3	5.04
26	04 45 56.9	38.7 N 138.9 E NEAR W. COAST HONSHU, JAPAN H= 20 KM MAG 4.80 CGS								eP	37 32	LZ	16	144.4			
26	LZ-	eP12	05 05 41.5	SZ	1.3	29.1	147.2			ePP	39 10	LZ	20	113.6			
26	05 20 04.*	15.7 S 167.8 E NEW HEBRIDES ISLANDS H=134 KM								e	48 25	LZ	22	302.8			
26	05 28 49.*	61.7 N 148.3 W ALASKA AFTERSHOCK H= 33 KM MAG 4.30 CGS								eLQ	53 30	LT	35	345.9			
26	LZ-	eP	08 01 50.5	SZ	0.4	48.3				eLR	55 50	LZ	27	829.9			
26	08 40 50.*	8.5 N 73.6 W NORTHERN COLOMBIA H= 33 KM MAG 4.00 CGS								ePCS	02 43 11	LR	20	257.9	44.7		
26	00- eP	11 05 22.1	SZ	0.4	14.1		•1			e	47 07	LZ	22	593.5			
26	eS	05 26	ST	0.5	55.5					eLQ	51 47	LR	25	415.4			
26	12 24 29.	48.2 N 115.1 W WESTERN MONTANA H= 33 KM MAG 4.70 CGS								eLR	55 42	LZ	19	2170.1			
26	13 10 28.9	12.6 S 169.4 E NEW HEBRIDES ISLANDS REGION H=648 KM MAG 4.90 CGS								eP11	02 48 23.5	SZ	1.6	23.6	142.0		
26	13 32 52.3	9.2 S 158.9 E SOLOMON ISLANDS H= 17 KM MAG 5.60 CGS															
26	LZ-	eP	15 07 38.4	SZ	0.5	26.4											
26	LZ-	eS	15 08 07.0	SR	0.7	33.7											
26	16 04 12.*	5.3 S 131.2 E BANDA SEA H= 60 KM MAG 4.90 CGS															
26	LZ-	eP	16 13 29.2	SZ	0.5	2.8											
26	LZ-	e	16 14 23	SZ	1.4	54.1											
27	02 28 57.1	40.4 N 77.5 E SINKIANG PROVINCE, CHINA H= 33 KM MAG 5.00 CGS															
27	GG+	eP	02 37 32.0	SZ	1.0	19.4											
27	06 18 18.0D	SZ	0.4	56.3		1.3											
27	18 35	SR	0.6	28.4													
27	08 50 29.1	16.5 N 85.7 W NEAR NORTH COAST OF HONDURAS H= 28 KM MAG 4.30 CGS															
27	LZ-	eL	09 11 40	LZ	25.0	299.5	36.7										
27	GG+	eP	10 01 44.3	SZ	0.5	12.8	4.0										
27	eS	02 30	ST	0.5	72.6												
27	LZ-	eP	10 17 07.5	SZ	1.1	8.2											
27	11 44 21.4	20.2 S 178.9 W TONGA ISLANDS REGION H=603 KM MAG 4.50 CGS															
27	16 43 47.	11.5 S 13.8 W ASCENSION ISLAND REGION H= 33 KM MAG 4.70 CGS															
27	LZ-	eL	17 07 30	LR	30.0	733.9	53.2										
27	00- eLQ	17 17 30	LR	43	3463.3	74.9											
27	eLR	21 40	LZ	30	2247.0												
27	LZ-	eP	16 53 03.5	SZ	1.5	27.1											
27	17 19 53.*	27.8 S 65.6 W TUCUMAN PROVINCE, ARGENTINA H=100 KM MAG 4.50 CGS															
27	LZ-	e	18 53 45	LZ	30.0	1066.6											

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
27	LZ-	eP	21 35 51.0	SZ	0.8	9		
27	21 55 39.*	46.7 N 152.2 E KURILE ISLANDS H= 33 KM MAG 4.90 CGS						
27	23 10 41.9	41. N 113.4 W NORTHERN UTAH H= 33 KM						
28	LZ-	eP	02 53 25.5	SZ	0.3	9	1.3	
	eS	53 41	ST	0.4	9.1			
28	LZ-	eL	02 55 39	LR	23	402.3		
28	05 52 35.*	13.4 S 71.5 W SOUTHERN PERU H=237 KM MAG 3.80 CGS						
28	LZ-	IP	05 53 01.8D	SZ	0.3	9	2.5	
	eS	53 34	ST	0.6	83.2			
28	LZ-	eP	06 02 11.4	SZ	0.8	9		
28	11 15 22.*	34.6 N 32.2 E EASTERN MEDITERRANEAN SEA H= 81 KM MAG 4.70 CGS						
28	12 51 34.6	1.7 S 149.6 E NEW IRELAND REGION H= 7 KM MAG 6.40 CGS						
28	LZ-	eP ¹	13 10 55.4	SZ	0.7	9	138.4	
	eP ¹	11 02	LZ	10	357.6			
	e	11 05	SZ	0.8				
	ePP	13 55	LZ	19	357.6			
	ePP	13 57	SZ	1.6				
	e	26 15	SZ	2.6				
	e	26 15	SZ	2.6				
	ePSS	32 45	LT	31	4651.7			
	eSSS	37 30	LT	25	1590.9			
	eLQ	44 55	LT	26	1670.0			
	eLR	55 45	LZ	999 9	9999.9			
28	14 52 08.4	13.2 S 167.1 E NEW HEBRIDES ISLANDS H=215 KM MAG 5.40 CGS						
28	00- eP ¹	15 10 51.8	SZ	0.8	27.6	129.2		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	15 22 43.*	37.4 N 14.3 W OFF SOUTHWEST COAST PORTUGAL H= 33 KM MAG 4.60 CGS						
28	LZ-	eP	15 46 26.6	SZ	0.7	9		
28	LZ-	eL	15 47 59	SR	1.2	14.1		
28	17 07 07.	3.5 N 32.4 W NORTH ATLANTIC OCEAN H= 33 KM MAG 4.60 CGS						
28	LZ-	eP	17 14 51.8	SZ	0.9	9	40.7	
	e	15 17	SZ	2.2				
	ePPP	16 45	LZ	15	525.6			
	eS	21 13	LT	20	706.3			
	eLQ	23 48	LR	21	949.0			
	eLR	26 00	LZ	33	1840.2			
28	17 21 50.*	27.1 N 111.5 W GULF OF CALIFORNIA H= 33 KM MAG 4.50 CGS						
28	17 27 59.8	4. N 32.4 W NORTH ATLANTIC OCEAN H= 33 KM MAG 5.30 CGS						
28	LZ-	eP	17 35 42.6	SZ	1.4	9	41.0	
	ePP	37 00	LZ	15	2844.7			
	ePP	37 26	SZ	2.2				
	ePPP	37 48	SZ	2.2				
	e	38 46	SZ	2.6				
	e	39 54	SZ	2.8				
	eS	41 37	LT	18	3301.9			
	e	44 12	LR	23	9999.9			
	eLR	47 53	LZ	32	9999.9			
28	00- eP	17 38 40.0	SZ	1.3	27.6	65.5	5.23	
	eLQ	56 20	LR	25	964.8			
	eLR	59 45	LZ	25	1994.0			
28	18 22 46.3	53.2 N 162.0 W UNIMAK ALEUTIAN ISLANDS H= 39 KM MAG 5.10 CGS						
28	LZ-	eP	18 51 31.2	SZ	0.8	9		
28	19 09 05.4	58.3 N 150.2 W ALASKA AFTERSHOCK H= 23 KM MAG 5.50 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	
28	23 45 37.9		30.7 S 178.0 W KERMADEC ISLANDS H= 29 KM MAG 4.20 CGS							eLR		12 32	LZ	25.0	249.2
29	00 04 30.1		16.5 N 94.6 W OAXACA MEXICO H= 68 KM MAG 4.80 CGS						29	08 50 57.*		1.8 S 78.4 W ECUADOR H=158 KM MAG 4.10 CGS			
29	LZ- eP e		00 12 11.3 12 25	SZ SZ	1.0 1.0	3.7 20.5	41.5	4.14	29	LZ- eP		08 54 50.2	SZ	0.6	6.3
29	03 54 01.2		22.6 S 65.5 W JUJUY PROVINCE ARGENTINA H=238 KM MAG 4.10 CGS						29	10 42 46.1		56.7 N 151.4 W ALASKA AFTERSHOCK H= 33 KM MAG 5.10 CGS			
29	LZ- eP eL		03 55 40.0 56 57	SZ SR	0.5 0.7	15.9 7.5	6.9	4.39	29	LZ- eP		12 07 04.6	SZ	0.9	6.6
29	04 43 30.*		26.7 N 110.8 W GULF OF CALIFORNIA H= 33 KM MAG 5.30 CGS						29	LZ- eP eS		12 28 10.7 28 37	SZ SR	0.4 0.5	9.0 23.5
29	LZ- eL		05 14 22	LZ	21.0	143.6	59.3		29	LZ- eP eS		13 15 18.1 15 57	SZ SR	0.4 0.7	6.7 8.4
29	LZ- eP		05 04 36.7	SZ	0.5	34.6			29	LZ- eP eL		16 58 06.2C 16 58 50	SZ LT	0.5 16	52.4 189.6
29	05 13 23.*		27.1 N 110.5 W GULF OF CALIFORNIA H= 33 KM MAG 4.70 CGS						29	LZ- eS		16 58 55	SR	999.9	9999.9
29	07 12 06.*		17.5 S 173.5 W TONGA ISLANDS H= 33 KM MAG 4.10 CGS						29	LZ- eL		18 46 00	LZ	23	893.4
29	00- eP*		07 31 29.0	SZ	0.9	22.1	136.4		29	19 04 50.*		61. N 143.7 W ALASKA AFTERSHOCK H= 33 KM MAG 4.50 CGS			
29	07 21 32.8		62.7 N 152.0 W SOUTHERN ALASKA H= 33 KM MAG 5.60 CGS						30	LZ- eP		05 11 57.8	SZ	0.7	159.5
29	LZ- ePP eSKS eLQ		07 39 30 45 53 08 02 40	LZ LR LR	19.0 15 27	130.2 335.0 406.7	101.3		30	05 27 28.7		29.8 S 178.7 W KERMADEC ISLANDS H=214 KM MAG 4.50 CGS			
									30	05 46 53.*		59.1 N 154.0 W ALASKA AFTERSHOCK H= 33 KM MAG 4.60 CGS			
									30	08 51 51.2		6.9 S 129.6 E BANDA SEA H= 99 KM MAG 4.90 CGS			
									30	LZ- eP		09 11 37.5	SZ	0.9	266.5
									30	LZ- eP eS		09 51 23.2 51 55	SZ SR	0.4 0.6	180.5 174.3
									30	00- e		09 57 40	LZ	14	170.7
									30	00- e		10 07 05	LT	20	392.9
									30	00- e		10 11 35	LT	25	576.3

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30	10	14	45.8		19.8 S	173.9 W	TONGA ISLANDS	
					H= 33 KM	MAG 4.80	CGS	
30	10	17	51.1		44.1 N	149.6 E	KURILE ISLANDS	
					H= 33 KM	MAG 4.90	CGS	
30	00-	eLQ	10 20 00	LR	43.0	1907.8		
30	00-	eLR	10 23 45	LR	25	1597.7		
30	11	28	58.*		23.3 S	66.6 W	JUJUY PROVINCE, ARGENTINA	
					H=353 KM	MAG 4.50	CGS	
30	LZ-	e	11 30 22	SZ	0.6	389.9	7.2	
		e	30 22	SZ	0.6	389.9		
30	11	34	12.*		44.5 N	150.2 E	KURILE ISLANDS	
					H= 36 KM	MAG 4.20	CGS	
30	12	30	03.3		47.8 N	16.0 E	EASTERN AUSTRIA	
					H= 33 KM	MAG 4.60	CGS	
30	13	46	21.6		8 S	122.5 E	NORTHERN CELEBES	
					H= 36 KM	MAG 6.30	CGS	
30	GG-	eP	14 00 20	LZ	17.0	695.4	104.3	
		e	02 30	LT	30	3607.2		
		e	05 15	LZ	17	2876.5		
		eS	12 05	LT	21	5163.1		
		eL	20 40	LR	22	9999.9		
30	00-	ePP	14 04 21	SZ	2.0	206.3	101.0	
		ePP	04 21	SZ	2.0	206.3		
		ePP	04 22	LZ	23	1769.1		
		ePP	04 22	LZ	23	1769.1		
		e	10 00	LZ	20	962.8		
		eS	11 30	LR	999.9	9999.9		
		eS	11 30	LR	999.9	9999.9		
30	LZ-	ePP	14 10 45	SZ	1.5	2072.9	159.9	
30	15	47	41.1		44.7 N	150.4 E	KURILE ISLANDS	
					H= 33 KM	MAG 5.10	CGS	
30	00-	eP	15 59 44.0	SZ	1.0	117.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30		00-	15 59 48	SZ	1.0	36.6		
30		16 24 08.*						
			33. S	70.1 W	ARGENTINA CHILE BORDER			
			H=115 KM	MAG 4.10	CGS			
30		17 52 35.6						
			14.3 S	173.6 E	NEW HEBRIDES ISLANDS REGION			
			H=607 KM	MAG 4.30	CGS			
30		18 47 23.*						
			45.1 N	150.0 E	KURILE ISLANDS			
			H= 33 KM	MAG 4.60	CGS			
30		19 47 22.5						
			122.9 E	NORTHERN CELEBES				
			H= 33 KM	MAG 4.90	CGS			
30	LZ-	eP ¹	20 07 22.0	SZ	1.5	32.5	160.3	
		eP ²	08 03.0	SZ	1.6	64.3		
30		20 08 28.5						
			46.6 N	144.6 E	SEA OF OKHOTSK			
			H=383 KM	MAG 5.50	CGS			
30	00-	eP	20 18 38.1	SZ	0.5	70.5	66.4	5.65
		eP	19 59	SZ	1.0	47.6		
		eS	27 01	LR	23	640.4		
		e	34 48	LR	25	1150.3		
		eL	38 25	LR	30	606.8		
30	LZ-	eP ¹	20 27 08.0	SZ	0.6	8.2	139.1	
		eP ²	28 47	SZ	1.3	47.2		
		ePP	30 12	SZ	1.6	79.2		
30	GG-	eL	20 39 50	LZ	22	263.4	75.9	
30		22 03 12.*						
			45.4 N	143.0 E	NORTH OF HOKKAIDO, JAPAN			
			H=367 KM	MAG 3.90	CGS			
30		22 11 38.5						
			11.1 S	162.4 E	SOLOMON ISLANDS			
			H= 9 KM	MAG 4.90	CGS			
30		00- eL	23 00 00	LZ	44.0	413.3		
30		23 14 33.*						
			3 S	122.6 E	NORTHERN CELEBES			
			H= 56 KM	MAG 5.30	CGS			
30	LZ-	eP ¹	23 34 31.5	SZ	1.6	24.7	160.2	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
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30 23 38 15.* 7.9 S 131.6 E TANIMBAR ISLANDS REGION
H=162 KM

30 LZ- eP⁰1 23 57 39.5 SZ 0.7 22.8 148.8

BULLETIN NO. 31A

July 1964



SEISMOLOGICAL BULLETIN
WEST GERMANY, NORWAY, BOLIVIA

THE GEOTECHNICAL CORPORATION
3401 SHILOH ROAD
GARLAND, TEXAS



SEISMOLOGICAL BULLETIN

**GRAFENBERG, WEST GERMANY
OSLO, NORWAY
LA PAZ, BOLIVIA**

The Geotechnical Corporation wishes to acknowledge the cooperation of the following scientific organizations in the collection and production of the data in this bulletin.

Bundesanstalt fur Bodenforschung, Hannover, West Germany (Professor Dr. Hans Closs, Director)

Jordskel, University of Bergen, Bergen, Norway (Professor A. Kvale, Director)

Observatorio San Calixto, La Paz, Bolivia (Father Ramon Cabre, S. J.)

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SEISMOLOGICAL BULLETIN
SEISMOLOGICAL BULLETIN
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1. INTRODUCTION
- 1.1 This bulletin contains seismological data on earthquake phases recorded at three mobile seismological stations being operated by The Geotechnical Corporation. The bulletin is intended to be an aid to interested observers in determining the extent of the earthquake data contained in the records from the three teams.
- 1.2 The bulletin contains the following:

- a. Data on all of the phases that have been associated with epicenters reported by the U. S. Coast and Geodetic Survey (USC&GS);
- b. Data on the epicenters listed in the bulletin - as reported by the USC&GS;
- c. Arrival time, period, amplitude, and distance for phases not associated with USC&GS epicenters.

- 1.3 All phases are listed in chronological order, except that unassociated phases are not mixed with a sequence of associated phases. In such cases, the unassociated phases are listed immediately following the associated phases.

2. INSTRUMENTATION

- 2.1 Instrumentation at the Grafenberg, West Germany (GG-GR), and Oslo, Norway (OO-NW) sites consists of a short-period vertical Benioff seismometer array. A short-period vertical Johnson-Matheson seismometer array is in operation at La Paz, Bolivia (LZ-BV). Each site is also equipped with

a three-component Sprengnether long-period seismograph system. Both systems use phototube amplifiers. The response characteristics of these systems are shown in figures 1, 2, and 3.

2.2 All data are recorded by 35-mm Film Recorders, Geotech Model 1301A, 14-channel Magnetic-Tape Recorders, Ampex Model 314, and 16-mm Film Develocorders, Geotech Model 4000C.

2.3 Precision Timing Systems, Geotech Model 5400 or 5400A, are used for primary timing. Chronometers are used for secondary timing. WWV is used for the time standard at LZ-BV. GG-GR and OO-NW use Radio Potsdam. WWV is a United States National Bureau of Standards Radio Station located at Beltsville, Maryland. The accuracy of the time program from WWV agrees with U. S. Naval Observatory time.

2.4 Each system is calibrated at least once every 24 hours. In the short-period system calibration, an electromagnetic (EM) calibrator is used to determine the magnification as a function of frequency and a weight-lift calibration is used to verify the EM magnification at 1 cps. In the long-period systems, magnification is determined as a function of frequency using EM calibrators. No method of verification is used. In the EM method of calibration, the seismometer mass is driven by a known sinusoidal force and the magnification is calculated using the relationships between the sinusoidal force and the recorded amplitude.

3. INTERPRETATION OF COLUMN TITLES

The column titles appearing in this bulletin are defined as follows:

3.1 DAY

The date, for the day of the month, is printed each time a new epicenter is listed and each time the station designator changes. Dates are given in Greenwich Civil Time (GCT).

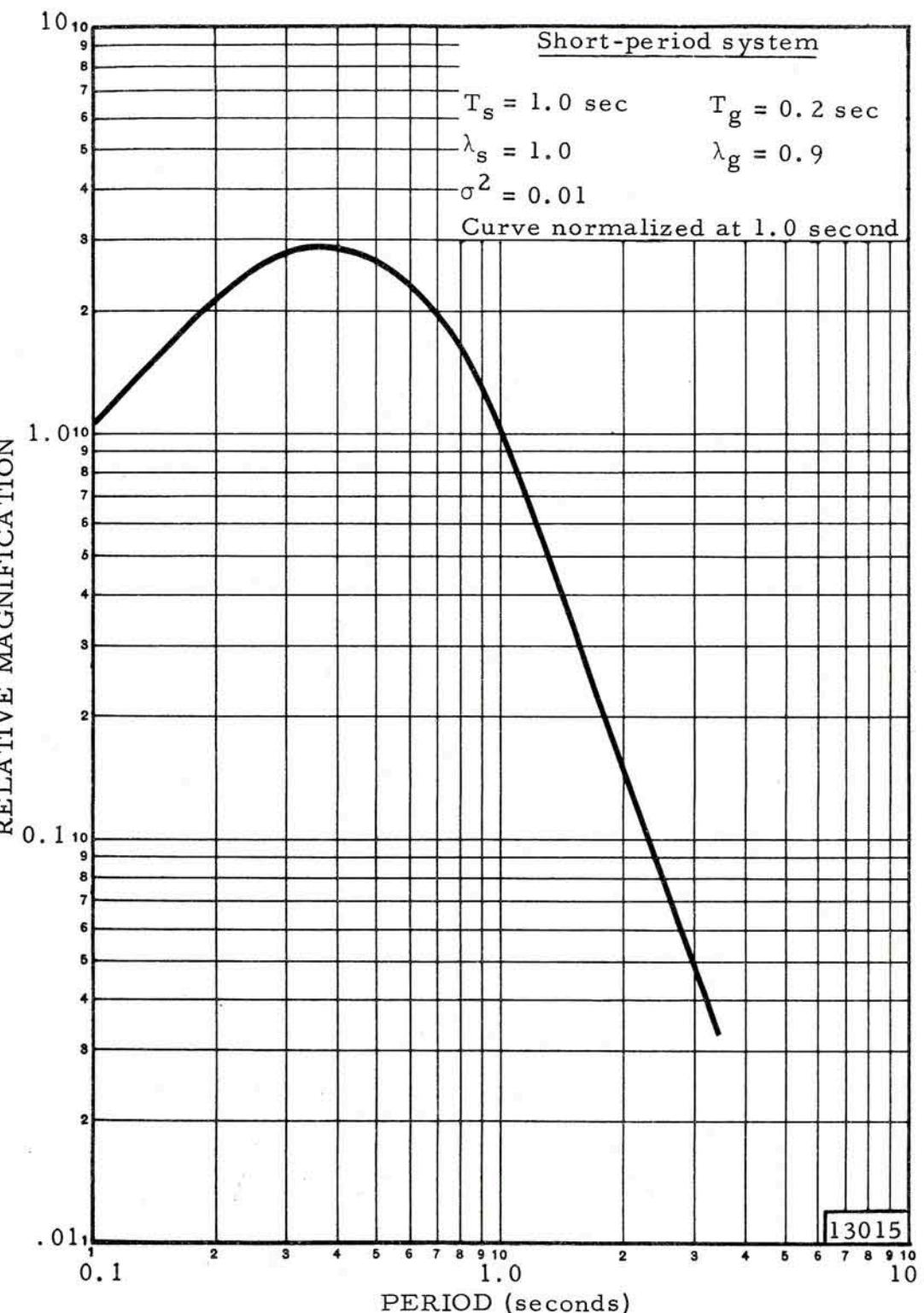


Figure 1. Frequency response of the Benioff short-period seismograph system

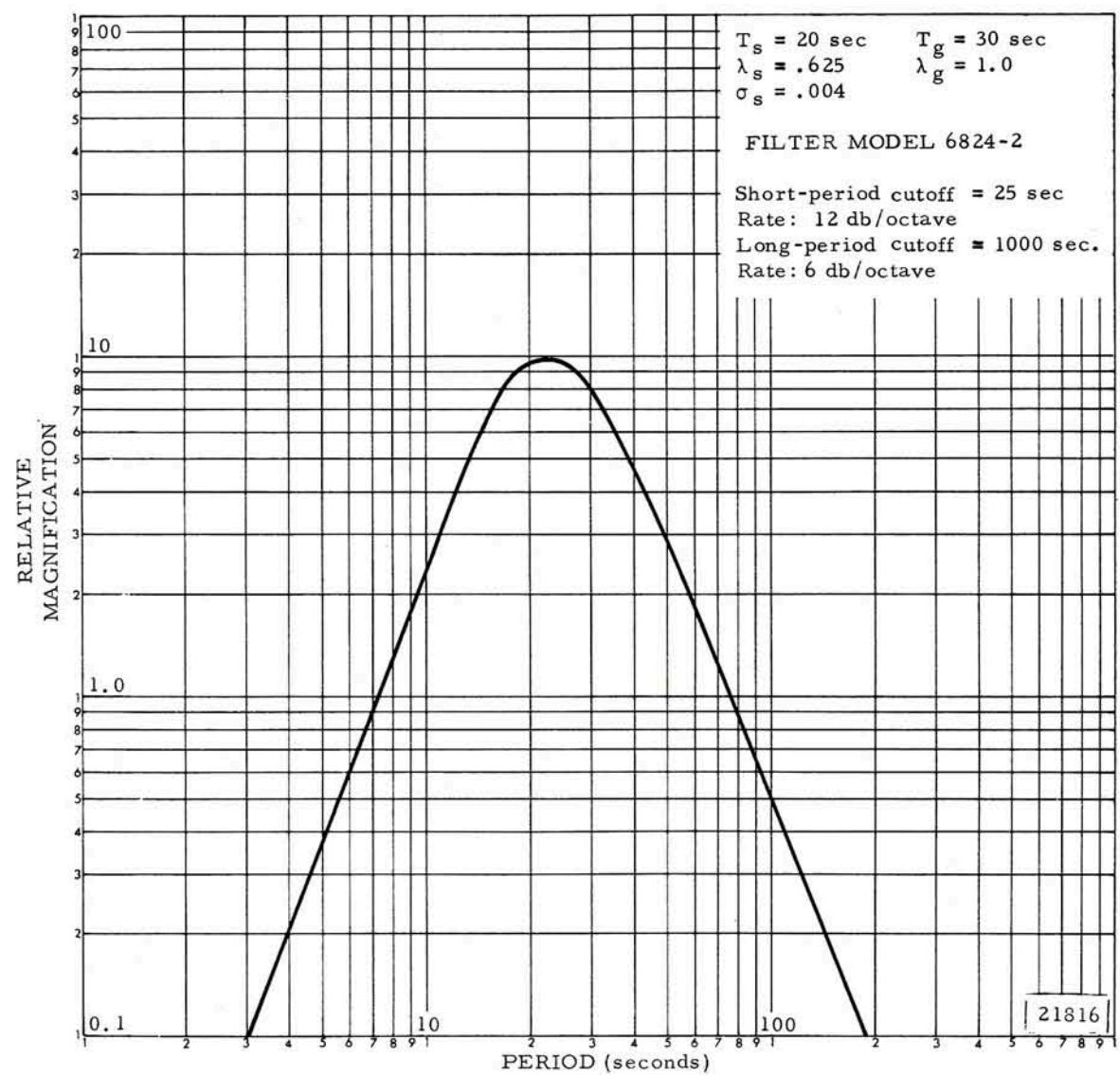


Figure 2. Frequency response of the Sprengnether long-period seismograph system

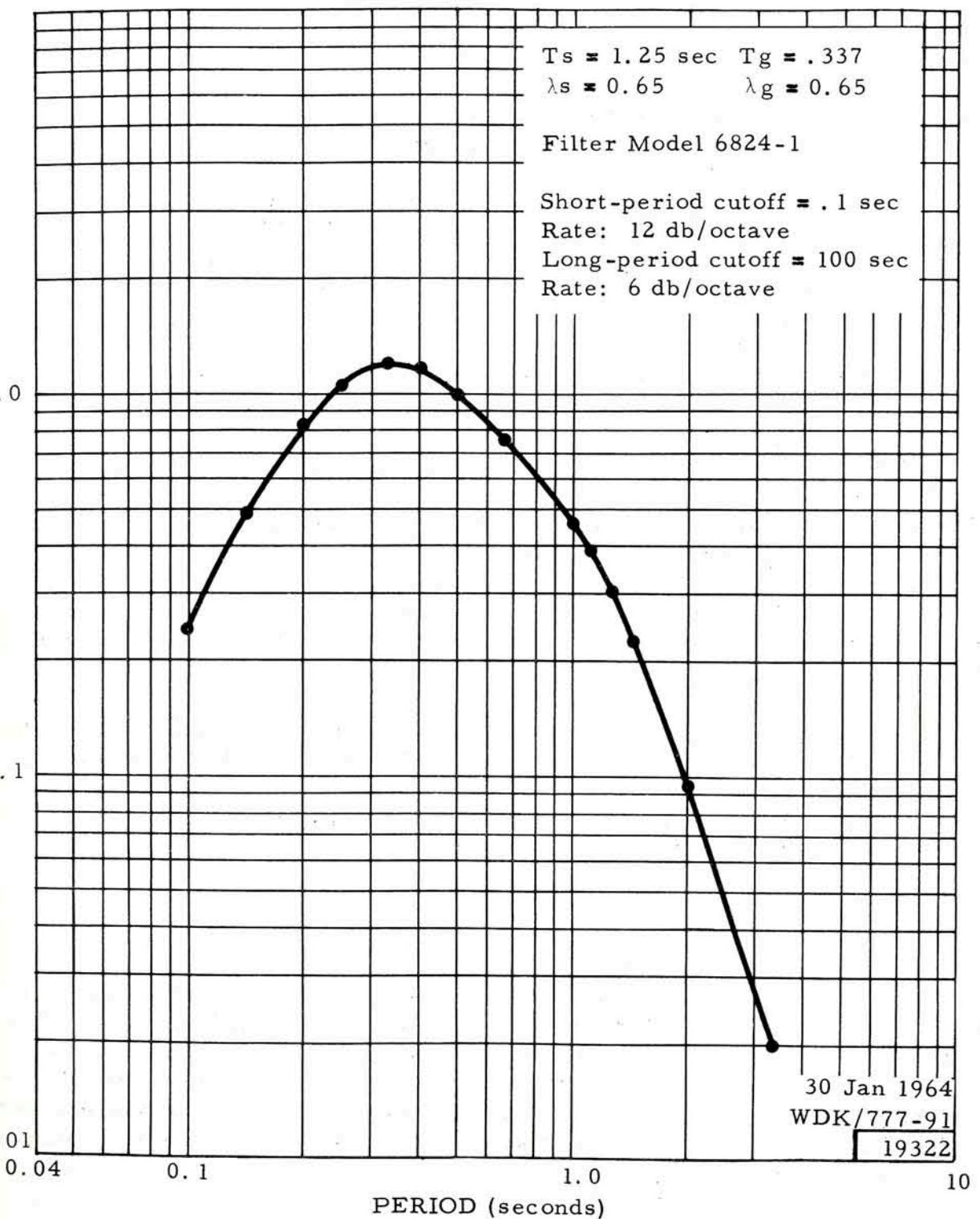


Figure 3. Frequency response of the Johnson-Matheson seismograph system

3.2 STA

The station from which the data were taken. The station designators used in this bulletin are given in the following table:

<u>Site designator</u>	<u>Site location</u>
GG-	Grafenberg, West Germany
OO-	Oslo, Norway
LZ-	La Paz, Bolivia

The locations of the stations are shown in figure 4.

3.3 PHASE

Symbols defining the phase type are listed in the phase column. Prefixes to the phase designators are defined as follows:

- a. An "i" (impetus) preceding the phase designates a sharp or sudden beginning of the phase motion. Direction of first motion is discernible on all "i" phases.
- b. An "e" (emersio) preceding the phase designates an emergent phase motion. The direction of the initial break cannot be positively determined.
- c. An "i" or "e" alone designates an unidentified phase of either an impetus or emersio arrival.

3.4 TIME

The arrival time of each phase is given in Greenwich Civil Time (GCT). Arrival times indicate that time at which phase motion is first detected. Arrival time is measured to the nearest one-tenth second for initial arrivals recorded by the short-period system, and to the nearest second for all other phases on both systems. The direction of motion for iP arrivals is also noted in this field; either C (compression) or D (dilation) will appear immediately to the right of the tenths of second column.

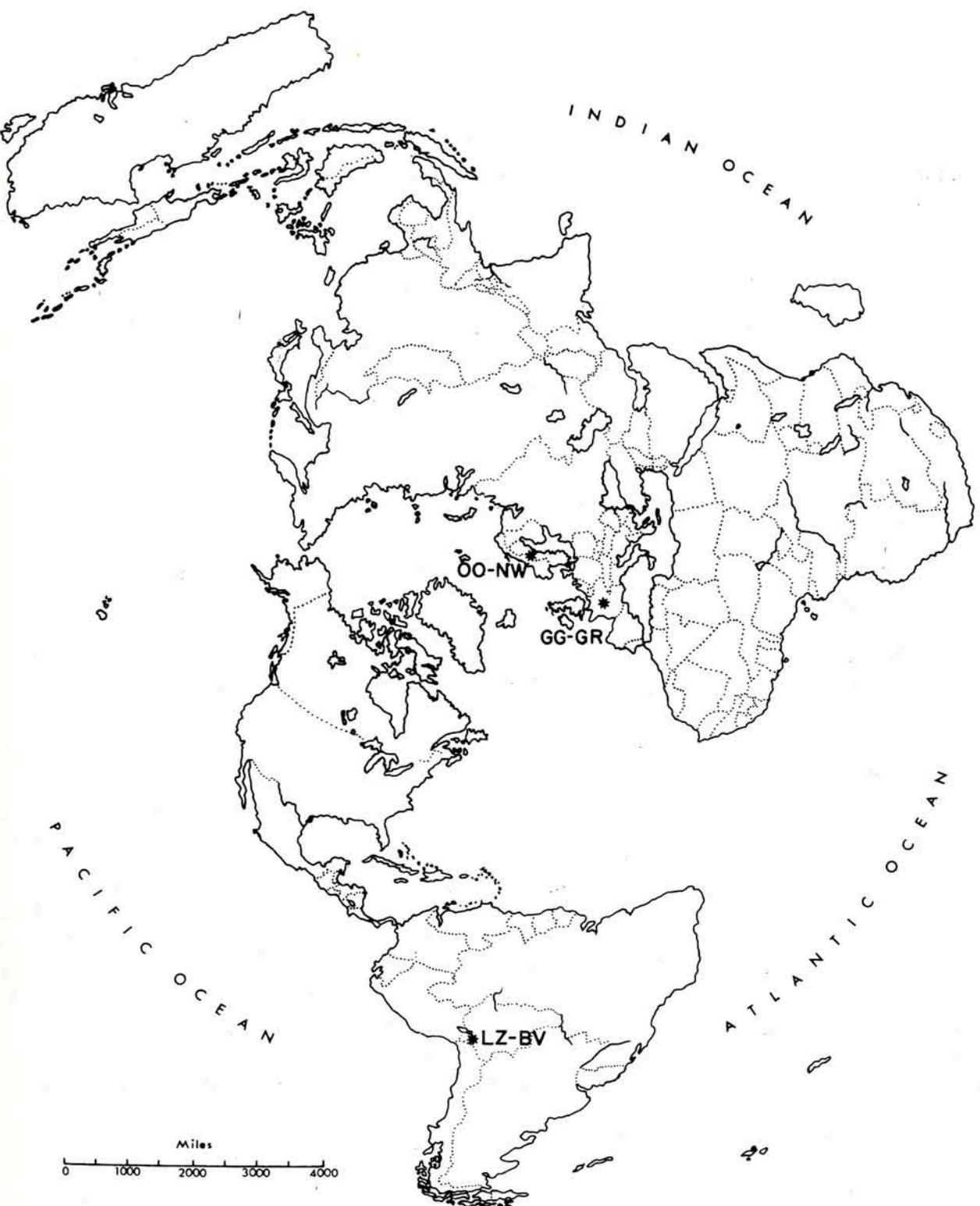


Figure 4. Bulletin sites

3.5 INST

The seismograph channel from which the data were taken. The symbols used to designate the seismograph channels are given as follows:

SZ	Short-period vertical
SR ¹	Short-period radial (horizontal)
ST ¹	Short-period transverse (horizontal)
LZ	Long-period vertical
LR ¹	Long-period radial (horizontal)
LT ¹	Long-period transverse (horizontal)

3.6 PER

The period, in seconds, of each phase. When possible, the period is determined from the first full cycle of the phase; otherwise, it is taken as the average period of the first three cycles. If the signal period recorded by a short-period instrument cannot be measured, the digits 999.9 appear in the period columns. The digits 999 appear in the period columns if the signal period recorded by a long-period instrument cannot be measured.

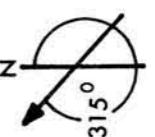
3.7 AMP

This column contains the amplitude of the phase given in millimicrons ($m\mu$) or microns (μ) of ground displacement. All amplitudes are given in tenths of units. All amplitudes are corrected for instrument response and are reported as one-half the peak-to-peak value. If the amplitude is reported in microns, a "U" appears in the column to the right of the tenths column. The column is left blank if the amplitude is reported in millimicrons. Amplitudes are measured from the largest pulse within the first 3 or 4 cycles whenever possible. The digits 999.9 appearing in the amplitude columns indicate either a "clipped" signal or a trace amplitude too large to measure. When amplitudes are not calculated because of insufficient calibration data, the amplitude columns are left blank.

Table 1. Bulletin site information

Site designator	Site location	Horizontal seismometer orientation (Azimuth from true north in degrees ¹)		Site coordinates in deg, min, sec	Elevation in km	Rock type
		Radial	Transverse			
GG-GR	Grafenberg, West Germany	140	230	N 49 41 32	0.53	Limestone
OO-NW	Oslo, Norway	138	228	N 61 03 17	0.56	Glacial drift
LZ-BV	La Paz, Bolivia	141	231	S 16 15 31	3.99	Limestone
				W 68 28 47		

¹ When earth moves in direction shown, trace moves up.



¹ Table 1 gives the instrument orientation of the horizontal seismometers.

3.8 DIST

This is the distance from the recording station to the epicenter. All reported distances are calculated based on geocentric coordinates. Distance is given to the nearest one-tenth of a degree. Distances computed for unassociated data are determined from the S-P intervals. In some instances, surface groups are recorded which have traveled the major arc from the epicenter to the station. In such cases, the major arc distance is given.

3.9 MAG

The magnitudes provided are body wave magnitudes, m_b , as defined by Gutenberg and Richter². They are determined only from the short-period vertical component of the P phase (initial arrival). The following equation is used:

$$m_b = \log_{10}(A/T) + Q$$

where:

m_b = body wave magnitude

A = one-half p-p earth amplitude of P phase in microns

T = period of P phase, in seconds

Q = depth-distance factor for PZ given by Gutenberg and Richter², for distances greater than 16°

Magnitude computations for distances less than 16° are based on extensions of the Q tables. Points from 10° to 16° were read from a curve in the Gutenberg-Richter paper, and an inverse cube relationship was used to extrapolate from 2° to 10° .

The average magnitude (sum of station magnitudes/number of stations) is listed on the last line of an epicenter print-out.

² Gutenberg, B., and Richter, C. F., 1956, Magnitude and energy of earthquakes: Ann. Geofis., vol. 9, pp. 1-15.

4. INTERPRETATION OF UNITED STATES COAST AND GEODETIC SURVEY DATA

The epicenter data reported by the USC&GS precedes each list of associated phases. This information appears as follows:

Line 1 (from left to right)

First group:	Day of the month
Second group:	Origin time of the event
Third group:	Geographic coordinates of the epicenter
Fourth group:	Geographic description

NOTE

An asterisk (*) following the origin time indicates epicenters believed accurate to $1/2^{\circ}$ in latitude and longitude and to 50 km in depth.

Line 2 (from left to right)

First group:	Depth (h) of the hypocenter in kilometers
Second group:	Magnitude (MAG) as determined by Pasadena (PAS), Berkeley (BRK), Palisades (PAL), or USC&GS (CGS)

NOTE

MAG. (CGS) is m_b of Gutenberg and Richter from the P phase only. The magnitude quoted is an average value determined from data forwarded by cooperating Standard stations and other observatories.

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	00 42 55.4		12. N 86.7 W	NEAR WEST COAST OF NICARAGUA				
			H=108 KM	MAG 4.30	CGS			
1	00 45 07.2		50.8 N 176.7 E	RAT ALEUTIAN ISLANDS				
			H= 33 KM	MAG 4.80	CGS			
1	LZ- eP		02 09 12.0	SZ	0.7	24.0		
1	02 38 19.		59.8 N 148.9 W	ALASKA AFTERSHOCK				
			H= 40 KM	MAG 4.70	CGS			
1	02 47 33.9		46.3 N 146.9 E	KURILE ISLANDS				
			H= 33 KM	MAG 5.40	CGS			
1	00- eP		02 58 28	LZ	15	142.6	67.2	
	ePPP		03 02 55	LZ	20	116.2		
	eSS		11 45	LT	22	365.4		
	eLQ		20 20	LR	35	223.2		
	eLR		22 15	LR	30	1327.5		
1	LZ- eP*		03 06 57.7	SZ	1.3	14.7	138.0	
	eL		54 05	LZ	40	128.2		
1	GG- eL		03 29 40	LT	23	1355.1	77.0	
1	03 41 15.		42.6 N 111.8 W	SOUTHEASTERN IDAHO				
			H= 33 KM					
1	06 05 33.7		58.9 N 151.7 W	ALASKA AFTERSHOCK				
			H= 20 KM	MAG 4.60	CGS			
1	07 16 32.*		35.4 N 140.1 E	EASTERN HONSHU, JAPAN				
			H= 74 KM	MAG 4.30	CGS			
1	09 25 54.*		2. S 141.2 E	OFF COAST OF WEST NEW GUINEA				
			H= 33 KM					
1	LZ- eP*2		09 45 33.8	SZ	1.1	81.8	145.5	
1	09 46 49.6		45.2 N 150.3 E	KURILE ISLANDS				
			H= 75 KM	MAG 4.80	CGS			
1	09 52 31.8		44.6 N 149.9 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.90	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	LZ-	eL	10 50 40	LZ	30.	149.1	137.1	
1	13 31 06.2		52.7 N 168.2 W FOX ALEUTIAN ISLANDS	H= 33 KM MAG 5.00 CGS				
1	13 33 10.*		1.8 N 127.1 E MOLUCCA PASSAGE	H= 33 KM MAG 4.50 CGS				
1	16 04 32.*		28.9 S 177.4 W KERMADEC ISLANDS	H= 33 KM MAG 4.30 CGS				
1	LZ-	eP	16 38 49.0	SZ	0.5	9.5		
1	20 09 31.2		30.9 N 41.5 W NORTH ATLANTIC OCEAN	H= 33 KM MAG 5.00 CGS				
1	GG-	eP	20 17 32.3	SZ	0.9	25.3	43.4	4.95
	eL		30 36	LZ	26	218.6		
1	LZ-	eP	20 18 52.4	SZ	1.2	10.2	53.6	4.70
	e		35 59	SZ	2.0	135.0		
					Avg.		4.82	
1	20 20 56.6		17.1 S 69.1 W PERU BOLIVIA BORDER REGION	H=147 KM MAG 5.10 CGS				
1	LZ-	tP	20 21 27.5D	SZ	999.9	9999.9	1.0	
	tP		21 28 D	LZ	18	9999.9		
1	00-	eL	21 31 35	LZ	25.	230.3		
1	22 46 18.7		31.1 N 139.6 E SOUTH OF HONSHU, JAPAN	H=147 KM MAG 5.10 CGS				
1	00-	eP	22 58 08.1	SZ	0.7	29.2	79.2	5.17
	ePP		23 01 07	SZ	0.8	10.8		
	eL		13 21	LT	24	136.7		
1	GG-	eP	22 58 51.4	SZ	1.2	45.1	87.4	5.28
					Avg.		5.22	
1	22 49 23.4		14.3 S 73.1 W SOUTHERN PERU	H=139 KM MAG 5.20 CGS				
1	LZ-	tP	22 50 35.4C	SZ	999.9	9999.9	4.9	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	GG-	tP	23 02 48	LZ	999.9	9999.9	85.5	97.1
	eP		13 14	LT	16	134.6		
	eSKS		35 12	LZ	40	302.2		
1	23 05 07.*		10. S 148.6 E EASTERN NEW GUINEA	H=176 KM				
2	01 19 02.7		60.1 N 146.0 W ALASKA AFTERSHOCK	H= 14 KM MAG 5.10 CGS				
2	00-	eP	01 28 55.3	SZ	0.8	13.8	57.9	5.04
	e		28 59	SZ	0.8	23.8		
	eL		02 47 53	LZ	38	632.6		
2	GG-	eP	01 30 10.5	SZ	0.8	17.3	69.0	5.28
	eL		53 03	LZ	35	270.7		
2	LZ-	eL	02 10 51	LR	32	410.7	97.9	
							AVG.	5.16
2	05 03 35.*		1.2 N 118.9 E MACASSAR STRAIT	H=133 KM				
2	LZ-	eP	05 23 35.7	SZ	1.2	11.7	163.4	
2	00-	eL	05 43 18	LZ	25	131.6	97.6	
	eL		54 12	LR	35	370.5		
2	GG-	eL	06 02 15	LT	26	133.6	100.5	
2	05 55 28.*		39.1 S 74.7 W OFF COAST OF CENTRAL CHILE	H= 33 KM MAG 4.50 CGS				
2	06 35 18.*		53.4 N 167.8 W FOX ALEUTIAN ISLANDS	H= 45 KM MAG 4.80 CGS				
2	GG-	eL	07 13 02	LZ	35	255.4	77.3	
2	00-	eL	08 07 02	LT	27.	389.8		
2	09 09 39.8		11.6 S 74.4 W CENTRAL PERU	H= 28 KM MAG 4.60 CGS				
2	LZ-	eL	09 13 18	LZ	15.	286.9	7.4	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	10 04	34.8	47.7 N 152.9 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.20 CGS				
2	00- eL		10 25 21	LR	38	478.8	67.3	
2	LZ- eP		10 11 27.6	SZ	1.1	30.7		
2	LZ- e		10 11 52	SZ	0.9	46.6		
2	12 11	22.*	1. N 124.3 E	MOLUCCA SEA				
			H= 160 KM					
2	14 11	31.5	18. S 168.1 E	NEW HEBRIDES ISLANDS				
			H= 15 KM	MAG 4.20 CGS				
2	LZ- eP		14 22 21.5	SZ	0.5	15.9	3.2	
	eS		22 56	ST	0.4	12.2		
2	15 09	13.5	47.6 N 128.7 W	OFF COAST OF WASHINGTON				
			H= 33 KM	MAG 4.00 CGS				
2	17 02	34.*	47.4 N 127.9 W	OFF COAST OF WASHINGTON				
			H= 33 KM	MAG 3.80 CGS				
2	17 03	42.4	47.7 N 128.3 W	OFF COAST OF WASHINGTON				
			H= 33 KM	MAG 4.90 CGS				
2	00- eL		17 26 03	LT	26	1204.1	66.7	
2	LZ- eL		17 41 47	LT	40	1944.6	83.0	
2	17 17	34.4	47.7 N 128.8 W	OFF COAST OF WASHINGTON				
			H= 14 KM	MAG 5.00 CGS				
2	00- eL		17 46 54	LZ	30	1600.2	66.8	
2	18 54	40.4	38.6 N 138.1 E	OFF W. COAST HONSHU, JAPAN				
			H= 33 KM	MAG 4.40 CGS				
2	22 09	37.3	20.2 S 175.6 W	TONGA ISLANDS				
			H= 157 KM	MAG 4.50 CGS				
2	22 51	35.9	39. S 74.6 W	NEAR COAST OF CENTRAL CHILE				
			H= 33 KM	MAG 4.70 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	LZ- eP		22 56 46.4	SZ	1.2	18.1	23.3	4.42
3	01 23	02.*	6.5 S 105.3 E	NEAR SOUTH COAST OF SUMATRA				
			H= 57 KM	MAG 5.30 CGS				
3	GG- e		01 30 18	LT	24.	408.8		
3	GG- e		01 34 57	LT	20	759.7		
3	GG- eLR		01 40 50	LZ	27	586.0		
3	GG- eL		01 49 00	LR	20	1836.0		
3	GG- eL		01 49 00	LT	18	1366.1		
3	GG- eL		01 49 00	LZ	19	1773.0		
3	LZ- eP		02 30 58.5	SZ	0.4	9.7	5.0	
	eS		31 58	ST	0.6	8.7		
3	02 33	50.*	13. N 90.9 W	OFF COAST OF EL SALVADOR				
			H= 8 KM	MAG 3.90 CGS				
3	05 05	33.8	19.4 N 104.3 W	JALISCO, MEXICO				
			H= 102 KM	MAG 4.40 CGS				
3	LZ- eP		05 14 23.9	SZ	1.0	3.7	49.9	4.27
	eLR		30 22	LZ	18	100.7		
3	08 16	33.7	38.2 N 138.9 E	NEAR W. COAST HONSHU, JAPAN				
			H= 33 KM	MAG 4.70 CGS				
3	LZ- eP		08 36 17.0	SZ	0.9	8.4	147.5	
3	11 03	50.*	15. N 88.2 W	WESTERN HONDURAS				
			H= 60 KM	MAG 3.80 CGS				
3	14 10	33.*	33.9 N 74.5 E	KASHMIR				
			H= 94 KM	MAG 4.90 CGS				
3	LZ- eP		18 46 29.1	SZ	1.0	5.6		
3	19 18	34.*	11. N 39.3 E	CENTRAL ETHIOPIA				
			H= 60 KM	MAG 5.00 CGS				
3	21 58	08.1	21.9 S 170.1 E	LOYALTY ISLANDS REGION				
			H= 45 KM					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	23	50 23*	18.2 N 94.4 W	VERA CRUZ + MEXICO				
			H= 10 KM	MAG 4.40	CGS			
4	02	36 55.*	11.3 N 86.5 W	NEAR WEST COAST OF NICARAGUA				
			H= 90 KM	MAG 4.10	CGS			
4	LZ-	eP	05 08 04.4	SZ	0.4	5.2		
4	LZ-	eS	05 08 32	SR	0.6	3.0		
4	LZ-	eP	06 25 39.5	SZ	0.8	5.6		
4	06	47 20.	51.8 N 178.5 W	ANDREANOF ALEUTIAN ISLANDS				
			H= 33 KM	MAG 4.70	CGS			
4	LZ-	eP	08 29 10.5	SZ	0.3	12.7		
4	LZ-	eS	08 29 33	SR	0.5	10.3		
4	10	49 28.8	11.7 N 144.5 E	MARIANA ISLANDS				
			H= 33 KM	MAG 6.00	CGS			
4	OO-	eP	11 03 05.8	SZ	0.6	9.0	98.8	5.64
4	LZ-	eP ¹²	11 09 11.5	SZ	1.2	168.6	147.7	
		eP ¹²	09 12	LZ	22	529.7		
		e	19 31	SZ	1.4	10.3		
		eLQ	46 10	LT	20	390.9		
		eLR	12 00 46	LZ	20	306.1		
4	11	11 20.	42.2 N 23.6 E	SOUTHWESTERN BULGARIA				
			H= 10 KM	MAG 4.70	CGS			
4	OO-	eP	11 15 58.5	SZ	0.5	29.2	20.4	4.81
4	12	13 56.9	15.5 S 72.5 W	SOUTHERN PERU				
			H=148 KM	MAG 5.30	CGS			
4	LZ-	eP	12 14 54.1	SZ	999.9	9999.9	3.9	
	eL		15 17	LT	17	9999.9		
4	13	08 41.*	58.9 N 148.1 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 3.50	CGS			
4	13	41 30.*	43.6 N 126.7 W	OFF COAST OF OREGON				
			H= 33 KM	MAG 4.70	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
4	13	58 45.9	21.8 S 65.1 W	SOUTHERN BOLIVIA				
			H=193 KM	MAG 4.30	CGS			
4	LZ-	eP	18 16 31.4	SZ	1.0	5.5		
5	01	06 28.4	1.2 S 78.3 W	ECUADOR				
			H=112 KM	MAG 4.00	CGS			
5	LZ-	eL	01 16 15	LT	23.	1082.9	17.8	
5	03	14 33.3	60.8 N 144.9 W	ALASKA AFTERSHOCK				
			H= 30 KM	MAG 4.90	CGS			
5	00-	eS	03 32 15	LT	22.	242.9	57.1	
5	GG-	eS	03 34 55	LT	25	327.3	68.2	
5	LZ-	eL	04 03 15	LZ	40	736.6	97.6	
5	GG-	eL	05 00 38	LT	16.	1033.3		
5	06	26 09.	19.9 S 173.3 W	TONGA ISLANDS				
			H=452 KM	MAG 3.90	CGS			
5	08	01 59.3	35.8 N 140.6 E	NEAR E. COAST HONSHU + JAPAN				
			H=156 KM	MAG 3.90	CGS			
5	LZ-	eP	09 44 25.7	SZ	0.9	34.9		
5	12	36 27.5	51.2 N 179.1 E	RAT ALEUTIAN ISLANDS				
			H= 33 KM	MAG 4.90	CGS			
5	13	32 16.*	18.6 S 168.5 E	NEW HEBRIDES ISLANDS				
			H= 86 KM					
5	17	57 30.9	11.9 N 142.4 E	MARIANA ISLANDS REGION				
			H= 20 KM	MAG 5.00	CGS			
5	LZ-	eP ¹²	18 17 29.3	SZ	0.8	7.0	149.7	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5	17	58 59.7	60.2 N 146.2 W	ALASKA AFTERSHOCK				
			H= 27 KM MAG 4.90	CGS				
5	19	07 57.8	26.2 N 110.2 W	GULF OF CALIFORNIA				
			H= 29 KM MAG 6.00	CGS				
5	LZ-	eP	19 17 52.6	SZ	2.3	442.4	58.5	6.08
		eP	17 55	LZ	13	1703.9		
		eS	26 00	LT	22	1624.4		
5	00-	eP	19 20 13.1	SZ	1.0	8.5	80.9	4.67
		eP	20 18	LZ	10	1334.5		
		eS	30 28	LR	23	1312.0		
		eSS	35 28	LR	20	2498.9		
5	GG-	eP	19 20 48.4	SZ	1.0	17.9	88.3	5.25
							AVG.	5.33
5	22	14 55.8	10. S 75.0 W	CENTRAL PERU				
			H= 93 KM MAG 5.00	CGS				
5	LZ-	eP	22 17 04.8	SZ	0.5	2.6	8.9	4.35
		e	17 21	SZ	0.7	17.1		
		eL	19 17	SZ	1.5	157.5		
5	22	37 02.*	44.6 N 148.7 E	KURILE ISLANDS				
			H= 33 KM MAG 4.50	CGS				
5	23	36 01.5	44.8 N 149.6 E	KURILE ISLANDS				
			H= 54 KM MAG 6.25	CGS				
5	00-	eP	23 47 03.9	SZ	1.2	96.2	69.3	5.67
		eP	47 04	LZ	19	3280.6		
		e	50 12	SZ	0.9	43.7		
		eS	55 55	LR	999	9999.9		
6	00-	eL	00 08 20	LZ	999	9999.9	69.3	
5	GG-	eP	23 48 02.0	SZ	1.0	209.5	79.1	6.01
		eP	48 05	LZ	20	2541.5		
		ePD	50 12	SZ	0.8	70.8		
		eS	58 05	LR	21	4438.3		
		eS	58 05	LT	29	4371.8		
6	GG-	eSS	00 03 30	LT	31	5281.0	79.1	
		e	06 40	LZ	24	2582.5		
5	LZ-	eP	23 55 20.7	SZ	1.7	56.5	137.2	
		e	55 37	SZ	1.7	152.6		
		eSKP	59 02	SZ	1.0	16.7		
		ePKS	59 08	LR	20	549.1		
6	LZ-	eSKKS	00 04 52	LR	22	659.7	137.2	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eSS		16 23	L†	24*	2453.3		
	eSSS		21 08	L†	20	1401.8		
	eLQ		35 32	L†	34	4493.8		
	eLR		41 20	LZ	33	4503.2		
							Avg.	5.84
5	LZ- eP		23 37 47.8	SZ	1.2	10.2		
5	23 39 10.3		44.7 N 149.6 E KURILE ISLANDS					
			H= 48 KM MAG 5.60 CGS					
6	LZ- e		00 15 28	L†	22*	619.1		
6	00 36 27.		17.3 S 169.6 E NEW HEBRIDES ISLANDS					
			H= 92 KM MAG 4.00 CGS					
6	01 12 39.*		26.6 N 110.0 W GULF OF CALIFORNIA					
			H= 33 KM MAG 4.40 CGS					
6	01 51 19.*		26.4 N 110.4 W GULF OF CALIFORNIA					
			H= 33 KM MAG 3.70 CGS					
6	02 08 19.2		26.5 N 110.2 W GULF OF CALIFORNIA					
			H= 33 KM MAG 5.00 CGS					
6	LZ- eL		02 39 00	LZ	29*	3104.2	58.7	
6	02 10 42.1		26.2 N 110.2 W GULF OF CALIFORNIA					
			H= 33 KM MAG 5.10 CGS					
6	02 14 36.		26.2 N 110.4 W GULF OF CALIFORNIA					
			H= 33 KM MAG 5.40 CGS					
6	LZ- eP		02 24 30.5	SZ	1.5	41.4	58.7	5.24
	eP		24 31	LZ	13	2383.9		
	e		24 38	SZ	2.3	829.5		
	ePCP		25 30	SZ	1.8	165.8		
	e		25 41	SZ	1.8	186.5		
	eSP		32 30	LZ	23	1858.6		
6	00- eP		02 26 49.2	SZ	1.2	13.1	81.0	4.77

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	GG+	eP	02 27 30.8	SZ	1.3	57.5	88.4	5.63
	eS		38 15	L ^T	999	9999.9		
							AVG.	5.21
6	02 25 36.*		26.2 N 110.1 W GULF OF CALIFORNIA					
			H= 33 KM	MAG 5.30	CGS			
6	LZ-	eP	02 35 31.3	SZ	1.6	25.2	58.5	5.00
	eL		54 27	SZ	2.3	69.1		
6	03 06 09.6		26.5 N 110.3 W GULF OF CALIFORNIA					
			H= 33 KM	MAG 5.20	CGS			
6	03 20 59.4		56.7 N 152.3 W ALASKA AFTERSHOCK					
			H= 33 KM	MAG 4.80	CGS			
6	05 53 43.7		14.1 N 91.2 W NEAR SOUTH COAST GUATEMALA					
			H= 119 KM	MAG 3.70	CGS			
6	07 17 46.*		26.1 N 110.8 W GULF OF CALIFORNIA					
			H= 33 KM	MAG 4.10	CGS			
6	07 22 11.7		18.3 N 100.4 W GUERRERO, MEXICO					
			H= 100 KM	MAG 6.88	CGS			
6	LZ-	eP	07 30 30.8	SZ	1.5	443.6	46.5	6.07
	eP		30 31 D	LZ	999	9999.9		
	ePCP		32 09	SZ	1.4	393.8		
	e		35 19	SZ	2.1	565.8		
	eS		37 25	SR	3.5	2012.9		
	eL		42 17	SR	10.0	11.2U		
6	OO-	eP	07 34 33.2	SZ	999.9	9999.9U	84.0	
	eP		34 35	LZ	999	9999.9U		
	eS		45 01	SR	8.0	17.4U		
	e		46 25	LZ	22	2982.9		
	eL		08 01 10	SZ	2.8	390.8		
6	GG-	eP	07 35 00	LZ	999	9999.9	89.4	
	eP		35 00	SZ	1.6	867.2		6.63
	e		45 56	ST	3.5	2199.5		
					Avg.		6.35	
6	LZ-	eP	07 59 09.3	SZ	0.8	2.8		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	LZ-	eP	08 01 17.0	SZ	1.3	12.0		
6	LZ-	e	08 01 35	SZ	2.1	94.3		
6	LZ-	e	08 03 45	SZ	2.0	71.0		
6	LZ-	eP	08 42 10.8	SZ	0.6	14.7	2.3	
	eS		42 41.0	SR	0.7	54.4		
6	09 31 56.2		13.5 N 90.4 W NEAR COAST OF EL SALVADOR					
			H= 33 KM	MAG 4.00	CGS			
6	09 47 26.		18. S 174.7 W TONGA ISLANDS					
			H= 80 KM	MAG 4.40	CGS			
6	10 06 02.3		6.3 S 154.7 E SOLOMON ISLANDS					
			H= 49 KM	MAG 6.40	CGS			
6	LZ-	eP [†]	10 25 11.8	SZ	1.6	25.2	131.7	
6	10 13 45.2		37.1 N 71.4 E HINDU KUSH					
			H= 100 KM	MAG 5.90	CGS			
6	00-	eP	10 21 45.3	SZ	0.7	42.4	44.3	5.28
6	GG-	eP	10 21 48.5	SZ	1.3	57.5	44.4	5.15
	e		22 11	SZ	1.1	107.1		
6	LZ-	eP [†]	10 33 02.8	SZ	1.1	37.3	139.0	
					Avg.		5.21	
6	10 24 33.8		18.3 N 100.3 W GUERRERO, MEXICO					
			H= 111 KM	MAG 4.30	CGS			
6	LZ-	ePP	10 34 55	SZ	1.0	7.4	46.5	
6	LZ-	eP	10 32 03.3	SZ	0.9	3.3		
6	LZ-	e	10 33 30	SZ	1.2	30.6		
6	10 38 41.		18.7 N 100.5 W GUERRERO, MEXICO					
			H= 108 KM	MAG 4.70	CGS			
6	LZ-	eP	10 46 59.4	SZ	1.0	7.4	46.9	4.44
	e		47 14	SZ	1.1	8.7		
6	11 09 38.*		18.4 N 100.3 W GUERRERO, MEXICO					
			H= 42 KM	MAG 3.90	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	LZ-	eP	11 24 14.4	SZ	1.2	7.6		
6	GG-	eP	11 24 45.1	SZ	1.0	59.8		
6	LZ-	eP	11 32 54.4C	SZ	0.3	44.3	1.7	
	eS		33 17	ST	0.7	59.8		
6	12 34 35.8		17.8 S 167.5 E	NEW HEBRIDES ISLANDS				
			H= 33 KM	MAG 4.30	CGS			
6	14 01 57.*		26.9 N 110.1 W	GULF OF CALIFORNIA				
			H= 33 KM	MAG 4.80	CGS			
6	14 06 32.6		24.2 S 69.7 W	NORTHERN CHILE				
			H=128 KM	MAG 4.50	CGS			
6	LZ-	eP	14 08 27.8	SZ	0.7	19.6	8.0	4.74
	e		09 13	ST	0.8	22.5		
6	14 19 46.3		6.9 S 129.6 E	BANDA SEA				
			H=100 KM	MAG 5.80	CGS			
6	LZ-	eP ¹ eP ² esP ¹	14 39 25.6C	SZ	1.5	140.9	150.9	
			39 31	SZ	1.1	9999.9		
			40 09	SZ	1.4	176.2		
6	LZ-	eP	19 04 55.2	SZ	0.4	25.5	2.1	
	eS		05 23.0	ST	0.7	9999.9		
6	19 21 12.7		18.7 N 100.3 W	GUERRERO, MEXICO				
			H= 81 KM	MAG 4.30	CGS			
6	19 50 42.1		21.2 S 173.8 E	NEW HEBRIDES ISLANDS REGION				
			H= 22 KM	MAG 4.80	CGS			
6	LZ-	eL	20 41 54	LZ	25.	678.8	108.5	
6	OO-	eL	20 59 17	LZ	30	537.9	138.4	
6	GG-	eL	21 00 25	LZ	43	338.2	148.4	
6	20 07 28.*		19.1 N 100.6 W	GUERRERO, MEXICO				
			H=105 KM	MAG 3.70	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	GG-	eL	20 23 30	LZ	20.	114.3		
7	01 28 29.9		44.4 N 149.4 E	KURILE ISLANDS				
			H= 30 KM	MAG 4.50	CGS			
7	GG-	eL	02 18 30	Lz	20.	57.1		
7	04 05 27.*		73.7 N 8.6 E	SVALBARD REGION				
			H= 33 KM	MAG 4.50	CGS			
7	05 24 20.*		18.2 N 100.2 W	GUERRERO, MEXICO				
			H=100 KM	MAG 4.20	CGS			
7	05 28 42.1		15.6 N 93.9 W	NEAR COAST CHIAPAS, MEXICO				
			H= 33 KM	MAG 3.80	CGS			
7	06 44 49.2		8.8 S 110.7 E	NEAR SOUTH COAST OF JAVA				
			H= 60 KM					
7	LZ-	eP	07 05 41.5	SZ	1.0	3.7		
7	07 39 04.2		23.6 S 179.9 W	FIJI ISLANDS REGION				
			H=462 KM	MAG 5.50	CGS			
7	09 59 20.*		10.8 N 86.6 W	NEAR WEST COAST COSTA RICA				
			H= 33 KM	MAG 4.90	CGS			
7	LZ-	eL	10 18 40	LZ	20.	192.6	32.3	
7	GG-	eP	13 00 08.9	SZ	0.5	8.1		
7	GG-	eL	13 01 23	SR	0.8	16.1		
7	13 44 40.*		43.4 N 127.2 W	OFF COAST OF OREGON				
			H= 7 KM	MAG 5.70	CGS			
7	GG-	eL	14 17 47	LT	28	200.2	80.4	
7	13 58 31.		43.9 N 16.1 E	NEAR COAST OF YUGOSLAVIA				
			H= 36 KM	MAG 4.70	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
7			20 14 16 56.*	178 0 S 178 0 W	FIJI ISLANDS			
				H=617 KM				
7	LZ-	eP	16 12 46.8	SZ	0.4	3.7		
7			16 16 28 42.9	11 2 S 163 2 E	SOLOMON ISLANDS REGION			
				H= 13 KM	MAG 5.10	CGS		
7	GG-	eL	17 43 13	LZ	22.	194.9	135.2	
7	LZ-	eP	16 41 53.0	SZ	0.5	8.8		
7			19 19 49 16.*	16 1 S 174 7 W	FIJI ISLANDS			
				H= 33 KM	MAG 4.30	CGS		
7			21 12 33.6	35 8 N 73 4 E	HINDU KUSH			
				H= 19 KM	MAG 5.20	CGS		
7	00-	eP	21 20 50.3	SZ	0.7	3.6	46.3	4.51
	eL		37 10	LT	18	278.1		
7			21 31 37.*	17 3 S 178 7 W	FIJI ISLANDS			
				H=574 KM				
7			22 14 01.8	15 2 N 93 2 W	NEAR COAST CHIAPAS, MEXICO			
				H= 90 KM	MAG 4.10	CGS		
8	01	32 56.3	34 9 N 21 7 E	EASTERN MEDITERRANEAN SEA				
				H= 18 KM	MAG 4.30	CGS		
8	GG-	eL	01 43 02	LZ	15	247.0	16.7	
8	01	35 02.5	15 3 S 173 1 W	TONGA ISLANDS				
				H= 33 KM	MAG 4.80	CGS		
8	LZ-	eL	02 21 15	LZ	25.	230.0	99.3	
8	LZ-	eL	03 28 42	LZ	28.	355.3		
8	05	55 42.2	38 4 N 118 4 W	CALIF. NEVADA BORDER REGION				
				H= 10 KM	MAG 4.40	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8			19 07 07 16*	19 2 N 121 1 E	NEAR NO COAST LUZON, P. I.			
				H= 37 KM	MAG 4.60	CGS		
8	00-	eL	07 51 07	LR	30.	333.8	82.7	
8			07 45 48.6	3 2 N 128 4 E	MOLUCCA PASSAGE			
				H= 50 KM	MAG 5.50	CGS		
8	LZ-	eLR	08 01 47	LZ	27.	343.0	158.9	
	eP ⁰¹		05 47	SZ	1.8	48.1		
	e		05 56	SZ	2.2	192.4		
	eL		07 34	LT	20	797.4		
	eL		07 34	LR	22	376.4		
	eL		07 34	LZ	20	909.3		
8	00-	eL	08 34 20	LR	37	2111.1	100.1	
8	GG-	eL	08 40 30	LZ	30	473.3	104.7	
8	LZ-	eP	08 03 25.7	SZ	0.3	10.4	1.7	
	eS		03 49	SR	0.5	18.5		
8			10 12 22.*	51 4 N 179 5 E	RAT ALEUTIAN ISLANDS			
				H= 33 KM	MAG 4.60	CGS		
8			11 49 23.7	6 4 S 154 8 E	NEW BRITAIN REGION			
				H= 73 KM	MAG 5.10	CGS		
8	LZ-	eP ⁰¹	12 08 30.8	SZ	1.2	20.3	131.6	
	e		09 02	SZ	0.9	16.5		
	eSKP		12 10	SZ	2.3	55.0		
	eL		39 00	LZ	999	9999.9		
8	LZ-	eP	11 51 12.6	SZ	0.4	6.7		
8	LZ-	eL	11 53 20	ST	0.7	8.5		
8			11 55 39.*	5 5 S 129 8 E	BANDA SEA			
				H=165 KM	MAG 6.50	CGS		
8	00-	ePD	12 09 35	LZ	21.	823.4	108.5	
	e		10 48	LZ	22	1200.4		
	e		23 42	LZ	18	9999.9		
8	LZ-	eP ⁰¹	12 15 12	LZ	23	1949.3	151.8	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eSKKS		25 30	SR	1.7	153.5		
	eSKKS		25 35	LT	20	2740.0		
8	LZ-	eP	12 08 07.8	SZ	0.5	2.6		
8	LZ-	e	12 19 40	SZ	1.4	192.7		
8	LZ-	e	12 19 40	LZ	19	3445.5		
8	LZ-	e	12 20 46	SZ	1.8	302.9		
8	LZ-	e	12 23 01	SZ	1.8	289.1		
8	LZ-	e	12 23 03	LZ	23	1836.8		
8	LZ-	e	12 29 57	LZ	21	9999.9		
8	LZ-	e	12 31 30	LZ	22	3448.7		
8	LZ-	e	12 33 33	LT	27	3497.7		
8	LZ-	e	12 33 51	SZ	2.3	137.7		
8	15 24 08.3		18° S 178°5 W FIJI ISLANDS REGION					
			H=558 KM MAG 4.00 CGS					
8	LZ-	eP	15 45 14.2	SZ	0.3	25.4	2.0	
	eS		45 41	SR	0.5	30.4		
8	LZ-	eP	20 55 23.7	SZ	0.3	7		
8	LZ-	eL	20 57 06	SR	1.1	15.1		
8	23 50 45.*		60.9 N 142.8 W ALASKA AFTERSHOCK					
			H= 33 KM MAG 4.10 CGS					
9	00 21 18.*		59.8 N 150.7 W ALASKA AFTERSHOCK					
			H= 15 KM MAG 4.30 CGS					
9	LZ-	eP	00 29 21.9	SZ	0.4	13.5	2.5	
	eS		29 54	SR	0.5	15.8		
9	03 38 10.8		29.3 N 52.7 E SOUTHWESTERN IRAN					
			H= 55 KM					
9	00- eL		03 59 21	LT	40.	819.5	42.1	
9	05 47 09.2		15.4 N 119.8 E NEAR W. COAST LUZON, P. I.					
			H= 53 KM MAG 5.50 CGS					
9	LZ-	eP ¹	06 07 16.4	SZ	1.0	24.2	172.0	
	eP ²		08 45	SZ	1.1	35.1		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
9		eLR	07 08 20	LZ	26	529.5		
9	OO-	eL	06 32 22	LR	26	1052.7	85.5	
9	GG-	eL	06 41 47	LT	19	1610.8	89.9	
9	OO-	eL	07 26 23	LZ	40.	984.7		
9	LZ-	eP	10 38 38.2	SZ	0.5	5.3	2.1	
	eS		39 05	SR	0.6	20.5		
9	10 48 21.5		13. N 90.2 W NEAR COAST OF EL SALVADOR					
			H= 56 KM MAG 3.60 CGS					
9	11 22 05.4		23.3 S 175.7 W TONGA ISLANDS					
			H= 43 KM MAG 5.70 CGS					
9	LZ-	eP	11 35 45.5	SZ	1.2	15.3	98.7	5.55
	ePP		39 44	SZ	2.0	159.9		
9	OO-	eP ¹	11 41 28	LZ	24	1251.8	142.0	
9	GG-	eP ¹	11 42 01.0	SZ	0.7	41.0	153.1	
	eP ¹		42 02	LZ	20	1141.1		
	eP ²		42 11	SZ	1.1	197.2		
	ePP		45 42	LZ	26	1297.8		
	ePP		45 45	SZ	2.0	257.7		
	e		54 52	LZ	23	812.2		
9	LZ-	eL	11 41 03	LZ	23.	696.1		
9	LZ-	eL	11 46 10	LT	19	2890.8		
9	12 02 11.9		34.2 N 140.9 E OFF E. COAST HONSHU, JAPAN					
			H= 49 KM MAG 5.00 CGS					
9	GG-	eP	12 14 46.0	SZ	1.0	58.1	85.3	5.60
9	LZ-	eP ¹	12 21 53.1	SZ	0.7	3.6	148.1	
	eP ²		21 56	SZ	1.0	33.5		
	e		22 19	SZ	1.2	115.0		
9	13 58 34.7		17.3 S 64.6 W CENTRAL BOLIVIA					
			H= 33 KM MAG 4.50 CGS					
9	LZ-	eP	13 59 33.5	SZ	999.9	9999.9	3.9	
9	16 39 49.3		15.5 S 167.6 E NEW HEBRIDES ISLANDS					
			H= 121 KM MAG 7.50 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
9	LZ-	eP*	16 58 21.6	SZ	2.0	337.5	116.3		10	GG-	eP	11 20 14.5	SZ	0.6	60.8			
		ePP	59 23	SZ	1.5	136.8												
		ePKKP	17 09 17	ST	2.5	192.2			10	11	50 46.8	26.5 N 109.7 W GULF OF CALIFORNIA H= 33 KM MAG 4.50 CGS						
9	OO-	eP*	16 58 35	LZ	25	2572.9	131.5											
		e	58 35	SZ	0.9	13.8			10	GG-	eP	14 35 16.7	SZ	0.2	27.8			
		eP*	58 48	SZ	999.9	9999.9			10	GG-	eS	14 35 21	ST	0.3	70.3			
		ePP	17 01 05	LZ	999	9999.9			10	LZ-	eP	15 01 38.4	SZ	0.5	15.9			
9	GG-	eP*	16 59 01.0	SZ	0.9	59.6	140.9											
		eP*	59 05	LZ	22	9999.9			10	17	08 57.3	47.2 N 153.1 E KURILE ISLANDS H= 82 KM MAG 4.80 CGS						
9	18 45 32.9		49.4 N 153.5 E SEA OF OKHOTSK H=140 KM MAG 5.30 CGS						10	19	16 43.5	16. S 71.6 W SOUTHERN PERU H=134 KM MAG 4.90 CGS						
9	21 43 46.3		1.8 S 141.6 E OFF COAST N. E. NEW GUINEA H= 33 KM						10	LZ-	eP	19 17 33.0	SZ	999.9	9999.9	3.0		
9	LZ-	eP*1	22 03 25.5	SZ	0.7	49.0	145.3		10	21	16 26.*	20.1 S 174.2 W TONGA ISLANDS H= 33 KM MAG 4.60 CGS						
9	21 56 48.4		44.2 N 149.5 E KURILE ISLANDS H= 33 KM MAG 4.50 CGS						10	21	48 42.5	8.5 S 147.9 E PAPUA H=127 KM						
9	OO-	eLR	22 37 50	LZ	50	1079.5	69.9			10	22	23 51.5	53.4 N 167.8 W FOX ALEUTIAN ISLANDS H= 33 KM MAG 4.80 CGS					
9	GG-	eL	22 41 00	LZ	42.	473.3			11	00	15 52.*	53.2 N 168.6 W FOX ALEUTIAN ISLANDS H= 61 KM MAG 4.60 CGS						
10	01 17 53.3		6 S 19.8 W MID ATLANTIC OCEAN H= 33 KM MAG 4.60 CGS						11	01	36 16.3	7.3 S 148.0 E NEAR COAST N. E. NEW GUINEA H= 58 KM MAG 5.10 CGS						
10	GG-	eSP	01 35 28	LZ	20.	280.7	56.7											
		eLR	45 10	LZ	40	1183.2			11	LZ-	eP*	01 55 35.0	SZ	1.0	9.4	137.0		
10	OO-	eLQ	01 44 50	LR	27	702.9	65.8			11	00-	eLR	02 35 22	LZ	23	118.1	117.6	
10	LZ-	e	06 34 22	LR	25.	364.2				11	GG-	eLR	02 43 00	LZ	17	80.8	124.4	
10	LZ-	e	06 37 45	LR	20	712.0												
10	LZ-	e	06 42 50	LR	23	4984.5												
10	LZ-	eL	06 47 30	LZ	17	1896.6												
10	07 23 10.*		55.6 N 154.1 W ALASKA AFTERSHOCK H= 33 KM MAG 3.90 CGS						11	02	47 31.2	42.4 N 110.8 W WYOMING H= 33 KM						

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11	LZ-	eP	04 43 33.0	SZ	0.4	10.6		
11			04 45 28.6	41.6 N 142.3 E NEAR E. COAST HONSHU, JAPAN H= 50 KM MAG 4.70 CGS				
11	OO-	eP	04 56 39.0	SZ	0.7	19.8	70.3	5.20
11	LZ-	eP	04 58 53.8C	SZ	1.0	66.0		
11			05 53 53.4	23.8 S 177.4 W TONGA ISLANDS REGION H=215 KM MAG 4.20 CGS				
11			06 40 45.6	11.7 S 166.6 E SANTA CRUZ ISLANDS H= 33 KM MAG 4.40 CGS				
11			06 48 14.5	19.3 S 169.6 E NEW HEBRIDES ISLANDS H=143 KM MAG 4.60 CGS				
11			08 15 39.*	2.6 S 77.6 W ECUADOR H=148 KM MAG 4.10 CGS				
11			08 29 12.9	22.4 N 121.4 E NEAR SOUTH COAST OF TAIWAN H=118 KM MAG 4.90 CGS				
11	GG-	eLR	09 17 40	LZ	35.	321.0	85.4	
11			09 44 18.7	59.7 N 146.1 W ALASKA AFTERSHOCK H= 33 KM MAG 5.30 CGS				
11			11 16 33.*	14.1 N 93.0 W OFF COAST OF CHIAPAS, MEXICO H= 51 KM MAG 3.70 CGS				
11			11 52 25.	1. N 29.3 W MID ATLANTIC OCEAN H= 33 KM MAG 4.90 CGS				
11	LZ-	eP	12 00 19.0	SZ	0.8	82.2	42.3	5.54
	eS		06 42	LR	18	379.1		
	eSS		09 50	LR	18	869.8		
	eL		11 15	LR	26	582.4		
11	OO-	eL	12 19 50	LR	27	706.2	67.2	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11			12 38 52.*	18.9 N 109.0 W OFF COAST JALISCO, MEXICO H= 33 KM MAG 3.80 CGS				
11			14 33 06.9	49.3 N 129.0 W VANCOUVER ISLAND REGION H= 33 KM MAG 4.70 CGS				
11			15 03 22.6	13.4 N 62.9 W WINDWARD ISLANDS REGION H= 33 KM MAG 4.10 CGS				
11			15 35 53.1	5.8 N 126.4 E MINDANAO, PHILIPPINE ISLANDS H=152 KM MAG 5.00 CGS				
11	LZ-	eP ¹	15 55 42.0	SZ	1.3	24.3	162.1	
11			17 07 38.9	16.9 S 172.8 W TONGA ISLANDS REGION H= 33 KM MAG 4.70 CGS				
11			17 32 16.8	15.5 S 167.7 E NEW HEBRIDES ISLANDS H=143 KM MAG 4.50 CGS				
11			17 44 29.8	66.4 N 19.7 W NORTHERN ICELAND H= 19 KM MAG 4.90 CGS				
11	OO-	eP	17 47 56.0	SZ	1.5	137.8	14.4	5.35
	eL		50 41	SZ	0.7	15.5		
	eL		52 50	LT	26	1029.4		
11	GG-	eP	17 49 36.5	SZ	1.3	75.5	23.0	5.03
	eLR		55 10	LZ	26	1627.1		
							Avg.	5.19
11			18 53 15.8	12.2 N 141.6 E MARIANA ISLANDS REGION H= 61 KM MAG 4.70 CGS				
11	LZ-	eP ¹	19 13 00.0	SZ	1.5	25.1	150.6	
	eP ²		13 05	SZ	0.8	22.6		
11			20 25 40.3	59.7 N 146.2 W ALASKA AFTERSHOCK H= 40 KM MAG 5.60 CGS				
11	OO-	eP	20 35 31.0	SZ	1.0	23.4	58.3	5.17
	eL		54 15	LZ	25	1348.1		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11	GG-	eP	20 36 46.0	SZ	1.2	40.3	69.4	5.34
		eP	36 47	LZ	18	128.2		
		eSP	46 00	LZ	20	236.1		
		eSS	50 00	LR	23	1161.5		
		eLQ	59 55	LR	40	2899.7		
		eLR	21 02 20	LZ	27	1083.8		
11	LZ-	eLQ	21 16 20	LT	17	599.7	97.8	
		eLR	21 25	LT	25	1278.2		
					Avg.		5.25	
11	OO-	eP	20 33 35	LZ	10*	655.1		
11	21 05 49.9		59.7 N 146.5 W ALASKA AFTERSHOCK					
			H= 33 KM MAG 4.90 CGS					
11	22 34 43.8		41.7 N 29.9 W AZORES REGION					
			H= 33 KM MAG 4.80 CGS					
11	LZ-	eP	22 45 39.0	SZ	1.0	20.5	67.8	5.19
12	01 45 25.6		38.6 N 139.2 E NEAR W. COAST HONSHU JAPAN					
			H= 13 KM MAG 6.00 CGS					
12	00-	eP	01 56 52.0	SZ	999.9	9999.9	72.2	
		eS	02 06 10	LR	13	1743.3		
		eSS	10 55	LT	30	1332.3		
		eSSS	14 28	LR	27	756.7		
		eL	18 40	LZ	54	5353.8		
		eLR	21 25	LR	16	2889.5		
12	GG-	eP	01 57 41.5	SZ	1.0	152.8	80.8	5.94
		eP	57 42	LZ	14	323.7		
		e	02 02 52	LR	19	755.6		
		eSS	13 05	LR	26	660.2		
		eL	27 44	LR	28	2478.0		
12	LZ-	eP ¹²	02 05 10.5	SZ	1.5	422.8	147.1	
		eL	56 06	LZ	42	667.9		
12	03 23 49.1		18.5 N 100.5 W GUERRERO MEXICO					
			H=113 KM MAG 3.90 CGS					
12	LZ-	eP	08 09 03.0	SZ	0.4	20.3	1.7	
		eS	09 25	ST	0.9	8.7		
12	09 00 40.*		60.1 N 146.1 W ALASKA AFTERSHOCK					
			H= 33 KM MAG 3.80 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	LZ-	eP	09 06 11.0	SZ	0.5	10.6		
12	LZ-	eP	09 58 18.5	SZ	0.4	3.7		
12	LZ-	eP	10 10 45.5	SZ	0.2	5.5	1.8	
		eS	11 10	ST	0.7	11.3		
12	11 23 29.*		53.1 N 168.6 W FOX ALEUTIAN ISLANDS					
			H= 33 KM MAG 4.40 CGS					
12	11 58 57.		40.2 N 124.7 W NEAR COAST NORTH CALIFORNIA					
			H= 33 KM MAG 4.20 CGS					
12	GG-	eP	12 03 31.0	SZ	0.5	28.0	1.4	
		eS	03 54	ST	0.5	79.9		
12	12 18 19.1		40.3 N 126.1 W NEAR COAST NORTH CALIFORNIA					
			H= 33 KM MAG 4.70 CGS					
12	LZ-	eP	15 02 38.0	SZ	0.4	2.2		
12	LZ-	eP	16 10 01.0	SZ	0.3	6.7	2.3	
		eS	10 30	ST	0.5	5.7		
12	16 48 21.7		24.5 S 66.9 W CHILE ARGENTINA BORDER					
			H=164 KM MAG 5.10 CGS					
12	LZ-	eP	16 50 21.5	SZ	0.5	33.7	8.3	5.01
		eL	51 54	SR	0.9	110.6		
12	20 00 59.6		53.8 N 81.3 E CENTRAL RUSSIA					
			H= 20 KM MAG 5.00 CGS					
12	20 15 59.		24.9 N 95.3 E NORTHWESTERN BURMA					
			H=155 KM MAG 6.70 CGS					
12	20 19 17.4		40.5 N 142.5 E NEAR E. COAST HONSHU JAPAN					
			H= 33 KM MAG 4.50 CGS					
12	00-	eL	20 35 06	LT	15*	435.1		
12	21 08 52.6		55.9 S 27.6 W SANDWICH ISLANDS					
			H=135 KM MAG 5.20 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	LZ-	eP	22 17 38.5	SZ	1.0	46.6		
12	LZ-	eP	22 18 05.0	SZ	1.0	26.1		
13	01	14 33.5	20.7 S 178.7 W FIJI ISLANDS H=575 KM MAG 4.90 CGS					
13	LZ-	eP eS	01 15 58.0C 16 20	SZ ST	0.3 0.5	36.8 26.6	1.7	
13	LZ-	eP	06 10 29.5	SZ	2.0	35.5		
13	06	28 28.4	11.8 S 166.0 E SANTA CRUZ ISLANDS H= 66 KM MAG 4.50 CGS					
13	06	47 54.*	44.7 N 129.9 W OFF COAST OF OREGON H= 33 KM MAG 5.50 CGS					
13	10	03 45.3	25. S 179.9 W FIJI ISLANDS H=424 KM MAG 4.50 CGS					
13	10	08 07.2	15.9 S 167.9 E NEW HEBRIDES ISLANDS H= 33 KM MAG 5.40 CGS					
13	10	58 47.7	23.7 N 94.7 E NORTHWESTERN BURMA H=117 KM MAG 6.50 CGS					
13	00-	eP eL	11 09 27.5 26 17	SZ LT	1.3 20	45.0 118.1	66.6	5.21
13	GG-	eP	11 09 39.0	SZ	1.5	140.9	68.2	5.56
13	LZ-	eP*1 e ePP	11 18 39.5 19 07 23 12	SZ SZ SZ	1.5 1.5 1.5	107.7 124.3 33.1	162.6	
					AVG.	5.38		
13	GG-	eP eS	11 27 13.0 27 33	SZ ST	0.4 0.6	13.7 66.3	1.6	
13	11	54 50.7	42.5 N 126.7 W NEAR COAST OF OREGON H= 33 KM MAG 5.60 CGS					
13	12	30 41.*	5.6 S 106.3 E SUNDA STRAIT H=333 KM MAG 4.30 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	14	53 27.6	20.9 S 169.9 E NEW HEBRIDES ISLANDS H= 89 KM MAG 5.10 CGS					
13	15	52 04.8	56.6 N 154.0 W ALASKA AFTERSHOCK H= 25 KM MAG 4.80 CGS					
13	16	22 26.*	53.7 N 35.2 W NORTH ATLANTIC OCEAN H= 33 KM MAG 4.30 CGS					
13	00-	eS eL	16 32 27 34 38	LR LR	18 21	250.0 1062.4	25.4	
13	GG-	eLR	16 36 00	LZ	27	432.0	28.6	
13	16	49 38.8	8.3 S 113.7 E JAVA H=153 KM					
13	LZ-	eP*1 eP*2 ePP e	17 09 20.0 09 47 13 20 13 54	SZ SZ SZ SZ	1.5 1.0 2.0 1.8	8.2 26.1 88.8 48.3	155.5	
13	17	12 01.3	8. N 126.8 E MINDANAO, PHILIPPINE ISLANDS H=104 KM MAG 4.00 CGS					
13	LZ-	eP*1 e	17 31 57.0 32 13	SZ SZ	1.0 1.0	11.1 7.4	163.0	
13	00-	eL	19 02 50	LZ	18.	143.8		
13	21	02 33.3	7.7 N 34.7 W NORTH ATLANTIC OCEAN H= 33 KM MAG 5.20 CGS					
13	LZ-	eP ePP eS eLR	21 10 12.9C 11 53 16 30 21 40	SZ LZ LT LZ	999.9 15 16 35	9999.9 556.4 610.4 2391.2	41.0	
13	GG-	eP eS eSS eL eL eL eL	21 12 15.5 20 10 24 05 29 02 33 05 33 05 33 05	SZ LT LT LT LT LR LZ	1.0 22 25 31 26 25 26	39.8 586.8 417.5 1463.3 1014.6 431.1 1049.3	56.7 5.40	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	00-	eP	21 12 58.5	SZ	0.9	18.0	63.0	5.14
		eS	21 34	L ^T	22	806.8		
		eLQ	28 34	LR	33	1220.4		
		eLR	31 52	LZ	25	2295.7		
		eL'	32 55	L ^T	25	1947.7		
		eL	32 55	LR	24	769.6		
		eL	32 55	LZ	30	2180.0		
					Avg.		5.27	
13	21	41 02.6	55.2 N 156.5 W ALASKA AFTERSHOCK H= 33 KM MAG 4.10 CGS					
13	22	47 27.*	41.8 S 84.3 W OFF COAST OF SOUTHERN CHILE H= 33 KM MAG 4.80 CGS					
13	LZ-	eP	22 53 25.5	SZ	1.5	16.5	28.9	4.58
		eLR	23 01 26	LZ	23	495.2		
13	LZ-	eP	23 07 26.8	SZ	0.2	11.1	5.5	
		eS	08 29	SR	0.4	31.5		
13	23	43 48.*	48.3 S 32.0 E PRINCE EDWARD ISLANDS REGION H= 33 KM					
13	LZ-	eP	23 56 19.3	SZ	1.3	30.0	84.8	5.27
14	LZ-	eL	00 26 40	LZ	22	435.8	84.8	
14	GG-	eL	00 33 20	LZ	35	227.6	99.2	
14	OO-	eL	00 42 42	LZ	27	586.7	110.3	
14	LZ-	eP	01 23 49.5	SZ	1.2	15.3		
14	04	04 18.2	53.6 N 172.0 E ALEUTIAN NEAR ISLANDS H= 33 KM MAG 4.90 CGS					
14	GG-	eL	04 42 52	LZ	30	139.2	75.8	
14	05	22 20.	60.4 N 142.9 W ALASKA AFTERSHOCK H= 10 KM MAG 4.80 CGS					
14	05	33 55.1	57. N 7.3 E NEAR SOUTH COAST OF NORWAY H= 36 KM MAG 5.10 CGS					
14	OO-	(P)	05 35 01.4C	SZ	0.3	22.3	4.5	4.97

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eL	35 48	SY	0.3	96.5		
14	LZ-	tP	09 54 07.2C	SZ	0.3	18.8	1.9	
		eS	54 32	SR	0.3	27.2		
14	09	55 24.4	19. N 66.5 W PUERTO RICO H= 46 KM MAG 4.80 CGS					
14	LZ-	eP	10 02 15.3	SZ	0.7	19.6	35.1	5.14
		eS	07 50	LR	25	320.9		
		e	08 12	SZ	1.0	5.5		
		eL	12 30	LZ	30	505.1		
14	OO-	eP	10 06 17.1	SZ	0.8	6.9	67.5	4.78
14	GG-	eL	10 27 12	LZ	26	689.5	67.9	
					Avg.		4.96	
14	GG-	eP	11 03 22.3	SZ	0.3	19.9	•6	
		eS	03 31	ST	0.3	149.2		
14	GG-	eP	11 43 05.3	SZ	0.2	115.7		
14	12	47 25.6	41.8 N 125.7 W NEAR COAST NORTH CALIFORNIA H= 33 KM MAG 5.40 CGS					
14	LZ-	eP	12 59 08.8	SZ	0.7	4.9	78.2	4.63
14	GG-	eL	13 27 42	L ^T	29	139.9	81.4	
14	13	58 28.5	53.3 N 159.7 E NEAR EAST COAST OF KAMCHATKA H= 40 KM MAG 5.50 CGS					
14	OO-	eP	14 08 54.4	SZ	0.6	26.0	63.3	5.48
14	GG-	eP	14 10 02.7	SZ	0.6	40.9	74.0	5.55
		ePCP	10 11	SZ	0.5	10.7		
		eL	35 27	LZ	40	346.8		
14	LZ-	eP	14 17 31.3	SZ	0.7	4.9	127.4	
					Avg.		5.51	
14	GG-	eP	14 31 54.1	SZ	0.4	26.7	1.2	
		eS	32 11	SR	0.5	9999.9		
14	LZ-	eP	15 15 16.0	SZ	0.8	2.8		
14	GG-	eP	15 38 31.0	SZ	999.9	9999.9		
14	GG-	eL	16 25 28	LZ	45	194.5		
14	17	19 23.3	45.3 N 150.2 E KURILE ISLANDS H= 33 KM MAG 4.80 CGS					
14	OO-	eL	17 51 53	LR	42	561.6	69.0	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
14	GG-	eL	18 07 40	LZ	21.	442.2		
14	18 38 39.1		52.7 S 139.4 E	WEST OF MACQUARIE ISLAND				
			H= 36 KM					
14	LZ-	eP	19 23 28.0	SZ	1.0	5.5		
14	LZ-	eP	20 40 44.9	SZ	0.4	18.5		
14	LZ-	eP	22 44 32.4	SZ	0.8	5.6		
14	22 59 09.2		59.5 N 144.8 W	ALASKA AFTERSHOCK				
			H= 20 KM	MAG 5.10	CGS			
14	OO-	eL	23 30 12	LR	27	173.7	58.3	
14	GG-	eL	23 37 25	LT	20	155.5	69.4	
14	23 12 12.7		34.3 S 179.1 E	KERMADEC ISLANDS REGION				
			H= 75 KM	MAG 5.10	CGS			
14	LZ-	eL	23 57 38	LT	30.	919.7	98.5	
15	OO-	eL	00 24 33	LZ	40.	298.3		
15	GG-	eL	00 32 21	LZ	34	199.3		
15	LZ-	eP	03 51 34.6	SZ	0.6	6.3		
15	LZ-	eL	04 26 42	LZ	31	200.7		
15	07 26 01.4		52.1 N 170.6 W	FOX ALEUTIAN ISLANDS				
			H= 30 KM	MAG 5.60	CGS			
15	OO-	eP	07 36 53.7	SZ	1.2	31.1	67.2	5.32
	eS		45 56	LR	25	118.8		
	eSS		50 35	LT	9	808.8		
	eSSS		53 03	LR	25	165.0		
15	GG-	eL	07 58 00	LZ	28	185.2	78.6	
15	08 24 56.5		11.3 S 166.1 E	SANTA CRUZ ISLANDS				
			H=130 KM	MAG 4.70	CGS			
15	09 49 05.8		35.2 N 4.5 E	ALGERIA				
			H= 39 KM	MAG 4.30	CGS			
15	GG-	eP	09 52 44.6	SZ	0.6	13.6	15.3	4.47
	eL		56 14	LR	30	4541.8		
15	OO-	eL	10 02 03	LR	25	726.2	26.2	
15	LZ-	eP	16 18 15.7	SZ	0.4	6.6	1.7	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
15	LZ-	eS	18 39	SZ	0.9	35.9		
15	18 20 52	LZ	20	197.6				
15	18 56 26.		44.0 N 148.1 E	KURILE ISLANDS				
			H= 30 KM	MAG 5.50	CGS			
15	LZ-	eP	23 01 52.0	SZ	1.0	11.3		
16	00 52 51.*		15.6 S 167.6 E	NEW HEBRIDES ISLANDS				
			H=125 KM					
16	04 21 05.3		1.5 N 126.4 E	MOLUCCA PASSAGE				
			H= 69 KM					
16	04 51 36.5		15.6 S 167.7 E	NEW HEBRIDES ISLANDS				
			H=121 KM					
16	LZ-	eL	05 15 55	LZ	35.	386.9		
16	LZ-	eP	05 21 34.5	SZ	0.3	1.5	3.1	
	eS		22 12	SR	0.5	4.8		
16	09 19 45.8		29.9 N 138.0 E	SOUTH OF HONSHU, JAPAN				
			H=461 KM	MAG 4.10	CGS			
16	10 37 23.1		44.0 N 148.3 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.80	CGS			
16	11 27 05.*		17.9 S 179.5 W	TONGA ISLANDS REGION				
			H=625 KM	MAG 4.20	CGS			
16	12 20 56.*		17.2 N 94.4 W	OAXACA, MEXICO				
			H= 81 KM	MAG 4.00	CGS			
16	13 15 26.3		16.0 N 145.5 E	MARIANA ISLANDS				
			H= 33 KM	MAG 5.00	CGS			
16	16 07 18.3		3 N 67.0 E	INDIAN OCEAN				
			H= 33 KM	MAG 5.10	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	LZ-	eLR	17 13 05	LZ	35.	483.7	133.3	
16	17 39 59.6		36.1 N 30.8 E NEAR COAST SOUTHWEST TURKEY					
			H= 61 KM MAG 4.90 CGS					
16	00-	eLQ	17 53 50	LT	40	534.2	28.0	
	eLR		58 41	LZ	16	1209.6		
16	17 51 50.4		8.5 N 82.9 W PANAMA COSTA RICA REGION					
			H= 34 KM MAG 4.50 CGS					
16	LZ-	eP	20 48 11.0	SZ	0.3	16.8	4.6	
	eS		49 06	ST	0.8	17.0		
17	02 34 26.9		38.2 N 23.7 E SOUTHERN GREECE					
			H=150 KM MAG 5.40 CGS					
17	GG-	eP	02 37 47.2	SZ	1.2	287.1	14.6	5.48
	eSCP		46 06	SZ	1.4	444.4		
	eSCS		49 43	ST	3.0	1727.1		
	e		50 50	ST	1.7	214.7		
17	00-	fP	02 39 31.4C	SZ	999.9	9999.9	24.3	
	eP		39 32	LZ	11	1711.1		
	e		42 30	SZ	0.8	57.6		
	ePCP		43 05	SZ	1.0	104.8		
	eS		43 37	LT	999	9999.9		
	e		44 03	SR	1.4	290.6		
	e		46 58	SZ	0.9	60.5		
	eSCS		50 12	ST	3.5	1261.1		
17	LZ-	eP	02 48 03.1	SZ	1.0	3.7	101.5	4.98
	ePP		48 40	LZ	24	540.5		
	e		51 23	SZ	1.0	11.3		
	ePP		52 07	SZ	1.3	24.4		
	ePP		52 08	LZ	20	682.0		
	eSKS		58 25	LT	19	419.4U		
	eSKS		58 25	ST	2.3	284.8		
	eSP		03 01 05	SZ	3.0	412.5		
	eSP		01 05	LZ	18	3751.0		
	ePKKP		04 11	SZ	0.8	7.1		
	eSS		06 20	LT	23	815.7		
	e		12 10	LT	28	1268.9		
	eL		14 55	LR	27	893.9		
							AVG.	5.23

