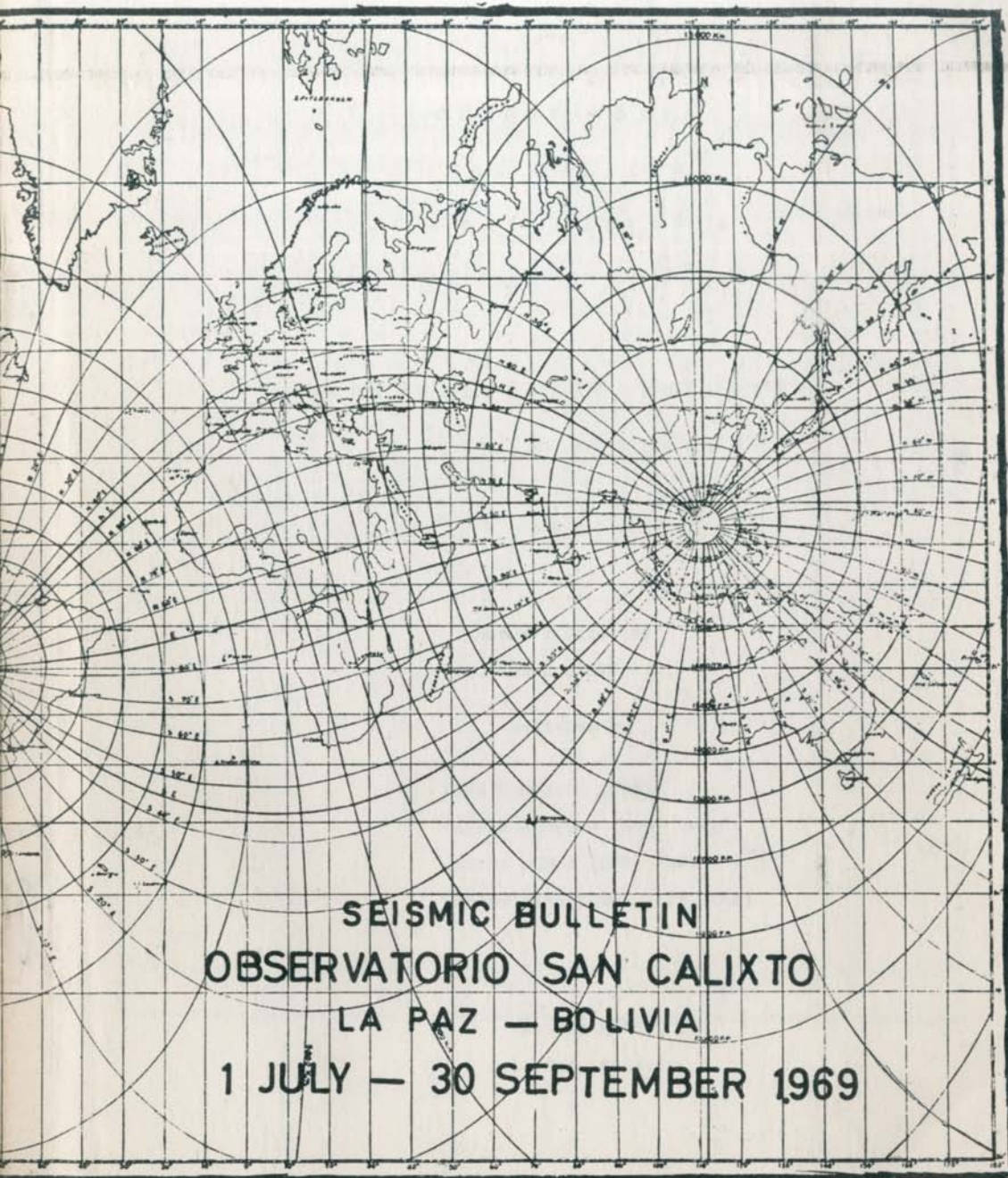


— PARA LA PAZ



OBSERVATORIO  
SAN CALIXTO  
LA PAZ BOLIVIA

SEISMOLOGICAL BULLETIN

1 JULY - 30 SEPTEMBER

1969

Network Director  
Rev. Ramón CABRE S.I.

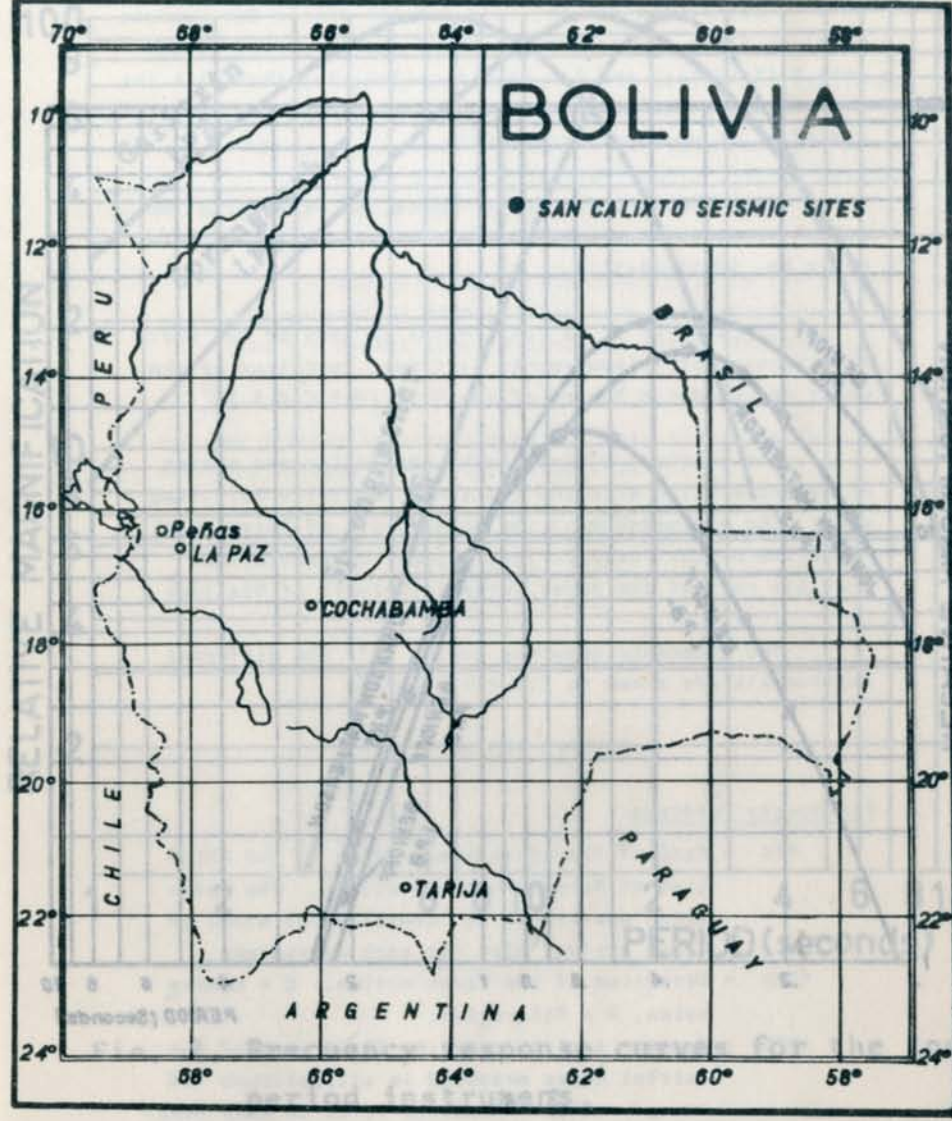
Assisted by  
Hugo BUSTILLO (PNS)  
Nelson AGUILAR (LPB, LPZ)  
Javier OCHOA (LPB, PNS)  
Carlos ABASTOFLOR (LPB, CCH)

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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 = .537 sec SP Hor. Renioff, To= 1 sec., Tg =2 sec. LP, three components Spreng- nether, 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. San Calixto Pendulo EW, To=2.4 sec. SP vertical Wilson-Lamison To=1 sec. SP vertical Wilson-Lamison To=3 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		
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		1,000 at 12 sec
Tarija	TRJ	21°30'47"S	64°46'34"W	2100		180 and 300 700



