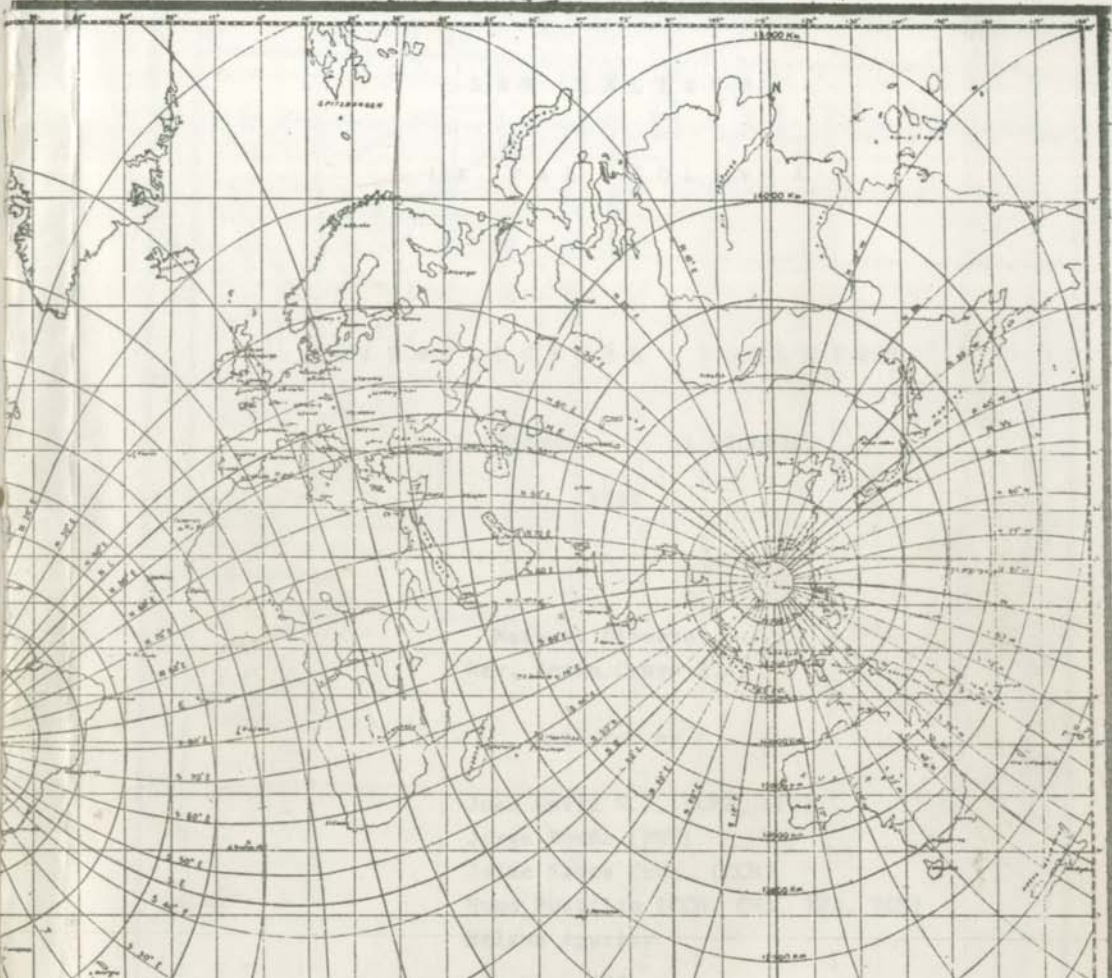


PARA LA PAZ



SEISMIC BULLETIN
OBSERVATORIO SAN CALIXTO
LA PAZ - BOLIVIA

1 OCTOBER - 31 DECEMBER 1967

OBSERVATORIO

SAN CALIXTO

LA PAZ BOLIVIA

SEISMOLOGICAL BULLETIN

1 OCTOBER - 31 DECEMBER
1967Network Director
Rev. Ramón Cabré S.J.

Assisted by

Juan Enviz S.J. (LPZ, LPB)
Jorge Román (PNS)
Jaime Santa Cruz. (CCH)
Hugo Bustillo (CCH, CHA, TRJ, SCS)
Nelson Aguilar

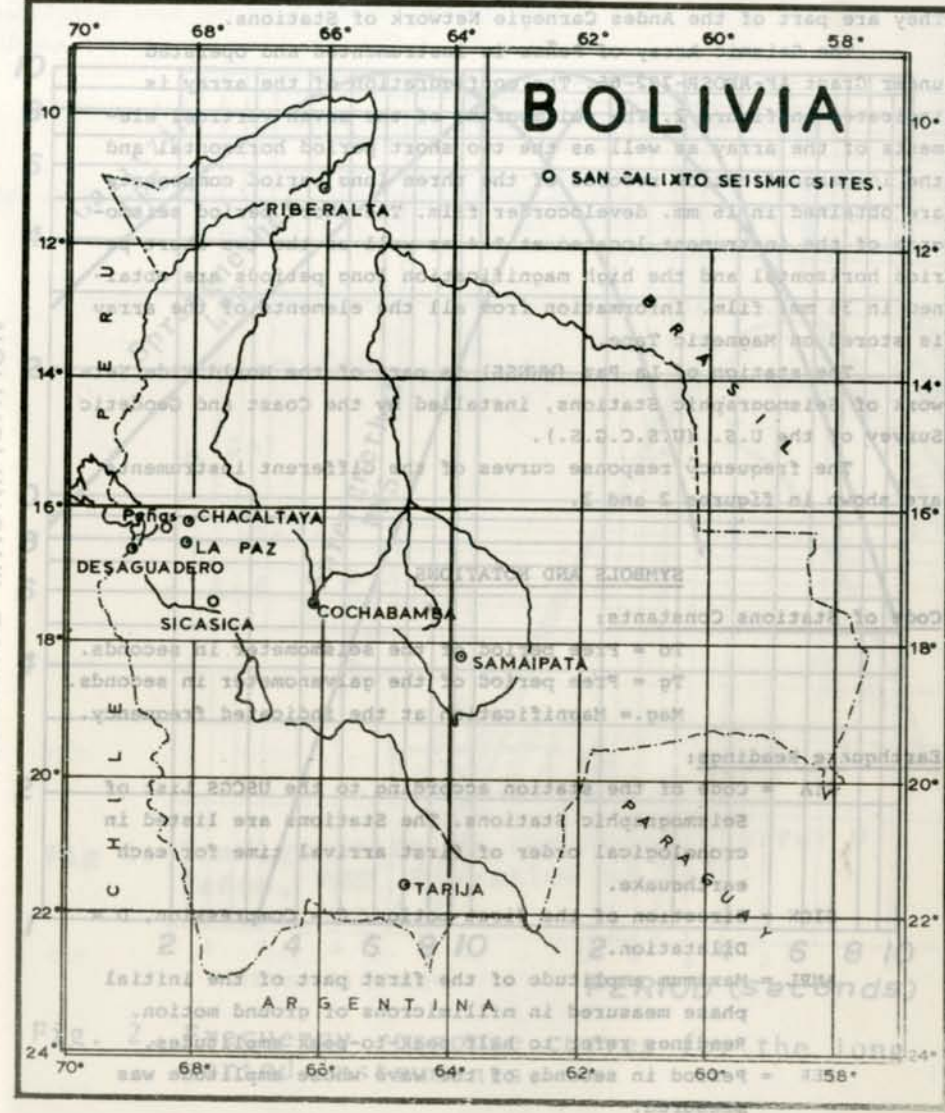
Casilla 283, La Paz,
BOLIVIA, South America.

STATIONS OF THE "SAN CALIXTO OBSERVATORIO" NETWORK

This Bulletin contains seismological information obtained at the following stations of Bolivia:

LOCATION	CODE	LATITUDE	LONGITUDE	ALTITUDE (Mts)	INSTRUMENTS	MAGNIFICATION
Peñas	PNS	16°16'02"S	68°28'24"W	3986	Seismic array of seven short-period vertical Johnson-Matheson, To=1.25 sec. Tg = .337 sec.	250,000 at 1 cps 250,000 at 1 cps
La Paz (WWNSS)	LPB	16°31'57.6"S	68°05'54.1"W	3292	SP Hor. Benioff, To=1 sec, Tg=2 sec. LP, three components Sprengnether, To = 20 sec., Tg = 30 sec. SP three components Benioff, To=1 sec. Tg = .75 sec.	20,000 at 25 sec. 50,000 at 1 cps
La Paz (Colegio)	LP2	16°29'43"S	68°07'57.7"W	3658	LP, three components Sprengnether, To = 15 sec., Tg = 100 sec. Wilson-Lamison, SP vertical, To=1.2 sec. Tg = 1 sec.	1,500 at 15 sec.
Chacaltaya	CHA	16°20'45"S	68°07'31"W	5220	LP, three components, Galitzin-Wilip To = 12 sec., Tg = 12.6 sec.	1,000 at 12 sec.
Cochabamba	CCH	17°22'56"S	66°08'54"W	2500	Mainka, NS, To=14 sec. EW, To=12 sec.	180 and 300
Sicasica	SCS	17°17'05"S	67°48'55"W	3900	San Calixto Pendulo EW, To=2.4 sec	700
Tarija	TRJ	21°30'47"S	64°46'54"W	2100	SP vertical Wilson-Lamison To = 1 sec. SP vertical Wilson-Lamison To = 1 sec. SP vertical Wilson-Lamison To = 1 sec. SP vertical Wilson-Lamison To = 3 sec.	

Fig. 1. Location of Bolivian network. DIST = Epicentral distance to La Paz. Bolivia measured in map of isostatic Curves centered at La Paz.



The stations of Cochabamba, Desaguadero, Samaipata, Sicasica and Tarija are operated in cooperation with the Instituto Geofísico Boliviano under the sponsorship of the Department of Terrestrial Magnetism of the Carnegie Institution of Washington. They are part of the Andes Carnegie Network of Stations.

The Seismic Array of Peñas is instrumented and operated under Grant AF-AFOSR-792-65. The configuration of the array is indicated in figure 2. The seismograms of the seven vertical elements of the array as well as the two short period horizontal and the low magnification records of the three long period components are obtained in 16 mm. developocorder film. The short period seismogram of the instrument located at 2-4 as well as the two short period horizontal and the high magnification long periods are obtained in 35 mm. film. Information from all the elements of the array is stored on Magnetic Tape.

The station of La Paz (WVNSS) is part of the World Wide Network of Seismographic Stations, installed by the Coast and Geodetic Survey of the U.S. (U.S.C.G.S.).

The frequency response curves of the different instruments are shown in figures 2 and 3.

SYMBOLS AND NOTATIONS

Code of Stations Constants:

To = Free period of the seismometer in seconds.
 Tg = Free period of the galvanometer in seconds.
 Mag. = Magnification at the indicated frequency.

Earthquake Readings:

STA = Code of the station according to the USCGS List of Seismographic Stations. The Stations are listed in chronological order of first arrival time for each earthquake.

SIGN = Direction of the first motion. C = Compression, D = Dilatation.

AMPL = Maximum amplitude of the first part of the initial phase measured in millimicrons of ground motion. Readings refer to half peak-to-peak amplitudes.

PER = Period in seconds of the wave whose amplitude was measured.

DIST = Epicentral distance to La Paz, Bolivia, measured in a map of Isodiastematic Curves centered at La Paz.

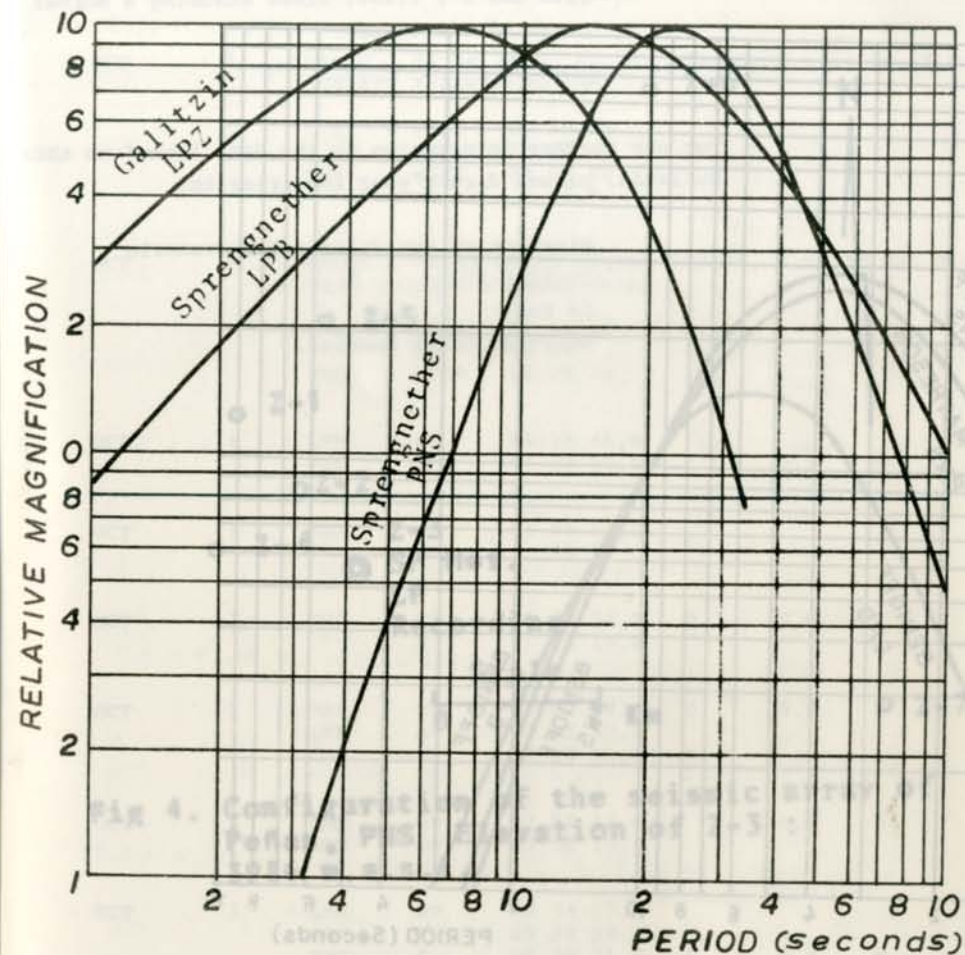


Fig. 2. Frequency response curves for the long period instruments.

The stations of Cochabamba, Desaguadero, Samaipeta, Sica-sica and Tarija are operated in cooperation with the Instituto Geofísico Boliviano under the sponsorship of the Department of Terrestrial Magnetism of the Carnegie Institution of Washington. They are part of the Andes Carnegie Network of Stations.

The seismic array of Peñas is instrumented and operated

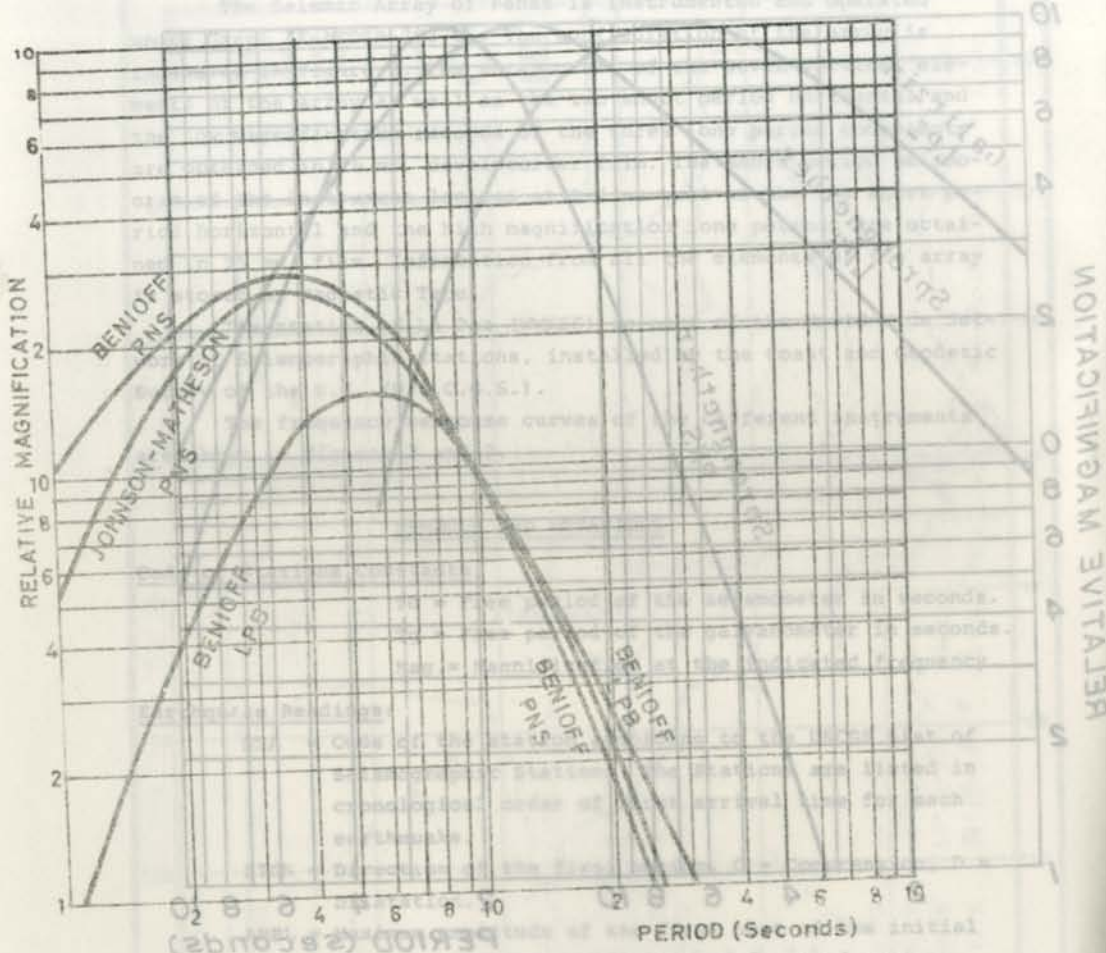


Fig. 3. Frequency response curves for the long period instruments of the Peñas array. The curves are centered at La Paz, Bolivia, measured in degrees latitude and longitude. The curves are centered at La Paz, Bolivia, measured in degrees latitude and longitude.

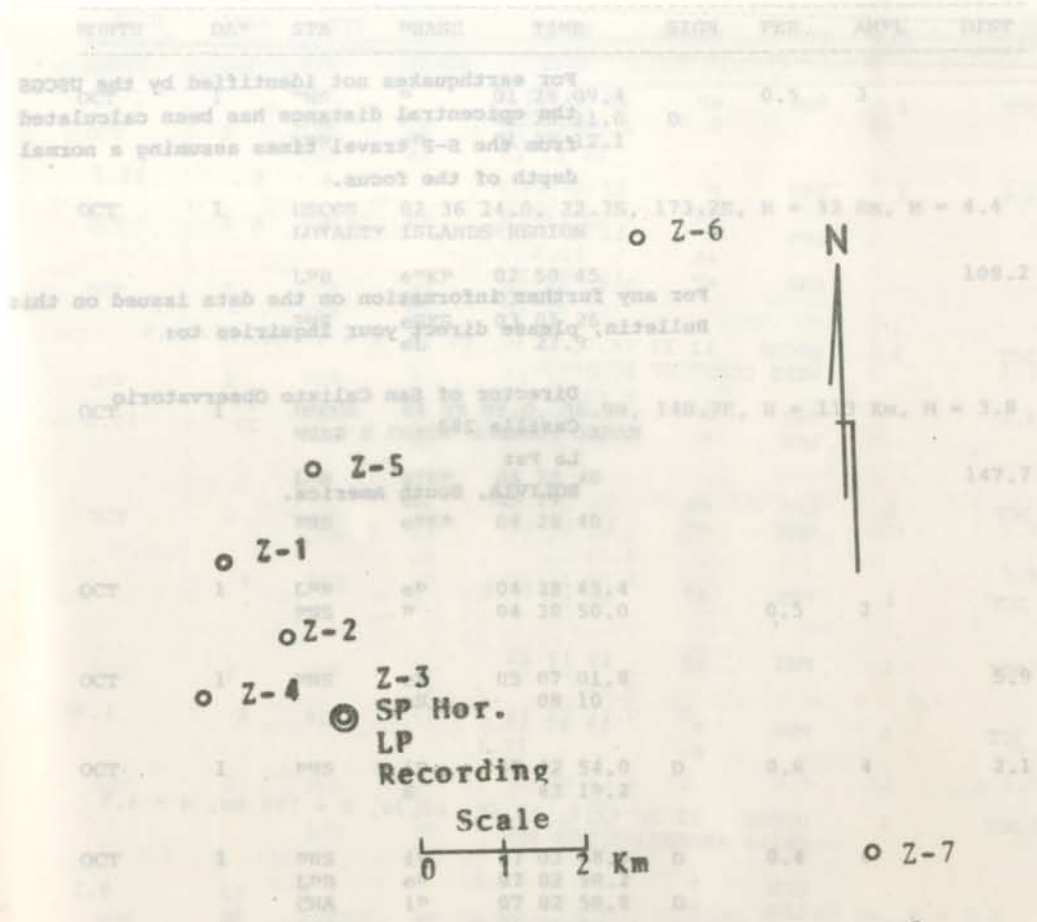


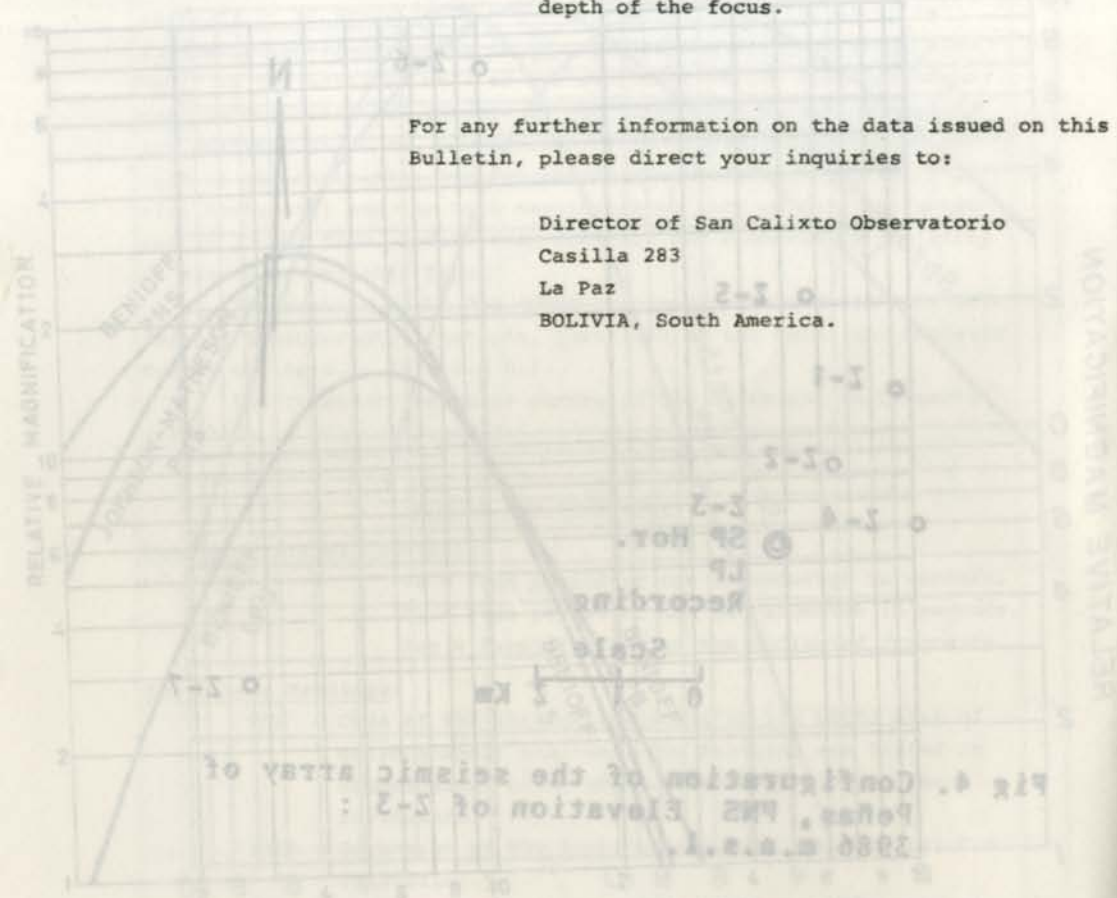
Fig 4. Configuration of the seismic array of Peñas, PNS. Elevation of Z-3 : 3986 m.a.s.l.

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For earthquakes not identified by the USCGS the epicentral distance has been calculated from the S-P travel times assuming a normal depth of the focus.

For any further information on the data issued on this Bulletin, please direct your inquiries to:

Director of San Calixto Observatorio
 Casilla 283
 La Paz
 BOLIVIA, South America.



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	1	PNS	p	01 28 09.4			0.5	3
OCT	2	CHA	P	01 28 11.0	D			
OCT	2	LPR	eP	01 28 12.1				
OCT	1	USCGS	02 36 24.0, 22.7S, 173.2E, H = 33 Km, M = 4.4					
		LOYALTY	ISLANDS REGION					
OCT	2	LPB	ePKP	02 50 45				108.2
			eL	03 27				
		PNS	eSKS	03 01 26				
			eL	27.9				
OCT	1	USCGS	04 09 09.0, 36.9N, 140.7E, H = 113 Km, M = 3.8					
		NEAR E	COAST HONSHU, JAPAN					
		LPB	ePKP	04 28 40				147.7
			eL	05 19				
		PNS	ePKP	04 28 40				
OCT	1	LPR	eP	04 38 45.4				
		PNS	P	04 38 50.0		0.5	2	
OCT	1	PNS	eP	05 07 01.8				5.9
			eS	08 10				
OCT	1	PNS	iP	05 42 54.0	D	0.6	4	2.1
			S	43 19.2				
OCT	1	PNS	iP	07 02 48.7	D	0.4	6	
		LPB	eP	07 02 50.2				
		CHA	iP	07 02 50.8	D			
OCT	1	PNS	eP	07 54 14.6		0.7	3	
		LPB	eP	07 54 17.6				
OCT	1	LPB	eP	09 34 27.8				
		CHA	P	09 34 28.3				
		PNS	P	09 34 31.0	C	0.4	6	5.8
			eS	35 37				
OCT	1	LPB	eP	09 44 20.3				
		PNS	P	09 44 20.8		0.8	4	

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
For earthquakes not identified by 3.3									
OCT	1	PNS	eP S	10 49 22.6 0 50 01.4					
OCT	1	PNS	P	12 09 04.5		0.6	5	15.2	
		LPB	eS P	11 53 45 12 09 06.8		0.6	6		
		CHA	eL eP	12 09 07.2					
OCT	1	USCGS	12 22 46.0, 2.3S, 79.9W, H = 68 Km, M = 4.5 NEAR COAST OF ECUADOR						
		PNS	P	12 26 53.7		1.1	17		
		LPB	P	12 26 56.7		0.9	22	15.1	
OCT	1	LPB	eP	17 19 10.9					
		PNS	eP	17 19 11.0					
OCT	1	PNS	eP	18 38 46.1		1.0	9		
OCT	1	PNS	eP	19 19 52					
OCT	1	PNS	P	19 50 15.0		0.6	6	1.9	
			S	37.7					
OCT	1	USCGS	22 26 42.8, 25.6S, 68.7W, H = 100 Km, M = 4.7 CHILE ARGENTINA BOR REG						
		CCH	P	22 28 44.3					
		LPB	P	22 28 52		1.0	52	9.1	
		PNS	iP	22 28 55.0	C	1.3	56		
			S	30 39					
OCT	2	USCGS	00 12 52.8, 21.0S, 178.8W, H = 604 Km, M = 5.2 FIJI ISLANDS REG						
		CCH	eP	00 25 42.8					
			ePP	00 30 03.6					
		LPB	eP	00 25 48				102.6	
			ePP	00 30 06					
			eL	01 00					
		PNS	eP	00 25 50		0.9	6		
			ePP	00 30 07					
			i	35 32					
			ePS	39 15					
			eG	54.2					
			eL	01 00.8					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
OCT	2	LPB	eP	01 19 21.6					
		PNS	eP	01 19 23					
OCT	2	PNS	eP	01 23 12					
OCT	2	CCH	eP	02 28 04.9					
		PNS	eP	02 28 23					
OCT	2	PNS	P	03 31 35.7	C	0.5	3	2.3	
			S	32 03.8					
OCT	2	LPB	eP	03 31 38.7				2.6	
			eS	32 09.5					
OCT	2	CCH	iP	05 02 28.7	D			5.4	
		LPB	iP	05 02 44.8	C	1.0	220	5.7	
			eS	03 49.8					
OCT	2	PNS	iP	05 02 49.2	C			5.8	
			S	03 56					
OCT	2	PNS	iP	05 40 37.0	D			1.9	
			iS	59.9					
OCT	2	CCH	iP	05 40 52.3	D				
								17 Km, M = 4.6	
OCT	2	PNS	iP	06 10 23.9	D	0.5	12	1.8	
			S	46.3					
		LPB	eP	06 10 25				2.0	
			S	48.7					
OCT	2	USCGS	08 45 40.6, 6.5S, 153.1E, H = 62 Km, M = 5.2 NEW BRITAIN REG						
		LPB	ePKP	09 04 50				132.7	
		PNS	ePKP	09 04 53.9					
OCT	2	USCGS	10 28 08.0, 56.4S, 27.4W, H = 153 Km, M = 5.3 S SANDWICH ISLANDS REG						
		CCH	P	10 36 38.0	C				
		LPB	iP	10 36 51.7	D	0.8	67	50.0	
		PNS	iP	10 36 54.8	D	0.9	54		
			eL	52.4					
OCT	2	PNS	P	10 41 52.1		0.8	3		

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
OCT	2	PNS	P S	11 28 32.6 29 07.0		0.8	6	3.8	
OCT	2	LPB PNS	eP P S	13 15 51.7 13 15 54.6 16 29.2		0.9	7	3.0	
OCT	2	USCGS	14 38 54.3, 6.6S, 153.4E, H = 49 Km, M = 5.1 NEW BRITAIN REGION						
		PNS	ePKP eL	14 58 09.2 15 42.3					
		LPB	ePKP	14 58 11.3				132.7	
OCT	2	USCGS	14 54 08.4, 6.7S, 153.4E, H = 27 Km, M = 5.3 NEW BRITAIN REGION						
		LPB	ePKP pPKP PKS eL	15 13 26 35 16 53.7 57		1.0	108	132.7	
		PNS	PKP pPKP PKS L	15 13 26.5 34.8 16 54.4 57.3		1.9	98		
OCT	2	PNS	P S	15 53 51.9 58.2		0.5	4	0.3	
OCT	2	USCGS	15 40 20.6, 28.0N, 127.9E, H = 109 Km, M = 4.9 EAST CHINA SEA						
		PNS	ePKP eL	16 00 11.6 17 56.7					
		LPB	eL	17 57				161.1	
OCT	2	USCGS	15 59 43.4, 11.7N, 86.8W, H = 39 Km, M = 4.7 NEAR COAST OF NICARAGUA						
		PNS	eP eL	16 06 19.3 16.1		0.5	5		
		LPB	eP	16 06 20				33.7	
OCT	2	USCGS	17 24 13.2, 6.6S, 105.2E, H = 33 Km, M = 5.5 SUNDA STRAIT						
		PNS	ePKP ePKP2 eL	17 44 08.8 37.8 18 37.8					
		LPB	ePKP eL	17 44 09 18 38				155.1	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
OCT	2	PNS	P	19 37 03.9					
OCT	2	PNS	eP	20 18 28					
OCT	2	PNS	P	21 13 14.6					
OCT	2	PNS LPB	eP eP	23 12 09 23 12 11.3		0.9	4		
OCT	3	CCH CHA LPB	P P eP	02 47 02.3 02 47 17.2 02 47 19.4	D C			4.8	
			S	48 14.5					
		PNS	P S	02 47 19.8 48 21.7		0.4	2	5.4	
OCT	3	PNS LPB CHA	eP eP eP	03 02 53 03 02 56.6 03 03 04.9					
OCT	3	USCGS	04 54 47.3, 1.0S, 149.5E, H = 17 Km, M = 4.6 NEW IRELAND REG						
		PNS LPB	PKP ePKP	05 14 08.5 05 14 11		1.0	6	138.8	
OCT	3	LPB PNS	eP P S	05 19 14.1 05 19 14.4 39		0.8	5	2.1	
		CHA	P	05 19 15.1					
OCT	3	PNS	eP	05 29 33					
OCT	3	PNS	P	05 36 57.9		0.7	11		
OCT	3	LPB PNS CHA CCH	P P P P	06 57 42.1 06 57 43.4 06 57 43.8 06 57 50.7	D D D D	0.7 0.4	4 5		
OCT	3	LPB CHA PNS	eP P P S	10 55 40.1 10 55 41.8 10 55 42.3 56 07.8				2.1	



MONTH	DAY	STA	PHASE	TIME	PER	AMPL	DIST
OCT	3	PNS	eP	11 30 42	PNS	4	T00
OCT	3	PNS	eP	11 30 16	PNS	7.0	T00
OCT	3	PNS	eP	13 10 20	PNS	P	3.9
OCT	3	PNS	P	13 21 09	PNS	7.0	T00
OCT	3	LPB	eP	13 24 35	CCH	P	T00
OCT	3	CHA	eP	13 24 37	CHA	P	T00
OCT	3	PNS	P	13 24 40	LPB	7.0	T00
OCT	3	PNS	eP	15 19 38	PNS	P	6.7
OCT	3	CCH	iP	15 43 56	PNS	P	T00
OCT	3	CHA	P	15 44 30	LPB	P	2.9
OCT	3	LPB	eP	15 44 32	CHA	P	T00
OCT	3	PNS	S	15 45 06	PNS	P	3.3
OCT	3	CHA	P	15 49 30	LPB	2.0	T00
OCT	3	CHA	P	15 49 31	CHA	P	T00
OCT	3	PNS	P	16 43 14	LPB	2.0	T00
OCT	3	LPB	eP	16 43 18	PNS	P	T00
OCT	3	CHA	eP	16 43 19	CHA	P	T00
OCT	3	PNS	eP	17 24 18	PNS	P	15.2
OCT	3	USCGS	P	18 16 03	PNS	P	T00
OCT	3	COSTA RICA	P	18 22 29	LPB	P	T00
OCT	3	CHA	eP	18 22 29	PNS	P	T00
OCT	3	PNS	P	18 22 29	CHA	P	1.0
OCT	3	LPB	eP	18 22 33	CCH	P	T00
OCT	3	LPB	eP	18 22 33	LPB	P	32.4
OCT	3	CHA	eP	18 22 33	CHA	P	T00
OCT	3	PNS	S	18 22 33	PNS	P	T00
OCT	3	PNS	SS	18 22 33	PNS	P	T00
OCT	3	PNS	eL	18 22 33	PNS	P	T00

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	3	USCGS	P	19 22 39.2	PNS	P	T00	
OCT	3	OFF COAST OF COSTA RICA	P	19 29 04.5	PNS	P	T00	
OCT	3	LPB	eP	19 29 06	CHA	P	31.9	
OCT	3	USCGS	P	19 50 25.9	PNS	P	T00	
OCT	3	ALEUTIAN NEAR ISLANDS	P	20 09 20	LPB	P	T00	
OCT	3	LPB	ePKP	20 09 20	LPB	P	121.0	
OCT	3	PNS	eL	20 48	LPB	P	T00	
OCT	3	PNS	eL	20 48.1	CHA	P	T00	
OCT	3	CHA	eP	20 32 26.6	PNS	P	T00	
OCT	3	PNS	eP	20 32 34	LPB	P	T00	
OCT	3	LPB	eP	20 32 37	LPB	P	T00	
OCT	3	PNS	P	21 09 18.7	PNS	P	1.8	
OCT	3	CHA	S	21 09 20.4	PNS	P	T00	
OCT	3	LPB	eP	21 09 20.5	LPB	P	T00	
OCT	3	LPB	eP	21 37 28.7	LPB	P	T00	
OCT	3	CHA	P	21 37 29.5	CHA	P	T00	
OCT	3	PNS	iP	21 37 30.8	PNS	P	0.6	
OCT	3	PNS	P	22 22 33	LPB	P	T00	
OCT	3	CHA	eP	22 33 08.3	CHA	P	2.8	
OCT	3	LPB	eP	22 33 08.6	LPB	P	T00	
OCT	3	LPB	eP	23 36 06	LPB	P	T00	
OCT	3	LPB	eL	24 20	LPB	P	T00	
OCT	3	PNS	eP	23 36 08.3	LPB	P	T00	
OCT	4	PNS	P	01 42 40.1	PNS	P	1.9	
OCT	4	LPB	S	01 43 03.3	LPB	P	T00	
OCT	4	CHA	eP	01 42 41.6	CHA	P	T00	
OCT	4	CHA	P	01 42 42.1	CHA	P	T00	
OCT	4	USCGS	P	01 53 19.7	PNS	P	T00	
OCT	4	DOMINICA REPUBLIC REGION	P	02 00 14	LPB	P	35.5	
OCT	4	LPB	eP	02 00 14	LPB	P	T00	
OCT	4	CHA	eL	02 00 11	CHA	P	T00	
OCT	4	CHA	eP	02 00 17.3	CHA	P	T00	
OCT	4	PNS	eP	02 00 17.9	PNS	P	0.9	
OCT	4	CCH	P	02 00 26.7	LPB	P	T00	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	4	LPB PNS	eP eP	02 24 03.5 02 24 04.9				
OCT	4	CCH CHA LPB PNS	P eP eP eP	04 27 53.0 04 28 22.0 04 28 33.3 29 23 04 28 37.6				
OCT	4	LPB PNS CHA	P P iP	04 44 20.7 04 44 21.4 04 44 21.8	D C	0.4 0.8	10 5	
OCT	4	PNS LPB	P P	06 03 53.2 06 03 55.5		0.8 0.9	5 7	
OCT	4	USCGS		06 02 16.4, 10.7N, 86.0W, H = 33 Km, M = 5.3				
				OFF COAST OF COSTA RICA				
		PNS	P	06 08 42.0		11.0	22	
			S	13 55				
			SS	15 53				
			eL	18.2				
		LPB	P	06 08 44.4		0.9	20	32.4
			eL	18.4				
		CCH	P	06 09 00.8	D			
OCT	4	USCGS		06 18 33.2, 33.0S, 139.7E, H = 52 Km, M = 5.2				
				WEST NEW GUINEA				
		PNS	PKP	06 38 10.9		0.9	4	
			pPKP	21.6				
		LPB	PKP	06 38 11.3		0.8	36	
			pPKP	22				
			eL	07 28				
		CHA	PKP	06 38 12.1				
		CCH	PKP	06 38 13.1				
OCT	4	USCGS		07 47 15.7, 30.4N, 142.2E, H = 33 Km, M = 4.3				
				SOUTH OF HONSHU, JAPAN				
		LPB	ePKP	08 07 00				149.0
			eL	58				
		PNS	PKP	08 07 03.0		0.8	4	
			eL	58.1				
OCT	4	USCGS		07 55 26.0, 24.1S, 16.8W, H = 195 Km, M = 4.1				
				SALTA PROVINCE, ARGENTINA				
		CCH	P	07 57 05.2				
		LPB	P	07 57 16.7	C	0.7	14	7.6
			S	58 42.8				
		CHA	P	07 57 18.0				
		PNS	iP	07 57 20.7	C	0.6	11	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	4	USCGS	S	08 58 47				
				08 58 48.6				
OCT	4	PNS	P	08 34 48.6				
OCT	4	PNS	eP	09 02 08.7				
		LPB	eP	09 02 10.2				
OCT	4	USCGS		09 00 06.5, 14.1N, 92.5W, H = 41 Km, M = 4.5				
				NEAR COAST CHIAPAS, MEXICO				
		PNS	eP	09 07 26		1.1	8	
			S	13 28				
			eL	19				
		LPB	eP	09 07 30				39.0
			eS	13 30				
			eL	19				
		CCH	eP	09 07 45.4				
OCT	4	USCGS		09 46 24.9, 31.4S, 70.2W, H = 72 Km, M = 4.2				
				CHILE-ARGENTINA BOR REG				
		LPB	P	09 49 53.8		1.1	25	14.5
		CHA	P	09 49 55.7		0.5		
		PNS	P	09 49 56.6	C	0.9	18	
OCT	4	CHA	P	14 31 45.1				4.0
			S	32 31.3				
		PNS	P	14 31 45.4		0.4	6	3.3
			S	32 24.5				
OCT	4	PNS	P	15 32 48.1		0.5	3	
		CHA	P	15 32 51.5				
OCT	4	PNS	P	16 26 41.1		0.5	6	
		LPB	eP	16 26 42.6				
OCT	4	USCGS		17 21 20.7, 5.7S, 153.9E, H = 52 Km, M = 6.7				
				NEW IRELAND REGION				
		LPB	eP	17 37 32				132.7
			ePKP	40 25.5				
			ePP	42 40				
			ePS	53 02				
			eL	18 23.8				
		PNS	eP	17 37 37				
			ePKP	40 21.8				
			pPKP	40 32.4				
			ePP	42 49				
			ePS	53 02				
			eSS	48 0000				
			eL	18 23.8				
		CHA	ePKP	17 40 27.4				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JUL	22	TRJ LPB PNS	i eP P	16 49 09.4 16 49 50 16 49 54.5				
JUL	22	USCGS TURKEY		16 56 53.3, 40.7N, 30.8E, H = 4 Km, M = 7.2				
		PNS	eP	17 11 11.4				
			iPP	15 49.2				
			S	23 19				
			PS	24 53				
			SS	31 00				
			G	40.8				
			L	48.2				
		LPB	eP	17 11 17				107.9
			PP	47.3				
			S	23 19				
			L	48				
JUL	22	TRJ LPB	eP eP i	17 14 24.0 17 14 31 15 47				
JUL	22	PNS	eP	17 26 45.7				
JUL	22	PNS LPB	iP S eP	17 50 34.4 58 17 50 34.5	C	0.4	6	2.0
JUL	22	USCGS TURKEY		17 48 06.0, 40.6N, 30.7E, H = 26 Km, M = 5.0				
		PNS	eP	18 02 23				107.9
JUL	22	USCGS TURKEY		19 47 26.0, 40.8N, 30.7E, H = 33 Km, M = 4.6				
		LPB	eL	20 38				107.9
		PNS	eL	20 38.7				
JUL	22	PNS	iP S	23 05 49.2 06 16	C	0.5	7	2.3
JUL	22	USCGS TURKEY		23 41 59.5, 40.6N, 30.7E, H = 33 Km, M = 4.7				
		LPB	eP	23 56 14				107.1
		PNS	eL	00 33.1				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	5	USCGS		02 12 31.9, 8.6N, 126.8E, H = 57 Km, M = 5.2				
		MINDANAO, P. I.						
		LPB	ePKP	02 32 19				163.3
		PNS	ePKP	02 32 32				
OCT	5	USCGS		04 07 41.9, 5.8S, 154.0E, H = 75 Km, M = 4.6				
		SOLOMON IS						
		PNS	ePKP	04 26 52				
			pPKP	27 02				
			eL	05 10.4				
		LPB	ePKP	04 26 53				132.3
			pPKP	27 02.7				
			eL	05 11				
		CCH	ePKP	04 26 55.3				
OCT	5	USCGS		09 41 31.4, 14.5S, 75.4W, H = 100 Km, M = 5.6				
		NEAR COAST OF PERU						
		PNS	eP	03 43 13.6				
			S	44 34				
			L	45.2				
		LPB	eP	09 43 18.5		0.5	78	7.4
			eL	45				
		CHA	iP	09 43 18.7	C			
		CCH	iP	09 43 45.6	D			
OCT	5	CHA LPB PNS	P eP P	10 25 04.8 10 25 05.4 10 25 07.0				0.4 4
OCT	5	LPB PNS	eP eP	12 11 32 12 11 35.2				1.1 9
OCT	5	USCGS		12 35 59, 5.2S, 154.1E, H = 100 Km, M = 5.2				
		SOLOMON IS						
		LPB	ePKP	12 54 41				132.7
			eL	13 38				
		PNS	ePKP	12 54 42				
OCT	5	CHA PNS	eP eP S	15 17 58.2 15 18 02.2 18 41.0				3.3
OCT	5	LPB	P	16 13 13.8			1.0	84
			e(L)	17.6				
		PNS	P	16 13 16.9	C		1.5	62
			i	13 26.3				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	5	USCGS KURILE IS	15 55	02.8, 45.4N, 150.7E, H = 33 Km, M = 5.3				
		LPB	eL	17 00				136.2
OCT	5	PNS	P	16 59 47.1		0.5	2	
OCT	5	USCGS NEW BRITAIN REGION	17 58	36.6, 6.3S, 153.0E, H = 54 Km, M = 5.0				
		PNS	PKP	18 17 51.6		1.0	7	
		LPB	ePKP	18 17 52.5				133.1
			eL	19 01				
OCT	5	USCGS SOUTH OF FIJI IS	18 27	38.3, 22.0S, 177.0W, H = 214 Km, M = 4.9				
		PNS	eP	18 40 59				
OCT	5	USCGS SOLOMON IS	19 48 30	6.2S, 154.9E, H = 45 Km, M = 4.8				
		LPB	ePKP	20 07 39				131.9
		PNS	PKP	20 07 45.9				
OCT	5	PNS	eP	21 24 55				
OCT	5	PNS	P	22 55 08				
		LPB	eP	22 55 08.4				
OCT	5	LPB	eP	22 57 54.5				2.6
		PNS	eP	22 57 55.2				
			S	58 26				
		CHA	P	22 58 01.7				
OCT	6	USCGS SOLOMON IS	00 31 00	6.5S, 154.2E, H = 86 Km, M = 4.8				
		PNS	ePKP	00 50 15.9				
OCT	6	PNS	P	03 02 12.3		0.6	8	2.9
			S	02 46				
		CHA	P	03 02 16.8				
		LPB	P	03 02 19.2		0.8	15	
OCT	6	PNS	eP	03 41 04.9				9.9
			eS	42 55				
		CHA	eP	03 41 05.2				
		LPB	eP	03 41 09.6				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	5	USCGS MINDANAO, P. I.	02 12	31.9, 8.6N, 126.8E, H = 57 Km, M = 5.2				
		LPB	ePKP	02 32 19				163.3
		PNS	ePKP	02 32 32				
OCT	5	USCGS SOLOMON IS	04 07	41.9, 5.8S, 154.0E, H = 75 Km, M = 4.6				
		PNS	ePKP	04 26 52				
			pPKP	27 02				
			eL	05 10.4				
		LPB	ePKP	04 26 53				132.3
			pPKP	27 02.7				
			eL	05 11				
		CCH	ePKP	04 26 55.3				
OCT	5	USCGS NEAR COAST OF PERU	09 41	31.4, 14.5S, 75.4W, H = 100 Km, M = 5.6				
		PNS	eP	03 43 13.6				
			S	44 34				
			L	45.2				
		LPB	eP	09 43 18.5		0.5	78	7.4
			eL	45				
		CHA	iP	09 43 18.7		C		
		CCH	iP	09 43 45.6		D		
OCT	5	CHA	P	10 25 04.8				
		LPB	eP	10 25 05.4				
		PNS	P	10 25 07.0		0.4	4	
OCT	5	LPB	eP	12 11 32				
		PNS	eP	12 11 35.2		1.1	9	
OCT	5	USCGS SOLOMON IS	12 35 59	5.2S, 154.1E, H = 100 Km, M = 5.2				
		LPB	ePKP	12 54 41				132.7
			eL	13 38				
		PNS	ePKP	12 54 42				130.3
OCT	5	CHA	eP	15 17 58.2				
		PNS	eP	15 18 02.2				3.3
			S	18 41.0				
OCT	5	LPB	P	16 13 13.8		1.0	84	
			e(L)	17.6				
		PNS	P	16 13 16.9		C	1.5	62
			i	13 26.3				
			-	19 -				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	5	USCGS KURILE IS	15 55	02.8, 45.4N, 150.7E	H = 33 Km, M = 5.3			
		LPB	eL	17 00				136.2
OCT	5	PNS	P	16 59 47.1		0.5	2	
OCT	5	USCGS NEW BRITAIN REGION	17 58	36.6, 6.3S, 153.0E	H = 54 Km, M = 5.0			
		PNS	PKP	18 17 51.6		1.0	7	
		LPB	ePKP	18 17 52.5				133.1
			eL	19 01				
OCT	5	USCGS SOUTH OF FIJI IS	18 27	38.3, 22.0S, 177.0W	H = 214 Km, M = 4.9			
		PNS	eP	18 40 59				
OCT	5	USCGS SOLOMON IS	19 48	30, 6.2S, 154.9E	H = 45 Km, M = 4.8			
		LPB	ePKP	20 07 39				131.9
		PNS	PKP	20 07 45.9				
OCT	5	PNS	eP	21 24 55				
OCT	5	PNS LPB	P eP	22 55 08 22 55 08.4				
OCT	5	LPB PNS	eP eP	22 57 54.5 22 57 55.2				2.6
			S	58 26				
		CHA	P	22 58 01.7				
OCT	6	USCGS SOLOMON IS	00 31	00, 6.5S, 154.2E	H = 86 Km, M = 4.8			
		PNS	ePKP	00 50 15.9				
OCT	6	PNS	P	03 02 12.3		0.6	8	2.9
			S	02 46				
		CHA	P	03 02 16.8				
		LPB	P	03 02 19.2		0.8	15	
OCT	6	PNS	eP	03 41 04.9				9.9
			eS	42 55				
		CHA	eP	03 41 05.2				
		LPB	eP	03 41 09.6				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	7	LPB PNS CHA	eP P eP	05 42 14.3 05 42 16.2 05 42 23.5			0.4 3	
OCT	7	USCGS NEAR COAST GUERRERO MEXICO	06 06	42.0, 16.4N, 99.3W	H = 33 Km, M = 4.0			
		PNS	eP	06 14 56				
		LPB	eP	06 15 00				45.0
OCT	7	PNS CHA LPB	eP eP eP	06 44 10.6 06 44 15.6 06 44 16.7				
OCT	7	LPB	eP	08 04 38.5				2.6
			S	05 10.1				
		PNS	eP	08 04 44		0.5	2	2.3
			S	05 22				
		CHA	eP	08 04 55.3				
OCT	7	USCGS KURILE ISLANDS	08 28	01.2, 49.2N, 156.3E	H = 33 Km, M = 5.3			
		PNS	PKP	08 47 13.2		0.8	8	
		LPB	PKP	08 47 14.4		0.9	19	131.4
			eL	09 31				
OCT	7	PNS	iP	09 15 24.0		0.6	14	1.9
			S	46.8				
		LPB	eP	09 15 25.8				2.0
			S	49.7				
		CHA	P	09 15 26.5				
OCT	7	USCGS KURILE ISLANDS	09 06	52.3, 49.2N, 156.3E	H = 33 Km, M = 4.9			
		PNS	PKP	09 26 03.4				
		LPB	PKP	09 26 05.1		0.9	8	130.5
OCT	7	USCGS FIJI ISLANDS REGION	10 33	08.2, 17.3S, 178.9W	H = 563 Km, M = 4.9			
		LPB	eP	10 46 03				103.6
		PNS	eP	10 46 03				
			eSS	57				
			eL	11 21.4				





MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	7	LPB PNS	eP eP	11 08 08.9 11 08 12.6				
OCT	7	CHA PNS	eP P	12 02 06.5 12 02 07.9	C	0.5	4	
OCT	7	PNS	P	12 07 07.7				
OCT	7	LPB PNS CHA	eP iP eP	12 43 17.2 12 43 20.0 12 43 23.7	D	0.3	9	
OCT	7	LPB PNS	eP iP	13 16 41.8 13 16 44.0	C	1.8	19	
OCT	7	LPB PNS	eP eP	14 26 00.7 14 26 03.6				
OCT	7	USCGS		14 36 59.5, 52.2N, 160.4E, H = 33 Km, M = 4.4				
				OFF EAST COAST OF CAMCHATKA				
		PNS	ePKP eL	14 56 07 15 37.8				128.0
		LPB	eL	15 37.5				
OCT	7	LPB PNS	e(P) P	14 59 08.7 14 59 11.2		1.0	14	
OCT	7	USCGS		15 07 04.0, 48.4N, 126.9W, H = 33 Km, M = 4.4				
				OFF COAST OF OREGON				
		LPB	eP eL	15 19 15 45				80.1
OCT	7	PNS	P	16 38 07.3				
OCT	7	PNS	eP	17 33 04				
OCT	7	PNS	iP	17 36 58.3	D			
OCT	7	CHA PNS	P iP	19 37 33.9 19 37 35.3	C	0.8	11	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	7	USCGS		19 52 07.4, 5.6S, 153.7E, H = 92 Km, M = 5.3				
				NEW IRELAND REGION				
		LPB	ePKP	20 11 10			132.8	
			eL	55				
		PNS	ePKP	20 11 12.4				
OCT	7	PNS	iP	20 37 35.2	C	0.7	5	
OCT	7	USCGS		20 46 46.0, 5.0S, 153.9E, H = 107 Km, M = 5.5				
				NEW IRELAND REGION				
		PNS	ePKP	21 06 03.2				
		LPB	eL	21 50			133.0	
OCT	7	PNS	eP	21 11 13				
OCT	7	PNS	P	21 18 28.5	C	0.5	2	135.0
OCT	7	PNS	iP	21 43 37.6	D	0.5	7	7.4
			S	50 01.8				
OCT	7	PNS	iP	22 18 53.0	C	0.5	4	
OCT	7	CHA PNS LPB	P P eP	23 21 05.9 23 21 06.9 23 21 09	C	0.8	3	
OCT	7	LPB PNS	P iP	23 23 21.5 23 23 25.4	C	0.7 0.5	28 8	
OCT	8	USCGS		02 23 01.0, 3.1N, 73.8W, H = 33 Km, M = 3.9				
				COLOMBIA				
		CHA	eP	02 26 36.3			132.7	
		LPB	eP	02 27 40			20.7	
			eL	33.6				
		PNS	eP	02 26 40.8				
OCT	8	LPB CHA PNS	P P P	03 33 50.4 03 33 52.0 03 33 53.0	D C	0.8	15 8	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	8	PNS	eP	04 14 13				
		LPB	eP	04 14 18.5				
		CHA	eP	04 14 19.3				
OCT	8	LPB	eP	04 26 15.7				
		PNS	eP	04 26 16				
OCT	8	PNS	P	05 54 33.9		1.0	13	5.9
			S	55 42				
		CHA LPB	P	05 54 38.1				
			P	05 54 39.0		0.8	7	
OCT	8	CHA LPB	eP	05 58 38.5				
			eP	05 58 43.2				2.4
		PNS	eP	05 58 44				
			S	59 12.6				
OCT	8	USCGS		07 00 16.0, 40.5N, 125.4W, H = 33 Km, M = 4.3				
				OFF COAST NORTHERN CALIFORNIA				
OCT	8	PNS	eL	07 37.6				77.5
			eP	07 59 28.4				
OCT	8	PNS	iP	08 04 28.0	C	0.5	3	1.9
			iS	50.7				
OCT	8	LPB	P	08 13 25		0.9	20	2.6
			S	56.2				
		PNS	iP	08 13 26.2	D	0.5	6	2.7
			S	58				
OCT	8	PNS	iP	12 01 02.1	D	0.5	2	2.0
			eS	26				
		CHA LPB	P	12 01 04.0	C			
eP	12 01 04.8							
OCT	8	LPB PNS	eP	13 51 29.3		0.8	3	
			P	13 51 30.8				
OCT	8	PNS	iP	13 58 24.1	D	0.4	7	2.0
			iS	28.3				2.3
		LPB	eP	13 58 05.3				
			eS	33.3				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	8	USCGS		13 55 48.4, 6.6S, 153.4E, H = 40 Km, M = 5.1				
				NEW BRITAIN REGION				
OCT	8	PNS LPB	PKP	14 15 04.6		1.4	11	
			ePKP	14 15 05				32.7
		eL	59					
OCT	8	USCGS		14 28 08.0, 11.3N, 86.0W, H = 33 Km, M = 4.2				
				NEAR COAST OF NICARAGUA				
OCT	8	PNS	P	14 34 37.7		0.8	3	
			eP	15 34 25				
OCT	8	USCGS		16 59 34.4, 9.5S, 148.8E, H = 17 Km, M = 5.5				
				EASTER NEW GUINEA REGION				
		LPB	ePKP	17 18 54				135.0
			L	18 03				
OCT	8	PNS	ePKP	17 18 55.4		1.5	17	
			eSS	39 25				
		eG	55.4					
		eL	18 03.3					
OCT	8	PNS	iP	17 21 35.4	D			2.9
			iS	22 09.2				
OCT	8	LPB	P	17 21 40.9		0.7	21	
			eP	18 08 38.6				
OCT	8	PNS	iP	18 08 33.1	C	0.8	4	3.2
			S	09 10.5				
		LPB	eP	18 08 38.6				
OCT	8	USCGS		18 08 18.1, 5.6S, 154.0E, H = 70 Km, M = 5.1				
				SOLOMON ISLANDS				
		LPB	PKP	18 27 28.3		1.2	15	132.7
			PKS	31 01				
OCT	8	PNS	eL	19 11.5				
			PKP	18 27 28.2		1.0	9	
		PKS	31 00					
		eSS	47 37					
			eL	19 11.3				
OCT	8	USCGS		21 09 13.1, 49.2N, 156.3E, H = 33 Km, M = 4.7				
				KURILE, ISLANDS				
OCT	8	PNS LPB	ePKP	21 28 24.5				
			ePKP	21 28 25				130.5

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	8	USCGS KURILE ISLANDS	21 19	46.3, 49.3N, 156.3E, H = 23 Km, M = 4.5				
		PNS	ePKP	21 38 58.8				130.5
OCT	8	USCGS NEAR COAST OF GUATEMALA	21 29	02.6, 13.6N, 90.8W, H = 53 Km, M = 4.2				
		PNS	P	21 36 09.8		0.8	2	
		LPB	eL eP eL	47.4 21 36 10 48				37.9
OCT	8	LPB PNS	eP P	21 56 29.4 21 56 29.7		0.7	3	
OCT	8	PNS LPB	eP eP	22 12 54 22 12 56.5				
OCT	9	PNS LPB	eP eP	00 32 11 00 32 11.8				
OCT	9	PNS LPB	P i S P i	00 39 05.7 09.7 57 00 39 05.8 09.8				4.4
OCT	9	LPB PNS	eP eP	02 31 40 02 31 42		1.2	12	
OCT	9	USCGS NORTHERN COLOMBIA	02 45	08.0, 6.9N, 72.9W, H = 150 Km, M = 4.2				
		PNS	iP iPP eL	02 50 05.4 38 57.8	D	0.9	8	
		LPB	P eL	02 50 08.3 58		1.0	18	23.4
OCT	9	USCGS SOUTH OF HONSHU, JAPAN	02 49	43.0, 30.7N, 141.3E, H = 33 Km, M = 4.4				
		LPB	ePKP eL	03 09 30 04 00.8				149.4
		PNS	eL	04 00.4				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	9	USCGS HALMAHERA	04 04	55.9, 1.5N, 127.1E, H = 127 Km, M = 5.3				
		PNS LPB	ePKP ePKP	04 24 37 04 24 39				158.5
OCT	9	PNS LPB	P eP	04 25 19.1 04 25 20.1		0.9	3	
OCT	9	PNS LPB	P P	04 33 20.5 04 33 20.9		0.7	1	
OCT	9	USCGS SCOTIA SEA	04 55	10.3, 60.9S, 36.1W, H = 33 Km, M = 5.2				
		LPB	P eS eL	05 04 04 11 20 19.6		1.0	24	50.4
		PNS	iP PcP ePP PS eL	05 04 06.4 05 25.4 06 04 11 31 19.6	D	0.8	6	
OCT	9	LPB PNS	P S P iS	06 39 11.6 38.6 06 39 17.4 50				2.3 2.8
OCT	9	PNS	P S	08 09 06.2 30	D	0.8	3	1.9
OCT	9	LPB PNS	eP P	08 10 44 08 10 44.5	C	0.7	3	
OCT	9	LPB PNS	eP eP	08 19 51.9 08 19 53		0.8	5	
OCT	9	USCGS NORTH ATLANTIC RIDGE	08 27	05.4, 19.4N, 46.2W, H = 33 Km, M = 4.9				
		PNS	P (PPP) eS eL	08 34 52.3 37 14.0 41 04 47.1		1.2	12	
		LPB	P (PPP) eL	08 34 53 37 15 47		1.2	21	41.5

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	9	LPB PNS	eP eP	09 37 53.1 09 37 52.4				
OCT	9	PNS	eP eS	09 52 38.2 53 03				2.1
OCT	9	PNS	P	13 27 04.0	D	0.6	2	
OCT	9	USCGS SOLOMON ISLANDS		13 27 56.7, 5.7S, 154.0E, H = 41 Km, M = 4.9				
		PNS	eP i PKS eL	13 47 10.8 36.3 50 40 14 30.9				131.4
		LPB	ePKP ePKS eSS eL	13 47 11 50 40 14 07 16 34				
OCT	9	USCGS KAMCHATKA		13 10 57.4, 54.1N, 155.1E, H = 393 Km, M = 5.2				
		PNS	PKP pPKP L	14 29 22.3 31 00 15 11.9	D	0.7	3	130.0
		LPB	ePKP eL	14 29 24 15 11				
OCT	9	PNS	P	14 32 06.9		0.8	4	
OCT	9	USCGS FIJI ISLANDS REGION		17 21 49.5, 21.1S, 179.3W, H = 654 Km, M = 7.0				
		LPB	eP pP i eL	17 34 38 38 58.2 44 20 18 09.5				102.6
		PNS	iP ipP PP i SKS eSS G eL	17 34 42.0 37 00 38 59.0 44 22 45 30 53 47 18 02.9 09.6	C	1.0	18	149.4



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	9	LPB PNS	eP P	18 16 34.6 18 16 38.0				
OCT	9	USCGS FIJI ISLANDS REGION		18 33 08.2, 21.3S, 179.3W, H = 619 Km, M = 5.1				
		PNS	eP PP SKS eSS eG eL	18 46 05 50 25 56 44 19 04 05 15.2 21.1				102.6
OCT	9	PNS	eP eS	23 29 21.6 40 13				4.4
		LPB CHA	eP eP	23 39 22.3 23 39 27.7				
OCT	10	LPB PNS	eP P	00 31 09.5 00 31 14.2		0.5	3	
OCT	10	CHA LPB PNS	eP eP eP	02 37 19.0 02 37 19.7 02 37 20.7				
OCT	10	USCGS ANDREANOF ALEUTIAN IS		02 52 56.3, 52.3N, 176.1W, H = 78 Km, M = 5.0				
		PNS	ePKP eL	03 11 32 47.2				
		LPB	ePKP eL	03 11 33 47				113.6
OCT	10	USCGS DENTRECASTEAUX ISLANDS REG		03 01 47.7, 9.5S, 155.1E, H = 33 Km, M = 5.3				
		LPB	ePKP eL	03 20 57.8 04 03				129.7
		PNS	PKP eL	03 20 57.8 04 03.6		1.6	19	
OCT	10	PNS	iP iS	04 51 25.8 48.0	D			1.8
		LPB	P iS	04 51 27.6 53		0.8	18	2.1
		CHA	iP	04 51 28.0	D			

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	10	USCGS NEW IRELAND REG		05 15 13.3, 5.6S, 153.9E, H = 67 Km, M = 4.7				
		LPB	ePKP	05 34 25			132.7	
			pPKP	38				
			L	06 18.2				
		PNS	ePKP	05 34 25.7				
			PKS	37 51.2				
			eL	06 18.3				
OCT	10	LPB	eP	06 56 49.5				
		PNS	eP	06 56 52.6				
OCT	10	USCGS NEAR E COAST HONSHU, JAPAN		06 46 58.5, 36.9N, 141.0E, H = 25 Km, M = 5.0				
		LPB	ePKP	07 06 39.4		1.0	20	147.0
			i	55.6				
			eL	57				
		PNS	PKP	07 06 40.1	C	1.3	17	
			eL	57.1				
OCT	10	LPB	eP	07 20 50.4				
		PNS	eP	07 20 55.4				13.1
			eS	23 20				
OCT	10	PNS	P	08 17 16.7		0.6	6	
			e(S)	19 00				
		CHA	P	08 17 20.3	D			
		LPB	P	08 17 22.4	C	0.6	10	
OCT	10	USCGS NEW GUINEA		08 23 25.0, 4.5S, 143.9E, H = 94 Km, M = 5.0				
		PNS	PKP	08 42 41.9	C	0.8	4	
		LPB	PKP	08 42 43	C	0.8	4	141.7
		CHA	PKP	08 42 43.3				
OCT	10	PNS	P	09 10 26.3		0.5	7	1.9
			S	49				
		CHA	P	09 10 28.7	D			
		LPB	eP	09 10 28.8				
OCT	10	PNS	iP	09 52 24.3	C	0.6	4	2.8
			iS	57				
		CHA	P	09 52 27.7	D			
		LPB	eP	09 52 29.7				3.2
			S	53 06.3				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	10	LPB	eP	13 15 47.2				
		PNS	P	13 15 47.8		0.8	6	
			e	16 22				
		CHA	eP	13 15 48.5				
OCT	10	PNS	P	14 34 11.3		0.6	6	1.9
			S	33.9				
		CHA	P	14 34 12.5				
OCT	10	LPB	eP	17 26 10.2		1.0	22	
		PNS	P	17 26 12.0		0.8	15	2.3
			eS	40				
OCT	10	USCGS VOLCANO ISLANDS REG		21 20 27.0, 23.9N, 142.5E, H = 33 Km, M = 4.7				
		LPB	ePKP	21 40 13				150.3
			eL	22 31				
OCT	11	PNS	eP	01 05 44				
OCT	11	USCGS FOX ALEUTIAN ISLANDS		02 33 22.0, 52.4N, 167.4W, H = 33 Km, M = 4.1				
		LPB	eP	02 47 44				108.6
OCT	11	PNS	P	03 25 41.3	D			1.4
			S	59				
		CHA	P	03 25 43.9				2.0
			S	26 07.6				
		LPB	P	03 25 47.1		6.8	10	
		CCH	eP	03 26 21.5				
OCT	11	PNS	P	04 03 46.1	D	0.9	6	
OCT	11	PNS	P	04 14 04.4				11.3
			eS	16 10				
		LPB	eP	04 14 04.7				
		CCH	eP	04 14 26.1				
OCT	11	PNS	P	06 33 32.3		1.0	6	
		LPB	P	06 33 34.1		0.7	7	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	11	USCGS DODECANESE IS		07 48 44.8, 36.1N, 27.2E, H = 35 Km, M = 4.7				
		LPB	eP	08 02 37				103.5
OCT	11	USCGS CENTRAL ALASKA		07 56 36.1, 63.0N, 151.1W, H = 115 Km, M = 4.6				
		PNS	eL	08 45.2				101.5
OCT	11	USCGS NEW BRITAIN REG		08 20 32.7, 5.1S, 151.3E, H = 158 Km, M = 4.7				
		LPB	ePKP	08 39 35				135.0
		PNS	ePKP	08 39 37.2		0.8	5	
OCT	11	PNS	P	08 55 11.3				
OCT	11	LPB	eP	10 33 09.4				
		PNS	P	10 33 14.7				
OCT	11	LPB	eP	12 19 01.4				
		PNS	P	12 19 02.6		1.0	4	
OCT	11	USCGS NEW IRELAND REGION		13 14 21.2, 5.6S, 153.8E, H = 69 Km, M = 4.5				
		PNS	ePKP	13 33 36.6				
		LPB	ePKP	13 33 38				132.7
OCT	11	CHA	P	14 59 16.5				
		LPB	eP	14 59 17				
		PNS	P	14 59 22.0		0.8	9	5.1
			S	15 00 20.6				
OCT	11	PNS	iP	15 15 17.1	D	0.7	5	6.9
			iS	16 35.5				
		LPB	eP	15 15 20.8				7.2
			S	16 42.1				
OCT	11	LPB	eP	15 21 02.1				7.6
			S	22 28.3				
		PNS	P	15 21 07.3		0.7	6	7.5
			S	22 32.7				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	11	USCGS SOUTH OF HONSHU, JAPAN		15 52 16.8, 30.4N, 142.6E, H = 32 Km, M = 5.5				
		PNS	PKP	16 12 00.5	D			
			i	04.2				
			eL	17 02.7				
		LPB	ePKP	16 12 01.8		1.6	58	148.5
			i	06.2				
			eL	17 03				
		CHA	ePKP	16 12 04.5				
		CCH	PKP	16 12 08.5				
OCT	11	CHA	P	16 38 34.8	D			
		LPB	eP	16 38 35.6				
		PNS	P	16 38 36.9				
OCT	11	USCGS SOUTH OF HONSHU, JAPAN		16 25 00.5, 30.5N, 142.6E, H = 33 Km, M = 5.0				
		PNS	PKP	16 44 47.2	D	0.7	14	
			eL	17 35.3				
		LPB	PKP	16 44 48.6		1.0	14	148.5
			eL	17 35				
OCT	11	USCGS KURILE IS		18 41 21.4, 44.4N, 146.0E, H = 33 Km, M = 4.6				
		LPB	eP	19 00 50				140.1
			eL	45				
		PNS	PKP	19 00 50.6		1.2	6	
OCT	11	USCGS PERU BRAZIL BORDER REGION		20 28 10.2, 10.3S, 71.2W, H = 585 Km, M = 5.0				
		PNS	iP	20 29 56.9	C			
			iS	31 22				
			eL	31.9				
		LPB	iP	20 29 58.6	C			7.1
			S	31 25				
		CHA	iP	20 29 59.2	C			
		CCH	iP	20 30 15.7	D			
		TRJ	iP	20 30 54.8	D			
OCT	11	PNS	P	22 23 32.8				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	11	USCGS HOKKAIDO, JAPAN REG	22 55	07.0, 42.4N, 143.8E	H = 33 Km, M = 4.4			
		PNS	eL	00 02.5			142.1	
OCT	12	USCGS GUERRERO, MEXICO	01 02	01.6, 17.5N, 99.3N	H = 118 Km, M = 3.7			
		PNS	P	01 10 09.8	1.2	6		
		LPB	eP	01 10 11			45.8	
OCT	12	USCGS GUATEMALA	03 17	28.0, 14.4N, 90.4W	H = 190 Km, M = 3.9			
		PNS	P	03 24 26.4	D	0.6	4	
			L	35.8				
		LPB	eP	03 24 26.8			38.2	
			eL	36				
OCT	12	USCGS EAST CHINA SEA	03 50	03.4, 28.3N, 126.9E	H = 225 Km, M = 4.9			
		PNS	PKP	04 09 40.7	1.4	20		
			PKP2	10 25.2				
		LPB	ePKP	04 09 41	1.0	8	162.0	
OCT	12	USCGS SOUTH OF FIJI ISLANDS	04 16	50.0, 23.1S, 179.2W	H = 99 Km, M = 4.2			
		PNS	eP	04 30 32.7			101.7	
OCT	12	PNS	P	05 32 53.4	0.7	2		
		LPB	P	05 32 53.9	0.8	4		
OCT	12	PNS	iP	05 40 08.0	D	0.6	3	2.1
			S	33.8				
		LPB	eP	05 40 11.1				
OCT	12	PNS	iP	05 54 42.6	C	0.6	6	4.3
			iS	55 32.5				
		CHA	P	05 54 43.0				
		LPB	P	05 54 47.6				
			i	55 49.1				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	12	USCGS FIJI ISLANDS REG	06 35	06.7, 21.1S, 179.2W	H = 636 Km, M = 5.6			
		PNS	P	06 48 01.6	C	1.0	14	
			PP	52 20.8				
			SKS	57 38.6				
			S	58 51				
			PS	07 00 37				
			eL	22.9				
		LPB	P	06 48 04.3	C	1.0	10	103.1
			ePP	52 21.6				
			SKS	57 35.6				
			S	58 23.6				
			eL	23				
OCT	12	LPB	P	07 03 55.6		0.6	6	
		PNS	P	07 03 57.3	C	1.0	10	
			e	04 22				
OCT	12	CCH	P	07 30 14.5				
		PNS	P	07 29 58.1		0.9	5	
OCT	12	PNS	eP	08 58 09.1				
		LPB	P	08 58 09.5		1.0	8	
OCT	12	USCGS NEW GUINEA REGION	11 02	05.0, 7.8S, 156.1E	H = 55 Km, M = 4.9			
		PNS	ePKP	11 21 13.6			129.6	
OCT	12	PNS	P	11 45 31.1	C	0.4	8	3.2
			S	46 08				
		CHA	P	11 45 35.3				
		LPB	eP	11 45 36.4				
OCT	12	USCGS NORTHWEST OF KURILE ISLANDS	12 53	46.9, 52.2N, 152.5E	H = 476 Km, M = 5.5			
		CHA	ePKP	13 12 07.2				
		PNS	iPKP	13 12 07.8	D	1.4	77	
			pPKP	14 00				
			iPP	47.2				
			SS	31 40				
			eL	55.5				
		LPB	PKP	13 12 08.8		1.2	93	132.3
			pPKP	14 00				
			PP	49.7				
			eL	56				
		CCH	PKP	13 12 10.1				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	12	PNS	iP	14 22 33.8	D	0.7	15	3.1
			S	23 10				
		CCH	iP	14 23 03.1	C			
OCT	12	PNS	iP	14 42 36.6	C	0.6	16	2.6
			iS	43 08				
		CCH	P	14 43 06.6				
OCT	12	PNS	P	16 44 44.5		0.5	2	
OCT	12	LPB	eP	18 41 12.9		0.6	39	
		CHA	iP	18 41 15.8	D			
		PNS	P	18 41 21.1				2.3
			S	48.4				
OCT	12	USCGS		18 31 37.1, 71.0S, 129.8E, H = 45 Km, M = 6.2				
		BANDA SEA						
		PNS	iPKP	18 51 22.8	C	1.7	370	
			i	28.0				
			PP	54 52.3				
			SKS	58 26.8				
			SKKS	19 01 40.0				
			PS	05 32				
			SS	14 05				
			eG	33.6				
			eL	42.5				
		LPB	SS	19 14 14				149.4
			eL	42.8				
		CHA	ePKP	18 51 23.3				
			i	28.8				
OCT	12	CHA	eP	19 16 14.7				
		PNS	iP	19 16 16.4	C	0.7	8	6.0
			S	17 25				
OCT	12	LPB	eP	19 53 30.7				
		PNS	P	19 53 38.7	C	0.7	4	3.4
			S	54 18.5				
OCT	12	PNS	P	20 21 04.9	D	0.6	14	
OCT	12	PNS	eP	20 42 48.7		1.0	11	
OCT	12	PNS	P	21 17 36.9		0.8	4	

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DISTOM
OCT	12	LPB	eP	02 22 05 44.4				
		CHA	eP	02 22 15 46.6				
		PNS	P	02 22 15 49.6		0.6	4	
OCT	12	USCGS		22 38 14.0, 13.9S, 14.6W, H = 33 Km, M = 4.9				
		SOUTH ATLANTIC RIDGE						
		PNS	eP	22 47 22				
			eL	23 08.1				
		LPB	eP	22 47 24.1				51.3
			eL	23 08				
OCT	13	PNS	P	00 42 00.1		0.8	5	
		LPB	P	00 42 01.8		0.8	7	
OCT	13	PNS	eP	00 58 35.5				
OCT	13	USCGS		01 19 04.0, 30.4N, 113.7W, H = 33 Km, M = 4.5				
		GULF OF CALIFORNIA						
		PNS	eP	01 29 37				64.4
OCT	13	PNS	eP	01 33 03.2				
		LPB	eP	01 33 31.3				
OCT	13	PNS	P	01 55 59.8		0.7	2	
		LPB	eP	01 56 01.8				
OCT	13	LPB	P	02 15 36.4	C	0.9	14	5.0
			S	16 33.3				
		PNS	iP	02 15 40.1	C	0.5	9	5.0
			S	16 38				
OCT	13	USCGS		03 24 47.0, 39.7N, 74.4E, H = 33 Km, M = 5.2				
		S SINKIANG PROV, CHINA						
		PNS	ePKP	03 44 13				
			eL	04 31.2				
		LPB	ePKP	03 44 18.3				139.8
OCT	13	PNS	P	03 59 44.8				
		LPB	eP	03 59 48.5				
OCT	13	LPB	P	04 23 17.2		0.8	7	3.0
		PNS	P	04 23 17.9		0.6	4	
			S	04 52.5				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	13	PNS	iP	05 41 45.0	D	0.5	8	2.0
			S	42 09.3			15	
		LPB	eP	05 41 47.6				2.0
			S	42 11.6				
		CHA	eP	05 41 58.4				
OCT	13	LPB	eP	06 39 21.6				
		CHA	eP	06 39 23.0				
		PNS	P	06 39 23.7	C	0.6	3	
OCT	13	PNS	P	06 53 36.0	D	0.4	3	1.8
			S	58				
		CHA	P	06 53 38.3				
		LPB	eP	06 53 39.1				
OCT	13	USCGS		07 26 31.5, 3.9S, 141.9E, H = 38 Km, M = 5.3				
				NEW GUINEA				
		PNS	ePKP	07 46 02.3		0.8	5	
			ipPKP	13.6				
			eL	08 35.1				144.0
		LPB	ePKP	07 46 03				
			ipPKP	13.6				
			eL	08 35				
OCT	13	LPB	P	08 05 12.1		0.7	8	
		PNS	P	08 05 13.6		0.9	9	
OCT	13	LPB	eP	08 47 34.9				
		PNS	P	08 47 35.5		0.5	2	
OCT	13	PNS	eP	09 09 38.6				
		LPB	P	09 09 38.8		0.8	4	
OCT	13	LPB	P	09 22 24.7		0.7	8	
OCT	13	PNS	P	09 58 46.6		0.5	2	2.5
			S	59 17				
		LPB	eP	09 58 53				
OCT	13	PNS	eP	11 49 17				10.1
			eS	51 10				
		LPB	eP	11 49 18				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	13	USCGS		12 39 28.8, 4.9S, 152.5E, H = 56 Km, M = 5.1				
				NEW BRITAIN REG				
OCT	13	PNS	PKP	12 58 45		0.9	8	
			L	13 45				
		LPB	ePKP	12 58 45.4				134.1
			eL	13 45				
OCT	13	PNS	eP	13 02 14.2				
OCT	13	LPB	eP	13 50 10.3				
		PNS	P	13 50 13.1		0.9	6	
OCT	13	LPB	eP	14 23 08.8				5.0
		PNS	P	14 23 10.4				
			ipp	19.6				
OCT	13	PNS	P	15 02 47.4		0.6	3	5.5
			eS	03 50				
		LPB	eP	15 02 49.2				
		TRJ	P	15 03 03.7	C			
			S	32.0				
OCT	13	PNS	P	16 53 25.3		0.6	4	
OCT	13	PNS	P	17 04 04.5		0.6	2	
OCT	13	PNS	P	19 20 45.1		0.6	3	
OCT	13	USCGS		19 27 12.1, 16.4N, 97.7W, H = 66 Km, M = 4.7				
				OAXACA, MEXICO				
		PNS	eP	19 35 11.8				
			i	17.6				
			eS	41 37				
			eL	48.2				
		LPB	eL	19 48				43.6
OCT	13	USCGS		19 31 25.0, 30.4N, 142.3E, H = 33 Km, M = 4.4				
				SOUTH OF HONSHU, JAPAN				
		LPB	ePKP	19 51 07.5				148.9
			eL	20 42				
		PNS	ePKP	19 51 08.2				
			i	12.9				
			eL	20 42.1				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	13	USCGS HOBENU, JAPAN		19 48 48.1, 36.5N, 138.2E, H = 30 Km, M = 4.6				
		PNS	ePKP	20 08 33.0		0.6	3	
			e	37.5				149.4
		LPB	ePKP	20 08 34				
			eL	59				
OCT	13	LPB	eP	20 29 04				
		PNS	iP	20 29 06.1		0.3	8	
OCT	13	USCGS SOUTH OF HONSHU, JAPAN		20 15 19.1, 30.5N, 142.5E, H = 33 Km, M = 4.7				
		PNS	PKP	20 35 05.8		0.6	8	
			eL	21 25.6				
		LPB	ePKP	20 35 06.8		0.8	15	148.5
			eL	21 26				
OCT	13	USCGS NEAR COAST OF CENTRAL CHILE		21 25 58.0, 38.1S, 73.3W, H = 55 Km, M = 4.1				
		LPB	eP	21 30 47				21.6
		TRJ	eP	21 30 51.1				
		PNS	eP	21 30 52.5		0.8	4	
OCT	14	LPB	eP	00 12 43.2				
		CHA	eP	00 12 44.6				
		PNS	eP	00 12 47.4				
OCT	14	CHA	eP	01 11 31.3				
		PNS	eP	01 11 33.7		0.6	2	
		LPB	eP	01 11 39.3				
OCT	14	PNS	eP	02 25 00.9				
OCT	14	USCGS LEEWARD ISLANDS		03 31 04.5, 17.3N, 60.8W, H = 29 Km, M = 5.3				
		PNS	P	03 37 50.3		0.9	20	
			eS	43 14				
			eL	47.8				
		CHA	P	03 37 50.4				
		LPB	P	03 37 51.7		1.0	82	34.1
			eS	43 25				
			eL	47.7				
		TRJ	P	03 38 27.8				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	14	CHA	eP	03 40 28.6				
		PNS	eP	03 40 31.7				4.2
			eS	41 20				
OCT	14	TRJ	P	03 47 50.6				
		PNS	eP	03 48 27.4				
			i	55.5				
		CHA	eP	03 48 25.9				
		LPB	eP	03 48 29.7				
OCT	14	CHA	eP	06 06 58.5				
		PNS	P	06 07 04.7		0.5	2	2.6
			eS	35.7				
		LPB	P	06 07 05.5				
			S	36.2				
OCT	14	PNS	eP	07 22 44.4				
OCT	14	PNS	eP	08 13 02.4				1.9
			S	25.3				
		LPB	eP	08 13 05.4				1.7
			S	26.2				
OCT	14	PNS	eP	08 19 00.8				2.0
			eS	24.7				
OCT	14	PNS	eP	09 11 07.8				4.3
			S	57.5				
		LPB	eP	09 11 09				
		CHA	eP	09 11 19.0				
		TRJ	eP	09 11 40.8				
OCT	14	USCGS SOLOMON IS		11 58 12.0, 7.6S, 156.1E, H = 60 Km, M = 5.4				
		LPB	eL	13 00				129.7
		PNS	eL	13 00.2				
OCT	14	USCGS SOUTH OF HONSHU, JAPAN		12 13 05.0, 31.0N, 143.0E, H = 33 Km, M = 4.3				
		LPB	ePKP	12 32 44				148.0
		PNS	ePKP	12 32 47.6		0.6	4	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
OCT	14	PNS	eP	12 44 51		1.0	6		
OCT	14	PNS	eP	12 25 17.5		0.8	4		
OCT	14	USCGS		16 08 11.9, 15.9S, 167.2E, H = 15 Km, M = 5.1					
				NEW HEBRIDES ISLANDS					
		PNS	eL	17 03.4					
		LPB	eL	17 03.6				116.1	
OCT	14	PNS	P	16 38 42.9		0.5	4	3.2	
			S	16 39 20					
		CHA	eP	16 38 50.7					
OCT	14	PNS	eP	16 57 48.5					
		CHA	eP	16 57 48.0					
OCT	14	PNS	eP	17 38 05					
OCT	14	PNS	P	18 22 59.2					
OCT	14	PNS	eP	19 12 33.8				6.5	
			eS	19 13 48					
		LPB	eP	19 12 35.5		1.2	50		
		CHA	eP	19 12 36.2					
OCT	14	PNS	iP	20 24 15.2	D	0.5	8	2.8	
			S	20 24 48.5					
		CHA	P	20 24 18.8	D				
OCT	14	PNS	iP	22 17 25.1	C			3.5	
			eS	22 18 06.6					
		CHA	iP	22 17 28.6	C				
		LPB	iP	22 17 30.4	C	1.0	32		
OCT	14	PNS	P	23 33 00.1	C	0.6	3	4.0	
			S	23 33 46.4					
		CHA	P	23 33 03.7					
		LPB	eP	23 33 04.3					
OCT	15	CHA	eP	00 15 09.2					
		LPB	eP	00 15 13.7					
			eL	29					
		PNS	P	00 15 15.9		0.6	4		
			eSS	24 50					
			eL	30.6					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
OCT	15	CHA	eP	00 15 09.2					
		LPB	eP	00 15 13.7					
			eL	29					
		PNS	P	00 15 15.9		0.6	4		
			eSS	24 50					
			eL	30.6					
OCT	15	USCGS		03 29 27.9, 52.2N, 160.8E, H = 35 Km, M = 4.4					
				OFF EAST COAST OF KAMCHATKA					
		PNS	eL	04 30.4					
		LPB	ePKP	03 48 34				127.1	
OCT	15	USCGS		06 36 40.0, 14.7N, 56.4E, H = 33 Km, M = 5.1					
				ARABIAN SEA					
		PNS	ePKP	06 55 45				127.0	
OCT	15	USCGS		08 00 50.3, 11.9N, 86.0W, H = 162 Km, M = 6.7					
				NEAR COAST OF NICARAGUA					
		PNS	iP	08 07 11.3	C				
			iPP	48.0					
			S	12 21					
			SS	14 32					
			L	16.6					
		CHA	P	08 07 12.9					
		LPB	iP	08 07 14.4	C	1.0	390	33.0	
			pP	50					
			iS	12 18					
			eL	16.6					
		TRJ	iP	08 08 03.5					
OCT	15	LPB	eP	08 38 26.4					
		PNS	P	08 38 30.8	C	1.1	12		
			iPP	39 50.9					
			eScS	49 20					
		TRJ	eP	08 39 38.3					
OCT	15	PNS	P	10 44 35.6		0.7	3		
OCT	15	PNS	P	10 47 50.2		0.7	3		
OCT	15	LPB	iP	13 36 38	C	0.5	6	3.0	
			S	37 13.2					
		PNS	iP	13 36 11.8	C			3.2	
			iS	37 19.9					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
OCT	15	PNS	P eS	14 37 43.1 41 04				1.7	
OCT	15	PNS	eP	15 22 18.8		1.0	6		
OCT	15	PNS	ip eS	16 02 46.7 04 13	C	0.8	24	7.6	
OCT	15	PNS	P S	17 04 27.8 41.8	D	0.4	4	1.1	
OCT	15	USCGS		18 35 55.0, 17.8N, 100.7W, H = 83 Km, M = 4.5 GUERRERO MEXICO					
	14	PNS	P ipP	18 44 15.5 29.4	C	0.9	14		
	14	LPB	P i	18 44 18.5 38		1.0	20	47.2	
OCT	15	USCGS		21 11 11.0, 3.8S, 78.3W, H = 10 Km, M = 4.4 PERU ECUADOR BORDER REG					
	14	PNS	eP eS eL	21 14 55 17 45 18.9		0.9	7		
	14	LPB	P eL	21 15 06 18		1.0	26	15.6	
OCT	15	USCGS		21 43 55.0, 36.8N, 105.0E, H = 33 Km, M = 5.1 NORTHERN CHINA					
	14	LPB	ePKP eL	22 03 53 59				158.7	
	14	PNS	PKP	22 03 56.7		0.9	5		
OCT	15	PNS	eP S	22 40 15.7 50				3.0	
	14	LPB	eP	22 40 15.9					
	14	TRJ	eP	22 40 19.5					
OCT	15	USCGS		23 03 15.0, 17.6S, 173.2W, H = 40 Km, M = 4.6 TONGA ISLANDS					
	14	PNS	eSKS L	23 27 33 49.9					
	14	LPB	eL	23 50				98.1	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
OCT	15	USCGS		23 36 49.0, 1.8S, 126.3E, H = 51 Km, M = 5.3 MOLUCCA SEA					
	15	PNS	ePKP eSS	23 56 43.6 00 30 46					
	15	LPB	eL ePKP eL	00 50.8 23 56 45 00 50				156.6	
OCT	16	TRJ	eP	01 01 40.0					
	16	PNS	P S	01 01 50.0 02 35				3.9	
OCT	16	USCGS		01 31 49.6, 10.7S, 77.6W, H = 89 Km, M = 4.7 NEAR COAST OF PERU					
	16	PNS	P	01 34 19.1		1.0	10		
	16	LPB	eP	01 34 24.8		0.9	7	10.8	
OCT	16	TRJ	ip	01 51 20.2	D				
OCT	16	LPB	eP	05 34 33.3		0.8	6		
OCT	16	PNS	eP	05 22 30				19.2	
	16	LPB	S P	05 22 00 05 22 41.1		1.0	16		
OCT	16	LPB	P	08 15 09.1					
OCT	16	LPB	eP	09 06 18.5					
OCT	16	PNS	eP	10 30 03.6				2.7	
	16	LPB	S eP	10 30 36 10 30 05.9					
OCT	16	USCGS		13 27 35.6, 49.3N, 129.1W, H = 33 Km, M = 5.2 VANCAUVER ISLAND REG					
	16	PNS	P eS	13 40 04.9 00 50 38		0.6	4		
	16	LPB	eL eP eS eL	14 08.3 13 40 07 50 33 14 08				84.6	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	16	USCGS HALMAHERA		16 58 02.0,	1.7N,	127.5E,	H = 120 Km,	M = 5.6
		PNS	PKP	17 17 49.6	C	1.4	29	
			iPKP2	18 26.0				
		LPB	PKP	17 17 49.7	C	1.2	28	158.3
			i	18 26.6				
			eL	18 12				
OCT	16	TRT	iP	17 27 17.5	D			
OCT	16	PNS	iP	17 43 31.7	D			2.0
			S	56				
OCT	16	USCGS HONSHU, JAPAN		17 26 40.5,	36.1N,	138.8E,	H = 141 Km,	M = 4.7
		LPB	eP	17 46 10				149.0
			i	15.7				
			eL	18 37				
		PNS	ePKP	17 46 10				
			i	14.4				
			eL	18 37.2				
OCT	16	PNS	iP	19 12 27.7	D			
		CHA	iP	19 12 29.0	D			
		LPB	eP	19 12 29.1				
OCT	16	PNS	eP	20 24 02				
		LPB	eP	20 24 02.7				
		CHA	eP	20 24 02.8				
OCT	16	USCGS MASCARENE ISLANDS REG		20 16 56.1,	17.3S,	66.6E,	H = 18 Km,	M = 5.2
		PNS	ePKP	20 35 56.8				
			eSS	54 32				
			eL	21 15.9				
		LPB	eL	21 16				123.7
OCT	16	PNS	P	20 58 17.8		0.7	10	1.8
			S	50.0				
OCT	16	USCGS PHILIPPINE IS REG		21 08 53.2,	19.9N,	121.8E,	H = 35 Km,	M = 4.9
		PNS	ePKP	21 29 00				170.0
		LPB	ePKP	21 09 01				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	16	USCGS WEST CHILE RISE		21 12 34.0,	41.1S,	85.5W,	H = 33 Km,	M = 4.4
		LPB	eP	21 18 33				28.8
			eL	26.2				
		PNS	P	21 18 33.6				
			eS	23 13				
			L	26.6				
OCT	16	USCGS KURILE ISLANDS		21 29 21.0,	49.1N,	156.3E,	H = 39 Km,	M = 4.2
		LPB	ePKP	21 48 32				131.4
		PNS	ePKP	21 48 34.1				
			eL	22 31.8				
OCT	16	PNS	P	21 58 28.0	C	0.6	3	1.8
			S	50.1				
OCT	16	LPB	eP	22 18 34.4				
		PNS	eP	22 18 35.8				
OCT	16	PNS	P	23 19 07.2		0.8	6	
OCT	16	USCGS KURILE ISLANDS REG		23 31 00.0,	43.9N,	150.1E,	H = 33 Km,	M = 4.3
		LPB	ePKP	23 50 25				137.7
			eL	00 36				
OCT	17	USCGS LEEWARD ISLANDS		01 51 26.6,	16.9N,	61.0W,	H = 51 Km,	M = 4.7
		PNS	eP	01 58 06				
			eL	02 07.8				
		LPB	eL	02 07				33.7
OCT	17	CHA	eP	04 19 21.1				
		PNS	eP	04 19 29				
		LPB	P	04 19 30.3		0.5	4	
OCT	17	LPB	P	05 06 09.6				
		PNS	P	05 06 09.9		0.8	5	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	17	USCGS EASTERN KAZAKH SSR	05 03	58.0, 49.8N, 78.1E, M = 5.7				
		LPB	ePKP	05 23 23				137.1
		PNS	ePKP	05 23 24				
OCT	17	USCGS NEAR COAST OF PERU	05 41	15.5, 13.7S, 76.5W, H = 78 Km, M = 4.4				
		PNS	eP	05 43 14.1		1.0	29	
		CHA	eP	05 43 15.7				
		LPB	P	05 43 18				7.3
			eL	45				
OCT	17	PNS	P	06 29 38		0.9	8	7.5
			S	31 02.6				
OCT	17	USCGS REVILLA GIGEDO ISLANDS REGION	09 40	41.0, 19.8N, 109.2W, H = 33 Km, M = 4.1				
		PNS	P	09 50 03.5		0.7	5	
			eL	10 06.9				
		LPB	P	09 50 06		0.6	6	54.0
			eL	10 07				
OCT	17	PNS	iP	10 17 14.1	D			2.1
			S	39.2				
		CHA	iP	10 17 14.6	C			
		LPB	iP	10 17 14.8	D	0.8	27	
OCT	17	PNS	eP	10 24 41.8				
OCT	17	PNS	P	11 28 03.5	C	1.0	6	
OCT	17	LPB	P	13 23 55.3				
		CHA	P	13 33 58.0				
OCT	17	USCGS BANDA SEA	13 43	50.2, 6.6S, 128.8E, H = 225 Km, M = 5.0				
		LPB	PKP	14 03 15.6		1.0	18	151.1
			eL	55				
OCT	17	USCGS FIJI ISLANDS REGION	14 08	58.4, 21.2S, 179.1W, H = 636 Km, M = 4.8				
		LPB	eP	14 21 43				102.5
			eL	57				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	17	USCGS SOUTHEASTERN ALASKA	14 53	25.2, 59.2N, 136.5W, H = 33 Km, M = 4.2				
		LPB	eP	15 06 40				93.7
			eL	38				
		PNS	eP	15 06 40				
			eL	38				
OCT	17	TRJ	eP	16 07 05.3				
		LPB	eP	16 07 26.2				
		PNS	P	16 07 32.5		0.5	3	4.3
			S	08 22.6				
		CHA	P	16 07 34.0				
			i	42.0				
OCT	17	CHA	eP	18 32 08.7				
		PNS	P	18 32 09.5				
		LPB	eP	18 32 11.1				
OCT	17	PNS	P	18 54 52.2		1.0	9	
OCT	17	TRJ	iP	19 03 07.2				
OCT	17	USCGS WEST NEW GUINEA	18 47	29.3, 2.3S, 138.5E, H = 51 Km, M = 5.2				
		LPB	ePKP	19 07 12		1.4	54	147.6
			eL	58				
		PNS	PKP	19 07 12.9				
OCT	17	CHA	P	19 24 19.7				
		LPB	eP	19 24 19.6				
		PNS	P	19 24 20.4		0.6	5	2.3
			S	47.4				
		CCH	P	19 25 04.0				
OCT	17	USCGS LUZON PHILIPPINE ISLANDS	21 05	22.5, 17.2N, 121.8E, H = 33 Km, M = 5.4				
		PNS	iPKP	21 25 31.1	C	1.2	52	
			pPKP	46.6				
			PKP2	26 47.8				
			PP	30 35.4				
			eL	25.9				
		LPB	PKP	21 25 31.3		1.1	45	170.1
			iPKP2	26 50				
			ePP	30 38				
			eL	22 25				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	17	PNS	eP	21 36 46				5.0
			e	21 36 52.3				
			S	21 36 37 43			137.1	
		LPB	eP	21 36 47				
		CHA	eP	21 36 55.2				
OCT	18	PNS	eP	00 45 57.4	0.8	5		10.7
			S	00 45 47 57				
		CHA	eP	00 45 57.0				
		LPB	eP	00 45 59.5				
OCT	18	USCGS		00 55 07.0, 23.4N, 94.9E, H = 54 Km, M = 4.8				
				BURMA INDIA BORDER REG				
OCT	17	LPB	ePKP	01 15 02				162.9
		PNS	PKP	01 15 02.8		10.9		
OCT	18	CHA	P	01 24 22.8				
		LPB	eP	01 24 24				
		PNS	P	01 24 24.6				
OCT	18	USCGS		01 11 45.0, 79.8N, 2.4E, H = 33 Km, M = 6.7				
				GREENLAND SEA				
OCT	17	PNS	eP	01 25 45.9				
			pp	30 03 38.8				
		SKS		36 30				
		S		03 37 27				
		SS		05 00				
		eP		05 45				
		L		02 01.1				
		eP		01 25 46.5				104.0
		pp		05 30 05.8				
		S		03 37 27				
		eSS		05 44 36				
		eL		02 00				
OCT	18	PNS	P	01 35 45.6	0.8	4		
OCT	10	PNS	P	02 07 32.3				1.9
OCT	18	USCGS		03 07 11.9, 23.7N, 122.9E, H = 35 Km, M = 5.1				
				TAIWAN REGION				
		LPB	ePKP	03 27 12				167.0
		PNS	ePKP	03 27 16				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	18	PNS	P	03 35 08				
OCT	18	PNS	eP	04 41 21				4.9
			S	04 41 42 17				
		LPB	eP	04 41 23.7				
		CHA	eP	04 41 27.7				
OCT	18	PNS	eP	05 13 44.6				
		CHA	eP	05 13 46.2				
		LPB	eP	05 13 49.1				
OCT	18	LPB	eP	05 56 19.6				
OCT	18	PNS	eP	06 14 57.6				
OCT	18	USCGS		06 38 55.3, 22.0S, 69.2W, H = 92 Km, M = 4.7				
				NORTHERN CHILE				
		TRJ	iP	06 39 53.6	C			
			i	06 40 27.1				
		LPB	eP	06 40 18		1.0	62	5.4
			i	06 40 36.2				
			S	06 40 41 18				
			eL	06 40 42				
		PNS	iP	06 40 21.2	C	1.4	64	
			iPg	06 40 52.4				
			S	06 40 41 30				
			L	06 40 42				
		CHA	iP	06 40 20.0	C			
OCT	18	TRJ	P	07 22 25.6				
			eS	07 22 53.9				
		LPB	P	07 23 05.8		1.0	16	
		CHA	P	07 20 07.3	D			
		PNS	P	07 23 09.5	C	0.6	7	
OCT	18	CCH	eP	07 39 36.7				
		PNS	eP	07 39 46.1				3.3
			eS	07 39 40 25				
		CHA	P	07 39 49.4	D			
OCT	18	PNS	P	09 42 24.7		0.6	4	1.9
			S	09 42 48				
		LPB	P	09 42 24.9		0.8	7	1.9
			S	09 42 48.1				
		CHA	iP	09 42 25.1	C			

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	18	PNS CHA	P	10 23 36.5	D	0.7	6	
			P	10 23 37.2	D			
OCT	18	USCGS RYUKYU ISLANDS		10 29 48.5, 25.6N, 128.7E,	H = 33 Km, M = 5.2			
		PNS	ePKP	10 49 47.5		1.4	17	
		LPB	PKP	10 49 49.4		1.2	19	162.0
			eL	11 47				
OCT	18	USCGS KURILE ISLANDS		10 49 18.0, 44.4N, 148.1E,	H = 15 Km, M = 4.6			
		LPB	ePKP	11 08 46				138.9
			eL	55				
OCT	18	USCGS OAXACA, MEXICO		10 56 32.0, 17.0N, 97.8W,	H = 65 Km, M = 4.1			
		PNS	eP	11 04 31.6				44.1
OCT	18	PNS	P	12 31 44.2		0.8	5	
OCT	18	PNS	P	12 36 33.1		0.7	3	
OCT	18	PNS LPB CHA	P eP P	13 00 13.3 13 00 14.7 13 00 16.9				C
OCT	18	PNS	eP	13 54 44.2				
OCT	18	PNS LPB	P P	14 41 12.6 14 41 13.5		0.9 0.8	17 9	
OCT	18	PNS	P	16 38 00.5		0.5	4	
OCT	18	USCGS MID-INDIAN RISE		16 23 26.0, 25.1S, 71.5E,	H = 33 Km, M = 5.7			
		PNS	eSS	17 00 43				
			eL	21.8				122.9
		LPB	ePKP	17 42 25				
			eL	21				
OCT	18	USCGS SOUTH OF HONSHU, JAPAN		16 59 54.0, 30.6N, 142.5E,	H = 33 Km, M = 4.6			
		PNS	PKP	17 19 38.7				148.5
		LPB	ePKP	17 19 41				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	18	USCGS		22 06 23.5, 33.9S,	179.6W, H = 26 Km, M = 5.4			
				SOUTH OF KERMADEC IS				
		TRJ	eP	22 19 26.6				
		PNS	P	22 19 58.9		1.6	21	
			ePP	23 53.7				
			PcP	30 40				
			SS	38 20				
		USCGS		22 19 52.9, 24.7W,	H = 33 Km, M = 5.4			
		LPB	eP	22 19 59				97.7
			eSKS	30 38				
			eSP	32 50				92.1
			eSS	38 18				
			eL	52.5				
OCT	18	USCGS		23 13 45.0, 44.2N,	129.0W, H = 33 Km, M = 4.4			
				OFF COAST OF OREGON				
		PNS	eP	23 26 00.8				
		LPB	eP	23 26 04				82.1
			eL	53				
OCT	18	USCGS		23 35 11.0, 13.9S,	166.5E, H = 87 Km, M = 5.0			
				NEW HEBRIDES ISLANDS				
		LPB	ePKP	23 53 50				118.0
		PNS	ePKP	23 53 51.5				
			PS	00 05 11				
			eL	31.3				
OCT	19	USCGS		00 44 30.0, 2.1N,	127.2E, H = 53 Km, M = 5.1			
				MOLUCCA PASSAGE				
		LPB	ePKP	01 04 23				159.0
			eL	02 00				
		PNS	ePKP	01 04 25.4				150.9
OCT	19	LPB	P	01 22 40.5		1.0	30	
OCT	19	USCGS		01 22 02.0, 52.7N,	166.5W, H = 33 Km, M = 4.3			
				FOX ALEUTIAN IS				
		LPB	eP	01 26 36				108.0
OCT	19	PNS	eP	01 59 08.7				2.6
			eS	39.5				
		CHA	eP	01 59 09.6				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	19	CHA	eP	03 04 18.0				
		PNS	eP	03 04 24				
		LPB	eP	03 04 27.0				
OCT	19	LPB	P	04 21 43.9				
			e	22 17.7				
OCT	19	LPB	P	06 44 54.1		0.4	22	
		CHA	P	06 44 55.6				2.5
			S	45 25.4				
		PNS	P	06 45 02.3				3.1
			S	38				
OCT	19	PNS	eP	09 33 15.1				5.9
			ipp	27.5				
			S	34 23				
		CHA	eP	09 33 16.4				
		LPB	P	09 33 37				4.8
			S	38 32.1				
OCT	19	USCGS		14 57 24.8, 58.6S, 24.8W, H = 33 Km, M = 5.3				
				S SANDWICH ISLANDS REGION				
		LPB	eP	15 06 35				52.1
			eL	22.8				
		PNS	P	15 06 36.3		0.7	5	
		CHA	eP	15 06 36.5				
OCT	19	USCGS		15 39 10.3, 58.7S, 25.0W, H = 33 Km, M = 5.1				
				SANDWICH IS REG				
		TRJ	eP	15 47 32.1				
		LPB	eP	15 48 21.2				52.1
			eL	16 05				
		CHA	P	15 48 21.4				
		PNS	P	15 48 24.9		0.7	6	
			e	49 34				
			eS	55 46				
			eL	04.4				
OCT	19	PNS	P	15 51 05.1		0.7	6	
			e	52 14.7				
OCT	19	PNS	eP	16 54 39.6				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	19	PNS	P	17 05 16.3	D	0.4	3	
OCT	19	LPB	eP	17 15 27				
		PNS	iP	17 15 32.5	D	0.5	9	1.9
			S	55.6				
OCT	19	USCGS		19 20 58.0, 58.7S, 24.9W, H = 33 Km, M = 5.4				
				S SANDWICH IS REG				
		LPB	eP	19 30 09				52.1
			eL	43				
		PNS	eP	19 30 12.9				
			eL	43.3				
OCT	19	CHA	eP	21 53 58.8				
		PNS	P	21 54 00.1		0.7	4	
OCT	20	PNS	eP	00 11 24.4				
OCT	20	PNS	iP	00 32 16.2		0.5	3	1.1
			S	30.1				
		CHA	eP	00 32 17.8				
		LPB	eP	00 32 21.9				
OCT	20	PNS	P	00 43 10.1		0.9	18	
		CHA	P	00 43 13.2	D			
		LPB	P	00 43 15.9		1.0	18	
OCT	20	USCGS		00 27 45.0, 6.9S, 129.8E, H = 152 Km, M = 4.7				
				BANDA SEA				
		PNS	ePKP	00 47 13.4				150.9
			iPKP2	23.6				
OCT	20	USCGS		01 02 43.8, 58.6S, 25.0W, H = 12 Km, M = 5.6				
				S SANDWICH IS REG				
		TRJ	P	01 11 12.8				
		LPB	P	01 11 59.4		1.0	22	52.1
			S	19 22				
			eL	27.7				
		CHA	P	01 11 59.6				
		PNS	P	01 12 02.1				
			S	19 30.4				
			G	24				
			eL	27.8				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	20	PNS CHA LPB	P P P	02 53 20.2 02 53 33.0 02 53 36.5	D	0.3 0.7	5 7	
OCT	20	USCGS		03 28 58.3, 22.4S, 69.0W, H = 86 Km, M = 4.2				NORTHERN CHILE
OCT		TRJ CHA PNS	P p eP	03 29 58.6 03 30 27.0 03 30 28.3				
			iPn i eL	30.0 48.0 32				
		LPB	eP Pn eS	03 30 28.5 31 31.2 31 30			6.0	
OCT	20	PNS	eP	1 04 42 07.7			18.0	
			eS	45 24				
		CHA LPB	eP e	04 42 09.4 04 42 21.7				
OCT	20	PNS LPB	eP eP	06 41 51.6 06 41 54.6				
OCT	20	CHA PNS LPB	iP iP S eP	06 52 07.1 06 52 08.3 20.4 06 52 13.2	D	0.3	6	0.9
OCT	20	USCGS		06 47 38.0, 37.9N, 37.7E, H = 33 Km, M = 4.8				TURKEY
		PNS LPB	ePKP eL	07 06 14 07 41			112.5	
OCT	20	USCGS		10 06 06.0, 24.2S, 67.1W, H = 186 Km, M = 4.0				CHILE ARGENTINA BOR REG
		TRJ LPB	P P	10 07 01.2 10 07 57.4	C	0.6	14	7.6
			eS	09 23				
		CHA PNS	iP P	10 07 58.6 10 08 01.4	C	0.9	5	
			S	09 27				
OCT	20	CHA PNS LPB	eP P S eP	12 22 09.1 12 22 10.0 23 20 12 22 11.4		0.5	6	6.1