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eS		05 00 39	L7	148	323.82		
	e		05 53	L7	23	167.85		
	eLQ		12 00	LR	36	513.81		
	eLR		14 17	LZ	34	730.89		
17	GG= eP		04 52 57.0	SZ	0.8	78.8	77.5	5.74
							Avg.	5.70
17	04 55 00.*		24.3 S 179.6 E	SOUTH OF FIJI ISLANDS				
			H=495 KM					
17	LZ= eP		06 00 12.4	SZ	1.2	15.5		
17	18 39 46.*		57.1 N 150.9 W	ALASKA AFTERSHOCK				
			H= 33 KM MAG 4.20 CGS					
17	19 09 16.4		24.3 S 177.1 W	TONGA ISLANDS REGION				
			H= 93 KM					
17	21 49 58.3		44.5 N 149.9 E	KURILE ISLANDS				
			H= 39 KM MAG 4.50 CGS					
17	22 54 42.2		44.6 N 149.2 E	KURILE ISLANDS				
			H= 33 KM MAG 5.40 CGS					
17	00- eP		23 05 46.5	SZ	1.0	74.9	69.4	5.72
	eP		05 47	LZ	17	233.9		
	ePS		15 14	L7	20	259.6		
	eSS		19 34	L7	23	565.9		
	e		23 11	LR	20	284.7		
	eL		26 35	LR	40	1983.9		
17	GG= eP		23 06 45.8	SZ	0.9	115.5	79.2	5.83
	eLR		36 35	LZ	25	254.3		
17	LZ= eP*		23 14 06.2	SZ	0.9	6.4	137.5	
	ePKS		17 24	SR	0.8	1.0		
18	LZ= eL		00 01 00	LZ	30	231.5	137.5	
							Avg.	5.77
18	03 12 20.1		60.5 N 139.6 W	SOUTHEASTERN ALASKA				
			H= 33 KM MAG 3.80 CGS					
18	03 40 21.5		36.3 N 26.1 E	DODOCANESE ISLANDS				
			H= 115 KM MAG 4.90 CGS					
18	GG= eP		03 44 15.6	SZ	1.2	256.8	17.2	5.36
	eP		44 16	LZ	17	387.8		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	00-	eL	47 32	SR	2.1	572.6			18	20 37 36.*	ii.	N	87.0	W	OFF WEST COAST OF NICARAGUA		
		eL	47 35	LZ	23	745.9				H= 33 KM	MAG 4.60	CGS					
		eP	03 45 50.0	SZ	0.4	6.4	26.6	4.54	18	23 36 21.	60.	N	143.4	W	ALASKA AFTERSHOCK		
		eL	50 18	LT	27	643.1				H= 33 KM	MAG 4.90	CGS					
		eL	51 14	ST	0.7	7.5			19	00 05 22	LZ	35		309.5	57.6		
					Avg.			4.95		GG-	eL	00 10 28	LZ	30	152.5	68.7	
18	LZ- eL		07 19 19	SZ	1.2	9.9			19	LZ- eL	00 25 08	LZ	7	4741.5	96.6		
18	07 33 39.*		38.8 N 138.5 E	NEAR W. COAST HONSHU JAPAN					19	02 51 57.8	21.4	S	64.9	W	SOUTHERN BOLIVIA		
			H= 33 KM	MAG 4.10	CGS					H= 102 KM	MAG 4.00	CGS					
18	LZ- eP		07 37 59.0	SZ	0.2	3.2	5.1		19	LZ- eP	03 53 58.2	SZ	0.5	35.8			
	eS		39 00	SR	0.4	3.5			19	05 59 58.9	49.9	N	78.1	E	KAZAKH S.S.R.		
18	11 13 14.2		18.4 S 70.9 W	NEAR COAST OF NORTHERN CHILE						H=	KM	MAG 5.50	CGS				
			H= 40 KM	MAG 4.80	CGS				19	00- eP	06 07 19.0	SZ	0.4	35.4	38.0	5.45	
18	LZ- eP		11 14 11.8	SZ	1.2	62.0	3.1	4.51	19	LZ- eP	06 30 20.5	SZ	0.5	6.8	2.2		
	eP		14 12	LZ	15	2725.2				30 49	SR	0.4	22.3				
	e		14 23	LT	19	3291.6			19	06 50 22.3	13.8 S 167.0 E	NEW HEBRIDES ISLANDS					
	eL		15 25	LZ	14	9999.9				H= 232 KM	MAG 4.60	CGS					
18	12 45 47.7		2 N 123.5 E	NORTHERN CELEBES					19	07 31 54.*	48.8 N 154.7 E	KURILE ISLANDS					
			H= 97 KM	MAG 5.80	CGS					H= 87 KM	MAG 4.40	CGS					
18	LZ- eP ¹		13 05 40.1	SZ	1.5	124.7	160.1		19	GG- eP	12 19 54.0	SZ	0.5	13.4	1.4		
	eP ²		06 16	SZ	1.7	219.5				eS	20 12	SR	0.4	15.3			
	e		06 55	SZ	1.0	77.8			19	12 30 39.*	44.4 N 149.3 E	KURILE ISLANDS					
	e		10 24	SZ	1.0	7.2				H= 33 KM	MAG 4.20	CGS					
18	GG- eL		13 28 05	LZ	25	128.4	104.1		19	13 40 06.6	15.1 S 173.4 W	TONGA ISLANDS REGION					
18	00- eL		13 35 30	LZ	32	239.9	100.6			H= 33 KM	MAG 4.70	CGS					
18	LZ- eP		15 00 29.7	SZ	0.4	5.1			19	15 33 57.6	9.4 S 113.0 E	SOUTH OF JAVA					
										H= 80 KM							
18	17 30 51.*		53.1 N 158.4 E	SOUTHERN KAMCHATKA					19	LZ- eP	16 42 23.3	SZ	0.5	4.2	1.6		
			H= 95 KM	MAG 4.50	CGS												
18	20 05 13.8		44.6 N 149.0 E	KURILE ISLANDS													
			H= 33 KM	MAG 4.30	CGS												

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eS	42 46	SR	0.4	17.3		
19	18 10 48.2		7.5 N 121.8 E MINDANAO, PHILIPPINE ISLANDS					
			H= 51 KM					
19	00- eL		18 55 55	LZ	20.	68.9	93.4	
19	GG- e		19 03 25	LZ	26.	52.0		
19	GG- e		19 09 15	LZ	17	89.5		
19	20 26 31.*		3.1 S 126.8 E BANDA SEA					
			H= 30 KM					
19	LZ- eP		23 12 08.0	SZ	0.5	35.4		
19	LZ- eL		23 39 55	LT	34	2074.6		
20	04 29 28.*		6.7 S 154.6 E SOLOMON ISLANDS					
			H= 78 KM MAG 5.00 CGS					
20	00- eLR		05 31 50	LZ	25.	51.2	119.4	
20	LZ- eLR		05 33 07	LZ	25	127.2	131.6	
20	08 27 27.*		13.6 N 87.9 W EL SALVADOR					
			H= 87 KM MAG 3.80 CGS					
20	09 34 22.*		64.5 S 176.7 E SOUTH PACIFIC OCEAN					
			H= 33 KM					
20	LZ- eP		09 47 01.7	SZ	1.5	45.4	85.6	5.34
	eLR		10 14 09	LZ	29	481.3		
20	00- eLR		10 58 35	LZ	45	631.3	172.6	
20	10 22 53.*		35.2 S 179.8 W NEAR NORTH IS., NEW ZEALAND					
			H= 108 KM MAG 4.80 CGS					
20	LZ- eLR		11 08 24	LZ	24.	229.6	97.3	
20	GG- eL		11 02 50	LZ	22.	1243.1		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	GG- e		11 31 40	S*	0.5	15.2		
20	GG- eL		13 08 50	LZ	20	100.6		
20	13 31 14.*		14.4 N 53.5 E GULF OF ADEN					
			H= 33 KM					
20	LZ- eP		14 05 24.8	SZ	0.8	9.7		
20	GG- eP		17 00 23.0	SZ	0.4	7.6	1.0	
	eS		00 38	SR	0.5	33.9		
20	LZ- eP		17 39 13.5	SZ	0.4	14.2		
20	LZ- e		17 39 56	SZ	1.4	65.3		
20	LZ- eL		17 47 17	LT	35	353.2		
20	18 49 43.5		19.8 N 109.0 W REVILLA GIGEDO ISLANDS REG.					
			H= 33 KM MAG 5.10 CGS					
20	LZ- eP		18 59 03.3D	SZ	1.3	122.9	53.6	5.75
	eS		19 06 48	LT	25	955.6		
	e		11 20	LT	21	388.3		
	eLQ		12 38	LT	20	1815.8		
	eLR		17 23	LZ	23	3235.0		
20	00- eS		19 13 18	LT	20	327.0	86.2	
	eSS		18 32	LT	27	259.8		
	eLQ		25 11	LT	28	713.4		
	eLR		32 20	LZ	28	998.8		
20	GG- e		19 28 15	LZ	15	144.0	93.0	
	eL		35 32	LR	30	908.0		
20	22 37 23.6		51.2 N 179.6 W ANDREANOF ALEUTIAN ISLANDS					
			H= 33 KM MAG 4.70 CGS					
20	00- eL		23 06 48	LR	27	160.9	67.8	
20	LZ- eL		23 27 48	LT	30	417.0	115.7	
20	22 43 15.*		35.5 S 179.7 E OFF NORTH IS., NEW ZEALAND					
			H= 223 KM MAG 4.90 CGS					
20	00- eP†1		23 02 42.0	SZ	1.2	34.5	153.4	
20	22 56 01.*		34.4 S 179.2 E OFF NORTH IS., NEW ZEALAND					
			H= 162 KM MAG 5.00 CGS					
21	GG- eL		00 07 20	LZ	25.	49.8	162.3	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21	00-	eL	00 08 20	LT	35	263.5	152.3	
21	01 07 55.8	19.6 N 109.1 W REVILLA GIGEDO ISLANDS REG.						H= 33 KM MAG 5.30 CGS
21	LZ-	e	01 26 22	LT	18	1588.7	53.5	
	eLQ		30 10	LT	20	642.6		
	eLR		32 16	LT	20	2880.7		
21	GG-	e	01 47 55	LZ	25	249.2	93.2	
	e		50 20	LR	22	772.0		
	e		51 50	LR	28	1156.9		
	eL		55 44	LR	28	1452.8		
21	01 09 25.8	19.8 N 108.8 W OFF COAST OF JALISCO, MEXICO						H= 31 KM MAG 4.90 CGS
21	00-	eSKS	01 32 45	LT	21	613.0	86.1	
	eSS		38 19	LT	27	519.7		
	e		44 52	LT	26	1136.1		
	eLQ		47 27	LT	39	3772.9		
	eLR		52 00	LZ	28	1993.9		
21	02 47 48.6	31.3 S 180.0 KERMADEC ISLANDS						H=433 KM MAG 4.00 CGS
21	03 41 04.8	18.8 N 109.3 W OFF COAST OF JALISCO, MEXICO						H= 33 KM MAG 3.70 CGS
21	03 48 59.1	26. S 178.0 W FIJI ISLANDS REGION						H=222 KM MAG 6.50 CGS
21	LZ-	eP	04 02 22	LZ	13	538.7	99.6	
	eSKS		12 38	LT	20	1107.9		
	e		13 55	LT	25	724.6		
	e		15 35	LT	20	1551.1		
21	GG-	eP ¹	04 07 20	SZ	0.6	57.9	155.3	
	eP ¹		07 20	LZ	15	252.1		
	e		10 57	LZ	18	355.1		
	e		30 30	LR	25	1135.2		
	eL		46 35	LR	35	728.0		
21	00-	eP ¹	04 08 08.2	SZ	0.9	87.5	144.4	
	eP ¹		08 09	LZ	19	323.7		
	eP ¹		09 28	LZ	14	704.7		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eSKP		11 31	SZ	1.6	154.9		
	eSKP		11 41	LZ	23	276.5		
	e		17 58	LT	24	334.2		
	ePKKS		19 49	LR	14	248.5		
	eSKSP		21 21	LZ	21	452.6		
	e		28 30	LZ	18	369.2		
	eSS		29 54	LR	32	1104.1		
	e		44 12	LT	25	540.1		
	e		45 29	LR	32	803.0		
	eL		51 19	LR	40	1560.6		
21	05 43 05.*	1.9 S 104.7 W N. EASTER ISLAND CORDILLERA						H= 33 KM MAG 4.10 CGS
21	07 01 59.3	13.1 N 88.4 W NEAR COAST OF EL SALVADOR						H= 68 KM MAG 4.70 CGS
21	LZ-	eL	07 19 05	LT	32	490.1	35.2	
21	00-	eL	07 41 15	LZ	32	269.7	83.1	
21	GG-	eL	07 42 20	LZ	25	99.7	86.2	
21	07 33 19.6	20. S 69.8 W NEAR COAST OF NORTHERN CHILE						H= 84 KM MAG 4.50 CGS
21	LZ-	eLQ	07 34 50	LT	15	507.8	3.9	
	eLR		35 35	LT	16	1295.6		
21	09 56 16.6	72.1 N 130.2 E LAPTEV SEA						H= 33 KM MAG 5.40 CGS
21	00-	eP	10 03 51.0	SZ	1.0	86.1	40.8	5.45
	eP		03 53	LZ	16	116.6		
	ePP		05 29	LZ	17	177.8		
	eS		10 20	LT	31	288.4		
	eSS		13 18	LR	23	188.3		
	eLQ		16 41	LT	33	513.8		
	eLR		19 22	LZ	26	1274.2		
21	GG-	eP	10 05 25	LZ	15	144.0	51.3	
	ePP		07 25	LZ	15	144.0		
	eL		25 18	LZ	26	586.1		
21	LZ-	eL	10 55 00	LT	25	790.5	123.1	
21	10 22 14.*	29.1 S 71.9 W NEAR COAST OF CENTRAL CHILE						H= 33 KM MAG 4.10 CGS

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21	11	46 54.0	27.7 N 56.5 E	NEAR COAST OF SOUTHERN IRAN				
			H= 50 KM					
21	13	13 00.2	11.5 N 121.9 E	PANAY, PHILIPPINE ISLANDS				
			H= 34 KM					
21	GG-	ePP	13 30 17	LZ	16.	130.4	94.3	
	eL		14 02 20	LZ	40	1972.8		
21	OO-	eLQ	13 53 50	LR	40	1275.9	89.9	
	eLR		59 40	LR	28	1874.0		
21	LZ-	eL	14 32 30	LT	50	2137.6	168.9	
21	18	05 40.2	15.3 N 93.2 W	NEAR COAST CHIAPAS, MEXICO				
			H= 33 KM	MAG 3.70	CGS			
21	21	01 49.5	4.6 S 153.3 E	NEW BRITAIN REGION				
			H= 60 KM	MAG 4.90	CGS			
21	GG-	eP†	21 20 45.5	SZ	0.7	29.7	124.8	
	e		22 35	LZ	25	127.1		
21	OO-	ePS	22 03 25	LZ	40	363.4		
	eL		21 31 27	LT	30	462.2	117.0	
21	LZ-	eL	56 30	LR	35	388.2		
21	GG-	eP	22 05 14	LT	30	689.3	133.8	
21	eS		22 02 03.0	SZ	0.5	13.1	3.8	
			02 49	ST	0.4	32.9		
22	00	49 20.4	14.6 S 167.6 E	NEW HEBRIDES ISLANDS				
			H= 33 KM	MAG 4.10	CGS			
22	01	06 43.8	41.8 S 75.9 W	NEAR COAST OF SOUTHERN CHILE				
			H= 33 KM	MAG 4.80	CGS			
22	LZ-	eL	01 17 10	LT	24.	309.6	26.2	
22	02	04 52.5	1.9 S 149.6 E	ADMIRALTY ISLANDS REGION				
			H= 78 KM	MAG 4.40	CGS			
22	03	50 51.6	14.3 S 167.4 E	NEW HEBRIDES ISLANDS				
			H=203 KM	MAG 4.00	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
22	04	41 55.1	27.6 N 55.0 E	SOUTHERN IRAN				
			H= 64 KM	MAG 4.90	CGS			
22	07	04 34.*	54.2 S 132.4 W	SOUTH PACIFIC OCEAN				
			H= 33 KM	MAG 4.60	CGS			
22	07	37 52.4	16.3 S 167.7 E	NEW HEBRIDES ISLANDS				
			H= 6 KM					
22	08	51 31.*	4.1 N 125.7 E	TALAUD ISLANDS				
			H=237 KM	MAG 4.40	CGS			
22	10	34 11.9	31.7 N 114.1 W	GULF OF CALIFORNIA				
			H= 33 KM	MAG 4.60	CGS			
22	12	19 38.5	22.2 S 175.4 W	TONGA ISLANDS				
			H= 33 KM	MAG 4.30	CGS			
22	GG-	eP	12 52 11.4	SZ	0.4	20.3	1.3	
	eS		52 29	SR	0.2	52.6		
22	LZ-	eP	15 35 01.5	SZ	0.3	2.8	5.4	
	e		35 14	SZ	0.5	11.6		
22	GG-	eS	36 04	SR	0.4	4.7		
	eP		17 01 47.9	SZ	0.5	19.1		
22	17	51 14.8	59.7 N 153.4 W	ALASKA AFTERSHOCK				
			H= 33 KM					
22	GG-	eP	18 10 37.8	SZ	0.4	15.7	1.1	
	eS		10 40	SR	0.3	9999.9		
22	20	15 04.6	13.2 N 144.3 E	MARIANA ISLANDS				
			H=146 KM	MAG 4.70	CGS			
22	LZ-	eP	21 04 33.4	SZ	1.0	15.9		
22	OO-	e	21 20 45	LR	30	333.8		
23	01	53 11.4	28.8 S 70.3 W	NORTHERN CHILE				
			H= 37 KM	MAG 4.60	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG				
23	LZ-	eP e	01 56 21.4 57 05	SZ SZ	0.6 1.0	2.2 21.2	12.6	4.35	23	19 18 56.8		27.8 S 66.4 W	CATAMARCA PROV.	ARGENTINA							
23			10.5 N 83.9 W COSTA RICA						H=130 KM	MAG 5.20	CGS										
23	04 57 54.3																				
23	07 11 28.*		60.7 N 147.9 W ALASKA AFTERSHOCK						H= 9 KM	MAG 3.90	CGS										
23	GG-	eP eS	07 46 43.4 46 56	SZ SR	0.3 0.2	7.8 70.1	1.0					24	00 46 27.1	18.5 N 100.3 W GUERRERO, MEXICO							
23									H=147 KM	MAG 4.00	CGS										
23	09 40 29.2		7 S 16.3 W NORTH OF ASCENSION ISLAND						H= 33 KM	MAG 4.80	CGS		24	01 39 39.	14.2 N 91.6 W NEAR WEST COAST OF GUATEMALA						
23	LZ-	eP e	09 49 44.7 49 51	SZ SZ	1.8 1.3	51.2 14.2	53.7	5.23					H= 65 KM	MAG 4.90	CGS						
23	00-	eL	09 58 05	LZ	25.	350.1						24	04 08 08.4	80.4 N 110.5 W ARCTIC OCEAN							
23	LZ-	eP	10 12 35.0	SZ	1.2	38.8			H= 33 KM	MAG 4.10	CGS										
23	LZ-	e	10 12 58	SZ	0.5	3.5						24	LZ-	eP eS	05 35 55.8 36 24	SZ ST	0.4 0.5	25.7 21.2	2.2		
23	LZ-	e	10 13 51	SZ	1.1	13.3															
23	GG-	eP	11 08 38.9	SZ	0.3	48.2															
23	GG-	eP eS	14 16 58.0 17 13	SZ ST	0.5 0.5	12.4 66.0	1.1														
23																					
23	14 19 01.1		57.1 N 150.4 W ALASKA AFTERSHOCK						H= 33 KM	MAG 5.10	CGS		24	06 50 52.8	46.9 N 153.9 E KURILE ISLANDS						
23									H= 33 KM	MAG 6.00	CGS										
23	15 56 28.*		59.7 N 145.8 W ALASKA AFTERSHOCK						H= 20 KM	MAG 4.70	CGS		24	00-	eP eP e ePP ePPP eS eSS eSSS eLQ eLR	07 01 51.0 01 53 03 40 04 30 06 13 10 55 15 30 18 35 22 05 25 40	SZ LZ LZ LZ LZ LR LT LR LR LR	1.3 15 24 18 21 15 25 25 999 35	626.6 2745.7 623.3 676.3 802.2 9999.9 9999.9 9999.9 9999.9 9999.9	68.3	6.55
23	19 08 06.6		59.9 N 149.2 W ALASKA AFTERSHOCK						H= 55 KM	MAG 5.40	CGS										
23	00-	eP eL	19 17 57.5 31 00	SZ LT	0.7 20	24.2 45.7	58.4	5.34				24	GG-	eP eP ePPP eS eL	07 02 52.5 02 55 C 07 50 12 28 18 50 29 20	SZ LZ LZ LT LT LT	1.0 20 20 20 30 999	430.4 2411.3 829.7 2087.2 2872.6 9999.9	78.5	6.40	
23	GG-	eP eL	19 19 13.0 48 05	SZ LZ	0.7 25	35.3 102.7	69.6	5.46													
23	LZ-	eP e	19 21 32.2 23 39	SZ ST	0.4 1.9	14.2 182.0	99.3	5.98													
							AVG.	5.59													

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
24	07	13 01.2	46.9 N 153.8 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.60	CGS			
24	07	35 48.4	56.3 N 157.8 W	NEAR COAST ALASKA PENINSULA				
			H= 24 KM	MAG 5.20	CGS			
24	08	12 40.	47.2 N 153.8 E	KURILE ISLANDS				
			H= 33 KM	MAG 6.50	CGS			
24	00-	eP	08 23 37.0	SZ	0.5	161.1	68.0	6.38
		eP	23 40	LZ	20	8924.5		
		ePCP	23 53	SZ	0.6	100.2		
		ePCS	27 55	LT	40	9999.9		
		e	31 20	LZ	17	9999.9		
		eS	32 33	LT	999	9999.9		
		eL	40 05	LR	999	9999.9		
24	GG-	eP	08 24 38.5	SZ	1.0	151.3	78.2	5.97
		eP	24 50	LZ	20	12.3U		
		ePP	27 30	LZ	17	4129.7		
		ePPS	36 00	LT	35	4753.1		
		e	39 45	LZ	27	9999.9		
		eLQ	49 50	LZ	30	13.9U		
		eLR	53 50	LZ	30	9999.9U		
24	LZ-	eP ^t	08 31 56.2	SZ	1.4	95.2	133.5	
		e	33 11	SZ	1.9	117.1		
		ePP	34 29	SZ	2.2	68.8		
		e	35 20	SZ	5.9	5978.5		
		eSP	44 37	SZ	2.0	50.6		
				Avg.		6.17		
24	08	29 47.6	46.9 N 153.9 E	KURILE ISLANDS				
			H= 20 KM	MAG 5.10	CGS			
24	00-	eP	08 40 49.5	SZ	1.0	41.1	68.3	5.53
24	09	07 31.1	47.0 N 153.7 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.40	CGS			
24	09	17 00.5	46.8 N 154.1 E	KURILE ISLANDS				
			H= 33 KM	MAG 5.00	CGS			
24	00-	eP	09 28 00.5	SZ	1.1	60.1	68.5	5.61
		e	28 11	SZ	1.0	63.6		
24	GG-	eP	09 29 02.0	SZ	0.9	65.4	78.7	5.62
			Avg.			5.61		
24	09	35 18.4	46.8 N 153.8 E	KURILE ISLANDS				
			H= 31 KM	MAG 4.60	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
24	10	02 16.4	46.8 N 153.8 E	KURILE ISLANDS				
			H= 33 KM	MAG 5.10	CGS			
24	00-	eP	10 13 16.5	SZ	1.1	32.3	68.4	5.34
24	GG-	eP	10 14 17.5	SZ	1.0	47.3	78.6	5.44
			Avg.					5.39
24	10	54 52.5	13.1 N 145.0 E	MARIANA ISLANDS				
			H= 43 KM	MAG 5.60	CGS			
24	LZ-	eP ^t 1	11 14 33.6	SZ	1.0	7.0	147.5	
		eP ^t 2	14 38	SZ	1.4	43.3		
		e	14 49	SZ	0.9	39.5		
24	12	09 27.	46.8 N 154.1 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.70	CGS			
24	00-	eP	12 20 27.0	SZ	1.0	37.4	68.5	5.44
24	12	35 59.5	46.9 N 154.0 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.90	CGS			
24	00-	eP	12 46 57.5	SZ	1.0	74.9	68.3	5.74
		e	47 48	SZ	1.0	37.4		
24	13	25 18.3	47.0 N 153.7 E	KURILE ISLANDS				
			H= 33 KM	MAG 5.70	CGS			
24	00-	eP	13 36 20	LZ	16	739.4	68.2	
		eS	45 22	LR	17	869.7		
		eSS	49 53	LT	20	1997.0		
		eSSS	53 00	LR	25	1893.0		
		eLQ	56 35	LR	43	9999.9		
		eLR	14 00 55	LR	32	9999.9		
24	GG-	e	13 37 19	SR	1.1	96.2	78.4	
24	LZ-	eP ^t	13 44 34.8	SZ	1.6	86.2	133.6	
		e	45 16	SZ	2.0	67.5		
		eSKP	47 59	SZ	2.2	84.9		
24	13	40 45.*	60.3 N 148.3 W	KENAI PENINSULA, ALASKA				
			H= 35 KM	MAG 3.90	CGS			
24	13	47 48.6	6.6 S 154.8 E	SOLOMON ISLANDS				
			H= 62 KM	MAG 5.60	CGS			
24	LZ-	eP ^t	14 06 58.4	SZ	1.5	94.5	131.5	
		ePKS	10 25	ST	1.3	52.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eSKP		19 44	SZ	1.6	20.1		
24	14 25 58.5		46.8 N 153.6 E KURILE ISLANDS	H= 33 KM MAG 4.70 CGS				
24	00- eP		14 36 58.5	SZ	1.0	41.1	68.4	5.48
	eLR		56 55	LZ	25	1390.3		
24	GG- eP		14 38 00.0	SZ	0.9	48.9	78.5	5.50
					Avg.			5.49
24	14 47 43.5		46.8 N 153.8 E KURILE ISLANDS	H= 33 KM MAG 4.50 CGS				
24	16 34 29.2		47.2 N 153.9 E KURILE ISLANDS	H= 33 KM MAG 5.00 CGS				
24	00- eP		16 45 27.0	SZ	1.0	63.6	68.0	5.67
	eP		45 30	LZ	20	68.4		
	eSS		59 10	LT	28	366.3		
	eSSS		17 02 15	LR	27	348.6		
	eLQ		05 50	LR	40	644.0		
	eLR		10 05	LR	30	823.9		
24	GG- eP		16 46 28.5	SZ	0.7	56.9	78.2	5.70
					Avg.			5.68
24	GG- eP		16 59 07.0	SZ	0.9	13.9		
24	17 02 49.2		47.1 N 153.6 E KURILE ISLANDS	H= 33 KM MAG 6.50 CGS				
24	00- eP		17 13 47.5	SZ	1.0	228.4	68.1	6.23
	eP		13 48	LZ	22	2287.4		
	e		17 00	SZ	1.0	63.6		
	ePCS		18 05	LT	20	1695.5		
	e		19 35	LT	16	1412.8		
	eS		22 50	LR	999	9999.9		
24	GG- eP		17 14 48.8	SZ	0.9	174.8	78.2	6.08
	ePP		17 56	SZ	1.0	102.7		
	e		18 50	SZ	1.2	216.7		
24	LZ- eP*		17 22 05.8	SZ	1.6	115.0	133.6	
	eSKP		25 32	SZ	1.6	61.3		
	e		46 07	SZ	1.1	12.5		
					Avg.			6.15
24	17 17 32.*		46.9 N 154.0 E KURILE ISLANDS	H= 33 KM MAG 4.50 CGS				
24	17 48 59.		45.1 N 150.5 E KURILE ISLANDS	H= 33 KM MAG 4.50 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
24	00- eP		18 01 41.5	SZ	1.0	26.2		
24	18 50 04.1		47.0 N 153.8 E KURILE ISLANDS	H= 33 KM MAG 5.10 CGS				
24	00- eP		19 01 02.0	SZ	1.0	48.6	68.2	5.56
24	GG- eP		19 02 04.9	SZ	0.8	59.1	78.4	5.64
					Avg.			5.60
24	18 52 02.1		46.7 N 153.9 E KURILE ISLANDS	H= 33 KM MAG 4.80 CGS				
24	00- eP		19 03 02.5	SZ	1.0	29.9	68.5	5.34
24	GG- eP		19 04 04.0	SZ	0.7	20.3	78.7	5.22
					Avg.			5.28
24	18 55 14.1		46.9 N 154.0 E KURILE ISLANDS REGION	H= 33 KM MAG 4.90 CGS				
24	00- eP		19 06 14.5	SZ	1.0	33.7	68.3	5.40
24	GG- eP		19 07 05.0	SZ	0.7	36.1	78.5	5.48
					Avg.			5.44
24	19 06 54.*		60. N 146.2 W SOUTHERN ALASKA	H= 33 KM MAG 3.90 CGS				
24	19 35 31.4		33.9 N 141.7 E OFF E. COAST HONSHU, JAPAN	H= 73 KM MAG 3.90 CGS				
24	20 29 11.5		85.9 N 20.6 E SVALBARD REGION	H= 33 KM MAG 4.80 CGS				
24	LZ- eP		21 30 54.9	SZ	1.1	14.9		
24	21 54 54.*		57.7 N 152.2 W ALASKA AFTERSHOCK	H= 10 KM MAG 5.20 CGS				
24	00- eL		22 30 35	LT	20	75.3	60.8	
24	22 11 38.2		47.0 N 153.9 E KURILE ISLANDS	H= 33 KM MAG 4.80 CGS				
24	00- eP		22 22 37.5	SZ	1.0	44.9	68.2	5.52
	eL		48 45	LR	25	157.7		
24	GG- eP		22 23 38.6	SZ	0.8	32.2	78.4	5.38
					Avg.			5.45

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
24	LZ-	eP	22 26 50.0	SZ	0.7	6.1			25	LZ-	eP	19 33 54.3	SZ	0.4	7.5	11.8	5.22
24	LZ-	eL	22 28 15	SR	0.9	12.7			25	GG-	ePP	34 05	SZ	999.9	9999.9		
24	LZ-	eP	22 49 29.5	SZ	0.5	9.7	4.5		25	GG-	ePD	19 45 20	LZ	20	812.9	106.0	
	eS		50 23	SR	0.6	27.1			25	GG-	ePP	49 40	LZ	22	1673.6		
25	01 33 20.6		52.8 N 159.3 E OFF SOUTH COAST OF KAMCHATKA						25	GG-	eSKS	56 10	LT	20	2273.0		
			H= 70 KM MAG 4.30 CGS						25	GG-	ePS	59 08	LT	999	9999.9		
25	02 16 02.*		46.7 N 153.8 E KURILE ISLANDS						25	GG-	eL	20 22 10	LT	27	3292.8		
			H= 33 KM MAG 4.70 CGS						25	00-	ePD	19 45 38	LZ	20	738.6	110.2	
25	GG-	eP	02 28 03.3	SZ	0.8	16.1	78.7	5.06	25	GG-	ePP	50 00	LZ	23	2283.2		
									25	GG-	ePPP	52 15	LZ	23	851.9		
25	02 24 38.9		1.8 S 141.0 E WEST NEW GUINEA REGION						25	GG-	ePS	59 48	LR	22	9999.9		
			H= 48 KM						25	GG-	eSS	20 05 35	LR	30	2572.6		
25	LZ-	eP ¹¹	02 44 17.6	SZ	0.9	28.3	145.8		25	GG-	eLQ	16 40	LR	43	5324.0		
	eP ¹²		44 25	SZ	1.0	78.3			25	GG-	eLR	21 40	LR	43	9999.9		
25	00-	eL	08 18 15	LR	30.	280.8			25	21 29 33.2		2.9 N 128.2 E NORTH OF HALMAHERA					
												H= 22 KM MAG 5.10 CGS					
25	12 20 22.2		19.9 S 176.2 W TONGA ISLANDS						25	GG-	e	21 48 19	SZ	1.5	81.4	104.8	
			H= 205 KM MAG 5.30 CGS						25	LZ-	eP ¹¹	21 49 33.0	SZ	2.0	67.5	158.9	
25	LZ-	eP	12 33 50.6	SZ	1.2	12.2	100.4	5.25	25	22 47 42.7		9.7 S 159.8 E SOLOMON ISLANDS					
	ePP		37 50	SZ	1.6	15.1						H= 21 KM MAG 5.60 CGS					
25	LZ-	e	17 43 19	SZ	1.1	15.3			26	LZ-	eP	02 25 05.5	SZ	0.7	32.6		
25	LZ-	e	17 43 32	SZ	1.5	45.6			26	LZ-	e	02 26 34	SR	0.7	11.4		
25	LZ-	e	17 43 47	SZ	1.4	15.2			26	03 58 29.6		12.7 N 89.6 W OFF COAST OF EL SALVADOR					
												H= 65 KM MAG 4.80 CGS					
25	18 04 11.2		46.8 N 154.1 E KURILE ISLANDS						26	06 28 32.7		23.4 S 180.0 FIJI ISLANDS REGION					
			H= 33 KM MAG 4.80 CGS									H= 555 KM MAG 4.90 CGS					
25	00-	eP	18 15 11.7	SZ	1.0	22.0	68.5	5.21	26	10 13 07.7		5. S 142.1 E NEAR N. COAST E. NEW GUINEA					
												H= 17 KM MAG 4.90 CGS					
25	18 18 09.*		17.1 S 172.9 W TONGA ISLANDS REGION						26	11 44 45.		52.3 N 176.2 W ANDREANOF ALEUTIAN ISLANDS					
			H= 33 KM MAG 4.60 CGS									H= 100 KM MAG 5.10 CGS					
25	19 31 07.		27.9 S 70.9 W NORTHERN CHILE						26	13 02 50.*		3.6 S 153.5 E NEW IRELAND REGION					
			H= 26 KM MAG 6.50 CGS									H= 239 KM MAG 4.50 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
26	13 53 25.1		11.8 N 88.2 W	OFF WEST COAST OF NICARAGUA					26	00	eL	21 11 40	LR	26.8	637.1	98.5		
	H= 9 KM	MAG 4.40 CGS							26	GG-	eL	21 23 50	LZ	28.6	82.3			
26	LZ- eP e		14 00 20.0	SZ	0.9	56.9	34.0	5.49	27	00 15 44.7		61.5 N 163.9 E	NORTHERN KAMCHATKA					
	06 38	SZ	1.6	38.3					H= 8 KM	MAG 4.70 CGS								
26	13 55 37.4		2.6 N 78.5 W	ECUADOR					27	00 40 26.2		17.0 S 172.7 W	SAMOA ISLANDS REGION					
	H= 38 KM	MAG 5.20 CGS							H= 33 KM	MAG 4.70 CGS								
26	GG- eP eL		14 08 24.9	SZ	1.0	21.2	87.9	5.31	27	01 50 50.*		7.5 301.1	NEAR COAST CENTRAL SIBERIA					
	38 00	LZ	32	132.2					H= 440 KM	MAG C.GS CGS								
26	14 21 12.3		27.9 S 71.6 W	NEAR COAST OF NORTHERN CHILE					27	02 28 00.*		16.4 S 173.8 W	TONGA ISLANDS					
	H= 33 KM	MAG 4.20 CGS							H= 33 KM	MAG 4.50 CGS								
26	LZ- eP		17 12 57.0	SZ	1.2	9.7			27	02 32 45.4		9.2 N 126.4 E	MINDANAO, PHILIPPINE ISLANDS					
									H= 82 KM									
26	18 34 34.6		46.8 N 153.8 E	KURILE ISLANDS					27	04 03 33.2		1.7 S 77.9 W	PERU COLOMBIA BORDER					
	H= 33 KM	MAG 5.20 CGS							H= 164 KM	MAG 4.50 CGS								
26	00- eP		18 45 34.6	SZ	0.7	27.9	68.4	5.47	27	04 07 25.0		0.5	21.6	17.2	4.76			
26	GG- eP eL		18 46 35.2	SZ	0.8	81.8	78.6	5.77										
	19 15 15	LZ	20	127.0				Avg.		27	06 27 53.*		16.8 N 104.9 W	OFF COAST MICHOACAN, MEXICO				
									H= 100 KM	MAG 3.90 CGS								
26	18 36 03.*		60.2 N 147.0 W	ALASKA AFTERSHOCK					27	11 01 13.*		1.9 N 126.3 E	NORTHERN CELEBES					
	H= 52 KM	MAG 3.80 CGS							H= 67 KM									
26	19 43 40.9		2.5 N 78.4 W	SOUTHERN COLOMBIA					27	11 10 42.0		0.5	36.1					
	H= 107 KM	MAG 4.50 CGS							SR	0.6	34.5							
26	19 44 12.8		47.0 N 153.7 E	-KURILE ISLANDS					27	15 34 05.2		47.5 N 152.5 E	KURILE ISLANDS					
	H= 33 KM	MAG 4.20 CGS							H= 33 KM	MAG 4.00 CGS								
26	00- eP		19 55 10.2	SZ	1.0	22.4	68.2	5.22	27	15 53 23.6		63.4 N 148.5 W	CENTRAL ALASKA					
									H= 115 KM	MAG 4.20 CGS								
26	GG- eP eS		20 23 02.2	SZ	0.3	18.9	4.7											
	24 00	SR	0.4	60.7														
26	20 24 13.9		4.1 N 126.4 E	TALAUD ISLANDS REGION														
	H= 33 KM	MAG 4.80 CGS																

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
27	18	23 51.*	47.1 N 153.7 E	KURILE ISLANDS					27	23	20 56.*	60.9 N 148.0 W	ALASKA AFTERSHOCK					
			H= 33 KM	MAG 4.30	CGS							H= 33 KM	MAG 4.20	CGS				
27	18	40 53.4	42.4 N 125.3 W	OFF COAST OF OREGON					28	00	25 21.9	46.7 N 153.7 E	KURILE ISLANDS					
			H= 33 KM	MAG 4.50	CGS							H= 33 KM	MAG 4.10	CGS				
27	19	31 15.	46.5 N 153.9 E	KURILE ISLANDS					28	01	54 18.5	10.8 N 86.2 W	NEAR WEST COAST COSTA RICA					
			H= 33 KM	MAG 4.20	CGS							H= 33 KM	MAG 4.20	CGS				
27	LZ-	eP	20 27 56.8	SZ	1.0	7.2			28	00-	eP	02 07 06.8	SZ	0.6	3.1			
									28	GG-	eL	02 15 42	LZ	17	118.1			
27	21	00 43.5	20.1 S 175.7 W	TONGA ISLANDS					28	00-	eL	02 20 15	LZ	19	146.7			
			H=163 KM	MAG 3.90	CGS													
27	21	44 38.5	7.7 N 82.3 W	NEAR SOUTH COAST OF PANAMA					28	02	53 27.*	11.5 N 86.4 W	NEAR COAST OF NICARAGUA					
			H= 33 KM	MAG 4.30	CGS							H=111 KM	MAG 4.20	CGS				
27	LZ-	eP	21 50 24.7	SZ	0.8	5.4	27.4	4.31	28	LZ-	eP	04 04 03.6	SZ	0.8	6.8			
27	GG-	eL	22 26 15	LZ	26	102.9	86.5		28	04	40 59.1	7.6 N 82.3 W	SOUTH OF PANAMA					
												H= 26 KM	MAG 4.60	CGS				
27	LZ-	eP	22 16 47.6	SZ	0.3	51.3	2.2		28	06	19 29.8	45.4 N 151.3 E	KURILE ISLANDS					
	eS		17 17	SR	0.6	74.1						H= 33 KM	MAG 4.70	CGS				
27	23	00 36.3	46.8 N 153.8 E	KURILE ISLANDS					28	00-	eP	06 30 34.3	SZ	0.8	11.0	69.2	5.00	
			H= 33 KM	MAG 5.30	CGS					GG-	eL	06 59 25	L*	27	134.5	79.1		
27	00-	eP	23 11 36.3	SZ	0.8	26.5	68.4	5.39	28	06	45 46.*	7.6 S 127.3 E	BANDA SEA					
	e		11 37	LT	15	384.9						H=257 KM	MAG 4.90	CGS				
	eS		20 33	LR	15	1016.0			28	07	05 14.2	SZ	1.0	30.9	151.6			
	eSSS		28 24	LR	25	1278.2												
	eLQ		31 50	LR	37	2324.5			28	08	00 00.3	18.9 S 169.4 E	NEW HEBRIDES ISLANDS					
	eLR		35 22	LR	30	2693.0						H=237 KM	MAG 4.80	CGS				
	eL		39 22	LR	22	5091.9			28	08	17 32.*	21.5 S 67.9 W	CHILE BOLIVIA BORDER REGION					
	eL		39 22	LT	24	2884.1						H=164 KM	MAG 4.40	CGS				
	eL		39 22	LZ	24	2487.9			28	LZ-	eP	08 18 49.0	SZ	0.5	19.0	5.3	4.54	
27	GG-	eP	23 12 37.0	SZ	0.7	47.0	78.6	5.59										
	eP		12 38	LZ	19	210.4												
	eL		39 37	LT	33	1063.9												
	eL		47 15	LT	18	1611.3												
	eL		47 15	LR	18	2104.1												
	eL		47 15	LZ	21	920.5												
27	LZ-	eP	23 19 58.6	SZ	1.6	14.7	133.6	Avg.	5.49									

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eL		19 42	SR	0.7	18.3			28	19 50 09.*		15.1 S 167.7 E	NEW HEBRIDES ISLANDS				
28	10 46 00.6		16. S 172.9 W SAMOA ISLANDS REGION					H= 33 KM MAG 4.60 CGS									
28	GG- eP		11 05 10.5	SZ	0.3	57.9	1.8		28	21 37 10.9		6.7 N 73.1 W	NORTHERN COLOMBIA				
28	eS		05 34	SR	0.4	73.6			28	21 42 10.0		H= 138 KM MAG 5.00 CGS					
28	LZ- eP		11 50 20.3	SZ	0.3	26.3	3.0		28	21 38 43.5		14.3 N 96.2 E	ANDAMAN ISLANDS REGION				
28	eS		50 59.0	ST	0.8	44.8			28	00- eP		H= 33 KM MAG 5.50 CGS					
28	12 22 43.		51.3 S 139.3 E	SOUTHWEST OF TASMANIA				H= 34 KM		28	21 50 30		LZ	15.	2881.8	75.4	
28	LZ- eP		17 29 41.0	SZ	0.8	2.7			28	e		55 15	LR	15	1845.0		
28	18 08 17.		44.3 N 148.8 E KURILE ISLANDS					H= 33 KM MAG 4.40 CGS		28	eS		22 00 10	LR	20	9999.9	
28	18 24 03.		46.5 N 153.7 E KURILE ISLANDS					H= 33 KM MAG 4.30 CGS		28	eSS		05 15	LR	20	9999.9	
28	18 40 04.3		51.2 S 139.0 E	SOUTHWEST OF TASMANIA				H= 33 KM MAG 5.30 CGS		28	eL		17 05	LR	999	9999.9	
28	LZ- ePP		18 58 55	SZ	1.4	13.4	108.7		28	GG- eP		21 50 34	LZ	16	2014.0	76.0	
28	GG- eP*1		18 59 48.0	SZ	1.0	59.7	147.3		28	ePP		53 37	LZ	20	653.9		
	eP*2		59 55	LZ	10	1041.6			28	e		56 15	LZ	19	729.1		
	ePP		19 03 35	LZ	13	941.4			28	eS		22 00 10	LT	10	13.1U		
	eSS		22 20	LT	25	851.6			28	e		04 15	LT	15	1981.2		
	eSSS		28 05	LT	30	1849.1			28	e		05 40	LT	25	9999.9		
	e		32 50	LT	20	985.0			28	eSSS		08 35	LR	20	3034.0		
	e		40 50	LT	35	3224.9			28	eL		09 20	LZ	23	2509.7		
	e		45 45	LT	35	2902.4			28	LZ- eP*1		21 58 48.5	SZ	1.4	39.4	165.1	
	e		47 18	LR	27	1499.0			28	eP*2		59 54	SZ	1.0	28.3		
	eLQ		50 30	LZ	55	7844.6			28	GG- e		22 14 45	LZ	20.	2414.4		
	eLR		52 45	LZ	32	3174.0			28	GG- e		22 15 30	LT	21	2811.9		
28	00- eP*1		18 59 54.5	SZ	1.0	35.1	150.2		28	GG- eLQ		22 17 00	LT	30	3106.5		
	eSS		19 22 55	LR	25	2766.0			28	GG- eLR		22 26 35	LT	25	9999.9		
	e		44 20	LR	25	2127.7			28	22 46 34.		14.1 N 96.1 E	ANDAMAN ISLANDS REGION				
	e		46 20	LT	25	4122.9			28	GG- eP		H= 14 KM MAG 5.60 CGS					
	eLQ		48 35	LT	50	9058.2			28	LZ- eP		22 58 24.5	SZ	1.4	79.9	76.1	5.61
	eLR		51 20	LR	38	9999.9			28	LZ- eP*2		23 07 37.3	SZ	1.4	39.4	165.0	
									29	GG- eP		01 43 37.0	SZ	0.4	16.7	3.6	
									29	eS		44 22	ST	0.3	21.4		
									29	LZ- eP		02 01 05.6	SZ	0.5	36.3		
									29	04 38 59.2		4. S 128.9 E	BANDA SEA				
												H= 159 KM MAG 4.90 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29	LZ-	eP+1	04 58 42.2	SZ	0.8	9.3	153.5			eL		06 10	LT	18	583419		
29	09 46 42.2		14.9 N 93.4 W NEAR COAST CHIAPAS, MEXICO						eL		06 10	LR	17	445780			
			H= 56 KM MAG 4.10 CGS						eL		06 10	LZ	18	819617			
29	13 38 52.3		1.4 33.9 ANDAMAN ISLANDS REGION						30	LZ-	eP	07 38 39.0	SZ	0.5	2380		
			H= KM						30	07 41 25.		35.9 N 139.6 E NEAR S. COAST HONSHU, JAPAN					
												H=101 KM MAG 4.00 CGS					
29	16 36 57.*		7.3 N 77.3 W PANAMA COLOMBIA BORDER REG.						30	08 41 54.*		55.5 S 147.3 E WEST OF MACQUARIE ISLAND					
			H= 33 KM MAG 4.00 CGS									H= 33 KM					
29	LZ-	eP	20 53 31.4	SZ	1.0	28.3			30	LZ-	eP	11 37 58.0	SZ	0.5	1.7	5.2	
30	01 22 10.1		17.7 S 178.2 W FIJI ISLANDS REGION						eL		39 00	SZ	0.7	12.0			
			H=643 KM MAG 4.30 CGS						GG-	eP	12 44 44.0	SZ	0.2	43.6	1.4		
									eS		45 00	SZ	0.2	39.9			
30	LZ-	eP	04 16 37.6	SZ	0.2	11.1	2.0		30	13 12 54.3		6. S 154.4 E SOLOMON ISLANDS REGION					
	eS		17 04	SR	0.2	10.1						H= 79 KM					
30	05 16 03.3		11.1 N 86.2 W NEAR W. COAST OF COSTA RICA						30	LZ-	eP	14 19 13.0	SZ	0.3	1.5		
			H= 42 KM MAG 5.70 CGS						30	LZ-	eL	14 20 28	SR	0.7	6.7		
30	LZ-	eP	05 22 32.7	SZ	1.0	24.2	32.3	5.01	30	15 13 39.2		10.6 N 86.5 W OFF COAST OF COSTA RICA					
	e		22 41	SZ	1.1	92.1						H= 33 KM MAG 4.70 CGS					
	e		23 10	SZ	1.5	107.7			30	GG-	eL	16 00 30	LZ	20	103.7	86.9	
	ePCP		25 20	SZ	1.5	62.1											
	e		28 01	SZ	2.4	110.2			30	16 53 18.2		61.4 N 145.5 W SOUTHERN ALASKA					
	eSCP		29 04	SZ	1.6	25.2						H= 25 KM MAG 4.00 CGS					
30	00-	eP	05 28 28	LZ	18	1292.2	83.8		30	18 15 20.1		1.4 S 149.2 E ADMIRALTY ISLANDS REGION					
	ePP		31 47	LZ	17	711.2						H= 90 KM MAG 4.70 CGS					
	e		39 05	LR	22	807.2			30	19 49 21.0		6.2 S 149.2 E ADMIRALTY ISLANDS REGION					
	ePS		40 00	LR	24	1986.7						H= 90 KM MAG 4.70 CGS					
	eSS		44 40	LR	26	3314.5			30	22 52 19.4		14.3 N 96.2 E ANDAMAN ISLANDS REGION					
	eSSS		48 06	LR	25	3058.3						H= 33 KM					
	eL		57 20	LR	30	9999.9											
30	GG-	eP	05 28 40	LZ	18	626.1	86.4										
	ePP		32 05	LZ	19	244.1											
	e		39 26	LR	23	1211.7			30	LZ-	eP	19 49 21.0	SZ	0.2	1.1		
	ePS		40 30	LR	23	1185.3											
	e		42 00	LT	29	2516.4			30	22 52 19.4		14.3 N 96.2 E ANDAMAN ISLANDS REGION					
	eSS		45 22	LR	33	2616.7						H= 33 KM					
	eLQ		56 47	LR	25	1765.5											
	eLR		06 03 05	LZ	32	3681.2											

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	LR		05 43	L+	24*	1356±1		

BULLETIN NO. 32A

August 1964

SEISMOLOGICAL BULLETIN
WEST GERMANY, NORWAY, BOLIVIA

THE GEOTECHNICAL CORPORATION
3401 SHILOH ROAD

GARLAND, TEXAS



SEISMOLOGICAL BULLETIN

GRAFENBERG, WEST GERMANY
OSLO, NORWAY
LA PAZ, BOLIVIA

The Geotechnical Corporation wishes to acknowledge the cooperation of the following scientific organizations in the collection and production of the data in this bulletin:

Bundesanstalt fur Bodenforschung, Hannover, West Germany (Professor Dr. Hans Closs, Director)

Jordskel, University of Bergen, Bergen, Norway (Professor A. Kvale, Director)

Observatorio San Calixto, La Paz, Bolivia (Father Ramon Cabre, S. J.)

Bulletin No. 32A
August 1964

23 December 1964

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SEISMOLOGICAL BULLETIN
Grafenberg, West Germany, Oslo, Norway, La Paz, Bolivia
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 1. INTRODUCTION

1.1 This bulletin contains seismological data on earthquake phases recorded at three mobile seismological stations being operated by The Geotechnical Corporation (Geotech). The bulletin is intended to be an aid to interested observers in determining the extent of the earthquake data contained in the records from the three teams.

1.2 The bulletin contains the following:

a. Data on all of the phases that have been associated with epicenters reported by the U. S. Coast and Geodetic Survey (USC&GS);

b. Data on the epicenters listed in the bulletin - as reported by the USC&GS;

c. Arrival time, period, amplitude, and distance for phases not associated with USC&GS epicenters.

1.3 All phases are listed in chronological order, except that unassociated phases are not mixed with a sequence of associated phases. In such cases, the unassociated phases are listed immediately following the associated phases.

Page

 2. INSTRUMENTATION

2.1 Instrumentation at the Grafenberg, West Germany (GG-GR), and Oslo, Norway (OO-NW) sites consists of a short-period vertical Benioff seismometer array. A short-period vertical Johnson-Matheson seismometer array is in operation at La Paz, Bolivia (LZ-BV). Each site is also equipped with a three-component Sprengnether long-period seismograph system. Both

systems use phototube amplifiers. The response characteristics of these systems are shown in figures 1, 2, and 3.

2.2 All data are recorded by 35-mm Film Recorders, Geotech Model 1301A, 14-channel Magnetic Tape Recorders, Ampex Model 314, and 16-mm film Develocorders, Geotech Model 4000C.

2.3 Precision Timing Systems, Geotech Model 5400 or 5400A, are used for primary timing. Chronometers are used for secondary timing. WWV is used for the time standard at LZ-BV. GG-GR and OO-NW use Radio Potsdam. WWV is a United States National Bureau of Standards Radio Station located at Beltsville, Maryland. The accuracy of the time program from WWV agrees with U. S. Naval Observatory time.

2.4 Each system is calibrated at least once every 24 hours. In the short-period system calibration, an electromagnetic (EM) calibrator is used to determine the magnification as a function of frequency and a weight-lift calibration is used to verify the EM magnification at 1 cps. In the long-period systems, magnification is determined as a function of frequency using EM calibrators. No method of verification is used. In the EM method of calibration, the seismometer mass is driven by a known sinusoidal force and the magnification is calculated using the relationships between the sinusoidal force and the recorded amplitude.

3. INTERPRETATION OF COLUMN TITLES

The column titles appearing in this bulletin are defined as follows:

3.1 DAY

The date, for the day of the month, is printed each time a new epicenter is listed and each time the station designator changes. Dates are given in Greenwich Civil Time (GCT).

3.2 STA

The station from which the data were taken. The station designators used in this bulletin are given in the following table:

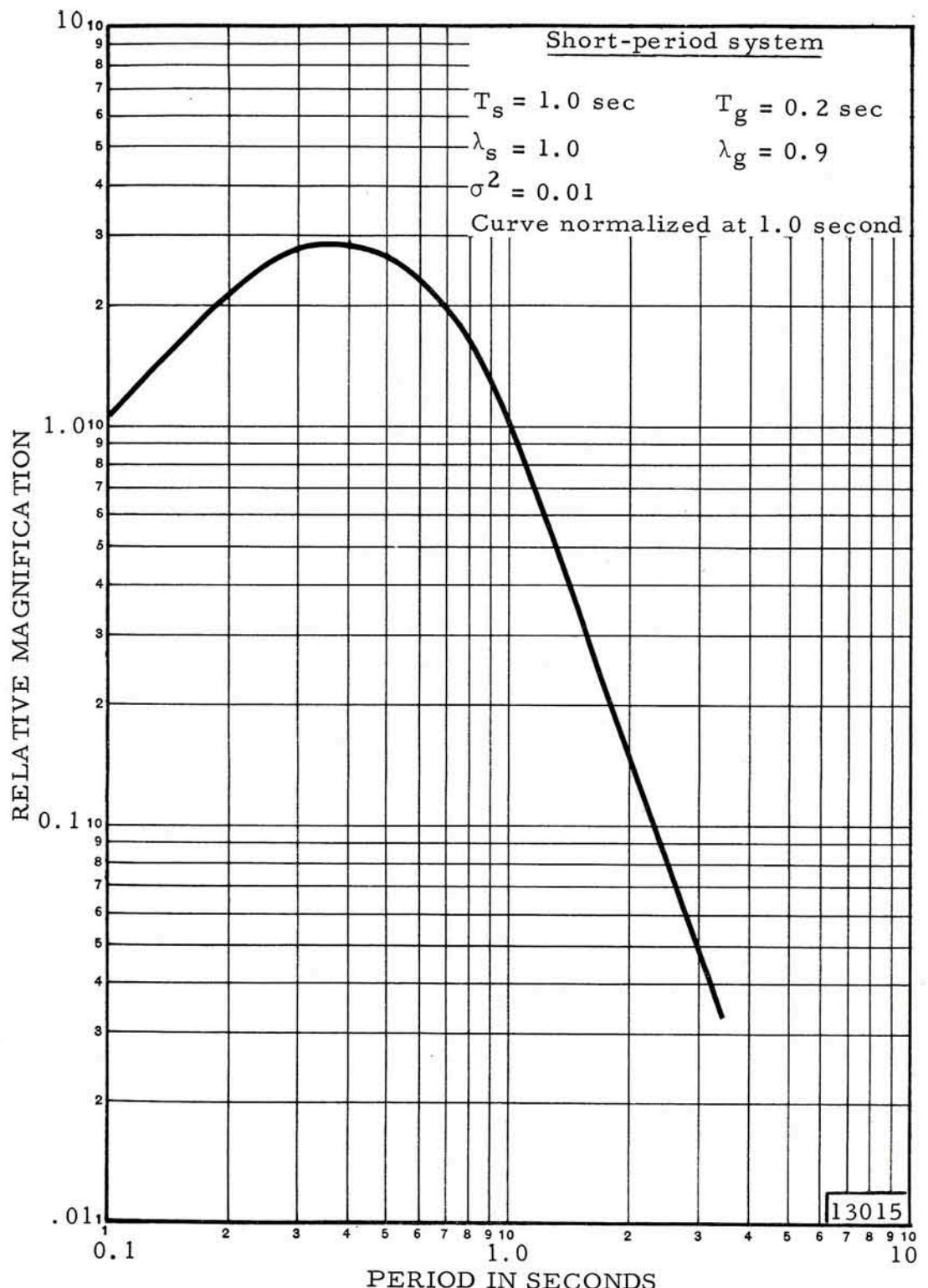


Figure 1. Frequency response of the Benioff short-period seismograph system

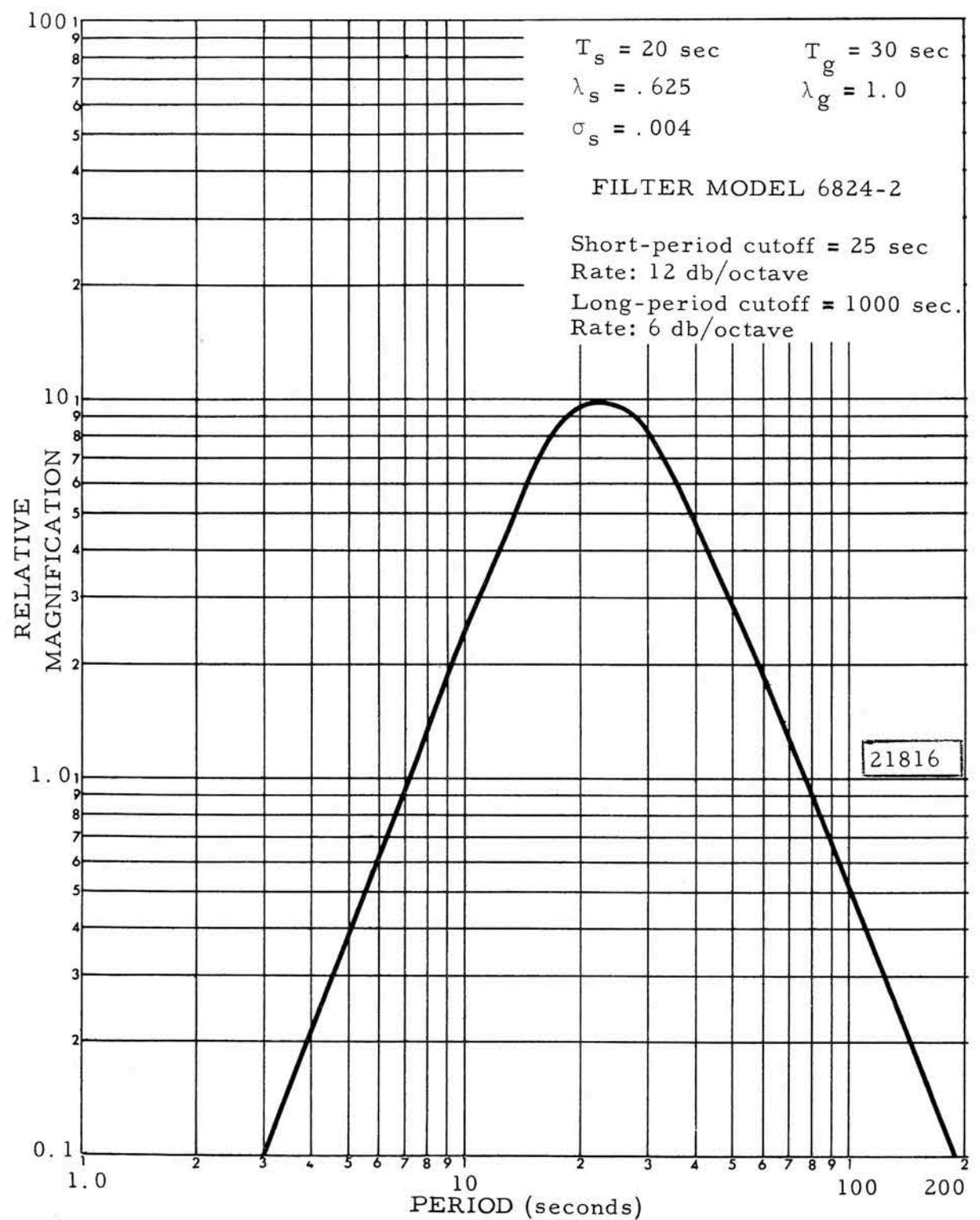


Figure 2. Frequency response of the Sprengnether long-period seismograph system

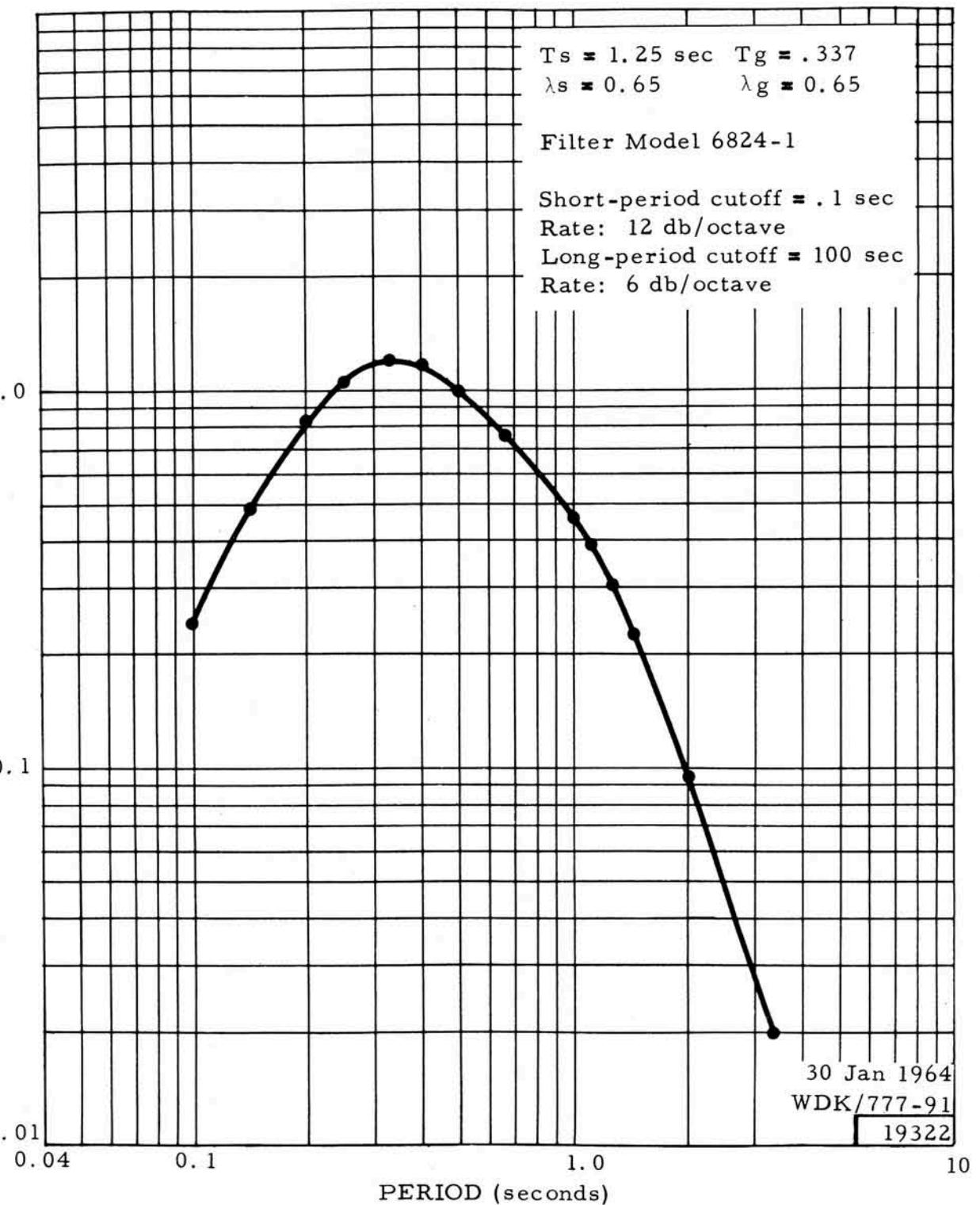


Figure 3. Frequency response of the Johnson-Matheson seismograph system

<u>Site designator</u>	<u>Site location</u>
GG-	Grafenberg, West Germany
OO-	Oslo, Norway
LZ-	La Paz, Bolivia

The locations of the stations are shown in figure 4.

3.3 PHASE

Symbols defining the phase type are listed in the phase column. Prefixes to the phase designators are defined as follows:

- a. An "i" (impetus) preceding the phase designates a sharp or sudden beginning of the phase motion. Direction of first motion is discernible on all "i" phases.
- b. An "e" (emersio) preceding the phase designates an emergent phase motion. The direction of the initial break cannot be positively determined.
- c. An "i" or "e" alone designates an unidentified phase of either an impetus or emersio arrival.

3.4 TIME

The arrival time of each phase is given in Greenwich Civil Time (GCT). Arrival times indicate that time at which phase motion is first detected. Arrival time is measured to the nearest one-tenth second for initial arrivals recorded by the short-period system, and to the nearest second for all other phases on both systems. The direction of motion for iP arrivals is also noted in this field; either C (compression) or D(dilation) will appear immediately to the right of the tenths of second column.

3.5 INST

The seismograph channel from which the data were taken. The symbols used to designate the seismograph channels are given as follows:

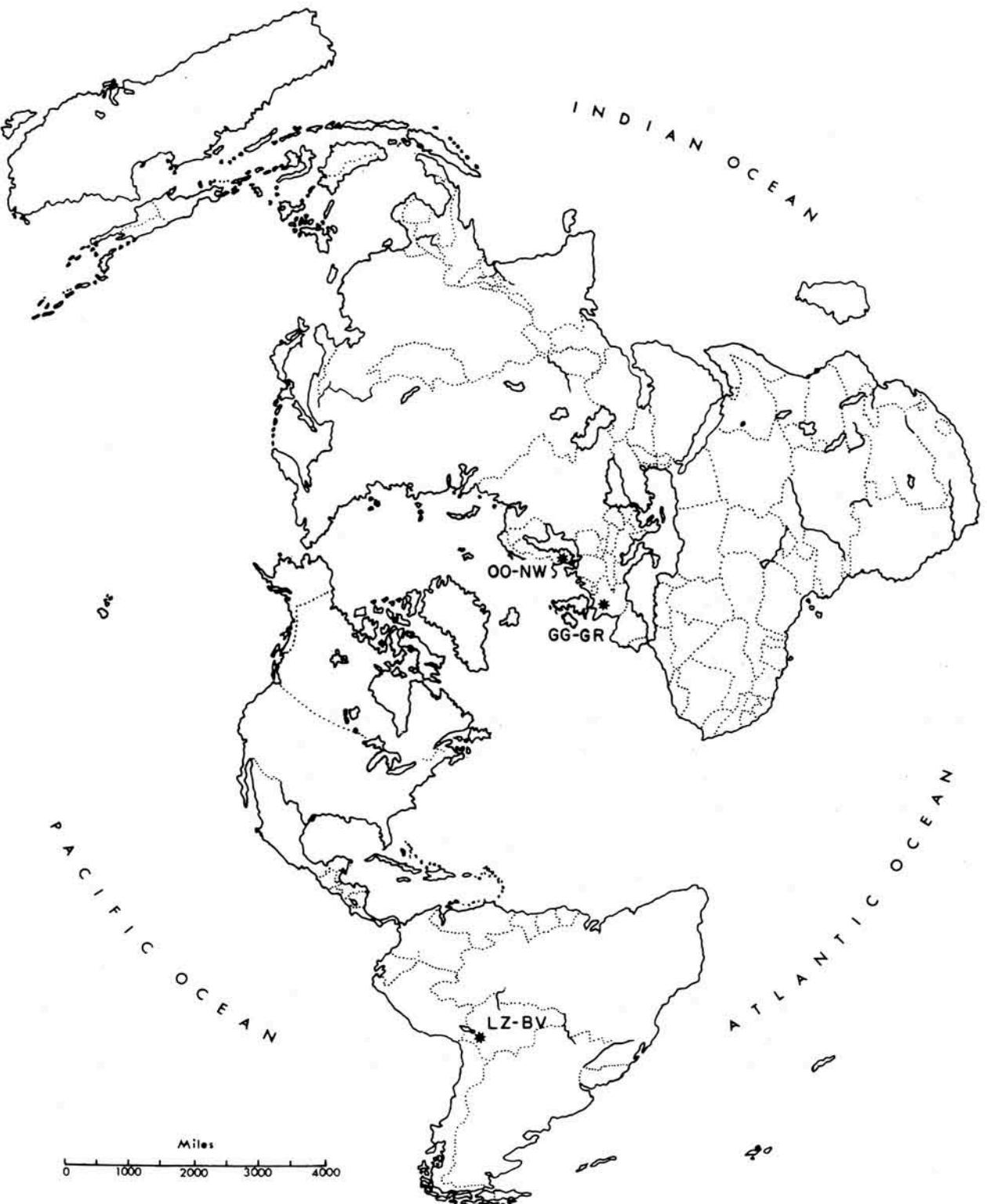


Figure 4. Bulletin sites



SZ ¹	Short-period vertical
SR ¹	Short-period radial horizontal)
ST ¹	Short-period transverse (horizontal)
LZ ¹	Long-period vertical
LR ¹	Long-period radial (horizontal)
LT ¹	Long-period transverse (horizontal)

3.6 PER

The period, in seconds, of each phase. When possible, the period is determined from the first full cycle of the phase; otherwise, it is taken as the average period of the first three cycles. If the signal period recorded by a short-period instrument cannot be measured, the digits 999.9 appear in the period columns. The digits 999 appear in the period columns if the signal period recorded by a long-period instrument cannot be measured.

3.7 AMP

This column contains the amplitude of the phase given in millimicrons ($m\mu$) or microns (μ) of ground displacement. All amplitudes are given in tenths of units. All amplitudes are corrected for instrument response and are reported as one-half the peak-to-peak value. If the amplitude is reported in microns, a U appears in the column to the right of the tenths column. The column is left blank if the amplitude is reported in millimicrons. Amplitudes are measured from the largest pulse within the first 3 or 4 cycles whenever possible. The digits 999.9 appearing in the amplitude columns indicate either a "clipped" signal or a trace amplitude too large to measure. When amplitudes are not calculated because of insufficient calibration data, the amplitude columns are left blank.

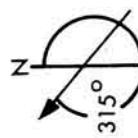
3.8 DIST

This is the distance from the recording station to the epicenter. All reported distances are calculated based on geocentric coordinates. Distance is given to the nearest one-tenth of a degree. Distances computed for unassociated

Table 1. Bulletin site information

Site designator	Site location	Horizontal seismometer orientation (azimuth from true north in degrees ¹)				Elevation in km	Rock type
		Radial	Trans- verse	Site coordinates in deg, min, sec	Elevation in km		
GG-GR	Grafenberg, West Germany	140	230	N 49° 41' 32'' E 11° 12' 55''	0.53	Limestone	
OO-NW	Oslo, Norway	138	228	N 61° 03' 17'' E 10° 51' 58''	0.56	Glacial drift	
LZ-BV	La Paz, Bolivia	141	231	S 16° 15' 31'' W 68° 28' 47''	3.99	Limestone	

¹Table 1 gives the instrument orientation of the horizontal seismometers.



¹When earth moves in direction shown, trace moves up.

data are determined from the S-P intervals. In some instances, surface groups are recorded which have traveled the major arc from the epicenter to the station. In such cases, the major arc distance is given.

3.9 MAG

The magnitudes provided are body wave magnitudes, m_b , as defined by Gutenberg and Richter². They are determined only from the short-period vertical component of the P phase (initial arrival). The following equation is used.

$$m_b = \log_{10}(A/T) + Q$$

where

- m_b = body wave magnitude
- A = one-half p-p earth amplitude of P phase in microns
- T = period of P phase, in seconds
- Q = depth-distance factor for PZ given by Gutenberg and Richter², for distances greater than 16° .

Magnitude computations for distances less than 16° are based on extensions of the Q tables. Points from 10° to 16° were read from a curve in the Gutenberg-Richter paper, and an inverse cube relationship was used to extrapolate from 2° to 10° .

The average magnitude (sum of station magnitudes/number of stations) is listed on the last line of an epicenter print-out.

4. INTERPRETATION OF UNITED STATES COAST AND GEODETIC SURVEY DATA

The epicenter data reported by the USC&GS precedes each list of associated phases. This information appears as follows:

²Gutenberg, B., and Richter, C. F., 1956, Magnitude and energy of earthquakes: Ann. Geofis., vol. 9, p. 1-15.

Line 1 (from left to right)

First group:	Day of the month
Second group:	Origin time of the event
Third group:	Geographic coordinates of the epicenter
Fourth group:	Geographic description

NOTE

An asterisk (*) following the origin time indicates epicenters believed accurate to $1/2^\circ$ in latitude and longitude and to 50 km in depth.

Line 2 (from left to right)

First group:	Depth (h) of the hypocenter in kilometers
Second group:	Magnitude (MAG) as determined by
	Pasadena (PAS), Berkeley (BRK),
	Palisades (PAL), or USC&GS (CGS)

NOTE

MAG (CGS) is m_b of Gutenberg and Richter from the P phase only. The magnitude quoted is an average value determined from data forwarded by cooperating Standard stations and other observatories.

5. REMARKS

The Geotechnical Corporation routinely receives and preprocesses data collected from three overseas field stations. Information on background levels, magnification levels, operational procedures, available records, and other data can be provided to interested organizations. Requests for such information should be made to the attention of:

THE GEOTECHNICAL CORPORATION
3401 Shiloh Road
Garland, Texas 75041

ATTN: Mr. J. M. Whalen

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1			00 05 48.*	73° N	6°4 E	NORWEGIAN SEA		
				H= 33 KM	MAG 4.30	CGS		
1			00 47 08.*	36°7 N	70°3 E	HINDU KUSH REGION		
				H=149 KM				
1			01 00 50.*	73° N	6°3 E	SVALBARD REGION		
				H= 33 KM				
1			02 27 13.6	20° S	179°8 E	SOUTH OF FIJI ISLANDS		
				H=553 KM	MAG 4.40	CGS		
1			08 55 49.*	11°8 N	87°0 W	NEAR COAST OF NICARAGUA		
				H= 88 KM	MAG 4.30	CGS		
1			09 52 51.3	5°5 S	131°4 E	BANDA SEA		
				H= 33 KM	MAG 4.60	CGS		
1	LZ-	eP	10 12 46.0	SZ	1.0	3.9	150.8	
1	13 54 54.8							
1								
1	LZ-	eP	13 56 18.0	SZ	999.9	9999.9		
1								
1			18 11 52.*	32°7 S	71°5 W	NEAR COAST OF CENTRAL CHILE		
				H= 70 KM	MAG 4.40	CGS		
1	LZ-	eP	18 15 39.0	SZ	1.0	7.8	16.6	3.86
1								
1	21 33 28.*							
1								
1	00-	eLQ	22 14 55	LT	45°	1539.1	92.1	
		eLR	20 17	LT	25	874.0		
1								
1			22 12 04.*	28°1 S	70°4 W	CENTRAL CHILE		
				H= 33 KM	MAG 4.40	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	LZ-	eP	22 14 48.5	SZ	0.8	4.84	11.9	4.62
		eL	17 42	SZ	1.5	43.65		
		eL	18 32	LZ	20	9999.9		
2	00 15 34.5							
2	02 20 19.*							
2	LZ-	eP	02 29 10.3	SZ	0.6	8.8	50.3	4.90
		e	29 49	ST	0.5	6.4		
2	03 04 16.9							
2	04 00 45.1							
2	LZ-	eP	05 40 43.0	SZ	0.5	4.6		
2	LZ-	e	05 40 46	SZ	0.7	30.9		
2	LZ-	eP	05 43 45.0	SZ	0.3	2.3		
2	LZ-	e	05 43 50	SZ	0.7	15.4		
2	06 13 07.*							
2	07 03 11.4							
2	08 10 38.7							
2	08 14 06.*							
2	LZ-	eL	08 15 11	SZ	0.5	13.0	1.6	
		eL	15 25	LZ	20	9999.9		
2	08 36 16.9							

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	00-	eP	08 46 36.0	SZ	1.0	3482	62.1	5.46
		eS	55 05	ST	25	1294.8		
		eSSS	09 01 55	ST	26	4964.4		
		eL	11 20	LZ	22	2798.8		
2	GG-	eP	08 47 47.7	SZ	0.9	55.3	73.3	5.58
2	LZ-	ePS	09 02 55	LR	24	327.1	98.7	
		eSS	08 10	LR	25	470.8		
		e	15 25	LZ	20	242.5		
		eLQ	22 25	LR	33	9999.9		
		eLR	27 30	LR	35	9999.9		
						Avg.		5.52
2	10 40 23.7		43.0 N 13.0 E CENTRAL ITALY					
			H= 33 KM MAG 4.50 CGS					
2	GG-	eP	10 42 02.5	SZ	1.5	158.8	6.8	5.61
		eL	44 29	SR	999.9	9999.9		
2	13 29 07.3		39.1 N 118.1 W NEVADA					
			H= 15 KM MAG 4.00 CGS					
2	13 57 45.*		27.5 S 70.3 W NEAR COAST OF NORTHERN CHILE					
			H= 61 KM MAG 4.20 CGS					
2	LZ-	eP	14 00 31.0	SZ	1.3	25.3	11.3	5.07
		eL	03 10	LR	20	9999.9		
		e	03 41	SZ	3.0	394.2		
		eL	04 05	ST	1.5	72.4		
2	15 33 31.*		56.5 N 149.5 W GULF OF ALASKA					
			H= 33 KM MAG 4.20 CGS					
2	15 56 48.4		44.7 N 151.5 E KURILE ISLANDS REGION					
			H= 33 KM MAG 4.10 CGS					
2	16 22 42.*		83.2 N 119.5 E NORTH OF SEVERNAYA ZEMLYA					
			H= 33 KM MAG 4.30 CGS					
2	21 39 54.3		49.9 N 156.8 E KURILE ISLANDS					
			H= 58 KM MAG 4.80 CGS					
3	01 48 23.3		19.8 N 70.7 W DOMINICAN REPUBLIC REGION					
			H= 7 KM MAG 5.20 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	LZ-	eP	01 55 25.0	SZ	2.4	268±7		
		eP	55 27	LZ	16	602±4		
		e	56 48	LR	14	1368±6		
		eS	02 01 05	SR	2.2	216±7		
		eS	01 06	LR	22	9999±9		
		eLQ	03 35	LT	999	9999±9		
		eLR	06 53	LZ	999	9999±9		
3	OO-	eP	01 59 32.0	SZ	0.8	10±1	68±8	5.07
		eP	59 32	LZ	15	824±9		
		ePP	02 02 05	LZ	15	549±9		
		eS	08 35	LR	25	1987±5		
		eSS	13 23	LR	23	923±6		
		eL	20 22	LZ	30	2032±6		
		eL	27 48	LR	19	3574±3		
		eL	27 48	LT	19	1813±0		
		eL	27 48	LZ	18	5464±4		
						Avg.		5.37
3	02 32 14.6		60° N 148°0 W KENAI PENINSULA, ALASKA					
			H= 18 KM MAG 4.20 CGS					
3	LZ-	eP	03 50 31.5	SZ	0.3	7±5		
3	LZ-	eL	03 51 50	ST	0.7	4±5		
3	04 05 07.5		46.6 N 153.5 E KURILE ISLANDS					
			H= 33 KM MAG 4.10 CGS					
3	LZ-	eP	04 55 55.0	SZ	0.9	20±0		
3	LZ-	e	04 56 57	SZ	1.6	182±2		
3	06 11 38.*		60.2 N 144.6 W SOUTHERN ALASKA					
			H= 20 KM MAG 4.10 CGS					
3	07 44 44.3		22.6 N 121.3 E NEAR SOUTH COAST OF TAIWAN					
			H= 33 KM MAG 5.40 CGS					
3	OO-	eP	07 56 50.6	SZ	1.0	21±4	79±8	5.01
		eP	56 51	LZ	16	585±6		
		eL	08 30 00	LT	30	8988±0		
3	GG-	eP	07 57 29.5	SZ	2.0	277±7	85±2	6.03
3	LZ-	eP ⁰¹	08 04 50.8	SZ	1.2	23±0	168±8	
		eP ⁰¹	04 51	LZ	17	196±8		
		ePP	09 48	LZ	20	174±1		
		eL	09 03 40	LR	42	1248±3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
							Avg.	5.52
3	13 11 47*		28.1 S 69.5 W CHILE ARGENTINA BORDER REG.					
			H= 71 KM	MAG 4.20	CGS			
3	LZ- eP eL		13 14 43.0	SZ	1.0	3.7	11.8	4.21
			17 30	SR	1.2	15.8		
3	16 56 18.2		56.7 N 152.4 W ALASKA AFTERSHOCK					
			H= 20 KM	MAG 4.10	CGS			
3	LZ- eP eS		17 06 05.5D	SZ	0.2	44.8	2.6	
			06 39	ST	0.6	14.6		
3	17 08 11.2		8.3 S 118.7 E SUMBAWA ISLAND REGION					
			H= 33 KM					
3	GG- eL		18 02 55	LZ	30.	148.8	107.6	
3	OO- eL		18 03 50	LT	32	125.8	105.8	
3	GG- eP eS		18 15 44.6	SZ	0.3	17.2	0.1	
			15 48	SR	0.4	55.7		
3	LZ- eP		18 48 25.0	SZ	0.7	6.1		
3	LZ- e		18 50 54	SZ	0.7	6.1		
3	18 54 54.9		53.8 N 132.1 W QUEEN CHARLOTTE ISLANDS REG.					
			H= 33 KM	MAG 4.20	CGS			
3	OO- eL		19 29 46	LZ	26	145.6	61.8	
3	LZ- e		18 55 15	LR	30.	151.1		
3	LZ- eL		18 57 10	LZ	25	623.1		
3	LZ- eL		18 57 25	LZ	25	623.1		
3	LZ- eL		18 57 25	LT	25	362.6		
3	LZ- eL		18 57 25	LR	22	275.6		
3	21 29 40.8		3.5 N 78.0 W SOUTH OF PANAMA					
			H= 65 KM	MAG 4.30	CGS			
3	LZ- eL		21 41 18	LT	26.	129.7	21.8	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
4	GG- eP eL		01 05 27.8	SZ	0.7	8.7	4.6	
4	GG- eL		01 06 25	SZ	0.8	12.9		
4	03 36 42.		2.5 S 139.8 E NEAR N. COAST W. NEW GUINEA					
			H= 33 KM	MAG 5.70	CGS			
4	LZ- eP ¹² GG- eL		03 56 23.2	SZ	0.9	58.5	146.4	
4	04 44 35		LZ	23		122.5	116.0	
4	05 44 05.6		56.9 N 151.0 W GULF OF ALASKA					
			H= 33 KM	MAG 3.80	CGS			
4	07 22 51.6		39.3 N 118.1 W NEVADA					
			H= 15 KM	MAG 3.60	CGS			
4	07 26 19.5		27. S 71.7 W OFF COAST OF NORTHERN CHILE					
			H= 58 KM					
4	LZ- eP e eL eLQ eLR		07 28 59.4	SZ	0.6	2.1	11.1	4.38
			29 25	SZ	0.7	9.8		
			31 56	SZ	2.0	55.2		
			32 00	LR	17	967.4		
			32 49	LZ	16	578.7		
4	LZ- eP eS		08 11 53.2	SZ	0.2	15.6	2.1	
			12 20	ST	0.6	22.9		
4	GG- eP eS		09 38 54.9	SZ	0.4	12.0	1.3	
			39 03	ST	0.4	69.6		
4	11 13 25.*		39.7 N 106.0 W COLORADO					
			H= 33 KM	MAG 4.00	CGS			
4	12 38 15.3		15.9 S 174.5 W TONGA ISLANDS					
			H= 134 KM	MAG 4.20	CGS			
4	13 06 22.*		5.1 S 78.6 W NORTHERN PERU					
			H= 33 KM	MAG 4.10	CGS			
4	17 24 29.2		46.5 N 151.1 E KURILE ISLANDS					
			H= 101 KM	MAG 5.90	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
4	00	eP	17 35 20	LZ	208	399.5	68.1	
		eP	35 20	SZ	999.9	9999.9		
		eS	44 10	LT	30	1035.5		
		eSS	49 05	LT	29	954.4		
		e	51 55	LR	30	768.4		
		eLQ	55 43	LR	40	1651.8		
		eLR	18 00 50	LZ	28	1922.7		
4	GG	eP	17 36 20.0	SZ	0.7	97.6	78.1	5.74
		eP	36 22	LZ	20	551.6		
		e	46 05	LZ	17	490.4		
		eLQ	18 01 45	LZ	60	6318.5		
		eLR	02 30	LZ	30	1603.3		
4	LZ	eP	17 43 41.9	SZ	1.1	35.2	135.4	
		ePP	46 15	LZ	19	157.1		
		eSKP	46 57	SZ	1.0	7.4		
		e	53 58	LZ	18	259.0		
		eSS	18 04 17	LT	21	609.0		
		e	13 15	LZ	17	252.0		
		eL	29 46	LZ	34	1354.8		
4	LZ	eP	20 29 57.0	SZ	0.5	5.4		
4	21 03 07.*		15.7 S 70.1 W	SOUTHERN PERU				
			H=248 KM	MAG 3.70 CGS				
4	LZ	eP	21 03 47.5	SZ	999.9	9999.9	1.6	
4	LZ	eP	22 41 18.5	SZ	0.3	9999.9	1.7	
	eS		41 41	ST	0.4	9999.9		
4	23 18 51.1		34.3 N 46.0 E	IRAN IRAQ BORDER REGION				
			H= 29 KM					
4	GG	eL	23 33 45	LZ	17	188.6	29.8	
5	LZ	eLR	00 18 20	LR	30	64.3	119.1	
4	LZ	eP	23 58 54.8	SZ	0.5	15.5		
5	LZ	eL	01 26 30	LT	28	229.9		
5	01 47 39.1		17.8 S 176.4 W	FIJI ISLANDS REGION				
			H= 16 KM	MAG 4.90 CGS				
5	LZ	eLR	02 35 15	LZ	26.	443.2	101.4	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5	02	54 38.2	14.5 N 92.1 W	NEAR COAST CHIAPAS, MEXICO				
			H= 33 KM	MAG 3.90 CGS				
5	04 24 51.3		27.1 N 128.1 E	RYUKYU ISLANDS				
			H=144 KM	MAG 5.10 CGS				
5	00	eP	04 36 38.5	SZ	0.7	34.0	78.6	5.24
		eL	05 02 50	LR	40	165.1		
5	GG	eP	04 37 15.0	SZ	1.0	45.8	85.3	5.29
		eLR	05 09 30	LZ	25	96.4		
							Avg.	5.26
5	05 08 04.		19.3 N 121.0 E	PHILIPPINE ISLANDS REGION				
			H= 18 KM	MAG 4.60 CGS				
5	06 47 27.7		44.4 S 72.4 W	NEAR COAST OF SOUTHERN CHILE				
			H= 33 KM	MAG 4.80 CGS				
5	LZ	eP	06 53 20.0	SZ	1.5	38.3	28.3	4.94
		e	53 21	LT	20	154.7		
		ePCS	07 00 20	LR	27	308.9		
		e	02 50	LR	24	324.4		
		eL	04 15	LT	16	9999.9		
5	08 25 45.7		31.1 S 69.0 W	SAN JUAN PROVINCE, ARGENTINA				
			H= 33 KM	MAG 4.60 CGS				
5	LZ	eP	08 29 22.5	SZ	1.2	13.1	14.8	4.28
		eLR	34 04	LZ	30	135.0		
5	09 48 25.4		15.1 S 177.7 W	FIJI ISLANDS REGION				
			H=398 KM	MAG 4.80 CGS				
5	11 01 16.5		39. S 74.5 W	OFF COAST OF CENTRAL CHILE				
			H= 26 KM	MAG 5.10 CGS				
5	LZ	eP	11 06 27.5	SZ	1.5	110.6	23.3	5.12
		eSS	11 15	LT	20	96.7		
		eLR	17 05	LZ	19	249.0		
5	11 06 02.6		32.1 S 179.8 E	SOUTH OF KERMADEC ISLANDS				
			H=235 KM	MAG 6.75 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5	LZ=	eP	11 19 19.0	SZ	1.0	11.4	98.9	5.26
		epP	20 16	SZ	2.0	100.3		
		epP	20 17	LZ	21	524.7		
		ePP	23 25	LZ	17	508.5		
		e	24 25	LZ	19	486.8		
		e	26 05	LZ	16	229.3		
		eSKS	29 30	LT	15	9999.9		
		eSKS	29 36	SR	1.5	138.7		
5	00-	eP ¹ 1	11 25 21.3	SZ	1.7	267.5	150.1	
		eP ¹ 1	25 23	LZ	24	460.5		
		e	26 20	LZ	20	998.7		
		e	27 40	LZ	20	490.3		
		ePP	29 03	LZ	23	316.6		
		eSKSP	38 50	LZ	25	431.9		
		e	42 10	LR	40	892.0		
		eSS	48 05	LR	25	9999.9		
		e	49 40	LR	30	9999.9		
5	GG=	eP ¹ 1	11 25 35	LZ	18	810.8	160.5	
		eP ¹ 2	26 18	SZ	2.0	1198.6		
		e	27 18	SZ	2.0	656.3		
		ePP	30 00	LZ	24	696.4		
		e	38 15	LZ	19	974.4		
		e	40 45	LT	22	895.6		
		ePPS	43 17	LR	23	1246.6		
		eSS	49 45	LR	25	2144.7		
		ePSS	51 40	LR	25	9999.9		
		e	55 30	LR	15	2094.3		
		e	57 35	LT	20	9999.9		
		e	59 20	LT	25	1239.5		
5	GG=	eP	14 05 24.4	SZ	0.5	9.6	1.3	
		eS	05 42	SR	0.3	42.0		
5	GG=	eP	14 24 51.6	SZ	0.4	73.7		
5	21 59 23.*	29° N 114° W BAJA CALIFORNIA H= 16 KM MAG 4.30 CGS						
5	22 23 13.	41.1 S 74.9 W OFF COAST OF SOUTHERN CHILE H= 33 KM MAG 6.75 CGS						
5	LZ=	eP	22 28 41.4	SZ	999.9	9999.9	25.4	
		eP	28 43	LZ	999	9999.9		
		e	31 50	SZ	4.4	4172.5		
		ePCP	32 13	SZ	2.0	336.2		
		e	34 14	SZ	6.2	13.7U		
		e	40 12	SZ	6.5	9351.8		
		e	44 55	SZ	5.6	3508.4		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
		e	50 20	SZ	7.3	11.2U			
		ePKKP	54 48	SZ	6.5	4849.1			
5	GG=	e	23 03 00	SZ	1.6	37.1			
		eP ¹ P ¹	03 22	SZ	1.8	63.6			
		eP ¹	22 41 57.8	SZ	0.9	19.7	117.7		
		ePP	43 14	LZ	18	563.8			
		eSKKS	50 16	LT	18	752.4			
		ePKKP	52 29	SZ	1.0	21.3			
		eSP	53 06	LZ	19	1930.7			
		eSS	59 48	LT	42	3830.8			
		eSSS	23 03 20	LT	21	1372.8			
		e	07 12	LT	22	1784.2			
		eLQ	16 24	LT	31	1730.9			
		eLR	21 30	LZ	35	7493.4			
5	00-	eP ¹	22 42 06.8	SZ	1.4	61.1	123.0		
		ePP	43 48	LZ	17	775.4			
		eSKS	49 02	LT	14	497.3			
		eSKKS	50 46	LT	19	517.4			
		e	51 51	LR	14	814.0			
		ePSCS	53 08	LT	28	836.1			
		eP ¹ SCS	57 20	LT	16	717.2			
		eSS	23 00 45	LT	36	2834.9			
		e	05 50	LT	24	1572.6			
		e	19 37	LR	34	4409.9			
		eLQ	21 17	LT	35	4093.2			
		eLR	27 48	LZ	999	9999.9			
6	02	33 39.5	31.5 N 129.9 E SOUTHWEST OF KYUSHU, JAPAN H=197 KM MAG 5.50 CGS						
6	00-	eP	02 45 02.7	SZ	0.8	40.5	75.4	5.21	
6	GG=	eP	02 45 43.4	SZ	0.8	106.8	82.6	5.63	
							Avg.	5.42	
6	LZ=	eP	06 07 36.0	SZ	0.3	16.1	1.6		
		eS	07 58	ST	0.8	13.8			
6	07 02 52.*	20.5 S 68.8 W CHILE BOLIVIA BORDER REGION H= 74 KM MAG 4.20 CGS							
6	LZ=	eP	07 04 03.7	SZ	0.4	2.6	4.2	3.92	
		e	04 07	SZ	0.6	35.5			
		eL	04 51	ST	0.4	34.2			
6	07 05 49.*	56.3 N 149.8 W ALASKA AFTERSHOCK H= 33 KM MAG 4.50 CGS							

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	07 12 01*		9.1 S 120.8 E	SUMBA ISLAND REGION				
			H= 58 KM	MAG 5.60 CGS				
6	LZ- eP*1		07 31 50.2	SZ	1.2	7.8	153.2	
	e		32 23	SZ	1.1	15.7		
6	10 46 28.9		43.4 N 126.7 W	OFF COAST OF OREGON				
			H= 33 KM	MAG 5.30 CGS				
6	LZ- eL		11 37 38	LZ	22.	90.4		
6	13 00 13.*		50.6 N 179.5 E	RAT ALEUTIAN ISLANDS				
			H= 33 KM	MAG 4.50 CGS				
6	13 11 31.*		60.4 N 145.8 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 4.00 CGS				
6	13 41 36.5		4.2 S 140.5 E	WEST NEW GUINEA				
			H= 50 KM					
6	16 04 06.*		75.7 N 6.8 E	SVALBARD REGION				
			H= 33 KM	MAG 4.40 CGS				
6	00- eL		16 11 35	LZ	22.	530.4	14.8	
6	17 03 28.9		22.5 S 179.5 W	SOUTH OF FIJI ISLANDS				
			H= 504 KM	MAG 5.30 CGS				
6	GG- eP*1		17 22 25.8	SZ	0.5	9.7	151.6	
	eP*2		22 37	SZ	0.9	39.8		
6	18 24 50.5		56.9 N 152.1 W	ALASKA AFTERSHOCK				
			H= 39 KM	MAG 5.60 CGS				
6	00- eP		18 35 06.2	SZ	0.7	10.6	61.6	5.08
	eP		35 07	LZ	17	1432.1		
	eS		43 30	LZ	25	1885.3		
	eS		43 30	LR	26	1853.3		
	eL		50 52	LT	22	2093.0		
	eL		57 47	LZ	27	2962.3		
	eL		19 05 50	LR	22	3892.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eL	05 50	LZ	23.	1936.8		
		eL	05 50	LZ	22	4044.5		
6	GG- eP		18 36 20.0	SZ	0.7	23.6	72.9	5.31
		eP	36 20	LZ	20	416.5		
		ePP	39 02	LZ	20	288.3		
		eS	45 52	LT	20	1503.8		
		eSS	50 42	LT	20	829.7		
		eLQ	19 02 20	LR	23	1321.5		
		eLR	03 37	LZ	28	969.2		
6	LZ- ePP		18 42 47	LZ	19	167.8	100.0	
		eSKS	49 10	LR	20	527.0		
		eSP	51 21	LZ	20	315.3		
					Avg.	5.19		
6	00- eL		21 07 00	LZ	23.	198.9		
6	23 42 45.7		19.2 S 167.6 E	NEW HEBRIDES ISLANDS REGION				
			H= 43 KM	MAG 5.00 CGS				
7	GG- eP*1		00 02 18.0	SZ	1.0	30.2	144.2	
7	00- eL		02 11 24	LZ	23.	430.9		
7	02 15 04.*		20.2 S 174.6 W	TONGA ISLANDS				
			H= 29 KM	MAG 4.40 CGS				
7	03 15 25.*		14.5 N 92.0 W	NEAR SOUTH COAST GUATEMALA				
			H= 33 KM	MAG 3.80 CGS				
7	05 37 25.1		56.8 N 152.3 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 5.20 CGS				
7	00- eP		05 47 42.5	SZ	0.7	17.0	61.7	5.30
7	GG- eL		06 17 30	LZ	19	199.0	73.0	
7	07 08 07.*		54.4 N 164.4 W	UNIMAK ISLAND REGION				
			H= 33 KM	MAG 4.60 CGS				
7	08 04 58.9		37.5 N 141.3 E	NEAR E. COAST HONSHU, JAPAN				
			H= 33 KM	MAG 4.50 CGS				
7	00- eP		08 16 24.0	SZ	0.8	7.5	73.8	4.72
7	LZ- eP*1		08 24 38.8	SZ	1.0	9.1	146.3	
	eP*2		24 52	SZ	1.2	30.1		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
7	08 08 49.9		27.8 S 66.4 W	CATAMARCA PROV., ARGENTINA				
	H=162 KM	MAG 4.40 CGS						
7	00- eP		08 16 12.3	SZ	0.7	6.3		
7	08 21 03.*		11.8 N 86.9 W	NEAR COAST OF NICARAGUA				
	H=130 KM	MAG 4.70 CGS						
7	GG- eL		08 26 35	LZ	17.	186.2		
7	LZ- eP		09 42 58.0	SZ	0.3	3.6	2.6	
	eS		43 31	SR	0.3	6.7		
7	LZ- eP		14 41 41.9	SZ	0.2	9.8		
7	LZ- eP		15 16 07.4	SZ	1.3	8.8		
7	LZ- e		15 22 14	SZ	1.0	10.9		
7	15 31 18.		14. N 91.9 W	NEAR SOUTH COAST GUATEMALA				
	H= 89 KM	MAG 5.00 CGS						
7	LZ- eP		15 38 31.0	SZ	1.0	7.3	37.9	4.54
	e		40 05	LR	28	358.9		
	eS		44 20	LT	18	301.4		
	eLQ		49 50	LT	27	1592.0		
	eLR		52 20	LZ	28	9999.9		
7	GG- eL		16 12 45	LZ	30	265.5	87.7	
7	00- eL		17 11 40	LZ	36.	582.8		
7	17 23 06.8		79.4 N 2.3 W	GREENLAND SEA				
	H= 33 KM	MAG 4.10 CGS						
7	17 31 42.*		14.7 S 173.0 W	SAMOA ISLANDS				
	H= 33 KM	MAG 4.60 CGS						
7	LZ- eP		17 54 44.0	SZ	1.2	15.0		
7	19 57 44.*		6 N 87.0 W	GALAPAGOS ISLANDS REGION				
	H= 33 KM	MAG 4.30 CGS						
7	LZ- eP		20 03 04.2	SZ	0.8	13.7	24.8	4.61