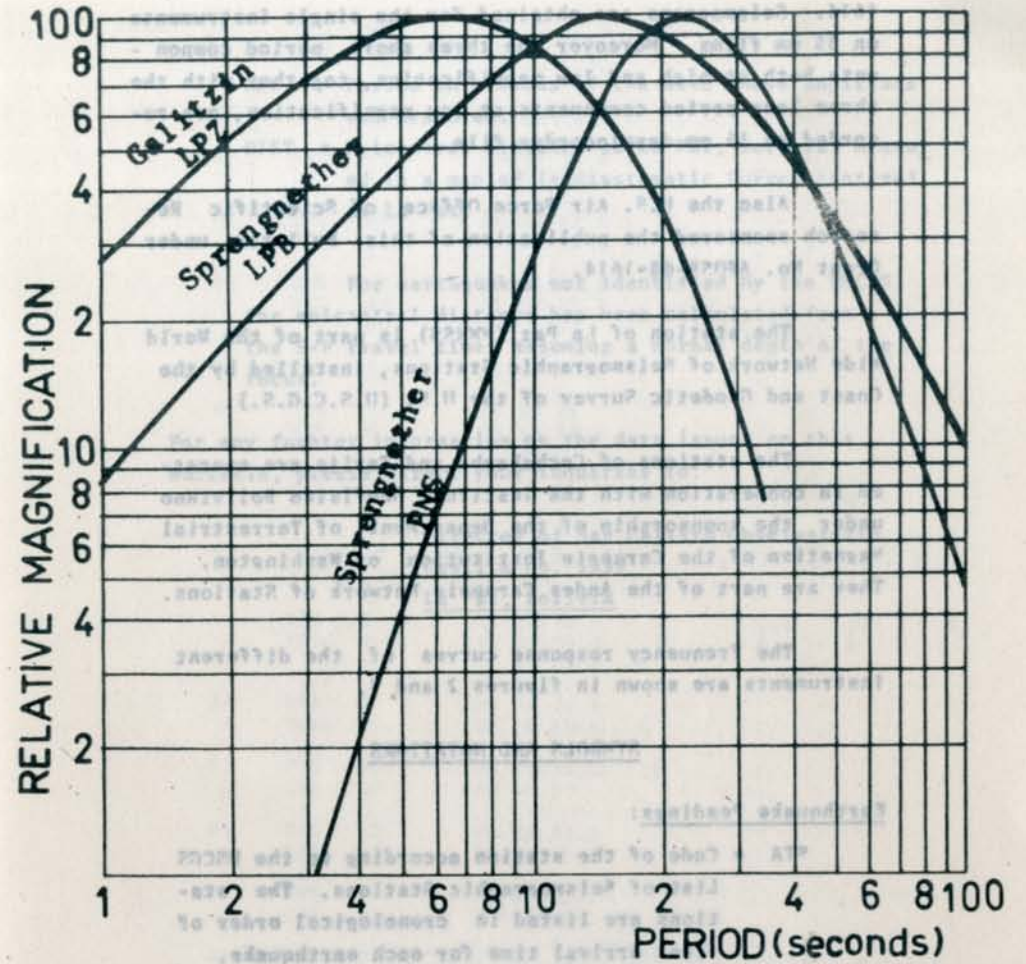
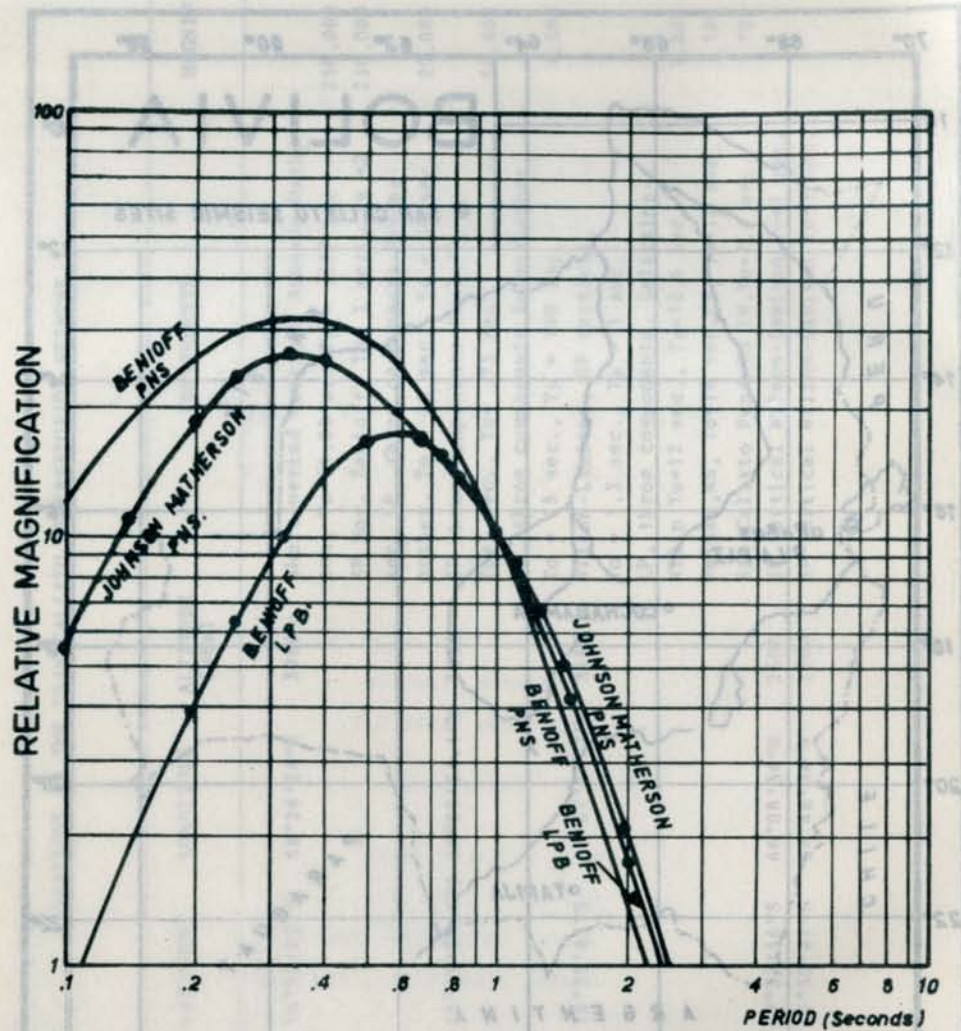


Fig. 2. Frequency response curves for the long period instruments.

The station of Pefas 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. AFOSP-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	TIM				
JULY	01	LPR PNS	eP eP eS	00 13 12.6 00 13 15.6 14 12.3				
	01	LPR	e(P)	02 28 12				
	01	PNS LPB	eP P	04 10 14.8 04 10 19.5		1.0	8	
	01	LPB PNS	eP eP	04 56 11.4 04 56 12.7				
	01	LPB PNS	eP eP eS	05 28 03.5 05 28 07.3 43				
	01	PNS	P	05 43 29.2				
	01	LPB PNS	P P	05 53 23 05 53 24.2				
	01	PNS LPB	iP iP i	06 34 13.4 06 34 15.5 38.8	D D	0.9	322	
	01	USCGS JUJUY	07 21 45.6, 23.8S, 66.7W, h = 194 km., m = 4.2					
		LPB PNS S	P P S	07 23 32.7 07 23 36.8 25 02.2	C	0.8 0.8	15 6	7
	01	LPB PNS	P P	07 59 15.4 07 59 18.8				
	01	PNS LPB	eP eP	08 16 55.5 08 16 57	D			
	01	PNS LPB	eP eP	08 25 44.1 08 25 45.4				
	01	PNS LPB	eP eP	09 43 35.5 09 43 38				
	01	USCGS CHILE ARGENTINA BOR REG	10 13 51.2, 24.3S, 67.0W, h = 174 km., m = 3.8					
		LPB PNS	eP eP	14 32 37.5 14 32 33.2				16
	01	PNS	eP	16 32 48.9				

The station of Chile is operated under U.S. Air Force Office of Naval Research under Grant No. AFOSR-67-1077. Data were also obtained for the single instruments on 31 in Chile. Summary of the three 24-hour period covers the following: ...

The epicentral distance has been calculated from the W. W. Wood level ...

For any further information on the data listed on this ...

The frequency response curves of the different instruments are shown in Figures 1 and 2.

Earthquake magnitudes:

M<sub>s</sub> = Code of magnitude according to the USCGC list of Seismological Stations. The stations are listed in chronological order of first arrival time for each earthquake.

USCGS = Magnitude of the first arrival. C = Country code, S = Station.

USCGS = Magnitude of the first arrival of the ...

