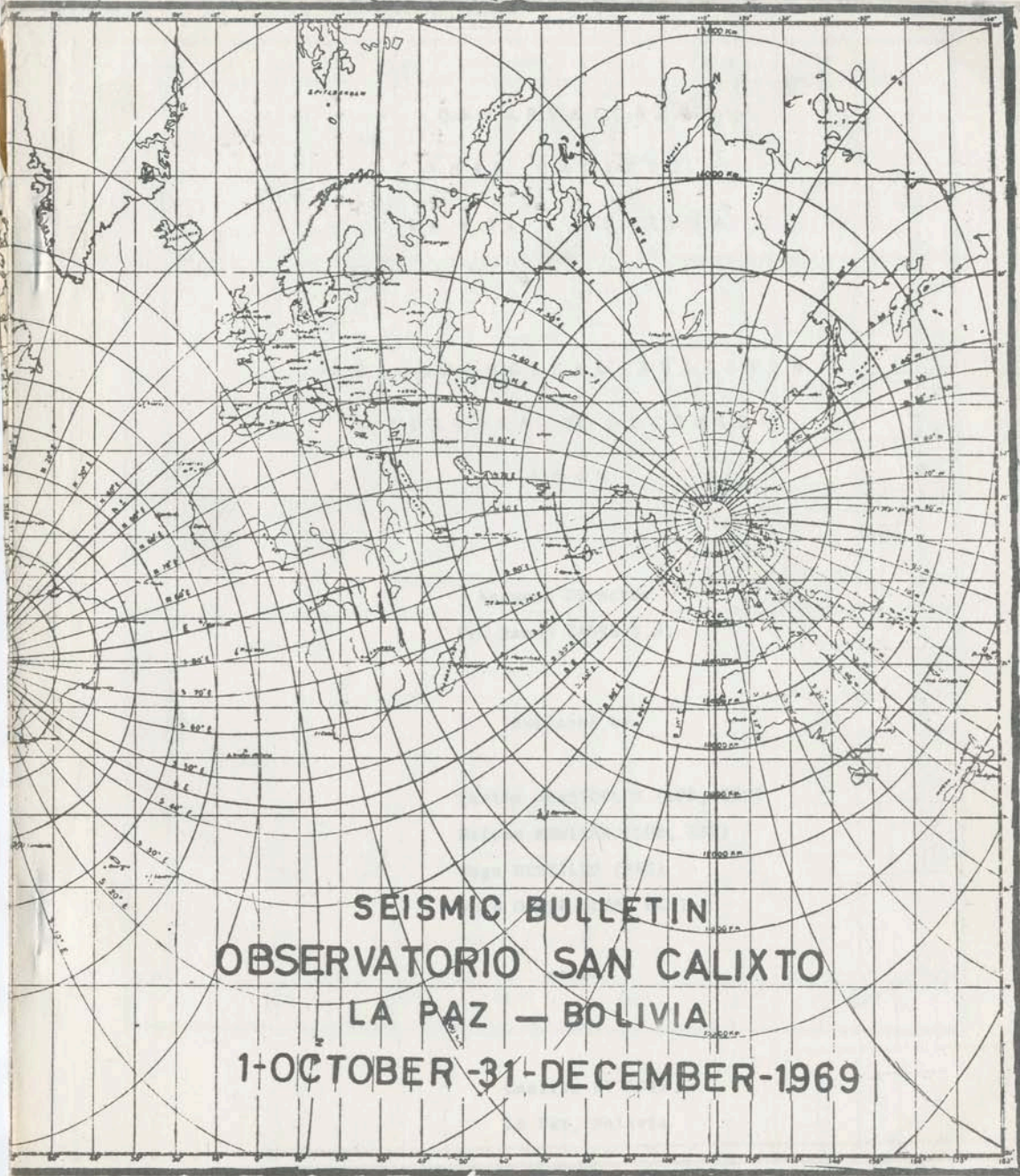


— PARA LA PAZ



OBSERVATORIO
SAN CALIXTO
LA PAZ BOLIVIA

SEISMOLOGICAL BULLETIN

1 OCTOBER - 31 DECEMBER

1969

Network Director

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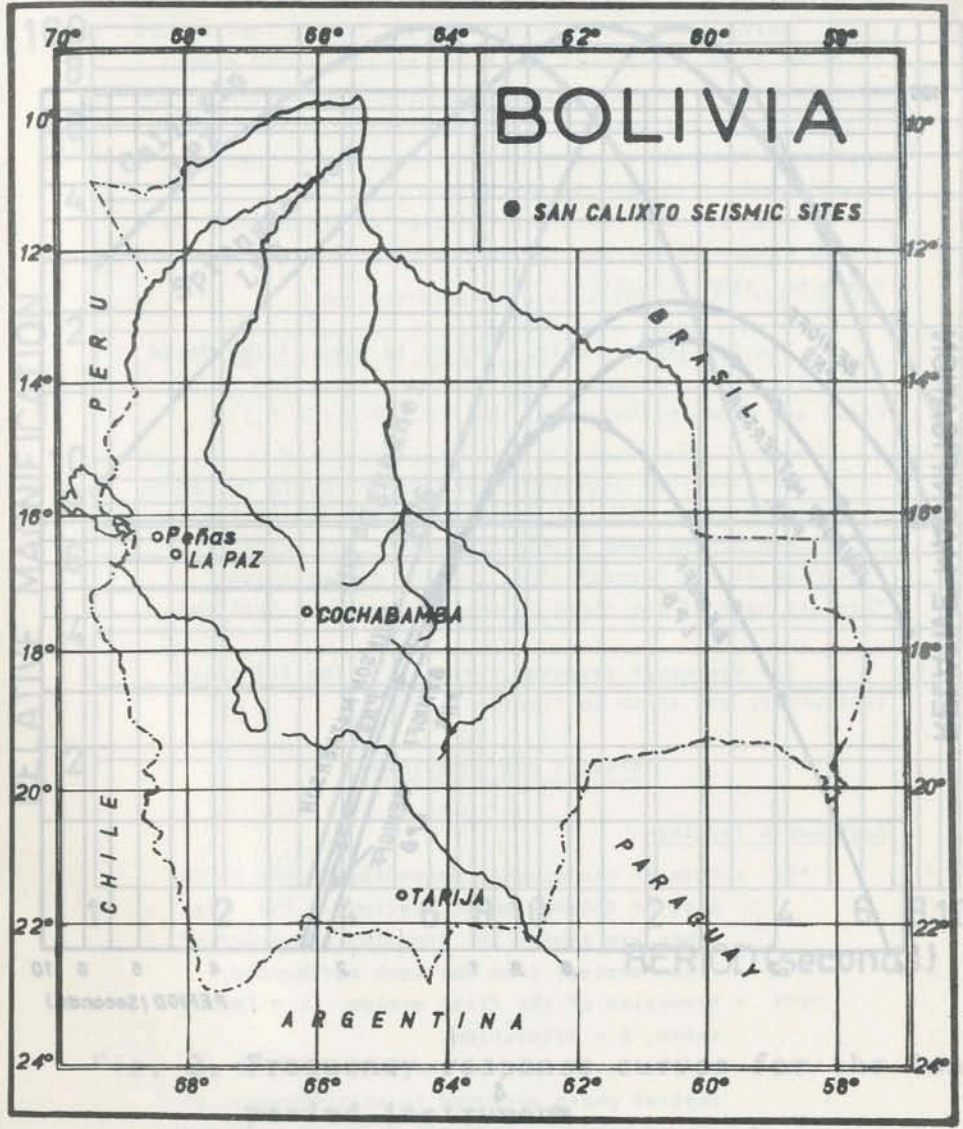
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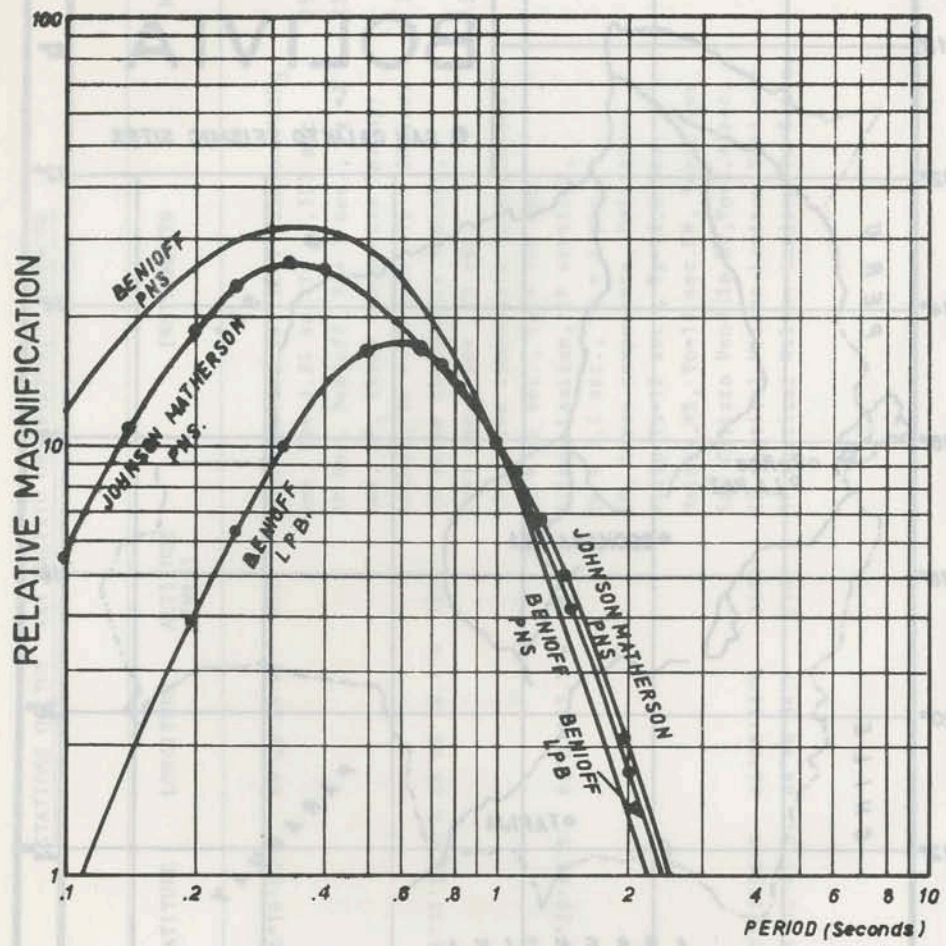
Casilla N° 5939

La Paz, Bolivia

STATIONS OF THE "SAN CALIXTO OBSERVATORIO" NETWORK

LOCATION	CODE	LATITUDE	LONGITUDE	ALTITUDE (Mts)	INSTRUMENTS	MAGNIFICATION
Peñas	PNS	16°16'02"S	68°28'24"W	3986	Short-period vertical Johnson-Mathe son, To= 1.25 sec Tg = .337 sec 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., To= .75 sec. LP, three components Sprengnether, To = 15 sec., Tg = 100 sec. Wilson-Lamison, SP vertical, To = 1.2 sec., Tg = 1 sec. LP, three components, Galitzing-Wilip To=12 sec., Tg=12.6 sec. Mainka, NS, To=14 sec. EW, To=12 sec.	250,000 at 1 cps 250,000 at 1 cps 20,000 at 25 sec 50,000 at 1 cps 1,500 at 15 sec
La Paz (WWNSS)	LPB	16°31'57.6"S	68°05'54.1"W	3292	San Calixto Pendulo EW, To=2.4 sec. SP vertical Wilson-Lamison To=1 sec. SP vertical Wilson-Lamison To=3 sec.	1,000 at 12 sec 180 and 300 700
La Paz (Colegio)	LPZ	16°29'43"S	68°07'57.7"W	3658		
Cochabamba	CCH	17°22'56"S	66°08'34"W	2500		
Tarija	TRJ	21°30'47"S	64°46'34"W	2100		





4

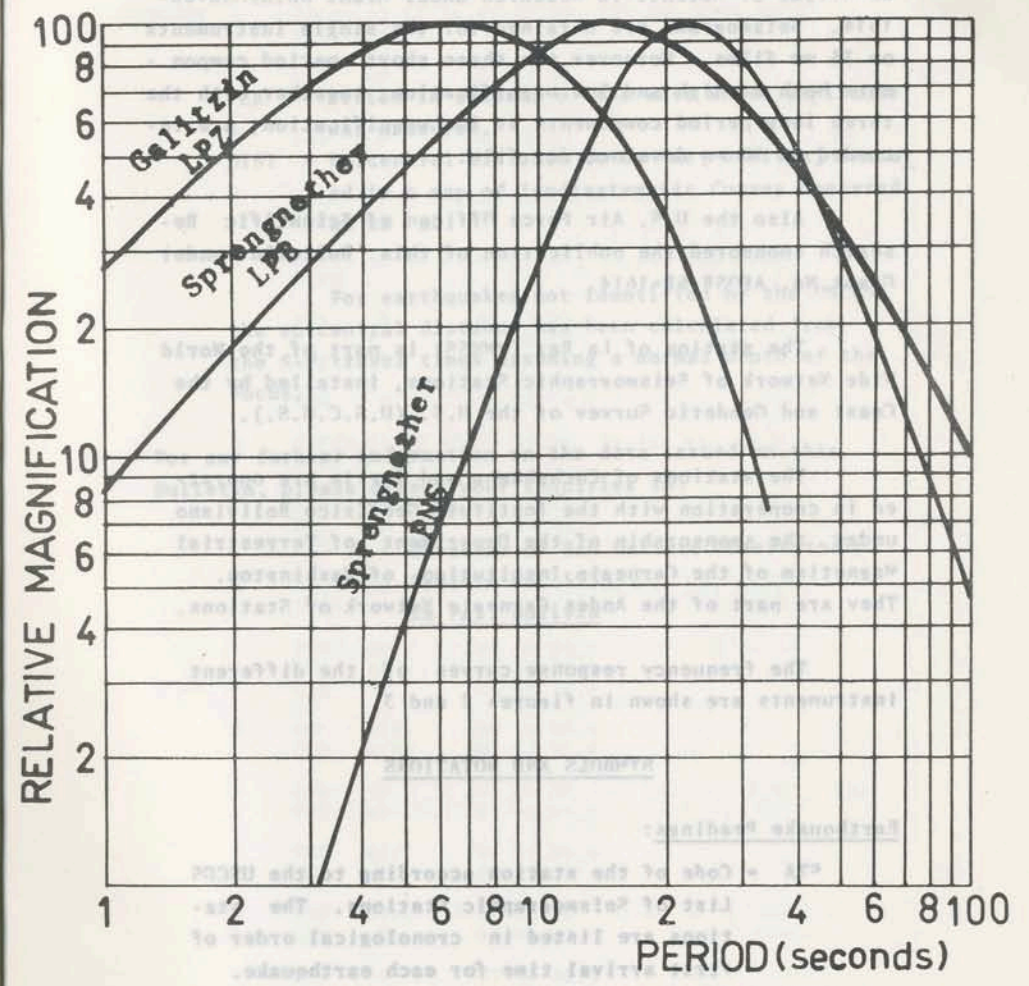


Fig. 2. Frequency response curves for the long period instruments.

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The station of Peñas is operated under U.S. Air Force Office of Scientific Research under Grant No. AFOSR-68-1614. Seismograms are obtained for the single instruments on 35 mm films. Moreover the three short period components both at high and low magnification, together with the three long period components at low magnification, are recorded on 16 mm developocorder film.

Also the U.S. Air Force Office of Scientific Research sponsored the publication of this Bulletin under Grant No. AFOSR-68-1614.

The station of La Paz (MNSS) 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 stations of Cochabamba 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 frequency response curves of the different instruments are shown in figures 2 and 3.

SYMBOLS AND NOTATIONS

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.

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 No. 5939
La Paz, Bolivia



MONTH	DAY	STA	PHASE	TIME			
OCTOBER	1	USCGS 23 57		36.4; 32.2S, 177.6W; h37; m5.3			
		KERMADEC IS.					
		LPB	eP	00 11 07			97°5
		PNS	P	00 11 08			
	1	LPB	P	03 18 17	1.0	28	
			e	19 27.5			
	1	PNS	eP	03 25 00.6			
		LPB	eP	03 25 01			
	1	USCGS 05 05		43.2; 11.9S, 75.5W; h4m m5.9			
		PERU					
		PNS	P	05 07 43.5	D		
			i	09 40			8°2
		LPB	P	05 07 49			
			i	09 48			
		CCH	P	05 08 10.5			
	1	USCGS 05 58		12.7; 11.7S, 75.1W; h5; m5.7			
		PERU					
		PNS	P	06 00 11.7	D		
		LPB	P	06 00 16.7			8°2
		CCH	P	06 00 39.4			
	1	USCGS 06 28		02.4; 11.7S, 75.1W; h5; m5.1			
		PERU					
		PNS	eP	06 30 02.2			
		LPB	eP	06 30 08.5			
		CCH	P	06 30 29.9			
	1	PNS	e(P)	06 56 36.6			
		CCH	e(P)	06 57 02.9			
	1	LPB	P	07 06 50	1.0	132	
		PNS	eP	07 06 54.6			
	1	PNS	e(P)	07 21 00.6			
		LPB	eP	07 21 05			
	1	PNS	e(P)	07 46 00			
		LPB	eP	07 46 02.5			
	1	PNS	P	07 59 08.3			
			i	40.6			
		LPB	P	07 59 13.6			
			i	50			
		CCH	P	07 59 34.9			
			e	08 00 08.4			
	1	PNS	eP	08 18 43.6			
	1	USCGS 08 28		14.0; -11.8S, 75.0W; h3; m5.8			
		PERU					
		PNS	iP	08 30 12.5	D		
		LPB	P	08 30 18	1.0	240	8°2
			i	33 13			

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	1	CCH	iP	08 30 40	C			
	1	LPB	eP	09 39 08				
	1	PNS	eP	10 10 43				
		LPB	P	10 10 44.5	D	0.6	14	
			i	53.5				
	1	PNS	eP	12 40 06.6				
		LPB	eP	12 40 08				
	1	LPB	eL	12 47				
	1	LPB	e(P)	13 02 10.7				
		PNS	eP	13 02 12.5				
	1	LPB	eP	16 36 23.5				
		PNS		16 34 25.4				
	1	USCGS PERU		17 04 44.8; 11.7S, 75.0W; h5; m5.1				
		PNS	P	17 06 44.4				
			eL	09.2				
		LPB	P	17 06 50		1.0	134	8°2
			e	08 47				
		CCH	P	17 07 11.9				
	1	USCGS		17 10 56.5; 0.8N, 85.0W; h--; m5.5				
				OFF COAST OF ECUADOR				
		PNS	eP	17 16 06				
			eS	20 00				
		LPB	P	17 16 11.5				23°5
			i	20 32				
	1	PNS	eP	17 43 18				
	1	USCGS		17 46 29.4; 0.0, 17.4W; h--; m5.0				
				NORTH ASCENSION ISLANDS.				
		PNS	eP	17 55 49				
	1	USCGS		18 42 12.8; 6.2S, 130.4E; h179; m5.3				
				BANDA SEA				
		PNS	ePKP	19 01 51				
	1	USCGS		19 53 15.7; 60.8S, 19.7N; h--; m5.6				
				SOUTH EASTERN ATLANTIC OCEAN				
		CCH	P	20 02 38.0				
		LPB	P	20 02 51.5				56°
			iS	10 45				
			L	20				
		PNS	eP	20 02 54				
			S	10 50				
			L	20				
	1	USCGS		20 47 00.6; 31.3N, 142.6E; h2; m4.7				
				SOUTH OF HONSHU, JAPAN				
		PNS	ePKP	21 06 47				
		LPB	ePKP	21 06 47.5		0.9		147°7

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	1	PNS	eP	21 25 34.6				
		LPB	P	21 15 36.5			0.7	11
	1	LPB	eP	22 31 22.5				
		PNS	eP	22 30 25.6				
	1	LPB	P	22 46 42			1.0	132
		PNS	P	22 46 49.2	C			
	1	USCGS PERU		22 56 24.8; 11.8S, 75.0W; h5; m5.5				
		PNS	iP	22 58 22.2	D			
			eS	23 00 15				
			eL	01.2				
		LPB	P	22 58 27.7			0.9	76
			e	23 00 08				8°2
			e	01 22				
		CCH	P	22 58 49.2				
	2	LPB	eP	00 14 34.5				
		PNS	eP	00 14 37.7				
	2	USCGS PERU		00 30 57.4; 11.9S, 75.1W; h5; m4.3				
		PNS	eP	00 32 55				
		LPB	eP	00 32 59.5				8°2
			e	35 20				
	2	USCGS		04 56 45.5; 38.5N, 122.7W; h2; m5.2				
				NORTHERN CALIFORNIA				
		PNS	P	05 08 28.6				
		LPB	P	05 08 30.5			1.0	10
		CCH	P	05 08 36.7				73°8
	2	USCGS		06 19 56.0; 38.5N, 122.7W; h2; m5.1				
				NORTHERN CALIFORNIA				
		PNS	eP	06 31 37				
		LPB	P	06 31 40				73°8
		CCH	eP	06 06 31 45.7				
	2	PNS	eP	07 14 34				
			eS	15 20				
		LPB	eP	07 14 36				
	2	LPB	eP	07 58 26				
		PNS	eP	07 58 28				
	2	PNS	eP	09 15 25.8				
		LPB	P	09 15 31.4			1.0	10
	2	LPB	eP	12 24 40				
		PNS	eP	12 24 44.4				
	2	LPB	eP	15 24 12				
		PNS	eP	15 24 15.4				
	2	LPB	eP	15 49 40				
			S	55.8				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	2	PNS	eP	16 31 00.6				
	2	CCH	eP	17 45 34.2				
		LPB	eP	17 45 45				
			S	46 28.5				
		PNS	eP	17 45 47				
			S	46 34.4				
	2	PNS	P	19 38 18.0				
	2	PNS	eP	21 45 34.2				
	2	PNS	P	22 21 06.8				
	2	USCGS 22 06 00.0; 51.4N, 179.2E; h1; m6.5 RAT IS., ALEUTIAN IS.						
		CCH	PKP	22 24 45.2		1.4	90	
		LPB	PKP	22 24 45.4		1.5	110	117°
		PNS	PKP	22 24 45.2		1.4	90	
			PS	35 14.4				
	2	PNS	eP	22 34 15				
	3	USCGS 01 33 19.8; 32.9S, 178.0W; h26; m5.7 SOUTH OF KERMADEC IS.						
		CCH	iP	01 46 50.6				
		PNS	eP	01 46 51		1.6	60	
		LPB	P	01 46 52		1.5	33	98°1
	3	USCGS 01 51 55.4; 51.9N, 157.8E; h91; m5.3 NEAR EAST COAST OF KAMCHATKA						
		PNS	ePKP	02 10 55				
		LPB	ePKP	02 10 56				129°7
	3	LPB	eP	04 49 03.7				
	3	PNS	eP	05 32 20.6				
		LPB	eP	05 32 21				
	3	LPB	eP	06 10 54.5				
		PNS	eP	06 10 55.6				
	3	LPB	eP	07 49 31.5				
	3	USCGS 08 33 08.0; 60.5S, 65.8W; h--; m4.6 DRAKE PASSAGE						
		CCH	eP	08 41 02.3				
		LPB	P	08 41 14.2		1.2	21	43.9
		PNS	P	08 41 16.4	D	1.4	43	
	3	PNS	eP	09 55 36.6				
	3	USCGS 12 03 20.0; 35.4N, 140.0E; h45; m4.0 NEAR COAST OF HONSHU, JAPAN						
		PNS	ePKP	12 23 15				
	3	LPB	eP	14 00 43.2				
		PNS		14 00 44.4				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	3	PNS	iP iS	14 29 10.7 35.4				C
	3	USCGS 15 39 43.5; 3.7S, 101.9E; h95; m5.6 SOUTHERN SUMATRA						
		LPB	ePKP	15 59 31				159°5
		PNS	PKP	15 59 32				
	3	USCGS 17 05 56.3; 62.7S, 161.1W; h--; m4.5 SOUTH PACIFIC CORBILLERA						
		CCH	eP	17 17 42.6				
		PNS	eP	17 17 48				
		LPB	eP	17 17 49.5				77°5
	3	PNS	eP	17 49 40.8				
	3	LPB	eP	18 15 53				
			e	16 22.5				
		PNS	eP	18 15 53.4				
			S	16 24.2				
	3	PNS	eP	22 24 28.9				
	3	LPB	P	23 58 02.7				0.7 14
		PNS	iP	23 58 03.7				D
			S	35.6				
	4	USCGS 00 26 34.9; 11.9S, 75.1W; h20; m4.7 PERU						
		PNS	P	00 28 30				
			eS	30 47				
			eL	31.3				
		LPB	P	00 28 35.7				0.9 11 8°2
			eS	04.5				
		CCH	P	00 28 57.6				
	4	PNS	eP	01 04 40				
		LPB	eP	01 04 45				
	4	PNS	iP	03 16 56.8				D
		LPB	eP	03 17 01				
		CCH	eP	03 17 24.4				
	4	PNS	eP	06 28 17				
		LPB	eP	06 28 18				
	4	PNS	P	06 33 44.3				
	4	LPB	eP	07 53 47.7				
	4	USCGS 07 50 52.1; 28.8S, 68.5W; h68; m4.2 LA RIOJA PROVINCE, ARGENTINA						
		LPB	eP	07 53 54				12°8
	4	USCGS 10 06 56.6; 32.5W, 141.2E; h42; m4.5 SOUTH OF HONSHU, JAPAN						
		PNS	PKP	10 26 43				
		LPB	PKP	10 26 44				0.9 8 149°5