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	LZ- eP		02 52 52.0	SZ	0.2	1.0	512	
	e		53 04	SZ	0.8	6.8		
	eS		53 54	SR	0.5	2.8		
8	LZ- eP		04 55 11.0	SZ	0.5	6.8		
8	LZ- e		04 55 18	SZ	0.4	10.3		
8	09 48 35.6		56.7 N 152.4 W	ALASKA AFTERSHOCK				
	H= 33 KM	MAG 5.10 CGS						
8	00- eL		13 26 26	SZ	1.0	8.5		
8	14 50 32.2		42.1 N 83.7 E	N. SINKIANG PROVINCE, CHINA				
	H= 33 KM	MAG 4.70 CGS						
8	14 59 41.2		31.7 N 140.2 E	SOUTH OF HONSHU, JAPAN				
	H=110 KM	MAG 5.70 CGS						
8	00- eP		15 11 33.2	SZ	0.8	131.4	78.8	5.81
	ePP		14 30	SZ	1.3	41.0		
	eL		38 22	LR	40	2223.8		
8	GG- eP		15 12 16.8	SZ	1.4	193.4	87.2	5.92
	eP		12 18	LZ	15	180.1		
	e		13 19	SZ	1.0	34.2		
	ePP		15 42	SZ	1.3	123.3		
	e		20 43	LZ	15	135.0		
	eL		16 26 18	LZ	28	951.0		
8	LZ- eP ¹		15 19 17.5	SZ	1.7	132.7	149.7	
	eP ²		19 22	SZ	1.0	166.0		
	e		20 27	SZ	1.5	105.4		
	e		20 36	SZ	1.5	85.1		
	AVG.							5.86
8	15 45 10.9		12.5 N 87.8 W	OFF WEST COAST OF NICARAGUA				
	H= 63 KM	MAG 5.80 CGS						
8	LZ- eP		15 51 57.0	SZ	1.0	7.2	34.4	4.53
	e		52 01	SZ	1.0	31.0		
	eS		57 35	LR	37	9999.9		
	eL		16 01 00	LT	15	9999.9		
8	00- eP		15 57 30.0	SZ	1.0	12.8	83.3	4.92
	ePP		16 00 45	SZ	1.2	13.1		
	eS		07 55	LR	30	705.3		
	eSS		13 20	LR	18	1013.2		
	eLQ		20 45	LT	28	1672.2		
	eLR		25 00	LR	35	2562.8		
8	GG- eP		15 57 45.0	SZ	1.6	58.9	86.3	5.37

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
							Avg.	4.94
8	LZ-	eP	16 47 29.5	SZ	0.7	57.6		
8	18 42 59.*		20.9 S 176.7 W	FIJI ISLANDS REGION				
			H=354 KM	MAG 4.50 CGS				
8	20 06 51.*		18. N 74.0 W	NEAR SOUTH COAST OF HAITI				
			H= 10 KM	MAG 5.10 CGS				
8	LZ-	eP	20 13 39.0	SZ	0.7	21.3	34.5	5.18
	eS		18 40	LT	18	215.7		
	eLQ		21 00	LT	22	444.5		
	eLR		23 30	LR	28	1268.7		
8	00-	eP	20 18 24.0	SZ	1.0	17.0	72.0	5.10
			Avg.					5.14
8	20 59 43.6		17.5 S 175.0 W	TONGA ISLANDS				
			H=193 KM	MAG 4.80 CGS				
9	01 48 12.8		17.8 S 178.6 W	FIJI ISLANDS REGION				
			H=537 KM	MAG 5.60 CGS				
9	03 12 57.3		6.2 S 147.9 E	EAST NEW GUINEA REGION				
			H= 54 KM	MAG 4.30 CGS				
9	LZ-	eP	03 32 21.3	SZ	1.0	9.5	137.6	
9	05 20 32.7		53.4 N 153.4 E	SEA OF OKHOTSK				
			H=511 KM	MAG 4.40 CGS				
9	00-	eP	05 30 04.2	SZ	0.7	8.5	62.1	4.36
9	05 30 46.9		10.3 S 161.3 E	SOLOMON ISLANDS				
			H= 85 KM	MAG 5.00 CGS				
9	06 31 29.3		17.1 S 173.1 W	TONGA ISLANDS				
			H= 33 KM	MAG 4.50 CGS				
9	07 16 13.*		6. N 78.8 W	SOUTH OF PANAMA				
			H= 33 KM	MAG 4.20 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
9	07 56 26.*		45.1 S 79.2 W	OFF COAST OF SOUTHERN CHILE				
			H= 33 KM	MAG 4.50 CGS				
9	LZ-	eP	08 02 33.2	SZ	1.0	7.6	30.1	4.46
	eS		07 32	LT	23	230.8		
	eL		10 42	LT	25	734.6		
9	LZ-	eP	08 21 41.0	SZ	0.6	35.5		
9	LZ-	eL	08 22 48	SR	0.6	15.7		
9	LZ-	eL	08 26 00	LT	20	242.6		
9	08 26 57.*		1.7 S 78.8 W	ECUADOR				
			H=175 KM	MAG 3.80 CGS				
9	09 30 26.*		41.1 S 83.7 W	WEST CHILE RISE				
			H= 33 KM	MAG 4.40 CGS				
9	11 33 26.*		60.7 N 145.4 W	ALASKA AFTERSHOCK				
			H= 33 KM	MAG 3.80 CGS				
9	15 31 13.2		5.7 N 72.5 W	COLOMBIA				
			H= 75 KM	MAG 4.00 CGS				
9	LZ-	eP	15 36 04.2	SZ	0.7	6.2	22.2	4.08
	eL		42 18	ST	1.2	5.8		
9	16 55 41.*		16.8 S 168.4 E	NEW HEBRIDES ISLANDS				
			H= 33 KM					
9	20 06 36.9		3 S 125.1 E	MOLUCCA SEA				
			H= 59 KM	MAG 5.00 CGS				
9	GG-	eL	21 05 55	LZ	30.	260.5	105.5	
9	00-	eL	21 06 20	LZ	26.	715.6		
9	LZ-	eL	21 40 45	LR	25	167.8		
9	LZ-	eP	22 00 14.5	SZ	0.3	11.4		
9	23 26 43.5		17.5 N 73.7 W	HAITI REGION				
			H= 33 KM	MAG 5.10 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
10	01	07 44*	59.8 N 151.8 W KENAI PENINSULA ALASKA					
			H= 33 KM MAG 4.20 CGS					
10	01	10 12.4	19.1 N 67.3 W MONA PASSAGE					
			H= 33 KM MAG 5.50 CGS					
10	LZ-	eP	01 17 04.0	SZ	0.9	37.2	35.1	5.31
		eP	17 05	LZ	22	177.0		
		ePPP	18 45	LZ	21	215.7		
		eS	22 45	LR	25	9999.9		
		eSS	24 50	LT	15	9999.9		
		eL	27 35	LR	29	9999.9		
10	00-	eP	01 21 10	LZ	20	137.8	67.8	
		eS	30 09	LT	20	477.4		
		ePPS	30 42	LR	27	606.5		
		eLQ	39 34	LR	30	495.9		
		eLR	41 43	LZ	31	893.3		
10	GG-	eP	01 21 15	LZ	20	158.1	68.3	
		eS	30 14	LT	17	495.5		
		eSCS	31 20	LR	21	484.0		
		eSS	34 43	LT	23	495.5		
		eL	42 45	LZ	27	1781.8		
10	00-	eP	01 21 08.5	SZ	1.0	22.4		
10	03	54 26.1	6.4 S 154.2 E SOLOMON ISLANDS					
			H=166 KM MAG 4.70 CGS					
10	07	34 49.9	16.7 S 70.8 W SOUTHERN PERU					
			H= 92 KM MAG 5.20 CGS					
10	LZ-	tP	07 35 37.3C	SZ	999.9	9999.9	2.3	
		eP	35 38	LZ	15	9999.9		
		e	39 05	LT	15	341.2		
10	GG-	eP	10 07 37.5	SZ	0.6	34.5		
10	LZ-	eP	12 13 10.5	SZ	0.4	6.1		
10	LZ-	eP	13 42 48.0	SZ	0.5	3.6		
10	LZ-	e	13 42 52	SZ	0.5	9.0		
10	14	00 51.*	12.4 N 88.3 W OFF COAST OF CENTRAL AMERICA					
			H= 71 KM MAG 4.00 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
10			14.1 S 166.7 E NEW HEBRIDES ISLANDS					
			H= 44 KM					
10	GG-	eP	15 43 34.7	SZ	0.2	105.3		
10	GG-	eP	16 55 59.8	SZ	0.2	38.9		
10	LZ-	eP	16 58 44.	9.2 N 62.0 W NEAR COAST OF VENEZUELA				
			H= 51 KM MAG 5.50 CGS					
10	LZ-	eP	17 04 13.8	SZ	1.0	106.0	26.1	5.38
		eP	04 15	LZ	15	169.3		
		eS	08 47	LR	21	9999.9		
		eLQ	11 20	LT	35	9999.9		
		eL	11 49	ST	0.8	57.1		
		eLR	13 50	LT	28	9999.9		
10	GG-	eP	17 10 10.5	SZ	0.8	11.3	72.2	4.90
10	00-	eP	17 10 15.0	SZ	1.1	33.2	73.7	5.19
							Avg.	5.15
10	17	52 02.5	45.1 N 149.9 E KURILE ISLANDS					
			H= 40 KM MAG 5.30 CGS					
10	00-	eP	18 03 05.7	SZ	0.5	8.4	69.1	5.06
		eL	28 30	LZ	29	348.6		
10	GG-	eP	18 04 04.5	SZ	0.7	90.8	79.0	5.83
							Avg.	5.44
10	18	18 35.6	30.3 N 57.7 E IRAN					
			H= 13 KM MAG 4.50 CGS					
10	LZ-	eP	19 02 08.0	SZ	0.4	3.8		
10	LZ-	e	19 03 20	SR	0.9	11.9		
10	20	16 55.8	44.6 N 148.8 E KURILE ISLANDS					
			H= 33 KM MAG 4.80 CGS					
10	00-	eP	20 28 00.0	SZ	0.9	34.5	69.3	5.43
10	GG-	eP	20 28 58.6	SZ	0.9	18.4	79.1	5.04
							Avg.	5.23
10	21	05 37.9	32.8 S 72.0 W OFF COAST OF CENTRAL CHILE					
			H= 33 KM MAG 4.70 CGS					
10	21	40 10.4	6.2 S 154.5 E SOLOMON ISLANDS					
			H=105 KM MAG 5.70 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
10	00-	eL	22 41 55	LZ	32	537.9	118.9	
		eL	44 42	LT	27	514.3		
		eL	44 42	LR	20	180.5		
		eL	44 42	LZ	27	467.1		
11	01	55 25.*	5.8 S 154.1 E	SOLOMON ISLANDS				
			H=425 KM	MAG 5.30	CGS			
11	05	49 58.7	18. S 176.9 W	Fiji Islands Region				
			H=329 KM	MAG 4.30	CGS			
11	07	44 07.*	53.8 N 163.3 E	OFF EAST COAST OF KAMCHATKA				
			H= 40 KM	MAG 4.20	CGS			
11	GG+	eP	08 05 23.0	SZ	0.3	18.8	.6	
		eS	05 32	ST	0.3	54.7		
11	08	13 42.*	9.9 N 82.9 W	PANAMA COSTA RICA REGION				
			H= 33 KM	MAG 3.80	CGS			
11	LZ-	eL	09 53 00	LZ	25	256.2		
11	LZ-	eP	10 00 11.0	SZ	1.0	3.8		
11	10	32 02.7	29.9 N 131.4 E	RYUKYU ISLANDS REGION				
			H= 59 KM	MAG 4.40	CGS			
11	12	32 00.2	14.7 S 167.8 E	NEW HEBRIDES ISLANDS				
			H=140 KM	MAG 4.70	CGS			
11	12	34 35.6	48.7 N 154.8 E	KURILE ISLANDS				
			H= 43 KM	MAG 4.80	CGS			
11	13	35 14.*	6.3 N 97.3 E	NICOBAR ISLANDS REGION				
			H= 33 KM	MAG 5.10	CGS			
11	LZ-	eP†1	13 55 24.5	SZ	0.7	3.7	162.9	
		eLR	14 53 12	LZ	18	220.3		
11	14	12 35.9	3. N 84.3 W	OFF COAST OF CENTRAL AMERICA				
			H= 33 KM	MAG 4.60	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11	LZ-	eP	14 17 56.2	SZ	1.0	24.7	24.7	4.75
11	LZ-	eP	14 43 41.2	SZ	1.3	12.2		
11	LZ-	eP	17 18 19.3	SZ	0.2	12.5	2.4	
		eS	18 50	ST	0.3	12.1		
11	LZ-	eP	18 20 47.9	SZ	0.2	9999.9		
11	LZ-	eP	21 09 29.0	SZ	1.0	3.8		
11	21	42 20.*	10.2 S 160.8 E	SOLOMON ISLANDS				
			H=168 KM	MAG 4.90	CGS			
11	LZ-	eLR	22 43 48	LZ	28	339.6	124.6	
11	LZ-	eP	21 59 14.2	SZ	0.8	14.2		
11	LZ-	eP	22 25 20.5	SZ	0.9	16.7		
11	GG-	eL	22 57 00	LZ	25	127.0		
12	02	34 24.*	27.2 N 56.4 E	SOUTHERN IRAN				
			H= 44 KM	MAG 4.70	CGS			
12	05	04 50.9	39.4 N 112.0 W	UTAH				
			H= 15 KM	MAG 3.90	CGS			
12	06	51 49.9	48.9 N 153.7 E	KURILE ISLANDS				
			H=127 KM	MAG 5.60	CGS			
12	00-	eP	07 02 21.8	SZ	0.8	93.4	66.4	5.71
		eP	02 25	LZ	17	115.8		
		ePP	04 52	SZ	1.0	21.0		
		eS	11 05	LT	21	146.8		
		eSSS	18 41	LR	26	314.0		
		eLR	27 10	LZ	30	195.2		
12	GG-	eP	07 03 28.9	SZ	0.8	120.2	76.6	5.75
		eP	03 29	LZ	18	104.4		
		e	10 44	SZ	999.9	9999.9		
		eL	30 27	LZ	22	186.2		
12	LZ-	eP†	07 10 54.0	SZ	0.8	4.1	132.7	
		e	11 33	SZ	1.6	24.8		
		eSKP	14 12	SZ	2.0	35.0		
							Avg.	5.73
12	LZ-	eL	11 15 53	LZ	17	94.2		
12	12	47 47.*	11.4 N 86.1 W	NEAR COAST OF NICARAGUA				
			H=135 KM	MAG 4.10	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	LZ-	eP	12 48 22.5	SZ	0.4	3.7	263	
		eS	48 52	ST	0.6	9.0		
12	LZ-	eP	13 19 51.2	SZ	0.3	4.4	1.8	
		eS	20 15	SR	0.5	11.5		
12	LZ-	eL	16 31 30	LZ	19	106.1		
12	LZ-	eP	18 39 51.0	SZ	1.0	7.3		
12	19 26 26.1		31. N 49.8 E WESTERN IRAN					
		H= 33 KM MAG 5.10 CGS						
12	GG-	eP	19 33 12.5	SZ	1.5	189.7	34.3	5.78
		eP	33 15	LZ	20	64.0		
		ePP	34 40	LZ	15	91.7		
		eS	38 47	LR	35	263.8		
		eSSS	41 05	LR	17	332.2		
		eLQ	44 50	LR	30	470.6		
		eLR	47 47	LT	14	2191.7		
12	00-	eP	19 33 53.8	SZ	0.5	19.5	39.4	5.08
		eP	33 55	LZ	15	92.9		
		ePP	35 24	SZ	1.0	17.3		
		ePP	35 35	LZ	15	139.4		
		eS	40 04	LR	21	132.4		
		e	42 45	LZ	18	352.5		
		eLQ	44 40	LT	14	436.4		
		eLR	46 27	LT	30	449.4		
12	LZ-	eLR	20 27 25	LT	25	137.2	122.2	
						Avg.	5.43	
12	LZ-	eP	21 30 59.5	SZ	0.5	10.2		
13	00 31 14.1		5.4 S 154.3 E SOLOMON ISLANDS					
		H=383 KM MAG 6.00 CGS						
13	00-	ePD	00 45 40	LZ	22.	471.6	118.1	
		epPD	47 06	LZ	20	454.3		
		eP ¹	49 16	SZ	0.6	14.4		
		eP ¹	49 23	LZ	19	336.0		
		ePP	50 30	LZ	16	3506.3		
		ePP	50 38	SZ	0.9	43.2		
		epPP	52 03	LZ	21	1398.3		
		esPP	52 48	LZ	23	1634.9		
		eSKKS	57 01	LT	16	1901.9		
		eS	57 53	LR	19	1344.0		
		ePKP	59 38	SZ	0.5	6.5		
		esPS	01 02 25	LT	30	5093.2		
		eSS	06 10	LR	20	4354.0		
		e	08 40	LZ	17	3471.0		
		e	09 32	LR	30	4262.9		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		e	13 50	LR	29.	3770.7		
		e	17 25	LT	22	2652.5		
		e	19 45	LR	31	4240.9		
		eLQ	22 35	LR	40	8589.1		
		eLR	25 58	LR	40	9999.9		
13	GG-	ePD	00 46 15	LZ	20	384.4	126.0	
		epPD	47 42	LZ	20	320.3		
		eP ¹	49 34	SZ	0.6	23.6		
		eP ¹	49 35	LZ	15	1376.6		
		ePP	51 05	LZ	15	6470.3		
		ePP	51 36	SZ	3.5	4971.1		
		epPP	52 47	LT	20	2785.0		
		ePPP	54 25	LZ	16	4398.3		
		eSP	01 00 50	LZ	20	2082.5		
		ePS	01 44	LT	22	2643.1		
		eSS	08 22	LR	25	9999.9		
		esSS	10 15	LT	999	9999.9		
		eL	31 15	LR	26	9999.9		
13	LZ-	ePD	00 46 52	LZ	23	146.1	132.5	
		epPD	48 20	LZ	25	348.9		
		eP ¹	49 20	LZ	15	1512.9		
		eP ¹	49 33	SZ	0.5	6.8		
		epP ¹	51 15	LZ	20	905.4		
		epP ¹	51 19	SZ	1.0	64.5		
		eSKP	52 40	SZ	1.0	9999.9		
		eSP	01 01 55	LZ	22	3898.6		
		ePS	02 40	LT	22	9999.9		
		e	10 00	LZ	20	9999.9		
		eL	17 05	LZ	40	5494.8		
		eLR	29 40	LZ	20	2162.9		
13	LZ-	eP	04 15 37.5	SZ	0.4	5.7	2.7	
		eS	16 11	ST	0.6	4.6		
13	04 20 55.*		54.4 N 158.7 E KAMCHATKA					
		H= 33 KM MAG 4.20 CGS						
13	04 28 23.2		6. S 130.4 E BANDA SEA					
		H=127 KM MAG 5.00 CGS						
13	LZ-	eP ¹	04 48 04.5	SZ	0.8	29.6	151.1	
		eP ¹	48 21	SZ	0.7	37.7		
		epP ¹	48 46	SZ	1.0	60.9		
		eL	05 56 15	LZ	28	163.0		
13	LZ-	eP	05 19 49.0	SZ	0.4	3.6		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13			06 35 39*	42°2 N 126°1 W OFF COAST OF OREGON	H= 33 KM MAG 4.90 CGS			
13			08 38 11.4	59°7 N 145°3 W GULF OF ALASKA	H= 33 KM MAG 4.20 CGS			
13			08 50 46.*	42°3 N 125°5 W OFF COAST OF OREGON	H= 33 KM MAG 4.90 CGS			
13	LZ-	eP	09 24 03.5	SZ	1.3	20.2		
13			10 28 06.*	19°2 N 109°0 W REVILLA GIGEDO ISLANDS REG.	H= 33 KM MAG 4.20 CGS			
13	LZ-	eP	10 37 30.0	SZ	1.0	17.9	53.2	5.00
13			10 38 05.	34°2 N 25°7 E CRETE	H= 33 KM MAG 4.40 CGS			
13	GG-	eP	10 42 14.0	SZ	1.5	118.5	18.8	4.91
	eLQ		47 23	LT	35	393.5		
	eLR		48 55	LT	18	771.8		
13	OO-	eL	10 52 40	LR	30	222.6	28.5	
13			10 48 34.*	19°3 S 177°6 W FIJI ISLANDS REGION	H=551 KM MAG 4.30 CGS			
13	GG-	eP	14 57 53.6	SZ	0.3	7.6	1.4	
	eS		58 13	SZ	0.4	48.7		
13	LZ-	eP	15 47 00.8	SZ	0.5	3.4	3.8	
	eS		47 47	ST	0.7	7.3		
13	GG-	eP	16 15 29.3	SZ	0.3	17.6	.1	
	eS		15 32	ST	0.4	71.2		
13			16 27 35.4	19°5 N 155°4 W HAWAII	H= 11 KM MAG 4.10 CGS			
13			16 32 17.*	5°9 S 81°1 W NEAR COAST OF NORTHERN PERU	H= 33 KM MAG 4.20 CGS			
13	LZ-	eP	16 36 06.5	SZ	1.2	9999.9	16.1	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	LZ-	eP	16 41 59.5	SZ	0.4	14.4		
13	OO-	e	17 47 48	LR	21	100.5		
13	OO-	e	17 52 53	LT	22	89.1		
13	OO-	e	17 55 52	LR	17	159.1		
13	OO-	eL	17 59 20	LR	43	647.8		
13	OO-	eL	18 02 20	LZ	33	500.4		
13			18 26 30.7	10°5 S 13°3 W ASCENSION ISLAND REGION	H= 33 KM MAG 5.10 CGS			
13	LZ-	eL	18 52 05	LZ	35	1315.7	53.9	
	eLR		54 10	LZ	28	1304.3		
13	GG-	eL	18 57 37	LR	24	535.2	63.7	
13	LZ-	eP	21 06 50.2	SZ	0.9	9.2		
13			21 51 02.*	46°5 N 112°2 W MONTANA	H= 15 KM MAG 4.10 CGS			
14			03 53 41.*	16°7 N 95°6 W OAXACA + MEXICO	H= 33 KM MAG 3.50 CGS			
14	LZ-	eP	06 13 57.2	SZ	0.4	8.4		
	eS		14 20	ST	0.8	12.5	1.7	
14			07 08 55.9	9°8 S 123°8 E TIMOR	H= 33 KM			
14	LZ-	eP	08 00 27.2	SZ	0.3	10.4		
	eS		00 55	ST	0.7	31.6		
14	GG-	eP	13 47 09.0	SZ	0.5	11.4		
14	GG-	e	13 49 29	SZ	0.7	15.1		
14	GG-	eP	16 00 12.0	SZ	0.3	12.4	1.3	
	eS		00 30	SR	0.3	35.6		
14	LZ-	eP	16 49 28.6	SZ	0.7	31.8		
14	LZ-	eL	17 58 58	LT	30	417.0		
14	LZ-	eP	19 13 09.8	SZ	1.5	17.9		
14			19 25 38.2	4 N 79°9 W NEAR COAST OF ECUADOR	H=102 KM MAG 4.60 CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
14	LZ-	eP	19 30 05.5	SZ	0.5	8.4	20.0	4.33
		ePPP	30 42	SZ	0.8	15.7		
		e	33 51	LT	27	229.8		
		eLQ	37 28	LR	26	9999.9		
		eLR	39 00	LZ	19	9999.9		
14	21 27 41.6	7.4 N 36.8 W CENTRAL MID ATLANTIC RIDGE						
		H= 33 KM MAG 4.80 CGS						
14	LZ-	eP	21 35 07.0	SZ	0.5	8.9	39.2	4.75
		eP	35 18	LZ	17	292.3		
		ePP	36 45	LZ	23	570.0		
		eS	41 15	LT	24	1629.5		
		eLQ	44 08	LR	30	679.5		
		eLR	45 47	LZ	999	9999.9		
14	GG-	eP	21 37 33.0	SZ	0.8	15.4	58.1	5.08
		eP	37 33	LZ	18	250.0		
		ePS	45 47	LT	28	1905.2		
		eSS	49 30	LT	19	838.1		
		eLQ	52 03	LR	30	1836.3		
		eLR	54 55	LZ	32	4619.6		
		eL	55 57	LT	26	3397.8		
		eL	55 57	LR	17	1613.2		
		eL	55 57	LZ	28	3765.2		
14	00-	eP	21 38 16.6	SZ	0.8	8.1	64.1	4.91
		e	40 35	LT	38	4448.2		
		eS	46 53	LT	26	2903.2		
		eLQ	54 00	LR	50	11.1U		
		eLR	57 25	LZ	31	7638.0		
		eL	58 58	LT	27	5346.2		
		eL	58 58	LR	28	781.4		
		eL	58 58	LZ	25	6130.2		
					Avg.	4.91		
14	21 48 31.2	18.8 S 168.2 E NEW HEBRIDES ISLANDS						
		H= 26 KM MAG 4.60 CGS						
14	GG-	eP ⁰¹	22 08 04.0	SZ	0.8	10.2	144.1	
15	02 29 28.*	50.7 N 179.4 E RAT ALEUTIAN ISLANDS						
		H= 33 KM MAG 4.10 CGS						
15	03 34 50.8	5.5 S 104.1 E SOUTHERN SUMATRA						
		H= 33 KM MAG 5.20 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
15	GG-	eLR	04 25 25	LR	23.8	252.0	96.0	
15	LZ-	eLR	04 48 50	LZ	20	85.4	157.2	
15	04 10 09.3	4.1 S 104.7 E SOUTHERN SUMATRA						
		H= 17 KM						
15	LZ-	eP	04 47 34.0	SZ	0.4	24.3	1.9	
		eS	48 01	ST	0.4	36.7		
15	LZ-	tP	04 52 53.4C	SZ	1.0	101.8		
15	LZ-	eP	06 17 50.2	SZ	0.2	11.2	2.6	
		eS	18 23	SR	0.2	14.7		
15	08 57 41.*	34.3 N 28.0 E EASTERN MEDITERRANEAN SEA						
		H= 68 KM						
15	10 03 57.1	10.8 N 81.6 W NORTH OF PANAMA						
		H= 33 KM MAG 3.80 CGS						
15	GG-	eP	13 15 14.5	SZ	0.5	12.3	1.4	
		eS	15 33	SR	0.5	24.6		
15	14 43 03.1	12. N 88.0 W NEAR COAST OF NICARAGUA						
		H= 39 KM MAG 4.00 CGS						
15	LZ-	eP	15 02 04.0	SZ	0.8	2.8		
15	LZ-	eLQ	15 44 03	LR	35	299.6		
15	LZ-	eLR	15 46 20	LZ	20	161.3		
15	LZ-	eP	18 49 52.0	SZ	0.9	6.7		
15	LZ-	e	18 52 36	SZ	1.0	7.5		
15	LZ-	e	18 53 10	SZ	1.0	30.1		
15	LZ-	eP	19 47 20.8	SZ	0.9	10.1		
15	LZ-	e	19 48 27	SZ	1.3	30.4		
15	LZ-	eP	19 58 34.3	SZ	0.2	9999.9	1.7	
		eS	58 57	SR	0.2	9999.9		
15	21 22 03.8	6.7 N 73.4 W NORTHERN COLOMBIA						
		H= 175 KM MAG 4.80 CGS						
15	LZ-	eP	21 26 57.5	SZ	0.5	7.1	23.3	4.49
		ePP	27 32	SZ	0.9	23.3		
16	00 42 13.4	19.8 S 169.5 E NEW HEBRIDES ISLANDS						
		H= 102 KM MAG 4.70 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16			02 57 06.*	61°6' N 150°2' W	SOUTHERN ALASKA			
				H= 63 KM	MAG 4.10	CGS		
16	LZ-	eP eS	04 01 54.0	SZ	0.5	29.3	2.0	
			02 20	ST	999.9	9999.9		
16			07 30 12.*	13°3' N 87°6' W	HONDURAS			
				H= 60 KM	MAG 3.90	CGS		
16	LZ-	fP eS	08 09 11.5D	SZ	0.4	26.3	1.7	
			09 33	SR	0.5	8.0		
16			11 08 00.2	5.9 S 151°4 E	NEW BRITAIN REGION			
				H= 54 KM				
16			11 40 46.5	40°3' N 142°2' E	NEAR E. COAST HONSHU, JAPAN			
				H= 74 KM	MAG 4.40	CGS		
16			12 34 34.8	12° N 88°6' W	OFF COAST OF CENTRAL AMERICA			
				H= 33 KM	MAG 4.30	CGS		
16			12 38 20.6	62°1' N 147°3' W	CENTRAL ALASKA			
				H= 56 KM	MAG 4.10	CGS		
16	LZ-	fP eS	13 54 20.0C	SZ	0.4	19.5	2.5	
			54 50	SR	0.8	40.1		
16	LZ-	eP	14 16 50.5	SZ	0.9	11.6		
16			15 52 38.7	27°8' N 53°0' E	SOUTHERN IRAN			
				H= 31 KM				
16			19 40 53.9	15° S 175°8' W	SAMOA ISLANDS REGION			
				H= 332 KM	MAG 4.60	CGS		
16			20 36 00.*	52°2' N 170°3' E	ALEUTIAN NEAR ISLANDS			
				H= 33 KM	MAG 4.50	CGS		
16			21 28 49.1	39°7' N 52°6' E	CASPIAN SEA			
				H= 33 KM	MAG 4.80	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	00-	eP eLR	21 35 24.0	SZ	0.8	12.4	33.3	4.86
16	GG-	eLR	21 47 15	LZ	25	148.0		
17	00	17 40.9	35° N 26°0' E	CRETE				
			H= 18 KM	MAG 4.80	CGS			
17	GG-	eP eP	00 21 54.0	SZ	0.8	17.2	18.3	4.28
			21 57	LZ	15	144.0		
		e	25 24	LZ	17	311.8		
		eLQ	26 30	LT	33	1100.2		
		eLR	28 00	LT	20	2543.6		
17	00-	e	00 28 40	LZ	20	182.6	27.8	
		eLQ	30 05	LT	38	342.2		
		eLR	32 15	LT	25	451.7		
17	00	59 47.*	12°1' S 75°3' W	PERU				
			H= 163 KM	MAG 3.90	CGS			
17	LZ-	eP	01 01 44.0	SZ	0.4	9999.9	7.8	
17	LZ-	eP	02 01 14.5	SZ	0.6	3.1		
17	LZ-	eP	04 15 20.0	SZ	0.5	15.9		
17	LZ-	e	04 15 42	SZ	0.5	7.0		
17	LZ-	e	04 16 24	SZ	1.0	16.7		
17			08 42 48.*	22° S 67°0' W	CHILE BOLIVIA BORDER REGION			
			H= 192 KM	MAG 4.70	CGS			
17	LZ-	eP eS	08 44 13.3	SZ	0.5	26.5	5.9	4.72
			45 16	SR	0.7	10.6		
17			09 07 03.8	52° N 30°0' W	NORTH ATLANTIC RIDGE			
			H= 42 KM	MAG 4.90	CGS			
17	00-	eP	09 12 19.5	SZ	0.8	6.2	23.9	4.14
17	GG-	eLR	09 19 35	LZ	25	365.5	25.9	
17			11 45 01.2	18° S 178°3' W	FIJI ISLANDS REGION			
			H= 648 KM	MAG 5.10	CGS			
17			11 51 19.3	46°3' N 151°9' E	KURILE ISLANDS			
			H= 33 KM	MAG 4.90	CGS			
17	GG-	eLR	12 34 45	LZ	30	164.3	78.5	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
17	12 41	58.*	50° N 171° 8' W ALEUTIAN ISLANDS REGION H= 33 KM MAG 4.50 CGS					
17	14 42	56.6	24.2 N 94.0 E BURMA INDIA BORDER REGION H=184 KM MAG 4.70 CGS					
17	00- eL		15 18 05	LR	30.	818.1	65.8	
17	14 54	01.4	42.6 N 142.8 E HOKKAIDO JAPAN REGION H= 33 KM MAG 5.10 CGS					
17	00- eP		15 05 08.5	SZ	0.9	53.7	69.6	5.60
17	GG- eP		15 06 03.5	SZ	0.7	26.7	78.8	5.33
						AVG.		5.46
17	15 15	18.9	72.2 N 1.7 E NORWEGIAN SEA H= 33 KM MAG 5.40 CGS					
17	00- eP		15 18 06.0	SZ	1.0	48.9	11.7	5.60
	eL		20 25	ST	0.5	31.2		
	eL		20 40	LR	999	9999.9		
17	GG- eP		15 20 25.0	SZ	1.0	70.1	23.0	5.08
	e		20 30	LR	20	407.0		
	eS		24 35	LT	20	1017.6		
	eLQ		25 10	LT	30	1026.0		
	eLR		26 25	LZ	26	3681.0		
17	LZ- eL		16 02 15	LZ	35	254.3	99.5	
	eLR		06 05	LZ	26	440.5		
						AVG.		5.34
17	16 38	44.4	51.5 N 177.8 E RAT ALEUTIAN ISLANDS H= 42 KM MAG 5.40 CGS					
17	00- eP		16 49 37.5	SZ	0.6	8.7	67.3	5.03
17	16 38	53.4	71.9 N 0.4 W JAN MAYEN ISLAND REGION H= 33 KM MAG 4.20 CGS					
17	00- eLR		16 44 55	LZ	25.	231.0	11.8	
17	GG- eLR		16 50 45	LZ	26	106.1	22.9	
17	LZ- eP		16 39 42.0	SZ	0.5	13.2		
17	LZ- e		18 18 52	LZ	40	574.1		
17	LZ- eLR		18 21 25	LZ	26	9999.9		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
17	LZ- e		18 33 30	LZ	35.	309.5		
17	LZ- eLR		18 37 15	LZ	19	386.9		
17	00- eL		18 51 10	LR	20	64.6		
17	19 05	44.*	12.4 N 86.8 W NICARAGUA H=116 KM MAG 4.50 CGS					
17	20 17	26.6	27.8 S 70.5 W NEAR COAST OF NORTHERN CHILE H= 33 KM MAG 4.60 CGS					
17	LZ- eL		20 25 05	LR	17.	9999.9	11.6	
17	21 41	21.3	72.5 N 1.8 E NORWEGIAN SEA H= 33 KM MAG 4.40 CGS					
17	00- eLR		21 47 15	LZ	22.	209.7	12.0	
17	GG- eLR		21 52 50	LZ	25	103.8	23.3	
17	21 41	46.*	51.7 N 167.7 W FOX ALEUTIAN ISLANDS H= 33 KM MAG 4.90 CGS					
17	22 02	35.1	24.5 S 176.8 W SOUTH OF FIJI ISLANDS H= 33 KM MAG 4.50 CGS					
17	22 33	58.*	33.3 N 114.8 W CALIFORNIA ARIZONA REGION H= 14 KM MAG 4.20 CGS					
17	22 47	32.4	52.1 N 30.1 W NORTH ATLANTIC RIDGE H= 36 KM MAG 5.10 CGS					
17	00- eLR		22 59 10	LZ	23	419.5	23.9	
17	GG- eL		23 00 30	LR	30	718.2	25.9	
18	00 26	51.8	7.2 S 74.4 W PERU BRAZIL BORDER REGION H=156 KM MAG 5.30 CGS					
18	LZ- eP		00 29 20.7	SZ	1.1	78.2	10.7	5.21
	eS		31 33	SR	0.7	9999.9		
18	00 33	55.*	44.2 N 16.4 E YUGOSLAVIA H= 33 KM MAG 4.40 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	GG-	eP	00 35 36.0	SZ	0.5	1480	6.5	4.97
18	02 13 37.*		40.3 N 125.7 W OFF COAST NORTH CALIFORNIA					
			H= 15 KM MAG 3.75 CGS					
18	04 35 43.6		42.8 N 145.3 E HOKKAIDO, JAPAN REGION					
			H= 33 KM MAG 4.70 CGS					
18	LZ-	eP	04 39 44.0	SZ	0.7	18.7		
18	04 44 58.		26.4 S 71.5 W OFF COAST OF NORTHERN CHILE					
			H= 8 KM MAG 6.40 CGS					
18	LZ-	eP	04 47 35.0	SZ	0.5	57.0	10.5	6.26
	eP		47 35	LZ	999	9999.9		
	e		49 41	LR	999	9999.9		
	e		53 13	SR	3.8	3321.2		
	eL		53 35	LR	999	9999.9		
	eL		58 03	ST	6.0	5574.1		
18	GG-	eP	04 59 11	LZ	18	531.2	105.2	
	ePP		05 03 26	LZ	19	578.7		
	eSKS		09 50	LT	20	1482.8		
	eSP		12 38	LZ	19	3291.3		
	eSS		18 40	LT	35	1476.4		
	e		23 30	LT	32	870.0		
	e		25 50	LT	20	1366.5		
18	00-	ePD	04 59 30	LZ	17	406.6	109.2	
	ePP		05 03 50	LZ	18	705.6		
	ePPP		06 17	LZ	19	293.1		
	eSKS		10 08	LT	22	609.1		
	eSP		13 24	LZ	19	2397.2		
	eSS		19 35	LR	25	9999.9		
	e		22 25	LZ	20	932.7		
	e		27 00	LT	25	1517.8		
	e		30 20	LZ	27	1580.9		
	eLQ		38 05	LZ	42	3369.6		
	eLR		41 20	LZ	26	3206.6		
18	08 47 18.*		45.1 N 110.5 W MONTANA					
			H= 33 KM MAG 4.20 CGS					
18	LZ-	eP	09 04 20.5	SZ	0.5	2.7		
18	11 09 43.4		5 N 67.2 E CARLSBERG RIDGE					
			H= 33 KM MAG 5.10 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	00-	eLQ	11 42 35	LT	50.8	750.8	73.9	
	eLR		47 30	LT	32	671.82		
18	GG-	eL	11 42 45	LT	35	447.3	68.3	
18	LZ-	eL	12 17 00	LZ	30	179.0	133.6	
18	15 26 11.4		5.7 N 58.0 E CARLSBERG RIDGE					
			H= 33 KM MAG 5.40 CGS					
18	GG-	eP	15 36 07.7	SZ	1.2	75.6	58.8	5.60
18	LZ-	eL	17 36 20	LZ	22.0	154.4		
18	LZ-	eP	17 51 04.5	SZ	0.8	7.1		
19	01 30 57.4		61.2 S 27.8 W SOUTH SANDWICH ISLANDS REG*					
			H= 33 KM					
19	LZ-	eP	01 40 07.3	SZ	0.9	6.4	53.4	4.62
	eL		55 45	LT	28	314.1		
19	00-	eL	02 31 45	LT	34	193.6	125.5	
19	LZ-	eP	03 30 37.0	SZ	0.7	7.1		
19	08 22 18.*		31.3 S 68.5 W SAN JUAN PROVINCE, ARGENTINA					
			H= 128 KM MAG 4.00 CGS					
19	LZ-	eP	08 25 45.0	SZ	1.0	40.0	15.0	4.66
19	09 33 10.		28.2 N 52.6 E SOUTHERN IRAN					
			H= 50 KM MAG 5.60 CGS					
19	GG-	eP	09 40 24.5	SZ	0.6	25.7	38.0	5.23
19	LZ-	eP	09 52 07.0	SZ	1.0	9.0	124.6	
	eLQ		10 27 55	LR	45	629.2		
	eLR		34 25	LR	28	2116.1		
	eL		37 05	LR	24	2257.9		
	eL		37 05	LZ	35	379.9		
	eL		37 05	LT	20	659.0		
19	00-	eLQ	09 54 40	LT	33	9999.9	43.0	
	eLR		58 00	LZ	20	9999.9		
19	GG-	eP	09 48 37.0	SZ	0.2	17.5	1.6	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
19	GG= eS		48 58	SR	0.4	21.4		
	GG= eL		13 14 01	SR	0.3	16.4		
19	14 00 38.*		6.9 S 75.5 W NORTHERN PERU					
	H= 14 KM	MAG 4.40 CGS						
19	LZ= eP		14 03 24.0	SZ	0.5	2.5	11.6	4.76
	e	06 44	SR	1.2	69.6			
	eL	06 55	LT	20	668.7			
19	15 20 13.9		28.2 N 52.7 E SOUTHERN IRAN					
	H= 52 KM	MAG 5.60 CGS						
19	GG= eP		15 27 29.3	SZ	0.3	19.3	38.1	5.41
19	00= eP		15 28 09.2	SZ	0.6	11.9	43.1	4.80
	eP	28 10	LZ	19	186.6			
	ePCP	30 08	LZ	18	249.1			
	e	35 00	LR	20	594.4			
	eSS	37 35	LT	21	1014.1			
	eL	42 08	LT	40	3857.4			
				Avg.	5.10			
19	GG= eP		16 09 09.5	SZ	0.2	19.8		
19	20 17 02.5		5.7 S 152.8 E NEW BRITAIN REGION					
	H= 55 KM	MAG 4.50 CGS						
19	LZ= eL		22 40 10	LR	35.	144.5		
19	22 40 17.9		28.4 N 52.7 E SOUTHERN IRAN					
	H= 58 KM							
19	00= eP		22 48 10.0	SZ	1.0	10.6	42.9	4.53
20	00 27 46.*		2.3 N 78.5 W NEAR WEST COAST OF COLOMBIA					
	H= 33 KM	MAG 4.40 CGS						
20	02 08 15.8		72.1 N 1.4 E NORWEGIAN SEA					
	H= 33 KM	MAG 5.10 CGS						

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	00= eP		02 11 03.0	SZ	0.5	5.3	11.7	4.84
	eP		11 04	LZ	14	449.2		
	eL		13 07	SR	0.5	7.5		
	eLR		13 50	LZ	25	3409.9		
	eL		14 25	LT	23	2516.2		
	eL		14 25	LR	30	2017.2		
	eL		14 25	LZ	25	3409.9		
20	GG= eP		02 13 22.0	SZ	0.8	9.8	22.9	4.32
				Avg.	4.63			
20	03 56 29.2		63.9 N 20.5 W ICELAND					
	H= 33 KM	MAG 4.80 CGS						
20	00= eP		03 59 56.0	SZ	0.7	10.6	14.7	4.44
	eL		04 02 32	LT	35	9999.69		
20	GG= eP		04 01 21.0	SZ	1.0	29.2	22.1	4.64
20	LZ= eS		04 20 13	LR	19	89.7	88.0	
	eSS		25 47	LR	29	154.4		
	eLQ		36 10	LR	23	154.0		
	eLR		41 50	LR	30	212.5		
				Avg.	4.54			
20	04 13 48.1		4. S 151.6 E NEW IRELAND REGION					
	H= 192 KM	MAG 4.30 CGS						
20	04 18 01.*		4.1 N 95.4 E NORTHERN SUMATRA					
	H= 93 KM							
20	05 08 50.3		28.1 N 52.6 E SOUTHERN IRAN					
	H= 47 KM	MAG 5.10 CGS						
20	GG= eP		05 16 06.0	SZ	1.0	50.0	38.1	5.29
20	00= eP		05 16 46.3	SZ	0.5	12.0	43.1	4.88
	e		25 30	LT	18	232.1		
	eL		30 20	LT	35	1568.2		
	eL		32 30	LT	25	1531.3		
	eL		32 30	LR	18	49.6		
	eL		32 30	LZ	15	140.8		
				Avg.	5.08			
20	05 39 47.7		28.2 N 52.6 E SOUTHERN IRAN					
	H= 52 KM	MAG 5.50 CGS						
20	GG= eP		05 47 02.2	SZ	0.6	40.1	38.0	5.43

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	00-	eP eS eSS eL	05 47 42.5 54 10 57 19 06 01 15	SZ LR LT LT	0.6 18 20 35	19.3 248.3 312.3 3237.6	43.0 124.6	5.01 AVG. 5.22
20	LZ-	eP	05 58 46.5	SZ	1.0	19.1		
20	07 25 09.3		18.0 N 98.4 W CENTRAL MEXICO					
			H= 60 KM MAG 4.40 CGS					
20	LZ-	eP eS	08 09 28.5 10 10	SZ SR	0.2 0.8	2.2 14.7	3.1	
20	08 26 52.*		11.7 N 87.2 W NEAR COAST OF NICARAGUA					
			H= 25 KM MAG 4.30 CGS					
20	08 32 43.1		29.7 S 177.9 W KERMADEC ISLANDS REGION					
			H= 80 KM MAG 4.40 CGS					
20	08 37 47.1		14.9 N 60.4 W WINDWARD ISLANDS					
			H= 65 KM MAG 5.50 CGS					
20	LZ-	eP ePP eS eL	08 44 10.0 45 06 49 10 53 00	SZ SZ LT LR	1.0 0.8 18 33	24.9 51.8 149.2 427.2	32.0	4.97
20	09 12 54.*		11.0 N 87.5 W NEAR COAST OF NICARAGUA					
			H= 33 KM MAG 4.20 CGS					
20	10 31 05.7		72.1 N 1.2 E NORWEGIAN SEA					
			H= 33 KM MAG 4.40 CGS					
20	00- eLR		10 36 20	LZ	25.0	470.9	11.7	
20	00- eP eS		11 16 47.0 17 28	SZ SR	0.2 0.2	1.6 9.5	3.1	
20	00- eP		11 33 59.0	SZ	1.0	14.2		
20	12 48 47.7		37.4 S 78.3 E MID INDIAN RISE					
			H= 33 KM					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	GG-	ePS eLR	13 16 32 43 52	SZ LZ	0.4 25	17.5 254.7	105.0	
20	LZ-	eLQ eLR	13 38 00 39 25	LT LZ	30 26	242.4 345.8	118.2	
20	00- eL		13 43 40	LT	31	474.7	112.3	
20	GG- eP eS		12 56 56.5 57 14.5	SZ ST	0.4 0.6	28.4 67.6	1.3	
20	14 03 34.4		61.4 N 147.5 W SOUTHERN ALASKA					
			H= 35 KM MAG 4.30 CGS					
20	LZ- eP		14 50 51.5	SZ	1.5	34.0		
20	LZ- eP		15 05 54.0	SZ	0.9	8.5		
20	15 11 53.*		8 S 132.6 E WEST NEW GUINEA REGION					
			H= 33 KM					
20	GG- eP		15 26 44.2	SZ	0.5	35.8		
20	16 17 48.2		60.3 S 27.1 W SOUTH SANDWICH ISLANDS REG.					
			H= 33 KM					
20	LZ- eP		16 27 04.8	SZ	1.0	7.6	53.1	4.62
20	16 29 58.5		72.3 N 1.7 E NORWEGIAN SEA					
			H= 33 KM MAG 5.10 CGS					
20	00- eP e eLR		16 32 46.7 32 56 34 47	SZ SZ LZ	0.8 0.9 24	8.1 34.5 2148.9	11.8	4.91
20	GG- eP eLQ eLR		16 35 06.0 39 20 41 04	SZ LT LZ	1.0 21 26	33.0 209.8 907.7	23.1	4.76
							Avg.	4.83
20	GG- eP		17 20 52.8	SZ	0.5	38.9		
20	17 30 42.3		3.0 N 128.3 E HALMAHERA					
			H= 178 KM MAG 4.80 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	OO-	eLQ	18 18 23	LR	46	628.7	100.3		21	LZ-	eP	10 14 44.9C	SZ	999.9	9999.9	480	
		eLR	23 32	LT	28	207.6											
20	GG-	eL	18 27 01	LR	26	242.7	104.8		21	10 18 32.*		17.1 N 95.2 W	OAXACA + MEXICO				
								H= 33 KM MAG 3.70 CGS									
20	22 54 48.*		28.7 N 52.9 E	SOUTHERN IRAN					21	16 49 12.9		40.1 N 40.9 E	TURKEY				
			H= 80 KM									H= 44 KM MAG 4.60 CGS					
21	02 09 41.5		23. S 69.0 W	NORTHERN CHILE					21	GG- eP		16 54 14.1	SZ	1.0	41.2	23.0	4.83
			H= 112 KM MAG 4.20 CGS							ePCP		58 15	LZ	20	137.8		
21	LZ-	eP	02 11 20.0	SZ	0.5	1.8	6.7	3.75	21	00- eLQ		17 03 15	LR	40.	394.4		
	e		11 49	SZ	0.8	47.3			21	00- eLR		17 04 20	LZ	30	523.8		
21	LZ-	e	02 32 21	LZ	25	187.8			21	19 41 38.*		30.6 N 113.8 W	GULF OF CALIFORNIA				
21	LZ-	eLQ	02 34 12	LT	25	180.1						H= 15 KM MAG 4.70 CGS					
21	LZ-	eLR	02 36 10	LZ	21	297.8			21	LZ-	eLR	20 13 50	LZ	37	135.8	63.8	
21	LZ-	eP	03 17 27.5	SZ	1.5	48.3											
21	LZ-	e	03 21 34	LR	16	472.9			21	00- eL		19 43 40	LT	32.	167.8		
21	LZ-	eL	03 26 50	LZ	18	470.1			21	LZ-	eL	19 58 30	LZ	13	199.8		
21	03 29 19.*		13.9 N 93.0 W	OFF COAST CHIAPAS, MEXICO					21	22 03 51.6		37. N 115.1 W	SOUTHERN NEVADA				
			H= 33 KM MAG 4.40 CGS									H= 33 KM MAG 3.80 CGS					
21	06 24 16.*		55. N 158.2 W	ALASKA PENINSULA					21	LZ- eP		23 34 40	LZ	10.	163.8		
			H= 33 KM MAG 4.40 CGS						21	LZ- e		23 40 40	LR	23	178.8		
21	07 59 17.		28.3 N 52.5 E	SOUTHERN IRAN					21	GG- eL		23 41 00	LT	20	340.2		
			H= 54 KM MAG 4.90 CGS						21	LZ- e		23 44 20	LR	25	137.2		
21	08 11 44		LZ	32	2292.9	42.9			21	LZ- e		23 45 40	LR	22	257.0		
	eL		21 40	LT	37	2694.6			21	LZ- e		23 47 10	LR	40	910.2		
21	GG- eL		08 20 16	LT	31	1063.9	37.9										
21	LZ- eLQ		08 54 00	LR	37	187.2	124.6		21	23 49 13.6		18.7 S 169.1 E	NEW HEBRIDES ISLANDS				
	eLR		09 00 38	LR	29	757.7						H= 81 KM					
21	LZ- e		08 16 02	LR	14	238.8			21	LZ- e		23 49 15	LR	27.	878.4		
21	LZ- eL		08 21 13	LZ	16	200.7			21	00- eL		23 50 15	LR	35	389.9		
21	10 13 33.4		19.6 S 66.1 W	SOUTHERN BOLIVIA					21	23 58 56.6		12.2 S 110.5 E	NORTHWEST OF AUSTRALIA				
			H= 199 KM MAG 4.70 CGS									H= 35 KM MAG 5.30 CGS					
22	LZ- eP		00 18 54.8	SZ	1.6	49.8	151.7										

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eL		01 11 25	LZ	38	492±2		
	eLR		16 30	LZ	33	606±0		
22	LZ-	e	00 52 50	LZ	16	57±4		
22	LZ-	e	00 58 55	LT	25	289±6		
22	LZ-	e	01 03 45	LT	19	488±8		
22	LZ-	eL	01 05 50	LR	36	1235±1		
22	01 07 51.*		1.5 N 126.2 E	MOLUCCA PASSAGE				
			H= 33 KM					
22	03 03 20.7		31.5 N 114.3 W	GULF OF CALIFORNIA				
			H= 15 KM	MAG 5.37 CGS				
22	LZ-	eP	03 14 10.0	SZ	1.0	9.2	64±7	4.92
22	GG-	eL	03 48 10	LT	23	1082±9	85±8	
22	03 28 12.*		4.2 511.0	WYOMING				
			H=450 KM	MAG C.GS CGS				
22	05 26 05.*		31.4 N 114.4 W	GULF OF CALIFORNIA				
			H= 33 KM	MAG 4.40 CGS				
22	05 42 39.*		34.9 S 15.1 W	TRISTAN DA CUNHA REGION				
			H= 33 KM					
22	GG-	eLR	06 27 00	LZ	25	204±8	87±4	
22	OO-	eLR	06 29 45	LZ	38	418±9	97±9	
22	07 34 17.*		32. N 113.8 W	GULF OF CALIFORNIA				
			H= 15 KM	MAG 4.60 CGS				
22	12 41 22.1		10.5 S 161.6 E	SOLOMON ISLANDS				
			H= 50 KM	MAG 5.00 CGS				
22	GG-	eL	16 50 45	LZ	22	100±1		
22	17 04 31.2		51.9 N 30.0 W	NORTH ATLANTIC RIDGE				
			H= 33 KM	MAG 4.90 CGS				
22	GG-	eP	17 10 02.5	SZ	0.6	8.6	25±9	4.53
	eLQ		29 08	LR	30	1651±3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eLR		33 55	LR	20	467±9		
22	GG-	eL	17 17 05	LZ	28	372±2		
22	GG-	eL	18 43 30	LR	22	198±3		
22	GG-	eL	19 25 30	LR	23	538±3		
22	OO-	e	19 32 45	LT	19	837±3		
22	OO-	eL	19 34 10	LZ	26	990±1		
22	20 07 51.7		10.1 S 161.7 E	SOLOMON ISLANDS				
			H= 71 KM	MAG 4.60 CGS				
22	OO-	eL	21 22 25	LZ	25	460±4		
22	GG-	eL	21 30 30	LR	25	115±9		
22	GG-	eL	23 44 40	LZ	22	100±1		
23	LZ-	eP	02 53 47.5	SZ	0.5	1±7		
23	LZ-	e	02 53 58	SZ	999±9	9999±9		
23	02 56 13.3		59.4 N 30.3 W	NORTH ATLANTIC OCEAN				
			H= 33 KM	MAG 4.60 CGS				
23	GG-	eL	03 09 30	LR	21	572±8	25±6	
23	04 47 46.4		59.4 N 30.2 W	NORTH ATLANTIC OCEAN				
			H= 33 KM	MAG 4.80 CGS				
23	GG-	eL	05 00 00	LR	25	637±6	25±5	
23	OO-	e	05 04 42	LT	18	439±2		
23	OO-	eL	05 06 26	LT	23	219±3		
23	LZ-	eP	06 44 18.0	SZ	0.6	62±1		3±3
	eS		44 59	ST	0.6	12±6		
23	OO-	e	06 56 15	LT	18	1142±0		
23	OO-	eL	06 57 55	LT	25	400±7		
23	LZ-	eLQ	07 32 15	LR	30	88±3		
23	LZ-	eLR	07 34 25	LZ	20	217±2		
23	LZ-	eP	07 50 59.5	SZ	999±9	9999±9		1±7
	eS		51 23	ST	0.4	5±8		
23	09 35 25.		4.5 S 138.4 E	WEST NEW GUINEA				
			H=163 KM	MAG 5.00 CGS				
23	LZ-	eP±1	09 54 51.0	SZ	0.8	11±2	146±3	
	e		55 20	SZ	0.8	12±6		
23	09 54 40.*		33.1 N 142.1 E	OFF EAST COAST HONSHU, JAPAN				
			H= 33 KM	MAG 4.10 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG			
23	10 30 28*		30° 8' S 71° 9' W	NEAR COAST OF CENTRAL CHILE							
			H= 76 KM	MAG 4.20 CGS							
23	12 23 37*		6° 9' N 73° 0' W	NORTHERN COLOMBIA							
			H= 161 KM	MAG 4.20 CGS							
23	LZ- eP		12 28 34.5	SZ	0.7	13.5	23.4	4.58			
	ePP		29 07	SZ	0.6	11.5					
23	13 26 25.4		21° 6' S 69° 6' W	NORTHERN CHILE							
			H= 71 KM	MAG 4.20 CGS							
23	LZ- eP		13 27 50.8	SZ	0.4	21.8	5.4	4.88			
	e		28 03	SZ	0.5	9999.9					
	eLR		29 00	LZ	20	177.1					
23	15 24 05.3		6° 1' S 149° 4' E	NEW BRITAIN REGION							
			H= 63 KM	MAG 4.90 CGS							
23	GG- ePD		15 39 41	LZ	22.	118.5	124.2				
	ePP		44 49	LZ	24	1259.8					
	ePKS		46 23	LT	23	652.5					
	ePPP		47 20	LZ	22	889.0					
	ePS		54 50	LT	24	1871.2					
	ePPS		56 16	LT	26	1339.0					
	e		16 00 11	LZ	25	875.7					
	e		02 42	LT	42	4886.9					
	eSSS		06 27	LT	23	9999.9					
	e		11 25	LT	26	1468.5					
	SKSSKS		15 52	LR	41	3275.0					
	eL		23 12	LR	34	2831.0					
23	LZ- eP		15 43 12.0	SZ	1.0	9.3	136.4				
	eP		43 13	LZ	16	450.4					
	e		43 26	SZ	1.0	55.9					
	ePP		46 00	LZ	24	1003.6					
	eSKP		46 51	SZ	1.3	30.0					
	ePKS		47 05	LT	22	9999.9					
	ePPP		49 10	LZ	21	403.0					
	ePCPP		51 20	LZ	19	295.9					
	ePS		56 10	LT	20	405.7					
	e		57 20	LZ	22	337.8					
	eSPP		58 15	LZ	21	604.5					
	eP ¹ PCS		59 40	LT	25	413.9					
	eSKKS		16 00 20	LT	23	300.6					
	ePSS		04 40	LT	25	9999.9					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eLQ		21 40	LR	29	9999.9		
	eLR		28 48	LZ	26	9999.9		
23	00- ePP		15 43 56	LZ	22	957.5	117.0	
	ePPP		46 39	LZ	21	777.8		
	ePS		53 42	LT	30	2045.0		
	eSS		59 52	LT	22	1966.4		
	eSSS		16 04 38	LT	44	9999.9		
	e		10 45	LT	24	1506.4		
	e		22 06	LT	36	3113.5		
	eL		25 04	LT	29	2381.5		
23	17 32 56.*		10° 2' N 102° 7' W	OFF COAST OF MEXICO				
			H= 33 KM	MAG 4.30 CGS				
23	LZ- eP		17 46 15.0	SZ	0.4	4.5	3.0	
	eS		46 53	ST	0.4	6.5		
23	22 03 26.5		15° 6' N 93° 9' W	NEAR COAST CHIAPAS, MEXICO				
			H= 144 KM	MAG 3.60 CGS				
24	01 36 24.*		61° 2' N 146° 8' W	SOUTHERN ALASKA				
			H= 47 KM	MAG 4.00 CGS				
24	01 51 03.3		38° 8' N 112° 3' W	UTAH				
			H= 33 KM					
24	01 55 38.*		39° 1' N 112° 2' W	UTAH				
			H= 33 KM					
24	02 01 33.8		20° S 175° 7' W	TONGA ISLANDS				
			H= 152 KM	MAG 4.50 CGS				
24	LZ- eP		03 09 18.3	SZ	0.4	35.9	1.7	
	eS		09 41	ST	0.5	7.3		
24	05 48 13.*		60° N 147° 3' W	SOUTHERN ALASKA				
			H= 33 KM	MAG 3.80 CGS				
24	06 54 26.4		51° 9' N 161° 8' E	OFF EAST COAST OF KAMCHATKA				
			H= 33 KM	MAG 4.80 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
24	LZ-	eP	07 32 38.3	SZ	0.7	12.2			24	LZ-	eP <i>1</i>	17 46 04.5	SZ	1.3	59.9	160.0		
24	GG-	eP	07 36 50.0	SZ	0.1	56.4			24	GG-	eP <i>2</i>	17 46 45	SZ	1.0	92.9			
24	LZ-	eP	08 04 35.4	SZ	0.5	15.0			24	19 53 59.7		12.9 N 120.3 E MINDORO, PHILIPPINE ISLANDS						
24	LZ-	eL	08 05 50	ST	1.0	13.5			24			H= 33 KM MAG 5.00 CGS						
24			08 31 05.8		18.4 N 68.8 W MONA PASSAGE				24	00-	eL	20 46 08	LZ	22.	113.9	87.9		
					H= 179 KM MAG 4.60 CGS				24	21 24 48.		86.9 N 52.0 E NORTH OF FRANZ JOSEF LAND						
24	LZ-	eP	08 37 38.1	SZ	0.9	13.2	34.4	4.62	24	21 56 54.2		58.4 N 150.3 W GULF OF ALASKA						
	ePP		39 00	LZ	15	125.6			24	22 07 03		H= 22 KM MAG 5.80 CGS						
	ePP		39 02	SZ	1.8	83.9			24	00-	e	07 09	LZ	17	239.3	60.0		
	eS		42 54	LT	14	124.5			24	00-	eP		SZ	0.7	13.7		5.11	
	eL		45 40	LZ	17	224.3			25	02 56 17.*		7. S 129.4 E BANDA SEA						
24	GG-	eP	10 01 22.0	SZ	0.3	27.2	2.3		25	04 55 14.*		H= 143 KM MAG 5.00 CGS						
	eS		01 40	ST	0.4	61.4			25	05 03 18.*		24.4 S 68.6 W CHILE ARGENTINA BORDER REG.						
24			10 37 23.4		1.5 S 78.1 W ECUADOR				25	05 46 12.1		H= 123 KM MAG 4.00 CGS						
					H= 173 KM MAG 5.10 CGS				25	07 08 11.1		12.1 N 87.7 W NEAR COAST OF NICARAGUA						
24	LZ-	eP	10 41 17	LZ	9.	476.5	17.4		25	07 16 14		H= 72 KM MAG 4.00 CGS						
	eP		41 17	SZ	1.1	121.5			25	07 18 40		5.4 S 147.1 E EAST NEW GUINEA REGION						
	eS		44 30	LT	14	1084.6			25	07 45 47.1		H= 203 KM MAG 5.00 CGS						
	e		44 34	SZ	1.0	34.2			25	08 05 18		35.4 N 28.6 E EASTERN MEDITERRANEAN SEA						
	eLQ		44 44	SZ	1.5	86.7			25	08 05 18		H= 11 KM MAG 4.60 CGS						
	e		45 24	LT	17	396.6			25	08 05 18		37.6 S 73.7 W NEAR COAST OF CENTRAL CHILE						
	eLR		45 45	ST	1.0	46.5			25	08 05 18		H= 24 KM MAG 4.50 CGS						
	eL		48 20	LT	16	601.6			25	08 05 18		35.6 N 29.1 E EASTERN MEDITERRANEAN SEA						
24	GG-	eP	15 41 39.5	SZ	0.3	9999.9			25	08 05 18		H= 45 KM MAG 4.60 CGS						
24	LZ-	eL	15 45 48	LT	23	223.9			25	08 05 18		105.6 19.1						
24			16 42 22.*		2.0 N 79.1 W NEAR COAST OF ECUADOR				25	08 05 18		596.8						
					H= 98 KM MAG 4.70 CGS				25	08 05 18		114.6						
24	LZ-	eL	16 54 11	LT	21.	226.3	20.9		25	GG-	e	08 05 18	SZ	999.9	9999.9			
24									25	GG-	e							
24			17 26 15.1		2 N 123.8 E NORTHERN CELEBES				25	08 05 01.6		35.6 N 29.1 E EASTERN MEDITERRANEAN SEA						
					H= 127 KM MAG 5.40 CGS													

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
25	11 11	53.6	36.1 N 28.7 E	DODECANESE ISLANDS					25	GG-	eL	21 04 05	L	21.	235.6	19.7		
			H= 50 KM	MAG 4.90	CGS				25	21 03	30.*	19.5 S 176.9 W	FIJI ISLANDS REGION					
25	GG-	eP	11 16 10	LZ	17	560.7	18.6						H=444 KM	MAG 4.20	CGS			
	eS		19 45	LT	7	9999.9			25									
	eL		22 50	LZ	25	9999.9												
25	00-	eP	11 17 40.0	SZ	0.6	4.3	27.4	4.30		25	LZ-	eL	21 49 50	LZ	26.	532.2	101.2	
	eP		17 41	LZ	12	377.7												
	eL		22 50	LZ	24	1033.0			25									
25	11 42	59.9	35.4 N 28.9 E	EASTERN MEDITERRANEAN SEA					25	22 27	18.*	18.2 N 68.2 W	MONA PASSAGE					
			H= 43 KM	MAG 4.50	CGS							H= 96 KM	MAG 4.50	CGS				
25	13 47	20.6	78.2 N 126.6 E	EAST OF SEVERNAYA ZEMLYA					26	LZ-	eP	00 36 03.5	SZ	0.5	8.7	1.9		
			H= 50 KM	MAG 6.38	CGS					eS		36 28	ST	0.6	12.0			
25	00-	eP	13 54 15.3	SZ	0.7	63.5	35.8	5.62	26	03 18	44.1	52.1 N 30.1 W	NORTH ATLANTIC RIDGE					
	eP		54 16	LZ	20	5458.8						H= 33 KM	MAG 5.40	CGS				
	ePP		55 24	LZ	999	9999.9			26	00-	eP	03 23 56.4	SZ	0.8	12.6	23.9	4.46	
	e		59 47	SZ	1.1	122.7				eL		30 00	LR	28	873.8			
	eS		59 52	LR	999	9999.9			26	GG-	eP	03 24 15.1	SZ	1.1	54.8	25.9	5.07	
	eL		14 08 18	SR	4.6	1757.0				eS		29 02	LT	16	214.1			
25	GG-	eP	13 55 46.4	SZ	1.4	365.1	46.6	6.15		eL		31 07	LT	27	878.6			
	eP		55 48	LZ	19	7603.4			26	LZ-	eP	03 30 29.0	SZ	1.5	38.1	75.8	5.19	
	ePCP		57 22	SZ	1.2	248.3				eL		54 25	LZ	40	171.0			
	e		57 37	LT	999	9999.9				eLR		57 20	LZ	28	134.6		Avg. 4.90	
	e		57 43	ST	1.9	872.3												
	eS		14 02 40	LT	999	9999.9			26	05 40	27.1	47.2 N 148.4 E	NORTHWEST OF KURILE ISLANDS					
	eL		06 12	SR	3.4	831.2						H= 308 KM	MAG 5.30	CGS				
							Avg.	5.88	26	00-	eP	05 50 46.8	SZ	1.0	62.1	66.8	5.29	
25	14 37	32.5	35.7 N 29.1 E	EASTERN MEDITERRANEAN SEA						GG-	eP	05 51 46.1	SZ	0.7	22.0	76.6	5.00	
			H= 24 KM	MAG 4.80	CGS					LZ-	ePP	06 02 10	SZ	1.5	42.4	136.7		
																Avg. 5.14		
25	GG-	eP	14 41 55.6	SZ	0.9	25.4	19.1		26	07 35	55.7	45.1 N 151.0 E	KURILE ISLANDS					
25	GG-	eP	17 20 07.9	SZ	0.2	34.5						H= 33 KM	MAG 4.20	CGS				
25	GG-	e	18 03 28	LT	17	279.8			26	09 00	20.*	13.9 N 92.6 W	OFF COAST OF CHIAPAS, MEXICO					
25	GG-	eL	18 05 16	LT	25	868.2						H= 33 KM	MAG 3.90	CGS				
25	00-	eL	18 11 11	LR	17	412.7			26	12 59	31.1	2 N 126.6 E	MOLUCCA PASSAGE					
25	19 20	33.	33.8 N 27.9 E	EASTERN MEDITERRANEAN SEA								H= 33 KM	MAG 4.50	CGS				
			H= 132 KM	MAG 4.40	CGS				26	LZ-	eP	13 04 30.3	SZ	0.5	4.5			
25	GG-	eL	19 30 28	LT	22	279.8	20.1											
25	20 53	41.*	34.9 N 29.0 E	EASTERN MEDITERRANEAN SEA														
			H= 70 KM															

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
26		13 21 03.*	23°3 S 179°5 W	SOUTH OF FIJI ISLANDS					27		04 45 02.6	5°6 S 133°9 E	AROE ISLANDS REGION				
			H=368 KM	MAG 4.60	CGS							H= 9 KM	MAG 5.10	CGS			
26	LZ-	eP	15 52 25.0	SZ	0.5	10.9			27	LZ-	eP ¹²	05 04 56.5	SZ	0.8	60.5	149.0	
26		16 58 52.*	43°8 N 102°2 W	SOUTH DAKOTA					27	00-	eL	05 52 33	LZ	27.	67.6		
			H= 15 KM	MAG 4.40	CGS				27	LZ-	eL	06 02 05	LZ	20	93.4		
26	LZ-	eP	17 00 26.0	SZ	0.5	6.3			27	LZ-	eP	06 23 27.5	SZ	2.1	41.1		
26		17 22 55.*	60°9 N 147°9 W	SOUTHERN ALASKA					27	LZ-	e	06 30 55	LR	20	94.9		
			H= 33 KM	MAG 3.90	CGS				27	LZ-	eLQ	06 34 20	LR	27	98.9		
26	LZ-	eP	19 23 39.0	SZ	0.3	2.3	1.6		27	LZ-	eLR	06 38 15	LT	25	9999.9		
	eS		24 01	ST	0.5	12.4			27	GG-	eLQ	06 46 45	LR	35	349.8		
26		19 31 40.8	20°3 S 178°3 W	FIJI ISLANDS REGION					27	GG-	eLR	06 51 57	LT	27	374.7		
			H=510 KM	MAG 4.30	CGS				27	00-	eL	06 53 00	LZ	40	525.1		
26		20 47 53.*	28°8 S 69°3 W	CHILE ARGENTINA BORDER REG.					27	GG-	eL	07 26 25	LR	18	308.7		
26	LZ-	eP	21 38 44.0	SZ	0.6	32.0			27	07 53 54.8	17.5 S 173.0 W	TONGA ISLANDS					
26	LZ-	e	21 39 09	SZ	0.6	11.3					H= 33 KM	MAG 5.30	CGS				
26	LZ-	eP	22 34 05.5	SZ	0.4	12.5			27	GG-	eP ¹²	08 13 39.0	SZ	2.0	405.8	147.7	
26		23 45 04.5	57°3 N 152°7 W	KODIAK ISLAND REGION					27	LZ-	eSKS	08 18 20	LT	15	343.9	98.4	
			H= 18 KM	MAG 4.90	CGS					e	19 16	LZ	16	118.8			
27	01 34 26.7		23°7 N 143°6 E	VOLCANO ISLANDS REGION					27	eSP	20 25	LZ	16	294.2			
			H= 39 KM	MAG 5.10	CGS				27	e	26 00	LT	22	232.6			
27	00-	e	01 47 10	SZ	0.9	14.1	87.3		27	eL	39 50	LZ	27	9999.9			
	eL		02 17 24	LR	32	365.4			27	08 27 42.*	6°5 N 123°5 E	MINDANAO, PHILIPPINE ISLANDS					
27	LZ-	eP ¹¹	01 54 13.0	SZ	1.0	27.4	149.0				H= 33 KM	MAG 5.10	CGS				
	eL		02 51 15	LT	20	77.8			27	09 10 54.7	15.1 N 98.8 W	OFF COAST GUERRERO, MEXICO					
27	03 10 19.*		54°1 N 167°4 W	FOX ALEUTIAN ISLANDS							H= 43 KM	MAG 3.90	CGS				
			H= 33 KM	MAG 4.30	CGS				27	09 31 15	LR	20.	512.5	43.2			
27	00-	e	04 47 10	SZ	0.9	14.1	87.3		27	GG-	eL	09 15 20	LR	20.	170.5		
	eL		05 17 24	LR	32	365.4			27	LZ-	eP	09 23 13.5	SZ	2.0	52.3		
27	01 54 13.0		SZ	1.0	27.4	149.0			27	09 53 51.	65.3 N 133.8 W	N. YUKON TERRITORY, CANADA					
	eL		02 51 15	LT	20	77.8				H= 33 KM	MAG 4.60	CGS					
27	03 10 19.*		54°1 N 167°4 W	FOX ALEUTIAN ISLANDS					27	10 32 00.*	63.6 N 148.2 W	CENTRAL ALASKA					
			H= 33 KM	MAG 4.30	CGS					H=106 KM	MAG 4.20	CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
27	ii	58 41.3	28.2 N 55.7 E	SOUTHERN IRAN						ii	58 27		SR	1.0	36.0			
			H= 69 KM	MAG 5.10	CGS													
27	00-	eP	12 06 45.4	SZ	0.7	10.9	44.3	4.71	27	21 23 38.9		22.7 S 172.0 E	LOYALTY ISLANDS REGION					
27	LZ-	eP ¹	12 17 42.5	SZ	1.0	7.3	127.4					H= 33 KM						
27	GG-	eL	12 17 50	LT	30	151.7	40.0											
27	12 25 22.5		4.8 N 76.2 W	COLOMBIA					27	21 46 42.*		1.5 N 78.4 W	COLOMBIA ECUADOR BORDER REG.					
			H= 112 KM	MAG 4.80	CGS								H= 141 KM	MAG 4.90	CGS			
27	12 56 46.1		27.5 N 55.9 E	SOUTHERN IRAN					27	LZ- eP		21 51 07.3	SZ	0.5	11.5	20.2	4.54	
			H= 33 KM	MAG 5.30	CGS													
27	00-	eP	13 04 59.4	SZ	0.7	12.5	45.0	4.89	27	23 48 26.3		21.6 S 175.3 W	TONGA ISLANDS					
	e	14 57	LT	25	572.0							H= 60 KM	MAG 5.20	CGS				
	eLQ	17 35	LT	40	1112.0													
	eLR	21 15	LT	25	2043.0													
27	GG-	eLQ	13 13 42	LT	20	279.4	40.6		28	LZ- eLR		00 35 30	LZ	22.	85.4	99.0		
	eLR	18 05	LT	31	1380.2													
27	LZ-	eP ¹	13 15 56.0	SZ	1.7	38.8	127.6		28	LZ- eP		02 11 58.7	SZ	0.4	8.9	2.0		
	eLQ	54 30	LR	30	150.7													
	eLR	58 45	LR	30	346.0													
27	LZ- eLQ	13 00 15	LR	32.	86.4													
27	LZ- eLR	13 02 20	LR	25	150.4				28	04 35 29.3		19.8 S 178.2 W	FIJI ISLANDS REGION					
27	LZ- eL	13 12 05	LZ	25	145.5							H= 580 KM	MAG 5.40	CGS				
27	LZ- eL	14 10 20	LZ	24	9999.9													
27	15 37 52.*		3. S 103.1 E	SOUTHERN SUMATRA					28	GG- eP ¹		04 54 14.7	SZ	0.8	72.6	149.2		
			H= 506 KM							eP ²		54 20	SZ	1.2	222.6			
27	19 31 56.9		35.5 N 28.7 E	EASTERN MEDITERRANEAN SEA					28	06 50 47.*		37. N 113.1 W	UTAH					
			H= 33 KM	MAG 4.70	CGS													
27	GG-	eP	19 36 25	LZ	17	387.2	19.1		28	08 25 08.9		18.2 S 174.6 W	TONGA ISLANDS					
	eP	36 27	SZ	0.9	50.6							H= 70 KM	MAG 4.40	CGS				
	eS	39 53	LT	12	4030.5													
	eLR	42 10	LT	28	9999.9													
27	00-	eS	19 42 32	LR	23	665.9	28.0		28	LZ- eP		09 03 44.5	SZ	0.5	8.8			
	eLQ	45 35	LR	37	2091.4													
	eLR	47 25	LR	24	2041.9				28	LZ- e		09 05 04	ST	0.6	10.2			
27	LZ- eL	20 25 45	LZ	31	217.9	105.0			28	GG- eP		10 00 44.3	SZ	0.6	25.6	1.1		
										eS		00 59	SR	0.3	9999.9			
27	LZ- eP	19 57 43.0	SZ	0.8	15.1	3.5			28	10 51 28.*		41.6 N 125.9 W	OFF COAST NORTH CALIFORNIA					
												H= 33 KM	MAG 4.90	CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
28			12 06 18.3	37°9' N 19°8' E	IONIAN SEA							04 05	L		208	208.7		
				H= 61 KM	MAG 4.50	CGS												
28	LZ-	eP	12 18 10.0	SZ	0.3	11.9	1.6		28	19 05 44.*		22.8 N 120.9 E	TAIWAN					
		eS	18 32.5	SR	0.5	12.7						H= 65 KM						
28	GG-	eP	12 38 08.5	SZ	0.4	12.9	1.7		28	00- eL		19 49 15		LR	20.	279.4	79.5	
		eS	38 30	SR	0.4	13.5												
28			13 21 13.5	7.1 N 95.1 E	NICOBAR ISLANDS REGION				28	LZ- eL		19 49 35		LZ	25.	96.2		
				H= 33 KM	MAG 5.10	CGS			28	00- eL		20 25 45		LR	35	300.9		
28	LZ-	eP ¹	13 41 13.2	SZ	1.5	33.0	161.5		28	LZ- eP		21 12 28.0		SZ	0.5	3.5	2.1	
		eP ²	41 58	SZ	0.7	23.2						eS	12 56	ST	0.8	21.2		
28			13 22 05.*	7.6 N 95.6 E	NICOBAR ISLANDS REGION				28	00- eL		22 15 44		LR	29	282.8		
				H= 33 KM	MAG 5.20	CGS												
28	LZ-	eP ²	13 42 50.7	SZ	1.8	55.0	162.2		28	22 57 58.2		51.5 N 130.2 W	QUEEN CHARLOTTE ISLANDS REG.					
		eLR	14 43 20	LZ	20	52.9						H= 33 KM	MAG 4.20	CGS				
28	LZ-	e	13 56 35	SZ	1.3	41.9			29	02 45 29.*		43.3 N 1 E	FRANCE					
									29	GG- e		02 48 43		SZ	0.5	8.8	10.0	
28			14 42 18.5	24.4 S 179.8 E	SOUTH OF FIJI ISLANDS				29	GG- eL		50 59		ST	0.8	60.1		
				H= 549 KM	MAG 4.90	CGS												
28	GG-	eP	15 30 23.0	SZ	0.5	81.2	1.2		29	LZ- eL		03 55 10		LT	30.	102.5		
		eS	30 39	ST	0.2	9999.9												
28	LZ-	eL	16 07 35	LZ	35	162.9			29	04 08 03.2		57.8 N 156.0 W	ALASKA PENINSULA					
												H= 78 KM	MAG 4.80	CGS				
28			18 17 03.2	23.5 N 120.6 E	TAIWAN				29	GG- eP		05 09 07.0		SZ	0.4	9.6	9	
				H= 10 KM	MAG 5.20	CGS								ST	0.3	39.4		
28	00-	eLQ	18 54 35	LR	45.	877.8	78.7		29	05 20 19.8		71.6 N 3.7 W	JAN MAYEN ISLAND REGION					
		eLR	57 25	LR	34	1340.1						H= 33 KM	MAG 4.70	CGS				
28		eL	19 01 30	LR	17	2144.2			29	GG- eP		05 25 24.0		SZ	1.0	18.7	23.0	4.51
		eL	01 30	LZ	20	264.7								LT	22	161.7		
28	GG-	eLQ	19 00 10	LR	35	506.7	84.1		29	GG- eL		32 40		LZ	24	1058.8	12.0	
		eLR	02 35	LR	22	841.2			29	00- eL		05 26 30		ST	27 10	1051.6		
28		eL	04 05	LR	23	783.2								LT	22	720.0		
		eL	04 05	LZ	20	132.3			29	eL		27 10		LR	25			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eL	27 10	L*	21s	605.8			29	GG-	eLR	34 15	LZ	37s	9999.9		
29	06 05 24.2		19.3 S 66.3 W SOUTHERN BOLIVIA						29	GG-	eL	18 05 27	LZ	30	135.9	101.1	
			H=232 KM MAG 5.00 CGS						29		eL	07 34	LZ	25	134.7		
29	LZ- eP		06 06 30.0	SZ	999.9	9999.9	3.7		29	17 26 55.5		20.7 S 174.1 W TONGA ISLANDS					
	eP		06 30	LZ	999	9999.9				H= 33 KM MAG 4.40 CGS							
	eL		07 18	L*	999	9999.9			29	00- eL		19 23 23	LZ	38s	2066.6		
29	LZ- e		06 20 13	LT	17s	311.2			29	19 37 56.		35.2 N 28.6 E EASTERN MEDITERRANEAN SEA					
29	LZ- e		06 22 15	LT	16	348.1				H= 63 KM MAG 4.70 CGS							
29	LZ- eP		06 34 06.0	SZ	0.5	3.5			29	GG- eL		19 47 10	LZ	30	139.2	19.3	
29	LZ- eL		06 37 40	LZ	27	126.6				eL	48 32	LZ	17	481.5			
29	LZ- eLR		06 40 15	LZ	20	234.1			29	00- eL		20 11 33	LZ	42s	3626.8		
29	06 55 30.*		72.3 N 2.8 W JAN MAYEN ISLAND REGION						29	20 51 55.*		11.4 N 87.2 W NEAR COAST OF NICARAGUA					
			H= 33 KM MAG 4.40 CGS							H= 33 KM MAG 4.20 CGS							
29	LZ- eP		08 39 23.0	SZ	0.5	4.4			29	LZ- eL		21 50 00	LZ	40s	151.7		
29	LZ- e		08 39 27	SZ	0.5	23.0			29	LZ- eL		21 52 40	LZ	29	153.8		
29	LZ- e		08 43 31	SZ	0.6	5.2			29	LZ- eL		21 52 40	LR	26	96.1		
29	LZ- eP		08 58 07.0	SZ	0.5	5.3			29	LZ- eL		21 52 40	LZ	20	32.0		
29	LZ- e		08 58 12	SZ	0.5	24.7			30	LZ- eP		01 10 22.0	SZ	1.6	80.3		
29	GG- eP		11 22 32.5	SZ	0.3	8.3	1.1		30	LZ- e		01 19 05	LZ	22	290.6		
	eS		22 48	SR	0.3	9999.9			30	LZ- e		01 23 05	LR	25	216.3		
29	12 49 58.3		13.3 S 172.4 E NEW HEBRIDES ISLANDS REGION						30	LZ- e		01 26 40	LZ	25	185.8		
			H= 33 KM MAG 4.90 CGS						30	LZ- eLR		01 30 50	LZ	40	830.1		
29	13 25 25.9		13.7 S 172.6 E NEW HEBRIDES ISLANDS REGION						30	LZ- eL		01 33 30	LZ	28	791.3		
			H= 33 KM MAG 5.00 CGS						30	LZ- eL		01 33 30	LZ	22	376.5		
29	00- eL		14 30 32	LZ	30s	1860.7	130.9		30	LZ- eL		01 33 30	LR	28	512.7		
									30	GG- eL		01 53 37	LZ	25	134.7		
29	LZ- eP		15 12 37.0	SZ	0.7	15.8			30	GG- eL		01 57 36	LZ	19	175.9		
29	LZ- e		15 13 01	SZ	0.8	19.5			30	02 35 08.*		27.6 N 88.3 E SIKKIM					
29	17 17 34.*		3.2 S 92.2 W GALAPAGOS ISLANDS REGION							H= 21 KM MAG 5.20 CGS							
			H= 33 KM MAG 4.20 CGS						30	GG- eP		02 45 26.7	SZ	1.4	89.0	61.4	5.71
29	LZ- eLQ		17 32 20	L*	20s	255.2	26.7			eL	03 07 27	LZ	34	458.6			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30	LZ-	eP eS	03 18 17.5 18 43	SZ SR	0.4 999.9	9999.9 9999.9	268		30	21 03 58.*		29.2 N 114.4 W BAJA CALIFORNIA	H= 33 KM	MAG 5.20	CGS		
30	03 19 07.5		6.6 N 82.5 W SOUTH OF PANAMA		H= 45 KM	MAG 4.20	CGS		30	LZ- eL	21 30 31	LZ	27.	404.3	63.3		
									30	00- eL	21 40 12	LT	35	582.5	79.7		
									30	GG- eL	21 49 44	LZ	26	303.7	87.8		
30	LZ- eLQ eLR	03 32 55 34 30	LR	30. LZ	24	167.4 309.9	26.6		30	21 44 56.9	19.9 S 176.0 W FIJI ISLANDS REGION	H=253 KM	MAG 5.60	CGS			
30	04 53 21.6		71.8 N 3.6 W JAN MAYEN ISLAND REGION		H= 33 KM	MAG 4.50	CGS		30	GG- eP*2	22 04 18.7	SZ	0.8	44.1	149.7		
30	07 57 38.		18.9 S 169.5 E NEW HEBRIDES ISLANDS		H=210 KM	MAG 4.00	CGS		30	22 30 24.8	13.7 S 172.5 E NEW HEBRIDES ISLANDS REGION	H= 33 KM					
30	08 11 42.5		15.8 S 174.9 W TONGA ISLANDS		H=286 KM	MAG 4.90	CGS		30	22 57 35.*	34.1 N 118.4 W SOUTHERN CALIFORNIA	H= 14 KM	MAG 4.25	CGS			
30	08 47 34.7		5 931.4 NEW GUINEA		H=580 KM	MAG 6.00	CGS		30	00- eL	23 35 21	LT	30	286.3	76.6		
									30	GG- eL	23 46 00	LZ	24	259.9	85.4		
30	15 20 50.7		12.6 N 88.5 W OFF COAST OF CENTRAL AMERICA		H= 54 KM	MAG 4.60	CGS		31	02 14 20.3	35.2 S 106.0 W EASTER ISLAND CORDILLERA	H= 33 KM	MAG 5.20	CGS			
30	LZ- eP eL	15 27 44.5 39 50	SZ LZ	1.0 25	9.2 192.4	34.8	4.66		31	LZ- eP	02 21 42.2	SZ	1.2	28.1	38.4	4.91	
										eP	21 45	LZ	16	263.9			
										ePP	23 15	LZ	13	470.2			
										eS	27 46	LT	22	9999.9			
										eLQ	30 20	LR	999	9999.9			
										eLR	32 25	LZ	999	9999.9			
30	LZ- eP	15 37 55.0	SZ	0.9	21.5				31	GG- eP*	02 33 41.2	SZ	1.0	18.6	132.8		
30	LZ- e	15 38 40	SR	1.0	52.3					eL	03 18 20	LZ	26	540.0			
30	LZ- e	15 38 43	SZ	1.5	115.6					00- eL	03 20 50	LT	24	258.5	133.0		
30	17 55 17.		9.8 S 159.1 E SOLOMON ISLANDS		H= 35 KM	MAG 4.80	CGS		31	02 42 09.7	55.2 N 162.0 E NEAR EAST COAST OF KAMCHATKA	H= 33 KM	MAG 4.60	CGS			
30	LZ- eP	18 23 28.0	SZ	0.9	9.9				31	04 22 09.*	1.4 N 66.0 E CARLSBERG RIDGE						
30	LZ- eP eS	18 49 44.0 50 11	SZ SR	0.3 0.5	12.7 4.3	2.1					H= 29 KM						
30	20 37 09.2		13.6 S 172.4 E NEW HEBRIDES ISLANDS REGION		H= 33 KM	MAG 4.90	CGS		31	00- eL	05 04 23	LR	33.	672.8	72.6		
									31	LZ- eL	05 26 00	LZ	44	206.8	132.8		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
31	05 30	35+1	25°7 N 128°1 E	RYUKYU ISLANDS				
			H= 91 KM					
31	00-	eL	06 14 19	L†	26°	180+8	79+9	
31	GG-	eL	06 24 35	LZ	19	172+4	86+4	
31	LZ-	IP	12 15 07+0D	SZ	0+4	39+8	1+8	
		eS	15 31	SR	0+5	18+0		
31	LZ-	IP	16 12 32+3D	SZ	0+2	36+1	1+7	
		eS	12 55	SR	0+5	10+5		
31	17 03	36+*	35+5 N 118+4 W	CENTRAL CALIFORNIA				
			H= 5 KM	MAG 4+50 CGS				
31	17 07	39+*	9+6 N 85+4 W	OFF COAST OF COSTA RICA				
			H= 33 KM	MAG 4+20 CGS				
31	19 36	38+*	59+5 N 145+9 W	GULF OF ALASKA				
			H= 33 KM	MAG 4+60 CGS				
31	LZ-	eL	21 37 30	LZ	20°	56+4		
31	23 20	19+4	52+4 N 170+7 W	FOX ALEUTIAN ISLANDS				
			H= 33 KM	MAG 5+20 CGS				
31	00-	eP	23 31 10+0	SZ	0+5	6+8	66+9	5+04
		eL	53 00	LZ	37	278+5		
31	GG-	eP	23 32 18+0	SZ	0+6	32+4	78+3	5+51
		eL	58 40	LZ	40	198+2		
					AVG.		5+27	
31	LZ-	eP	23 40 06+0	SZ	0+5	12+2	1+7	
		eS	40 29	ST	0+5	12+8		
31	23 55	23+*	58+5 N 154+8 W	ALASKA PENINSULA				
			H= 33 KM					

September 1964

SEISMOLOGICAL BULLETIN
WEST GERMANY, NORWAY, BOLIVIA

THE GEOTECHNICAL CORPORATION
3401 SHILOH ROAD
GARLAND, TEXAS



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Grafenberg, West Germany-Oslo, Norway-La Paz, Bolivia
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 1. INTRODUCTION

1. 1 This bulletin contains seismological data on earthquake phases recorded at three mobile seismological stations being operated by The Geotechnical Corporation (Geotech). The bulletin is intended to be an aid to interested observers in determining the extent of the earthquake data contained in the records from the three teams.

1. 2 The bulletin contains the following:

- a. Data on all of the phases that have been associated with epicenters reported by the U. S. Coast and Geodetic Survey (USC&GS);
- b. Data on the epicenters listed in the bulletin - as reported by the USC&GS;
- c. Arrival time, period, amplitude, and distance for phases not associated with USC&GS epicenters.

Page

1. 3 All phases are listed in chronological order, except that unassociated phases are not mixed with a sequence of associated phases. In such cases, the unassociated phases are listed immediately following the associated phases.

 2. INSTRUMENTATION

2. 1 Instrumentation at the Grafenberg, West Germany (GG-GR), and Oslo, Norway (OO-NW) sites consists of a short-period vertical Benioff seismometer array. A short-period vertical Johnson-Matheson seismometer array is in

operation at La Paz, Bolivia (LZ-BV). Each site is also equipped with a three-component Sprengnether long-period seismograph system. Both systems use phototube amplifiers. The response characteristics of these systems are shown in figures 1, 2, and 3.

2.2 All data are recorded by 35-mm Film Recorders, Geotech Model 1301A, 14-channel Magnetic-Tape Recorders, Ampex Model 314, and 16-mm film Developocorders, Geotech Model 4000C.

2.3 Precision Timing Systems, Geotech Model 5400 or 5400A, are used for primary timing. Chronometers are used for secondary timing. WWV is used for the time standard at LZ-BV. GG-GR and OO-NW use Radio Potsdam. WWV is a United States National Bureau of Standards Radio Station located at Beltsville, Maryland. The accuracy of the time program from WWV agrees with U. S. Naval Observatory time.

2.4 Each system is calibrated at least once every 24 hours. In the short-period system calibration, an electromagnetic (EM) calibrator is used to determine the magnification as a function of frequency and a weight-lift calibration is used to verify the EM magnification at 1 cps. In the long-period systems, magnification is determined as a function of frequency using EM calibrators. No method of verification is used. In the EM method of calibration, the seismometer mass is driven by a known sinusoidal force and the magnification is calculated using the relationships between the sinusoidal force and the recorded amplitude.

3. INTERPRETATION OF COLUMN TITLES

The column titles appearing in this bulletin are defined as follows:

3.1 DAY

The date, for the day of the month, is printed each time a new epicenter is listed and each time the station designator changes. Dates are given in Greenwich Civil Time (GCT).

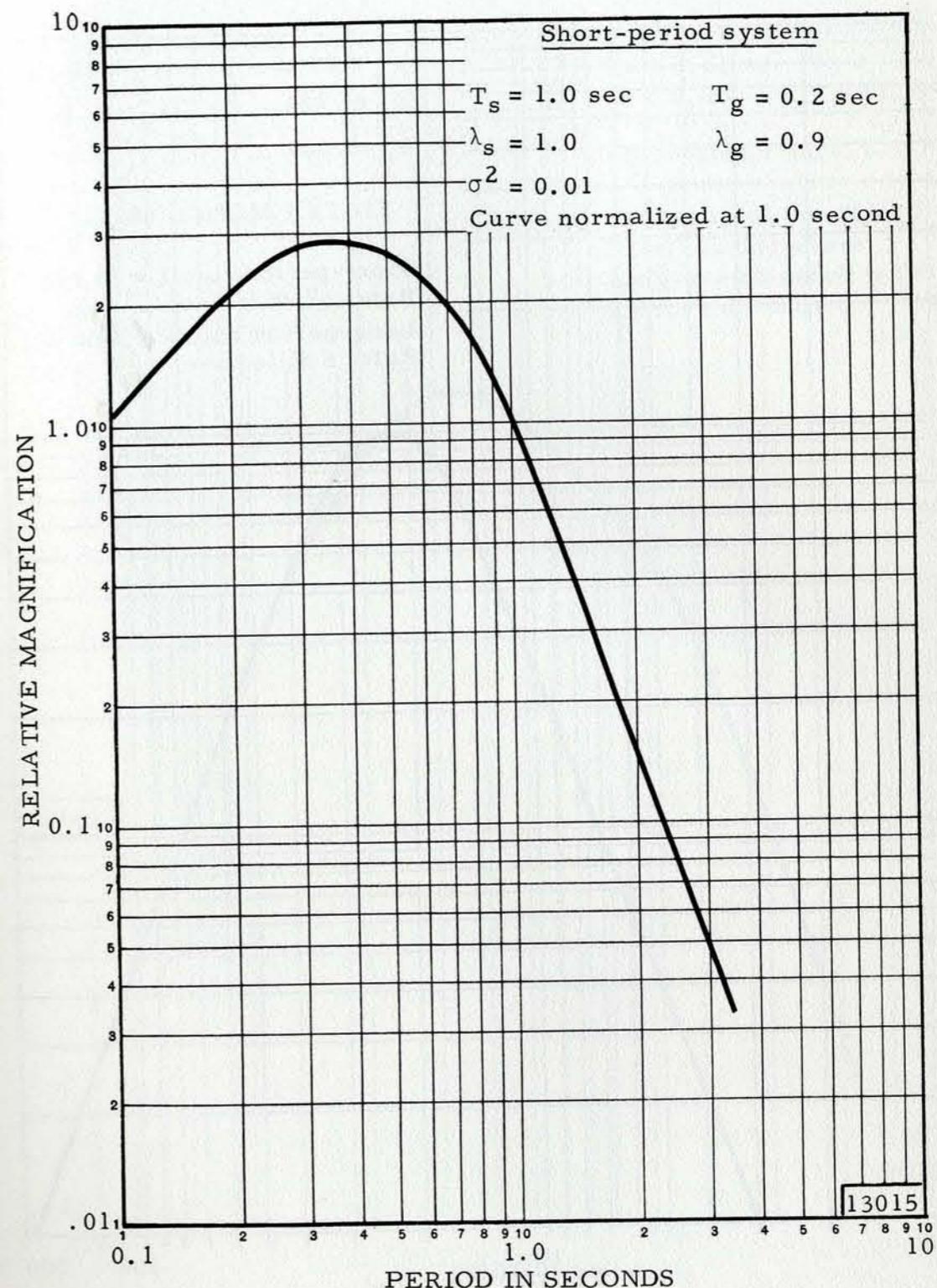


Figure 1. Frequency response of the Benioff short-period seismograph system

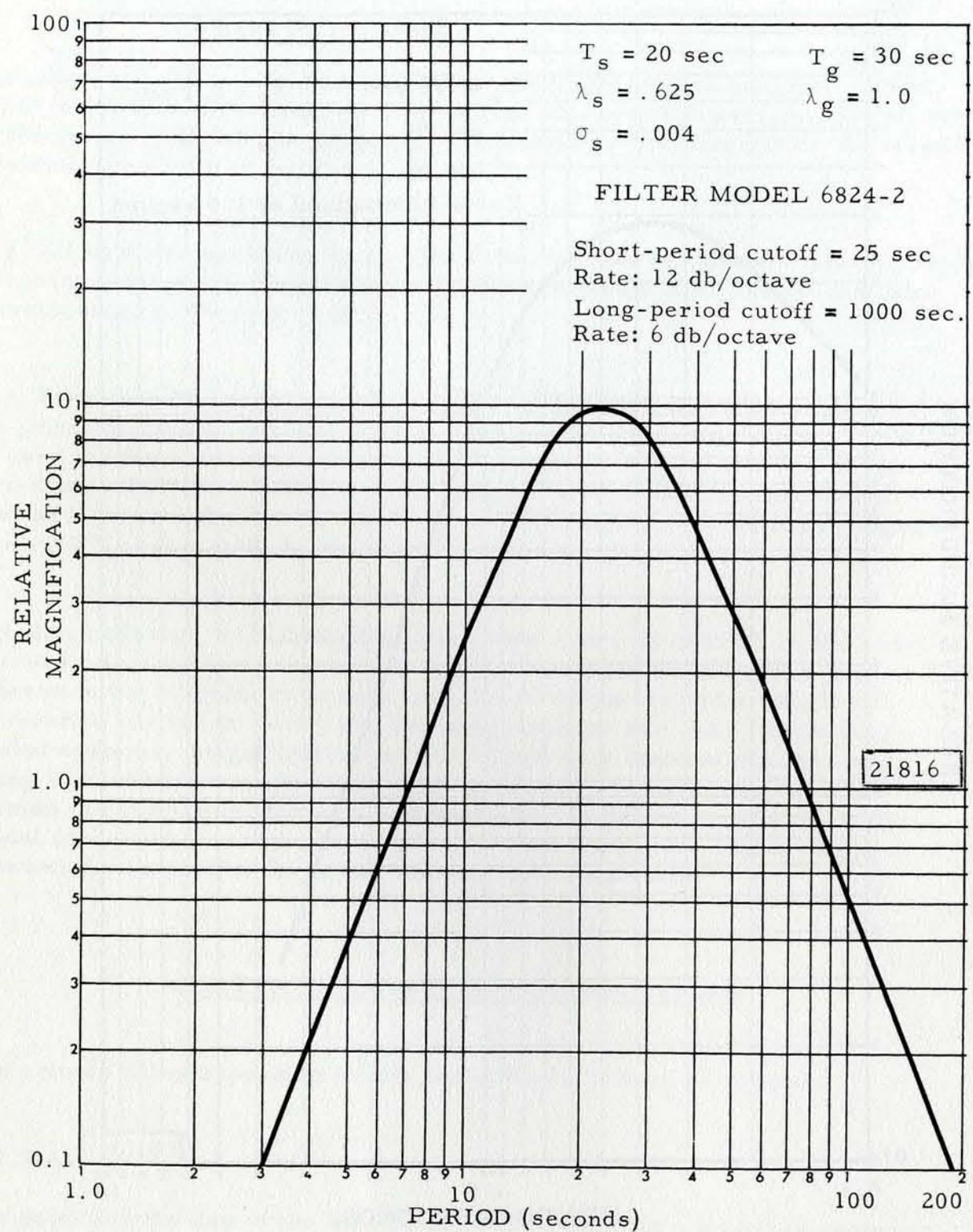


Figure 2. Frequency response of the Sprengnether long-period seismograph system

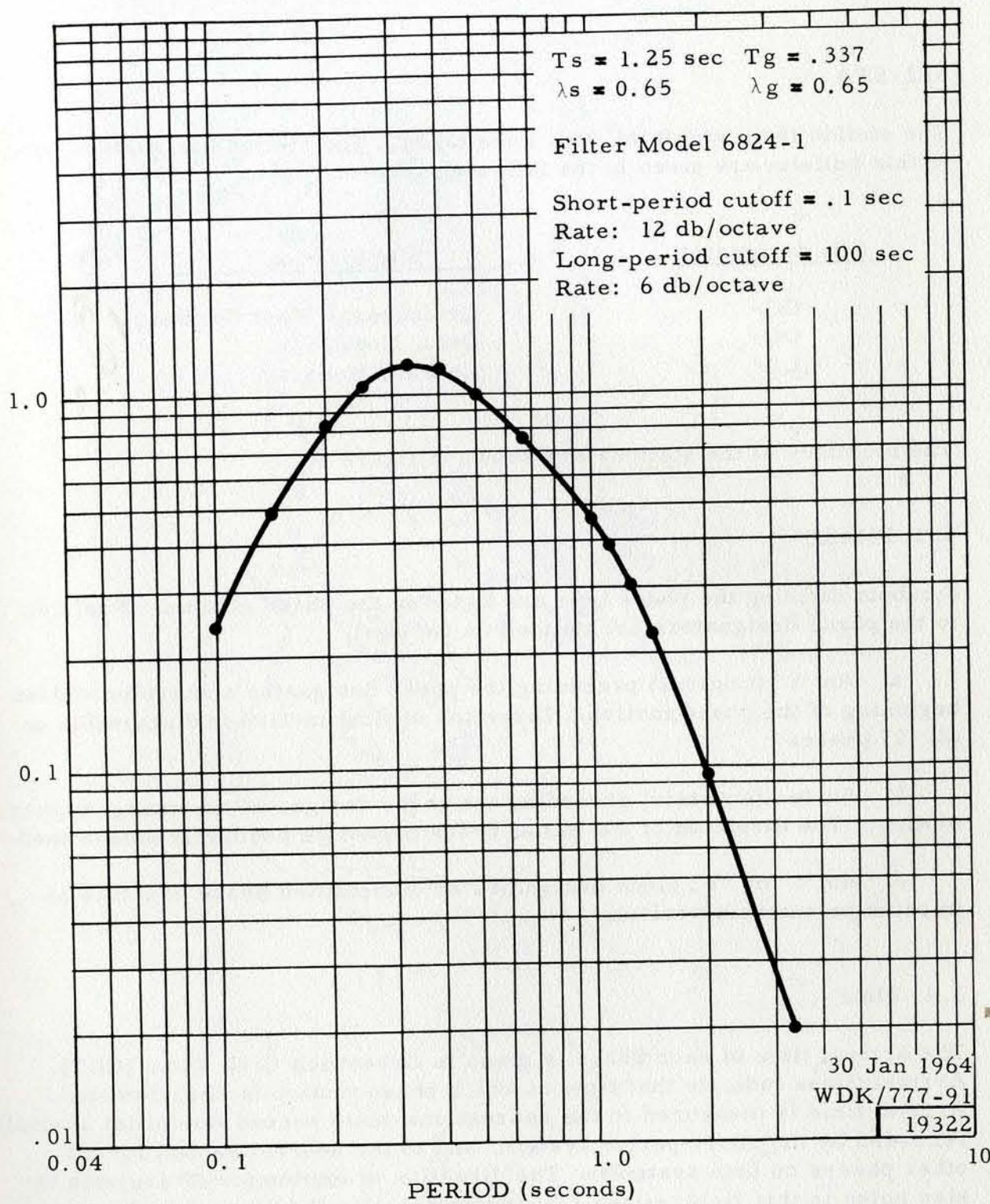


Figure 3. Frequency response of the Johnson-Matheson seismograph system

3.2 STA

The station from which the data were taken. The station designators used in this bulletin are given in the following table:

<u>Site designator</u>	<u>Site location</u>
GG-	Grafenberg, West Germany
OO-	Oslo, Norway
LZ-	La Paz, Bolivia

The locations of the stations are shown in figure 4.