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	01	LPB	eP	22 45 32					
		PNS	P	22 45 34.2	D	0.6	6		
			eS	46 24.5					
	01	LPB	eP	23 06 51.5					
	02	LPB	eP	00 20 06.6					
		PNS	eP	00 20 06.9					
	02	LPB	eP	03 14 26					
			S	55.6					
		PNS	eP	03 14 26					
			S	56					
	02	USCGS 05 18 20.6, 14.0N, 91.2W, h = 61 km., m = 4.2 GUATEMALA							
		LPB	eP	05 25 24.5				38	
		PNS	eP	05 25 30.2					
	02	PNS	eP	06 59 43.9					
			eS	07 00 25.7					
		LPB	eP	06 59 45		0.9	8		
			eS	07 00 25					
	02	PNS	iP	08 00 05.5	D				
			iS	29.5					
		LPB	iP	08 00 08.5	D	0.6	28		
			S	35					
	02	PNS	e(P)	08 40 53.1					
		LPB	(P)	08 40 53.6					
			S	46					
	02	PNS	eP	09 38 17.4					
	02	LPB	P	10 15 34.5					
			i	51					
			S	16 39					
		PNS	P	10 15 36.7					
			e	15 52.9					
	02	LPB	eP	11 24 23					
		LPB	eP	12 58 46.5					
		PNS	eP	12 58 50.7					
			eS	59 16.9					
	02	PNS	P	15 19 18.8					
			S	46.4					
	02	LPB	eP	22 49 30					
		PNS	eP	22 49 32.2					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	03	LPB	eP	03 06 42					
		PNS	P	03 59 16.6					
			iS	35					
		LPB	iP	03 59 24.5	D	0.8			
			iS	48.5					
	03	LPB	eP	05 22 27					
		PNS	eP	05 22 40.8					
	03	PNS	eP	05 26 48					
		LPB	eP	05 26 49					
	03	PNS	eP	06 44 12					
		LPB	eP	06 44 18.5					
	03	USCGS 06 34 46, 7.1N, 126.7E, h = 97 km., m = 5.0 MINDANAO, PHILIPPINE IS							
		LPB	ePKP	06 54 42				162	
		PNS	ePKP	06 54 42.2					
	03	LPB	P	07 29 31			1.2	40	
		PNS	P	07 29 31.6	D	0.9	17		
	03	PNS	eP	08 32 47.8					
	03	PNS	eP	09 19 26.6					
			S	56.4					
	03	PNS	eP	11 43 03.1					
			eS	59.2					
		LPB	eP	11 43 03.5					
	03	LPB	eP	12 12 00					
		PNS	eP	12 12 01.8					
	03	USCGS 12 31 44, 5.4S, 80.9W, h = 74 km., m = 4.4 NEAR COAST OF NORTHERN PERU							
		PNS	eP	12 35 29.6					
		LPB	eP	12 35 38				19	
	03	LPB	eP	12 39 57.6					
	03	PNS	eP	13 43 06.5					
		LPB	eP	13 43 11					
	03	USCGS 14 06 33.6, 4.4S, 128.4E, h = 193 km., m = 5.1 BANDA SEA							
		PNS	ePKP	14 26 13.3					
		LPB	ePKP	14 26 17				154	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	03	USCGS 15 02 21.0, 43.0N, 29.2W, h = 33 km., m = 4.3 NORTH ATLANTIC RIDGE	PNS	eP	15 13 33			
	03	LPB	eP	15 59 22.5				
		PNS	eP	15 59 23.8				
	03	PNS	eP	17 06 12				
		LPB	eP	17 06 15				
	03	USCGS 16 59 06.9, 16.7N, 98.5W, h = 26 km., m = 5.2 NEAR COAST OF GUERRERO, MEXICO	PNS	eP	17 07 16			
		LPB	eP	17 07 20				45
	03	PNS	P	17 40 38.6		0.5	10	
		LPB	P	17 40 40.5				
	03	PNS	P	19 16 55.3				
	03	PNS	e(P)	20 10 47.2				
	03	LPB	eP	20 14 53.5				
	03	PNS	P	22 14 24.8		0.8	15	
		LPB	P	22 14 28.5		1.0	20	
	03	LPB	eP	22 20 11				
		PNS	eP	22 20 13.2				
			eS	31.4				
	04	PNS	e(P)	05 41 09				
		LPB	eP	05 41 01.2				
	04	LPB	eP	06 20 42				
		PNS	eP	06 20 43.4				
	04	PNS	e(P)	06 33 30				
		LPB	e(P)	06 33 36.6				
	04	USCGS 06 32 43.4, 4.1S, 80.9W, m = 4.5 PERU ECUADOR BORDER REGION	PNS	P	06 36 44.1			
			S	40 03				
			eL	42.6				
		LPB	P	06 36 48.6				16
			i	40 08				
			eL	42.4				
	04	USCGS 07 12 22.2, 6.8N, 73.0W, h = 168 km., m = 3.9 NORTHERN COLOMBIA						



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY		PNS	eP	07 17 19.4				
		LPB	eP	07 17 22				24
	04	USCGS 07 21 49.7, 4.1S, 81.0W, h = 35 km., m = 4.4 NEAR COAST OF NORTHERN PERU	LPB	P	07 25 50			18
			e	32 00				
			L	32.4				
		PNS	P	07 25 50.2				
			eS	29 07		1.0	29	
			eL	32.2				
	04	PNS	iP	08 04 08				
			S	31.9				
	04	LPB	eP	09 04 40				
		PNS	e(P)	09 04 42.2				
	04	PNS	eP	09 36 47.8				
		LPB	eP	09 36 52.5				
	04	USCGS 11 16 01.0, 7.4N, 82.7W, m = 5.2 SOUTH OF PANAMA	PNS	P	11 21 46.6			
			eL	31.8		1.2	40	
		LPB	P	11 21 49				
			eL	31.6		1.5	55	27
	04	LPB	eP	12 12 15				
		PNS	eP	12 12 16.4				
	04	PNS	P	12 25 18				
	04	PNS	iP	16 00 58.8				
			S	01 40.1				
		LPB	eP	16 01 02				
	04	LPB	P	16 34 27				
		PNS	iP	16 34 27.5				20
	04	LPB	e(P)	18 29 30.6				
	04	LPB	eP	22 02 46.5				
			S	03 44				
		PNS	P	22 02 47.6				
			iS	03 16.4				
	04	PNS	eP	23 16 10.6				
		LPB	eP	23 16 15				
			L	23 42				
	05	PNS	eP	00 03 20				
			eS	42.3				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	05	USCGS 01 44 01.1, 3.8S, 131.5E, m = 5.5 WEST NEW GUINEA REG							
		LPB	PKP	02 03 51		1.3	30	152	
		eL		03 00					
		PNS	PKP	02 03 51.4		1.6	52		
	05	LPB	eP	03 25 06					
		S		26 14					
		PNS	eP	03 25 10					
		S		26 20					
	05	USCGS 04 55 33.7, 5.6S, 77.2W, h = 37 km., m = 5.2 NORTHERN PERU							
		PNS	P	04 58 44.2		0.9	36		
		L		05 04.5					
		LPB	P	04 58 49.5		0.8	19	13	
		eL		05 04.7					
	05	LPB	eP	07 08 46					
		PNS	eP	07 08 47.2					
	05	PNS	eP	07 15 59.2					
		LPB	eP	07 15 59.5					
	05	PNS	iP	07 28 55.6	D				
		LPB	P	07 38 57.6		0.6	22		
	05	PNS	eP	08 19 45.2					
		eS		20 10					
	05	USCGS 11 12 43.6, 18.6N, 147.0E, h = 57 km., m = 5.0 MARIANA IS REG							
		PNS	ePKP	11 32 23.8					
		LPB	ePKP	11 32 27				146	
	05	PNS	P	12 25 55.4					
		S		26 21					
	05	LPB	e(P)	12 42 49.5					
	05	PNS	eP	18 11 00.8					
	05	LPB	eP	19 07 31.3					
		PNS	eP	19 07 35		0.4	5		
		eS		09 03.4					
	05	PNS	eP	20 01 50.6					
		S		02 12.2					
	05	LPB	eP	22 44 32.5					
		PNS	eP	22 44 34					
		S		45 18.2					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	06	LPB	eP	00 00 29					
		PNS	eP	00 00 34.2					
	06	LPB	eP	00 24 43.3					
	06	PNS	eP	02 00 09.6					
		S		32					
	06	PNS	eP	02 14 28.9					
		LPB	eP	02 14 34					
	06	LPB	eP	04 00 57					
		PNS	eP	04 00 57.8					
	06	LPB	P	08 02 56.4					
		PNS	P	08 03 00.3			0.5	2	
	06	PNS	eP	08 10 24.4					
		LPB	eP	08 10 29.7					
	06	PNS	eP	08 27 31					
		eS		28 15.8					
		LPB	eP	08 27 38.5					
	06	LPB	eP	09 37 22.4					
	06	PNS	P	10 10 31.9			1.0	27	
		LPB	P	10 10 36			1.0	14	
	06	PNS	P	10 13 09.7					
	06	PNS	P	11 07 20.4					
		LPB	eP	11 07 25.2					
	06	PNS	P	11 11 27.8					
		LPB	eP	11 11 36.5					
	06	PNS	eP	11 42 10					
		LPB	eP	11 42 15					
	06	USCGS 12 41 40.1, 1.6N, 79.3W, h = 47 km., m = 4.5 NEAR COAST OF ECUADOR							
		PNS	P	12 46 20			0.8	36	
		eL		54					
		LPB	P	12 46 24				21	
		eL		54.4					
	06	PNS	eP	13 23 30.8					
	06	USCGS 14 31 16.7, 15.3S, 173.4W, m = 5.3 TONGA IS							
		PNS	eP	14 45 01.4					
		eL		15 18.6					
		LPB	eP	14 45 04					
		eL		18.2				99	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	06	PNS	P	15 26 27.8				
	06	PNS	P	17 16 50.8	C	0.6	13	
		LPB	P	17 16 47		0.8	22	
	06	PNS	P	19 07 21.2				
		LPB	eP	19 07 24.5				
	06	PNS	eP	19 24 01.4				
		LPB	eP	19 24 09.5				
	06	PNS	eP	21 23 09.4				
		LPB	eP	21 23 12				
	06	PNS	eP	21 58 44.8				
	07	LPB	eP	01 05 18				
		PNS	P	01 05 19.7	D			
07	USCGS 02 41 07.7, 24.2S, 66.9W, h = 168 km., m = 4.5 SALTA PROVINCE, ARGENTINA							
		LPB	P	02 42 59				8
		PNS	P	02 43 04.2				
	07	PNS	P	03 10 32.2	D			
	07	LPB	P	03 34 52		0.6	14	
		PNS	P	03 34 55		0.5	7	
07	USCGS 03 37 54.8, 1.8N, 126.4E, h = 42 km., m = 5.1 MOLUCCA PASSAGE							
		LPB	PKP	03 07 53		1.0	10	159
		PNS	ePKP	03 57 55				
	07	PNS	P	03 59 26.9	D			
			S	51.3				
		LPB	eP	03 59 27				
			eS	52				
07	USCGS 04 43 15.4, 16.5N, 147.3E, h = 38 km., m = 5.7 MARIANA IS REG							
		PNS	PKP	05 02 53.4	D			
			eL	52				
		LPB	PKP	05 02 54.5				
			eL	51				
07	USCGS 07 06 05 TONGA IS							
		LPB	eP	07 06 05				
		PNS	eP	07 06 06.7				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	07	LPB	eP	08 41 00.2				
		PNS	eP	08 40 57.8				
	07	PNS	eP	10 01 05.6				
		LPB	eP	10 01 14.5				
	07	PNS	iP	12 18 59.2				
			iS	19 25.4				
		LPB	eP	12 19 00				
	07	PNS	e(P)	20 05 52.7				
	07	PNS	eP	21 50 52.6				
	08	PNS	eP	01 15 51.1		1.0	11	
		LPB	P	01 15 51.5				
08	USCGS 04 06 39.7, 2.1N, 126.6E, h = 16 km., m = 5.5 MOLUCCA PASSAGE							
		PNS	PKP	04 26 41.6		1.0	15	
		LPB	PKP	04 26 42		1.0	32	159
	08	LPB	eP	05 30 04				
	08	LPB	e(P)	05 57 47				
		PNS	iP	05 57 47.8	D			
	08	LPB	P	06 10 15.5				
			S	44.5				
		PNS	iP	06 10 16.6	C			
			S	45.3				
	08	LPB	P	06 58 10.5				
		PNS	P	06 58 12.5				
08	USCGS 07 19 03.0, 56.3S, 27.6W, h = 175 km., m = 5.1 SOUTH SANDWICH IS REG							
		LPB	P	07 27 42.5		0.8	37	50
		PNS	P	07 27 45.8	D	0.8	32	
08	USCGS 08 09 17.5, 37.6N, 20.3E, m = 5.4 IONIAN SEA							
		LPB	eP	08 23 41				99
	08	PNS	e(P)	10 01 55.8				
		LPB	eP	10 01 56.5				
08	USCGS 14 02 46.1, 40.3S, 74.8W, h = 34 km., m = 4.9 OFF COAST OF SOUTHERN CHILE							
		LPB	eP	14 08 05.5				24
		PNS	P	14 08 05.9		1.2	25	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	08	LPR	eP	14 25 40					
		PNS	eP	14 25 40.5					
	08	LPR	eP	16 28 10					
			S	43					
		PNS	eP	16 28 15.8					
	08	PNS	eP	22 12 42.4					
			S	13 09.2					
		LPR	eP	22 12 48					
			eS	13 16.5					
	08	PNS	eP	22 39 06.9					
			S	46					
	08	USCGS 22 48 13.4, 14.0N, 144.8E, h = 125 km., m = 4.8 MARIANA IS							
		PNS	ePKP	23 07 47.8					
		LPR	ePKP	23 07 49				148	
	08	PNS	eP	23 51 29.5					
		LPR	eP	23 51 30					
	09	PNS	eP	02 30 43.6					
		LPR	eP	02 30 52.2					
	09	USCGS 03 02 58, 34.2S, 178.9W, h = 37 km., m = 5.1 SOUTH OF KERMADEC IS							
		PNS	eP	03 16 28.4					
		LPR	eP	03 16 30				97	
			eL	48					
	09	LPR	e(P)	04 25 42.2					
	09	LPR	eP	04 54 05.5					
	09	PNS	eP	05 37 18.6					
		LPR	P	05 37 23		1.0	16		
	09	LPR	eP	08 37 40					
		PNS	eP	08 37 41.4					
			S	38 03.6					
	09	USCGS 08 19 06, 7.4S, 126.9E, h = 106 km., m = 5.1 BANDA SEA							
		PNS	PKP	08 38 52.0	C	0.8	15		
		LPR	PKP	08 38 52.2	C	0.8	30	152	
	09	LPR	P	10 19 19.5		0.8	22		
			eS	20 13 0					
		PNS	P	10 19 23.6	C	0.4	7		
			eS	20 24.1					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	09	PNS	e(P)	11 13 59.2					
	09	PNS	eP	14 31 51.9					
		LPR	eP	14 31 52					
	09	PNS	eP	15 41 49.2					
		LPR	eP	15 41 50					
	09	PNS	eP	16 27 05.2					
			eS	31.2					
	09	PNS	eP	18 10 02				0.4 2	
			S	31.2					
		LPR	S	18 10 03				0.5 7	
			S	31.6					
	09	LPR	eP	21 27 30.5					
		PNS	eP	21 27 31.8				0.6 2	
			eS	28 19.4					
	09	PNS	eP	21 53 51.1					
			eS	54 21.4					
		LPR	eP	21 54 01					
	09	PNS	eP	22 02 46.6				0.6 4	
	09	USCGS 22 52 11.5, 8.8S, 124.0E, h = 34 km., m = 5.2 TIMOR							
		PNS	PKP	23 12 05.6					
		LPR	PKP	23 12 07.2				0.9 42 151	
	10	PNS	eP	00 30 20					
		LPR	eP	00 30 22					
	10	PNS	eP	00 52 45					
			S	53 07.7					
	10	PNS	P	01 53 39.7					
		LPR	P	01 53 40.7					
	10	PNS	P	03 29 51.9					
		LPR	P	03 29 58.2				0.9 30	
	10	LPR	eP	07 45 32.5					
			e	48					
		PNS	eP	07 45 36.2					
	10	USCGS 08 03 11.3, 17.2S, 69.7W, h = 173 km., m = 3.9 PERU-BOLIVIA BORDER REG							