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	4	PNS	iP iS	11 37 57.4 38 21.7	D			
	4	LPB PNS	eP eP	12 14 00 12 14 01.8				
	4	PNS	P	16 23 01	D			
	4	PNS	eP	16 35 07				
	4	LPB PNS	eP eP	16 56 12 16 56 15.6				
	4	PNS	eP S	17 11 35.7 12 12.6				
	4	PNS LPB	eP eP	20 59 41.6 20 59 42.5				
	4	USCGS PERU	21 08 18.8; 11.8S, 75.1W; h5;m4.4					
		LPB PNS	eP P	21 10 19.2 21 10 22.1				8*2
		e		37.4				
	4	USCGS PERU	21 57 51.7; 11.6S, 75.0W; h5; m4.2					
		PNS LPB	eP eP	21 59 50 21 59 55				8*2
	5	PNS	eP eS	04 35 59 36 27.6				
		LPB	eP	04 36 01				
	5	USCGS	05 01 22.8; 33.1S, 19.6E; h--; m5.8					
		REPUBLIC OF SOUTH AFRICA						
		PNS	eP	05 13 25				
	5	LPB PNS	P P	05 20 59 05 20 59.2				
	5	PNS	eP S	05 26 16 27 10				
		LPB	eP	05 26 25.5				
	5	LPB PNS	eP eP	08 42 10 08 42 12.6				
	5	LPB PNS	eP eP	09 42 59 09 43 05.8				
	5	PNS	P	10 39 08.6				
	5	USCGS	15 22 46.4; 22.5S, 68.2W; h105; m4.6					
		NORTHERN CHILE						
		CCH LPB	P P	15 24 04.5 15 24 15				5*5
		e		56				
		PNS	P	15 24 18.8	C			

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	5	LPB PNS	eP eP	16 07 39.2 16 07 43				
	5	PNS	eP S	16 34 52.6 35 17.2				
	5	USCGS	16 34 15.8; 7.5N, 123.7E; h33; m5.4					
		MINDANAO, PHILIPPINES ISLANDS						
		CCH LPB	ePKP ePKP	16 54 17.6 16 54 20				166*5
		i		32				
		PNS	ePKP e	16 54 21 32				
	5	PNS	iP iS	19 14 08 30	D			
	5	LPB	eP	20 07 16.5				
	5	USCGS	23 05 26.7; 32.5N, 141.2E; h43; m4.7					
		SOUTH OF HONSHU, JAPAN						
		PNS	PKP	23 25 13.2				
	5	PNS	eP	23 57 54.2				
	6	USCGS	00 37 59.6; 11.7S, 75.1W; h3; m5.1					
		PERU						
		PNS LPB	iP eP	00 39 58.2 00 40 04	D	1.0	37	9*0
		i		42 34				
		CCH	P	00 40 25.5	D			
	6	USCGS	00 47 25.5; 7.4N, 35.6W; h--; m4.6					
		CENTRAL MID-ATLANTIC RIDGE						
		CCH LPB PNS	P eP iP	00 54 45.9 00 54 59 00 55 01				38*8
	6	PNS	P S	02 46 33 56.6	D			
	6	PNS	iP S	04 42 21.7 46	D			
		LPB	iP S	04 42 22.5 47.5	D	0.9	44	
		CCH	eP	04 42 35.7				
	6	USCGS	06 36 45.2; 11.8S, 75.0W; h4; m5.3					
		PERU						
		PNS	P S eL	06 38 43.8 40 10 41.3	D			
		LPB	P	06 38 49.5		0.9	59	9*0
		L		40.4				
		CCH	P	06 39 11.2	D			
				15				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	6	CCH PNS LPB	eP eP eP	10 05 50.5 10 06 24.5 10 06 26				
	6	PNS	P S	10 40 27.3 51.8				
	6	USCGS		12 48 05.6; 15.0N, 120.1E; h59; m5.6				
		LUZON, PHILIPPINE IS.						
		LPB	PKP	13 08 11.9		1.0	90	17122
	6	PNS	eP	15 33 28.2				
	6	PNS LPB	eP eP	15 58 07.2 15 58 16.6				
	6	PNS	eP	16 47 54				
	6	PNS	eP	21 27 00.6				
	6	USCGS		21 46 32.7; 7.2N, 123.7E; h--; m5.2				
		MINDANAO, PHILIPPINE ISLANDS.						
		LPB	ePKP	22 06 34				164°8
		PNS	ePKP	22 06 37.8				
	6	LPB PNS	eP eP eS	22 53 30.5 22 53 38 54 20				
	7	PNS	eP	00 15 32.4				
	7	CCH LPB	P P eS	00 54 57.1 00 55 13.6 56 39		0.7	10	
		PNS	P S	00 55 18 56 43.4				D
	7	USCGS		03 47 51.8; 6.1S, 104.2E; h15; m5.2				
		SUNDA STRAIT						
		PNS	ePKP e	04 07 45 08 30				
	7	PNS	eP	07 53 28.8				
	7	USCGS		08 02 13.2; 9.0S, 109.0W; h--; m4.5				
		NORTHERN EASTER I. CORDILLERA						
		PNS	eP	08 09 48.8				40°6
		LPB	eP	08 09 52				
		CCH	eP	08 10 03.1				
	7	LPB PNS	eP eP	09 30 49.0 09 30 49.2				
	7	PNS LPB CCH	P eP eP	11 18 10.9 11 18 17.5 11 18 46.0			1.0	20
	7	PNS LPB	P eP eS	13 17 13.8 13 17 16 18 38.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	7	CCH		13 17 45.9				
	7	USCGS		15 58 30.7; 13.0N, 144.3E; h49; m4.7				
		MARIANA IS.						
		PNS	ePKP	16 18 15.7				
	7	PNS	eP	16 33 20.2				
	7	LPB PNS	eP eP	18 52 41.5 18 52 47.5				
	7	PNS LPB	eP eP e	19 46 31.2 19 46 57 49 46				
	7	PNS	eP	22 29 42.4				
	7	USCGS		23 07 21.2; 11.7S, 75.3W; h5; m4.9				
		PERU						
	7	PNS	P eL	23 09 22 12.3				
		LPB	P	23 09 29		1.0	40	9°0
			eL	12.5				
		CCH	P	23 09 50.2				
	8	PNS	eP	02 38 05.2				
	8	USCGS		02 19 27.2; 10.1S, 117.5E; h--; m5.1				
		SOUTH OF SUMBAWA IS.						
		CCH	eP	02 39 21.9				
		PNS	ePKP	02 39 27.4				
		LPB	ePKP	02 39 32				152°2
	8	USCGS		03 43 24.2; 20.0S, 68.9W; h120; m4.9				
		CHILE-BOLIVIA BORDER REGION						
		CCH	iP	02 44 18.8				
		LPB	iP	02 44 21.6				3°6
			S	55				
		PNS	iP	02 44 24.3				
			S	45 00				
	8	PNS	eP	03 32 02.5				
	8	LPB	eP	03 55 08.5				
		PNS	eP	03 55 08.9				
		CCH	eP	03 55 15.3				
	8	LPB	eP	04 24 04				
		PNS	eP	04 24 06				
	8	USCGS		04 07 36.4; 31.1N, 142.3E; h14; m4.8				
		SOUTH OF HONSHU, JAPAN						
		PNS	ePKP	04 27 25.4				
		LPB	ePKP	04 27 28				148°8
	8	PNS	eP e	06 05 07 24.8				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	8	LPB	P	06 05 11.2 30				
	8	USCGS 06 32 08.9; 12.0N, 143.7E; h9; m5.2						
		SOUTH OF MARIANA ISLANDS.						
		PNS	PKP	06 51 56.8				
	8	LPB	P	08 04 20				
			S	44				
		PNS	eP	08 04 21.6				
			S	47				
	8	PNS	eP	08 06 40				
		LPB	eP	08 06 46				
	8	LPB	eP	08 53 11.5				
			P	08 53 13.6				
	8	PNS	P	09 48 08				
	8	PNS	P	11 14 04.2	D			
			S	15 10.6				
	8	USCGS 13 53 15.2; 38.1S, 72.3W; h42; m3.9						
		CENTRAL CHILE						
		CCH	P	13 57 58.2				
		LPB	P	13 58 06.5				21°6
		PNS	eP	13 58 09.6				
	8	LPB	eP	14 29 44				
			S	30 23				
		PNS	eP	14 29 44.3				
		LPB	eS	30 27				
	8	PNS	P	14 35 52.1				
	8	USCGS 14 30 00.0; 37.3N, 116.5W; h0; m5.5						
		SOUTHERN NEVADA						
		PNS	P	14 41 13.9				
		LPB	P	14 41 16.5				70°3
		CCH	P	14 41 22.9				
	8	USCGS 14 46 27.6; 11.0N, 142.8E; h19; m4.6						
		SOUTH OF MARIANA IS.						
		PNS	ePKP	15 06 21				
	8	PNS	eP	15 57 20				
			S	41.8				
	8	PNS	eP	16 34 25				
			S	35 03				
	8	LPB	eP	18 20 14.2				
		PNS	eP	18 20 16				
	8	PNS	eP	19 32 09.6				
	8	PNS	eP	20 26 10				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	9	PNS	eP	01 46 45				
		LPB	eP	01 46 50				
			i	47 43				
	9	PNS	eP	02 22 17.5				
		LPB	eP	02 22 27.5				
	9	PNS	eP	04 14 03.6				
		LPB	eP	04 14 12.4				
	9	USCGS 07 45 16.3; 43.7N, 127.4W; h10; m4.8						
		OFF COAST OF OREGON						
		PNS	eP	07 57 28.8				
		LPB	P	07 57 31.6				1.0 10 81°9
		CCH	P	07 57 36.2				
	9	CCH	P	08 38 11.5				
		LPB	P	08 38 27.3				0.5 5.6
			e	39 52.5				
		PNS	P	08 38 31.6				
			e	39 56				
	9	PNS	eP	08 41 53.8				
	9	LPB	eP	09 02 41				
			IS	03 02				
	9	USCGS 09 06 02.7; 13.3N, 89.8W; h67; m4.3						
		EL SALVADOR						
		PNS	eP	09 13 02.3				
		LPB	eP	09 13 05				37°8
		CCH	eP	09 13 16.6				
	9	USCGS 12 15 03.3; 40.1N, 139.3E; h--; m4.1						
		NEAR WEST COAST OF HONSHU, JAPAN						
		PNS	ePKP	12 34 46				
	9	USCGS 13 32 57.4; 9.0S, 158.0E; h47; m4.9						
		SOLOMON IS.						
		PNS	ePKP	13 52 02				
	9	USCGS 14 07 40.7; 43.5N, 147.5E; h30; h30; m4.8						
		KURILE IS.						
		PNS	ePKP	14 27 08				
	9	LPB	P	18 51 42.2				
		PNS	eP	18 51 47.4				
	9	PNS	iP	20 51 27				
			S	52 28				
	10	CCH	iP	01 14 21.8				
		PNS	eP	01 14 24.6				
			e	34.5				
			S	15 23.4				
		LPB	eP	01 14 28				
			eS	15 13.4				
	10	USCGS 02 32 56.6; 13.5N, 98.8W, h65; m4.1						
		EL SALVADOR						

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	10	PNS	eP	02 29 51.2				
	10	USCGS	02 36 56.0; 46.0N, 95.8E; h--;					m5.2
			SOUTH EAST INDIAN RISE					
		PNS	ePKP	02 55 42.6				
	10	USCGS	04 06 24.1; 13.2N, 89.7W; h71;					m4.6
			EL SALVADOR					
		PNS	eP	04 13 22.4				
		LPB	eP	04 13 31				37°8
		CCH	eP	04 13 36.8				
	10	USCGS	04 23 46.7; 10.0S, 73.3W; h184;					m4.0
			PERU					
		PNS	eP	04 25 41.4				
		LPB	P	04 25 45		0.9		7°2
		CCH	eP	04 26 07.8				
	10	CCH	P	04 44 01.3				
		LPB	P	04 44 10				
		PNS	P	04 44 13.7				
	10	LPB	eP	05 27 57.5				
		PNS	eP	05 28 00.8				
	10	PNS	eP	05 48 21.9				
		LPB	eP	05 48 29.5				
	10	PNS	eP	05 59 35.4				
		LPB	eP	05 59 37.5				
	10	USCGS	06 38 18.8; 38.3N, 140.6E; h10;					m4.6
			HONSHU, JAPAN					
		PNS	ePKP	06 58 02.2				
		LPB	P	06 58 03				145°8
	10	PNS	eP	07 19 13				
		LPB	P	07 19 13.5				
	10	LPB	eP	07 28 50.5				
		PNS	eP	07 28 54				
	10	LPB	eP	08 30 51.7				
		PNS	eP	08 30 51.8				
	10	LPB	eP	08 51 57.4				
		PNS	eP	08 51 58.8				
	10	CCH	P	11 42 15.2				
	10	USCGS	11 43 05.9; 21.6S, 68.2W; h123;					m4.2
			CHILE-BOLIVIA BORDER REGION					
		LPB	P	11 44 22				5°4
				44				
		PNS	iP	11 44 25.6		C	0.8	44
			i	43				
	10	PNS	eP	12 54 54.2				
	10	LPB	eP	13 04 52				
		PNS	P	13 04 55.3				
				20				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	10	PNS	eP	13 11 46.8				
	10	PNS	P	15 07 34				
			iS	56.9				
	10	LPB	eP	19 48 20				
	10	CCH	eP	21 47 37.7				
		PNS	eP	21 47 45				
	10	PNS	eP	23 01 12				
	11	PNS	P	03 24 44.8				
		LPB	P	03 24 46				
		CCH	eP	03 24 49.3				
	11	PNS	eP	04 14 37.4				
			e	59.2				
		LPB	eP	04 14 43				
			e	58				
	11	LPB	eP	08 56 00				
		PNS	eP	08 56 02.4				
	11	LPB	P	09 14 34.2		C		
		PNS	P	09 14 38.2		C	0.5	9
	11	PNS	eP	11 19 21				
		LPB	eP	11 19 25				
	11	LPB	eP	12 44 08.6				
		PNS	eP	12 44 11.6				
	11	PNS	P	15 53 51.1		D		
			S	54 14.4				
	11	PNS	eP	23 30 21.7				
		LPB	eP	23 30 22.6				
	11	USCGS	23 53 24.5; 24.3S, 67.1W; h171;					m4.6
			CHILE-ARGENTINA BORDER REGION					
		CCH	P	23 55 02.2		C		
		LPB	eP	23 55 17.2		C	1.0	9°9
		PNS	P	23 55 21		C		
	12	LPB	eP	02 19 13.3				
	12	USCGS	03 31 12.8; 0.1N, 123.7E; h166;					m5.4
			NORTHERN CELEBES					
		LPB	PKP	03 50 57			1.0	160°2
			i	51 38.5				
		PNS	PKP	03 50 58.4				
			PKP2	51 38.2				
	12	LPB	eP	05 28 20				
		PNS	eP	05 28 23.8				
	12	LPB	eP	05 51 47				
	12	LPB	eP	05 56 44				
			e	57 57				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	12	PNS	eP	05 56 49				
	12	PNS	iP	06 46 55.9	D			
		LPB	P	06 46 56.2				
		CCH	eP	06 47 09.8	D			
	12	PNS	eP	08 01 50.8				
	12	PNS	eP	08 15 02				
	12	PNS	P	09 20 18.1	D			
		LPB	eP	09 20 25				
	12	PNS	eP	09 28 02.6				
		LPB	eP	09 28 04.5				
	12	LPB	eP	09 54 32.4				
		PNS	eP	09 54 36				
			e	55 27				
	12	CCH	eP	10 50 38.1				
		LPB	eP	10 50 46				
			e	51 07.7				
		PNS	eP	10 50 48.4				
	12	PNS	eP	13 32 35.6				
		LPB	eP	13 32 38				
			eS	33 27				
	12	PNS	eP	14 24 22				
	12	USCGS JAVA SEA	16 05 37.5; 112.0E; 5.9S; h595; m5.3					
		PNS	ePKP	16 24 27				
	12	LPB	eP	16 29 30.5				
		PNS	eP	16 29 31.2				
	12	LPB	eP	19 22 53				
		PNS	eP	19 22 53.8				
	12	PNS	P	19 57 06.4	D			
	12	LPB	eP	22 10 52.5				
	12	USCGS	22 48 15.2; 13.2N, 90.6W; h68; m4.0					
			NEAR COAST OF GUATEMALA					
		PNS	eP	22 55 27				
	12	PNS	eP	23 25 13.4				
	12	PNS	eP	23 43 01.8				
	13	PNS	eP	01 12 51.4				
		LPB	eP	01 12 55				
	13	PNS	eP	01 56 32				
		LPB	eP	01 56 36				
	13	USCGS PERU	04 11 23.0; 25.2W, 11.9S; h14; m4.3					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	13	USCGS PERU	04 11 23.0; 11.9S, 25.2W; h14; m4.3					
		PNS	eP	04 13 20.2				
			e	15 37.2				
		LPB	P	04 13 26.7				8°1
			e	15 47				
		CCH	eP	04 13 48.5				
	13	CCH	P	04 50 31.9				
		LPB	P	04 50 51				
			S	52 27				C
		PNS	P	04 50 55				C
			S	52 35.6				
	13	PNS	P	05 39 42.3				C
		LPB	eP	05 39 48				
	13	CCH	eP	07 10 27.9				
		PNS	eP	07 10 24				
		LPB	P	07 10 30				
			i	14 13				
	13	USCGS	06 56 01.6; 18.9S, 169.3E; h246; 5.9					
			NEW HEBRIDES IS.					
		PNS	PKP	07 14 18.4				
	13	PNS	P	07 23 43.8				D
		LPB	eP	07 23 50				
	13	PNS	eP	08 48 07.6				
			iS	33				
	13	USCGS	12 44 10.0; 13.6N, 44.9W; h--; m4.9					
			NORTH ATLANTIC RIDGE.					
		PNS	eP	12 51 22.4				
		LPB	eP	12 51 26				37°8
	13	LPB	eP	13 54 30				
		PNS	iP	13 54 37.8				D
			iS	55 09.8				
	13	PNS	eP	10 34 50				
	13	PNS	21 17 49.4					
	13	USCGS	22 12 11.8; 9.8N, 62.4W; h55; m4.4					
			NEAR COAST OF VENEZUELA					
		PNS	eP	22 17 46.4				
			S	22 47				
			L	28.2				
	13	PNS	P	23 43 17				
			S	43				
	14	USCGS	13 03 50.3; 46.0N, 27.6W; h-- m4.4					
			NORTH ATLANTIC RIDGE					
		PNS	eP	13 15 20				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	14	PNS	P S	14 40 20.9 47.4	D			
	14	PNS	eP	15 22 16.3				
	14	PNS LPB	P eP	16 34 22 16 34 30				
	14	LPB PNS	eP eP	19 54 30.2 19 54 36.1				
	14	USCGS 20 39 11.6; 37.9N, 135.1E; h371; m4.7 SEA OF JAPAN						
		PNS	ePKP	20 58 05				
	14	USCGS 23 59 26.0; 27.0S, 176.5W; h61; m5.3 KERMADEC IS.						
	15	PNS	eP	00 12 56.8				
	15	LPB PNS	eP P	00 19 05.5 00 19 09.4				
	15	LPB	eP	02 48 45				
	15	USCGS 03 56 06.6; 19.3N, 65.4W; h50; m4.8 PUERTO RICO REGION						
		PNS	eP	04 03 00.6				
		LPB	eP	04 03 03				
			e	20.5			36°0	
	15	USCGS 04 13 51.3; 23.9S, 66.9W; h192; m4.0 JUJUY PROVINCE, ARGENTINA						
		LPB	P	04 15 39.5				
			i	16 07.8			9°0	
		PNS	eP	04 15 42				
	15	USCGS 05 41 25.5; 4.2N, 126.3E; h22; m5.0 TALAUD IS.						
		LPB	PKP	06 01 30				
	15	LPB	P	06 08 58.7				
			S	10 14.5				
		PNS	eP	06 09 02.4				
			S	10 21.8				
	15	LPB PNS	P eP	06 21 45.5 06 21 53.2				
	15	USCGS 11 54 13.9; 14.3N, 91.0W; h105; m4.4 GUATEMALA						
		PNS	eP	12 01 22				
	15	PNS	P	13 31 32.7				
	15	PNS	iP	15 42 43.2	D			
	15	PNS	P	15 55 02.9				
	15	PNS	iP i	19 21 40.1 53	C			