3.3 PHASE

Symbols defining the phase type are listed in the phase column. Prefixes to the phase designators are defined as follows:

- a. An "i" (impetus) preceding the phase designates a sharp or sudden beginning of the phase motion. Direction of first motion is discernible on all "i" phases.
- b. An "e" (emersio) preceding the phase designates an emergent phase motion. The direction of the initial break cannot be positively determined.
- c. An "i" or "e" alone designates an unidentified phase of either an impetus or emersio arrival.

3.4 TIME

The arrival time of each phase is given in Greenwich Civil Time (GCT). Arrival times indicate that time at which phase motion is first detected. Arrival time is measured to the nearest one-tenth second for initial arrivals recorded by the short-period system, and to the nearest second for all other phases on both systems. The direction of motion for iP arrivals is also noted in this field; either C (compression) or D (dilation) will appear immediately to the right of the tenths of second column.

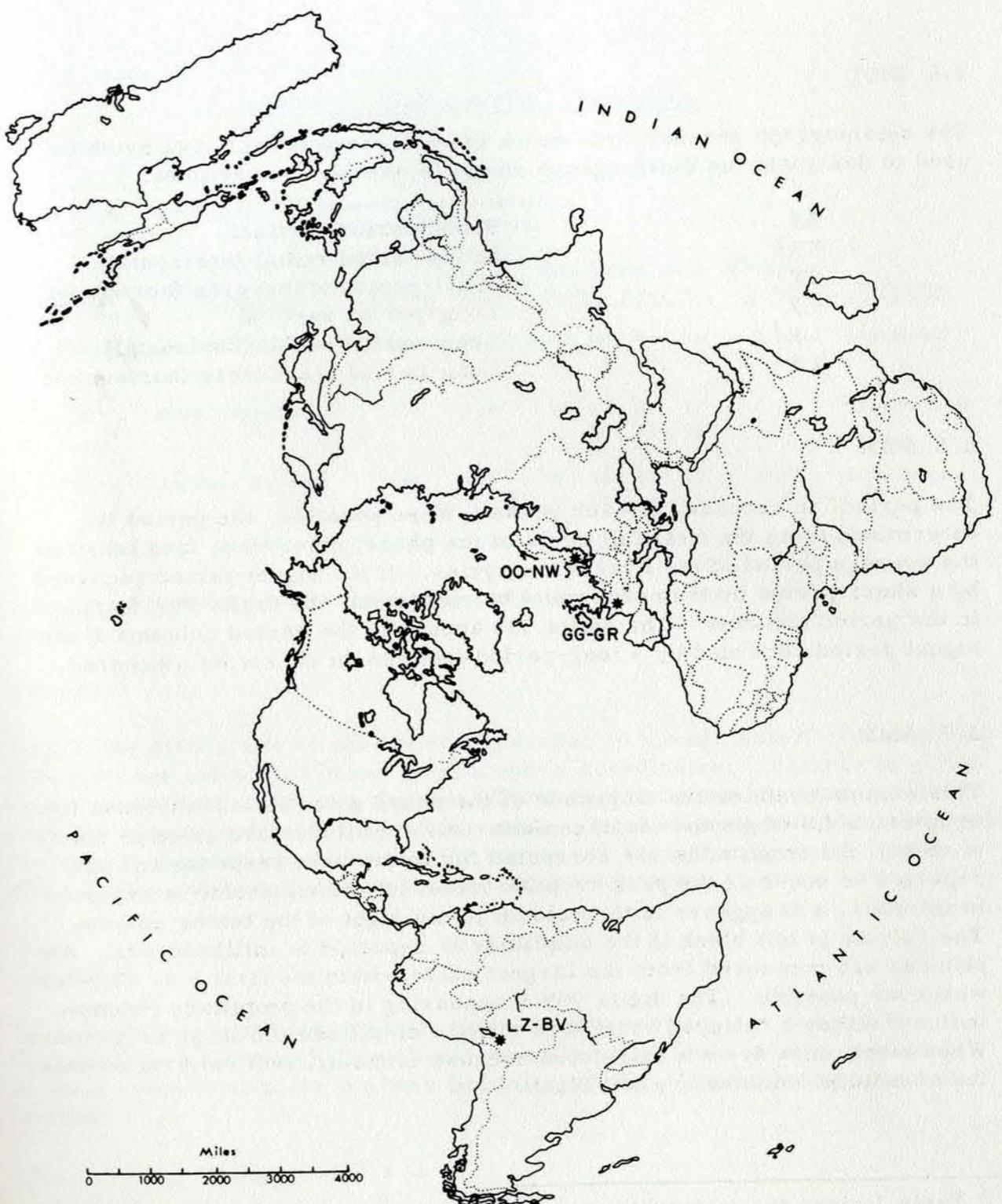


Figure 4. Bulletin sites

3.5 INST

The seismograph channel from which the data were taken. The symbols used to designate the seismograph channels are given as follows:

SZ	Short-period vertical
SR ¹	Short-period radial (horizontal)
ST ¹	Short-period transverse (horizontal)
LZ	Long-period vertical
LR ¹	Long-period radial (horizontal)
LT ¹	Long-period transverse (horizontal)

3.6 PER

The period, in seconds, of each phase. When possible, the period is determined from the first full cycle of the phase; otherwise, it is taken as the average period of the first three cycles. If the signal period recorded by a short-period instrument cannot be measured, the digits 999.9 appear in the period columns. The digits 999 appear in the period columns if the signal period recorded by a long-period instrument cannot be measured.

3.7 AMP

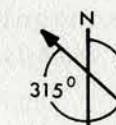
This column contains the amplitude of the phase given in millimicrons ($m\mu$) or microns (μ) of ground displacement. All amplitudes are given in tenths of units. All amplitudes are corrected for instrument response and are reported as one-half the peak-to-peak value. If the amplitude is reported in microns, a U appears in the column to the right of the tenths column. The column is left blank if the amplitude is reported in millimicrons. Amplitudes are measured from the largest pulse within the first 3 or 4 cycles whenever possible. The digits 999.9 appearing in the amplitude columns indicate either a "clipped" signal or a trace amplitude too large to measure. When amplitudes are not calculated because of insufficient calibration data, the amplitude columns are left blank.

¹ Table 1 gives the instrument orientation of the horizontal seismometers.

Table 1. Bulletin site information

Site designator	Site location	Horizontal seismometer orientation (Azimuth from true north in degrees ¹)		Site coordinates in deg, min, sec	Elevation in km	Rock type
		Radial	Trans- verse			
GG-GR	Grafenberg, West Germany	140	230	N 49 41 32 E 11 12 55	0.53	Limestone
OO-NW	Oslo, Norway	138	228	N 61 03 17 E 10 51 58	0.56	Glacial drift
LZ-BV	La Paz, Bolivia	141	231	S 16 15 31 W 68 28 47	3.99	Limestone

¹ When earth moves in direction shown, trace moves up.



3.8 DIST

This is the distance from the recording station to the epicenter. All reported distances are calculated based on geocentric coordinates. Distance is given to the nearest one-tenth of a degree. Distances computed for unassociated data are determined from the S-P intervals. In some instances surface groups are recorded which have traveled the major arc from the epicenter to the station. In such cases, the major arc distance is given.

3.9 MAG

The magnitudes provided are body wave magnitudes, m_b , as defined by Gutenberg and Richter.² They are determined only from the short-period vertical component of the P phase (initial arrival). The following equation is used:

$$m_b = \log_{10}(A/T) + Q$$

² Gutenberg, B., and Richter, C. F., 1956, Magnitude and energy of earthquakes: Ann. Geofis., vol. 9, p. 1-15.

where

m_b = body wave magnitude

A = one-half p-p earth amplitude of P phase in microns

T = period of P phase, in seconds

Q = depth-distance factor for PZ given by Gutenberg and Richter,² for distances greater than 16° .

Magnitude computations for distances less than 16° are based on extensions of the Q tables. Points from 10° to 16° were read from a curve in the Gutenberg-Richter paper, and an inverse cube relationship was used to extrapolate from 2° to 10° .

The average magnitude (sum of station magnitudes/number of stations) is listed on the last line of an epicenter print out.

4. INTERPRETATION OF UNITED STATES COAST AND GEODETIC SURVEY DATA

The epicenter data reported by the USC&GS precedes each list of associated phases. This information appears as follows:

Line 1 (from left to right)

First group:	Day of the month
Second group:	Origin time of the event
Third group:	Geographic coordinates of the epicenter
Fourth group:	Geographic description

²Ibid.

NOTE

An asterisk (*) following the origin time indicates epicenters believed accurate to $1/2^\circ$ in latitude and longitude and to 50 km in depth.

Line 2 (from left to right)

First group:

Second group:

Depth (h) of the hypocenter in kilometers
Magnitude (MAG) as determined by
Pasadena (PAS), Berkeley (BRK),
Palisades (PAL) or USC&GS (CGS).

NOTE

MAG (CGS) is m_b of Gutenberg and Richter from the P phase only. The magnitude quoted is an average value determined from data forwarded by cooperating Standard stations and other observatories.

5. REMARKS

The Geotechnical Corporation routinely receives and preprocesses data collected from three overseas field stations. Information on background levels, magnification levels, operational procedures, available records, and other data can be provided to interested organizations. Requests for such information should be made to the attention of:

THE GEOTECHNICAL CORPORATION
3401 Shiloh Road
Garland, Texas 75041

ATTN: Mr. J. M. Whalen

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	LZ-	eL	00 14 40	LZ	30	188.0		
1	LZ-	eP	00 49 56.5	SZ	0.4	2.9	3.2	
		eS	50 37	ST	0.7	14.9		
1	OO-	eL	03 45 27	LZ	23	314.4		
1	LZ-	eP	04 46 34.0	SZ	1.0	16.4		
1	10 40 01.*		30.9 N 49.9 E	WESTERN IRAN				
			H= 42 KM					
1	12 45 24.*		76.1 N 120.8 E	LAPTEV SEA				
			H= 33 KM	MAG 4.30 CGS				
1	13 22 36.6		27.2 N 92.3 E	INDIA CHINA BORDER REGION				
			H= 33 KM	MAG 5.70 CGS				
1	00- eP		13 32 56.2	SZ	0.9	62.9	62.5	5.73
	ePS		41 25	LT	15	728.1		
	eSS		45 18	LT	17	342.1		
	eLR		56 10	LT	25	9999.9		
1	GG- eS		13 41 50	LT	13	1349.7	64.2	
	e		46 35	LZ	28	424.9		
	eL		49 23	LR	20	749.8		
1	LZ- eP ¹		13 42 35.0	SZ	1.2	30.1	159.1	
	eP ²		43 14	SZ	1.5	40.7		
	ePP		46 53	SZ	1.6	19.8		
	eL		14 40 25	LR	35	595.3		
1	GG- eP		14 33 11.5	SZ	1.2	191.1		
1	17 16 40.4		51.2 N 170.6 W	FOX ALEUTIAN ISLANDS				
			H= 25 KM	MAG 5.50 CGS				
1	00- eP		17 27 40.6	SZ	0.7	13.5	68.1	5.19
	eP		27 45	LZ	13	147.8		
	ePCP		27 55	SZ	0.6	15.2		
	eSP		36 47	LZ	16	138.9		
	eSS		41 30	LT	26	271.1		
	eLQ		46 33	LR	40	328.2		
	eLR		49 43	LZ	38	545.6		
1	GG- eP		17 28 52	LZ	16	131.5	79.5	
	e		40 15	LR	31	771.5		
	e		44 05	LZ	35	159.2		
	eL		55 35	LZ	30	267.8		
1	GG- eP		18 28 48.5	SZ	0.8	112.4		
1	GG- e		18 29 03	SZ	0.7	120.0		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	19 49 14.*		36.7 N 121.9 W	CENTRAL CALIFORNIA				
			H= 14 KM	MAG 4.10 CGS				
1	20 48 39.*		57.2 S 147.1 E	WEST OF MACQUARIE ISLAND				
			H= 33 KM					
1	LZ- eL		21 36 10	LZ	25.	776.6	101.1	
1	00- eL		21 49 30	LZ	17	95.3	157.5	
1	GG- eL		22 11 20	LZ	23.	60.1		
1	00- e		22 17 45	LZ	20	82.0		
1	00- e		22 25 40	LZ	20	82.0		
1	00- e		22 30 35	LZ	20	109.3		
2	00- eL		03 18 25	LZ	17	127.1		
2	LZ- eP		08 02 02.6	SZ	0.5	6.1	1.2	
	eS		02 19	SZ	0.5	7.8		
2	LZ- eP		09 11 07.2	SZ	0.3	14.0	2.6	
	eS		11 40	SR	0.4	7.3		
2	GG- eP		14 09 06.3	SZ	0.3	52.5		
2	GG- eP		14 18 40.4	SZ	0.2	33.3		
2	15 19 07.3		7.1 N 78.5 W	PANAMA				
			H= 33 KM	MAG 4.30 CGS				
2	GG- eP		17 15 45.3	SZ	0.8	16.5		
2	17 50 04.		8. N 72.8 W	NORTHERN COLOMBIA				
			H= 33 KM	MAG 4.10 CGS				
2	18 12 22.9		7.8 N 73.3 W	NORTHERN COLOMBIA				
			H= 112 KM	MAG 4.80 CGS				
2	LZ- eP		18 17 33.0	SZ	0.7	9999.9	24.4	
	eLQ		22 09	LT	15	9999.9		
	eLR		25 05	LT	999	9999.9		
	eL		25 22	SZ	1.8	271.3		
2	00- eP		18 24 22.5	SZ	1.0	5.4	80.4	4.32
	eL		50 09	LZ	26	138.5		
	eL		52 08	LR	27	225.6		
	eL		52 08	LT	30	157.3		
2	GG- eL		18 50 29	LZ	29	224.3	80.6	
2	21 32 39.6		18.6 S 169.4 E	NEW HEBRIDES ISLANDS				
			H= 218 KM	MAG 4.90 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
2	GG-	eP+I	21 51 48.9	SZ	0.9	21.5	144.4		3	OO-	eL	11 16 09	LR	28.6	292.1	124.7		
2	LZ-	eP	22 53 40.3	SZ	1.2	9.7			3	GG-	eL	11 30 36	LZ	25	123.5	133.3		
2	LZ-	eP	23 07 42.5	SZ	0.7	14.0			3	11 23 03.*	28.4 S 177.1 W	KERMADEC ISLANDS						
2	LZ-	eL	23 09 01	SR	0.7	6.1						H=312 KM	MAG 3.90	CGS				
3	01	55 32.*	12.2 N 87.0 W	NEAR COAST OF NICARAGUA					3	11 36 23.8	6.8 N 73.4 W	NORTHERN COLOMBIA						
			H=108 KM	MAG 4.00	CGS													
3	02	45 07.2	59.5 N 144.8 W	GULF OF ALASKA					3	LZ-	eP	11 41 18.1	SZ	0.6	5.0	23.4	4.25	
			H= 19 KM	MAG 4.20	CGS													
3	04	16 19.*	8. N 72.6 W	VENEZUELA					3	11 48 36.1	43.5 N 127.1 W	OFF COAST OF OREGON						
			H= 82 KM	MAG 3.70	CGS													
3	LZ-	eP	04 21 33.7	SZ	0.6	7.6	24.4	4.34	3	12 32 00.6	59.4 N 145.2 W	GULF OF ALASKA						
3	05	31 15.	50.5 N 129.5 W	VANCOUVER ISLAND REGION					3	12 57 22.3	17.9 S 178.0 W	FIJI ISLANDS REGION						
			H= 29 KM	MAG 5.00	CGS													
3	LZ-	eP	05 43 50.4	SZ	1.0	3.9	85.2	4.49										
3	eL	06 14 55	LZ	46	268.6				3	LZ-	eP	14 02 54.0	SZ	0.4	5.0	3.8		
3	00-	eL	06 06 27	LZ	24	186.6	64.3		3	eS	03 41	SR	0.6	5.1				
3	GG-	eL	06 10 51	LT	25	192.1	74.7											
3	08	25 47.*	53.2 N 162.4 E	OFF EAST COAST OF KAMCHATKA					3	15 36 46.*	30.5 S 177.4 W	KERMADEC ISLANDS REGION						
			H= 33 KM	MAG 4.50	CGS													
3	10	06 55.9	30.9 S 68.4 W	SAN JUAN PROVINCE, ARGENTINA					3	16 58 55.4	15.2 S 173.5 W	TONGA ISLANDS						
			H=113 KM	MAG 5.10	CGS													
3	LZ-	eP	10 10 22.5	SZ	0.8	83.2	14.6	5.04	3	LZ-	eL	17 49 23	LZ	21.	100.4	99.7		
			10 23	LZ	18	132.6												
			13 12	LT	15	341.5												
			13 19	ST	1.6	109.3			3	OO-	eL	18 01 30	LZ	35	252.3	134.1		
			13 45	ST	1.5	68.8			3	GG-	eL	18 14 35	LZ	25	295.4	145.4		
			14 42	LR	27	524.6												
			15 26	LZ	29	456.8			3	17 38 11.*	19.6 N 109.1 W	REVILLA GIGEDO ISLANDS REG.						
			17 36	LR	25	283.4												
			17 36	LT	18	183.7												
3	10	23 47.8	10.4 S 160.5 E	SOLOMON ISLANDS					3	LZ-	eP	18 03 07.1	SZ	0.9	6.3			
			H= 57 KM	MAG 4.90	CGS													

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	LZ-	eL	18 07 08	ST	0.8	7.8		
3	18 59 07.*		59.8 N 149.7 W KENAI PENINSULA, ALASKA					
			H= 33 KM MAG 4.10 CGS					
3	LZ-	eP	19 08 12.7	SZ	0.6	26.2		
3	LZ-	eL	19 09 40	SR	0.7	10.5		
3	21 04 13.3		59.7 N 144.0 W GULF OF ALASKA					
			H= 33 KM MAG 4.50 CGS					
3	21 14 43.*		24.6 N 108.6 W GULF OF CALIFORNIA					
			H= 33 KM MAG 5.30 CGS					
3	LZ-	eP	21 24 17.5	SZ	1.0	14.5	56.4	4.96
	ePP		24 24	SZ	1.2	39.8		
	eS		32 15	LT	21	195.2		
	eSS		36 15	LT	17	121.1		
	eSSS		38 20	LT	20	407.8		
	eLQ		41 10	LT	20	516.6		
	eLR		44 15	LR	20	328.8		
3	GG-	eS	21 38 35	LT	20	164.9	88.8	
	eLQ		51 15	LT	25	306.4		
3	00-	eL	22 00 10	LT	23	1038.5		
3	00-	eL	21 52 40	LT	35	1193.9	81.7	
3	22 19 23.1		6.4 S 128.5 E BANDA SEA					
			H=218 KM					
3	23 41 56.2		24.2 N 108.8 W GULF OF CALIFORNIA					
			H= 15 KM MAG 4.60 CGS					
4	00 08 51.		5.5 S 130.4 E BANDA SEA					
			H= 99 KM					
4	01 16 30.*		19.3 N 109.1 W REVILLA GIGEDO ISLANDS REG.					
			H= 33 KM MAG 3.60 CGS					
4	01 25 44.*		4.5 S 153.5 E NEW IRELAND REGION					
			H=167 KM MAG 5.60 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
4	02 13 13.*		19.1 N 107.0 W OFF COAST OF JALISCO, MEXICO					
			H= 33 KM MAG 4.00 CGS					
4	03 28 33.1		7.6 N 36.9 W CENTRAL MID ATLANTIC RIDGE					
			H= 22 KM MAG 5.40 CGS					
4	LZ-	eP	03 36 03.5	SZ	0.5	54.5	39.2	5.50
	eP		36 05	LZ	17	660.6		
	ePP		37 44	LZ	17	9999.9		
	eS		42 03	LT	999	9999.9		
	eSCP		42 07	SZ	3.0	365.5		
	e		45 00	LZ	999	9999.9		
	eLR		47 20	LZ	999	9999.9		
4	GG-	eP	03 38 26.0	SZ	0.8	61.6	58.0	5.69
4	00-	eP	03 39 07.5	SZ	1.0	41.2	64.0	5.55
	eP		39 08	LZ	14	562.2		
	ePP		39 13	SZ	0.8	37.9		
	eS		47 46	LT	30	1416.3		
	eSS		52 05	LT	22	959.1		
	eSSS		55 00	LR	35	1435.4		
	eL		56 20	LR	25	1268.9		
							Avg.	5.58
4	03 39 36.7		39.8 N 40.3 E TURKEY					
			H= 33 KM MAG 5.00 CGS					
4	GG-	eP	03 44 36.0	SZ	1.0	170.3	22.8	5.45
	eP		44 37	LZ	15	853.8		
	e		47 35	LT	30	1746.0		
	eLQ		51 25	LT	18	1074.9		
	eLR		54 20	LT	23	1238.2		
4	00-	eP	03 45 26.5	SZ	0.5	3.4	27.9	4.36
							Avg.	4.90
4	04 10 56.*		59.2 N 138.1 W SOUTHEASTERN ALASKA					
			H= 33 KM MAG 3.80 CGS					
4	00-	eP	07 38 40.0	SZ	0.5	10.3	.6	
	eS		38 49	ST	0.5	4.5		
4	08 12 45.*		52.4 N 158.6 E NEAR EAST COAST OF KAMCHATKA					
			H= 70 KM MAG 4.50 CGS					
4	09 03 00.6		28.5 S 70.3 W CENTRAL CHILE					
			H= 44 KM MAG 4.70 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eSS		49 15	LZ	18	906.7		
	eLQ		51 20	LR	26	2055.6		
	eLR		54 40	LZ	44	7927.3		
5	00-	eP	12 38 08.4	SZ	1.2	13.4	66.5	4.95
	eP		38 10	LZ	19	616.0		
	eS		47 07	LR	24	4088.9		
	e		48 28	LR	27	2273.5		
	e		51 45	LZ	22	1310.0		
	eLQ		54 18	LR	34	7797.2		
	eLR		56 38	LR	28	1060U		

5 15 05 10.9 19.2 S 69.3 W NORTHERN CHILE
H=103 KM MAG 4.60 CGS

5 LZ- tP 15 06 02.8D SZ 999.9 9999.9 3.0

5 18 46 19.* 53.9 S 140.4 E WEST OF MACQUARIE ISLAND
H= 33 KM

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5	21 08 49.4		44.1 N 11.1 E NORTHERN ITALY					
			H= 40 KM					
			MAG 4.30					
			CGS					
5	GG- eP		21 10 09.0	SZ	0.3	10.4	5.6	4.85
	e		10 38	SZ	0.5	22.0		
	eL		10 50	LZ	15	121.5		
5	00-	eP	21 12 46.5	SZ	1.0	8.7	17.0	3.88
	e		14 16	SZ	1.0	8.7		
	eL		17 10	LR	28	241.5		
					Avg.			4.36

5 22 28 51.* 44.6 N 12.3 E NORTHERN ITALY
H= 33 KM

5 GG- eL 22 31 06 ST 0.6 15.8 5.1
5 00- eP 22 32 45.4 SZ 1.0 4.3 16.5 3.57

6 LZ- eP 02 11 03.3 SZ 1.0 3.7
6 LZ- eP 02 45 09.0 SZ 0.2 2.2 2.8
eS 45 45 SR 0.7 9.4

6 03 27 47.9 17.8 S 168.2 E NEW HEBRIDES ISLANDS
H= 33 KM MAG 4.80 CGS

6 03 38 48.8 46.7 S 13.5 W SOUTH ATLANTIC RIDGE
H= 33 KM MAG 4.80 CGS

DAY	STA	PHASE	TIME	INST	PER	AMP	INTL	From the ISC collection scanned by SISMOS
6	LZ-	eP	03 48 13.0	SZ	1.4	17.2	54.5	4.89
		eP	48 24	LZ	20	70.8		
		ePCP	49 19	SZ	1.3	20.9		
		eS	56 05	LZ	18	304.0		
		eL	04 04 52	LZ	35	795.7		
6	GG-	eL	04 26 00	LZ	27	132.8	98.4	

6 04 09 07.* 23.4 N 108.5 W GULF OF CALIFORNIA
H= 33 KM MAG 4.10 CGS

6 LZ- eP 04 12 06.4 SZ 0.5 4.8

6 07 50 12.6 48.1 S 104.1 E SOUTHEAST INDIAN RISE
H= 33 KM

6 09 21 22.4 20.3 S 178.9 W FIJI ISLANDS REGION
H= 621 KM MAG 4.20 CGS

6 00- eP 09 42 15.4 SZ 1.0 13.0

6 09 52 49.7 15.9 N 61.7 W LEEWARD ISLANDS
H= 143 KM MAG 4.40 CGS

6 10 29 51.4 53.9 N 163.9 W UNIMAK ISLAND REGION
H= 33 KM

6 LZ- tP 11 06 34.5D SZ 999.9 9999.9

6 LZ- e 11 06 53 SZ 0.9 202.4

6 11 15 27.9 6. S 153.7 E NEW BRITAIN REGION
H= 90 KM MAG 4.50 CGS

6 GG- eP 12 15 15.0 SZ 0.5 19.1 1.4

eS 15 33 ST 0.5 38.1

6 LZ- eP 12 53 56.0 SZ 0.5 4.8

LZ- eL 12 56 03 SR 0.4 1.3

LZ- eP 14 33 01.1 SZ 0.2 24.4 1.7

eS 33 23 ST 0.4 17.3

LZ- eP 15 45 17.3 SZ 1.4 6.8

6 15 51 24.* 10.6 S 107.5 W N. EASTER ISLAND CORDILLERA
H= 33 KM MAG 4.70 CGS

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
6	LZ-	eP	15 52 58.0	SZ	1.0	11.1					eP	09 28	LZ	3.0	537.9			
6	15 58 15.*		58.7 N 151.4 W	KODIAK ISLAND REGION						e	09 45	SZ	1.0	36.2				
			H= 33 KM							eS	19 30	LZ	22	257.1				
6	LZ-	eP	15 59 27.6	SZ	1.0	5.5				eSS	24 35	LR	27	2007.9				
6	16 13 23.2		21.5 S 66.8 W	SOUTHERN BOLIVIA						eLQ	28 50	LR	45	3251.3				
			H=233 KM MAG 4.70 CGS							eLR	33 00	LR	33	4482.3				
6	LZ-	fP	16 14 46.1D	SZ	999.9	9999.9	5.5		6	19 03 34.6		39.1 N 111.6 W UTAH						
6	LZ-	eP	16 58 18.0	SZ	1.3	11.9					H= 15 KM							
6	17 16 54.6		59.1 N 147.4 W	GULF OF ALASKA					6	20 34 22.2		4.7 S 144.8 E NEAR NORTH COAST NEW GUINEA						
			H= 33 KM MAG 5.10 CGS							H= 76 KM MAG 5.70 CGS								
6	17 36 44.3		63.1 N 147.7 W	CENTRAL ALASKA					6	21 05 48.*		6. S 107.1 W N. EASTER ISLAND CORDILLERA						
			H= 33 KM MAG 4.80 CGS							H= 33 KM MAG 5.00 CGS								
6	18 41 01.8		10. N 140.2 E	WEST CAROLINE ISLANDS					6	LZ-	eP	21 13 14.5	SZ	1.3	32.3	39.2	4.89	
			H= 33 KM MAG 5.10 CGS						e	18 00	ST	3.4	226.4					
6	LZ-	e	19 00 52	ST	0.7	49	151.4			eS	19 20	ST	6.5	1401.5				
6	18 51 16.*		34.1 N 114.2 W	CALIFORNIA ARIZONA REGION						eS	19 22	LZ	18	389.9				
6	00-	e	19 22 10	LR	40	1628.1	75.2		6	00-	eL	22 10	LR	999	9999.9			
		eL	24 40	LR	50	3920.2				00-	eL	21 57 35	LZ	40	1216.6	108.5		
6	18 55 47.4		38.3 N 26.6 W	AZORES ISLANDS						GG-	eL	21 59 50	LZ	35	402.0	112.7		
6	00-	eL	19 11 25	LZ	30	450.2	32.5		6	21 18 02.*		6.1 S 106.5 W N. EASTER ISLAND CORDILLERA						
6	18 57 20.4		7.1 N 93.7 E	NICOBAR ISLANDS REGION						H= 33 KM MAG 4.40 CGS								
6	GG-	eP	19 09 26.0	SZ	0.9	39.0	79.8	5.30	7	03 38 50.4		19.9 N 122.2 E PHILIPPINE ISLANDS REGION						
			H= 46 KM MAG 5.20 CGS						H= 28 KM MAG 4.70 CGS									
7	03 54 05.1								7	03 54 05.1		48.6 N 153.9 E KURILE ISLANDS						
7	00-	eL	04 21 23	LR	30	2366.8				H=100 KM MAG 4.60 CGS								
7	LZ-	eP	04 00 19.5	SZ	0.5	8.6			7	00-	eL	04 21 23	LR	30	2366.8	66.7		
		eS	01 21	ST	0.9	43.7												

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
7	07	07	55.4	57.7 N 151.5 W	KODIAK ISLAND REGION	H= 33 KM MAG 4.00 CGS		
7	07	42	02.3	58.3 N 152.0 W	KODIAK ISLAND REGION	H= 33 KM MAG 5.10 CGS		
7	00-	eL	08 14 05	LT	20	132.3	60.2	
7	LZ-	eP	10 06 25.5	SZ	0.3	12.1	1.6	
7	eS		06 48	ST	0.7	25.4		
7	GG-	eP	10 13 31.5	SZ	0.5	35.5	1.3	
7	eS		13 49	ST	0.2	41.2		
7	11	27	15.*	15.7 N 53.3 E	ARABIAN SEA	H= 33 KM MAG 4.60 CGS		
7	GG-	eP	11 35 50	LZ	22.	105.4	48.0	
	e		37 40	LR	20	527.8		
	ePPP		38 50	LZ	18	212.9		
	e		39 55	LR	35	1194.4		
	eS		43 05	LT	24	673.2		
	eSS		46 38	LT	30	921.1		
	eLQ		49 50	LT	20	783.0		
	eLR		51 25	LT	35	2164.7		
7	00-	eP	11 36 40	LZ	20	164.0	54.5	
	e		40 00	LR	20	201.2		
	eS		44 35	LR	30	1961.1		
	eSS		48 15	LR	23	529.1		
	eLQ		53 30	LR	45	2483.0		
	eLR		56 40	LZ	30	9999.9		
7	LZ-	eSSS	12 09 10	LR	17	185.8	124.2	
	e		10 50	LT	30	95.5		
	e		14 00	LR	23	150.2		
	eLQ		21 50	LR	32	9999.9		
	eLR		27 50	LZ	36	1492.0		
7	11	29	17.6	4.1 S 151.7 E	NEW BRITAIN REGION	H=246 KM		
7	15	13	14.1	10.1 S 161.1 E	SOLOMON ISLANDS	H= 38 KM MAG 5.00 CGS		
7	15	52	11.5	37.1 N 71.8 E	AFGHANISTAN USSR BORDER REG.	H=168 KM MAG 4.30 CGS		

DAY	STA	PHASE	TIME	INST	PER	A
7	LZ-	eP	16 21 35.0	SZ	1.5	35.6
7	LZ-	e	16 22 59	SR	0.5	4.0
8	00	27 55.*	44.2 N 114.8 W	WESTERN IDAHO		
			H= 33 KM MAG 3.90 CGS			
8	02	43 17.*	60.1 N 146.9 W	SOUTHERN ALASKA		
			H= 34 KM MAG 3.50 CGS			
8	05	55 19.*	20.5 S 176.2 W	FIJI ISLANDS REGION		
			H= 33 KM MAG 4.50 CGS			
8	LZ-	eP	06 05 11.5	SZ	0.5	2.7
8	LZ-	e	06 05 30	SZ	0.5	9.9
8	07	54 57.9	5.8 N 126.1 E	MINDANAO, PHILIPPINE ISLANDS		
			H=177 KM MAG 5.40 CGS			
8	GG-	ePP	08 12 51	SZ	0.5	8.8
8	LZ-	eP12	08 15 33.5	SZ	1.5	25.2
	eLR		09 14 45	LZ	25	134.2
8	LZ-	eP	08 51 58.0	SZ	0.7	4.9
8	LZ-	e	08 52 32	SZ	1.1	55.7
8	LZ-	e	08 52 53	SZ	1.1	51.2
8	LZ-	eP	09 29 57.5	SZ	0.2	45.3
8	09	32 26.8	45.6 N 149.9 E	KURILE ISLANDS		
			H=141 KM MAG 4.50 CGS			
8	10	26 25.*	2.7 S 127.7 E	CERAM SEA		
			H= 33 KM			
8	11	15 35.*	17.4 S 173.5 W	TONGA ISLANDS		
			H= 33 KM MAG 5.00 CGS			
8	GG-	eP	11 27 49.2	SZ	0.6	13.0
8	LZ-	eP	12 51 52.5	SZ	1.0	5.6
8	13	40 03.5	29.6 N 142.0 E	SOUTH OF HONSHU, JAPAN		
			H= 77 KM MAG 5.60 CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	LZ-	eP ¹	13 59 43.0	SZ	1.5	168.3	149.0	
		eP ²	14 00 00	SZ	1.6	143.3		
		e	53 55	LT	25	112.2		
		eLQ	55 35	LT	30	313.4		
		eLR	59 15	LZ	23	408.6		
8	13 41 44.1		24.1 S 177.6 W	SOUTH OF FIJI ISLANDS				
			H=165 KM	MAG 4.80 CGS				
8	LZ-	eLR	14 29 10	LZ	21.	166.7	100.0	
8	14 09 19.2		23.8 S 177.5 W	SOUTH OF FIJI ISLANDS				
			H=213 KM	MAG 4.70 CGS				
8	14 12 39.8		23.9 S 177.2 W	SOUTH OF FIJI ISLANDS				
			H=175 KM	MAG 4.50 CGS				
8	OO- e		14 20 55	LR	30.	509.4		
8	OO- e		14 23 40	LT	25	401.0		
8	OO- e		14 28 15	LZ	20	401.3		
8	OO- eL		14 29 35	LT	25	458.3		
8	GG- eL		14 35 45	LT	14	514.6		
8	LZ- eP		15 11 07.8D	SZ	0.4	9.1		
8	LZ- e		15 11 12	SZ	0.5	18.9		
8	LZ- e		15 11 38	SZ	0.9	27.0		
8	16 52 33.2		29.1 N 142.3 E	SOUTH OF HONSHU, JAPAN				
			H= 33 KM	MAG 4.80 CGS				
8	17 05 23.4		20.4 S 178.3 W	SOUTH OF FIJI ISLANDS				
			H=539 KM	MAG 5.40 CGS				
8	20 22 54.2		6.9 N 126.4 E	MINDANAO, PHILIPPINE ISLANDS				
			H= 33 KM					
8	LZ- eP		22 22 50.5	SZ	0.5	7.0		
9	LZ- eP		01 24 46.0	SZ	1.0	7.3		
9	02 41 46.*		58.9 N 154.5 W	ALASKA PENINSULA				
			H= 33 KM					

DAY	STA	PHASE	TIME	INST	PER
9	03 36 43.*		58.9 N 152.8 W	KODIAK ISLAND REGION	
			H= 33 KM	MAG 4.60 CGS	
9	LZ- eP		04 16 40.0	SZ	0.7
9	04 52 45.4		5.6 S 130.9 E	BANDA SEA	
			H= 93 KM	MAG 5.10 CGS	
9	LZ- eP ¹ e		05 12 32.5 13 05	SZ	0.7 1.1
9	GG- eL		05 11 35	LT	25.
9	05 30 44.7		24.1 S 177.1 W	SOUTH OF FIJI ISLANDS	
			H= 33 KM	MAG 4.20 CGS	
9	06 06 18.4		26.2 N 143.7 E	BONIN ISLANDS REGION	
			H= 33 KM	MAG 4.90 CGS	
9	LZ- eP ¹ eP ²		06 26 05.5 26 13	SZ	1.4 1.0
9	06 35 14.9		6.9 S 129.4 E	BANDA SEA	
			H=122 KM	MAG 4.90 CGS	
9	09 39 48.1		37.5 N 3.7 W	SPAIN	
			H= 15 KM	MAG 4.30 CGS	
9	GG- eP eS		13 31 35.1 31 50	SZ	0.2
9	LZ- eP		16 01 08.5	SZ	0.5
9	LZ- eP		16 33 09.5	SZ	0.5
9	GG- e		17 38 27	SR	0.5
9	22 19 40.5		34.5 N 45.8 E	IRAN IRAQ BORDER REGION	
			H= 68 KM	MAG 4.50 CGS	
9	00- eL		22 38 20	LT	23
9	LZ- eP		23 14 51.0	SZ	1.5

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
9	LZ-	e	23 22 14	LZ	14	238.4											
9	LZ-	eL	23 28 40	LZ	17	108.5											
10	LZ-	eP	00 16 44.5	SZ	0.8	8.3											
10	LZ-	eP	01 45 47.2	SZ	0.3	20.9	1.2										
	eS		46 05	SR	0.3	18.2											
10	02 39 26.5		7.4 N 73.0 W	NORTHERN COLOMBIA					10	21 36 32.*		4.8 S 81.3 W	NEAR COAST OF NORTHERN PERU				
			H=140 KM										H= 45 KM	MAG 4.50	CGS		
10	LZ-	eP	02 44 30.4	SZ	0.6	47.2	23.9	5.17	10	LZ-	eP	21 40 30.9	SZ	1.0	62.9	17.0	4.74
10	GG-	eP	08 06 52.5	SZ	0.6	13.6				eS		43 54	LR	19	194.6		
10	GG-	eP	08 09 21.6	SZ	999.9	9999.9				eLQ		45 53	LZ	18	9999.9		
10	LZ-	eL	08 45 23	LZ	35	123.1				eLR		46 47	LZ	21	9999.9		
10	09 15 47.		16.4 N 96.0 W	OAXACA, MEXICO					11	00 26 29.9		60.3 N 146.6 W	SOUTHERN ALASKA				
			H= 59 KM	MAG 4.50	CGS							H= 38 KM	MAG 4.70	CGS			
10	LZ-	eP	09 23 49.0	SZ	0.7	4.8	42.3	4.39	11	LZ-	iP	04 25 49.8C	SZ	999.9	9999.9	7.8	
	eS		02 50	ST	0.3	13.2				eP		25 50	LZ	14	428.7		
10	GG-	eP	10 02 12.6	SZ	0.3	22.4	2.2			eS		26 49	LR	17	614.3		
	eS		02 50	ST	0.3	13.2				eLQ		27 13	LR	999	9999.9		
10	GG-	eP	12 56 40.7	SZ	0.5	38.9	1.3			eLR		27 55	LZ	999	9999.9		
	eS		56 59	ST	0.6	60.6				e		31 19	SR	2.4	346.9		
10	LZ-	eP	13 17 14.5	SZ	0.5	38.9			11	LZ-	eP	05 06 25.7	SZ	0.5	25.4		
									11	LZ-	eL	05 08 53	SR	0.7	15.3		
10	14 18 15.*		34.5 N 135.6 E	NEAR S. COAST SOUTH HONSHU					11	LZ-	eL	06 41 40	LZ	25	74.1		
			H=388 KM	MAG 4.10	CGS				11	GG-	eP	10 26 18.9	SZ	0.6	6.3	•5	
										eS		26 26	ST	0.5	20.8		
10	GG-	eP	16 05 48.8	SZ	0.4	7.1	6		11	11 04 39.		26.4 S 177.8 W	SOUTH OF FIJI ISLANDS				
	eS		05 57	ST	0.5	13.0						H=217 KM	MAG 4.70	CGS			
10	17 37 08.7		33. S 69.4 W	MENDOZA PROVINCE, ARGENTINA					11	GG-	eP	11 04 54.9	SZ	0.3	34.3		
			H= 80 KM	MAG 5.40	CGS				11	LZ-	eP	15 04 21.7	SZ	0.4	1.5	3.8	
										eS		05 08	SR	0.7	10.2		
10	LZ-	eP	17 41 03.5	SZ	1.5	561.7	16.7	5.55	11	19 47 53.3		16.5 N 93.6 W	CHIAPAS, MEXICO				
	eP		41 05	LZ	19	214.1						H=130 KM	MAG 4.20	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11	LZ-	eLR	22 44 15	LZ	24	396.6					eSS	24 10	LR	20	771.5		
11	LZ-	eL	22 46 25	LZ	21	540.0					e	26 25	LT	20	449.6		
11	LZ-	eL	22 46 25	LR	21	323.1					eSSS	29 45	LR	28	9999.9		
11	LZ-	eL	22 46 25	LT	17	274.4					e	37 05	LZ	23	350.7		
11	LZ-	eL	22 55 45	LZ	25	182.1					eLQ	42 30	LR	30	9999.9		
11	LZ-	eLR	22 59 45	LZ	22	9999.9					eLR	47 00	LZ	21	240.0		
11	LZ-	eL	23 01 35	LZ	19	9999.9			12	00-	eLR	13 42 33	LZ	40	3165.7	113.5	
11	LZ-	eL	23 01 35	LR	21	516.9			12	GG-	eL	13 43 30	LR	25	1127.5	119.9	
11	LZ-	eL	23 01 35	LT	18	305.2			12	GG-	eL	13 03 05	LZ	25	204.8		
11	LZ-	eL	23 23 30	LZ	35	351.4			12			11 09 N 143 06 E	SOUTH OF MARIANA ISLANDS				
11	LZ-	eLR	23 26 45	LZ	25	563.0						H= 33 KM MAG 4.50 CGS					
11	LZ-	eL	23 28 50	LZ	20	9999.9			12			17 04 S 179 09 W	FIJI ISLANDS REGION				
11	LZ-	eL	23 28 50	LR	22	408.1						H=561 KM MAG 5.80 CGS					
11	LZ-	eL	23 28 50	LT	17	294.0			12								
12	05 58 08.*		40. N 139 09 E NEAR W. COAST HONSHU, JAPAN						12								
			H= 33 KM MAG 4.00 CGS						12								
12	06 30 00.*		1 07 N 127 08 E HALMAHERA						12								
			H=172 KM						12								
12	09 59 00.*		21 07 S 66 06 W SOUTHERN BOLIVIA						12								
			H=309 KM MAG 3.80 CGS						12								
12	LZ- eP		10 00 27.5C	SZ	0.5	28.9	5.7	4.44	12	GG- eP		15 38 03.2	SZ	6.0	19.2U	146.6	
	e		00 48	SZ	0.8	23.5			12	LZ- eSKP		15 39 51	LZ	16	212.4	104.6	
	eL		01 35	ST	1.5	20.0						eSKS	42 15	LT	17	248.2	
												eS	43 40	LR	23	285.2	
												ePPS	47 38	LR	23	422.9	
												eSS	51 10	LR	25	266.6	
												eSKKS	54 30	LR	25	155.9	
												eSSS	55 40	LR	14	330.5	
												e	58 36	LT	24	350.8	
												eLR	16 08 50	LZ	22	151.1	
12	10 48 19.2		24 07 S 170 05 E LOYALTY ISLANDS REGION						12	17 08 38.1		18 05 S 67 00 W BOLIVIA					
			H= 33 KM MAG 4.00 CGS									H=237 KM MAG 4.20 CGS					
12	12 43 19.		4 04 S 144 00 E NEAR NORTH COAST NEW GUINEA						12	LZ- eP		17 09 31.1	SZ	999.9	9999.9	2.7	
			H=120 KM MAG 6.50 CGS														
12	LZ- eP		13 02 35.5	SZ	0.6	77.5	141.9		12	LZ- eP		17 42 45.2	SZ	0.5	48.5		
	eP		02 38	LZ	20	228.3			12	18 25 30.7		9 01 N 137 09 E WEST CAROLINE ISLANDS					
	ePP		03 05	SZ	0.7	72.2						H= 33 KM MAG 4.40 CGS					
	ePKS		05 46	LZ	25	198.7			12	19 05 47.4		11 02 N 86 09 W NEAR COAST OF NICARAGUA					
	eSKKS		06 20	LT	14	317.8						H= 33 KM MAG 4.70 CGS					
	eSKKKS		12 31	ST	2.0	54.7			12	20 25 53.5		45 04 N 149 07 E KURILE ISLANDS					
	eP ⁰ PCS		13 10	LT	20	151.7						H= 53 KM MAG 4.80 CGS					
	eSKKP		14 30	LR	25	140.8											
	ePS		15 44	LZ	25	198.7											
			16 23	LT	22	174.2											

DAY	STA PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	LZ- eL	21 25 24	LZ	22.	227.4	136.8	
12	LZ- eP	21 13 32.0	SZ	0.8	5.3		
12	21 19 39.*	12.5 N 89.1 W H= 55 KM MAG 4.20	OFF COAST OF CENTRAL AMERICA CGS				
12	LZ- eP	21 48 15.5	SZ	1.2	12.1		
12	22 07 03.2	49.1 S 164.2 E H= 33 KM MAG 7.50	AUCKLAND ISLANDS REGION CGS				
12	LZ- eP eP ePP eSKS ePKKP eP'P' eL	22 20 48.5 20 50 24 53 31 26 37 07 45 21 57 00	SZ LZ SZ SR SZ SZ ST	2.0 999 1.6 3.4 1.7 2.1 20.0	219.5 9999.9 153.3 622.7 53.7 59.7 15.3U	100.0	6.44
12	GG- eP'1 eP'1 eP'2 ePP	22 26 59.5 27 00 27 55 31 40	SZ LZ SZ SZ	3.0 999 1.0 3.5	1023.1 9999.9 97.7 2641.9		162.4
12	00- eP'1 eP'1 eP'2 e	22 27 05.0 27 06 27 43 29 48	SZ LZ SZ SZ	1.5 999 1.0 1.5	183.8 9999.9 58.0 105.0	160.8	
13	LZ- eP	00 14 49.0	SZ	0.9	4.7		
13	00 21 06.7	49.3 S 163.7 E H= 33 KM	AUCKLAND ISLANDS REGION				
13	LZ- eP	00 30 27.5	SZ	0.8	5.3		
13	02 50 18.2	49.4 S 162.9 E H= 33 KM	AUCKLAND ISLANDS REGION				
13	LZ- eP eS	02 54 16.8 54 37	SZ SR	0.4 0.4	12.1 5.5	1.5	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	03 26	36.*	28°1' S H= 54 KM	66°5' W MAG 4.40	CATAMARCA PROV., ARGENTINA CGS			
13	04 47	45.4	6.3 S H=373 KM	127°8' E MAG 5.00	BANDA SEA CGS			
13	LZ- eP eS		05 01 21.7 01 52	SZ ST	0.6 0.7	7.0 11.5	2.5	
13	07 27	29.*	12.4 N H= 51 KM	89°2' W MAG 4.30	OFF COAST OF CENTRAL AMERICA CGS			
13	08 46	46.*	15.6 S H= 33 KM	172°7' W MAG 4.20	SAMOA ISLANDS REGION CGS			
13	09 29	08.*	53.9 N H= 33 KM	168°7' E MAG 4.20	KOMANDORSKY ISLANDS REGION CGS			
13	10 29	17.*	15.1 N H= 33 KM	44°7' W MAG 4.30	NORTH ATLANTIC RIDGE CGS			
13	LZ- eP eL		10 36 44.5 48 00	SZ LZ	1.5 30	11.8 256.4	39.0	4.40
13	11 03	50.	19.8 S H=357 KM	177°7' W MAG 5.20	FIJI ISLANDS REGION CGS			
13	11 52	19.*	16.3 N H=234 KM	91°8' W MAG 3.80	MEXICO GUATEMALA BORDER REG. CGS			
13	12 41	50.6	17.6 S H=421 KM	178°0' W MAG 4.40	FIJI ISLANDS REGION CGS			
13	LZ- eP		14 52 38.0	SZ	1.0	10.6		
13	LZ- eP eS		14 54 20.6 55 04	SZ SR	0.5 0.5	20.2 10.3	3.5	
13	15 07	31.9	49.4 S H= 33 KM	163°3' E MAG 5.00	AUCKLAND ISLANDS REGION CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	15 52 24.*		15.8 S 172.9 W	SAMOA ISLANDS REGION				
			H= 33 KM MAG 4.70 CGS					
13	16 55 48.*		50.3 N 153.0 E	KURILE ISLANDS				
			H=249 KM MAG 4.30 CGS					
13	LZ- eP eS		17 29 21.2 30 32	SZ SR	0.6 0.9	12.0 5.8	4.3	
13	17 44 10.*		61.4 N 149.8 W	SOUTHERN ALASKA				
			H= 33 KM MAG 3.90 CGS					
13	19 40 44.*		58.8 N 154.9 W	ALASKA PENINSULA				
			H= 83 KM MAG 4.70 CGS					
13	LZ- eLQ		21 03 50	LR	32.	119.5		
13	LZ- eLR		21 05 55	LZ	25	245.3		
13	21 38 32.		18.2 N 100.5 W	GUERRERO, MEXICO				
			H= 20 KM MAG 4.30 CGS					
13	22 31 22.*		54.4 N 163.7 W	UNIMAK ISLAND REGION				
			H= 33 KM MAG 3.70 CGS					
13	23 01 06.*		58.5 N 30.8 W	NORTH ATLANTIC OCEAN				
			H= 33 KM MAG 4.30 CGS					
13	00- eL		23 10 45	LZ	27	310.2	20.9	
13	GG- eL		23 13 50	LZ	28	279.1	25.8	
13	23 23 35.*		58.3 N 32.4 W	NORTH ATLANTIC OCEAN				
			H= 25 KM MAG 4.30 CGS					
13	GG- eL		23 36 20	LZ	25	221.9	26.6	
14	06 19 51.*		59.3 N 32.1 W	NORTH ATLANTIC OCEAN				
			H= 33 KM MAG 4.60 CGS					
14	00- eS		06 28 20	LT	20	326.2	21.2	
	eL		29 25	LZ	32	492.5		
14	GG- eL		06 32 25	LZ	26	401.4	26.5	
14	06 34 42.*		59.4 N 31.2 W	NORTH ATLANTIC OCEAN				
			H= 33 KM MAG 4.50 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
14	GG- eL		06 47 20	LZ	25.	290.2	26.0	
14	LZ- eP eS		09 15 05.0 15 39	SZ ST	0.5 0.5	2.6 6.4	2.7	
14	GG- eP eS		09 58 03.5 58 21	SZ ST	0.4 999.9	35.3 9999.9	1.3	
14	10 17 46.6		56.7 N 157.4 W	ALASKA PENINSULA				
			H= 61 KM MAG 5.70 CGS					
14	00- eP		10 28 04.5	SZ	0.8	19.0	62.2	5.23
14	10 48 18.*		17.9 S 69.7 W	PERU BOLIVIA BORDER REGION				
			H=192 KM MAG 3.50 CGS					
14	LZ- tP eS		10 48 59.0C 49 36	SZ ST	0.5 0.5	23.9 15.0	2.0	
14	11 35 54.*		52.3 N 170.8 W	FOX ALEUTIAN ISLANDS				
			H= 50 KM MAG 3.80 CGS					
14	11 58 31.*		41.9 S 89.5 W	SOUTHERN PACIFIC OCEAN				
			H= 33 KM MAG 4.50 CGS					
14	LZ- eP eP e e		12 04 50.0 04 52 04 58 06 50	SZ LZ SZ LZ	0.8 20 1.1 15	9.8 103.9 32.9 191.4	31.3	4.72
	eS eL eL eL		09 33 13 10	LT LZ	21 999	318.1 9999.9		
14	00- eL		13 04 02	LT	29	264.7	130.3	
14	12 25 04.4		44.7 N 146.4 E	KURILE ISLANDS				
			H=149 KM MAG 4.40 CGS					
14	12 56 32.2		9.5 S 111.8 E	SOUTH OF JAVA				
			H=127 KM					
14	GG- eP		13 21 14.9	SZ	0.4	18.9		
14	13 33 33.7		15. N 93.2 W	NEAR COAST CHIAPAS, MEXICO				
			H= 64 KM MAG 4.90 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
14	LZ-	eP	13 41 00.7C	SZ	1.2	112.4	39.5	5.53	14	20 40 26.5	45.2 N 150.3 E KURILE ISLANDS							
		eP	41 02	LZ	20	267.3				H= 33 KM	MAG 5.00 CGS							
		ePP	42 35	LZ	20	173.2			14	00- eL	21 18 46	LZ	28	422.7	69.1			
		ePCP	43 08	SZ	1.7	96.1			14	GG- eL	21 28 42	LZ	22	447.9	79.0			
		e	46 55	LR	35	448.9			14	LZ- eL	21 46 30	LZ	33	228.7	136.6			
		eSS	50 00	LR	20	556.5												
		eLQ	52 25	LT	30	9999.9												
		eLR	53 40	LT	28	9999.9			14	22 41 17.2	16. N 99.9 W NEAR COAST GUERRERO, MEXICO							
14	OO-	eP	13 45 57	LT	14	320.9	83.7			H= 33 KM	MAG 4.70 CGS							
		e	47 54	LT	18	465.0												
		ePP	48 37	LZ	23	763.4			14	LZ- eP	22 49 33.8	SZ	1.8	61.9	44.6	5.12		
		e	56 17	LR	21	727.3				eS	56 16	LR	20	132.0				
14	GG-	eL	14 13 12	LZ	38	1419.8				eL	23 05 00	LZ	21	472.4				
		eP	13 46 20	LZ	18	160.7	87.7			eL	06 24	LR	19	306.3				
		ePP	50 10	LZ	29	598.8				eL	06 24	LT	18	103.4				
		ePPP	51 58	LZ	21	869.3			14	00- eL	23 26 00	LZ	31	241.5	85.8			
		eL	14 16 00	LZ	31	433.8												
14	OO-	e	14 29 57	LT	17.	746.5			14	23 55 49.8	44.8 N 147.8 E KURILE ISLANDS							
14	OO-	e	14 31 23	LT	19	2271.7				H= 33 KM	MAG 4.20 CGS							
14	OO-	eL	14 32 44	LZ	27	2011.1			15	01 00 08.	15.6 S 175.9 W TONGA ISLANDS							
14	GG-	eL	14 33 48	LZ	27	1581.6				H= 9 KM	MAG 4.90 CGS							
14	LZ-	eL	15 03 25	LZ	27	144.5												
14	15 21 09.		28. N 55.8 E SOUTHERN IRAN						15	05 09 23.*	15.1 N 91.0 W MEXICO GUATEMALA BORDER REG.							
			H= 33 KM							MAG 3.80 CGS								
14	GG-	eP	15 28 44.1	SZ	0.8	40.6	40.2	5.19	15	LZ- eP	05 33 38.2	SZ	0.5	5.3				
14	OO-	eP	15 29 19.4	SZ	0.7	11.1	44.6	4.78	15	LZ- e	05 34 42	LZ	19	207.7				
		eSCS	39 13	LT	23	388.8												
		eL	45 37	LT	27	1311.6			15	05 37 45.4	1 S 124.6 E MOLUCCA SEA							
					AVG.	4.98				H= 33 KM	MAG 5.30 CGS							
14	15 45 22.2		15.5 N 90.8 W GUATEMALA						15	LZ- eP'1	05 57 45.0	SZ	1.7	56.3	159.2			
			H= 38 KM							eP'2	58 23	SZ	1.1	50.7				
14	LZ-	eP	15 52 43.0	SZ	1.0	9.3	38.5	4.51		eP'2	58 44	LZ	16	182.8				
		e	58 45	LR	35	532.0				e	06 00 07	SZ	1.5	33.0				
		e	16 02 15	LT	26	478.7				ePP	02 15	LZ	20	244.6				
		eL	03 55	LT	26	9999.9				eSKKS	08 52	LT	20	128.6				
14	OO-	eL	16 24 50	LZ	35	601.9	82.1			eSKKS	12 45	LT	16	302.7				
										ePPS	15 39	LT	21	247.2				
14	LZ-	eL	16 35 00	LZ	22.	575.5				ePSS	22 58	LT	22	323.0				
										e	29 16	LT	34	429.1				
										eL	42 08	LR	42	712.6				
											54 06	LZ	43	764.3				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
15	00-	eP\$	06 05 00	L+	248	41785	101.4	
	ePKKS		10 58	L+	22	31180		
	e		20 37	LZ	25	59882		
	eL		27 35	L+	37	119480		
15	GG-	eL	06 31 27	LZ	30	64884	105.0	
15	07 51 28.8		15.4 N 90.6 W GUATEMALA					
	H= 33 KM MAG 3.90 CGS							
15	08 57 56.5		56.4 S 27.2 W SOUTH SANDWICH ISLANDS REG.					
	H= 33 KM MAG 6.10 CGS							
15	LZ-	eP	09 06 55.8	SZ	0.8	56.7	50.8	5.58
	eS		14 12	LR	15	264.8		
	eL		22 24	LZ	36	311.1		
	eLR		25 20	LZ	20	440.3		
15	GG-	eP	11 12 08.2	SZ	0.5	7.2	•4	
	eS		12 14	SR	0.7	53.5		
15	GG-	eP	11 41 16.6	SZ	0.4	24.6		
15	11 44 13.7		22.2 S 175.2 W TONGA ISLANDS REGION					
	H= 33 KM MAG 4.70 CGS							
15	12 44 12.2		16. S 172.9 W SAMOA ISLANDS REGION					
	H= 33 KM MAG 5.30 CGS							
15	GG-	eP ¹²	13 03 51.2	SZ	1.1	87.8	146.2	
15	LZ-	eL	13 30 17	LZ	28	486.3	98.8	
	eL		33 04	L+	20	433.4		
	eL		33 04	LR	20	211.3		
15	13 12 54.*		15.8 S 173.1 W TONGA ISLANDS					
	H= 33 KM MAG 4.60 CGS							
15	GG-	eP	13 47 50.5	SZ	0.2	33.8		
15	GG-	eS	13 47 54	SR	0.2	96.7		
15	GG-	eP	14 00 53.5	SZ	0.5	21.4	1.1	
	eS		01 08	SR	0.4	54.3		
15	15 29 32.2		8.9 N 93.1 E NICOBAR ISLANDS REGION					
	H= 37 KM MAG 6.20 CGS							

DAY	STA	PHASE	TIME	INST	PER	AM		
15	GG-	eP	15 41 29.0	SZ	1.0	462.3	78.0	6.45
	tP		41 30 C	LZ	18	9999.9		
	epP		41 41	SZ	0.9	191.4		
	ePP		44 23	LZ	12	3229.9		
	ePPP		46 45	LZ	16	2364.8		
	eS		51 15	SR	3.5	1318.8		
	eS		51 18	LR	22	4786.2		
	ePS		51 50	SR	4.0	2401.6		
	ePS		52 05	LR	999	9999.9		
	eSPP		52 28	SZ	5.0	3146.3		
	e		55 10	LR	18	6830.6		
	eSS		56 25	LT	999	9999.9		
	eL		16 04 25	LZ	999	9999.9	78.5	5.85
	eP		15 41 30.7	SZ	1.0	124.1		
	eP		41 42	LZ	17	6610.7		
	e		49 33	SZ	1.5	65.1		
	e		49 34	LT	999	9999.9		
	eS		51 10	ST	3.3	1198.9		
	eS		51 19	LT	999	9999.9		
	ePS		51 55	ST	5.0	2808.7		
	ePS		51 58	LT	999	9999.9		
	eLQ		16 05 00	LZ	999	9999.9		
	eLR		10 00	SZ	1.1	67.7	160.6	
	eP ¹		15 49 32.0	LZ	15	9999.9		
	eP ¹		49 32	SZ	2.6	826.2		
	e		49 54	LT	1.4	110.1		
	eP ²		50 11	SZ	17	9999.9		
	eP ²		50 33	LZ	999.9	9999.9		
	e		50 33	SZ	1.6	100.4		
	eSKP		52 55	LZ	18	9999.9		
	eSKP		52 58	LT	20	9999.9		
	e		54 22	ST	2.5	284.4		
	ePKKP		57 27	SZ	999	9999.9		
	ePPP		57 46	LZ	2.2	216.4		
	ePCPP ¹		58 05	SZ	999	9999.9		
	eSKKS		16 00 24	LT	999	9999.9		
	eSKKS		00 37	SR	2.9	917.7		
	e		01 28	ST	2.2	210.9		
	e		03 08	LT	999	9999.9		
	eSKKS		04 51	ST	6.0	1920.2		
	eL		44 00	LZ	999	9999.9		
					Avg.	6.15		
15	GG-	eP	41.6 S 73.6 W NEAR COAST OF SOUTHERN CHILE					
15	GG-	eS	13 47 54	SR	0.2	96.7		
15	GG-	eP	14 00 53.5	SZ	0.5	21.4		
	eS		01 08	SR	0.4	54.3		
15	16 13 33.*		H= 82 KM MAG 4.20 CGS					
15	LZ-	eP	16 18 59.0	SZ	1.0	5.9	25.6	4.07
15	GG-	eL	17 45 30	LZ	30.	688.9		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
15	18	37 10*	6.6 S 146.8 E H= 59 KM MAG 5.10 CGS	EAST NEW GUINEA REGION				
15	18	44 49.*	48.6 N 154.0 E H= 33 KM MAG 4.70 CGS	KURILE ISLANDS				
15	20	23 35.2	54.5 S 53.4 W H= 33 KM MAG 5.20 CGS	SOUTH ATLANTIC OCEAN				
15	LZ-	eP	20 31 05.5	SZ	0.5	6.9	39.9	4.61
		eS	37 18	LR	17	209.7		
		eSS	40 00	LT	40	661.9		
		eLQ	42 55	LT	999	9999.9		
		eLR	44 25	LZ	999	9999.9		
15	GG-	eL	21 22 20	LZ	24	218.4		
15	OO-	eL	21 25 00	LZ	22	476.7	117.1	
15	21	00 31.7	58.7 S 66.5 W H= 33 KM MAG 5.20 CGS	DRAKE PASSAGE				
15	LZ-	eP	21 08 24.5	SZ	1.1	27.8	42.4	4.92
		e	08 31	SZ	0.8	39.6		
		e	18 45	SZ	1.2	42.3		
15	21	56 07.2	15.3 N 90.8 W H= 74 KM MAG 4.40 CGS	GUATEMALA				
16	01	26 26.9	10.9 N 93.1 E H= 47 KM MAG 5.70 CGS	ANDAMAN ISLANDS REGION				
16	GG-	eP	01 38 14	LZ	17.	520.7	76.5	
		eP	38 14	SZ	1.0	128.0		
		e	40 48	SZ	1.0	14.2		
		eS	48 10	LT	22	490.8		
		eSS	53 15	LR	24	1109.8		
		eL	02 10 50	LZ	21	1653.2		
16	LZ-	eP ¹	01 46 25.0	SZ	1.3	14.6	161.3	
		eP ¹	46 30	LZ	18	139.2		
		eP ²	47 10	SZ	1.0	36.3		
		eP ²	47 13	LZ	10	633.1		
		ePP	51 00	LZ	18	423.2		
		e	02 01 40	LR	14	580.9		
		eSSP	12 06	LZ	29	959.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		e	15 00	LR	23*	741.5		
		e	18 50	LR	31	1296.2		
		eL	37 02	LZ	24	9999.9		
		eL	39 15	LT	30	9999.9		
		eL	42 17	LZ	999	9999.9		
16	01	50 33.9	60. N 147.1 W H= 29 KM MAG 5.75 CGS	GULF OF ALASKA				
16	GG-	eP	02 01 40.1	SZ	1.5	104.5	69.3	5.71
		eL	30 20	LZ	17	2162.9		
16	03	32 34.*	51.6 N 173.8 W H= 45 KM MAG 4.20 CGS	ANDREANOF ALEUTIAN ISLANDS				
16	GG-	eL	04 20 50	LZ	23	150.2	79.0	
16	LZ-	eP	05 11 21.0	SZ	1.0	14.5		
16	LZ-	eL	05 20 15	LZ	23	128.9		
16	05	20 46.1	5.9 S 152.0 E H= 29 KM MAG 6.20 CGS	NEW BRITAIN REGION				
16	LZ-	eP ¹	05 40 05.7	SZ	0.9	4.8	134.3	
		eSKP	43 32	SZ	1.8	20.2		
16	05	34 30.7	37.1 N 114.9 W H= 33 KM	SOUTHERN NEVADA				
16	08	42 15.*	19.6 N 106.9 W H= 33 KM MAG 3.60 CGS	OFF COAST OF JALISCO, MEXICO				
16	LZ-	eP	10 29 55.5	SZ	0.3	2.9		
16	12	22 44.*	34.4 N 119.4 W H= 14 KM MAG 3.80 CGS	SOUTHERN CALIFORNIA				
16	GG-	iP	14 13 37.2D	SZ	0.3	61.3		
16	14	40 38.*	31.4 N 114.0 W H= 33 KM MAG 4.30 CGS	GULF OF CALIFORNIA				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	GG-	eP eS	15 01 54.7 02 00	SZ ST	0.4 0.4	12.8 14.2	13		16	22 37 26.5		56.3 N 162.8 E	NEAR EAST COAST OF KAMCHATKA				
16		15 13 01.5	43.7 N 141.2 E	HOKKAIDO, JAPAN REGION						17	02 06 27.*	59.1 N 148.3 W	KENAI PENINSULA, ALASKA				
16		17 23 16.1	10.3 S 161.3 E	SOLOMON ISLANDS						17	02 48 52.2	17.6 N 100.3 W	GUERRERO, MEXICO				
16		19 26 25.*	41.6 N 139.3 E	HOKKAIDO, JAPAN REGION						17	05 56 31.*	28.3 N 143.4 E	BONIN ISLANDS REGION				
16		20 32 11.2	29.7 S 69.7 W	CHILE ARGENTINA BORDER REG.						17	06 59 37.8	26.5 S 176.4 W	SOUTH OF FIJI ISLANDS				
16		20 47 16.	16.1 S 176.5 W	FIJI ISLANDS REGION						17	GG- eP	07 12 15.7	SZ	0.4	12.3		
16	GG-	eP 12	21 06 46.4	SZ	0.8	16.9	145.9			17	07 41 13.9	15.6 S 72.9 W	SOUTHERN PERU				
16		22 22 18.*	59.6 N 146.7 W	GULF OF ALASKA						17	LZ- tP eL	07 42 18.5C 42 50	SZ LZ	0.5 999	9999.9 9999.9	4.3	
16		22 23 36.3	22.9 N 45.1 W	NORTH ATLANTIC RIDGE						17	GG- eP	10 39 31.0	SZ	0.3	66.4		
16	LZ-	eP ePP eS e eLQ eLR	22 31 51.3 33 39 38 36 42 13 45 12 46 57	SZ SZ LR LR LR LZ	1.1 2.0 15 19 30 26	141.6 78.2 840.3 1036.3 9999.9 9999.9	45.1	5.75		17	10 57 51.*	4.9 N 76.2 W	COLOMBIA				
16	GG-	eP eP eS eL	22 32 39.9 32 40 40 07 47 30	SZ LZ LT LZ	1.3 12 14 27	178.8 132.7 868.2 718.7	51.2	5.87		17	GG- eP eS	11 05 18.8 05 22	SZ ST	0.3 0.4	7.6 45.0	.1	
16	OO-	eP eS eLQ eLR	22 32 59.0 40 32 47 10 49 31	SZ LT LT LZ	1.0 23 35 29	62.5 1567.9 1177.8 1814.7	53.9	5.59	Avg. 5.73	17	GG- eP eP e	12 55 53.0 56 11 13 14 34.6 14 54	SZ SR SZ SR	0.5 0.4 0.4 0.5	29.9 26.0 33.1 89.9	1.3	
										17	15 02 00.9	44.5 N 31.3 W	NORTH ATLANTIC RIDGE				
										17	GG- eP eP e	15 08 02.0 08 04 13 12	SZ LZ LZ	1.0 16 18	76.3 197.0 351.8	29.1 5.44	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
17	00-	e	14 00	LZ	25.	802.3		
	eLQ		15 38	LT	16	1435.1		
	eLR		16 40	LZ	22	9999.9		
17	00-	eP	15 08 09.0	SZ	1.0	31.2	29.7	5.06
	eS		13 10	LR	12	731.3		
	eLQ		14 38	LR	30	915.4		
	eLR		16 16	LZ	24	2140.1		
17	LZ-	eP	15 13 09.0	SZ	1.2	279.9	69.3	6.25
	e		13 25	SZ	1.4	155.4		
	eS		22 21	LR	15	519.0		
	e		30 26	LR	19	446.6		
	e		34 13	LR	25	1051.7		
	e		36 42	LT	22	576.1		
	eL		38 43	LZ	20	1033.3		
				Avg.		5.58		
17	15 06 13.8		12.8 S 168.9 E	SANTA CRUZ ISLANDS REGION				
			H=622 KM	MAG 4.50 CGS				
17	LZ-	eP	15 41 09.4	SZ	1.1	15.0		
17	GG-	eP	16 16 03.7	SZ	0.3	27.2	•1	
	eS		16 05	SR	0.3	61.9		
17	LZ-	fP	17 52 11.00	SZ	0.4	9999.9	2.2	
	eS		52 39	ST	999.9	9999.9		
17	22 07 40.*		38.7 N 71.9 W	OFF EAST COAST UNITED STATES				
			H= KM					
17	22 17 20.*		42.8 N 110.8 W	WYOMING				
			H= 33 KM	MAG 4.00 CGS				
18	00 08 42.6		35.4 N 28.8 E	EASTERN MEDITERRANEAN SEA				
			H= 18 KM	MAG 4.70 CGS				
18	00-	eS	00 19 15	LR	21	743.5	28.1	
	eLQ		22 17	LR	36	2052.7		
	eLR		24 52	LZ	24	1994.0		
18	LZ-	eL	00 57 58	LR	31	153.1	105.1	
18	LZ-	eL	01 15 00	LZ	18.	868.3		
18	06 00 21.*		20.1 S 67.6 W	SOUTHERN BOLIVIA				
			H=290 KM	MAG 3.60 CGS				
18	LZ-	eP	06 01 27.5	SZ	0.4	77.9	3.9	5.09

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18		eS	02 11	SR	0.6	12.8		
18		07 20 34.*	54.2 N 164.0 W	UNIMAK ISLAND REGION				
			H= 33 KM	MAG 4.40 CGS				
18		07 59 54.8	72.9 N 55.2 E	NOVAYA ZEMLYA				
			H= KM	MAG 4.30 CGS				
18		10 25 28.1	19.4 N 155.3 W	HAWAII REGION				
			H= 10 KM	MAG 4.50 CGS				
18		12 22 13.3	51.4 N 179.9 W	ANDREANOF ALEUTIAN ISLANDS				
			H= 33 KM	MAG 4.80 CGS				
18		13 06 00.2	5.9 S 103.4 E	SOUTHERN SUMATRA				
			H= 86 KM	MAG 5.30 CGS				
18		13 12 42.3	39.8 N 29.7 W	AZORES ISLANDS				
			H= 20 KM	MAG 5.50 CGS				
18	GG-	eP	13 18 55.1	SZ	1.1	54.1	30.4	5.30
	eP		18 56	LZ	17	220.5		
	ePP		19 42	LZ	12	739.5		
	eS		23 54	LT	19	1267.5		
	eLR		27 00	LZ	27	9999.9		
18	LZ-	eP	13 23 35.6	SZ	1.7	97.7	66.5	5.70
	eP		23 39	LZ	16	123.1		
	eS		32 30	LR	17	584.7		
	eSS		36 44	LR	19	299.6		
	e		40 10	LR	22	320.4		
	eLQ		42 15	LR	32	9999.9		
	eLR		45 00	LZ	23	9999.9		
	ePIP		52 13	SZ	1.6	23.9		
18	00-	eS	13 24 37	LT	19	593.6	32.7	
	eLQ		26 51	LR	32	1510.2		
	eLR		28 12	LZ	24	9999.9		
				Avg.		5.50		
18		16 54 10.5	SZ	0.4	30.2	2.0		
	eS		54 38	SR	0.5	23.7		
18	GG-	eP	17 04 22.8	SZ	0.3	12.5	*1	
	eS		04 27	ST	0.4	101.9		
18		19 09 04.*	58.3 N 151.8 W	KODIAK ISLAND REGION				
			H= 53 KM	MAG 4.70 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	22 01	28.3	44.9 N 111.2 W	HEBGEN LAKE REGION H= 41 KM				
18	GG-	eL	23 51 24	LT	18.	395.0		
19	00 39	10.7	36.5 N 70.0 E	HINDU KUSH REGION H=212 KM MAG 4.70 CGS				
19	GG-	eP	04 48 55.9	SZ	0.4	6.6	2.0	
	eS		49 22	ST	0.4	19.4		
19	05 08	15.1	15.3 N 94.0 W	NEAR COAST OF OAXACA, MEXICO H= 42 KM MAG 6.00 CGS				
19	LZ-	eP	05 15 51.9	SZ	1.1	20.8	40.2	4.77
	eP		15 54	LZ	15	358.4		
	e		20 14	LZ	14	553.4		
	eS		21 55	LT	19	1698.5		
	eLQ		24 58	LT	19	9999.9		
	eLR		29 00	LZ	999	9999.9		
19	00-	eP	05 20 44	LZ	17	995.3	83.8	
	eP		20 44	SZ	0.6	11.2		5.15
	e		31 08	LR	17	2399.1		
	eSS		36 52	LR	30	1365.4		
	e		41 02	LR	24	1094.5		
	eL		48 38	LZ	32	3341.8		
19	GG-	eP	05 21 04	LZ	16	930.0	88.0	
	ePP		24 33	LZ	18	275.9		
	eSKS		31 24	LR	21	1709.0		
	eSS		37 56	LR	21	603.1		
	eSSS		41 12	LR	24	934.6		
	eL		50 16	LZ	32	1189.9		
				AVG.		4.96		
19	10 06	38.*	20.8 S 178.3 W	FIJI ISLANDS REGION H=434 KM				
19	12 13	15.*	70. N 11.7 E	NORWEGIAN SEA H= 33 KM MAG 4.10 CGS				
19	LZ-	eP	13 46 30.9	SZ	0.6	12.0	1.2	
	eS		46 47	SR	0.6	40.1		
19	LZ-	eP	14 15 22.2	SZ	0.5	16.0	4.0	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eS			16 10	SR	1.0	37.8
19	17 26	13.*	5.6 S 81.0 W	NEAR COAST OF NORTHERN PERU H= 33 KM MAG 4.80 CGS				
19	LZ-	eP	17 30 04.5	SZ	1.0	42.5	16.2	4.56
	eS		33 19	LR	17	182.6		
	eLQ		35 07	LT	21	875.5		
	eLR		36 27	LZ	22	899.5		
19	LZ-	eP	19 27 26.2	SZ	1.2	26.7		
19	19 41	21.8	21.6 N 120.9 E	TAIWAN REGION H= 33 KM MAG 4.30 CGS				
19	00-	eL	19 49 30	LR	19.	367.6		
19	GG-	eL	19 54 13	LR	19	233.7		
19	00-	eL	20 31 55	LZ	20	454.8		
19	21 34	10.2	22.1 S 177.6 W	SOUTH OF FIJI ISLANDS H=251 KM MAG 4.40 CGS				
20	03 25	36.*	6.8 S 108.9 E	JAVA H=240 KM MAG 5.90 CGS				
20	04 20	17.6	49.5 S 116.2 W	EASTER ISLAND CORDILLERA H= 33 KM MAG 4.50 CGS				
20	04 33	29.4	49.6 S 116.2 W	EASTER ISLAND CORDILLERA H= 33 KM MAG 5.20 CGS				
20	LZ-	eP	04 42 28.0	SZ	2.2	144.8	50.8	5.54
	eP		42 30	LZ	15	343.0		
	ePCP		43 50	LZ	25	783.3		
	eS		49 50	LT	21	1371.8		
	eSS		53 30	LT	25	744.6		
	eLQ		54 50	LR	40	9999.9		
	eLR		56 40	LZ	22	9999.9		
20	GG-	eP'1	04 53 11	LZ	12	178.2	146.5	
	e		05 06 49	LZ	16	136.6		
	eSS		15 47	LT	26	284.0		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	LZ- eL		20 53 36 19 05 47 15	LZ LZ LZ	22. 22 30	174.7 134.4 1101.65	148.7	
20	LZ- eL		05 43 00	LZ	26.	697.7		
20	07 42 28.*		41.3 N 124.9 W H= 33 KM MAG 4.30 CGS	NEAR COAST NORTH CALIFORNIA				
20	LZ- eL		08 34 20	LZ	30.	190.1		
20	09 18 19.*		32.4 N 141.6 E H= KM MAG 4.30 CGS	SOUTH OF HONSHU, JAPAN				
20	LZ- eP		12 31 36.0	SZ	1.0	14.9		
20	LZ- eP		14 23 07.0	SZ	0.8	11.2		
20	14 36 05.3		30. N 138.1 E H=454 KM MAG 4.90 CGS	SOUTH OF HONSHU, JAPAN				
20	GG- eL		15 25 13	LZ	18.	203.0	87.7	
20	LZ- eP		14 36 18.5	SZ	0.5	13.3		
20	LZ- eP		14 55 04.5	SZ	1.5	41.4		
20	LZ- e		14 55 11	SZ	1.0	54.1		
20	LZ- eL		14 57 59	SZ	1.5	29.0		
20	GG- eL		15 55 40	LZ	45	177.9		
20	LZ- eP		17 30 04.5	SZ	0.5	16.8		
20	18 59 55.*		62.1 N 4.2 E H= 33 KM MAG 4.20 CGS	NORWEGIAN SEA				
20	00- eP		19 00 47.7	SZ	999.9	9999.9	3.4	
20	20 43 10.9		24. N 121.8 E H= 37 KM MAG 5.10 CGS	TAIWAN				
20	GG- eL		21 35 11	LZ	20.	54.3		
20	LZ- eP		22 28 16.0	SZ	0.8	5.4		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21			00 10 36.8				5. N 76.0 W H=116 KM MAG 5.00 CGS	COLOMBIA
21			04 23 19.7				21.8 S 179.6 W H=609 KM MAG 5.40 CGS	Fiji Islands Region
21	00- eP ¹		04 41 33.5				SZ	0.7 28.8 140.1
21	GG- eP ¹		04 41 58.5				SZ	1.1 28.8 150.9
	eP ²		42 05				SZ	0.8 113.6
	e		42 16				SZ	0.9 182.3
21	GG- eL		05 14 42				LZ	17. 142.2
21			05 37 48.9				7. S 129.4 E H=123 KM MAG 5.20 CGS	BANDA SEA
21	LZ- eP ²		05 57 31.5				SZ	0.7 71.7 150.9
21			08 30 54.4				2.1 S 128.3 E H= 36 KM MAG 5.70 CGS	CERAM SEA
21	GG- eP ²		09 55 45.7				SZ	0.7 52.3 1.3
	eS		56 03				SR	0.8 42.3
21			12 01 46.6				17.8 S 167.3 E H= 33 KM MAG 5.10 CGS	NEW HEBRIDES ISLANDS
21			13 27 32.9				7.2 S 74.3 W H=150 KM MAG 4.60 CGS	PERU BRAZIL BORDER REGION
21	LZ- eP		13 30 04.5				SZ	1.0 10.9 10.6 4.42
21			14 17 54.4				36.2 S 100.2 W H= 33 KM MAG 4.80 CGS	SOUTHERN PACIFIC OCEAN
21	LZ- eP		14 24 42.6				SZ	0.8 31.4 34.5 5.28
	eS		30 18				LT	21 177.3
	eLQ		32 40				LR	20 235.5
	eLR		34 10				LZ	28 837.4

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21			16 29 36.*	48° N H= 5 KM	152° 9 E MAG 4.80	KURILE ISLANDS CGS		
21			16 57 36.*	19° 9 S H=512 KM	178° 5 W MAG 4.50	FIJI ISLANDS REGION CGS		
21			18 10 51.6	30° 1 S H=319 KM	179° 5 W MAG 5.20	KERMADEC ISLANDS CGS		
21	00-	eP ⁰¹	18 29 59.6	SZ	0.7	48.8	148.3	
21			19 29 25.2	12° 1 N H= 33 KM	142° 9 E MAG 4.80	SOUTH OF MARIANA ISLANDS CGS		
21			21 23 43.*	15° 2 S H=126 KM	175° 2 W	TONGA ISLANDS		
21			22 02 25.*	48° N H= 31 KM	152° 7 E MAG 4.70	KURILE ISLANDS CGS		
21			23 16 35.8	20° 2 S H=511 KM	177° 8 W MAG 4.40	FIJI ISLANDS REGION CGS		
22	06 52 10.			44° 4 N H= 15 KM	114° 8 W MAG 4.30	WESTERN IDAHO		
22	09 05 06.4			23° 9 S H= 33 KM	70° 7 W MAG 4.70	NEAR COAST OF NORTHERN CHILE		
22	LZ- eP eL eL		09 07 02.2	SZ 08 50 08 55	0.5 LR ST	13.1 999 9999.9 9999.9	7.9	5.20
22			09 07 32.8	43° 7 N H= 33 KM	147° 7 E MAG 5.00	KURILE ISLANDS CGS		
22			09 46 27.8	10° 6 N H= 12 KM	70° 0 W MAG 4.10	VENEZUELA		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
22	LZ-	eP eL	09 52 12.5 10 00 41	SZ ST	0.9 1.0	4.9 9.6	26.7	4.19
22			12 36 57.6	16° 6 N H= 66 KM	95° 5 W MAG 4.10	OAXACA, MEXICO CGS		
22			13 27 29.7	13° 3 N H= 78 KM	89° 7 W MAG 4.80	EL SALVADOR CGS		
22			20 39 07.	2° 8 S H= 84 KM	141° 0 E MAG 5.70	NEAR NORTH COAST NEW GUINEA CGS		
22	LZ-	eP ⁰¹	20 58 37.0	SZ	1.0	28.9	145.2	
23			01 41 01.*	34° 3 N H= 61 KM	32° 6 E MAG 4.70	CYPRUS CGS		
23			02 49 33.*	13° 4 S H=301 KM	174° 4 W MAG 3.90	SAMOA ISLANDS REGION CGS		
23			04 59 47.4	53° 6 N H= 29 KM	163° 9 W MAG 5.50	UNIMAK ISLAND REGION CGS		
23	00-	eP eP eS e eLQ eLR	05 10 30.0 10 31 19 25 24 35 27 00 28 55	SZ LZ LT LT LR LR	0.5 16 20 24 25 28	20.2 1013.2 1108.8 844.1 1154.7 2210.7	65.6	5.52
23	LZ- eSKS		05 24 35	LR	17	498.0	106.1	
23			25 55	LT	21	480.5		
23			27 40	LR	19	712.3		
23			33 30	LR	25	450.2		
23			37 55	LT	25	547.1		
23			47 05	LT	40	2125.0		
23			52 35	LZ	33	1073.9		
23			06 18 57.4	53° 7 N H= 13 KM	163° 6 W MAG 4.80	UNIMAK ISLAND REGION CGS		
23			07 52 38.*	13° 1 S H= 33 KM	14° 8 W MAG 5.00	SOUTH ATLANTIC RIDGE CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	LZ-	eP	08 01 46.5	SZ	1.0	7.2	51.9	4.59
23	GG-	eL	10 23 35	LZ	25.0	151.5		
23	LZ-	e	12 12 30	ST	0.5	9.6		
23	GG-	eP	12 47 09.4	SZ	0.5	71.2	2.6	
	eS		47 42	SR	0.4	55.4		
23	13 28 06.*		51.7 N 177.6 W	ANDREANOF ALEUTIAN ISLANDS				
			H= 33 KM	MAG 4.10 CGS				
23	00-	e	15 43 59	LZ	22.0	1199.5		
23	00-	e	15 46 38	LZ	26	1008.1		
23	00-	e	15 53 42	LT	31	2638.0		
23	00-	e	15 55 15	LT	27	1974.5		
23	00-	e	15 59 52	LT	24	2532.5		
23	00-	e	16 04 57	LT	36	9999.9		
23	00-	e	16 09 27	LZ	27	1960.2		
23	00-	e	16 10 44	LT	27	1985.8		
23	00-	e	16 22 28	LT	38	4318.4		
23	00-	e	16 25 11	LT	28	2220.6		
23	00-	eL	16 28 10	LZ	26	9999.9		
23	16 37 19.*		61.6 N 150.0 W	SOUTHERN ALASKA				
			H= 33 KM	MAG 4.10 CGS				
23	GG-	eP	16 39 48.1	SZ	0.4	15.0	•1	
	eS		39 50	SR	0.4	77.1		
23	LZ-	eP	16 58 47.5	SZ	0.5	4.3		
23	GG-	eP	17 09 14.6	SZ	0.4	12.5	•1	
	eS		09 16	SR	0.5	36.9		
23	17 18 12.1		5.8 N 126.4 E	MINDANAO, PHILIPPINE ISLANDS				
			H=132 KM					
23	18 09 38.*		35.9 N 114.8 W	CALIF. NEVADA BORDER REGION				
			H= 15 KM	MAG 4.40 CGS				
23	LZ-	eP	21 42 23.2	SZ	0.2	18.0	1.4	
	eS		42 32	ST	0.3	9999.9		
24	02 34 43.2		60.3 N 137.4 W	S. YUKON TERRITORY, CANADA				
			H= 66 KM	MAG 4.10 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
24	02 39 38.*		56.5 N 157.0 W	ALASKA PENINSULA				
			H= 33 KM	MAG 4.30 CGS				
24	GG-	eP	04 52 47.5	SZ	0.4	15.6	•1	
	eS		52 51	SR	0.4	81.9		
24	GG-	eP	05 11 39.8	SZ	1.2	153.5		
24	GG-	eP	05 11 40	LZ	19	844.1		
24	GG-	e	05 14 27	LZ	20	260.1		
24	GG-	e	05 26 48	LZ	35	773.9		
24	GG-	e	05 30 37	LZ	26	492.1		
24	GG-	e	05 34 50	LZ	24	683.5		
24	GG-	e	05 41 00	LZ	27	814.1		
24	GG-	e	05 45 04	LT	22	4131.7		
24	GG-	eL	05 46 29	LZ	22	9999.9		
24	GG-	eP	08 15 54.2D	SZ	0.3	51.8		
24	09 14 38.6		5.6 S 151.8 E	NEW BRITAIN REGION				
			H= 35 KM	MAG 5.30 CGS				
24	LZ-	eP	09 28 48.0	SZ	0.9	4.8		
24	09 34 26.5		60.9 N 143.7 W	SOUTHERN ALASKA				
			H= 7 KM	MAG 4.00 CGS				
24	12 51 33.*		38.3 N 118.5 W	CALIFORNIA NEVADA REGION				
			H= 15 KM					
24	13 59 36.8		43.5 N 127.5 W	OFF COAST OF OREGON				
			H= 14 KM					
24	LZ-	eP	14 11 51.9	SZ	1.9	39.5	80.3	5.03
24	00-	eS	14 20 10	LT	14	267.3	70.4	
	eL		28 41	LT	25	586.4		
24	LZ-	eL	14 06 18	LZ	25.	694.6		
24	14 34 48.		20.7 N 144.6 E	MARIANA ISLANDS				
			H=146 KM	MAG 4.80 CGS				
24	LZ-	eP ^{•1}	14 54 17.0	SZ	1.9	39.5	148.3	
	eP ^{•1}		55 00	SZ	1.8	60.6		
24	GG-	eP	17 40 12.5	SZ	0.3	12.8	•1	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eS	40 14	SR	0.4	32.7		
24	17 59 53.4		40.3 N 141.6 E	NEAR E. COAST HONSHU, JAPAN				
			H=104 KM	MAG 4.40	CGS			
24	23 10 16.*		5.5 S 151.5 E	NEW BRITAIN REGION				
			H= 92 KM	MAG 5.00	CGS			
24	23 37 23.5		51.5 N 177.1 W	ANDREANOF ALEUTIAN ISLANDS				
			H= 49 KM	MAG 4.70	CGS			
25	01 54 18.*		13.3 N 89.4 W	EL SALVADOR				
			H= 94 KM	MAG 4.00	CGS			
25	04 55 22.*		57.5 N 144.5 W	GULF OF ALASKA				
			H= 33 KM	MAG 4.50	CGS			
25	05 21 33.		52.1 N 174.7 W	ANDREANOF ALEUTIAN ISLANDS				
			H= 33 KM	MAG 4.60	CGS			
25	06 33 35.1		8.9 S 108.4 W	N. EASTER ISLAND CORDILLERA				
			H= 33 KM	MAG 4.30	CGS			
25	LZ- eP eLR		06 41 07.8 52 53	SZ LZ	0.8 20	9.5 885.3	39.6	4.56
25	GG- eP eS		06 35 28.2 35 30	SZ ST	0.3 0.5	37.8 103.6	•1	
25	07 52 05.*		16. N 93.4 W	CHIAPAS, MEXICO				
			H= 33 KM	MAG 3.60	CGS			
25	GG- eP eS		13 04 31.6 04 41	SZ SR	0.2 0.3	46.6 204.9	•7	
25	LZ- eP		14 13 37.9	SZ	0.9	9.4		
25	LZ- eL		14 25 27	LZ	24	353.2		
25	LZ- eP		14 26 18.1	SZ	1.0	7.0		
25	14 33 51.*		8.9 S 108.3 W	N. EASTER ISLAND CORDILLERA				
			H= 33 KM	MAG 4.40	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
25	LZ- eP eLQ eLR		14 41 24.1 50 37 53 08	SZ LR LZ	1.0 21 24	33.6 658.2 1040.2	39.5	5.01
25	LZ- eL		14 37 46	LZ	27.	251.8		
25	14 46 32.*		18.9 N 145.7 E	MARIANA ISLANDS				
			H=151 KM	MAG 4.40	CGS			
25	15 42 17.9		50.3 N 176.6 E	RAT ALEUTIAN ISLANDS				
			H= 30 KM	MAG 5.50	CGS			
25	00- eP eS eSS eLR		15 53 15.0 16 02 20 07 00 14 48	SZ LT LT LZ	0.9 13 26 38	1591.7 609.4 2507.5	68.4	4.93
25	GG- eP eP eLR		15 54 24.0 54 25 16 20 44	SZ LZ LZ	2.0 17 32	254.8 326.0 570.0	79.6	5.80
							Avg.	5.36
25	GG- e		15 52 58	SZ	0.9	125.4		
25	16 32 23.*		56.7 N 152.8 W	KODIAK ISLAND REGION				
			H= 33 KM	MAG 4.10	CGS			
25	17 24 44.9		53.6 N 163.9 W	UNIMAK ISLAND REGION				
25	00- eP LZ- ePP		17 35 26.5 17 43 23	SZ SZ	0.7 1.0	8.7 24.1	65.6	5.00
25	LZ- eP eP		17 33 24.1 18 26 46.5	SZ SZ	1.0 0.5	5.3 11.8		
25	LZ- eL		18 30 59	SR	7.5	1028.2		
25	LZ- eP		19 23 49.9	SZ	0.5	7.7		
25	20 28 33.5		3.8 S 139.0 E	WEST NEW GUINEA				
			H=171 KM	MAG 5.80	CGS			
25	LZ- eP e		20 48 00.0 48 28	SZ SZ	0.6 1.3	17.1 70.2	146.3	
25	23 27 49.7		30.7 S 179.9 W	KERMADEC ISLANDS				
			H=424 KM	MAG 5.30	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
25	OO-	eP+1	23 46 47.5	SZ	1.0	61.6	148.8	
25	GG-	eP+1	23 46 57.6	SZ	1.0	8.1	159.3	
		eP+2	47 38	SZ	1.8	155.3		
25	LZ-	eSKS	23 50 45	LT	15	320.8	99.3	
		e	53 42	LT	22	197.2		
26	00	46 02.8	30.1 N 80.7 E	TIBET INDIA BORDER REGION				
		H= 50 KM	MAG 6.20	CGS				
26	00-	eP	00 55 26.2	SZ	0.8	36.4	54.5	5.46
		eP	55 27	LZ	14	757.8		
		eS	01 03 00	LT	16	1806.9		
		eSCS	05 15	LT	17	889.9		
		eSS	07 10	LT	20	1312.2		
		eLQ	12 12	LT	37	5630.8		
		eL	15 35	LT	20	8857.4		
		eL	15 35	LR	20	6371.5		
		eLR	18 15	LZ	15	791.7		
26	GG-	eP	00 55 30	LZ	15	426.7	54.8	
		eP	55 30	SZ	1.0	73.4		5.67
		e	01 08 20	LZ	18	380.8		
		eL	17 25	LR	18	3184.8		
26	LZ-	eP+1	01 05 44.4	SZ	1.5	168.3	148.6	
		eSKP	09 19	SZ	1.7	40.1		
		eL	58 13	LT	35	344.6		
				Avg.		5.56		
26	03	38 32.7	17.7 S 173.3 W	TONGA ISLANDS				
		H= 33 KM	MAG 5.10	CGS				
26	GG-	eP+1	03 58 17.0	SZ	1.0	24.4	147.9	
		eP+1	58 18	LZ	18	418.8		
26	LZ-	eSKS	04 02 55	LT	17	378.8	98.6	
		eL	24 05	LT	28	748.1		
26	06	29 01.4	81. N 5.1 W	NORTH OF SVALBARD				
		H= 24 KM	MAG 4.40	CGS				
26	07	50 19.*	49. S 164.5 E	AUCKLAND ISLANDS REGION				
		H= 33 KM	MAG 5.20	CGS				
26	GG-	eP	10 47 51.1	SZ	0.2	19.4	1.6	
		eS	48 13	SR	0.2	23.9		
26	00-	eL	13 14 15	LR	20	282.5		
26	GG-	eL	13 17 50	LR	19	509.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
26	00-	eL	13 18 30	LZ	25*	209.8		
26	22	55 14.8	4.9 S 153.5 E	NEW IRELAND REGION				
		H= 34 KM	MAG 5.50	CGS				
26	LZ-	eP+	23 14 32.0	SZ	1.0	5.3	133.5	
		eSKP	18 05	SZ	0.9	9.4		
26	00-	eLQ	23 49 00	LR	40	628.8	117.3	
		eLR	56 55	LT	29	921.5		
26	GG-	eL	23 57 15	LZ	30	188.8	125.2	
27	LZ-	eP	00 59 55.5	SZ	1.0	28.3		
27	01	27 06.*	24.9 N 140.5 E	VOLCANO ISLANDS REGION				
		H= 33 KM	MAG 4.60	CGS				
27	03	40 56.8	44.1 N 149.0 E	KURILE ISLANDS				
		H= 35 KM	MAG 4.70	CGS				
27	00-	eP	03 52 05.0	SZ	0.9	27.1	69.8	5.29
27	06	36 25.3	16.1 S 176.0 W	FIJI ISLANDS REGION				
		H= 332 KM	MAG 4.50	CGS				
27	07	53 53.4	2.2 N 126.5 E	MOLUCCA PASSAGE				
		H= 70 KM	MAG 5.30	CGS				
27	00-	eL	08 47 50	LR	24*	220.5	100.2	
27	LZ-	eP	09 29 43.0	SZ	0.6	31.0	2.2	
		eS	30 10	ST	0.7	29.6		
27	09	53 36.6	2.3 N 126.7 E	MOLUCCA PASSAGE				
		H= 100 KM	MAG 5.10	CGS				
27	00-	eL	10 47 00	LR	30*	332.4	100.2	
27	13	24 23.9	28.3 S 178.3 W	KERMADEC ISLANDS				
		H= 220 KM	MAG 4.20	CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
27	GG-	eL	15 06 25	LZ	45.	285.2			28	00-	eLR	31 15	L	17.	9999.9			
27	15 24 17.2		11.3 S 116.6 E	SOUTH OF SUMBAWA ISLAND					00-	eP	05 15 49.0	SZ	1.2	34.3				
			H= 33 KM	MAG 5.20	CGS				eP	15 57	LZ	22	153.8					
27	LZ-	eP ⁰ 1	15 44 15.0	SZ	0.6	6.0	152.2		28	eL	36 30	LZ	35	1629.4				
		eP ⁰ 2	44 20	SZ	1.0	23.0												
27	15 50 54.7		56.6 N 152.0 W	KODIAK ISLAND REGION					28	05 25 12.1	13.6 N 90.0 W	EL SALVADOR						
			H= 27 KM	MAG 5.40	CGS					H= 33 KM	MAG 4.30	CGS						
27	GG-	eP	16 02 24.5	SZ	1.2	50.1	73.2	5.43	28	05 39 34.8	40. S 74.1 W	OFF COAST OF CENTRAL CHILE						
		eP	02 25	LZ	17	337.7				H= 33 KM	MAG 4.70	CGS						
		eS	12 00	LR	17	766.2			28	LZ-	eP	05 44 57.0	SZ	1.0	9.2	24.2	4.26	
		eSS	16 10	LZ	21	302.3												
		e	20 25	LZ	21	604.6			28	LZ-	eP	06 08 01.0	SZ	0.3	25.3	1.7		
		eL	22 30	LZ	23	562.9				eS	08 24	ST	0.7	5.1				
27	22 01 40.2		5.5 S 151.6 E	NEW BRITAIN REGION					28	06 51 05.3	36.3 N 71.6 E	AFGHANISTAN USSR BORDER REG.						
			H= 50 KM	MAG 5.40	CGS					H= 118 KM	MAG 5.50	CGS						
27	GG-	eL	23 06 45	LZ	25.	53.9	124.8		28	00-	eP	06 59 09.5	SZ	0.7	26.6	45.0	5.03	
										59 32	SZ	0.8	23.7					
27	22 58 29.3		21.4 S 68.7 W	CHILE BOLIVIA BORDER REGION					28	07 16 02.9	15.2 N 94.1 W	NEAR COAST OF OAXACA, MEXICO						
			H= 132 KM	MAG 5.40	CGS					H= 47 KM	MAG 3.70	CGS						
28	01 05 35.2		10.5 N 60.1 W	TRINIDAD					28	LZ-	eP	12 43 26.0	SZ	0.5	14.9	1.8		
			H= 63 KM	MAG 4.50	CGS					eS	43 50	ST	0.6	3.5				
28	03 20 59.*		13.3 N 90.1 W	NEAR COAST OF GUATEMALA					28	12 53 55.1	22. S 179.4 W	FIJI ISLANDS REGION						
			H= 72 KM	MAG 3.80	CGS					H= 548 KM	MAG 4.10	CGS						
28	05 04 55.5		1.2 S 24.1 W	CENTRAL MID ATLANTIC RIDGE					28	15 43 13.6	43.5 N 127.1 W	OFF COAST OF OREGON						
			H= 37 KM	MAG 5.50	CGS					H= 33 KM	MAG 4.80	CGS						
28	LZ-	tP	05 13 20.0D	SZ	1.2	9999.9U	46.2		28	16 25 54.6	34. N 141.2 E	OFF E. COAST HONSHU, JAPAN						
		eP	13 22	LZ	17	233.3				H= 71 KM	MAG 5.00	CGS						
		e	14 11	SZ	1.5	144.0			28	00-	eP	16 37 41.2	SZ	0.7	17.7	77.0	5.09	
		e	15 20	L	25	241.8												
		eS	20 02	L	19	9999.9			28	LZ-	eP ⁰ 1	16 45 35.5	SZ	1.5	28.8	148.0		
		eSS	23 35	L	21	9999.9												
		eLQ	27 15	L	35	9999.9			28	e	48 30	ST	0.8	6.1				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	18 30 20.2		61° N 147° 4' W	SOUTHERN ALASKA				
			H= 89 KM	MAG 4.50	CGS			
28	LZ- eP eS		20 05 05.0 05 27	SZ ST	0.3 0.8	28.3 7.8		1.7
28	20 06 46.		5° 2 S 150° 5 E	NEW BRITAIN REGION				
			H=224 KM	MAG 5.50	CGS			
28	22 39 46.*		2° 5 S 138° 7 E	WEST NEW GUINEA				
			H= 82 KM	MAG 4.70	CGS			
28	LZ- eP		23 31 36.5	SZ	0.5	3.5		
28	LZ- e		23 32 10	SZ	1.0	27.7		
28	LZ- eL		23 33 16	ST	0.8	6.6		
28	LZ- eP		23 59 23.5	SZ	0.7	6.0		
28	23 59 30.5		7° 5 S 146° 7 E	EAST NEW GUINEA REGION				
			H=152 KM	MAG 4.80	CGS			
29	01 26 37.*		16.1 S 168.1 E	NEW HEBRIDES ISLANDS				
			H=172 KM					
29	02 00 02.*		57.8 N 149° 5 W	GULF OF ALASKA				
			H= 44 KM	MAG 3.80	CGS			
29	05 30 59.5		18.1 S 175° 4 W	TONGA ISLANDS				
			H=197 KM	MAG 4.80	CGS			
29	06 30 30.6		15.8 N 93° 3 W	NEAR COAST CHIAPAS, MEXICO				
			H= 33 KM	MAG 3.90	CGS			
29	GG- eP eS		10 59 45.0 11 00 04	SZ ST	0.6 0.5	10.4 17.4		1.4
29	GG- eP eS		13 34 32.0 34 48	SZ ST	0.4 0.4	19.4 41.8		1.3
29	13 47 24.3		33.3 N 141° 9 E	OFF E. COAST HONSHU, JAPAN				
			H= 41 KM	MAG 4.60	CGS			
29	LZ- eP*2		14 07 15.0	SZ	1.0	11.1	147.8	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29	14 00 1409		20.4 S 174.4 W H= 29 KM MAG 6.50	TONGA ISLANDS CGS				
29	LZ-	eP	14 14 03.0	SZ	999.9	9999.9	98.7	
		eSS	32 20	LT	25	1312.2		
		eSKKS	37 33	LT	20	863.5		
		e	39 18	LT	22	878.4		
		eLR	46 20	LZ	999	9999.9		
29	GG-	eP ¹ 1	14 20 05.0	SZ	1.7	260.7	150.4	
		eP ¹ 1	20 06	LZ	18	1613.6		
		e	21 56	SR	1.4	99.2		
		ePP	23 45	LZ	18	1008.5		
		ePPP	27 05	LZ	19	332.0		
		ePCPP ¹	28 25	LZ	17	392.4		
		e	30 55	LZ	18	403.4		
		e	37 25	LZ	20	337.5		
		eSS	42 45	LR	22	484.4		
		e	43 30	LZ	29	341.6		
		e	47 25	LZ	17	392.4		
		eSSS	48 55	LR	19	487.3		
		e	54 15	LZ	15	701.1		
		e	56 40	LT	20	473.4		
		e	15 02 25	LZ	24	362.2		
		e	13 50	LZ	27	669.0		
		eL	15 35	LZ	22	719.5		
		eLR	23 50	LZ	22	1929.6		
		eL	25 10	LZ	22	2305.8		
		eL	25 10	LR	23	968.9		
		eL	25 10	LT	21	1651.6		
29	OO-	eSKP	14 23 10	LZ	30	1899.7	139.2	
		ePPP	26 00	LZ	20	1006.0		
		ePCPP ¹	28 10	LZ	30	1276.8		
		e	30 35	LZ	29	1696.8		
		e	37 45	LZ	30	2647.1		
		eL	15 14 00	LZ	25	1206.9		
29	LZ-	eP	14 15 42.6	SZ	0.2	22.2	1.4	
		eS	16 00	SR	0.4	4.2		
29	LZ-	eP	15 13 39.5	SZ	1.0	27.8		
29	LZ-	e	15 13 49	SZ	0.9	49.7		
29	LZ-	eLQ	15 26 55	LR	25	641.3		
29	LZ-	eLR	15 31 00	LZ	23	1395.8		
29	18 46 15.3		8.6 S 74.5 W H=170 KM MAG 4.10	PERU BRAZIL BORDER REGION CGS				
29	20 31 51.9		16.4 S 69.3 W H=139 KM MAG 4.00	PERU BOLIVIA BORDER REGION CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29	LZ-	eP	20 32 19.0	SZ	0.3	46.4	2.0		30	GG-	eL	09 36 40	LZ	29.	125.6		
		eS	32 46	ST	0.3	43.8			30	LZ-	eL	10 19 00	LT	29.	133.0		
29	LZ-	eP	21 20 26.0	SZ	0.3	68.9	1.7		30	10 38 28.9		1 S 97.8 E	SOUTHWEST OF SUMATRA				
		eS	20 49	ST	0.3	40.4						H= 33 KM					
29	22 30 48.4		34.3 N 23.0 E	MEDITERRANEAN SEA					30	14 46 28.9		11.6 S 166.5 E	SANTA CRUZ ISLANDS				
			H= 33 KM									H= 118 KM	MAG 3.90	CGS			
29	LZ-	eP	22 43 15.3	SZ	0.4	17.9			30	GG-	eL	15 56 32	LZ	35.	138.7		
29	LZ-	eL	22 44 43	SR	0.6	4.4											
30	03 47 00.3		22.9 S 179.1 W	SOUTH OF FIJI ISLANDS					30	17 51 35.*		35.3 N 118.0 W	CENTRAL CALIFORNIA				
			H= 368 KM	MAG 3.90	CGS							H= 33 KM	MAG 4.20	CGS			
30	04 39 44.		34.5 N 23.4 E	CRETE					30	19 14 08.		35.6 N 139.3 E	NEAR S. COAST HONSHU, JAPAN				
			H= 43 KM	MAG 4.60	CGS							H= 79 KM	MAG 4.80	CGS			
30	GG-	eP	04 43 49.2	SZ	0.6	26.0	17.6	4.58	30	20 27 24.1		58.4 N 151.3 W	KODIAK ISLAND REGION				
		eP	43 51	LZ	13	112.4						H= 17 KM	MAG 5.10	CGS			
		e	43 54	SZ	1.4	267.6											
		eS	47 12	LT	22	433.1											
		eLQ	49 23	LT	22	9999.9											
		eLR	51 06	LZ	16	9999.9											
30	00-	eP	04 45 30.0	SZ	0.8	10.8	27.8	4.63									
		e	50 29	LZ	26	563.9											
		eLQ	53 28	LR	31	1877.0											
		eLR	55 51	LZ	23	699.8											
30	LZ-	eL	05 26 02	LR	44	292.0	100.5										
							AVG.	4.60									
30	06 25 54.2		5 N 126.6 E	MOLUCCA PASSAGE													
			H= 77 KM														
30	08 23 12.2		32.5 S 71.6 W	NEAR COAST OF CENTRAL CHILE													
			H= 33 KM	MAG 4.30	CGS												
30	LZ-	eP	08 27 04.2	SZ	1.0	20.1	16.4	4.24									
		e	27 17	SZ	1.1	62.4											
		eL	30 40	ST	1.6	26.7											
		eL	31 54	LR	26	206.3											
30	LZ-	eP	09 15 21.4	SZ	1.2	7.5											

BULLETIN NO. 34A
October 1964

SEISMOLOGICAL BULLETIN
WEST GERMANY, NORWAY, BOLIVIA

THE GEOTECHNICAL CORPORATION
3401 SHILOH ROAD

GARLAND, TEXAS



SEISMOLOGICAL BULLETIN

GRAFENBERG, WEST GERMANY
OSLO, NORWAY
LA PAZ, BOLIVIA

The Geotechnical Corporation wishes to acknowledge the cooperation of the following scientific organizations in the collection and production of the data in this bulletin:

Bundesanstalt fur Bodenforschung, Hannover, West Germany (Professor Dr. Hans Closs, Director)

Jordskel, University of Bergen, Bergen, Norway (Professor A. Kvale, Director)

Observatorio San Calixto, La Paz, Bolivia (Father Ramon Cabre, S. J.)