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	20	CHA LPB PNS	P eP P	12 32 18.1 12 32 22.4 12 32 26		0.4	3	
OCT	20	LPB CHA	P P	12 32 41 12 32 41.2				2
			S	33 14.9				
OCT		PNS	P	12 32 49.1	D	0.5	10	3
			S	33 25.9				
OCT	20	PNS	P	13 00 06.4		0.4	2	
OCT	20	USCGS		14 02 37.0, 6.2S, 130.6E, H = 81 Km, M = 4.9				BANDA SEA
		PNS LPB	ePKP ePKP	14 22 18.4 14 22 24.3	C	0.8	20	150
OCT	20	PNS	P	14 24 51.2	D	0.5	0	3
			S	25 26.7				
OCT	20	PNS	P	15 33 21.0		0.6	7	
OCT	20	USCGS		15 25 31.0, 58.5S, 25.3W, H = 33 Km, M = 4.6				S SANDWICH ISLANDS REG
		LPB	eP eL	15 34 40.8 51				52
		PNS	eP eL	15 34 45 50.9				
OCT	20	USCGS		15 56 33.4, 20.6S, 178.1W, H = 556 Km, M = 5.0				FIJI ISLANDS REG
		PNS LPB	SKS eL eL	16 20 03 44.1 16 44				102
OCT	20	PNS	P	16 40 27.0		0.6	3	
OCT	20	USCGS		16 34 16.0, 3.8S, 140.0E, H = 24 Km,				WEST NEW GUINEA
		PNS LPB	ePKP ePKP eL	16 53 51.4 16 53 56 17 43				145

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	20	LPB	eP	17 40 13.7				
		PNS	P	17 40 18.5				
OCT	20	CHA	P	18 14 04	D			
		PNS	P	18 14 07.8	C	3.2		0.5
			S	15.4				
		LPB	P	18 14 17		0.3	34	
OCT	20	USCGS		19 28 21.7, 33.7S, 71.3W, H = 71 Km, M = 4.6				
				NEAR COAST OF CENTRAL CHILE				
		CHA	eP	19 32 19.8				
		PNS	P	19 32 23.7		1.0	12	
			eS	35 26				
			SS	53				
			eL	36.9				
		LPB	P	19 32 25.8		1.1	38	17.1
			eL	36.6				
OCT	20	LPB	eP	22 32 40				
		PNS	P	22 32 40.7				
		CHA	eP	22 32 47.7				
OCT	21	LPB	eP	00 43 51.8				
		PNS	eP	00 43 53				
OCT	21	CHA	P	02 33 43.4				
		LPB	P	02 33 43.8		1.0	8	
		PNS	P	02 33 46.7	C	0.8	6	
OCT	21	USCGS		02 35 12.3, 27.7S, 71.8W, H = 13 Km, M = 5.4				
				NEAR COAST OF NORTHERN CHILE				
		TRJ	eP	02 37 00.5				
		CCH	P	02 37 55.6				
		LPB	P	02 37 59.3		0.5	6	11.7
			PP	38 11.5				
			eS	39 11.5				
			SS	40 22				
			L	40.6				
			ScS	49 09				
		CHA	iP	02 37 59.7	D			
		PNS	P	02 38 00.7	D			
			S	40 11				
			L	40				
OCT	21	USCGS		04 59 58.1, 13.4N, 54.8E, M = 5.9				
				NOVAYA ZEMLYA				
		LPB	ePKP	05 18 34.5		1.0	4	119.1
			eL	56				
		PNS	ePKP	05 18 42.6		0.9	5	
			e	19 31.5				
			eSS	36 26				
			eL	56.6				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	21	PNS	P	05 29 21.1	D	0.8	13	
		LPB	P	05 29 21.3		0.8	15	
		CHA	P	05 29 21.6				
OCT	21	LPB	eP	08 01 40.5				
		PNS	eP	08 01 42				
OCT	21	PNS	P	08 28 17.1				
OCT	21	LPB	eP	08 30 07.5				
		PNS	eP	08 30 10				11.7
			S	32 20				
		CHA	eP	08 30 13.4				
OCT	21	PNS	eP	10 24 39.2				
		CHA	P	10 24 42.8				
		LPB	eP	10 24 43				4.0
			S	25 29.4				
OCT	21	USCGS		11 00 36.0, 31.6N, 99.9E, H = 33 Km, M = 5.2				
				SZECHWAN PROVINCE CHINA				
		LPB	ePKP	11 20 38				160.5
		PNS	PKP	11 20 35.4		1.3	14	
			eL	12 17				
OCT	21	USCGS		12 50 38.7, 5.8S, 149.4E, H = 92 Km,				
				NEW BRITAIN REG				
		PNS	ePKP	13 09 46				
			ePKS	13 21				
			eL	55.2				
		LPB	eL	13 55				136.8
OCT	21	TRJ	P	14 51 36.5				
		PNS	P	14 51 57.3				3.9
			eS	52 42				
		CHA	eP	14 51 57.9				
		LPB	eP	14 51 58.3				
OCT	21	USCGS		14 47 03.0, 6.5S, 153.3E, H = 22 Km, M = 5.1				
				NEW BRITAIN REG				
		LPB	ePKP	15 07 22				132.7
			eL	51				
		PNS	eSS	15 27 35				
			eL	51				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	21	PNS CHA	P eP	16 34 57.3 16 35 02.7	D	5		
OCT	21	USCGS WEST CAROLINE IS		17 01 46.0, 11.8N, 141.2E, H = 52 Km, M = 5.1				
		LPB	ePKP	17 21 30.2				150.6
			eL	18 12				
		PNS	ePKP	17 21 31.6				
			i	37.8				
			eL	18 12.5				
		CHA	P	17 21 38.4				
OCT	21	USCGS NORTHERN COLOMBIA		17 45 35.4, 6.9N, 73.0W, H = 151 Km, M = 4.4				
		LPB	eP	17 50 31				23.4
			PP	51 04				
		PNS	P	17 50 32.4	D	0.8	27	
			ipp	51 04.8				
			eS	54 30				
OCT	21	PNS	eP	18 17 01				8.8
			S	18 40				
OCT	21	LPB PNS	eP eP	18 40 43.4 18 40 44.5		0.6	3	
OCT	21	USCGS SOUTH OF FIJI ISLANDS		18 39 40.3, 14.8S, 177.3W, H = 107 Km, M = 4.8				
		PNS	P	18 53 14.5		1.0	6	99.4
OCT	21	PNS	P	19 48 14.0		0.6	3	
OCT	21	PNS	eP	00 09 16.5				
OCT	21	USCGS MARIANA IS		20 03 49.0, 19.0N, 145.1E, H = 320 Km, M = 4.7				
		PNS	ePKP	20 22 56.6				
			e	24 24				
		LPB	ePKP	20 23 56				148.5
			eL	21 13				
		CCH	ePKP	20 23 01.2				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	21	PNS CHA	P S P	22 08 54.1 09 24.7 22 08 57.3			0.4 3	2.6
OCT	21	PNS LPB	ip S P	23 07 07.5 49.2 23 07 13.9	D		0.7 15 0.6 7	3.6
OCT	22	USCGS JUJUUY PROVINCE ARGENTINA		00 52 10.9, 22.3S, 65.7W, H = 259 Km, M = 5.2				
		TRJ	ip	00 52 51.4	C			
		CCH	ip	00 53 29.2	C			
		LPB	ip	00 53 44.3	C	1.0	1160	5.8
			S	54 41.8				
		CHA	ip	00 53 47.2	C			
		PNS	ip	00 53 48.2	C			
			S	54 44				
			iscs	01 06 55				
OCT	22	PNS CHA	P P	01 19 42.8 01 19 45.3			0.6 6	
OCT	22	LPB PNS CHA	eP P eS eP	02 10 08.8 02 10 09.2 33 02 10 09.8			0.5 2	2.0
OCT	22	PNS CHA LPB	eP eP eP	02 40 53.7 02 40 55.5 02 40 57.8				
OCT	22	LPB PNS CHA	P P P	03 55 01.2 03 54 55.7 03 54 58.7			0.9 14 0.5 4	
OCT	22	USCGS HALMAHERA		04 15 32.1, 1.6N, 127.2E, H = 138 Km, M = 5.1				
		LPB	ePKP	04 35 12.5				158.8
		PNS	ePKP	04 35 16.6				
			PKP2	52.9				
OCT	22	USCGS PERU-BOLIVIA BORDER REG		04 40 53.1, 17.0S, 69.9W, H = 161 Km, M = 4.1				
		PNS	ip	04 41 25.6	D			
			is	50.0				
		LPB	ip	04 41 28.2	D	0.7	595	1.5
			is	53.7				
		CHA	ip	04 41 28.5	D			

MONTH	DAY	STA	PHASE	TIME	SLGN	PER	AMPL	DIST
OCT	21	CCH TRJ	iP eP	04 41 48.7 04 42 25.4	D			
OCT	22	LPB CHA TRJ PNS	P P iP P	04 50 16.2 04 50 17.3 04 49 17.8 04 50 18.5	C	0.9	11	7.7
			S	51 46				
OCT	22	PNS	iP iS	04 58 57.7 59 23.2	D			2.4
		CHA LPB	iP eP	04 59 01.3 04 59 01.7	D			
OCT	22	PNS LPB	P eP	06 19 20.8 06 19 21.6	D	0.8	5	
OCT	22	PNS LPB	eP eP	06 43 22.5 06 43 28	D	0.8 0.4	4 5	
OCT	22	USCGS		06 30 49.3, 2.2S, 137.4E, H = 33 Km, M = 5.2				
				WEST NEW GUINEA				
		PNS	ePKP eL	06 49 53 07 40.5				148.5
		LPB	e(PKP) eL	06 47 58.6 07 40				
OCT	22	LPB CHA PNS	eP eP P	07 23 22.6 07 23 25.0 07 23 27.1		0.8	5	
OCT	22	LPB PNS	eP eP	08 07 53.3 08 07 54				
OCT	22	USCGS		10 00 50.0, 39.1N, 143.0E, H = 26 Km, M = 4.2				
				OFF E COAST HONSHU, JAPAN				
		PNS LPB	ePKP eL	10 20 25 11 09				144.7
OCT	22	PNS LPB	P S eP	10 27 47.2 28 21.2 10 27 49.6				2.9

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	22	USCGS		17 21 37.0, 19.0N, 145.4E, H = 257 Km, M = 4.2				
				MARIANA ISLANDS				
		LPB PNS	ePKP ePKP	17 40 50 17 40 51.5		0.8	5	147.8
OCT	22	USCGS		18 48 45.0, 31.0N, 41.4W, H = 33 Km, M = 4.7				
				NORTH ATLANTIC RIDGE				
		LPB PNS	P iP	18 58 07.1 19 14 18 58 07.8	C	1.2	20	54.0
			eS eL	19 05 41 14.9				
OCT	22	LPB PNS	eP eP	19 54 49.1 19 54 49.6		0.6	3	
OCT	22	PNS	P S	20 30 48.3 31 17	D	0.5	3	2.4
OCT	22	USCGS		21 31 48.1, 6.7S, 150.8E, H = 42 Km, M = 4.9				
				NEW BRITAIN REGION				
		PNS LPB	ePKP eL ePKP eL	21 51 06.5 22 35.8 21 51 09 22 35				135.0
OCT	22	USCGS		22 18 14.4, 18.0S, 174.8W, H = 145 Km, M = 4.5				
				TONGA ISLANDS				
		LPB PNS	eP eL eSKS eL	22 31 36 23 05 22 42 40 23 06				99.9
OCT	22	LPB PNS	eP eP	22 49 01.9 22 49 02.7				
OCT	22	LPB PNS	eP iP	23 05 49.4 23 05 50.7	D	0.5		
OCT	22	USCGS		22 55 42.0, 6.1S, 145.3E, H = 111 Km, M = 5.2				
				NEW GUINEA				
		PNS LPB	ePKP eSS eL eL	23 15 06.8 36 27 00 02.2 00 02				139.6

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	22	USCGS RYUKYU ISLANDS	23 04	14.2, 27.4N, 128.3E, H = 31 Km, M = 5.2				
		PNS	ePKP	23 24 13.5		1.2	12	
			eSS	49				
		LPB	ePKP	23 24 14.5		1.0	14	160.9
OCT	22	USCGS NEAR COAST OF PERU	23 46	35.8, 14.8S, 76.0W, H = 39 Km, M = 4.4				
		PNS	P	23 48 24.1		0.5	3	
			S	49 59				
			eL	50.4				7.7
		LPB	P	23 48 29.4				
OCT	23	PNS LPB	P	01 06 10.9		0.6	6	
			P	01 06 05.3		0.6	19	
OCT	23	USCGS NEAR COAST OF PERU	01 31	41.0, 23.0S, 68.6W, H = 138 Km, M = 3.9				
		TRJ	P	01 32 31.6	D			6.3
		LPB	P	01 33 15.1		0.8	12	
		PNS	P	01 33 18.1		1.0	8	
OCT	23	TRJ LPB PNS	eP	01 51 41.9		0.6	6	5.7
			P	01 51 55				
			P	01 51 55.3				
			eS	53 00				
OCT	23	USCGS KURILE ISLANDS	02 53	30.7, 43.4N, 146.9E, H = 33 Km, M = 5.0				
		PNS	PKP	03 12 58		1.2	12	
			eL	00.1				140.0
		LPB	PKP	03 12 59.5		1.1	10	
			eL	04 00				
OCT	23	USCGS NEAR COAST OF VENEZUELA	04 02	51.0, 11.2N, 68.9W, H = 33 Km, M = 4.0				
		PNS	eP	04 08 42.2				27.9
OCT	23	USCGS NORTHERN CELBES	05 39	21.0, 1.2N, 123.8E, H = 58 Km, M = 4.8				
		LPB	ePKP	05 59 12		1.2	8	160.1
			ePKP	05 59 18.3				
		PNS	ePKP2	06 00 01				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	23	USCGS COLOMBIA	06 04	15.7, 5.0N, 72.9W, H = 46 Km, M = 4.2				
		PNS	P	06 09 05.1		0.8	11	
			eS	13 18				
			eL	15.9				
		LPB	P	06 09 08.8		0.8	9	23.4
			pP	15.6				
			eL	15				
OCT	23	PNS	P	07 43 11				1.8
OCT	24	LPB	S	33				
			eP	07 43 20.6				
OCT	23	USCGS BONIN ISLANDS REGION	08 27	06.2, 28.9N, 139.1E, H = 463 Km, M = 5.3				
		PNS	iPKP	08 46 03.9	D	1.5	65	
			i	10.7				
			pPKP	47 46.2				
			PKS	49 46.2				
			eG	09 28.6				
			eL	38.1				
		LPB	PKP	08 46 04.5	D	1.0	40	151.1
			i	11.8				
			PKP2	19.3				
			eSS	09 09 26				
			eL	38				
OCT	23	LPB PNS	eP	09 12 56.5				
			P	09 12 59.2	D	0.6	3	
OCT	23	PNS LPB	eP	09 46 08				2.5
			eS	37.6				
			eP	09 46 08.1				
OCT	23	USCGS SOUTH OF MARIANA IS	09 39	44.8, 11.7N, 146.4E, H = 33 Km, M = 4.5				
		LPB	ePKP	09 59 23				146.4
			eL	10 49				
		PNS	ePKP	09 59 23.8				
			L	10 49				
OCT	23	USCGS JUJUUY PROVINCE ARGENTINA	10 51	56.4, 23.9S, 66.6W, H = 192 Km, M = 4.5				
		TRJ	iP	10 52 48.8	C			
		LPB	iP	10 53 46.6	C	0.7	43	7.6
			iS	55 11.8				
		PNS	iP	10 53 50.4	C	0.9	23	157.5
			iS	55 16.2				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	23	USCGS MALA-I	11 13 34.8, 11.6S, 34.8E, H = 33 Km, M = 5.2					
	11	PNS	eP	11 27 09			12	
			ePKS	37 54				
			eL	57.9		1.0	14	99.0
			eP	11 27 11				
			eS	59				
OCT	23	USCGS	23 46 35.1214.8E, 23.4S, H = 39 Km, M = 4.4					
		PNS	eP	13 21 56.4		0.9	3	
			eP	13 33 46				
		LPB	eP	13 33 47.3				
			eP	23 48 19.4				
OCT	23	USCGS	08 13 39.18 E, 08.13 S, H = 138 Km, M = 3.9					
		PNS	eP	14 20 12.7			13	4.0
			eS	58.4				
		LPB	eP	14 20 18.6				
			eP	16 43 00.9		0.7	3	
		LPB	eP	16 43 04.5		0.5	8	
		CHA	eP	16 43 06.1				
OCT	23	PNS	iP	17 24 33.3		0.6	9	3.2
			eS	25 11				
		LPB	eP	17 24 33.3		0.0	22	
		CHA	eP	17 24 34.8				
		CCH	eP	17 24 49.3				
		TRJ	eP	17 25 17.3				
OCT	23	USCGS	07 44 21.8 E, 07.45 S, H = 33 Km, M = 3.5					
		PNS	eP	18 04 09.8		1.0	11	
OCT	23	USCGS	18 29 07.0, 3.6S, 102.9W, H = 33 Km, M = 4.5					
		LPB	eP	18 36 07.3				36.1
			eL	46.5				
		PNS	eP	18 36 09		1.3	9	
			eS	41 46				
			eS	46.7				
OCT	23	USCGS	19 17 03.0, 19.17 S, H = 58 Km, M = 4.7					
		CCH	eP	19 17 03.0				
		LPB	eP	19 17 08.6				
		PNS	eP	19 17 09.3				2.9
			eS	43				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	23	PNS	eP	22 25 24.6				1.9
			eS	48				
		CHA	eP	22 25 25.0				
		LPB	eP	22 25 26				
OCT	23	CCH	eP	23 27 26.6				
		TRJ	eP	23 27 27.6				
		LPB	eP	23 27 28.4				
		CHA	iP	23 27 30.1		1.1	200	
		PNS	iP	23 27 30.5				
OCT	24	PNS	eP	01 13 36.2		0.8	4	
		CHA	eP	01 13 36.7				
		LPB	eP	01 13 37.3				
OCT	24	PNS	eP	01 28 55.0		0.4	3	
		LPB	eP	01 28 55.8				
		CHA	eP	01 28 56.2				
OCT	24	USCGS	03 13 26.5, 31.3S, 179.7W, H = 250 Km, M = 5.4					
		LPB	eP	03 26 38				99.0
			eL	04 00				
		PNS	eP	03 26 40.5		0.9	5	
OCT	24	CHA	eP	07 15 17.1				4.0
		PNS	eP	07 15 19.6				
			eS	16 06.4				
OCT	24	LPB	eP	07 38 18.1				
		PNS	eP	07 38 18.7				1.7
			eS	40				
OCT	24	USCGS	09 50 14.8, 5.8S, 153.0E, H = 26 Km, M = 4.6					
		LPB	eP	10 09 32				133.1
		PNS	ePKP	10 09 33.4				
OCT	24	USCGS	10 51 15.1, 3.1S, 101.5E, H = 63 Km, M = 5.5					
		CHA	ePKP	11 11 01.0				111.6
		TRJ	ePKP	11 11 05.7				
		PNS	PKP	11 11 06.6		1.4	23	
			i	26.3				
			e	54.2				
			eSS	35 08				
		LPB	ePKP	11 11 09				157.5
			eL	12 05				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
OCT	24	USCGS	11 47 25.3, 6.2S, 151.8E, H = 39 Km, M = 4.9 NEW BRITAIN REGION						
		LPB	ePKP	12 06 38				134.1	
			eL	51					
		PNS	ePKP	12 06 43					
OCT	24	LPB	eP	12 47 50.6					
		CHA	eP	12 47 51.7					
		PNS	P	12 47 51.9	C	0.5	4	5.0	
			eS	48 50					
OCT	24	PNS	eP	14 02 30				5.1	
			S	03 28.7					
OCT	24	USCGS	15 17 54.0, 2.4S, 79.0W, H = 123 Km, M = 5.0 NEAR COAST OF ECUADOR						
		PNS	eP	15 21 44.7					
			S	25 06					
			eL	26.5					
		LPB	eP	15 21 45.5				17.1	
			eS	25 08					
			eL	26.6					
		CHA	eP	15 21 49.3					
		TRJ	eP	15 22 53.3					
OCT	24	PNS	P	17 58 15.7		1.0	6		
OCT	24	TRJ	P	19 14 06.5					
		CCH	P	19 14 46.7					
		LPB	P	19 15 02.5	D	0.9	42		
			eL	20 10					
		CHA	iP	19 15 02.9	C				
		PNS	iP	19 15 05.6	D	0.8	20		
			L	20 10.1					
OCT	24	USCGS	19 42 12.0, 59.8S, 26.3W, H = 33 Km, M = 5.0 S SANDWICH ISLANDS REGION						
		LPB	P	19 51 26.3		0.9	17	52.7	
		PNS	P	19 51 28.6	D	1.0	21		
			i	44.0					
			eL	20 07.4					
OCT	24	PNS	eP	19 54 58.3		0.4	2	2.6	
			S	55 28.9					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
OCT	24	PNS	P	20 54 48.8			0.8	4	
OCT	24	CCH	P	20 58 51.5					
		LPB	eP	20 58 57.5					
		CHA	eP	20 58 57.7					
		PNS	P	20 58 57.9	C	0.8	7	154.1	
OCT	25	PNS	iP	21 11 40.1	D	0.5	7	1.8	
			S	12 02.6					
		LPB	eP	21 11 41					
		CHA	iP	21 11 42.5	D				
OCT	25	USCGS	00 34 09.6, 5.9N, 126.6E, H = 102 Km, MINDANAO, PHILIPPINE IS						
		PNS	ePKP	00 54 00				162.0	
OCT	25	USCGS	00 59 22.6, 24.5N, 122.2E, H = 65 Km, M = 6.0 TAIWAN REGION						
		PNS	iPKP	01 19 24.8	C	1.0	86		
			PP	24 23					
			SKS	26 23					
			eSS	45 00					
			eG	02 08.1					
			eL	18.4					
		LPB	iPKP	01 19 25	C	1.0	445	167.4	
			i	44.5					
			PKP2	20 27.5					
			ePP	24 19					
			eSS	45 00					
			eG	02 08.2					
			L	18					
		CHA	PKP	01 19 25.1					
		CCH	ePKP	01 19 26.2					
		TRJ	PKP	01 19 26.8					
OCT	25	CCH	P	01 20 36.9	D				
OCT	25	USCGS	01 31 50.0, 18.3S, 171.9E, H = 41 Km, M = 4.9 NEW HEBRIDES ISLANDS REG						
		LPB	ePKP	01 51 36.2				111.6	
OCT	25	LPB	eP	02 14 41					
		PNS	P	02 14 41.1		0.9	6		
			e	52.6					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	25	USCGS TAIWAN REG	01 57	23.1, 24.3N, 122.2E, H = 67 Km, M = 5.3				
		PNS	PKP	02 17 25.3	C	1.6	84	
			iPKP2	18 27.7				
		LPB	PKP	02 17 25.7		1.3	68	167.4
			iPKP2	18 29.6				
			PP	22 16.3				
			eL	03 16.7				
OCT	25	LPB	eP	03 33 52.0				
		PNS	eP	03 33 56.8				
OCT	25	PNS	iP	04 09 37.2	D	0.4	5	
		CHA	iP	04 09 39.3	D			
OCT	25	CHA	eP	04 17 51.2				
		LPB	eP	04 17 51.5				
		PNS	eP	04 17 52.7				7.8
			eS	19 21				
OCT	25	USCGS NORTHERN COLOMBIA	04 49	38.4, 6.8N, 73.0W, H = 166 Km, M = 4.7				
		PNS	p	04 54 34.0		0.8	12	
			ipb	55 07.1				
			eS	58 42				
			SS	59 40				
			eL	05 00.8				
		CHA	eP	04 54 35.4				
		LPB	eP	04 54 37.0				23.4
			ipb	55 10.4				
			eL	05 01				
OCT	25	LPB	eP	05 26 15.5				
		PNS	eP	05 26 28				
			e	42.6				
OCT	25	LPB	eP	05 37 42.6				
		PNS	p	05 37 43.3		0.5	2	3.0
			S	38 18				
		CHA	eP	05 37 43.7				
OCT	25	PNS	eP	06 32 27.8				
		LPB	eP	06 32 28.5		1.0	10	
OCT	25	USCGS TAIWAN REGION	08 54	40.2, 24.5N, 122.2E, H = 60 Km, M = 5.2				
		PNS	PKP	09 14 42.6		1.2	24	
			i	15 45.3				
			eL	17 13.8				
		LPB	ePKP	09 14 43.3		0.9	24	167.1
			eL	10 14				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	25	USCGS SOUTH OF JAVA	09 10	19.0, 9.4S, 112.9E, H = 58 Km, M = 5.2				
		PNS	ePKP	09 30 16.5				
			eL	23.5				
		LPB	ePKP	09 30 18				154.1
			eL	23				
OCT	25	USCGS OFF E COAST N ISLAND, NZ	09 16	16.0, 37.1S, 177.5E, H = 189 Km, M = 5.1				
		LPB	eP	09 29 31				98.1
		PNS	eP	09 29 32.4				
OCT	25	PNS	eP	10 45 25.8				5.0
			eS	46 23				
		LPB	eP	10 45 33				
OCT	25	PNS	iP	16 27 14.2	C	0.4	5	3.4
			S	54				
		CHA	iP	16 27 15.8	C			
		LPB	eP	16 27 23.2				3.6
			S	28 05.4				
OCT	25	PNS	eP	16 38 25.2				
OCT	25	TRJ	P	17 27 24.0				3.0
			S	59.4				
		CHA	P	17 28 08.0				
		LPB	eP	17 28 09		0.7	11	
		PNS	P	17 28 09.7	C	0.8	10	5.9
			eS	29 18				
OCT	25	PNS	eP	18 31 15.7		1.0	6	
OCT	25	PNS	p	19 18 20.9	D	0.7	4	2.0
		CHA	eS	44.5				
			eP	19 18 21.6	D			
OCT	25	PNS	eP	19 22 55				1.7
			S	23 15.7				
OCT	25	USCGS SOUTH OF AUSTRALIA	15 09	35.0, 50.1S, 114.3E, H = 33 Km, M = 5.3				
		PNS	ePKP	15 28 13.6				113.4
			eL	16 03.3				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
OCT	25	USCGS	15 36 20.7, 14.5N, 93.1W, H = 61 Km, M = 4.5 NEAR COAST CHIAPAS, MEXICO						
		LPB	eP	15 43 44				25.6	
			eL	55					
		PNS	P	15 43 44.6		1.0	11		
			eS	49 48					
OCT	25	LPB	e(PKP)	20 00 44		1.1	15		
			eL	21 01.7					
		CHA	eP	20 00 45.8					
		PNS	eP	20 00 46.9		1.0	7		
			i	01 12.9					
OCT	25	CHA	P	21 03 19.2					
		PNS	iP	21 03 25	C	0.6	3	2.8	
			S	57.7					
OCT	25	PNS	eP	21 50 19.6		1.6	19		
OCT	25	LPB	eP	23 08 46.5					
		PNS	eP	23 08 47.3		0.5	2		
		CHA	eP	23 08 47.7					
OCT	26	PNS	eP	00 18 33					
OCT	26	USCGS	00 22 21.6, 24.5N, 122.2E, H = 63 Km, M = 5.6 TAIWAN REGION						
		CCH	PKP	00 42 23.1	C				
		PNS	PKP	00 42 24.2	C	1.6	240		
			PKP2	43 27.4					
			ePP	47 15.6					
			PPP	51 26.7					
			SS	01 07 57					
			SSS	12 45					
			eL	41.4					
		LPB	PKP	00 42 24.5	C	2.0	507	167.4	
			PKP2	43 29.1					
			PP	01 47 14					
			eSS	01 37 28					
			eG	31.5					
			eL	41					
OCT	26	TRJ	iP	01 50 28.7	C			2.6	
			S	51 00.2					
		CCH	P	01 51 06.7	C				
		LPB	iP	01 51 23.1	C	1.0	46	6.4	
			(S)	52 36.5					
		CHA	P	01 51 24.3	C				
		PNS	iP	01 51 27.0	C	0.8	27	6.9	
			S	52 45					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
OCT	26	USCGS	04 55 38.3, 37.3N, 29.1E, H = 35 Km, M = 5.1 TURKEY						
		LPB	eP	05 09 43				105.3	
			eL	46					
		PNS	eP	05 09 44					
			eL	45.7					
OCT	26	USCGS	05 10 02.0, 2.3N, 121.7E, H = 62 Km, M = 5.0 CELEBES SEA						
		LPB	eP	05 29 52				162.9	
			pPKP	30 20					
			PKP2	30 51.5					
		PNS	ePKP	05 29 59.4		0.6	3		
			iPKP2	30 51.6					
OCT	26	PNS	P	05 50 13.8					
			i	18.3					
		CHA	eP	05 50 19.3					
		LPB	P	05 50 20.7		0.8	10		
			i	29.2					
			(S)	51 31.4					
OCT	26	TRJ	iP	06 33 58.0	D				
		LPB	P	06 34 24		0.7	7		
		CHA	eP	08 34 25.0					
		PNS	P	06 34 26.9	C	0.7	4	5.5	
			eS	35 29.6					
OCT	26	PNS	eP	08 02 07.8					
			i	26.0					
		LPB	eP	08 02 11		0.8	9		
		CHA	eP	08 02 12.1					
OCT	26	LPB	P	08 26 55.4		1.0	12		
		CHA	eP	08 26 56.6					
		PNS	P	08 26 56.8		0.8	4		
OCT	26	USCGS	08 48 00.0, 7.5S, 127.6E, H = 33 Km, M = 4.6 BANDA SEA						
		LPB	PKP	09 07 47		1.0	24	151.1	
			i	53.4					
		PNS	ePKP	09 07 47		1.2	6		
			iPKP2	08 02.3					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	26	USCGS		09 28 29.8, 6.9S, 131.1E, H = 30 Km, M = 4.8				
		TANIMBAR ISLANDS REG						
		PNS	ePKP	09 48 16.2		1.2	14	
			i	21.5				
		LPB	PKP	09 48 17.2		1.2	22	149.7
			i	21.6				
		CHA	ePKP	09 48 21.4		1.0		
OCT	26	USCGS		11 26 31.4				
		CHA	p	11 26 31.4				
		PNS	p	11 26 34.3		0.8	6	3.5
			eS	27 15				
OCT	26	USCGS		12 21 33.0, 17.7N, 60.9W, H = 33 Km, M = 5.2				
		LEEWARD ISLANDS						
		PNS	p	12 28 20.4		1.3	26	
			iS	33 50				
			eL	38.8				
		CHA	p	12 28 20.7				
		LPB	p	12 28 22.4		1.5	82	34.6
			eS	33 48				
			eG	37.7				
			eL	39				
OCT	26	USCGS		18 44 45.1, 17.6N, 61.0W, H = 37 Km, M = 5.3				
		LEEWARD ISLANDS						
		PNS	p	13 51 32.3	C	1.4	48	
			pp	32 51.8				
			S	57 06				
		LPB	p	14 01.4				
			i	13 51 34.6		1.5	154	34.6
			eS	57 08				
		CHA	eL	14 01.5				
			p	13 51 50				
OCT	26	CHA	iP	13 52 46.8				1.1
		PNS	S	53 00.6				
			eP	13 52 49.8				
			iS	53 06.1				113.4
OCT	26	PNS	eP	14 47 12				
OCT	26	CHA	eP	14 53 18.2				
		LPR	p	14 53 19				
		PNS	eP	14 53 22.4				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	26	CHA	P	15 35 05.4	C			
		PNS	P	15 35 07.8	C	0.5	4	
OCT	26	LPB	P	17 17 58.5		0.8	12	
		PNS	P	17 17 59.4	C	0.6	4	
OCT	26	USCGS		17 22 05.3, 2.0S, 125.2E, H = 42 Km, M = 5.6				
		MOLUCCA SEA						
		CCH	ePKP	17 41 59.3				
		LPB	ePKP	17 42 03.2				157.3
			e	18				
			ePKS	45 34				
			eSS	18 06				
			eL	37				
		PNS	PKP	17 42 03.3		1.9	67	157.3
			e	18				
			ePKS	45 34				
			eSS	18 06				
			eL	37				
OCT	26	PNS	eP	18 58 36				
OCT	26	USCGS		20 19 43.7, 17.4N, 46.4W, H = 33 Km, M = 4.7				
		N ATLANTIC RIDGE						
		LPB	P	20 27 16.5		1.1	25	40.0
			i	23.2				
			eL	40				
		PNS	iP	20 27 17.1	C	1.0	19	
			i	23.9				
			eL	41				
OCT	26	LPB	iP	22 04 14	C	0.8	28	2.7
			S	46.2				
		CHA	iP	22 04 15.1	C			
		PNS	iP	22 04 15.7	C	0.6	18	2.8
			S	48.5				
		CCH	P	22 04 21.0				
OCT	26	CHA	eP	23 33 41.7				
		PNS	eP	23 33 41.8				
OCT	27	LPB	P	00 25 14.3		0.9	10	
		PNS	P	00 25 15.3		1.0	10	
			i	23.4				
		CHA	P	00 25 19.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	27	USCGS MENDOZA PROVINCE, ARGENTINA		00 34 44.7, 32.3S, 69.4W, H = 26 Km, M = 4.8				
		CCH	iP	00 38 22.6	C			
		LPB	eP	00 38 27.5	D	1.4	54	15.3
			i	31.4				
			eL	43				
		CHA	eP	00 38 29.3				
		PNS	eP	00 38 29.7		1.3	28	
			eS	41 27				
			eL	42.9				
OCT	27	LPB	eP	01 33 02				
		PNS	eP	01 33 02.7		1.0	6	
OCT	27	CHA	eP	02 58 42.9				
		LPB	P	02 58 43.3	C	0.9	17	
			L	03 07.7				
		PNS	P	02 58 43.6	C	1.0	28	
			L	03 07.5				
		CCH	eP	02 58 45.3				34.6
OCT	27	PNS	eP	03 29 52				
			eL	03 42				
		LPB	eL	03 42				
OCT	27	CCH	P	04 59 37.9	C			
		CHA	P	04 59 38.3	C			
		PNS	P	04 59 39.0	C	0.9	11	
		LPB	iP	04 59 39.2		0.9	24	
OCT	27	USCGS PERU BRAZIL BOR REG		06 29 33.8, 8.4S, 74.2W, H = 144 Km, M = 4.7				
		PNS	eP	06 31 50.7		1.1	10	
			eS	33 42				
		CHA	eP	06 31 53.1				
		LPB	P	06 31 56		1.0	24	9.9
			eL	34				
OCT	27	USCGS WESTERN IRAN		08 05 14.0, 34.3N, 46.2E, H = 68 Km, M = 5.0				
		PNS	eP	08 24 03				
			eSS	41 39				
			eL	09 01.1				
		LPB	eP	08 24 04				119.0

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	27	PNS	eP	09 07 52.5			0.5	3
			S	08 15.3				1.9
OCT	27	PNS	P	11 23 33			0.6	3
OCT	27	USCGS BANDA SEA		10 37 23.0, 7.1S, 128.1E, H = 33 Km, M = 4.6				
		LPB	ePKP	10 57 11.8			1.0	34
			i	17.5				151.1
			eL	11 40				
		PNS	PKP	10 57 11.4			1.5	16
			i	17.6				
			eL	11 49.1				
		CHA	PKP	10 57 15.7				
OCT	27	USCGS SOUTH ATLANTIC RIDGE		12 58 51.0, 46.9S, 10.4W, H = 33 Km, M = 4.5				
		PNS	eP	13 08 32.2			0.9	5
			eS	16 18				
			eG	21.6				
			eL	25.5				
		LPB	eL	13 26				55.6
OCT	27	PNS	P	13 26 19.5			0.5	2
OCT	27	USCGS NEAR S COAST HONSHU, JAPAN		15 34 16.2, 34.4N, 137.2E, H = 325 Km, M = 4.2				
		LPB	ePKP	15 53 30				150.9
			eL	16 45				
		PNS	PKP	15 53 33.6	D		7	
OCT	27	USCGS NEAR COAST OF CENTRAL CHILE		16 08 32.0, 29.9S, 71.2W, H = 72 Km, M = 4.4				
		CCH	eP	16 11 01.0				
		LPB	eP	16 11 45			0.8	11
			eL	15				13.5
		PNS	P	16 11 45.8	C		1.0	15
			eS	14 10				
			eL	15.3				
		CHA	eP	16 11 51.4				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	27	PNS CHA	p ep	16 36 54.0 16 36 59.4		0.6	4	
OCT	27	CCH PNS CHA	p p s	19 49 15.4 19 49 18.3 50 52				8.3
OCT	27	USCGS	21 08 41.0, 34.5S	112.0W, H = 33 Km, M = 4.8				
			EASTER ISLAND CORDILLERA					
OCT	27	LPB	ep	21 16 41			6	42.9
OCT	27	PNS	p	21 16 43.0		1.7	44	
OCT	27	CHA	es	23 04				
OCT	27	LPB	ess	26 15				
OCT	27	CCH	eL	29.5				
OCT	27	USCGS	26 41 33.0, 24.3N	122.2E, H = 74 Km, M = 4.9				
			TAIWAN REGION					
OCT	27	CCH	ePKP	21 01 34.0		1.3	35	
OCT	27	PNS	PKP	21 01 34.2				
OCT	27	LPB	eL	22 00.6				
OCT	27	LPB	PKP	21 01 35		1.2	62	167.4
OCT	27	PNS	eL	22 01				
OCT	27	PNS	p	21 46 37.5		0.5	3	
OCT	28	USCGS	00 02 21.0, 16.2S	66.9E, H = 33 Km, M = 4.6				
			MID INDIAN RISE					
OCT	28	LPB	ePKP	00 21 21			10	124.9
OCT	28	PNS	eL	01 02				
OCT	28	PNS	ePKP	00 21 21.6				
OCT	28	LPB	eL	01 01.8				
OCT	28	USCGS	00 24 27.3, 25.8S	70.3W, H = 33 Km, M = 4.6				
			NEAR COAST OF NORTHERN CHILE					
OCT	28	TRJ	eP	00 26 11.2				
OCT	28	CCH	eP	00 26 41.3				
OCT	28	LPB	eP	00 26 47		1.0	14	9.9
OCT	28	CHA	i	27 06				
OCT	28	CHA	p	00 26 41.3				119.0
OCT	28	PNS	p	00 26 47.8		0.8	6	
OCT	28		iPPP	27 02.2				
OCT	28		i	29.5				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	28	PNS	p	04 23 00.6		0.7	3	2.3
OCT	28	CHA	s	28.3				
OCT	28	LPB	ep	04 23 02.4 04 23 03.3		1.0	8	
OCT	28	USCGS	04 45 13.0, 20.4S	69.8W, H = 35 Km, M = 4.5				
			CHILE-BOLIVIA BOR REG					
OCT	28	TRJ	p	04 46 18.3				
OCT	28		i	21.1				
OCT	28		s	47 09.0				
OCT	28	CCH	p	04 46 20.4				
OCT	28	LPB	p	04 46 21.6		0.7	25	4.0
OCT	28		s	47 10				
OCT	28	CHA	ip	04 46 23.5				
OCT	28	PNS	ip	04 46 23.8		1.0	28	
OCT	28		i	26.8				
OCT	28		is	47 14				
OCT	28	LPB	ep	05 27 50		1.0	10	
OCT	28		eL	55				
OCT	28	PNS	eL	05 55.1				
OCT	28	PNS	p	07 32 07.4		0.4	8	1.9
OCT	28		s	30				
OCT	28	CHA	ip	07 32 09.4				
OCT	28	USCGS	07 31 52.1, 5.9S	151.9E, H = 33 Km, M = 4.8				
			NEW BRITAIN REG					
OCT	28	LPB	ePKP	07 51 11				134.3
OCT	28		eL	08 35				
OCT	28	PNS	ePKP	07 51 11.2				
OCT	28		eL	08 35.6				
OCT	28	PNS	ep	09 31 25				
OCT	28	LPB	ep	10 30 37				
OCT	28		eL	43				
OCT	28	PNS	eL	42.9				
OCT	28	LPB	ip	11 55 53.8		0.7	71	2.3
OCT	28		s	56 20.6				
OCT	28	PNS	ip	11 55 54.9				2.3
OCT	28		s	56 21.8				
OCT	28	CHA	ip	11 55 55.0				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	28	USCGS	11 46	33.0, 5.9S, 151.0E, H = 58 Km, M = 4.9				
		NEW BRITAIN REG						
		LPB	ePKP	12 05 53				135.0
			eL	57				
		PNG	PKP	12 05 53.2				
			eSS	26 29				
OCT	28	PNS	P	13 51 48.1	0.5	4		2.4
			S	52 17.4				
		CHA	eP	13 51 51.4				
OCT	28	PNS	eP	15 09 05.6				
OCT	28	PNS	P	16 36 11.0				
		LPB	eP	16 36 12				
OCT	28	USCGS	18 42	13.7, 24.9N, 45.9W, H = 33 Km, M = 5.1				
		NORTH ATLANTIC RIDGE						
		CCH	eP	18 50 27.0				
		PNS	P	18 50 39.7	D	1.7	150	
			i	52 00				
			S	57 30				
			eSS	19 00 55				
			eL	19 05.2				
		LPB	P	18 50 40.4	2.2	338		45.9
			eS	57 30				
			eL	19 05				
		TRJ	eP	18 50 49.5				
OCT	28	USCGS	19 18	58.0, 25.0N, 45.5W, H = 33 Km, M = 4.5				
		NORTH ATLANTIC RIDGE						
		PNS	P	19 27 26.6	1.0	17		
			eL	41.7				
		LPB	eP	19 27 27.4	2.0	1		47.9
			eL	41.5				
OCT	28	USCGS	19 21	30.0, 25.4N, 46.0W, H = 33 Km, M = 4.8				
		NORTH ATLANTIC RIDGE						
		PNS	P	19 29 54.1	1.0	24		
			eS	36 45				
		LPB	eP	19 29 54.3	2.0	121		47.0
OCT	28	PNS	eP	19 34 17				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	28	CCH	eP	19 58 43.0				
		PNS	eP	19 58 45.8				
		LPB	eP	19 58 46			1.2	74
		CHA	eP	19 58 48.6				
OCT	28	LPB	eP	20 49 20				
		PNS	eP	20 49 26				
OCT	29	USCGS	02 59	20, 24.0S, 179.9E, H = 548 Km, M = 4.4				
		SOUTH OF FIJI IS						
OCT	28	PNS	eP	21 08 49				3.1
			eS	09 24.8				
OCT	28	CCH	eP	22 26 16.7				
		LPB	eP	22 26 28				
		PNS	eP	22 26 34.9				
		CHA	eP	22 26 39.3				
OCT	28	PNS	eP	23 55 22.5				1.9
			eS	46				
		CHA	eP	23 55 26.8			0.9	10
		LPB	eP	23 55 28				
OCT	29	CCH	eP	00 00 19.2				
		PNS	P	00 00 30				2.1
		CHA	eP	00 00 36.3				
		LPB	eP	00 00 36.5				
OCT	29	PNS	eP	01 23 14.8	D			1.9
			S	23 38				
		CHA	eP	01 23 17.0	D			2.1
		LPB	eP	01 23 17.4				
			S	23 42.2				
		CCH	P	01 23 37.4				
OCT	29	USCGS	02 43	06.0, 25.0N, 45.5W, H = 33 Km, M = 4.3				
		NORTH ATLANTIC RIDGE						
		CCH	iP	02 43 06.0	C			
		LPB	eP	02 43 43				2.7
			iS	44 15.2				
		CHA	P	02 43 43.5	C			2.8
			S	44 16.1				
		PNS	eP	02 43 50.4				3.2
			S	44 28				
OCT	29	LPB	eP	02 54 23				
OCT	30	PNS	P	02 54 23.7	0.5	13		
		CHA	eP	02 54 24.6				
OCT	30	USCGS	02 59	20, 24.0S, 179.9E, H = 548 Km, M = 4.4				
		SOUTH OF FIJI IS						
		PNS	eP	03 12 15				
			eL	47				
		LPB	eP	03 12 16				102.6



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	29	TRJ	P	03 23 00.8	D			
		CCH	eP	03 23 30.8				
		LPB	eP	03 23 34				
			i	23 49.4				
		CHA	P	03 23 34.6				
		PNS	eP	03 23 35.4				12.1
			eS	25 50				
OCT	29	USCGS SOLOMON IS		05 24 00, 10.3S, 161.3E, H = 91 Km, M = 4.7				
		LPB	ePKP	05 42 46.5				124.1
			eL	06 33				
		PNS	PKP	05 42 47.2	1.0	6		
			eL	06 32.9				
OCT	29	CCH	eP	06 05 09.7				
		PNS	eP	06 05 17.7				2.4
			S	05 46.4				
		CHA	eP	06 05 18.6				
OCT	29	CCH	eP	06 31 50.6				
		LPB	P	06 32 02.3	0.8	7		
		CHA	eP	06 32 04.0				
		PNS	P	06 32 05.9	0.4	3		
OCT	29	PNS	eP	07 25 09				
		LPB	P	07 25 10.4	0.9	8		
		CHA	eP	07 25 11.6				
OCT	29	USCGS SOUTH OF FIJI IS		07 45 04.5, 19.3S, 175.7E, H = 42 Km, M = 5.0				
		LPB	eL	08 36				107.5
		PNS	eL	08 36.1				
OCT	29	PNS	eP	10 51 51.9				4.8
			S	52 47				
		LPB	eP	10 51 56				
OCT	29	USCGS SOUTH SANDWICH IS REG		12 37 22.2, 60.8S, 23.1W, H = 33 Km, M = 5.3				
		LPB	P	12 46 49.4	C	1.0	26	54.6
			i	46 51.2				
			is	54 31				
			eSS	58 26				
			G	13 00.3				
			L	03.8				
		PNS	P	12 46 52.5	C			
			S	54 35				
			eSS	58 22				
			eG	59.9				
			eL	13 03.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	29	USCGS SAN JUAN PROVINCE, ARGENTINA		13 25 07, 31.3S, 67.9W, H = 83 Km, M = 4.2				
		LPB	eP	13 28 33				141.4
			eL	33				
OCT	29	USCGS TONGA IS		16 00 00, 20.5S, 173.9W, H = 33 Km, M = 4.4				
		LPB	ePKP	16 13 32				98.0
			eL	46				
		PNS	eSKS	16 24 19				
			eL	46.7				
OCT	29	PNS	iP	18 42 31.3	D			
OCT	29	TRJ	eP	18 53 12.0				
		PNS	P	18 53 26.3		0.5	3	
		LPB	P	18 53 33.2	C	0.8	18	
OCT	29	PNS	P	20 49 58.4		0.7	5	
			e	50 23.3				
OCT	30	TRJ	eP	20 50 20.7				
OCT	29	PNS	P	21 11 17.2		0.8	5	
			S	11 45.8				
OCT	29	PNS	eP	21 17 58		0.8	4	
OCT	29	USCGS S SANDWICH IS REG		22 22 33.1, 57.9S, 25.8W, H = 29 Km, M = 4.9				
		LPB	eP	22 31 41.2		0.7	7	52.1
		PNS	P	22 31 44.2		0.7	6	4.8
OCT	29	PNS	P	23 55 03.1	D	0.4	6	1.7
			S	55 24				
OCT	30	LPB	P	01 08 20.2		0.9	17	5.1
		PNS	P	01 08 24.0		0.6	4	
OCT	30	PNS	iP	01 52 53.4	D			2.6
			is	00 53 24				
		LPB	P	01 52 58		0.9	12	1492.9
			S	53 32.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	30	USCGS LOYALTY IS REG	02 36	45.1, 22.0S, 170.1E, H = 32 Km, M = 4.4				
		LPB	eL	03 29				111.1
		PNS	eL	03 29.7				
OCT	30	LPB	eP	02 56 20				20.9
			i	56 26.4				
			e(S)	03 00 04.5				
			eL	03				
		PNS	eP	02 56 23				20.7
			S	03 00 05				
			L	02				
OCT	30	LPB	P	05 04 39.7				5.8
			e(S)	05 46				
		PNS	iP	05 04 42.6	D	0.6	16	
OCT	30	USCGS EASTERN KAZAKH SSR	06 03	57.9, 49.8N, 78.1E, H = Km, M = 5.5				
		LPB	ePKP	06 23 11				137.1
		PNS	ePKP	06 23 15				
			eL	07 09 05				
OCT	30	PNS	iP	06 25 12.5	D			2.0
			S	25 47				
		LPB	P	06 25 14.4		0.9	24	2.3
			S	25 41.4				
OCT	30	PNS	eP	09 28 20				107.5
		LPB	P	09 28 21.5		0.9	8	
OCT	30	PNS	P	09 35 34.4		0.8	3	2.1
			S	35 59				
OCT	30	PNS	iP	12 12 23.7	D	0.5	10	2.1
			S	12 49				
		LPB	P	12 12 24	D	0.8	46	2.0
			(S)	12 48.5				
OCT	30	PNS	iP	13 10 13.5	D	0.4	5	1.8
			S	10 35.4				
OCT	30	PNS	P	13 33 21.2	C	0.6	4	6.0
			S	34 30				
		LPB	P	13 33 22				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	30	LPB	iP	14 01 49	D			3.1
			iS	02 25				
		PNS	iP	14 01 50.3	D			3.2
			iS	02 27				
		TRJ	iP	14 02 12.0	D			
OCT	30	USCGS NORTHERN CHILE	14 26	08.8, 23.2S, 68.9W, H = 101 Km, M = 4.0				
		TRJ	P	14 27 11.9				
		LPB	eP	14 27 45				6.5
		PNS	eP	14 27 49.5				
			pg	28 20.0				
			eS	28 50				
OCT	30	PNS	eP	14 43 04				1.4
			S	43 22				
OCT	30	LPB	P	17 32 29.5	D	1.0	50	
		PNS	P	17 32 30.3		0.7	9	
OCT	30	USCGS UGANDA	19 55	38, 2.0N, 31.3E, H = 33 Km, M = 5.3				
		LPB	eP	20 09 18				99.9
			eL	33				
		PNS	eSS	20 27 57				
			eL	33.2				
OCT	30	PNS	iP	21 07 44.5	C			1.8
			S	08 06.9				
		CHA	iP	21 07 45.4	C			
OCT	30	USCGS UGANDA	21 36	22, 2.1N, 31.2E, H = 33 Km, M = 4.8				
		PNS	eP	21 36 02.6				
			eL	22 06.9				
OCT	30	USCGS WEST NEW GUINEA REGION	23 24	41.4, 4.2S, 134.1E, H = 33 Km, M = 5.1				
		PNS	ePKP	23 44 27				
			PKP2	44 37.2				
			eL	00 35.9				
		LPB	ePKP	23 44 29				149.8
			eL	00 35				
		CHA	ePKP	23 44 34.9				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	30	USCGS	23 59 22, 20.3S, 70.7W, H = 24 Km, M = 4.2					
			NEAR COAST OF NORTHERN CHILE					
		LPB	eP	00 00 30.2				4.5
			e	00 00 34.6				
			p	00 00 38.1				
			s	01 01 28.3				
		PNS	eP	00 00 32.7		1.3	12	
			p	00 00 47.4				
			s	01 01 30				
		CHA	p	00 00 37.5				
OCT	31	USCGS	01 15 40.8, 11.6S, 166.0E, H = 63 Km, M = 4.4					
			SANTA CRUZ IS					
		PNS	ePKP	01 34 28				
			eL	02 12.9				
		LPB	eL	02 12				119.7
OCT	31	LPB	p	02 03 06.6	C	0.7	11.2	
		CHA	p	02 03 07.3	C			
		PNS	p	02 03 06.6	C	0.5	8.	7.8
			s	04 37.8				
OCT	31	TRJ	eP	02 50 17.3				
		LPB	p	02 50 45.5	C	0.8	13	
		CHA	p	02 50 46.9	D			
		PNS	iP	02 50 49.1	C	0.5	19	5.0
			s	51 46				
OCT	31	LPB	p	04 01 50.5		1.1	17	
		CHA	p	04 01 51.3	D			
		PNS	p	04 01 54.2		0.6	6	
OCT	31	LPB	p	04 46 02.6		0.6	24	
OCT	31	LPB	p	04 50 55.6		0.9	17	
		CHA	p	04 50 51.1				
		PNS	p	04 50 57.4		0.6	5	
OCT	31	USCGS	05 04 20.3, 7.6N, 73.0W, H = 162 Km, M = 4.2					
			NORTHERN COLOMBIA					
		PNS	p	05 09 23.0		1.0	34	
		CHA	p	05 09 23.9				
		LPB	p	05 09 27		0.8	22	24.0
			eL	16				
OCT	31	PNS	p	06 13 42.5		0.6	4	3.6
			s	14 24.5				
		CHA	p	06 13 45.6				