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	15	PNS	P eS	21 14 56 15 32.8	C			
	15	PNS	eP	23 20 31				
	16	PNS	P	00 00 05.6				
	16	PNS	eP	01 11 40.8				
	16	PNS	iP iS	01 32 11.5 48.3	C			
	16	PNS	iP S	03 05 32.4 58.8				
	16	PNS	eP S	04 17 07.1 30				
	16	PNS	eP	04 32 23				
	16	PNS	P S	05 06 42.8 07 11.1				
	16	PNS	P	05 42 06.6				
	16	PNS	eP	06 16 14.2				
	16	PNS	iP S	13 18 36.4 19 06.6	C			
	16	PNS	eP eS	14 17 00.2 18 10				
	16	PNS	P	16 17 19				
	16	PNS	eP	16 59 08.4				
	16	PNS	P	18 56 39.7	D			
	16	PNS	eP	21 07 16.4				
	16	PNS	eP S	22 42 50 43 22.8				
	16	PNS LPB	eP eP	23 18 20.8 23 18 25				
	17	LPB	P	00 34 19.5	C			
			S	35 23.5				
		PNS	iP S	00 34 23.6 32.2	C			
	17	USCGS 01 12 40.6; 4.4N, 76.2W; h157; m4.5 COLOMBIA						
		PNS	eP	01 17 20				
		LPB	eP	01 17 27				22°5
	17	LPB PNS	P P	01 22 15 01 22 18.1	D D			
			e	23 10				
				25				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	17	USCGS 01 25		12.4; 23.1N, 94.7E; h134; m6.0				
		BURMA-INDIA BORDER REGION						
		PNS	PKP	01 45 01.6				
			pPKP	41				
			PP	50 10				
			eL	02 45				
		LPB	ePKP	01 45 02				163°8
			i	40.6				
	17	PNS	eP	01 54 25.6				
	17	PNS	eP	05 37 45				
	17	PNS	iP	06 16 40.6	C			
			S	17 05				
		LPB	P	06 16 41.5				
			S	17 06.7				
	17	LPB	eP	06 42 13				
	17	LPB	eP	08 08 49				
		PNS	eP	08 08 51.8				
	17	USCGS 08 09		55.5; 14.7S, 71.2W; h113; m5.2				
		PERU						
		PNS	iP	08 10 51.6	C			
		LPB	iP	08 10 57	C			3°6
			e	11 34				
	17	PNS	eP	10 44 57				
		LPB	eP	10 45 36				
	17	USCGS 13 46		27.7; 6.9N, 73.0W; h151; m4.0				
		NORTHERN COLOMBIA						
		PNS	eP	13 51 25.2				
	17	LPB	P	16 11 13				
			i	17.5				
	17	LPB	P	18 44 22				
		PNS	P	18 44 23.6	D			
	17	USCGS 21 11		21.4; 5.9S, 151.4E; h57; m5.1				
		NEW BRITAIN REG.						
		PNS	ePKP	21 30 38.4				
	18	LPB	(P)	00 49 44				
		PNS	(P)	00 49 47.5				
	18	USCGS 01 13		59.7; 39.3N, 141.4E; h107; m5.3				
		HONSHU, JAPAN						
		PNS	PKP	01 33 27.6	D			
			eL	02 23.7				
		LPB	PKP	01 33 28.4	D			146°)
	18	LPB	eP	02 48 10				
			S	40.5				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	18	PNS	eP	02 48 16.6				
			S	52.3				
	18	LPB	P	04 50 38	D			
			S	51 05.5				
		PNS	iP	04 50 38.7	D			
			S	51 05.6				
	18	LPB	eP	06 40 24				
	18	PNS	eP	07 27 10.8				
			S	34.2				
	18	LPB	P	08 14 21.8				
			S	49				
		PNS	eP	08 14 29.4				
	18	LPB	eP	08 36 05.5				
			S	34.5				
		PNS	eP	08 36 16				
	18	USCGS 08 44		00.0; 52.5N, 173.5E; h24; m5.6				
		NEAR ISLANDS, Aleutian Is.						
		PNS	ePKP	09 02 50				
		LPB	eP	09 02 51				120°7
	18	LPB	P	15 03 43.4				
		PNS	P	15 03 46.2				
	18	LPB	eP	21 16 06				
	18	LPB	P	22 12 53.6				
			eS	13 31				
		PNS	P	22 12 59.5	C			
	19	PNS	iP	00 07 50	D			
			S	08 11.4				
	19	PNS	eP	00 45 53.8				
			S	46 19.6				
	19	USCGS 02 23		55.8; 24.0S, 66.7W; h200; m4.0				
		SALTA PROVINCE, ARGENTINA						
		LPB	P	02 25 45				9°0
			iS	27 10.2				
		PNS	P	02 25 49.2	D			
			S	17 15.2				
	19	PNS	eP	04 11 55				
		LPB	eP	04 11 55.5				
	19	LPB	P	06 33 08.6				
			e	33				
		PNS	P	06 33 14.8				
	19	LPB	eP	06 42 27				
			e	43 15				
		PNS	eP	06 42 31.4				
	19	LPB	eP	06 57 35				
			S	57.5				
		PNS	eP	06 57 40				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
OCTOBER	19	PNS	eP eS	12 07 56.5 08 20					
	19	PNS	eP eS	12 18 13.1 41.2					
	19	PNS	P	12 27 54					
	19	USCGS 12 25 45.1; 7.7N, 126.0E; h60; m5.4 MINDANAO, PHILIPPINE IS.							
		LPB	ePKP	12 45 50				163°9	
	19	USCGS 12 29 27.1; 139.3E, 39.7N; h--; m4.8 NEAR COAST OF HONSHU, JAPAN							
		PNS	PKP	12 49 08.5					
		LPB	PKP	12 49 09.5				147°8	
	19	PNS	eP	13 17 49					
		LPB	eP	13 17 52.5					
	19	PNS	eP	14 28 38.2					
		LPB	e	14 28 55.4					
	19	PNS	eP	15 23 48.6	C				
		LPB	eP	15 23 52					
	19	USCGS 19 33 36.3; 46.2S, 33.6E; h--; m5.0 PRINCE EDWARD ISLANDS REG.							
		LPB	eP	19 46 16.2					
		PNS	eP	19 46 20.8				86°5	
	19	PNS	eP	21 23 51					
		LPB	eP	21 23 51.5					
	19	PNS	eP S	22 36 30.2 37 11					
	19	LPB	eP	22 37 22					
	19	USCGS 23 19 18.7; 24.0S, 66.4W; h203; m3.9 SALTA PROVINCE, ARGENTINA							
		LPB	P	23 21 08.7					
		PNS	P	23 21 12.5	D	0.6		9°0	
			S	22 38					
	20	LPB	eP	00 42 20					
		PNS	eP	00 42 22					
			e	54.8					
	20	USCGS 01 12 23.4; 5.6S, 153.1E; h50; m4.6 NEW ISLAND REG.							
		PNS	ePKP	01 31 42.2					
			PP	35 10.4					
			eL	02 23					
		LPB	ePKP	01 31 43				133°2	
			PP	35 11.4					
			eL	02 24					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
OCTOBER	20	LPB	eP	03 07 23.5					
			e	08 02					
		PNS	eP	03 07 24.7					
	20	LPB	eP	04 47 02					
		PNS	P	04 47 02.1					
			S	24.5					
	20	PNS	P	06 54 15.2					
	20	LPB	eP	07 53 05					
		PNS	eP	07 53 10					
	20	LPB	eP	08 11 17					
		PNS	eP	08 11 20.4					
	20	USCGS 08 47 38.0; 13.7S, 72.5W; h106; m39 PERU							
		PNS	eP	08 48 47.8					
		LPB	eP	08 48 56.5				5°4	
			i	49 26					
	20	PNS	eP S	10 18 56 19 19.6					
	20	USCGS 11 58 03.3; 19.7N, 109.4W; h--; m4.7 REVILLA GIGEDO ISLANDS REG.							
		PNS	P	12 07 26.8					
		LPB	P	12 07 29.7				54°0	
	20	USCGS 13 11 33.5; 10.8N, 72.4W; h55; m5.1 VENEZUELA							
		PNS	P	13 17 13.8					
			i	22 30					
			L	26.7					
		LPB	eP	13 17 16.8					
			e(L)	26.4					
	20	USCGS 15 20 36.5; 17.3N, 95.2W; h87; m5.4 OAXACA, MEXICO							
		PNS	iP	15 28 25.5				D	
			S	34 48					
			eL	42.5					
		LPB	P	15 28 28.5				D	
			eL	38.3				43°2	
	20	PNS	eP	16 36 28.7					
	20	USCGS 18 00 28.7; 11.9S, 75.2W; h52; m4.7 PERU							
		PNS	eP	18 02 26.6					
			eL	04.8					
		LPB	eP	18 02 31				8°1	
			eL	05					
	20	PNS	eP S	20 11 16 38.4					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	20	PNS	eP	20 16 12.6				
		LPB	eP	20 51 56.6				
		PNS	P	20 52 01	D			
			eS	53 20				
	21	LPB	eP	01 02 44				
		PNS	eP	01 02 46.4				
			e	03 41.6				
	21	LPB	eP	01 08 09.5				
	21	LPB	P	01 22 25				
	21	LPB	e(P)	01 39 59				
	21	LPB	eP	04 39 32				
			eS	30 11.5				
		PNS	eP	04 29 33.2				
			S	30 12				
	21	LPB	P	05 32 57.6				
		PNS	eP	05 32 58.8				
	21	PNS	P	06 58 43.8				
			S	59 07				
		LPB	eP	06 58 45.5				
			eS	59 14				
	21	LPB	eP	07 54 10				
	21	LPB	P	09 31 44.2				
	21	USCGS 11 19 05.5; 0.8N, 27.9W; h--; m4.7 CENTRAL MID-ATLANTIC RIDGE						
		CCH	P	11 26 49.5				
		LPB	P	11 27 07				43°2
			L	40				
		PNS	eP	11 27 08.8		1.0	35	
			eL	40.5				
	21	PNS	P	11 50 27.1				
			S	51 22.2				
		LPB	eP	11 50 31				
	21	PNS	P	16 33 01.8				
	21	PNS	eP	17 41 23.8				
		LPB	eP	17 41 28.2				
			e	44 15				
			eL	49.8				
	21	USCGS 17 40 13.7; 33.6S, 71.7W; h45; m4.4 NEAR COAST OF CENTRAL CHILE						
		PNS	P	17 44 13.8				
			eL	49.6				
	21	PNS	eP	17 45 17				
	21	PNS		18 36 55.4				
	21	USCGS 19 52 46.8; 12.0N, 43.7W; h--; m4.8 NORTH ATLANTIC RIDGE						
		PNS	P	19 59 57.4				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	21	PNS	P	20 59 46.3	D			
	21	USCGS 20 53 47.5; 31.3N, 179.2W; h48; m5.9 ANDREANOF ISLANDS, ALEUTIAN ISLANDS.						
		PNS	ePKP	21 12 26.8				116°2
		LPB	ePKP	21 12 47.3				
	21	PNS	eP	21 23 06.3				
			eL	39				
		LPB	eL	39.2				
	21	PNS	eP	22 28 52				
	22	LPB	eP	02 28 29.2				
	22	LPB	P	04 10 03.5				
		PNS	P	04 10 06.8				
	22	PNS	eP	06 17 22.6				
		LPB	P	06 17 23	D			
	22	PNS	P	06 20 16				
		LPB	P	06 20 17				
	22	USCGS 07 12 07.7; 4.8S, 152.5E; h71; m5.3 NEW BRITAIN REG.						
		PNS	ePKP	07 31 05				
			i	23				
			PKS	34 50				
		LPB	ePKP	07 31 07				134°2
			i	23				
			e	34 50				
	22	LPB	P	07 41 34.8				
		PNS	eP	07 41 37.6				
	22	USCGS 09 37 00.5; 19.3N, 65.8W; h64; m4.3 PUERTO RICO REGION						
		LPB	eP	09 43 57				36°
	22	PNS	eP	09 52 41				
		LPB	P	09 52 58				
	22	USCGS 10 21 52.1; 18.1S, 71.5W; h23; m5.4 OFF COAST OF NORTHERN CHILE						
		PNS	iP	10 22 51.8	C			
		LPB	iP	10 22 54.7	C			4°5
		CCH	P	10 23 11.7				
			i	16.2				
	22	USCGS 12 52 22.0; 10.9N, 62.6W; h79; m5.4 NEAR COAST OF VENEZUELA						
		PNS	P	12 58 05	D			
			S	13 02 45				
			eL	05.9				
		LPB	P	12 58 07		1.0		27°9
			e	13 02 44				
			eL	06				
	22	PNS	eP	13 46 13.6				
	22	PNS	eP	13 52 57.8				
			eS	53 47.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	22	PNS LPB	iP eP	13 59 53 13 59 55	D			
	22	PNS	eP S	14 54 09.2 38.2				
	22	PNS LPB CCH	eP eP eP	15 40 27.2 15 40 29.5 15 40 48.7				
	22	PNS LPB	eP eP	15 55 05.2 15 55 08.2				
	22	PNS	eP S	16 38 31.4 39 07.6				
	22	LPB	P	16 44 39.6				
		PNS	e P eS	16 44 48 45 03.4	C			
		CCH	P	16 44 56.7				
	22	PNS LPB	iP eP	22 44 37.1 22 44 39.5	D			
	22	USCGS 22 51 33.5; 34.8N, 121.3W; h15; m5.9 OFF COAST OF CALIFORNIA						
		PNS LPB	P P	23 02 55 23 02 58				72°
		CCH	eL P	32 23 03 05.8				
	23	PNS	P	00 45 46.7	D			
		PNS LPB	eP eP	01 13 59.6 01 14 16.4				
	23	USCGS 01 39 22.1; 56.2S, 27.3W; h95; m5.3 SOUTH SANDWICH ISLANDS REGION						
		CCH LPB	P P	01 47 54.1 01 48 10.5				49°S
			iS e(L)	55 13 02 01				
		PNS	P	01 48 13.4	C			
			i S	53 14 55 18.6				
	23	LPB	e(P)	02 33 06				
	23	LPB PNS	P P	05 45 18.5 46 20 05 45 19.2		0.8	9	
	23	PNS	eP	05 46 18.8				
	23	CCH PNS	eP eP	06 50 38.6 06 50 42				
	23	CCH PNS LPB	eP eP S eP	07 00 22.9 07 00 29 48 07 00 33				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	23	PNS LPB	eP eP	12 42 02.6 12 42 13				
	23	PNS	eP S	13 22 35.2 23 33				
	23	LPB PNS	eP iP S	16 39 36.5 16 39 37.4 40 01.				C
	23	PNS	P S	17 14 37 15 01				
	23	PNS	eP e	19 11 11 19.6				
	23	PNS	P S	20 07 23.7 47.4				
	23	CCH LPB	P eP	21 44 19.1 21 44 22.5				
			eS P	45 21 44 26.2				
		PNS	eS	55				
	23	PNS	eP	21 54 51				
	24	CCH LPB PNS	eP P eP	06 32 35.5 06 32 53 06 32 57				
	24	CCH PNS LPB	eP eP eP	07 44 35.1 07 44 37.6 07 44 38.2				
	24	PNS LPB	eP P	07 57 01 07 57 02				
	24	PNS LPB	eP eP	08 14 32.6 08 14 40				
			e(S)	59.5				
	24	USCGS 08 29 12.1; 33.3N, 119.2W; h10; m5.1 SOUTHERN CALIFORNIA						
		PNS	P	08 40 23				
			eL	09 05.2				
		LPB	P L	08 40 25.5 09 05				70°2
		CCH	P	08 40 33.5				
	24	USCGS 11 34 43.6; 19.4N, 145.6E; h157; m4.9 MARIANA ISLANDS						
		LPB PNS	ePKP ePKP	11 54 10 11 54 11.4				147°8
	24	LPB PNS	eP eP	12 45 38.2 12 45 40.8				
	24	LPB PNS	eP P	16 33 46.5 16 33 48.2				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	24	LPB PNS CCH	eP eP eP	19 48 08 19 48 11 19 48 15.6				
	24	USCGS 19 46 09.0; 9.0S, 108.7W; h--; m4.5 NORTHERN EASTER I. CORDILLERA						
		LPB PNS	eP iP	19 59 46 19 53 42.8	C	0.8	37	40°S
	24	PNS LPB	eP eS eP	20 01 05 22 08 20 01 08.8				
	24	USCGS 20 26 42.5; 33.3N, 119.1W; h2; m4.9 SOUTHERN CALIFORNIA						
		PNS	eP	20 37 57				
	24	USCGS 21 44 06.7; 127.7E, 7.5S; h149; m5.6 BANDA SEA						
		CCH LPB PNS	PKP PKP PKP	22 02 41.9 22 03 47 22 03 47.5	D			150°S
	25	LPB PNS	eP eP	00 23 35 00 23 35.4				
	25	LPB PNS	P eS eP eS	01 39 55.7 40 22.5 01 40 04 35				
	25	USCGS 03 56 53.0; 23.4S, 115.3W; h--; m4.5 EASTER IASLAND CORDILLERA						
		PNS LPB	P P	04 05 03.6 04 05 06				45°O
	25	USCGS 04 06 47.3; 36.2S, 101.2W; h--; m5.2 SOUTHERN PACIFIC OCEAN						
		PNS	P S SS eL	04 13 41.8 19 10 21 50 23.5		1.2	31	
		LPB	P S eL	04 13 41.8 *19 09 23.7				35°I
		PNS	P	04 13 44.1				
	25	USCGS 04 33 00.1; 36.0S, 101.4W; h--; m4.6 SOUTHERN PACIFIC OCEAN						
		PNS LPB	P P	04 39 55.5 04 39 56	C	1.0	25	35°I
	25	LPB PNS	eP eP	07 02 26 07 02 28.2				
	25	PNS LPB	eP eP	07 59 28.6 07 59 42				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	25	USCGS 09 40 42.5; 21.4S, 67.3W; h187; m4.3 CHILE-BOLIVIA BORDER REGION						
		CCH LPB PNS	P iP iP S	09 41 42.5 09 41 59.0 09 42 03 43 02				4°S
	25	USCGS 12 03 47.6; 44.1N, 147.8E; h38; m5.3 KURILE IS.						
		PNS	PKP	12 23 12.8				
	25	PNS	eP	16 32 11				
	25	USCGS 17 02 49.7; 8.5N, 83.0W; h37; m4.1 COSTA RICA						
		PNS	eP	17 08 45.6				
	25	PNS	P S	22 09 45 10 23.4				
	26	LPB	e(P)	02 23 03				
	26	USCGS 02 59 48.5; 5.5N, 126.6E; h80; m4.8 MINDANAO, PHILIPPINE ISLANDS						
		LPB PNS	ePKP PKP	03 19 45 03 19 46				162°O
	26	USCGS 03 44 50.4; 27.0S, 176.5W; h30; m5.3 KERMADEC ISLANDS						
		LPB PNS	eP eP	03 58 21.5 03 58 25				98°2
	26	USCGS 06 38 03.4; 16.2S, 174.0W; h127; m5.8 TONGA ISLANDS						
		PNS LPB	ePKP ePKP	06 51 40 06 51 41.4				100°O
	26	PNS	eP i eP	06 55 33 43.6 06 55 46				
	26	LPB	eP	07 06 42				
	26	LPB	eP	09 00 37				
	26	CCII LPB PNS	eP P eP	10 28 31.6 10 28 45.7 10 28 49.2				
	26	PNS LPB CCII	eP eP eP	15 37 23.6 15 37 26.4 15 37 42				
	26	USCGS 15 36 51.8; 44.9N, 17.3E; h--; m5.3 YUGOSLAVIA						
		PNS	eP	15 50 29				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	26	PNS	eP S	16 07 17 47.2				
	26	LPB PNS	P P	17 03 15.2 17 03 18.4				
	26	USCGS		19 15 51.2; 43.6N, 148.2E; h37; m5.0				
		KURILE IS.						
		PNS	ePKP	19 35 18				
	26	USCGS		21 39 20.8; 53.4S, 23.5E; h--; m5.9				
		SOUTH AFRICA						
		CCH	P	21 51 01.5				
		LPB	P	21 51 18				
			i	22 01 24	D			77°S
			eL	22 22				
		PNS	iP	21 51 20.3	D			
			eL	22 17				
	27	CCH	eP	03 17 07.1				
		LPB	P	03 17 15.5				
			S	18 44.8				
		PNS	P	03 17 29.2				
	27	LPB	P	06 18 32.5				
			S	58				
		PNS	eP	06 18 33.6				
			i	19 00				
		CCH	eP	06 18 40.5				
	27	LPB	eP	07 06 25.5				
	27	LPB	eP	07 09 35				
	27	LPB	P	07 56 37.5				
	27	LPB	eP	21 02 10				
		PNS	eP	21 02 19				
	27	LPB	eP	21 50 13.5				
	27	USCGS		22 32 32.1; 2.2S, 78.9W; h131; m4.5				
		ECUADOR						
		PNS	eP	22 36 27.6				
		LPB	P	22 36 32.5				
		CCH	P	22 36 46.1				18°9
	28	PNS	P	04 08 15.5	D			
		LPB	eP	04 08 16.5				
	28	LPB	P	06 03 32				
	28	PNS	eP	07 04 12.4				
		LPB	eP	07 04 16.5				
	28	PNS	iP	09 40 23.4	C			
		eS		41 06.4				
		LPB	P	09 40 28.3	C			
			S	41 17				
		CCH	P	09 40 49.3				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	28	PNS	eP	19 06 42				
		LPB	eP	19 06 47				
	28	PNS	eP	19 27 22.1				
			e	31.4				
		LPB	eP	19 27 32.4				
	28	LPB	eP	23 02 10.8				
		PNS	P	23 02 16.6	D			
	29	PNS	P	00 47 05.9	D			
	29	LPB	eP	02 07 07.6				
	29	PNS	iP	03 10 26.1	D			
			S	55.6				
		LPB	iP	03 10 29.8	D			
			S	11 03				
		CCH	P	03 10 42.9	D			
	29	PNS	P	06 07 52.8	D			
		LPB	eP	06 07 55				
	29	LPB	eP	06 39 14				
		PNS	eP	06 39 09.6				
	29	LPB	eP	06 49 21.5				
		PNS	eP	06 49 24				
		CCH	eP	06 49 59.7				
	29	PNS	P	07 45 14.2	C			
		LPB	P	07 45 15				
			S	40				
		CCH	eP	07 45 25.8				
	29	USCGS		11 03 37.4; 37.9S, 72.9W; h61; m3.7				
		CENTRAL CHILE						
		PNS	eP	11 08 42.4				
	29	USCGS		16 24 17.0; 38.0S, 73.5W; h16; m4.7				
		NEAR COAST OF CENTRAL CHILE						
		CCH	P	16 29 01.3				
		LPB	P	16 29 13.4				22°S
			i	33 18				
			eL	37.7				
		PNS	eP	16 29 14.8				
			eL	38				
	29	USCGS		16 40 07.3; 1.5N, 126.2E; h93; m5.0				
		MOLUCCA PASSAGE						
		PNS	ePKP	17 00 11				
	29	CCH	P	17 27 18.7				
		LPB	eP	17 27 33.3				
			S	28 12.8				
	29	USCGS		22 01 51.4; 37.1N, 116.1W; h0; m 5.7				
		SOUTHERN NEVADA						
		PNS	eP	22 13 03				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	30	USCGS 00 05 39.4; 37.6N, 140.1E; h151; m5.0 HONSHU, JAPAN						
		CCH	ePKP	00 25 01.7				
		PNS	ePKP	00 25 05.2				
			i	47				
		LPB	P	00 25 07				145°8
			e	47.5				
	30	LPB	eP	01 08 05				
	30	USCGS 02 47 04.2; 32.2S, 70.5W; h181; m3.9 CHILE-ARGENTINA BORDER REGION						
		CCH	eP	02 50 52.5				
		LPB	eP	02 51 14.5				16°2
	30	LPB	eP	05 31 30				
	30	USCGS 07 51 50.1; 41.6N, 142.2E; h89; m4.7 HOKKAIDO, JAPAN						
		PNS	ePKP	08 11 14.4				
	30	LPB	eP	10 10 45				
			i(S)	11 08				
			eP	10 10 51				
	30	LPB	iP	22 13 05.2		C		
	31	PNS	eP	02 30 32.8				
	31	PNS	eP	03 29 00				
	31	CCH	P	03 57 14.1				
		PNS	eP	03 57 26.6				
	31	USCGS 04 29 48.9; 2.5S, 143°5E; h19; m4.9 NEW GUINEA REGION						
		PNS	ePKP	04 49 22.4				
		CCH	ePKP	04 49 21.4				
	31	PNS	eP	06 00 31.6				
		CCH	eP	06 00 28.1				
	31	PNS	eP	06 13 09				
	31	PNS	iP	06 58 24.4				
	31	USCGS 07 00 13.4; 37.1N, 142°0E; h40; m5.0 OFF EAST COAST OF HONSHU, JAPAN						
		PNS	PKP	07 19 51.6				
	31	PNS	eP	07 57 28.6				
	31	PNS	P	10 29 23.2				
			i	40.8				
	31	PNS	eP	10 50 39				
		CCH	eP	10 50 44.4				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
OCTOBER	31	USCGS 11 33 04.8; 51.3N, 179.0W; h49; m6.0 ANDREANOF ISLANDS, ALEUTIAN IS.						
		PNS	ePKP	11 51 44.4				
	31	PNS	eP	22 32 29				
			i	48.4				
	31	USCGS 22 37 53.7; 11.9S, 75.1W; h7; m4.5 PERU						
		PNS	eP	22 39 50.4				
	31	LPB	eP	23 12 31.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	1	PNS LPB	P eP	01 52 52.7 01 52 54				
	1	LPB	eP	01 56 09				
	1	USCGS 11 08 20.9; 23.1N, 107.9W; h--; m4.6 GULF OF CALIFORNIA						
		PNS LPB	P eP	11 17 51.2 11 17 53		1.2	52	54°9
	1	USCGS 11 20 50.5; 35.5N, 135.3E; h348; m4.9 SOUTHERN HONSHU, JAPAN						
		PNS LPB	ePKP ePKP	11 40 06.6 11 40 07.5				152°2
	1	LPB PNS	e(P) e(P)	11 47 31 11 47 31.4				
			e	48 40				
	1	PNS	eP	17 55 51.4				
	1	PNS LPB	P eP	20 55 56.8 20 55 57	D			
	1	USCGS 21 07 22.9; 3.7S, 143.2E; h36; m5.3 NEAR NORTH COAST OF NEW GUINEA						
		LPB PNS	ePKP ePKP	21 26 50 21 26 53.6				142°2
	2	LPB PNS CCH	eP eP eP	01 42 41.2 01 42 41.8 01 42 45.1				
	2	CCH PNS LPB	eP eP eP	04 51 37.0 04 51 43 04 51 44.2				
	2	CCH LPB PNS	P eP P	05 03 58.0 05 04 16.5 05 03 58.0				
	2	PNS LPB CCH	iP P eP	05 44 03.9 05 44 06 05 44 19.0		0.7	24	
	2	PNS LPB CCH	P eP eP	08 10 14.5 08 10 15 08 10 48.9	D			
	2	PNS LPB	eP eP	10 20 24 10 20 26				
	2	LPB	eP	11 39 24		0.7	11	
			eS	40 02				
		PNS CCH	eP eP	11 39 24.4 11 39 28.0				
	2	USCGS 11 47 06.2; 5.3S, 81.7W; h12; m4.5 NEAR COAST OF NORTHERN PERU						
		PNS LPB	eP eP	11 50 54 11 51 01.5				170°1