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SEISMOLOGICAL BULLETIN

 GRAFENBERG, WEST GERMANY
 OSLO, NORWAY
 LA PAZ, BOLIVIA

1. INTRODUCTION

1.1 This bulletin contains seismological data on earthquake phases recorded at three mobile seismological stations being operated by The Geotechnical Corporation. The bulletin is intended to be an aid to interested observers in determining the extent of the earthquake data contained in the records from the three teams.

1.2 The bulletin contains the following:

a. Data on all of the phases that have been associated with epicenters reported by the U. S. Coast and Geodetic Survey (USC&GS);

b. Data on the epicenters listed in the bulletin - as reported by the USC&GS;

c. Arrival time, period, amplitude, and distance for phases not associated with USC&GS epicenters.

1.3 All phases are listed in chronological order, except that unassociated phases are not mixed with a sequence of associated phases. In such cases, the unassociated phases are listed immediately following the associated phases.

2. INSTRUMENTATION

2.1 Instrumentation at the Grafenberg, West Germany (GG-GR), and Oslo, Norway (OO-NW) sites consists of a short-period vertical Benioff seismometer

array. A short-period vertical Johnson-Matheson seismometer array is in operation at La Paz, Bolivia (LZ-BV). Each site is also equipped with a three-component Sprengnether long-period seismograph system. Both systems use phototube amplifiers. The response characteristics of these systems are shown in figures 1, 2, and 3.

2.2 All data are recorded by 35-mm Film Recorders, Geotech Model 1301A, 14-channel Magnetic-Tape Recorders, Ampex Model 314, and 16-mm film Develocorders, Geotech Model 4000C.

2.3 Precision Timing Systems, Geotech Model 5400 or 5400A, are used for primary timing. Chronometers are used for secondary timing. WWV is used for the time standard at LZ-BV. GG-GR and OO-NW use Radio Potsdam. WWV is a United States National Bureau of Standards Radio Station located at Beltsville, Maryland. The accuracy of the time program from WWV agrees with U. S. Naval Observatory time.

2.4 Each system is calibrated at least once every 24 hours. In the short-period system calibration, an electromagnetic (EM) calibrator is used to determine the magnification as a function of frequency and a weight-lift calibration is used to verify the EM magnification at 1 cps. In the long-period systems, magnification is determined as a function of frequency using EM calibrators. No method of verification is used. In the EM method of calibration, the seismometer mass is driven by a known sinusoidal force and the magnification is calculated using the relationships between the sinusoidal force and the recorded amplitude.

3. INTERPRETATION OF COLUMN TITLES

The column titles appearing in this bulletin are defined as follows:

3.1 DAY

The date, for the day of the month is printed each time a new epicenter is listed and each time the station designator changes. Dates are given in Greenwich Civil Time (GCT).

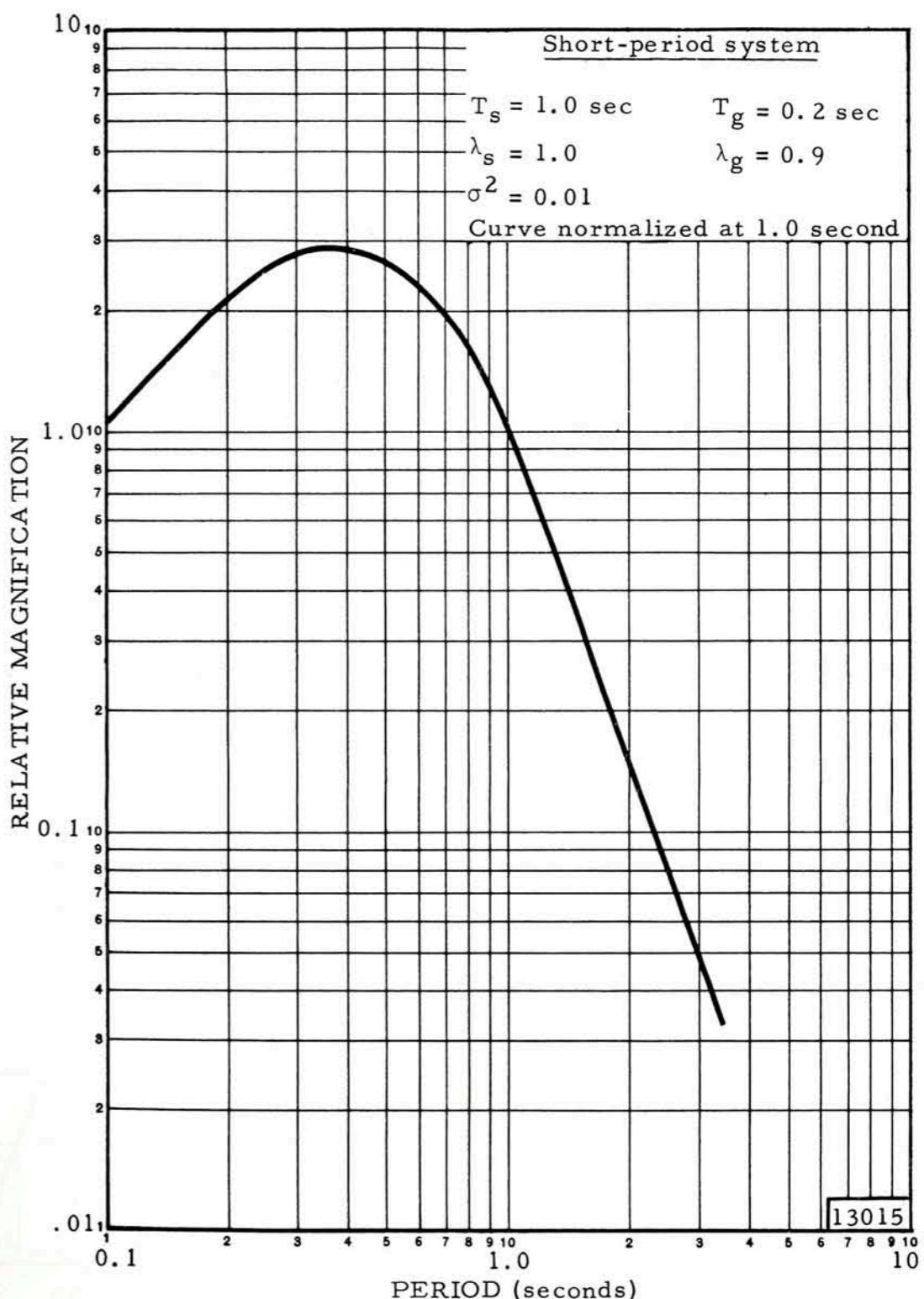


Figure 1. Frequency response of the Benioff short-period seismograph system

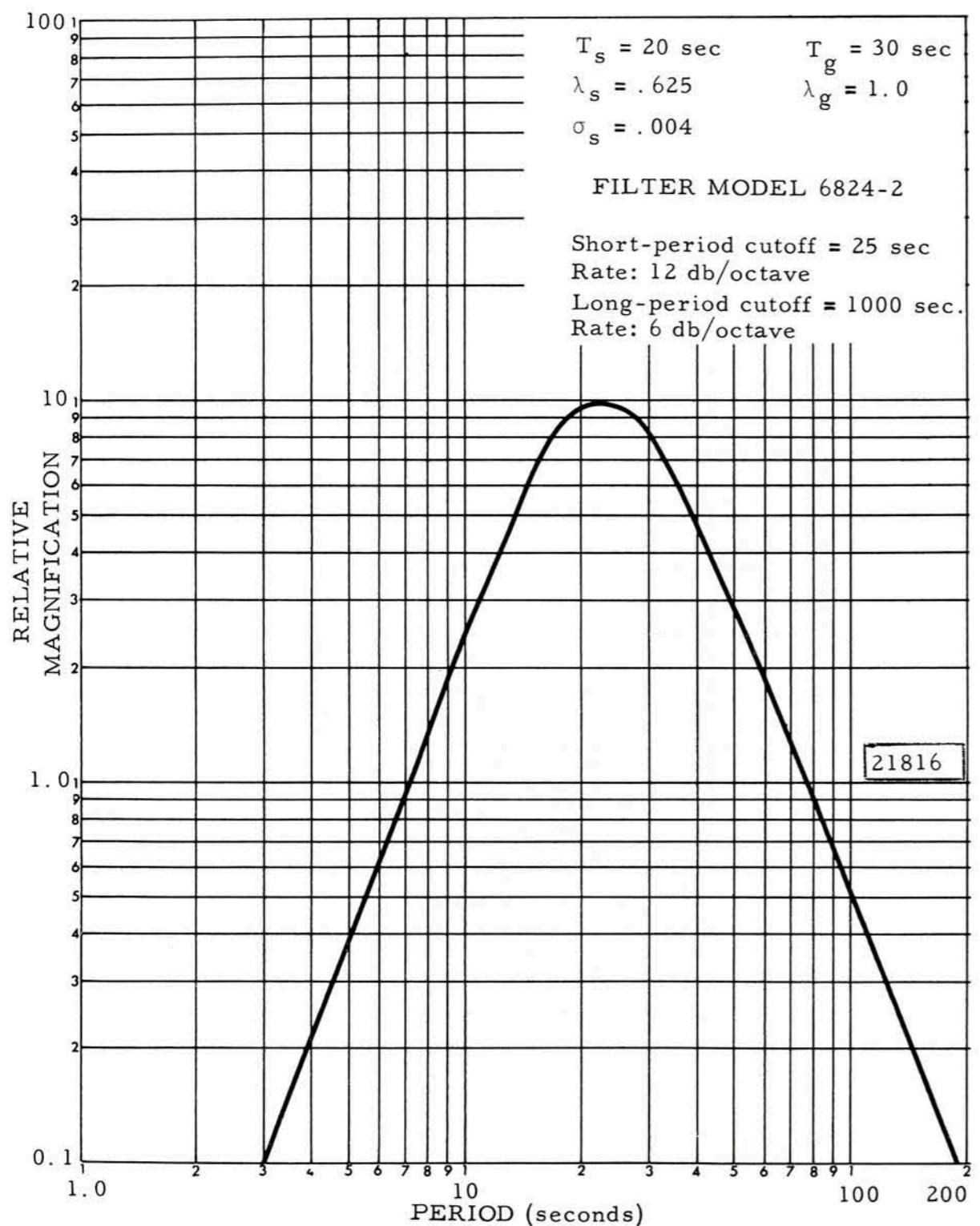


Figure 2. Frequency response of the Sprengnether long-period seismograph system

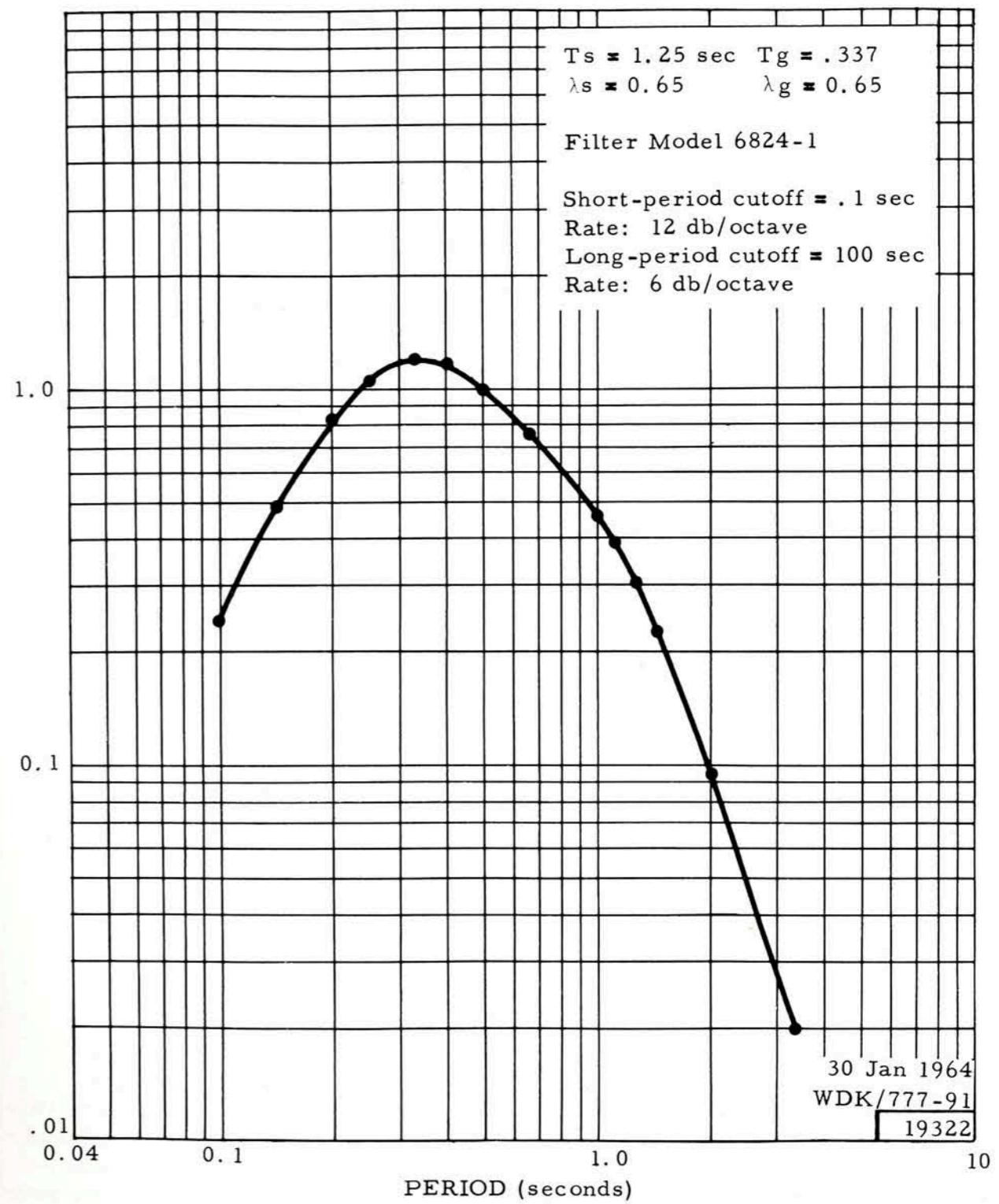


Figure 3. Frequency response of the Johnson-Matheson seismograph system

3.2 STA

The station from which the data were taken. The station designators used in this bulletin are given in the following table:

<u>Site designator</u>	<u>Site location</u>
GG-	Grafenberg, West Germany
OO-	Oslo, Norway
LZ-	La Paz, Bolivia

The locations of the stations are shown in figure 4.

3.3 PHASE

Symbols defining the phase type are listed in the phase column. Prefixes to the phase designators are defined as follows:

- a. An "i" (impetus) preceding the phase designates a sharp or sudden beginning of the phase motion. Direction of first motion is discernible on all "i" phases.
- b. An "e" (emersio) preceding the phase designates an emergent phase motion. The direction of the initial break cannot be positively determined.
- c. An "i" or "e" alone designates an unidentified phase of either an impetus or emersio arrival.

3.4 TIME

The arrival time of each phase is given in Greenwich Civil Time (GCT). Arrival times indicate that time at which phase motion is first detected. Arrival time is measured to the nearest one-tenth second for initial arrivals recorded by the short-period system, and to the nearest second for all other phases on both systems. The direction of motion for iP arrivals is also noted in this field; either C (compression) or D (dilation) will appear immediately to the right of the tenths of second column.

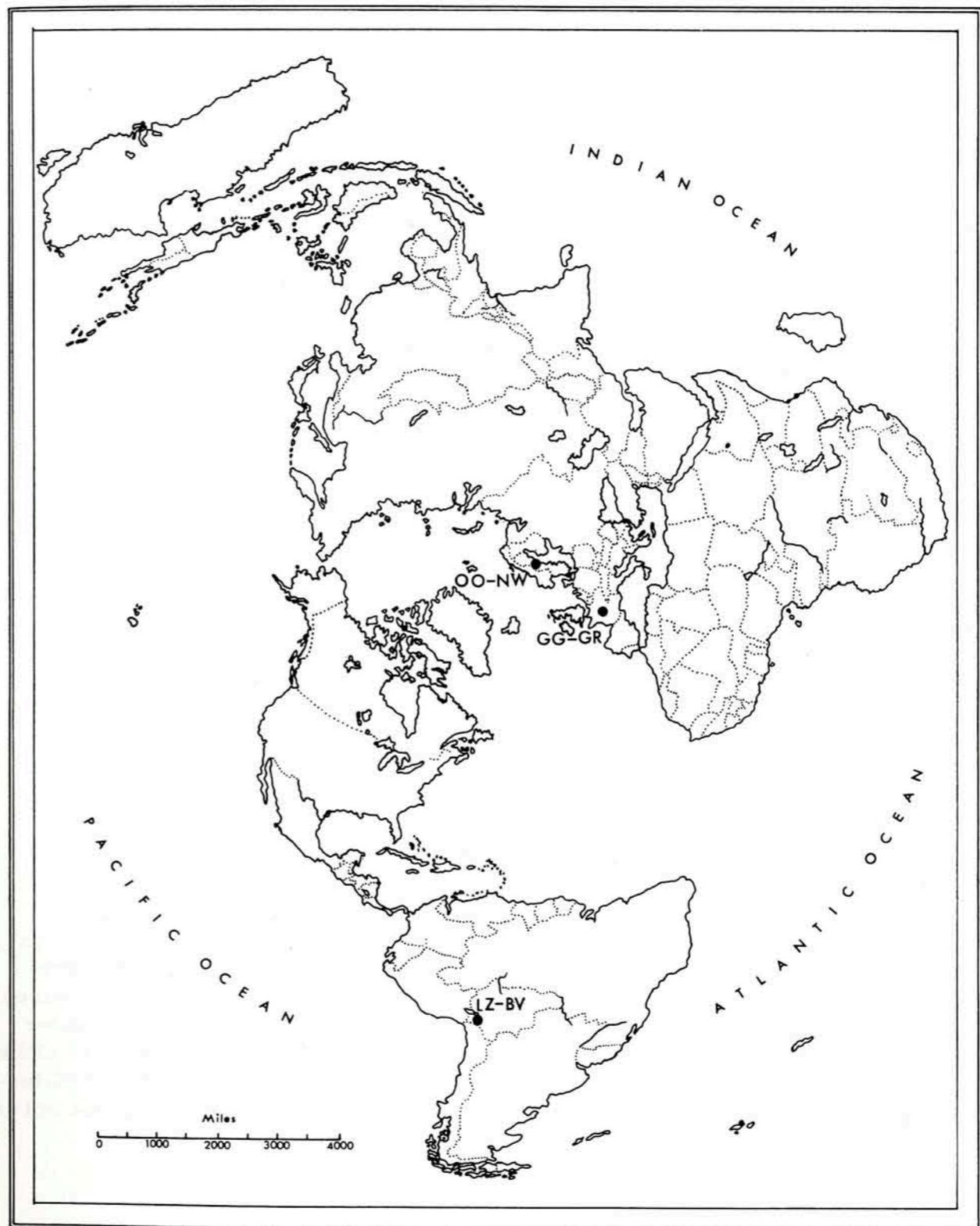


Figure 4. Bulletin sites

3.5 INST

The seismograph channel from which the data were taken. The symbols used to designate the seismograph channels are given as follows:

SZ	Short-period vertical
SR ¹	Short-period radial (horizontal)
ST ¹	Short-period transverse (horizontal)
LZ ₁	Long-period vertical
LR ₁	Long-period radial (horizontal)
LT ₁	Long-period transverse (horizontal)

3.6 PER

The period, in seconds, of each phase. When possible, the period is determined from the first full cycle of the phase; otherwise, it is taken as the average period of the first three cycles. If the signal period recorded by a short-period instrument cannot be measured, the digits 999.9 appear in the period columns. The digits 999 appear in the period columns if the signal period recorded by a long-period instrument cannot be measured.

3.7 AMP

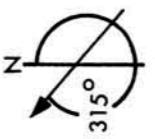
This column contains the amplitude of the phase given in millimicrons ($m\mu$) or microns (μ) of ground displacement. All amplitudes are given in tenths of units. All amplitudes are corrected for instrument response and are reported as one-half the peak-to-peak value. If the amplitude is reported in microns, a U appears in the column to the right of the tenths column. The column is left blank if the amplitude is reported in millimicrons. Amplitudes are measured from the largest pulse within the first 3 or 4 cycles whenever possible. The digits 9999.9 appearing in the amplitude columns indicate either a "clipped" signal or a trace amplitude too large to measure. When amplitudes are not calculated because of insufficient calibration data, the amplitude columns are left blank.

¹ Table 1 gives the instrument orientation of the horizontal seismometers.

Table 1. Bulletin site information

Site designator	Site location	Radial	Transverse	Site coordinates		Elevation in km	Rock type
				in deg, min, sec	from true north in degrees ¹)		
GG-GR	Grafenberg, West Germany	140	230	N 49	41 32	0.53	Limestone
OO-NW	Oslo, Norway	138	228	E 11	12 55		
LZ-BV	La Paz, Bolivia	141	231	N 61	03 17	0.56	Glacial drift
				E 10	51 58		
				S 16	15 31	3.99	Limestone
				W 68	28 47		

¹ When earth moves in direction shown, trace moves up.



3.8 DIST

This is the distance from the recording station to the epicenter. All reported distances are calculated based on geocentric coordinates. The distance is given to the nearest one-tenth of a degree. Distances computed for unassociated data are determined from the S-P intervals. In some instances, surface groups are recorded which have traveled the major arc from the epicenter to the station. In such cases, the major arc distance is given.

3.9 MAG

The magnitudes provided are body wave magnitudes, m_b , as defined by Gutenberg and Richter². They are determined only from the short-period vertical component of the P phase (initial arrival). The following equation is used:

$$m_b = \log_{10} (A/T) + Q$$

where

m_b = body wave magnitude

A = one-half p-p earth amplitude of
P phase in microns

T = period of P phase in seconds

Q = depth-distance factor for PZ given by
Gutenberg and Richter², for distances
greater than 16° .

Magnitude computations for distances less than 16° are based on extensions of the Q tables. Points from 10° to 16° were read from a curve in the Gutenberg-Richter paper, and an inverse cube relationship was used to extrapolate from 2° to 10° .

The average magnitude (sum of station magnitudes/number of stations) is listed on the last line of an epicenter print-out.

²Gutenberg, B., and Richter, C. F., 1956, Magnitude and energy of earthquakes: Ann. Geofis., vol. 9, p. 1-15

4. INTERPRETATION OF UNITED STATES COAST AND GEODETIC SURVEY DATA

The epicenter data reported by the USC&GS precede each list of associated phases. This information appears as follows:

Line 1 (from left to right)

First group:	Day of the month
Second group:	Origin time of the event
Third group:	Geographic coordinates of the epicenter
Fourth group:	Geographic description

NOTE

An asterisk (*) following the origin time indicates epicenters believed accurate to $1/2^\circ$ in latitude and longitude and to 50 km in depth.

Line 2 (from left to right)

First group:	Depth (h) of the hypocenter in kilometers
Second group:	Magnitude (MAG) as determined by Pasadena (PAS), Berkeley (BRK), Palisades (PAL), or USC&GS (CGS)

NOTE

MAG (CGS) is m_b of Gutenberg and Richter from the P phase only. The magnitude quoted is an average value determined from data forwarded by cooperating Standard stations and other observatories.

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	02 33	03.*	10.5 S 13.3 W	ASCENSION ISLAND REGION				
			H= 33 KM	MAG 5.10	CGS			
1	LZ-	eS	02 50 00	LR	24.	107.3	53.9	
		eL	59 20	LZ	33	1089.0		
1	GG-	eL	03 03 48	LZ	38	392.5	63.7	
1	02 47	43.7	4. S 153.5 E	NEW IRELAND REGION				
			H=128 KM					
1	03 50	15.8	7.1 N 72.0 W	NORTHERN COLOMBIA				
			H= 66 KM	MAG 4.00	CGS			
1	LZ-	eP	03 55 23.0	SZ	0.7	12.0	23.5	4.44
1	06 36	12.*	14.1 S 175.1 W	SAMOA ISLANDS REGION				
			H=243 KM	MAG 4.00	CGS			
1	07 46	02.	14.9 N 94.0 W	NEAR COAST CHIAPAS, MEXICO				
			H= 94 KM	MAG 3.80	CGS			
1	08 46	36.9	19.7 S 68.8 W	CHILE BOLIVIA BORDER REGION				
			H=138 KM	MAG 4.40	CGS			
1	LZ-	tP	08 47 39.8C	SZ	0.3	14.0	3.4	4.47
1	08 58	26.*	55.9 S 26.8 W	SOUTH SANDWICH ISLANDS REG.				
			H= 33 KM					
1	LZ-	tP	09 21 07.8D	SZ	999.9	9999.9		
1	LZ-	eP	10 07 25.0	SZ	0.8	12.4		
1	LZ-	e	10 07 49	SZ	0.9	11.4		
1	11 00	48.3	43.5 N 126.9 W	OFF COAST OF OREGON				
			H= 33 KM					
1	12 05	39.*	31.2 N 114.2 W	GULF OF CALIFORNIA				
			H= 33 KM	MAG 4.10	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	12 31 24.6		45.7 N 122.8 W	WASHINGTON OREGON REGION				
			H= 33 KM					
1	LZ- eP eS		13 35 27.5 35 52	SZ ST	999.9 0.5	9999.9 25.7	1.8	
1	16 25 54.*		14.3 N 124.7 E	Luzon, PHILIPPINE ISLANDS				
			H= 190 KM	MAG 4.50 CGS				
1	LZ- eP		16 41 55.5	SZ	0.5	3.5		
1	18 19 43.8		13.6 N 90.1 W	NEAR COAST OF GUATEMALA				
			H= 62 KM	MAG 4.40 CGS				
1	LZ- eP eL		18 26 40.0 38 00	SZ LT	1.0 24	7.3 103.9	36.5	4.51
1	18 30 01.9		49.3 N 128.8 W	VANCOUVER ISLAND REGION				
			H= 9 KM	MAG 5.30 CGS				
1	OO- eLQ eLR		18 57 34 59 56	LT LZ	24 37	613.3 1200.4	65.3	
1	GG- eL		19 11 30	LZ	22	265.4	75.6	
1	LZ- eL		19 19 45	LT	26	168.4	84.2	
2	OO- eP		00 57 05.0	SZ	1.0	45.2		
2	OO- eP		00 57 10	LZ	15	577.9		
2	00 58 39.2		51.9 N 142.9 E	SAKHALIN ISLAND				
			H= 33 KM	MAG 5.70 CGS				
2	LZ- ePi ePKS ePS e eSS e eL eL		01 18 01.5 21 37 31 03 34 19 38 40 45 28 51 11 02 06 37	SZ LR LR LR LR LR LR	2.0 14 19 26 20 35 22 31	101.5 218.1 87.8 135.0 139.3 559.5 119.7 920.4	136.6	
2	OO- e		01 04 37	LR	16.	461.7		
2	OO- e		01 09 13	LT	17	456.8		
2	OO- eLQ		01 15 00	LR	26	1132.6		
2	OO- eLR		01 20 05	LT	18	2447.6		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	GG- e		01 27 00	LZ	13.	669.1		
2	GG- e		01 37 40	LR	21	9333.6		
2	GG- eL		01 40 55	LZ	15	1795.0		
2	04 31 21.		23.6 S 179.6 W	SOUTH OF FIJI ISLANDS				
			H= 503 KM					
2	09 47 27.2		10.4 S 162.4 E	SOLOMON ISLANDS				
			H= 58 KM	MAG 5.20 CGS				
2	10 39 33.*		44.8 N 111.4 W	HEBGEN LAKE REGION				
			H= 33 KM	MAG 3.80 CGS				
2	13 00 39.7		10.5 S 162.4 E	SOLOMON ISLANDS				
			H= 68 KM	MAG 6.00 CGS				
2	LZ- ePi ePP ePP eS eSKKP e eSS eLQ eLR		13 19 42.9 21 13 21 18 29 33 32 55 33 19 38 11 52 03 58 15	SZ LZ SZ LZ LZ LZ LZ LZ	0.9 16 1.5 20 23 2.3 28 40 27	28.0 446.0 41.3 250.9 805.9 129.2 962.5 9999.9 9999.9	123.1	
2	GG- ePP ePP eSP eSSS e e eL eLR		13 22 20 22 22 32 18 45 24 49 54 53 34 57 40 14 07 51	SZ LZ LZ LT LZ LT LZ LR	2.4 17 18 25 21 25 28 27	628.6 766.2 542.6 1584.3 916.4 1440.1 880.8 9999.9	134.2	
2	GG- eP		15 19 15.0	SZ	0.6	21.3		
2	16 52 06.4		21.7 S 67.7 W	CHILE BOLIVIA BORDER REGION				
			H= 49 KM	MAG 5.00 CGS				
2	LZ- eP eL eL eL		16 53 39.2 54 05 54 30 55 08	SZ LR ST LR	0.3 12 999.9 17	56.2 186.7 9999.9 422.7	5.5 5.53	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eL		55 08	LZ	11*	400.2		
2	LZ-	eP	19 48 10.3	SZ	0.6	4.3		
2	20 41 47.7		8.9 S 79.7 W	NEAR COAST OF NORTHERN PERU				
			H= 55 KM	MAG 4.60	CGS			
2	LZ-	eP	20 44 53.0	SZ	0.9	6.9	13.2	4.43
	eL		47 56	ST	1.5	56.9		
2	22 23 32.4		59.7 N 144.5 W	GULF OF ALASKA				
			H= 22 KM	MAG 5.20	CGS			
2	GG-	eP	22 34 39.9	SZ	0.9	29.4	69.2	5.41
	eL		23 04 26	LZ	17	258.1		
2	LZ-	eP	23 52 57.5	SZ	0.5	9999.9	2.0	
	eS		53 24	ST	0.6	9999.9		
3	01 55 00.2		21. S 178.5 W	FIJI ISLANDS REGION				
			H=547 KM	MAG 5.00	CGS			
3	LZ-	eL	03 23 10	LZ	27.	60.3		
3	GG-	eP	04 01 35.5	SZ	1.1	23.6		
3	GG-	eL	04 07 32	LZ	24	311.3		
3	GG-	eP	12 36 30.1	SZ	0.2	24.7	1.5	
	eS		36 49	ST	0.3	19.3		
3	12 49 31.5		10.7 S 75.3 W	PERU				
			H=154 KM	MAG 4.80	CGS			
3	LZ-	eP	12 51 30.2	SZ	0.5	6.2	8.6	4.37
	eL		53 05	LZ	15	184.2		
	eL		53 15	ST	0.4	22.0		
3	13 39 39.9		61.4 N 147.1 W	SOUTHERN ALASKA				
			H= 48 KM	MAG 5.20	CGS			
3	OO-	eP	13 49 28.8	SZ	1.2	48.7	56.7	5.41
3	GG-	eP	13 50 44.3	SZ	0.9	34.9	67.9	5.40
	eL		14 13 03	LZ	32	179.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	LZ-	eL	14 30 22	LZ	22*	81.0	98.8	Avg. 5.40
3	LZ-	eL	14 10 06	LZ	34*	102.8		
3	15 05 20.*		59.1 N 153.2 W	SOUTHERN ALASKA				
			H= 60 KM	MAG 4.10	CGS			
3	16 52 20.7		26.7 S 177.7 W	SOUTH OF FIJI ISLANDS				
			H=134 KM	MAG 4.50	CGS			
3	17 02 48.		18.1 S 178.8 W	FIJI ISLANDS REGION				
			H=673 KM	MAG 4.40	CGS			
3	GG-	eP	17 23 43.1	SZ	1.2	29.9		
3	20 41 33.5		45.3 N 150.0 E	KURILE ISLANDS				
			H= 48 KM	MAG 4.50	CGS			
3	22 00 53.8		10.3 S 164.5 E	SANTA CRUZ ISLANDS REGION				
			H= 66 KM	MAG 4.40	CGS			
3	LZ-	eL	22 58 25	LZ	28*	152.8	121.3	
3	GG-	eL	23 09 37	LZ	30	121.5	134.9	
3	22 41 09.		20.2 S 176.3 W	FIJI ISLANDS REGION				
			H=219 KM	MAG 4.40	CGS			
4	LZ-	e	00 49 44	LZ	17*	52.3		
4	LZ-	e	00 57 45	LZ	30	870.1		
4	LZ-	eLQ	01 04 32	LR	28	1352.6		
4	LZ-	eLR	01 07 15	LZ	999	9999.9		
4	01 46 54.*		39.4 N 15.4 E	SOUTHERN ITALY				
			H=261 KM	MAG 4.20	CGS			
4	GG-	eP	01 49 21.8	SZ	0.7	48.4	10.7	4.89
	eLR		55 20	LZ	25	290.2		
4	LZ-	eP	05 37 40.5	SZ	0.2	32.3	2.3	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG		
	eS		38 10	ST	0.5	715			5	03 25 57.*		41.9 N 142.2 E	HOKKAIDO, JAPAN REGION						
4	06 30 14.4		11.3 N 87.4 W	NEAR COAST OF NICARAGUA				H= 33 KM MAG 4.20 CGS	5	03 35 08.4		42.6 N 142.6 E	HOKKAIDO, JAPAN REGION						
4	07 00 57.1		27.9 N 69.2 E	INDIA W. PAKISTAN BORDER				H= 14 KM MAG 4.80 CGS	5	GG- eL		04 15 00	LZ	35	625.4	78.7			
4	LZ- eL eL		08 09 23 15 50	LZ	40. 30	325.3 128.6	139.3		5	06 24 01.		18.2 S 177.7 W	FIJI ISLANDS REGION						
4	09 11 23.*		8.9 S 129.2 E	TIMOR SEA				H= 78 KM MAG 4.40 CGS	5	08 30 15.7		16.7 S 173.7 W	TONGA ISLANDS						
4	LZ- eP ⁰¹		09 30 38.0	SZ	1.5	66.3	149.5		5	LZ- eL		09 16 20	LZ	25.	98.7	99.3			
4	LZ- e		09 39 05	LZ	17.	246.7			5	GG- eL		09 42 00	LZ	30	139.4	146.9			
4	LZ- e		09 45 55	LR	30	517.4			5	LZ- eL		09 45 20	LZ	28.	425.0				
4	GG- eLR		09 46 03	LZ	24	655.3			5	12 24 06.4		16.6 S 174.2 W	TONGA ISLANDS						
4	GG- eL		09 48 22	LT	18	860.5			H= 84 KM										
4	GG- eL		09 48 22	LR	13	1473.2				5	13 12 15.5		22.3 S 171.6 E	LOYALTY ISLANDS REGION					
4	GG- eL		09 48 22	LZ	18	1047.9			H= 145 KM MAG 4.90 CGS										
4	LZ- e		09 49 06	LZ	28	688.0				5	13 58 56.9		22.2 S 175.8 W	TONGA ISLANDS REGION					
4	LZ- eP		10 28 27.0	SZ	999.9	9999.9			H= 33 KM MAG 5.10 CGS										
4	12 27 37.2		17.7 S 178.3 W	FIJI ISLANDS REGION						5	GG- eL		15 13 28	LZ	37.	145.3	152.0		
4	16 27 29.*		66.1 N 154.3 W	ALASKA						5	00- eL		15 21 15	LZ	20	99.6	140.9		
4	LZ- eP eS		21 24 33.0 25 16	SZ	0.3	6.7	3.5			5	GG- eL		16 15 40	LZ	45.	443.3			
4	22 57 03.4		37.8 N 20.9 E	IONIAN SEA						5	22 10 16.5		36. N 141.2 E	NEAR E. COAST HONSHU, JAPAN					
4	GG- eP		23 00 21.2	SZ	0.7	12.4	13.8	4.37			5	00- eP eL		22 21 57.5 44 00	SZ	0.9 40	14.1 367.1	75.2	4.88
5	01 24 55.*		32.9 N 115.8 W	CALIFORNIA MEXICO REGION						5	GG- eP		22 22 42.5	SZ	1.3	49.9	83.9	5.40	
								H= 33 KM MAG 4.50 CGS											

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5	LZ-	eL eP ^{0.1}	22 55 00 22 29 55.5	LZ SZ	28. 1.8	128.0 76.0	147.1 AVG.	5.14
5	22 58 04.9	13.8 N 91.3 W NEAR COAST OF GUATEMALA H= 33 KM MAG 4.40 CGS						
5	LZ-	eL	23 19 30	LZ	32.	194.3	37.4	
6	LZ-	eP eS	00 00 32.0 00 40	SZ ST	0.5 0.8	1.7 9.7	.5	
6	GG-	eP	00 19 50	LZ	28	91.4		
6	01 37 21.*	56.5 N 152.7 W KODIAK ISLAND REGION H= 33 KM MAG 4.40 CGS						
6	LZ-	eP eS	02 13 20.8 13 29	SZ ST	0.5 0.8	1.7 9.1	.5	
6	02 19 33.3	17.7 N 95.6 W OAXACA, MEXICO H=131 KM MAG 4.30 CGS						
6	02 54 32.7	30.3 N 94.6 E TIBET H= 33 KM MAG 4.50 CGS						
6	04 11 23.*	28.4 S 65.4 W SANTIAGO PROVINCE, ARGENTINA H= 82 KM MAG 4.30 CGS						
6	LZ-	eP	05 39 20.5	SZ	1.2	32.3		
6	06 11 32.6	18.6 N 119.6 E PHILIPPINE ISLANDS REGION H= 33 KM MAG 6.00 CGS						
6	00-	eP e eSS e eLQ eLR	06 23 58 34 07 40 00 44 10 51 00 55 15	LZ LT LT LT LT LZ	15. 23 30 18 40 33	249.6 226.0 396.5 225.3 472.0 1095.5	82.6	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	07 17 57.1	36.2 S 100.9 W SOUTHERN PACIFIC OCEAN H= 33 KM MAG 5.50 CGS						
6	LZ-	eP eP ePP eS eL	07 24 51.5 24 55 26 15 30 27 33 40	SZ LZ SZ SR SR	1.0 18 2.4 3.0 15.0	34.5 9999.9 859.4 428.8 14.3U	35.0	5.24
6	00-	eSP ePPS eSS eL	07 49 35 51 00 57 23 08 20 00	LZ LR LR LZ	23 20 30 35	193.0 407.8 1727.1 957.9	131.3	
6	GG-	eL	08 20 30	LZ	47	3481.3	130.2	
6	GG-	eP e e e eL	07 24 20 07 27 40 07 34 50 07 36 00 08 03 00	LZ LZ LZ LZ LR	17. 14 20 24 26	200.2 295.2 172.2 369.6 1011.2		
6	10 06 17.9	2.6 N 95.3 W GALAPAGOS ISLANDS REGION H= 33 KM MAG 4.70 CGS						
6	LZ-	eL eP eS eP eS	10 19 05 12 15 12.0 15 35 12 35 51.2 36 20	LT SZ SR SZ SR	16. 0.4 999.9 999.9 0.5	332.5 10.9 9999.9 9999.9 9999.9		1.3
6	14 29 55.6	40.2 N 28.1 E TURKEY H= 10 KM MAG 5.10 CGS						
6	GG-	eP e eL eP eP	14 33 32.0 35 05 35 40 14 34 51.0 35 05	SZ ST ST SZ LZ	1.1 0.6 4.7 0.8 20	33.9 61.6 9999.9 16.2 224.1	15.2	4.69
6	00-	eP eP eS eL eP	14 34 51.0 35 05	SZ LZ	0.8 20	16.2 224.1	23.4	4.59
6	14 31 19.2	40.3 N 28.2 E TURKEY H= 10 KM MAG 6.88 CGS						
6	00-	eP eP eS eL eP	14 36 16.0 36 20 40 38 44 57 14 45 35	SZ LZ SR SR LZ	0.7 999 4.5 17.0 23	9999.9 9999.9 13.0U 391.8U 492.1	23.4	
6	OCT 64	20	OCT 64	21				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
	e		48 06	SZ	1.2	9.9			7	03 52 11.3		6.8 S 155.2 E	SOLOMON ISLANDS					
	ePP		49 41	SZ	1.2	19.9				H= 70 KM	MAG 5.50	CGS						
	ePP		50 00	LZ	22	772.0												
	e		15 01 11	ST	1.3	9.3			7	LZ- eP		08 24 56.0	SZ	0.8	15.0			
	eL		29 00	SR	20.0	16.9U												
6	GG-	eP	14 44 05.0	SZ	10.5	340.5U	15.2		7	11 03 55.*		51.9 N 173.3 W	ANDREANOF ALEUTIAN ISLANDS					
6			18 19 08.*		13.4 S 75.8 W	PERU			7	LZ- eP		14 54 04.0	SZ	0.6	4.1			
					H= 117 KM	MAG 4.20	CGS		7	LZ- e		14 54 38	SZ	0.8	5.4			
6	LZ-	e	18 21 29	SZ	0.4	23.4	7.6		7	17 02 34.4		6.3 S 78.6 W	NORTHERN PERU					
6			18 24 57.*		70.9 N 5.7 W	JAN MAYEN ISLAND REGION			7	LZ- eP		17 06 03.5	SZ	0.5	3.4	14.0	4.30	
					H= 33 KM	MAG 4.80	CGS			eL		09 32	SR	1.2	5.0			
6	OO-	eP	18 27 34.5	SZ	0.8	10.8	11.9	5.01			eL		11 15	LR	22	297.4		
6	GG-	eP	18 29 59.0	SZ	1.3	66.1	22.7	4.92										
					AVG.	4.96			7	17 26 25.*		43.5 N 126.0 W	OFF COAST OF OREGON					
												H= 23 KM	MAG 4.50	CGS				
6			19 12 12.*		16.1 S 168.6 E	NEW HEBRIDES ISLANDS			7	20 05 37.*		59. N 148.8 W	KENAI PENINSULA, ALASKA					
					H= 21 KM	MAG 5.40	CGS					H= 33 KM						
6	GG-	ePP	19 34 55	LZ	999.	9999.9	141.8		7	23 04 47.9		32.7 N 83.9 E	TIBET					
6												H= 33 KM						
6	20 19 34.1		29.3 N 80.9 E	NEPAL INDIA BORDER REGION					7	23 07 52.*		40.1 N 28.2 E	TURKEY					
					H= 27 KM	MAG 5.10	CGS					H= 32 KM	MAG 4.40	CGS				
6	GG-	eL	20 51 55	LZ	25.	102.4	55.4		7	GG- eL		23 17 00	LZ	17	319.3	15.4		
6	LZ-	eP	22 34 31.7	SZ	0.5	25.9			8	03 15 41.6		18.3 S 174.8 W	TONGA ISLANDS					
												H= 97 KM	MAG 4.70	CGS				
7	00 54 18.		53. N 36.2 W	NORTH ATLANTIC OCEAN					8	04 36 26.*		3.4 N 126.7 E	TALAUD ISLANDS					
					H= 33 KM	MAG 4.50	CGS					H= 33 KM	MAG 4.10	CGS				
7	01 24 45.2		20.7 S 177.8 W	FIJI ISLANDS REGION					8	LZ- eP		04 49 09.0	SZ	0.2	26.0	1.8		
					H= 328 KM	MAG 4.40	CGS			eS		49 33	ST	0.4	17.1			
7	GG-	eL	02 03 00	LZ	33.	236.8												

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	LZ-	eL	06 30 18	LR	17*	191.2			8	17 07 15.*		32.1 S 70.9 W CHILE ARGENTINA BORDER REG.					
8	GG-	eP	09 02 00.0	SZ	0.2	33.4				H=146 KM	MAG 4.20	CGS					
	eS		02 03	SR	0.2	97.8	.1										
8	10 39 13.		6.5 S 154.4 E	SOLOMON ISLANDS					8	LZ-	e	17 10 18	SZ	0.8	6.8	15.9	
			H= 74 KM	MAG 5.20	CGS					eLQ		13 00	LR	33	273.2		
										eL		13 12	ST	0.9	8.4		
										eLR		17 25	LZ	23	353.1		
8	10 55 26.*		2.6 S 79.1 W	NEAR COAST OF ECUADOR					9	00 14 22.*		35. S 115.0 W EASTER ISLAND CORDILLERA					
			H=131 KM	MAG 4.00	CGS							H= 33 KM	MAG 4.50	CGS			
8	LZ-	eP	11 08 37.3	SZ	0.2	1.0	2.7		9	LZ-	eLQ	00 33 45	LT	20.	96.4	45.5	
	eS		09 12	SR	0.3	1.7				eLR		35 00	LT	20	261.8		
8	00-	eP	12 25 09.2	SZ	0.2	11.2	3.3		9	00 33 46.2		38.9 N 110.9 W UTAH					
	eS		25 51	SR	0.2	13.2						H= 33 KM					
	eP		33 13.3	SZ	0.2	6.7											
	eS		33 55	SR	0.3	8.5											
8	12 35 35.*		27.3 N 110.9 W	GULF OF CALIFORNIA					9	02 26 02.4		47.8 N 114.2 W MONTANA					
			H= 33 KM	MAG 4.60	CGS							H= 33 KM	MAG 4.60	CGS			
8	GG-	eP	13 42 44.0	SZ	0.2	18.2	1.8		9	04 27 42.*		5.6 S 129.0 E BANDA SEA					
	eS		43 08	SR	0.3	23.1						H= 79 KM	MAG 5.20	CGS			
8	14 12 54.*		43.9 N 127.4 W	OFF COAST OF OREGON					9	09 11 54.*		60. N 143.7 W SOUTHERN ALASKA					
			H= 33 KM	MAG 3.90	CGS							H= 33 KM	MAG 4.00	CGS			
8	14 38 02.*		22.6 S 69.4 W	NORTHERN CHILE					9	11 27 57.*		18.4 N 68.9 W MONA PASSAGE					
			H= 33 KM	MAG 4.70	CGS							H=178 KM	MAG 4.30	CGS			
8	LZ-	eP	14 39 43.5	SZ	0.4	6.5	6.4	4.71	9	LZ-	eP	11 34 30.0	SZ	1.0	9.0	34.4	4.41
	e		39 49	SZ	0.5	39.6				ePP		35 55	SZ	1.4	33.6		
	eL		41 08	ST	0.4	13.7											
	eL		41 30	LR	14	399.3											
8	LZ-	eP	15 30 46.3	SZ	0.3	9.7			9	LZ-	eP	12 17 30.0	SZ	0.2	25.0	.7	
8	LZ-	eL	15 33 26	ST	0.5	7.5				eS		17 41	ST	0.5	6.9		
8	LZ-	eL	15 34 00	LT	14	336.6			9	12 43 04.5		28.4 N 138.8 E BONIN ISLANDS REGION					
												H=520 KM	MAG 4.90	CGS			
8	16 53 23.		52.8 N 168.0 W	FOX ALEUTIAN ISLANDS					9	LZ-	eP	13 44 25.5	SZ	0.7	3.5		
			H= 33 KM	MAG 4.50	CGS												

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
9	LZ-	eL	13 52 20	SR	1.4	9.5			10	LZ-	e	06 00 55	L4	25.8	258.6		
9	14 56 48.*		59.6 N 143.9 W GULF OF ALASKA						10	LZ-	eLQ	06 02 50	LR	20	169.3		
			H= 29 KM MAG 3.80 CGS						10	LZ-	eLR	06 04 30	LZ	999	9999.9		
9	19 26 39.7		6.8 N 73.0 W NORTHERN COLOMBIA						10	07 50 52.7		16.7 N 97.9 W OAXACA, MEXICO					
			H=157 KM MAG 5.30 CGS									H= 43 KM MAG 4.40 CGS					
9	LZ-	eP	19 31 36.4D	SZ	0.5	55.4	23.3	5.33	10	07 56 40.5		25.2 S 180.0					
	ePPD		32 20	SZ	0.5	9999.9											
	e		32 47	SZ	0.8	9999.9			10	08 31 07.7		23.8 S 179.7 W					
	eS		35 35	LT	21	323.9						H=441 KM					
	eS		35 37	SR	1.5	89.2			10	LZ-	eP	11 01 36.5	SZ	0.4	1.4		
	eSS		36 30	LT	14	1653.2					eS	02 24	ST	0.5	2.4		
	eSS		36 33	ST	1.8	213.0			10	LZ-	eP	11 25 45.5	SZ	0.8	15.2		
	eL		39 04	ST	1.2	113.7											
	eL		41 50	LT	22	146.8			10	16 00 59.*		5.9 S 130.1 E					
9	00- eP		19 38 39.5	SZ	0.7	36.5	81.1	5.26				H=100 KM MAG 4.40 CGS					
							Avg.	5.29									
9	19 55 34.7		57. N 151.9 W KODIAK ISLAND REGION						10	17 13 30.*		30.2 S 179.3 W					
			H= 17 KM MAG 5.10 CGS									H=294 KM					
9	GG- eLR		20 35 00	LZ	30	168.4	72.8		10	19 38 47.7		60.4 N 146.1 W					
												SOUTHERN ALASKA					
9	21 34 09.2		16.2 S 171.9 W SAMOA ISLANDS REGION						10	19 52 32.0		0.2	36.3				
			H= 33 KM MAG 5.80 CGS							53 00	ST	0.6	6.0				
9	GG- eP ¹²		21 53 50.0	SZ	2.0	446.4	146.5		10	20 06 39.8		60.5 N 145.4 W					
9	LZ- eSKS		21 58 30	LT	20	124.0	97.9					H= 31 KM MAG 5.40 CGS					
	eL		22 19 30	LT	27	661.2			10	20 17 42.5		1.0	25.9				
9	22 07 13.*		59.5 N 144.4 W GULF OF ALASKA								eL	44 00	LZ	25	367.3		
			H= 16 KM MAG 4.50 CGS						10	20 29 45		LR	26	322.9			
9	00- eLR		22 38 00	LZ	30	728.2	58.3				e	36 40	LZ	20	282.2		
9	GG- eLR		22 43 50	LZ	30	379.0	69.4				eL	55 00	LT	30	403.0		
10	04 47 46.*		32. N 87.3 E TIBET						10	22 47 56.0		SZ	0.6	5.1			
			H= 20 KM														
10	LZ- eP		05 56 07.5	SZ	1.1	8.6											
10	LZ- eP		05 56 10	LZ	19	97.4											
10	LZ- e		05 57 50	LT	20	87.0											

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
10	22 50 19•4		31•4 S 70•7 W	CHILE ARGENTINA BORDER REG.					11	GG-	eL	11 09 35	LZ	22•	346•8		
			H= 75 KM	MAG 4•20	CGS				11	11 10 33•6		13•6 S 166•6 E	NEW HEBRIDES ISLANDS				
10	LZ- eP		22 54 03•0	SZ	0•9	11•4	15•2	4•16		H= 68 KM	MAG 5•00	CGS					
	e		58 40	LR	17	220•0			11	LZ- e		11 58 50	LT	20•	69•8	118•0	
	e		23 01 50	LZ	15	287•4				e		12 04 20	LZ	20	70•4		
10	23 57 14•*		52•7 N 171•5 W	FOX ALEUTIAN ISLANDS						eLR		06 35	LZ	30	301•7		
			H= 33 KM	MAG 4•60	CGS				11	14 19 11•5		17•9 S 71•5 W	NEAR COAST OF PERU				
11	00 13 13•4		16•2 S 168•2 E	NEW HEBRIDES ISLANDS						H= 35 KM	MAG 5•20	CGS					
			H= 17 KM	MAG 5•30	CGS				11	LZ- tP		14 20 09•4C	SZ	999•9	9999•9	3•3	
				tP						tP		20 10 C	LZ	999	9999•9		
11	00 43 39•*		N 17•8 W	NORTH OF ASCENSION ISLANDS					11	00- eLR		15 18 00	LZ	33	265•9	101•8	
			H= 33 KM	MAG 4•80	CGS				11	LZ- eP		20 11 31•5	SZ	0•5	4•4	1•7	
				eS						eS		11 55	ST	0•5	17•2		
11	LZ- eS		01 00 10	LR	25•	80•8	52•5		11	20 52 14•		15•1 S 167•6 E	NEW HEBRIDES ISLANDS				
	eSS		04 15	LR	25	121•2				H= 241 KM							
	eLQ		07 00	LR	40	467•5			11	21 15 03•9		6 S 121•7 E	NORTHERN CELEBES				
	eLR		13 05	LZ	21	374•3				H= 33 KM	MAG 6•30	CGS					
11	LZ- tP		01 48 25•5D	SZ	0•5	15•9	1•7		11	00- ePP		21 32 50	SZ	1•0	13•7	100•5	
	eS		48 48	ST	0•6	7•0				ePP		32 55	LZ	15	950•0		
11	03 01 56•*		50•9 N 160•0 E	KURILE ISLANDS REGION						e		39 15	LZ	25	1205•1		
			H= 34 KM	MAG 4•90	CGS				11	eS		40 20	LR	24	1466•6		
11	06 10 09•		43•8 N 129•3 W	OFF COAST OF OREGON						eSPP		42 40	LZ	18	1981•6		
			H= 33 KM	MAG 4•60	CGS				11	eSS		47 03	LR	25	9999•9		
11	10 06 44•9		19•1 N 156•6 W	HAWAII REGION						ePKKS		48 45	LR	21	9999•9		
			H= 33 KM	MAG 5•30	CGS				11	e		53 50	LR	24	9999•9		
11	LZ- eS		10 31 15	LT	21•	100•3	93•5			e		56 20	LR	23	9999•9		
	eSS		37 40	LR	30	122•6			11	eLQ		22 02 30	LR	999	9999•9		
	e		46 40	LR	27	255•2				eLR		10 00	LR	999	9999•9		
	eLQ		51 35	LT	20	130•4			11	GG- ePP		21 33 14	SZ	1•0	12•9	103•6	
	eLR		54 30	LZ	17	204•6				ePP		33 15	LZ	17	770•0		
11	00- eLR		10 56 40	LZ	28	328•4	99•5			ePP		33 23	SZ	1•0	32•4		
									11	eSP		42 20	LZ	15	1538•3		
11	10 21 01•1		6•3 S 145•7 E	NEW GUINEA						ePKKP		45 20	LZ	17	1831•3		
			H= 138 KM	MAG 5•00	CGS				11	eSS		48 20	LR	22	5847•9		
										ePIP		53 20	LZ	23	1977•0		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		e	55 45	LZ	30	2611.1			12	09 14 52.2		55.9 S 144.1 W	SOUTH PACIFIC CORDILLERA				
		eLQ	22 03 35	LR	48	12.9U				H= 33 KM	MAG 5.30	CGS					
		eLR	13 15	LZ	27	9999.9U			12	09 25 53.2		0.7	51.3	68.6	5.73		
11	LZ-	eP ¹	21 35 05.0	SZ	1.4	127.3	160.5		12	09 25 53.2		0.7	51.3	68.6	5.73		
		eP ¹	35 06	LZ	15	9999.9				eS	34 50	LT	17	189.5			
		eP ¹	35 11	SZ	1.7	9999.9				eLQ	44 37	LR	29	343.4			
		eP ²	35 47	SZ	1.8	378.6				eLR	47 37	LZ	25	837.4			
		e	37 53	SR	1.5	62.4				eL	47 50	LT	26	490.8			
		ePKS	38 43	ST	2.0	61.9				eL	47 50	LR	25	342.7			
		ePP	39 23	SZ	1.5	41.3				eL	47 50	LZ	26	830.7			
		e	40 55	LZ	13	9999.9			12	GG- eL	10 39 45	LZ	17	126.6	163.4		
		ePKKP	43 10	LZ	17	9999.9			12	GG- eL	10 39 45	LZ	17	126.6	163.9		
		e	47 02	ST	3.5	247.2			12	GG- eL	09 19 56	LZ	35	502.9			
		eLQ	22 25 35	LT	21	9999.9			12	LZ- eP	09 53 01.6D	SZ	0.3	55.4	3.1		
		eLR	33 30	LZ	999	9999.9				eS	53 40	ST	999.9	9999.9			
11	22 01 46.*		57.4 N 150.2 W	GULF OF ALASKA					12	GG- eP	10 08 22.3	SZ	0.2	56.4	1.4		
			H= 33 KM	MAG 4.60	CGS					eS	08 40	ST	0.2	34.3			
11	23 33 23.9		6. N 126.7 E	MINDANAO, PHILIPPINE ISLANDS					12	00- eL	10 40 00	LZ	21	266.9			
			H=121 KM	MAG 5.40	CGS				12	11 43 35.3	4.5 S 144.5 E	NEAR NORTH COAST NEW GUINEA					
										H= 77 KM	MAG 5.20	CGS					
12	01 02 02.*		12.3 S 166.7 E	SANTA CRUZ ISLANDS					12	13 55 21.5	14.8 S 167.4 E	NEW HEBRIDES ISLANDS					
			H= 35 KM							H=131 KM							
12	01 48 30.8		21.6 S 177.1 W	FIJI ISLANDS REGION					12	14 16 29.*	35.4 N 28.8 E	EASTERN MEDITERRANEAN SEA					
			H=188 KM	MAG 4.40	CGS					H= 32 KM	MAG 4.30	CGS					
12	LZ- eP		05 19 26.5	SZ	0.2	18.9	1.9		12	LZ- eP	15 10 02.8	SZ	0.3	9999.9	1.6		
		eS	19 53	SR	0.2	9.1				eS	10 24	SR	0.3	9999.9			
12	LZ- eP		06 00 28.5	SZ	0.7	4.8			12	00- eP	15 56 33	LZ	15	354.9	99.6		
										ePP	16 00 40	LZ	15	603.3			
12	06 06 08.*		56.6 N 152.6 W	KODIAK ISLAND REGION						eSKS	07 10	LR	35	773.9			
			H= 33 KM	MAG 4.60	CGS					e	15 55	LT	40	2013.9			
12	GG- eP		07 57 59.5	SZ	0.2	50.1				eLQ	27 15	LR	52	4920.1			
12	LZ- e		08 50 58	LT	16	177.6				eLR	33 30	LZ	32	3159.4			
12	LZ- e		08 51 38	LR	17	156.6			12	GG- eP	15 56 52	LZ	16	276.9	103.9		
12	LZ- e		08 55 55	LR	18	121.9				ePP	16 01 08	LZ	15	572.2			
12	LZ- e		09 01 50	LT	26	278.4											
12	LZ- eLR		09 05 40	LZ	28	489.1											
12	LZ- eL		09 08 30	LR	27	379.4											
12	LZ- eL		09 08 30	LT	25	204.0											
12	LZ- eL		09 08 30	LZ	27	687.3											

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	GG-	eSKS	16 07 30	LT	18	591.9	103.9		13	02 20 49.3	44.4 N 151.6 E KURILE ISLANDS REGION						
	eSP		10 20	LZ	32	1110.4				H= 33 KM	MAG 5.20 CGS						
	eL		40 00	LZ	33	3694.9			13	00- eP	02 32 00.0	SZ	1.3	61.7	70.2	5.48	
12	LZ-	eP ¹ 1	16 02 53.6	SZ	1.4	27.5	160.1		13	GG- eP	02 32 58.7	SZ	0.8	11.6	80.1	4.84	
	eP ¹ 1		02 54	LZ	14	1008.6									Avg.	5.16	
	e		03 12	SZ	2.0	115.0											
	e		03 14	LZ	20	573.4			13	03 13 42.*	16.3 S 174.2 W TONGA ISLANDS						
	e		04 03	LZ	17	584.7				H= 167 KM	MAG 4.70 CGS						
	ePP		07 19	ST	1.2	4.6			13	LZ- eP	04 10 31.4	SZ	0.5	35.4			
	ePP		07 30	LZ	14	775.8											
	e		12 55	LZ	25	578.2			13	05 31 43.*	1.9 N 126.5 E MOLUCCA PASSAGE						
	eSKKS		13 52	LT	16	734.1				H= 16 KM	MAG 5.10 CGS						
	eSKKS		13 57	SR	1.2	5.3											
	e		14 14	ST	3.5	173.0			13	06 57 48.7	34. N 45.1 E IRAN IRAQ BORDER REGION						
	eSKKS		18 12	LT	22	708.4				H= 96 KM							
	eSPP		20 46	LZ	18	907.1			13	10 38 59.3	3.3 S 149.9 E BISMARCK SEA						
	eSS		27 22	LR	24	709.7				H= 59 KM	MAG 5.10 CGS						
	e		40 55	LR	25	632.0			13	LZ- eP ¹	10 58 15.2	SZ	1.0	5.5	137.4		
	e		50 00	LR	55	9999.9				58 20	LZ	16	53.6				
	eLQ		56 37	LR	35	9999.9			13	ePKKP	11 07 33	LZ	21	129.7			
	eLR		58 10	LZ	44	9999.9				19 45	LT	35	303.5				
12	20 13 54.*		5.6 S 147.1 E EAST NEW GUINEA REGION						13	eL	44 00	LZ	27	829.4			
			H= 195 KM	MAG 5.50 CGS					13	GG- e	11 09 15	LZ	18	157.8	122.0		
12	21 55 33.2		31.3 S 110.8 W EASTER ISLAND REGION							eP ¹ P ¹	16 15	LZ	22	193.5			
			H= 25 KM	MAG 6.25 CGS						eL	37 55	LZ	59	2322.7			
12	LZ-	eP ¹	22 03 19.8C	SZ	1.9	573.7	41.3	6.00	13	eLR	42 30	LZ	32	1228.5			
	eP ¹		03 20 C	LZ	10	9999.9			13	00- eL	11 31 25	SR	43.0	419.4U	114.6		
	e		03 45	SZ	1.8	488.7											
	e		04 13	SR	1.8	195.6			13	14 00 12.3	58.5 N 151.4 W KODIAK ISLAND REGION						
	e		04 29	SR	2.0	267.7				H= 33 KM	MAG 4.90 CGS						
	e		05 30	ST	1.8	134.2			13	17 20 15.*	32.6 S 179.8 W SOUTH OF KERMADEC ISLANDS						
	e		09 36	LR	999	9999.9				H= 118 KM	MAG 4.40 CGS						
	eS		09 42	SR	4.4	1728.1			13	18 12 14.5	22.1 S 170.5 E LOYALTY ISLANDS REGION						
	eS		09 42	ST	5.5	1763.0				H= 41 KM	MAG 4.70 CGS						
	eL		12 52	SR	10.0	8102.7			13	23 02 26.*	35.8 N 71.1 E WEST PAKISTAN						
12	GG-	eP ¹	22 14 47.5	SZ	1.8	94.1	133.5			H= 120 KM	MAG 5.80 CGS						
	eL		52 20	LZ	35	2822.1											
12	00- e		22 27 12	LZ	20	297.3	132.1										
	eSS		34 45	LR	26	1233.9											
	e		40 35	LR	23	1231.1											
	eL		58 25	LZ	36	4582.3											
13	00 49 43.2		8.2 N 122.4 E MINDANAO, PHILIPPINE ISLANDS						13	OCT 64	32	33					
			H= 64 KM	MAG 4.50 CGS													

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
13	23 54 15*		13°2 S 76°5 W	NEAR COAST OF PERU					14	LZ-	eP	16 37 51.2	SZ	0.5	3.5			
			H= 75 KM	MAG 4.60	CGS				14	GG-	eP	17 35 00	LZ	12	188.6			
13	LZ- eP		23 56 14.4	SZ	0.5	5.3	8.3	4.64	14	GG-	e	17 36 47	LZ	17	85.3			
14	LZ- eP		00 37 14.0	SZ	0.4	1.4			14	GG-	e	17 41 55	LZ	22	106.7			
									14	GG-	e	17 41 55	LT	22	304.5			
									14	GG-	e	17 45 45	LT	18	569.2			
									14	GG- eL		17 50 15	LZ	28	436.3			
									14	OO- eL		17 55 20	LZ	38	1089.8			
14	03 04 59.6		33°4 N 141°8 E	OFF E. COAST HONSHU, JAPAN					14	18 04 41.3		34°8 N 138°9 E	NEAR S. COAST HONSHU, JAPAN					
			H= 33 KM	MAG 5.60	CGS							H=176 KM	MAG 4.10	CGS				
14	GG- eP		03 17 42.3	SZ	1.5	75.0	86.4	5.57	14	20 39 42.3		13°9 N 54°6 E	SOCOTRA REGION					
	eP		17 45	LZ	17	168.8						H= 9 KM						
	ePP		21 05	LZ	15	208.0												
	e		28 15	LZ	20	290.5												
	eLR		51 50	LZ	18	591.8												
14	LZ- eP*1		03 24 44.5	SZ	1.3	101.9	147.8		14	21 05 07.		15°5 N 93°0 W	NEAR COAST CHIAPAS, MEXICO					
	eP*1		24 49	LZ	20	540.7						H= 44 KM	MAG 4.00	CGS				
	eLR		04 15 25	LZ	28	414.4												
14	03 23 36.*		14°9 N 61°3 W	WINDWARD ISLANDS					14	LZ- eP		21 31 27.4	SZ	0.3	2.2			
			H=163 KM	MAG 4.10	CGS				14	LZ- eL		21 32 30	ST	0.8	14.3			
14	03 45 58.		21°4 S 178°5 W	FIJI ISLANDS REGION					14	22 10 09.2		9°2 N 73°1 W	NORTHERN COLOMBIA					
			H=481 KM	MAG 4.50	CGS							H=249 KM	MAG 3.70	CGS				
14	05 48 49.*		50°7 N 157°3 E	KURILE ISLANDS					14	LZ- eP		22 15 30.5	SZ	1.0	5.5	25.7	4.08	
			H= 50 KM	MAG 4.20	CGS													
14	LZ- eL		10 27 20	LZ	30.	177.5			15	00 37 30.*		43°9 N 113°5 W	EASTERN IDAHO					
14	GG- eL		10 30 00	LZ	22	88.9						H= 33 KM						
14	11 50 28.7		5° N	75°9 W	COLOMBIA				15	02 07 06.4		6°6 S 154°8 E	SOLOMON ISLANDS					
			H= 63 KM	MAG 4.30	CGS							H= 62 KM	MAG 5.10	CGS				
14	LZ- eL		11 52 25	LZ	30.	96.1			15	05 56 31.1		33° S 70°4 W	CHILE ARGENTINA BORDER REG.					
14	LZ- eP		12 02 09.0	SZ	1.2	15.2						H=118 KM	MAG 4.40	CGS				
14	12 06 38.1		5.7 S	150°5 E	NEW BRITAIN REGION				15	05 57 18.*		52°7 N 172°4 W	ANDREANOF ALEUTIAN ISLANDS					
			H= 89 KM	MAG 4.00	CGS							H= 33 KM	MAG 4.00	CGS				
14	16 03 53.6		47°9 N	114°3 W	MONTANA				15	06 33 18.*		52° N 171°2 W	FOX ALEUTIAN ISLANDS					
			H= 33 KM	MAG 4.60	CGS							H= 33 KM	MAG 4.00	CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
SOUTH OF KERMADEC ISLANDS																	
15	11 05 14*		33°1 S 179°6 E						15	21 30 40*		47°1 N 147°5 E					
			H=480 KM	MAG 4.20	CGS								H= 33 KM	MAG 4.30	CGS		
15	GG- eP		12 16 30.0	SZ	0.2	11.9			15	22 35 35.*		44.5 N 149.9 E					
15	GG- eP		12 37 29.5	SZ	0.2	29.8	2.3					H= 33 KM	MAG 4.20	CGS			
	eS		38 00	SR	0.2	77.9			15	22 40 32.4		44.6 N 149.9 E					
15	GG- eP		12 56 05.5	SZ	0.2	35.8	1.3					H= 44 KM	MAG 4.60	CGS			
	eS		56 22	SR	0.2	27.8			15	00- eP		22 51 39.0	SZ	0.8	8.1	69.6	4.80
15	GG- eL		13 32 33	SR	0.2	19.4			15	GG- eP		22 52 37.0	SZ	0.7	12.4	79.4	4.94
15	GG- eP		13 34 41.0	SZ	0.5	14.1				e		53 21	SZ	0.8	11.1		
															Avg.	4.87	
15	14 32 38.*		47.7 N 122.1 W						15	22 52 36.*		9.6 N 83.7 W					
			WASHINGTON									H= 33 KM	MAG 4.10	CGS			
15	GG- eP		15 18 20.0	SZ	0.2	26.8			15	22 59 43.6		56.8 N 151.9 W					
												H= 33 KM	MAG 5.20	CGS			
15	17 45 08.*		54.9 N 161.1 E						15	23 09 25.1		56.9 N 151.7 W					
			NEAR E. COAST OF KAMCHATKA									H= 33 KM	MAG 5.30	CGS			
15	20 26 53.5		44.7 N 149.8 E						15	01 36 43.9		44.3 N 149.6 E					
			KURILE ISLANDS									H= 44 KM	MAG 4.10	CGS			
			H= 49 KM	MAG 5.20	CGS				16	GG- eP		01 48 51.0	SZ	0.8	11.1	79.6	4.82
15	00- eP		20 37 58.5	SZ	1.0	64.2	69.5	5.59	16	GG- eL		02 21 15	LZ	21	125.8	79.6	
	e		39 07	SZ	1.0	41.2											
15	GG- eP		20 38 56.5	SZ	1.0	87.7	79.3	5.63	16	04 06 31.*		57.1 N 151.0 W					
	eP		38 57	LZ	16	1423.4						H= 33 KM	MAG 4.20	CGS			
15	GG- eP		40 20	SZ	1.3	144.5			16	06 15 31.5		23.6 S 177.6 W					
	eL		21 05 00	LZ	54	7017.6						H= 178 KM	MAG 5.50	CGS			
							Avg.	5.61	16	06 59 38.6		44.3 N 149.5 E					
15	20 35 33.*		44.8 N 149.6 E									H= 33 KM	MAG 5.50	CGS			
			KURILE ISLANDS						16	00- eP		07 10 47.0	SZ	0.7	185.1	69.8	6.24
			H= 33 KM	MAG 4.60	CGS					eP		10 48	LZ	25	3124.9		
15	00- eP		20 46 40.0	SZ	1.0	9.1	69.3	4.81	16	eS		19 55	LT	999	9999.9		
15	GG- eP		20 47 49.0	SZ	1.3	60.2	79.1	5.39	16	GG- eP		07 11 44.5	SZ	0.8	218.8	79.6	6.13
	eL		21 11 05	LZ	23	2739.0				eP		11 45	LZ	20	3464.0		
							Avg.	5.10	16	eS		21 55	LT	22	9655.4		
15	GG- e		20 49 00	LZ	20	936.2				e		27 50	LZ	35	4196.0		
15	GG- e		20 54 50	LZ	30	1101.3											
15	21 04 11.4		9.1 N 84.0 W														
			COSTA RICA														
15	21 09 02.6		9.6 N 84.0 W														
			COSTA RICA														
			H= 51 KM	MAG 4.20	CGS												

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG						
16	LZ-	eLR	43 40	LZ	999	9999.9	137.5	AVG. 6.18						
		eP	07 19 10	LZ	15	755.1								
		ePKS	22 40	LR	12	1536.1								
		eSS	40 00	LT	999	9999.9								
		eLR	08 09 00	LZ	999	9999.9								
16	56.1 S 27.7 W SOUTH SANDWICH ISLANDS REG. H= 33 KM MAG 5.10 CGS													
	16	44.2 N 149.9 E KURILE ISLANDS H= 33 KM												
		07 17 04.4	SZ	1.0	23.8	70.0	5.18							
		00- eP						07 28 13.2						
		07 21 42.7						44.2 N 149.4 E KURILE ISLANDS H= 33 KM MAG 5.20 CGS						
16		00- eP						07 32 51.0	SZ	0.8	84.6	69.8	5.84	
	GG- eP	07 33 49.0						SZ	1.0	89.2	79.6	5.64		
16	07 24 57.*	47.6 N 143.4 E SAKHALIN ISLAND H= 33 KM MAG 5.10 CGS												
	07 28 28.3	44.3 N 149.5 E KURILE ISLANDS H= 52 KM MAG 5.00 CGS												
16	07 37 19.6	44.5 N 149.6 E KURILE ISLANDS H= 33 KM MAG 4.90 CGS												
	00- eP	07 48 28.0	SZ	1.0	66.7	69.6	5.65							
	GG- eP	07 49 25.0	SZ	0.9	44.1	79.4	5.40							
16	07 51 36.7	44.5 N 149.6 E KURILE ISLANDS H= 33 KM MAG 4.40 CGS												
	08 18 28.3	44.6 N 149.4 E KURILE ISLANDS H= 33 KM MAG 5.20 CGS												
	00- eP	08 29 35.0	SZ	0.8	90.3	69.5	5.89							
16	GG- eP	08 30 33.0	SZ	0.7	50.7	79.3	5.57							
16	AVG.	5.73												
16	08 23 00.6	44.6 N 149.6 E KURILE ISLANDS H= 33 KM MAG 5.30 CGS												

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
16	08 33 29.8	44.2 N 149.4 E KURILE ISLANDS H= 33 KM MAG 4.70 CGS							
16	00- eP	08 44 38.0	SZ	1.0	57.2	69.8	5.57		
16	GG- eP	08 45 36.5	SZ	0.8	30.1	79.6	5.27		
						Avg.	5.42		
16	08 34 45.6	44.1 N 149.2 E KURILE ISLANDS H= 33 KM MAG 4.70 CGS							
16	GG- eP	08 47 00.0	SZ	0.8	22.6	79.6	5.15		
16	08 37 34.8	44.3 N 150.1 E KURILE ISLANDS REGION H= 33 KM MAG 4.60 CGS							
16	08 47 27.3	45. N 149.3 E KURILE ISLANDS H= 33 KM MAG 5.00 CGS							
16	00- eP	09 09 58.5	SZ	1.0	28.6				
16	09 18 16.6	44.5 N 149.1 E KURILE ISLANDS H= 33 KM MAG 5.40 CGS							
16	GG- eP	09 30 22.5	SZ	1.0	127.5	79.3	5.82		
16	00- eP	09 20 04.5	SZ	0.7	118.6				
16	09 54 30.9	44.1 N 149.3 E KURILE ISLANDS H= 33 KM MAG 4.40 CGS							
16	00- eP	10 05 40.7	SZ	0.8	31.0	69.9	5.40		
16	GG- eP	10 06 38.5	SZ	1.0	25.5	79.7	5.09		
						Avg.	5.24		
16	10 50 59.1	44.4 N 149.5 E KURILE ISLANDS H= 35 KM MAG 4.40 CGS							
16	10 58 30.6	44.1 N 149.5 E KURILE ISLANDS H= 25 KM MAG 4.60 CGS							
16	00- eP	11 09 40.5	SZ	0.8	16.9	70.0	5.15		
16	11 24 41.5	44.6 N 149.5 E KURILE ISLANDS H= 33 KM MAG 4.20 CGS							
16	12 04 05.3	44.6 N 149.5 E KURILE ISLANDS H= 33 KM MAG 4.50 CGS							

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
16	00-	eP	12 15 13.0	SZ	0.9	36.6	69.5	5.44		eSPP		11 50	LZ	18.	196.2			
16	12 18 54.4		44.6 N 149.5 E KURILE ISLANDS							e		18 03	LT	30	242.5			
			H= 33 KM MAG 4.60 CGS							eLQ		33 32	LR	45	1076.5			
										eLR		40 03	LZ	25	1122.8			
16	12 37 26.8		44.3 N 149.4 E KURILE ISLANDS						17	02 00 03.3		59.5 N 145.5 W GULF OF ALASKA						
			H= 33 KM MAG 4.90 CGS									H= 33 KM MAG 5.20 CGS						
16	00-	eP	12 48 34.4	SZ	0.9	58.7	69.7	5.64	17	02 28 42.		32.2 N 141.5 E SOUTH OF HONSHU, JAPAN						
	eLR		13 15 45	LZ	25	347.2	79.5	5.28				H= 22 KM MAG 4.20 CGS						
16	GG-	eP	12 49 31.5	SZ	1.0	38.2												
	eLR		13 22 55	LZ	22	606.9												
16	LZ-	eLR	13 46 40	LZ	20	139.8	137.6		17	03 17 28.1		7 N 119.3 E NORTHERN CELEBES						
							Avg.	5.46				H= 62 KM MAG 5.40 CGS						
16	13 29 30.6		44.4 N 149.5 E KURILE ISLANDS						17	LZ-	eP ¹	03 37 28.4	SZ	1.2	69.0	162.7		
			H= 33 KM MAG 4.90 CGS							eP ²		38 17	SZ	1.0	37.3			
16	00-	eP	13 40 38.5	SZ	0.9	40.3	69.7	5.47			eL	04 37 55	LZ	28	89.7			
16	GG-	eP	13 41 36.8	SZ	0.8	18.8	79.5	5.07										
							Avg.	5.27										
16	23 42 45.3		44.1 N 149.1 E KURILE ISLANDS							eP	05 36 45.6	SZ	0.5	4.4				
			H= 33 KM MAG 4.50 CGS							eS	37 20	SR	0.8	4.8				
17	00 59 34.5		32.5 N 140.3 E SOUTH OF HONSHU, JAPAN						17	05 55 54.4		22.3 S 171.5 E LOYALTY ISLANDS REGION						
			H= 86 KM MAG 4.80 CGS									H= 116 KM MAG 5.30 CGS						
17	LZ-	eP ¹	01 19 17.0	SZ	0.7	22.0	149.3		17	GG-	eP ¹	06 15 29.0	SZ	0.7	9.6	148.5		
									17	LZ-	eLQ	06 41 15	LR	18	422.7	109.9		
									17	eLR		47 16	LZ	32	546.4			
17	01 07 49.8		29.6 S 68.4 W SAN JUAN PROVINCE, ARGENTINA															
			H= 96 KM MAG 4.20 CGS						17	GG-	e	06 15 34	LZ	15.	236.6			
17	LZ-	eP	01 10 56.1	SZ	0.9	6.6	13.3	4.11										
17	LZ-	eP	01 24 45.4	SZ	0.2	45.8			17	06 34 50.*		42.4 N 131.0 E RUSSIA CHINA BORDER REGION						
												H= 513 KM MAG 4.50 CGS						
17	01 38 36.		7. S 155.8 E SOLOMON ISLANDS						17	00-	eL	07 05 50	LZ	30	332.4	66.0		
			H= 58 KM MAG 4.70 CGS						17	GG-	eL	07 06 10	LZ	42	495.2	74.2		
17	LZ-	eP ¹	01 57 57.1	SZ	0.8	9.8	130.5			17	06 45 15.*		44.5 N 149.4 E KURILE ISLANDS					
	ePP		02 00 00	LZ	22	189.2						H= 33 KM MAG 4.40 CGS						
	ePKS		01 05	LT	23	251.6												
	eSKP		01 05	SZ	1.1	46.0												

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
17	LZ-	eP	07 46 46.5	SZ	1.3	36.1	4.8	4.54	17	LZ-	eP	14 56 52.0	SZ	1.1	43.8	48.6	5.38
	e		47 00	LZ	15	129.9					ePCP	58 33	SZ	1.0	9.3		
	eL		48 11	LZ	20	1074.4				eL	15 11 30	LZ	35	315.6			
17	08 06 17.2		37.2 S 52.2 E	SOUTH INDIAN OCEAN					17	GG-	e	15 03 52	LZ	18	119.6	48.2	
			H= 33 KM							eL	10 55	LZ	25	709.5			
17	LZ-	eL	08 56 00	LZ	30.	91.9	102.9		17	00-	eL	15 13 10	LZ	22	465.4	50.4	
17	09 50 29.5		35. N 25.4 E	CRETE					17	15 01 14.		7.1 S 129.4 E	BANDA SEA				
			H= 33 KM	MAG 4.80 CGS								H= 117 KM	MAG 5.50 CGS				
17	GG-	eP	09 54 28.5	SZ	1.2	59.9	18.0	4.63	17	LZ-	eP ¹	15 20 51.3	SZ	1.0	16.7	150.8	
	eP		54 37	LZ	17	192.0				eP ²	20 57	SZ	1.2	153.3			
	e		58 00	LZ	17	533.5				e	21 33	SZ	0.9	39.9			
17	00-	eL	10 00 00	LZ	19	1311.5			17	LZ-	eP	15 06 58.6	SZ	0.8	4.2		
	eP		09 56 02.0	SZ	1.0	18.8	27.7	4.78	17	LZ-	e	15 09 02	SZ	0.8	7.0		
17	00-	eL	10 01 00	LZ	23	492.8			17	18 25 46.8		6 S 122.2 E	NORTHERN CELEBES				
						Avg.	4.70					H= 152 KM	MAG 4.90 CGS				
17	10 02 37.*		21.8 S 170.2 E	LOYALTY ISLANDS REGION					17	LZ-	eP ¹	18 45 35.1	SZ	1.0	7.4	160.2	
			H= 33 KM						18	02 49 16.8		2.8 N 78.0 W	NEAR WEST COAST OF COLOMBIA				
17	10 14 02.7		44.5 N 149.9 E	KURILE ISLANDS								H= 68 KM	MAG 4.50 CGS				
			H= 33 KM	MAG 4.50 CGS					18	06 16 35.2		44.4 N 149.7 E	KURILE ISLANDS				
17	12 07 30.6		35.8 N 141.3 E	NEAR E. COAST HONSHU, JAPAN								H= 33 KM	MAG 5.10 CGS				
			H= 45 KM	MAG 4.90 CGS					18	00-	eP	06 27 43.0	SZ	0.8	11.1	69.7	4.97
17	00-	eP	12 19 10.5	SZ	0.5	7.1	75.4	4.88		eL	55 10	LZ	25	231.2			
17	LZ-	eP	12 12 00.6	SZ	0.2	3.3			18	GG-	eP	06 28 41.5	SZ	1.0	51.0	79.5	5.41
17	LZ-	eL	12 13 13	SR	0.3	2.3				e	28 59	SZ	1.0	57.3			
17	14 24 39.*		28.1 N 45.3 W	NORTH ATLANTIC RIDGE						eL	07 00 30	LZ	25	215.9			
			H= 33 KM	MAG 4.10 CGS										Avg.	5.19		
17	LZ-	eP	14 33 10.4	SZ	0.8	5.6	49.5	4.58	18	07 07 31.8		19.4 N 68.7 W	NORTH ATLANTIC OCEAN				
	eL		50 00	LZ	25	125.8						H= 33 KM	MAG 4.30 CGS				
17	LZ-	eP	14 40 38.4	SZ	0.8	7.0			18	09 06 26.		2.9 N 65.7 E	CARLSBERG RIDGE				
												H= 33 KM					
17	14 48 10.9		26.7 N 44.6 W	NORTH ATLANTIC RIDGE					18	GG-	eP	09 17 07.0	SZ	1.5	112.5	65.5	5.78
			H= 33 KM	MAG 4.90 CGS													

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	GG-	ePP	09 19 35	SZ	2.0	199.2	65.5		18	13 20 20.3		29.7 N 50.8 E	SOUTHERN IRAN				
		eL	38 10	LZ	40	881.6				H= 33 KM	MAG 4.90	CGS					
18	00-	eP	09 17 42.0	SZ	1.0	42.4	71.1	5.43	18	GG-	eP	13 27 19.0	SZ	0.7	15.8	35.9	5.00
		eP	17 45	LZ	10	513.1											
		eS	27 00	LT	20	518.5			18	15 58 10.*		59.1 N 148.2 W	KENAI PENINSULA, ALASKA				
		eLQ	38 40	LT	40	1363.7				H= 33 KM	MAG 4.80	CGS					
		eLR	43 10	LT	32	1079.5			Avg.	5.60							
18	09 26 57.3		14.4 S 167.0 E	NEW HEBRIDES ISLANDS					18	18 33 19.9		41.9 N 111.8 W	UTAH				
			H= 50 KM	MAG 4.30	CGS					H= 10 KM	MAG 4.30	CGS					
18	10 07 58.2		12.1 N 89.6 W	OFF COAST OF CENTRAL AMERICA					18	20 03 35.*		16.4 S 174.3 W	TONGA ISLANDS				
			H= 33 KM	MAG 4.20	CGS					H= 189 KM	MAG 4.20	CGS					
18	10 45 15.5		12.2 N 89.3 W	OFF COAST OF CENTRAL AMERICA					18	20 57 15.*		20.5 S 67.1 W	SOUTHERN BOLIVIA				
			H= 33 KM	MAG 4.70	CGS					H= 210 KM	MAG 3.80	CGS					
18	12 32 24.1		7. S 124.0 E	BANDA SEA					18	21 25 29.9		28. N 54.7 E	SOUTHERN IRAN				
			H= 574 KM	MAG 5.80	CGS					H= 61 KM	MAG 4.80	CGS					
18	00-	ePD	12 45 45.5	SZ	0.7	14.0	107.2		18	GG-	eP	21 32 59.0	SZ	0.7	15.8	39.5	4.91
		ePD	45 42	LZ	21	849.3											
		e	47 40	LZ	18	1103.6			18	21 45 10.4		60.3 N 152.3 W	SOUTHERN ALASKA				
		e	48 50	LZ	26	878.7				H= 96 KM	MAG 4.10	CGS					
		e	49 30	SZ	1.0	18.8			18	21 56 01.		7.1 N 144.4 E	CAROLINE ISLANDS REGION				
		e	51 45	LZ	18	2045.8				H= 33 KM	MAG 4.80	CGS					
		ePKS	53 05	LZ	21	2513.8			18	22 31 37.7		19.4 S 179.1 W	FIJI ISLANDS REGION				
		eSKS	55 25	LZ	24	4046.8				H= 666 KM	MAG 4.80	CGS					
		e	58 30	LZ	27	9999.9			18	22 35 45.5		29.7 N 51.0 E	SOUTHERN IRAN				
		e	58 33	SZ	2.5	931.4				H= 36 KM	MAG 4.80	CGS					
		e	59 06	SZ	1.0	19.1	110.0		18	22 56 00		LZ	30.	256.3	36.0		
18	GG-	ePD	12 45 57.0	SZ	20	871.6											
		ePD	45 58	LZ	18	1440.0			18	00-	eL	22 45 40	LT	30.	122.0	103.0	
		eP	47 55	LZ	0.7	50.7											
		eP	49 53	SZ	17	1097.8			18	22 31 37.7		19.4 S 179.1 W	FIJI ISLANDS REGION				
		ePP	50 30	LZ	1.1	70.8				H= 666 KM	MAG 4.80	CGS					
		ePP	50 38	SZ	15	2861.0			18	22 35 45.5		29.7 N 51.0 E	SOUTHERN IRAN				
		ePP	52 25	LZ	18	1238.6				H= 36 KM	MAG 4.80	CGS					
		ePPP	53 30	SZ	2.3	492.2			18	22 56 00		LZ	30.				
		eSP	59 06	LZ	20	22.1U											
		e	13 00 15	SZ	0.9	39.2											
		ePKP	00 58	SZ	21	20.6U											
		eSP	02 55	LZ	20	27.4U											
		e	04 25	LZ	21	25.9U											
		eL	37 00	LZ													