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY		PNS	iP	08 03 43.6	D			
			S	04 05.4				
		LPB	iP	08 03 45.7		0.8	1480	2
			S	04 10				
10		USCGS 08 42 28.5, 23.6S, 69.7W, h = 48 km., m = 5.4 NORTHERN CHILE						
		PNS	P	08 44 03				
			i	29.4				
			eL	47				
		LPB	P	08 44 19.2				7
			i	26				
10		LPB	P	09 30 18				
		PNS	eP	09 30 18.4				
10		USCGS 09 52 36.1, 8.7S, 80.8W, m = 4.6 OFF COAST OF NORTHERN PERU						
		LPB	eP	09 56 05				14
		PNS	eP	09 56 05.8				
10		LPB	eL	10 01				
10		PNS	eP	10 20 48.7				
			S	21 31				
10		PNS	eP	11 07 59.1				
			eS	08 21.2				
10		PNS	eP	12 20 03.9				
10		LPB	e(P)	12 22 17.4				
10		PNS	P	13 29 09.8				
		LPB	eP	13 29 10				
10		PNS	P	16 31 25.4				
		LPB	P	16 31 31.5		1.1	25	
			eS	30				
10		LPB	eP	17 37 48.5				
		PNS	eP	17 37 53.6				
			S	38 15.9				
10		LPB	eP	18 17 39				
		PNS	eP	18 17 41.2				
10		PNS	eP	19 12 29.4				
			S	58.9				
10		PNS	eP	19 14 34.9				
			S	58.1				



MONTH	DAY	STA	PHASE	TIME				
JULY	10	PNS	eP	20 52 54.4				
	11	LPB	eP	01 23 16.6				
		PNS	eP	01 23 19.1				
	11	LPB	eP	02 54 30.5				
			eS	55 14				
		PNS	e(P)	02 54 40				
			eS	55 24.2				
	11	LPB	eP	02 59 13.4				
	11	LPB	eP	04 46 40				
	11	LPB	eP	06 03 36				
		PNS	eP	06 03 38.4				
	11	LPB	eP	07 09 40				
		PNS	eP	07 09 40.1				
	11	USCGS 07 51 04, 10.3N, 85.4W, m = 5.0 COSTA RICA						
		PNS	eP	07 57 23.6				
			eL	08 07				
		LPB	eP	07 57 26.5				32
			eL	08 07.2				
	11	PNS	e(P)	08 49 45				
			eS	50 08.2				
	11	PNS	eP	09 14 32.8				
		LPB	eP	09 14 53				
	11	PNS	eP	12 25 21.7				
			S	43.8				
	11	USCGS 13 51 25.7, 4.2S, 76.5W, h = 122 km., m = 4.6 NORTHERN PERU						
		PNS	P	13 54 42.6				
		LPB	eP	13 54 48				14
	11	PNS	eP	14 57 47				
		LPB	eP	14 57 45				
	11	LPB	eP	16 28 22				
		PNS	eP	16 28 30.5				
	11	PNS	P	16 51 44.6				
			eS	52 07.5				
	11	LPB	P	19 13 22			0.9	18
		PNS	P	19 13 25.9			0.8	10
			S	14 50.8				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	11	PNS	e(P) S	20 55 16.7 29.9					
	11	LPB PNS	eP eP	22 15 11 22 15 13.6					
	11	PNS	eP eS	22 21 26.7 22 16.4					
	12	LPB PNS	eP eP	02 27 12.4 02 27 13.2		1.0	26		
	12	PNS	iP S	03 05 16.2 39.4					
		LPB	P	03 05 19		0.7	9.1		
	12	PNS LPB	eP eP	03 27 50.4 03 27 46.2					
	12	PNS	eP	05 21 14.4					
	12	USCGS 05 13 12.3, 6.2N, 126.1E, h = 142 km., m = 5.3 MINDANAO, PHILIPPINE IS							
		PNS	ePKP	05 33 02					
			ePKP2	51.6					
		LPB	ePKP ePKP2	05 33 07 52.2		1.0	10	162	
	12	PNS LPB	P P	06 15 03.9 06 15 04.8		0.7	8		
	12	USCGS 05 57 11.1, 6.0S, 71.4E, m = 5.3 CHAGOS ARCHIPELAGO REG							
		LPB PNS	ePKP ePKP	06 16 29 06 16 30.6				132	
	12	PNS	eP	09 39 11					
	12	LPB PNS	P S	10 24 14.5 36.3					
		PNS	P S	10 24 21.9 52.1					
	12	USCGS 11 44 12.3, 7.9S, 117.8E, h = 52 km., m = 5.1 BALI SEA							
		PNS LPB	ePKP ePKP	12 04 03.7 12 04 20.3				155	
	12	PNS	eP	12 53 26.9					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	12	USCGS 13 00 36.9, 46.5N, 153.3E, h = 12 km., m = 5.3 KURILE IS							
		PNS	PKP	13 19 57.4					
			eL	14 05.5					
		LPB	ePKP eL	13 19 58 14 05.6				135	
	12	USCGS 13 16 55.4, 26.1S, 178.3E, h = 603 km., m = 5.0 SOUTH OF FIJI IS							
		LPB PNS	eP eP	13 30 02 13 30 05.1				103	
	12	PNS	e(P)	13 34 04.4					
	12	PNS	P S	14 46 58.2 47 21.5					
	12	LPB PNS	eP eP	16 36 23 16 36 24.8			0.5	4	
	12	PNS	eP	18 55 53.3			0.7	5	
	12	USCGS 19 16 31.6, 39.7N, 143.5E, m = 5.2 OFF EAST COAST OF HONSHU, JAPAN							
		PNS LPB	ePKP ePKP	19 36 05.8 19 36 10.2				144	
	12	LPB PNS	eP eP	21 10 13 21 10 13					
	12	PNS	P S	21 59 22.6 48.4					
	12	LPB PNS	eP eP	22 53 38 22 53 40					
	12	LPB	e(P)	22 58 07.3					
	13	PNS	P S	01 17 35.6 18 07.8					
	13	PNS LPB	eP P	01 39 25.6 01 39 30.2			1.0	18	
	13	USCGS 05 45 00.3, 18.1S, 69.4W, h = 140 km., m = 4.7 NORTHERN CHILE							
		LPB	iP iS	05 45 36.5 46 02			D	2	
		PNS	iP iS	05 45 36.8 46 04			D		
	13	LPB PNS	P eP	06 30 16 06 30 16.4					
	13	LPB	P S	09 48 20.8 59.5			C	0.7 45	