MONTH	DAY	STA	PHASE	TIME	SIGN	PRE	AMPL	DIST
OCT	31	PNS	eP	06 48 20				
		LPB	eP	06 48 25		0.9	7	
OCT	31	PNS	eP	08 43 03				
			e	43 14				
		LPB	eP	08 43 04.7				
OCT	31	USCGS	10 14 43.8, 19.7S, 177.3E, H = 40 Km, M = 5.4					
			SOUTH OF FIJI IS					
		LPB	eL	11 01				106.1
		PNS	eL	11 01.3				
OCT	31	PNS	p	12 09 31.7				
OCT	31	PNS	p	12 50 56.2		0.8	10	
OCT	31	PNS	eP	16 19 13				
OCT	31	PNS	p	16 37 34.1		0.8	5	
OCT	31	PNS	iP	16 53 09.7	D	0.6	17	1.8
			s	53 22.2				
OCT	31	PNS	eP	16 55 24.9		1.4	12	
		LPB	eP	16 55 25				
OCT	31	CHA	eP	18 19 43.3				
		PNS	iP	18 19 44.0	D	0.4	5	2.0
			s	20 08.2				
OCT	31	PNS	eP	18 47 32				
OCT	31	PNS	eP	20 14 15.8				
		LPB	eP	20 14 16				
OCT	31	USCGS	21 08 07.2, 37.8N, 14.6E, H = 33 Km, M = 4.8					
			SICILY					
		PNS	p	21 21 25.9		1.1	7	
			ePP	25 13.2				
			eSS	39 00				
			eL	47.9				
			eL	53.2				
		LPB	eP	21 21 26				94.5
			eL	53				
		CCH	eP	21 21 47.9				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCT	31	LPB	eP	23 04 51.5				
		PNS	eP	23 04 56.7				
			eL	10.9				

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NOV	1	USCGS	05 25 41.0, 29.2N, 114.0W, H = 33 Km, M = 4.2 BAJA CALIFORNIA						
		LPB	eP	05 36 11				63.4	
NOV	1	LPB	P	06 51 40.2		0.8	7		
		CHA	P	06 51 41.2					
		PNS	iP	06 51 44.1	D	2.5	3		
NOV	1	PNS	eP	09 10 04.8					
		CHA	eP	09 10 09.7					
		LPB	eP	09 10 12		1.2	9		
NOV	1	LPB	eP	09 30 38					
		PNS	eP	09 30 38.6					
NOV	1	LPB	eP	11 42 17					
		CHA	P	11 42 20.0					
		PNS	P	11 42 22.5		0.6	5		
NOV	1	USCGS	14 59 58.9, 23.0S, 176.8W, H = 140 Km, M = 5.3 SOUTH OF FIJI ISLANDS						
		PNS	eP	15 13 21.6					
		LPB	eP	15 13 23				99.9	
			eL	47					
NOV	1	USCGS	16 09 16.7, 48.2N, 154.4E, H = 47 Km, M = 5.3 KURILE ISLANDS						
		PNS	ePKP	16 28 29.8		1.3	12		
		LPB	ePKP	16 28 31				133.0	
			eL	17 13					
NOV	1	USCGS	16 30 57.1, 48.3N, 154.4E, H = 40 Km, M = 5.5 KURILE ISLANDS						
		PNS	PKP	16 50 10.0		1.0	8		
		LPB	ePKP	16 50 11.5				133.0	
			eL	17 34					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOV	1	CHA	P	17 04 19.3	D				
		LPB	P	17 04 21.8					
		PNS	iP	17 04 22.1	C	0.4	6	7.8	
			eS	05 50					
NOV	1	USCGS	16 55 43.0, 30.7N, 113.4W, H = 33 Km, M = 4.7 GULF OF CALIFORNIA						
		LPB	eP	17 06 15				64.0	
NOV	1	USCGS	17 29 21.0, 4.1S, 143.4E, H = 119 Km, M = 5.0 NEW GUINEA						
		LPB	ePKP	17 48 37.7				142.1	
		PNS	ePKP	17 48 40					
NOV	1	USCGS	18 56 54.8, 4.8S, 135.7E, H = 14 Km, M = 5.8 WEST NEW GUINEA REGION						
		PNS	PKP	19 16 40.6		1.6	67		
			i	45.8					
		LPB	eSS	19 39 17				148.2	
			eL	20 07					
NOV	1	USCGS	19 17 24.7, 37.1N, 141.3E, H = 72 Km, M = 4.7 NEAR E COAST HONSHU, JAPAN						
		PNS	PKP	19 37 01.7		1.0	24		
			i	14.2					
		LPB	PKP	19 37 02.7		1.0	66	147.1	
			eL	20 27					
NOV	1	PNS	iP	19 42 49.2	D	0.5	15	1.8	
			iS	43 11.6					
NOV	1	USCGS	19 38 16.0, 341.0S, 112.4W, H = 33 Km, M = 4.7 EASTER IS CORDILLERA						
		PNS	iP	19 46 16.2		1.5	75		
			i	26.1					
		LPB	P	19 46 17		2.1	119	43.1	
			e	37					
			eL	58.7					
NOV	2	PNS	P	00 58 49.2	C	0.8	13		
		CHA	P	00 58 52.2					
		LPB	P	00 58 54.6		0.7	11		

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	2	USCGS		03 32 24.7, 28.8S, 69.5W, H = 79 Km, M = 5.3				
				CHILE-ARGENTINA				
		LPB	P	03 35 19.4				12.1
			eS	37 32				
			eL	38				
		CHA	P	03 35 21.6				
		PNS	P	03 35 22.2		0.8	10	
			S	37 33.6				
NOV	2	LPB	eP	05 02 54		0.8	4	4.2
		PNS	eP	05 02 56				
		CCH	eP	05 03 03.2				
NOV	2	LPB	eP	05 19 15				
		CHA	eP	05 19 15.3				
		PNS	eP	05 19 17				
NOV	2	PNS	P	05 51 49.0		0.7	4	
		CHA	eP	05 51 49.1				
		LPB	P	05 51 49.5		0.7	4	
NOV	2	USCGS		06 41 45.0, 54.8S, 130.5W, H = 33 Km, M = 4.8				
				SOUTH PACIFIC CORDILLERA				
		LPB	P	06 51 55.5		1.2	37	60.5
			eL	07 11				
		PNS	P	06 51 55.7		C	30	
NOV	2	LPB	P	07 21 45.5				
NOV	2	USCGS		07 31 14, 21.0S, 174.0W, H = 140 Km, M = 5.3				
				SOUTH OF FIJI ISLANDS				
		LPB	eP	07 31 14		0.9	5	
		PNS	eP	07 31 14.5				
NOV	2	LPB	eP	08 23 38				
		CHA	eP	08 23 40.1				
		PNS	eP	08 23 42.8				
NOV	2	LPB	ePKPeP	08 33 25.5				
			eL	38				
		PNS	eL	08 33 43				
NOV	2	USCGS		19 26 49.6, 16.3S, 153.0W, H = 5.5				
				NEW HEBRIDES ISLANDS				
		LPB	eP	19 26 51.7		1.2	31	
			eP	16 50 10.9				
			eP	16 50 11.5				
			eL	17 34				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	2	TRJ	P	20 49 52.6				
		LPB	P	20 50 14.2		0.8	19	
		CHA	P	20 50 19.1				
		PNS	iP	20 50 22.2		C	0.6	7
NOV	2	TRJ	P	22 50 47.6				
		PNS	eP	22 51 29				4.0
			S	52 16				
		CHA	eP	22 51 23.3				
		LPB	eP	22 51 35				
NOV	3	LPB	eP	01 14 29.5		0.8	6	2.9
			S	15 03.1				
		CHA	eP	01 14 32.0				
		PNS	eP	01 14 33				2.6
			S	15 04				
NOV	3	TRJ	eP	02 11 31.4				
		LPB	eP	02 12 28				
		PNS	P	02 12 31.6		0.5	4	
NOV	3	USCGS		04 30 12.7, 32.3N, 140.1E, H = 148 Km, M = 4.3				
				SOUTH OF HONSHU, JAPAN				
		PNS	iPKP	04 49 46.2		D	0.6	4
		CHA	PKP	04 49 47.2				
		LPB	PKP	04 49 50.4		0.7	6	149.7
NOV	3	USCGS		07 32 50.1, 18.7S, 169.0E, H = 230 Km, M = 5.3				
				NEW HEBRIDES ISLANDS				
		LPB	PKP	07 51 04.6		0.9	8	113.4
		PNS	PKP	07 51 04.7		1.1	8	
			epPKP	53.6				
NOV	3	PNS	eP	08 01 18.9				5.8
		CHA	eP	08 10 19.8				
		LPB	eP	08 00 56.5				
NOV	3	USCGS		08 15 34.4, 7.6S, 81.4W, H = 14 Km, M = 5.2				
				OFF COAST OF NORTHERN PERU				
		LPB	eP	08 19 11.5				15.3
			i	24.2				
			S	22 04.5				
			L	25				
		PNS	P	08 19 12.6		1.6	70	
			i	19.4				
			PP	29.0				
			eS	22 02				
			SS	26				
		CHA	eP	08 19 17.5				
			i	23.0				
		TRJ	P	08 20 22.3				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOV	3	USCGS	08 54 47.0, 21.3S, 67.8W, H = 204 Km, M = 4.2 CHILE BOLIVIA BOR REG						
		TRJ	ip	08 55 27.2	C				
			S	58.2					
		LPB	P	08 56 00	C	0.8	140	4.6	
		CHA	ip	08 56 01.1	C				
		PNS	ip	08 56 03.8	C				
			is	57 03					
NOV	3	LPB	P	10 40 55.5		0.8	19		
		PNS	eP	10 42 06					
NOV	3	USCGS	10 31 19.5, 6.1N, 125.7E, H = 82 Km, M = 5.1 MINDANAO, PHILIPPINE ISLANDS						
		LPB	ePKP	10 51 23				162.8	
			PKP2	52 07.5					
			eL	11 48					
		PNS	PKP2	10 52 06.5					
NOV	3	CCH	eP	12 14 33.5					
		PNS	ip	12 14 48.8	C	0.7	27	3.3	
			S	15 28.3					
		LPB	ip	12 14 59.3	C	0.7	82	2.4	
			S	15 28					
		CHA	ip	12 14 59.6	D			2.6	
			S	15 30.9					
NOV	3	PNS	P	13 38 06.9		0.6	10	7.3	
			eS	39 30					
NOV	3	PNS	ip	13 55 08.9	C	0.6	25	2.9	
			S	43.2					
		CHA	ip	13 55 12.4	C				
		LPB	ip	13 55 14		0.4	59		
NOV	3	PNS	eP	16 16 27.5					
NOV	3	PNS	eP	16 36 06.9				0.3	
			eS	13.2					
NOV	3	PNS	eP	16 45 41		1.0	5		
NOV	3	PNS	eP	16 49 36		0.5	5	4.1	
			S	50 24.8					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOV	3	PNS	P	18 26 57.0		0.5	10	2.4	
			S	27 26.2					
NOV	3	LPB	P	20 00 13	C	0.5	15		
NOV	3	PNS	P	21 17 07.6		0.5	3		
		CHA	eP	21 17 09.2					
NOV	3	USCGS	21 34 15.2, 15.3S, 167.5E, H = 104 Km, M = 4.6 NEW HEBRIDES ISLANDS						
		LPB	ePKP	21 52 48.4				116.1	
NOV	3	USCGS	22 37 49.6, 56.1S, 27.2W, H = 155 Km, M = 5.4 S SANDWICH ISLANDS REGION						
		TRJ	P	22 45 45.6	D				
		LPB	P	22 46 30.7		1.1	95	49.9	
			S	54.5					
			PS	53 33					
			eL	23 02					
		CHA	ip	22 46 32.9	C				
		PNS	ip	22 46 35.1	C	1.3	82		
			ipP	47 01.0					
			ipS	51 32					
			is	53 40					
			SeS	56 12.7					
NOV	3	PNS	P	23 25 31.0	C	0.6	7	2.8	
			S	26 04.5					
		CHA	P	23 25 34.4	C				
NOV	3	LPB	eP	23 31 06					
		PNS	eP	23 31 12					
NOV	3	USCGS	23 45 51.6, 32.1S, 68.7W, H = 125 Km, M = 3.9 MENDOZA PROVINCE ARGENTINA						
		CHA	eP	23 49 25.9					
		LPB	eP	23 49 27				15.3	
		PNS	eP	23 49 27.8				141.4	
NOV	4	PNS	ip	00 49 33.7	D	0.4	17	1.9	
			S	56.6					
		CHA	ip	00 49 36.0	D				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	4	USCGS RYUKYU ISLANDS	00 38	09.0, 28.1N, 129.2E, H = 39 Km, M = 4.9				
		LPB	ePKP eL	00 58 10.7 01 55				160.1
NOV	4	USCGS N WEST CST OF COLOMBIA	02 43	56.6, 4.1N, 77.1W, H = 74 Km, M = 3.9				
		LPB	eP	02 48 54		0.9	10	22.0
		PNS	eP	02 48 47.8				
		CHA	eP	02 48 50.1				
NOV	4	USCGS CHILE-ARGENTINA BOR REG	02 49	00.0, 28.2S, 69.4W, H = 32 Km, M = 4.1				
		PNS	eP	02 51 40				11.1
NOV	4	LPB	eP	04 31 46		0.8	4	
		PNS	iP	04 31 46.4	D	0.5	6	2.0
			S	32 11.5				
		CHA	iP	04 31 47.9	C			
NOV	4	PNS	eP	04 37 27.6				2.2
			eS	54				
		LPB	eP	04 37 30				3.2
			S	38 06.7				
		CHA	eP	04 37 31.6				
NOV	4	USCGS TAIWAN REG	05 07	18.0, 24.3N, 122.2E, H = 76 Km, M = 5.0				
		PNS	PKP i	05 27 19.4 28 21.9	C	1.4	82	
		LPB	PKP i eL	05 27 19.8 28 23.4 06 23	C	1.2	77	159.3
NOV	4	PNS	iP S	06 06 23.2 46	D	0.7	11	1.9
		LPB	eP	06 06 23.5				
		CHA	iP	06 06 24.8	D			
NOV	14	TRJ	eP	08 21 50.0				
		LPB	P	08 22 19.6		0.9	27	
		CHA	iP	08 22 21.0	C			
		PNS	iP S	08 22 22.7 23 20	C	0.6	21	5.0

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	4	PNS	P S	08 45 33.8 46 03	C	0.7	4	2.4
		CHA	P	08 45 37.4	C			
		LPB	P	08 45 37.8		0.9	14	
NOV	4	USCGS FIJI ISLANDS REGION	10 17	14.7, 17.8S, 179.0W, H = 573 Km, M = 6.2				
		LPB	SKS eL	10 40 07.5 11 05				103.5
		PNS	eP	10 30 13.6				
			SKS	40 06.1				
NOV	4	LPB	P S	10 33 26.3 34 08.5		0.9	15	3.6
		CHA	P	10 33 27.0				
		PNS	P	10 33 29.5		0.8	10	4.0
			S	34 15.4				
NOV	4	LPB	eP	10 46 09				
		PNS	P	10 46 09.3		1.0	11	
NOV	4	USCGS MICHOACAN, MEXICO	11 59	05.0, 19.4N, 102.2W, H = 36 Km, M = 4.1				
		PNS	eP	12 07 47.5				48.8
NOV	4	USCGS NEAR E COAST OF HONSHU, JAPAN	13 26	47.7, 37.4N, 141.6E, H = 46 Km, M = 5.7				
		PNS	iPKP	13 46 25.2	C	1.8	430	
		CHA	ePKP	13 46 26.4				
		LPB	PKP eSS eL	13 46 27.2 14 08 50 37	D	1.8	404	146.7
NOV	4	USCGS HOKKAIDO, JAPAN REG	14 30	37.5, 43.5N, 144.1E, H = 30 Km, M = 5.8				
		PNS	ePKP ePKS	14 50 01.8 53 32.6		1.6	45	
		LPB	ePKP i PKS SS L	14 50 04 10.2 53 33.5 15 12 00 38		1.3	25	141.4
		TRJ	i	14 50 19.3				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	4	USCGS HOKKAIDO, JAPAN REG		14 46 01.9, 43.5N, 144.0E, H = 33 Km, M = 5.4				
		PNS	e	15 05 26.6	C	1.3	24	160.1
			PKP	35.0				141.5
		LPB	eP	15 05 36				
			PP	08 48				
		TRJ	ePKP	15 05 44.6				
NOV	4	USCGS LEEWARD ISLANDS		15 11 22.5, 17.7N, 61.0W, H = 42 Km, M = 4.9				
		PNS	P	15 18 09.4		1.3	21	
		LPB	P	15 18 16		1.1	32	34.8
NOV	4	USCGS HOKKAIDO, JAPAN REG		16 03 28.0, 43.3N, 144.1E, H = 33 Km, M = 4.5				
		PNS	ePKP	16 23 01.6				141.7
NOV	4	USCGS PERU-ECUADOR BOR REG		16 26 48.2, 2.8S, 77.7W, H = 99 Km, M = 6.0				
		PNS	P	16 30 29.2		1.5	50	
			i	34.2				
			S	33 39				
		CHA	P	16 30 32.7				
		LPB	P	16 30 35		1.5	165	16.1
			i	39.9				
			PP	54				
			S	33 47				
			eL	35				
		GCH	eP	16 30 57.3				
		TRJ	P	16 31 39.6	C			
NOV	4	LPB	eP	16 51 06.5				
		CHA	eP	16 51 06.7				
		PNS	iP	16 51 07.0	D	0.5	22	2.3
			iS	34				
NOV	4	PNS	eP	17 09 28				
NOV	4	PNS	iP	17 57 30.6	D	0.3	6	1.9
			S	54				
NOV	4	CHA	iP	17 57 32.8	D			1.7
			S	53.7				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	4	PNS	iP	18 34 05.7	D	0.5	5	1.8
			iS	27.7				
		CHA	iP	18 34 06.5	D			
NOV	4	PNS	iP	21 55 46.1	C	0.8	43	2.6
			S	56 16.7				
		CHA	iP	21 55 49.5	C			
		LPB	P	21 55 55.6		1.0	22	
NOV	4	USCGS UTAH		21 06 31.9, 39.2N, 111.7W, H = 33 Km,				
		PNS	eP	21 10 39				
		LPB	eP	21 17 40				69.0
			eL	21 40				
NOV	4	USCGS GUATEMALA		22 29 46.0, 14.2N, 89.7W, H = 24 Km, M = 4.0				
		LPB	eP	22 36 22				37.0
		PNS	eP	22 36 55				
NOV	5	LPB	P	03 59 32.5		0.6	10	
NOV	5	USCGS BANDA SEA		04 58 35.8, 7.8S, 126.9E, H = 33 Km, M = 4.9				
		CHA	PKP	05 18 30.8	D			
		LPB	PKP	05 18 30.8	C	1.2	53	151.3
		PNS	PKP	05 18 30.9	C	1.0	14	
			pPKP	40.2				
NOV	5	PNS	eP	06 13 08.6				
		LPB	iP	06 13 09				
		CHA	P	06 13 12.7	D			
NOV	5	PNS	eP	06 16 29				
		CHA	eP	06 16 37.5				
NOV	5	LPB	iP	08 05 48.2	D	0.7	22	6.4
			eS	07 01.2				
		CHA	P	08 05 49.6	C			
		PNS	iP	08 05 52.1	D	0.5	9	6.7
			S	07 08				
		TRJ	iP	08 04 53.9	C			

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOV	5	USCGS	08 44 39.0, 30.6N, 142.4E, H = 33 Km, M = 4.9 SOUTH OF HONSHU, JAPAN						
		PNS	ePKP	09 04 22.5		1.0	9		
			PKP2	29.8					
		LPB	ePKP	09 04 23.8		1.1	20	148.6	
			PKP2	28.8					
		CHA	ePKP	09 04 26.7					
NOV	5	USCGS	08 50 00.0, 30.6N, 142.3E, H = 33 Km, M = 4.4 SOUTH OF HONSHU, JAPAN						
		PNS	ePKP	09 09 44.2		1.0	11		
		LPB	ePKP	09 09 47.7				48.6	
			eL	10 01					
NOV	5	LPB	eP	11 04 29				2.1	
		PNS	P	11 04 31.0					
			eS	56					
NOV	5	USCGS	11 20 28.0, 12.4S, 166.2E, H = 48 Km, M = 5.6 SANTA CRUZ ISLANDS						
		LPB	ePKP	11 39 11				118.8	
			eL	12 18					
NOV	5	USCGS	13 56 20.0, 46.9S, 34.6E, H = 33 Km, M = 4.4 PRINCE EDWARD ISLANDS REGION						
		PNS	eP	14 09 03.3				86.5	
		LPB	eP	14 09 04					
NOV	5	USCGS	14 23 53.8, 3.2N, 74.7W, H = 39 Km, M = 4.9 COLOMBIA						
		PNS	eP	14 28 29		1.0	7		
			i	35.6					
			eS	32 12					
			eSSS	32 55					
		LPB	eP	14 28 34				20.6	
			i	40.2					
			eL	34.1					
		CHA	eP	14 28 34.8					
NOV	5	CCH	iP	16 00 29.2					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOV	5	CHA	iP	16 01 04.7	D				
		LPB	P	16 01 05.9		0.9	19	3.2	
			i	07.8					
			S	42.8			16		
		LPB	iP	16 01 10.2	C			3.3	
			S	48					
		TRJ	P	16 01 29.8					
NOV	5	USCGS	16 23 19, H = 180 Km, M = 4.4 SANTA CRUZ ISLANDS						
		PNS	eP	16 23 19				3.2	
			S	57					
NOV	5	PNS	eP	16 27 48.5					
NOV	5	CHA	eP	16 55 23.7					
NOV	5	LPB	eP	20 54 14		0.8	7	3.7	
NOV	5	USCGS	21 38 52, 16.2S, 69.4W, H = 235 Km, M = 3.8 PERU-BOLIVIA BOR REG						
		PNS	iP	21 39 25.7	D				
			S	39 50					
		LPB	iP	21 39 27.8	C	0.5	160	1.1	
			iS	39 53.5					
NOV	5	CHA	eP	23 20 48.9					
		PNS	eP	23 20 49.2					
NOV	5	LPB	P	23 31 33.5		1.0	70		
		PNS	P	23 31 35.3		0.8	14.6		
NOV	5	LPB	eP	23 46 43.2					
NOV	6	TRJ	P	02 19 55.8	C				
		LPB	P	02 20 17.5	C	0.8	18		
		PNS	iP	02 20 21.5	C	0.6	14	4.7	
			eS	21 16					
NOV	6	PNS	eP	03 35 30					
			e	36 03					
		LPB	eP	03 35 31					
NOV	6	PNS	iP	04 04 36.1	D	0.4	8	7.3	
			i(Pn)	04 44.7					
			S	04 52					
		LPB	iP	04 04 38.7	D	0.6	11	1.5	
			i(Pn)	04 47					
			iS	04 57.5					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	6	PNS	iP	04 51 37.1	D	0.6	14	2.1
			S	52 02				
		LPB	iP	04 51 39.0		0.7	11	2.2
			S	52 05.5				
NOV	6	USCGS		05 49 49, 68.0N, 18.8W, H = 33 Km, M = 4.5				
				ICELAND REGION				
		LPB	eP	06 02 50.5				91.3
NOV	6	PNS	P	07 40 06.4		1.1	10	
		LPB	eP	07 40 06.5		1.0	8	
NOV	6	PNS	iP	12 12 15.7	D	0.3	7	1.7
			S	12 37				
NOV	6	PNS	eP	12 26 26.6				2.1
			eS	26 35				
NOV	6	LPB	eP	15 48 22				
		PNS	eP	15 48 27.8				
NOV	6	LPB	eP	18 18 28				
		CHA	eP	18 18 35.8				
		PNS	eP	18 18 38.9				
NOV	6	USCGS		18 49 26, 13.5N, 88.0W, H = 33 Km, M = 4.3				
				EL SALVADOR				
		PNS	P	18 56 21.3				
		LPB	eP	18 56 24				36.0
NOV	6	USCGS		19 01 11, 13.7N, 60.1W, H = 33 Km, M = 4.3				
				WINDWARD IS				
		LPB	eP	19 07 28				31.5
			eL	17				
		PNS	P	19 07 28.4		1.0	7	
NOV	6	USCGS		21 05 47, 21.9S, 63.7W, H = 535 Km, M = 4.5				
				SOUTHERN BOLIVIA				
		TRJ	eP	21 06 52.2	C			
		CHA	iP	21 07 33.3	C			
		LPB	P	21 07 34		0.8	19	6.6
			S	08 51.8				
		PNS	iP	21 07 38.1	D	0.7	17	
			S	09 04.8				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	6	CHA	iP	21 33 49.7	C			
		PNS	iP	21 33 51.1	D	0.8	16	
		LPB	eP	21 33 51.5				
			i	33 56				
NOV	6	USCGS		22 12 41, 11.5S, 75.5W, H = 180 Km, M = 4.0				
				PERU				
		PNS	eP	22 14 41				
			i	15 18.8				
			eS	16 15				
		CHA	eP	22 14 43.8				
		LPB	eP	22 14 46.6		0.9	17	8.5
NOV	6	PNS	eP	22 53 09.7				3.7
			eS	53 53				
NOV	6	PNS	iP	23 15 14.4	D	0.7	6	1.9
			eS	15 38				
		CHA	P	23 15 15.1	C			
NOV	7	LPB	P	00 03 11		0.8	16	
		PNS	P	00 03 13.0		1.3	24	
		CHA	eP	00 03 14.9				
NOV	7	CHA	eP	01 37 57.0				
		PNS	eP	01 38 03				
		LPB	eP	01 38 18		1.0	8	
NOV	7	USCGS		03 29 15.3, 4.6S, 105.2W, H = 33 Km, M = 4.4				
				NORTHERN EASTER I CORDILLERA				
		PNS	EP	03 36 31.7		1.2	18	
			eS	42 30				
			eSS	45 14				
			eL	47.7				
		LPB	P	03 36 34.2		1.2	15	37.8
			i(pP)	36 41.3				
			S	42 37				
			SS	45 21				
			eL	48				
NOV	7	USCGS		03 49 17.4, 14.9S, 173.0W, H = 43 Km, M = 5.6				
				SAMOA IS REG				
		LPB	eP	04 02 34				99.1
			eL	36				
		PNS	eP	04 02 58.2		1.3	12	
			eSKS	13 47				
			eSS	21 43				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	7	USCGS S SANDWICH IS	08 28 25	56.2S, 26.8W	H = 33 Km, M = 5.1			
		LPB	P	08 37 22.4	C	1.1	30.0	50.4
		PNS	iP	08 37 25.5	C	0.8	16	
		CHA	P	08 37 32.4	C			
NOV	7	PNS	eP	09 38 11				
		LPB	eP	09 38 46				
NOV	7	TRJ	iP	09 39 57.2	D			2.6
		S	S	40 29.0				
		LPB	P	09 40 37.6		0.8	19	5.7
		S	S	41 42.2				
		PNS	iP	09 40 41.1	D	0.5	19	5.7
		S	S	41 46.6				
		CHA	P	09 40 41.4				
NOV	7	PNS	eP	09 45 49				6.0
		LPB	eS	46 57.8				
NOV	7	LPB	eP	09 55 46				
		PNS	eP	09 55 48.6		1.0	9	
NOV	7	USCGS WEST NEW GUINEA REG	10 21 49.7	4.4S, 135.2E	H = 40 Km			
		PNS	ePKP	10 41 37				
		LPB	eL	32.7				
		LPB	ePKP	10 41 39				149.4
		LPB	eL	11 32.8				
NOV	7	PNS	eP	11 36 32.5				2.3
		IS	IS	36 59.1				
NOV	7	LPB	P	11 56 28.5		0.7	21	
		PNS	iP	11 56 28.5	D	0.8	8	
NOV	7	PNS	eP	12 46 37				7.1
		S	S	47 56.7				
NOV	7	PNS	eP	14 28 03.3				1.8
		CHA	iS	28 25.2				
		CHA	eP	14 28 05.0				
NOV	7	USCGS NEW HEBRIDES IS	14 35 15.1	19.0S, 169.9E	H = 198 Km, M = 3.8			
		PNS	eL	12 28.5				
		LPB	eL	15 29				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	7	PNS	eP	14 57 28.4				
		CHA	eP	14 57 37.1				
NOV	7	PNS	eP	15 16 26				7.4
		CHA	eS	17 50				
NOV	7	PNS	P	15 24 03.9		1.0	7	
NOV	7	PNS	eP	16 32 54.7				
NOV	7	PNS	eP	19 01 27.5				2.0
		S	S	01 51.7				
		CHA	P	19 01 29.4				2.2
		S	S	01 55.8				
NOV	7	LPB	eP	20 53 12.5				3.3
		PNS	P	20 53 12.7				
		CHA	eS	53 52				
		CHA	P	20 53 13.2				
NOV	7	PNS	P	22 13 49.9		0.5	2.2	2.0
		S	S	14 14				
		CHA	P	22 13 51.8	C			
		LPB	P	22 13 53		0.8	21	
NOV	7	LPB	P	22 22 29				1.9
		PNS	iP	22 22 29.4	D	0.5	11	
		S	S	22 52.7				
		CHA	eP	22 22 30.6				
NOV	7	PNS	eP	22 29 29.5				
NOV	7	PNS	P	22 30 23.2		0.7	6	
		CHA	P	22 30 24.4				
NOV	7	PNS	P	22 55 48.5				1.3
		S	S	56 05.2				
		CHA	P	22 55 53.6				
		LPB	P	22 55 56.6		0.8	19	
NOV	7	PNS	P	23 00 46.3		0.9	6	
NOV	7	LPB	eP	23 46 24				
		PNS	P	23 46 27.5		0.6	3	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOV	8	LPB	eP	00 44 27					
		CHA	iP	00 44 34.1	D			0.4	
			iS	44 40.7					
		PNS	iP	00 44 35.4	D	0.6	4	0.4	
			iS	44 42.3					
NOV	8	PNS	eP	01 59 57.9					
NOV	8	USCGS	01 56 15.1, 35.5N, 140.8E, H = 56 Km, M = 4.3 NEAR E COAST HONSHU, JAPAN						
		PNS	ePKP	02 15 54		1.2	12		
			eL	03 06.6					
		LPB	ePKP	02 15 56		1.0	22	148.0	
			eL	03 07					
		CCH	ePKP	02 15 56.2					
NOV	8	USCGS	02 41 34.1. 59.0N, 150.2W, H = 34 Km, M = 4.4 KENAI PENINSULA, ALASKA						
		PNS	eP	02 55 17					
		LPB	eP	02 55 19				100.0	
NOV	8	USCGS	03 10 53.3, 16.8N, 85.9W, H = 28 Km, M = 5.4 CARIBBEAN SEA						
		PNS	eP	03 18 04.4		1.0	7		
			S	23 51					
			SS	26 24					
			SeS	28 19					
			L	29.3					
		LPB	eP	03 18 08				37.4	
			ipP	18 19.2					
			S	24 02					
			eSS	26 04					
			eL	29.4					
NOV	8	USCGS	03 31 04, 35.5N, 140.8E, H = 57 Km, M = 4.2 NEAR EAST COAST HONSHU, JAPAN						
		PNS	ePKP	03 50 46.6					
			eL	04 41.4					
		LPB	ePKP	03 50 47				148.0	
NOV	8	PNS	iP	05 26 56.9	D	0.5	7	6.0	
			eS	28 06					
		CHA	P	05 27 00.7					
		LPB	P	05 27 01.8		1.0	22		
		CCH	P	05 27 25.7					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOV	8	USCGS	06 07 21.4, 5.3S, 134.0E, H = 33 Km, M = 5.9 AROE ISLANDS REGION						
		TRJ	ePKP	06 27 00.7					
		CHA	ePKP	06 27 05.2					
		CCH	PKP	06 27 06.5					
		LPB	PKP	06 27 07.2		1.1	75	149.0	
			i	28					
			PKP2	41.2					
			eSS	49 58					
			L	07 18					
		PNS	PKP	06 27 07.3	D	1.3	51		
			PS	41 21					
			SS	49 52					
			eSSS	55 24					
			G	07 09.3					
			eL	18					
NOV	8	LPB	eP	06 57 22		0.9	5		
		PNS	eP	06 57 22		0.7	7		
		CHA	eP	06 57 29.0					
NOV	8	USCGS	07 11 59.3, 36.2S, 100.7W, H = 33 Km, M = 4.6 SOUTHERN PACIFIC OCEAN						
		PNS	eP	07 18 49.5		1.3	20		
		LPB	eP	07 18 51.5		1.4	31	34.0	
			eL	28					
		CCH	eP	07 08 57.3					
NOV	8	LPB	P	07 56 47.5		0.8	18		
		PNS	P	07 56 49.8	C	1.3	34	3.3	
			eS	57 29					
		CHA	eP	07 56 50.2					
NOV	8	USCGS	10 47 45.3, 20.0S, 70.3W, H = 60 Km, M = 4.6 NEAR COAST OF NORTHERN CHILE						
		LPB	iP	10 48 48.3	C	0.8	270	4.1	
			S	49 35					
		PNS	iP	10 48 48.5	C				
			(S)	49 58					
		CHA	iP	10 48 50.3	D				
		CCH	iP	10 48 54.4	C				
		TRJ	P	10 49 04.4	C				
NOV	8	PNS	eP	12 49 26				3.9	
			S	50 11.5					
NOV	8	USCGS	13 12 06.3, 40.9N, 137.9E, H = 272 Km, M = 4.4 EASTERN OF JAPAN						
		PNS	ePKP	13 31 17					
			eL	14 21.5					
		LPB	ePKP	13 31 17.5				147.1	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIS
NOV	8	LPB	eP	15 02 15				3
			S	58.5				
		PNS	eP	15 02 21				3
			S	03 04.9				
		CHA	eP	15 02 28.0				
		TRJ	eP	15 02 46.1				
NOV	8	PNS	iP	16 32 25.6	D	1.3	95	2
			S	52				
		LPB	iP	16 32 26.2	D	1.1	82	
NOV	8	PNS	eS	16 36 08.3		0.5	2	2
			eS	41				
NOV	8	PNS	ePKP	17 05 54	D	0.8	13	2
			S	06 17.7				
NOV	8	USCGS		17 03 04.1, 51.0N, 178.6E, H = 42 Km, M = 4.7				
				RAT IS, ALEUTIAN IS				
		LPB	eL	17 58				117
		PNS	eL	17 58.9				
NOV	8	USCGS		17 09 27.1, 51.1N, 178.5E, H = 29 Km, M = 5.3				
				RAT IS ALEUTIAN IS				
		LPB	ePKP	17 28 14				117
			eL	18 05				
		PNS	ePKP	17 28 14.6				
			SS	45 36				
			eG	55.5				
			eL	18 05.3				
NOV	8	USCGS		17 22 32.1, 51.1N, 178.4E, H = 10 Km, M = 5.2				
				RAT IS, ALEUTIAN ISLANDS				
		PNS	ePKP	17 41 19				
			eSS	59 10				
		LPB	ePKP	17 41 20				117
NOV	8	PNS	eP	22 08 03.3				2
			S	36.9				
		CHA	eP	22 08 03.6				3
			S	44.2				
NOV	8	PNS	P	22 53 16.8	D	0.4	3	
		CHA	eP	22 53 17.3				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	9	USCGS		01 17 15.9, 22.2S, 68.8W, H = 109 Km, M = 4.1				
				NORTHERN CHILE				
		TRJ	iP	01 18 13.8	D			
		LPB	eP	01 18 40				5.5
		CHA	iP	01 18 42.3	C			
		PNS	P	01 18 42.6	C	1.1	44	
			i	19 01.7				
			S	44.4				
NOV	9	USCGS		02 18 45.5, 7.2S, 123.6E, H = 560 Km, M = 5.8				
				BANDA SEA				
		TRJ	PKP	02 38 31.8				
			i	36.1				
			i	41.0				
		PNS	iPKP	02 37 36.6	D	1.0	84	
			i	45.5				
			SKKS	47 28				
			SS	03 01 10				
		LPB	iPKP	02 37 36.7	D	1.0	134	153.4
			i	44.5				
			PKP2	56.5				
			eSS	03 00 18				
			eL	30				
		CHA	PKP	02 37 36.7				
			i	44.9				
NOV	9	USCGS		02 20 51.0, 15.8S, 178.4E, H = 84 Km, M = 4.8				
				FIJI ISLANDS				
		PNS	eP	02 34 53				
			eS	46 40				
			L	03 16.3				
		LPB	L	03 10.5				106.1
NOV	9	PNS	eP	04 32 40.7				
NOV	9	LPB	eP	04 52 35.6	D	1.0	66	
NOV	9	USCGS		08 09 10.8, 16.9S, 71.5W, H = 97 Km, M = 3.8				
				SOUTHERN PERU				
		PNS	iP	08 09 56.6	C			
			iS	10 30.0				
		CHA	iP	08 10 00.2	C			
			S	36.0				
		LPB	iP	08 10 01.3	C	0.9	298	3.1
			iPP	11				
			eS	35.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	10	PNS	P	03 31 54.0		1.2	5	
NOV	10	USCGS TONGA ISLANDS		03 27 33.6, 21.5S, 175.7W, H = 100 Km, M = 4.8				
NOV	9	LPB	eP	03 41 00				99.2
NOV	10	LPB	eP	04 12 50.5				
NOV	10	USCGS NORTH ATLANTIC RIDGE		04 40 15.0, 45.1N, 28.1W, H = 33 Km, M = 4.8				
NOV	9	LPB	eP	04 51 31				71.1
NOV	9	PNS	P	04 51 33.5		1.2	17	
NOV	9	CHA	eS	05 00 51				
NOV	9	LPB	eL	05 14.9				2.1
NOV	10	PNS	iP	05 10 40.8	D	0.5	16	1.9
NOV	9	LPB	S	11 03.8				
NOV	9	LPB	P	05 10 42.4		0.8	12	
NOV	9	CHA	iP	05 10 42.7	D			
NOV	10	USCGS NORTH ATLANTIC RIDGE		05 12 01.4, 45.0N, 28.1W, H = 33 Km, M = 4.4				
NOV	9	PNS	eP	05 23 19.8				71.1
NOV	9	LPB	eP	05 23 20				
NOV	9	LPB	eL	46				
NOV	10	USCGS NORTH ATLANTIC RIDGE		05 50 27.6, 44.8N, 28.1W, H = 33 Km, M = 4.7				
NOV	9	LPB	eP	06 01 42				71.1
NOV	9	PNS	eP	06 01 44.8		1.5	16	
NOV	10	CHA	P	06 05 21.9	D			
NOV	9	PNS	P	06 05 23.0	C	0.6	3	2.1
NOV	9	USCGS	S	48				
NOV	10	PNS	P	06 11 02.7	C	0.7	7	
NOV	10	LPB	P	06 11 03.3	C	0.8	10	
NOV	10	PNS	iP	06 39 17.8	D	0.6	6	1.8
NOV	10	CHA	eS	40				
NOV	10	CHA	iP	06 39 19.7	D			



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	10	USCGS JAVA SEA		07 28 53.7, 5.9S, 113.1E, H = 555 Km, M = 5.2				
NOV	9	LPB	PKP	07 47 50				157.5
NOV	9	LPB	PKP2	48 25.6				
NOV	9	LPB	eL	08 42				
NOV	10	PNS	PKP	07 47 50.4		1.6	19	
NOV	10	PNS	iPKP2	48 26.2				
NOV	10	PNS	eL	08 42.4				
NOV	10	CHA	iP	09 57 36.3	C			2.9
NOV	10	LPB	S	58 09.9				
NOV	10	LPB	P	09 57 37				3.0
NOV	10	LPB	i	39.6				
NOV	10	LPB	S	58 12				
NOV	10	PNS	iP	09 57 42.0	C	0.7	22	3.2
NOV	10	PNS	S	58 19				
NOV	10	USCGS MOLUCCA PASSAGE		10 19 16.2, 1.0N, 126.7E, H = 74 Km, M = 4.8				
NOV	9	LPB	ePKP	10 39 09				158.4
NOV	9	LPB	eL	11 34				
NOV	9	PNS	ePKP	10 39 15				
NOV	9	PNS	L	11 34				
NOV	10	USCGS PHILIPPINE IS REGION		11 29 51.3, 10.4N, 126.3E, H = 43 Km, M = 5.3				
NOV	9	LPB	ePKP	11 49 55				164.3
NOV	9	LPB	eL	12 47				
NOV	9	PNS	PKP	11 49 55.5		1.0	7	
NOV	9	LPB	eL	12 47.6				
NOV	10	PNS	iP	12 03 44.2	D	0.3	6	1.8
NOV	10	CHA	iS	04 06.4				
NOV	10	CHA	iP	12 03 46.1	D			
NOV	10	TRJ	eP	12 02 49.6				
NOV	10	PNS	iP	12 19 20.6	D	0.5	4	1.9
NOV	10	CHA	S	43.6				
NOV	10	CHA	P	12 19 22.4	C			
NOV	10	PNS	iP	13 09 38.9	D			2.0
NOV	10	LPB	S	10 03				
NOV	10	LPB	P	13 09 39.8		0.8	60	
NOV	10	CHA	iP	13 09 40.1	D			
NOV	10	PNS	P	13 30 13.9		0.5	2	1.7
NOV	10	PNS	S	35				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOV	10	CHA	iP	13 45 50.9	C			3.2	
			S	46 36.8					
		LPB	eP	13 45 55				2.8	
			eS	46 28					
		PNS	P	13 45 56.8		0.5	4	3.4	
			S	46 36.8					
		TRJ	eP	13 46 30.7					
NOV	10	PNS	P	15 42 40.1		0.6	5	3.1	
			S	43 16.5					
		CHA	P	15 42 44.5					
NOV	10	PNS	P	16 39 27.2		0.6	3		
NOV	10	PNS	iP	16 42 17.8	D	0.5	8	1.8	
			S	41.8					
NOV	10	TRJ	iP	17 37 14.1	C			2.7	
			S	46.1					
		CHA	P	17 38 02.2					
		LPB	P	17 38 04.6	D	1.0	50		
		PNS	iP	17 38 08.9	D			7.1	
			eS	39 29					
NOV	10	USCGS	18 29 57.3, 62.3N, 151.4W, H = 90 Km, M = 4.9						
		CENTRAL ALASKA							
		LPB	eP	18 43 24				101.4	
			eL	19 18					
		PNS	eSS	19 02 30					
NOV	10	USCGS	18 38 37.6, 6.0S, 71.4E, H = 32 Km, M = 5.4						
		CHAGOS ARCHIPELAGOS REG							
		CHA	ePKP	18 57 53.0					
		LPB	ePKP	18 57 56				134.1	
			eL	42					
		PNS	ePKP	18 57 56.4		1.0	7		
			SKS	19 03 48					
			eSS	18 20					
			eG	33.9					
			eL	42					
		TRJ	ePKP	18 57 58.8					
NOV	10	PNS	P	19 02 07.3				4.7	
			S	03 01.4					
		CHA	P	19 02 11.0					
		LPB	iP	19 02 13.5		1.3	186		



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOV	10	PNS	P	19 02 07.3				4.7	
			S	03 01.4					
		CHA	P	19 02 11.0					
		LPB	iP	19 02 13.5		1.3	186		
NOV	10	USCGS	19 53 46.6, 6.2S, 128.7E, H = 270 Km, M = 5.2						
		BANDA SEA							
		TRJ	ePKP	20 13 02.9					
		PNS	ePKP	20 13 07.0		1.2	7		
			iPKP2	14.2					
			eSS	36 28					
			eL	21 05.1					
		LPB	ePKP	20 13 08				151.6	
			eL	21 05					
NOV	10	LPB	eP	21 51 43					
		CHA	eP	21 51 43.2					
		PNS	P	21 51 44.2		0.5	1		
		TRJ	eP	21 52 36.0					
NOV	10	PNS	iP	21 55 50.6	D	0.6	3	1.9	
			S	56 13.9					
NOV	10	LPB	P	22 00 50		0.9	14		
NOV	11	LPB	eP	00 04 30		1.0	20		
			e(L)	46					
NOV	11	USCGS	00 21 37.6, 28.4N, 138.6E, H = 529 Km, M = 4.3						
		BONIN ISLANDS REG							
		LPB	ePKP	00 40 15				152.1	
			eL	01 32					
		PNS	ePKP	00 40 26					
NOV	11	USCGS	02 28 45.6, 2.0N, 31.5E, H = 33 Km, M = 5.1						
		UGANDA							
		LPB	eP	02 42 11				100.0	
			eL	03 17					
		PNS	eSS	03 01 05					
			eL	16.4					
NOV	11	PNS	P	04 20 18.2	D	0.5	7	1.9	
			S	40.8					
		CHA	iP	04 20 20.2	D				
		LPB	P	04 20 21	C	0.8	7		

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	11	TRJ	iP	04 54 49.6				3.0
		CHA	eP	04 55 24.2				
		LPH	eP	04 55 58.3				
		PNS	eP	04 56 01.4				
NOV	11	LPH	eP	06 13 32.1		0.9	10	
		CHA	eP	06 13 32.8				
		PNS	eP	06 13 35.1		0.9	10	
NOV	11	LPH	eP	06 24 43.5		0.9	8	155.2
		PNS	eP	06 24 44.6		0.9	4	
NOV	11	USCGS		06 39 35.1, 24.2S, 179.7W, H = 465 Km, M = 4.1				
				SOUTH OF FIJI ISLANDS				
		LPH	eP	06 52 40				102.1
		PNS	eP	06 52 40				
			eL	07 27.6				
NOV	11	LPH	eP	07 05 17				
		PNS	eP	07 05 19				
NOV	11	LPH	eP	07 33 25.2				
NOV	11	USCGS		07 42 22.0, 41.4S, 86.5W, H = 33 Km, M = 4.4				
				WEST CHILE RISE				
		LPH	eP	07 48 25.6		1.2	15	29.2
			eS	53 16				
			L	56.6				
		PNS	eP	07 48 25.9		1.4	17	
			eS	53 15				
			L	56.8				
NOV	11	CHA	P	08 03 45.0				
		PNS	P	08 03 48		0.5	4	134.1
		LPH	eP	08 03 48				
NOV	11	PNS	eP	09 25 51.4				
NOV	11	LPH	eP	09 51 40				
		PNS	eP	09 51 41.8				
NOV	11	USCGS		11 17 02.6, 44.0N, 114.5W, H = 10 Km, M = 4.1				
				WESTERN IDAHO				
		LPH	eP	11 28 34				73.6
			eL	11 52.4				
		PNS	eL	11 52.4				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	11	USCGS		11 41 45.4, 10.4N, 126.5E, H = 48 Km, M = 5.3				
				PHILIPPINE IS REG				
		LPH	ePKP	12 01 48				164.2
		PNS	ePKP	12 01 48.9				
NOV	11	USCGS		11 55 55.6, 6.0S, 71.4E, H = 37 Km, M = 5.6				
				CHAGOS ARCHIPIELAGO REG				
		LPH	ePKP	12 15 14				133.8
			ePKS	18 42				
			SSP	37 46				
NOV	11	PNS	ePKP	12 15 15.7				
			PKS	18 43.2				
			SSP	37 48				
			eL	59.6				
NOV	11	USCGS		12 14 57.3, 6.0S, 71.3E, H = 34 Km, M = 5.7				
				CHAGOS ARCHIPIELAGO REG				
		PNS	ePKP	12 34 03.4		1.2	20	
			ePKP	14				
			PKS	36 37.8				
			SS	37 41.6				
			SS	54 33				
			eL	13 18.5				
NOV	11	PNS	eP	13 20 59				
		CHA	eP	13 21 02.2				
NOV	11	TRJ	P	13 30 22.5				
		LPH	eP	13 30 33				
		CHA	P	13 30 34.4				
		PNS	P	13 30 36		0.5	5	
NOV	11	USCGS		15 05 10.3, 6.1S, 71.3E, H = 33 Km, M = 5.3				
				CHAGOS ARCHIPIELAGOS REG				
		LPH	ePKP	15 24 28				133.8
			eL	16 09				
		PNS	PKP	15 24 29.3		1.8	44	
			PKS	27 58.7				
			eL	16 08.8				
NOV	11	PNS	P	17 00 18.4		0.6	7	3.1
			S	54				
NOV	11	PNS	P	17 19 41.4		0.5	2	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	11	PNS	P S	17 45 11.9 24.6		0.6	31	1.0
NOV	11	USCGS		17 42 18.4				
								6.1S, 71.5E, H = 33 Km, M = 5.4
								CHAGOS ARCHIPELAGO REG
		PNS	PKP eSS eL	18 01 36.9 21 59 46		1.6	15	VON
		LPB	iPKP eL	18 01 37 46				133.9
NOV	11	PNS	P eS	18 09 44.1 10 23.7		0.4	1	3.4
NOV	11	USCGS		18 00 00.7				
								6.1S, 71.4E, H = 33 Km, M = 5.7
								CHAGOS ARCHIPELAGO REGION
		LPB	PKP ePKS eL	18 19 19.2 22 51 19 03		2.4	163	133.8
		PNS	PKP PKS SS eL	18 19 19.8 22 51.6 18 39 39 19 03.6		1.6	40	
NOV	11	USCGS		18 58 10.2				
								41.0S, 175.8E, H = 11 Km, M = 5.3
								NORTH ISLAND, NEW ZEALAND
		PNS	eP SKS eL	19 11 38 22 33 44.9				
		LPB	eL	19 49				97.7
NOV	11	USCGS		19 07 32.0				
								6.1S, 71.1E, H = 33 Km, M = 4.9
								CHAGOS ARCHIPELAGO REGION
		PNS	ePKP eL	19 26 50.4 20 10.1				
		LPB	ePKP eL	19 26 52 20 10				133.5
NOV	11	CHA	iP	20 08 29.6	C			
		PNS	iP	20 08 31.2	C	0.5	10	
		LPB	eP	20 08 38.2		0.8	13	
NOV	11	PNS	eP	20 22 25		0.6	2	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	11	USCGS		20 18 11.1				
								6.0S, 71.3E, H = 20 Km, M = 5.4
								CHAGOS ARCHIPELAGO REGION
		LPB	ePKP	20 37 30.5				133.8
		PNS	PKP	20 37 32.0	C	1.6	29	
NOV	11	LPB	iP iS	21 11 14.4 49.3	C	1.1	12	3.0
		CHA	iP	21 21 14.5	D			
		PNS	iP S	21 15.2 51.7	D	0.6	20	3.1
NOV	11	USCGS		22 18 01.0				
								6.2S, 148.5E, H = 155 Km,
								NEW BRITAIN REGION
		LPB	ePKP	22 37 16.5				137.3
		PNS	ePKP L	22 37 22.6 23 23.1				
NOV	12	USCGS		02 27 16.6				
								44.8N, 149.8E, H = 41 Km, M = 5.1
								KURILE ISLANDS
		PNS	PKP eL	02 16 39.0 03 32.6	C	1.2	13	
		LPB	PKP	02 46 38.6		1.1	15	137.4
NOV	12	LPB	P	04 34 40.0		0.9	8	
		CHA	iP	04 34 41.6	D			
		PNS	iP	04 34 43.8	D	0.5	7	
		TRJ	P	04 35 03.2				
NOV	12	LPB	eP	06 49 24.0		0.8	4	
NOV	12	USCGS		08 49 25.0				
								15.6S, 74.6W, H = 68 Km, M = 3.9
								NEAR COAST OF PERU
		LPB	eP S eL	08 51 01 52 10 52.7		1.0	20	6.2
		PNS	P S eL	08 50 53.6 52 10 52.7	C	0.5	2	
		CHA	iP	08 50 57.6	D			
NOV	12	PNS	P	10 11 31.4	D	1.0	15	
		LPB	P	10 11 32.0	C	0.9	15	
NOV	12	LPB	eP	10 18 07.2				
		PNS	eP	10 18 11.2		0.9	4	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	12	USCGS TONGA ISLANDS REGION		10 36 52.0, 17.2S, 172.0W, H = 34 Km, M = 6.1				
		PNS	P	10 50 27.0	D	1.2	17	
			eRP	11 01 09				
			eSKS	11 01 09				
			PS	03 30				
			SS	08 38				
			SSS	12 43				
			G	16.9				
			L	22.1				
		LPB	P	10 50 28.2		1.0	14	97.6
			ePP	54 32				
			SKS	11 01 21				
			PS	03 37				
			eSS	07 59				
			eG	16				
			L	22.5				
NOV	12	USCGS AFGHANISTAN USSR BOR REG		10 40 36.0, 36.3N, 71.4E, H = 98 Km, M = 5.1				
		LPB	ePKP	10 59 54				139.2
		PNS	ePKP	10 59 55.4				
			eL	11 46.5				
NOV	12	USCGS NICOBAR ISLANDS REGION		12 32 43.4, 6.1N, 95.2E, H = 105 Km, M = 4.7				
		LPB	ePKP	12 52 33				160.3
		PNS	PKP	12 52 34.3		1.1	10	
NOV	12	USCGS BANDA SEA		13 07 31.1, 6.0S, 130.6E, H = 114 Km, M = 4.9				
		LPB	ePKP	13 27 06				150.4
		PNS	ePKP	13 27 07		0.9	17	
			i	14.7				
			e	54.5				
		CHA	iP	13 27 13.8	C			
NOV	12	PNS	P	14 13 36.2		0.9	6	
		LPB	P	14 13 36.6		1.1	2	
NOV	12	PNS	iP	14 54 57.2	D	0.5	8	1.8
			S	55 19.6				
NOV	12	LPB	iP	15 12 44.5	D	0.9	51	
		PNS	P	15 12 45.5		1.0	11	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	12	PNS	eP	17 08 54				
NOV	12	USCGS LOYALTY IS REG		17 24 31.9, 22.8S, 170.7E, H = 26 Km, M = 5.1				
		LPB	ePKP	17 43 05				110.3
		PNS	eSS	17 59 10				
			eL	18 16.9				
NOV	12	LPB	eP	18 08 01.8		0.8	27	
		PNS	P	18 08 04.6	C	0.8	17	5.3
			S	09 06				
NOV	12	LPB	eP	18 18 47				
		PNS	P	18 18 50.9		0.6	2	4.8
			eS	19 46				
NOV	12	PNS	iP	18 44 13.9	D			2.4
			eS	43				
		LPB	iP	18 44 16.4	D			2.1
			iS	41.2				
NOV	12	USCGS TALAUD ISLANDS		18 55 07.6, 3.1N, 126.9E, H = 73 Km, M = 5.4				
		LPB	ePKP	19 14 45				150.6
		PNS	ePKP	19 14 45				
			eL	20 06.4				
NOV	12	PNS	P	19 38 55.5		0.5	5	2.4
			S	39 24.3				
NOV	12	PNS	P	20 54 40		0.5	2	
NOV	12	USCGS PHILIPPINE IS REG		21 19 45.2, 19.1N, 121.2E, H = 64 Km, M = 4.7				
		LPB	ePKP	21 39 53				170.7
			eL	22 40				
		PNS	ePKP	21 39 54.6				
NOV	12	USCGS BANDA SEA		23 13 54.6, 4.8S, 129.7E, H = 141 Km, M = 5.3				
		LPB	ePKP	23 33 32				152.0
		PNS	ePKP	23 33 33.2		1.4	11	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	12	LPB PNS	P iP	23 37 42.4 23 37 47.4		0.8 0.5	21 12	
NOV	13	PNS	eP	00 15 55				
NOV	13	LPB PNS	eP eP	05 55 14 05 55 16.2				
NOV	13	USCGS TURKEY		06 50 33.8, 37.9N, 29.1E, H = 46 Km, M = 4.6				
		LPB	eP eL	07 04 40 41				105.7
NOV	13	PNS	P S	08 00 35.1 58		0.7	2	1.9
		LPB	eP	08 00 35.5				
NOV	13	PNS LPB	iP eP	08 27 09.9 08 27 10.5		0.5	3	
NOV	13	PNS	iP iS	09 15 05.8 27.6	D			7.8
		LPB	iP S	09 15 07.8 32.5		0.7	217	2.1
NOV	13	PNS	P	09 20 12		0.6	3	
NOV	13	PNS LPB	eP eP	11 01 34.2 11 01 35				
NOV	12	PNS	P	11 20 01.3		0.6	8	
NOV	13	USCGS		11 17 13.6, 34.4N, 142.0E, H = 44 Km, M = 4.6				
				OFF EAST COAST HONSHU, JAPAN				
		PNS LPB	PKP PKP eL	11 36 52.9 11 36 57.4 12 28		1.5 1.0	33 42	147.6
NOV	13	USCGS		16 05 46.5, 10.4N, 85.7W, H = 18 Km, M = 4.6				
				COSTA RICA				
		PNS LPB	eP eP eL	16 12 13.6 16 12 14 22		1.0	3	31.5