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	2	USCGS 13 39 22.0; 21.8S, 68.4W; h124; m4.4 CHILE-BOLIVIA BORDER REGION						
		CCH LPB PNS	P P P	13 40 29.4 13 40 41 13 40 43.8				1.0 23 5°4
	2	CCH LPB PNS	eP eP eP	15 03 52.2 15 04 00 15 04 00.6				
	2	PNS	eP	18 06 02				
			i	29.3				
	2	PNS LPB	iP eP	18 23 42.5 18 23 44.5	D			
	2	USCGS 18 53 06.6; 6.5S, 107.1E; h57; m5.4 JAVA						
		PNS LPB	ePKP ePKP	19 13 07.6 19 13 07				156°7
	2	PNS LPB	eP eP	22 00 53 22 00 57.5				
	2	USCGS 22 51 43.3; 0.9N, 125.2E; h62; m5.2 MOLUCCA PASSAGE						
		PNS LPB	ePKP ePKP	23 11 40 23 11 38.5				
	3	PNS	iP	01 59 04.6	D			
			S	26.8				
		LPB	eP	01 59 06.5				
	3	LPB PNS	eP eP	02 47 31 02 47 32.8				
	3	CCH LPB PNS	P P eP	03 57 14.9 03 57 16.4 03 57 17.6				
	3	PNS LPB CCH	eP eP eP	05 33 01 05 33 02.3 05 33 19.1				
	3	PNS	eP	08 57 16.8				
	3	LPB PNS CCH	eP P P	09 43 06 09 43 06.7 09 43 22.7	D			
			S	44 06.1				
	3	PNS	eP	12 24 45.6				
	3	PNS	eP	17 16 12.4				
	3	LPB	e(P)	17 25 10				
	3	USCGS 20 06 59.6; 59.0S, 26.0W; h153; m4.6 SOUTH SANDWICH ISLANDS REGION						
		PNS	eP	20 15 50				
	3	PNS	iP	23 00 21.1				
			S	43.4				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	3	PNS	iP S	23 00 21.1 43.4	D			
	4	USCGS 00 40 46.4; 34.8N, 121'3W; h--; m4.9 OFF COAST OF CALIFORNIA						
		PNS	eP	00 52 06				
	4	USCGS 02 45 49.2; 19.3N; 104.9W; h--; m4.1 NEAR COAST OF JALISCO, MEXICO						
		PNS	P	02 54 45.4				
	4	USCGS 03 57 23.2; 6.2S; 130.1E; h--; m5.1 BANDA SEA						
		CCH	P	04 17 09.6	C			
		PNS	PKP	04 17 15	C			
	4	PNS	P S	05 24 28.5 51	D			
	4	USCGS 05 38 03.4; 1.9N, 100.2W; h--; m4.2 EAST CENTRAL PACIFIC OCEAN						
		PNS	eP	05 45 07				
		CCH	P	05 45 20.1				
	4	PNS	eP S	06 22 04.6 27				
	4	PNS	P	08 30 16.4				
		CCH	eP	08 30 32.2				
	4	USCGS 08 50 46.9; 33.8N, 132.1E; h347; m5.4 NEAR S. COAST OF HONSHU, JAPAN						
		CCH	PKP	09 09 52.9				
			i	10 14.1				
		PNS	PKP	09 09 57.	D	1.0	20	
			i	10 02.6				
	4	CCH	P	10 18 00.1				
		PNS	P S	10 18 26.2 49	C			
	4	USCGS 10 40 00.1; 26.6S, 114.8W; h--; m5.3 EASTER ISLAND REGION						
		PNS	P PP	10 48 09.8 49 54.6				
	4	PNS	eP	12 30 21.4				
	4	PNS	eP	15 42 48.6				
	4	PNS	eP e	15 54 35 55 26.4				
	4	PNS	P	16 34 09	D			
	4	PNS	eP	16 41 42				
				42				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	4	PNS	eP	17 58 33.4				
	4	PNS	e(P)	18 35 00				
	4	PNS	e(P)	18 40 14				
	4	PNS	eP i	18 45 05.4 54.6				
	4	PNS	eP i	18 54 26.4 55 20				
	4	PNS	e(P)	18 58 06.5				
	4	PNS	eP	19 00 06				
	4	PNS	P	19 45 28	D			
	4	PNS	eP	19 56 13.6				
	4	PNS	P	20 00 50				
	4	USCGS 21 52 59.7; 52.8S; 27.2E; h--; m4.8 SOUTH OF AFRICA						
		PNS	eP	22 05 11.6				
	4	USCGS 22 04 11.9; 0.1S, 125.0E; h--; m5.4 MOLUCCA PASSAGE						
		PNS	PKP	22 24 12.2				
	4	CCH	eP	23 57 21.1				
		PNS	eP	23 57 40				
		LPB	eP	23 57 41.2				
	5	PNS	eP	02 48 02				
		LPB	e(P)	02 48 03.5				
		CCH	eP	02 48 22.3				
	5	PNS	eP	03 22 30				
	5	USCGS 04 38 37.4; 27.5S, 63.1W; h567; m4.4 SANTIAGO DEL ESTERO PROVINCE, ARGENTINA						
		CCH	P	04 40 53.8	D			
		LPB	P	04 41 16.5	D			11°7
			e	43 32				
		PNS	iP S	04 41 20 43 30	D			
	5	PNS	iP	06 16 36.3	D			
		LPB	iP	06 16 36.7	D	1.0	130	
		CCH	P	06 16 47.8				
			S	17 25.9				
	5	CCH	eP	07 35 17.1				
		LPB	eP	07 35 22				
		PNS	eP	07 35 23.6				
	5	USCGS 07 47 34.3; 35.9N, 10.7W; h-- m4.6 NORTH ATLANTIC OCEAN						
		CCH	P	07 59 05.7				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOVEMBER	5	LPB PNS	eP eP	07 59 16.5 07 59 17.6				75°7	
	5	CCH	P	17 51 17.1					
	5	USCGS 17 54 13.6; 34.8N, 121.2W; h--; m5.8 OFF COAST OF CALIFORNIA							
		PNS	P	18 05 33					
		LPB	P	18 05 35	C	1.0	70	71°2	
		CCH	P	18 05 38.4					
	5	USCGS 18 48 48.9; 34.8N, 121.1W; h--; m5.1 OFF COAST OF CALIFORNIA							
		PNS	eP	19 00 06					
		LPB	eP	19 00 10					
	5	USCGS 19 02 35.5; 33.1S; 19.6E; h--; m5.5 REPUBLIC OF SOUTH AFRICA							
		PNS	eP	19 14 44					
	6	CCH	P	03 44 26.6	D				
		LPB	P	03 44 46.2		0.5	7		
		S		45 34.5					
		PNS	P	03 44 50.6					
	6	LPB	eP	06 17 24.3					
		PNS	eP	06 17 26.6					
	6	PNS	eP	08 13 04					
	6	CCH	P	08 29 56.4					
			i	59.7					
		LPB	P	08 30 05		1.0	10.0		
		PNS	P	08 30 06.6					
	6	LPB	P	10 13 38.6					
		PNS	eP	10 13 42.6					
	6	USCGS 11 33 16.1; 5.2N, 76.2W; h110; m4.8 COLOMBIA							
		PNS	P	11 38 08					
			S	42 79					
			eL	44					
		LPB	P	11 38 11.2		0.8	16	23°4	
			S	42 16					
		CCH	P	11 38 19.5					
	6	USCGS 13 01 20.1; 15.7N, 92.5W; h141; m50 MEXICO-GUATEMALA BORDER REGION							
		LPR	eP	13 08 35				39°6	
		PNS	eP	13 08 40.4					
		CCH	eP	13 08 50.0					
	6	USCGS 13 13 56.5; 15.7N, 93.5W; h114; 4.6 NEAR COAST OF CHIAPAS, MEXICO							
		PNS	eP	13 21 29.6					
	6	USCGS 13 21 21.0; 3.9N; 32.4W; h--; m5.0 CENTRAL MID-ATLANTIC RIDGE							

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOVEMBER	6	CCH LPB PNS	P P P	13 28 41.1 13 29 01.4 13 29 02.6				45°0	
					C	1.0	14		
						1.0	32		
	6	PNS LPB	eP eP	17 46 10.4 17 46 19.7					
	7	CCH LPB PNS	eP eP eP	00 00 37.8 00 00 42 00 00 42.6					
	7	USCGS 01 27 26.9; 18.1N, 94.5W; h46; m4.6 GULF OF CAMPECHE							
		PNS	eP	01 35 20.8					
		LPB	eP	01 35 25					
	7	USCGS 02 33 06.1; 6.9N, 124.6E; h413; m5.1 MINDANAO, PHILIPPINE IS.							
		CCH	ePKP	02 54 20.3				163°9	
		LPB	ePKP	02 54 26					
			e	55 27					
		PNS	ePKP	02 54 26.4					
	7	USCGS 03 58 30.9; 24.1S, 66.9W; h211; m4.9 SALTA PROVINCE, ARGENTINA							
		CCH	P	03 59 59.6	C				
			i	04 00 02.9					
		LPB	iP	04 00 02	C	0.8	262	7°2	
			S	01 43					
		PNS	iP	04 00 22.7	C				
	7	USCGS 04 30 58.3; 6.3S, 105.3E; h52; m5.8 SUNDA STRAIT							
		PNS	ePKP	04 50 52					
			e	51 21.6					
		LPB	ePKP	04 50 54					
	7	PNS	eP	05 12 39.2					
			eS	13 02					
		LPB	eP	05 12 43					
			S	13 05					
	7	LPB	eP	05 53 38.5					
	7	LPB	eP	09 35 00					
		PNS	P	09 35 03.6	C	0.6	9		
	7	USCGS 12 11 46.5; 3.1S, 12.0W; h--; m4.9 NORTH OF ASCENSION IS.							
		LPB	eP	12 21 29				56°7	
		PNS	eP	12 21 32					
	7	USCGS 12 45 35.3; 2.9S, 12.0W; h--; m5.2 NORTH ASCENSION IS.							
		LPB	eP	12 55 12				56°7	
		PNS	eP	12 55 13					
	7	USCGS 13 04 24.9; 2.9N, 12.0W; h--; m5.9 NORTH OF ASCENSION IS.							
		PNS	eP	13 14 10.6					
		LPB	eP	13 14 10					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	7	USCGS 13 51 47.4; 24.0S, 66.8W; h185; m3.8 SALTA PROVINCE, ARGENTINA						
		LPB	eP	13 53 38				7°2
		PNS	eP	13 53 42				
	7	LPB	eP	14 41 41.5				
		PNS	eP	14 41 45.2				
	7	LPB	eP	16 05 18.5				
		PNS	P	16 05 20.8				
	7	USCGS 16 41 06.7; 2.8S, 12.1W; h--; m5.3 NORTH OF ASCENSION ISLAND						
		LPB	P	16 50 50				56°7
			e	51 02				
		PNS	eP	16 50 52.2				
	7	USCGS 18 20 35.8; 2.9S, 12.0W; h--; m5.2 NORTH OF ASCENSION ISLAND						
		LPB	eP	18 30 19				56°7
		PNS	eP	18 30 22				
	7	LPB	PKP	18 53 11.9		1.3	266	
		PNS	iPKP	18 53 12.2	D			
	7	PNS	eP	20 17 02.6				
	7	LPB	eP	20 58 00				
		PNS	eP	20 58 04.2				
	7	PNS	P	23 09 29				
			i	32.2				
		LPB	P	23 09 32				
			S	56.4				
	8	USCGS 01 14 22.2; 20.0N, 147.1Eh65; m4.9 MARIANA ISLANDS.						
		PNS	ePKP	01 33 59				
		LPB	ePKP	01 34 00		1.0	14	146°9
	8	PNS	eP	04 35 51				
			S	36 23.2				
		LPB	eP	04 35 53.5				
			S	36 19				
	8	USCGS 06 31 00.9; 3.2N, 84.2W; h--; m4.6 OFF COAST OF CENTRAL AMERICA						
		PNS	P	06 36 23.2				
		LPB	P	06 36 26.6		1.0	8	
	8	USCGS 07 21 29.7; 45.5N, 150.1E; h57; m5.3 KURILE IS						
		PNS	ePKP	07 40 49.6				
		LPB	PKP	07 40 50		1.0	12	136°9
	8	LPB	eP	09 07 45				
		PNS	eP	09 07 45.2				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	8	PNS	eP	09 51 11				
		LPB	eP	09 51 16.5				
	8	USCGS 15 39 13.2; 2.8S; 11.9W; h--; m4.7 NORTH OF ASCENSION ISLAND.						
		PNS	eP	15 48 58				56°7
		LPB	eP	15 49 00				
	8	LPB	eP	18 11 21.5				
			eS	12 52.5				
		PNS	eP	18 11 24.4				
			i	49				
			eS	12 54				
	8	USCGS 20 28 23.9; 3.0S, 12.1W; h--; m5.2 NORTH OF ASCENSION ISLAND						
		LPB	eP	20 38 05				56°7
		PNS	eP	20 38 08.2				
	8	LPB	P	21 45 17.6	D	0.7	15	
		PNS	P	21 45 20.8	D			
	8	USCGS 21 54 50.8; 1.1S, 127.0E; h18; m4.7 HALMAHERA						
		PNS	ePKP	22 14 49				
		LPB	ePKP	22 14 43.5				156°5
	8	USCGS 21 55 09.2; 1.1S, 127.0E; h--; m5.9 HALMAHERA						
		PNS	ePKP	22 15 09				
		LPB	ePKP	22 15 13.5				
	8	USCGS 22 23 18.1; 1.1S, 126.9E; h33; m4.9 MOLUCCA SEA						
		PNS	ePKP	22 43 26				
	8	USCGS 23 26 00.0; 1.0S; 127.0E; h55; m5.3 HALMAHERA						
		PNS	ePKP	23 45 54.6				156°5
		LPB	ePKP	23 45 56.6				
	9	LPB	P	00 20 09.7		0.8	13	
		PNS	iP	00 20 13.6	C			
	9	PNS	eP	01 10 14.0				
		LPB	eP	01 10 15.8				
	9	USCGS 01 09 24.3; 1.0S, 127.1E; h19; m5.2 HALMAHERA						
		PNS	ePKP	01 29 22				156°5
		LPB	ePKP	01 29 24.4				
	9	USCGS 01 22 10.6; 1.2S, 126.9E; h69; m5'2 MOLUCCA SEA						
		PNS	ePKP	01 42 12				
		LPB	ePKP	01 42 15				
	9	LPB	iP	02 26 14.6		0.7	77	
			iS	53				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOVEMBER	9	PNS	iP S	02 26 18.4 59	C				
	9	PNS LPB	P eP eS	02 42 14.6 02 42 19.5 43 07	C				
	9	USCGS 03 32 45.6; 21.5S, 70.9W; h90; m4.2 NEAR COAST OF NORTHERN CHILE							
		LPB	P S	03 34 07.5 35 35		1.0	32	5°4	
		PNS CCH	P P S	03 34 09.1 03 34 23.3 46.5					
	9	PNS LPB	eP eP	07 53 41.4 07 53 43.5					
	9	USCGS 09 07 50.9; 16.3S, 167.9E; h185; m5.3 NEW HEBRIDES IS.							
		PNS LPB	ePKP ePKP	09 26 13.2 09 26 14.3		0.8	10	116°2	
	9	USCGS 12 26 25.2; 6.9N, 73.0W; h155; m4.6 NORTHERN COLOMBIA							
		PNS LPB	P eP iPP	12 31 22.5 12 31 25.5 59	C	0.7	8	24°3	
	9	PNS LPB	eP eP	23 31 56 23 32 03					
	10	USCGS 00 10 21.2; 2.6S, 79.6W; h97; m4.0 NEAR COAST OF ECUADOR							
		PNS LPB	eP P	00 14 20 00 14 25.4		1.0	10	17°-	
	10	USCGS 05 36 48.7; 2.5S, 139.8E; h15; m5.0 NEAR NORTH COAST OF WEST NEW GUINEA							
		PNS LPB	PKP PKP	05 56 33.1 05 56 33.4		1.3	45	146°9	
	10	PNS LPB	iP eS iP	12 02 10.4 18 12 02 12.5	C				
		CCH	eS iP	19 12 02 16.8	C				
	10	LPB PNS	P P	12 24 46.8 12 24 47.8		1.0	26		
	10	LPB PNS	eP P S	13 06 38 13 06 39.5 07 04.8	D	0.4	7		
	10	USCGS 15 42 34.5; 5.6S, 142.0E; h40; m5.3 NEW GUINEA							
		LPB PNS	ePKP ePKP	16 02 00 16 02 04.4				142°2	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOVEMBER	10	CCH PNS LPB	eP P eP	19 55 32.6 19 55 45.8 19 55 47.5				0.5 5	
	10	LPB PNS	eP eP	22 09 52 22 09 54.2				0.4 4	
	11	USCGS 00 27 20.3; 20.6S, 68.7W; h84; m3.9 CHIILE-BOLIVIA BORDER REGION							
		LPB PNS	P P S	00 28 30.5 00 28 32 29 04		1.0 0.6	60 27		
	11	LPB	eP	00 57 28					
	11	USCGS 04 22 42.9; 1.2S, 15.9W; h--; m4.8 NORTH OF ASCENSION IS.							
		PNS LPB	eP eP	02 32 03.4 02 32 05				56°7	
	11	USCGS 02 45 29.8; 80.2W, 2.4S; h62; m4.1 NEAR COAST OF ECUADOR							
		PNS LPB	eP eP	02 49 38.4 02 49 42.5				18°0	
	11	USCGS 06 40 10.2; 32.6S, 70.9W; h77; m3.9 CHIILE-ARGENTINA BORDER REGION							
		PNS LPB	eP eP	06 43 57.2 06 44 00				16°2	
	11	USCGS 06 55 32.6; 70.6W, 24.9S; h39; m5.1 NEAR COAST OF NORTHERN CHILE							
		LPB	P PP L	06 57 39.3 50.5 07 00.9		1.0	52	9°0	
		PNS	iP PP S L	06 57 41.4 54 59 52 07 00.9	D				
	11	PNS LPB	eP eP	07 49 44 07 49 45					
	11	LPB PNS	P eP	08 13 34.3 08 13 36.6					
	11	PNS LPB	P eP	09 01 15.8 09 01 16					
	11	USCGS 10 54 58.3; 14.4S, 70.9W; h175; m4.2 PERU							
		PNS	P i S	10 55 47.5 56 09 25.6	D				
		LPB	P i e S	10 55 52.7 56 15 34		0.4	34		

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	11	USCGS 19 52 00.5; 28.1S, 66.6W; h129; m3.9 CATAMARCA PROVINCE, ARGENTINA						
		LPB	P	19 54 44.5		0.7	14	11°7
		PNS	P	19 54 48	D			
	12	PNS	eP	00 00 37.8				
		LPB	eP	00 00 38.5				
	12	PNS	eP	00 59 43.2				
		LPB	eP	00 59 46.5				
	12	LPB	P	01 08 28		0.7	11	
		PNS	P	01 08 28.6	C			
	12	PNS	eP	02 01 16.4				
		LPB	eP	02 01 11				
	12	LPB	P	03 20 45		1.0	40	
		PNS	P	03 20 47.2				
	12	USCGS 03 48 28.2; 13.9N, 90.0W; h11; m4.0 NEAR COAST OF GUATEMALA						
		PNS	eP	03 55 28				
		LPB	eP	03 55 30				37°9
	12	LPB	P	04 18 42.5		0.5	14	
			S	19 17.5				
		PNS	P	04 18 46.5	C			
			S	25				
	12	LPB	eP	04 56 01.5				
	12	LPB	e(P)	05 00 07.5				
	12	PNS	eP	05 27 36				
		LPB	eP	05 27 45				
	12	USCGS 05 57 02.0; 8.5N, 103.7W; h--; m4.3 OFF COAST OF MEXICO						
		PNS	eP	06 04 58.4				
		LPB	eP	06 05 02				43°2
	12	USCGS 06 15 13.8; 8.6N, 103.5W; h--; m4.5 OFF COAST OF MEXICO						
		PNS	eP	06 23 10				
		LPB	P	06 23 12.5		1.0	10	43°2
	12	USCGS 06 20 23.9; 8.8N, 103.4W; h--; m4.2 OFF COAST OF MEXICO						
		PNS	eP	06 28 19.6				
		LPB	P	06 28 23.4		1.0	10	43°2
	12	LPB	eP	09 08 33				
	12	USCGS 12 29 42.5; 42.4N, 144.9E; h--; m5.2 HOKKAIDO, JAPAN						
		PNS	ePKP	12 49 14				
		LPB	ePKP	12 49 15.2		1.0	10	141°4