JULY

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY		PNS	P	09 48 22.6	C	0.7	31	
	13	LPB	eP	10 49 52.0				
		PNS	eP	10 49 58.5				
	13	PNS	eP	11 05 04.8				
	13	PNS	P	13 23 00.8	C			
		LPB	P	13 23 07.9	C	1.0	724	
			i	26 36				
	13	PNS	eP	13 26 29.8				
	13	PNS	eP	13 47 04.6				
		LPB	eP	13 47 11.5				
	13	LPB	eP	14 16 30.6				
	13	PNS	eP	16 39 19.2				
			S	46.6				
		LPB	eP	16 39 25		1.0	16	
			eS	38				
			i	41 34.5				
	13	PNS	eP	17 33 49				
		LPB	eP	17 33 52				
	13	LPB	iP	17 59 40.4	C	0.8	16	
			S	18 00 06				
		PNS	P	17 59 40.4	C			
			S	18 00 05.7				
	13	LPB	eP	23 14 21				
			S	15 12.5				
		PNS	eP	23 14 24.1				
	14	LPB	e(P)	00 34 42.5				
	14	LPB	eP	03 54 15				
	14	LPB	eP	04 34 12				
	14	USCGS 05 44 43.8, 6.8N, 73.0W, h = 155 km., m = 4.6. NORTHERN COLOMBIA						
		PNS	P	05 49 41				
			i	50 14.8				
		LPB	P	05 49 43.6		1.0	34	23
			i	50 18.2				
	14	PNS	eP	06 20 38.3				
	14	USCGS 06 50 32.7, 38.1S, 73.3W, h = 61 km., m = 3.5 NEAR COAST OF CENTRAL CHILE						

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JULY



From the ISC collection scanned by SISMOS

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY		LPB	P	06 55 24				
		PNS	eP	06 55 25.8				22
	14	LPB	eP	07 05 32				
	14	LPB	eP	07 25 30				
			S	26 09.3				
		PNS	eP	07 25 40.4				
			eS	26 19.3				
	14	LPB	eP	07 47 48				
		PNS	eP	07 47 48.9				
	14	PNS	P	08 21 15.6				
	14	LPB	P	09 30 30				
	14	LPB	eP	10 58 31.5				
		PNS	eP	10 58 34				0.8 4
	14	PNS	eP	11 47 15.5				
			eS	40.2				
	14	LPB	eP	12 03 31				
	14	PNS	eP	13 07 09				
		LPB	eP	13 07 15.5				
	14	LPB	eP	13 23 54.5				
		PNS	P	13 23 55				D
	14	LPB	eP	14 44 17.5				
			e(S)	53.7				
		PNS	P	14 44 19.6				
	14	USCGS 20 11 45.7, 5.6S, 147.1E, m = 208 km., m = 5.1 EAST NEW GUINEA REG						
		PNS	ePKP	20 30 51				
	14	PNS	iP	22 45 26				D
			S	48.8				
		LPB	eP	22 45 32.2				
			S	53				
	15	PNS	e(P)	01 21 00.1				
		LPB	eP	01 21 01.7				
	15	PNS	P	02 52 51.6				D
			S	53 13.7				
	15	PNS	eP	03 14 53.2				
			S	15 16.5				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	15	LPB PNS	P eP	03 15 58.7 03 16 00.1					
	15	USCGS 03 13		28.1, 3.5, 76.2W, h = 167 km., m = 4.5					COLOMBIA
		PNS	P	03 18 00.2					
		LPB	P	03 18 04.2		0.8	15	22	
			e	25 12.4					
	15	PNS	P	03 25 19.2					
			S	44					
	15	PNS	P	03 56 40.5					
	15	LPB	eP	05 36 47		1.0	10		
		PNS	P	05 36 49.6					
			eS	37 46.1					
	15	LPB	eP	05 50 48					
			e	51 24					
		PNS	P	05 50 50					
	15	LPB	eP	06 57 37.5					
	15	LPB	e(P)	07 04 10.5					
	15	USCGS 08 49		35.3, 16.5S, 69.5W, h = 209 km., m = 4.1					PERU-BOLIVIA BOR REG
		PNS	iP	08 50 07.5	D				
			S	31					
		LPB	iP	08 50 10	D			1	
			iS	36					
	15	PNS	iP	13 39 45.3	D				
			S	40 08					
	15	PNS	P	14 20 28.9	D				
			S	21 01.8					
	15	LPB	eP	14 28 35					
		PNS	eP	14 28 39.7					
			S	29 10.2					
	15	USCGS 15 22		40.5, 15.1N, 60.5W, h = 31 km., m = 5.0					LEEWARD IS
		PNS	P	15 27 07.6	C.O	1.2	21		
		LPB	P	15 27 09.6		1.2	50	32	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	15	USCGS 16 56		50.7, 8.4S, 74.4W, h = 166 km., m = 4.7					PERU-BRAZIL BOR REG
		PNS	P	16 59 08.9	D	0.4	7		
			i	23.2					
		LPB	eP	16 59 10				10	
	15	LPB	e(P)	17 32 05					
		PNS	e(P)	17 32 07.8					
	15	USCGS 19 37		58.0, 5.1N, 76.1W, h = 129 km., m = 4.7					COLOMBIA
		PNS	P	19 42 45					
		LPB	eP	19 42 50.5		1.0	16	23	
			e	49 33					
	15	PNS	eP	20 21 07.4					
		LPB	eP	20 21 10.5					
	15	PNS	eP	20 37 24.1					
		LPB	eP	20 37 28.7					
	15	PNS	eP	20 43 23.5					
			S	44 17.5					
	15	PNS	eP	21 43 07.8					
		LPB	P	21 43 08					
	16	LPB	eP	00 13 10.2					
		PNS	P	00 13 15		0.7	9		
	16	LPB	P	00 48 17.7		0.5	9		
		PNS	P	00 48 17.8		0.5	5		
	16	PNS	eP	01 47 32.4					
			S	55					
	16	LPB	eP	02 54 29.5					
		PNS	eP	02 54 33.6					
	16	PNS	eP	04 16 05.8					
		LPB	eP	04 16 08.5					
	16	LPB	eP	04 51 56					
		PNS	eP	04 51 57.6					
	16	USCGS 04 47		37.2, 5.3N, 126.8E, h = 75 km., m = 5.4					MINDANAO, PHILIPPINE IS
		LPB	ePKP	05 07 34.5				162	
		PNS	PKP	05 07 34.6					
	16	LPB	eP	05 32 56					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	16	LPB	iP	06 34 31.5	D	0.4	89		
			S	55.7					
		PNS	iP	06 34 31.5	D				
			S	56.5					
	16	LPB	eP	07 41 19					
	16	USCGS 08 16 53.3, 52.2N, 159.0E, h = 69 km.; m = 5.8 OFF EAST OF KAMCHATKA							
		PNS	ePKP	08 35 53.8		1.2	150		
			eL	09 19					
		LPB	ePKP	08 35 55				129	
	16	PNS	iP	12 00 31.9	D				
			S	01 02					
		LPB	P	12 00 36.3		0.6	30		
			S	01 10					
	16	LPB	eP	12 10 05					
			e(S)	39					
		PNS	iP	12 10 06.9	C	0.5	12		
			S	41.7					
	16	PNS	P	12 43 36.5					
			S	44 05.6					
	16	LPB	eP	12 58 37					
		PNS	eP	12 58 38.5					
	16	PNS	eP	13 02 04.2					
		LPB	eP	13 02 09.5					
	16	USCGS 12 54 16.7, 13.0N, 144.9E, h = 92 km.; m = 5.0 MARIANA IS							
		LPB	ePKP	13 13 42.5				148	
			i	57					
		PNS	PKP	13 13 54		0.8	16		
	16	PNS	P	14 13 26.1					
	16	USCGS 14 55 00, 37.1N, 116.1W, m = 5.6 SOUTHERN NEVADA							
		PNS	P	15 06 11.8		0.8	12		
		LPB	eP	15 06 14.5		1.0	90	70	
	16	PNS	P	19 34 30.6					
		LPB	P	19 34 37		1.0	34		