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	13	USCGS		16 13 25.1, 1.1N, 126.3E, H = 21 Km,				
				MOLUCCA PASSAGE				
		LPB	ePKP eL	16 33 25 17 28				159.0
NOV	14	PNS	ePKP PKP2	16 33 27.8 34 03.7				
NOV	13	PNS	P	18 26 04.0		0.7	3	
NOV	13	PNS	P	19 38 35.9		0.6	2	
NOV	14	USCGS		00 04 17.8, 24.0N, 91.5E, H = 33 Km, M = 5.1				
				INDIAN E PAKISTAN BORDER REGION				
		LPB	PKP eL	00 24 17.2 01 20		1.2	15	159.7
		PNS	PKP PKP2	00 24 17.2 55.9		1.2	11	
NOV	14	LPB PNS	eP eP	03 06 32.8 03 06 41.7		1.0	6	
NOV	14	LPB	eP	03 38 30.6				
NOV	14	LPB PNS	eP eP	04 53 04.3 04 53 13.1				
NOV	14	USCGS		05 28 36.9, 5.4S, 147.1E, H = 201 Km, M = 5.8				
				EAST NEW GUINEA REGION				
		PNS	PKP iPKS eSS eL	05 47 31.9 51 10 06 08 41 33.7	C	0.6	14	
		LPB	P i eSS eL	05 47 32.8 43.2 06 08 42 06 33	C	1.0	26	138.4
NOV	14	LPB PNS	P P S	06 05 12.2 06 05 13 36.7		0.8 0.6	7 5	2.0
NOV	14	LPB PNS	P P eS	08 10 12.8 08 10 15.3 11 00.9		0.6	4	4.0

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	14	PNS	iP	09 24 51.4	D	0.3	6	1
			S	09 25 14				
NOV	14	LPB	eP	09 31 54.7		1.0	8	
		PNS	P	09 31 58.6		0.5	5	3
			S	09 32 34.2				
NOV	14	USCGS		10 18 41.2, 19.2S, 69.6W, H = 116 Km, M = 4.1				
				NORTHERN CHILE				
		LPB	P	10 19 28.5		0.8	25	2
			S	10 20 03.5				
		PNS	iP	10 19 03.0	C			
			S	10 20 06.2				
NOV	14	LPB	eP	13 08 30		0.7		
		PNS	eP	13 08 39.2				
NOV	14	USCGS		13 38 07.7, 51.9N, 178.1E, H = 123 Km, M = 4.				
				RAT IS ALEUTIAN ISLANDS				
		PNS	ePKP	13 56 40				
		LPB	ePKP	13 56 41.5			11	
			eL	14 34 05.8	D			
NOV	14	LPB	P	14 25 16.7	D	1.0	26	
		PNS	P	14 25 17.8				
NOV	14	LPB	eP	15 43 21.5				
		PNS	iP	15 43 29.2	D	0.4	3	2
			S	15 45 57				
NOV	14	USCGS		16 18 34.4, 25.7S, 70.6W, H = 26 Km, M = 4.5				
				NEAR COAST OF NORTHERN CHILE				
		LPB	eP	16 20 54				
			eL	16 23.6				
		PNS	P	16 20 54.5		0.5	4	
			PP	16 21 07.6				
			S	16 22 35				
			eSS	16 22 52.9				
NOV	14	PNS	eP	16 33 06.4		0.6	2	
NOV	14	PNS	eP	16 49 43		1.0	3	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	14	PNS	eP	18 55 17.4				4.8
			eS	18 56 11.7				
		LPB	eP	18 55 17.5				
		CHA	eP	18 55 24.2				
NOV	14	USCGS		19 44 45.6, 18.0S, 175.2W, H = 255 Km, M = 4.4				
				TONGA ISLANDS				
		PNS	eP	19 58 01.4				100.0
			eL	20 32.1				
NOV	14	LPB	eP	21 06 08.4				
		PNS	eP	21 06 08.6				
NOV	14	PNS	iP	21 08 49.2				2.0
			S	21 09 13.2				
		LPB	P	21 08 50		1.0	34	
		CHA	iP	21 08 50.3	D			
NOV	14	PNS	P	21 50 04.6	C	0.5	2	
NOV	14	CHA	P	22 02 06.8				
		LPB	P	22 02 07		0.8	19	3.2
			S	22 02 43.6				
		PNS	eP	22 02 10.4				3.4
			eS	22 02 50				
NOV	14	USCGS		23 44 25.0, 58.7S, 25.4W, H = 33 Km, M = 4.0				
				S SANDWICH ISLANDS REGION				
		LPB	eP	23 53 37				52.3
			eL	24 10				
		PNS	eP	23 53 39.7				
			eL	24 09.9				
NOV	14	PNS	eP	23 59 26				
NOV	14	LPB	eP	01 40 49.4		0.8	6	
		PNS	P	01 40 51.9	D	0.5	4	
NOV	14	LPB	eP	01 55 32.5				
		PNS	P	01 55 59.0		0.5	4	3.6
			eS	01 56 41				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	15	PNS	eP	02 37 56.9				
NOV	15	LPB	eP	04 40 26.8				
NOV	15	PNS	P	05 52 54.3	D	0.5	3	
			i	53 19				
NOV	15	LPB	eP	06 10 27.5				
		PNS	eP	06 10 28.8				
NOV	15	USCGS		07 04 15.7, 13.5S, 165.8E, H = 94 Km, M = 4.9				
				NEW HEBRIDES ISLANDS				
		LPB	ePKP	07 23 51				118.6
			eL	08 01				
		PNS	ePKP	07 23 53.3				
NOV	15	PNS	eP	07 52 53				
NOV	15	USCGS		07 36 36.4, 6.2N, 123.7E, H = 567 Km, M = 5.2				
				MINDANAO, PHILIPPINE ISLANDS				
		PNS	iPKP	07 55 37.2	D	1.6	107	
			i	56 39.3				
			eSS	08 20 46				
		LPB	P	07 55 39.3		1.4	54	164.2
			i	56 39.8				
			eSS	08 20 16				
			eL	54 35 17.8				
		CHA	ePKP	07 55 40.2				
NOV	15	LPB	eP	16 08 40.5		0.7	17	2.3
			S	09 07.5				
		PNS	iP	16 08 41.5	C	0.4	7	2.1
			S	09 06.6				
		CHA	P	16 08 58.6				
NOV	15	LPB	eP	16 11 32				
		PNS	eP	16 19 56.9				
NOV	15	PNS	P	16 32 17.5		0.6	4	3.0
			S	16 52 7.5				
		CHA	eP	16 32 23.0				
NOV	15	LPB	eP	17 29 34.0				
		PNS	eP	17 29 46.7		0.6	3	
NOV	15	LPB	eP	17 58 50				
		PNS	eP	17 58 52		1.0	13	5.6
			S	59 54				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	15	USCGS		18 37 31.0, 2.0S, 81.0W, H = 33 Km, M = 4.7				
				NEAR COAST OF ECUADOR				
		PNS	P	18 41 50.7			1.8	52
			iS	45 29				
			eL	46.9				
		CHA	eP	18 41 53.3				
		LPB	P	18 41 55			1.3	99
			eS	45 31				18.9
			eL	46.9				
NOV	15	USCGS		19 29 53.1, 15.9S, 73.6W, H = 81 Km, M = 4.4				
				SOUTHERN PERU				
		PNS	P	19 31 08.7	C		1.0	59
			S	32 10				
		LPB	P	19 31 12.7			1.0	340
		CCH	P	19 31 13.9	C			
NOV	15	LPB	eP	20 28 14				
		PNS	P	20 28 17.7	D		0.6	3
			iS	43				
NOV	15	LPB	eP	20 51 26				
		PNS	eP	20 51 27.4				
NOV	15	USCGS		21 31 51.5, 28.7S, 71.2W, H = 15 Km, M = 6.1				
				NEAR COAST OF CENTRAL CHILE				
		TRJ	P	21 34 08.1				121.3
		LPB	eP	21 34 52.2				12.6
			ipp	35 00.3				
			iS	37 25				
		PNS	P	21 34 53.6			0.7	3
			ipp	35 00.8				
			iS	37 11				
			iSS	30				
			L	38.6				
NOV	15	USCGS		22 02 35.0, 14.2N, 90.4W, H = 26 Km, M = 4.6				
				GUATEMALA				
		PNS	eP	22 09 50				37.9
NOV	15	LPB	eP	22 11 11				
		PNS	eP	22 11 11				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	15	LPB	eP	23 00 03			21	
		PNS	eP	23 00 04.2		0.9	6	
NOV	15	PNS	eP	23 32 05.2				2.3
			S	33.5				
		LPB	P	23 32 07		1.0	26	
		CHA	P	23 32 07.7				
NOV	15	TRJ	iP	23 32 51.0	D			
		LPB	iP	23 33 05.7		0.8	13	4.1
			S	33 54				
		CHA	iP	23 33 07.4	D			
		PNS	iP	23 33 10.5	C			4.8
			S	34 06				
NOV	16	PNS	SS	00 20 38				
			G	27 40				
			eL	34				
		LPB	eL	00 34.3				
NOV	16	USCGS		00 36 30.0, 28.8S, 71.1W, H = 14 Km, M = 4.5				
				NEAR COAST OF CENTRAL CHILE				
		TRJ	P	00 38 46.4				
			i	49.9				
		PNS	eP	00 39 31.6				
			S	41 42.6				
		LPB	P	00 39 36.6		0.8	9	12.6
		CHA	eP	00 39 37.3				
NOV	16	USCGS		01 33 56.0, 14.8S, 173.9W, H = 33 Km, M = 4.2				
				SANOA ISLANDS REGION				
		LPB	eP	01 47 38				99.9
			eL	02 21				
		PNS	eL	02 21.5				
NOV	16	USCGS		02 22 03.0, 15.1N, 39.8E, H = 33 Km, M = 5.1				
				ETHIOPIA				
		LPB	eP	02 35 41				102.0
			eL	03 10				
		PNS	eL	03 10.7				
NOV	16	PNS	P	04 23 03		0.5	3	
		LPB	eP	04 23 03.5				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	16	PNS	eP	04 49 02.6				
		LPB	eP	04 49 03				
NOV	16	LPB	eP	04 53 27.5				
		PNS	eP	04 53 36.8				2.8
			S	54 10.2				
NOV	16	PNS	eP	05 21 28.7				
		LPB	eP	05 21 44		0.9	8.5	
NOV	16	USCGS		05 21 46.0, 28.9S, 71.8W, H = 33 Km, M = 4.3				
				NEAR COAST CENTRAL CHILE				
		LPB	P	05 24 49.2		0.7	2	12.6
			eL	28.7				
		PNS	eP	05 24 51.6				
			eL	28.5				
NOV	16	LPB	eP	08 59 58.5				
		PNS	eP	08 59 59.5				4.2
			S	09 00 49				
NOV	16	LPB	eP	11 45 27				
		PNS	P	11 45 27.6		0.9	7	
NOV	16	USCGS		13 22 44.0, 10.8S, 164.4E, H = 33 Km, M = 4.8				
				SANTA CRUZ ISLANDS REG				
		LPB	ePKP	13 41 36				121.3
		PNS	ePKP	13 41 37.4				
			eL	14 20.4				
NOV	16	USCGS		15 02 14.0, 51.8N, 172.8W, H = 36 Km, M = 4.2				
				ANDREANOF ALEUTIAN ISLANDS				
		LPB	ePKP	15 20 26				112.0
			eL	56				
		PNS	eL	15 55.7				
NOV	16	LPB	P	16 29 01				
		PNS	iP	16 29 01.2	C	0.7	25	
		CHA	iP	16 29 05.6				
NOV	16	LPB	eP	16 40 10.5				
		PNS	P	16 40 15.5	D	0.5	4	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	16	CHA	iP	17 37 39.1	D			
			i	45.5				
		PNS	iP	17 37 39.4	D			
		LPB	iP	17 37 42.4	D	0.6	46	
NOV	16	LPB	eP	19 38 24				
		PNS	P	19 38 26.9		0.8	5	
NOV	16	PNS	iP	21 27 59.5	D	0.5	7	1.9
			S	28 22.5				
		CHA	eP	21 28 01.9				
NOV	16	LPB	eP	23 18 05.5				
		PNS	iP	23 18 05.5	D	0.4	8	2.6
			S	37				
		CHA	eP	23 18 06.1				
		TRJ	eP	23 18 40.9				
NOV	17	TRJ	P	01 21 36.1	D			
NOV	17	LPB	eP	01 38 08				
		PNS	eP	01 38 09				
NOV	17	USCGS		01 30 31.1, 18.8S, 168.7E, H = 102 Km, M = 4.8				
				NEW HEBRIDES IS				
		PNS	eSKS	01 55 24				
			eL	02 20.7				
		LPB	eL	02 20				105.3
NOV	17	TRJ	iP	02 02 50.1	C			
		LPB	P	02 03 30.5		0.7	7	
		CHA	eP	02 03 33.2				
		PNS	P	02 30 33.7		0.5	4	5.2
			eS	04 35.5				
NOV	17	USCGS		04 58 56.8, 28.5N, 43.8W, H = 33 Km, M = 6.0				
				NORTH ATLANTIC RIDGE				
		CHA	eP	05 07 52.4				
		PNS	P	05 07 52.5	C	0.9	33	
			PP	09 50				
			iS	15 13				
			eG	19.3				
			L	23.2				
		LPB	P	05 07 54		2.0	183	50.4
			ePP	09 52				
			S	15 16				
			L	23				
		TRJ	P	05 08 13.9				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	17	PNS	P	05 11 57.7		0.9	8	
		LPB	eP	05 11 59				
		TRJ	eP	05 12 18.4				
NOV	17	PNS	P	05 13 25.1	C	0.9	12	
		LPB	P	05 13 26.2	C	1.4	2	
NOV	17	PNS	eP	05 31 26.5		0.7	3	
NOV	17	PNS	eP	05 36 52				
		LPB	eP	05 36 55.5		0.9	15	
NOV	17	USCGS		05 22 44.9, 4.8S, 152.1E, H = 97 Km, M = 5.1				
				NEW BRITAIN REGION				
		LPB	ePKP	05 41 55				135.0
		PNS	PKP	05 41 56.1				
			eL	06 26.7				
NOV	17	USCGS		05 27 17.1, 17.6N, 144.8E, H = 21 Km, M = 4.7				
				MARIANA IS REG				
		PNS	ePKP	05 47 03.5				
		LPB	ePKP	05 47 04				148.5
NOV	17	LPB	eP	06 00 41.5				
			i	01 57.5				
NOV	17	PNS	P	07 09 49.9		0.9	6	
			i	55.9				
		LPB	P	07 09 54		1.0	12	
NOV	17	USCGS		07 49 03.1, 24.5S, 68.5W, H = 119 Km, M = 4.6				
				CHILE-ARGENTINA BOR REG				
		TRJ	iP	07 50 10.8	C			
		LPB	P	07 50 55.5				8.1
			S	52 25				
		PNS	iP	07 50 58.8	D			
		CHA	iP	07 50 58.1	D			
NOV	17	USCGS		09 19 21.0, 6.3S, 154.9E, H = 60 Km, M = 5.1				
				SOLOMON ISLANDS				
		TRJ	ePKP	09 38 21.4				
		PNS	ePKP	09 38 29.1		1.0	6	
			pPKP	47.0				
			iPKS	42 07				
			eSS	58 20				
			eL	10 21.6				
		LPB	ePKP	09 38 29.5		1.0	10	131.4
			pPKP	46.8				
			PKS	42 13.5				
			L	10 21				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	17	USCGS NEW HEBRIDES IS		10 10 04.7, 13.7S, 167.3E			H = 215 Km, M = 4.5	
		LPB	ePKP	10 28 23				117.3
			eL	11 05				
		PNS	ePKP	10 28 23				
NOV	17	LPB PNS	eP	11 33 50				
			eP	11 33 53.9		0.9	7	
NOV	17	LPB PNS	eP	12 08 07			1.0 16	
			P	12 08 08.2		0.9	8	
NOV	17	USCGS TAIWAN REGION		13 58 35.3, 24.0N, 122.3E			H = 36 Km, M = 5.1	
		LPB	ePKP	14 18 42				167.4
		PNS	PKP	14 18 42.1		0.9	6	
			eL	15 17.8				
NOV	17	USCGS TAIWAN REGION		14 48 02.1, 24.1N, 122.2E			H = 53 Km, M = 5.1	
		PNS	ePKP	15 08 06.2		1.0	5	
			eL	16 07.1				
		LPB	eL	16 07				167.4
NOV	17	USCGS NORTH ATLANTIC RIDGE		17 04 20.6, 28.4N, 43.7W			H = 33 Km, M = 4.7	
		PNS	P	17 13 17.9		0.9	9	
			eL	17 29.2				
		LPB	P	17 13 19		1.1	25	50.4
			eL	29				
NOV	17	USCGS CHILE BOLIVIA BORDER REG		18 31 14.1, 21.6S, 68.2W			H = 129 Km, M = 4.7	
		TRJ	iP	18 32 05.1			C	
		LPB	iP	18 32 29.8			D	4.9
			S	33 29.5				
		CHA	iP	18 32 32.4			D	
		PNS	iP	18 32 34.4			D	
			S	33 26				
NOV	17	PNS	eP	18 57 00				3.2
			eS	37.8				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	17	LPB	eP	20 19 49.4				11.3
			eS	22 55.5				
			eL	24				
		PNS	eP	20 19 57				11.5
			eS	22 05				
			eL	23.9				
NOV	17	USCGS NEAR COAST CHIAPAS, MEXICO		21 20 28.0, 15.7N, 93.5W			H = 33 Km, M = 3.8	
		LPB	eP	21 28 04				40.5
			eL	40.6				
		PNS	eP	21 28 04.9				
			eL	40.3				
NOV	17	PNS	eP	21 44 37				
NOV	17	PNS	eP	23 27 58				5.0
			eS	28 55				
NOV	18	USCGS MOLUCCA PASSAGE		01 05 47.2, 1.3N, 126.1E			H = 78 Km, M = 4.5	
		PNS	ePKP	01 25 40.0				1.3
			eL	02 13.4				
		LPB	ePKP	01 25 40.0				
			eL	02 13.4				
NOV	18	PNS	P	01 37 03.9				5.8
			S	38 10				
		LPB	P	01 37 05.7			0.7 11	
		CHA	eP	01 37 09.0				
NOV	18	PNS	iP	02 11 00.5			C 0.8 24	1.9
			S	23.7				
		CHA	P	02 11 03.2			D	
NOV	18	USCGS CRETE		02 31 35.4, 35.2N, 23.1E			H = 43 Km, M = 4.5	
		LPB	eP	02 45 20.2				100.3
			eL	03 02				
		PNS	eL	03 19.2				
NOV	18	PNS	eP	03 10 10.6				
			eL	03 25				
		LPB	eP	03 10 13.5				
			eL	25				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	18	USCGS TALAUD IS	05 05	59.8, 4.8N, 125.9E, H = 128 Km, M = 5.0				
		PNS	ePKP	05 25 45				
			eL	06 22.8				
		LPB	ePKP	05 25 49				162.0
NOV	18	USCGS WEST NEW GUINEA REG	05 29	35.0, 1.7S, 134.1E, H = 49 Km, M = 4.8				
		LPB	PKP	05 49 24				151.0
			e	28.7				
		PNS	ePKP	05 49 25				
			e	28.5				
			eL	06 41.3				
NOV	18	LPB	eP	06 27 44.5		0.6	4	
NOV	18	CHA	P	06 40 01.8				
		LPB	P	06 40 03.8		0.9	20	
		PNS	P	06 40 07.0		0.8	6	
NOV	18	LPB	eP	07 16 24				
NOV	18	PNS	P	09 05 16.8		0.8	6	
		LPB	P	09 05 21.8		1.1	10	
NOV	18	TRJ	P	10 27 50.8	D			2.3
			S	28 19.0				
NOV	18	USCGS EL SALVADOR	12 16	55.4, 13.4N, 89.1W, H = 78 Km, M = 5.1				
		PNS	iP	12 23 50.0	C	1.1	27	
			PcP	26 17				
			S	29 28				
			SS	32 09				
			G	34.2				
			L	35				
		LPB	P	12 23 53.5		1.0	20	36.4
			PcP	26 19				
			eS	29 33				
			eSS	32 11.5				
			eL	35				
		CHA	eP	12 23 58.5				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	18	USCGS EL SALVADOR	12 26	09.4, 13.3N, 89.3W, H = 70 Km, M = 4.7				
		PNS	eP	12 33 04.8		1.2	6	
		LPB	eP	12 33 08.0				36.4
NOV	18	TRJ	P	12 37 58.0				
		LPB	eP	12 38 11				
		PNS	P	12 38 29.3				
NOV	18	PNS	eP	12 42 07				3.2
			S	45.5				
NOV	18	LPB	eP	13 15 24				
		PNS	P	13 15 45.4		0.4	2	
NOV	18	USCGS WEST NEW GUINEA REG	14 50	58.7, 4.8S, 133.8E, H = 33 Km, M = 4.9				
		PNS	ePKP	15 10 49.2		1.0	4	
			eL	16 01.7				
		LPB	PKP	15 10 50.5		0.9	14	149.4
NOV	18	PNS	P	15 22 43.1	D	0.5	13	1.9
			S	23 06				
		LPB	P	15 22 49		1.0	78	
NOV	18	CHA	P	15 30 28.2	D			3.2
		PNS	iP	15 30 31.1	D	0.6	17	1.9
			iS	54.5				
NOV	18	PNS	P	16 11 34.1				1.8
			S	56.3				
NOV	18	PNS	P	16 14 18.5		0.5	3	1.7
			S	40				
NOV	18	PNS	P	16 36 56.9		0.5	4	
		LPB	eP	16 36 59				
NOV	18	PNS	eP	17 15 05				1.8
			S	27.5				
NOV	18	PNS LPB	eP	18 41 29.8				
			P	18 41 31.2				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	18	USCGS NEW HEBRIDES IS	19 39	27.0, 19.1S, 169.0E, H = 148 Km, M = 4.4				
		LPB	eSS	20 14 16				113.5
			eL	20 33				162.0
		PNS	eL	20 33.2				
NOV	18	CHA	P	20 01 39.9				0.5
			S	48.0				
		PNS	P	20 01 41.1	D	0.5	5	0.4
			S	48				
NOV	18	PNS	P	20 20 01.4		0.6	2	
NOV	18	USCGS HONSHU, JAPAN	20 42	37.3, 36.1N, 139.8E, H = 48 Km, M = 4.2				
		LPB	ePKP	21 02 17				149.4
		PNS	ePKP	21 02 18				
NOV	18	PNS	eP	21 38 08				4.2
		LPB	S	57				
NOV	18	USCGS SOUTH OF FIJI IS	21 41	58.3, 22.1S, 179.6W, H = 553 Km, M = 4.3				
		LPB	eP	21 54 51				102.4
		PNS	eP	21 54 51.9				
NOV	18	LPB	P	22 12 23.4		0.9	29	
		CHA	P	22 12 25.3				
		PNS	P	22 12 27.5		0.7	11	
NOV	18	LPB	P	23 44 47.5		0.9	20	3.2
			S	45 24.6				
		PNS	P	23 44 48.9	D	0.8	6	3.1
			S	45 25				
		TRJ	eP	23 44 04.8				
NOV	18	PNS	eP	23 47 06.6				1.8
			S	29				
NOV	19	LPB	P	01 41 00		0.9	86	9.1
			S	42 42.5				
		CHA	P	01 41 01.8				
		PNS	P	01 41 01.9		0.8	11	9.2
			S	45.0				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	19	PNS LPB	eP eP	02 08 17 02 08 20				
NOV	19	TRJ	P S	02 22 13.6 44.8				2.6
NOV	19	USCGS NEW BRITAIN REGION	02 11	51.0, 5.4S, 151.6E, H = 62 Km, M = 4.8				
		PNS	ePKP	02 31 10.4				
			eL	03 11.8				
		LPB	ePKP	02 31 15				135.0
NOV	19	LPB PNS	eP eP	02 58 55 02 58 55				102.4
NOV	19	PNS LPB TRJ	eP eP P	04 08 21.5 04 08 22 40 09 17.0				
NOV	19	LPB	eP	04 29 15.5				3.1
			S	51.2				
		CHA	eP	04 29 15.8				
		PNS	P	04 29 18.9				3.6
			S	30 00.7				
NOV	19	PNS	P S	05 19 00.3 38.5		0.6	4	3.2
		LPB	eP	05 19 07.2				
NOV	19	USCGS NEAR WEST COAST OF COLOMBIA SOUTH OF MARIANA IS	06 26	32.0, 6.9N, 77.9W, H = 58 Km, M = 4.2				
		PNS	eP	06 31 50.6				
			eL	39.2				
		LPB	eP	06 31 52				24.7
			eL	40				
NOV	19	USCGS ECUADOR	06 58	54.7, 1.1S, 78.3W, H = 6 Km, M = 4.2				
		PNS	eP	07 03 05.3		1.1	7	
			eS	06 40				
			L	08.4				
		LPB	P	07 03 12.7		1.3	30	20.0
			eS	06 46				
			SS	07 17				
			L	08.8				
		TRJ	P	07 04 11.8				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	19	PNS LPB	eP eP	17 59 05.8 17 59 06.5				
NOV	19	USCGS	19 41 36.9, 19.3S, 70.5W, H = 59 Km, M = 4.0 NEAR COAST OF NORTHERN CHILE					
		PNS	iP	19 42 31.5	C	0.6	24	
			S	43 12.2				
		LPB	P	19 42 31.8	C	0.5	195	3.6
			eS	43 10				
NOV	19	USCGS	19 49 20.0, 22.6S, 170.8E, H = 38 Km, M = 4.5 LOYALTY IS REGION					
		PNS	ePKP	18 07 50.6				110.1
NOV	19	PNS	P	20 00 13.4		0.6	3	1.8
			S	30 35.5				
NOV	19	LPB	eP	21 10 19		0.6	3	5.1
		PNS	P	21 10 20.5				
			eS	11 20				
NOV	19	TRJ	iP	23 58 31.2	C			3.4
			S	59 11.2				
		LPB	eP	23 59 06				
		PNS	P	23 59 09.4	C	0.6	7	
NOV	20	PNS	P	00 17 17.3		0.6	15	1.9
			S	40.6				
		LPB	iP	00 17 23		0.8	52	
NOV	20	USCGS	02 11 25.3, 15.3S, 174.3W, H = 33 Km, M = 4.8 TONGA ISLANDS					
		LPB	eP	02 25 08				100.2
			eL	58				
		PNS	eL	02 58.1				
NOV	20	PNS	iP	02 36 54.1	C	0.5	14	2.4
			iS	37 22.7				
		LPB	P	02 36 57.7				
NOV	20	TRJ	P	03 50 20.4	D			
NOV	20	LPB	eP	05 29 21		1.2	9	
		PNS	P	05 29 25.1		1.0	13	
		TRJ	eP	05 28 39.2				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	20	TRJ	iP	05 51 23.5	D			2.7
			S	55.2				
NOV	20	LPB	eP	07 15 07.5				5.4
		PNS	eP	07 15 13				
			S	16 15.5				
NOV	20	LPB	P	07 42 06		1.0	8	8.2
		PNS	P	07 42 14.4		0.7	7	
			S	43 47.7				
NOV	20	LPB	eP	08 17 32.5				
NOV	20	PNS	eP	08 24 56.5		0.6	9	1.9
			iS	25 19.4				
		LPB	P	08 25 02.4	D	0.8	21	2.3
			(S)	30				
NOV	20	PNS	P	09 17 19.7		0.5	15	1.9
			S	43				
		LPB	iP	09 17 25.7	D	0.7	32	2.1
			eS	51.2				
NOV	20	PNS	P	09 46 21.8	D	0.6	10	1.9
			S	45				
		LPB	P	09 46 27.7	D	0.7	21	
NOV	20	LPB	P	09 50 11.5		0.9	10	
		PNS	P	09 50 16.6				1.0
			S	29.8				
NOV	20	PNS	P	09 53 21.2				2.0
			eS	45				
		LPB	P	09 53 27.5	D	0.9	46	
NOV	20	PNS	iP	09 58 39.3	C	0.5	4	2.0
			iS	59 03.5				
NOV	20	USCGS	10 15 43.0, 51.2N, 151.3E, H = 426 Km, M = 4.7 SEA OF OKHOTSK					
		LPB	ePKP	10 34 21				133.6
		PNS	ePKP	10 34 22.8				
			eL	11 18.6				
NOV	20	PNS	iP	10 50 11.9	D	0.4	10	
NOV	20	PNS	eP	10 52 30.1				3.1
			eS	53 06				
		LPB	P	10 52 39.5		1.0	12	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	20	PNS	P	11 05 59.1				
NOV	20	USCGS SOUTH OF HONSHU, JAPAN		10 48 31.8, 32.0N, 140.9E, H = 65 Km, M = 5.0				
		PNS	PKP	11 08 12.7		1.0	18	
			eSS	31 01 59				
		LPB	ePKP	11 08 15 18.4		1.0	8	149.4
			i					
			eL	59				
NOV	20	PNS	eP	13 25 17.4		0.6	12	1.9
			iS	40.0				
		LPB	P	13 25 22.5		0.6	21	1.7
			eS	44				
NOV	20	LPB	eP	13 54 06.5				
		PNS	P	13 54 07.3		0.5	2	
NOV	20	USCGS SOUTH OF MARIANA IS		13 35 28.7, 12.9N, 143.4E, H = 145 Km, M = 4.7				
		LPB	ePKP	13 54 49.5				149.0
			PKP2	55 05.5				
		PNS	ePKP	13 55 00				
			eL	14 45.9				
NOV	20	LPB	eP	15 01 40				4.3
		PNS	eP	15 01 55				
			S	02 45				
NOV	20	LPB	P	16 29 48		0.9	17	
		PNS	P	16 29 49.2		0.6	4	
NOV	20	PNS	eP	16 32 29		0.5	2	
NOV	20	LPB	eP	17 03 23.3				3.1
		PNS	P	17 04 27.8		1.0	12	
			eS	05 08				
NOV	20	PNS	eP	18 59 58.8		0.7	2	
			e	19 00 50.6				
		LPB	eP	18 59 59				
NOV	20	PNS	P	19 31 01.7		0.6	2	
			SS	49 00				
			eL	20 04.1				
		LPB	eP	19 31 02				
			eSS	47 16				
			eL	20 05				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	20	PNS	eP	19 59 52.9		0.9	4	
NOV	20	PNS	P	20 10 37.5		0.5	3	2.2
			S	11 03.2				
NOV	20	PNS	P	20 31 38.1		0.7	6	
		LPB	eP	20 31 39				
NOV	20	PNS	P	20 32 47.7		0.5	5	1.9
		LPB	S	33 10.7				
		LPB	eP	20 32 53		0.9	17	2.3
			eS	33 21.5				
NOV	20	PNS	P	20 46 08.4		0.6	3	1.8
			S	30				
NOV	20	LPB	eP	22 10 44				
		PNS	P	22 10 48.2		0.6	3	
NOV	20	PNS	L	00 35.6				
		LPB	eL	00 36				
NOV	21	PNS	eP	01 17 38.4				2.1
		LPB	eS	18 03.5				
NOV	21	PNS	P	01 44 39.9		0.6	5	1.8
			S	45 02				
NOV	21	LPB	P	01 44 40.5		0.8	4	
			e	44.2				
		CHA	P	01 44 45.7				
NOV	21	PNS	P	01 45 23.4				2.7
		LPB	S	45 55				
		CHA	P	01 45 29.6				
NOV	21	PNS	P	02 25 30.5				1.8
			eS	02 58				
NOV	21	PNS	P	03 18 29.0		0.6	12	1.9
			iS	52.5				
		LPB	P	03 18 35		0.9	44	2.3
			eS	18 02.2				
		CHA	P	03 18 35.2				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	21	USCGS NORWEGIAN SEA	19 43	48.0, 71.4N, 6.8E	H = 33 Km, M = 4.3			
		PNS	eP	19 57 11				96.0
NOV	21	USCGS SANTA CRUZ ISLANDS	19 59	32.4, 12.6S, 166.3E	H = 48 Km, M = 4.5			
		LPB	ePKP	20 18 21.5				118.8
			eL	56				
		PNS	ePKP	20 18 22				
			L	20 56.1				
NOV	21	USCGS NORTH ATLANTIC RIDGE	21 50	24.3, 48.2N, 27.8W	H = 33 Km, M = 5.0			
		PNS	eP	22 01 57		1.8	35	
			eL	25.7				
		LPB	eP	22 01 58				73.7
			eL	26				
NOV	21	USCGS JUJUY PROVINCE ARGENTINA	22 49	53.0, 23.1S, 66.7W	H = 233 Km, M = 4.3			
		LPB	P	22 51 30.2	D	0.6	43	6.6
			S	52 44				
		PNS	iP	22 51 34.2	D	0.5	14	
			S	52 50				
NOV	22	PNS	eP	00 14 05				1.9
			S	28.5				
NOV	22	LPB	eP	01 24 31.5				
NOV	22	CCH PNS	P	01 27 11.0		0.6	3	5.4
			S	28 15				
		LPB	eP	01 27 14.5		0.9	8	
NOV	22	LPB PNS	eP	01 32 42.5				
			P	01 32 52.5				
NOV	22	CCH PNS	eP	01 39 50.4		0.7	20	2.5
			iP	01 40 07.0	C			
			S	37.0				
		LPB	eP	01 40 11.2		1.0	8	1.7



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	22	LPB	e(P)	01 55 34.6				
			eL	02 35				
		PNS	eL	02 34.6				
NOV	22	USCGS CENTRAL ALASKA	02 44	26.3, 63.6N, 147.2W	H = 2 Km, M = 4.3			
		LPB	eL	03 32				99.9
		PNS	eL	03 32.2				
NOV	22	PNS	iP	03 54 25.2	C		0.6	10
			iS	55 04.5				
		LPB	eP	03 54 30				3.9
			S	55 15				
		CCH	eP	03 54 52.7				
NOV	22	USCGS EASTERN KAZAKH SSR	04 03	57.1, 49.9N, 77.3E	H = 4.8			
		LPB	eL	05 08				135.4
		PNS	eL	05 08.6				
NOV	22	LPB	eP	04 40 38.2				
NOV	22	USCGS ANDREANOF OF ALEUTIAN IS	04 37	30.2, 53.1N, 172.4W	H = 130 Km, M = 4.9			
		LPB	eL	05 30.5				111.6
		PNS	eL	05 30.7				
NOV	22	LPB	eP	06 04 59.2				
NOV	22	LPB	eP	06 33 23			1.0	16
			eL	42				
		PNS	eL	43				
NOV	22	LPB PNS	eP	07 50 08				135.4
			eP	07 50 13.2				
NOV	22	PNS	eP	09 23 13.4				1.9
			S	36.4				
NOV	22	LPB	eP	09 33 43			0.3	6
NOV	22	PNS	eP	09 45 23				2.1
			eS	51 52.7				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	22	PNS	P	09 49 08.0		0.5	5	2.1
NOV	22	LPB	eP	09 49 12.6		0.7	6	
NOV	22	USCGS		09 31 37.1, 14.8N, 146.8E, H = 57 Km, M = 4.5				
NOV	22	MARIANA IS						
NOV	22	CCH	ePKP	09 51 08.1				
NOV	22	LPB	ePKP	09 51 15		1.2	19	146.0
NOV	22	LPB	eL	10 08				110.0
NOV	22	PNS	ePKP	09 51 15.4		1.2	21	
NOV	22	LPB	eL	10 40.9				
NOV	22	USCGS		10 33 14.7, 59.6S, 26.4W, H = 33 Km, M = 5.2				
NOV	22	S SANDWICH IS-REGION						
NOV	22	LPB	iP	10 42 28.1	C	1.1	35	52.9
NOV	22	LPB	i(pP)	43.3				
NOV	22	LPB	eL	58.5				
NOV	22	PNS	iP	10 42 31.0	C	1.2	25	
NOV	22	LPB	i(pP)	46.6				
NOV	22	LPB	eL	50.8				
NOV	22	PNS	eP	12 58 08.6				2.9
NOV	22	USCGS	S	12 58 43				
NOV	22	LPB	P	14 43 37.4		0.9	7	
NOV	22	LPB	L	15 01.2				
NOV	22	LPB	eP	14 43 40.5			14	
NOV	22	LPB	eL	15 01				
NOV	22	LPB	P	14 53 18.3				1.9
NOV	22	PNS	P	14 53 18.6		1.0	11	
NOV	22	USCGS		14 43 11.1, 9.9S, 120.5E, H = 18 Km, M = 5.1				
NOV	22	SUMBA IS REG						
NOV	22	CCH	iP	15 02 58.3	D			
NOV	22	PNS	iP	15 03 03.3				
NOV	22	PNS	i	10.9			3	
NOV	22	LPB	eSS	26 10				
NOV	22	LPB	iP	15 03 11		0.9	31	152.1
NOV	22	LPB	eL	55				
NOV	22	USCGS		15 19 26.0, 22.7S, 170.9E, H = 42 Km, M = 5.2				
NOV	22	LOYALTY IS REG						
NOV	22	PNS	ePKP	15 37 58				
NOV	22	CCH	SS	54 50				
NOV	22	PNS	eG	16 04.9				
NOV	22	LPB	L	13.1				
NOV	22	LPB	ePKP	15 38 36		1.0	8	110.2
NOV	22	LPB	eSS	54 30				
NOV	22	LPB	eL	16 13				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	22	LPB	eP	15 52 48				
NOV	22	PNS	eP	15 52 52				
NOV	22	PNS	iP	16 52 57.5	D	0.4	3	2.1
NOV	22	LPB	S	53 22.6				
NOV	22	LPB	eP	16 52 59				
NOV	22	LPB	eP	18 00 31				4.2
NOV	22	LPB	S	01 20				
NOV	22	PNS	P	18 00 53.5		0.7	10	3.3
NOV	22	PNS	S	01 33				
NOV	22	LPB	P	10 11 00.2		0.9	20	
NOV	22	PNS	P	18 11 01.4	C	1.0	16	17.0
NOV	22	PNS	S	14 02				
NOV	22	PNS	eP	18 31 16.2		0.7	3	3.3
NOV	22	LPB	eS	55				
NOV	22	PNS	eP	19 13 44				7.7
NOV	22	PNS	eS	15 11				
NOV	22	LPB	eP	19 14 55				
NOV	22	PNS	eP	19 52 50.2				1.8
NOV	22	PNS	S	53 12				
NOV	22	PNS	eP	20 07 17				3.0
NOV	22	PNS	S	52				
NOV	22	USCGS		20 42 41.0, 3.2S, 153.2E, H = 56 Km, M = 4.6				
NOV	22	NEW IRELAND REG						
NOV	22	LPB	ePKP	21 02 07.2				135.4
NOV	22	LPB	eL	47				
NOV	22	PNS	P	21 47 43.2	C	0.8	4	1.8
NOV	22	PNS	S	48 05.5				
NOV	22	LPB	eP	22 03 35				9.2
NOV	22	PNS	P	22 03 36.4				
NOV	22	PNS	S	05 20				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	22	USCGS BANDA SEA		22 04 00.0	6.0S	130.3E	H = 107 Km, M = 5.5	
		CCH	PKP	22 23 34.8				
		PNS	PKP	22 23 38.9		1.4	16	
			i	45.2				
			PKP2	53.0				
			PKP	24 02.7				
			eL	23 15.5				
		LPB	ePKP	22 23 39			151.0	
			i	45.6				
			PKP2	53				
			eL	23 16				
NOV	23	LPB	eP	01 47 28.5		1.0	10	
NOV	23	CCH	eP	01 49 13.0				
		LPB	eP	01 49 25.5		0.7	5	
		PNS	eP	01 49 32.4				
NOV	23	LPB	eP	05 47 38.5				
NOV	23	PNS	P	06 03 03.0		0.7	12	1.8
			S	25				
		LPB	P	06 03 04.2		0.6	4	1.9
			S	27				
NOV	23	USCGS SOUTH DAKATA		06 23 38.6	43.7N	99.4W	H = 16 Km, M = 4.4	
		LPB	eL	06 51			57.4	
		PNS	eL	06 51.5				
NOV	23	USCGS CHILE ARGENTINA BORDER REG		06 56 48.2	24.1S	67.2W	H = 181 Km, M = 3.9	
		CCH	P	06 58 15.3		C		
		LPB	P	06 58 38.2		C	0.7	43
		PNS	iP	06 58 41.8		C	0.7	35
			S	07 00 08.0				
NOV	23	LPB	eP	07 18 46.7				
		PNS	eP	07 18 47.2				
NOV	23	LPB	eP	08 12 29.2		0.7	4	
NOV	23	PNS	iP	08 41 28.0		D	0.7	21
			S	42 01.7				
		LPB	P	08 41 32.7		0.9	14	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	23	USCGS EASTERN GULF OF ADEN		08 35 49.5	14.5N	52.1E	H = 3 Km, M = 6.6	
		PNS	ePKP	08 54 50.2			0.9	12
			PP	56 37				
			SKS	09 01 53				
			PS	06 33				
			SS	13 18				
			G	26.5				
			L	34.4				
		LPB	ePKP	08 54 52				122.6
			PP	56 20.7				
			SKS	09 02 00				
			ePS	06 26				
			PPS	07 53				
			SS	13 26				
			G	26.5				
			L	34.4				
NOV	23	PNS	eP	09 04 53.5			1.3	10
		LPB	eP	09 04 55				
NOV	23	LPB	eP	09 32 12.5				
		PNS	eP	09 33 13				
NOV	23	LPB	eP	09 36 24.5			0.8	6
		PNS	P	09 36 27.1		C	0.8	9
NOV	23	PNS	eP	12 57 49.9			0.6	4
			eS	58 24.2				
		LPB	eP	12 57 50				2.9
NOV	23	USCGS NORTH SVALBARD		13 42 01.6	80.2N	1.0W	H = 10 Km, M = 6.5	
		LPB	ePKP	13 55 42			1.0	10
			L	29.7				102.6
		PNS	ePP	13 55 57.9				
			PP	14 00 16.0				
			SKS	06 40				
			ePS	09 10				
			SS	14 47				
			G	24.5				
			eL	30.8				
NOV	23	LPB	eP	14 12 24				
		PNS	eP	14 12 26.4			1.2	10



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	23	LPB PNS	eP iP S	15 05 20 15 05 24.0 49	D	0.5	175	2.1
NOV	23	PNS	P S	18 19 14.1 36.8	D	0.6	5	1.9
NOV	23	PNS	P eS	19 02 00.2 39.6	D	0.7	3	3.3
NOV	23	PNS	P iS	19 35 42.3 36 21.8	D	0.6	4	3.3
NOV	23	USCGS PERU		22 42 55.0, 10.0S, 75.6W, H = 122 Km, M = 4.2				
		PNS	eP eS	22 45 08.5 47 08				
		CHA LPB	eP eP	22 45 11.8 22 45 13.2				9.4
		CCH	eP	22 45 15.8				
NOV	24	PNS	P	00 26 39.4		0.8	6	
NOV	24	LPB	eP	01 09 10				
NOV	24	PNS	P eS	02 42 42.6 43 28				3.9
NOV	24	PNS	P S	03 43 03.2 28.6		0.6	4	2.1
NOV	24	USCGS NEAR E COAST HONSHU, JAPAN		03 26 29.6, 35.8N, 141.6E, H = 50 Km, M = 4.3				
		PNS	ePKP eL	03 46 07.4 04 36.3				147.5
		LPB	ePKP eL	03 46 07.5 04 36				
NOV	24	CCH LPB PNS	P P P	04 31 22.5 04 31 39.3 04 31 40.6		1.0 0.8	26 7	
	24	LPB	eP	04 39 10.5		0.8	5	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	24	PNS LPB	P P	05 03 00.5 05 03 00.7				6 14
NOV	24	USCGS FIJI ISLANDS REGION		05 42 14.0, 16.4N, 177.2W, H = 420 Km, M = 5.4				
		CCH LPB	eP eP PP	05 55 17.9 05 55 32.2 54.5				103.0
	01	PNS	eP PP	05 55 32.6 59 51.8				
NOV	25		SKS eSS	06 06 00 14 30				
			eL eP	30.5 05 55 17.9				
NOV	24	PNS	eP eS	07 10 02.3 11 06.7				5.6
NOV	25	LPB	P	07 10 15				
NOV	24	CCH LPB	eP eP i eP i	09 05 44.9 09 05 53.2 06 07.5 09 06 02.6 07 08.0				3
NOV	24	PNS LPB	eP eP	10 08 25 10 11 27			1.0	8
NOV	24	PNS	P	10 32 01.6			0.8	5
NOV	24	USCGS SAMAR, PHILIPPINE IS		11 07 27.0, 11.6N, 125.7E, H = 101 Km, M = 4.5				
		PNS	eP eL	11 34 21.6 12 32.5				165.5
		LPB	ePKP eL	11 34 23 12 32				
NOV	24	LPB PNS	eP eP	12 49 30 12 49 38.6				
NOV	24	PNS	eP	14 02 56.8				
NOV	25	CCH PNS	LP LP	12 14 09.3 14 27.1			0.8	17

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOV	24	USCGS	13 57 09.4, 40.4N, 125.1W, H = 17 Km, M = 4.6 OFF COAST NORTHERN CALIFORNIA						
		PNS	eL	14 34.4					
		LPB	eL	14 34.5				77.4	
NOV	24	LPB	n	14 17 05.5		0.8	21		
		CCH	n	14 16 06.9					
			i	12.6					
		PNS	n	14 17 13.0	D	0.9	10	2.9	
			eS	14 17 47					
NOV	24	PNS	eP	14 36 00				1.8	
			S	14 36 22.4					
NOV	24	USCGS	23 42 55.0, 10.0S, 75.6W, H = 122 Km, M = 4.2						
		PNS	eP	17 19 50		0.8	7		
		LPB	P	17 19 57		1.1	22		
NOV	24	USCGS	17 58 02.0, 17.2S, 71.6W, H = 69 Km, M = 4.0 NEAR COAST OF PERU						
		CCH	n	17 58 20.1					
		PNS	iP	17 58 56.6	C	0.8	80		
			eS	17 59 36					
		LPB	iP	17 59 01.0	C	1.0	168	3.2	
			Pg	08.5					
			eS	17 59 42					
NOV	24	USCGS	18 46 53.0, 5.9N, 126.5E, H = 111 Km, M = 5.1 MINDANAO, PHILIPPINE IS						
		LPB	ePKP	19 06 47				162.0	
			eL	20 04					
		PNS	ePKP	19 06 47.4					
			i	07 35.3					
			eS	20 03.8					
			eL	20 03.8					
NOV	24	LPB	eP	22 42 27				147.5	
			eL	23 17					
		PNS	n	22 42 29.3		0.6	3		
			eL	23 16.8					
		CCH	eP	22 42 32.2					
NOV	25	LPB	eP	01 00 31		0.8	9		
		PNS	eP	01 00 32					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOV	25	PNS	eP	02 11 54		1.0	7		
			eL	24.6					
		LPB	eL	24.5					
NOV	25	USCGS	04 13 45.0, 14.1N, 90.5W, H = 96 Km, M = 4.3 GUATEMALA						
		LPB	eP	04 20 47				37.8	
		PNS	eP	04 20 48					
NOV	25	CCH	eP	04 54 43.3					
		PNS	eP	04 54 44					
		LPB	eP	04 54 49					
NOV	25	USCGS	21 31 55.0, 55.7S, 23.1W, H = 33 Km, M = 5.4						
		LPB	P	07 35 24.2		0.7	6		
NOV	25	LPB	eP	07 39 29					
		PNS	eP	07 39 32.4		1.0	5		
NOV	25	USCGS	10 32 33.1, 24.8S, 179.4E, H = 567 Km, M = 4.7 SOUTH OF FIJI IS						
		PNS	eSKS	10 56 15					
			eL	11 20.7					
		LPB	eL	11 20.5				103.2	
NOV	25	PNS	P	10 49 32.1		0.7	6	2.0	
			S	56					
NOV	25	USCGS	11 07 37.0, 3.0N, 31.2W, H = 33 Km, M = 4.5 CENTRAL-MID ATLANTIC RIDGE						
		LPB	eP	11 15 22.5		1.1	20	40.5	
			eL	28					
		PNS	P	11 15 23.5		1.2	16		
			eSS	24 30					
			eL	28.1					
NOV	25	PNS	eP	11 36 58				4.0	
			eS	37 45					
NOV	25	LPB	eP	12 13 32		0.9	12		
		PNS	P	12 13 32.7		0.8	5		
NOV	25	CCH	iP	12 14 09.2	C				
		PNS	iP	12 14 27.1	C	0.8	17		