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	12	USCGS 15 40 15.5; 6.0S, 148.8E; h82; m5.0 NEW BRITAIN REGION						
		PNS	PKP	15 59 21.8				
			i	33.8				
		LPB	P	15 59 22				137°9
			i	33.5				
	12	USCGS 18 23 25.8; 55.4N, 140.7E; h69; m4.7 NEAR EAST COAST OF HONSHU, JAPAN						
		PNS	ePKP	18 43 07.4				
		LPB	ePKP	18 43 09				147°6
	12	PNS	iP	19 33 46.2	D			
	12	USCGS 21 16 16.7; 68.8W, 21.4S; h124; m4.6 CHILE-BOLIVIA BORDER REGION						
		PNS	P	21 17 32.6				
	12	PNS	P	23 51 33.8	C			
			e	42.6				
	13	PNS	eP	00 26 04				
	13	CCH	eP	01 12 45.2				
		LPB	eP	01 12 56				
			eS	13 21				
		PNS	eP	01 12 56.8				
			S	13 22.6				
	13	PNS	eP	02 18 15.8				
	13	LPB	P	02 53 49		0.7	8	
			P	02 53 51.2				
	13	LPB	P	04 05 15				
		PNS	P	04 05 18.8	D			
	13	PNS	eP	06 53 47				
		LPB	eP	06 53 53.5				
	13	USCGS 07 06 22.6; 10.1S, 75.3W; h151; m4.1 PERU						
		PNS	eP	07 08 33				
			e	48.6				
		LPB	P	07 08 36.5				9°0
			e	50.5				
		CCH	P	07 08 39.0				
	13	USCGS 07 51 29.5; 27.8S, 71.6W; h--; m5.8 NEAR COAST OF NORTHERN CHILE						
		LPB	P	07 54 16.2		0.8	46	10°8
			S	56 42				
			L	58				
		PNS	iP	07 54 17	C			
			S	56 48				
			L	57.8				
	13	LPB	P	11 20 43	D	0.6	42	
			S	21 10				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	13	PNS	P S	11 20 51.3 21 12.6	D			
	13	CCH LPB PNS	P P S P	11 21 35.7 11 21 53.4 22 39.3 11 27 55.4				
	13	PNS	eP S	12 14 39 15 09				
	13	LPB PNS	eP eP	22 14 43.3 22 14 51.6				
	13	LPB PNS	eP P	23 19 25 23 19 25.7				
	13	PNS	eP	23 37 37.4				
	14	PNS	P	00 37 41.6				
	14	PNS LPB	eP eP	02 46 10 02 46 12				
	14	PNS	eP eS	03 01 13.6 02 39.2				
	14	PNS LPB	iP S eP	04 03 18.4 42.8 04 03 18.7	C			
	14	LPB PNS	eP e eP e	06 42 22.7 55 06 42 26.2 43 00				
	14	USCGS COLOMBIA	06 52 05.3; 4.9N, 76.8W; h53; m4.7					
		PNS	P e L	06 57 01.2 07 04 17.6 06.1				
		LPB	P e	06 57 04.4 07 04 22				27°5
	14	PNS	eP eS	07 44 09 16.8				
	14	USCGS TONGA IS.	07 37 45.7; 19.7S, 175.9W; h200; m5.5					
		PNS	eP PP eL	07 51 10.6 55 17.4 08 24.8				
		LPB	eP ePP	07 51 12.6 55 18.7				
	14	LPB PNS	eP eP	08 07 25.2 08 07 27.5				
	14	LPB PNS	eP eP	09 01 54.5 09 01 59.2				
	14	LPB PNS	eP eP	10 53 18.2 10 53 18.8				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	14	USCGS 11 46 54.6; 21.6S, 68.4W; h114; m4.5						
		CHILE-BOLIVIA BORDER REGION						
		LPB	eP	11 48 12				5°4
		PNS	iP S	11 48 15.2 49 07	C			
	14	PNS LPB	eP eP	12 01 37.8 12 01 41.7				
	14	PNS	eP	12 28 11.4				
	15	LPB	L	00 09				
	15	CCH LPB	eP P S	00 39 42.4 00 40 00 28				
		PNS	P S	00 40 03 32				
	15	LPB PNS	eP P	01 21 00 01 21 05				
	15	LPB	iP S	02 10 08.5 32.5	D	0.5	36	
		PNS	P S	02 10 09 33.4				
		CCH	eP	02 10 32.9				
	15	PNS	iP eS	09 07 33 57	D			
		LPB	P eS	09 07 33 59				
	15	PNS	eP	13 51 17.8				
	15	USCGS 16 40 21.3; 14.6N, 90.4W; h121; m3.9						
		GUATEMALA						
		LPB	eP	16 47 22				
		PNS	eP	16 47 25				
	15	USCGS 17 58 36.9; 19.3S; 70.5W; h53; m4.6						
		NEAR COAST OF NORTHERN CHILE						
		CCH	P	17 59 20.1				
		LPB	P S	17 59 32 18 00 14		0.5	81	3°6
		PNS	iP	17 59 32.5	D			
	15	LPB PNS	eP P S	18 30 58.5 18 31 02 24.2				
	15	PNS LPB	P P i	21 50 15 21 50 15.7 32.7		0.7	32	
		CCH	P	21 50 18.2				
	15	LPB	eP	22 10 48				
	15	USCGS 22 08 43.9; 25.4N, 140.6E; h160; m4.8						
		VOLCANO IS. REGION						
		PNS	PKP	22 28 21.6				
		LPB	P	22 28 22.7		0.8	16	151°2
	15	PNS	eP eS	23 04 28.4 44.4				
		LPB	eP eS	23 04 31 52				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	16	PNS	P S	00 09 27.2 49.2	D			
	16	PNS	eP S	01 43 23.6 47.4				
		LPB	eP	01 43 26				
	16	LPB	p	02 16 11		1.0	30	
		PNS	eP i	02 16 12.4 30				
	16	LPB		03 25 10		0.7	15	
	16	PNS	eP	04 01 33.6				
		LPB	eP	04 01 38.6				
	16	LPB	eP	06 29 26.5		1.0	10	
	16	PNS	P S	07 23 49.6 24 16.3				
		LPB	eP S	07 23 50 24 17.6				
	16	USCGS 10 30 EL SALVADOR			01.7; 13.4N, 98.7W; h79; m4.9			
		PNS	P L	10 36 58 48.6				
		LPB	P i L	10 37 01.5 11.6 49		1.0	10	37°9
	16	LPB	eP e	13 23 22.5 24 30				
		PNS	P	13 23 29.2				
		CCH	P	13 22 38.4				
	16	USCGS 14 38 04.5; 19.0S, 69.2W; h120; m4.1 NORTHERN CHILE						
		LPB	iP iS	14 38 50.4 39 23.5	C			3°6
		PNS	iP S	14 38 51.7 39 30	C			
	16	PNS	eP	16 42 07				
	16	USCGS 20 09 10.4; 6.2S, 147.9E; h62; m4.9 EAST NEW GUINEA REGION						
		PNS	PKP pPKP PKS	20 28 20 33.6 32 04.8				
		LPB	PKP pPKP PKS	20 28 32.5 44 32 07		1.2	38	138°5
	16	LPB	eP S	21 41 30 42 04.5				
		PNS	eP S	21 41 39.2 42 18.6				
	16	LPB	eP	21 44 30				
		PNS	eP	21 44 32.1				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
NOVEMBER	16	PNS	eP	22 45 54.2					
		LPB	eP	22 46 01					
		CCH	eP	22 46 03.3					
	16	LPB	P	23 09 51.5				0.5 21	
		PNS	eP	23 09 55.8					
	16	LPB	P	23 48 54.5				0.7 30	
			S	49 24.4					
		PNS	P	23 49 01.5					
			S	37					
	17	PNS	eP	01 47 37.4					
			e	53					
		LPB	P	01 47 58.3					
	17	LPB	P	02 25 43.4				0.5 14	
			S	26 15					
		PNS	P	02 25 49.2					
			S	26 28					
	17	LPB	P	02 36 41.5				0.6 28	
			iS	37 12					
		PNS	eP	02 36 46.4					
			S	37 25.4					
	17	LPB	P	04 00 27.2				0.9 8	
			e	01 00					
	17	LPB	P	04 59 42.4				0.8 9	
			eS	05 00 05					
		PNS	eP	04 59 50.5					
			eS	05 00 16.2					
	17	LPB	eP	05 03 32.7					
		PNS	P	05 03 36.6					
	17	USCGS 05 20 50.1; 10.0N, 125.9E; h8.2; m5.1 LEYTE, PHILIPPINE IS.							
		LPB	PKP	05 40 49				1.0 10	
		PNS	ePKP	05 40 49.2					
	17	LPB	eP	05 55 49					
	17	LPB	eP	06 18 19.5					
	17	PNS	eP	08 12 15				0.5 18	
		LPB	P	08 12 17.3					
	17	LPB	P	08 44 42.2					
		PNS	P	08 44 42.4					
	17	PNS	iP	10 58 52.1				D	
		LPB	P	10 58 53					
	17	LPB	eP	12 20 39					
		PNS	P	12 20 40					
	17	LPB	eP	14 55 12.5					
		PNS	eP	14 55 17					
	17	PNS	P	18 33 10.8					
			iS	54.6					
		LPB	eP	18 33 17					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	18	LPB	e(P)	01 21 11				
	18	USCGS 02 39 49.1; 02 39 49.1; 11.2N, 140.0E; h70; m4.9 WEST CAROLINE IS.						
		PNS	ePKP	02 59 41.6				
		LPB	ePKP	02 59 42.5				152°
	18	LPB	eP	07 13 12.6				
		PNS	eP	07 13 17.6				
	18	LPB	eP	09 47 21				
		PNS	eP	09 47 22.4				
	18	PNS	eP	10 12 29.2				
		LPB	eP	10 12 35.5				
	18	USCGS 13 52 40.2; 14.5N, 92.9W; h160; m4.8 NEAR COAST OF CHIAPAS, MEXICO						
		PNS	eP	13 59 52				
	18	LPB	P	14 12 10.5				
	19	LPB	eP	00 52 32				
		PNS	eP	00 52 32.5				
	19	LPB	eP	01 53 56.5				
		PNS	eP	01 53 57.2				
	19	PNS	eP	03 58 31.6				
		LPB	eP	03 58 35				
		CCH	P	03 58 38.7				
	19	LPB	eP	04 25 23.5				
		PNS	eP	04 25 24.2				
	19	CCH	eP	04 35 10.6				
		LPB	P	04 35 24.5				
			S	36 00				
		PNS	P	04 35 26.2				
			S	36 01.8				
	19	CCH	iP	05 16 02.4				
	19	LPB	P	05 43 25				
	19	USCGS 08 45 03.3; 41.8N, 133.7E; h423; m5.0 SEA OF JAPAN						
		PNS	ePKP	09 04 01.8				
			e	05 53				
		LPB	ePKP	09 04 04				
			e	05 55				148°
	19	PNS	eP	12 12 58				
		LPB	eP	12 13 01.5				
	19	PNS	eP	13 26 55				
		LPB	eP	13 27 00				1.0 12
	19	USCGS 14 11 58.7; 17.5N, 94.4W; h142; m4.1 CHIAPAS, MEXICO						
		PNS	P	14 19 42.2				
	19	LPB	e(P)	18 12 17				

MONTH	DAY	STA	PHASE	T				
NOVEMBER	19	LPB	P	19 07 35.5				
		PNS	eP	19 07 38.2				
	19	PNS	iP	21 18 13.7				D
			S	37.4				
		LPB	eP	21 18 17				
	19	PNS	eP	21 39 16.4				
		LPB	eP	21 39 18				
	19	LPB	eP	23 43 26.5				
		PNS	eP	23 43 27.8				
	20	USCGS 00 15 38.3; 66.6W; 24.0S; h197; m3.9 SALTA PROVINCE, ARGENTINA						
		LPB	P	00 17 29			0.7	18 7°
			S	18 54.5				
		PNS	iP	00 17 32.9				C
			S	19 01				
	20	USCGS 01 00 09.0; 37.4N, 81.0W; h3; m4.3 WEST VIRGINIA						
		LPB	eP	01 09 29				54°
		PNS	eP	01 09 35				
	20	LPB	P	02 04 53			1.1	32
		PNS	P	02 04 54.6				
	20	USCGS 03 41 35.3; 7.0S, 123.4E; h630; m5.0 BANDA SEA						
		CCH	ePKP	03 59 58.4				
		PNS	ePKP	04 00 27.6				
			e	02 47				
		LPB	ePKP	04 00 28.7				153°
			e	02 58				
	20	CCH	eP	06 05 47.5				
		PNS	eP	06 05 59.6				
		LPB	eP	06 06 00				
	20	LPB	P	06 09 35.5				
		LPB	P	07 04 07.5			1.0	10
		PNS	eP	07 04 10				
			S	36.4				
	20	PNS	eP	07 07 16.6				
	20	USCGS 10 33 37.2; 22.2S, 67.4W; h174; m4.3 CHILE-BOLIVIA BORDER REGION						
		LPB	P	10 35 02.4			0.8	52 5°
		PNS	iP	10 35 06.3				C
			S	36 12				
	20	PNS	iP	11 53 10				
		LPB	P	11 53 14.4				
	20	EPB	P	15 04 09			1.0	36
		PNS	P	15 04 10.8				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	20	LPB	eP	15 29 39				
		PNS	eP	15 29 44				
	20	USCGS 16 50 47.5; 37.5S; 94.1W; h--; m4.2 WEST CHILE RISE						
		PNS	P	16 57 04				
		eL		17 05.8				
		LPB	eP	16 57 04		1.1	30	32°4
	20	PNS	eP	17 14 32				
		LPB	eP	17 14 32.4				
	20	USCGS 17 21 59.3; 54.4S, 133.9W; h--; m5.0 SOUTH PACIFIC CORDILLERA						
		CCH	P	17 32 03.8				
		LPB	eP	17 32 21				62°2
		PNA	eP	17 32 24				
	20	PNS	eP	17 57 26				
	20	USCGS 21 00 29.0; 43.3N, 147.9E; h53; m5.1 KURILE IS.						
		PNS	ePKP	21 19 55				
		LPB	ePKP	21 19 55.4				138°5
	20	USCGS 23 46 11.6; 56.6N, 153.2E; h--; m5.1 KODIAK IS. REGION						
	21	PNS	eP	00 00 09				
	21	USCGS 00 14 12.5; 56.3N, 153.4W; h--; m5.1 KODIAK IS. REGION						
		PNS	eP	00 28 08				
	21	USCGS 00 29 50.1; 56.4N, 153.6W; h12; m5.2 KODIAK IS. REGION						
		PNS	eP	00 43 48				
	21	LPB	eP	02 14 28.7				
		PNS	eP	02 14 35				
	21	USCGS 02 05 35.3; 2.1N, 94.6E; h20; m6.4 OFF WEST COAST OF NORTHERN SUMATRA						
		LPB	PKP	02 25 34.7				
		PNS	PKP	02 25 35.2		1.6	167	159°5
			PKP2	26 15				
			PP	30 00				
		eL		03 21				
	21	USCGS 02 32 49.2; 56.5N, 153.1W; h37; m5.1 KODIAK IS. REGION						
		PNS	eP	02 46 10.6				
	21	USCGS 02 29 27.0; 1.7N, 94.5E; h--; m-- OFF COAST OF NORTHERN SUMATRA						
		PNS	ePKP	02 49 27				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	21	LPB	eP	03 01 41				
		PNS	eP	03 01 40				
	21	LPB	eP	04 04 16.6				
		eS		04 55				
	21	USCGS 07 26 35.4; 8.1N, 146.8E; h--; m4.8 CAROLINE IS. REGION						
		PNS	ePKP	07 46 11.4				
		LPB	PKP	07 46 14.0				144°9
	21	PNS	eP	08 23 55				
	21	PNS	P	11 29 57				
			S	30 19.6				
	21	USCGS 14 52 00.0; 37.0N, 116.0W; h0; m5.0 SOUTHERN NEVADA						
		PNS	eP	15 03 12				
		LPB	eP	15 03 13.7				70°2
	21	PNS	P	15 52 37.4				
		LPB	eP	15 52 40				
	21	PNS	P	22 24 52.6				
			S	25 14.6				D
	22	LPB	eP	02 23 23				
			S	24 02				
	22	CCH	eP	07 26 59.6				
		LPB	P	07 27 14			0.7	7
		PNS	eP	07 27 14.4				
	22	LPB	P	08 24 02.5				
		PNS	P	08 24 06.4			0.9	64
	22	PNS	eP	08 31 15				
		LPB	eP	08 31 19				
	22	LPB	P	08 55 00				
		PNS	P	08 55 02.6				
	22	PNS	eP	09 23 59.8				
			S	24 25.4				
	22	PNS	eP	09 24 41				0.8
		LPB	P	09 24 47.4				7
	22	PNS	iP	09 58 15.7				
			S	40				D
		LPB	P	09 58 18.5				1.1
			S	46.2				27
	22	LPB	eP	11 50 15				
			S	51 42				
		PNS	eP	11 50 19.2				
	22	PNS	eP	12 08 12				
			eP	12 08 14.7				
	22	PNS	eP	12 51 04				
		LPB	eP	12 51 14.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	22	USCGS BANDA SEA	15 02	22.9; 6.9S, 127.4E; h330; m5.3				
		PNS	PKP	15 21 36.6				
			i	43.4				
			i	23 01				
			eL	14.2				
		LPB	PKP	15 21 32				151°2
			i	43				
	22	PNS	iP	18 43 02.8	D			
		LPB	iP	18 43 04	D			
	22	USCGS NEAR EAST COAST OF KAMCHATKA	23 09	37.2; 57.8N, 163.5E; h--; m6.3				
		PNS	PKP	23 28 34.6		1.4	98	
		LPB	PKP	23 28 35		1.3	130	124°2
	23	LPB	P	00 03 59.8				
		PNS	P	00 03 59.8		0.8	14	
	23	USCGS NEAR EAST COAST OF KAMCHATKA	23 53	44.4; 57.4N, 163.1E; h--; m4.6				
		PNS	ePKP	00 12 44				
	23	USCGS NEAR COAST OF KAMCHATKA	00 48	40.3; 57.3N, 163.1E; h33; m4.8				
		PNS	ePKP	01 07 44				
	23	PNS	eP	01 13 32.4				
		LPB	eP	01 13 34.7				
	23	LPB	eP	01 50 56				
			S	51 21				
		PNS	eP	01 50 57.4				
			S	51 22.4				
	23	PNS	eP	02 18 08.4				
			S	33				
		LPB	P	02 18 10				
			eS	39.8				
	23	LPB	eP	03 49 29				
		PNS	eP	03 49 29.6				
	23	PNS	eP	04 01 15				
		LPB	eP	04 01 18.5				
	23	LPB	P	05 47 37				
		PNS	eP	05 47 40				
	23	LPB	eP	08 41 58				
		PNS	P	08 41 59.4				
			S	42 30				
	23	USCGS SOLOMON IS.	08 54	53.5; 10.4S; 161.3E; h59; m5.3				
		PNS	ePKP	09 13 48				
	23	PNS	P	13 06 30		0.4	3	
		LPB	P	13 07 31				

MONTH	DAY	STA	PHSE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	23	PNS	P	13 06 30		0.4	3	
		LPB	P	13 07 31		0.6	21	
	23	PNS	P	14 01 17.8	C	0.6	6.7	
		LPB	P	14 01 18.4				
	23	PNS	P	15 40 01.8		0.6	2	
			S	35.1				
		LPB	eP	15 40 05				
			S	35				
	23	PNS	eP	17 10 23.6				
			eS	11 00				
		LPB	eP	17 10 21				
	23	LPB	P	19 03 41.6		1.0	116	
			S	04 21				
		PNS	P	19 03 43.4		1.2	35	
	23	PNS	eP	14 57 28		1.0	4.3	
		LPB	iP	19 57 30				
	24	LPB	P	04 02 33		0.7	8	
		PNS	eP	04 02 33.8		0.7	5.2	
	24	USCGS SOUTH WESTERN ATLANTIC OCEAN	04 31	41.0; 58.2S, 13.8W; h--; m4.8				
		LPB	P	04 41 30.2		1.0	32	56°7
		PNS	P	04 41 32.8		1.6	49	
	24	LPB	P	06 00 33.5				
			S	07				
		PNS	iP	06 00 34.5	D	0.4	11.3	
			iS	01 08.2				
	24	LPB	e(P)	10 29 15				
	24	PNS	eP	12 25 31.4				
		LPBZ	eP	12 25 34.5				
	24	PNS	eP	12 26 01		0.6	4	
		LPB	eP	12 26 09				
	24	LPB	eP	14 35 47.5				
		PNS	eP	14 35 50				
	24	USCGS AFGHANISTAN-USSR BORDER REGION	17 23	20.2; 37.2N, 71.1E; h 123; m 5.6				
		PNS	ePKP	17 42 28				
			i	36				
			PP	46 00				
		LPB	ePKP	17 42 31.7				137°8
	24	PNS	eP	19 26 42.5				
	24	PNS	eP	20 14 48.6				
			S	15 07.6				
	24	USCGS DAVIS STRAIT	21 14	13.7; 60.6N, 58.8W; h--; m5.0				
		PNS	P	21 26 04.3		1.0	8.5	
			eP	22 00 10		1.0	8.5	
			i	33				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	24	PNS	eP i	22 00 10 33		1.0	8.5	
	24	USCGS 22 51 50.1; 56.2N, 153.6N; h--; m5.5 KODIAK IS. REGION						
		PNS	eP	23 05 39.4				
	25	LPB PNS	eP eP	01 52 29.5 01 52 33				
	25	LPB PNS	P P eS	02 42 44 02 42 48 43 52.3		0.6	5.5	
	25	LPB PNS	eP eP	04 43 23 04 43 23.2				
	25	LPB	P	05 09 05.6				
	25	PNS	iP iS eP S	07 19 15.5 39.8 07 19 20.5 47.7	D			
	25	LPB PNS	eP eS eP S	13 22 47 23 30 13 22 48 23 37				
	25	PNS LPB	P S eP S	13 34 23.8 51.8 13 34 25 58	C	0.4	3.1	
	25	LPB PNS	eP eP eS	13 59 49.2 13 59 50 14 00 44.2				
	25	LPB PNS	P P	14 52 47 14 52 47.3	D	0.6	9.1	
	25	USCGS 21 51 04.2; 3.5S; 138.5E; h52; m5.2 WEST NEW GUINEA						
		PNS	PKP i eL	22 10 43.8 45.4 23 00				
		LPB	ePKP	22 10 45		0.8	82	145°9
	25	PNS	eP	23 41 35				
	26	PNS	eP S	00 58 02.8 33.6				
	26	PNS	P S	03 15 52.4 16 15				
	26	PNS	iP iS P S	03 27 03.6 29.4 03 27 03.8 30	D	1.0	18	
	26	PNS LPB	iP iS P S	06 44 03.6 29.2 06 44 04 31.2	D	0.5	11.3	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	26	LPB PNS	P eP	07 46 29.2 07 46 31.8		0.6	4	
	26	LPB PNS	eP eP S	09 36 34 09 36 36.2 37 09				
	26	LPB PNS	eP eP eS	10 22 28 10 22 41 23 17.2				
	26	PNS LPB	eP eP	10 28 35.4 10 28 38				
	26	LPB	eP	11 28 39 29 17				
		PNS	eP	11 28 42				
	26	LPB	L	12 38.8				
	26	USCGS 12 44 04.7; 16.8S, 167.7E; h33; m5.4 NEW HEBRIDES IS.						
		LPB PNS	ePKP PKP	13 02 47.6 13 02 48.8				116°7
	26	LPB	eP P	13 03 49 13 03 54.6				
	26	PNS	eP	13 31 14.2				
	26	LPB	eP	13 44 17				
	26	USCGS 14 27 20.4; 16.8S, 167.8E; h34; m5.3 NEW HEBRIDES ISLANDS						
		PNS	ePKP	14 46 03				
	26	USCGS 14 40 04.8; 58.8S, 25.2W; h--; m4.9 SOUTH SANDWICH IS. REGION						
		LPB PNS	eP eP	14 49 17 14 49 20.4		1.0	19	53°2
	26	LPB	eP eS	15 03 22.5 04 07				
		PNS	eP S	15 03 22.6 04 00.8				
	26	USCGS 17 35 59.3; 58.8S, 24.5W; h--; m4.9 SOUTH SANDWICH ISLANDS REGION						
		LPB PNS	eP P	17 44 52.5 17 44 57.2				
	26	USCGS 18 15 26; 58.8S, 24.9W; h--; m5.1 SOUTH SANDWICH ISLANDS REGIONS						
		LPB PNS	P P	18 24 28.2 18 24 30				53°2
	26	USCGS 18 24 04.5; 58.8S, 24.7W; h--; m4.9 SOUTH SANDWICH ISLANDS REGION						
		LPB PNS	eP P	18 33 17 18 33 21				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	26	USCGS SOUTH SANDWICH ISLANDS REGION	18 26 08.9; 58.8S, 24.7W; h--; m5.4					
		LPB	P	18 35 23		1.1	3.7	53°2
			eL	18 52.8				
		PNS	P	18 35 25.4				
			eL	52.6				
	26	LPB	eP	21 17 09				
		PNS	eP	21 17 09.2				
	26	LPB	eP	23 45 25				
		PNS	iP	23 45 25.6	D			
			S	50				
	26	LPB	eP	00 21 55.5				
		PNS	P	00 21 59.2				
			eS	22 53.2				
	27	LPB	eP	00 21 55.5				
		PNS	P	00 21 59.2				
			eS	22 53.2				
	27	PNS	eP	01 01 46				
			S	02 08				
		LPB	eP	01 01 49.5				
	27	USCGS NEAR COAST OF CHIAPAS, MEXICO	01 39 43.2; 14.3N, 93.2W; h46; m4.7					
		PNS	eP	01 46 39				
		LPB	eP	01 46 40.5				
	27	PNS	eP	05 22 47.6				
			eS	23 14				
	27	PNS	eP	05 38 05.4				
	27	PNS	P	07 18 10				
			S	35				
		LPB	eP	07 18 12				
	27	LPB	eP	09 46 53				
		PNS	eP	09 46 56.6				
			S	47 35.8				
	27	PNS	P	14 42 16.2				
		LPB	eP	14 42 20				
	27	USCGS COLOMBIA	15 36 08.0; 4.5N, 75.5W; h61; m4.3					
		PNS	eP	15 40 58				
	27	PNS	eP	19 22 11.6				
	27	PNS	eP	23 05 54.3				
	27	LPB	eP	23 13 41				
		PNS	eP	23 13 41.2				
	27	LPB	eP	23 23 23.6				
			S	54.4				
		PNS	P	23 23 25.6				
			S	50.6				