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	16	LPB	e(P)	20 50 49					
			S	51 22.2					
		PNS	eP	20 50 57.1					
			eS	51 32.9					
	16	USCGS 21 59 19.9, 32.2S, 13.1W, m = 4.9 SOUTH ATLANTIC RIDGE							
		LPB	eP	22 08 28.4				52	
		PNS	eP	22 08 30.9					
	16	PNS	P	22 17 05.2					
			S	30					
	16	USCGS 22 12 48.9, 6.9N, 73.4W, h = 168 km.; m = 4.3 NORTHERN COLOMBIA							
		PNS	P	22 17 45					
		LPB	eP	22 17 50				23	
			eL	24					
	16	LPB	eP	23 08 24.7					
			eL	26					
		PNS	eP	23 08 25.4					
	16	PNS	eP	23 33 10.5					
	17	PNS	P	01 26 29.5					
	17	LPB	P	02 14 21					
		PNS	P	02 14 22.4					
			i	27.4					
	17	LPB	eP	04 51 47.5					
	17	LPB	eP	06 36 32.6					
			e	37 08					
		PNS	eP	06 36 32.6					
			e	37 08					
	17	LPB	eP	10 10 38.5					
			i	12 01.5					
	17	PNS	eP	11 29 39.2					
	17	PNS	P	13 44 29.4					
		LPB	eP	13 34 34					
	17	LPB	eP	16 35 18					
		PNS	eP	16 35 18.4					
	17	PNS	eP	18 20 30.3					



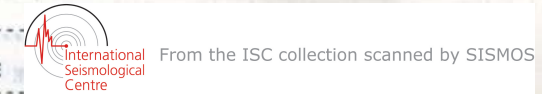
MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	17	LPB	eP	20 13 40		1.0	32	
		PNS	P	20 13 42.7		0.7	12	
	17	LPB	eP	20 57 15				
		PNS	eP	20 57 16.7				
17		PNS	eP	21 20 30				
		LPB	eP	21 20 35.7				
17	0	PNS	eP	23 49 28.6				
			eS	52.1				
18		LPB	eP	00 04 54				
		PNS	eP	00 04 57.6				
18		USCGS 00 00 47.4, 29.7N, 42.9W, m = 5.0 NORTH ATLANTIC RIDGE						
		PNS	P	00 09 55.6				
	18	LPB	P	00 09 56		1.5	112	52
		PNS	eP	00 29 21.6				
18		LPB	eP	00 29 22				
		PNS	eP	00 44 24.5				
18		LPB	eP	00 44 31				
		PNS	eP	00 44 31				
18		USCGS 04 08 36.4, 6.4S, 130.0E, h = 145 km., m = 5.3 BANDA SEA						
		PNS	PKP	04 28 09.4		1.0	48	
	18	LPB	i	15.8				
			ePKP	04 28 10.5				151
	18	LPB	i	16				
			PNS	eP	05 44 43		1.0	34
	18	PNS	eL	06 41				
			PKP	05 44 43.1		1.2	21	
	18	PNS	i	46.6				
			SS	06 08 40				
	18	PNS	eL	40				
			P	06 41 44.5				
	18	LPB	eS	42 09.2				
			P	06 41 45				
18		LPB	P	07 17 53.8				
		PNS	eP	07 17 57.8				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	18	LPB	eP	08 59 43.2				
		S	09 00 12.5					
		PNS	eP	08 59 52				
			eS	09 00 25.2				
18		LPB	P	10 09 54.5		0.8	31	
		PNS	P	10 09 55.4		0.5	11	
18		USCGS 14 13 55.4, 60.5S, 26.0W, h = 40 km., m = 5.7 SOUTH SANDWICH IS RFG						
		PNS	iP	14 23 14.1				
	18	LPB	S	30 43.9				
			eL	42.8				
	18	LPB	P	14 23 11.7		0.9	102	53
			eL	39.3				
18		LPB	eP	15 23 58.5				
		PNS	e(L)	31				
18		PNS	eP	15 23 58.8				
		LPB	eP	18 48 10				
18		LPB	eP	18 48 11				
		PNS	P	19 40 11.9				
18		LPB	S	33.9				
			eP	19 40 30				
18		PNS	P	20 21 33.4				
			S	56.6				
18		LPB	eP	20 24 01				
			eP	20 24 02.6				
18		PNS	eP	21 11 44.6				
			LPB	eP	21 40 14.9			
18		LPB	eP	21 40 15				
			PNS	iP	21 46 08.4			
18		LPB	eP	21 46 10				
			PNS	eP	21 58 09.6			
18		LPB	e	22.8				
			eP	21 58 16				
18		PNS	e(P)	22 24 12.6				
			LPB	eP	23 01 12			
18		PNS	eP	23 01 16				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	18	USCGS BOLIVIA	23 17	10.6, 18.2S, 63.3W	h = 19 km., m = 5.6			
		LPB	P	23 18 26.5				5
			eL	19.3				
		PNS	iP	23 18 31.3	D			
			L	19.8				
	18	USCGS BOLIVIA	23 44	44.7, 18.2S, 63.2W	h = 28 km., m = 4.6			
		LPB	P	23 46 00.7				5
		PNS	P	23 46 05.6				
	19	LPB	eP	00 03 13.6				
		PNS	eP	00 03 16.2				
			eS	04 15.9				
	19	PNS	eP	00 05 43.2				
			e	06 00.2				
			S	42.7				
	19	PNS	eP	00 19 23.4				
			S	43.1				
	19	LPB	P	00 23 13		0.7	23	
		PNS	P	00 23 19				
			S	24 17.8				
	19	PNS	eP	00 35 59.2				
	19	PNS	P	00 50 20				
			eS	51 20				
		LPB	eP	00 50 25				
	19	LPB	e(P)	00 58 19.4		0.9	8	
	19	LPB	P	01 08 13		0.5	17	
			e(S)	09 31				
		PNS	P	01 08 18.2				
			i	09 18.1				
	19	LPB	e(P)	01 30 43				
	19	LPB	e(P)	01 38 42.5				
	19	USCGS BANDA SEA	01 33	44.0, 6.4S, 130.1E	h = 142 km., m = 5.3			
		PNS	PKP	01 53 23.4				151
		LPB	PKP	01 53 24				
			e	54 30.8				
	19	PNS	eP	01 57 00.2				
			S	59.7				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	19	PNS	eP	02 04 45.2				
			eS	05 45.4				
	19	PNS	eP	02 19 32				
			eS	10 32.4				
		LPB	eP	02 19 36				
	19	PNS	eP	02 21 32.5				
			eS	54.6				
	19	LPB	eP	02 46 00				
		PNS	eP	02 46 02.2				
			eS	47 01.9				
	19	PNS	eP	02 52 48.6				
			eS	53 48.9				
		LPB	eP	02 52 50				
	19	LPB	P	03 38 42		1.0	15	
		PNS	P	03 38 44.1				
	19	USCGS NEAR COAST PERU	04 54	54.1, 17.3S, 72.5W	h = 54 km., m = 5.9			
		PNS	iP	04 55 56.8				
		LPB	iP	04 56 01.0				
			i	49				
	19	PNS	iP	04 55 56.8				4
		LPB	iP	04 56 01.0				
	19	PNS	eP	04 42 25.5				
			eS	43 26				
	19	LPB	eP	05 47 31				
		PNS	eP	05 47 33.9				
	19	LPB	eP	07 36 14.3		0.9	10	
		PNS	eP	07 36 26.2				
	19	USCGS SOUTH SANDWICH REG	09 03	06.3, 59.2S, 25.1W	m = 4.7			
		LPB	P	09 12 21		1.0	10	53
		PNS	eP	09 12 23				
	19	PNS	P	11 23 30.1				
			S	24 34.8				
		LPB	P	11 23 38		1.0	24	
			eS	24 43.4				
	19	PNS	eP	11 28 30				
			S	52.4				
		LPB	eP	11 28 34.3				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	19	USCGS 12 28 46.5, 6.8N, 73.1W, h = 157 km., m = 4.7 NORTHERN COLOMBIA						
		PNS	p	12 33 43.3		0.7	13	
		LPB	eP	12 33 45.3				23
	19	PNS	eP	12 39 11.2				
		LPB	eP	12 39 16				
	19	PNS	eP	13 00 23.9				
		LPB	eP	13 00 26.5				
	19	PNS	e(P)	15 28 25				
	19	PNS	p	16 35 31.8		0.6	10	
		LPB	eP	16 35 38				
	19	PNS	p	16 48 30.3				
		S		49 00.4				
	19	PNS	eP	17 36 15.4				
		LPB	eP	17 36 18				
	19	PNS	eP	19 56 08				
		LPB	eP	19 56 10				
	19	LPB	eP	23 47 50				
		PNS	eP	23 47 55.2				
	20	PNS	p	00 09 09.1	D			
		LPB	p	00 09 09.6		1.0	10	
	20	PNS	eP	00 37 39.7				
		S		38 14.2				
		LPB	eP	00 37 49.6				
	20	LPB	p	00 53 28.6		0.7	21	
		i		44				
		PNS	p	00 53 34.6				
		S		54 34.1				
	20	PNS	eP	02 35 08.8				
		eS		33				
	20	LPB	p	04 19 01.2				
		i		22.2				
		PNS	p	04 19 07.6	D	0.5	8	
		S		20 06.8				
	20	LPB	eP	04 37 56.5				
		PNS	eP	04 37 53				
	20	PNS	p	05 52 50.2				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	20	PNS	p	06 07 10.5				
		LPB	eP	06 07 18				
	20	LPB	eP	06 21 01				
		PNS	eP	06 21 02.2				
	20	LPB	e(P)	06 24 07.5				
	20	LPB	eP	06 26 06				
		PNS	eP	06 26 11.1				
	20	PNS	p	09 46 20.8				
	20	USCGS 10 00 14.4, 30.1S, 69.6W, h = 122 km., m = 3.9 CHILE ARGENTINA BOR REG						
		LPB	eP	10 03 25				14
		e		56				
		PNS	eP	10 03 25.8				
	20	PNS	eP	10 31 56.6				
		LPB	eP	10 31 58				
	20	PNS	iP	10 35 55.2				
		LPB	eP	10 36 00.5				
		S		56				
	20	PNS	eP	10 36 44.6				
		S		37 44.6				
	20	USCGS 10 46 11.7, 7.2N, 34.3W, m = 4.3 CENTRAL MID-ATLANTIC RIDGE						
		PNS	p	10 53 55.1		0.4	5	
		S		11 00 15				
		L		06.5				
		LPB	eP	10 53 55.5		1.2	24	41
		e		55 32				
		S		11 00 14				
		L		05				
	20	PNS	p	12 21 07.6				
	20	USCGS 12 13 43.3, 60.0S, 65.3W, m = 5.1 DRAKE PASSAGE						
		LPB	p	12 21 45		1.0	52	43
		eL		36				
		PNS	p	12 21 47.5		1.2	68	
		eL		36.1				
	20	PNS	eP	13 42 46.6				
		S		43 46.8				
		LPB	eP	13 42 53.5				
	20	LPB	eP	17 01 43				
		PNS	eP	17 01 43.5				
	20	PNS	eP	18 40 55.4				