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	25	USCGS	12 58	48.1, 22.6S, 170.7E, H = 64 Km, M = 4.8				
			LOYALTY ISLANDS REGION					
		LPB	eL	13 53				114.3
		PNS	eL	13 53.1				
NOV	25	USCGS	13 54	25.0, 14.5N, 92.1W, H = 108 Km, M = 4.2				
			NEAR COAST CHIAPAS, MEXICO					
		LPB	eP	14 01 40.5				39.1
		PNS	eP	14 01 41				
NOV	25	PNS	iP	15 29 01.8	C	0.6	11	2.7
			S	32.2				
		LPB	eP	15 29 04				114.5
NOV	25	PNS	P	16 41 31.9		0.6	2	5.0
			eS	42 30				
NOV	25	PNS	P	16 50 58.0		0.8	4	2.1
			S	51 22.6				
NOV	25	LPB	iP	16 53 11				
		PNS	P	16 53 12.2		0.4	2	
NOV	25	LPB	iP	17 45 43				4.0
			eS	46 29				
		PNS	P	17 45 43.0		0.8	4	4.2
			S	46 32				
NOV	25	LPB	eP	18 29 16.5				
		PNS	eP	18 29 22.8				
NOV	25	PNS	P	18 56 29.5	D	0.8	9	2.0
			S	53.2				
NOV	25	PNS	eP	19 24 12				5.1
			S	25 11				
		CCH	eP	19 24 16.2				
		LPB	eP	19 24 18.5		0.8	9	
NOV	25	LPB	eP	19 35 58				
		PNS	eP	19 36 07				5.1
			eS	37 05.6				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	25	CCH	eP	20 20 19.5				
		PNS	P	20 20 21.8		0.6	5	4.2
			eS	21 11				
		LPB	eP	20 20 27.5		0.6	7	
			i	33.5				
NOV	25	LPB	eP	21 29 29				
		PNS	P	21 29 37.5		0.8	8	4.7
			S	30 32				
NOV	25	LPB	eP	21 31 41.5		1.0	10	
		PNS	eP	21 31 42		1.0	3	
NOV	25	USCGS	21 51	58.0, 55.3S, 29.1W, H = 33 Km, M = 5.4				
			S SANDWICH ISLANDS REGION					
		LPB	iP	22 00 43.2	C	1.2	77	48.6
			ePcP	01 56				
			S	07 48				
			eL	15.3				
		CCH	P	22 00 27.3				
		PNS	iP	22 00 46.2	C	0.8	44	
			PP	02 41.7				
			S	07 50				
			eL	15.4				
NOV	25	CCH	e(P)	22 15 11.9				
		LPB	eP	22 15 44		1.0	7	7.1
		PNS	P	22 15 46.0				
			S	17 06				
NOV	25	LPB	eP	23 40 50		0.8	3	
		PNS	eP	23 40 51.4				
NOV	26	CCH	eP	00 18 23.9		1.0	38	6.5
		LPB	iP	00 18 41.4				
			S	19 55.5				
		PNS	iP	00 18 45.4	D	0.4	10	6.6
			S	20 00				
NOV	26	USCGS	00 08	09.8, 28.6N, 130.0E, H = 33 Km, M = 5.7				
			RYUKYU IS					
		CCH	ePKP	00 28 10.2				
		PNS	PKP	00 28 08.8		1.4	26	
			PKP2	45.0				
			eSS	52 35				
			eL	01 23.6				
		LPB	DKP	00 28 10.6		2.0	30	159.3
			ePKS	31 34				
			ePP	32 30				
			eSS	52 32				
			eL	01 24				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	26	USCGS RYUKU IS	00 17	47.0, 28.6N, 130.1E, H = 33 Km, M = 4.6				159.3
		LPB	ePKP	00 37 47				
NOV	26	LPB	eP	02 35 47				
NOV	26	USCGS JAVA	02 53	57.4, 8.1S, 112.9E, H = 80 Km, M = 5.7				39.1
		CCH	PKP	03 13 44.3				
		PNS	PKP	03 13 45.8		1.7	30	
			iPKP2	14 12.7				
			PP	17 16.2				
			eSS	37 36				
			eL	04 07.8				155.5
		LPB	PKP	03 13 46				
			pPKP	14 10.3				
			PP	17 46.5				
			eL	04 08				
NOV	26	LPB	eP	03 26 47.5				
NOV	26	USCGS GREECE ALBANIA BORDER REG	03 24	56.7, 39.4N, 20.4E, H = 44 Km, M = 4.6				
		PNS	eP	03 38 34				99.3
		LPB	eP	03 38 37				
NOV	26	USCGS S SANDWICH IS REG	03 49	36.8, 55.2S, 29.2W, H = 33 Km, M = 5.3				
		CCH	P	03 58 06.9				
		LPB	P	03 58 21.2		1.1	28	48.6
			eL	04 14				
		PNS	P	03 58 24.8		1.2	32	
NOV	26	PNS	iP	05 06 15.4		0.5	5	2.1
			iS	06 40.2				
NOV	26	CCH	P	05 28 44.3				
		LPB	iP	05 28 44.4		0.9	24	
		PNS	P	05 28 44.9		1.0	19	
NOV	26	CCH	eP	05 48 15.0				5.1
		LPB	P	05 48 27.2				5.0
		PNS	eP	05 48 30				
			eS	49 26.8				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	26	USCGS	07 35	54, 12.3S, 77.2W, H = 32 Km, M = 4.5				
								OFF COAST OF PERU
		PNS	eP	07 38 07.6				
			eS	39 43.4				
		LPB	eP	07 38 10				9.0
		CCH	eP	07 38 41.5				
NOV	26	LPB	eP	07 59 56				
		PNS	eP	07 59 57				
NOV	26	USCGS KODIAK IS REG	08 11	06.3, 56.6N, 152.2W, H = 28 Km, M = 4.9				
		PNS	eP	08 24 51.1		1.0	3	
			eL	59				100.3
		LPB	eL	08 59				
NOV	26	USCGS HALMAHERA	10 53	21.9, 1.9S, 127.8E, H = 8 Km, M = 5.5				
		LPB	ePKP	11 13 17.5				155.7
			eL	12 07				
		PNS	ePKP	11 13 19.4		1.9	40	
			eS	57.7				
			eL	12 07.4				
		CCH	ePKP	11 13 19.6				
NOV	26	USCGS LOYALTY IS REG	11 55	53.3, 22.9S, 171.4E, H = 58 Km, M = 4.7				
		PNS	eL	12 48.1				
NOV	26	PNS	eP	12 25 01				
		LPB	eP	12 25 02				
NOV	26	USCGS	15 14	54, 13.1N, 90.1W, H = 58 Km, M = 4.4				
								NEAR COAST OF GUATEMALA
		PNS	eP	15 21 50.3		0.9	5	
			e	21 54.3				
		LPB	eP	15 21 52.5				37.0
			eL	33				
NOV	26	USCGS S CHILE-ARGENTINA BORDER REG	18 09	06, 39.5S, 71.7W, H = 39 Km, M = 4.2				
		CCH	eP	18 14 04.1				
		LPB	P	18 14 13.2		0.8	7	23.4
			eL	21				
		PNS	P	18 14 13.8		0.6	7	
			eL	20.9				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	26	USCGS COLOMBIA		20 00 36	5.3N, 76.1W, H = 128 Km, M = 3.9			
		PNS	eP	20 05 27.4				159.3
		LPB	P	20 05 32.5		1.0	24	23.4
NOV	26	PNS	iP	20 58 55.4	D	0.7	24.2	2.3
		S		59 22				
NOV	26	LPB	eP	20 58 57.5				2.3
		S		59 24.5				
NOV	26	LPB	eP	23 04 55				
		PNS	eP	23 05 01				
NOV	26	USCGS		23 12 47	15.2N, 96.3W, H = 46 Km, M = 4.2			
					NEAR COAST OF OAXACA, MEXICO			
		PNS	eP	23 20 31.6		0.8	2	
		LPB	eP	23 20 33				41.8
NOV	27	PNS	P	00 03 25.3	D	0.4	4.4	2.4
		S		03 54.5				
NOV	27	LPB	eP	00 03 29				
NOV	27	USCGS		00 06 45	15.3S, 173.6W, H = 173 Km, M = 4.3			
					TONGA IS			
		LPB	eL	00 54				99.9
		PNS	eL	00 54.1				
NOV	27	LPB	eP	02 38 32.5				
		PNS	eP	02 38 33.5		0.8	7	
NOV	27	USCGS		04 27 02.4	60.3N, 140.8W, H = 16 Km, M = 4.6			
					SOUTHEASTERN ALASKA			
		LPB	eP	04 40 21				95.8
			eL	05 12.7				
		PNS	eL	05 12.6				
NOV	27	USCGS		05 13 12.6	30.8S, 71.0W, H = 62 Km, M = 5.4			
					NEAR COAST OF CENTRAL CHILE			
		PNS	eP	05 16 39		C	1.0	98
			i	16 42.6				
			ISS	19 33				
			eL	20.3				
		LPB	P	05 16 39.4		C	1.4	283
			PP	16 57.5				
			SS	19 27				
			L	20.2				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	27	USCGS		05 09 22.7	40.N, 104.7W, H = 5 Km, M = 5.2			
					W COLORADO			
		PNS	eL	05 40.1				
NOV	27	USCGS		05 35 00.7	39.9N, 104.7W, H = 5 Km, M = 4.4			
					COLORADO			
		PNS	eL	06 06.7				
NOV	27	LPB	P	06 02 38.6			0.8	13
		PNS	P	06 02 43.5		C	0.5	9
NOV	27	USCGS		08 18 42.4	21.3S, 174.3W, H = 33 Km, M = 5.4			
					TONGA IS			
		LPB	eP	08 32 16				98.1
			eSKS	43 00				
			eL	09 06.8				
		PNS	eP	03 32 16				
			eSKS	43 03				
			L	09 06.6				
NOV	27	PNS	eP	10 37 02.7				
NOV	27	USCGS		10 46 49	13.0S, 67.1E, H = 33 Km, M = 5.2			
					MID INDIAN RISE			
		PNS	ePKP	11 05 55.4				
			eL	47.2				
		LPB	ePKP	11 05 55				126.9
			eL	47				
NOV	27	PNS	eP	11 24 21				3.3
		S		25 00				
		LPB	eP	11 24 24			1.0	12
NOV	27	LPB	eP	12 56 32				
		PNS	eP	12 56 36				
NOV	27	USCGS		13 04 16	14.1N, 52.0E, H = 33 Km, M = 5.1			
					EASTERN GULF OF ADEN			
		PNS	PKP	13 23 12.6			0.9	
		LPB	ePKP	13 23 13				122.5
			eL	14 02				
NOV	27	PNS	eP	14 05 12			0.8	2

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	27	PNS LPB	p eP	16 38 20.8 16 38 21		0.5	3	
NOV	27	LPB PNS	eP p	17 31 35 17 31 35.1		0.5	4	1.8
NOV	27	PNS	p is	17 34 51.8 35 29.2		0.7	3	3.2
NOV	27	PNS	p	18 30 22				
NOV	27	USCGS LPB PNS		19 17 28.2, 31.5S, 68.5W, H = 113 Km, M = 4.4 SAN JUAN PROVINCE, ARGENTINA 19 20 55.5 19 20 56.4		0.8 1.0	13 12	14.7
NOV	27	LPB PNS	eP p	20 07 49 20 07 51.4		0.6	2	
NOV	27	USCGS PNS LPB		20 17 49, 12.6S, 66.4E, H = 33 Km, M = 5.1 MID INDIAN RISE 20 36 53.2 21 16.9 21 17		0.8	2	126.8
NOV	27	USCGS LPB PNS		21 03 20.4, 12.7S, 66.4E, H = 33 Km, M = 4.8 MID INDIAN RISE 21 22 22 22 03 21 22 23.5 22 03.5				126.8
NOV	27	USCGS LPB PNS		21 08 03, 31.0N, 142.7E, H = 33 Km, M = 4.4 SOUTH OF HONSHU, JAPAN 21 27 47 21 27 48.4		0.6	3	148.4
NOV	27	USCGS PNS LPB		21 46 02.9, 28.5W, 129.6E, H = 17 Km, M = 5.0 RYUKYU ISLANDS 22 06 00 23 01.8 23 01				159.8



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	28	PNS LPB	iP S P S	01 09 39.1 10 06.6 01 09 41.5 10 11.5	D	0.5 0.9	12 14	2.3 2.5
NOV	28	USCGS CHAGOS ARCHIPELAGO REGION LPB PNS		02 21 55.8, 6.1S, 71.4E, H = 33 Km, M = 5.1 02 41 14 02 41 14.5 03 01 30				133.6
NOV	28	USCGS KYUSHU, JAPAN PNS LPB		02 36 54.1, 32.1N, 130.8E, H = 125 Km, M = 5.6 02 56 37.9 02 57 05.7 03 00 54.4 20 26 41 50.4 02 56 38.2 02 57 07.5 03 20 27 50	C	1.9	80	155.6
NOV	28	USCGS LEEWARD IS PNS LPB		03 21 31.4, 18.4N, 62.4W, H = 45 Km, M = 5.0 03 28 21.2 03 28 3 04 38		1.3 1.4	21 72	35.1
NOV	28	USCGS SOUTH OF HONSHU, JAPAN PNS LPB		04 13 05.8, 30.5N, 137.5E, H = 495 Km, M = 4.5 04 31 00.7 32 07.3 34 05.6 04 31 02 05 24		1.0	6	152.5
NOV	28	LPB PNS	eP eP	06 18 50 06 18 52.3				
NOV	28	LPB PNS	eP eP	07 39 40 07 39 42.4		0.5	2	

DATE	TIME	STATION	DEPTH	LOCATION	MAGNITUDE	AMPLITUDE	DISTANCE
NOV 27	10 11 2	LPB	ep	10 15 05	0.3	7	1.0
NOV 27	10 43 02	PNS	ep	10 43 02	0.3	4	1.0
NOV 27	11 32 53	LPB	ep	11 32 53	0.3	4	1.0
NOV 27	11 33 06	PNS	ep	11 33 06	0.9	4	1.0
NOV 28	12 09 02.3	LPB	ip	12 09 02.3	0.9	66	2.7
NOV 28	12 09 09.4	PNS	ip	12 09 09.4	0.7	23	3.2
NOV 28	12 40 50.6	PNS	p	12 40 50.6	0.7	3	3.2
NOV 28	13 18 07.7	LPB	p	13 18 07.7	0.8	27	2.8
NOV 28	13 18 14.9	PNS	p	13 18 14.9	0.8	15	3.3
NOV 28	13 57 15.2	PNS	p	13 57 15.2	0.5	3	12.8
NOV 28	13 57 17.3	LPB	ep	13 57 17.3	0.8	6	12.8
NOV 28	16 34 46.2	LPB	p	16 34 46.2	0.8	7	4.8
NOV 28	16 34 49	PNS	ep	16 34 49	0.8	4	2.9
NOV 28	16 35 23.4	PNS	s	16 35 23.4			
NOV 28	16 35 38.5	PNS	p	16 35 38.5	0.7	5	
NOV 28	16 41 40.0, 23.3S, 65.6W	USCGS		16 41 40.0, 23.3S, 65.6W	H = 181 Km		
NOV 28	16 43 24.2	LPB	ip	16 43 24.2	0.7	140	7.0
NOV 28	16 43 28.3	PNS	ip	16 43 28.3			
NOV 28	18 21 51.0, 37.9N, 115.7E	USCGS		18 21 51.0, 37.9N, 115.7E	H = 33 Km, M = 4.6		
NOV 28	19 36.9	PNS	eL	19 36.9			158.4



DATE	TIME	STATION	DEPTH	LOCATION	MAGNITUDE	AMPLITUDE	DISTANCE
NOV 28	20 19 36.8, 56.0E, 152.1N	USCGS		20 19 36.8, 56.0E, 152.1N	M = 14 Km, M = 4.5		
NOV 28	21 08	LPB	eL	21 08			100.4
NOV 28	22 22 05.1	PNS	p	22 22 05.1		0.5	4
NOV 28	22 22 31.8	PNS	s	22 22 31.8			2.2
NOV 28	22 22 12.5	LPB	ep	22 22 12.5			2.3
NOV 28	22 22 41	LPB	s	22 22 41			2.4
NOV 28	22 56 54.3, 10.1N, 64.3W	USCGS		22 56 54.3, 10.1N, 64.3W	H = 44 Km, M = 4.1		
NOV 28	23 02 31.0	PNS	p	23 02 31.0		1.2	7
NOV 28	23 02 07.32	PNS	iss	23 02 07.32			
NOV 28	23 02 10.1	LPB	eL	23 02 10.1			27.0
NOV 28	23 02 32	LPB	ep	23 02 32			
NOV 28	23 02 10.2	LPB	eL	23 02 10.2			
NOV 29	01 04 07.3	PNS	ep	01 04 07.3		0.9	13
NOV 29	01 04 07.6	LPB	ep	01 04 07.6		1.0	8
NOV 29	01 23 34.5, 18.4N, 62.1W	USCGS		01 23 34.5, 18.4N, 62.1W	H = 58 Km, M = 5.1		
NOV 29	01 30 22.9	PNS	p	01 30 22.9		0.5	10
NOV 29	01 30 36.14	PNS	ss	01 30 36.14			
NOV 29	01 30 40.6	PNS	eL	01 30 40.6			
NOV 29	01 30 24.8	LPB	ip	01 30 24.8		1.4	112
NOV 29	01 30 36.12	LPB	eS	01 30 36.12			35.1
NOV 29	01 30 40.7	LPB	L	01 30 40.7			
NOV 29	02 25 33	PNS	ep	02 25 33			
NOV 29	02 25 45	LPB	ep	02 25 45		1.0	12
NOV 29	03 01 43.5	LPB	ep	03 01 43.5			
NOV 29	03 01 54.0	PNS	p	03 01 54.0		0.8	3
NOV 29	02 13.2	PNS	i	02 13.2			
NOV 29	17.9	PNS	L	17.9			
NOV 29	04 08 14	LPB	ep	04 08 14			
NOV 29	04 08 57.4	PNS	p	04 08 57.4		0.9	7
NOV 29	04 07 37.2, 49.0S, 153.2E	USCGS		04 07 37.2, 49.0S, 153.2E	H = 62 Km, M = 4.8		
NOV 29	04 26 48.5	LPB	ePKP	04 26 48.5			133.5
NOV 29	05 11	LPB	eL	05 11			
NOV 29	04 26 52.3	PNS	ePKP	04 26 52.3		0.8	8
NOV 29	47 10	PNS	eSS	47 10			
NOV 29	05 11	LPB	eL	05 11			

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	29	LPB	eP	04 30 17				
NOV	29	PNS	eP	04 42 01.2		0.6	2	
NOV	29	PNS	P	05 42 35.9		0.7	15	2.2
			S	43 02				
		LPB	iP	05 42 37.0	D	0.7	45	3.3
			eS	43 16.5				
NOV	29	LPB	eP	05 50 50.2		0.9	7	
		PNS	eP	05 50 52.6				
			i	56.2				
NOV	29	PNS	eP	06 37 34				
			e	33 01.2				
		LPB	eP	06 37 35				
NOV	29	LPB	eP	06 43 15.7				
		PNS	P	06 43 22.6		0.6	2	3.5
			eS	44 03.2				
NOV	29	USCGS		07 21 57.0, 48.5N, 151.0E, H = 189 Km, M = 4.3				
				KURILE IS				
		PNS	ePKP	07 40 40.5				
			eL	08 25.3				
		LPB	ePKP	07 40 41				135.0
			eP	18 57 17.3				
NOV	29	PNS	P	08 06 40		0.7	12	
		LPB	eP	08 06 43		0.7	4	
NOV	29	USCGS		08 09 27.0, 55.9S, 26.1W, H = 33 Km,				
				SANDWICH IS				
		LPB	P	08 18 25.3		0.8	15	52.0
			eL	35				
		PNS	P	08 18 28.3		0.7	18	
			eL	35				
		LPB	iP	10 02 12.6	D	0.5	12	2.0
			S	36.6				
NOV	29	LPB	P	11 36 56.2		0.7	35	2.7
			S	37 28				
		PNS	P	11 36 59.4		0.7	6	3.3
			eS	37 38				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	29	LPB	P	11 54 49.3		0.9	15	
		PNS	eP	11 54 20.2		0.7	10	11.5
			eS	56 28				
			eL	57.1				
NOV	29	LPB	P	11 57 25				3.2
			S	58 03				
		PNS	P	11 57 31.1		0.5	10	3.4
			S	58 12				
NOV	29	PNS	iP	12 41 15				
		LPB	eP	12 41 21		0.9	8	
NOV	29	LPB	eP	13 15 34				
		PNS	P	13 15 37				
NOV	29	USCGS		15 03 38.0, 53.0S, 6.1E, H = 33 Km, M = 5.4				
				BOUVET ISLAND REG				
		LPB	P	15 14 32.8		1.4	63	67.4
			S	23 31				
			eL	36				
		PNS	P	15 14 36.3	D	1.1	11	
			S	23 30				
			SS	27 00				
			G	31.5				
			eL	36				
NOV	29	USCGS		16 10 20.0, 52.0N, 175.3W, H = 16 Km, M = 4.3				
				ANDREANOF ALEUTIAN ISLANDS				
		LPB	eL	17 04				112.5
		PNS	e	17 04				
NOV	29	LPB	eL	16 36 51				
		PNS	P	16 36 51.3		0.7	5	3.1
			eS	37 27.8				
NOV	29	USCGS		17 25 53.0, 4.3S, 153.3E, H = 49 Km,				
				NEW IRELAND REG				
		LPB	eP	17 45 10				133.8
			eL	30				
				11 37 30				
NOV	29	LPB	eP	19 34 33				
		PNS	eP	19 34 36.5				
			iPP	51.4				
			eS	36 24.8				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	29	PNS LPB	eP eP	20 46 00 20 46 01		0.8	6	
NOV	29	USCGS	22 09	17.0, 25.1S, 70.4W, H = 56 Km, M = 4.4				
				NEAR COAST OF NORTHERN CHILE				
		CCH	eP	22 11 12.4				
		LPB	eP	22 11 24.5				9.0
			e	50				
		PNS	eP	22 11 27.4		0.7	3	
			i	52.0				
NOV	30	CCH LPB	iP iP	00 23 07.9 00 23 45.7	D D		48	2.3
			S	24 12.5				
		PNS	iP	00 23 46.6	D			2.3
			S	24 13.8				
NOV	30	USCGS	03 23	36.0, 0.3S, 125.1E, H = 81 Km, M = 5.0				
				MOLUCCA SEA				
		LPB	ePKP	03 43 25				159.1
		PNS	ePKP	03 43 27				
NOV	30	CCH LPB PNS	eP p p	03 57 10.2 03 57 23.7 03 57 27.8		0.6 0.6	4 2	6.5
			eS	58 42				
NOV	30	PNS LPB	iP eP	04 41 23.2 04 41 24.5	D D	0.3 0.8	25 7	
NOV	30	LPB PNS	eP eP	05 25 13 05 25 15.3		1.0 0.5	6 3	
NOV	30	USCGS	05 48	06.0, 16.0S, 13.4W, H = 33 Km,				
				SOUTH ATLANTIC RIDGE				
		LPB	p	05 57 18.7				52.6
			eL	06 13				
		PNS	p	05 57 21.4		1.2	6	
			eL	06 13.6				
NOV	30	USCGS	02 00	40.0, 16.8N, 91.9W, H = 150 Km, M = 4.5				
				MEXICO, GUATEMALA BOR REG				
		PNS	P	07 08 05.0		0.7	6	
		LPB	P	07 08 08		0.9	17	40.0
			eL	19				
		CCH	P	07 08 20.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOV	30	USCGS ALBANIA	07 23	51.5, 41.5N, 20.5E, H = 29 Km, M = 6.5				
		LPB	eP	07 37 35		1.4	22	100.0
			ePP	41 37				
			SKS	48 13				
			PS	50 18				
			SS	56 03				
			eG	08 00				
			L	11				
		PNS	P	07 37 35.3		0.8	13	
			iPP	41 45.8				
			SKS	48 14				
			PS	50 50				
			SS	56 08				
			G	08 04.9				
			L	11.6				
		CCH	eP	07 37 28.7				
NOV	30	PNS LPB	P eP	07 53 55.8 07 54 08.5		1.3 1.1	8 12	
NOV	30	USCGS ALBANIA	07 42	53.0, 41.3N, 20.5E, H = 33 Km, M = 4.3				
		LPB	eP	07 56 22				100.1
NOV	30	USCGS ALBANIA	08 13	20.0, 41.7N, 20.8E, H = 33 Km, M = 4.5				
		LPB	eP	08 27 04.5				100.1
NOV	30	USCGS ALBANIA	10 13	53.0, 41.7N, 20.4E, H = 33 Km, M = 4.3				
		PNS	eL	11 01.7				
		LPB	eL	11 02				100.0
NOV	30	LPB	eP	11 23 07		0.9	17	46.0
			eS	29 50				
			SS	33 10				
			eL	35.7				
		PNS	P	11 23 09.9		0.7	7	4.7
			S	29 57				
			SS	33 20				
			L	36.2				
NOV	30	LPB	eP	11 32 46.5				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DEC	1	LPB	eP	05 14 38		0.8	4		
DEC	1	PNS	iP	05 14 52.0	D	0.7	18	4.9	
			i	15 00					
			S	48					
DEC	30	LPB	P	05 14 56.2		0.7	7	5.0	
			i	15 04.0					
			S	54.2					
DEC	1	USCGS	07 18 22.7, 2.3N, 127.1E, H = 95 Km, M = 5.4						
			MOLUCCA PASSAGE						
		PNS	ePKP	07 38 14.2		1.0	13		
			iPKP2	52.8					
			eSS	08 02 43					
			eL	34.6					
		LPB	PKP	07 38 14.9		1.2	34	159.0	
			PKP2	52.8					
			eL	34					
DEC	1	PNS	P	09 55 12		0.6	3		
			L	10 08.5					
		LPB	eP	09 55 15					
			eL	10 08					
DEC	1	USCGS	10 45 41.0, 11.6N, 126.0E, H = 33 Km, M = 4.8						
			PHILIPPINE ISLANDS REG						
		PNS	ePKP	11 05 43.6					
			eL	12 04					
		LPB	ePKP	11 05 46.5				165.4	
			eL	12 04					
DEC	1	LPB	eP	11 31 15					
		PNS	iP	11 31 22.7	C	10.5	11		
DEC	1	LPB	eP	12 26 27		0.7	5		
		PNS	P	12 26 35.2					
DEC	1	LPB	e(P)	13 17 35		0.9	6		
		PNS	P	13 17 38.7					
DEC	1	PNS	P	13 27 36.2				1.6	
			S	57.8					
DEC	1	PNS	eP	13 37 35		0.6	2		

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DEC	1	USCGS	13 57 02.4, 49.5N, 154.4E, H = 136 Km, M = 5.9						
			KURILE ISLANDS						
		PNS	PKP	14 16 02.3		1.5	77		
			i	42.5					
			PKS	18 29.7					
			SKS	23 07					
			SS	36 00					
			G	51.4					
			eL	15 00					
		LPB	PKP	14 16 04	D	1.6	201	132.7	
			PP	18 27					
			PKS	19 17					
			SS	36 04					
			eG	48					
			L	15 01					
DEC	1	PNS	P	15 17 51.7		0.8	8	5.7	
			S	18 56.3					
DEC	1	USCGS	16 36 43.0, 5.9S, 105.5E, H = 31 Km,						
			SUNDA STRAIT						
		LPB	ePKP	16 56 37.5				157.0	
			ePKP2	57 12.5					
		PNS	ePKP	16 56 40					
			ePKP2	57 14					
		SCS	ePKP	16 56 40.0					
DEC	1	USCGS	16 57 25.2, 60.2N, 29.6W, H = 33 Km, M = 4.5						
			NORTH ATLANTIC OCEAN						
		LPB	eP	17 09 45				82.5	
			eL	36					
		PNS	eP	17 09 45					
			eL	36.7					
DEC	1	SCS	eP	18 04 59.2					
		LPB	eP	18 05 09.5		0.8	9		
		PNS	P	18 05 17.6		0.6	7	3.2	
			eS	55.6					
DEC	1	USCGS	17 50 30.7, 10.5S, 161.6E, H = 74 Km, M = 4.9						
			SOLOMON IS						
		PNS	ePKP	18 09 24					
			eL	49.4					
		LPB	ePKP	18 09 26				123.7	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	1	PNS	n	18 36 30.7		0.5	19	3.5
			S	18 37 12				
		LPB	eP	18 36 37		0.9	19	
DEC	1	LPB	p	19 35 28.2		0.5	11	
DEC	1	SCS	eP	19 48 15.3				
		LPB	eP	19 48 20				
		PNS	p	19 48 20.6		0.7	8	
DEC	1	PNS	eP	19 52 25				
DEC	1	USCGS		20 15 55.2, 8.6N, 125.8E, H = 63 Km, M = 5.1				
				MINDANAO, PHILIPPINE ISLANDS				
		LPB	ePKP	20 36 10				
DEC	1	USCGS		20 38 33.9, 6.3S, 154.3E, H = 77 Km,				
				SOLOMON ISLANDS				
		PNS	eL	21 41.3				132.1
DEC	1	SCS	p	21 47 24.6				
		PNS	iP	21 47 28.5		0.4	5	2.4
			iS	57.0				
		LPB	eP	21 47 30		0.9	19	2.4
			S	58.6				
DEC	1	PNS	p	21 59 25.8		0.5	3	
		LPB	eP	21 59 28				
DEC	1	LPB	eP	22 57 52				
		PNS	eP	22 57 59				
DEC	2	USCGS		00 24 16.0, 41.3N, 20.6E, H = 29 Km, M = 5.1				
				ALBANIA				
		PNS	eP	00 37 57				99.9
DEC	2	USCGS		00 31 18.9, 24.1N, 108.6W, H = 33 Km, M = 5.1				
				GULF OF CALIFORNIA				
		SCS	n	00 40 03.0				
		LPB	n	00 40 58.8		1.2	40	56.5
			(p ⁿ)	41 04.6				
			pp	43 10				
			eL	59				
		PNS	p	00 40 56.0		1.4	42	
			i (n ⁿ)	41 02.9				
			s	49 48				
			=L	50				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	2	LPB	eP	01 11 10.5		1.4	22	
DEC	2	SCS	eP	03 45 19.3				
		PNS	p	03 45 45.0		0.7	9	
DEC	2	SCS	p	03 53 34.1				
		PNS	p	03 53 42.5		0.5	9	2.7
			S	54 15				
		LPB	eP	03 53 49.5		0.8	10	
DEC	2	LPB	e(P)	04 40 41.5				
			eL	05 14				
		PNS	eL	05 14.1				
DEC	2	SCS	iP	06 44 26.5				
		LPB	iP	06 44 34.3		0.7	7	
		PNS	iP	06 44 35.6				2.9
			S	45 09.5				
DEC	2	USCGS		07 15 36.0, 55.7S, 28.0W, H = 33 Km, M = 4.7				
				S SANDWICH ISLANDS REG				
		LPB	eP	07 24 27.5				
		PNS	eP	07 24 30		0.8	12	
DEC	2	LPB	eP	08 41 21		0.8	9	
		PNS	eP	08 41 21.5		0.7	2	
DEC	2	PNS	eP	09 11 22.2				
		LPB	eP	09 11 34				
		SCS	e(P)	09 11 52.3				
DEC	2	SCS	p	09 13 43.4				
		LPB	p	09 13 50.3		0.8	13	
		PNS	p	09 13 53.3		0.4	1	4.0
			S	14 40				
DEC	2	PNS	p	09 04 51.2		0.7	4	
DEC	2	PNS	eP	10 04 25				
DEC	2	LPB	eP	12 34 38				
			e	35 10				
		PNS	eP	12 34 42				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	2	USCGS ALBANIA	12 44	42.7, 41.3N, 20.3E, H = 17 Km, M = 5.4				
		LPB	eP	12 58 20				99.3
			eL	13 32				
		PNS	eP	12 58 21				
DEC	2	LPB PNS	eP eP	15 04 04 15 04 10				
DEC	2	PNS LPB	P eP	16 27 27.0 16 27 42		0.5	4	
DEC	2	PNS	P i	16 42 10.3 23		0.6	3	
DEC	2	PNS	P	17 17 52.2		0.7	16	
DEC	2	LPB PNS	eP P	20 13 12 20 13 14.9		0.7	16	
DEC	2	USCGS NORTHEASTERN CHINA	20 05	52.4, 37.8N, 115.2E, H = 13 Km, M = 5.2				
		PNS	ePKP L	20 25 47 21 17.9				
		LPB	ePKP eL	20 24 47 21 20				158.4
DEC	3	LPB	eP	01 21 21				
DEC	3	PNS LPB	eP eP	04 23 17 04 23 25.8		0.9	8	
DEC	3	USCGS NEAR COAST OF CENTRAL CHILE	04 51	34.1, 30.3S, 71.7W, H = 85 Km, M = 4.0				
		LPB PNS	eP eP	04 54 50.5 04 54 54.2		0.9 0.7	6 4	13.6
DEC	3	SCS LPB PNS	P eP S P S	05 09 20.4 05 09 30 10 09.5 05 09 32.0 10 13.7		0.9 0.6	14 8	3.3 3.6

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	3	LPB PNS	eP P	05 53 32.7 05 53 37.9				
					C	0.7	17	
DEC	3	PNS LPB	P S eP	06 16 37.2 59.7 06 16 39		0.6	13	1.8
DEC	3	PNS LPB	P S eP	06 16 37.2 59.7 06 16 39		0.6	13	1.8
DEC	3	PNS	eP	06 50 08.8				
DEC	3	LPB PNS	eP eP	06 55 38 06 55 39				
DEC	3	PNS LPB	P eP	09 47 10 09 47 11.5		0.6	5	
DEC	3	USCGS BANDA SEA	09 34	09.3, 7.5S, 128.8E, H = 147 Km, M = 5.2				
		LPB	ePKP i eL	09 53 43 48.2 10 45				150.4
		PNS	PKP i	09 53 43.1 48.6		0.7	6	
		SCS	ePKP	09 53 46.7	C			
DEC	3	LPB PNS	L L	46.4 11 45.9				
DEC	3	PNS LPB SCS	P eP eP	11 45 00.5 11 45 02 11 45 13.2		0.7	4	
DEC	3	USCGS NEW HEBRIDES ISLANDS REGION	11 19	02.0, 21.5S, 173.9E, H = 33 Km, M = 4.4				
		LPB PNS	eL eL	12 07.6 12 07.9				108.3
DEC	3	LPB PNS	eP eP	13 32 40 13 32 52.7				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	3	SCS	eP	13 40 01.0				2.2
		PNS	eP	13 40 05.0				
		LPB	eP	13 40 05.5				
DEC	3	PNS	eP	14 39 59.6		0.9	7	
		LPB	eL	47.3 1 30				
		LPB	eL	46				
DEC	3	SCS	eP	15 08 37.6				
		LPB	P	15 08 44.3		1.0	20	
		PNS	P	15 08 47.3		0.7	17	
DEC	3	PNS	P	16 23 37.1		0.8	8	
DEC	3	USCGS		19 49 39.0				13.6E, H = 18 Km, M = 4.6
		CENTRAL ITALY						
		LPB	eP	20 03 39				104.0
		PNS	P	20 03 39.9		1.2	14	
DEC	3	PNS	eP	21 23 47.6		0.7	2	
DEC	3	PNS	eP	22 30 08.1		0.9	6	
DEC	3	LPB	eL	24 03 28.6				
DEC	4	LPB	eP	02 56 36.6				
			e	58 09.6				
			eL	03 31				
DEC	4	SCS	P	03 02 49.8				3.2
		LPB	e(P)	03 02 54				
		PNS	S	03 32.2				3.6
		PNS	eP	03 03 01.6				
			S	43.4				
DEC	4	LPB	eL	04 22				
DEC	4	PNS	P	04 14 36.7		0.8	13	
		LPB	eL	05 08.4				
		LPB	eP	04 14 39		1.6	52	
		SCS	eL	05 02				
		SCS	eP	04 14 46.8				
DEC	4	PNS	P	07 29 21.8		0.8	5	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	4	SCS	eP	07 33 12.9				
		LPB	eP	07 33 20		1.0	12	
		PNS	eP	07 33 22.9		0.8	7	
DEC	4	USCGS		08 19 08.5				62.4N, 151.8W, H = 96 Km, M = 4.9
		CENTRAL ALASKA						
		PNS	eL	09 07.5				101.5
DEC	4	PNS	P	08 54 09.6		0.7	8	
		LPB	PKP	08 54 12.3		1.6	34	
			eSS	09 11 12				
			eG	23				
			eL	30.7				
DEC	4	SCS	eP	08 54 20.1				
DEC	4	USCGS		08 48 45.2				43.7N, 127.4W, H = 33 Km, M = 4.6
		OFF COAST OF OREGON						
DEC	4	PNS	eP	09 00 58.3				
			S	11 08				
			G	22.7				
		LPB	eL	27.6				81.0
		LPB	eP	09 01 02				
			eL	10 27				
		SCS	eP	09 01 08.0				
DEC	4	LPB	eP	09 15 42.4	D			
DEC	4	LPB	eP	09 15 48				
DEC	4	LPB	ePKP	10 55 25.8				
			PKS	59 06				
			eL	11 32				
		PNS	ePKP	10 55 29				
			PKS	59 05.7				
			eL	11 32.3				
DEC	4	USCGS		11 57 54.7				51.1N, 178.3E, H = 33 Km, M = 4.7
		RAT ALEUTIAN ISLANDS						
DEC	4	LPB	ePKP	12 16 40.5				117.7
			eL	53.1				
		PNS	eL	12 53.9				
DEC	4	LPB	eP	12 58 49				
DEC	4	PNS	P	12 58 52.4		1.0	8	
DEC	4	USCGS		13 56 36.0				36.4S, 97.5W, H = 33 Km, M = 4.4
		WEST CHILE RISE						
		LPB	P	14 03 07				30.8
			eL	12				
		PNS	P	14 03 08.5		0.9	15	
			L	11.6				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	4	PNS	eP	14 39 53.4		0.7	2	
DEC	4	PNS	p	15 11 12.1		1.0	10	
			eS	16 00				
			eL	19.6				
		LPB	eP	15 11 23				
			eL	19				
DEC	4	PNS	eP	15 22 36.7				
DEC	4	USCGS		15 35 34.2, 36.1N, 71.2E, H = 143 Km, M = 4.9				
				AFGHANISTAN USSR BOR REG				
		LPB	ePKP	15 54 33				139.2
			eL	16 41				
		PNS	SS	16 15 52				
			eL	41.3				
DEC	4	SCS	p	15 55 32.8				
		LPB	p	15 55 40.7		1.0	170	5.4
			i	43.2				
			eS	56 43				
		PNS	p	15 55 42.6		1.4	68	5.3
			s	56 50				
			i	16 00 16.7				
DEC	4	PNS	p	16 38 58.9		0.6	23	
DEC	4	PNS	p	17 36 56.0		0.8	3	
DEC	4	PNS	eP	18 43 14.2		0.7	3	
DEC	4	PNS	p	18 58 51.8		0.6	3	3.2
			eS	59 30				
DEC	4	USCGS		19 00 22.6, 63.0S, 60.5W, H = 33 Km, M = 4.7				
				PALMER PENINSULA				
		LPB	eP	19 08 50		1.2	25	46.5
		PNS	p	19 08 52.7		1.2	11	
DEC	4	LPB	eP	19 28 15.5		0.5	21	
		PNS	p	19 28 15.5	C	0.5	4	
DEC	4	PNS	p	20 26 14.2		0.6	3	

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	4	PNS	p	20 27 30.1		0.6	6	3.1
			s	28 05.9				
DEC	4	USCGS		20 17 05.7, 27.5N, 128.9E, H = 33 Km, M = 4.8				
				RYUKYU ISLANDS				
		PNS	ePKP	20 36 59.2		0.9	5	
			eL	21 32.5				
		LPB	ePKP	20 37 02				159.5
			eL	21 32				
DEC	4	SCS	iP	20 41 36.2	C			
		PNS	iP	20 41 41.4	D	0.7	10	2.0
			s	42 05.4				
		LPB	eP	20 41 47				1.5
			s	42 06				
DEC	4	PNS	eP	21 27 10.4		1.0	6	
DEC	4	USCGS		21 41 50.9, 2.8N, 65.1E, H = 33 Km, M = 4.9				
				CARLSBERG RIDGE				
		LPB	ePKP	22 01 05				131.6
			eL	44				
		PNS	ePKP	22 01 05.4				
DEC	4	LPB	eP	22 34 13.5				
DEC	4	PNS	p	23 13 02		0.5	3	
DEC	5	PNS	p	00 24 31.9		0.6	2	3.9
			i	35.0				
			s	25 18				
		LPB	eP	00 24 40.7				4.1
			e	45.6				
			s	25 29				
		SCS	p	00 24 56.2				4.9
			(s)	25 52.5				
DEC	5	PNS	iP	00 33 08.4	C	0.5	2	
		LPB	eP	00 33 09				
DEC	5	LPB	p	03 03 30.0		0.8	6	
DEC	5	USCGS		03 48 06.3, 28.7S, 70.2W, H = 57 Km, M = 4.6				
				CENTRAL CHILE				
		LPB	eP	03 51 09.5				12.4
			eL	54.2				
		PNS	eP	03 51 12		1.0	3	
			eS	53 30				
			eL	181 54.2				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
		SCS	eP	03 51 19.3				
DEC	5	SCS	iP	06 30 27.2	D			2.0
			S	51.4				
		PNS	iP	06 30 28.7	D	0.7	19	1.9
			S	52				
		LPB	iP	06 30 29.7	D	0.9	37	
DEC	5	USCGS HALMAHERA		06 54 48.8, 1.7N, 127.1E, H = 72 Km, M = 5.3				
		LPB	ePKP	07 14 32				156.0
			eL	08 08				
		PNS	ePKP	07 14 44				
			eL	08 08.9				
DEC	5	SCS	P	07 46 33.2				
		LPB	eP	07 46 41		1.0	8	
		PNS	P	07 46 41.0		0.6	9	2.4
			S	47 10				
DEC	5	LPB	P	07 52 18		1.6	39	
DEC	5	PNS	eP	08 49 08.4				5.1
			S	50 07.7				
		LPB	eP	08 49 11.5				
DEC	5	USCGS ANDREANOF ALEUTIAN ISLANDS		09 05 13.1, 51.6N, 173.4W, H = 36 Km, M = 5.3				
		LPB	ePKP	09 23 50				112.1
			eL	58				
		PNS	PKP	09 23 50.6				
DEC	5	PNS	P	10 49 43.8		0.6	4	2.4
			S	50 12.5				
DEC	5	USCGS GULF OF CALIFORNIA		11 09 37.4, 30.8N, 114.1W, H = 33 Km, M = 5.5				
		PNS	eP	11 20 10.9		1.7	44	
			eL	40.4				
		LPB	eP	11 20 13		1.5	33	64.4
			eL	41				
DEC	5	LPB	eP	12 25 03				20
DEC	5	PNS	iP	12 32 29.3	D	0.5	3	1.9
			S	52.2				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	5	PNS	P	13 24 54.8		0.5	4	5.0
			S	25 53.5				
DEC	5	PBS	eP	13 16 39.4				157.2
			S	17 06.0				
DEC	5	PNS	eP	13 53 36.5				
		LPB		13 53 38				
DEC	5	LPB	P	15 36 54.2		1.0	14	
		PNS	P	15 36 55.2		0.9	4	
DEC	5	USCGS GULF OF CALIFORNIA		18 35 32.6, 30.8N, 114.0W, H = 33 Km, M = 5.5				
		LPB	eP	18 46 04		1.8	1120	64.4
			e	12.5				
			eL	19 06				
		PNS	eP	18 46 10.5		2.0	58	
			ess	59 09				
			eL	19 06.5				
DEC	5	SCS	P	19 25 21.3	D			
		LPB	eP	19 25 28.6				
		PNS	eP	19 25 34				3.2
			S	26 11				
DEC	5	SCS	eP	19 28 55.0				
		LPB	eP	19 29 04.5		1.0		2.7
			S	36.8				
		PNS	eP	19 29 10.2				3.1
			S	46.2				
DEC	5	LPB	eP	21 14 20.5				
		PNS	eP	21 14 50.2		1.0	6	
DEC	5	USCGS NEAR COAST OF KAMCHATKA		21 14 28.0, 53.2N, 160.4E, H = 33 Km, M = 4.4				
		PNS	ePKP	21 33 35				
			eL	22 15.3				
		LPB	eL	22 15				
DEC	5	PNS	iP	21 55 33.5	C			2.2
			iS	56 00				
		LPB	iP	21 55 36.8	C	1.0	155	2.4
			iS	56 06.2				
		SCS	iP	21 55 38.2	D			
		CCH	P	21 55 58.2				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	5	LPB	eP	22 31 14				
		PNS	eP	22 31 15				
		CCH	P	22 31 52.3				
DEC	6	LPB	eP	01 02 14.7				
		PNS	eP	01 02 21.5		0.6	2	
DEC	6	SCS	P	01 25 10.8				
		CCH	eP	01 25 17.4				
		LPB	iP	01 25 21.3		1.0	28	4.5
			(S)	26 11.8				
		PNS	iP	01 25 24.8		0.6	12	3.1
			eS	26 02				
DEC	6	USCGS		02 53 06.9, 12.5N, 87.2W, H = 87 Km, M = 5.3				
				NEAR COAST OF NICARAGUA				
		PNS	eP	02 59 44.9		1.5	41	
			S	03 05 08				
			eSS	07 33				
			L	09.9				
		LPB	P	02 59 48.3		1.7	105	34.7
			eS	30 05 13				
			eSS	08 09				
			eL	10				
		SCS	P	02 59 55.5				
		CCH	P	03 00 02.6				
DEC	6	LPB	eP	03 10 19.5				
DEC	6	SCS	eP	03 21 23.7		1.0	10	
		LPB	eP	03 21 24.5				
		PNS	eP	03 21 24.5		0.8	4	
DEC	6	SCS	P	03 34 11.7				
		LPB	eP	04 34 21.5		0.8	15	
		PNS	P	03 34 25.7		0.5	11	7.6
			S	35 51.4				
DEC	6	USCGS		03 33 46.4, 15.1N, 92.5W, H = 77 Km, M = 4.4				
				MEXICO-GUATEMALA BOP REGION				
		LPB	eL	03 56				39.6
		PNS	eL	03 56.6				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	6	USCGS		04 41 08.6, 4.2S, 103.0E, H = 81 Km, M = 5.4				
				SOUTHERN SUMATRA				
		CCH	eP	05 00 55.2				
		LPB	eP	05 00 57.5				157.1
			eL	55				
		PNS	ePKP	05 01 00				
			eL	55.7				
DEC	6	USCGS		05 03 40.8, 21.3S, 178.8W, H = 559 Km, M = 5.1				
				FIJI ISLANDS REGION				
		LPB	eP	05 16 34				102.4
		PNS	eP	05 16 38				
DEC	6	USCGS		05 42 36.2, 0.5N, 126.2E, H = 36 Km, M = 5.3				
				MOLUCCA PASSAGE				
		PNS	ePKP	06 02 33				
			eSS	27 29				
			eL	59.5				
		LPB	ePKP	06 02 35				162.0
			eSS	27 30				
			eL	59				
DEC	6	PNS	eP	06 09 21				
DEC	6	USCGS		08 02 21.5, 27.3N, 140.2E, H = 462 Km, M = 4.6				
				BONIN ISLANDS REGION				
		PNS	ePKP	08 21 18.7		1.0	8	
			i	25.0				
			eL	09 13.1				
		LPB	ePKP	08 21 19.2		1.0	6	151.1
			i	25.6				
			eL	09 13				
		SCS	P	08 21 26.5				
DEC	6	LPB	eP	08 31 10.7		1.0	12	
		PNS	eP	08 31 13.7				147.1
DEC	6	SCS	e(P)	08 34 08.4				
		CCH	e(P)	08 34 10.0				
		LPB	eP	08 34 43				3.2
			eS	35 21.5				
		PNS	eP	08 34 50				2.5
			eS	35 19.6				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	6	CCH	eP	09 12 13.0				
		LPB	eP	09 12 13.9				
		PNS	eP	09 12 15				
DEC	6	USCGS		09 41 06.4, 14.9S, 167.3E, H = 124 Km, M = 5.3				
				NEW HEBRIDES ISLANDS				
		PNS	ePKP	09 59 40.8				
			eL	10 36.7				
		LPB	eL	10 36.8				117.0
DEC	6	PNS	eP	11 16 32				
DEC	6	CCH	eP	11 19 12.4				
		LPB	eP	11 19 14				
DEC	6	PNS	eP	11 34 40				1.9
			S	35 02.8				
DEC	6	SCS	P	12 30 24.1				
		LPB	eP	12 36 25				
		PNS	P	12 36 30.4		0.4	5	3.1
			eS	37 06				
DEC	6	PNS	P	13 56 54.1		0.7	8	
DEC	6	PNS	eP	14 59 03.8				8.9
			S	15 00 44				
		LPB	eP	14 59 11.3				
DEC	6	LPB	eP	15 12 06				
DEC	6	USCGS		14 56 37.1, 40.9N, 143.0E, H = 31 Km, M = 4.6				
				OFF E COAST HONSHU				
		PNS	ePKP	15 16 13.8				
		LPB	eL	16 05				144.0
DEC	6	PNS	eP	21 05 14				
			SS	18 36				
		LPB	eP	21 05 17				
			e(SS)	18 16				
			eL	40				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	6	LPB	eP	21 22 40				2.7
			S	23 12.5				
		PNS	P	21 22 43.3				2.3
			S	23 11.8				
DEC	6	USCGS		22 21 56.8, 1.2S, 67.5E, H = 33 Km, M = 5.5				
				CARLEBERG RIDGE				
		LPB	ePKP	22 41 11				132.2
			eL	23 25				
		PNS	eL	23 25.1				
DEC	7	LPB	iP	01 06 57.7	C	1.0	160	3.9
			S	07 42.5				
		PNS	iP	01 07 02.1	C	1.0	55	4.1
			S	50				
DEC	7	LPB	e(P)	01 13 13.5				
			eL	45				
		PNS	eL	01 44.5				
DEC	7	LPB	eP	03 39 14				
		PNS	P	03 39 15.2		0.8	6	
DEC	7	LPB	P	04 29 25.5		0.7	11	
		PNS	P	04 29 28.8		-0.5	9	7.7
			eS	30 56				
DEC	7	PNS	eP	04 38 56.4				
DEC	7	LPB	eP	05 35 11.7				
		PNS	eP	05 35 12				
DEC	7	USCGS		06 46 32.9, 36.6N, 141.3E, H = 54 Km, M = 4.2				
				NEAR E COAST HONSHU, JAPAN				
		PNS	ePKP	07 06 10.6		1.0	6	
		LPB	PKP	07 06 12.7		1.0	10	147.1
			eL	56				
DEC	7	USCGS		08 17 01.7, 9.7N, 70.1W, H = 41 Km, M = 4.3				
				VENEZUELA				
		PNS	P	08 22 31.6		0.7	4	
			eS	26 00				
			eL	29.6				
		LPB	P	08 22 35.7		0.8	6	25.6
			eL	30				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	7	LPB	eP	08 49 05		0.9	8	
DEC	7	USCGS TONGA ISLANDS	09 41	14.1, 16.7S, 174.1W, H = 120 Km, M = 5.0				
		LPB	eP	09 54 41				99.7
			eL	10 28				
		PNS	eL	10 28.4				
DEC	7	PNS	P	10 03 04.2		0.7	2	
DEC	7	USCGS NEW HEBRIDES ISLANDS	09 49	37.0, 14.6S, 167.3E, H = 151 Km, M = 5.3				
		LPB	ePKP	10 08 06				117.0
		PNS	ePKP	10 03 06.8				
DEC	7	LPB	e(P)	13 55 54				
			eL	14 30				
		PNS	eL	14 29.9				
DEC	7	LPB	eP	16 27 04.5				
		PNS	eP	16 27 06.5		0.5	15	
		CCH	eP	16 27 11.0				
DEC	7	LPB	eP	18 18 24		0.8	12	
		PNS	eP	18 18 26.1		0.3	3	
DEC	7	USCGS NORTHERN CHILE	18 32	23.6, 29.2S, 69.2W, H = 120 Km, M = 3.9				
		LPB	iP	18 33 22.5		0.9	289	3.6
			i	23.7				
			S	34 07				
		CCH	iP	18 33 23.2				
		PNS	iP	18 33 24.8		1.4	70	
			S	34 09				
DEC	7	PNS	P	20 15 06.9		0.6	4	
		LPB	eL	20 41				
DEC	7	LPB	eP	20 44 26		0.9	14	
		PNS	eP	20 44 28		0.9	6	
DEC	7	PNS	P	21 51 33.3		0.5	1	
		LPB	ePKP	21 51 43.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	7	PNS	eP	21 58 38.3				
DEC	7	USCGS TONGA ISLANDS	23 00	28.0, 21.3S, 124.5W, H = 33 Km, M = 4.3				
		PNS	ePKP	23 19 42		1.1	8	
			eL	00 06.2				
		LPB	ePKP	23 19 49				138.6
			eL	24 06				
DEC	8	LPB	eP	01 39 07.6				
		PNS	eP	01 39 14				
DEC	8	USCGS SOLOMON ISLANDS	02 00	27.9, 10.6S, 161.5E, H = 14 Km, M = 5.4				
		LPB	ePKP	02 19 27				127.4
			eSS	38 40				
			eL	03 00				
		PNS	ePKP	02 19 28.7				
			eSS	38 35				
			L	03 00.1				
		CCH	PKP	02 19 32.9				
DEC	8	LPB	eP	03 05 27				
		PNS	iP	03 05 27.0		0.4	17	
DEC	8	USCGS BISMARCK SEA	03 29	35.0, 3.4S, 148.3E, H = 33 Km, M = 4.7				
		LPB	ePKP	03 48 49				133.5
			eL	04 35				
		PNS	ePKP	03 48 58.9		1.4	8	
			eSS	04 10 00				
			eL	04 35				
DEC	8	LPB	eP	04 38 45.7				
DEC	8	USCGS EASTERN KAZAH SSR	06 03	57.1, 49.8N, 78.2E, M = 5.4				
		LPB	BKP	06 23 24				136.9
		PNS	ePKP	06 23 25.3				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	COM
DEC	8	LPB PNS	eP eP	09 03 26 09 03 54		0.8	3		
DEC	8	LPB	eP	10 45 26.2					
DEC	8	PNS CCH	eP eP	11 29 16.3 11 29 37.1		0.7	3		
DEC	8	USCGS		12 14 40.0, 15.5S, 71.3W, H = 156 Km, M = 3.6					
				SOUTHERN PERU					
		PNS	iP	12 15 31.8	C				
			S	16 12					
		LPB	p	12 15 37.2	D	0.8	64	3.6	
			eS	16 19					
		SCS	P	12 15 44.8					
		CCH	P	12 16 02.1					
DEC	8	PNS LPB	p eP	18 47 04.8 18 46 55		0.5	4		
DEC	8	PNS	eP	20 07 48.2				10.2	
			eS	10 09 42.4					
DEC	8	PNS SCS	p P	20 19 36.5 20 19 43.3		0.6	7		
DEC	8	SCS LPB CCH PNS	p p eP P	23 12 11.4 23 12 13.4 23 12 21.3 23 12 23.0		0.9	126		
DEC	9	LPB	PKP	00 00 17.6					
			eL	49					
		SCS	P	00 00 18.3					
		PNS	PKP	00 00 30.9	C	0.7	5		
			eL	50					
		TRJ	PKP	00 00 32.3					
DEC	9	LPB PNS	eP eP	00 49 08 00 49 21		1.1	7		
DEC	9	LPB SCS PNS	eP eP P	03 50 06 03 50 07.5 03 50 13.4		0.4	3	3.3	
			S	52.6					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	COM
DEC	9	USCGS HONSHU KUSH REGION		04 56 14.3, 36.3N, 70.8E, H = 225 Km, M = 4.8					
		PNS	ePKP	05 15 12.3					
			eL	06 01.7					
		LPB	eL	06 01				139.0	
DEC	9	USCGS		05 28 38.9, 22.2S, 179.4W, H = 588 Km, M = 4.9					
				SOUTH OF FIJI ISLANDS					
		LPB	eP	05 41 29				102.5	
DEC	9	LPB PNS	eP P	05 51 42 05 51 51.4		0.8	3		
DEC	9	PNS	eP	06 57 23		1.4	16		
			eL	07 11.7					
		LPB	eP	06 57 24.4					
			eL	07 11					
		SCS	eP	06 57 29.3					
		TRJ	eP	06 57 52.4					
DEC	9	USCGS		06 43 25.9, 5.5S, 151.6E, H = 50 Km, M = 5.2					
				NEW BRITAIN REG					
		LPB	ePKP	07 02 15				134.1	
			eL	47					
		PNS	ePKP	07 02 41.8		0.9	6		
			eL	47.2					
DEC	9	USCGS		07 54 19.8, 15.2S, 173.3W, H = 33 Km, M = 5.0					
				TONGA ISLANDS					
		LPB	eP	08 07 55.5				99.3	
			eL	42					
		PNS	eP	08 07 57					
			L	41.2					
DEC	9	TRJ	P	09 04 31.8	D			2.0	
			eS	55.6					
DEC	9	LPB PNS	eP P	09 06 31 09 06 32.2		0.7	5		
DEC	9	USCGS		09 25 39.8, 17.1S, 70.7W, H = 76 Km, M = 4.7					
				NEAR COAST OF PERU					
		LPB	iP	09 26 19	C			2.7	
		PNS	iP	09 26 26.6	C				
			S	57					
		TRJ	iP	09 26 27.1	C				
		SCS	iP	09 26 33.3	C				
		CCH	iP	09 26 53.6	D				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	9	USCGS SANTA CRUZ ISLANDS REGION		10 50 46.6, 10.9S, 164.2E, H = 33 Km, M = 5.5				
		LPB	ePKP	11 09 38				121.4
			eL	48				
		PNS	ePKP	11 09 38.5				
			pp	11 14				
			ePKS	13 10				
			SKS	16 41				
			SP	21				
			eSS	27 39				
			L	48				
		TRJ	ePKP	11 09 38.9				
		CCH	ePKP	11 11 48.8				
DEC	9	TRJ	eP	13 01 33.2				11.7
		PNS	eP	13 02 03.3				
			i	16.0				
			S	04 13.8				
		LPB	eP	13 02 04				
		SCS	eP	13 02 10.8				
DEC	9	USCGS TAIWAN		13 38 34.8, 23.5N, 121.6E, H = 33 Km, M = 4.6				
		LPB	ePKP	13 58 40				168.4
			eL	14 58				
		PNS	PKP	13 58 41.0		1.2	8	
DEC	9	TRJ	iP	16 37 08.6				7.7
		LPB	eP	16 37 57.5				
		PNS	eP	16 38 09.8		0.6	3	
			S	39 36.7				
DEC	9	LPB	eP	16 42 14.5				
		PNS	eP	16 42 29.6				
		SCS	eP	16 42 38.9				
DEC	9	SCS	p	19 42 27.6				6.5
		PNS	p	19 42 41.7				
			eS	43 55.8				
DEC	9	USCGS UNIMAK ISLAND REGION		22 11 12.9, 53.8N, 163.2W, H = 14 Km, M = 4.3				
		PNS	eL	23 01.2				106.1