MONTH	DAY	STA	PHASE	T
NOVEMBER	28	PNS	eP	00 05 38.6
		LPB	eP	00 05 41
	28	PNS	eP	01 54 20.6
		LPB	eP	01 54 21.5
	28	PNS	eP	03 25 58.8
			S	26 25.2
		LPB	eP	03 26 05.7
			S	27
	28	PNS	eP	04 44 40
		LPB	eP	04 44 41
	28	LPB	eP	04 49 02
			iS	26.5
		PNS	eP	04 49 12.6
	28	PNS	eP	05 32 53
			S	33 55
		LPB	P	05 32 54.7
			S	33 52
	28	PNS	eP	07 08 04.8
		LPB	eP	07 08 05.5
	28	PNS	P	07 39 19.6
		LPB	P	07 39 25
			e	42 15.5
	28	LPB	eP	09 53 50.6
		PNS	eP	09 53 57.2
	28	PNS	eP	10 54 00
		LPB	eP	10 54 04
			eS	55 12
	28	USCGS BANDA SEA	13 47 08.9; 6.9S, 129.7E; h75; m5.6	
		PNS	PKP	14 06 50.6
		LPB	PKP	14 06 52
			i	57.2
	28	LPB	P	15 31 49.9
			S	32 16.5
		PNS	P	15 31 50
			S	32 16.2
	28	PNS	eP	16 24 23
			S	46
	28	LPB	eP	17 04 28.7
		PNS	P	17 04 33.6
			S	57.4
	28	LPB	P	18 41 58
			S	43 05.5
		PNS	eP	18 42 00
			S	43 09.6
	28	LPB	eP	20 16 36
		PNS	P	20 16 38.4
	28	PNS	eP	22 57 50
		LPB	eP	22 57 52.5
	28	PNS	iP	23 44 58.3
		LPB	eP	23 44 59
			S	45 23.6

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	29	USCGS 03 14	04.1; 19.2S, 69.4W; h108; m4.3					
		NORTHERN CHILE						
		LPB	iP	03 14 52.7	C			3°6
			S	15 30				
		PNS	iP	03 14 53.8	C			
			S	15 32				
	29	USCGS 04 17	38.9; 7.4S, 128.2E; h82; m5.4					
		BANDA SEA						
		PNS	PKP	04 37 27				
	29	PNS	eP	05 04 34				
		LPB	eP	05 04 37.5				
			e	07 38				
	29	LPB	eP	10 06 35.5				
			S	07 12.7				
		PNS	eP	10 06 41.6				
			S	07 13.6				
	29	LPB	eP	10 18 36				
			S	19 05.2				
		PNS	P	10 18 37.5	D			
			S	59.5				
	29	PNS	iP	12 41 27.6	D			
		LPB	eP	12 41 30				
	29	PNS	eP	16 08 45.8				
		LPB	eP	16 08 47				
	29	USCGS 16 43	15.7; 33.3N, 132.3E; h48; m5.1					
		SHIKOKU, JAPAN						
		PNS	ePKP	17 03 06.8				
		LPB	PKP	17 03 09				154°9
	29	LPB	eP	20 54 06.5				
			S	30.5				
	30	LPB	eP	02 09 41.6				
		PNS	eP	02 09 43.6				
	30	PNS	eP	02 48 36.6				
		LPB	P	02 48 39		1.0	8	
	30	LPB	eP	03 04 59.5				
		PNS	eP	03 05 03				
	30	PNS	eP	03 40 27.8				
		LPB	P	03 40 31				
	30	USCGS 03 32	57.2; 49.9N, 79.0E; h0; m6.0					
		EASTERN KAZAKH USSR.						
		LPB	PKP	03 52 25.6		0.9	13	136°5
		PNS	PKP	03 52 25.6				
	30	PNS	P	04 30 08				
		LPB	eP	04 30 08.5				
	30	USCGS 04 12	21.4; 33.2N, 132°4E; h49; m4'9					
		SHIKOKU, JAPAN						
		LPB	ePKP	04 32 12'5				154°9
		PNS	ePKP	04 32 12.6				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	30	USCGS 04 45	56.8; 16.8N, 99.3W; h64; m4.2					
		NEAR COAST OF GUERRERO, MEXICO						
		PNS	eP	04 54 00				
		LPB	P	04 54 08				45°9
	30	PNS	eP	05 03 03.8				
		LPB	eP	05 03 07				
	30	LPB	P	06 11 11				
			S	41.2				
		PNS	P	06 11 11.8				
			S	42				
	30	USCGS 07 15	23.9; 15.3S, 71.9W; h138; m4.1					
		SOUTHERN PERU						
		PNS	P	07 16 17.4	C			
			S	57				
		LPB	P	07 16 23		0.9	17	3°6
			S	17 11.6				
	30	USCGS 07 41	20.8; 28.6S, 70.2W; h138; m3.9					
		CENTRAL CHILE						
		LPB	eP	07 44 13				13°5
		PNS	eP	07 44 13				
	30	PNS	P	09 12 33.2				
			S	54.8				
		LPB	P	09 12 35				
			S	59				
	30	LPB	P	13 30 02				
			S	31 27.3				
		PNS	P	13 30 05.4	C			
			S	31 33.2				
	30	LPB	eP	18 33 22				
		PNS	P	18 33 27.6		0.8	7	
	30	LPB	P	19 12 32.4		0.8	24	
		PNS	P	19 12 35.6	C	0.6	18	
	30	PNS	eP	19 32 32				
		LPB	eP	19 31 47.5				
	30	PNS	eP	19 47 01.2				
			S	24				
	30	PNS	P	20 14 32.6				
			S	15 04.6				
		LPB	eP	20 14 35				
	30	USCGS 20 21	40.6; 7.1S; 128.0E; h44; m--					
		BANDA SEA						
		LPB	PKP	20 21 33		0.7	18	
		PNS	PKP	20 21 33.2		0.8	11	
	30	LPB	eP	20 50 25				
	30	PNS	eP	23 31 45.4				
			eS	32 21				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
NOVEMBER	30	PNS	P	23 38 12.2				
			S	48.4				
	30	LPB	P	23 39 22.4				
			S	40 50				
		PNS	P	23 39 26		0.5	13	
			S	40 54.2				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DECEMBER	1	PNS	eP	00 30 54.4					
	1	PNS	P	00 51 33.8					
			S	58.2					
	1	PNS	iP	01 07 13.4	D	0.5	7		
			S	26					
	1	LPB	eP	01 07 16					
		LPB	eP	01 21 01					
		PNS	eP	01 21 04					
			eS	22 06.5					
	1	LPB	e(P)	02 14 33.6					
			eP	02 14 37.2					
	1	PNS	eP	02 50 21.6					
		LPB	eP	02 50 26					
	1	LPB	P	02 59 42.6			0.6	49	
			i	03 00 19.7					
		PNS	iP	02 59 44	C				
	1	LPB	eP	03 24 59					
			S	25 30					
		PNS	eP	03 25 07					
			S	42					
	1	PNS	P	04 05 32.3					
			S	54.8					
	1	LPB	eP	04 35 38.5					
		PNS	eP	04 35 39					
	1	PNS	eP	04 40 57					
		LPB	eP	04 41 02					
	1	PNS	eP	04 43 20					
		LPB	eP	04 43 20.5					
	1	USCGS 05 10 35.4; 35.9S, 72.7W; h57; m4.2 NORTH COAST OF CENTRAL CHILE							
		LPB	P	05 15 04.5			0.8	7	
		PNS	eP	05 15 05				19°8	
	1	PNS	iP	08 56 12.5		0.4		10	
			S	36					
	1	PNS	iP	09 31 53.9	D	0.4		8	
			S	32 16.6					
		LPB	eP	09 31 55					
	1	eP	eP	10 01 47.8					
	1	LPB	eP	10 44 37					
		PNS	eP	10 44 38.6					
	1	USCGS 11 20 04.6; 12.1N, 43.8W; h--; m4.4 NORTH ATLANTIC RIDGE							
		PNS	eP	11 27 15					
		LPB	eP	11 27 16				36°9	
	1	USCGS 11 26 42.2; 12.1N, 43.8W; h--; m4.7 NORTH ATLANTIC RIDGE							

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DECEMBER	1	LPB PNS	eP eP	11 33 53 11 33 53.4				36°9	
	1	PNS	eP S	11 44 26.2 50					
	1	PNS	eP	13 39 19					
	1	PNS LPB	eP eP	13 51 27.8 13 51 32					
	1	USCGS 14 11 14.6; 49.8S, 115.1W; h--; m4.8 EASTER ISLAND CORDILLERA							
		PNS	eP PP L	14 20 09 22 11 35					
		LPB	P i	14 20 10.7 27 26				50°5	
	1	USCGS 19 10 33.5; 49.7S, 114.0W; h--; m4.5 EASTER ISLAND CORDILLERA							
		PNS	P	19 19 24					
	1	PNS	iP iS	19 38 36.3 39 05	D				
	1	USCGS 20 18 06.3; 35.0N, 24.3E; h53; m5.0 CRETE							
		PNS LPB	eP eP	20 31 27.8 20 31 29				100°1	
	1	USCGS 20 35 05.2; 60.0S, 28.5W; h163; m5.6 SOUTH SANDWICH ISLAND REGION							
		LPB	P eL	20 44 00 21 00				52°3	
		PNS	iP S SS eL	20 44 03.1 51 40 56 23 21 01	D				
	1	USCGS 22 13 53.4; 16.7N, 60.8W; h41; m5.6 LEEWARD ISLANDS							
		PNS	P S L	22 20 32.4 26 15 32.5					
		LPB	P eS eL	22 20 33.5 26 06 32.2				33°3	
	1	PNS LPB	eP eP	23 39 46 23 39 51					
	2	PNS	eP S	00 24 24 47.8					
	2	PNS	eP S	02 04 37.4 55					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DECEMBER	2	PNS LPB	eP eP	02 22 46.4 02 22 49					
	2	PNS LPB	P S eP	03 50 36.4 59 03 50 38					
	2	PNS LPB	eP eP	04 18 50.8 04 18 51					
	2	USCGS 04 12 34.6; 57.4N, 163.4E; h--; m5.1 NEAR EAST COAST OF KAMCHATKA							
		PNS	ePKP	04 31 32					
	2	PNS	eP S	05 31 00 23					
		LPB	P S	05 31 00 23.5					
	2	PNS LPB	eP P	07 40 01.4 07 40 02					
	2	LPB	P	08 46 33					
			i	37.6					
		PNS	P i	08 46 33.3 36.8					
	2	LPB PNS	eP eP	09 13 12 09 13 12.6					
	2	USCGS 09 46 56.9; 18.7N, 63.2W; h35; m4.6 LEEWARD ISLANDS							
		PNS LPB	eP P	09 53 47.8 09 53 49				36°0	
	2	PNS	eP	12 48 56					
	2	PNS	eP S	13 04 30.6 55.8					
	2	PNS	eP S	13 38 15 54					
	2	USCGS 13 45 45.7; 38.7S, 71.1W; h119; m4.4 SOUTH CHILE-ARGENTINA BORDER REGION							
		PNS LPB	eP P	13 50 36.2 13 50 36.3				22°5	
	2	PNS LPB	eP eP	15 48 52.4 15 48 55					
	2	LPB	P S	17 41 04.5 42 25					
		PNS	iP S	17 41 08.1 42 30	D				
	2	USCGS 12 26 33.1; 13.1N, 143.9E; h110; m5.0 SOUTH OF MARIANA ISLANDS							
		PNS	PKP i	17 46 07.4 15.8					
		LPB	ePKP i	17 46 08 13				148°8	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DECEMBER	2	USCGS 17 57 04.3; 8.2N, 126.3E; h102; m5.7 MINDANAO, PHILIPPINE ISLANDS							
		LPB	PKP	18 17 00				164°	
	2	PNS	eP S	19 41 39.4 09					
	2	PNS	eP	19 53 21.8					
	2	LPB	eP e	21 08 40.4 16.5					
	2	PNS	eP	21 09 12					
	2	PNS	eP	21 09 14.8					
		LPB	eP	21 33 20					
		LPB	eP	21 33 23					
	2	PNS	eP	22 48 27.6					
		LPB	eP	22 48 31					
	3	LPB	eP	00 42 18.4					
	3	LPB	eP	01 18 14.7					
	3	USCGS 02 31 47.5; 24.7N, 65.4E; h--; m4.9 NEAR COAST OF WEST PAKISTAN							
		LPB	ePKP	02 51 06					
		PNS	PKP	02 51 08					
	3	USCGS 06 02 56.4; 169N, 60.5W; h--; m3.9 LEEWARD ISLANDS							
		PNS	eP	06 09 37					
		LPB	eP	06 09 38.5				33°	
	3	PNS	eP S	08 20 23.2 45.7					
	3	PNS	P S	09 24 40 25 02.4					
		LPB	eP eS	09 24 43 25 04.5					
	3	PNS	eP eS	10 24 46.4 25 08					
		LPB	eP	10 24 46.5					
	3	LPB	P	10 26 38					
		PNS	iP	10 26 41.3	D				
	3	PNS	P	16 36 24	D				
	3	LPB	P	17 57 12.5	C				
		PNS	eP	17 57 16.2	C				
	3	PNS	eP S	20 02 31.2 41					
		LPB	eP	20 02 35					
	3	USCGS 21 11 58.6; 16.6N, 60.7W; h36; m4.4 LEEWARD ISLANDS							
		PNS	eP	21 18 37.4					
		LPB	eP	21 18 39.5				33°	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DECEMBER	3	PNS	eP	21 22 56					
	3	PNS	P S	22 29 57.8 30 22.2					
	4	PNS	eP	00 34 00					
	4	USCGS 00 34 58.6; 12.4N, 93.7E; h--; m5.3 ANDAMAN ISLANDS REGION							
		PNS	ePKP	00 55 07				162°9	
		LPB	ePKP	00 55 10					
	4	LPB	eP	02 41 43.5					
	4	LPB	eP	03 07 29					
		PNS	P	03 07 32.4					
	4	USCGS 03 02 56.7; 121N, 143.6E; h--; m5.3 SOUTH OF MARIANA ISLANDS							
		PNS	PKP	03 22 41.6		1.1	20		
		LPB	PKP	03 22 43				148°5	
	4	PNS	eP	03 16 18					
		LPB	eP	03 26 20					
	4	PNS	P S	05 50 23.8 36.8					
		LPB	P S	05 50 32 53.6					
	4	PNS	eP	05 56 25.4					
		LPB	eP	05 56 27.5					
	4	PNS	eP	08 59 21					
		LPB	eP	08 59 29					
	4	USCGS 08 50 21.6; 40.7N, 144.7E; h20; m5.7 OFF COAST OF HONSHU, JAPAN							
		PNS	PKP	09 09 51.6					
			eL	59					
		LPB	ePKP	09 09 53				142°3	
	4	LPB	eP S	09 35 05 30					
		PNS	eP S	09 35 08.6 36 37					
	4	PNS	eP	10 00 53.6					
		LPB	eP	10 00 56.2					
	4	PNS	eP S	10 54 01 30					
	4	USCGS 11 16 41.4; 7.4S, 81.7W; h51; m4.5 OFF COAST OF NORTHERN PERU							
		PNS	eP e	11 20 20 34.4					
			eL	26.7					
		LPB	eP e	11 20 22.4 40				16°2	
	4	USCGS 11 34 24.0; 13.1N, 143.3E; h190; m4.6 SOUTH OF MARIANA ISLANDS							

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	4	PNS	ePKP	11 53 51				
	4	PNS	P	15 11 24.4		0.8	4.5	
	4	USCGS 18 14 23.1; 36.2N, 8.5W; h--; m4.3 WEST OF GIBRALTAR						
		PNS	eP	18 26 13				
	4	PNS	eP	20 16 59				
		LPB	eP	20 17 02				
	4	PNS	P	22 17 36.6				
	4	LPB	eP	22 33 57.4				
		PNS	eP	22 34 01				
	1	PNS	eP	23 44 33.8				
		LPB	eP	23 44 35				
	4	USCGS 25 52 44.4; 15.3S, 20.3W; h185; m4.2 SOUTHERN PERU						
		PNS	iP	23 53 29.4	D			
		S		54 03.2				
		LPB	P	23 53 34.5	D	0.7	53	3°1
		eS		54 11.6				
	5	PNS	P	01 39 02				
		S		25				
	5	LPB	eP	01 44 26				
		S		51.5				
		PNS	eP	01 44 26.2				
		S		51.2				
	5	LPB	eP	01 53 11.5				
	5	PNS	P	03 34 36.4				
		LPB	eP	03 34 40				
	5	PNS	P	07 41 16.9	D			
		S		39.8				
		LPB	eP	07 41 19				
	5	PNS	iP	08 28 49.8	D	0.6	11	
		LPB	P	08 28 51				
	5	USCGS 08 49 59.6; 16.0N, 95.8W; h57; m4.6 OAXACA, MEXICO						
		LPB	eP	08 57 42				43°3
		PNS	eP	08 57 46.4				
	5	LPB	eP	09 15 40.5				
		PNS	eP	09 15 42				
	5	LPB	eP	10 24 51.6				
		e		26 05.5				
		PNS	P	10 24 57.8				
	5	LPB	eP	10 59 38				
	5	PNS	eP	13 19 32.6				
	5	PNS	P	14 23 00.8				
		LPB	eP	14 23 02				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	5	PNS	P	15 22 41				
	5	USCGS 17 00 00.0; 37.2N, 116.2W; h0; m5.0 SOUTHERN NEVADA						
		PNS	eP	17 11 12				
	5	PNS	eP	17 30 07.8				
		eS		31.8				
	5	USCGS 18 45 17.4; 29.7N, 80.8E; h--; m4.9 NEPAL-INDIA BORDER REGION						
		PNS	ePKP	19 05 04				
	5	PNS	P	20 07 59.6				
	6	USCGS 06 13 51.5; 5.3S, 152.3E; h100; m4.9 NEW BRITAIN REGION						
		LPB	ePKP	06 32 49				133°4
		PNS	ePKP	06 32 53.6				
	6	USCGS 07 02 57.4; 43.8N, 54°8E; h0; m5.8 WESTERN KAZAKH, USSR.						
		LPB	PKP	07 22 02		1.0	22	124°2
		PNS	PKP	07 22 02.2				
	6	PNS	eP	07 31 43.2				
		LPB	eP	07 31 43.5				
	6	PNS	eP	09 28 01				
		LPB	eP	09 28 09				
	6	USCGS 09 39 44.1; 2.9N, 79.2W; h38; m4.5 SOUTH OF PANAMA						
		PNS	P	09 44 36.9				22°5
		LPB	P	09 44 39				
		eL		51.2				
	6	LPB	eP	09 51 51				
	6	USCGS 14 54 00.8; 58.7S, 25.1W; h--; m5.3 SOUTH SANDWICH ISLANDS REGION						
		LPB	P	15 03 13.4		0.8	12	52°2
		eL		17.5				
		PNS	P	15 03 16				
		eL		20.4				
	6	USCGS 15 36 27.7; 30.7N, 140.4E; h116; m4.6 SOUTH OF HONSHU, JAPAN						
		PNS	ePKP	15 54 58.4				150°5
		LPB	ePKP	15 55 06				
	6	USCGS 17 17 50.2; 45.1N, 28.1W; h--; m4.5 NORTH ATLANTIC RIDGE						
		PNS	eP	17 29 09				
	6	PNS	iP	19 05 29.9	D			
		S		51.6				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIS	
DECEMBER	6	LPB	eP S	19 05 30 55					
	6	PNS	eP	19 12 55.6					
	6	LPB PNS	eP eP	19 33 24.4 19 33 30.7					
	7	PNS LPB	eP P	00 59 28.5 00 39 32.6					
	7	LPB PNS	eP eP	01 44 07 35.5 01 44 09.5	0.9		8		
	7	LPB PNS	P S	03 19 53.3 20 53.5	0.6		24		
		PNS	P S	03 19 57.6 20 59.9	0.4		10		
	7	LPB	eP	04 15 14					
	7	LPB PNS	P eP	04 47 41.5 04 47 43.8	1.0		18		
	7	USCGS 06 11 22.9; 19.2N, 64.6W; h--; m4.2 VIRGEN ISLANDS							
		PNS LPB	eP P	06 18 18.2 06 18 21.5				36°0	
	7	PNS LPB	eP eP	07 20 25.7 07 20 30					
	7	PNS	eP	08 39 03.4					
	7	PNS	eP	11 09 32.8					
	7	LPB PNS	eP eL eP	11 20 03.4 32 11 20 06.2					
	7	USCGS 13 32 45.2; 6.7S, 129.6E; h119; m5.5 BANDA SEA							
	7	USCGS 16 11 47.0; 21.5S, 68.1W; h137; m3.8 CHILE-BOLIVIA BORDER REGION							
		LPB PNS	P P	16 13 01 16 13 04.5	0.6 0.3		9 5	4°9	
	7	LPB PNS	eP P	20 31 34.5 20 31 38.2					
	7	USCGS 21 46 15.1; 9.6N; 125.7E; h51; m512 MINDANAO, PHILIPPINE ISLANDS							
		LPB PNS	ePKP ePKP	22 06 19.3 22 06 25.8					
	7	USCGS 22 32 31.5; 4.8S; 143.5E; h105; m5.3 NEW GUINEA							
		PNS LPB	ePKP ePKP	22 51 49.3 22 51 52					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIS	
DECEMBER	7	PNS	P	23 24 07.2	D				
		PNS	P S	23 43 33 57					
	8	PNS	P	00 00 16					
	8	PNS	P i	00 48 27.6 37.8					
		LPB	eP i	00 48 30 37					
	8	LPB PNS	eP P	01 40 48 01 40 51.3					
	8	LPB	eP	04 51 48					
	8	USCGS 05 04 19.7; 1.7N, 127.3E; h101; m5.5 HALMAHERA							
		PNS	PKP i	05 24 09.9 46				150°5	
		LPB	ePKP i	05 24 11 47					
	8	LPB	eP	08 07 45.4					
	8	LPB PNS	eP eS	08 50 45 08 50 48.5 52 04.4					
	8	USCGS 09 37 39.0; 0.1S; 122.8E; h194; m5.1 NORTHERN CELEBES							
		PNS LPB	ePKP ePKP	09 57 20.6 09 57 22				160°2	
	8	LPB	eP eS	13 15 47 16 49					
		PNS	P S	13 15 49.7 16 54.9	0.3		15		
	8	PNS	eP	14 18 56					
	8	LPB	P eS	17 22 36.6 23 40			0.8	24	
		PNS	P S	17 22 40.1 23 46	C				
	8	PNS	P S	17 27 20 41.8					
	8	LPB PNS	eP eP	18 17 17.4 18 17 18.6					
	8	LPB PNS	P P S	19 07 41 19 07 41.4 08 51.0			1.0 0.4	20 7	
	8	LPB	eP	22 17 39					
	8	PNS	e(P)	22 24 06.6					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	9	PNS LPB	iP P	00 56 53.1	D	0.7	25	
				00 56 54.4		0.8	22	
	9	LPB	eP	01 11 20				
9	PNS LPB	eP eP		01 34 06				
				01 34 13				
9		USCGS 03 25 51.7; 0.9N, 126.2E; h99; m5.1 MOLUCCA PASSAGE						
		LPB	PKP	03 45 44				160°2
		PNS	ePKP	03 45 44.5				
9		LPB	P	07 41 00		0.8	9	
			eS	33				
9	PNS	eP		07 41 00.5				
				eS 32.6				
9	LPB	eP		09 15 53				
				PNS eP 09 15 56.9				
9		USCGS 10 16 47.6; 9.1S; 109.6W; h--; m4.4 NORTHERN EASTER I. CORDILLERA						
		PNS	P	10 24 28				40°5
		LPB	P	10 24 32.5	1.0	10		
9		USCGS 12 10 01.7; 75.5W; 10.2S; h26; m4.8 PERU						
		PNS	P	12 12 16				9°0
		LPB	P	12 12 22				
			e	15 40				
9	LPB	P		13 06 21.2				
				PNS P 13 06 23.4				
					0.5	16		
9		PNS	eP	15 49 42.2				
9		PNS	iP	17 59 02.3				
9		PNS	eP	18 40 35.9				
9	LPB	eP		21 56 39.5				
				PNS eP 21 56 42.3				
9		USCGS 21 59 11.9; 44.0N, 148.4E; h--; m5.1 KURILE ISLANDS.						
		PNS	ePKP	22 18 32.6				
10		USCGS 00 10 31.8; 2.7S, 129.2E; h--; 4.9 CERAM						
		LPB	ePKP	00 30 33				154°9
		PNS	ePKP	00 30 34				
10		LPB	eP	03 46 09				
10		USCGS 06 53 13.8; 75.6W, 10.3S; h39; m4.4 PERU						
		PNS	eP	06 55 27.6				
			i	43.6				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	10	LPB	P	06 55 32.6				9°0
				47.7				
			i	58 19				
10	PNS	P		08 12 50.8				0.5 19
				S 13 12.5				
		LPB	P	08 12 52.2				
			eS	13 16.5				
10		PNS	eP	09 02 22.8				
10	PNS	eP		09 10 08				
				LPB eP 09 10 17				
			e	36				
10		USCGS 09 46 47.6; 7.4S, 74.8W; h164; m4.5 PERU-BRAZIL BORDER REGION						
		PNS	P	09 49 20				9°9
		LPB	P	09 49 22.2				
10		PNS	P	14 40 24.9	D		0.4	20
			S	48.6				
10		LPB	P	14 45 51.4			0.6	66
10		USCGS 16 10 13.4; 22.6S; 68.3W; h108; m4.1 NORTHERN CHILE						
		LPB	P	16 11 42				6°3
			e	12 02				
			i	19				
		PNS	P	16 11 45.6				
			e	12 05.3				
			i	21.3				
10		USCGS 17 32 48.7; 59.1S, 25.1W; h--; m4.5 SOUTH SANDWICH ISLANDS REGION						
		PNS	eP	17 42 05.4				52°3
		LPB	eP	17 42 08.4				
10	PNS	eP		19 21 27				
				i 31				
			eS	22 00.5				
		LPB	P	19 21 37.5			1.0	14
			eS	22 15				
10		USCGS 19 53 48.2; 14.8S, 167.0E; h21; m5.4 NEW HEBRIDES ISLANDS						
		PNS	ePKP	20 12 47.4				117°0
			e	51.6				
		LPB	ePKP	20 12 49.5				
10		PNS	eP	21 42 53.6				
		LPB	eP	21 42 54				
10	LPB	P		23 37 29.6				
				PNS eP 23 37 31.7				
11		USCGS 00 45 40.5; 14.9S, 166.7E; h43; m5.2 NEW HEBRIDES ISLANDS						
		PNS	ePKP	01 04 25.4				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	11	LPB	eP	01 13 08				
			e	14 49				
		PNS	eP	01 13 08.2				
11	LPB	P		01 44 16	D	0.7	77	
		i		39.7				
PNS	iP			01 44 22	D			
		i		50.5				
11	PNS	eP		02 45 57				
		LPB	eP	02 46 02				
11	LPB	eP		07 17 49				
11	LPB	eP		09 59 32				
		PNS	P	09 59 39.9				
11	USCGS 10 33 07.6; 60.0S, 114.9W; h--; m4.7 EASTER ISLAND CORDILLERA							
PNS	P			10 42 03.9				
		S		49 22				
		L		57				
LPB	P			10 42 04				
		L		57				
11	PNS	eP		15 36 01.9				
11	USCGS 16 56 25.2; 21.2S; 68.5W; h119; m4.7 CHILE-BOLIVIA BORDER REGION							
LPB	P			16 57 36				
		PNS	P	16 57 39.2	C		5°4	
11	PNS	eP		18 23 22.8				
		eS		45.4				
11	LPB	eP		18 26 28				
		PNS	eP	18 26 29.4				
11	LPB	eP		18 37 01				
		PNS	eP	18 37 01.2				
		e		02.6				
11	LPB	eP		21 26 39				
11	USCGS 22 33 09.1; 19.9S, 70.2W; h60; m4.3 NEAR COAST OF NORTHERN CHILE							
PNS	iP			22 34 09.4	D			
		LPB	iP	22 34 12.5	D		4°8	
	iS			39				
12	USCGS 00 22 47.3; 62.3S; 161.8W SOUTH PACIFIC CORDILLERA							
LPB	eP			00 34 40				77°5
12	PNS	P		01 02 06.6				
		LPB	eP	01 02 12				
12	USCGS 01 12 11.4; 40.1N, 143.8E; h11; m5.0 OFF EAST COAST OF HONSHU, JAPAN							