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	23	52 34•3	5•9 S 105•0 E	SUNDA STRAIT					19	13	54 29•1	14•4 S 166•4 E	NEW HEBRIDES ISLANDS				
			H= 79 KM							H= 9 KM	MAG 4•60	CGS					
19	LZ-	eP	00 12 55•0	SZ	1•5	46•9			19	15	33 34•9	45•1 N 150•9 E	KURILE ISLANDS				
										H= 33 KM	MAG 4•60	CGS					
19	01	30 18•*	59•2 N 151•2 W	KENAI PENINSULA, ALASKA					19	16	29 49•1	59•7 N 148•7 W	KENAI PENINSULA, ALASKA				
			H= 33 KM	MAG 4•50	CGS					H= 53 KM	MAG 4•60	CGS					
19	02	15 58•1	31•4 N 79•0 E	TIBET INDIA BORDER REGION					19	17	38 44•*	29•8 N 51•2 E	SOUTHERN IRAN				
			H= 33 KM	MAG 4•80	CGS					H= 54 KM							
19	05	39 55•8	46•6 N 27•1 W	NORTH ATLANTIC RIDGE					19	LZ-	eP	18 42 17•8	SZ	1•0	5•3		
			H= 33 KM	MAG 4•50	CGS				19	LZ-	e	18 42 24	SZ	0•8	13•6		
19	06	34 02•*	1•5 N 97•0 W	WEST OF GALAPAGOS ISLANDS					19	LZ-	eP	19 56 59•2	SZ	0•2	11•8	2•5	
			H= 33 KM	MAG 4•40	CGS					57 31	ST	0•2	20•3				
19	GG-	eL	07 20 40	LZ	25•	89•9	100•6		19	21	14 52•2	15•7 S 177•8 W	FIJI ISLANDS REGION				
										H= 398 KM	MAG 4•40	CGS					
19	08	50 30•4	24•7 S 179•6 W	SOUTH OF FIJI ISLANDS					19	21	17 59•8	36•1 S 73•5 W	NEAR COAST OF CENTRAL CHILE				
			H= 475 KM	MAG 4•30	CGS					H= 33 KM	MAG 4•90	CGS					
19	GG-	eP	10 49 47•5	SZ	0•8	70•8			19	LZ-	eP	21 22 37•5	SZ	1•5	46•9	20•3	4•55
19	12	35 18•*	49•8 N 155•6 E	KURILE ISLANDS					19	21	38 28•8	44•2 N 149•3 E	KURILE ISLANDS				
			H= 50 KM	MAG 4•50	CGS					H= 33 KM	MAG 4•50	CGS					
19	LZ-	eL	13 07 07	SZ	0•5	1•3			19	GG-	eP	21 50 35•0	SZ	1•0	12•6	79•6	4•79
										22 16 25	LZ	25	89•9				
19	13	29 29•4	4•6 S 152•9 E	NEW BRITAIN REGION					19	23	26 36•*	19•1 N 108•5 W	REVILLA GIGEDO ISLANDS REG.				
			H= 70 KM	MAG 4•90	CGS					H= 33 KM	MAG 3•80	CGS					
19	LZ-	eP ¹ eSKP	13 48 43•0	SZ	0•9	5•4	134•1		20	00	49 05•7	19•6 S 174•8 W	TONGA ISLANDS				
			52 08	SZ	1•5	41•7				H= 29 KM	MAG 5•10	CGS					
19	00-	eLQ eLR	14 19 00	LT	21	178•6	116•9		20	LZ-	eP	01 13 38•0	SZ	0•5	1•6		
			22 28	LZ	15	246•0			20	LZ-	eL	01 14 34	ST	0•6	13•9		
19	00-	eP	13 31 01•0	SZ	0•7	6•9			20	05	41 16•*	18•6 N 108•5 W	REVILLA GIGEDO ISLANDS REG.				
										H= 33 KM	MAG 4•00	CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	06 24	12.*	56° 9' N 152° 6' W	KODIAK ISLAND REGION				
			H= 48 KM	MAG 4.10	CGS			
20	LZ-	eP	08 07 03.8	SZ	0.4	6.4		
20	GG-	eL	08 56 05	LZ	20	158.8		
20	LZ-	eL	14 52 40	LZ	20	217.8		
20	LZ-	eL	15 00 10	LZ	28	963.6		
20	LZ-	eP	15 34 51.0	SZ	0.4	4.2	2.0	
	eS		35 19	ST	0.7	8.7		
20	LZ-	eP	16 48 25.0	SZ	0.7	5.8		
20	19 43	17.*	38° 7' N 26° 7' E	AEGEAN SEA				
			H= 33 KM					
20	20 04	02.*	23° 9' S 179° 0' W	SOUTH OF FIJI ISLANDS				
			H= 165 KM	MAG 4.70	CGS			
20	LZ-	eP	21 39 26.7	SZ	999.9	9999.9	3.4	
	eS		40 07	ST	0.9	51.4		
20	LZ-	eP	23 09 37.1	SZ	0.3	4.2		
20	23 13	00.4	3° S 128° 6' E	CERAM				
			H= 33 KM	MAG 4.40	CGS			
20	LZ-	eLQ	23 16 40	LR	30.	254.2		
20	LZ-	eLR	23 17 45	LZ	25	328.9		
20	23 34	59.4	14° 8' N 60° 2' W	WINDWARD ISLANDS				
			H= 33 KM	MAG 4.20	CGS			
20	23 48	14.*	13° 6' N 92° 2' W	OFF COAST OF CHIAPAS, MEXICO				
			H= 33 KM	MAG 3.90	CGS			
21	GG-	eL	00 06 30	LZ	25.	174.9		
21	02 13	49.*	30° N 141° 2' E	SOUTH OF HONSHU, JAPAN				
			H= 33 KM	MAG 4.70	CGS			
21	GG-	eL	05 16 35	LZ	38.	190.1		
21	00-	eP	06 36 38.3	SZ	0.5	3.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21	00-	eL	06 40 08	SR	0.5	8.5		
21	07 38	31.*	44° 8' N 111° 6' W	HEBGEN LAKE REGION				
			H= 33 KM	MAG 5.80	CGS			
21	00-	eSP	07 57 58	LZ	22	139.9	64.7	
	eSS		08 02 09	LR	28	312.6		
	eLQ		07 35	LT	41	708.1		
	eLR		13 16	LZ	24	1126.9		
	eL		14 36	LZ	24	1220.8		
	eL		14 36	LT	16	350.5		
21	LZ-	e	07 59 34	LZ	20	230.0	72.3	
	eL		08 09 50	LT	49	857.7		
21	GG-	e	08 05 08	LZ	28	150.9	73.5	
	e		08 07	LZ	18	170.7		
	eLR		14 10	LZ	40	862.1		
21	08 34	06.*	6° 5' S 80° 7' W	NEAR COAST OF NORTHERN PERU				
			H= 100 KM	MAG 3.90	CGS			
21	LZ-	eP	08 37 33.2	SZ	1.0	7.2	15.4	3.86
	e		37 43	SZ	0.9	12.0		
21	GG-	eP	08 40 58.4	SZ	0.3	9.1		
	eS		41 01	ST	0.4	92.2		
21	GG-	eP	09 00 36.5	SZ	0.5	24.0	1.4	
	eS		00 56	ST	0.4	18.4		
21	10 08	46.7	14° 1' S 166° 7' E	NEW HEBRIDES ISLANDS				
			H= 45 KM	MAG 4.40	CGS			
21	11 48	30.9	2° 7' S 138° 9' E	WEST NEW GUINEA				
			H= 99 KM					
21	LZ-	eP	12 08 06.0	SZ	0.7	4.7	147.0	
21	14 32	57.6	58° 5' N 151° 9' W	KODIAK ISLAND REGION				
			H= 33 KM	MAG 5.60	CGS			
21	GG-	eP	15 43 43.2	SZ	0.2	121.4		
21	GG-	eP	15 48 07.5	SZ	0.4	15.8		
21	GG-	eP	16 03 50.5	SZ	0.3	29.6		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
21	17 23 33.7		35.9 N 71.3 E	WEST PAKISTAN						epP ¹		29 27	SZ	1.2	39.8			
			H=181 KM	MAG 4.40 CGS						e		29 36	SZ	1.4	53.8			
21	LZ- eP		18 25 00.5	SZ	0.4	31.5	3.9			eP ²		29 58	SZ	1.5	105.0			
	e		25 19	SZ	0.6	25.6				eSKP		32 56	SZ	1.7	55.0			
	e		25 48	ST	0.7	48.5				ePP		33 33	SZ	2.2	108.2			
21	19 17 50.		36.4 N 4.3 E	ALGERIA						ePP		33 39	LZ	22	9999.9			
			H= 33 KM	MAG 4.40 CGS						e		37 02	LZ	17	9999.9			
21	00- eL		19 31 00	LR	20	400.6	25.0			e		38 26	LZ	18	9999.9			
										eSKKS		40 30	LT	19	9999.9			
21	20 02 20.5		44.8 N 111.6 W	HEBGEN LAKE REGION						ePPS		47 16	LT	999	9999.9			
			H= 33 KM	MAG 3.90 CGS						e		48 53	LZ	999	9999.9			
										e		52 48	LT	22	9999.9			
										SKSSKS		54 10	LT	20	9999.9			
21	20 56 59.*		15.1 S 173.0 W	TONGA ISLANDS					22	LZ- e		00 00 10	LR	23	9999.9	159.8		
			H= 33 KM	MAG 5.00 CGS						e		01 47	LT	999	9999.9			
										e		03 55	LT	22	9999.9			
										e		05 42	LT	21	9999.9			
															Avg.	5.78		
21	23 09 18.8		28.1 N 93.8 E	INDIA CHINA BORDER REGION					21	GG- eP		23 53 42.4	SZ	0.6	21.3			
			H= 37 KM	MAG 5.90 CGS					22	03 02 16.7		40.4 N 138.7 E	EASTERN SEA OF JAPAN					
												H= 33 KM	MAG 4.80 CGS					
21	00- eP		23 19 40.7	SZ	1.0	47.0	62.5	5.55	22	06 41 33.*		38.9 N 75.8 E	S. SINKIANG PROVINCE, CHINA					
	eP		19 41	LZ	16	3946.4					eS		H=120 KM	MAG 4.40 CGS				
	eP ²		19 54	SZ	1.1	104.6					eSCS							
	ePP		22 03	LZ	22	1585.5					e							
	ePPP		23 37	LZ	23	1702.1					31 27	LR	15	9999.9				
	ePPS		24 31	SR	1.3	36.1					e							
	ePCS		28 07	LT	999	9999.9					33 56	LR	18	9999.9				
	eS		29 17	LT	999	9999.9					e							
	eSCS		31 27	LR	15	9999.9					33 56	LR	14	9999.9				
	e		33 56	LR	18	9999.9					eLQ		39 40	LR	9999.9			
	eLQ		39 40	LR	14	9999.9					eLR		41 56	LR	999			
	eLR		41 56	LR	999	9999.9					eL		45 02	SZ	15.0	91.3U		
														1.2	156.9	64.5	6.01	
21	GG- eP		23 19 55.4	SZ	1.2	156.9			22	09 54 36.9		36.7 N 141.1 E	NEAR E. COAST HONSHU, JAPAN					
	eP		19 56	LZ	19	3002.0					eS		H= 40 KM	MAG 4.80 CGS				
	ePP		22 19	LZ	17	2172.6					eSS							
	eS		28 30	LT	20	19.7U					e							
	eSS		32 47	LT	16	9999.9U					eLQ		38 24	LR	999	9999.9U		
	e		33 20	LZ	32	9999.9U					eLR		43 25	LT	999	9999.9U		
	eSSS		35 50	LR	20	9999.9U					eL		50 21	SZ	14.5	54.3U	159.8	
	eLQ		38 24	LR	999	9999.9U												
	eLR		43 25	LT	999	9999.9U												
21	LZ- eP ¹		23 29 19.7	SZ	1.0	14.5			23	01 56 03.2		19.8 N 56.0 W	NORTH ATLANTIC OCEAN					
	eP ¹		29 20	LZ	15	763.8							H= 31 KM	MAG 6.75 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	00-	eP	02 06 20.5	SZ	1.0	106.3	61.7	5.94		ePKS		29 30	LR	22.	128.0		
		eP	06 21	LZ	15	2025.2				eSKKS		35 40	LR	30	120.3		
		ePP	06 29	SZ	1.0	187.4				ePKKS		38 50	LR	20	102.3		
		ePP	08 40	LZ	18	1359.8				eSS		47 15	LR	23	198.2		
		eS	14 45	LR	999	9999.9				e		50 20	LR	23	152.8		
23	05 06 44.*		23.6 S 180.0							eLQ		22 06 20	LT	30	306.0		
			H=548 KM MAG 4.20 CGS							eLR		12 40	LZ	32	843.7		Avg. 5.98
23	06 53 25.1		2.7 S 142.1 E						23	22 22 07.*		61.8 N 161.6 W					
			NEAR NORTH COAST NEW GUINEA									H= 29 KM MAG 4.00 CGS					
23	09 39 06.2		28.2 S 177.3 W						24	00 40 09.4		44.2 N 149.3 E					
			KERMADEC ISLANDS									H= 33 KM MAG 4.40 CGS					
23	10 07 35.*		30.8 S 64.4 W						24	00- eP		00 51 18.5	SZ	1.0	43.6	69.8	5.45
			CORDOBA PROVINCE, ARGENTINA									H= 79 KM MAG 4.00 CGS					
23	13 57 11.*		38.5 N 118.4 W						24	02 36 45.0		SZ	0.7	22.5			
			CALIFORNIA NEVADA BORDER							eS		37 24	ST	0.5	8.1		
23	GG- eP		14 48 14.5	SZ	0.3	15.6	2.4		24	06 37 46.*		44.5 N 129.5 W					
	eS		48 45	ST	0.5	12.8						H= 33 KM MAG 4.50 CGS					
23	15 21 56.8		13.2 N 91.6 W						24	06 44 38.*		44.4 N 130.0 W					
			KURILE ISLANDS									H= 45 KM MAG 4.00 CGS					
23	LZ- eP		20 19 18.0	SZ	0.4	6.1	3.1		24	06 51 01.9		38.8 N 71.0 E					
	eS		19 58	ST	0.5	7.2						H= 57 KM MAG 5.10 CGS					
23	21 06 24.2		44. N 147.5 E						24	07 51 31.*		60.9 N 146.7 W					
			KURILE ISLANDS									H= 45 KM MAG 5.90 CGS					
23	00- eP		21 17 30.0	SZ	0.7	53.0	69.5	5.67	24	08 46 25.		24.8 N 122.1 E					
	eS		27 00	LT	20	696.4						H= 63 KM MAG 5.30 CGS					
	eSS		31 15	LT	16	1245.9			24	LZ- eP ¹		09 06 26.5	SZ	1.1	20.2	166.9	
	eLQ		39 00	LR	40	2957.4				eP ²		07 30	SZ	1.0	20.9		
	eLR		42 00	LZ	25	2955.9			24	09 51 27.3		19.1 S 169.7 E					
23	GG- eP		21 18 27.0	SZ	1.0	401.0	79.2	6.30				H= 33 KM					
	eP		18 30	LZ	17	440.5			24								
	e		34 30	LZ	20	499.5											
	eLR		52 30	LZ	22	1001.3											
23	LZ- eP ¹		21 25 48.0	SZ	0.6	7.5	138.9										

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
24	LZ-	eP eS	10 40 59.5 41 29	SZ SR	0.3 0.5	16.9 10.9	2.3	
24	13 46 19.1		55.8 N 160.4 E KAMCHATKA	H= 33 KM MAG 5.00 CGS				
24	LZ-	eL	13 53 50	LT	21.	110.4		
24	LZ-	eL	13 56 20	LR	25	143.6		
24	LZ-	eP	15 25 23.0	SZ	0.5	2.7		
24	18 38 25.7		66. N 145.5 E EASTERN SIBERIA	H= 33 KM MAG 4.50 CGS				
24	00-	eP	18 47 10.0	SZ	0.6	21.6	48.9	5.33
24	22 04 57.5		4.5 S 152.9 E NEW BRITAIN REGION	H= 49 KM MAG 5.80 CGS				
24	22 05 24.*		12.6 S 167.5 E SANTA CRUZ ISLANDS	H=162 KM				
25	LZ-	eP	00 29 30.4	SZ	0.4	16.5		
25	02 09 29.*		34. N 136.6 E SOUTHERN HONSHU, JAPAN	H=393 KM MAG 4.10 CGS				
25	03 43 20.		5. N 82.5 W SOUTH OF PANAMA	H= 33 KM MAG 5.10 CGS				
25	LZ-	eP	03 48 45.7	SZ	0.7	29.4	25.3	5.01
		eP	48 46	LZ	12	191.8		
		eLQ	53 20	LR	16	440.5		
		eLR	57 15	LZ	30	1019.3		
25	GG-	eL	04 25 15	LZ	40	440.8	88.6	
25	06 25 48.6		2. S 77.2 W ECUADOR	H=160 KM MAG 5.30 CGS				
25	LZ-	eP	06 29 32.3	SZ	0.9	206.5	16.6	5.48

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eP eL	29 33 32 30	LZ	16	424.1 1298.2		
25	07 59 58.8		73.5 N 53.7 E NOVAYA ZEMLYA	H= KM MAG 4.90 CGS				
25	00-	eP eL	08 04 35.8 08 09	SZ	0.4	29.2	20.1	4.87
25	GG-	eP	08 06 07.5	SZ	0.8	14.8	30.1	4.88
		Avg.						4.87
25	10 01 48.*		15.3 S 173.3 W TONGA ISLANDS	H= 33 KM MAG 5.00 CGS				
25	LZ-	eL	10 48 10	LZ	27.	161.0	99.4	
25	LZ-	eL	11 50 05	LZ	32.	142.5		
25	12 08 46.9		21.7 S 179.2 W FIJI ISLANDS REGION	H=534 KM MAG 5.50 CGS				
25	LZ-	ePP	12 26 08	SZ	1.5	41.4	102.3	
25	GG-	eP 1	12 27 38.0	SZ	0.7	102.8	150.9	
25	00-	eP	12 29 52.2	SZ	0.8	27.8		
25	LZ-	eP	18 07 30.0	SZ	0.1	14.9		
25	LZ-	eP	22 22 19.0	SZ	1.0	3.7		
25	LZ-	eP eS	22 50 41.5 51 23	SZ SR	0.5 0.5	5.3 9999.9		3.4
25	22 56 08.*		38.7 N 70.8 E AFGHANISTAN USSR BORDER REG.	H= 33 KM MAG 5.00 CGS				
25	00-	eP ePP	23 04 02.9 05 52	SZ SZ	0.3 0.8	5.0 5.5	42.7	4.74
		e	13 44	LZ	16	198.7		
		e	15 43	LZ	33	669.2		
		eL	18 20	LR	12	1250.3		
25	GG-	eP eL	23 04 07.0 20 00	SZ LZ	0.7 15	12.4 137.6	43.1	4.75
		Avg.						4.74
25	22 56 32.8		2. S 79.0 W ECUADOR	H= 57 KM MAG 5.40 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
25	LZ-	eP	23 00 33.7	SZ	2.2	432.2	17.5	5.25
		eP	00 36	LZ	16	562.9		
		e	01 38	SZ	1.6	226.9		
		eS	03 58	SR	3.1	1043.4		
		eS	04 04	LR	15	1245.5		
		e	04 13	ST	1.6	148.7		
		e	05 29	SZ	1.6	149.5		
		eLQ	05 35	LT	18	9999.9		
		eL	06 00	ST	1.0	63.8		
		eLR	07 40	LZ	999	9999.9		
25	OO-	eLR	23 41 10	LZ	30	245.2	91.7	
26	GG-	eL	00 36 25	LZ	25.	111.1		
26	00 55 22.3		8.9 N 83.9 W	COSTA RICA				
			H= 33 KM	MAG 4.70	CGS			
26	LZ-	eP	01 01 22.5	SZ	1.2	10.4	29.3	4.48
		e	02 25	LR	24	70.6		
		eSS	07 30	LT	17	332.7		
		eLQ	10 32	LT	27	777.9		
		eLR	12 25	LZ	24	771.5		
26	01 29 21.1		32.9 N 49.2 E	WESTERN IRAN				
			H= 33 KM					
26	04 05 37.		49.1 S 163.7 E	AUCKLAND ISLANDS REGION				
			H= 33 KM					
26	08 12 10.*		6.8 N 73.1 W	NORTHERN COLOMBIA				
			H= 165 KM	MAG 3.80	CGS			
26	08 49 56.*		7.9 N 37.6 W	CENTRAL MID ATLANTIC RIDGE				
			H= 33 KM	MAG 4.30	CGS			
26	LZ-	eP	08 57 21.2	SZ	0.5	15.4	38.9	5.00
		eL	09 08 40	LZ	34	183.8		
26	OO-	eP	08 58 46.0	SZ	0.6	7.8		
26	GG-	eP	09 02 54.5	SZ	0.6	20.9		
26	LZ-	eP	09 14 24.0	SZ	0.2	1.1	3.4	
		eS	15 06	ST	0.3	6.8		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
26	GG-	eP	10 00 41.1	SZ	0.6	28.8		
26	LZ-	e	13 13 07	LZ	12	176.0		
26	LZ-	eL	13 21 00	LZ	33	275.4		
26	GG-	eL	14 17 40	LZ	30	261.3		
26	14 22 57.8		2.2 N 126.8 E	MOLUCCA PASSAGE				
			H= 48 KM	MAG 6.00	CGS			
26	LZ-	eP ¹	14 42 56.5	SZ	2.0	109.0	159.5	
		eP ¹	42 57	LZ	24	113.1		
		e	47 35	SZ	0.9	8.5		
		eSPP	15 00 32	LZ	28	222.1		
		e	10 43	LT	16	926.0		
		eLR	38 15	LZ	32	487.0		
26	00-	eLQ	15 07 32	LR	52	2047.4	100.3	
		eLR	15 22	LZ	35			
		eL	18 10	LT	27	1100.0		
		eL	18 10	LR	27	1395.3		
		eL	18 10	LZ	28			
26	14 32 49.3		56.8 N 152.3 W	KODIAK ISLANDS REGION				
26	00-	eLR	15 05 00	LZ	42		61.7	
26	15 09 09.3		17.8 S 66.0 W	BOLIVIA				
			H= 204 KM	MAG 4.40	CGS			
26	LZ-	iP	15 10 00.6C	SZ	0.3	100.0	2.8	
26	15 16 47.7		42.9 N 94.4 E	N. SINKIANG PROVINCE, CHINA				
26	LZ-	eP ¹	15 36 36.2	SZ	0.8	10.0	149.7	
26	LZ-	iP	15 37 13.5D	SZ	0.3	36.1	1.7	
26		eS	37 37	SR	0.3	18.3		
26	LZ-	eP	16 55 23.0	SZ	0.5	14.5		
26	17 08 47.*		31.7 N 113.6 W	GULF OF CALIFORNIA				
			H= 33 KM	MAG 4.20	CGS			
26	20 07 43.*		24. N 123.4 E	SOUTHWESTERN RYUKYU ISLANDS				
			H= 33 KM	MAG 4.70	CGS			

DAY	STA PHASE	TIME	INST	PER	AMPL	DIST	MAG
26	LZ- eP eS	20 23 36.0 24 14	SZ ST	0.3 0.5	4.5 5.8	3.1	
26 21 29 26.* 37.1 N 141.9 E NEAR E. COAST HONSHU, JAPAN H= 55 KM MAG 3.80 CGS							
26	GG- eL	22 21 35	LZ	18.	86.1		
27 00 32 22.* 40.1 N 121.7 W NORTHERN CALIFORNIA H= 14 KM MAG 4.40 CGS							
27	01 52 22.*	28.4 N 128.8 E RYUKYU ISLANDS H= 33 KM MAG 4.30 CGS					
27	LZ- IP eS	02 29 26.0D 29 50	SZ ST	999.9 999.9	9999.9 9999.9	1.9	
27	02 40 20.9	18.9 N 120.9 E LUZON, PHILIPPINE ISLANDS H= 56 KM MAG 4.50 CGS					
27	GG- eLR	03 31 15	LZ	25.	110.0	87.8	
27	LZ- eL LZ- eP eS	04 10 00 06 01 16.5 02 14	LT SZ ST	35. 0.4 1.0	125.8 6.0 32.8	3.9	
27	06 12 48.8	20.8 S 71.4 W OFF COAST OF NORTHERN CHILE H= 8 KM MAG 4.40 CGS					
27	LZ- IP e eL	06 14 15.0C 14 30 15 40	SZ LT LR	0.7 28 18	51.5 335.8 9999.9	5.3 5.29	
27	12 44 27.*	57.7 N 152.1 W KODIAK ISLAND REGION H= 33 KM MAG 3.90 CGS					
27	LZ- IP eS	14 00 48.5D 01 09	SZ SR	0.6 0.5	42.1 17.0	2.4	
27	LZ- eP	15 08 32.5	SZ	0.5	5.3		

DAY	STA PHASE	TIME	INST	PER	AMPL	DIST	MAG
27	LZ- eL LZ- eP eS	15 21 00 17 46 54.5 47 41	SZ ST SR	26. 0.4 0.8	104.0 3.0 7.9	3.7	
27 19 03 14.9 59.6 N 144.4 W GULF OF ALASKA H= 33 KM MAG 4.70 CGS							
27	19 46 12.	47.8 N 16.1 E AUSTRIA H= 39 KM MAG 5.60 CGS					
27	GG- eP eP	19 47 09.0 47 10	SZ LZ	999.9 25	9999.9 1072.7	3.7	
27	LZ- eLR	20 34 00	LZ	48	688.0	98.3	
27 20 00 35.* 27.6 S 176.8 W KERMADEC ISLANDS H= 168 KM MAG 4.50 CGS							
27	LZ- eSKS ePS	20 24 30 26 45	LT LT	20.	279.4 300.9	98.0	
27	GG- eLR	21 18 35	LZ	33	131.3	157.1	
27	GG- eP eS	20 28 17.0 29 16	SZ ST	0.5 0.4	9.5 58.1	5.0	
27	GG- eP eS	20 42 50.5 43 52	SZ ST	0.4 0.4	8.6 24.9	5.1	
27	21 24 31.2	45.6 S 96.1 E SOUTHEAST INDIAN RISE H= 33 KM					
27	GG- eL	22 20 00	LZ	30.	524.3	120.1	
27	22 36 18.*	58.5 S 66.2 W DRAKE PASSAGE H= 33 KM MAG 5.40 CGS					
27	LZ- eP eP e eSCS eLR	22 44 09.5 44 10 44 55 54 05 23 00 00	SZ LZ SZ LT LZ	1.1 23 1.4 23 30	71.8 282.9 197.9 718.4 1527.0	42.2 5.34	
28	LZ- eP	00 20 10.5	SZ	0.1	72.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	00	22 07.3	29.6 S H= 45 KM	70.7 W MAG 4.90	CENTRAL CHILE CGS			
28	LZ-	eP	00 25 21.0	SZ	1.5	25.4	13.4	4.77
28	00 41 48.2		47.9 N H= 33 KM	16.2 E	AUSTRIA			
28	GG-	eL	01 43 50	SZ	0.6	151.2	3.8	
28	01 34 54.5		17.7 N H=159 KM	94.2 W MAG 4.60	CHIAPAS, MEXICO CGS			
28	GG-	eP	01 42 44.0	SZ	0.5	23.7	3.8	
28	02 33 09.*		51.1 N H= 31 KM	157.8 E MAG 4.60	NEAR EAST COAST OF KAMCHATKA CGS			
28	03 07 07.3		13.4 S H= 53 KM	72.6 W MAG 4.40	PERU CGS			
28	LZ-	eP	03 08 23.0	SZ	0.5	19.9	4.9	4.70
28	LZ-	eP	03 07 16.7	SZ	0.6	6.4		
28	LZ-	e	03 08 03	ST	1.0	22.2		
28	LZ-	eP	03 56 13.5	SZ	0.5	16.3		
28	LZ-	e	03 57 42	ST	0.9	8.5		
28	05 48 45.4		16.6 S H= 33 KM	177.2 W MAG 4.80	FIJI ISLANDS REGION CGS			
28	LZ-	eL	06 36 40	LZ	26.	1118.0	102.5	
28	08 17 21.*		60.8 N H= 33 KM	146.9 W MAG 3.80	SOUTHERN ALASKA CGS			
28	09 26 02.		6.1 S H= 60 KM	149.3 E	NEW BRITAIN REGION			
28	13 10 49.5		6.4 S H= 90 KM	154.7 E MAG 4.90	SOLOMON ISLANDS CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	LZ-	eP	14 24 33.5	SZ	1.0	9.5		
28	18 24 56.6		6.8 S H= 85 KM	155.1 E MAG 4.80	SOLOMON ISLANDS CGS			
28	18 56 40.5		44.3 N H= 19 KM	149.3 E MAG 4.90	KURILE ISLANDS CGS			
28	19 35 15.8		36.1 N H=130 KM	71.3 E MAG 5.50	AFGHANISTAN USSR BORDER REG. CGS			
28	00- eP eL		19 43 18.5 58 40	SZ LZ	0.7 35	23.4 114.3	45.0	4.93
28	22 59 40.5		47.8 N H= 33 KM	16.1 E	AUSTRIA			
28	GG- eP eL		23 00 37.5 01 23	SZ SR	0.2 999.9	38.7 9999.9	3.7	5.09
28	LZ- eP eS		23 58 06.5 58 34	SZ ST	0.4 0.5	15.3 23.4	2.1	
29	01 14 51.		52.7 N H= 33 KM	168.7 W MAG 4.30	FOX ALEUTIAN ISLANDS CGS			
29	04 28 03.7		47.6 N H= 33 KM	16.1 E	AUSTRIA			
29	GG- eP eS		04 29 02.0 30 00	SZ SR	0.4 999.9	12.9 9999.9	3.9	4.31
29	04 36 01.*		43.4 N H= 33 KM	19.7 E	YUGOSLAVIA			
29	GG- eP eL		04 38 07.0 41 20	SZ LT	0.7 8	12.4 7023.7	8.6	5.17
29	LZ- eP eS		06 08 39.5 09 22	SZ ST	0.4 0.4	9.7 3.0	3.4	
29	06 51 46.*		13.4 S H= 43 KM	166.6 E MAG 4.90	NEW HEBRIDES ISLANDS CGS			
29	LZ- eL		07 48 50	LZ	25.	112.5	118.1	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
29	LZ-	{P eS	07 21 55.3D 22 19	SZ ST	0.5 0.5	32.7 21.6	1.7		30	LZ-	eP eLR	00 27 55.5 38 22	SZ LZ	1.5 18	41.4 155.1	23.1	4.68	
29	LZ-	eP	08 53 38.5	SZ	1.4	14.1			30	LZ-	eP	00 42 25.5	SZ	0.7	9.8			
29	LZ-	eP	09 39 42.0	SZ	1.0	7.6			30	LZ-	eP	00 49 41.2	SZ	0.7	4.9			
29	12 21 53.*		13.2 N 88.5 W EL SALVADOR						30	02 10 37.6		35.0 S 107.3 W EASTER ISLAND CORDILLERA						
			H= 33 KM MAG 4.00 CGS									H= 33 KM MAG 4.80 CGS						
29	13 30 44.*		26.3 N 96.7 E BURMA						30	LZ-	eP	02 18 08.8	SZ	1.0	13.0	39.4	4.60	
			H= 170 KM MAG 4.70 CGS							eP	18 09	LZ	18	370.6				
29	13 40 36.*		41.3 N 29.5 W AZORES ISLANDS REGION							ePP	18 17	SZ	0.9	38.3				
			H= 33 KM MAG 4.60 CGS							ePP	19 36	SZ	1.8	62.1				
29	LZ- eP		13 51 40.0	SZ	1.1	13.4	67.7	4.97		e	20 25	ST	2.5					
	eL		14 13 50	LZ	30	124.0				eS	24 12	LT	20	9999.9				
29	GG- eL		13 55 12	LZ	25	354.9	29.4			eLQ	27 20	LR	999	9999.9				
29	OO- eL		13 55 40	LZ	20	145.8	31.4			eL	28 32	SR	11.0	4021.5				
										eLR	29 20	LZ	999	9999.9				
29	GG- eP		14 51 24.5	SZ	0.2	20.5	•1		30	02 22 50.		32.6 S 69.9 W MENDOZA PROVINCE, ARGENTINA						
	eS		51 28	ST	0.2	163.8				H= 92 KM MAG 4.20 CGS								
29	GG- eP		18 17 08.0	SZ	0.3	15.4	4.6		30	LZ-	eP	02 26 38.0	SZ	0.9	6.6	16.3	3.86	
	eS		18 04	ST	0.3	32.9				eL	30 51	SR	1.4	5.9				
29	19 05 43.*		22.8 S 65.6 W JUJUY PROVINCE, ARGENTINA						30	GG-	ePP	02 42 02	LZ	22	126.1	108.8		
			H= 127 KM MAG 4.40 CGS							ePPP	44 23	LZ	21	239.1				
29	LZ- eP		19 07 32.0	SZ	0.3	7.6	7.1	4.64		e	55 19	LZ	21	255.0				
	eL		08 58	ST	0.7	9.1				eLR	03 14 30	LZ	37	1425.0				
29	19 09 59.*		17.8 S 168.1 E NEW HEBRIDES ISLANDS						30	00- eS		02 50 34	LR	24	629.0	113.7		
			H= 33 KM MAG 4.40 CGS							eL	03 13 42	LZ	37	917.6				
29	00- e		21 19 12	LZ	25.	216.7			30	02 53 40.8		12.1 S 65.7 E MID INDIAN RISE						
29	LZ- eP		22 52 22.9	SZ	0.3	24.8	1.7			H= 28 KM MAG 5.00 CGS								
	eS		52 46	SR	0.5	6.2			30	GG- eP		03 05 39.5	SZ	1.2	28.4	77.8	5.19	
29	23 07 41.		6.9 S 143.6 E NEW GUINEA								30	LZ- eP		03 53 31.3	SZ	0.8	33.6	
			H= 33 KM MAG 4.70 CGS								30	LZ- eL		04 56 25	LZ	26	128.6	
30	00 22 48.8		38.9 S 74.1 W OFF COAST OF CENTRAL CHILE								30	GG- eP		10 56 34.5	SZ	0.3	15.4	1.1
			H= 33 KM MAG 4.70 CGS									eS	56 50	SR	0.2	18.3		
											30	GG- eP		13 59 37.0	SZ	0.3	13.6	1.4

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eS	59 55	SR	0.3	19.6			31	LZ-	eP	00 50 58.0	SZ	0.7	9.5		
30	16 47 52.7		6.8 N 73.0 W	NORTHERN COLOMBIA					31	02 39 38.*		31.6 N 141.6 E	SOUTH OF HONSHU, JAPAN				
			H=146 KM	MAG 4.50	CGS								H= 41 KM	MAG 4.40	CGS		
30	LZ- eP eP P		16 52 50.5 53 21	SZ SZ	0.7 0.7	8.5 38.0	23.3	4.34	31	LZ- eP eS		07 05 34.5 05 58	SZ SR	0.5 0.6	11.2 8.3	1.8	
30	17 13 13.8		56.6 N 152.2 W	KODIAK ISLAND REGION					31	08 50 14.		14.4 S 173.0 W	SAMOA ISLANDS REGION				
			H= 33 KM	MAG 5.10	CGS							H=235 KM	MAG 4.10	CGS			
30	OO- eLR		17 45 35	LZ	25	145.9	61.9		31	11 57 32.*		38.2 N 117.8 W	NEVADA				
30	GG- eLR		17 53 35	LZ	25	163.4	73.2					H= 20 KM	MAG 3.70	CGS			
30	17 50 47.4		37.7 N 118.2 W	CALIFORNIA-NEVADA BORDER					31	12 13 27.5		38.2 S 74.1 W	OFF COAST OF CENTRAL CHILE				
			H= 20 KM	MAG 4.10	CGS							H= 39 KM	MAG 4.40	CGS			
30	18 18 07.*		37.6 N 118.5 W	CALIFORNIA-NEVADA BORDER					31	13 36 44.*		55.4 N 160.4 E	KAMCHATKA				
			H= 20 KM	MAG 3.80	CGS							H= 33 KM	MAG 4.50	CGS			
30	19 01 46.*		37.8 N 118.2 W	CALIFORNIA-NEVADA BORDER					31	14 59 35.6		27.7 N 55.7 E	SOUTHERN IRAN				
			H= 20 KM									H= 39 KM					
30	19 03 12.3		37.7 N 118.0 W	CALIFORNIA-NEVADA BORDER					31	LZ- eL		16 11 10	LZ	24.	72.5		
			H= 20 KM	MAG 4.40	CGS				31	LZ- tP		16 15 34.8C	SZ	0.3	9999.9		
30	19 40 30.*		38. N 117.7 W	CALIFORNIA-NEVADA BORDER					31	LZ- eP eS		18 21 33.0 22 33	SZ ST	0.5 0.6	13.8 7.3	5.2	
			H= 20 KM														
30	20 04 41.*		59.2 N 152.6 W	SOUTHERN ALASKA					31	18 54 28.6		8.8 N 126.6 E	MINDANAO, PHILIPPINE ISLANDS				
			H= 33 KM	MAG 4.10	CGS							H= 69 KM	MAG 5.40	CGS			
30	LZ- eP		20 57 52.5	SZ	999.9	9999.9			31	GG- eL		19 46 20	LZ	32.	99.1	99.2	
									31	OO- eL		19 46 40	LZ	30	298.8	94.4	
30	21 27 04.*		45.1 N 148.5 E	KURILE ISLANDS					31	LZ- eP		20 34 26.5	SZ	1.3	8.7		
			H= 21 KM	MAG 4.30	CGS												
30	23 02 59.5		37.7 N 118.1 W	CALIFORNIA-NEVADA BORDER													
			H= 20 KM	MAG 4.10	CGS												



From the ISC collection scanned by SISMOS

Bulletin No. 35A

November 1964

SEISMOLOGICAL BULLETIN

WEST GERMANY, NORWAY, BOLIVIA

THE GEOTECHNICAL CORPORATION
3401 SHILOH ROAD

GARLAND, TEXAS



SEISMOLOGICAL BULLETIN

GRAFENBERG, WEST GERMANY
OSLO, NORWAY
LA PAZ, BOLIVIA

The Geotechnical Corporation wishes to acknowledge the cooperation of the following scientific organizations in the collection and production of the data in this bulletin.

Bundesanstalt fur Bodenforschung, Hannover, West Germany (Professor Dr. Hans Closs, Director)

Jordskel, University of Bergen, Bergen, Norway (Professor A. Kvale, Director)

Observatorio San Calixto, La Paz, Bolivia (Father Ramon Cabre, S. J.)

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SEISMOLOGICAL BULLETIN
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1. INTRODUCTION

1.1 This bulletin contains seismological data on earthquake phases recorded at three mobile seismological stations being operated by The Geotechnical Corporation. The bulletin is intended to be an aid to interested observers in determining the extent of the earthquake data contained in the records from the three teams.

1.2 The bulletin contains the following:

- a. Data on all of the phases that have been associated with epicenters reported by the U. S. Coast and Geodetic Survey (USC&GS);
- b. Data on the epicenters listed in the bulletin - as reported by the USC&GS;
- c. Arrival time, period, amplitude, and distance for phases not associated with USC&GS epicenters.

Page

1.3 All phases are listed in chronological order, except that unassociated phases are not mixed with a sequence of associated phases. In such cases, the unassociated phases are listed immediately following the associated phases.

2. INSTRUMENTATION

2.1 Instrumentation at the Grafenberg, West Germany (GG-GR), and Oslo, Norway (OO-NW) sites consists of a short-period vertical Benioff seismometer array. A short-period vertical Johnson-Matheson seismometer array is in operation at La Paz, Bolivia (LZ-BV). Each site is also equipped with

a three-component Sprengnether long-period seismograph system. Both systems use phototube amplifiers. The response characteristics of these systems are shown in figures 1, 2, and 3.

2.2 All data are recorded by 35-mm Film Recorders, Geotech Model 1301A, 14-channel Magnetic-Tape Recorders, Ampex Model 314, and 16-mm Film Develocorders, Geotech Model 4000C.

2.3 Precision Timing Systems, Geotech Model 5400 or 5400A, are used for primary timing. Chronometers are used for secondary timing. WWV is used for the time standard at LZ-BV. GG-GR and OO-NW use Radio Potsdam. WWV is a United States National Bureau of Standards Radio Station located at Beltsville, Maryland. The accuracy of the time program from WWV agrees with U. S. Naval Observatory time.

2.4 Each system is calibrated at least once every 24 hours. In the short-period system calibration, an electromagnetic (EM) calibrator is used to determine the magnification as a function of frequency and a weight-lift calibration is used to verify the EM magnification at 1 cps. In the long-period systems, magnification is determined as a function of frequency using EM calibrators. No method of verification is used. In the EM method of calibration, the seismometer mass is driven by a known sinusoidal force and the magnification is calculated using the relationships between the sinusoidal force and the recorded amplitude.

3. INTERPRETATION OF COLUMN TITLES

The column titles appearing in this bulletin are defined as follows:

3.1 DAY

The date, for the day of the month, is printed each time a new epicenter is listed and each time the station designator changes. Dates are given in Greenwich Civil Time (GCT).

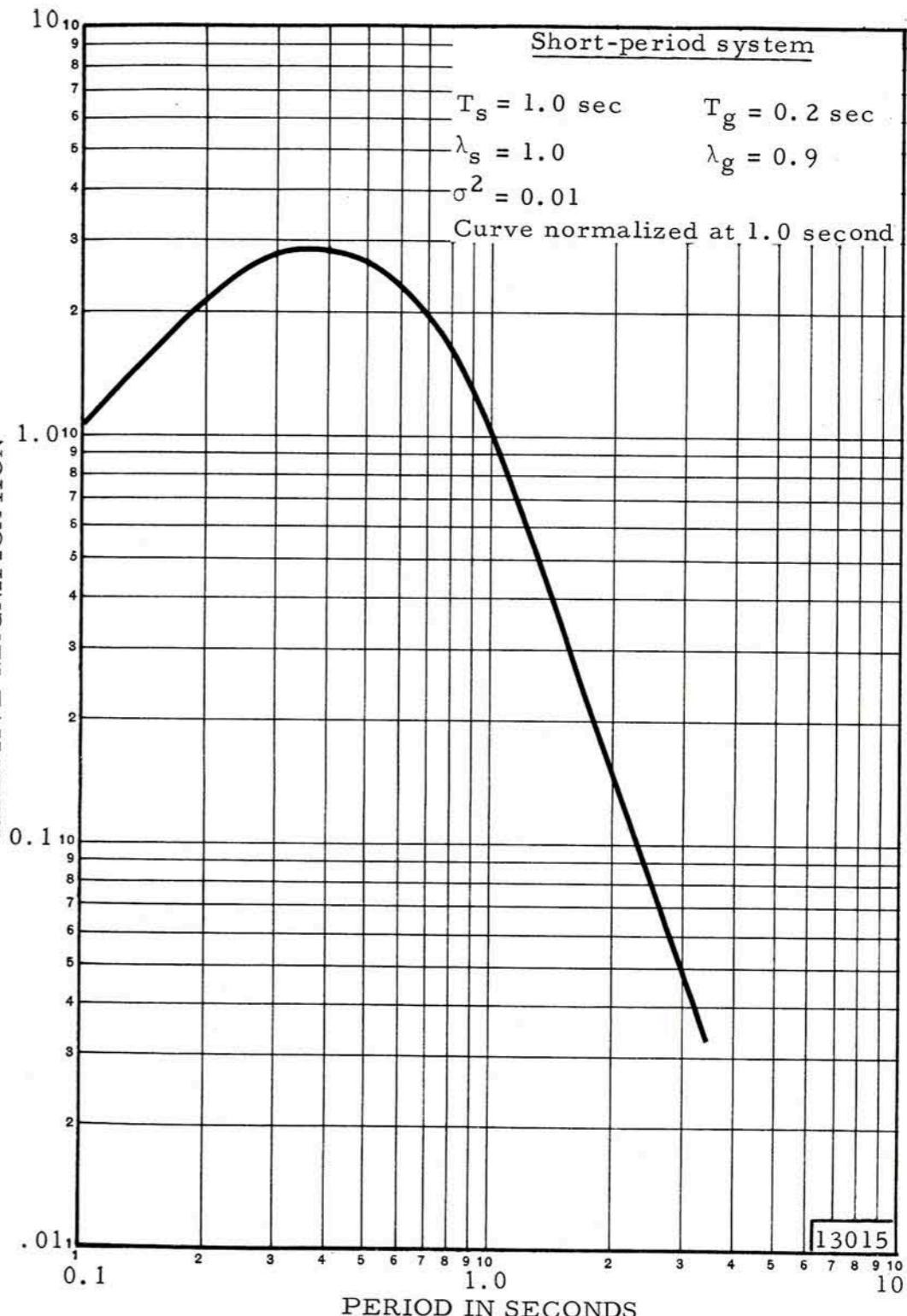


Figure 1. Frequency response of the Benioff short-period seismograph system

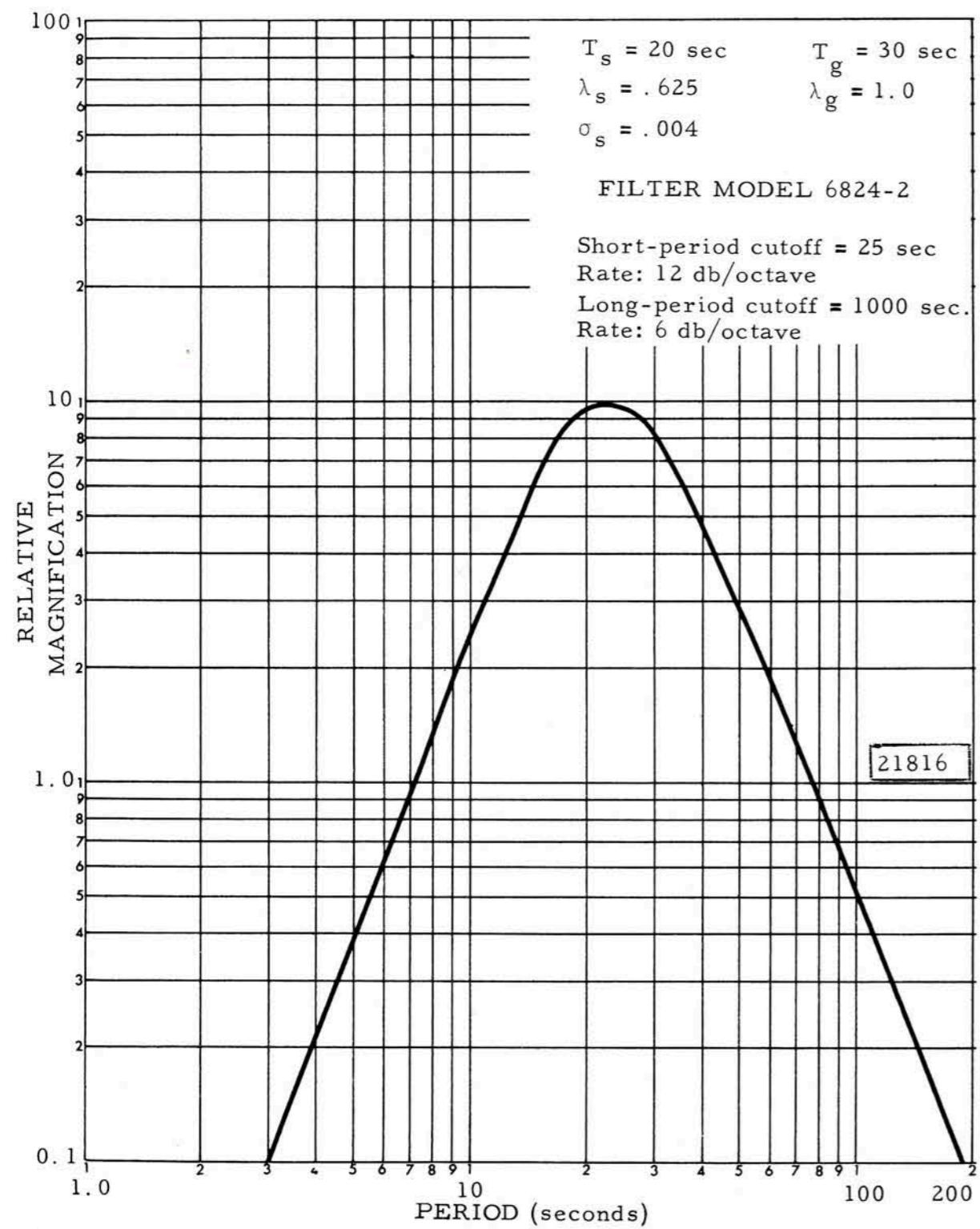


Figure 2. Frequency response of the Sprengnether long-period seismograph system

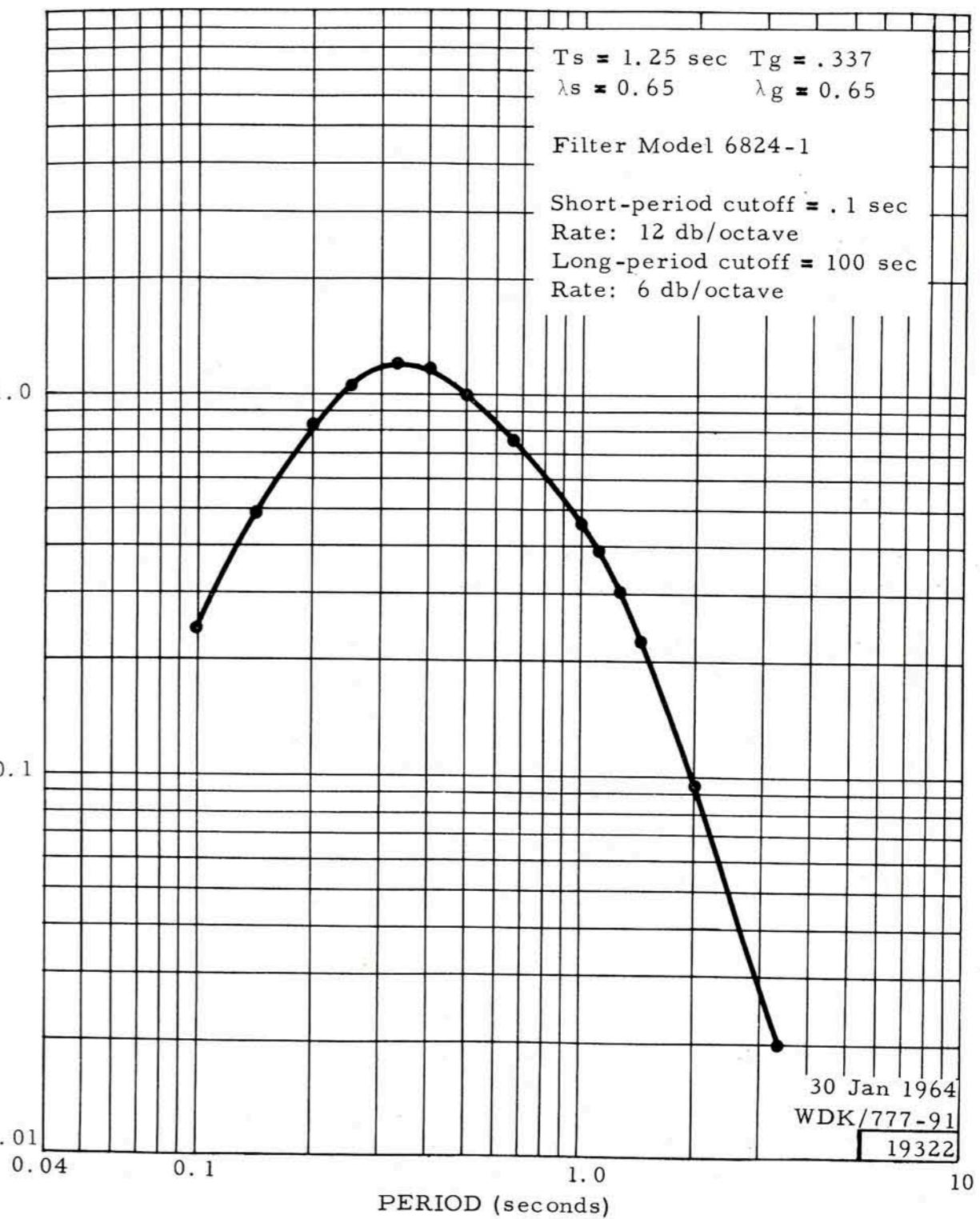


Figure 3. Frequency response of the Johnson-Matheson seismograph system

3.2 STA

The station from which the data were taken. The station designators used in this bulletin are given in the following table:

<u>Site designator</u>	<u>Site location</u>
GG-	Grafenberg, West Germany
OO-	Oslo, Norway
LZ-	La Paz, Bolivia

The locations of the stations are shown in figure 4.

3.3 PHASE

Symbols defining the phase type are listed in the phase column. Prefixes to the phase designators are defined as follows:

- a. An "i" (impetus) preceding the phase designates a sharp or sudden beginning of the phase motion. Direction of first motion is discernible on all "i" phases.
- b. An "e" (emersio) preceding the phase designates an emergent phase motion. The direction of the initial break cannot be positively determined.
- c. An "i" or "e" alone designates an unidentified phase of either an impetus or emersio arrival.

3.4 TIME

The arrival time of each phase is given in Greenwich Civil Time (GCT). Arrival times indicate that time at which phase motion is first detected. Arrival time is measured to the nearest one-tenth second for initial arrivals recorded by the short-period system, and to the nearest second for all other phases on both systems. The direction of motion for iP arrivals is also noted in this field; either C (compression) or D (dilation) will appear immediately to the right of the tenths of second column.

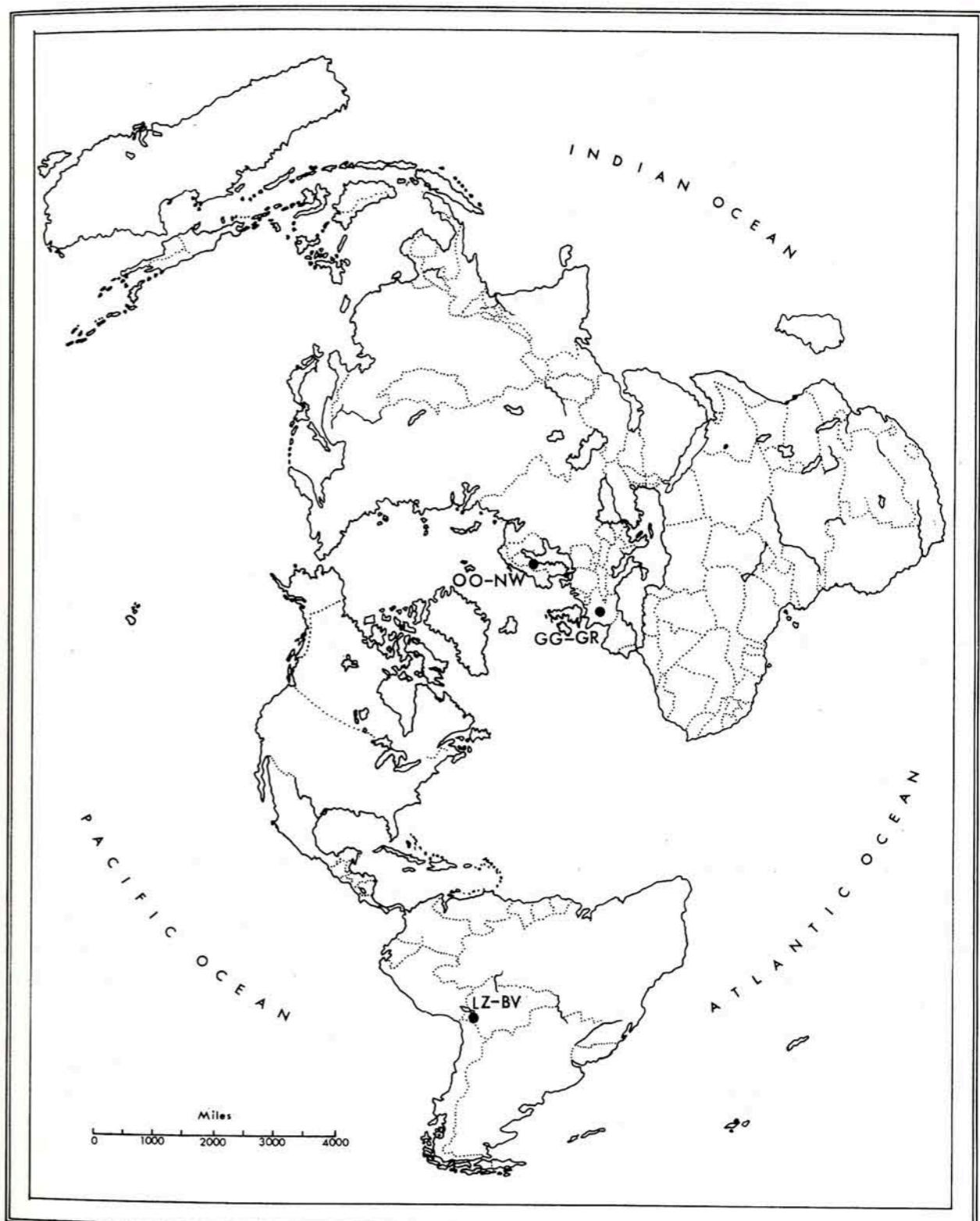


Figure 4. Bulletin sites

3.5 INST

The seismograph channel from which the data were taken. The symbols used to designate the seismograph channels are given as follows:

SZ	Short-period vertical
SR ¹	Short-period radial (horizontal)
ST ¹	Short-period transverse (horizontal)
LZ	Long-period vertical
LR ¹	Long-period radial (horizontal)
LT ¹	Long-period transverse (horizontal)

3.6 PER

The period, in seconds, of each phase. When possible, the period is determined from the first full cycle of the phase; otherwise, it is taken as the average period of the first three cycles. If the signal period recorded by a short-period instrument cannot be measured, the digits 999.9 appear in the period columns. The digits 999 appear in the period columns if the signal period recorded by a long-period instrument cannot be measured.

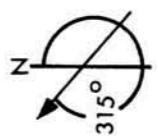
3.7 AMP

This column contains the amplitude of the phase given in millimicrons ($m\mu$) or microns (μ) of ground displacement. All amplitudes are given in tenths of units. All amplitudes are corrected for instrument response and are reported as one-half the peak-to-peak value. If the amplitude is reported in microns, a "U" appears in the column to the right of the tenths column. The column is left blank if the amplitude is reported in millimicrons. Amplitudes are measured from the largest pulse within the first 3 or 4 cycles whenever possible. The digits 9999.9 appearing in the amplitude columns indicate either a "clipped" signal or a trace amplitude too large to measure. When amplitudes are not calculated because of insufficient calibration data, the amplitude columns are left blank.

¹Table 1 gives the instrument orientation of the horizontal seismometers.

Table 1. Bulletin site information

Site designator	Site location	Trans-		Site coordinates in deg, min, sec	Elevation in km	Rock type
		Radial	verse			
GG-GR	Grafenberg, West Germany	140	230	N 49° 41' 32"	0.53	Limestone
OO-NW	Oslo, Norway	138	228	E 11° 12' 55"	0.56	Glacial drift
LZ-BV	La Paz, Bolivia	141	231	N 61° 03' 17"	3.99	Limestone
				S 10° 51' 58"	28	
				W 16° 15' 31"	47	



¹When earth moves in direction shown, trace moves up.

3.8 DIST

This is the distance from the recording station to the epicenter. All reported distances are calculated based on geocentric coordinates. Distance is given to the nearest one-tenth of a degree. Distances computed for unassociated data are determined from the S-P intervals. In some instances, surface groups are recorded which have traveled the major arc from the epicenter to the station. In such cases, the major arc distance is given.

3.9 MAG

The magnitudes provided are body wave magnitudes, m_b , as defined by Gutenberg and Richter². They are determined only from the short-period vertical component of the P phase (initial arrival). The following equation is used:

$$m_b = \log_{10} (A/T) + Q$$

where:

m_b = body wave magnitude

A = one-half p-p earth amplitude of P phase in microns

T = period of P phase, in seconds

Q = depth-distance factor for PZ given by Gutenberg and Richter², for distances greater than 16°

Magnitude computations for distances less than 16° are based on extensions of the Q tables. Points from 10° to 16° were read from a curve in the Gutenberg-Richter paper, and an inverse cube relationship was used to extrapolate from 2° to 10° .

The average magnitude (sum of station magnitudes/number of stations) is listed on the last line of an epicenter print-out.

²Gutenberg, B., and Richter, C. F., 1956, Magnitude and energy of earthquakes: Ann. Geofis., vol. 9, pp. 1-15.

4. INTERPRETATION OF UNITED STATES COAST AND GEODETIC SURVEY DATA

The epicenter data reported by the USC&GS precedes each list of associated phases. This information appears as follows:

Line 1 (from left to right)

First group:	Day of the month
Second group:	Origin time of the event
Third group:	Geographic coordinates of the epicenter
Fourth group:	Geographic description

NOTE

An asterisk (*) following the origin time indicates epicenters believed accurate to $1/2^\circ$ in latitude and longitude and to 50 km in depth.

Line 2 (from left to right)

First group:	Depth (h) of the hypocenter in kilometers
Second group:	Magnitude (MAG) as determined by Pasadena (PAS), Berkeley (BRK), Palisades (PAL), or USC&GS (CGS)

NOTE

MAG. (CGS) is m_b of Gutenberg and Richter from the P phase only. The magnitude quoted is an average value determined from data forwarded by cooperating Standard stations and other observatories.

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	LZ-	eL	00 33 15	LZ	25.	64.3		
1	LZ-	eP	01 52 31.5	SZ	1.0	7.2		
1	02 56 41.4		25.1 S 179.7 W SOUTH OF FIJI ISLANDS					
			H=459 KM MAG 5.00 CGS					
1	04 55 47.4		51.8 N 130.8 W QUEEN CHARLOTTE ISLANDS REG.					
			H= 33 KM MAG 4.90 CGS					
1	00-	eL	05 25 40	LZ	28	109.7	63.4	
1	LZ-	eL	05 01 00	LZ	30.	190.8		
1	05 15 48.4		13.7 N 120.6 E MINDORO, PHILIPPINE ISLANDS					
			H= 94 KM MAG 4.90 CGS					
1	GG-	eL	06 30 40	LZ	35.	263.8		
1	06 46 54.1		51.7 N 175.4 W ANDREANOF ALEUTIAN ISLANDS					
			H= 20 KM MAG 5.00 CGS					
1	00-	eL	07 19 50	LZ	30	119.5	67.5	
1	LZ-	eL	09 39 38	LZ	27.	101.5		
1	10 03 28.6		34.7 S 108.5 W EASTER ISLAND CORDILLERA					
			H= 33 KM MAG 4.60 CGS					
1	LZ-	e	10 15 55	LZ	15.	81.3	40.2	
		eS	17 15	LT	20	233.9		
		eL	20 30	LR	28	846.2		
1	LZ-	eP	10 09 51.6	SZ	1.2	9.9		
1	12 07 59.*		13.9 N 92.3 W OFF COAST OF CHIAPAS, MEXICO					
			H= 33 KM MAG 3.90 CGS					
1	12 26 06.2		3.1 N 128.1 E NORTH OF HALMAHERA					
			H= 65 KM MAG 6.30 CGS					
1	LZ-	ePD	12 44 05	SZ	1.6	48.9	159.1	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
1	GG-	ePP	12 44 15	LZ	16	257.0	100.1	
	eSKS		50 18	LT	12	927.5		
	e		51 30	LR	25	490.7		
	eSS		58 35	LR	30	1073.0		
	e		13 03 50	LR	30	1042.4		
	e		06 25	LT	24	578.7		
	eLQ		10 50	LR	55	3793.5		
	eLR		17 40	LR	30	9999.9		
1	GG-	ePP	12 44 23	SZ	1.0	18.7	104.6	
1	GG-	eP	13 53 27.0	SZ	1.2	19.2		
1	LZ-	eL	15 45 00	LZ	26	115.0		
1	15 58 15.1		3.1 N 128.3 E	NORTH OF HALMAHERA				
			H=107 KM					
1	16 43 41.*		27.3 S 178.5 W	KERMADEC ISLANDS				
			H=366 KM	MAG 4.00 CGS				
1	20 41 07.*		38. N 117.7 W	NEVADA				
			H= 33 KM	MAG 3.90 CGS				
2	LZ-	eP	00 24 24.0	SZ	0.5	34.6	2.2	
	eS		24 52	SR	0.7	34.9		
2	LZ-	eP	01 54 25.9	SZ	999.9	9999.9	1.7	
	eS		54 49	ST	999.9	9999.9		
2	LZ-	eP	03 19 57.2	SZ	0.3	8.0	2.2	
	eS		20 26	SR	0.6	13.6		
2	05 03 52.3		7.5 S 128.7 E	BANDA SEA				
			H= 48 KM	MAG 4.50 CGS				
2	LZ-	eP	06 23 38.8	SZ	1.1	12.8		
2	LZ-	e	06 23 44	SZ	1.0	76.3		
2	06 50 58.2		4.1 S 76.9 W	NORTHERN PERU				
			H= 91 KM	MAG 6.75 CGS				
2	LZ-	eP	06 54 22.0	SZ	0.5	8.6	14.6 4.28	
2	06 51 08.8		3.5 S 76.6 W	NORTHERN PERU				
			H=161 KM	MAG 5.80 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	LZ-	eP	06 54 28.0	SZ	0.9	9999.9	15.0	
	eP		07 03 57.0	SZ	1.2	57.8	91.2	5.57
	e		08 18	LZ	15	254.2		
	e		14 48	LZ	17	137.5		
2	00-	e	07 15 45	LZ	21	693.1	91.8	
	e		16 50	LZ	20	631.9		
	eL		36 20	LZ	22	440.8		
2	07 07 58.*		11.8 N 86.9 W	NEAR COAST OF NICARAGUA				
			H=117 KM	MAG 4.60 CGS				
2	LZ-	e	07 30 04	SZ	1.7	28.6		
2	08 10 05.5		16.9 S 169.7 E	NEW HEBRIDES ISLANDS				
			H=255 KM	MAG 4.70 CGS				
2	GG-	eP	08 38 22.2	SZ	0.2	11.9	*2	
	eS		38 27	SR	0.3	86.5		
2	09 18 01.6		5.8 S 105.4 E	SUNDA STRAIT				
			H= 39 KM	MAG 5.00 CGS				
2	GG-	eP	09 28 47.0	SZ	0.3	24.6	1.4	
	eS		29 05	SR	0.4	20.8		
2	GG-	eP	10 32 32.0	SZ	0.2	23.8	1.3	
	eS		32 49	SR	0.3	15.1		
2	GG-	eL	11 38 31	ST	0.5	16.5		
2	11 38 55.7		37.6 N 118.0 W	CALIFORNIA NEVADA BORDER				
			H= 32 KM	MAG 4.50 CGS				
2	11 50 58.1		44.5 N 149.7 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.20 CGS				
2	GG-	eP	15 26 31.7	SZ	0.2	38.3	*1	
	eS		26 36	ST	0.2	112.4		
	eP		50 44.8	SZ	0.2	19.1		
	eS		50 46	SR	0.3	58.4		
2	18 37 30.*		20.9 S 178.2 W	FIJI ISLANDS REGION				
			H=604 KM	MAG 4.40 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	22	59 35.3	44.3 N H= 33 KM	11.6 E MAG 4.30	NORTHERN ITALY			
2	GG-	eL	23 02 32	LZ	17	483.6	5.4	
2	GG-	eP	23 00 54.2	SZ	0.4	27.7	4.9	
	eS	01 53	ST	0.5	55.6			
2	LZ-	eP	23 49 59.0	SZ	0.5	6.2	3.0	
	eS	50 36	SR	0.9	21.8			
3	00	29 41.8	47.1 N H=353 KM	144.6 E MAG 4.80	SEA OF OKHOTSK			
3	GG-	eP	00 40 50.0	SZ	0.5	17.7	75.5	5.05
3	LZ-	eP	02 04 03.4	SZ	0.2	27.2		
3	02	05 40.4	34.5 N H= 86 KM	140.3 E MAG 5.20	NEAR E. COAST HONSHU, JAPAN			
3	GG-	eP	02 18 07.4	SZ	0.8	31.7	84.8	5.34
3	LZ-	eP ¹	02 25 19.2	SZ	1.1	17.1	148.4	
	eP ²	25 22	SZ	1.1	115.5			
3	02	25 50.7	29.7 N H= 35 KM	51.0 E	SOUTHERN IRAN			
3	LZ-	eL	03 26 36	LR	30.	87.0	123.3	
3	GG-	eP	02 33 05.4	SZ	0.3	16.7	4.8	
	eS	34 04	ST	0.4	85.4			
3	06	05 33.1	31.6 N H= 38 KM	66.4 E MAG 5.10	AFGHANISTAN			
3	LZ-	eLR	07 12 21	LR	31	59.3	136.3	
3	06	14 31.*	32.4 N H= 33 KM	59.1 E	IRAN			
3	GG-	eP	08 18 48.6	SZ	0.2	35.1	*1	
	eS	18 50	SR	0.2	122.3			
3	09	14 40.*	57. N H= 33 KM	150.9 W MAG 4.20	GULF OF ALASKA			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	LZ-	eL	09 30 52	LZ	25	299.2		
3	GG-	eP	10 32 50.4	SZ	0.2	31.9		
3	GG-	eP	10 37 05.0	SZ	0.3	28.7		
3	11	09 37.	34.6 N H= 33 KM	138.6 E MAG 4.60	NEAR S. COAST HONSHU, JAPAN			
3	LZ-	eP ¹	11 29 24.8	SZ	1.4	13.4	149.6	
	eLR	12 20 52	LZ	30	82.4			
3	00-	eL	11 49 10	LR	30	510.6	75.6	
3	GG-	eP	11 19 51.0	SZ	0.2	15.9		
3	12	43 04.7	1 N H=149 KM	123.7 E MAG 5.40	NORTHERN CELEBES			
3	LZ-	eP ¹	13 02 51.6	SZ	1.6	79.6	159.9	
	eP ²	03 28	SZ	2.0	103.8			
	e	04 04	SZ	1.4	70.0			
	ePP	07 05	SZ	1.2	7.4			
	eLR	14 00 00	LZ	35	273.7			
3	LZ-	eL	12 58 33	LZ	20.	59.3		
3	GG-	eP	13 14 22.0	SZ	0.2	18.0	1.5	
	eS	14 43	SR	0.2	27.4			
3	LZ-	eL	13 28 02	LT	22	154.5		
3	13	53 35.*	50.3 N H= 33 KM	158.3 E MAG 4.20	KURILE ISLANDS REGION			
3	GG-	eP	14 16 06.0	SZ	0.2	18.0	*1	
	eS	16 08	SR	0.2	71.4			
3	14	55 40.1	44.6 N H= 20 KM	149.0 E MAG 5.00	KURILE ISLANDS			
3	00-	eP	15 06 48.0	SZ	0.9	21.7	69.4	5.27
3	GG-	eP	15 07 47.0	SZ	1.0	56.9	79.1	5.51
	eL	41 30	LZ	20	510.5			
3	LZ-	eP ¹	15 15 17.3	SZ	1.1	12.8	137.7	
	eLR	16 01 32	LZ	31	106.5			
	AVG.	5.39						
3	GG-	eP	15 37 20.1	SZ	0.2	18.0		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
3	GG-	eP	16 24 35.5	SZ	0.2	60.2		
3	17 36 09.5		36. N 50.6 E IRAN					
			H= 33 KM MAG 5.30 CGS					
3	18 28 58.6		1.7 S 149.8 E NEW IRELAND REGION					
			H= 35 KM MAG 5.80 CGS					
3	18 58 44.		37.6 N 118.0 W CALIFORNIA NEVADA BORDER					
			H= 33 KM MAG 4.10 CGS					
4	LZ-	e	01 22 14	LZ	14.	92.2		
4	LZ-	eLQ	01 27 50	LR	30	85.1		
4	LZ-	eLR	01 31 28	LZ	29	244.6		
4	LZ-	eL	01 33 54	LR	21	250.7		
4	LZ-	eL	01 33 54	LT	21	172.4		
4	LZ-	eL	01 33 54	LZ	20	425.4		
4	02 11 24.9		19.7 S 69.2 W NORTHERN CHILE					
			H=102 KM MAG 5.20 CGS					
4	LZ-	fP	02 12 22.6C	SZ	999.9	9999.9	3.5	
		eP	12 23	LZ	18	393.1		
		eS	12 57	LR	999	9999.9		
		eL	13 36	LT	999	9999.9		
		eSCS	26 42	LT	19	177.9		
4	03 37 35.9		54.9 N 162.6 E NEAR EAST COAST OF KAMCHATKA					
			H= 49 KM MAG 5.00 CGS					
4	GG-	eP	03 49 03.5	SZ	0.6	15.8	73.1	5.17
4	LZ-	eL	03 40 55	LZ	30.	126.7		
4	04 44 35.*		58.8 N 151.6 W KODIAK ISLAND REGION					
			H= 34 KM MAG 4.60 CGS					
4	06 00 13.*		21. S 67.1 W SOUTHERN BOLIVIA					
			H=244 KM MAG 3.90 CGS					
4	LZ-	eP	06 01 28.2	SZ	0.6	7.1	4.9	4.18

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eL	02 28	ST	0.6	9.5		
4	06 27 54.*		16.3 S 172.9 W SAMOA ISLANDS REGION					
			H= 33 KM MAG 4.40 CGS					
4	LZ-	eLR	07 14 20	LZ	22.	93.9	98.7	
4	GG-	eP	06 35 39.0	SZ	1.2	29.2		
4	06 40 51.*		55. N 162.3 E NEAR EAST COAST OF KAMCHATKA					
			H= 33 KM MAG 4.20 CGS					
4	08 42 54.4		39.6 N 110.4 W EASTERN UTAH					
			H= KM					
4	LZ-	eP	10 18 42.0	SZ	0.4	1.4	2.8	
		eS	19 17	ST	0.6	4.7		
4	11 50 32.*		37.6 N 118.2 W CALIFORNIA NEVADA BORDER					
			H= 33 KM MAG 3.60 CGS					
4	11 53 56.*		37.5 N 118.4 W CALIFORNIA NEVADA BORDER					
			H= 33 KM MAG 3.75 CGS					
4	GG-	eP	14 11 46.0	SZ	0.2	24.3	.1	
		eS	11 50	ST	0.2	76.4		
4	15 20 23.5		24.8 N 96.1 E BURMA					
			H= 43 KM					
4	GG-	eP	16 07 29.3	SZ	0.2	42.6	.1	
		eS	07 32	SR	0.2	284.0		
4	LZ-	eP	16 10 54.5	SZ	0.4	49.8	1.5	
		eS	11 16	ST	0.4	28.4		
4	GG-	e	16 12 52	SR	0.3	20.8		
4	GG-	eS	16 13 08	ST	0.2	17.2		
4	GG-	eP	16 23 00.0	SZ	0.3	11.4	.1	
		eS	23 04	SR	0.3	87.7		
4	LZ-	eL	16 45 55	LR	25	33.9		
4	GG-	eP	17 22 15.2	SZ	0.7	9.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
4	GG-	eL	17 25 10	SR	0.8	31.1		
4	19	46 06.2	36.4 N 70.8 E HINDU KUSH REGION					
			H=210 KM MAG 4.60 CGS					
4	21	02 38.7	6.8 N 125.4 E MINDANAO, PHILIPPINE ISLANDS					
			H= 70 KM					
4	LZ-	eP*1	21 22 39.6	SZ	1.4	16.4	163.5	
		eLQ	22 19 52	LT	30	153.8		
		eLR	21 14	LZ	30	151.8		
4	00-	eL	21 50 50	LT	40	1329.7	95.6	
4	22	34 54.*	20.1 S 178.5 W FIJI ISLANDS REGION					
			H=605 KM MAG 4.10 CGS					
5	00	45 30.9	7. S 129.4 E BANDA SEA					
			H= 95 KM MAG 5.20 CGS					
5	LZ-	eP	01 05 12.0	SZ	0.7	6.9	•3	
		eS	05 18	ST	0.4	28.2		
5	01	47 42.1	5.1 S 146.1 E EAST NEW GUINEA REGION					
			H=137 KM					
5	LZ-	eP	02 30 06.4C	SZ	0.4	80.0	2.4	
		eS	30 37	ST	0.6	12.7		
5	04	19 39.5	5.5 S 147.2 E EAST NEW GUINEA REGION					
			H=197 KM MAG 4.90 CGS					
5	LZ-	eP	06 08 00.2	SZ	0.4	7.1	3.7	
		eS	08 45	ST	0.6	12.7		
5	07	01 15.3	9.2 N 142.0 E WEST CAROLINE ISLANDS					
			H= 33 KM MAG 4.80 CGS					
5	LZ-	eP*1	07 21 01.7	SZ	1.0	5.6	149.5	
		eLR	08 11 27	LZ	26	119.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5	GG-	eL	07 58 55	LZ	27.	197.9	107.3	
5	GG-	eP	08 03 44.0	SZ	0.2	42.6	•1	
		eS	03 48	SR	0.2	144.8		
5	08	47 06.	18.2 N 68.4 W MONA PASSAGE					
			H=183 KM MAG 4.80 CGS					
5	LZ-	eP	08 53 37.1	SZ	0.5	9.2	34.2	4.71
5	09	07 32.*	20.3 S 174.0 W TONGA ISLANDS					
			H= 15 KM MAG 4.70 CGS					
5	LZ-	eP	10 43 07.0	SZ	0.6	5.0		
5	LZ-	eP	13 24 42.6	SZ	1.0	14.1		
5	LZ-	eP	14 01 17.9	SZ	0.6	29.0	4.3	
5	GG-	eS	14 01 26	SR	0.2	40.4		
5	LZ-	eS	14 02 09	SR	1.0	23.1	4.3	
5	LZ-	eP	16 08 10.5	SZ	0.9	6.3		
5	GG-	eS	16 29 25	SR	0.3	17.3		
5	LZ-	eP	16 31 12.3	SZ	0.4	7.1	1.8	
		eS	31 35	ST	0.8	15.8		
5	LZ-	eL	16 37 40	LZ	25	98.2		
5	20	55 42.9	35.1 N 24.2 E CRETE					
			H= 10 KM MAG 4.20 CGS					
5	GG-	eP	20 59 49.0	SZ	1.0	51.0	17.4	4.62
		eL	21 05 50	LZ	20	152.4		
5	00-	eP	21 01 29.0	SZ	0.5	12.1	27.3	4.89
							Avg.	4.75
5	LZ-	eP	23 59 16.6	SZ	0.4	17.8	1.8	
		eS	59 41	ST	0.7	15.1		
6	LZ-	eL	03 07 13	LR	24	74.6		
6	06	57 38.*	44.5 N 148.4 E KURILE ISLANDS					
			H= 33 KM MAG 4.50 CGS					
6	09	22 01.*	57. N 161.6 E NEAR EAST COAST OF KAMCHATKA					
			H= 33 KM MAG 4.40 CGS					
6	09	53 22.4	44.4 N 149.0 E KURILE ISLANDS					
			H= 60 KM MAG 5.70 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	00-	eP	10 04 26.0	SZ	1.0	64.2		
		eP	04 27	LZ	30	1859.6		
		eS	13 28	LT	28	876.5		
		eSS	18 15	LT	25	1098.8		
		e	21 40	LZ	25	830.8		
		eLQ	24 35	LR	45	4389.3		
		eLR	29 30	LZ	30	3437.5		
6	GG-	eP	10 05 23.0	SZ	1.3	307.0	79.3	6.04
		e	15 18	LZ	33	576.3		
		e	21 00	LZ	35	586.3		
		e	25 00	LZ	25	415.4		
		eL	31 47	LZ	33	1100.2		
6	LZ-	eP	10 12 44.2	SZ	1.1	20.8	137.8	
		eP	12 50	LZ	15	67.9		
		eSKP	16 13	SZ	1.9	61.6		
		ePKS	16 25	LR	15	153.0		
		eSPP	28 02	LZ	18	126.0		
		eSS	33 45	LT	25	388.1		
		e	35 22	LT	27	273.1		
		eSSS	38 35	LT	30	284.5		
		e	45 14	LT	26	225.6		
		eLQ	53 03	LT	34	585.9		
		eLR	58 55	LZ	31	937.5		
					Avg.	5.79		
6	10 25 31.8		44.5 N 148.9 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.50 CGS				
6	GG-	eP	10 37 35.5	SZ	1.4	91.2	79.2	5.53
6	12 14 29.8		43.5 N 126.6 W	OFF COAST OF OREGON				
			H= 33 KM	MAG 4.60 CGS				
6	13 55 53.7		31.7 S 57.4 E	ATLANTIC INDIAN RISE				
			H= 33 KM	MAG 5.90 CGS				
6	GG-	eP	14 08 55.0	SZ	1.5	73.2	90.8	5.74
		eL	40 00	LZ	40	473.2		
6	GG-	eP	14 39 52.0	SZ	0.3	17.7		•1
		eS	39 56	ST	0.3	41.2		
		eP	16 26 57.0	SZ	0.3	24.4		
		eS	27 00	SR	0.2	156.4		
6	16 31 11.9		21. S 67.2 W	CHILE BOLIVIA BORDER REGION				
			H=179 KM	MAG 4.40 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6	LZ-	eP eL	16 32 29.8 33 23	SZ ST	0.5 0.7	9999.9 9999.9		4.9
6	LZ-	eP eS	17 13 30.4 14 04	SZ ST	0.5 0.8	17.2 21.2		2.5
6	20 35 59.*		44.5 N 148.8 E KURILE ISLANDS H= 72 KM MAG 4.20 CGS					
7	00 50 08.*		2. N 99.7 E NORTHERN SUMATRA H= 33 KM MAG 5.20 CGS					
7	01 36 56.5		12. N 88.0 W OFF COAST OF CENTRAL AMERICA H= 33 KM MAG 4.40 CGS					
7	03 48 12.*		32.9 S 67.4 W MENDOZA PROVINCE, ARGENTINA H=143 KM MAG 4.00 CGS					
7	04 03 38.7		14. N 144.7 E MARIANA ISLANDS H=155 KM					
7	04 16 30.*		48.6 N 156.9 E KURILE ISLANDS REGION H= 33 KM MAG 4.50 CGS					
7	07 44 05.7		6.5 S 148.2 E NEW BRITAIN REGION H= 48 KM MAG 5.30 CGS					
7	LZ- eL		08 48 32	LZ	30.	95.0	137.2	
7	07 59 56.7		6.8 S 148.4 E NEW BRITAIN REGION H= 44 KM					
7	00- eL eL		08 49 20 51 30	LR LR	25. 25	216.7 313.0		117.3
7	GG- eL		08 52 02	LZ	15	223.3		124.2
7	08 47 59.3		6.7 S 148.2 E NEW BRITAIN REGION H= 69 KM					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG					
7	09 11	28.8	19.3 N 147.1 E	MARIANA ISLANDS REGION									
			H= 57 KM	MAG 4.70 CGS									
7	LZ- eP		10 34 38.4	SZ	0.9	9.7							
7	11 20	46.*	50.7 N 179.1 E	RAT ALEUTIAN ISLANDS									
			H= 33 KM	MAG 4.10 CGS									
7	14 49	13.4	45.5 N 150.3 E	KURILE ISLANDS									
			H= 33 KM	MAG 5.60 CGS									
7	GG- eP		15 01 14.5	SZ	1.0	85.9	78.7	5.69					
	e		20 40	LZ	15	140.1							
	eL		30 18	LZ	25	368.5							
7	LZ- eP*		15 08 35.6	SZ	1.6	39.3	136.4						
	eLR		55 15	LZ	33	363.8							
7	00- eL		15 27 00	LZ	26	942.0	68.8						
7	GG- eP		15 28 58.0	SZ	0.6	11.0	4.8						
	eS		29 57	SR	0.5	75.1							
7	15 42	38.*	46.5 N 13.9 E	AUSTRIA									
			H= 33 KM										
7	GG- eP		15 43 36.0	SZ	0.6	19.3	4.8						
	eS		44 34	SR	0.5	75.1							
7	GG- e		17 03 53	LZ	18	999.3							
7	GG- e		17 08 22	LZ	20	939.4							
7	GG- e		17 13 54	LZ	18	1020.6							
7	GG- e		17 22 10	LZ	20	1683.2							
7	GG- e		17 28 45	LT	25	2883.2							
7	GG- e		17 34 14	LT	25	3071.8							
7	GG- eL		18 11 30	LZ	30	3361.4							
7	18 37	43.7	4 N 100.1 E	NORTHERN SUMATRA									
			H= 107 KM	MAG 5.10 CGS									
7	GG- eP		18 50 28.2	SZ	1.3	76.3	89.0	5.65					
	ePP		54 00	SZ	1.2	20.3							
	e		19 01 20	LZ	15	224.2							
	eL		24 15	LZ	35	873.3							
7	LZ- eP*1		18 57 37.4	SZ	1.8	67.3	160.6						
	eP*2		58 21	SZ	1.0	36.3							
	eSS		19 22 11	LT	20	677.1							