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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	9	PNS	P	22 41 48.5		0.6	7	1.8
			S	42 11				
DEC	9	USCGS SOLOMON ISLANDS		02 08 30.0, 11.4S, 162.2E, H = 45 Km, M = 5.3				
		PNS	ePKP	02 27 22.8		1.1	5	
			SS	45 50				
			eL	03 06.8				
		LPB	ePKP	02 27 23				121.3
			eL	03 06.7				
DEC	9	USCGS		03 42 04.0, 30.3S, 71.7W, H = 67 Km, M = 4.3				
				NEAR COAST OF CENTRAL CHILE				
		PNS	eP	03 45 20				
		LPB	eP	03 45 22				13.8
DEC	10	PNS	p	06 24 06.9				1.9
			S	30.2				
DEC	10	PNS	p	08 15 46				
DEC	10	TRJ	iP	10 46 45.0				
DEC	10	TRJ	iP	10 49 20.3				2.8
			S	52.9				
		LPB	eP	10 49 44				
		PNS	p	10 49 50.6		0.5	6	
DEC	10	USCGS IRAN		10 52 52.1, 36.0N, 53.6E, H = 51 Km, M = 5.0				
		PNS	ePKP	11 12 01.4				
			eSS	31 18				
			eL	54.9				
		LPB	ePKP	11 12 02				128.2
			eL	55				
DEC	10	PNS	p	11 27 04.8		0.8	7	
DEC	10	USCGS		12 06 50.3, 40.5N, 24.6W, H = 5 Km, M = 5.3				
				NEAR COAST OF NORTHERN CALIFORNIA				
		PNS	p	12 18 45.8		1.6	80	
			S	28 36				
			eSS	33 38				
			eG	38.6				
			Le	43.4				
		LPB	p	12 18 47				76.9
			eS	28 39				
			eL	44				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC		CCH	P	12 18 55.7				
		TRJ	P	12 18 18.8				
DEC	10	PNS	P	14 32 05.9		0.5	2	
DEC	10	PNS	P eS	14 46 54.7 47 18		0.5	8	1.9
DEC	10	PNS	eP	15 06 53				
DEC	10	LPB	P	15 41 41				2.3
			S	42 08.5				
		PNS	iP	15 41 45.4	D			2.3
			S	42 12				
DEC	10	USCGS EASTERN KAZAH SSR		15 34 53.0, 46.3N, 31.9E, H = 48 Km, M = 4.8				
		PNS	ePKP	15 54 24.6				141.2
			eL	16 41.9				
DEC	10	PNS	iP	15 58 11.2	C	0.6	6	3.4
			S	51.5				
		CCH	P	15 58 56.6				
DEC	10	USCGS BUMA		18 43 34.4, 22.5N, 94.8E, H = 158 Km, M = 5.2				
		PNS	ePKP	19 03 16.5				
			eL	20 01.5				
DEC	10	USCGS NEW MEXICO		19 30 00.1, 36.7N, 107.2W, M = 5.1				
		PNS	eP	19 40 24.6				64.6
DEC	10	PNS	iP	20 00 21.9	D			2.5
			S	52.4				
		LPB	iP	20 00 22	D	1.0	140	2.5
			S	51.6				
		CCH	P	20 00 26.9	D			
DEC	10	LPB	eP	21 18 17.5		0.5	3	28.0
		PNS	eP	21 18 18.2				
			S	22 58				
			L	26.1				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	10	LPB	eP	21 46 44				
		PNS	P	21 46 47.0		0.8	8	5.9
			S	47 54				
DEC	10	LPB	eP	22 47 06				
		PNS	P	22 47 09.0		0.6	3	
DEC	10	USCGS INDIA		22 51 24.3, 17.7N, 73.9E, H = 33 Km, M = 6.5				
		PNS	ePKP	23 10 53.6		1.6	150	
			PKS	14 28				
			SKS	18 09				
			PPS	26 55				
			SS	33 00				
			G	50.9				
			eL	00 00				
		CCH	ePKP	23 10 46.9				
		LPB	ePKP	23 10 56		1.4	94	144.0
			PKP2	11 02				
			eSKS	18 11				
			PPS	26 44				
			eSS	26 44				
			eL	00 00				
DEC	10	LPB	eP	23 27 17				
		PNS	P	23 27 21.2		1.0	8	
DEC	10	PNS	iP	23 47 37.0	C			4.0
			S	48 24				
		LPB	P	23 47 42		1.2	46	
		CCH	eP	23 48 05.7				
DEC	10	USCGS INDIAN		23 52 17.0, 17.4N, 73.7E, H = 33 Km, M = 5.0				
		LPB	ePKP	00 11 51				143.6
		PNS	ePKP	00 11 51.6				
DEC	11	USCGS		04 27 22.0, 13.7S, 69.8W, H = 70 Km, M = 4.4				
				PERU-BOLIVIA BOR REG				
		PNS	iP	04 28 05.8	C			
		LPB	iP	04 28 11	C	1.0	100	2.4
			iS	59.5				
		CCH	P	04 28 31.5				
		TRJ	P	04 29 27.9				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	11	TRJ	eP	05 28 06.5				
		PNS	eP	05 27 57.8		1.2	9	
			eL	06 02				
DEC	11	PNS	eP	05 50 45				56.3
			eS	52 07				
DEC	11	PNS	eP	06 30 25				7.2
			eS	31 46				
		LPB	eP	06 30 27				
DEC	11	TRJ	iP	06 38 58.8	C			2.6
			S	39 29.4				
DEC	11	LPB	eP	07 02 56.5				
		PNS	eP	07 02 57.4				
DEC	11	USCGS		07 07 57.0, 25.5S, 71.4W, H = 33 Km, M = 4.5				
				OFF COAST OF NORTHERN CHILE				
		TRJ	P	07 09 41.0				
		LPB	eP	07 10 15.5			9.4	
		PNS	P	07 10 16.0		0.3	4	
DEC	11	LPB	P	07 10 17				
		PNS	P	07 10 34		0.8	9	
			iP	41.8				
			eL	33.9				
DEC	11	PNS	eP	08 55 43				
DEC	11	USCGS		11 19 47.6, 22.7S, 68.8W, H = 99 Km, M = 3.6				
				NORTHERN CHILE				
		TRJ	iP	11 20 47.4	C			
		CCH	P	11 21 12.1				
		LPB	eP	11 21 19			6.2	
		PNS	P	11 21 21.3		0.8	16	
			iPg	38				
			S	22 13.4				
DEC	11	PNS	P	11 36 33.6		0.9	21	2.2
			S	37 00				
		LPB	eP	11 36 39				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	11	LPB	P	12 09 14.4			1.0	14
		PNS	e(P)	12 09 21				
DEC	11	USCGS		14 16 07.1, 5.5S, 77.7W, H = 118 Km, M = 4.7				
				NORTHERN PERU				
		PNS	P	14 19 22.1			1.4	16
			i	28.0				
			S	22 59.8				
DEC	11	PNS	eP	14 35 33				
DEC	11	LPB	eP	15 16 05.5				
		PNS	P	15 16 06.4		0.8	6	
DEC	11	USCGS		15 18 17.0, 41.2S, 10.7W, H = 33 Km, M = 4.5				
				SOUTHERN PACIFIC OCEAN				
		LPB	eP	15 24 37				31.5
			L	33.5				
		PNS	P	15 24 38.1		1.1	37	
			iP	48.0				
			L	33.5				
DEC	11	PNS	iP	16 13 04.5	D			1.9
			iS	28				
		LPB	iP	16 13 06.6				2.3
			S	33.2				
DEC	11	USCGS		16 18 26.3, 5.2S, 152.7E, H = 54 Km, M = 5.1				
				NEW BRITAIN REGION				
		LPB	ePKP	16 37 34				133.4
		PNS	ePKP	16 37 38				
			eL	17 21.7				
DEC	11	USCGS		19 40 53.3, 20.6S, 174.3W, H = 33 Km, M = 5.3				
				TONGA ISLANDS				
		PNS	eP	19 54 29				
			S	20 05 21				
			L	20 27.3				
		LPB	eP	19 54 30				98.4
			eS	20 05 22				
			eL	27.2				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	11	LPB PNS	eP eP	20 01 49 20 01 49.3				
DEC	11	USCGS EASTERN GULF OF ADEN		19 43 43.3, 13.7N, 51.6E, H = 33 Km, M = 5.2				
		PNS	ePKP eSS eL	20 07 3 ± 3 25 55 46.7				
		LPB	eL	20 46.6			122.0	
DEC	11	PNS	p iPn eS	20 30 12.1 19.3 30 55		0.7	10	2.8
		LPB	P S	20 30 24.4 31 04.2		0.6	11	3.4
DEC	11	USCGS INDIAN		20 49 48.5, 17.3N, 73.7E, H = 11 Km, M = 5.2				
		LPB	ePKP eL	21 09 23 58				143.3
		PNS	ePKP eL	21 09 24.7 57.8				
DEC	11	LPB PNS	eP P	21 20 11 21 20 12.3		0.6	6	
DEC	11	PNS	eP	21 37 01.3				
DEC	11	PNS LPB	eP eP	21 59 24 21 59 24.5		0.7	7	
DEC	11	USCGS EASTERN GULF OF ADEN		22 30 18.3, 13.6N, 51.6E, H = 33 Km, M = 5.6				
		LPB	ePKP eSS eL	22 49 14 23 07 28 28				122.0
		PNS	ePKP pPKP eSS eL	22 49 14.1 23 32 23 07 32 23 28.1		1.0	5	
DEC	11	USCGS GOUTHERN SUMATRA		22 33 01.9, 5.3S, 102.5E, H = 93 Km, M = 4.7				
		LPB	ePKP eL	22 52 43 23 47				
		PNS	L	23 46.9				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	12	TRJ	iP S	00 48 01.5 31.8	D			2.5
DEC	12	LPB TRJ PNS	eP eP eP	02 30 19 02 30 21.0 02 30 24				
DEC	12	LPB PNS	eP eP eS	03 26 25 03 26 36.6 29 06				13.4
DEC	12	LPB PNS	eP eP	03 41 41.5 03 41 42		1.1	7	
DEC	12	PNS	P S	04 14 07.7 30		0.8	81	1.8
DEC	12	LPB	eP	04 14 09				
DEC	12	TRJ LPB PNS	P eP S P S	04 40 41.0 04 40 59.5 41 09.4 04 41 01.6 50		0.9 0.6	8 4	0.7 4.1
DEC	12	USCGS NEW BRITAIN REGION		04 24 42.3, 5.2S, 152.8E, H = 54 Km, M = 4.9				
		LPB	ePKP PKS	04 43 54 47 29.3				133.4
		PNS	ePKP PKS L	04 43 55.1 47 29 28.2		1.8	87	
DEC	12	USCGS NEW BRITAIN REGION		04 35 28.0, 5.1S, 152.4E, H = 58 Km, M = 4.8				
		PNS	ePKP	04 54 47.2				134.0
DEC	12	USCGS INDIAN		06 18 37.9, 17.6N, 73.9E, H = 29 Km, M = 5.4				
		TRJ PNS	ePKP ePKP eL	06 37 57.8 06 36 11 07 27.2		1.5	21	
		LPB	ePKP eL	06 38 11.5 07 27				144.6



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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	12	USCGS		07 52 29.3	17.5N, 95.3W	H = 84 Km, M = 4.1		
								OAXACA, MEXICO
DEC	11	PNS	P	08 00 23.0		1.0	5	
			eL	12.9				
		LPB	eP	08 00 24		0.8	4	42.5
			eL	13				
DEC	12	USCGS		08 06 16.7	22.7S, 171.1E	H = 39 Km, M = 4.9		
								JOVIALTS ISLANDS REGION
DEC	11	LPB	ePKP	08 24 46.5				109.8
			eL	58				
		PNS	eSS	08 45 56				
			eL	08 58.3				
DEC	12	LPB	eP	09 48 52.5				
		PNS	eP	09 48 58				
DEC	12	USCGS		10 10 34.6	23.8N, 123.3E	H = 46 Km, M = 4.7		
								SOUTHWESTERN RYUKYU ISLANDS
DEC	11	PNS	PKP	10 30 40.0		1.3	7	
			eL	11 29.5				
DEC	11	LPB	ePKP	10 30 41				166.8
			eL	11 30				
DEC	12	USCGS		11 08 11.5	5.2S, 162.9E	H = 52 Km, M = 4.4		
								NEW BRITAIN REGION
DEC	11	PNS	ePKP	11 27 28.7		1.6	15	
DEC	11	LPB	eL	12 11.6				133.3
DEC	12	LPB	eP	12 00 14.5				
		PNS	P	12 00 14.8		0.8	8	
		TRJ	P	12 00 31.7				
DEC	12	USCGS		15 48 55.5	17.4N, 73.9E	H = 27 Km, M = 5.0		
								INDIAN
DEC	11	PNSH	ePKP	16 08 29.6		1.0	12	
			eSS	30 27				
			eL	57				
DEC	11	LPB	ePKP	16 08 30.7		1.0	12	143.7
			eL	57				
DEC	11	LPB	ePKP	23 47 10				
			eL	23 46.9				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	12	USCGS		17 26 30.0	27.5N, 44.4W	H = 33 Km, M = 4.6		
								NORTH ATLANTIC RIDGE
DEC	11	LPB	eP	17 35 18.5		1.1	17	49.4
			eL	49				
		PNS	P	17 35 18.8		0.8	8	
			eL	50.3				
DEC	12	PNS	iP	17 53 30.2		0.6	8	2.2
			S	56.2				
DEC	12	LPB	eP	19 34 08.2				
		PNS	eP	19 34 10.4				
DEC	12	PNS	eP	20 28 13.5				
DEC	12	LPB	eP	21 51 29				
		PNS	eP	21 51 36				
DEC	12	PNS	eP	22 37 07.2				3.5
			S	48				
DEC	12	PNS	eP	22 55 51.2		0.6	3	136.8
DEC	12	LPB	eP	22 57 51				
		PNS	eP	22 58 04				
DEC	13	LPB	eP	05 24 59.2		0.5	10	
DEC	13	PNS	P	05 38 13.1		0.8	4	
		LPB	eP	05 38 13.8		0.8	13	
		CCH	P	05 38 15.6				
DEC	13	LPB	eP	07 30 42.5		0.7	4	
DEC	13	TRJ	P	08 43 02.3				13.5
		CCH	P	08 43 37.1				
		PNS	eP	08 43 44.4				
		LPB	eP	08 43 45				
DEC	13	TRJ	iP	09 00 33.5				



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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	13	USCGS KURILE ISLANDS		10 38 23.4, 47.6N, 152.6E, H = 124 Km, M = 5.5				
		PNS	PKP	10 57 28.5		1.2	19	
			i	58 03.7				
			eSS	11 12 53				
			eL	12				
		LPB	ePKP	10 57 29		1.5	33	134.4
			ePKS	11 00 45.5				
			eSS	17 46				
			eL	42				
		TRJ	ePKP	10 57 29.8				
DEC	13	USCGS KURILE ISLANDS		10 58 21.6, 49.4N, 154.5E, H = 138 Km, M = 5.1				
		PNS	ePKP	11 17 21		1.4	19	
			eL	12 01.1				
		LPB	ePKP	11 17 22		1.2	34	132.8
			eL	12 01				
		TRJ	ePKP	11 17 28.7				
DEC	13	USCGS MINDANAO, PHILIPPINE ISLANDS		15 36 00.7, 5.3N, 125.9E, H = 108 Km, M = 5.4				
		LPB	ePKP	15 55 52				162.0
			eL	53				
		PNS	ePKP	15 55 53.6		1.3	14	
			eL	16 52.9				
DEC	13	PNS	P	16 16 21.6		1.2	15	
		LPB	P	16 16 21.8		1.1	3	
DEC	13	LPB	eP	16 41 40				3.9
		PNS	eP	16 41 42				
			ipP	52.0				
			S	42 27.5				
DEC	13	USCGS SEA OF OKHOTSK		17 47 51.2, 47.1N, 145.7E, H = 312 Km, M = 4.8				
		PNS	ePKP	18 06 41.2				
			eP	09 39				139.6
		LPB	ePKP	18 06 41.5				
			eP	09 34				
			eL	53				
DEC	13	PNS	eP	19 22 05				

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From the ISC collection scanned by SISMOS

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	13	USCGS NEW HEBRIDES ISLANDS		19 07 14.4, 19.1S, 168.7E, H = 51 Km, M = 5.7				
		LPB	PS	19 36 38				113.5
			eL	20 00.2				
		PNS	ePKP	19 25 49.6		0.8	6	
			PS	36 24				
			eSS	42 30				
			L	20 01.2				
DEC	13	LPB	eP	19 36 40				
		PNS	eP	19 36 41.2		1.4	12	
DEC	13	PNS	iP	20 08 43.1	D			1.9
			S	09 06.5				
DEC	13	PNS	P	20 34 28.5	D	0.6	13	2.0
			S	53				
DEC	13	USCGS NEW BRITAIN REGION		20 48 02.2, 5.0S, 149.7E, H = 382 Km, M = 4.9				
		PNS	ePKP	21 06 32.3				
			e	42.6				
			PP	09 43				
			eL	52.1				
		LPB	ePKP	21 06 33.5				136.8
			i	44.8				
			PP	09 44.8				
			eL	52				
DEC	13	LPB	eP	21 53 11				
		PNS	eP	21 53 12.5				
DEC	13	USCGS VANCAUVER ISLANDS REGION		22 20 39.0, 50.1N, 129.6W, H = 33 Km, M = 4.1				
		PNS	eP	22 23 12.5				
			eL	23 01.4				
		LPB	eL	23 01				85.4
DEC	13	LPB	eP	23 51 40.5				13.5
			S	54 10.3				
DEC	14	PNS	eP	00 17 54				
		LPB	P	00 17 59.5		0.8	28	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	14	LPB	eP	00 31 23.5		0.8	13	
DEC	14	LPB	P	01 25 25.6		1.1	21	
		PNS	P	00 25 28.1		0.9	9	
DEC	14	LPB	ePKP	02 39 27				124.0
			eL	03 19.6				
		PNS	ePKP	02 39 28.6				
			eL	03 19.5				
DEC	14	USCGS		03 20 47.8, 24.0S, 69.3W, H = 53 Km, M = 5.1				
				NORTHERN CHILE				
		CCH	eP	03 22 32.4				
			i	34.7				
		LPB	eP	03 22 40.7		1.2	50	7.3
			i	47.2				
			pp	55				
			eS	24 04				
		PNS	P	03 22 41.0		1.2	39	
			ipp	49				
			S	24 10				
DEC	14	PNS	iP	03 31 26.1	C	0.6	13	2.3
			S	53.6				
DEC	14	CCH	P	04 28 02.5				3.2
		LPB	P	04 28 11.7				
			S	50				
		PNS	eP	04 28 17				3.2
			S	54.8				
DEC	14	CCH	iP	04 43 14.2	C			
		LPB	iP	04 43 24.7	C	1.3	46	3.2
			S	44 01.9				
		PNS	iP	04 43 28.8	C	0.8	35	3.4
			S	44 09				
DEC	14	LPB	eP	04 56 36.5				
		PNS	e(P)	04 56 46				
DEC	14	LPB	eP	05 33 36				
		PNS	P	05 33 39.6		0.8	3	
DEC	14	PNS	P	06 09 06.4		0.7	6	2.7
			S	38.8				
		LPB	eP	06 09 09				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	14	PNS	P	06 18 40.3		0.6	3	
DEC	14	LPB	iP	10 42 03.5	D	0.8	16	3.9
			S	48.5				
		PNS	iP	10 42 07.4	D			4.1
			S	55				
		CCH	iP	10 42 52.0	D			
DEC	14	USCGS		11 25 38.0, 51.3N, 178.8W, H = 40 Km, M = 4.7				
				ANDREANOF ALEUTIAN ISLANDS				
		PNS	eL	13 20.5				
		LPB	eL	13 21				115.2
DEC	14	PNS	eP	12 55 28				
DEC	14	LPB	P	12 57 33.2		0.7	29	
DEC	14	USCGS		14 39 34.8, 14.9S, 166.3E, H = 18 Km, M = 5.0				
				NEW HEBRIDES ISLANDS				
		PNS	ePKP	14 58 21.2				
		LPB	ePKP	14 58 22				117.1
			eL	15 35				
DEC	14	LPB	iP	15 01 55.7	C	0.9	95	6.2
			S	03 06.8				
		CCH	P	15 01 38.5	D			
		PNS	iP	15 01 59.4	C			5.9
			S	03 16.5				
DEC	14	LPB	eP	15 12 21.5		0.8	6	
		CCH	eP	15 12 35.1				
		PNS	eP	15 12 46				
DEC	14	CCH	eP	16 11 27.3				
		PNS	P	16 11 29.3		0.8	22	
		LPB	eP	16 11 20.5		0.8	16	
DEC	14	LPB	eP	16 40 01				
		PNS	eP	16 40 04.8		0.5	5	
DEC	14	PNS	eP	17 27 53.1				
DEC	14	USCGS		18 25 16.6, 54.6N, 160.4E, H = 33 Km, M = 5.5				
				NEAR EAST COAST OF KAMCHATKA				
		CCH	eP	18 44 12.3				
		PNS	ePKP	18 44 17.5		0.3	7	
			eL	19 25.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	14	LPB	ePKP eL	18 44 18 19 26				126.9
DEC	14	USCGS		19 15 21.0, 38.2N, 91.3E, H = 33 Km, M = 5.4				
				TRINGHAR PROVINCE, CHINA				
DEC	14	LPB	ePKP eL	19 35 09 20 27.4		0.9	2	151.5
DEC	14	USCGS		20 27 49.0, 26.1S, 176.2W, H = 112 Km, M = 4.9				
				SOUTH OF FIJI ISLANDS				
DEC	14	LPB	eL	21 14				98.0
DEC	14	PNS	eL	21 14				
DEC	14	LPB	eP	21 40 09		0.6	5	
DEC	14	PNS	eP	21 40 09.1				
DEC	14	PNS	eP	21 49 35.6		0.8	6	
DEC	14	PNS	eP	21 53 36.9		0.7	5	
DEC	14	LPB	eP	21 53 38		1.0	16	
DEC	14	USCGS		21 58 55.0, 4.0S, 68.4E, H = 33 Km, M = 4.9				
				CHAGOS ARCHIPIELAGO REGION				
DEC	14	PNS	L	23 02.9				132.8
DEC	14	LPB	eL	23 03				
DEC	14	USCGS		23 22 25.7, 32.2N, 137.6E, H = 341 Km, M = 4.4				
				SOUTH OF HONSHU, JAPAN				
DEC	14	PNS	ePKP ipPKP eL	23 41 36.4 44.8 24 33.6		0.8	11	
DEC	14	LPB	ePKP eL	23 41 43 24 33				151.6
DEC	14	USCGS		23 26 39.7, 5.1S, 151.2E, H = 150 Km, M = 5.1				
				NEW BRITAIN REGION				
DEC	14	LPB	ePKP ePKS	23 45 29 49 06				135.4
DEC	14	PNS	ePKP ePKS	23 45 33.5 49 05				
DEC	15	PNS	P S	00 01 53.1 02 15.5		0.8	8	1.8

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	15	USCGS		01 43 22.3, 16.6N, 98.3W, H = 33 Km, M = 4.0				
				NEAR COAST GUERRERO, MEXICO				
DEC	15	LPB	eP eL	01 51 21 02 05				43.1
DEC	15	PNS	eP	02 04 27				
DEC	15	LPB	eP	03 42 11		0.9	5	
DEC	15	USCGS		06 01 33.0, 27.9S, 175.7W, H = 29 Km, M = 4.8				
				KERMADEC ISLANDS				
DEC	15	LPB	eL	06 47				97.1
DEC	15	PNS	eL	06 47.3				
DEC	15	LPB	eP	06 24 29.5		0.8	7	
DEC	15	PNS	eP	06 24 37				
DEC	15	LPB	eP	07 02 07				
DEC	15	PNS	eP	07 02 03.2				
DEC	15	CCH	P S	08 15 32.6 16 53.1				7.1
DEC	15	LPB	eP	08 15 41.5		0.9	19	
DEC	15	PNS	P	08 15 44.0		0.8	9	7.1
DEC	15	LPB	ipg	16 21.0				
DEC	15	PNS	S	17 04				
DEC	15	PNS	eP	10 13 42.4				8.4
DEC	15	PNS	S	15 17				
DEC	15	PNS	P	11 51 28.3		0.4	4	
DEC	15	PNS	ip	12 40 26.4		D		2.3
DEC	15	PNS	is	53.9				
DEC	15	LPB	eP	14 01 30				
DEC	15	PNS	eP	14 01 36				
DEC	15	PNS	eP S	14 57 45.6 58 09				1.9



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	15	PNS	iP	15 42 22.2	C			2.3
			S	49.8				
		LPB	iP	15 42 25		0.7	32	2.5
			S	55				
DEC	15	PNS	eP	16 02 52				
DEC	15	PNS	P	17 31 23.5	D	0.5	6	2.4
			S	52.9				
DEC	15	CCH	iP	18 20 43.1	C			
		LPB	P	18 20 53.5		0.8	15	3.2
			S	21 31.2				
		PNS	iP	18 20 57.0	C	0.5	10	3.4
			S	21 37.5				
DEC	15	USCGS		19 39 06.3, 11.4S, 163.2E, H = 37 Km, M = 5.2				
		SOLOMON ISLANDS						
		LPB	ePKP	19 57 56				121.
			eL	20 37				
		PNS	ePKP	19 57 59.3		1.0	6	
			eL	20 36.8				
DEC	15	USCGS		19 47 13.5, 29.1S, 177.6W, H = 61 Km, M = 5.3				
		KERMADEC ISLANDS REGION						
		LPB	eP	20 00 40				97.
			eL	33.5				
		PNS	eP	20 00 42.3		0.9	3	
			i	01 01.8				
			eL	33.4				
DEC	15	PNS	eP	22 07 43				
		LPB	eP	22 04 49				
DEC	15	LPB	eP	22 29 44				
		PNS	eP	22 29 44.4		0.8	4	
DEC	15	PNS	eP	23 05 01		0.5	3	5.7
			S	06 06				
		LPB	eP	23 05 05.5				
DEC	16	LPB	eP	00 02 18				
		PNS	P	00 02 24.4		0.8	5	
DEC	16	LPB	eP	02 02 43.5				
		PNS	P	02 02 44.5				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	16	USCGS		03 18 13.4, 2.9S, 77.0W, H = 121 Km, M = 5.0				
		PERU ECUADOR BOR REGION						
		CCH	P	03 23 10.8				
			i	16.1				
		PNS	P	03 22 47.9		1.0	13	
			i	54.6				
			PcP	28 04				
		LPB	P	03 22 52.7		1.0	20	15.7
			eL	26.9				
DEC	16	PNS	P	05 14 17.1		1.1	10	
			eL	40.9				
		LPB	P	05 14 19		1.0	8	
			eL	40				
DEC	16	LPB	P	06 37 01.3				
		PNS	P	06 37 04.6	D	0.8	19	4.3
			S	54.8				
DEC	16	PNS	eP	06 58 12.6				
		LPB	eP	06 58 16.8		0.9	7	
DEC	16	LPB	P	07 03 33		0.7	8	5.0
			S	04 29.6				
DEC	16	PNS	eP	08 03 30.6				
			eL	35.5				
		LPB	eP	08 03 32				
			eL	36				
DEC	16	USCGS		09 20 12.0, 7.8S, 81.5W, H = 27 Km, M = 4.1				
		OFF COAST OF NORTHERN PERU						
		PNS	P	09 23 48.0		1.2	10	
			eL	27.9				
		LPB	eP	09 23 54				15.3
			eL	28				
DEC	16	LPB	eP	11 00 15				
			eL	35				
		PNS	eP	11 00 15.9				
			e	24				
			eL	35.4				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	16	USCGS JUJUY, PROVINCE ARGENTINA		11 46 41.0, 23.9S, 66.7W, H = 200 Km, M = 4.4				
		CCH	P	11 48 14.8				
		LPB	P	11 48 30.2		0.8	19	7.1
			S	11 48 49 58.7				
		PNS	P	11 48 33.5		0.7	14	
			eS	11 48 49 58				
DEC	16	LPB	eP	14 59 29.5				
		PNS	eP	14 50 32		0.8	4	
DEC	16	USCGS SAN JUAN PROVINCE ARGENTINA		15 01 19.9, 31.7S, 69.7W, H = 105 Km, M = 4.5				
		CCH	eP	15 04 38.7				
		LPB	eP	15 04 50.4		1.0	74	14.7
			eL	15 04 08.8				
		PNS	P	15 04 52.9		1.0	52	
DEC	16	PNS	P	16 37 38.3		0.8	61	3.1
			eS	16 38 14.8				
DEC	16	USCGS NEAR E COAST HONSHU, JAPAN		19 44 16.0, 35.8N, 140.7E, H = 45 Km, M = 4.1				
		PNS	ePKP	20 03 56.7		0.9	8	
			eL	20 03 54.6				148.0
		LPB	ePKP	20 03 59				
			eL	20 04 54				
		CCH	ePKP	20 04 06.8				
DEC	16	USCGS NEAR EAST COAST OF KAMCHATKA		20 53 58.3, 51.2N, 157.7E, H = 24 Km, M = 5.5				
		PNS	PKP	21 13 07.4		1.7	77	
			PKS	21 18 32				
			SS	21 32 43				
			eL	21 55.5				
		LPB	PKP	21 13 08		1.7	13	129.6
			PP	21 15 40.2				
			ePS	21 25 41				
			eSS	21 32 42				
			eL	21 56				
		CCH	PKP	21 13 08.3				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	18	PNS	eP	04 49 00				1.2
			eS	04 49 14.6				
		CCH	eP	04 49 38.0				
DEC	18	USCGS LOYALTY ISLANDS REGION		06 24 19.7, 22.4S, 170.8E, H = 34 Km, M = 4.8				
		PNS	ePKP	06 42 51.8				
			eL	06 42 17.1				110.5
		LPB	ePKP	06 42 52				
DEC	18	CCH	iP	09 18 04.6				
		LPB	P	09 18 12.3		0.7	17	2.4
			S	09 18 41.5				
		PNS	P	09 18 18.7		0.6	4	2.9
			S	09 18 52.3				
DEC	18	USCGS SOUTH OF MARIAN ISLANDS		10 21 54.7, 12.0N, 143.8E, H = 39 Km, M = 5.3				
		PNS	ePKP	10 41 36.4		1.4	28	
			eL	10 41 32.5				
		LPB	ePKP	10 41 40		1.3	27	148.5
			eL	10 41 33				
DEC	18	USCGS MARIANA ISLANDS		10 30 41.0, 13.2N, 145.0E, H = 99 Km, M = 4.8				
		LPB	ePKP	10 50 12				147.6
			eL	10 50 11				
		PNS	ePKP	10 50 13.6				
			eL	10 50 40.7				
DEC	18	USCGS NEPAL		10 51 34.8, 29.1N, 81.9E, H = 42 Km, M = 5.2				
		PNS	ePKP	11 11 20		0.9	6	
			eL	11 11 02.8				
		LPB	ePKP	11 11 24.5				149.9
			eL	11 11 03				
DEC	18	USCGS SOUTH OF MARIANA ISLANDS		14 04 19.5, 12.1N, 143.6E, H = 12 Km, M = 5.5				
		PNS	PKP	14 24 06.8		1.2	25	
			eL	14 24 15				
		LPB	ePKP	14 24 08		1.3	95	148.5
			eL	14 24 15				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	18	USCGS EASTERN CHINA	14 07	40.0, 36.2N, 111.7E, H = 33 Km, M = 4.9				
		LPB	ePKP	14 27 43				160.1
			eL	15 24				
		PNS	eL	15 23.7				
DEC	18	PNS	P	17 32 42.6		0.7	8	
DEC	18	USCGS CENTRAL CALIFORNIA	17 24	31.9, 37.0N, 121.8W, H = 11 Km, M = 5.2				
		LPB	eP	17 36 06		1.0	20	73.5
			eL	5 1.8				
DEC	18	LPB	eP	18 29 11.5		0.8	13	
		PNS	eP	18 29 12.8		0.5	3	
DEC	18	PNS	P	19 24 16.2		1.1	7	
DEC	18	LPB	eP	20 43 48.5				
			e	44 20.5				
DEC	18	LPB	eP	22 42 55		0.8	10	
DEC	18	PNS	eP	22 45 00.6		0.5	5	4.4
			S	51.8				
		LPB	P	22 45 05.8		0.8	19	4.2
			S	54.7				
DEC	18	USCGS IRAN IRAG BOR REG	22 49	27.6, 33.6N, 46.9E, H = 39 Km, M = 5.0				
		LPB	eL	23 46				119.7
		PNS	eL	23 46.5				
DEC	19	LPB	eP	01 46 57		0.7	4	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	16	PNS	P	21 28 52.0	C			2.6
			S	29 23.2				
		LPB	eP	21 23 57				3.1
			S	29 32.6				
DEC	16	USCGS CHILE-BOLIVIA BOR REG	22 2	42.0, 21.5S, 67.0W, H = 230 Km, M = 4.4				
		CCH	iP	22 30 49.0	D			
		LPB	iP	22 31 00.3	C	0.8	345	5.2
			S	32 04				
		PNS	iP	22 31 04.0	C			
			S	32 06				
DEC	16	PNS	P	22 52 16.5	D			1.9
			S	40				
		LPB	iP	22 52 18.0				
		CCH	P	22 52 35.2				
DEC	17	PNS	eP	00 40 13.5				
DEC	17	USCGS AFGHANISTAN USSR BOR REG	00 25	15.1, 36.5N, 71.4E, H = 82 Km, M = 5.2				
		PNS	ePKP	00 44 34.9		0.9	4	
			eL	01 31				
		LPB	ePKP	00 45 28				139.0
			eL	01 31				
DEC	17	PNS	eP	01 37 43				
DEC	17	PNS	iP	02 34 57.5	C			2.2
			S	35 24				
		LPB	P	02 35 01		0.8	12	2.6
			S	31.8				
DEC	17	LPB	eP	04 30 50		0.9	15	
		PNS	eP	04 30 50.2		0.7	3	
		CCH	P	04 30 53.3				
DEC	17	LPB	eP	04 57 41.6				
DEC	17	CCH	P	06 14 19.3				
		LPB	P	06 14 23.3		1.0	24	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	17	LPB	eP	06 27 42				3.5
			eS	28 23.5				
DEC	18	PNS	iP	06 27 49.3				2.8
			eS	28 22.3				
DEC	17	PNS	eP	09 54 05				160.1
		LPB	eP	09 54 06.5				
DEC	17	USCGS		10 56 48.0,				
				20.5S, 168.9E, H = 32 Km,				
				LOYALTY ISLANDS				
DEC	18	LPB	ePKP	11 15 23.5				113.0
			eL	31 50 50				
DEC	17	PNS	eP	14 17 54				73.5
DEC	17	LPB	eP	16 06 24				
		PNS	eP	16 06 28.7		0.7	3	
DEC	17	USCGS		15 58 24.2, 11.5N,				
				125.8E, H = 43 Km, M = 5.3				
				SAMAR PHILIPPINE ISLANDS				
		PNS	ePKP	16 18 27.8		1.4	16	
			eL	17 16.3				
		LPB	ePKP	16 18 29		1.3	19	165.5
			eL	42				
DEC	17	USCGS		16 03 26.9, 11.6N,				
				125.9E, H = 3 Km, M = 5.3				
				SAMAR, PHILIPPINE ISLANDS				
		PNS	PKP	16 23 36.5		1.1	8	
			eL	17 11.9				
		LPB	ePKP	16 23 37				165.5
			eL	17 11				
DEC	17	LPB	eP	16 46 53				
		PNS	eP	16 47 05.7				4.0
			S	28 53				
DEC	17	LPB	eP	19 40 07				
			eSS	57 44				
			eL	20 16				
		PNS	eP	19 40 07.8				
			eL	20 16.1				
DEC	17	CCH	P	20 15 38.1				
		LPB	eP	20 15 45.5				
		PNS	P	20 15 51.5		0.9	5	1.9
			S	16 15				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	19	USCGS		03 23 40.6, 37.3,				
				72.0E, H = 39 Km, M = 5.5				
				TADNIK SSP				
		LPB	ePKP	03 43 03.8				137.7
			ePKP	47 26				
DEC	19	PNS	ePKP	03 43 05.4				
			eL	34 20.2				
DEC	19	PNS	P	04 06 36.1				
DEC	19	LPB	eP	05 21 06.5				
			eL	37.6				
DEC	19	PNS	eL	37.8				
DEC	19	USCGS		05 55 41.0, 29.1N,				
				139.8E, H = 363 Km, M = 4.3				
				SOUTH OF HONSHU, JAPAN				
		LPB	ePKP	06 14 40				151.1
			eL	07 06				
		PNS	ePKP	06 14 52				
DEC	19	LPB	eP	07 00 14				2.2
			eS	40.3				
			iP	07 00 14.9				1.9
			S	37.6				
DEC	19	PNS	P	07 40 50.8				
DEC	19	USCGS		08 42 20.7, 28.5S,				
				71.0W, H = 18 Km, M = 5.3				
				NEAR COAST OF CENTRAL CHILE				
		LPB	eP	08 45 06				12.1
			vp	24.6				
			L	42.4				
		PNS	eP	08 45 20				
			i	11 26.7				
			pp	35.4				
			S	47 33				
			L	48.6				
DEC	19	LPB	eP	10 03 11.5				
		PNS	eP	10 03 14.8				
DEC	19	USCGS		14 14 42.0, 16.1S,				
				75.1W, H = 47 Km, M = 4.4				
				OFF COAST OF PERU				
		PNS	P	14 16 19.1				1.2
			S	17 35				
			eL	18 00				
		LPB	eP	14 16 23				1.2
			S	17 40				6.4
DEC	19	PNS	eP	15 14 01				
		LPB	eP	15 14 02				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	19	USCGS	22 01	39.8, 5.6N, 78.1W, H = 33 Km, M = 4.7				
				SOUTH OF PANAMA				
		LPB	eL	22 16				29.3
		PNS	eL	22 16.1				
DEC	20	PNS	iP	01 56 13.4	D	0.5	22	
			S	37.6				
		LPB	P	01 56 15.6	C	0.8	16	
DEC	20	PNS	eP	02 40 31				
		LPB	eP	02 40 33.7				
DEC	20	PNS	P	04 11 02.5				
DEC	20	LPB	eP	05 04 12.5				
		PNS	P	05 04 13.9		0.7	2	
DEC	20	USCGS	05 45	30.0, 43.2N, 146.2E, H = 33 Km, M = 4.7				
				KURILE ISLANDS				
		PNS	ePKP	06 05 02		1.0	4	140.6
DEC	20	USCGS	06 10	57.4, 5.0S, 144.4E, H = 84 Km, M = 4.7				
				NEW GUINEA				
		LPB	ePKP	06 30 14				141.2
		PNS	ePKP	06 30 14		1.1	4	
			pPKP	42.4				
DEC	20	USCGS	08 48	52.3, 15.1S, 167.6E, H = 129 Km, M = 5.1				
				NEW HEBRIDES ISLANDS				
		PNS	ePKP	09 07 21				116.1
			eL	43.9				
DEC	20	USCGS	11 34	25.9, 11.8N, 93.0E, H = 61 Km, M = 5.4				
				ANDAMAN ISLANDS REGION				
		CCH	PKP	11 54 19.0				
		LPB	PKP	11 54 22.7		1.0	36	161.1
			eP	58 41.5				
			eL	12 50				
		PNS	PKP	11 54 22.8		1.0	17	
			eP	59 02.0				
			eL	12 50.9				

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From the ISC collection scanned by SISMOS

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	20	PNS	eP	13 17 55.4			0.8	4
DEC	20	PNS	P	13 29 57.4			0.5	3
DEC	20	PNS	iP	13 34 25.3			0.5	6
DEC	20	PNS	eP	15 17 34				
DEC	20	LPB	eP	15 40 03				
		PNS	eP	15 40 06.6				
DEC	20	LPB	P	16 02 51.5			1.0	36
		PNS	P	16 02 53.8			0.8	9
DEC	20	USCGS	16 49	05.0, 8.6N, 84.3W, H = 33 Km, M = 4.0				
				COAST OF COSTA RICA				
		LPB	eP	16 55 04				29.8
			eL	17 04				
		PNS	eP	16 55 05.4			1.2	5
DEC	20	LPB	eP	17 05 07.7				
		PNS	eP	17 05 08.6			0.4	1
			S	35				2.2
DEC	20	USCGS	17 07	49.1, 15.1S, 167.4E, H = 135 Km, M = 5.1				
				NEW HEBRIDES ISLANDS				
		LPB	ePKP	17 26 20				116.4
		PNS	ePKP	17 26 20			1.0	4
			eP	18 03				
DEC	20	CCH	P	17 42 03.6				
		LPB	eP	17 42 07			0.8	37
			eL	44.70				
		PNS	P	17 42 09.7			0.5	11
			L	44.5				
DEC	20	LPB	eP	19 56 31			1.0	38
			S	57 27				
		PNS	P	19 56 35.3			0.6	11
			S P	57 35				
DEC	20	PNS	iP	21 02 05.9	C		0.5	10
			S	03 14				
		LPB	P	21 02 11.7			0.9	29
DEC	20	PNS	eP	21 26 22.6				
		LPB	eP	21 26 24				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	20	PNS	eP	21 30 19.9				
DEC	20	PNS	eP	21 42 54				
			e(S)	44 51				
DEC	20	PNS	eP	21 47 17.4				
		LPB	eP	21 47 17.5	0.7		14	
DEC	20	PNS	P	22 24 00		1.2	3	
			e	26 21				
			CP	23 26				
			L	29.3				
		LPB	eP	22 24 01	0.9		12	
			L	28.8				
DEC	20	PNS	eP	22 49 49.4				
			eS	53 08.7				
			SS	54 14				
			L	55.1				
		LPB	eP	22 49 52				
			SS	54 22				
			eL	55				
DEC	21	USCGS	00 09 39.0, 42.1N, 20.7E, H = 19 Km, M = 4.7					100.0
			YUGOSLAVIA					
		LPB	eP	00 23 22				100.1
		PNS	eL	00 57.2				
DEC	21	PNS	eP	01 30 14.5	0.6		2	
DEC	21	USCGS	02 25 21.6, 21.8S, 70.0W, H = 33 Km, M = 7.0					5.1
			NEAR COAST OF NORTHERN CHILE					
		LPB	iP	02 26 50.5	C	1.7	1983	5.4
		PNS	P	02 26 52.0	C			
		CCH	P	02 26 52.2	C			
DEC	21	LPB	eP	02 50 03				5.4
		PNS	eP	02 50 04.8				
DEC	21	PNS	eP	03 00 53				5.4
DEC	21	PNS	P	03 06 02.9	0.5		3 17	5.4
			S	07 25				
DEC	21	PNS	P	03 07 52.0				6.4
			eS	09 05				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	21	PNS	eP	03 14 20.8				
DEC	21	PNS	eP	03 23 15				
		CCH	eP	03 23 20.2				
DEC	21	CCH	eP	03 29 43.2				
		PNS	eP	03 29 44.2	0.7	15	6	6.3
			eS	30 56				
DEC	21	PNS	eP	03 38 20.6	0.8	15	5	6.5
			S	39 34.4				
		LPB	P	03 38 21	0.9		19	
			i	35.3				
			e(S)	42 12.5				
		CCH	eP	03 38 24.7				
DEC	21	CCH	iP	03 46 13.2	C			
		LPB	P	03 46 44.5	0.9		12	2.5
			eS	47 14.7				
		PNS	P	03 46 52.9	1.0		6	2.7
			S	47 25				
DEC	21	CCH	eP	03 59 49.2				
		LPB	eP	03 59 53	1.1		27	6.0
			S	01 02				
		PNS	eP	03 59 53.5				6.3
			eS	04 01 05.3				
DEC	21	LPB	eP	04 03 50.5	1.1		250	6.2
			(S)	05 02				
		PNS	P	04 03 50.8	1.2		32	6.2
			S	05 01				
		CCH	eP	04 03 54.3				
DEC	21	LPB	eP	04 08 40				
		PNS	eP	04 08 40				
DEC	21	PNS	eP	04 15 57.4				8.6
			S	17 34.6				
		LPB	P	04 15 58.6	1.0		10	5.1
			S	17 30.5				
DEC	21	CCH	eP	04 16 00.9				
DEC	21	LPB	P	04 26 13.3	0.6		8	
DEC	21	LPB	e(P)	04 35 05.5				
		PNS	eP	04 35 08.5				
DEC	21	PNS	eP	04 39 48				6.0
			eS	41 03.2				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	20	LPB	eP	04 30 50.2		15		
DEC	21	LPB	eP	04 45 03		15		
		PNS	eP	04 45 05				
DEC	21	LPB	eP	04 49 25.7		12		
		PNS	eP	04 49 32.8		0.7	2	
DEC	21	LPB	eP	04 50 21		1.0	12	
		PNS	eP	04 50 25.5				8.3
			S	04 52 00				
DEC	21	LPB	eP	04 58 37				
			e	04 58 44				
		PNS	eP	04 58 43		0.9	5	
DEC	21	PNS	P	05 00 14.4		0.5	3	
DEC	21	LPB	eP	05 03 51		0.9	24	6.5
			S	05 05 05				
		PNS	eP	05 03 51.3				6.4
			S	05 05 04.6				
		CCH	eP	05 03 52.3				
DEC	21	LPB	P	05 08 58.7				6.4
			eS	05 10 11.5				
		PNS	P	05 08 59.4	C	0.8	6	6.6
			S	05 10 14.8				
		CCH	P	05 09 00.6				
DEC	21	LPB	P	05 17 03.4				
		PNS	eP	05 17 07.7				
DEC	21	USCGS		05 17 54.2, 18.0S, 69.3W, H = 158 Km, M = 4.3				
				NORTHERN CHILE				
		LPB	iP	05 18 28.8	D			1.7
		PNS	iP	05 18 29.2	D			
		CCH	iP	05 18 43.2	C			
DEC	21	PNS	eP	05 30 24.1				6.7
			S	05 31 40				
DEC	21	PNS	eP	05 32 24				6.6
			S	05 33 33.9				
		CCH	eP	05 32 34.2				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	21	PNS	eP	05 43 41.4		0.8	3	
DEC	21	LPB	eP	05 49 10				
		PNS	eP	05 49 11				
DEC	21	PNS	eP	06 05 00.6				6.2
			eS	06 06 12				
		LPB	eP	06 05 01		1.0	10	6.0
			eS	06 06 10.5				
		CCH	eP	06 05 04.9				
DEC	21	CCH	eP	06 10 13.9				
		LPB	eP	06 10 14.2		1.0	20	
			i	06 10 24				
		PNS	P	06 10 14.5		1.0	11	1.0
			eS	06 11 28				
DEC	21	LPB	eP	06 18 21		1.0	12	
		PNS	P	06 18 22.9				
DEC	21	LPB	eP	06 48 18				
DEC	21	LPB	eP	06 49 51.5		1.0	10	
		PNS	eP	06 49 51.5				
		CCH	eP	06 49 52.1				
DEC	21	LPB	P	06 52 18.7		0.9	12	6.1
			S	06 53 28.5				
		PNS	eP	06 52 18.8				6.6
			S	06 53 33.6				
		CCH	eP	06 52 21.3				
DEC	21	LPB	eP	07 05 38				
		PNS	eP	07 05 39.3				
DEC	21	LPB	eP	07 08 34.3				
		PNS	eP	07 08 36.9				
DEC	21	LPB	eP	07 20 37.2				
		PNS	eP	07 20 46				
DEC	21	PNS	eP	07 38 59				
		LPB	eP	07 39 00		1.0	8	
DEC	21	LPB	eP	07 50 10				
		PNS	iP	07 50 12.0	C	0.7	6	4.3