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	12	LPB	ePKP	01 32 50				
		PNS	ePKP	01 32 50.4				143°2
12	USCGS 04 07 57.3; 52.8N, 31.9W; h--; m4.6 NORTH ATLANTIC RIDGE							
PNS				04 19 48.4				
12	PNS	eP		06 42 42.1				
		LPB	eP	06 42 47				
12	PNS	eP		06 48 28.8				
		i		31.9				
		S		49 16.2				
LPB	P			06 48 38				
		S		49 29.5				
12	LPB	P		07 11 18.5				
		i		36.5				
		i		52.5				
PNS	P			07 11 20				
		i		38.9				
12	USCGS 07 34 10.7; 14.5S, 75.8W; h88; m4.2 NEAR COAST OF PERU							
PNS	eP			07 35 57.2				
		LPB	eP	07 36 02				6°3
12	LPB	eP		07 39 02				
		PNS	P	07 39 04.2				
		iS		47.2				
12	LPB	P		07 58 39.5				
		PNS	P	07 58 43.4				
12	PNS	eP		08 10 58.4				
		S		11 32				
LPB	eP			08 11 01				
		S		35				
12	LPB	eP		09 02 05				
		PNS	eP	09 02 05.4				
12	PNS	eP		09 13 15				
		LPB	eP	09 13 16				
12	LPB	eP		09 51 51.5				
		PNS	P	09 51 54.6				
12	PNS	eP		12 29 48.6				
		LPB	eP	12 29 52				
12	PNS			13 12 00.2				
		LPB	eP	13 12 05				
12	LPB	eP		13 17 19				
		PNS	eP	13 17 22.5				
12	PNS	eP		14 57 47.7				
		LPB	eP	17 11 16		1.0	28	
		P		17 11 24				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DECEMBER	12	LPB	eP	19 27 16					
			S	57.5					
		PNS	eP	19 27 19.5					
			S	28 00.9					
	12	PNS	eP	19 36 31.8					
	12	PNS	eP	21 45 50.3					
	13	PNS	eP	01 41 28.6					
	13	USCGS 03 06 40.0; 1.0N, 27.9W; h--; m4.8 CENTRAL MIDDLE ATLANTIC RIDGE							
		PNS	eP	03 14 40.8					
			e	21 23					
			eL	28					
		LPB	P	03 14 41		1.0	20	43°3	
	13	USCGS 03 19 58.3; 1.0N, 28.0W; h--; m5.6 CENTRAL MID-ATLANTIC RIDGE							
		LPB	P	03 27 58.5		0.7	59	43°3	
			eL	43.6					
		PNS	P	03 28 01.2	D	1.0	69		
			eL	43.2					
	13	USCGS 03 40 34.8; 34.0N, 137.0E; h358; m5.1 NEAR S. COAST OF HONSHU, JAPAN							
		PNS	ePKP	03 59 42.5					
			i	49					
		LPB	PKP	03 59 43.5		1.0	20	151°2	
			i	50					
	13	USCGS 04 03 56.4; 1.3N, 126.4E; h56; m5.3 MOLUCCA PASSAGE							
		PNS	ePKP	04 23 52.9					
		LPB	PKP	04 23 53		1.0	11	160°5	
	13	PNS	P	05 17 30.2					
	13	LPB	eP	08 03 59.5					
		PNS	P	08 04 05.2					
	13	LPB	eP	10 27 19					
	13	PNS	P	11 32 09.8	D				
			S	37.6					
		LPB	P	11 32 10					
			S	40					
	13	USCGS 21 33 21.9; 32.7S, 70.0W; h105; m5.6 CHILE-BOLIVIA BORDER REGION							
		LPB	P	21 37 07.6		1.0	40	15°3	
			eS	40 54					
		PNS	P	21 37 10.4	D	1.0	52		
	13	USCGS 01 37 06.0; 23.9N, 126.5E; h20; m5.4 RYU-KYU ISLANDS REGION							
		PNS	PKP	21 57 13.1					
			e	58 03.1					
		LPB	PKP	21 57 13.5		1.0	28		

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DECEMBER	14	PNS	eP	01 15 05.4					
		LPB	eP	01 15 11					
	14	LPB	eP	01 40 07					
			eP	01 40 10.6					
	14	USCGS 02 42 09.4; 2.0N, 126.9E; h42; m6.0 MOLUCCA PASSAGE							
		LPB	PKP	03 02 08					
			(PP)	06 25			260	160°2	
			eL	58					
		PNS	PKP	03 02 08.1					
			eL	59					
	14	LPB	eP	04 29 51					
	14	LPB	eP	08 29 02					
	14	LPB	eP	12 24 22					
		PNS	eP	12 24 30.8					
	14	LPB	eP	12 36 20					
		PNS	eP	12 36 24.4					
	14	LPB	P	14 01 02					
			S	30.5					
		PNS	P	14 01 03.4					
			S	28.6					
	14	PNS	eP	14 57 23.6					
		LPB	eP	14 57 25.5					
	14	LPB	eP	16 41 26					
		PNS	eP	16 41 27.4					
	14	PNS	P	17 45 19					
			S	42					
	14	USCGS 18 32 09.5; 8.2N, 58.5E; h--; m6.0 CARLSBERG RIDGE							
		LPB	ePKP	18 56 15.4			26	126°9	
			ePP	58 13.5					
			eL	19 36.6					
		PNS	ePKP	18 56 20					
			eL	19 38.0					
	14	LPB	P	19 26 40.4					
			S	28 11					
	14	USCGS 22 39 26.5; 11.4N; 65.1W; h32; m4.9 CARIBBEAN SEA							
		LPB	eP	22 45 11.5				27°9	
			eL	57					
		PNS	eP	22 45 15.2					
			eL	57.1					
	15	PNS	eP	00 49 29.6					
		LPB	eP	00 49 56.5					
	15	LPB	eP	02 53 45					
		PNS	eP	02 53 51.4					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	15	LPB	P	08 39 28		0.8	30	
			eS	09				
		PNS	P	08 39 35.4				
			S	40 17.6				
	15	LPB	eP	08 54 00				
			eS	37				
		PNS	eP	08 54 07.7				
			S	49.6				
	15	PNS	eP	08 56 53.8				
				P	08 56 54.2			
	15	LPB	eP	12 18 05.7				
				S	33.6			
		PNS	eP	12 18 06				
			S	32.2				
	15	USCGS 15 08 58.9; 18.7S, 69.6W; h123; m3.9 NORTHERN CHILE						
			LPB	P	15 09 41.8			
			S	10 09				
		PNS	iP	15 09 42	D			
			S	10 10.7				
	15	LPB	eP	21 03 36				
	16	LPB	P	00 50 20		1.0	12	
				eP	00 50 22.2			
	16	PNS	eP	00 56 34				
	16	LPB	P	02 50 16.5				
				eP	03 40 37.5			
		PNS	eP	03 40 38.5				
	16	LPB	P	04 46 17		0.8	9	
				eP	04 46 18.4			
	16	LPB	P	07 53 37.5				
				eP	07 53 38.1			
	16	LPB	P	08 10 35		1.0	14	
				eP	09 14 39.4			
		PNS	P	09 14 39.4	D	0.7	9	
			i	15 11.6				
		LPB	P	09 14 44.5				
			i	15 08.5				
	16	LPB	eP	12 19 36.5				
					48.2			
	16	LPB	P	13 02 18				
	16	LPB	eP	15 11 44.5				
				eL	20.4			
		PNS	eP	15 11 44.6				
			i	45.1				
	16	PNS	P	19 39 10.7				
				S	24.9			
		LPB	eP	19 39 15				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	16	USCGS 21 12 44.5; 17.4S, 69.7W; h164; m4.0 PERU-BOLIVIA BORDER REGION						
		PNS	iP	21 13 18.5	D			
			iS	44				
		LPB	P	21 13 19.6	C	0.6	210	1°8
			iS	46				
	16	PNS	eP	23 31 08.2				
				S	33.3			
		LPB	eP	23 31 11.6				
	17	USCGS 01 10 37.8; 19.0S, 67.5W; h215; m4.6 SOUTHERN BOLIVIA						
			LPB	P	01 11 23.4	D	0.5	700
			iS	58				
		PNS	iP	01 11 26.6	C			
			iS	12 04.6				
	17	LPB	eP	02 44 20				
	17	LPB	ePKP	02 49 42				
				PKP2	50 28			
		PNS	ePKP	02 49 45				
				PKP2	50 30			
	17	USCGS 03 11 46.5; 4.4N, 88.0W; h--; m4.4 OFF COAST OF CENTRAL AMERICA						
			PNS	eP	03 17 40			
		LPB	eP	03 17 44				28°8
	17	USCGS 07 05 24.6; 0.7S; 78.0W; h19; m4.5 ECUADOR						
			PNS	eP	07 09 42.8			
			eL	16.8				
		LPB	P	07 09 46				19°9
				e	15 50			
			eL	17.5				
	17	LPB	eP	07 23 25				
	17	LPB	eP	09 07 47				
				eP	09 07 50.8			
	17	LPB	P	10 25 40		1.0	40	
				eP	10 25 40.4			
			e	41.7				
	17	USCGS 15 00 00.0; 37.1N, 116.0W; h0; 5.5 SOUTHERN NEVADA						
			PNS	eP	15 11 10.4			
		LPB	P	15 11 13.8				70°2
	17	USCGS 15 15 00.0; 37.0N, 116.0W; h0; m4.8 SOUTHERN NEVADA						
			PNS	eP	15 26 11			
	17	PNS	iP	17 52 02.1	C			
				S	53 02.2			

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DECEMBER	17	PNS	iP	17 52 02.1	C				
			S	53 02.2					
		LPB	eP	17 52 11					
	17	LPB	eP	18 45 38.7					
		PNS	eP	18 45 41.6					
			S	46 28.6					
	17	USCGS 19 49 48.3; 18.1N, 102.8W; h85; m3.9 MICOACAN, MEXICO							
		PNS	eP	19 58 22.3					
		LPB	eP	19 58 26				47°8	
	17	PNS	P	23 55 47.4					
	18	PNS	P	00 51 54.7					
			eS	53 18.4					
		LPB	P	00 51 55		0.9	34		
			iS	53 19.5					
	18	USCGS 04 51 35.1; 17.2S, 72.2W; h46; ,4.1 NEAR COAST OF PERU							
		PNS	eP	04 52 35.2					
		LPB	P	04 52 40.5		1.0	20	4°5	
			eS	53 50					
	18	LPB	P	05 16 57.6		0.9	23		
		PNS	P	07 29 44.3					
		LPB	P	07 29 45.5					
	18	PNS	P	10 13 57					
		LPB	eP	10 14 00.5					
	18	LPB	eP	10 33 49					
			S	34 34					
		PNS	eP	10 33 51					
			eS	34 37.4					
	18	LPB	eP	10 58 06					
	18	USCGS 13 32 05.2; 46.3N, 142.5E; h344; m5.9 SAKHALIN ISLANDS							
		PNS	PKP	13 50 50.4					
			i	58.9					
			PP	54 01.3					
		LPB	PKP	13 50 54.4		1.0	40	140°8	
			i	54 54					
			ePP	06					
	18	USCGS 16 51 16.5; 5.5S, 153.5E; h46; m5.2 CHILE ARGENTINA BORDER REGION							
		LPB	P	16 55 08					
		PNS	P	16 55 08.2		1.2	60	18°0	
	18	PNS	P	17 29 01.6					
	18	PNS	eP	18 19 29.2					
	18	USCGS 18 25 59.0; 5.7S, 104.0E; h47; m5.2 SOUTHERN SUMATRA							



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DECEMBER	18	PNS	ePKP	18 45 53					
			e	46 24					
		LPB	ePKP	18 45 54.5				154°9	
	18	USCGS 19 00 00.0; 37.1N, 116.0W; h0; m5.2 SOUTHERN NEVADA							
		PNS	eP	19 11 11					
		LPB	P	19 11 14		1.0	25	70°2	
	18	PNS	eP	19 23 38.1					
			eS	25 02.2					
	18	PNS	eP	21 21 48.3					
			eS	22 11.6					
	19	PNS	eP	00 31 59					
		LPB	eP	00 32 07					
	19	LPB	eP	00 42 17					
		PNS	eP	00 42 19.1					
	19	LPB	eP	02 28 08					
	19	LPB	eP	04 49 23					
		PNS	eP	04 49 29					
	19	LPB	eP	06 31 13					
	19	PNS	eP	06 52 23.7					
			eS	53 26					
		LPB	eP	06 52 26.5					
	19	LPB	P	07 16 28.5					
		PNS	P	07 16 30.8		0.8	19		
	19	USCGS 07 50 53.3; 54.3S, 136.8W; h--; m5.3 SOUTH PACIFIC CORDILLERA							
		PNS	P	08 01 27.7		1.3	59		
		LPB	P	08 01 28.7		1.2	60	63°9	
	19	USCGS 11 15 41.8; 7.3N, 82.3W; h--; m4.2 SOUTH OF PANAMA							
		PNS	eP	11 21 24.5					
	19	LPB	eP	13 53 13.5					
		PNS	eP	13 53 15.5					
			eS	50.2					
	19	PNS	eP	14 22 18.9					
			S	23 00.4					
	19	PNS	eP	14 55 26					
			S	56 06.5					
	19	PNS	eP	20 24 28.9					
			S	57.3					
		LPB	eP	20 24 30					
			S	59					
	19	PNS	P	20 28 23.5					
	19	LPB	eP	21 50 32					
		PNS	iP	21 50 35.4				D	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DECEMBER	19	PNS	eP	22 29 12.2					
	20	LPB	eP	00 06 02					
	20	PNS	eP	02 29 12.5					
		LPB	eP	02 29 13					
	20	LPB	P	02 47 31.2					
		PNS	P	02 47 31.8					
	20	USCGS 03 56 20.0; 28.0S, 70.1W; h23; m4.7 CENTRAL CHILE							
		LPB	eP	03 59 03.5				11°7	
		PNS	eP	03 59 10					
	20	USCGS 05 40 00.9; 35.5N, 140.4E; h64; m4.8 NEAR EAST COAST OF HONSHU, JAPAN							
		PNS	ePKP	05 59 42					
		LPB	ePKP	05 59 43		1.0	13	148°2	
	20	PNS	eP	06 54 01.9					
			eS	55 08.3					
	20	LPB	eP	08 29 20.5					
	20	LPB	P	08 32 53.6					
		PNS	eP	08 32 54.8					
	20	PNS	eP	09 03 16.8					
	20	USCGS 09 56 13.0; 22.2N, 108.2W; h--; 4.3 OFF COAST OF CENTRAL MEXICO							
		LPB	eP	10 05 37				54°9	
		PNS	eP	10 05 40.6					
	20	PNS	P	12 27 49.8	D				
	20	PNS	P	13 08 51.4					
	20	USCGS 13 05 28.5; 7.2S; 192.2E; h180; m5.3 BANDA SEA							
		PNS	ePKP	13 24 58.4					
		LPB	ePKP	13 25 00				151°2	
	20	PNS	eP	19 02 37.8					
		LPB	eP	19 02 39					
	20	LPB	eP	20 03 49					
	20	LPB	eP	21 49 30					
	21	PNS	eP	00 28 59.2					
	21	PNS	P	00 49 28.6					
		LPB	eP	00 49 32					
	21	LPB	eP	01 47 35					
		PNS	eP	01 47 37					
	21	PNS	eP	02 09 22.9					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DECEMBER	21	PNS	P	05 43 08.9					
			iS	32.8					
		LPB	eP	05 43 12					
	21	USCGS 10 18 02.4; 28.2N, 130.6E; h28; m5.6 RYUKYU ISLANDS							
		PNS	PKP	10 38 00.6				159°2	
		LPB	ePKP	10 38 02					
	21	PNS	eP	11 17 16.2					
		LPB	P	11 17 17.4					
	21	USCGS 13 03 53.3; 16.4S, 72.8W; h68; m5.0 NEAR COAST OF PERU							
		PNS	iP	13 04 57.6	C				
			eL	06.4				5°4	
		LPB	P	13 05 02					
			eL	06.3					
	21	PNS	eP	18 58 56.6					
			eS	59 21					
	21	LPB	eP	21 10 21.4					
		PNS	eP	21 10 25.2					
	22	USCGS 00 06 04.2; 16.9S, 72.9W; h50; m5.2 NEAR COAST OF PERU							
		PNS	iP	00 07 10.4	C				
			eL	08.3					
		LPB	iP	00 07 14.8	C			5°4	
			eL	08.4					
	22	PNS	P	01 24 07.2					
			S	29.4					
	22	LPB	P	02 52 23		0.8		7	
	22	LPB	P	05 48 03.9					
		PNS	P	05 48 07.7					
	22	PNS	eP	06 30 49					
		LPB	eP	06 30 05.5					
	22	USCGS 06 25 40.3; 55.9S, 27.4W; h--; m5.4 SOUTH SANDWICH ISLANDS REGION							
		LPB	P	06 34 34.7		1.0	16	49°6	
		PNS	eP	06 34 38					
	22	USCGS 08 52 10.2; 62.0S, 164.6E; h--; m5.3 BALLENY ISLANDS REGION							
		LPB	eP	09 05 22				91°9	
		PNS	eP	09 05 27.5					
	22	PNS	P	09 07 36.5					
			eS	59.4					
		LPB	eP	09 07 38.5					
	22	PNS	eP	10 24 39.2					
		LPB	eP	10 24 39.5					
	22	PNS	eP	10 32 47					
			eS	33 30.4					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	22	PNS	P	10 32 47				
			eS	33 30.4				
		LPB	eP	10 32 52.5				
			e	35 50.5				
	22	USCGS 10 16 12.1; 15.3N, 144.9E; h99; m4.7						
		MARIANA ISLANDS REGION						
		LPB	ePKP	10 35 50				147°8
		PNS	ePKP	10 35 58.9				
	22	USCGS 15 01 05.6; 5.9N, 77.4W; h48; m4.1						
		NEAR WEST COAST OF COLOMBIA						
		LPB	eP	15 06 10.7				25°2
		PNS	eP	15 06 15.2				
	22	LPB	P	23 37 04.5				
	23	PNS	eP	00 40 09.8				
	23	USCGS 01 39 00.8; 29.6S, 71.8W; h39; m4.4						
		NEAR COAST OF CENTRAL CHILE						
		LPB	eP	01 42 11.4				13°5
			eL	47				
		PNS	eP	01 42 16.5				
			eL	46.9				
	23	PNS	eP	06 24 27.1				
	23	LPB	eP	09 35 26.7				
	23	PNS	eP	10 30 13.8				
			eS	54				
		LPB	eP	10 30 07				
	23	USCGS 12 20 53.3; 10.0N, 78.8W; h--; m5.0						
		NORTH OF PANAMA						
		PNS	eP	12 26 43.4				
		LPB	eP	12 26 46.6		1.0	36	27°8
			eL	34.4				
	23	USCGS 12 42 59.5; 7.3N, 34.2W; h--; m4.7						
		CENTRAL MID-ATLANTIC RIDGE						
		LPB	P	12 50 40				39°6
			eL	13 02.2				
		PNS	P	12 50 40.8				
	23	USCGS 13 22 54.2; 57.4N, 163.1E; h--; m5.4						
		NEAR EAST COAST OF KAMCHATKA						
		LPB	ePKP	13 41 52				124°2
			eL	14 21				
		PNS	ePKP	13 41 53.7				
	23	USCGS 14 08 00.5; 13.8N, 120.6E; h118; m5.3						
		MINDORO, PHILIPPINE ISLANDS						
		PNS	ePKP	14 27 27.6				
			e	29 20.7				
		LPB	ePKP	14 28 27.5				171°0