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	e		27 30	L+	17.	247.4		
	eSS		28 17	LT	25	373.8		
	eLQ		49 55	LT	23	9999.9		
	eLR		56 28	LZ	25	9999.9		
7	00- e		18 58 15	LZ	14	204.2	89.3	
	e		19 01 20	LT	22	609.1		
	e		06 40	LT	30	585.5		
	eL		21 50	LT	35	5039.0		
7	20 07	04.*	13.1 N 89.9 W	EL SALVADOR				
			H= 82 KM	MAG 4.30 CGS				
7	20 21	12.1	13. N 90.1 W	OFF COAST OF CENTRAL AMERICA				
			H= 73 KM	MAG 4.10 CGS				
7	22 03	18.8	36.5 N 70.8 E	HINDU KUSH REGION				
			H= 215 KM					
7	23 41	55.1	19.9 S 177.4 W	FIJI ISLANDS REGION				
			H= 281 KM	MAG 4.50 CGS				
8	00 06	54.*	48.8 S 111.2 W	EASTER ISLAND CORDILLERA				
			H= 33 KM	MAG 4.70 CGS				
8	01 19	17.*	35.8 N 120.2 W	CENTRAL CALIFORNIA				
			H= 14 KM	MAG 4.40 CGS				
8	01 25	36.*	32.2 S 178.8 W	SOUTH OF KERMADEC ISLANDS				
			H= 33 KM	MAG 4.40 CGS				
8	00- eL		02 39 10	LT	30.	246.5	150.4	
	eL		44 50	LZ	25	236.2		
8	02 43	57.*	49. S 163.7 E	AUCKLAND ISLANDS REGION				
			H= 33 KM	MAG 6.50 CGS				
8	LZ- eP		02 57 38	LZ	17.	376.3	100.3	
	ePP		03 01 47	LZ	17	335.8		
	eSKS		08 15	LT	18	9999.9		
	eS		09 25	LR	27	9999.9		
	ePS		10 42	LT	24	9999.9		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	ePSS		16 27	LT	27*	9999.9		
	eSSS		20 02	LT	29	9999.9		
	eLQ		26 10	LR	999	9999.9		
	eLR		32 10	LZ	999	9999.9		
	00- eP*1		03 03 55	LZ	19	987.3	160.5	
	ePP		08 15	LZ	18	1890.5		
	ePPP		12 05	LZ	24	627.8		
	e		18 30	LT	22	964.5		
	e		23 15	LZ	20	1120.4		
	eSS		27 57	LR	32	1966.5		
	e		35 20	LR	28	2704.0		
	e		38 57	LR	30	2156.9		
	e		43 10	LR	34	2880.7		
eLQ		56 40	LR	46	8177.4			
eLR		04 04 50	LZ	29	4717.8			
04 30 51.4		18.1 S 178.5 W	FIJI ISLANDS REGION					
		H=643 KM	MAG 3.50 CGS					
10 33 27.5		29.7 N 51.0 E	SOUTHERN IRAN					
		H= 40 KM	MAG 4.80 CGS					
GG- eP		10 40 26.0	SZ	0.7	39.4	36.0	5.39	
00- eP		10 41 08.0	SZ	0.6	10.1	41.0	4.77	
eL		53 10	LT	40	1430.9			
LZ- eP*1		10 52 24.2	SZ	1.0	9.0	123.3		
eLR		11 32 02	LR	22	87.4			
		Avg.			5.08			
16 36 52.8		5.5 S 147.0 E	EAST NEW GUINEA REGION					
		H=170 KM	MAG 4.70 CGS					
LZ- eP		16 42 12.3	SZ	0.4	16.1	5.4		
eS		43 17	SR	0.6	5.9			
17 56 31.1		34.8 N 133.0 E	NEAR S. COAST SOUTH HONSHU					
		H= 42 KM	MAG 5.00 CGS					
GG- eP		18 08 45.6	SZ	1.0	13.2	81.3	4.86	
LZ- eP		22 40 40.5	SZ	0.7	11.9			
LZ- eP		23 29 22.9	SZ	0.6	1.8			
04 44 19.9		7.2 S 128.2 E	BANDA SEA					
		H=129 KM	MAG 5.30 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
9	LZ-	eP*1	05 03 56.1	SZ	1.4	84.1	151.4	
		eP*2	04 02	SZ	0.9	154.6		
		eSKP	07 20	SZ	1.3	14.6		
		e	15 28	SZ	1.7	22.0		
00- eL		06 15 22	LZ	24*	149.1			
LZ- eP		08 04 30.6	SZ	1.0	14.5			
08 05 48.8		39.8 N 48.4 E	NORTHWEST IRAN USSR BORDER					
		H= 65 KM	MAG 5.10 CGS					
GG- eP		08 11 47	LZ	14	270.4	27.9		
eL		19 45	LZ	33	488.1			
00- eP		08 12 03.5	SZ	0.5	19.5	31.3	5.16	
e		12 23	SZ	0.5	15.9			
eLQ		21 00	LT	30	971.0			
eLR		24 10	LZ	26	896.6			
LZ- eLR		09 06 45	LZ	40	498.8	120.8		
GG- eP		08 11 14.3	SZ	0.7	13.1			
GG- eL		08 12 49	SR	0.7	14.5			
LZ- eL		08 16 20	LZ	27	144.0			
LZ- eP		08 25 01.2	SZ	0.4	21.9	1.9		
eS		25 26	SR	0.7	14.5			
LZ- eP		08 51 22.7	SZ	0.5	1.7			
LZ- eL		08 54 18	SR	0.7	4.5			
09 56 10.*		14.6 N 92.2 W	NEAR COAST CHIAPAS, MEXICO					
		H= 61 KM	MAG 3.80 CGS					
GG- eP		14 19 02.7	SZ	0.2	60.9	.1		
eS		19 05	ST	0.2	218.0			
GG- eP		14 25 37.2	SZ	0.2	15.2			
GG- eP		14 38 37.8	SZ	0.3	16.0			
16 01 03.*		56.8 N 161.5 E	NEAR EAST COAST OF KAMCHATKA					
		H= 33 KM	MAG 4.50 CGS					
16 12 50.6		29.5 N 86.0 E	TIBET					
		H= 33 KM	MAG 4.70 CGS					
LZ- eP*1		16 32 45.5	SZ	1.5	36.3	153.1		
00- eL		16 46 30	LZ	22	252.5	57.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
9	17 53 03.*		7.1 S 129.1 E	BANDA SEA				
			H=164 KM					
9	LZ- eP eS		18 12 34.8 12 42	SZ ST	0.8 0.4	2.7 4.1	•5	
9	18 24 21.*		28.7 N 112.0 W	GULF OF CALIFORNIA				
			H= 33 KM	MAG 3.50 CGS				
9	18 43 38.6		19.3 N 121.0 E	PHILIPPINE ISLANDS REGION				
			H= 33 KM	MAG 5.00 CGS				
9	LZ- eP ¹ ePP eLQ eLR		19 03 48.2 08 50 20 03 27 05 40	SZ SZ LT LZ	1.2 1.6 29 24	33.8 24.5 124.5 230.9	170.5	
9	00- e eSS eL		19 06 25 11 45 23 50	LZ LT LR	22 28 45	202.0 334.4 1645.9	82.6	
9	GG- eSP eL		19 08 03 32 48	LZ LZ	20 18	258.4 280.7	87.6	
9	LZ- eP		18 50 43.6	SZ	0.6	10.2		
9	00- eL		19 27 35	LR	27	1416.5		
9	LZ- eL		19 30 13	LZ	40	259.3		
9	00- eLR		19 31 40	LZ	28	929.2		
9	LZ- eP eS		22 58 00.9 58 28	SZ ST	0.4 999.9	2.1 9999.9	2.1	
10	LZ- eP		03 11 53.7	SZ	1.5	40.4		
10	04 16 48.*		24.4 S 65.7 W	SALTA PROVINCE, ARGENTINA				
			H= 76 KM	MAG 4.40 CGS				
10	LZ- eP eL		04 18 59.0 20 33	SZ ST	0.4 0.7	1.4 4.6	8.5 4.21	
10	LZ- eP eS		04 44 58.2 45 48	SZ SR	0.5 0.5	1.0 2.6	4.1	
10	05 03 45.*		60.1 N 143.5 W	SOUTHERN ALASKA				
			H= 40 KM	MAG 4.60 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
10	06 07 49.6		59.8 N 144.3 W	GULF OF ALASKA				
			H= 42 KM	MAG 5.00 CGS				
10	LZ- eLR		06 59 00	LR	30	99.4	96.9	
10	LZ- eP eS		09 01 06.5 01 57	SZ ST	0.4 0.9	2.1 16.8	4.2	
10	10 35 35.*		6.1 S 147.2 E	EAST NEW GUINEA REGION				
			H= 80 KM					
10	11 22 54.*		56.7 N 161.3 E	NEAR EAST COAST OF KAMCHATKA				
			H= 33 KM	MAG 4.40 CGS				
10	12 45 16.*		31.6 N 132.3 E	SOUTHEAST OF SHIKOKU, JAPAN				
			H=169 KM	MAG 4.70 CGS				
10	LZ- eP ²		13 05 06.1	SZ	1.2	12.4	155.7	
10	GG- eP eS		14 30 44.5 30 49	SZ SR	0.2 0.3	26.7 58.9	•1	
10	LZ- eP eS		14 45 48.0 46 17	SZ ST	0.4 0.8	35.1 6.9	2.3	
10	15 47 49.3		32.6 N 49.1 E	WESTERN IRAN				
			H= 28 KM	MAG 5.30 CGS				
10	GG- eP		15 54 22.0	SZ	1.3	134.8	32.8	5.68
10	00- eLQ eLR		16 06 10 09 40	LT LZ	45 27	1247.4 591.1	37.7	
10	LZ- eL		16 50 40	LR	27	123.4	121.6	
10	16 34 15.5		3.7 S 136.5 E	WEST NEW GUINEA				
			H= 14 KM	MAG 5.40 CGS				
10	LZ- eP ²		16 54 06.6	SZ	0.9	9.7	148.3	
10	17 13 03.9		29.8 N 92.2 E	TIBET				
			H= 69 KM	MAG 4.60 CGS				
10	19 13 25.*		12.5 N 90.3 W	OFF COAST OF CENTRAL AMERICA				
			H= 33 KM	MAG 4.20 CGS				
10	LZ- eLR		19 32 25	LZ	22.	106.1	35.8	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
10			19 26 40.8	47.5 N 23.6 W	NORTH ATLANTIC OCEAN			
				H= 31 KM	MAG 4.30	CGS		
11			02 01 47.*	56.9 N 161.0 E	NEAR EAST COAST OF KAMCHATKA			
				H= 33 KM	MAG 4.50	CGS		
11			03 31 41.*	56.7 N 161.3 E	NEAR EAST COAST OF KAMCHATKA			
				H= 33 KM	MAG 4.40	CGS		
11	LZ-	eP	04 37 45.1	SZ	1.6	57.5		
11	LZ-	eL	04 45 17	LR	22	181.7		
11			05 25 07.6	30.7 N 131.3 E	KYUSHU, JAPAN			
				H= 33 KM	MAG 4.60	CGS		
11	GG-	eL	06 10 20	LZ	20	195.7	83.9	
11			05 59 32.*	53.8 N 160.8 E	NEAR EAST COAST OF KAMCHATKA			
				H= 33 KM	MAG 4.10	CGS		
11			06 17 06.*	44.6 N 148.6 E	KURILE ISLANDS			
				H= 33 KM	MAG 4.30	CGS		
11			07 54 58.*	57.1 N 161.7 E	KAMCHATKA			
				H= 33 KM	MAG 4.80	CGS		
11			08 01 26.1	59.4 N 144.6 W	GULF OF ALASKA			
				H= 10 KM	MAG 5.20	CGS		
11	GG-	eP	08 12 43	LZ	15	336.4	69.5	
	e		21 50	LZ	13	488.4		
	eL		35 47	LZ	30	690.7		
11	OO-	e	08 19 50	LR	15	353.1	58.4	
	eL		30 30	LZ	36	1455.7		
11	LZ-	eLR	08 49 22	LT	40	684.8	96.9	
11			09 18 34.*	56.7 N 161.4 E	NEAR EAST COAST OF KAMCHATKA			
				H= 33 KM	MAG 4.90	CGS		
11			10 16 18.*	56.8 N 161.2 E	NEAR EAST COAST OF KAMCHATKA			
				H= 33 KM	MAG 4.50	CGS		
11			11 19 39.*	23.7 S 178.0 W	SOUTH OF FIJI ISLANDS			
				H=332 KM	MAG 4.30	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11	LZ-	eP	12 28 27.0	SZ	1.0	5.3		
11			13 11 23.*	56.5 N 161.5 E	NEAR EAST COAST OF KAMCHATKA			
				H= 33 KM	MAG 4.50	CGS		
11			13 17 37.5	56.6 N 161.4 E	NEAR EAST COAST OF KAMCHATKA			
				H= 33 KM	MAG 5.40	CGS		
11	GG-	eP	13 28 55.2	SZ	1.0	62.8	71.2	5.60
	eL		57 40	LZ	25	304.4		
11	OO-	eL	13 48 50	LZ	34	423.7	60.4	
11	LZ-	eLR	14 22 24	LR	35	203.3	125.0	
11	LZ-	eP	13 17 50.0	SZ	0.4	2.8	2.1	
	eS		18 17	ST	0.5	3.7		
11			14 11 05.*	29.4 S 178.2 W	KERMADEC ISLANDS REGION			
				H= 89 KM	MAG 4.10	CGS		
11	GG-	eP	14 11 09.0	SZ	0.3	8.9	1.8	
	eS		11 33	SR	0.3	24.0		
11	LZ-	eP	14 30 56.8	SZ	0.4	11.4	2.5	
	eS		31 29	ST	0.9	22.9		
11			14 37 22.6	56.8 N 161.1 E	NEAR EAST COAST OF KAMCHATKA			
				H= 33 KM	MAG 4.70	CGS		
11	GG-	eP	14 48 39.0	SZ	0.9	14.5	71.0	5.01
11			14 59 36.*	56.9 N 161.7 E	NEAR EAST COAST OF KAMCHATKA			
				H= 33 KM	MAG 4.60	CGS		
11	GG-	eP	15 29 41.0	SZ	0.2	23.9	•5	
	eS		29 49	SR	0.2	149.8		
11			15 40 18.	56.6 N 161.4 E	NEAR EAST COAST OF KAMCHATKA			
				H= 33 KM	MAG 5.10	CGS		
11	GG-	eP	15 51 35.8	SZ	1.0	25.1	71.2	5.20
11	GG-	eP	16 03 01.0	SZ	0.3	11.2	•1	
	eS		03 05	SR	0.3	20.0		
	eP		04 00.3	SZ	0.2	14.9		
	eS		04 04	SR	0.2	69.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11	16	32 24.5	56.5 N 161.2 E H= 33 KM MAG 5.00 CGS	NEAR EAST COAST OF KAMCHATKA				
11	GG-	eP	16 43 42.7	SZ	1.0	25.1	71.3	5.20
11	16	45 09.*	20. N 108.9 W H= 33 KM MAG 4.60 CGS	REVILLA GIGEDO ISLANDS REG.				
11	LZ-	eP	16 54 27.0	SZ	1.1	20.8	53.6	5.05
		ePP	54 40	SZ	1.5	55.1		
		e	17 08 03	LT	20	435.3		
		e	09 44	LT	34	9999.9		
		eLQ	12 00	LT	21	388.4		
		eLR	13 30	LZ	22	9999.9		
11	16	57 24.4	56.6 N 161.4 E H= 33 KM MAG 5.20 CGS	NEAR EAST COAST OF KAMCHATKA				
11	GG-	eP	17 08 43.0	SZ	1.3	60.4	71.2	5.47
		eL	36 20	LZ	22	297.6		
11	17	18 43.*	19.8 N 108.9 W H= 33 KM MAG 3.90 CGS	REVILLA GIGEDO ISLANDS REG.				
11	LZ-	eP	17 28 02.8	SZ	1.2	4.8	53.5	4.37
11	17	23 18.*	55.8 N 161.0 E H= 33 KM MAG 4.40 CGS	NEAR EAST COAST OF KAMCHATKA				
11	17	26 25.*	56.8 N 161.8 E H= 33 KM MAG 4.60 CGS	NEAR EAST COAST OF KAMCHATKA				
11	GG-	eP	17 37 40.0	SZ	0.9	9.6	71.1	4.83
11	17	28 50.5	56.6 N 161.4 E H= 33 KM MAG 5.10 CGS	NEAR EAST COAST OF KAMCHATKA				
11	GG-	eP	17 40 08.5	SZ	1.0	25.1	71.2	5.20
11	17	53 19.3	56.5 N 161.3 E H= 33 KM MAG 4.90 CGS	NEAR EAST COAST OF KAMCHATKA				
11	00-	eL	18 10 35	LZ	20.	461.7		
11	18	18 52.7	56.5 N 161.3 E H= 33 KM MAG 5.30 CGS	NEAR EAST COAST OF KAMCHATKA				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11	GG-	eP	18 30 10.5	SZ	1.4	59.8	71.3	5.43
		eL	58 02	LZ	18	479.7		
11	00-	eL	18 48 10	LZ	35	448.6	60.5	
11	18	37 20.*	19.6 N 109.0 W H= 33 KM MAG 4.40 CGS	REVILLA GIGEDO ISLANDS REG.				
11	18	48 56.6	13.4 S 75.0 W PERU H= 99 KM MAG 5.00 CGS					
11	LZ-	eP	18 50 39.3	SZ	0.6	9999.9	6.9	
		eL	51 58	ST	999.9	9999.9		
		eL	52 01	LT	20	9999.9		
11	19	06 57.1	56.5 N 161.3 E NEAR EAST COAST OF KAMCHATKA H= 33 KM MAG 5.60 CGS					
11	GG-	eP	19 18 15.0	SZ	1.4	104.8	71.3	5.68
		eL	41 45	LZ	40	1126.3		
11	00-	eL	19 37 00	LZ	31	1230.2	60.5	
11	19	13 39.3	56.6 N 161.3 E NEAR EAST COAST OF KAMCHATKA H= 33 KM MAG 5.20 CGS					
11	GG-	eP	19 24 56.5	SZ	1.3	72.5	71.2	5.55
11	19	16 57.*	38.7 N 140.1 E HONSHU, JAPAN H= 89 KM MAG 4.40 CGS					
11	21	28 03.	13.7 S 167.2 E NEW HEBRIDES ISLANDS H= 135 KM MAG 3.90 CGS					
11	23	38 47.2	11.9 N 143.1 E SOUTH OF MARIANA ISLANDS H= 33 KM MAG 4.70 CGS					
12	00	55 26.*	33.2 S 179.9 W SOUTH OF KERMADEC ISLANDS H= 74 KM MAG 4.20 CGS					
12	01	12 08.*	33. S 179.7 E SOUTH OF KERMADEC ISLANDS H= 8 KM					
12	LZ-	eL	01 41 48	LZ	22.	121.8		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	05 16 26.2		47.1 N 146.6 E	NORTHWEST OF KURILE ISLANDS				
			H=328 KM	MAG 4.80 CGS				
12	LZ- e		05 58 59	LR	27	349.7	137.7	
	e		06 06 02	LR	22	584.7		
	eLQ		16 00	LR	40	9999.9		
	eLR		21 06	LZ	999	9999.9		
12	LZ- eP		05 51 30.0	SZ	1.8	26.9		
12	GG- e		05 53 10	SZ	1.2	19.3		
12	OO- eL		06 37 40	LZ	35	1719.9		
12	GG- e		06 37 52	LZ	18	354.5		
12	GG- eL		06 42 15	LZ	50	2426.8		
12	GG- eP		09 25 14.0	SZ	0.2	26.9	•1	
	eS		25 16	SR	0.3	68.2		
12	09 25 54.1		16.7 S 174.6 W	TONGA ISLANDS				
			H=190 KM	MAG 4.80 CGS				
12	GG- eP+1		09 45 15.0	SZ	0.8	26.0	146.8	
	epP+1		46 13	SZ	1.4	74.8		
12	GG- eS		09 26 05	SR	0.2	32.1		
12	GG- eP		09 42 11.4	SZ	0.2	62.8	1.1	
	eS		42 27	SR	0.3	34.1		
12	12 13 34.6		18. S 69.8 W	NORTHERN CHILE				
			H= 80 KM	MAG 4.80 CGS				
12	LZ- eP		12 14 11.6	SZ	0.5	9999.9	2.1	
12	13 21 13.*		29.1 S 178.3 W	KERMADEC ISLANDS REGION				
			H=136 KM	MAG 3.70 CGS				
12	13 34 19.*		27. N 127.1 E	RYUKYU ISLANDS				
			H= 33 KM	MAG 3.90 CGS				
12	GG- eP		13 39 46.0	SZ	0.2	9.2		
12	GG- eP		13 47 12.2	SZ	0.2	18.5		
12	13 57 58.8		36.7 N 139.0 E	HONSHU, JAPAN				
			H= 28 KM	MAG 4.80 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	LZ- eP+1		14 17 41.8	SZ	1.1	23.5	148.2	
12	LZ- eP		14 09 48.3	SZ	0.8	4.1		
12	LZ- eP		15 11 35.5	SZ	0.5	39.8	2.5	
12	GG- eP		15 52 52.0	SZ	0.2	21.6	•4	
12	GG- eP		52 59	SR	0.2	90.7		
12	LZ- eP		17 28 29.0	SZ	0.6	53.4		
12	19 57 37.		42.1 N 142.5 E	HOKKAIDO, JAPAN REGION				
			H= 69 KM	MAG 5.00 CGS				
12	GG- eP		20 09 37.0	SZ	0.7	16.1	79.1	5.02
12	20 07 25.4		37.7 N 118.0 W	CALIFORNIA NEVADA BORDER				
			H= 20 KM	MAG 3.80 CGS				
12	OO- eP		20 08 43.0	SZ	0.7	23.4		
12	LZ- eP		21 18 57.0	SZ	0.7	9999.9		
12	LZ- eL		21 19 36	LR	20	167.6		
12	LZ- eL		21 23 48	ST	0.8	6.3		
12	LZ- eP		22 18 31.9	SZ	1.7	22.0		
12	LZ- eL		22 25 40	LT	17	355.1		
12	23 14 30.*		16.7 N 145.6 E	MARIANA ISLANDS				
			H= 73 KM					
12	LZ- eP+1		23 34 02.2	SZ	1.0	5.8	147.3	
12	LZ- eP		23 44 35.4	SZ	0.5	3.4	1.5	
	eS		44 55	ST	0.6	4.4		
13	00 35 49.*		18.5 S 177.1 W	FIJI ISLANDS REGION				
			H=329 KM	MAG 4.20 CGS				
13	01 38 30.6		6.6 S 131.0 E	TANIMBAR ISLANDS REGION				
			H= 53 KM	MAG 4.00 CGS				
13	LZ- eP+2		01 58 20.3	SZ	0.9	9.7	150.2	
13	LZ- eP		04 05 25.0	SZ	0.3	33.7	1.7	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eS	05 48	SR	0.7	6.6		
13	05 05 10.8	37.6 N 118.0 W CALIFORNIA NEVADA BORDER						H= 20 KM MAG 4.20 CGS
13	08 02 38.5	13. N 88.6 W OFF COAST OF CENTRAL AMERICA						H= 86 KM MAG 4.90 CGS
13	LZ- eP		08 09 29.6	SZ	0.7	16.7	35.2	5.08
	e		09 55	SR	0.7	6.6		
	eS		14 55	LT	20	263.3		
	eSS		17 38	LT	19	267.2		
	eLQ		20 02	LT	32	561.9		
	eLR		21 26	LZ	30	406.0		
13	LZ- eP		09 50 53.2	SZ	0.4	7.3	1.8	
	eS		51 17	ST	999.9	9999.9		
13	GG- eP		12 55 50.0	SZ	0.4	13.1	1.4	
	eS		56 07	SR	0.5	9.9		
13	13 28 03.*	7.4 S 125.4 E BANDA SEA						H=368 KM
13	LZ- eP*1		13 47 20.6	SZ	1.1	12.8	152.8	
13	LZ- eP		14 07 22.8	SZ	0.3	5.8		
13	LZ- eP		14 26 06.0	SZ	1.0	5.4		
13	15 15 27.4	18.1 S 178.4 W FIJI ISLANDS REGION						H=574 KM MAG 4.50 CGS
13	GG- eP		15 20 40.0	SZ	0.2	30.3	•5	
	eS		20 46	ST	0.3	74.3		
13	GG- eP		16 03 24.5	SZ	0.2	18.2		
13	21 57 30.*	29.2 S 178.1 W KERMADEC ISLANDS REGION						H= 77 KM MAG 5.40 CGS
13	LZ- eLR		22 43 31	LZ	31.	806.2	98.4	
13	GG- eL		23 19 00	LZ	25	257.1	158.3	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	23 10 00.*	45.1 N 111.4 W MONTANA						H= 20 KM MAG 4.20 CGS
14	LZ- eL		02 32 12	LZ	31.	209.0		
14	03 32 53.*	23.5 S 64.2 W JUJUY PROVINCE, ARGENTINA						H= 65 KM MAG 4.30 CGS
14	LZ- eP		03 34 58.0	SZ	0.6	10.7	8.3	4.92
	eL		36 12	SR	0.8	3.2		
14	03 56 06.	33.6 N 131.6 E KYUSHU, JAPAN						H= 60 KM MAG 5.30 CGS
14	00- eP		04 07 36.5	SZ	0.8	25.0	74.1	5.18
	e		07 55	SZ	1.0	51.7		
	eLQ		31 45	LR	35	825.0		
	eLR		35 20	LR	25	835.0		
14	GG- eP		04 08 19.2	SZ	1.0	89.2	81.7	5.66
	e		29 06	LZ	33	658.6		
	eL		35 42	LZ	32	337.6		
14	LZ- eP*1		04 15 54.2	SZ	1.4	83.3	155.0	
	eP*2		16 30	SZ	1.1	81.4		
	ePP		20 10	SZ	2.0	47.7		
	e		23 04	SZ	1.0	10.3		
	ePKKP		24 24	SZ	1.3	12.2		
	eLR		05 08 52	LZ	33	425.5		
	AVG.							5.42
14	05 56 47.8	36.6 N 140.3 E NEAR E. COAST HONSHU, JAPAN						H= 90 KM MAG 4.90 CGS
14	00- eP		06 08 17.0	SZ	0.7	44.5	74.3	5.42
14	GG- eP		06 09 05.5	SZ	0.8	37.7	83.0	5.40
14	LZ- eP*2		06 16 23.8	SZ	1.2	24.6	147.4	
	eLR		07 07 04	LZ	35	107.1		
	AVG.							5.41
14	10 42 15.*	60.2 N 149.4 W KENAI PENINSULA, ALASKA						H= 47 KM MAG 3.70 CGS
14	10 53 01.*	40. S 144.3 E BASS STRAIT						H= 33 KM
14	12 52 46.3	18.2 N 105.5 W OFF COAST OF JALISCO, MEXICO						H= 33 KM MAG 5.30 CGS

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
14	LZ-	eP	13 01 36.7	SZ	1.2	37.9	50.0	5.20
	eS		08 49	LR	25	272.2		
	eLR		18 03	LZ	20	9999.9		
14	OO-	eL	13 39 40	LZ	25	279.5	86.2	
14	16 12 16.*		10.3 S 119.9 E	SUMBA ISLAND REGION				
			H= 33 KM					
14	LZ-	eP*2	16 32 17.0	SZ	1.1	8.1	152.3	
14	16 54 50.7		5.3 S 146.8 E	EAST NEW GUINEA REGION				
			H=228 KM MAG 4.30 CGS					
14	LZ-	fP	17 48 22.6D	SZ	0.3	9999.9	1.9	
	eS		48 48	ST	0.5	9999.9		
14	LZ-	eL	18 47 10	LZ	32	169.9		
14	18 49 41.*		18.5 S 168.8 E	NEW HEBRIDES ISLANDS				
			H= 89 KM					
14	19 06 14.6		18.1 S 168.0 E	NEW HEBRIDES ISLANDS				
			H= 5 KM MAG 4.40 CGS					
15	00 31 32.*		18.5 N 105.6 W	OFF COAST OF JALISCO, MEXICO				
			H= 33 KM MAG 4.40 CGS					
15	00 55 36.7		36.1 N 139.6 E	HONSHU, JAPAN				
			H= 71 KM MAG 4.90 CGS					
15	GG-	eP	01 07 57.0	SZ	0.9	20.3	83.1	5.14
15	LZ-	eP*1	01 15 15.2	SZ	1.4	26.9	148.2	
15	LZ-	eL	01 56 40	LZ	29.	157.7		
15	02 26 07.*		19.2 N 108.9 W	REVILLA GIGEDO ISLANDS REG.				
			H= 33 KM MAG 3.70 CGS					
15	LZ-	eP	03 19 00.1	SZ	0.5	2.5	3.0	
	eS		19 38	ST	0.5	3.9		
15	04 34 30.3		9.4 N 126.3 E	MINDANAO, PHILIPPINE ISLANDS				
			H= 62 KM MAG 5.50 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
15	06 33 23.5		35.6 N 45.7 E	IRAN IRAQ BORDER REGION				
			H= 33 KM MAG 4.70 CGS					
15	GG-	eP	06 39 19.2	SZ	0.5	9.9	28.7	4.83
15	06 38 13.*		37.8 S 72.4 W	CENTRAL CHILE				
			H= 79 KM MAG 4.10 CGS					
15	LZ-	eP	06 43 06.0	SZ	1.2	7.4	21.7	3.91
15	LZ-	eP	07 20 58.3	SZ	0.4	21.9		
	eS		21 23 SR	0.6	8.1			
15	07 22 08.		18. S 178.3 W	FIJI ISLANDS REGION				
			H=608 KM MAG 4.20 CGS					
15	LZ-	eP	07 56 36.2	SZ	0.5	17.3		
	eS		57 11 ST	0.6	11.9			
15	09 33 46.7		29.9 N 51.0 E	SOUTHERN IRAN				
			H= 33 KM					
15	GG-	eP	09 40 43.5	SZ	1.2	40.7	35.9	5.17
15	LZ-	eLR	10 33 30	LR	30	107.2	123.3	
15	14 12 49.6		17.9 N 105.9 W	OFF COAST OF JALISCO, MEXICO				
			H= 33 KM MAG 4.10 CGS					
15	LZ-	eP	14 21 43.8	SZ	1.2	9.9	50.1	4.62
	eLR		39 05 LZ	20	320.1			
15	GG-	eP	14 18 13.0	SZ	0.4	16.6		
	eS		18 31 ST	0.4	27.5			
15	15 42 34.4		17.8 N 105.9 W	OFF COAST OF JALISCO, MEXICO				
			H= 33 KM MAG 4.50 CGS					
15	LZ-	eP	15 51 29.1	SZ	1.2	9.9	50.0	4.62
15	15 52 21.5		24. N 122.2 E	TAIWAN REGION				
			H= 42 KM MAG 5.40 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
15	GG-	eP	16 04 52.0	SZ	1.3	79.3	84.6	5.66
		eP	04 57	LZ	18	169.4		
		e	25 50	LZ	17	203.9		
15	LZ-	eP*1	16 12 27.0	SZ	1.5	40.4	167.3	
15	00-	eSS	16 19 50	LT	32	688.8	79.0	
		e	23 40	LR	22	558.3		
		eLQ	31 00	LR	33	540.2		
		eLR	37 50	LZ	25	1115.7		
15	GG-	eL	16 45 23	LZ	22.	1246.6		
15	16 45 44.8	49.5 S 163.6 E	AUCKLAND ISLANDS REGION					
		H= 33 KM						
15	LZ-	e	17 15 56	LZ	22.	159.3	100.0	
		eL	29 26	LZ	34	383.7		
15	17 12 43.9	36.5 N 70.9 E	HINDU KUSH REGION					
		H=220 KM MAG 5.00 CGS						
15	17 34 10.*	17.4 S 169.1 E	NEW HEBRIDES ISLANDS					
		H=222 KM						
15	20 03 49.6	34.9 N 5.2 W	MOROCCO					
		H= 3 KM MAG 5.00 CGS						
15	GG-	eP	20 08 14.5	SZ	0.6	2.8	19.1	3.68
		e	08 17	SZ	0.7	23.9		
		eP	08 20	LZ	15	223.3		
		e	11 50	LZ	17	226.6		
15	00-	eLQ	20 18 00	LR	35	927.1	28.1	
		eLR	21 55	LZ	20	766.5		
15	LZ-	eLR	20 42 36	LZ	32	123.1	78.7	
15	23 57 21.*	47.2 N 147.3 E	NORTHWEST OF KURILE ISLANDS					
		H=297 KM MAG 4.80 CGS						
16	LZ-	eP*	00 15 59.8	SZ	0.9	3.2	137.3	
16	GG-	eP	00 08 39.0	SZ	0.5	20.7		
16	02 46 43.*	36.9 N 121.8 W	CENTRAL CALIFORNIA					
		H= 33 KM MAG 5.25 CGS						
16	LZ-	eL	03 25 34	LZ	24	101.0	72.9	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	GG-	eL	03 31 04	LZ	23.	245.5	84.3	
16	04 47 27.5	36.3 N 70.4 E	HINDU KUSH REGION					
		H=225 KM MAG 5.50 CGS						
16	GG-	eP	04 55 17.0	SZ	0.6	8.6	44.2	4.33
16	00-	eP	04 55 17.0	SZ	0.7	37.4	44.4	4.90
		AVG.	4.61					
16	LZ-	eL	04 52 49	LZ	22.	115.8		
16	05 27 33.8	39.8 N 39.9 E	TURKEY					
		H= 39 KM MAG 5.10 CGS						
16	GG-	eP	05 32 32.6	SZ	0.8	113.9	22.5	5.35
		ePCP	36 44	LZ	14	601.4		
		eL	38 53	LZ	35	569.9		
16	00-	eP	05 33 20.0	SZ	0.6	11.8	27.8	4.80
		eLQ	41 30	LT	30	747.4		
		eLR	44 15	LT	18	2099.5		
16	LZ-	eL	06 26 08	LZ	25	122.4	114.3	
		AVG.	5.07					
16	05 59 57.4	49.7 N 78.0 E	EASTERN KAZAKH SSR					
		H= KM MAG 6.00 CGS						
16	00-	eP	06 07 18.5	SZ	0.4	51.9	38.1	5.60
		e	08 15	ST	0.6	6.4		
16	GG-	eP	06 07 52.6C	SZ	0.7	85.5	41.9	5.59
		eS	06 58	SR	0.2	168.6	AVG.	5.59
16	GG-	eL	08 05 08	SR	0.3	19.4		
16	GG-	eP	08 06 55.4	SZ	0.2	26.2		
		eS	06 58	SR	0.2	168.6		
16	08 54 09.*	56.1 S 27.5 W	SOUTH SANDWICH ISLANDS REG.					
		H=163 KM MAG 4.90 CGS						
16	LZ-	eP	09 02 52.2	SZ	0.9	19.4	50.5	4.77
		ePP	03 23	SZ	0.8	12.5		
16	09 34 42.*	22.8 S 171.6 E	LOYALTY ISLANDS REGION					
		H= 25 KM						
16	LZ-	eP	10 13 13.0	SZ	0.4	12.4		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	LZ-	eP	11 56 24.8	SZ	1.0	16.3		
16	LZ-	eL	12 09 50	LZ	34	253.3		
16	12 16 19.3		47.1 N 154.1 E KURILE ISLANDS					
			H= 33 KM MAG 4.40 CGS					
16	GG-	eP	12 25 16.0	SZ	0.3	16.5		
16	12 38 29.7		47.4 N 154.2 E KURILE ISLANDS					
			H= 33 KM MAG 5.70 CGS					
16	00-	eP	12 49 26.0	SZ	1.0	127.1	67.9	5.98
	e	49 39	SZ	0.9	57.9			
	eL	13 15 15	LR	25	565.8			
16	GG-	tP	12 50 27.4C	SZ	0.6	44.2	78.1	5.66
16	LZ-	eP ¹	12 57 44.5	SZ	1.1	10.2	133.1	
					Avg.	5.82		
16	GG-	eP	13 08 51.0	SZ	0.2	12.5	1.5	
	eS	09 12	SR	0.2	21.2			
16	13 50 58.5		48.3 N 154.6 E KURILE ISLANDS					
			H= 33 KM MAG 4.70 CGS					
16	GG-	eP	13 57 43.0	SZ	0.2	31.4	•2	
	eS	57 48	SR	0.2	127.3			
16	LZ-	eL	13 59 03	LZ	24	121.4		
16	LZ-	eP	15 26 12.6	SZ	0.5	3.4		
16	LZ-	e	15 26 19	SZ	0.9	9.7		
16	GG-	eP	15 47 43.1	SZ	0.2	44.0		
16	GG-	eS	15 47 53	SR	0.3	59.1		
16	16 53 18.*		16.5 N 98.0 W NEAR COAST GUERRERO, MEXICO					
			H= 103 KM MAG 4.30 CGS					
16	18 21 14.5		50. N 156.5 E KURILE ISLANDS					
			H= 33 KM MAG 4.70 CGS					
16	20 35 06.*		51.6 N 178.5 E RAT ALEUTIAN ISLANDS					
			H= 33 KM MAG 4.90 CGS					
16	21 37 31.		30.9 S 66.8 W LA RIOJA PROVINCE, ARGENTINA					
			H= 33 KM MAG 4.30 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	22 09 48.*		85.8 N 88.3 E NORTH OF SEVERNAYA ZEMLYA					
			H= 33 KM MAG 4.50 CGS					
16	22 40 44.		1. N 118.8 E BORNEO					
			H= 33 KM MAG 6.70 CGS					
16	LZ-	eP ¹	23 00 48.1	SZ	1.9	161.8	163.2	
	eP ²	01 38	SZ	1.3	34.3			
	ePP	05 33	SZ	1.2	17.0			
	eSSP	26 52	LZ	28	177.0			
17	LZ-	eL	00 01 31	LZ	36	333.8	163.2	
16	GG-	eL	23 38 23	LZ	28	329.3	100.5	
16	23 05 29.2		15.8 S 173.0 W TONGA ISLANDS					
			H= 12 KM MAG 4.80 CGS					
16	GG-	eL	23 07 52	LZ	18.	236.5		
17	00 01 17.1		16.3 S 173.7 W TONGA ISLANDS					
			H= 33 KM MAG 5.40 CGS					
17	GG-	eP ²	00 20 57.4	SZ	1.3	127.1	146.5	
	e	22 30	SZ	1.3	38.1			
17	00-	e	00 15 50	LR	20.	299.0		
17	00-	e	00 17 30	LT	30	342.5		
17	00-	e	00 20 40	LZ	25	235.1		
17	00-	eL	00 28 25	LT	45	1247.4		
17	01 26 26.*		27.5 N 55.0 E SOUTHERN IRAN					
			H= 45 KM					
17	02 46 35.*		55.5 S 27.9 W SOUTH SANDWICH ISLANDS REG.					
			H= 115 KM MAG 5.00 CGS					
17	LZ-	eP	02 55 19.0	SZ	0.9	25.3	49.9	5.07
	eL	03 13 29	LZ	28	127.6			
17	LZ-	tP	07 45 21.0D	SZ	0.5	89.8	1.5	
	eS	45 42	ST	999.9	9999.9			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
17	08	08 56.7	23.5 S 175.7 W	TONGA ISLANDS REGION	H=320 KM	MAG 4.40	CGS	
17	08	15 39.3	5.7 S 150.7 E	NEW BRITAIN REGION	H= 45 KM	MAG 7.25	CGS	
17	00-	ePD	08 30 40	LZ	30.	1256.0	117.1	
		eP'	34 22	SZ	0.6	13.7		
		ePP	35 25	LZ	29	9999.9		
		ePS	45 15	LT	999	9999.9		
		eSS	51 50	LT	25	9999.9		
		e	56 15	LZ	999	9999.9		
		eL	09 17 25	LZ	999	9999.9		
17	GG-	ePD	08 31 12	LZ	27	794.9	124.5	
		eP'	34 20	SZ	0.6	22.1		
		eP'	34 35	LZ	23	675.0		
		e	34 59	SZ	1.0	112.4		
		ePP	36 30	LZ	999	9999.9		
		ePPP	39 05	LZ	22	4725.6		
		ePKKP	45 00	LZ	24	1996.6		
		eSKKP	48 03	SZ	2.0	124.0		
		e	51 50	SZ	2.0	248.0		
		e	56 32	LR	999	9999.9		
17	LZ-	ePD	08 32 05	LZ	26	490.3	135.5	
		e	34 41	SZ	1.4	9.8		
		eP'	34 47	SZ	0.9	45.9		
		eP'	34 47	LZ	20	9999.9		
		ePP'	35 00	SZ	1.0	267.7		
		e	36 48	SZ	2.0	363.0		
		ePP	37 26	LZ	999	9999.9		
		ePP	37 41	SZ	1.8	361.1		
		ePKS	38 33	SR	1.6	253.8		
		ePKS	38 33	LR	999	9999.9		
		e	38 56	SR	1.8	358.7		
		e	39 09	SR	2.1	551.6		
		ePPP	40 33	SZ	1.6	340.2		
		e	41 03	SZ	2.0	312.3		
		eSKS	41 56	ST	2.0	195.9		
		e	43 41	SR	2.3	156.9		
		e	45 54	LZ	999	9999.9		
		e	51 08	LT	999	9999.9		
		e	53 46	ST	2.0	38.2		
	09	00 26	SZ	2.5	67.8			
		e	11 01	SZ	2.0	25.3		
		e	12 17	SZ	2.4	62.8		
		e	14 42	SZ	2.0	23.6		
		eL	17 46	LZ	999	9999.9		
		eL	21 20	SZ	25.0	54.3U		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
17	LZ-	eP eS	08 16 57.7 17 25	SZ SR	0.4 0.6	6.4 3.5	2.1	
17	10	11 00.1	44.6 N 110.9 W	YELLOWSTONE PARK, WYOMING	H= 33 KM	MAG 3.90	CGS	
17	GG-	eP eS	10 19 34.5 19 41	SZ SR	0.2 0.2	44.0 139.5	3.0	
17	11	03 06.8	23.4 S 179.9 W	SOUTH OF FIJI ISLANDS	H=549 KM	MAG 5.50	CGS	
17	LZ-	eP ePP ePP	11 16 08.5 18 05 20 24	SZ SZ SZ	1.5 1.5 1.8	15.7 7.8 52.5	102.3 5.40	
17	GG-	eS	12 45 19	SR	0.2	31.2		
17	GG-	eP eS	14 02 35.0 02 51	SZ SR	0.5 0.5	16.1 65.2	1.2	
17	14	37 53.*	3.5 S 150.1 E	NEW IRELAND REGION	H= 33 KM	MAG 5.00	CGS	
17	GG-	eL	15 38 00	LZ	40.	482.6	122.3	
17	LZ-	eL	15 43 02	LZ	28	214.0	137.1	
17	14	52 26.5	33.8 N 116.5 W	SOUTHERN CALIFORNIA	H= 14 KM	MAG 4.50	CGS	
17	16	17 03.	13.2 N 89.6 W	EL SALVADOR	H= 54 KM	MAG 4.50	CGS	
17	LZ-	eP eL	16 24 00.4 36 28	SZ LZ	1.0 999	37.2 9999.9	35.9 5.23	
17	00-	eL	16 58 00	LZ	30	694.5	83.6	
17	17	40 57.4	1 S 122.9 E	NORTHERN CELEBES	H=160 KM	MAG 5.40	CGS	
17	LZ-	eP'1	18 00 42.1	SZ	1.1	14.1	160.2	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eP*2	01 24	SZ	0.9	14.2		
17	19 00 10.4	12.7 N 144.9 E SOUTH OF MARIANA ISLANDS H= 43 KM MAG 5.10 CGS						
17	LZ-	eP*2	19 19 55.2	SZ	1.3	57.1	147.5	
17	OO-	eSKS	19 24 20	LT	15	259.9	98.0	
	e		28 40	LT	28	308.1		
	eSS		31 55	LT	22	401.9		
	eLQ		43 30	LR	50	1528.8		
	eLR		51 10	LR	25	1012.1		
17	GG-	eSP	19 28 03	LZ	15	313.2	105.8	
	eL		54 05	LZ	40	643.5		
17	22 50 53.7	36.7 N 35.2 E TURKEY H= 37 KM MAG 4.50 CGS						
18	00 11 56.*	10.3 S 75.9 W PERU H= 24 KM MAG 4.30 CGS						
18	LZ-	eP	00 14 15.4	SZ	0.5	2.5	9.3	4.78
	eL		16 49	ST	0.8	13.2		
	eL		16 58	LR	16	221.0		
18	03 24 53.9	9.6 S 116.8 E SUMBAWA ISLAND REGION H= 82 KM MAG 4.80 CGS						
18	04 03 58.	13.1 S 75.0 W PERU H= 80 KM MAG 4.30 CGS						
18	LZ-	eP	04 05 42.8	SZ	0.9	232.7	7.0	5.81
	e		06 16	LZ	22	209.3		
	eL		07 03	LZ	22	700.3		
18	GG-	eL	04 57 38	LZ	35	489.4	97.4	
18	05 01 41.4	31.2 S 67.6 W SAN JUAN PROVINCE, ARGENTINA H= 8 KM MAG 5.60 CGS						
18	LZ-	eP	05 05 16.6	SZ	1.6	81.4	14.9	5.01
	eP		05 17	LZ	21	313.8		
	ePP		05 24	SZ	1.2	189.4		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		ePPP	05 42	SZ	1.4	183.8		
	e		06 10	SZ	1.5	133.9		
	eS		08 00	SR	1.4	65.4		
	eS		08 09	LR	14	1000.4		
	eL		09 06	SR	2.5	308.8		
	eL		09 30	LR	999	9999.9		
18	GG-	eL	05 55 26	LZ	25	118.2	106.5	
18	LZ-	eP	08 05 49.8	SZ	999.9	9999.9	1.7	
	eS		06 13	ST	999.9	9999.9		
18	10 26 50.*	44.1 N 114.1 W WESTERN IDAHO H= 33 KM MAG 3.60 CGS						
18	GG-	eP	13 05 20.0	SZ	0.2	15.4		
18	13 21 47.2	51.7 N 174.2 W ANDREANOF ALEUTIAN ISLANDS H= 12 KM MAG 5.30 CGS						
18	14 34 54.5	6. S 148.2 E NEW BRITAIN REGION H= 49 KM MAG 6.10 CGS						
18	GG-	ePD	14 50 38	LZ	25.	210.0	123.5	
	ePP		55 30	LZ	26	1054.5		
	eSKKP		15 07 15	LZ	19	1037.6		
	e		17 00	LZ	26	703.0		
	eL		35 00	LZ	40	3742.7		
18	LZ-	e	14 54 02	SZ	0.9	9.4	137.5	
	eP*		54 17	SZ	1.0	124.1		
	ePP*		54 29	SZ	1.2	92.2		
	ePP		57 00	LZ	25	9999.9		
	ePKS		57 41	LT	999	9999.9		
	eSKP		57 46	SZ	1.5	126.0		
	ePKS		58 07	ST	1.1	37.8		
	e		58 13	SZ	1.6	134.1		
	ePS		15 07 10	LT	22	9999.9		
	e		08 21	LZ	21	9999.9		
	eSPP		09 17	LZ	999	9999.9		
	eL		39 55	LZ	999	9999.9		
18	00-	ePP	14 54 40	LZ	25	893.5	116.5	
	eSKP		57 10	LZ	27	445.4		
	ePS		15 04 35	LT	33	2744.8		
	eSKKS		11 30	LT	35	3471.0		
	eSSS		15 10	LT	18	2675.9		
	e		24 05	LZ	33	2805.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eLQ		25 50	LZ	50	4671.5		
	eLR		32 20	LZ	36	2540.3		
18	22 21 01.9		20.2 S 174.1 W TONGA ISLANDS					
			H= 33 KM MAG 5.80 CGS					
18	LZ- eP		22 34 46	LZ	17	210.6	98.5	
	ePP		38 37	LZ	16	347.9		
	ePP		38 37	SZ	1.8	60.3		
	eSKS		45 13	LT	18	9999.9		
	eS		46 09	LT	16	9999.9		
	ePS		47 36	LT	17	9999.9		
	eLQ		23 02 51	LR	22	179.2		
	eLR		07 11	LZ	27	9999.9		
18	GG- eP+2		22 40 55	LZ	20	308.3	150.3	
	eL		23 38 12	LZ	19	259.4		
18	OO- ePP		22 43 40	LZ	22	275.8	139.0	
	eSPP		55 40	LZ	16	422.2		
	eSS		23 01 35	LR	17	504.6		
	eLQ		24 10	LR	25	455.4		
	eLR		32 20	LZ	20	237.2		
18	23 35 03.9		20.1 S 174.3 W TONGA ISLANDS					
			H= 33 KM MAG 5.10 CGS					
19	LZ- eP		03 19 24.6	SZ	0.7	2.3	4.0	
	eS		20 13	SR	0.6	3.4		
19	03 30 25.9		19.2 S 169.3 E NEW HEBRIDES ISLANDS					
			H=147 KM MAG 4.30 CGS					
19	LZ- eL		04 18 56	LZ	21	68.8	113.1	
19	LZ- eP		04 21 51.1	SZ	0.5	29.3	4.2	
	eS		22 43	SR	0.8	8.8		
19	GG- eP		07 03 17.7	SZ	0.2	15.4	.1	
	eS		03 22	ST	0.2	84.6		
19	GG- eP		08 04 37.8	SZ	0.2	37.1		
19	GG- eP		09 12 44.4	SZ	0.2	98.9		
19	GG- eP		10 16 28.5	SZ	0.2	9.2	.1	
	eS		16 35	SR	0.2	111.3		
19	14 07 21.5		56. N 161.3 E NEAR EAST COAST OF KAMCHATKA					
			H= 33 KM MAG 4.70 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
19	GG- eL		14 17 02	SR	0.3	19.9		
19	LZ- eP		15 20 45.4	SZ	0.4	17.5	5.4	
	eS		21 50	SR	0.5	3.7		
19	GG- eP		15 29 12.8	SZ	0.2	17.9	.7	
	eS		29 23	SR	0.3	115.8		
19	15 45 31.2		3.4 S 150.1 E NEW IRELAND REGION					
			H= 38 KM MAG 5.70 CGS					
19	LZ- eP		16 04 56.4	SZ	1.8	40.2	137.1	
	eL		50 43	LZ	26	262.3		
19	00- eL		16 36 00	LR	50	1274.0	114.8	
19	GG- eL		16 45 00	LZ	40	428.8	122.2	
19	16 15 26.2		10.8 S 166.3 E SANTA CRUZ ISLANDS					
			H=166 KM MAG 4.90 CGS					
19	LZ- eP		17 57 31.4D	SZ	0.4	9999.9	2.1	
	eS		57 58	ST	0.4	20.2		
19	LZ- eL		19 15 50	LZ	31	109.6		
19	LZ- eP		22 08 34.9	SZ	0.7	14.3	3.2	
	eS		09 20	SR	0.8	12.0		
19	23 35 06.		6. S 150.8 E NEW BRITAIN REGION					
			H= 3 KM MAG 6.75 CGS					
19	00- ePD		23 50 15	LZ	25	1410.8	117.5	
	eP		53 50	SZ	1.0	32.9		
	eP		53 51	LZ	21	743.5		
	e		54 07	SZ	1.2	94.1		
	ePP		55 05	LZ	25	18.5U		
	e		57 55	LZ	20	10.0U		
20	00- eSKS		00 00 50	LT	27	6030.8	117.5	
	eSKKS		02 15	LT	25	5858.7		
	ePS		05 00	LT	999	9999.9		
	eSS		11 05	LT	999	9999.9		
19	GG- ePD		23 50 48	LZ	23	952.2	124.8	
	eP		54 09	SZ	1.4	104.4		
	eP		54 25	LZ	20	1098.5		
	ePP		56 00	LZ	999	9999.9		
20	GG- ePKKP		00 04 22	LZ	999	9999.9	124.8	
	eSPP		07 21	SZ	1.5	36.8		
	e		11 12	SZ	2.0	117.4		
19	LZ- ePD		23 51 49	LZ	23	218.4	135.3	
	e		54 16	SZ	1.4	26.9		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eP ¹	54 33	SZ	1.2	151.9		
		eP ¹	54 33	LZ	999	9999.9		
		e	55 20	SZ	0.9	38.9		
		e	55 37	SZ	1.2	82.1		
		e	56 10	LZ	15	9999.9		
		e	56 27	SZ	1.3	117.3		
		ePP	57 00	LZ	15	9999.9		
		e	57 22	LT	27	9999.9		
		eSKP	58 08	SZ	1.5	121.2		
		ePKS	58 14	ST	1.6	180.6		
		e	58 18	SZ	1.6	250.6		
		ePKS	58 20	LT	999	9999.9		
		e	58 34	ST	1.7	9999.9		
		e	59 07	ST	1.8	174.6		
19	23 55 06.8		6.9 S 149.9 E	NEW BRITAIN REGION				
			H= 33 KM	MAG 5.60	CGS			
20	LZ- eP ¹		00 14 24.0	SZ	1.0	5.4	135.6	
20	00 56 21.*		6 N 156.3 E	CAROLINE ISLANDS REGION				
			H= 33 KM	MAG 4.30	CGS			
20	01 23 40.6		6.2 S 150.4 E	NEW BRITAIN REGION				
			H= 61 KM	MAG 5.20	CGS			
20	01 35 38.*		5.5 S 150.1 E	NEW BRITAIN REGION				
			H= 91 KM					
20	03 01 52.3		6.2 S 150.5 E	NEW BRITAIN REGION				
			H= 44 KM	MAG 5.10	CGS			
20	04 50 55.3		59.6 N 148.2 W	KENAI PENINSULA, ALASKA				
			H= 33 KM	MAG 4.90	CGS			
20	GG- eP		08 35 39.4	SZ	0.2	17.9		
20	09 50 13.5		2 S 18.2 W	CENTRAL MID ATLANTIC RIDGE				
			H= 33 KM	MAG 5.10	CGS			
20	LZ- eP		09 59 23.0	SZ	1.0	10.9	52.1	4.77

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eS	10 06 47	LR	25	261.7		
		eSS	10 31	LR	22	9999.9		
		eL	11 30	LR	999	9999.9		
20	GG- eP		09 59 47.8	SZ	0.9	14.4	55.7	5.01
20	00- eP		10 01 48	SZ	0.9	14.4		
		ePP						
		e	10 16 55	LR	33	631.8	65.0	
		eLQ	19 50	LR	32	597.9		
		eLR	22 05	LR	33	737.1		
							Avg.	4.89
20	10 30 36.*		5. S 77.8 W	NORTHERN PERU				
			H= 292 KM	MAG 3.70	CGS			
20	GG- eP		12 54 05.5	SZ	0.2	6.2	1.1	
		eS	54 21	SR	0.3	21.3		
20	16 20 04.*		8.9 S 123.6 E	FLORES ISLAND REGION				
			H= 33 KM					
20	16 34 43.*		35.9 N 138.9 E	HONSHU, JAPAN				
			H= 86 KM	MAG 4.40	CGS			
20	19 05 09.7		6.9 S 129.7 E	BANDA SEA				
			H= 126 KM	MAG 4.70	CGS			
20	LZ- eP ²		19 24 51.7	SZ	0.9	37.3	150.8	
		e	25 31	SZ	1.0	25.4		
20	19 21 10.		4.9 S 145.4 E	NEAR N. COAST OF NEW GUINEA				
			H= 152 KM	MAG 5.80	CGS			
20	LZ- eL		21 03 14	LZ	28	286.6		
20	21 27 39.5		63.7 N 146.5 W	CENTRAL ALASKA				
			H= 80 KM	MAG 4.60	CGS			
20	23 33 08.9		44.6 N 149.7 E	KURILE ISLANDS				
			H= 33 KM	MAG 5.60	CGS			
20	00- eP		23 44 15.0	SZ	0.7	37.4	69.5	5.56
		eP	44 16	LZ	18	489.7		
		e	49 10	LT	25	308.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eS	53 30	LT	21.	863.3		
		eSS	58 10	LT	22	1456.9		
21	00-	eLQ	00 05 45	LR	40	4688.7	69.5	
		eLR	10 00	LR	25	3298.9		
20	GG-	eP	23 45 14.2	SZ	0.7	51.8	79.4	5.58
		eP	45 15	LZ	20	673.3		
		e	45 19	SZ	0.7	81.0		
		e	46 12	SZ	1.0	45.6		
21	GG-	e	00 01 02	LZ	34	690.7	79.4	
		eL	15 11	LZ	24	849.9		
20	LZ-	ePP	23 55 06	LZ	19	92.2	137.2	
		eSKP	56 04	LZ	23	210.7		
21	LZ-	eSS	00 13 30	LT	24	370.3	137.2	
		eL	39 04	LR	36	962.9		
					Avg.	5.57		
20	23 51 35.4		44.6 N 149.5 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.90	CGS			
21	00-	eP	00 02 42.5	SZ	0.9	25.3	69.5	5.28
21	GG-	eP	00 03 41.0	SZ	1.0	71.7	79.3	5.57
					Avg.	5.42		
21	00-	eL	00 44 00	LT	35.	398.9		
21	01 35 35.5		6.7 S 154.3 E	SOLOMON ISLANDS				
			H= 103 KM	MAG 4.90	CGS			
21	02 16 44.5		1. N 124.0 E	NORTHERN CELEBES				
			H= 248 KM	MAG 5.80	CGS			
21	LZ-	eP ¹	02 36 19.8	SZ	1.4	63.9	160.5	
		eP ¹	36 20	LZ	16	134.8		
		eP ²	37 03	SZ	1.0	58.1		
		eP ²	37 57	SZ	1.2	29.8		
		esP ²	38 09	SZ	0.9	40.5		
		eSKP	39 19	SZ	1.5	44.4		
		ePP	40 40	SZ	2.0	51.9		
		ePP	40 52	LZ	16	202.3		
		ePP	41 57	LZ	21	181.8		
		e	48 50	LZ	17	308.4		
		e	03 04 25	LT	25	155.1		
		e	07 25	LZ	21	202.6		
21	00-	eL	03 05 15	LR	35	1138.2	100.1	
21	GG-	e	02 35 10	LZ	17.	207.2		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21	GG-	eP	02 35 38.0	SZ	0.7	12.9		
21	GG-	e	02 40 20	LZ	21	252.1		
21	LZ-	eP	03 57 25.2	SZ	0.6	8.2	2.5	
		eS	57 57	SR	0.6	11.5		
21	04 01 02.		1.9 N 96.8 E	OFF W. COAST NORTH SUMATRA				
			H= 33 KM	MAG 5.20	CGS			
21	LZ-	eP ²	04 21 49.0	SZ	0.9	12.9	159.7	
		eL	05 17 08	LZ	30	218.4		
21	LZ-	eP	04 17 06.0	SZ	0.7	4.7		
21	06 19 16.		14.9 S 167.2 E	NEW HEBRIDES ISLANDS				
			H= 97 KM	MAG 5.10	CGS			
21	GG-	eP	07 21 46.0	SZ	0.2	15.5	3.5	
		eS	22 30	SR	0.3	14.9		
21	09 49 20.*		27.9 S 68.1 W	CHILE ARGENTINA BORDER REG.				
			H= 33 KM	MAG 4.20	CGS			
21	GG-	eP	10 21 34.0	SZ	0.2	15.5	1.5	
		eS	21 55	SR	0.3	29.9		
21	11 57 00.3		19.9 S 70.4 W	NEAR COAST OF NORTHERN CHILE				
			H= 118 KM	MAG 4.40	CGS			
21	LZ-	eP	11 58 07.4	SZ	0.5	25.1	4.1	4.80
21	12 40 56.*		44.4 N 149.7 E	KURILE ISLANDS				
			H= 60 KM	MAG 4.30	CGS			
21	GG-	eP	12 52 59.0	SZ	1.0	26.9	79.5	5.09
21	12 41 47.8		6.2 S 150.5 E	NEW BRITAIN REGION				
			H= 43 KM	MAG 4.90	CGS			
21	00-	eL	13 36 35	LR	30.	377.0	117.5	
21	LZ-	eL	13 46 52	LZ	23	174.7	135.4	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21	LZ-	eL	12 50 33	LZ	24.	227.7		
21			13 27 34.	24.2 N 122.4 E	TAIWAN REGION			
				H= 60 KM	MAG 4.80	CGS		
21			13 55 42.8	17.9 N 105.8 W	OFF COAST OF JALISCO, MEXICO			
				H= 33 KM	MAG 3.80	CGS		
21	GG-	eL	14 20 54	LZ	18.	510.9		
21			14 31 13.9	13.1 N 144.4 E	MARIANA ISLANDS			
				H= 61 KM	MAG 4.50	CGS		
21	LZ-	eP	15 03 27.6	SZ	0.8	6.8		
21	LZ-	eL	15 12 22	LZ	26	268.8		
21			15 34 13.2	12.8 N 145.2 E	SOUTH OF MARIANA ISLANDS			
				H= 35 KM	MAG 5.20	CGS		
21	LZ-	eP*2	15 53 55.3	SZ	1.7	55.0	147.2	
	e		54 26	SZ	1.1	27.8		
	eSKKS		16 04 07	LT	16	162.8		
	ePSS		17 11	LT	18	180.4		
	eL		43 00	LZ	26	215.0		
21	GG-	e	16 16 23	LZ	15	380.7	105.8	
	eL		28 24	LZ	17	261.4		
21	OO-	eL	16 23 40	LR	30	754.1	98.0	
21			17 24 24.1	4.8 S 76.6 W	NORTHERN PERU			
				H=107 KM	MAG 4.40	CGS		
21			17 25 57.*	32.8 N 116.0 W	CALIFORNIA MEXICO BORDER			
				H= 14 KM	MAG 4.70	CGS		
21			18 09 32.*	41.4 N 142.9 E	HOKKAIDO, JAPAN REGION			
				H=140 KM	MAG 3.80	CGS		
21			22 40 12.*	4.9 S 103.6 E	SOUTHERN SUMATRA			
				H= 33 KM	MAG 5.40	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21			23 26 22.3	5.7 S 150.8 E	NEW BRITAIN REGION			
				H= 59 KM	MAG 4.90	CGS		
22			00 02 33.3	24. N 45.4 W	NORTH ATLANTIC RIDGE			
				H= 33 KM	MAG 4.70	CGS		
22	LZ-	eP	00 10 52.2	SZ	1.2	36.4	45.9	5.21
	eS		17 44	LR	17	194.9		
	eSS		21 14	LR	20	397.4		
	eLQ		24 00	LR	25	9999.9		
	eLR		25 46	LZ	25	540.6		
22	GG-	eSCP	00 16 32	LZ	15	263.5	50.6	
	eL		26 00	LZ	30	769.7		
22	OO-	eS	00 19 30	LT	20	682.4	53.1	
	eL		27 50	LZ	25	1110.3		
22	GG-	eP	02 32 30.5	SZ	0.7	13.3		
22			02 38 29.	17.9 S 178.5 W	FIJI ISLANDS REGION			
				H=563 KM	MAG 5.00	CGS		
22	LZ-	eL	03 32 32	LZ	32.	133.6	103.2	
22	GG-	eP	03 00 30.5	SZ	0.8	15.9		
22	GG-	e	03 00 52	SZ	0.8	7.9		
22	LZ-	eL	03 09 50	LT	18	137.4		
22			05 10 41.2	6.2 S 150.4 E	NEW BRITAIN REGION			
				H= 39 KM	MAG 4.70	CGS		
22	LZ-	eL	06 02 02	LZ	35.	136.2	135.5	
22			05 24 01.6	22.9 S 65.7 W	JUJUY PROVINCE, ARGENTINA			
				H=135 KM	MAG 4.10	CGS		
22	LZ-	eP	05 25 53.2	SZ	0.8	223.9	7.1	5.65
	eL		27 08	LZ	15	187.7		
	e		27 13	SZ	1.4	95.2		
22			05 46 33.3	6.2 S 150.4 E	NEW BRITAIN REGION			
				H= 47 KM	MAG 5.40	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
22	LZ-	ePi	06 05 51.4	SZ	1.2	21.8	135.5	
	ePP		08 22	SZ	1.6	20.1		
	e		09 33	SZ	1.4	16.4		
	eL		51 59	LZ	23	130.4		
22	OO-	eL	06 45 25	LR	20	271.2	117.5	
22	GG-	eL	06 22 10	LZ	17.	166.4		
22	GG-	eL	06 52 10	LZ	30	192.4		
22	09 00 57.		6.1 S 150.4 E NEW BRITAIN REGION					
			H= 50 KM MAG 4.90 CGS					
22	09 25 15.8		3.4 S 130.7 E CERAM					
			H= 33 KM MAG 5.40 CGS					
22	LZ-	eP*2	09 45 14.5	SZ	0.8	18.6	152.8	
	eL		10 43 44	LZ	22	68.6		
22	LZ-	eP	10 07 20.6	SZ	0.4	2.8		
22	LZ-	eL	10 11 37	SZ	1.5	11.8		
22	LZ-	eP	16 50 05.6	SZ	0.4	2.1	5.3	
	e		50 17	SZ	0.5	18.5		
	e		50 38	SR	0.5	7.8		
	eL		51 08	SR	0.6	24.7		
22	17 52 23.		6.4 S 150.6 E NEW BRITAIN REGION					
			H= 48 KM MAG 5.10 CGS					
22	18 40 41.8		4.9 S 151.9 E NEW BRITAIN REGION					
			H= 86 KM MAG 5.00 CGS					
22	20 11 53.		18.8 N 101.4 W GUERRERO, MEXICO					
			H=123 KM MAG 4.50 CGS					
22	21 46 32.		30.8 N 140.7 E SOUTH OF HONSHU, JAPAN					
			H= 82 KM MAG 4.10 CGS					
22	22 12 00.*		32.5 N 48.8 E WESTERN IRAN					
			H= 39 KM					
23	04 17 13.*		8.1 S 108.4 E JAVA					
			H= 33 KM MAG 4.60 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	LZ-	eP*2	04 37 32.8	SZ	1.4	15.5	155.6	
23	04 45 58.*		45.4 N 150.8 E KURILE ISLANDS					
			H= 45 KM MAG 4.80 CGS					
23	06 57 58.5		41.9 N 86.1 E S. SINKIANG PROVINCE, CHINA					
			H= 33 KM MAG 4.90 CGS					
23	LZ-	eP*2	07 17 39.6	SZ	0.9	16.4	146.4	
23	GG-	eP	08 28 47.5	SZ	0.2	28.3	*1	
	eS		28 52	ST	0.3	99.9		
23	09 01 11.		6.5 S 150.7 E NEW BRITAIN REGION					
			H= 63 KM MAG 4.90 CGS					
23	10 26 30.*		20.5 S 70.0 W NEAR COAST OF NORTHERN CHILE					
			H= 10 KM MAG 4.20 CGS					
23	LZ-	eP	10 27 39.5	SZ	0.5	62.3	4.5 5.20	
	eL		28 41	LT	21	226.8		
23	10 47 16.6		31.5 S 72.0 W NEAR COAST OF CENTRAL CHILE					
			H= 68 KM MAG 4.50 CGS					
23	LZ-	eP	10 50 47.4	SZ	0.9	10.4	15.5 4.10	
	eLQ		54 00	LR	29	133.9		
	eL		55 00	SR	1.1	12.9		
	eLR		55 34	LZ	22	473.2		
23	LZ-	eP	12 37 34.1	SZ	0.5	11.1	2.2	
	eS		38 03	SR	1.2	102.7		
23	13 15 02.*		63.5 N 157.0 W CENTRAL ALASKA					
			H= 33 KM MAG 4.30 CGS					
23	GG-	eL	14 43 38	LZ	33.	213.6		
23	GG-	eP	15 58 06.6	SZ	0.6	16.3		
23	LZ-	eP	18 51 36.9	SZ	0.4	49.3	1.7	
	eS		52 00	SR	0.8	17.5		

DAY	STA PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	18 55 35.3	36.7 N 140.7 E	NEAR E. COAST HONSHU, JAPAN				
		H= 81 KM	MAG 4.60	CGS			
23	19 07 10.*	19.1 N 145.0 E	MARIANA ISLANDS				
		H=220 KM	MAG 4.00	CGS			
23	19 45 09.	56. S 27.6 W	SOUTH SANDWICH ISLANDS REG.				
		H= 33 KM	MAG 5.50	CGS			
23	LZ- eP	19 54 06.7	SZ	1.0	41.9	50.4	5.34
	e	54 33	SZ	1.0	33.5		
	e	54 37	SZ	1.2	66.6		
	eSCP	59 07	SZ	1.6	81.6		
	eS	20 01 11	ST	1.3	27.1		
23	LZ- eP	21 44 16.3	SZ	0.4	9.1	1.8	
	eS	44 40	ST	0.5	9999.9		
23	22 15 47.	1 S 124.5 E	MOLUCCA SEA				
		H= 66 KM	MAG 5.70	CGS			
23	LZ- eP ¹	22 35 43.2	SZ	1.5	34.7	159.3	
	eP ¹	35 44	LZ	17	89.9		
	e	36 21	SZ	0.9	35.6		
	eP ²	36 29	SZ	1.0	57.2		
	e	23 00 56	LT	22	166.7		
	e	23 50	LZ	20	137.1		
	eL	32 56	LZ	33	174.0		
23	00- eL	23 04 00	LR	35	421.4	101.3	
23	LZ- eP	23 36 49.0	SZ	0.9	21.7		
23	23 52 30.*	37.5 N 117.9 W	CALIFORNIA NEVADA BORDER				
		H= 14 KM	MAG 4.25	CGS			
24	LZ- eP	00 49 01.3	SZ	0.8	11.7		
24	01 30 35.*	36.1 S 69.8 W	MENDOZA PROVINCE, ARGENTINA				
		H= 92 KM	MAG 4.50	CGS			
24	LZ- eP	01 35 02.1	SZ	0.9	9.3	19.8	4.11

DAY	STA PHASE	TIME	INST	PER	AMPL	DIST	MAG
24	01 38 49.6	6.3 S 150.7 E	NEW BRITAIN REGION				
		H= 33 KM	MAG 5.50	CGS			
24	00- eL	02 34 20	LR	40.	503.7	117.7	
24	LZ- eL	02 42 41	LZ	28	87.4	135.2	
24	02 32 28.*	25. N 125.0 E	SOUTHWESTERN RYUKYU ISLANDS				
		H= 33 KM	MAG 4.50	CGS			
24	03 01 10.*	45.4 N 111.7 W	MONTANA				
		H= 33 KM	MAG 3.80	CGS			
24	GG- eL	04 13 17	LZ	28.	209.8		
24	05 48 32.8	8.2 S 122.6 E	FLORES ISLAND REGION				
		H= 33 KM	MAG 5.10	CGS			
24	06 35 14.5	20.2 S 179.2 W	FIJI ISLANDS REGION				
		H=660 KM	MAG 4.80	CGS			
24	GG- eP	07 14 50.6	SZ	0.2	21.3		
24	GG- eS	08 17 29	SR	0.2	14.5		
24	09 18 46.*	51.9 N 157.5 E	NEAR EAST COAST OF KAMCHATKA				
		H= 87 KM	MAG 5.10	CGS			
24	10 41 33.5	6.8 S 107.4 E	JAVA				
		H=125 KM	MAG 6.00	CGS			
24	LZ- eP ¹	11 01 18.2	SZ	1.4	57.8	156.7	
	eP ¹	01 19	LZ	12	234.9		
	eP ²	01 47	SZ	1.2	216.4		
	epP ¹	01 59	SZ	1.1	57.1		
	epP ²	02 15	SZ	1.0	45.8		
	ePP	05 23	SZ	1.5	289.3		
	ePP	05 25	LZ	17	216.7		
	epPP	06 03	LZ	14	385.8		
	e	16 21	LR	21	145.8		
	eSPP	18 37	LZ	22	156.7		
	e	26 22	LZ	30	239.9		
	eL	55 29	LZ	46	483.6		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
24	GG-	eP	11 08 49.2	SZ	0.2	23.9	61	
		eS	08 52	ST	0.3	45.9		
24	GG-	eP	12 38 47.0	SZ	0.2	18.0	1.5	
		eS	39 08	SR	0.3	24.4		
24	12 40 51.4		13.1 N 124.7 E	Luzon, Philippines Islands				
		H= 5 KM	MAG 6.10	CGS				
24	OO-	eP	12 53 53.5	SZ	0.8	19.2	89.7	5.38
		eP	53 55	LZ	21	3073.1		
		ePP	57 15	LZ	24	2003.2		
		ePPP	59 25	LZ	22	1318.9		
		eSKS	13 04 40	LT	25	9999.9		
		ePS	05 50	LT	23	9999.9		
		e	17 05	LR	20	9999.9		
		eL	23 00	LR	999	9999.9		
24	GG-	eP	12 54 20	LZ	18	2935.8	94.6	
		eP	54 20	SZ	1.0	18.9		
		ePP	57 54	SZ	0.7	9.4		
		ePP	58 08	LZ	18	2657.2		
		eS	13 05 33	LR	999	9999.9		
		eL	29 55	LR	999	9999.9		
24	LZ-	e	13 01 01	SZ	1.2	71.3	166.9	
		eP†1	01 01	SZ	1.5	50.1		
		eP†1	01 03	LZ	999	9999.9		
		eP†2	02 14	LZ	999	9999.9		
		eP†2	02 15	SZ	1.4	106.0		
		e	05 28	SZ	2.6	187.3		
		ePP	05 51	LZ	999	9999.9		
		ePP	06 01	SZ	2.1	195.0		
		e	06 30	SZ	1.9	181.1		
		e	08 10	LZ	999	9999.9		
		e	09 29	LZ	999	9999.9		
		eSKKS	12 43	ST	2.6	291.0		
		eSKKS	12 44	LR	17	9999.9		
		eSKKKS	14 00	LT	999	9999.9		
		e	14 40	LZ	999	9999.9		
		e	16 16	LZ	999	9999.9		
		eSPP	19 32	LZ	999	9999.9		
		e	25 23	LT	999	9999.9		
		eSS	26 50	LT	999	9999.9		
				Avg.		5.41		
24	12 50 40.2		13.2 N 124.9 E	Luzon, Philippines Islands				
		H= 97 KM	MAG 5.00	CGS				
24	GG-	ePPP	13 09 22	LZ	18.	3557.2	94.7	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
		eSP	15 55	LZ	24.	2001.1		
		eLR	34 10	LZ	999	9999.9		
24	LZ-	eP†1	13 10 35.0	SZ	2.0	115.7	166.7	
		eL	14 13 40	LZ	999	9999.9		
24	GG-	eP	13 38 45.5	SZ	0.2	9.0	1.3	
		eS	39 03	ST	0.2	36.6		
24	GG-	eP	14 10 57.0	SZ	0.2	54.0		
		GG-	14 25 47.3	SZ	0.2	21.0		
24	14 48 47.*		24.6 S 179.5 W	SOUTH OF FIJI ISLANDS				
		H=406 KM	MAG 4.20	CGS				
24	GG-	eP	16 16 28.3	SZ	0.2	21.0	•1	
		eS	16 32	ST	0.2	91.5		
24	21 32 20.6		13.3 N 124.7 E	Luzon, Philippines Islands				
		H= 63 KM	MAG 4.90	CGS				
24	23 51 20.*		23.2 S 176.0 W	SOUTH OF FIJI ISLANDS				
		H= 33 KM	MAG 4.70	CGS				
25	LZ-	eL	00 38 00	LZ	26.	90.5	99.0	
25	00-	tP	02 49 34.3D	SZ	0.2	26.5	•4	
		eS	49 40	ST	0.3	35.7		
25	02 50 05.*		37.4 N 81.5 W	COALWOOD, WEST VIRGINIA				
		H= KM	MAG 4.50	CGS				
25	04 35 56.7		20.6 S 69.6 W	NORTHERN CHILE				
		H= 78 KM	MAG 4.50	CGS				
25	LZ-	eP	04 37 08.0	SZ	0.7	25.6	4.5	4.66
		e	37 55	LZ	13	100.4		
		eL	38 27	ST	0.7	20.1		
		eL	38 53	LZ	22	420.0		
25	LZ-	eP	04 55 23.2	SZ	1.7	37.6		
25	LZ-	eLQ	05 01 08	LT	15	174.9		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
25	LZ-	eLR	05 02 21	UT	20.	528.1		
25	07 35 41.*		51.4 N 178.8 E RAT ALEUTIAN ISLANDS	H= 33 KM MAG 4.70 CGS				
25	08 31 32.9		16.1 S 175.1 W TONGA ISLANDS	H=302 KM MAG 4.70 CGS				
25	08 32 59.		26.6 N 96.3 E BURMA	H= 80 KM MAG 5.40 CGS				
25	09 24 08.9		4.3 S 122.2 E CELEBES	H=610 KM MAG 6.20 CGS				
25	LZ-	eP*1	09 43 00.3	SZ	1.4	39.4	157.0	
		eP*1	43 01	LZ	13	130.7		
		eP*2	43 34	SZ	1.2	58.2		
		ePP*1	45 32	SZ	2.0	101.3		
		ePP*2	47 17	SZ	1.7	53.7		
		e	47 40	SZ	1.5	59.1		
		ePPP	50 04	LZ	20	86.0		
		eSKKS	53 03	ST	2.0	76.6		
		eSS	10 06 11	LR	20	529.4		
		e	11 19	LZ	18	143.8		
		eL	42 37	LZ	22	182.7		
25	GG-	eL	10 20 30	LZ	17	343.9	106.8	
25	11 45 54.1		38.9 N 71.0 E AFGHANISTAN USSR BORDER REG.	H= 85 KM MAG 4.80 CGS				
25	12 45 20.*		55.1 N 162.6 E NEAR EAST COAST OF KAMCHATKA	H= 79 KM MAG 4.50 CGS				
25	13 02 41.7		9.5 S 158.8 E SOLOMON ISLANDS	H= 38 KM MAG 5.40 CGS				
25	GG-	e	13 18 32	SZ	0.5	8.6		
25	LZ-	eP	14 07 57.8	SZ	0.3	14.5	2.1	
		eS	08 26	SR	0.5	26.4		
25	LZ-	eL	16 59 55	LZ	26	187.7		
25	19 35 16.4		5.2 S 125.2 E BANDA SEA	H=430 KM MAG 5.10 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
25	LZ-	eP	20 31 47.8	SZ	0.4	4.8		
25	LZ-	e	20 31 52	LZ	18	293.7		
25	LZ-	eL	20 32 50	LZ	999	9999.9		
25	LZ-	tP	22 36 48.4D	SZ	0.3	9999.9	1.8	
		eS	37 13	ST	0.4	9999.9		
26	00 59 04.5		34.7 N 25.9 E CRETE	H= 80 KM				
26	GG-	eP	01 03 16.0	SZ	0.6	9.5	18.5	4.23
26	LZ-	e	03 42 22	LZ	22.	115.7		
26	LZ-	eL	04 02 47	LZ	29	226.2		
26	04 48 55.*		33.1 N 49.0 E WESTERN IRAN	H= 33 KM MAG 4.70 CGS				
26	04 50 33.*		6.8 N 73.0 W NORTHERN COLOMBIA	H=167 KM MAG 3.90 CGS				
26	GG-	eL	09 01 25	ST	0.5	13.2		
26	LZ-	eP	09 31 39.9	SZ	999.9	9999.9	2.1	
		eS	32 07	ST	0.6	9999.9		
26	10 21 07.2		24.9 N 122.0 E TAIWAN REGION	H= 33 KM MAG 5.40 CGS				
26	GG-	eP	10 33 35.5	SZ	1.0	53.3	83.7	5.63
		eP	33 36	LZ	12	703.8		
		e	43 54	LZ	25	504.3		
		e	48 40	SZ	0.7	7.5		
		e	49 23	LZ	22	493.0		
		e	53 23	LZ	27	1265.7		
		eL	11 03 00	LZ	36	3175.0		
26	LZ-	eP*1	10 41 13.1	SZ	1.1	34.9	166.9	
		eP*1	41 16	LZ	12	274.5		
		e	41 19	SZ	1.5	117.5		
		eP*2	42 22	SZ	1.4	53.7		
		e	43 12	LZ	16	195.8		
		e	45 32	SZ	1.6	18.4		
		ePP	46 07	SZ	1.9	51.9		
		ePP	46 20	LZ	22	213.2		
		ePPP	49 54	LZ	14	290.9		
		ePCPP*	50 52	SZ	2.0	65.0		
		e	53 21	LR	18	282.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
26	e		56 52	LR	22.	282.4		
	e		11 03 05	LR	25	260.5		
	e		13 00	LR	24	401.4		
	eL		41 22	LR	31	9999.9		
	00-	eS	10 43 10	LR	30	1171.7	78.1	
	eSS		48 05	LT	22	2204.0		
	e		49 10	LT	30	2735.5		
	eSSS		51 45	LT	18	9999.9		
	eL		58 50	LZ	42	6974.4		
26	eL	12 36 10	LZ	35.	470.1			
	GG-	eP	14 13 49.2	SZ	0.3	13.9	.1	
	eS		13 54	ST	0.4	53.4		
26	14 19 47.6	24.9 N 122.0 E	TAIWAN REGION					
		H= 33 KM	MAG 5.20	CGS				
26	00- eLQ	15 08 45	LR	19.	489.8			
26	00- eLR	15 09 30	LZ	17	1202.3			
26	GG- eP	16 34 09.3	SZ	0.4	17.9	4.8		
	eS	34 56	ST	0.5	48.0			
26	16 36 50.6	58.7 N 152.0 W	KODIAK ISLAND REGION					
		H= 33 KM	MAG 5.40	CGS				
26	LZ- eP	17 11 13.3	SZ	0.5	7.3			
26	LZ- eL	17 12 40	SR	0.7	7.5			
26	LZ- eP	18 32 41.8	SZ	0.4	16.5			
26	LZ- eL	18 34 10	ST	0.6	3.3			
27	03 37 03.*	65.3 N 151.4 W	ALASKA					
		H= 33 KM	MAG 4.20	CGS				
27	05 36 01.5	45.2 N 150.9 E	KURILE ISLANDS					
		H= 33 KM	MAG 5.10	CGS				
27	GG- eP	05 48 03.1	SZ	0.8	34.6	79.2	5.36	
27	GG- eP	06 36 45.3	SZ	0.2	34.1			
27	07 47 07.6	62.6 N 151.5 W	CENTRAL ALASKA					
		H= 113 KM	MAG 5.40	CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
27	10 55 11.*	13.4 N 88.7 W	EL SALVADOR					
		H= 33 KM	MAG 4.10	CGS				
27	11 03 48.	36.3 N 70.7 E	HINDU KUSH REGION					
		H= 219 KM	MAG 5.20	CGS				
27	13 47 42.7	37.9 N 138.3 E	NEAR W. COAST HONSHU, JAPAN					
		H= 36 KM	MAG 5.50	CGS				
27	00- eP	13 59 07.0	SZ	0.7	63.2	72.5	5.75	
	e	59 57	SZ	1.0	80.0			
	eLQ	14 25 10	LR	27	1096.3			
	eLR	32 50	LZ	16	1953.6			
27	GG- eP	13 59 56.0	SZ	0.9	127.1	81.1	5.88	
	e	14 00 46	SZ	1.2	142.4			
	eL	16 08	LZ	17	293.5			
	AVG.							5.81
27	14 27 56.*	7.7 N 36.9 W	CENTRAL MID ATLANTIC RIDGE					
		H= 33 KM	MAG 4.70	CGS				
27	18 44 27.1	29.7 N 42.0 W	NORTH ATLANTIC RIDGE					
		H= 33 KM	MAG 4.70	CGS				
27	LZ- eP	18 53 38.6	SZ	1.5	26.4	52.3	4.98	
27	LZ- eP	18 45 47.8	SZ	1.2	16.7			
27	20 27 06.*	6. S 150.4 E	NEW BRITAIN REGION					
		H= 37 KM						
27	LZ- eP	20 50 22.5	SZ	0.5	20.8			
27	LZ- eL	20 51 44	ST	0.7	10.9			
27	LZ- eP	21 35 34.3	SZ	0.6	16.7			
27	23 50 38.4	15.8 N 89.4 W	GUATEMALA					
		H= 33 KM	MAG 4.00	CGS				
28	LZ- eL	01 07 53	LZ	20.	56.4			
28	LZ- eP	10 52 47.9	SZ	0.5	9.8			
28	11 00 23.*	23.3 S 177.6 W	SOUTH OF FIJI ISLANDS					
		H= 157 KM	MAG 3.50	CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	LZ-	e	12 43 56	SZ	0.7	264			28	LZ-	eP eS	19 42 29.2 43 30	SZ ST	0.7 1.0	15.9 19.3		5.0
28	12 51 07.1	35.5 N 140.7 E NEAR E. COAST HONSHU, JAPAN H= 72 KM MAG 4.70 CGS							29	03 24 28.8	3.6 S 80.6 W PERU ECUADOR BORDER REGION H= 33 KM MAG 4.80 CGS						
28	LZ-	eP*1 eL	13 10 44.6 14 04 13	SZ LZ	1.2 25	40.2 111.8	147.7		29	LZ-	eP eP e eLQ eLR	03 28 34.6 28 36 32 02 33 30 35 11	SZ LZ LR LT LZ	1.1 27 18 999 18	68.8 95.6 235.2 9999.9 9999.9	17.3	4.73
28	LZ-	e	12 55 28	SZ	1.0	5.5			29	06 20 10.*	19.4 S 169.2 E NEW HEBRIDES ISLANDS H=324 KM MAG 4.90 CGS						
28	LZ-	e	13 03 28	LZ	17	114.1			29	07 20 46.*	16.7 N 99.0 W NEAR COAST GUERRERO, MEXICO H= 33 KM MAG 4.10 CGS						
28	16 41 33.4	7.7 S 71.2 W WESTERN BRAZIL H=626 KM MAG 5.40 CGS							29	09 11 05.8	6.8 N 73.2 W NORTHERN COLOMBIA H=171 KM MAG 4.90 CGS						
28	LZ-	eP eP eLQ eL eL eLR	16 43 43.6 43 44 45 11 45 21 48 43 48 44	SZ LZ LR SZ SZ LZ	0.7 18 999 0.7 1.1 15	9999.9 381.1 9999.9 9999.9 129.7 2846.6	8.9		29	LZ-	eP ePP eS e eL eL	09 16 00.6 16 35 20 04 20 52 21 05 23 34	SZ SZ LR SR LT ST	0.6 0.9 19 1.1 999 1.2	76.1 60.1 154.1 16.4 9999.9 96.8	23.4	5.43
28	16 49 30.3	8. S 71.4 W WESTERN BRAZIL H=655 KM MAG 5.60 CGS							29	12 26 29.6	4.6 N 77.6 W NEAR WEST COAST OF COLOMBIA H= 44 KM MAG 4.30 CGS						
28	LZ-	eP eL eL	16 51 40.0 53 17 53 19	SZ LZ SZ	0.9 14 999.9	9999.9 3364.1 9999.9	8.7		29	LZ-	eP eS e eL eL	12 31 25.6 35 40 38 41 38 41	SZ LT SR LZ	1.0 22 1.4 26	17.7 9999.9 39.6 9999.9	22.6	4.44
28	GG-	eP	17 01 30.0	SZ	1.2	39.2	91.3		29	15 52 18.4	5.5 S 146.2 E EAST NEW GUINEA REGION H= 48 KM MAG 5.00 CGS						
28	00-	e	17 00 40	LZ	15.	368.6			29	16 54 25.8	55.5 S 26.0 W SOUTH SANDWICH ISLANDS REG. H= 33 KM MAG 5.60 CGS						
28	LZ-	e	17 03 02	ST	2.4	541.2											
28	00-	e	17 05 08	LZ	20	561.5											
28	00-	e	17 08 00	LT	18	816.8											
28	00-	e	17 09 05	LR	30	654.1											
28	00-	e	17 10 30	LR	35	1672.4											
28	00-	e	17 14 10	LR	23	636.7											
28	LZ-	eP	17 27 33.0	SZ	1.5	8.1											
28	19 35 48.*	19. N 64.6 W VIRGIN ISLANDS H= 33 KM															
28	LZ-	eL	19 54 04	LZ	29.	77.2	35.2										

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG	
29	LZ-	eP	17 03 25.6	SZ	1.0	9999.9	50.8		30	04 11 42.9	71.8 N	2.7 W	JAN MAYEN ISLAND REGION					
		e	03 39	SZ	0.9	98.1				H= 33 KM	MAG 4.50 CGS							
		e	05 30	SZ	1.7	32.2			30	00- eP	04 14 40.0	SZ	0.5	7.1	12.0	5.03		
		e	08 51	SZ	2.0	16.8				eP	14 41	LZ	13	233.4				
		eS	10 46	LT	15	210.1				eL	16 20	LZ	24	1489.5				
		eL	21 47	LZ	20	9999.9				eL	16 39	ST	0.7	5.6				
29	GG-	eL	17 46 58	LZ	35	239.0	109.3		30	GG- eP	04 16 50.0	SZ	1.2	39.7	23.1	4.76		
29			17 08 25.7	4.8 S	79.3 W	PERU ECUADOR BORDER REGION				eL	22 36	LZ	35	657.4				
				H= 81 KM	MAG 4.60 CGS									Avg.	4.89			
29	LZ-	eP	17 12 04.0	SZ	1.1	15.0	15.6	4.15	30	LZ- tP	05 56 41.8D	SZ	0.4	9999.9				
29	00- eL		17 52 35	LZ	35	276.4	94.2		30	06 25 15.7	13.8 N	120.7 E	MINDORO, PHILIPPINE ISLANDS					
29	LZ- e		17 12 08	SZ	1.0	49.6				H= 203 KM	MAG 4.90 CGS							
29	LZ- e		17 12 39	SZ	1.4	26.2			30	09 46 56.*	18.3 N	69.3 W	DOMINICAN REPUBLIC REGION					
29	LZ- e		17 15 09	SZ	1.9	46.2				H= 33 KM								
29	LZ- e		17 15 40	SR	1.2	23.0			30	10 10 06.1	4.7 N	126.8 E	TALAUD ISLANDS					
29			20 56 39.2	31. N	141.2 E	SOUTH OF HONSHU, JAPAN				H= 52 KM								
29	00- eP		21 08 45.0	SZ	0.8	11.2	79.8	4.83	30	GG- eL	11 12 45	LZ	20.	155.3	102.6			
		eLQ	35 20	LR	40	222.4												
		eLR	43 10	LZ	28	169.8			30	12 24 09.*	6.2 N	93.7 E	NICOBAR ISLANDS REGION					
29	LZ- eP*1		21 16 24.2	SZ	1.5	15.7	149.2			H= 33 KM								
		eP*2	16 28	SZ	0.9	18.9			30	12 27 38.6	6.8 N	94.8 E	NICOBAR ISLANDS REGION					
29	LZ- eL		22 08 12	LZ	24	87.1				H= 33 KM	MAG 5.70 CGS							
29	GG- eL		21 41 05	LZ	25	134.7	88.2		30									
29			23 07 42.*	80.2 N	4.1 W	NORTH OF SVALBARD			30									
				H= 33 KM	MAG 4.30 CGS				30									
30	00 15 57.*		38.9 S	72.4 W	CENTRAL CHILE				30	GG- eP	12 39 49.5	SZ	0.8	54.7	80.7	5.55		
				H= 87 KM	MAG 4.50 CGS					eP	39 54	LZ	15	831.3				
30	LZ- eP		00 20 58.0	SZ	1.2	26.7	22.8	4.47	30	eL	13 00 10	LZ	28	2717.3				
		eP	20 58	LZ	17	448.1				e	01 40	LZ	33	5133.5				
		e	21 05	SZ	1.5	110.3			30	LZ- eP*1	12 47 41.8	SZ	1.3	31.4	161.1			
		eS	25 15	LR	999	9999.9				eP*1	47 45	LZ	14	696.9				
		eL	27 38	LZ	29	9999.9				eP*2	48 29	SZ	1.0	72.6				
30	GG- e		00 45 25	LZ	15	222.5	114.8			ePP	52 20	SZ	2.0	143.5				
		eL	01 15 45	LZ	20	155.3				eSKKS	58 57	SR	2.4	107.3				
30	00- eL		01 20 50	LT	20.	103.1				eL	13 47 50	LZ	999	9999.9				
30									30	GG- eP	15 28 58.5	SZ	0.2	18.8				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30	16	07	30.*	23.8 S	179.3 E	SOUTH OF FIJI ISLANDS		
				H=481 KM	MAG 4.80	CGS		
30	17	59	07.7	6.4 S	150.9 E	NEW BRITAIN REGION		
				H= 37 KM	MAG 4.40	CGS		
30	18	53	11.4	24. S	179.9 E	SOUTH OF FIJI ISLANDS		
				H=550 KM	MAG 5.50	CGS		
30	22	40	46.	53.7 N	167.7 W	FOX ALEUTIAN ISLANDS		
				H= 69 KM	MAG 5.00	CGS		

December 1964



SEISMOLOGICAL BULLETIN
WEST GERMANY, NORWAY, BOLIVIA

THE GEOTECHNICAL CORPORATION
3401 SHILOH ROAD
GARLAND, TEXAS



SEISMOLOGICAL BULLETIN

GRAFENBERG, WEST GERMANY
OSLO, NORWAY
LA PAZ, BOLIVIA

The Geotechnical Corporation wishes to acknowledge the cooperation of the following scientific organizations in the collection and production of the data in this bulletin.

Bundesanstalt fur Bodenforschung, Hannover, West Germany
(Professor Hans Closs, Director)

Jordskel, University of Bergen, Bergen, Norway
(Professor A. Kvale, Director)

Observatorio San Calixto, La Paz, Bolivia (Father Ramon Cabre, S.J.)

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SEISMOLOGICAL BULLETIN

 GRAFENBERG, WEST GERMANY
 OSLO, NORWAY
 LA PAZ, BOLIVIA

 1. INTRODUCTION

1.1 This bulletin contains seismological data on earthquake phases recorded at three mobile seismological stations being operated by The Geotechnical Corporation. The bulletin is intended to be an aid to interested observers in determining the extent of the earthquake data contained in the records from the three teams.

1.2 The bulletin contains the following:

- a. Data on all of the phases that have been associated with epicenters reported by the U. S. Coast and Geodetic Survey (USC&GS);
- b. Data on the epicenters listed in the bulletin - as reported by the USC&GS;
- c. Arrival time, period, amplitude, and distance for phases not associated with USC&GS epicenters.

1.3 All phases are listed in chronological order, except that unassociated phases are not mixed with a sequence of associated phases. In such cases, the unassociated phases are listed immediately following the associated phases.

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2. INSTRUMENTATION

2.1 Instrumentation at the Grafenberg, West Germany (GG-GR), and Oslo, Norway (OO-NW), sites consists of a short-period vertical Benioff seismometer array. A short-period vertical Johnson-Matheson seismometer array is in operation at La Paz, Bolivia (LZ-BV). Each site is also equipped with a three-component Sprengnether long-period seismograph system. Both systems use phototube amplifiers. The response characteristics of these systems are shown in figures 1, 2, and 3.

2.2 All data are recorded by 35-mm Film Recorders, Geotech Model 1301A, 14-channel Magnetic-Tape Recorders, Ampex Model 314, and 16-mm film Developcorders, Geotech Model 4000C.

2.3 Precision Timing Systems, Geotech Model 5400 or 5400A, are used for primary timing. Chronometers are used for secondary timing. WWV, the National Bureau of Standards' radio station at Beltsville, Maryland, is used for the time standard at LZ-BV. GG-GR and OO-NW use Radio Potsdam. The accuracy of the time program from WWV agrees with U. S. Naval Observatory time.

2.4 Each system is calibrated at least once every 24 hours. In the short-period system calibration, an electromagnetic (EM) calibrator is used to determine the magnification as a function of frequency and a weight-lift calibration is used to verify the EM magnification at 1 cps. In the long-period systems, magnification is determined as a function of frequency using EM calibrators. No method of verification is used. In the EM method of calibration, the seismometer mass is driven by a known sinusoidal force and the magnification is calculated using the relationships between the sinusoidal force and the recorded amplitude.

3. INTERPRETATION OF COLUMN TITLES

The column titles appearing in this bulletin are defined as follows.

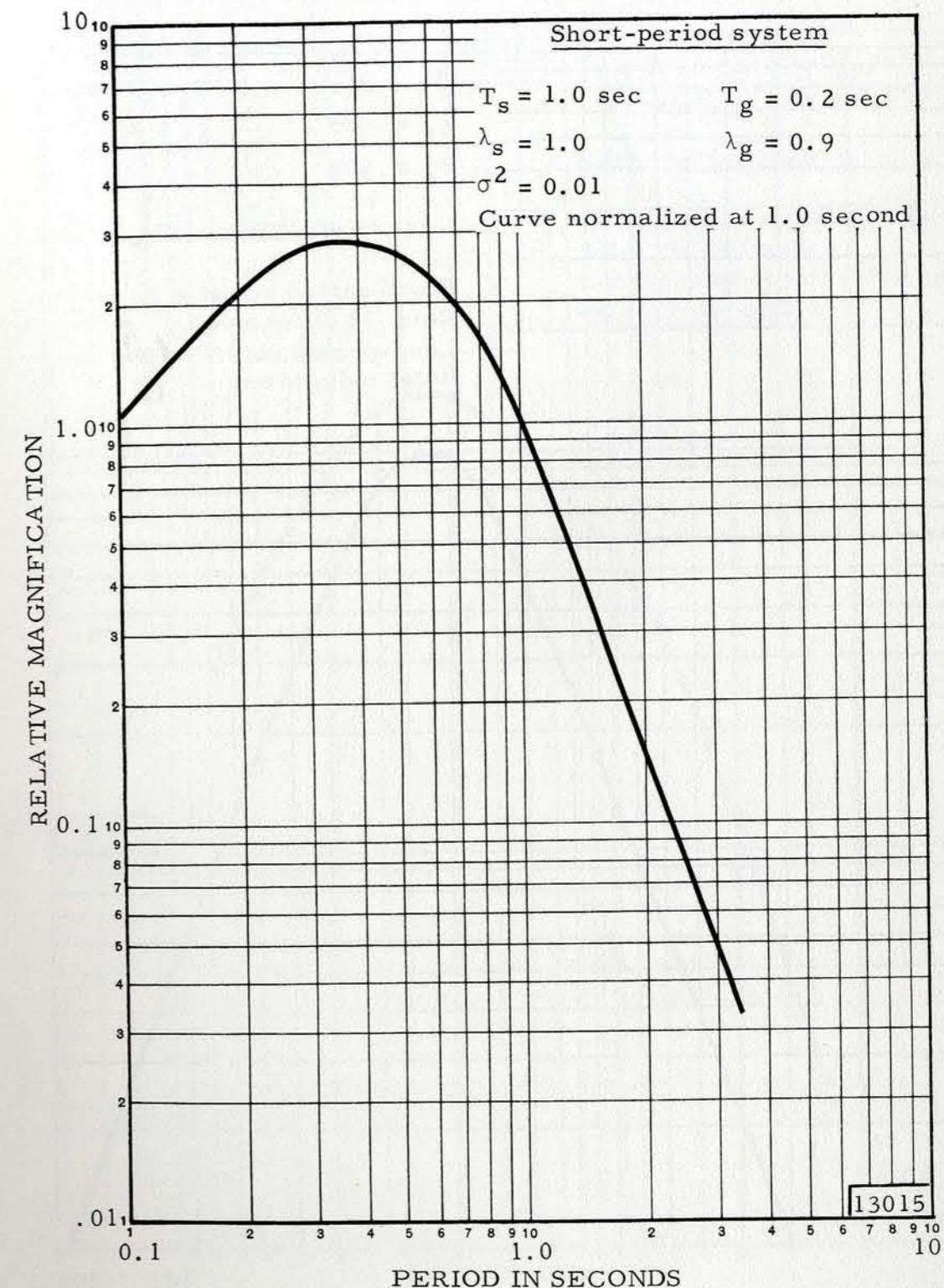


Figure 1. Frequency response of the Benioff short-period seismograph system

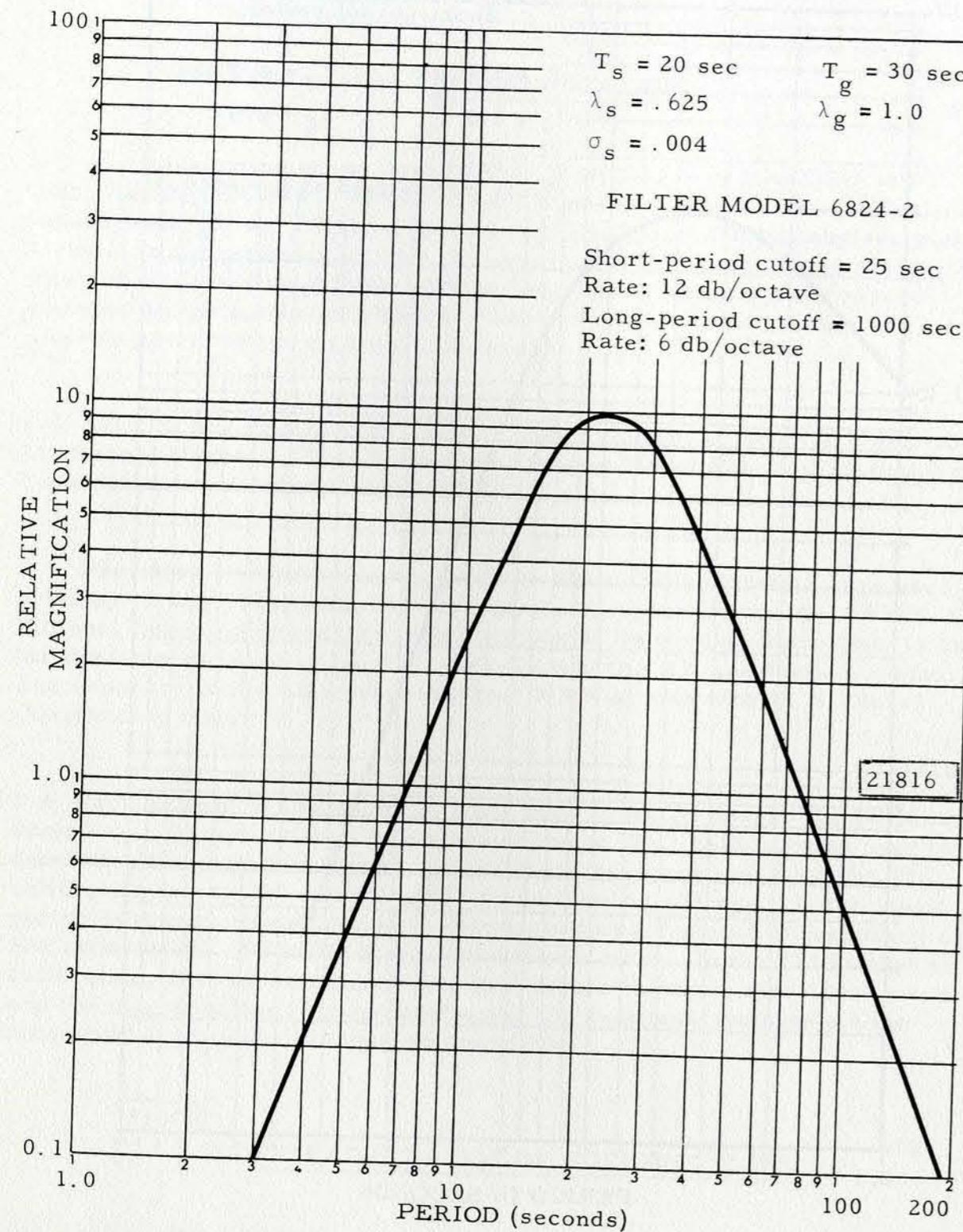


Figure 2. Frequency response of the Sprengnether long-period seismograph system

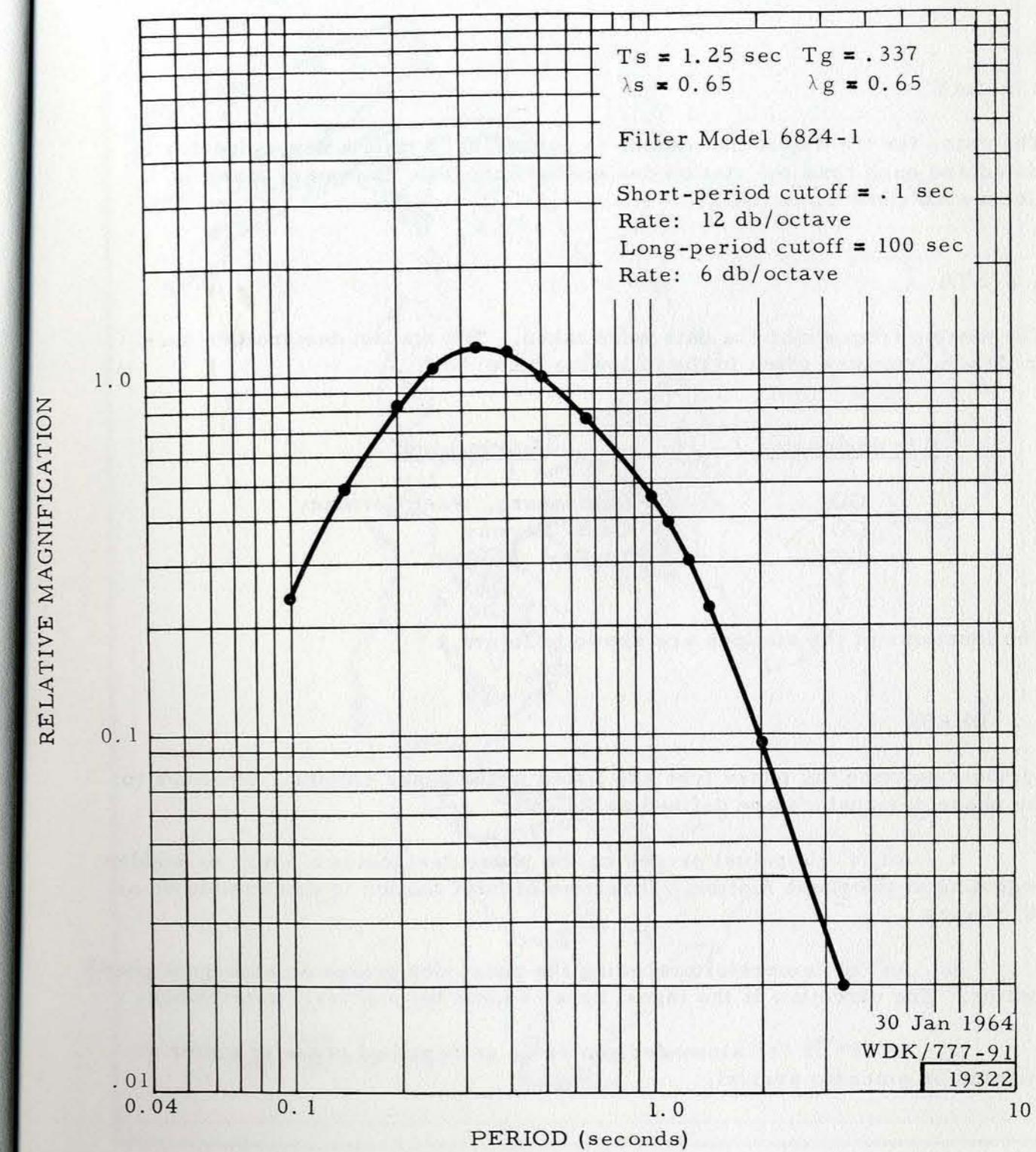


Figure 3. Frequency response of the Johnson-Matheson seismograph system

3.1 DAY

The date, for the day of the month, is printed each time a new epicenter is listed and each time the station designator changes. Dates are given in Greenwich Civil Time (GCT).

3.2 STA

The station from which the data were taken. The station designators used in this bulletin are given in the following table:

<u>Site designator</u>	<u>Site location</u>
GG-	Grafenberg, West Germany
OO-	Oslo, Norway
LZ-	La Paz, Bolivia

The locations of the stations are shown in figure 4.

3.3 PHASE

Symbols defining the phase type are listed in the phase column. Prefixes to the phase designators are defined as follows:

- a. An "i" (impetus) preceding the phase designates a sharp or sudden beginning of the phase motion. Direction of first motion is discernible on all "i" phases.
- b. An "e" (emersio) preceding the phase designates an emergent phase motion. The direction of the initial break cannot be positively determined.
- c. An "i" or "e" alone designates an unidentified phase of either an impetus or emersio arrival.

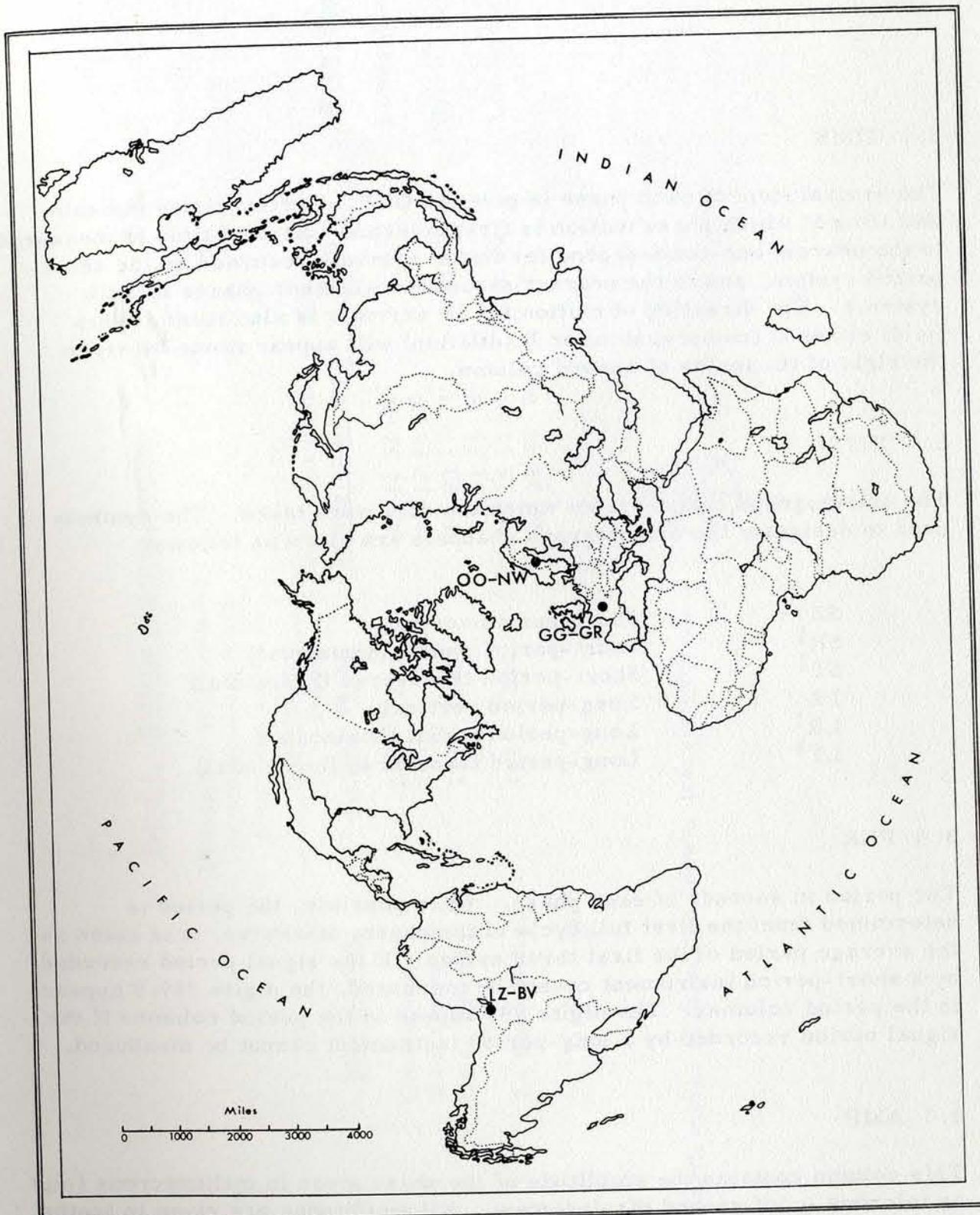


Figure 4. Bulletin sites

3.4 TIME

The arrival time of each phase is given in GCT. Arrival times indicate that time at which phase motion is first detected. Arrival time is measured to the nearest one-tenth second for initial arrivals recorded by the short-period system, and to the nearest second for all other phases on both systems. The direction of motion for iP arrivals is also noted in this field; either C (compression) or D (dilation) will appear immediately to the right of the tenths of second column.