MONTH	DAY	STA	PHASE	TIME	STGN	PER	AMPL	DIST
JULY	20	PNS	eP	19 08 18				
			eS	59.6				
	20	PNS	eP	20 23 37.1				
			S	24 03.4				
	20	LPR	eP	20 59 38.5				
		PNS	eP	20 59 39.6				
	21	LPR	eP	00 36 36				
	21	LPR	e(P)	00 46 55				
	21	PNS	eP	02 03 32.8				
	21	PNS	eP	03 55 35.4				
		LPR	eP	03 55 38				
	21	LPR	eP	04 10 02				
	21	LPR	eP	04 32 26.2				
	21	LPR	P	06 36 14.7		0.9	17	
			S	37 22				
		PNS	eP	06 36 19.4				
			S	37 29.8				
	21	LPR	P	06 39 22.2				
		PNS	i	06 39 28.2		0.5	6	
			S	45.3				
			S	40 28.2				
	21	LPR	P	06 49 00.5				
		PNS	P	06 49 03.6		0.5	4	
			eS	20.4				
			eS	50 20.6				
	21	LPR	P	06 53 36.5		0.8	15	
		PNS	P	06 53 37		0.4	7	
	21	PNS	P	07 18 20.9		1.0	13	
		LPR	eP	07 18 21.5				
			eL	31.3				
	21	LPR	eP	07 56 19				
			eS	57 39				
		PNS	eP	07 56 24.4				
			eS	57 27.8				
	21	PNS	eP	08 34 35.4				
		LPR	P	08 34 35.5				
			e(S)	08.3				
	21	LPR	e(P)	09 00 08				



MONTH	DAY	STA	PHASE	TIME	STGN	PER	AMPL	DIST
JULY	21	PNS	P	09 12 56.7			0.8	28
		LPR	P	09 12 59.5			1.0	46
	21	LPR	eP	11 37 57.6				
		PNS	eP	11 38 00.7				
	21	LPR	eP	13 06 10				
		PNS	P	13 06 14.6				
	21	PNS	eP	13 23 28.9				
			eS	53.4				
	21	PNS	eP	14 22 13.9				
		LPR	eP	14 22 14				
	21	PNS	eP	14 47 58.1				
		LPR	eP	14 48 01				
	21	PNS	eP	15 03 53.5				
		LPR	eP	15 03 57				
	21	PNS	eP	16 52 30.8				
	21	HSCGS 17 38 28.8, 35.2N, 35.9W, m = 4.9 NORTH ATLANTIC RIDGE						
		PNS	P	17 48 34.6			1.0	32
		LPR	eP	17 48 34.8				60
	21	HSCGS 19 44 13.5, 39.4N, 143.0E, m = 5.0 OFF EAST COAST OF HONSHU, JAPAN						
		PNS	ePKP	20 03 52.1				
	21	PNS	eP	21 58 37.6				
		LPR	eP	21 58 38				
	21	HSCGS 22 06 56.9, 2.9N, 124.7E, h = 220 km., m = 5.6 CELERES SEA						
		LPR	PKP	22 26 36			1.1	100
		PNS	PKP	22 26 36.1			1.2	70
	22	PNS	eP	01 09 09				
			eS	50				
		LPR	eP	01 09 12				
	22	LPR	e(P)	01 32 03				
	22	PNS	P	03 37 20.8				
		LPR	P	03 37 26.5			1.0	66
	22	PNS	eP	04 20 03.8				
		LPR	eP	04 20 00.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	22	PNS LPB	P P	05 10 55.8 05 11 01		0.5	7		
	22	LPB PNS	eP eP	06 01 06 06 01 09.4					
	22	PNS	eP	06 26 06.8					
	22	PNS LPB	eP eP	10 10 43.2 10 10 44					
	22	PNS LPB	eP eP	11 31 30.4 11 31 35.6					
	22	USCGS 15 51 46.5, 14.2N, 91.5W, h = 151 km., m = 4.7 GUATEMALA							
		LPR PNS	eP eP	15 58 49.6 15 58 53.4				38	
	22	PNS LPR	eP eP	16 12 53.7 16 12 54					
	22	USCGS 17 14 13, 11.8S, 166.5E, h = 144 km., m = 5.4 SANTA CRUZ IS							
		LPB PNS	PKP PKP	17 32 45.4 17 32 47.8		1.0	19	119	
	22	PNS	eP	17 55 13.8					
	22	PNS LPB	P eP	22 26 52.8 22 26 56.4					
	22	PNS	eP	23 30 47.6					
			eS	31 11.3					
		LPR	eP	23 30 50.8					
			S	31 14					
	23	PNS eS	eP eS	00 23 56.8 24 24.4					
	23	USCGS 01 15 32.7, 14.6S, 71.7W, h = 134 km., m = 4.4 PERU							
		PNS LPB	P P	01 16 28.1 01 16 33.5				4	
	23	USCGS 01 16 16.4, 31.8N, 141.7E, h = 32 km., m = 4.6 SOUTH OF HONSHU, JAPAN							
		LPB PNS	ePKP ePKP	01 36 01 01 36 05				149	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	23	LPB	eP	03 15 04.5					
	23	USCGS 02 46 58.1, 49.9N, 78.3E, m = 6.5 EASTERN KAZAKH SSR							
		LPB PNS	ePKP ePKP	03 06 26.8 03 06 27				137	
	23	USCGS 04 27 03.6, 17.7N, 45.0W, 148 km., m = 4.9 OAXACA, MEXICO							
		LPB PNS	P P	04 34 46 04 34 47.4		0.7	12	42	
	23	PNS LPB	eP eP	05 26 36.3 05 25 39					
	23	PNS LPB	eP eP	05 44 51 05 44 55					
	23	LPB	e(P)	08 47 44.5					
	23	LPB PNS	P eP	10 17 56 10 17 59.5		1.0	14		
	23	USCGS 13 14 35.1, 37.3N, 141.5E, h = 53 km., m = 5.2 NEAR EAST COAST HONSHU, JAPAN							
		PNS	PKP	13 34 11.7	C	1.6	119		
			eL	14 25					
		LPB	PKP	13 34 14.6		1.2	62	147	
			eL	14 24.8					
	23	PNS	eP	16 33 03.2					
	23	USCGS 16 27 29.4, 30.5W, 137.6E, h = 487 km., m = 4.5 SOUTH OF HONSHU, JAPAN							
		LPB PNS	ePKP ePKP	16 46 25 16 46 33.4					
	23	PNS	eP	18 57 40					
			S	58 25.4					
	23	PNS	P	19 37 24.3					
			S	38 02.6					
		LPB	eP	19 37 28.6					
			S	38 11.6					
	24	LPB	e(P)	01 54 47.5					
	24	USCGS 02 59 21, 11.9S, 75.1W, h = 1 km., m = 5.9 PERU							