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	23	USCGS 17 27 47.7; 3.3S, 80.7W; h44; m4.3						
		PERU-ECUADOR BORDER REGION						
		LPB	eP	17 32 04.2				18°0
	23	PNS	P	20 09 17.9				
			S	48.3				
		LPB	eP	20 09 20				
			eS	54				
	24	LPB	eP	02 35 01				
		LPB	P	02 39 08				
	24	USCGS 04 39 02.9; 22.3S, 68.3W; h140; m4.3						
		NORTHERN CHILE						
		LPB	P	04 40 29.3				6°3
			i	47.8				
			eS	41 06				
		PNS	P	04 40 31				
			eS	41 07.8				
	24	USCGS 05 04 44.5; 36°0N, 10.4W; h--; m5.1						
		NORTH ATLANTIC OCEAN						
		LPB	P	05 16 26.5				74°8
		PNS	eP	05 16 28.4				
	24	LPB	eP	06 44 27.2				
		PNS	eP	06 44 32.9				
	24	LPB	eP	10 53 32				
		PNS	eP	10 53 39				
	24	PNS	eP	13 42 13.8				
		LPB	eP	13 42 14.5				
	24	LPB	eP	16 51 55.4				
		PNS	iP	16 51 57.4				C
			S	52 24.2				
	25	PNS	eP	03 31 48.6				
		LPB	eP	03 31 58		1.0	14	
	25	LPB	eP	05 22 27				
			e	23 25.5				
		PNS	eP	05 22 30.2				
	25	LPB	eP	06 19 13.5				
	25	LPB	P	07 03 54		1.0	32	
		PNS	eP	07 03 55.6				
	25	LPB	eP	11 01 16				
		PNS	eP	11 01 18.5				
			S	02 03.4				
	25	LPB	P	11 36 31.5				
			S	37 09				
		PNS	eP	11 36 35.2				
	25	PNS	eP	11 56 05				
			eS	57 06.9				
		LPB	eP	11 56 12				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	25	LPB	eP	23 34 20				
		PNS	eP	13 34 21.2				
25	25	PNS	eP	17 57 29.6				
		LPB	eP	17 57 31		0.5	22	
25	25	PNS	eP	21 16 20				
		LPB	eP	21 16 22.7				
25	25	USCGS 21 32 27.3; 25.8N, 59.7W; h7; m6.4 LEEWARD ISLANDS						
		PNS	P	21 39 06.2				
25	25	PP		40 23				
		eS		44 26				
25	25	L		49				
		LPB	P	21 39 07.6		1.0	110	34°2
25	25	USCGS 22 13 46.9; 15.8N, 59.6W; h--; m5.1 LEEWARD ISLANDS						
		PNS	eP	22 20 19				
25	25	LPB	eP	22 20 26.5		0.9	33	34°2
		USCGS 22 17 42.9; 16.2N, 59.8W; h25; m5.4 LEEWARD ISLANDS						
25	25	PNS	eP	22 24 21.4				
		LPB	eP	22 24 23.5				34°2
25	25	USCGS 22 26 11.8; 59.7W; 15.8N; h15; m5.5 LEEWARD ISLANDS						
		PNS	P	22 32 50				
25	25	LPB	P	22 32 51				
		USCGS 22 31 02.3; 16.1N, 59.8W; h8; m6.0 LEEWARD ISLANDS						
25	25	PNS	P	22 37 42.8				
		LPB	iP	22 37 44.7				34°2
25	25	LPB	eP	23 14 17.5				
		PNS	eP	23 14 20				
25	25	USCGS 23 15 44.6; 16.0N, 59.6W; h--; m4.9 LEEWARD ISLANDS						
		PNS	eP	23 22 21.2				
25	25	LPB	eP	23 22 23				34°2
		USCGS 23 23 51.9; 15.9N, 59.5W; h--; m4.2 LEEWARD ISLANDS						
25	25	PNS	eP	23 30 33				
		LPB	eP	23 30 35				34°2
26	26	USCGS 00 08 14.9; 15.9N, 59.6W; h--; m4.7 LEEWARD ISLANDS						
		LPB	P	00 14 51.6				
		PNS	eP	00 14 51.2				34°2



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	26	USCGS 00 11 14.4; 16.0N, 59.7W, h--; m5.1 LEEWARD ISLANDS						
		PNS	eP	00 17 53.5				
		LPB	P	00 17 54				34°2
26	26	USCGS 00 15 57.0; 16.0N, 59.9W; h--; m4.8 LEEWARD ISLANDS						
		PNS	eP	00 22 33.7				34°2
		LPB	eP	00 22 33.7				
26	26	LPB	eP	00 51 17.4				
			eS	52 25				
26	26	PNS	eP	00 51 21.4				
			eS	52 34.6				
26	26	PNS	eP	01 16 43				
		LPB	eP	01 16 44				
26	26	USCGS 02 56 43.4; 16.2N, 59.6W; h--; m4.7 LEEWARD ISLANDS						
		PNS	eP	03 03 21.8				
		LPB	eP	03 03 23.5				54°2
26	26	USCGS 03 10 30.7; 16.1N, 59.5W; h--; m4.5 LEEWARD ISLANDS						
		LPB	P	03 17 08.7				
		PNS	eP	03 17 09.3		1.0		34°2
26	26	PNS	eP	03 48 52				
			S	49 14.8				
26	26	USCGS 03 56 40.7; 16.1N, 59.5W; h--; m4.6 LEEWARD ISLANDS						
		PNS	eP	04 08 17.4				
		LPB	eP	04 03 20.6				34°2
26	26	PNS	P	04 07 10.8				
		LPB	P	04 07 11.4				
26	26	USCGS 04 30 31.3; 16.2N, 59.7W; h--; m4.6 LEEWARD ISLANDS						
		PNS	eP	04 37 09.5				
		LPB	P	04 37 11		1.0	14	34°2
26	26	LPB	eP	04 47 11.5				
		USCGS 04 50 34.8; 15.9N, 59.6W; h--; m4.8 LEEWARD ISLANDS						
26	26	PNS	eP	04 57 10.1				
		LPB	P	04 57 11.6		1.0	24	34°2
26	26	USCGS 05 21 48.4; 16.1N, 59.6W; h--; m4.7 LEEWARD ISLANDS						
		PNS	eP	05 28 25.9				

MONTH	DAY	STA	PHASE	TIME	SIGN	PBR	AMPL	DIST
DECEMBER	26	LPB	P	05 28 28		1.0	10	34°2
	26	LPB	eP	05 32 24.5				
	26	USCGS 05 34 33.4; 16.1N, 59.7W; h--; m5.2 LEEWARD ISLANDS						
		PNS	eP	05 41 10.9				
		LPB	P	05 41 12.4		1.2	58	34°2
	26	LPB	eP	06 04 16				
	26	USCGS 06 52 44.0; 16.2N, 59.5W; LEEWARD ISLANDS						
		PNS	eP	06 59 19				
		LPB	eP	06 59 24				34°2
	26	USCGS 07 00 04.5; 15.9N, 59.5W; h26; m5.0 LEEWARD ISLANDS						
		PNS	eP	07 06 41.4				
		LPB	P	07 06 43.5		1.0	12	34°2
	26	LPB	eP	07 32 26.3				
	26	USCGS 07 29 18.0; 15.9N, 59.6W; h25; m4.8 LEEWARD ISLANDS						
		LPB	P	07 35 57		1.4	40	34°2
			e	37 10				
		PNS	eP	07 35 55.5				
	26	LPB	P	08 50 10.5				
	26	USCGS 08 46 15.2; 15.8N, 59.6W; h22; m5.2 LEEWARD ISLANDS						
		PNS	P	08 52 54	D	1.0	106	34°2
		LPB	P	08 52 52.3	D	1.0	16	
	26	USCGS 08 49 35.3; 16.0N, 59.6W; h--; m4.8 LEEWARD ISLANDS						
		LPB	P	08 56 13.5		1.0	17	54°2
		PNS	eP	08 56 18				
	26	USCGS 10 15 12.6; 15.9N, 59.6W; h--; m5.0 LEEWARD ISLANDS						
		LPB	eP	10 21 49				34°2
		PNS	eP	10 21 59.4				
	26	USCGS 10 33 59.8; 16.1N, 59.8W; h16; m5.4 LEEWARD ISLANDS						
		PNS	P	10 40 40.2		1.5	52	
		LPB	P	10 40 41.7		1.6	328	34°2
	26	USCGS 10 46 17.8; 59.7W, 16.3N; h9; m5.2 LEEWARD ISLANDS						
		PNS	eP	10 53 01				
		LPB	P	10 53 02.7		1.3	66	34°2

MONTH	DAY	STA	PHASE	TIME	SIGN	PBR	AMPL	DIST
DECEMBER	26	LPB	eP	11 00 33				
		PNS	eP	11 00 38.5				
	26	USCGS 11 54 41.1; 16.2N, 59.7W; h6; m4.8 LEEWARD ISLANDS						
		PNS	eP	12 01 23.5				
		LPB	eP	12 01 25		0.9	18	34°2
	26	USCGS 13 48 48.5; 16.1N, 59.6W; h13; m4.4 LEEWARD ISLANDS						
		LPB	eP	13 55 28.7				34°2
		PNS	eP	13 55 29.8				
	26	PNS	P	14 58 58.3				
			S	59 20.9				
	26	PNS	eP	16 36 05.9				
	26	USCGS 16 43 26.8; 16.0N, 59.7W; h--; m4.5 LEEWARD ISLANDS						
		PNS	eP	16 50 03				
		LPB	P	16 50 04		1.0	20	34°2
	26	USCGS 18 38 35.1; 16.1N, 59.7W; h--; m4.8 LEEWARD ISLANDS						
		PNS	eP	18 45 12.7				
		LPR	P	18 45 14.6		1.2	46	34°2
	26	USCGS 18 46 43.6; 16.1N, 59.8W; h--; m4.8 LEEWARD ISLANDS						
		PNS	eP	18 53 20.8				
		LPB	P	18 53 22.6		1.4	58	34°2
	26	USCGS 19 11 34.9; 15.9N, 59.6W; h--; m4.4 LEEWARD ISLANDS						
		LPB	eP	19 18 11.8				34°2
		PNS	eP	19 18 14				
	26	USCGS 19 22 49.1; 16.1N, 59.8W; h--; m4.7 LEEWARD ISLANDS						
		LPB	eP	19 29 28				34°2
		PNS	eP	19 29 30.7				
	26	USCGS 19 24 25.7; 16.4N, 59.8W; h--; m4.3 LEEWARD ISLANDS						
		LPB	eP	19 31 01				34°2
		PNS	eP	19 31 06				
	26	USCGS 19 39 07.4; 15.9N, 59.6W; h--; m4.8 LEEWARD ISLANDS						
		LPB	eP	19 45 43.5				34°2
		PNS	eP	19 45 44.4				
	26	USCGS 20 03 28.8; 15.8N, 59.6W; h--; m5.4 LEEWARD ISLANDS						
		PNS	P	20 10 04.4				
		LPB	P	20 10 07.4		1.0	76	34°2

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	26	USCGS 20 03 28.8; 15.8N, 59.6W; h--; m5.4 LEeward ISLANDS						
		PNS	P	20 10 04.4				
		LPR	P	20 10 07		1.0	76	34°2
	26	LPB	eP	20 17 55.5				
	26	USCGS 20 55 23.2; 16.1N, 59.8W; h--; m4.5 LEeward ISLANDS						
		PNS	eP	21 02 01				
		LPB	eP	21 02 02				34°2
	26	LPB	P	23 46 20.5				
	27	USCGS 01 59 32.4; 16.2N, 59.7W; h--; m4.2 LEeward ISLANDS						
		PNS	eP	02 06 10.7				
		LPB	P	02 06 11.6				34°2
	27	LPR	eP	03 26 39				
	27	PNS	P	03 41 14.3				
		LPB	P	03 41 17				
	27	PNS	P	04 00 51.5				
			S	01 13.7				
		LPR	P	04 00 53.2				
			S	01 16.5				
	27	PNS	eP	04 12 19				
		LPR	eP	04 12 22				
	27	PNS	eP	04 14 53.3				
		LPB	eP	04 14 57.5				
	27	PNS	P	04 22 35.6				
		LPB	eP	04 22 37.2				
	27	USCGS 04 21 14.2; 16.2N, 59.7W; h--; m4.8 LEeward ISLANDS						
		PNS	eP	04 27 53				
		LPB	P	04 27 53.2				74°2
	27	LPR	P	05 11 47.5		1.3	19	
		PNS	eP	05 11 57.6				
	27	LPB	eP	06 35 09		1.0	14	
		PNS	eP	06 35 10.6				
	27	USCGS 06 55 26.7; 10.7N, 63.9W; h--; m4.2 NEAR COAST OF VENEZUELA						
		LPB	eP	07 01 12.5				27°5
		PNS	eP	07 01 15				
	27	PNS	eP	07 25 35.4				
		LPB	P	07 25 35.5				
	27	USCGS 07 38 11.9; 16.2N, 59.8W; h--; m4.4 LEeward ISLANDS						



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	27	LPB	eP	07 44 51				34°2
		PNS	eP	07 44 53				
	27	PNS	eP	08 11 51				
		LPB	eP	08 11 58.5				
	27	LPB	P	08 28 51.2				
	27	USCGS 09 11 20.3; 10.0S, 118.9E; h--; m5.1 SOUTH OF SUMBAWA ISLANDS						
		LPB	ePKP	09 31 25				152°2
		PNS	ePKP	09 31 27				
	27	USCGS 09 36 04.1; 16.2N, 59.7W; h--; 4.7 LEeward ISLANDS						
		PNS	eP	09 42 42.2				
		LPB	P	09 42 43.5		1.0	28	34°2
	27	USCGS 09 55 35.5; 16.2N, 59.6W; h--; m5.0 LEeward ISLANDS						
		PNS	eP	10 02 14				
			eS	07 37		1.5	258	34°2
			eL	13.4				
		LPB	P	10 02 15.4		1.5	158	34°2
			eS	07 37				
			eL	13.3				
	27	USCGS 11 39 07.7; 15.8N, 59.6W; h--; m5.0 LEeward ISLANDS						
		PNS	eP	11 45 43				
			eS	51 08				
			L	57.4				
		LPB	P	11 45 46		1.0	34	34°2
			eS	51 06				
			L	57.3				
	27	USCGS 11 45 19.8; 15.9N, 59.4W; h--; m4.6 LEeward ISLANDS						
		PNS	eP	11 51 54				
		LPB	eP	11 51 57.7				34°2
	27	PNS	eP	13 10 37.9				
			S	11 05.6				
	27	USCGS 13 08 41.4; 16.2N, 59.6W; h--; m5.1 LEeward ISLANDS						
		PNS	eP	13 15 19.8				
			eL	26.5				
		LPB	P	13 15 21.3		1.5	58	34°2
			eL	27				
	27	PNS	eP	13 21 51.5				
		LPB	P	13 21 56.4				
	27	USCGS 14 03 04.4; 16.2N, 59.6W; h--; m5.5 LEeward ISLANDS						
		PNS	P	14 09 42.3		D	1.4	36
			S	15 04				
			eL	21				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	27	LPB	P S eL	14 09 44 15 06 21.3		1.3	133	34°2
	27	USCGS 15 43 54.7; 16.2N, 59.7W; h--; 5'4 LEEWARD ISLANDS						
		PNS	P S	15 50 33.3 55 56		1.5	39	
		LPB	L P eS eL	16 00.9 15 50 35 56 01 16 01		1.7	240	34°2
	27	PNS	eP	16 39 06.6				
	27	USCGS 16 50 56.7; 16.1N, 59.8W; h--; m4.6 LEEWARD ISLANDS						
		PNS	eP	16 57 33.2				
		LPB	P	16 57 35		1.0	20	
	27	USCGS 18 49 39.9; 16.3N, 59.7W; h--; 4.7 LEEWARD ISLANDS						
		PNS	eP	18 56 18				
		LPB	P	18 56 20.5		0.8	12	34°2
	27	USCGS 19 44 48.6; 23.9S, 68.0W; h105; m4.3 NORTHERN CHILE						
		LPB	P	19 46 35.6				9°0
	28	USCGS 01 19 13.4; 43.6N, 147.8E; h47; m4.8 KURILE ISLANDS						
		LPB	ePKP	01 38 45				138°8
	28	PNS	eP	02 26 47.8				
		LPB	eP	02 26 50				
	28	USCGS 03 46 58.0; 50.0N, 77.8E; h0, m5.7 EASTERN KASAKH, U.S.S.R.						
		LPB	PKP	04 06 25		1.0	10	136°9
		PNS	ePKP	04 06 25.2				
	28	PNS	iP eS	05 10 22.4 45	D			
	28	USCGS 04 53 09.2; 43.5N, 147.9E; h26; m5.3 KURILE ISLANDS						
		LPB	ePKP eL	05 12 37 06 01		1.1	12	138°8
		PNS	ePKP	05 12 57.6				
	28	LPB	eP	06 18 44				
		PNS	eP	06 18 46.5				
	28	PNS	P S	06 51 45.3 52 09.2	D			
		LPB	P	06 51 46				
	28	LPB	eP	08 44 56				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	28	PNS	eP	09 08 05.1				
		LPB	P	09 08 08.5				
	28	LPB	P	09 29 32				
	28	PNS	eP eS	09 40 29.7 51.8				
		LPB	eP	09 40 36				
	28	USCGS 10 24 46.9; 16.0N, 59.9W; h--; m4.6 LEEWARD ISLANDS						
		PNS	eP	10 31 24.2				
		LPB	eP	10 31 26.5		1.0	10	34°2
	28	USCGS 13 26 05.6; 28.5S, 69.1W; h55; m4.5 CHILE-ARGENTINA BORDER REGION						
		LPB	eP	13 29 00				12°6
		PNS	eP	13 29 00.2				
	28	PNS	eP	15 51 03.2				
	28	USCGS 16 52 41.6; 15.2N, 59.8W; h--; m4.9 LEEWARD ISLANDS						
		PNS	eP	16 59 08.3				
		LPB	eP	16 59 11.5				34°2
	28	PNS	eP	17 15 48.7				
	28	LPB	eP	18 57 42				
	28	LPB	P	19 17 59.5		1.3	34	
	28	PNS	P S	20 59 18.7 58.7				
	28	USCGS 23 23 10.5; 16.2N, 59.7W; h13; m5.3 LEEWARD ISLANDS						
		PNS	P S eL	23 29 51.6 35 13 41				
		LPB	P eL	23 29 52.2 40		1.5	192	34°2
	29	USCGS 00 51 47.2; 19.2N, 59.7W; h17; m5.6 LEEWARD ISLANDS						
		PNS	P S L	00 58 28.8 01 03 46 10.1				
		LPB	P iS eL	00 58 29.2 03 52 10		1.2	184	34°8
	29	USCGS 01 29 44.5; 16.3N, 59.6W; h--; m4.7 LEEWARD ISLANDS						
		PNS	eP	01 36 24.8				34°2
		LPB	P	01 36 25				
	29	USCGS 01 38 28.7; 16.3N, 59.6W; h--; m4.8 LEEWARD ISLANDS						

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	29	PNS	eP	01 45 08.3				
		LPB	P	01 45 10		1.6	39	34°2
			e	46 25.5				
29	LPB	eP	04 52 24					
	PNS	eP	04 52 25.1					
29	PNS	P	05 53 38.6					
		S	54 22.9					
		LPB	P	05 53 43.5				
29	USCGS 06 03 22.2; 16.2N, 59.7W; h--; m4.6 LEEWARD ISLANDS							
29	PNS	eP	06 10 00					
	LPB	P	06 10 02		1'0	10	34°2	
29	LPB	P	06 18 21.5					
	PNS	eP	06 18 22					
29	PNS	eP	06 51 35.6					
	LPB	eP	06 51 40					
29	USCGS 08 21 38.9; 16.2N, 59.6W; h--; m4.9 LEEWARD ISLANDS							
29	PNS	eP	08 28 17					
	LPB	P	08 28 18.8		1.0	16	34°2	
29	PNS	P	09 36 25.8					
		S	47.7					
29	USCGS 09 42 11.1; 11.1S, 75.9W; h133; m4.4 PERU							
29	PNS	eP	09 44 14.2					
	LPB	P	09 44 20		0.8	10	9°0	
29	LPB	eP	09 56 05					
	PNS	eP	09 56 07.2					
29	PNS	eP	10 05 21.5					
29	PNS	iP	11 01 50.1		C			
		iS	02 29					
		LPB	iP	11 01 55.5		0.9	96	
29	USCGS 13 55 26.0; 16.2N, 59.8W; h19; m5.0 LEEWARD ISLANDS							
29	PNS	eP	14 02 04.5					
		eS	07 36					
		LPB	eP	14 02 06.5				34°2
29	PNS	S	07 40					
		eL	12					
		USCGS 13 55 38.0; 16.0N, 59.7W; h--; m5.4 LEEWARD ISLANDS						
29	PNS	P	14 02 15.8					
		S	07 52					
		L	13.8					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
DECEMBER	29	LPB	P	14 02 18				34°2
			eS	07 41				
			eL	14				
29	USCGS 14 13 29.6; 16.2N, 59.7W; h20; m5.2 LEEWARD ISLANDS							
29	PNS	eP	14 20 09.4					
		eS	25 30					
29	LPB	P	14 20 11.7		1.0	36	34°2	
29	PNS	eP	17 09 39					
29	PNS	iP	19 04 27.2					
		iS	49.3					
29	LPB	eP	21 07 02					
		S	46.2					
29	PNS	eP	21 07 05					
29	PNS	eP	23 20 05.1					
29	PNS	eP	23 48 09					
30	LPB	eP	00 30 16					
30	PNS	eP	04 00 10					
		P	04 00 14.2					
30	PNS	eP	04 40 48.3					
		LPB	eP	04 40 51				
30	USCGS 08 11 49.4; 16.2N, 59.6W; h--; m4.6 LEEWARD ISLANDS							
30	PNS	eP	08 18 27.9					
		LPB	P	08 18 29				34°2
30	USCGS 10 15 59.4; 16.2N, 59.7W; h--; m5.0 LEEWARD ISLANDS							
30	PNS	P	10 22 37.1					
		LPB	P	10 22 39				34°2
30	PNS	eP	11 21 59.5					
30	USCGS 11 17 31.8; 0.1S, 124.1E; h88; m5.2 MOLUCCA SEA							
30	LPB	ePKP	11 37 22.2					
		PKP2	38 05.5					
		PNS	ePKP	11 37 25				
30	PNS	PKP2	38 03.8					
30	PNS	P	16 44 30.6					
		LPB	eP	16 44 37.5				
30	PNS	P	18 31 03					
		eS	38.5					
30	LPB	P	18 30 55.5		0.7	31		
30	PNS	P	19 13 53.6					
30	LPB	eP	22 13 09					
		S	43.3					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DECEMBER	30	PNS	eP eS	22 13 11.1 42					
	30	LPB	P	22 19 46.5					
		PNS	iP eS	22 19 47.8 20 10.9					
	31	PNS	eP	00 47 51.3					
	31	USCGS 02 08 53.1' 0.4S, 80.3W; h58; m3.9 NEAR COAST OF ECUADOR							
		PNS	eP	02 13 21.3					
		LPB	eP	02 13 23.5				19°9	
	31	LPR	eP	03 56 57.4					
		PNS	eP	03 56 59					
	31	LPB	eP	03 57 54					
	31	PNS	eP	04 02 10.2					
		LPB	eP	04 02 13.5					
	31	USCGS 05 41 57.5; 16.1N, 59.7W; h17; m5.1 LEEWARD ISLANDS							
		PNS	eP	05 48 37.2					
		LPB	P	05 48 38.2				34°2	
	31	LPB	eP	06 00 14					
		PNS	P	06 00 18.9					
	31	USCGS 06 49 56.8; 16.1N, 59.6W; h--; m5.0 LEEWARD ISLANDS							
		PNS	eP	06 56 34.6					
		LPB	eP	06 56 36				34°2	
	31	LPB	eP	08 21 38					
	31	PNS	eP S	09 10 56.6 11 26.6					
		LPB	eP	09 11 01					
	31	LPB	eP	12 09 45					
		PNS	eP	12 09 47.4					
	31	LPB	eP	16 22 25					
		PNS	eP	16 22 33.2					
	31	USCGS 19 01 56.1; 28.5N, 129.1E; h44; m5.9 RYUKYU ISLANDS							
		LPB	PKP PP	19 21 55 26 14				159°2	
			eL	20 19					
		PNS	PKP iPP	19 22 00 26 16.8					
			i eL	32 09 20 20					
	31	LPB	eP	19 56 23.3					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
DECEMBER	31	PNS	P S	20 42 45 43 04					
		LPB	eP	20 42 46.5					
	31	PNS	eP	23 20 03					
		LPB	eP	23 20 12.5					
	31	USCGS 23 38 52.3; 7.0S, 117.8E; h483; m5.3 BALI SEA							
		LPB	ePKP	23 57 54				154°9	
		PNS	PKP i	23 57 54.4 58 24.6				C	