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	21	USCGS	07 50	34.8, 16.4S, 72.6W, H = 99 Km, M = 5.0				
				NEAR COAST FO PERU				
DEC	21	PNS	iP	07 51 37.0	C			
		LPB	iP	07 51 41.7	C		4.1	
		CCH	iP	07 52 05.2	D			
DEC	21	PNS	eP	08 32 41				6.3
		LPB	P	08 32 41.5		1.0	12	5.9
			eS	08 33 49.5				
DEC	21	CCH	eP	08 44 01.3				
		LPB	eP	08 44 04				
		PNS	eP	08 44 06.5				3.7
			S	50				
DEC	21	LPB	eP	09 10 35.5				
		PNS	eP	09 10 44.8				
DEC	21	PNS	eP	09 20 07				
		LPB	eP	09 20 11				
DEC	21	LPB	P	09 54 12.2		0.6	8	
		PNS	P	09 54 13.0		0.7	5	6.4
			S	55 26				
		CCH	P	09 54 13.9				
DEC	21	LPB	eP	10 07 10.5				
			i	27.2				
		PNS	iP	10 07 21.7	C			3.7
			S	08 04.4				
		CCH	P	10 07 52.9				
DEC	21	LPB	eP	10 18 03				
		PNS	eP	10 18 06				
DEC	21	LPB	eP	11 05 04				
		PNS	eP	11 05 06.2				
DEC	21	LPB	eP	11 24 51				
		PNS	eP	11 24 52				6.9
			S	26 10.3				
DEC	21	TRJ	eP	11 26 02.5				
		CCH	eP	11 26 10.3				
		LPB	eP	11 26 11.5				
		PNS	eP	11 26 13.7				7.1
			S	27 33.6				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	21	USCGS	11 37	22.5, 7.0N, 72.1W, H = 33 Km, M = 5.4				
				NORTHERN COLOMBIA				
DEC	21	PNS	iP	11 42 30.0	C			
			S	46 36				
			ScS	52 13				
		LPB	iP	11 42 33.3	C	1.8	124	24.3
			S	46 49				
			eL	49.8				
		CCH	P	11 42 44.9				
		TRJ	eP	11 43 20.2				
DEC	21	PNS	P	12 24 21.7		0.9	10	
DEC	21	PNS	P	12 40 05.5		1.0	17	
		LPB	eP	12 40 07				
DEC	21	PNS	eP	12 47 15				
		LPB	eP	12 47 30				
DEC	21	LPB	eP	14 51 36.5				
DEC	21	PNS	eP	14 58 32.6				4.2
			S	59 22				
		LPB	eP	14 58 33.2				
DEC	21	LPB	eP	15 30 08				
		PNS	eP	15 30 08				
DEC	21	TRJ	eP	15 52 20.0				
		LPB	eP	15 52 33				
		PNS	eP	15 52 34.4				6.7
			S	53 50				
DEC	21	PNS	eP	16 22 30				
		LPB	eP	16 22 31.5				
DEC	21	USCGS	16 12	30.7, 49.1N, 156.2E, H = 53 Km, M = 4.8				
				KURILE ISLANDS				
		LPB	ePKP	16 31 40.5				131.8
			eL	17 15				
		PNS	ePKP	16 31 41				
			pPKP	51.1				
			eL	17 15.3				
DEC	21	PNS	P	16 35 26.7		0.5	3	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DEC	21	LPH	eP	16 36 21					
			e	28.8					
		PNS	eP	16 36 36.6				6.7	
			eS	37 53					
		CCH	eP	16 36 49.5					
DEC	21	TRJ	eP	16 56 42.8					
		LPB	eP	16 56 50		1.0	14		
			i	57 04.3					
		PNS	P	16 56 51.2		0.8	5	6.3	
			eS	58 02.8					
		CCH	eP	16 56 55.0					
DEC	21	LPB	eP	17 03 28.5					
		PNS	eP	17 03 28.5				6.2	
			S	04 40					
DEC	21	PNS	P	17 09 30.5	D	0.8	11	2.4	
			S	10 00					
		LPB	iP	17 09 32.4	C	1.1	57		
DEC	21	LPB	eP	17 34 23		1.0	16		
		PNS	eP	17 34 26.6					
		TRJ	eP	17 34 08.6					
DEC	21	USCGS 17 45 54.4, 21.7S, 179.1W, H = 23 Km, M = 5.1 KERMADEC ISLANDS							
		PNS	eP	17 59 31		1.0	3		
			S	18 19 09					
			PS	12 32					
			eSS	17 37					
		L	32						
		LPB	eP	17 59 23				98.0	
			eSS	18 12 26					
			L	31.9					
DEC	21	PNS	eP	18 03 25					
		LPB	eP	18 03 26					
DEC	21	USCGS 19 52 22.2, 6.8S, 153.4E, H = 53 Km, M = 5.0 NEW BRITAIN REGION							
		PNS	ePKP	20 11 36		1.4	19		
		LPB	ePKP	20 11 36.5		1.2	19	132.4	
			eL	55					
DEC	21	PNS	eP	21 13 37.5				6.6	
			eS	14 52.6					
		LPB	P	21 13 38.3		1.2	34		



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DEC	21	TRJ	eP	21 20 36.5					
		LPB	eP	21 26 30					
DEC	21	TRJ	P	21 50 57.5					
		CCH	ePKP	21 51 32.3					
		LPB	ePKP	21 51 52.7			0.6	27	
		PNS	P	21 51 55.7			0.8	19	
DEC	21	LPB	eP	21 55 09.5				0.8 4	
DEC	21	TRJ	eP	22 53 57.7					
		LPB	eP	22 54 05.7				6.7	
			i	11.7					
DEC	22	PNS	P	22 54 11.5				0.5 15 6.9	
			eS	55 30					
DEC	22	USCGS 23 43 11.4, 11.0N, 93.1E, H = 33 Km, M = 5.0 ANDAMAN ISLANDS REGION							
		TRJ	ePKP	00 03 05.2					
DEC	22	LPB	ePKP	00 03 09.5				161.1	
			eL	59					
DEC	22	PNS	ePKP	00 03 11.6					
			eL	59.6					
DEC	22	TRJ	eP	01 24 16.2					
		LPB	P	01 24 31.7				0.9 29 6.3	
			S	25 43.5					
			P	01 24 31.6				0.5 2 6.1	
			i (P)	50.0					
		S	25 42						
		CCH	eP	01 24 32.1					
DEC	22	TRJ	P	01 33 46.2					
		LPB	P	01 34 32.4				1.0 10	
		PNS	P	01 34 36.4				1.0 11	
DEC	22	TRJ	P	02 09 21.9					
		PNS	eP	02 09 27.6				0.7 21 7.2	
			eS	10 49.4					
		LPB	P	02 09 33.0				1.1 72 6.3	
			S	10 45.5					
		CCH	eP	02 09 34.0					
DEC	22	TRJ	eP	02 44 26.6				0.8 6	
DEC	22	TRJ	eP	03 30 31.8					
		LPB	eP	03 30 37.4				0.6 3 2.8	
			eP	03 30 39.2					
			eS	31 12.7					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DEC	22	TRJ	eP	03 30 18.9					
		LPB	eP	03 30 21.5		0.9	15		
		CCH	eP	04 17					
		PNS	P	03 30 24.2		0.7	8		
DEC	22	USCGS	05 11 09.7, 50.75, 25.50, H = 33 Km, M = 4.9 S SANDWICH ISLANDS REGION						
		TRJ	P	05 19 35.6					
		CCH	eP	05 20 09.1					
		LPB	eP	05 20 21		0.7	7	52.4	
			eL	36.5					
		PNS	P	05 20 24.1		0.8	6		
			eL	36.5					
DEC	22	PNS	P	06 16 24.3		0.9	15		
		LPB	P	06 16 24.5		0.9	15		
		TRJ	P	06 16 41.5					
DEC	22	TRJ	eP	06 20 00.3				6.9	
		PNS	P	06 20 13					
		LPB	eP	21 32					
		CCH	eP	06 20 14.8				6.5	
		LPB	eP	06 20 15					
			S	21 29					
DEC	22	TRJ	P	07 34 44.2					
		CCH	P	07 34 55.5					
		PNS	P	07 35 03.5		0.9	15		
		LPB	eP	07 34 59.5		0.8	10	2.3	
			eS	35 26.2					
DEC	22	TRJ	eP	08 44 00.5					
		LPB	eP	08 44 06					
DEC	22	PNS	P	09 32 43.4		0.5	4	1.8	
			S	33 05					
DEC	22	PNS	eP	10 37 59				11.5	
			S	38 58					
DEC	22	LPB	eP	10 37 58		0.9	25		
DEC	22	LPB	eP	10 50 44					
		PNS	eP	10 50 45					
			eL						
DEC	22	PNS	eP	12 05 25.9				2.6	
			S	56.8					
DEC	22	LPB	eP	12 13 54.5					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DEC	22	USCGS	12 43 45.3, 7.4S, 156.1E, H = 55 Km, M = 4.9 SOLOMON ISLANDS						
		LPB	PKP	13 02 54.2		0.9	10	129.7	
			ePKS	05 33					
			eL	45					
		PNS	PKP	13 02 54.4		0.9	9		
			eL	45.4					
DEC	22	PNS	eP	13 46 17					
		LPB	eP	13 46 22		0.8	7		
DEC	22	LPB	P	14 36 34					
						0.7	6		
DEC	22	LPB	eP	14 55 05		1.3	30		
			eL	15 10					
		PNS	P	14 55 06.5		1.5	28		
DEC	22	PNS	P	14 56 15.8		0.6	4		
DEC	22	CCH	eP	15 59 19.4					
		LPB	P	15 59 21.7		0.9	29		
		PNS	P	15 59 25.2		0.8	15	3.2	
			S	16 00 02.5					
DEC	22	LPB	P	16 29 22.2					
			eL	45					
		PNS	eP	16 29 22.6					
			eL	45					
DEC	22	LPB	eP	16 44 20					
DEC	22	TRJ	P	16 52 22.8					
		LPB	eP	16 52 03		0.7	21		
		PNS	eP	16 53 06.7		0.9	8		
DEC	22	PNS	eP	17 14 49					
DEC	22	TRJ	eP	17 42 07.9					
		LPB	eP	17 42 19					
			i	33.5					
		PNS	eP	17 42 19.2				6.3	
			S	43 31					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	22	PNS	i ⁿ	22 17 36.5	D	0.5	5	2.1
DEC	22	USCGS	23 08 58.0, 20.9S, 177.4W, H = 22 Km, M = 5.4					
				23 22 32.6				
				26 30.2				
				33 19				
				35 22				
				40.2				
				54.9				
				23 22 39.7				97.1
				26 30.6				
				54.7				
DEC	23	LPB	e ⁿ	01 46 36.7				
		PNS	p	01 46 45.6		0.5	2	
DEC	23	PNS	p	01 50 03.1	D	0.5	6	
		LPB	e ⁿ	01 50 09.5		0.9	7	
DEC	23	LPB	e ⁿ	02 18 18.7				
DEC	23	USCGS	02 40 08.3, 9.9S, 74.7W, H = 126 Km, M = 5.1					
				02 42 15		0.8	5	
				43 58.9				
				02 42 21		0.8	16	9.0
				02 42 46.9				
				02 43 33.2				
DEC	23	LPB	e ⁿ	05 03 49 55				
DEC	23	LPB	e ⁿ	05 02 31.5				
DEC	23	LPB	p	06 09 49.2		0.8	6	11.5
DEC	23	LPB	e ⁿ	06 10 23.6				
DEC	23	LPB	p	06 23 53.3		0.7	10	
DEC	23	USCGS	07 08 57.0, 23.2S, 66.3W, H = 249 Km, M = 4.1					
				07 10 37.7		0.8	9	6.8
				12				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	23	LPB	e ⁿ	07 25 27.7		0.7	6	
DEC	23	LPB	e ⁿ	07 30 03.7		1.0	14	
DEC	23	TRT	e ⁿ	07 40 30.8				7.1
				07 40 41				
				45.6				
				42 01.5				
DEC	23	LPB	e ⁿ	08 07 51		1.2	19	
DEC	23	LPB	e ⁿ	08 13 35				
DEC	23	TRT	e ⁿ	08 29 15.1				
				08 29 29				
DEC	23	USCGS	10 28 52.0, 5.7S, 145.7E, H = 107 Km, M = 3.8					
				10 48 09				130.5
				11 35				
DEC	23	PNS	p	11 39 39.2		0.8	4	
DEC	23	USCGS	13 23 15.0, 5.2S, 151.0E, H = 61 Km, M = 5.5					
				13 42 16.6				134.1
				31.7				
				45.7				
				46 04				
				14 27				
				13 42 24.0				
				13 41 37		0.0	10	
				42 35.2				
				42 45.0				
				46 02				
				14 02 52				
				17.3				
				14 26.9				
DEC	23	LPB	e ⁿ	14 30 18				
DEC	23	LPB	e ⁿ	15 27 48				
				15 27 57.5		0.8	4	
DEC	23	USCGS	16 04 37.9, 49.2W, 157.3E, H = 26 Km, M = 5.1					
				16 23 50.6		1.6	26	
				17 07.3				
				16 23 51				131.4



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	23	LPB	eP	16 34 18				
		PNS	p	16 35 00.8		0.6	10	
DEC	23	TPJ	eP	16 59 57.4				
		LPB	eP	17 00 04		1.2	37	
		PNS	p	17 00 04.1		0.9	8	
			e	17 10 39.3				
DEC	23	USCGS		17 14 37.6, 11.0N, 125.5E, H = 154 Km, M = 5.3				
		SAMAR, PHILIPPINE ISLANDS						
		PNS	PKP	17 34 27.8		1.1	12	
			i	51.6				
		LPB	PKP	17 34 28.5		1.0	26	165.3
DEC	23	PNS	eP	18 36 10				2.6
			eS	41				
DEC	23	PNS	p	20 26 04.0		0.7	7	
			e	37.4				
		LPB	eP	20 26 07		0.8	13	
DEC	23	LPB	eP	22 50 11.5				0.8
			eS	23				
		PNS	eP	22 50 18				
DEC	23	USCGS		22 57 43.7, 6.6S, 78.5W, H = 43 Km, M = 4.5				
		NORTHERN PERU						
		PNS	eP	23 00 58				
			eS	03 32				
		LPB	p	23 01 02		0.9	15	13.5
			i	11.8				
		CCH	eP	23 01 24.5				
DEC	23	LPB	p	23 37 01.2		0.9	9	3.5
			s	42.2				
		PNS	iP	23 37 03.1	C	0.7	17	3.5
			s	44.3				
		CCH	p	23 37 05.8				
DEC	23	CCH	p	23 44 20.5				
		PNS	eP	23 44 23		1.1	8	
			eL	00 22				
		LPB	eP	23 44 23.8		0.9	14	
			e	32.5				
			eL	00 02				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	24	PNS	p	02 07 55.6		0.6	4	
		LPB	eP	02 07 59.8		0.8	10	
DEC	24	USCGS		02 24 50.4, 21.0S, 179.0W, H = 428 Km, M = 5.0				
		FIJI ISLANDS REGION						
		PNS	eP	02 37 59.6				
			eSKS	48 47				
			eL	03 12.6				
		LPB	eL	03 13				
DEC	24	CCH	p	03 01 15.6				
		LPB	eP	03 01 22				
		PNS	eP	03 01 27.4				3.5
			s	02 03				
		TRJ	p	03 01 38.4				
DEC	24	USCGS		04 22 01.2, 71.9N, 0.9W, H = 33 Km, M = 5.0				
		JAN MAYEN ISLANDS REGION						
		PNS	eP	04 34 22				
			eL	05 07.4				95.8
		LPB	eL	05 07				
DEC	24	PNS	eP	06 53 27.4				
		LPB	eP	06 53 29				
		TRJ	p	06 52 43.2				
DEC	24	CCH	eP	07 10 09.9				
		PNS	iP	07 10 12				
		LPB	eP	07 10 13				
DEC	24	LPB	eP	08 17 46		0.8	7	
DEC	24	USCGS		08 34 13.5, 54.5N, 142.5E, H = 33 Km, M = 5.0				
		SAKHALIN ISLANDS						
		LPB	ePKP	08 53 29				135.3
			eL	09 30.3				
		PNS	ePKP	08 53 31.5		1.8	25	
			eSS	09 14 00				
			eL	09 38.2				
		CCH	ePKP	08 03 32.9				
		TRJ	ePKP	03 53 37.4				
DEC	24	PNS	p	08 59 28.6		0.7	10	
		LPB	iP	08 59 35.6		0.8	42	2.5
			eS	09 00 06				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	24	TRJ	eP	11 34 21.1			76	
DEC	24	CCH	eP	11 34 30.2			76	
DEC	24	LPB	eP	11 34 30.2			76	
DEC	24	PNS	eP	11 34 30.2			76	
DEC	24	TRJ	eP	12 17 39.5				
DEC	24	PNS	eP	12 18 02.6				
DEC	24	LPB	eP	12 18 04				
DEC	24	LPB	eP	14 43 54.2			22	
DEC	24	PNS	eP	14 43 54.6			22	
DEC	24	USCGS		15 44 42.0, 14.2N, 92.2W, H = 33 Km, M = 4.3				
DEC	24	PNS	eP	15 52 00.6				
DEC	24	LPB	eP	15 52 02				38.9
DEC	24	TRJ	eP	16 35 35.5				
DEC	24	LPB	eP	16 36 22				
DEC	24	PNS	eP	16 36 22.5				
DEC	24	USCGS		20 03 10.9, 17.4N, 61.1W, H = 24 Km, M = 6.8				
DEC	24	PNS	iP	20 09 55.1				
DEC	24	LPB	iP	20 09 58.5			45	34.6
DEC	24	CCH	iP	20 10 00.8				
DEC	24	LPB	eP	20 40 00.5				
DEC	24	USCGS		21 32 31.3, 17.4N, 61.3W, H = 20 Km, M = 6.5				
DEC	24	PNS	iP	21 39 18.7				
DEC	24	CCH	iP	21 39 18.7				
DEC	24	LPB	iP	21 39 18.7			187	34.6
DEC	24	LPB	eP	21 39 18.7				
DEC	24	CCH	iP	21 39 18.7				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	24	PNS	p	22 04 51.1		0.7	3	
DEC	24	LPB	p	22 04 51.7				
DEC	24	LPB	eP	22 27 51.2				
DEC	24	USCGS		22 23 06.2, 19.4N, 66.1W, H = 33 Km, M = 4.0				
DEC	24	PNS	eP	22 30 00				
DEC	24	LPB	eP	22 30 05.5				36.0
DEC	24	TRJ	eP	22 37 52.0				
DEC	24	PNS	p	22 38 06.7				4.8
DEC	24	LPB	p	22 38 07		1.4	67	5.3
DEC	24	USCGS		23 49 54.0, 17.5N, 73.9E, H = 33 Km, M = 5.5				
DEC	24	INDIA	ePKP	00 09 20				143.8
DEC	24	PNS	ePKP	00 09 30.9				
DEC	24	LPB	eL	58.2				
DEC	25	CCH	iP	00 45 40.9				
DEC	25	LPB	eP	00 46 06				4.0
DEC	25	PNS	iP	00 46 25				
DEC	25	LPB	S	47 04				
DEC	25	CCH	iP	00 47 24.4				
DEC	25	TRJ	eP	00 47 34.7				
DEC	25	PNS	eP	00 48 09.9				2.9
DEC	25	LPB	eP	00 47 50				3.9
DEC	25	LPB	S	48 34.8				
DEC	25	LPB	eP	00 52 35				
DEC	25	USCGS		01 23 33.6, 5.3S, 153.7E, H = 64 Km, M = 6.8				
DEC	25	PNS	p	01 39 52		1.0	6	
DEC	25	LPB	ePKP	01 42 31.2				
DEC	25	LPB	pPKP	45.6				
DEC	25	LPB	pKS	46 04.7				
DEC	25	LPB	SKS	49 56.2				
DEC	25	LPB	PS	55 51				
DEC	25	LPB	SS	02 02 55.8				
DEC	25	LPB	G	02 02 55.8				
DEC	25	LPB	L	25.7				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
		LPB	P	01 39 50				173.0
			ePKP	01 42 33				
			i	46.7				
			ep	45 10				
			PKS	46 14				
			SKS	49 56				
			ePS	55 52				
			SS	02 02 56				
			G	18.3				
			L	26.5				
		CCH	ePKP	01 42 32.2				
		TRJ	ePKP	01 42 35.0				
	25	PNS	ep	02 42 15				
			e	25				
		LPB	ep	02 42 18.5				
	25	LPB	ep	02 53 17.5		1.1	10	
	25	PNS	p	02 54 44.8		1.3	10	
	25	PNS	ep	03 32 30				
		LPB	ep	03 32 55				
	25	LPB	ep	04 52 14.5				151.1
		PNS	ep	04 52 31				
	25	USCGS		04 48 37.0				7.3S, 128.2E, H = 83 Km, M = 4.3
		BANDA SEA						
		TRJ	PKP	05 08 17.9		1.4	26	
		PNS	PKP	05 08 19.6				
			i	25.5				
			eL	06 00.3				
		CCH	PKP	05 08 22.5		0.8	16	151.1
		LPB	PKP	05 08 24.7				
			eL	06 01				
	25	LPB	ep	06 06 12.5				
		PNS	ep	06 06 40				
	25	LPB	ep	06 34 12.7				
	25	LPB	ep	06 45 05		1.7	14	
		PNS	ep	06 45 05				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	25	TRJ	P	06 56 34.2				
		PNS	ep	06 56 45				6.4
			eS	57 58				
		LPB	ep	06 56 46.6		1.0	12	1.3
		CCH	ep	00 56 47.5				
DEC	25	LPB	ep	08 00 37		0.8	6	
DEC	25	PNS	ep	08 04 43.2				2.0
			S	05 07.7				
		LPB	ep	08 04 49.2				27.6
DEC	25	LPB	ep	08 50 25.5				
		TRJ	ep	08 50 19.1				
		PNS	ep	08 50 26				7.8
			eS	51 54				
		CCH	ep	08 50 36.3				
DEC	25	PNS	ip	09 23 23.7				
		LPB	p	09 23 25.7		0.6	8	
DEC	25	USCGS		09 29 29.3				5.2S, 154.0E, H = 101 Km, M = 4.7
		SOLOMON ISLANDS						
DEC	25	LPB	ePKP	09 48 32				132.7
		PNS	ePKP	09 48 34.1				
DEC	25	USCGS		10 41 31.6				21.5S, 70.4W, H = 53 Km, M = 6.7
		NEAR COAST OF NORTHERN CHILE						
DEC	25	TRJ	ip	10 42 50.4	C			
		LPB	ip	10 42 56.2	C	2.0	216	5.4
			S	43 56				
		PNS	p	10 42 56.6	C			
			S	44 09				
		CCH	ip	10 42 57.8	C			
DEC	25	PNS	ep	11 20 56.2		1.6	22	150.4
DEC	25	LPB	ep	11 54 23.5		1.2	9	
		PNS	ep	11 54 26				
DEC	25	USCGS		11 41 25.0				4.9S, 153.7E, H = 95 Km, M = 4.5
		NEW IRELAND REG						
DEC	25	LPB	ePKP	12 00 25				133.1
		PNS	ePKP	12 00 34				
DEC	25	USCGS		12 09 28.4				4.9S, 153.7E, H = 104 Km, M = 5.1
		NEW IRELAND REG						



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
		LPB	ePKP	12 28 43		25		133.1	
			eL	13 13					
		PNS	ePKP	12 28 45.4		0.5	4		
			eL	13 12.6					
		CCH	ePKP	12 28 45.9					
			eL	13 12.6					
DEC	25	LPB	eP	12 32 19		1.6	19		
		PNS	eP	12 32 09.3					
		CCH	eP	12 32 12.7					
DEC	25	PNS	eP	12 38 26.1		0.9	5		
		LPB	P	12 38 27.7		0.9	10		
DEC	25	LPB	eP	13 40 02					
		PNS	eP	13 40 05.4					
DEC	25	PNS	eP	17 30 33.4					
		LPB	eP	17 30 36.5					
DEC	25	USCGS	17 14 14.9, 37.7S, 77.4E, H = 33 Km, M = 5.2 MID INDIAN RISE						
		LPB	ePKP	17 32 52				117.0	
			eL	18 10					
		PNS	ePKP	17 32 57.8					
			eSS	50 19					
			eL	18 10					
DEC	25	PNS	eP	17 53 25.4					
		LPB	eP	17 53 36.5					
DEC	25	USCGS	17 37 39.0, 17.2N, 73.9E, H = 33 Km, M = 5.1 INDIA						
		LPB	ePKP	17 57 13				143.4	
			eL	18 46					
		PNS	eSS	19 19 07					
			eL	45.7					
DEC	25	LPB	eP	18 52 20					
DEC	25	LPB	eP	19 59 40.2					
DEC	25	USCGS	19 52 04.2, 5.2S, 154.0E, H = 119 Km, M = 5.1 SOLOMON ISLANDS						
		LPB	ePKP	19 11 02				132.6	
			eL	54					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DEC	25	LPB	eP	19 12 28					
DEC	25	PNS	eP	21 28 39.4				1.3	
			S	56					
DEC	25	USCGS	21 19 52.4, 1.9S, 12.7W, H = 33 Km, M = 5.0 NORTH OF ASCENSION ISLANDS						
		CCH	eP	21 29 17.0					
		LPB	eP	21 29 27.8				57.6	
			eS	37 22					
			eL	47					
		PNS	eP	21 29 34.3		1.0	9		
			S	37 35					
			L	47.5					
DEC	25	PNS	iP	22 12 47.5	C			2.9	
			S	13 22					
DEC	25	LPB	P	22 12 52.5		1.2	7	3.2	
			S	13 30.8					
		CCH	P	22 13 14.5					
DEC	25	USCGS	22 13 23.1, 5.2S, 153.6E, H = 69 Km, NEW IRELANDS REGION						
		PNS	ePKP	22 37 35					
		LPB	eL	23 21				132.3	
DEC	25	LPB	eP	23 42 11.7					
		PNS	P	23 42 42.9		0.8	14		
DEC	26	USCGS	00 29 49.0, 32.5N, 139.4E, H = 196 Km, M = 4.2 SOUTH OF HONSHU, JAPAN						
		LPB	ePKP	00 49 08				150.4	
			eL	01 40					
		PNS	ePKP	00 49 13					
DEC	26	PNS	P	00 53 52.1	D	0.7	13	2.0	
			iS	54 15.8					
		LPB	eP	00 54 13		0.9	8		
DEC	26	LPB	eP	00 57 30.8				2.5	
			S	58 01.2					
		PNS	eP	00 57 28.3				2.1	
			S	53.1					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	26	USCGS	10 49	22.0, 44.6N, 129.6W, H = 33 Km, M = 4.9				
				OFF COAST OF OREGON				
		PNS	p	11 01 41.0		1.4	19	
			eL	11 30				
		LPB	eP	11 01 43				82.8
DEC	26	USCGS	14 34	27.8, 32.0S, 178.0W, H = 33 Km, M = 4.7				
				SOUTH OF KERMADEC ISLANDS				
		LPB	eL	15 20				97.2
		PNS	eL	15 20.5				
DEC	26	PNS	p	15 11 14.0		0.4	5	3.3
			eS	53				
DEC	26	LPB	eP	16 42 14.5				
		PNS	p	16 42 22.4		0.5	3	
DEC	26	PNS	eP	17 35 49				
		LPB	eP	17 35 49.8				
DEC	26	PNS	iP	18 10 57.1				
		LPB	p	18 11 00.9		0.7	76	
			i	24.5				
		CCH	p	18 11 22.7				
DEC	26	LPB	eP	21 41 27.8		0.7	6	
DEC	26	LPR	p	22 21 52	D	0.7	34	
DEC	26	LPB	eP	22 27 05				
DEC	26	USCGS	22 24	03.0, 51.7N, 174.5E, H = 33 Km, M = 4.6				
				ALEUTIAN NEAR ISLANDS				
		PNS	eSS	23 00 40				
			eL	20				
		LPB	eL	23 20				119.7
DEC	26	USCGS	23 46	25.0, 10.7S, 73.9W, H = 120 Km, M = 4.4				
				PEPU				
		PNS	iP	23 48 15.5	C	0.7	5	
			eS	50 38.7				
		LPB	iP	23 48 21.2	C	0.6	11	7.6
			eS	50 46.7				
		CCH	p	23 48 43.0				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	26	PNS	iP	02 03 09.6	D	0.5	16	1.8
			iS	31.9				
DEC	26	PNS	eP	03 46 43				
		LPB	eP	03 46 54		0.9	12	
DEC	26	PNS	eP	03 49 26				
		LPB	eP	03 49 44.2		0.7	6	
DEC	26	PNS	eP	05 30 49				
		LPB	eP	05 31 11.5		0.7	6	
DEC	26	USCGS	05 24	33.0, 5.0S, 153.9E, H = 111 Km, M = 4.9				
				NEW IRELAND REGION				
		LPB	ePKP	05 43 32				133.1
		PNS	ePKP	05 43 33		1.7	17	
DEC	26	PNS	iP	05 54 06.3	D	0.7	14	1.8
			S	28.3				
		LPB	eP	05 54 07.3				
DEC	26	LPB	eP	06 28 15.5				
		PNS	eP	06 28 51.9		0.7	4	
DEC	26	LPB	eP	06 40 05				
		PNS	eP	06 40 07.4		1.4	26	
DEC	26	PNS	eP	07 39 54				6.7
			eS	41 10				
		LPB	eP	07 39 54.5		1.1	15	
DEC	26	PNS	eP	07 50 05.4				
		LPB	p	07 50 09.2		0.9	8	
DEC	26	LPB	p	08 09 40.3		0.9	35	6.0
			e	54.4				
			S	10 49.3				
		PNS	eP	08 09 41.5				5.9
			S	10 50				
		CCH	p	08 09 44.0				
DEC	26	LPB	eP	08 20 05		0.6	6	
DEC	26	USCGS	08 52	42.3, 5.1S, 153.7E, H = 59 Km, M = 5.2				
				NEW IRELAND REGION				



MONTH	DAY	STA	PHASE	TIME	SIGN	AMP	AMPL	DIST	
DEC	27	USCGS		00 27 29.0, 54.1S, 132.2W, H = 33 Km, M = 4.9					
				SOUTH PACIFIC, CORDILLERA					
		CCH	n	00 37 44.2					
		LPB	eP	00 37 45.6		2.0	86	61.2	
			i	52.3					
			eS	46 17					
			L	56.6					
		PNS	p	00 37 45.8		1.3	10		
			eS	52.5					
			L	56.8					
DEC	27	USCGS		01 49 11.0, 54.8S, 132.8W, H = 33 Km, M = 4.8					
				SOUTH PACIFIC CORDILLERA					
		CCH	n	01 58 28.3					
		LPB	eP	01 58 31		2.4	29	61.7	
			eS	02 06 55					
			L	02 17.3					
		PNS	eP	01 58 31		1.8	54		
			eS	02 06 54					
			eP	13.1					
			L	17.6					
DEC	27	USCGS		01 43 25.0, 5.8S, 147.1E, H = 85 Km, M = 5.0					
				EAST NEW GUINEA REGION					
		PNS	ePKP	02 02 34					
		LPB	PKP	02 02 43		1.0	16	138.1	
DEC	27	LPB	eP	02 06 12.7					
DEC	26	PNS	eP	02 06 14.5					
DEC	27	PNS	p	04 22 00		0.6	5	3.2	
			s	37					
		LPB	eP	04 22 04.5		1.1	15	3.6	
			i	11					
			s	47					
DEC	27	USCGS		04 28 21.0, 5.0S, 153.7E, H = 130 Km, M = 4.9					
				NEW IRELAND REGION					
		LPB	ePKP	04 47 25.5		0.8	4	133.2	
			eL	05 31.5					
		PNS	ePKP	04 47 26					
			PKP	50.5					
			eS	05 07 37					
DEC	26	USCGS		10 20 40.6, 44.5N, 129.7W, H = 33 Km, M = 5.0					
				OFF COAST OF OREGON					
			eL	31.3					
DEC	27	PNS	eP	04 54 48.2					
		LPB	eP	04 54 49		1.0	12		

MONTH	DAY	STA	PHASE	TIME	SIGN	AMP	AMPL	DIST	
DEC	27	CCH	ePKP	09 11 53.3					
		LPB	ePKP	09 11 54.5				133.1	
			PKS	15 30.6					
			eL	56					
		PNS	ePKP	09 11 54.6					
			PKS	15 30.0					
			eSUS	18 53					
			eSS	32 03					
			eP	47.3					
			eL	55.9					
DEC	26	LPB	eP	09 27 52.5					
		PNS	eP	09 27 55.5				7.7	
			eS	29 22.7					
DEC	26	USCGS		09 29 30.5, 44.5N, 129.7W, H = 33 Km, M = 5.1					
				OFF EAST OF OREGON					
		PNS	eP	09 41 58					
			S	52 09					
			eSS	57 41					
			eL	10 09.1					
		LPB	eP	09 41 54.5				82.7	
			ePP	44 53.2					
		CCH	p	09 42 06.8					
DEC	26	USCGS		09 49 50.8, 44.5N, 129.8W, H = 33 Km, M = 4.5					
				OFF COAST OF OREGON					
		PNS	eP	10 02 09.6					
		LPB	eP	10 02 10				82.7	
		CCH	eP	10 02 14.0					
DEC	26	LPB	eP	10 14 20					
		PNS	eP	10 14 42.2					
DEC	26	PNS	eP	10 24 18					
		LPB	eP	10 24 19.5		0.8	9		
DEC	26	USCGS		10 27 58.0, 44.7N, 129.7W, H = 33 Km, M = 4.4					
				OFF COAST OF OREGON					
		PNS	eP	10 40 27.7					
		LPB	eP	10 40 28				82.8	
DEC	26	USCGS		10 40 40.6, 44.5N, 129.7W, H = 33 Km, M = 5.0					
				OFF COAST OF OREGON					
		PNS	eP	10 53 00					
			eL	11 20.2					
		LPB	eP	10 53 01.7		0.9	9	82.7	
		CCH	eP	10 53 08.9					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	27	LPR	eP	04 59 30.7				
DEC	27	LPR	eP eL	05 15 46.7 31		0.7	6	
DEC	27	PNS LPR	eP eP	05 37 52 05 37 52.5				
DEC	27	LPR PNS	eP eP	05 42 41 05 42 43				
DEC	27	PNS	ip S	06 23 13.7 37.7	D			2.0
DEC	27	USCGS		06 15 56.0, 23.8S, 179.8E, H = 506 Km, M = 4.5				
				SOUTH OF FIJI ISLANDS				
		LPR	eP eL	06 28 55 42.3				102.0
		PNS	eP eL	06 28 56.7 42.7				
DEC	27	LPR	ip e eS	06 41 15.2 30.3 44.6	C	0.9	254	2.4
		PNS	ip S	06 41 16.5 46.2	C			2.5
DEC	27	LPR PNS	eP P eS	06 53 17.5 06 53 10.5 55.24		0.5	5	11.0
DEC	27	LPR	eP eS	07 21 07.3 51				3.7
DEC	27	PNS LPR	P eP	08 18 20.0 08 18 25.5		0.6	5	
DEC	27	USCGS		09 17 55.7, 21.2S, 69.3W, H = 135 Km, M = 7.0				
				CHILE-BOLIVIA BORDER REGION				
		CCH	P	09 18 59.5				
		LPR	ip C	09 19 06.9 55				4.6
		PNS	ip C	09 19 10.1 59				
DEC	27	PNS	eP	09 14 07.6				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	27	USCGS		09 54 02.0, 21.3S, 68.4W, H = 115 Km, M = 4.7				
				CHILE-BOLIVIA BORDER REGION				
		CCH	P	09 55 08.6	D			
		LPR	ip	09 55 16.8	C	0.7	124	4.6
		PNS	ip S	09 55 20.1 56 10	C			
DEC	27	PNS	eP	10 11 05.3				
DEC	27	USCGS		10 27 15.8, 10.7S, 165.1E, H = 46 Km, M = 4.9				
				SANTA CRUZ ISLANDS				
		PNS	ePKP	10 46 06		1.2	10	
		LPR	ePKP	10 46 08				120.5
DEC	27	USCGS		10 48 45.0, 22.5S, 69.8W, H = 110 Km, M = 4.4				
				NORTHERN CHILE				
		TRJ	ip	10 49 43.3	C			
		CCH	P	10 50 07.7				
		LPR	ip	10 50 13		0.8	24	6.8
			ipn	29.3				
		PNS	ip ipn	10 50 15.3 34.0	C	1.2	22	
DEC	27	PNS	eP	12 29 36				
DEC	27	TRJ LPR PNS	P eP eP	12 36 02.0 12 36 24 12 36 25.4				
DEC	27	LPR PNS	eP eP	13 19 52 13 19 55.6		0.7	7	
DEC	27	PNS	P S	14 20 30.5 53				1.8
DEC	27	USCGS		14 39 08.5, 3.5S, 141.3E, H = 36 Km, M = 5.1				
				NEW GUINEA				
		TRJ	PKP	14 58 42.0				
		PNS	PKP pPKP	14 58 43.4 55.2		1.6	60	
			ePS	15 12 53				
			eSS	21 07				
			eL	15 48				
		LPR	ipPKP	14 58 44.2	D	1.0	74	144.7
			eL	15 48				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	27	USCGS		14 47 18.0, 4.6S, 193.4E, H = 143 Km,				
				NEW IRELAND REGION				
		PNS	eP	15 06 20.8		1.4	49	133.2
DEC	27	TRJ	P	15 44 55.1				
		LPB	eP	15 45 12.8		0.8	16	
		PNS	P	15 45 15.9		0.9	8	
DEC	27	USCGS		16 22 40.5, 22.3S, 174.8W, H = 33 Km, M = 6.0				
				TONGA ISLANDS				
		TRJ	eP	16 36 26.6				
		PNS	P	16 36 26.8		2.0	121	
			P	40 23.8				
			SKS	47 10				
			eSS	54 45				
			eG	17 03.4				
			L	08.7				
		LPB	P	16 36 27.7		2.0	324	98.4
			P	40 26				
			SKS	47 04				
			eSS	54 00				
			G	17 04				
			L	08.2				
DEC	27	TRJ	eP	16 52 55.8				
		LPB	eP	16 53 01				
		PNS	eP	16 53 01				
DEC	27	TRJ	P	17 11 03.7				
		LPB	eP	17 11 20				
		PNS	eP	17 11 26.4				
DEC	27	LPB	eP	17 36 33.4				
		PNS	eP	17 36 40.4		0.8	9	
DEC	27	LPB	eP	18 31 12				
DEC	27	USCGS		19 26 06.0, 21.8S, 174.8W, H = 33 Km, M = 4.6				
				TONGA ISLANDS				
		LPB	eL	20 11				99.0
		PNS	eL	20 11.4				
DEC	27	PNS	eP	21 37 57.2				11.0
			e	54.7				
			eS	40 00				
		LPB	eP	21 39 11.2				7.7
			eS	40 38.7				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	27	USCGS		23 58 34.0, 16.4S, 174.0W, H = 150 Km, M = 4.2				
				TONGA ISLANDS				
DEC	28	PNS	eL	00 45.9				
		LPB	eL	00 46				99.8
DEC	28	USCGS		01 46 26.0, 19.1N, 67.4W, H = 33 Km, M = 4.4				
				MINA PASSAGE				
DEC	28	PNS	eP	01 53 19				
		LPB	eP	01 53 24				35.5
DEC	28	LPB	eP	03 00 42.2				
DEC	28	PNS	iP	03 38 08.2	D	0.4	6	1.4
			S	26.4				
DEC	28	TRJ	e(P)	04 50 41.9				
		PNS	eP	04 51 48				
		LPB	P	04 51 49.3		0.9	7	
DEC	28	LPB	eP	05 33 11		0.7	6	
DEC	28	LPB	eP	05 58 27.8		0.9	5	
DEC	28	USCGS		06 26 15.8, 44.2N, 128.8W, H = 33 Km, M = 5.4				
				OFF COAST OF OREGON				
		PNS	P	06 38 31.9		2.0	97	
			iSKS	48 52				
			SS	54 17				
			eSSS	58 50				
			G	07 00.2				
			L	05.5				
		LPB	P	06 38 33.3		2.0	162	82.0
			SKS	48 52				
			ePS	50 16				
			SS	54 22				
			L	07 05.8				
			P	06 39 01.7				
DEC	28	USCGS		07 01 36.8, 44.2N, 129.0W, H = 33 Km, M = 4.9				
				OFF COAST OF OREGON				
DEC	28	PNS	P	07 13 54.6		1.5	28	
		LPB	eP	07 13 56.5		1.2	47	82.0
			eL	40				
		TRJ	P	07 14 23.9				
DEC	28	USCGS		07 36 49.8, 44.4N, 128.8W, H = 33 Km, M = 4.4				
				OFF COAST OF OREGON				
		LPB	eP	07 49 07				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	28	PNS	eP	08 16 00				
			eP	07 49 07				
			eL	08 16.1				
DEC	28	PNS	eP	08 16 00				
		LPB	eP	08 16 04.5				
DEC	28	PNS	iP	11 57 16.0				2.5
		LPB	iP	11 57 20.4		0.9	17	2.9
			eS	54.0				
DEC	28	PNS	eP	12 11 32.6		0.4	2	3.5
			S	12 14				
DEC	28	LPB	eP	12 56 38		0.9	17	3.3
		PNS	eP	12 56 43.6				
			eS	57.23				
DEC	28	USCGS		13 29 25.0, 4.6S, 153.7E, H = 144 Km, M = 4.8				
				NEW IRELAND REGION				
		LPB	ePKP	13 48 27				133.2
			eL	14 32				
		PNS	eL	14 32.6				
DEC	28	TRJ	iP	14 39 13.3				
		LPB	iP	14 39 39.5		0.7	16	4.9
		PNS	iP	14 39 43.2		0.4	6	
			S	40 39				
DEC	28	PNS	eP	15 11 58.2				2.9
			S	12 32.2				
DEC	28	PNS	eP	16 37 24.4		0.5	9	3.0
			S	59.6				
DEC	28	USCGS		17 33 39.8, 6.9N, 72.8W, H = 196 Km, M = 5.2				
				NORTHERN COLOMBIA				
		PNS	iP	17 39 34.2				
			S	42 31.6				
			SS	43 30				
			L	44.970				
			ScS	49 20				
		LPB	iP	17 39 37.3		1.0	465	23.4
			e	47				
			eP	39 11				
			S	42 37.6				
			ePKP	17 39 10.2				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	28	PNS	eP	20 16 05				
DEC	28	PNS	P	20 20 48.6				
DEC	28	PNS	P	22 01 39.8				
		LPB	P	22 01 44.4		0.7	10	
						0.9	25	
DEC	28	USCGS		22 11 33.9, 44.2N, 128.9W, H = 33 Km, M = 5.0				
				OFF COAST OF OREGON				
		PNS	eP	22 23 49.9				
			iS	34 11				
			eSS	39 33				
			eL	50.8				
		LPB	eP	22 23 51				82.0
			eSKS	34 13				
			eSS	39 50				
			eG	48				
			eL	51				
		TRJ	eP	22 24 19.6				
DEC	28	TRJ	P	23 10 58.0				
		LPB	P	23 11 04.9				
		PNS	iP	23 11 05.4		C	0.4	15
DEC	29	USCGS		00 15 37.1, 44.3N, 128.9W, H = 33 Km, M = 4.3				
				OFF COAST OF OREGON				
		LPB	eP	00 27 53.5				82.0
			eL	55				
		PNS	eP	00 27 54				
			eL	54.8				
DEC	29	PNS	eP	01 02 22		0.9	8	
		LPB	eP	01 02 27.5				
DEC	29	LPB	eP	02 23 20				
		PNS	eP	02 23 42.9				6.8
			eS	25 00				
DEC	29	PNS	iP	02 43 03.6		C	0.3	4
			eS	26.2				1.9

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DEC	29	PNS	eP	03 04 47					
DEC	29	PNS LPB	iP P	03 23 10.1 03 23 11.4	D	0.8	7		
DEC	29	LPB PNS	eP eP	04 42 25.7 04 42 28.7		0.9	10		
DEC	29	USCGS		06 24 50.3, 36.3N, 70.2E, H = 230 Km, M = 4.7					
				HINDU KUSH REGION					
		LPB	ePKP	06 43 49.5				138.3	
			eL	07 03					
		PNS	ePKP	06 43 53					
			eG	07 21.4					
			eL	07 30					
DEC	29	LPB PNS	eP eP	07 06 49 07 06 52.7					
			e	07 39.5					
DEC	29	LPB PNS	eP eP	07 13 02 07 13 05.9		1.6	41		
DEC	29	LPB PNS	eP P	07 17 48.3 07 17 51		1.3 1.5	19 40		
DEC	29	LPB PNS	eP eP	07 21 18.2 07 21 24		1.5	25		
DEC	29	LPB PNS	eP eP	07 23 25 07 23 28		1.0	10		
DEC	29	LPB PNS	P P	07 32 58.8 07 33 01.9		0.9 0.9	12 10	4.5	
			eS	07 35 54					
DEC	29	LPB PNS	eP P	07 51 08 07 51 15.0		0.7	6	2.7	
			eS	07 54 46.9					
DEC	29	LPB	eP	07 53 12				1.8	
			S	34.5					
		PNS	eP	07 53 18.2				2.9	
			eS	52					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DEC	29	PNS	eP	08 16 22					
			eL	32.7					
		LPB	eP	03 16 26					
			eL	32					
DEC	29	LPB PNS	eP eP	09 44 42.5 09 44 43					
DEC	29	PNS LPB	P eP	09 51 11.6 09 51 17.9		0.7 0.9	13 10		
DEC	29	USCGS		09 39 09.0, 17.5S, 178.4W, H = 512 Km, M = 3.7					
				FIJI ISLANDS REGION					
		LPB	eL	10 27				103.4	
		PNS	eL	10 27.3					
DEC	29	LPB PNS	eP iP	13 41 14.5 13 41 16.3					
DEC	29	LPB PNS	eP eP	15 27 44.2 15 27 45.7				2.2	
			S	28 12					
		TRJ	eP	15 46 28.6					
DEC	29	PNS	P	18 00 05.3		0.6	9	2.1	
			S	29.9					
DEC	29	PNS LPB	eL eL	19 10.8 19 11					
DEC	29	PNS	eP	19 50 36.6				2.1	
			S	51 01.6					
DEC	29	USCGS		19 49 23.6, 41.5N, 20.4E, H = 39 Km, M = 4.7					
				ALBANIA					
		PNS	eL	20 36.8					
		LPB	eL	20 37				99.8	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	29	USCGS TONGA ISLANDS REGION	20 29	32.2, 22.8S, 175.3W, H = 30 Km, M = 5.3				
		LPB	eP	20 43 07				98.7
			ePP	47 09.5				
			eSKS	53 51				
			L	21 16.5				
		PNS	SKS	20 53 54				
			eSS	21 00 50				
			L	15.5				
DEC	29	USCGS TONGA ISLANDS REGION	22 23	06.0, 22.7S, 175.2W, H = 33 Km, M = 5.1				
		PNS	eP	22 36 40				
			SKS	47 20				
			eSS	55 06				
			L	23 09.7				
		LPB	eP	22 36 41.7				98.7
			eL	23 10				
DEC	29	USCGS PERU-BRAZIL BOR REGION	23 57	49.0, 7.9S, 74.4W, H = 135 Km, M = 4.3				
		PNS	iP	00 00 12.6	D	0.8	10	
		LPB	iP	00 00 17.7	D	0.9	36	10.4
		TRJ	eP	00 01 29.8				
DEC	30	USCGS TALAUD ISLANDS	00 07	13.0, 3.1N, 126.5E, H = 33 Km, M = 5.2				
		LPB	ePKP	00 27 12				155.4
		TRJ	eP	00 27 15.5				
		PNS	eL	01 21				
DEC	30	PNS	iP	00 48 00.9	D			2.0
			S	24.8				
		LPB	iP	00 48 01.4	D	1.0	160	2.0
			eS	25				
DEC	30	USCGS NEW BRITAIN REGION	00 54	39.7, 6.6S, 150.6E, H = 43 Km, M = 4.7				
		PNS	ePKP	01 13 59.8				
			eL	58.8				
		LPB	ePKP	01 14 00				135.2
DEC	30	USCGS NEAR COAST OF NORTHERN CHILE	02 14	20.2, 25.7S, 20.3W, H = 44 Km, M = 5.0				
		TRJ	eP	02 16 02.4				
		LPB	eP	02 16 38		0.8	7	9.4
			eS	18 42				
			L	19				
		PNS	eP	02 16 41				
			eS	18 30				
			eL	18.9				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	30	USCGS NEAR COAST HONSHU, JAPAN	02 27	50.3, 38.4N, 142.0E, H = 33 Km, M = 4.8				
		PNS	ePKP	02 47 27				
			eL	03 37				
		TRJ	eP	02 47 42.2				
		LPB	PKP	02 47 28.3		0.8	19	145.8
			eL	03 27				
DEC	30	USCGS EAST CENTRAL PACIFIC OCEAN	02 46	55.0, 2.1N, 101.1W, H = 33 Km, M = 4.7				
		PNS	P	02 54 04.8		0.9	5	
			eL	03 05.1				
		LPB	P	02 54 07.4		0.9	15	37.3
			eL	03 05				
DEC	30	PNS	eP	03 44 14.6				
			L	04 55.1				
		LPB	eP	03 44 17.5				
			e	24.2				
DEC	30	TRJ	eP	04 16 53.3				
		PNS	P	04 17 21		0.4	9	1.8
			S	43.3				
		LPB	eP	04 17 22.5				
DEC	30	USCGS NORTHERN ITALY	04 19	21.2, 44.7N, 12.2E, H = 33 Km, M = 5.3				
		LPB	eP	04 32 37.2				94.5
			eL	05 05				
		PNS	eP	04 32 38.2				
			eL	05 04.3				
DEC	30	PNS	eP	05 17 41.8				2.3
			eS	18 09.9				
DEC	30	PNS	eP	05 18 42		0.7	2	
		LPB	eP	05 18 46.6		0.9	8	
DEC	30	USCGS SOLOMON ISLANDS	05 06	38.0, 6.4S, 154.3E, H = 33 Km, M = 4.5				
		TRJ	eP	05 25 39.6				
		LPB	ePKP	05 25 52				132.2
			eL	06 09				
		PNS	ePKP	05 25 53.7				
			eL	06 09.3				
DEC	30	PNS	eP	05 44 38				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	31	LPB PNS	eP eP	15 14 20.5 15 14 23				
DEC	31	USCGS SOLOMON ISLANDS		15 05 32.3, 7.1S, 154.8E, H = 19 Km, M = 5.4				
DEC	30	LPB	ePKP PKS eL	15 24 46.5 27 14 16 08		1.5	44	131.3
DEC	30	PNS	ePKP PKS eSS eL	15 24 47.8 28 13 44 36 16 08.3		1.6	31	
DEC	31	LPB PNS	eP eP eS	15 36 08.8 15 36 10 58		0.9	8	4.1
DEC	31	USCGS SOLOMON ISLANDS		15 53 58.0, 7.1S, 134.9E, H = 47 Km, M = 4.8				
DEC	30	PNS	PKP eL	16 13 07.8 56.4		1.0	4	131.3
DEC	31	LPB PNS	P S P eS	17 10 29.5 11 39.6 17 10 30.7 11 45		1.1	83	6.1 6.5
DEC	31	LPB PNS	eP P S	18 40 41.8 18 40 47.1 41 51		0.8	7	5.6
DEC	31	LPB PNS	eP P	18 49 31 18 49 32.8		1.2	10	
DEC	31	LPB PNS	eP eP S G L	19 15 25 19 15 28 21 47 25.6 27.2		1.5	13	43.0
DEC	31	USCGS SOLOMON ISLANDS		20 03 24.0, 7.0S, 154.9E, H = 33 Km				
		PNS LPB	ePKP ePKP eL	20 22 36 20 22 37 21 06				131.3



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DEC	31	PNS LPB	eP eP	20 45 11.7 20 45 23.5				
DEC	31	LPB	P i iS	22 28 06 08.6 41		0.8	70	
DEC	31	PNS	iP iPn S	22 28 12.0 17.4 53	C	0.5	14	
DEC	31	USCGS SOUTH OF MARIANA ISLANDS		22 53 30.0, 13.1N, 143.7E, H = 141 Km, M = 4.				
DEC	31	LPB PNS	ePKP eL ePKP	23 12 56 24 04 23 12 56.6		0.9	3	148
DEC	31	PNS	eP eS	23 15 36.6 17 14.6				8
DEC	31	LPB PNS	P S eP	23 55 41.3 52.5 23 55 46		0.9	24	0