3.5 INST

The seismograph channel from which the data were taken. The symbols used to designate the seismograph channels are given as follows:

SZ	Short-period vertical
SR ¹	Short-period radial (horizontal)
ST ¹	Short-period transverse (horizontal)
LZ	Long-period vertical
LR ¹	Long-period radial (horizontal)
LT ¹	Long-period transverse (horizontal)

3.6 PER

The period in seconds of each phase. When possible, the period is determined from the first full cycle of the phase; otherwise, it is taken as the average period of the first three cycles. If the signal period recorded by a short-period instrument cannot be measured, the digits 999.9 appear in the period columns. The digits 999 appear in the period columns if the signal period recorded by a long-period instrument cannot be measured.

3.7 AMP

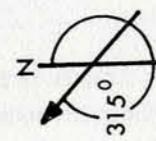
This column contains the amplitude of the phase given in millimicrons ($\text{m}\mu$) or microns (μ) of ground displacement. All amplitudes are given in tenths

¹Table 1 gives the instrument orientation of the horizontal seismometers.

Table 1. Bulletin site information

Site designator	Site location	Horizontal seismometer orientation (azimuth from true north in degrees ¹)		Site coordinates in deg, min, sec	Elevation (km)	Rock type
		Radial	verse			
GG-GR	Grafenberg, West Germany	140	230	49 41 32 N 11 12 55 E	0.53	Limestone
OO-NW	Oslo, Norway	138	228	61 03 17 N 10 51 58 E	0.56	Glacial drift
LZ-BV	La Paz, Bolivia	141	231	16 15 31 S 68 28 47 W	3.99	Limestone

¹When earth moves in direction shown, trace moves up.



of units. All amplitudes are corrected for instrument response and are reported as one-half the peak-to-peak value. If the amplitude is reported in microns, a "U" appears in the column to the right of the tenths column. The column is left blank if the amplitude is reported in millimicrons. Amplitudes are measured from the largest pulse within the first 3 or 4 cycles when possible. The digits 9999.9 appearing in the amplitude columns indicate either a "clipped" signal or a trace amplitude too large to measure. When amplitudes are not calculated because of insufficient calibration data, the amplitude columns are left blank.

3.8 DIST

This is the distance from the recording station to the epicenter. All reported distances are calculated based on geocentric coordinates. Distance is given to the nearest one-tenth of a degree. Distances computed for unassociated data are determined from the S-P intervals. In some instances, surface groups are recorded which have traveled the major arc from the epicenter to the station. In such cases, the major arc distance is given.

3.9 MAG

The magnitudes provided are body wave magnitudes, m_b , as defined by Gutenberg and Richter². They are determined only from the short-period vertical component of the P phase (initial arrival). The following equation is used:

$$m_b = \log_{10} (A/T) + Q$$

where:

m_b = body wave magnitude

A = one-half p-p earth amplitude of P phase in microns

T = period of P phase in seconds

Q = depth-distance factor for PZ given by Gutenberg and Richter², for distances greater than 16°

Magnitude computations for distances less than 16° are based on extensions of the Q tables. Points from 10 to 16° were read from a curve in the Gutenberg-Richter paper, and an inverse cube relationship was used to extrapolate from 2 to 10°.

The average magnitude (sum of station magnitudes/number of stations) is listed on the last line of an epicenter printout.

4. INTERPRETATION OF U. S. COAST AND GEODETIC SURVEY DATA

The epicenter data reported by the USC&GS precede each list of associated phases. This information appears as follows:

Line 1 (from left to right)

First group: Day of the month

Second group: Origin time of the event

Third group: Geographic coordinates of the epicenter

Fourth group: Geographic description.

NOTE

An asterisk (*) following the origin time indicates epicenters believed accurate to 1/2° in latitude and longitude and to 50 km in depth.

Line 2 (from left to right)

First group: Depth (h) of the hypocenter in kilometers

Second group: Magnitude (MAG) as determined by Pasadena (PAS), Berkeley (BRK), Palisades (PAL), or USC&GS (CGS).

²Gutenberg, B., and Richter, C. F., 1956, Magnitude and energy of earthquakes: Ann. Geofis., v. 9, p. 1-15

DAY	STA	PHASE	TIME	INST	PER	AMF	
1		02 33 20.*	7° S 75°5 W	NORTHERN PERU			
			H=254 KM	MAG 3.60	CGS		
1		04 53 23.9	18.9 S 175.8 W	TONGA ISLANDS			
			H=232 KM	MAG 5.50	CGS		
1	LZ-	ePP	05 10 55	SZ	1.8	68.3	100.4
1	GG-	eP*1	05 12 41.0	SZ	1.5	58.3	148.8
		eP*2	12 46	SZ	1.3	254.3	
		epP*2	13 49	SZ	1.0	33.0	
1		07 39 50.2	79.5 N 3.9 E	GREENLAND SEA			
			H= 33 KM	MAG 4.70	CGS		
1	OO-	eP	07 44 06.5	SZ	1.0	38.1	18.7 4.58
		eS	47 20	LT	35	735.2	
		eLR	49 05	LZ	24	691.4	
1		10 11 06.*	14.2 S 113.4 W	N. EASTER ISLAND CORDILLERA			
			H= 33 KM	MAG 4.30	CGS		
1	GG-	eP	10 17 11.7	SZ	0.2	34.6	
1		11 45 21.*	10.6 N 93.4 E	ANDAMAN ISLANDS REGION			
			H= 33 KM	MAG 4.70	CGS		
1		11 47 02.4	30.9 S 177.9 W	KERMADEC ISLANDS REGION			
			H= 33 KM	MAG 4.90	CGS		
1		13 13 17.*	13.4 N 119.5 E	PHILIPPINE ISLANDS REGION			
			H=179 KM	MAG 5.00	CGS		
1		15 28 21.*	37.8 N 117.8 W	CALIFORNIA NEVADA BORDER			
			H= 33 KM	MAG 3.70	CGS		
2		01 18 59.*	19.6 N 120.8 E	PHILIPPINE ISLANDS REGION			
			H= 98 KM	MAG 4.60	CGS		
2	LZ-	eP	07 08 39.9	SZ	0.3	4.3	

NOTE

MAG. (CGS) is m_b of Gutenberg and Richter from the P phase only. The magnitude quoted is an average value determined from data forwarded by cooperating Standard stations and other observatories.

5. REMARKS

The Geotechnical Corporation routinely receives and preprocesses data collected from three overseas field stations. Information on background levels, magnification levels, operational procedures, available records, and other data can be provided to interested organizations. Requests for such information should be made to the attention of:

THE GEOTECHNICAL CORPORATION
3401 Shiloh Road
Garland, Texas 75041

Attn: Mr. J. M. Whalen

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	07 58 27*		77°5 N 18°5 E	SVALBARD REGION				
			H= 33 KM					
2	08 17 41.9		22.4 S 70.3 W	NEAR COAST OF NORTHERN CHILE				
			H= 79 KM	MAG 4.30 CGS				
2	LZ- eP e		08 19 17.2 20 11	SZ ST	0.8 0.8	14.2 24.2	6.4	4.49
2	08 20 45.6		30.6 N 42.0 W	NORTH ATLANTIC RIDGE				
			H= 33 KM	MAG 5.20 CGS				
2	GG- eP eSCP eL		08 28 51.0 34 30 41 16	SZ LZ LZ	2.0 33 35	162.7 370.9 1660.6	43.9	5.41
2	LZ- eP eP eS eLQ eLR		08 30 02.0 30 08 37 34 44 32 47 37	SZ LZ LR LR LZ	2.2 13 20 32 31	352.9 154.2 391.9 9999.9 9999.9	53.1	5.94
2	00- eL		08 42 30	LZ	27	1274.8	45.9	
					Avg.	5.67		
2	08 21 43.3		29.5 N 81.3 E	NEPAL				
			H= 23 KM	MAG 5.10 CGS				
2	LZ- eP ¹ eP ²		08 41 31.0 41 34	SZ SZ	1.0 1.0	9.0 29.0	149.3	
2	LZ- eP eS		08 30 30.0 31 35	SZ ST	0.4 0.7	20.5 5.3	5.5	
2	09 17 51.*		37.5 N 117.9 W	CALIFORNIA NEVADA BORDER				
			H= 33 KM	MAG 3.90 CGS				
2	09 34 26.*		60.4 N 153.9 W	SOUTHERN ALASKA				
			H= 33 KM					
2	10 08 39.6		9.1 S 158.0 E	SOLOMON ISLANDS				
			H= 42 KM	MAG 5.60 CGS				
2	LZ- eP ¹		10 27 44.0	SZ	1.0	5.4	127.5	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
2	11 33 36.6		21.9 S 175.2 W	TONGA ISLANDS				
			H= 33 KM	MAG 4.60 CGS				
2	12 31 45.*		38.9 N 70.6 E	AFGHANISTAN USSR BORDER REG.				
			H= 33 KM	MAG 4.70 CGS				
2	13 18 29.		53.8 N 165.4 W	FOX ALEUTIAN ISLANDS				
			H= 35 KM	MAG 5.00 CGS				
2	LZ- ePD e		13 32 51 32 55	SZ SZ	1.0 0.8	6.9 16.4	107.0	
2	00- eL		13 52 00	LZ	25	477.0	65.5	
2	14 27 15.4		49.1 S 121.4 E	SOUTH OF AUSTRALIA				
			H= 16 KM					
2	15 20 11.4		19.6 S 177.8 W	FIJI ISLANDS REGION				
			H= 396 KM	MAG 4.30 CGS				
2	GG- e eL		16 09 43 20 52	LZ LZ	18. 20	487.1 604.4	149.1	
2	22 03 00.*		44.4 N 149.4 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.40 CGS				
3	LZ- eP eS		01 15 46.8 16 19	SZ ST	0.4 0.4	16.4 4.3	2.5	
3	02 00 29.*		13.8 N 89.0 W	EL SALVADOR				
			H= 41 KM	MAG 4.20 CGS				
3	LZ- eP		02 47 32.3	SZ	0.6	8.4		
3	LZ- eL		02 49 50	ST	0.8	8.0		
3	LZ- eP		03 26 59.0	SZ	0.6	8.4		
3	03 50 01.2		15. S 66.8 E	MID INDIAN RISE				
			H= 46 KM	MAG 6.10 CGS				
3	LZ- eP ¹ eSPP		04 09 02.4 22 21	SZ SZ	1.8 2.4	103.2 78.4	126.0	
3	00- eS		04 13 40	LR	15	900.5	87.8	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eSS eLR		19 15 34 50	LR LZ	20. 30	1283.7 849.3		
3	08 16 55.*		6.1 S 150.6 E	NEW BRITAIN REGION				
			H= 35 KM	MAG 4.70	CGS			
3	08 28 38.5		19.4 N 155.5 W	HAWAII REGION				
			H= 24 KM	MAG 4.70	CGS			
3	09 44 16.*		24.4 N 109.2 W	GULF OF CALIFORNIA				
			H= 33 KM	MAG 4.00	CGS			
3	GG- eP		10 14 04.5	SZ	0.2	22.7		
3	GG- eS		10 14 37	SR	0.4	39.4		
3	14 51 10.9		12.3 N 88.5 W	OFF COAST OF CENTRAL AMERICA				
			H= 33 KM	MAG 4.10	CGS			
3	17 10 59.*		19.5 S 69.2 W	NORTHERN CHILE				
			H= 180 KM	MAG 4.20	CGS			
3	LZ- eP		17 11 55.0	SZ	0.4	47.2	3.3	4.87
3	22 32 38.*		36.6 N 55.6 E	IRAN				
			H= 33 KM	MAG 4.70	CGS			
4	00 38 54.7		15.4 S 173.9 W	TONGA ISLANDS				
			H= 33 KM	MAG 4.50	CGS			
4	01 54 49.3		7.8 N 102.7 W	OFF COAST OF MEXICO				
			H= 33 KM	MAG 4.90	CGS			
4	LZ- eP		02 02 46.5	SZ	1.3	37.7	41.4	5.00
4	07 33 32.*		18.7 N 105.1 W	OFF COAST OF JALISCO, MEXICO				
			H= 33 KM	MAG 4.00	CGS			
4	07 43 47.*		77.3 N 6.4 E	SVALBARD REGION				
			H= 33 KM	MAG 4.90	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
4	09 21 14.2		21.3 S 67.4 W	CHILE BOLIVIA BORDER REGION				
			H= 60 KM	MAG 4.70	CGS			
4	LZ- eP		09 22 42.4	SZ	0.5	69.3	5.1	5.31
4	11 39 58.*		35.6 N 118.4 W	CENTRAL CALIFORNIA				
			H= 14 KM	MAG 3.13	CGS			
4	GG- eP		13 30 20.5	SZ	0.8	43.0		
4	GG- eP		13 30 20.7	SZ	1.0	72.7		
4	GG- eL		13 49 05	LZ	24	131.0		
4	GG- eP		15 02 50.0	SZ	0.2	18.8		
4	GG- eL		15 34 10	LZ	17	691.9		
4	GG- eL		15 34 14	LZ	30	361.3		
4	15 48 43.4		6.4 S 150.7 E	NEW BRITAIN REGION				
			H= 19 KM	MAG 5.20	CGS			
4	LZ- e eSKP		16 08 24 11 39	SZ SZ	1.4 2.0	26.6 37.6	135.2	
4	21 11 40.		5.5 S 151.2 E	NEW BRITAIN REGION				
			H= 101 KM	MAG 5.20	CGS			
5	02 16 13.*		85.7 N 88.7 E	NORTH OF SEVERNAYA ZEMLYA				
			H= 33 KM	MAG 4.50	CGS			
5	GG- eP		04 02 10.9	SZ	1.5	155.6		
5	GG- eL		04 32 45	LZ	27	560.7		
5	LZ- eP		04 48 43.6	SZ	1.0	5.4		
5	LZ- eL		04 50 26	SR	1.1	11.5		
5	04 57 06.6		77.4 N 6.0 E	SVALBARD REGION				
			H= 33 KM	MAG 5.30	CGS			
5	05 14 39.6		20.9 S 178.5 W	FIJI ISLANDS REGION				
			H= 529 KM	MAG 5.20	CGS			
5	05 18 06.7		19.1 S 169.0 E	NEW HEBRIDES ISLANDS				
			H= 160 KM	MAG 4.50	CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
5			08 29 06.6	15.9 N 147.1 E	MARIANA ISLANDS REGION H= 42 KM			
5	LZ-	eP ¹	08 48 46.4	SZ	1.4	37.0	145.8	
5			10 32 39.2	17.8 S 167.8 E	NEW HEBRIDES ISLANDS H= 33 KM MAG 4.40 CGS			
5			19 50 01.6	59.4 N 144.8 W	GULF OF ALASKA H= 33 KM MAG 4.70 CGS			
5	LZ-	eP	21 20 57.7	SZ	0.9	34.4		
5			22 31 44.3	54. N 161.5 E	NEAR EAST COAST OF KAMCHATKA H= 38 KM MAG 5.20 CGS			
5	OO-	eP	22 42 08.5	SZ	0.6	7.8	62.9	4.95
5	LZ-	eP	23 22 44.5	SZ	0.3	2.2	4.0	
	e		22 49	SZ	0.4	20.7		
	eS		23 34	ST	0.4	9999.9		
5			23 51 38.8	53.9 N 161.5 E	OFF EAST COAST OF KAMCHATKA H= 38 KM MAG 5.30 CGS			
6	OO-	eP	00 02 03.5	SZ	0.8	13.8	63.0	5.06
6	LZ-	eL	00 54 21	LZ	28	163.0	126.1	
5			23 55 59.2	54. N 161.5 E	NEAR EAST COAST OF KAMCHATKA H= 39 KM MAG 5.00 CGS			
6	OO-	eP	00 06 23.5	SZ	0.6	13.6	62.9	5.19
	eL		29 40	LR	20	748.0		
6	OO-	e	00 06 35	SZ	0.6	21.5		
6	LZ-	eP	00 49 23.6	SZ	0.3	2.9	2.9	
	eS		50 01	ST	0.4	8.5		
6			01 53 06.*	14.7 S 173.3 W	SAMOA ISLANDS REGION H= 33 KM MAG 4.50 CGS			
6	LZ-	eP	02 46 37.9	SZ	1.2	37.7		
6	LZ-	e	02 46 45	SZ	1.1	77.8		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
6			02 55 55	LZ	18.	189.4		
6	LZ-	e	03 05 11	LR	29	251.0		
6	LZ-	eL	03 07 53	LZ	999	9999.9		
6			03 15 37.7	15.4 S 70.5 W	SOUTHERN PERU H=164 KM MAG 4.60 CGS			
6	LZ-	tP	03 16 23.2D	SZ	999.9	9999.9	2.1	
	eS		16 52	ST	999.9	9999.9		
6	OO-	eL	03 58 35	LZ	30	271.4	99.2	
6			04 27 16.*	2.3 S 138.3 E	WEST NEW GUINEA H= 33 KM MAG 5.00 CGS			
6	LZ-	eP ¹	04 47 00.2	SZ	0.9	7.8	147.7	
	eP ²		47 06	SZ	0.8	34.5		
6	OO-	eL	05 20 30	LR	35	515.9	109.3	
6			05 03 57.5	17.9 N 143.5 E	MARIANA ISLANDS REGION H= 13 KM MAG 4.70 CGS			
6	LZ-	eP	05 30 12.4	SZ	1.0	71.6		
6	LZ-	eL	05 38 40	LZ	27	467.8		
6			05 41 06.9	18. S 178.5 W	Fiji ISLANDS REGION H=551 KM MAG 5.60 CGS			
6	LZ-	e	08 26 49	LZ	20.	67.0		
6	LZ-	e	08 30 43	LZ	18	104.7		
6	LZ-	e	08 36 42	LT	16	165.9		
6	LZ-	eLQ	08 55 39	LR	21	131.2		
6	LZ-	eLR	09 00 15	LZ	999	9999.9		
6	OO-	eL	09 26 20	LZ	25	160.0		
6			11 09 37.*	17.8 N 146.5 E	MARIANA ISLANDS H= 16 KM MAG 4.80 CGS			
6			12 30 48.*	47.6 N 152.9 E	KURILE ISLANDS H= 33 KM MAG 4.50 CGS			
6			23 53 02.*	53.2 N 159.8 E	NEAR EAST COAST OF KAMCHATKA H= 33 KM MAG 4.30 CGS			

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
7	03 39 04.1		12. N 122.3 E PANAY	PANAY	PHILIPPINE ISLANDS			
	H= 40 KM	MAG 5.20 CGS						
7	06 02 21.5		5.5 S 80.3 W NEAR COAST OF NORTHERN PERU					
	H=345 KM	MAG 3.50 CGS						
7	LZ- eP eL		06 05 58.2	SZ ST	0.9 1.0	4.7 7.7	15.8	3.87
7	08 58 43.8		5.4 S 151.3 E NEW BRITAIN REGION					
	H= 54 KM	MAG 5.80 CGS						
7	GG- ePP ePPP e e e e eL		09 19 25	LZ	26.	519.1	124.5	
	22 15	LZ	17	379.0				
	27 30	LZ	20	209.5				
	41 00	LZ	38	1267.7				
	45 45	LZ	35	1110.8				
	53 35	LZ	40	2638.1				
7	00- eSP eSS eSKKS eSSS eLQ eLR		09 28 20	LZ	28	600.9	117.1	
	34 26	LT	23	596.7				
	35 35	LT	40	1765.1				
	38 50	LT	30	1267.9				
	50 55	LR	45	3642.1				
	56 45	LZ	37	1992.4				
7	10 07 42.		18.1 S 68.7 W CHILE BOLIVIA BORDER REGION					
	H= 95 KM	MAG 4.40 CGS						
7	00- eL		10 59 55	LZ	25.	479.3	100.7	
7	13 08 05.		5.1 S 153.3 E NEW IRELAND REGION					
	H= 57 KM	MAG 4.40 CGS						
7	15 43 29.7		5.1 S 145.9 E EAST NEW GUINEA REGION					
	H=219 KM	MAG 5.00 CGS						
7	15 55 56.8		6.4 S 76.2 W NORTHERN PERU					
	H=177 KM	MAG 4.70 CGS						
7	LZ- eP eL		15 58 42.6	SZ SR	0.5 0.9	1.6 20.1	12.4	3.77

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
7	LZ- eP eS		16 29 48.0	SZ ST	0.4 0.5	17.1 16.0		2.2
7	18 30 17.*		51.7 N 158.0 E NEAR EAST COAST OF KAMCHATKA					
	H= 50 KM	MAG 5.10 CGS						
7	18 52 47.6		6.7 N 82.2 W SOUTH OF PANAMA					
	H= 30 KM	MAG 5.20 CGS						
7	LZ- eP e		18 58 25.2	SZ	0.5	3.3		26.5 4.23
	58 31	SZ	1.0	33.6				
7	00- eS eSS eLQ eLR		19 16 00	LT	20	475.4		85.7
	21 35	LT	30	706.5				
7	GG- e eLR		29 20	LR	35	555.6		
	33 15	LZ	35	1568.9				
7	19 16 10	LZ	18	344.2				87.2
	33 40	LZ	29	1447.4				
7	19 31 35.*		7.6 S 128.0 E BANDA SEA					
	H=144 KM							
7	20 41 42.		18.9 S 69.6 W NORTHERN CHILE					
	H=127 KM	MAG 4.40 CGS						
7	LZ- iP eS eL		20 42 28.0C	SZ SR LZ	0.6 999.9 20	9999.9 9999.9 553.1		2.8
7	LZ- e		20 52 42	SZ	1.0	9.4		
7	LZ- e		20 56 31	SZ	1.1	6.4		
7	LZ- e		20 56 48	SZ	1.4	30.3		
7	LZ- e		20 58 20	SZ	1.6	39.3		
7	LZ- e		21 02 50	SZ	1.0	11.2		
7	21 03 48.3		2.6 N 79.8 W SOUTH OF PANAMA					
	H= 38 KM	MAG 4.40 CGS						
7	LZ- eP eL eLR		21 08 36.0	SZ LZ LZ	0.8 31 18	6.8 140.8 9999.9		21.8 4.08
	15 23	LZ						
	18 09	LZ						
7	LZ- eP		22 12 30.0	SZ	0.9	24.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
7	LZ-	eLQ	22 22 11	LR	29*	9999.9		
7	LZ-	eLR	22 24 23	LZ	24	313.6		
8	LZ-	eL	02 16 12	LZ	33	85.5		
8	04 11 53.7		11.5 N 87.0 W NEAR COAST OF NICARAGUA H= 48 KM MAG 5.00 CGS					
8	LZ-	eP	04 18 26.8	SZ	0.9	4.8	33.1	4.39
	eS		23 55	LR	18	63.5		
	eL		27 16	LR	19	134.6		
8	GG-	eLR	04 55 25	LZ	25	215.8	86.6	
8	LZ-	eP	08 37 42.9	SZ	0.6	1.2		
8	LZ-	eL	08 40 30	LZ	18	169.0		
8	09 14 29.*		21.3 S 81.8 W S. E. CENTRAL PACIFIC OCEAN H= 33 KM MAG 4.80 CGS					
8	LZ-	eP	09 17 47.2	SZ	1.2	17.4	13.6	4.71
	eP		17 50	LZ	16	164.7		
	ePP		17 56	SZ	1.4	114.4		
	eLQ		20 51	LR	22	9999.9		
	eLR		21 35	LZ	18	9999.9		
8	16 11 25.*		45. N 130.1 W OFF COAST OF OREGON H= 28 KM MAG 4.30 CGS					
8	17 49 46.3		34.7 N 139.2 E NEAR S. COAST HONSHU, JAPAN H= 31 KM MAG 5.20 CGS					
8	LZ-	eP ¹	18 09 30.8	SZ	1.4	16.8	149.1	
	eP ²		09 39	SZ	1.7	187.3		
	eSKP		13 04	SZ	2.0	51.9		
	e		22 50	SZ	2.4	46.0		
8	00-	eS	18 11 15	LR	20	503.0	75.7	
	eSS		15 55	LR	20	457.2		
	eSSS		19 45	LT	18	659.0		
	e		20 50	LR	25	747.7		
	eL		24 00	LR	45	2394.1		
8	GG-	e	18 12 45	LZ	20	174.1	84.2	
	eSP		13 35	LZ	15	193.9		
	eSPP		14 12	LZ	16	221.3		
	e		22 50	LZ	20	232.1		
	eLR		31 50	LZ	30	591.7		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
8	19 17 26.*		67.5 N 137.0 W N. YUKON TERRITORY, CANADA H= 33 KM MAG 3.70 CGS					
8	20 55 55.3		19. N 64.0 W LEEWARD ISLANDS H= 55 KM MAG 4.50 CGS					
8	LZ-	eP	21 02 47.8	SZ	0.5	7.1	35.3	4.84
8	GG-	eLR	21 27 10	LZ	30	159.3	66.2	
9	06 19 33.3		19.5 S 176.9 W FIJI ISLANDS REGION H=290 KM MAG 3.80 CGS					
9	06 42 32.*		43.1 N 145.2 E HOKKAIDO, JAPAN REGION H= 39 KM MAG 4.80 CGS					
9	00-	eP	06 53 40.0	SZ	0.5	13.8	69.8	5.24
9	07 21 18.*		60.8 N 144.2 W SOUTHERN ALASKA H= 33 KM MAG 4.00 CGS					
9	07 51 10.*		51.1 N 170.5 W FOX ALEUTIAN ISLANDS H= 33 KM MAG 4.20 CGS					
9	LZ-	eP	10 42 00.0	SZ	0.7	1.2		
9	11 22 22.*		35.1 S 109.7 W EASTER ISLAND CORDILLERA H= 33 KM MAG 4.70 CGS					
9	LZ-	eP	11 30 07.0	SZ	1.4	48.3	41.3	5.07
	ePP		31 45	SZ	1.6	50.4		
9	13 35 42.4		27.5 S 63.2 W SANTIAGO PROV., ARGENTINA H=586 KM MAG 5.90 CGS					
9	LZ-	tP	13 38 24.0C	SZ	999.9	9999.9	12.2	
9	GG-	eP	13 48 30	LZ	17	380.9	101.2	
	ePP		52 40	LZ	17	470.5		
	ePPP		55 00	LZ	22	560.1		
	eL		14 17 40	LZ	26	1132.6		
9	00-	eSKS	13 58 35	LT	19	449.4	106.4	
	eS		14 00 05	LR	24	336.0		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	ePS		02 43	LT	17.	831.1		
	e		03 20	LR	25	512.1		
	e		05 35	LT	23	940.0		
	e		10 55	LR	25	546.3		
	e		11 45	LT	22	1014.2		
	eL		13 25	LZ	22	692.9		
9	14 22 03.*		13.2 N 87.2 W	HONDURAS				
			H=200 KM	MAG 3.90 CGS				
9	16 44 02.2		20.4 S 68.0 W	SOUTHERN BOLIVIA				
			H= 83 KM	MAG 5.00 CGS				
9	LZ- eP		16 45 14.5	SZ	1.0	9999.9	4.2	
	e		48 47	SZ	1.6	236.9		
9	18 28 38.2		41.1 N 21.0 E	ALBANIA YUGOSLAVIA BORDER				
			H= 30 KM	MAG 4.80 CGS				
9	00- eP		18 33 20.0	SZ	0.5	7.0	20.9	4.24
9	GG- e		18 33 48	LZ	12	396.0	11.0	
	eL		35 30	LZ	18	711.8		
9	19 06 16.9		40.9 N 20.6 E	GREECE ALBANIA BORDER REGION				
			H= 23 KM	MAG 4.90 CGS				
9	19 12 21.*		1.1 S 77.4 W	ECUADOR				
			H=242 KM	MAG 4.50 CGS				
9	LZ- eP		19 16 09.4	SZ	0.9	44.9	17.4	4.86
	e		16 15	SZ	0.8	67.3		
	e		19 19	SR	1.2	26.3		
	e		20 19	SR	1.0	8.9		
	e		27 39	ST	1.9	57.8		
9	22 51 45.*		4.7 N 126.9 E	TALAUD ISLANDS				
			H= 33 KM	MAG 4.80 CGS				
10	LZ- eL		01 33 19	LZ	26.	546.0		
10	02 35 40.*		1.9 N 76.7 W	COLOMBIA				
			H=191 KM	MAG 4.50 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
10	LZ- eP		07 46 28.2	SZ	0.3	2.9	5.5	
	eS		47 34	ST	0.5	8.4		
10	LZ- eP		10 46 16.5	SZ	0.4	7.3	1.7	
	eS		46 40	SR	0.4	8.0		
10	11 53 45.2		19.5 N 155.3 W	HAWAII REGION				
			H= 10 KM	MAG 5.10 CGS				
10	15 10 25.6		36.5 S 110.5 W	EASTER ISLAND CORDILLERA				
			H= 33 KM	MAG 5.30 CGS				
10	LZ- eP		15 18 19.4	SZ	1.5	120.7	42.3	5.43
	eP		18 20	LZ	14	9999.9		
	ePP		19 57	SZ	1.9	165.4		
	eS		24 45	LT	999	9999.9		
	eS		24 50	ST	4.5	1275.3		
	e		28 07	LT	999	9999.9		
	eL		29 40	LZ	999	9999.9		
	eL		36 01	ST	7.1	2987.1		
10	15 11 05.5		40.4 N 138.9 E	EASTERN SEA OF JAPAN				
			H= 33 KM	MAG 6.00 CGS				
10	00- eP		15 22 17.0	SZ	0.9	84.6	70.4	5.77
	eP		22 18	LZ	13	1679.3		
	ePCP		22 32	SZ	1.2	402.2		
	eS		31 30	LT	15	2114.7		
	eSSS		39 00	LT	14	3173.7		
	eLQ		41 30	LR	65	9999.9		
	eLR		46 10	LR	35	9999.9		
10	GG- eP		15 23 10.0	SZ	1.2	226.2	79.2	6.00
	eP		23 11	LZ	13	2355.5		
	e		33 05	LZ	16	1171.3		
	e		41 45	LZ	16	1073.7		
	eLQ		54 00	LR	17	9999.9		
	eLR		57 20	LZ	22	9999.9		
10	LZ- eP*2		15 30 45.0	SZ	1.3	9999.9	146.2	
	e		31 01	SZ	999.9	9999.9		
					AVG.	5.88		
10	LZ- eP		18 38 31.2	SZ	1.0	14.4		
	e		18 38 37	SZ	0.8	20.4		
10	GG- eL		18 51 00	LZ	20	249.5		
	eL		18 52 51	LZ	34	378.5		
10	19 43 27.*		44.7 N 149.2 E	KURILE ISLANDS				
			H= 22 KM	MAG 4.60 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
10	LZ-	eL	20 49 57	LZ	32.	105.1	137.5	
10	20 25 40.*		8.4 S 127.1 E	TIMOR				H= 33 KM
10	LZ-	eL	22 13 25	LZ	25.	160.9		
10	23 30 51.4		40.2 N 139.0 E	EASTERN SEA OF JAPAN				H= 39 KM MAG 5.40 CGS
10	OO-	eP	23 42 06.0	SZ	0.6	7.6	70.6	
11	OO-	eL	00 03 40	LR	42	952.1	70.6	
10	LZ-	eP ¹	23 50 31.2	SZ	1.8	154.3	146.2	
11	LZ-	eLR	00 41 22	LZ	40	304.4	146.2	
11	GG-	eLR	00 13 05	LZ	26	233.4	79.4	
11	LZ-	fP	01 49 38.4D	SZ	0.4	9999.9		
		eS	50 02	SR	0.6	9999.9		
11	LZ-	eL	04 30 47	LZ	18	55.9		
11	05 25 58.*		28.1 N 52.8 E	SOUTHERN IRAN				H= 61 KM MAG 5.00 CGS
11	LZ-	eL	06 18 27	LT	26.	259.8	124.8	
11	05 29 15.*		18.7 S 178.4 W	FIJI ISLANDS REGION				H= 635 KM MAG 4.10 CGS
11	11 18 23.*		60.1 N 146.6 W	SOUTHERN ALASKA				H= 33 KM MAG 4.00 CGS
11	12 48 08.9		29. N 53.2 E	SOUTHERN IRAN				H= 74 KM
11	LZ-	eLR	13 54 35	LZ	22.	76.7	125.2	
11	13 03 44.*		16.4 N 98.4 W	NEAR COAST OF GUERRERO, MEX.				H= 33 KM MAG 3.90 CGS
11	16 04 58.2		38.9 N 130.0 E	SEA OF JAPAN				H= 550 KM MAG 5.60 CGS

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
11	OO-	eP	16 15 08.0	SZ	0.6	75.8	68.8	5.45
11	GG-	eP	16 15 54.5	SZ	0.6	89.6	76.6	5.41
		ePP	17 53	SZ	1.2	99.9		
11	LZ-	eLR	17 22 37	LZ	38	143.7	152.2	
					Avg.			5.43
11	19 03 26.*		15.3 S 173.4 W	TONGA ISLANDS				H= 33 KM MAG 4.50 CGS
11	19 21 52.*		39.1 N 118.3 W	NEVADA				H= 33 KM MAG 4.20 CGS
11	22 42 59.4		6.3 S 131.2 E	TANIMBAR ISLANDS REGION				H= 47 KM MAG 5.80 CGS
11	LZ-	eP ¹	23 02 45.3	SZ	0.8	4.4	150.3	
		eP ²	02 50	SZ	0.9	59.5		
		eL	53 28	LZ	22	170.5		
12	02 19 52.2		15. S 173.8 W	TONGA ISLANDS				H= 33 KM MAG 5.00 CGS
12	07 20 00.		6.9 S 150.6 E	NEW BRITAIN REGION				H= 33 KM MAG 5.90 CGS
12	GG-	ePP	07 40 50	LZ	15.	344.4	125.5	
		eSPP	52 00	LZ	16	305.6		
		e	08 03 00	LZ	40	608.1		
		eL	21 15	LZ	45	1521.3		
12	LZ-	eSKP	07 42 54	LZ	16	525.2	135.0	
		eSCSP ¹	54 47	LZ	17	146.1		
		eSS	59 32	LT	34	330.3		
		eL	08 16 33	LR	38	307.2		
		eL	23 12	LT	30	389.7		
		eL	25 44	LZ	31	244.0		
12	00-	eL	08 14 40	LR	42	1678.7	118.2	
		eL	25 50	LZ	25	1234.8		
12	07 57 44.3		7. S 150.7 E	NEW BRITAIN REGION				H= 30 KM MAG 5.00 CGS
12	07 59 24.6		39.6 N 117.9 W	NEVADA				H= 33 KM MAG 3.40 CGS

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
12	LZ-	eP	08 01 59.0	SZ	0.6	9.9		
12	09 22 16.3		19. S 169.5 E NEW HEBRIDES ISLANDS					
			H=261 KM MAG 4.10 CGS					
12	10 10 17.		52.6 N 169.3 W FOX ALEUTIAN ISLANDS					
			H= 33 KM MAG 4.80 CGS					
12	LZ-	eSKS	10 35 37	LR	18	32.4	109.3	
	eSP		38 42	LZ	17	227.2		
	eL		45 02	LT	38	157.9		
	eL		48 20	LZ	29	311.0		
12	LZ-	eP	11 11 03.2	SZ	0.5	9.3	5.0	
	eS		12 03	SR	0.6	2.8		
12	11 16 55.*		2.6 N 76.1 W COLOMBIA					
			H= 51 KM MAG 3.90 CGS					
12	LZ-	eP	11 21 26.6	SZ	0.6	2.2	20.2	3.63
	eL		27 25	SR	1.1	6.0		
12	12 49 05.*		39.7 N 119.7 W NEVADA					
			H= 33 KM					
12	13 11 50.2		35.3 N 23.0 E CRETE					
			H= 60 KM MAG 4.40 CGS					
12	13 14 01.5		39.1 N 114.2 W NEVADA					
			H= 33 KM MAG 2.70 CGS					
12	13 32 02.*		39.6 N 119.6 W NEVADA					
			H= 33 KM					
12	14 20 35.1		35.4 S 71.5 W CENTRAL CHILE					
			H= 89 KM MAG 4.30 CGS					
12	19 44 55.7		26.1 S 175.9 W SOUTH OF TONGA ISLANDS					
			H= 85 KM MAG 4.90 CGS					
12	LZ-	eL	20 30 37	LZ	27.	317.5	97.9	

DAY	STA	PHASE	TIME	INST	PER		
12	21	17 21.	40.3 N 125.1 W OFF COAST OF N. CALIFORNIA				
			H= 33 KM MAG 3.50 CGS				
12	22	15 51.*	20.2 S 174.0 W TONGA ISLANDS				
			H= 33 KM MAG 5.00 CGS				
12	LZ-	eL	23 02 00	LZ	22.	144.2	98.4
12	23	07 46.1	5.8 S 147.1 E EAST NEW GUINEA REGION				
			H= 68 KM MAG 5.00 CGS				
12	LZ-	e	23 26 09	SZ	1.0	37.5	138.5
	ePI		26 56	SZ	1.0	5.9	
	e		30 40	LT	21	118.6	
	eSKP		30 43	SZ	0.8	11.8	
	e		48 40	LT	36	179.4	
13	LZ-	eL	00 13 03	LT	31	221.1	138.5
13	00	13 40.*	34. S 179.1 W SOUTH OF KERMADEC ISLANDS				
			H=112 KM MAG 5.30 CGS				
13	LZ-	eSKS	00 37 42	LT	20.	300.2	97.2
	ePS		39 44	LT	22	331.6	
	e		58 37	LZ	27	665.9	
13	00	32 09.4	65.2 N 164.9 W ALASKA				
			H= 33 KM MAG 4.90 CGS				
13	LZ-	eLR	01 25 42	LT	38.	9999.9	107.3
13	00	33 24.7	64.9 N 165.7 W ALASKA				
			H= 15 KM MAG 5.40 CGS				
13	GG-	eP	00 44 10.4	SZ	1.1	65.1	65.7
	eLR		01 07 10	LZ	30	872.2	
13	LZ-	eLR	01 33 15	LR	22	9999.9	107.6
13	LZ-	eL	04 57 35	LT	22.	81.6	
13	LZ-	eP	05 01 05.3D	SZ	0.4	70.1	
	eS		01 28	ST	0.5	9999.9	1.7

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
13	06 37	07.3	15. S 167.2 E	NEW HEBRIDES ISLANDS				
			H=131 KM	MAG 5.20 CGS				
13	LZ- eP		07 44 22.1	SZ	0.5	7.5		
13	00- eL		12 54 00	LR	45	3872.9		
13	13 15 49.8		20.1 N 122.0 E	PHILIPPINE ISLANDS REGION				
			H= 33 KM	MAG 4.80 CGS				
13	LZ- eP ¹		13 35 57.0	SZ	1.1	13.9	169.3	
	ePKS		39 32	LT	26	9999.9		
	ePP		41 02	SZ	1.8	30.7		
	ePPP		45 06	SZ	1.9	42.9		
13	GG- eLR		13 58 10	LZ	42	1165.2	87.5	
13	LZ- e		13 33 40	SZ	1.2	16.2		
13	LZ- e		13 36 58	LR	18	51.4		
13	LZ- e		13 46 15	LZ	34	9999.9		
13	13 51 50.*		46.2 N 151.9 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.70 CGS				
13	14 26 15.*		45.2 N 150.4 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.80 CGS				
13	16 51 39.2		7.9 N 137.0 E	WEST CAROLINE ISLANDS				
			H= 33 KM	MAG 4.90 CGS				
13	LZ- eP ¹		17 11 32.4	SZ	1.2	8.1	153.8	
13	LZ- eP		18 03 24.6	SZ	0.4	26.2		
13	19 12 57.1		10.7 S 165.0 E	SANTA CRUZ ISLANDS				
			H= 33 KM	MAG 5.30 CGS				
13	GG- eL		22 49 05	LZ	37.	428.3		
14	01 59 05.6		54.3 S 2.4 W	SOUTH ATLANTIC RIDGE				
			H= 33 KM					

DAY	STA	PHASE	TIME	INST	PER	A... A. -		
14	LZ- eP		02 09 31.4	SZ	1.0	147.0	63.0	6:00
	eP		09 33	LZ	999	9999.9		
	ePS		18 12	ST	3.5	251.4		
	eS		18 12	LR	999	9999.9		
	eSCS		19 30	LR	999	9999.9		
	e		20 53	LZ	999	9999.9		
	e		22 45	LZ	999	9999.9		
	eL		29 18	LT	999	9999.9		
	e		35 40	SZ	1.1	11.5		
	e		36 41	SZ	1.2	10.7		
	eP ¹ P ¹		38 35	SZ	1.5	8.7		
	eL		42 20	SR	11.0	2681.0		
14	GG- ePP		02 17 24	LZ	16	512.4	104.2	
	e		26 30	LZ	18	1585.1		
	e		31 32	LZ	23	1116.0		
	eL		48 10	LZ	34	2734.2		
14	00- e		02 26 45	LR	25	464.2	115.5	
	e		28 30	LT	25	1210.6		
	eSS		34 40	LR	22	1719.9		
	eSSS		39 00	LR	21	1328.1		
	eLQ		47 25	LR	32	2309.8		
	eLR		54 30	LZ	33	5583.2		
14	02 45 07.*		12.1 N 143.9 E	SOUTH OF MARIANA ISLANDS				
			H= 33 KM	MAG 4.40 CGS				
14	LZ- eP		02 53 53.2	SZ	0.6	42.0	4.1	
	eS		54 43	ST	0.9	33.5		
14	LZ- eP		03 10 15.1	SZ	0.6	8.8	3.5	
	eS		10 59	ST	0.5	7.3		
14	03 35 14.5		44.2 N 81.6 E	N. SINKIANG PROVINCE, CHINA				
			H= 33 KM	MAG 4.20 CGS				
14	00- eL		03 55 40	LZ	40	1540.3	43.7	
14	GG- eL		04 02 15	LZ	28	580.8	46.8	
14	06 41 23.1		28.2 N 140.8 E	BONIN ISLANDS REGION				
			H=115 KM	MAG 5.00 CGS				
14	LZ- e		07 10 48	LT	29.	84.5	150.5	
	e		15 19	LR	21	61.2		
	eLR		55 09	LT	25	126.7		
14	LZ- eP		07 24 57.5	SZ	1.0	31.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
14	08 15	41.4	38. N 117.8 W	CALIFORNIA NEVADA BORDER				
			H= 33 KM MAG 3.60 CGS					
14	LZ- eP		09 36 10.3	SZ	1.0	9.4		
14	LZ- e		09 44 47	LT	15	87.5		
14	LZ- e		09 52 07	LT	24	82.5		
14	LZ- eLQ		09 56 17	LR	27	84.2		
14	LZ- eLR		09 58 15	LZ	26	236.9		
14	LZ- eP		10 25 27.6	SZ	0.5	70.0		
14	11 04	17.4	41.3 N 77.1 E	KIRGIZ SINKIANG BORDER REG.				
			H= 33 KM MAG 4.50 CGS					
14	GG- eP		14 45 49.7	SZ	0.3	35.2		
14	15 52	34.2	33.4 N 142.0 E	OFF EAST COAST HONSHU, JAPAN				
			H= 33 KM MAG 4.50 CGS					
14	LZ- eP*1		16 12 16.0	SZ	0.8	10.3	147.7	
14	17 16	47.7	55.8 N 160.1 W	ALASKA PENINSULA				
			H= 33 KM MAG 4.60 CGS					
14	18 49	41.*	40.5 N 138.3 E	EASTERN SEA OF JAPAN				
			H= 26 KM MAG 4.70 CGS					
14	LZ- eP		19 37 04.8	SZ	0.9	17.5		
14	LZ- e		21 04 47	LZ	17	269.9		
14	LZ- eL		21 15 18	LZ	26	437.9		
14	21 29	06.*	13.9 N 90.5 W	NEAR COAST OF GUATEMALA				
			H= 33 KM MAG 4.40 CGS					
15	01 16	41.7	15.5 S 173.3 W	TONGA ISLANDS				
			H= 14 KM MAG 4.60 CGS					
15	01 58	38.9	8.5 N 71.5 W	VENEZUELA				
			H= 53 KM MAG 4.30 CGS					
15	LZ- eP		02 03 59.4	SZ	1.0	80.1	24.8	5.23
	eS		08 32	LR	18	99.1		

DAY	STA	PHASE	TIME	INST	PER
	eL		11 50	SR	1.5
	eLQ		11 50	LR	26
	eLR		14 12	LZ	21
15	02 51	36.6	34.9 N 26.2 E	CRETE	
			H= 60 KM MAG 4.40 CGS		
15	LZ- eLR		03 42 54	LZ	13
15	LZ- tP		03 33 07.1C	SZ	0.3
	eS		33 31	ST	0.6
15	03 40	16.5	20.8 N 106.6 W	OFF COAST OF JALISCO, MEXICO	
			H= 33 KM MAG 5.10 CGS		
15	LZ- eP		03 49 28.8	SZ	1.7
	e		55 53	LT	16
	eS		56 57	LT	20
	eLQ		04 04 21	LT	36
	eLR		08 51	LZ	18
15	GG- eLR		04 28 30	LZ	30
15	03 53	57.*	42.7 N 143.6 E	HOKKAIDO, JAPAN REGION	
			H= 135 KM MAG 4.40 CGS		
15	GG- eP		04 35 12.6	SZ	0.4
	eS		35 57	ST	0.5
15	05 06	22.8	2.3 N 126.6 E	MOLUCCA PASSAGE	
			H= 45 KM		
15	LZ- eP*1		05 26 20.7	SZ	1.5
	eLR		06 23 38	LT	28
15	00- eLR		06 00 00	LZ	40
15	GG- eLR		06 02 00	LZ	37
15	GG- eL		05 27 06	LZ	23.
15	LZ- eP		06 57 34.0	SZ	0.7
	eS		58 28	ST	0.5
15	07 54	07.3	78. N 7.6 E	SVALBARD REGION	
			H= 33 KM MAG 4.40 CGS		

DAY STA PHASE TIME INST PER AMPL DIST MAG

15 07 58 49.9 76.2 N 9.3 E SVALBARD REGION
H= 33 KM MAG 4.80 CGS

15 08 24 20.7 7.1 N 73.2 W NORTHERN COLOMBIA
H= 119 KM

15 LZ- eP 08 29 18.0 SZ 0.6 8.6 23.7 4.37
eL 35 59 SR 1.0 3.3

15 11 38 06.* 51.2 N 171.3 W FOX ALEUTIAN ISLANDS
H= 33 KM MAG 4.40 CGS

15 12 13 25.8 14.7 N 91.7 W GUATEMALA
H= 118 KM MAG 5.40 CGS

15 LZ- eP 12 20 38.8 SZ 1.1 132.4 38.4 5.71
eP 20 40 LZ 13 747.1
ePP 22 15 LZ 14 431.0
eS 26 29 SR 1.6 20.1
eS 26 31 LT 999 9999.9
eSS 29 08 LT 999 9999.9
eLR 32 00 LZ 999 9999.9

15 00- eP 12 25 40 LZ 18 472.8 83.2
e 35 00 LR 18 868.7
e 42 05 LR 30 788.9

15 GG- eP 12 26 01 LZ 17 548.2 87.1
ePP 29 15 LZ 18 320.1
e 36 33 LZ 20 432.2
eLR 54 20 LZ 37 2327.1

15 LZ- eP 14 11 04.2 SZ 0.8 11.4
15 LZ- e 14 14 31 ST 0.9 3.6
15 LZ- e 14 15 52 LT 22 113.8
15 LZ- e 14 18 07 LT 27 230.4
15 LZ- eL 14 20 00 LZ 23 9999.9
15 LZ- eP 14 36 48.8 SZ 0.8 5.7

15 15 03 40.* 45.4 N 150.9 E KURILE ISLANDS
H= 33 KM MAG 4.70 CGS

15 LZ- eP 16 11 01.4 SZ 0.5 23.9 5.6
eS 12 08 ST 0.8 9.4

DAY STA PHASE TIME INST PER AMPL

15 16 20 11.* 7.2 S 76.9 W NORTHERN PERU
H= 33 KM MAG 4.80 CGS

15 17 31 46.4 36.5 N 34.6 E TURKEY
H= 53 KM MAG 4.50 CGS

15 GG- eL 19 09 30 LZ 42. 795.0
15 LZ- tP 19 09 51.4D SZ 0.2 9999.9 1.7
eS 10 14 ST 0.6 22.8
tP 41 22.5D SZ 0.4 9999.9
eS 41 47 ST 999.9 9999.9

15 21 03 15.9 40. N 28.9 E TURKEY
H= 33 KM MAG 4.90 CGS
15 GG- eLR 21 13 21 LZ 14 437.7 15.8

15 22 34 07.7 51. N 169.6 W FOX ALEUTIAN ISLANDS
H= 33 KM MAG 5.00 CGS
15 GG- eP 22 46 14.6 SZ 0.7 13.1 79.7 4.96

16 02 21 30.7 3.2 S 147.5 E BISMARCK SEA
H= 33 KM MAG 4.90 CGS

16 LZ- eP 02 40 53.4 SZ 1.4 10.8 139.5
eL 03 27 38 LT 29 201.5
16 00- eL 03 17 20 LZ 40 244.6 113.7
16 GG- eL 03 25 00 LZ 22 114.2 120.7

16 03 08 12.1 3.2 S 147.3 E BISMARCK SEA
H= 33 KM MAG 4.80 CGS

16 00- eL 04 04 00 LZ 40. 195.6 113.6
16 GG- eL 04 04 03 LZ 41 201.2 120.6
16 LZ- eL 04 14 32 LT 26 209.4 139.7

16 03 55 17.4 6. N 125.3 E MINDANAO, PHILIPPINE ISLANDS
H= 121 KM MAG 5.60 CGS

16 LZ- eP 04 15 10.3 SZ 1.2 69.5 163.1
eP 16 02 SZ 0.9 57.5
ePP 19 46 SZ 1.9 50.9

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
16	OO-	eL	04 40 20	LZ	38.	658.2	96.3	
16	GG-	eL	04 47 07	LZ	42	706.6	100.6	
16	03 57 17.2		21.6 S 169.6 E LOYALTY ISLANDS REGION					
			H= 44 KM MAG 4.30 CGS					
16	LZ-	eL	04 40 56	LT	22.	202.0	111.8	
16	OO-	eP	10 08 01.0	SZ	0.4	8.0	3.6	
	eS		08 45	SR	0.4	14.7		
16	LZ-	eP	11 20 26.6	SZ	0.5	13.9		
16	12 20 44.2		21.7 S 169.6 E LOYALTY ISLANDS REGION					
			H= 21 KM MAG 4.30 CGS					
16	LZ-	eP	15 18 34.2	SZ	0.3	8.3	2.4	
	eS		19 05	SR	0.6	4.1		
16	LZ-	eP	16 52 58.9	SZ	0.9	15.6		
16	LZ-	e	16 57 32	LR	17	32.9		
16	LZ-	e	16 58 19	LT	19	35.6		
16	LZ-	e	16 59 07	LT	16	39.5		
16	LZ-	eLQ	17 00 49	LT	27	78.2		
16	LZ-	eLR	17 03 07	LZ	14	226.1		
16	18 26 39.		20.1 N 121.9 E PHILIPPINE ISLANDS REGION					
			H= 19 KM MAG 4.40 CGS					
16	OO-	eL	19 06 30	LR	40.	834.9	82.3	
16	GG-	eL	19 16 21	LZ	20	152.4	87.5	
16	19 20 26.3		21.8 S 175.3 W TONGA ISLANDS					
			H= 33 KM MAG 5.40 CGS					
16	19 28 50.		24.8 N 122.4 E TAIWAN REGION					
			H= 61 KM MAG 4.80 CGS					
16	LZ-	eP	22 10 51.3	SZ	0.5	4.3		
16	LZ-	e	22 12 54	LT	20	102.2		
16	LZ-	eP	22 20 04.4	SZ	1.5	25.4		
16	LZ-	eLQ	22 26 45	LT	29	187.0		
16	LZ-	eLR	22 29 20	LZ	21	9999.9		

DAY	STA	PHASE	TIME	INST	PER			
16	LZ-	eL	23 35 42	LZ	21.	96.3		
17	00 47 15.*		55.8 N 161.9 E NEAR EAST COAST OF KAMCHATKA					
			H= 33 KM MAG 4.40 CGS					
17	LZ-	eP	00 54 54.5	SZ	2.0	45.4		
	LZ-	eL	01 03 14	LZ	20	393.6		
17	01 08 51.*		7.8 S 117.4 E BALI SEA					
			H= 33 KM					
17	LZ-	eP ¹	01 28 46.0	SZ	1.0	5.7	155.4	
	eLQ		02 16 55	LT	24	168.1		
	eLR		19 19	LZ	20	524.8		
17	01 37 47.*		19.7 S 169.6 E NEW HEBRIDES ISLANDS					
			H= 33 KM MAG 4.50 CGS					
17	02 33 26.5		35.5 N 141.8 E NEAR E. COAST HONSHU, JAPAN					
			H= 81 KM MAG 4.40 CGS					
17	LZ-	eL	03 01 42	LZ	21.	185.6		
	LZ-	eP	03 57 35.2	SZ	0.5	3.6		
17	04 03 45.7		27.6 N 140.0 E BONIN ISLANDS REGION					
			H= 468 KM MAG 4.60 CGS					
17	00-	eP	04 15 19.0	SZ	0.7	27.3	82.5	4.96
	LZ-	eP ¹	04 22 42.1	SZ	1.3	15.3	151.3	
	eP ²		22 48	SZ	0.7	37.6		
17	04 43 56.8		1.8 N 84.6 W OFF COAST OF ECUADOR					
			H= 33 KM MAG 4.60 CGS					
17	LZ-	eP	04 49 11.5	SZ	1.6	128.9	24.0	5.17
	eP		49 12	LZ	13	189.4		
	e		51 21	LZ	18	110.8		
	eS		53 40	LT	23	116.4		
	eLQ		56 00	LT	29	9999.9		
	eLR		58 30	LZ	20	9999.9		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
17	05 18 34.8		45.4 N 150.1 E KURILE ISLANDS					
			H= 17 KM MAG 5.30 CGS					
17	00- eP		05 29 40.0	SZ	0.8	16.2	68.9	5.24
	eS		38 40	LT	24	196.2		
	eSS		43 25	LT	30	502.9		
	e		46 50	LR	27	672.6		
	eL		50 45	LR	35	1230.4		
17	GG- eP		05 30 38.1	SZ	0.8	39.0	78.8	5.47
	eP		30 39	LZ	20	190.5		
	e		51 16	LZ	21	279.8		
	eL		06 06 53	LZ	22	2104.3		
17	LZ- eP ¹		05 37 56.9	SZ	1.1	11.2	136.6	
	eSKP		41 24	SZ	2.0	45.4		
	ePKS		41 31	LR	19	153.1		
	eSS		59 06	LR	22	145.2		
	SKSSKS		06 09 44	LT	27	102.4		
	eLQ		16 33	LT	40	462.1		
	eLR		24 20	LT	27	9999.9		
			Avg.			5.35		

17 06 35 36.9 3.2 S 147.2 E BISMARCK SEA
H= 33 KM MAG 4.80 CGS

17	LZ- eP		07 57 38.0	SZ	0.4	1.5	3.8	
	eS		58 24	SR	0.4	6.2		
17	LZ- eP		10 14 47.2	SZ	0.9	8.5		
17	LZ- eLQ		10 23 03	LT	22	85.4		
17	LZ- eLR		10 24 10	LZ	19	290.6		

17 10 28 41.7 21. S 175.0 W TONGA ISLANDS
H= 33 KM MAG 4.40 CGS

17 11 25 32.* 40.3 N 127.3 W OFF COAST OF N. CALIFORNIA
H= 33 KM MAG 4.20 CGS

17 12 11 52.* 41.9 N 126.0 W OFF COAST OF N. CALIFORNIA
H= 33 KM MAG 4.60 CGS

17 GG- eP 13 09 50.5 SZ 0.4 21.2

17 13 59 25.3 16. N 96.9 W OAXACA, MEXICO
H= 36 KM MAG 4.90 CGS

17 LZ- eP 14 07 18.0 SZ 1.4 21.9 42.6 4.71

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	ePCP		09 10	SZ	1.5	12.7		
	eS		13 36	LR	19	61.2		
	e		17 06	LT	25	166.8		
	eLQ		19 57	LT	23	9999.9		
	e		20 25	SR	2.0	21.7		
	eLR		22 03	LZ	17	9999.9		

17 14 33 43.* 24.3 S 179.6 E SOUTH OF FIJI ISLANDS
H=600 KM MAG 4.10 CGS

17 14 58 26.3 21.5 S 66.9 W SOUTHERN BOLIVIA
H=190 KM MAG 4.30 CGS

17	LZ- eP		14 59 45.0	SZ	0.6	15.0	5.4	4.35
	eS		15 00 38	ST	0.9	20.1		

17 GG- eL 17 00 00 LZ 42. 357.5

17 18 48 02.4 31.6 N 138.0 E SOUTH OF HONSHU, JAPAN
H=376 KM MAG 4.90 CGS

17	LZ- eP ¹²		19 07 16.2	SZ	1.0	8.0	151.5
	e		08 49	SZ	1.0	9.5	

17 23 44 46.2 51.4 N 177.9 W ANDREANOF ALEUTIAN ISLANDS
H= 57 KM MAG 5.50 CGS

17	GG- eP		23 56 45.5	SZ	1.5	105.7	79.0	5.53
	eP		56 46	LZ	23	346.7		
	ePP		59 56	LZ	22	192.6		

18	GG- eS		00 07 00	LT	30	2037.0	79.0	
	eL		23 30	LZ	32	1189.9		

18	LZ- eS		00 12 08	LT	26	115.2	114.6	
	eSP		14 05	LZ	18	9999.9		

	eSS		20 03	LT	24	201.1		
	eSSS		24 08	LT	27	283.6		

	e		25 10	LZ	21	234.5		
	e		28 00	LZ	20	246.0		

	eL		38 37	LT	26	196.3		
	eL		41 04	LZ	29	9999.9		

18 00- e 00 06 45 LZ 27. 1160.3

18 00 10 59.6 18.8 S 168.9 E NEW HEBRIDES ISLANDS
H= 69 KM MAG 4.40 CGS

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	00-	eL	00 19 10	LZ	28.	2482.2		
18	00 35 19.*		27.8 N 52.8 E	SOUTHERN IRAN				
			H= 33 KM					
18	LZ-	eP	01 10 13.2D	SZ	0.4	15.7	1.9	
	eS		10 38	ST	0.4	18.7		
18	LZ-	e	01 44 47	LZ	20	235.1		
18	LZ-	e	01 46 41	LZ	22	225.7		
18	LZ-	e	01 48 00	LZ	27	215.7		
18	LZ-	eL	01 54 21	LZ	21	9999.9		
18	02 29 10.*		60.7 N 147.4 W	SOUTHERN ALASKA				
			H= 33 KM	MAG 3.80	CGS			
18	06 05 18.8		37.3 N 142.0 E	OFF E. COAST HONSHU, JAPAN				
			H= 33 KM	MAG 4.60	CGS			
18	LZ-	eP'1	06 24 57.8	SZ	1.0	11.1	145.9	
	e		25 07	SZ	1.4	51.6		
	eL		07 16 00	LZ	26	66.1		
18	06 50 18.2		37.3 N 141.8 E	NEAR E. COAST HONSHU, JAPAN				
			H= 62 KM	MAG 4.00	CGS			
18	LZ-	eP'1	07 09 54.0	SZ	1.5	20.6	146.0	
18	09 10 19.*		44.1 N 149.4 E	KURILE ISLANDS				
			H= 33 KM	MAG 4.70	CGS			
18	10 53 28.4		51.3 N 178.0 W	ANDREANOF ALEUTIAN ISLANDS				
			H= 33 KM	MAG 4.80	CGS			
18	GG-	eL	11 05 20	LZ	23.	260.4		
18	LZ-	e	11 25 28	LZ	18	59.1		
18	LZ-	e	11 32 34	LZ	19	189.3		
18	LZ-	eL	12 02 04	LZ	20	135.0		
18	LZ-	eP	12 25 15.2	SZ	0.4	11.9	1.7	
	eS		25 38	ST	0.4	26.9		
18	18 59 34.*		29.5 N 114.2 W	BAJA CALIFORNIA				
			H= 33 KM	MAG 5.10	CGS			
18	GG-	eL	20 34 00	LZ	33.	290.3		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
18	00-	eL	20 34 15	LZ	32.	216.0		
18	22 07 34.3		7. N 73.1 W	NORTHERN COLOMBIA				
			H=149 KM	MAG 4.00	CGS			
19	01 59 03.*		35.3 N 28.2 E	EASTERN MEDITERRANEAN SEA				
			H= 52 KM					
19	GG- eL		02 10 25	LZ	15	137.4	19.0	
19	04 07 38.*		29.8 N 114.1 W	BAJA CALIFORNIA				
			H= 33 KM	MAG 4.50	CGS			
19	LZ- eP		06 36 52.5	SZ	0.9	8.7		
19	06 41 27.3		32.8 S 177.6 W	SOUTH OF KERMADEC ISLANDS				
			H=203 KM	MAG 4.40	CGS			
19	00- eP		07 01 10.0	SZ	0.9	32.2		
19	08 30 22.*		55.9 S 28.0 W	S. SANDWICH ISLANDS REGION				
			H= 33 KM					
19	LZ- eP		08 39 18.4	SZ	0.7	18.8		
19	LZ- eP		10 06 06.9	SZ	1.1	9.6		
19	LZ- eP		10 06 09	LZ	15	59.2		
19	LZ- e		10 10 11	LR	18	177.6		
19	LZ- e		10 14 26	LT	22	173.4		
19	LZ- eLQ		10 15 56	LR	17	241.4		
19	LZ- eLR		10 16 53	LZ	18	1091.9		
19	LZ- eP		11 19 09.7	SZ	0.9	91.0	6.0	
	eS		20 20	ST	999.9	9999.9		
19	LZ- eL		11 20 25	LR	18	9999.9		
19	LZ- eL		12 01 53	LZ	17	53.1		
19	12 53 27.6		37.8 S 72.9 W	CENTRAL CHILE				
			H= 64 KM	MAG 4.80	CGS			
19	LZ- eP		12 58 20.0	SZ	1.3	60.0	21.8	4.79
	eP		58 22	LZ	15	121.6		
	e		58 28	SZ	1.2	80.5		
	eS		13 02 26	LR	999	9999.9		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eLQ		05 48	LR	17.	9999.9		
	eLR		07 44	LZ	999	9999.9		
19	18 18 31.*		8.9 S 112.8 E JAVA					
			H=336 KM MAG 4.40 CGS					
19	LZ- eL		20 32 40	LZ	24.	223.5		
19	LZ- eL		21 02 57	LZ	36	81.5		
19	23 31 57.3		28. N 56.9 E SOUTHERN IRAN					
			H= 50 KM MAG 5.30 CGS					
20	LZ- eLR		00 42 30	LZ	26.	73.6	128.4	
20	03 31 36.		29.5 N 81.0 E NEPAL					
			H= 33 KM MAG 5.20 CGS					
20	LZ- eP*1		03 51 20.4	SZ	1.5	34.8	149.1	
20	LZ- eP		04 58 32.1	SZ	1.7	77.2		
20	LZ- e		05 05 00	LR	22	72.8		
20	LZ- e		05 08 12	LT	25	65.5		
20	LZ- eLQ		05 11 45	LT	37	227.0		
20	LZ- eLR		05 16 27	LZ	22	289.6		
20	GG- eP		05 38 09.6	SZ	0.3	52.9	4.6	
	eS		39 05	ST	0.3	87.8		
20	08 32 35.*		18.7 S 177.6 W FIJI ISLANDS REGION					
			H=628 KM MAG 4.60 CGS					
20	LZ- eP		08 43 17.5	SZ	0.6	17.7	2.0	
	eS		43 44	ST	999.9	9999.9		
20	08 44 42.5		33.9 S 72.0 W OFF COAST OF CENTRAL CHILE					
			H= 28 KM MAG 4.80 CGS					
20	LZ- eP		08 48 49.8	SZ	1.3	25.3	17.9	4.22
	eP		48 51	LZ	21	221.6		
	e		48 54	SZ	1.8	159.7		
	ePP		49 01	SZ	1.6	132.4		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eS		52 23	LT	17.	9999.9		
	eL		53 11	SR	1.4	15.3		
	eLQ		53 45	LT	21	9999.9		
	eLR		55 16	LT	999	9999.9		
20	08 45 58.*		52.1 N 177.1 W ANDREANOF ALEUTIAN ISLANDS					
			H=140 KM MAG 4.30 CGS					
20	11 26 32.6		20.1 S 177.7 W FIJI ISLANDS REGION					
			H=463 KM MAG 4.80 CGS					
20	LZ- eL		11 54 42	LZ	20.	67.0		
20	13 31 54.7		37.5 N 141.6 E NEAR E. COAST HONSHU, JAPAN					
			H= 40 KM MAG 4.90 CGS					
20	00- eP		13 43 26.5	SZ	1.0	18.8	73.9	5.00
	eLR		14 14 20	LZ	25	572.4		
20	GG- eP		13 44 16.0	SZ	1.0	37.7	82.7	5.43
							Avg.	5.21
20	LZ- eP		13 40 09.3	SZ	0.4	15.8	2.8	
	eS		40 44	SR	1.1	15.9		
20	15 27 16.*		80.5 N 123.1 E EAST OF SEVERNAYA ZEMLYA					
			H= 33 KM MAG 4.80 CGS					
20	15 45 25.3		22.2 S 69.1 W NORTHERN CHILE					
			H=100 KM MAG 4.50 CGS					
20	LZ- eP		15 46 52.1	SZ	1.0	105.8	5.9	5.02
20	21 56 03.2		35.9 N 114.9 W CALIFORNIA NEVADA BORDER					
			H= 5 KM					
20	22 18 22.*		35.9 N 114.8 W CALIFORNIA NEVADA BORDER					
			H= 5 KM					
20	22 43 35.*		18.6 S 69.5 W NORTHERN CHILE					
			H=129 KM MAG 4.30 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
20	LZ-	tP	22 44 18.4C	SZ	999.9	9999.9		
	eP		44 20	LZ	15	113.1		
	eS		44 48	ST	999.9	9999.9		
	eL		44 53	LR	999	9999.9		
20	23 14 45.9		36.6 N 140.3 E	NEAR E. COAST HONSHU, JAPAN				
			H= 83 KM	MAG 4.30 CGS				
20	LZ-	tP	23 52 38.9C	SZ	0.2	56.5	2.3	
	eS		53 08	ST	0.8	42.5		
21	LZ-	eP	01 06 05.2	SZ	0.4	4.7	2.3	
	eS		06 34	SR	0.5	6.9		
21	LZ-	eL	01 07 48	LZ	19	79.0		
21	LZ-	tP	05 00 03.7D	SZ	999.9	9999.9	2.4	
	eS		00 34	SR	0.6	13.5		
21	07 28 48.1		5.9 S 154.3 E	SOLOMON ISLANDS				
			H= 40 KM	MAG 4.80 CGS				
21	LZ-	eL	08 32 33	LT	28.	96.4	132.3	
21	08 07 25.*		56.6 N 34.7 W	NORTH ATLANTIC OCEAN				
			H= 33 KM	MAG 4.30 CGS				
21	17 36 29.		60.5 N 146.8 W	SOUTHERN ALASKA				
			H= 43 KM	MAG 5.00 CGS				
21	18 32 03.		63.1 N 150.3 W	CENTRAL ALASKA				
			H= 111 KM	MAG 4.80 CGS				
21	LZ-	eL	18 38 47	LZ	20.	113.2		
21	19 23 21.*		13. N 124.5 E	Luzon, PHILIPPINE ISLANDS				
			H= 33 KM	MAG 5.50 CGS				
21	LZ-	eL	21 08 09	LZ	21.	83.9		
21	21 38 47.*		45.2 N 112.7 W	MONTANA				
			H= 33 KM	MAG 3.50 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
21	21 54 58.*		44.9 N 112.7 W	EASTERN IDAHÖ				
			H= 44 KM	MAG 3.90 CGS				
21	LZ-	eP	22 23 04.2	SZ	0.8	8.8		
21	LZ-	e	22 26 22	ST	1.6	35.9		
21	LZ-	e	22 27 40	SR	1.9	18.9		
21	LZ-	eL	22 27 40	LR	999	9999.9		
21	22 55 09.*		45. N 112.0 W	HEBGEN LAKE REGION				
			H= 33 KM					
21	LZ-	eP	23 34 27.8	SZ	0.6	18.8		
21	LZ-	eL	23 35 29	LZ	17	604.0		
22	00 24 48.7		9.5 S 71.3 W	PERU BRAZIL BORDER REGION				
			H= 614 KM	MAG 5.30 CGS				
22	LZ-	tP	00 26 41.4D	SZ	999.9	9999.9	7.2	
	eP		26 43	LZ	16	9999.9		
	eS		27 55	LR	999	9999.9		
	eL		31 18	SZ	1.3	132.8		
	eL		31 22	LZ	999	9999.9		
22	GG-	e	00 43 10	LZ	25	230.0	92.4	
22	00 46 33.*		21.3 S 179.3 W	FIJI ISLANDS REGION				
			H= 663 KM	MAG 4.60 CGS				
22	02 30 08.7		20.7 S 178.2 W	FIJI ISLANDS REGION				
			H= 85 KM	MAG 4.70 CGS				
22	LZ-	eP	02 37 03.5	SZ	0.4	17.3		
22	LZ-	eP	02 37 07	LZ	14	123.1		
22	LZ-	eS	02 37 50	ST	999.9	9999.9		
22	LZ-	eL	02 37 52	LR	14	386.5		
22	GG-	eP	04 03 22.5	SZ	0.3	11.6	2.9	
	eS		03 58	SR	0.3	29.5		
22	04 36 34.7		28.2 N 57.0 E	SOUTHERN IRAN				
			H= 42 KM	MAG 5.50 CGS				
22	GG-	eP	04 44 13.5	SZ	0.9	240.0	40.8	5.96

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
22	00-	eP	44 15	LZ	16.	976.1		
		ePP	46 00	LZ	17	870.4		
		eL	54 12	LZ	19	1192.7		
22	00-	eP	04 44 46.5	SZ	0.5	14.0	44.9	5.05
		eP	44 47	LZ	18	919.5		
		e	46 42	LR	22	950.2		
		e	51 40	LR	35	2631.5		
		eSS	54 50	LT	27	3106.1		
		eLR	05 01 00	LT	25	2901.7		
22	LZ-	eP'	04 55 42.9	SZ	1.1	27.6	128.5	
		ePP	57 52	LZ	18	192.1		
		e	05 05 53	LR	25	106.8		
		eSP	07 49	SZ	1.3	6.3		
		eSKKP	08 48	SZ	1.5	13.0		
		eSKKP	09 15	LZ	18	405.3		
		eSS	15 17	LR	30	267.6		
		SKSSKS	17 25	LR	21	254.1		
		eSSS	19 54	LR	26	311.4		
22	08 01 12.6	MONA PASSAGE	18.4 N 68.8 W					
			H=115 KM					
			MAG 6.00					
			CGS					
22	LZ-	eP	08 07 51.0	SZ	0.8	56.0	34.4	5.45
		eP	07 52	LZ	16	421.5		
		e	08 32	LZ	17	9999.9		
		eS	13 09	ST	1.4	148.8		
		eS	13 15	LT	23	9999.9		
		ePCS	13 58	LT	999	9999.9		
		e	15 40	LZ	999	9999.9		
		e	18 34	ST	1.4	117.2		
		e	18 45	LR	999	9999.9		
		eLQ	18 45	ST	1.2	55.3		
		e	19 12	ST	1.3	91.0		
		e	19 24	LZ	999	9999.9		
		eLR	21 10	LZ	999	9999.9		
22	GG-	eP	08 12 11.3	SZ	1.5	57.3	69.8	5.17
		e	21 10	LZ	23	372.0		
22	00-	eP	08 12 18.0	SZ	0.6	13.6	69.1	4.94
		eS	21 05	LR	28	788.0		
		eLR	37 50	LZ	20	411.1		
22	10 28 46.7	EASTERN IDAHO	44.9 N 112.5 W					
			H= 33 KM					
			MAG 4.30					
			CGS					
			Avg.					
			5.18					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
22			22 11 58 10.1					
			H=600 KM					
			MAG 5.00					
			CGS					
22	GG-	eP	13 59 35.5	SZ	0.7	19.7		
22			45.4 N 112.2 W					
			MONTANA					
			H= 33 KM					
			MAG 4.00					
			CGS					
22			7.2 N 126.8 E					
			MINDANAO, PHILIPPINE ISLANDS					
			H=384 KM					
			MAG 4.90					
			CGS					
22			31.9 N 117.1 W					
			OFF W. COAST BAJA CALIFORNIA					
			H= 14 KM					
			MAG 5.60					
			CGS					
22	LZ-	eP	21 05 29.4	SZ	1.3	44.2	66.8	5.49
		eP	05 32	LZ	14	165.0		
		e	08 34	SZ	2.1	74.8		
		eS	14 22	LT	24	9999.9		
		eSSS	21 07	LT	21	187.3		
		eLQ	22 20	LT	22	9999.9		
		eLR	25 24	LT	999	9999.9		
22	00-	eS	21 16 30	LR	30	532.5		78.2
		eSS	21 40	LR	25	822.5		
		eSSS	25 20	LR	21	689.6		
		eLQ	31 35	LT	36	2891.5		
		eLR	34 45	LT	27	3438.2		
22			51.4 N 177.9 W					
			ANDREANOF ALEUTIAN ISLANDS					
			H= 65 KM					
			MAG 4.60					
			CGS					
23			19.9 S 169.7 E					
			NEW HEBRIDES ISLANDS					
			H=129 KM					
			MAG 4.10					
			CGS					
23			51.8 N 175.8 W					
			ANDREANOF ALEUTIAN ISLANDS					
			H= 33 KM					
			MAG 4.30					
			CGS					
23			59.4 S 26.9 W					
			SOUTH SANDWICH ISLANDS REG.					
			H= 33 KM					
			MAG 6.00					
			CGS					
23	LZ-	eP	05 55 57.7	SZ	1.6	254.3	52.7	5.93
		eP	55 58	LZ	14	342.3		
		ePP	58 04	LZ	16	181.3		
		eS	06 03 25	LR	12	9999.9		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	e eLQ eLR		03 28	ST	4.0	595.3		
			11 20	LT	30	437.5		
			16 05	LZ	24	9999.9		
23	06 30 38.*		27.4 S 63.1 W	SANTIAGO PROVINCE, ARGENTINA				
			H=580 KM	MAG 4.40 CGS				
23	LZ- eP eL		06 33 19.3	SZ	0.6	43.2	12.2	4.90
			35 28	SR	1.0	39.3		
23	07 36 02.9		7.1 S 129.4 E	BANDA SEA				
			H=111 KM	MAG 5.00 CGS				
23	LZ- eP*1 e		07 55 42.0	SZ	1.4	47.2	150.8	
			55 47	SZ	1.0	107.8		
23	LZ- eP eS		09 07 30.0	SZ	0.5	7.4	4.8	
			08 27	ST	0.7	6.2		
23	09 16 52.9		51.1 N 175.5 W	ANDREANOF ALEUTIAN ISLANDS				
			H= 33 KM	MAG 4.40 CGS				
23	10 16 22.*		23.6 S 179.0 W	SOUTH OF FIJI ISLANDS				
			H= 33 KM	MAG 4.90 CGS				
23	10 52 17.5		27.9 N 57.0 E	SOUTHERN IRAN				
			H= 33 KM	MAG 4.80 CGS				
23	11 11 50.9		19.7 S 68.5 W	CHILE BOLIVIA BORDER REGION				
			H=163 KM	MAG 4.30 CGS				
23	LZ- tP eL eL		11 12 45.9C	SZ	999.9	9999.9	3.4	
			13 25	ST	999.9	9999.9		
			13 25	LR	999	9999.9		
23	GG- eP		12 56 43.6	SZ	0.6	74.5		
23	16 04 18.*		23.2 S 114.0 W	EASTER ISLAND REGION				
			H= 33 KM	MAG 4.50 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
23	16 11 39.*		52.2 N 168.2 W	FOX ALEUTIAN ISLANDS				
			H=160 KM	MAG 4.80 CGS				
23	LZ- tP eS		17 01 04.9D	SZ	999.9	9999.9	2.2	
			01 33	ST	999.9	9999.9		
23	19 47 59.3		30.3 N 131.1 E	KYUSHU, JAPAN				
			H= 33 KM	MAG 5.40 CGS				
23	GG- eP eL		20 00 29.0	SZ	1.0	39.5	84.2	5.50
			34 35	LZ	21	445.4		
23	LZ- eP*1		20 08 06.3	SZ	1.2	10.7	157.3	
			e 08 37	SZ	1.5	36.6		
23	00- e eSS		20 10 20	LT	27	263.6	76.9	
			14 50	LT	24	468.4		
23	eL		26 45	LR	33	531.9		
			31 35	LR	25	2377.4		
23	GG- e		21 28 20	LZ	25.	287.5		
23	GG- eLQ		21 37 05	LZ	35	1012.1		
23	GG- eLR		21 39 50	LZ	25	3834.6		
24	01 08 37.7		36.2 N 70.9 E	HINDU KUSH REGION				
			H=158 KM	MAG 5.60 CGS				
24	00- eP e		01 16 36.5	SZ	0.6	17.7	44.7	4.80
			17 07	SZ	0.8	27.8		
24	eS eSS		23 00	LR	20	283.7		
			26 30	LT	18	494.2		
24	eL		31 15	LT	25	300.6		
24	GG- eP		01 16 37.0	SZ	2.0	164.9	44.6	5.24
							Avg.	5.02
24	02 06 05.*		28.1 N 57.4 E	SOUTHERN IRAN				
			H= 33 KM					
24	09 38 07.*		36.4 N 135.2 E	SEA OF JAPAN				
			H= 33 KM	MAG 4.40 CGS				
24	LZ- tP		16 01 11.0C	SZ	0.3	33.9		
24	LZ- eP		16 58 46.5	SZ	0.6	3.3		
24	LZ- e		16 59 00	SZ	0.6	7.7		
24	LZ- eL		17 00 09	SR	0.5	5.0		
24	18 45 45.5		4.4 S 153.1 E	NEW IRELAND REGION				
			H= 93 KM	MAG 6.10 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
24	GG-	eP ¹	19 04 36.8	SZ	0.5	19.9	124.6	
	eL		47 40	LZ	40	991.1		
24	LZ-	eSKP	19 08 22	SZ	1.2	72.5	134.0	
	e		17 03	SZ	1.9	17.0		
	eL		48 45	LZ	20	9999.9		
24	OO-	eLQ	19 41 15	LT	18	507.0	116.7	
	eLR		43 00	LZ	35	1073.9		
24			19 25 52.5	3.9 N 96.9 E	NORTHERN SUMATRA			
				H=141 KM	MAG 5.40	CGS		
24			19 49 58.5	52.7 N 168.8 W	FOX ALEUTIAN ISLANDS			
				H= 35 KM	MAG 4.30	CGS		
24			19 55 01.3	35.1 N 139.2 E	NEAR S. COAST HONSHU, JAPAN			
				H= 66 KM	MAG 5.00	CGS		
24	GG-	eP	20 07 25.0	SZ	1.0	21.1	83.8	5.13
	eL		41 15	LZ	18	479.0		
24	LZ-	eP	20 24 06.8	SZ	1.0	7.8		
24	LZ-	eL	21 27 05	LZ	22	226.2		
24	GG-	eP	21 31 04.2	SZ	0.7	5.2	3.3	
	eS		31 45	SR	0.5	11.2		
24			22 51 35.*	44.7 N 110.8 W	YELLOWSTONE PARK, WYOMING			
				H= 33 KM	MAG 4.00	CGS		
24			23 48 37.2	23.9 S 179.9 W	SOUTH OF FIJI ISLANDS			
				H=473 KM	MAG 4.60	CGS		
25	01 08 26.8			8.2 N 126.0 E	MINDANAO, PHILIPPINE ISLANDS			
				H= 62 KM	MAG 5.50	CGS		
25	LZ-	eP ¹	01 28 28.0	SZ	1.6	26.4	163.7	
	eP ²		29 21	SZ	1.0	6.2		
	eL		02 28 14	LZ	17	137.8		
25			02 31 15.8	18.6 S 169.1 E	NEW HEBRIDES ISLANDS			
				H=209 KM	MAG 4.30	CGS		
25	03 16 47.1			15.2 S 173.2 W	TONGA ISLANDS			
				H= 11 KM	MAG 4.50	CGS		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
25			08 02 08.5	9.9 S 159.8 E	SOLOMON ISLANDS			
				H= 35 KM	MAG 5.10	CGS		
25			08 05 52.9	7.8 N 80.8 W	PANAMA			
				H= 45 KM	MAG 4.40	CGS		
25	LZ-	eP	08 11 34.0	SZ	0.9	24.5	26.8	4.83
	e		13 45	LZ	20	161.6		
	e		17 29	LR	18	119.4		
	eLQ		20 37	LT	24	278.2		
	eLR		22 06	LZ	17	335.8		
25			08 48 37.7	18.8 S 69.0 W	NORTHERN CHILE			
				H=117 KM	MAG 5.10	CGS		
25	LZ-	tP	08 49 24.3D	SZ	999.9	9999.9	2.6	
	eP		49 25	LZ	26	9999.9		
	eL		09 03 50	SR	1.9	112.5		
25	GG-	eL	09 34 25	LZ	15	280.6	98.0	
25			09 51 02.*	22.5 S 67.3 W	CHILE BOLIVIA BORDER REGION			
				H= 92 KM	MAG 4.60	CGS		
25	LZ-	eP	09 52 43.0	SZ	1.0	17.6	6.3	4.38
	e		53 29	LZ	17	167.0		
	eL		54 21	LR	14	747.1		
25			13 50 50.*	35.2 N 139.1 E	NEAR S. COAST HONSHU, JAPAN			
				H=104 KM	MAG 4.80	CGS		
25	LZ-	eP ¹	14 10 28.2	SZ	1.2	21.4	149.0	
	eP ²		10 37	SZ	1.5	69.7		
25			14 09 48.*	32.3 N 113.7 W	W. ARIZONA MEXICO BORDER			
				H= 33 KM	MAG 4.40	CGS		
25	LZ-	eL	15 01 00	LZ	23.	73.0		
25			16 30 01.9	18. N 101.2 W	NEAR COAST GUERRERO, MEXICO			
				H= 81 KM	MAG 4.80	CGS		
25	LZ-	eP	16 38 25.8	SZ	1.2	12.8	46.9	4.69

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eP		38 29	LZ	19.6	96.7		
	ePP		40 05	SZ	1.4	18.1		
	eS		45 20	LT	24	175.7		
	eSCS		48 20	LT	23	214.5		
	eLQ		51 49	LT	31	9999.9		
	eLR		55 02	LZ	999	9999.9		
25	17 01 32.2		34.8 N 139.3 E NEAR S. COAST HONSHU, JAPAN					
			H= 33 KM MAG 5.10 CGS					
25	LZ- eP*1		17 21 19.4	SZ	1.5	61.0	149.0	
25	17 56 40.1		25.3 S 68.1 W CHILE ARGENTINA BORDER REG.					
			H=101 KM MAG 5.00 CGS					
25	LZ- eP		17 58 49.2	SZ	0.6	22.1	9.0	5.16
	eP		58 52	LZ	16	200.9		
	e		18 01 23	LT	20	420.4		
	eL		02 04	LZ	18	9999.9		
	eL		02 23	SZ	2.4	628.9		
25	LZ- eL		18 14 29	LZ	25.	163.7		
25	LZ- eL		21 37 40	LZ	17	55.4		
26	01 19 06.*		18. N 91.8 W GULF OF CAMPECHE					
			H= 33 KM MAG 3.50 CGS					
26	04 57 14.*		19.7 S 178.3 W FIJI ISLANDS REGION					
			H=510 KM MAG 4.70 CGS					
26	LZ- eP		05 18 50.0	SZ	0.4	5.9		
26	LZ- e		05 18 54	SZ	999.9	9999.9		
26	LZ- eP		05 19 00	LZ	16	182.0		
26	LZ- eL		05 19 35	LT	17	804.0		
26	LZ- eP		05 31 06.1	SZ	0.5	1.7	3.8	
	eS		31 52	ST	0.7	9999.9		
26	LZ- eL		05 31 53	LZ	19	9999.9		
26	08 16 28.9		16.7 N 99.6 W NEAR COAST GUERRERO, MEXICO					
			H= 33 KM MAG 5.40 CGS					
26	LZ- eP		08 24 41.2	SZ	2.0	253.8	44.9	5.72
	eP		24 42	LZ	13	198.5		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eP		24 51	SZ	1.8	313.1		
	eS		31 10	LR	20	595.4		
	eSS		34 43	LT	22	580.4		
	eLQ		37 00	LT	30	9999.9		
	eLR		40 40	LZ	999	9999.9		
26	LZ- tP		10 18 26.5D	SZ	0.5	29.7	1.6	
	eS		18 48	ST	999.9	9999.9		
26	10 57 17.2		43.1 N 145.2 E HOKKAIDO, JAPAN REGION					
			H= 12 KM MAG 4.30 CGS					
26	14 30 29.1		51.8 N 156.8 E KAMCHATKA					
			H=136 KM MAG 5.70 CGS					
26	00- eP		14 40 51.0	SZ	0.5	10.5	64.2	4.95
26	GG- eP		14 41 50	LZ	18	491.6	74.7	
	eP		41 55	SZ	1.0	60.7		5.35
	e		42 07	SZ	0.8	39.9		
	ePP		42 30	SZ	0.7	23.4		
	e		42 50	LZ	16	663.7		
	eSP		51 00	LZ	18	680.6		
	eL		52 20	LZ	23	826.2		
	15 13 00		LZ	20	661.4			
26	LZ- eP*		14 49 25.1	SZ	1.2	50.3	129.6	
	e		50 00	SZ	1.3	47.4		
	ePP		51 33	LZ	19	402.9		
	ePP		51 35	SZ	1.7	33.4		
	e		15 01 25	SZ	1.8	20.4		
	e		01 30	LZ	16	350.0		
	e		02 59	SZ	1.9	31.9		
	eL		34 15	LZ	32	9999.9		
	AVG.							5.15
26	20 58 14.4		39.6 N 110.3 W EASTERN UTAH					
			H= KM MAG 3.90 CGS					
26	LZ- eP		21 47 39.5	SZ	0.5	1.8		
26	LZ- eL		21 49 02	ST	0.6	11.7		
26	23 50 23.8		59.3 N 152.9 W SOUTHERN ALASKA					
			H= 35 KM					
27	LZ- eP		01 30 28.0	SZ	0.5	28.1		
27	LZ- tP		09 56 50.8D	SZ	0.4	9999.9	2.0	

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
	eS		57 17	ST	0.6	62.4		
27	10 14 51.*		51.2 N 177.2 E RAT ALEUTIAN ISLANDS H= 33 KM MAG 4.60 CGS					
27	LZ- eP		14 18 39.3	SZ	0.2	5.7	3.8	
	eS		19 25	ST	0.3	14.6		
27	17 43 21.4		12.9 N 125.4 E SAMAR, PHILIPPINE ISLANDS H= 33 KM MAG 5.90 CGS					
27	00- eP		17 56 25	LZ	22.	163.2	90.2	
	eSKS		18 06 55	LR	16	1103.5		
	ePKKS		17 10	LR	21	450.1		
	e		20 10	LR	24	1444.6		
	eLQ		26 15	LR	40	1859.5		
	eLR		32 25	LR	23	2943.7		
27	GG- eP		17 56 40	LZ	20	192.1	95.2	
	eSP		18 09 08	LZ	17	609.1		
	eL		32 45	LZ	37	749.4		
27	LZ- eP'1		18 03 27.8	SZ	1.4	70.6	166.2	
	eP'1		03 32	LZ	19	9999.9		
	eP'2		04 31	SZ	1.5	63.6		
	ePP		08 16	SZ	1.9	33.1		
	e		35 55	LT	22	9999.9		
	eL		19 02 44	LT	25	9999.9		
27	17 51 46.*		7.2 N 73.4 W NORTHERN COLOMBIA H=113 KM MAG 4.10 CGS					
28	04 55 03.*		11.9 S 165.6 E SANTA CRUZ ISLANDS H=111 KM MAG 4.90 CGS					
28	LZ- eP		06 18 13.1	SZ	0.4	1.5		
28	LZ- e		06 18 17	SZ	0.3	7.9		
28	LZ- eL		06 19 50	ST	0.8	8.7		
28	LZ- eL		13 46 07	LZ	20	199.8		
28	LZ- eP		14 52 00.1D	SZ	0.2	18.7	1.9	
	eS		52 25	ST	0.6	8.5		
28	16 16 11.		22.1 S 179.6 W SOUTH OF FIJI ISLANDS H=611 KM MAG 6.38 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	LZ- eP		16 29 07.8	SZ	1.0	11.7	102.5	
	ePP		33 30	SZ	1.7	207.9		
	epPP		35 22	SZ	2.1	110.1		
	eSKS		38 47	SR	1.1	27.8		
	e		39 32	ST	2.4	142.4		
	ePS		42 53	ST	5.0	855.1		
	ePKKP		45 03	SZ	1.1	55.3		
	e		49 21	SZ	1.6	26.4		
	eP'P'		53 12	SZ	2.1	55.0		
28	00- eP'		16 34 40.0	SZ	0.7	50.2	140.4	
	eP'		34 50	LZ	22	637.6		
	ePP		37 12	LZ	20	2044.9		
	ePP		37 28	SZ	1.0	123.8		
	epPP		39 50	LZ	27	980.6		
	e		41 35	LZ	21	2417.0		
	e		47 00	LZ	17	2432.0		
	eSS		55 33	LR	31	3136.0		
	e		59 50	LT	25	2129.5		
	e		17 03 45	LT	23	2602.2		
	eL		18 00	LZ	32	4342.6		
28	GG- eP'1		16 34 51.0	SZ	1.0	76.5	151.2	
	eP'2		34 58	SZ	1.2	686.8		
	eP'2		34 58	LZ	18	990.2		
	epP'1		37 20	SZ	2.5	2600.0		
	epP'2		37 29	SZ	1.3	490.5		
	epP'2		37 30	LZ	18	3557.4		
	e		38 18	LZ	20	9999.9		
	epPP		40 35	LZ	23	1668.0		
	esPP		41 45	LZ	18	2567.2		
	e		48 12	LZ	18	2585.5		
	e		17 01 00	LZ	25	1438.6		
28	16 47 40.*		12.3 N 44.6 W NORTH ATLANTIC RIDGE H= 33 KM MAG 4.90 CGS					
28	LZ- eP		16 55 00.0	SZ	1.6	37.0	36.9	4.94
	e		17 11 19	SZ	1.0	9.8		
28	17 04 57.		86.7 N 68.7 E NORTH OF FRANZ JOSEF LAND H= 33 KM MAG 5.70 CGS					
28	00- eP		17 10 42.0	SZ	1.4	65.5	27.5	5.15
28	GG- eP		17 12 22.8	SZ	0.8	18.8	38.8	4.89
							AVG.	5.02
28	LZ- eP		21 11 32.0	SZ	1.1	11.4		

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
28	GG-	eL	21 21 40	LZ	35•	415•5		
28	23 50 41•*		51•5 N 175•0 W ANDREANOF ALEUTIAN ISLANDS H= 33 KM MAG 4•90 CGS					
29	00 28 54•4		52•2 N 175•1 W ANDREANOF ALEUTIAN ISLANDS H= 33 KM MAG 4•50 CGS					
29	00 44 20•1		51•5 N 175•0 W ANDREANOF ALEUTIAN ISLANDS H= 35 KM MAG 4•60 CGS					
29	01 40 08•4		51•5 N 175•0 W ANDREANOF ALEUTIAN ISLANDS H= 38 KM MAG 4•70 CGS					
29	02 07 03•4		59•6 N 145•3 W GULF OF ALASKA H= 33 KM MAG 4•60 CGS					
29	03 30 44•3		38•1 N 144•0 E OFF E. COAST HONSHU, JAPAN H= 40 KM MAG 4•90 CGS					
29	LZ-	tP	06 21 18•6C	SZ	0•5	46•1		
29	06 35 02•2		51•4 N 174•9 W ANDREANOF ALEUTIAN ISLANDS H= 22 KM MAG 5•00 CGS					
29	00- eL		07 07 40	LZ	30	276•5	67•8	
29	06 39 08•		51•5 N 174•8 W ANDREANOF ALEUTIAN ISLANDS H= 33 KM MAG 5•30 CGS					
29	00- eP		06 50 14•5	SZ	1•0	22•9	67•7	5•24
29	GG- eP		06 51 10•5	SZ	0•7	22•2	79•1	5•23
					Avg•		5•23	
29	10 09 42•4		51•8 N 175•1 W ANDREANOF ALEUTIAN ISLANDS H= 76 KM MAG 4•40 CGS					
29	LZ- eP		10 10 31•0	SZ	0•3	70•7		
29	LZ- tP		11 19 06•8D	SZ	0•4	23•3	1•6	
	eS		19 29	ST	0•4	643•0		
29	12 50 43•5		40•5 N 139•0 E EASTERN SEA OF JAPAN H= 16 KM MAG 5•10 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
29	LZ-	eP•1	13 10 21•0	SZ	1•0	5•5	146•1	
29	LZ-	eP	19 20 02•5	SZ	0•6	9•4		
29	22 59 22•		17•2 S 178•7 W FIJI ISLANDS REGION H=493 KM MAG 4•90 CGS					
29	23 22 42•1		6•2 S 155•5 E SOLOMON ISLANDS H= 50 KM MAG 5•20 CGS					
30	01 14 22•*		36•6 N 34•7 E TURKEY H= 33 KM					
30	GG- eP		03 11 16•2	SZ	0•3	10•9	5•5	
	eS		12 24	SR	0•3	56•6		
30	LZ- eP		07 13 23•7	SZ	0•5	2•7	4•2	
	eS		14 15	ST	1•0	22•7		
30	09 26 40•*		9•6 S 109•1 W N. EASTER ISLAND CORDILLERA H= 33 KM MAG 4•50 CGS					
30	LZ- eP		09 34 24•7	SZ	0•8	8•6	40•1	4•50
30	09 58 01•*		8•7 S 109•3 W N. EASTER ISLAND CORDILLERA H= 33 KM MAG 4•60 CGS					
30	LZ- eP		10 05 40•8	SZ	0•8	19•2	40•5	4•88
	eL		19 35	SZ	5•5	829•8		
30	13 08 50•2		12•4 N 142•0 E SOUTH OF MARIANA ISLANDS H=100 KM MAG 4•90 CGS					
30	LZ- eP•1		13 28 33•8	SZ	1•2	15•6	150•2	
30	13 15 55•*		16•7 S 175•0 W TONGA ISLANDS H= 33 KM MAG 4•80 CGS					
30	13 19 47•4		62•6 S 165•8 E BALLENY ISLANDS REGION H= 33 KM MAG 5•20 CGS					

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
30	LZ-	eP	13 32 50.0	SZ	1.2	26.1	90.7	5.38
30	14 00 46.*		19.1 N 107.8 W	OFF COAST OF JALISCO, MEXICO				
			H= 33 KM	MAG 3.90 CGS				
30	GG-	eL	14 45 50	LZ	18.	580.9	92.9	
30	15 27 25.8		31.3 N 138.8 E	SOUTH OF HONSHU, JAPAN				
			H=261 KM	MAG 5.40 CGS				
30	00-	eP	15 39 00.5	SZ	0.6	9999.9	78.7	
30	GG-	eP	15 39 43.5	SZ	0.5	24.5	86.9	5.35
		epP	40 36	SZ	1.3	37.5		
30	16 04 39.*		36.1 S 179.4 W	EAST OF N. IS., NEW ZEALAND				
			H= 33 KM	MAG 4.60 CGS				
30	16 49 46.4		41.6 N 141.7 E	HOKKAIDO, JAPAN REGION				
			H= 42 KM	MAG 4.30 CGS				
30	LZ-	eP	21 14 03.6	SZ	0.4	19.6		
30	LZ-	eL	21 15 32	ST	0.8	6.7		
30	21 30 58.8		23.3 S 179.9 W	SOUTH OF FIJI ISLANDS				
			H=547 KM	MAG 5.20 CGS				
30	23 37 41.		36.4 N 69.9 E	HINDU KUSH REGION				
			H=123 KM	MAG 5.30 CGS				
31	01 04 38.*		18.9 N 107.9 W	OFF COAST OF JALISCO, MEXICO				
			H= 33 KM	MAG 4.40 CGS				
31	01 47 13.*		28.7 N 139.4 E	BONIN ISLANDS REGION				
			H=426 KM	MAG 4.70 CGS				
31	03 14 26.*		60. N 147.0 W	SOUTHERN ALASKA				
			H= 58 KM	MAG 4.10 CGS				
31	10 41 03.6		35. N 116.6 W	CENTRAL CALIFORNIA				
			H= 14 KM	MAG 3.50 CGS				

DAY	STA	PHASE	TIME	INST	PER	AMPL	DIST	MAG
31	12 46 22.4		7.4 S 156.0 E	SOLOMON ISLANDS				
			H= 48 KM	MAG 4.80 CGS				
31	16 18 01.7		35.8 N 25.6 E	CRETE				
			H= 86 KM	MAG 5.10 CGS				
31	GG-	eP	16 22 00.0	SZ	1.0	202.4	17.4	5.29
		eL	25 30	ST	1.2	97.7		
31	00-	eP	16 23 35.5	SZ	0.5	12.4	27.0	4.72
							AVG.	5.00
31	LZ-	eP	18 53 32.9	SZ	0.3	3.9	3.7	
		eS	54 18	ST	0.4	16.3		
31	LZ-	eP	20 08 25.6	SZ	0.3	3.4	5.2	
		e	08 33	SZ	0.4	16.6		
		eS	09 27	SR	999.9	9999.9		
31	23 13 30.9		4.6 S 153.0 E	NEW BRITAIN REGION				
			H= 77 KM	MAG 5.10 CGS				
31	LZ-	eP†	23 32 44.7	SZ	1.4	43.5	134.0	
		eSKP	36 11	SZ	1.3	56.9		
31	23 34 52.9		52. N 175.4 E	RAT ALEUTIAN ISLANDS				
			H= 33 KM	MAG 4.70 CGS				