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	24	PNS	p	03 01 18.8				
		LPB	L	03 01 03.3				
		LPB	P	03 01 25.1		1.1	400	8
			iS	03 22				
24		USCGS PERU	04 32	36.8, 11.8S, 75.2W, h = 1 km., m = 4.6				
		PNS	P	04 34 36.6				8
		LPB	P	04 34 42				
			e	36 57.7				
24		USCGS MOLUCCA PASSAGE	05 03	26.7, 1.6N, 126.5E, h = 41 km., m = 5.4				
		LPB	ePKP	05 23 25.5				150
		PNS	ePKP	05 23 25.6				
24		PNS	P	05 52 32				
			S	57.2				
24		PNS	eP	06 33 02.8				
24		USCGS PERU	06 33	07.8, 11.9S, 75.1W, h = 1 km., m = 4.8				
		LPB	eP	06 33 06				8
			i	35 13.2				
		PNS	P	06 35 06.8		1.0	34	
			S	37 30				
			eL	38.3				
24		PNS	eP	07 05 02				
		LPB	eP	07 05 06				
24		PNS	eP	07 18 59.4				
		LPB	eP	07 19 05				
24		LPB	eP	07 35 08				
			S	45				
		PNS	P	07 35 10.6				
24		PNS	P	08 02 37.7				
			e	59				
			S	04 57.9				
		LPB	P	08 02 42.5				
24		LPB	P	09 01 13				
		PNS	eP	09 01 16.8				
24		LPB	eP	09 31 04				
		PNS	eP	09 31 06.4				
24		LPB	eP	10 19 42.5				
		PNS	eP	10 19 46.9				
			eS	20 25.7				
24		PNS	e(P)	10 48 43				
		LPB	eP	10 48 46				



MONTH	DAY	STA	PHASE	TIME			
JULY	24	USCGS CHILE-ARGENTINA BOR REG	11 58	29.1, 24.3S, 67.1W, h = 169 km., m = 4.1			
		LPB	eP	12 00 22			8
			eS	01 45			
		PNS	P	12 00 25.4			
			S	01 53.8			
24		USCGS PRINCE EDWARD IS REG	12 41	40.2, 45.4S, 35.0E, m = 5.7			
		LPB	eP	12 54 24.6			87
		PNS	P	12 54 28.2			
			eS	13 05 14			
			eL	13 23.5			
24		USCGS HALMAHERA	15 11	01.1, 1.8S, 128.5E, h = 53 km., m = 5.1			
		PNS	PKP	15 31 03			
24		PNS	P	16 10 22.5			
			S	53.9			
24		LPB	eP	16 59 25.5			
		PNS	eP	16 59 32.1			
25		LPB	eP	00 32 30			
		PNS	eP	00 32 31.3			
25		LPB	eP	01 14 17.4			
		PNS	P	01 14 18.5			
25		LPB	eP	01 18 52			
		PNS	eP	01 18 52			
25		PNS	P	03 14 04.7		0.5	10
		LPB	eP	03 14 06			
			e	18 01.7			
25		PNS	P	03 17 42.7			
			S	47			
25		USCGS MOLUCCA SEA	04 37	35.9, 0.9S, 125.1E, h = 82 km., m = 5.3			
		PNS	ePKP	04 57 21.4			
		LPB	ePKP	04 57 25			158
25		USCGS SALTA, PROV. ARGENTINA	06 06	42.4, 25.6S, 63.3W, h = 57.9 km., m = 5.5			

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	25	LPB	iP iS L	06 09 03.2 10 58 10.8	D			11	
		PNS	iP iS L	06 09 06.4 10 55 11.3	D				
	25	PNS	eP	06 44 58.8					
		LPB	eP	06 44 59					
	25	PNS	P	06 56 55.5		0.5	12		
		LPB	P	06 57 01		0.5	7		
	25	LPB	P	08 17 21.5					
	25	LPB	eP	13 35 21					
		PNS	eP	13 35 23					
	25	USCGS 13 34 98.8, 2.6N, 126.6E, m = 5.6 MOLUCCA PASSAGE							
		PNS	PKP	13 54 09					
		LPB	PKP	13 54 09.5		1.1	27	159	
			eL	48					
	25	PNS	P	15 27 43.8					
	25	PNS	P	15 28 49.4					
		LPB	eP	15 28 53					
	25	LPB	e(P) e	19 00 14.4 01 03					
	25	LPB	P	20 04 55.2		1.0	23		
		PNS	P	20 05 03.6					
	25	PNS	P	20 10 29.8					
	25	LPB	eP S	20 43 46 45 46.5					
	25	PNS	iP iS	20 45 17.2 39.9	D				
	25	LPB	eP	21 03 46.5					
		PNS	eP	21 03 53.5					
	25	USCGS 21 30 33.1, 12.4N, 40.7W, h = 9 km., m = 4.9 NORTH ATLANTIC OCEAN							
		PNS	P	21 38 06.2		1.0	39		
		LPB	P	21 38 07.2		1.0	34	40	
	25	PNS	eP	21 45 38.6					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
JULY	25	USCGS 22 49 41.3, 21.6N, 111.9E, m = 5.4 EASTERN CHINA							
		LPB	ePKP	23 09 50.2				175	
		PNS	ePKP	23 09 52					
	26	LPB	P	04 10 23.4			0.8	22	
		PNS	P	04 10 25.1				C	
	26	PNS	eP	05 30 26					
		LPB	eP	05 30 31.5					
	26	USCGS 07 21 00.2, 12.6N, 87.8W, h = 84 km., m = 4.8 NEAR COAST OF NICARAGUA							
		PNS	P	07 27 41.6					
		LPB	P	07 27 47				36	
	26	PNS	eP	07 48 28					
		LPB	eP	07 48 29.5					
	26	USCGS 07 47 32.9, 6.4N, 82.5W, m = 4.5 SOUTH OF PANAMA							
		PNS	eP	07 53 11.2					
		LPB	eP	07 53 16					
	26	PNS	eP	08 05 55					
		LPB	eP	08 05 58					
	26	PNS	eP	09 15 45.8					
			S	16 10.6					
		LPB	eP	09 15 47.5					
			i	16 18					
	26	LPB	eP	09 55 24					
	26	PNS	eP	09 56 21.1					
	26	LPB	eP	11 29 29					
	26	USCGS 12 24 29.5, 43.7N, 14.6W, m = 4.8 NORTH ATLANTIC OCEAN							
		LPB	eP	12 36 22.8					
		PNS	P	12 36 23					
	26	USCGS 14 45 48, 11.6S, 165.1E, h = 34 km., m = 5.5 SANTA CRUZ IS							
		LPB	ePKP	15 04 38				121	
		PNS	ePKP	15 04 40					
	26	PNS	P	15 50 42.9					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	26	LPB	e(P)	16 14 51				
	26	PNS	P	16 20 13.4				
			S	21 25.4				
		LPB	eP	16 20 18.5				
	26	PNS	P	17 08 45.2				
	26	USCGS SOUTH SANDWICH IS		17 17 16.2, 56.4S, 25.9W, h = 38 km., m = 5.5				
		LPB	P	17 26 17		1.0	17	51
			eS	33 31.4				
			eL	42				
		PNS	iP	17 26 20.2				C
			S	33 37.2				
			eL	42.8				
	26	PNS	eP	20 25 01.8				
	27	LPB	e(P)	01 31 45.5				
	27	USCGS NEW HEBRIDES IS		02 14 28.1, 19.4S, 168.8E, h = 70 km., m = 5.4				
		LPB	ePKP	02 33 00				114
			eL	03 07				
		PNS	ePKP	02 33 01				
			eL	03 08.4				
	27	LPB	eP	03 24 08				
	27	PNS	P	04 05 51		0.6	10	
		LPB	P	04 05 57				
	27	LPB	eP	10 20 05.4				
			eS	31.5				
		PNS	P	10 20 07.4				
			S	30				
	27	LPB	P	11 27 45		1.0	10	
		PNS	eP	11 27 45.5				
	27	LPB	eP	11 46 40				
	27	PNS	e(P)	12 16 04.4				
			eS	27				
		LPB	eP	12 16 11				
	27	USCGS NEAR COAST OF PERU		13 11 31.4, 14.8S, 75.4W, h = 45 km., m = 4.3				
		PNS	P	13 13 16.8				
		LPB	P	13 13 22				7
			e	15 36				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	27	PNS	P	13 52 31.8				
	27	LPB	eP	15 12 33.2				
		PNS	eP	15 12 38.4				
	27	USCGS NEAR COAST OF CENTRAL CHILE		16 11 21.2, 31.2S, 71.0W, h = 42 km., m = 4.1				
		LPB	eP	16 14 59.5				14
		PNS	eP	16 15 00.8				
	27	PNS	eP	16 24 10.6				
		LPB	eP	16 24 13				
	27	PNS	e(P)	17 45 40				
	27	PNS	eP	18 11 51.2				
			S	13 07.8				
		LPB	eP	18 11 53				
	27	LPB	eP	18 23 55.5				
			S	24 35				
		PNS	P	18 24 03.3				
			S	47				
	27	LPB	eP	18 31 12				
		PNS	eP	18 31 14.3				
	27	LPB	eP	18 59 04				
		PNS	P	18 59 06.6				
	27	USCGS NORTHERN EASTER IS CORDILLERA		19 08 09.7, 9.0S, 109.1W, m = 4.1				
		PNS	P	19 15 46		0.6	4	40
	27	PNS	eP	19 40 38.9				
		LPB	eP	19 40 42				
	27	LPB	eP	21 15 27				
			S	16 01.4				
		PNS	iP	21 15 33.2				D
			S	56.8				
	27	USCGS GULF OF ALASKA		21 21 40.7, 59.4N, 145.3W, m = 5.3				
		LPB	eP	21 35 00				98
		PNS	eP	21 35 04.1				
	27	LPB	e(P)	21 39 20				
			eL	15.5				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	27	USCGS 22 26	54.2, 24.9N, 122.5E, h = 105 km., m = 5.4					
		TAIWAN REG						
		PNS	PKP	22 46 51		1.2	30	
			PKP2	47 52.4				
		LPB	PKP	22 46 51.5		1.0	26	167
			PKP2	47 54.2				
	27	USCGS 23 49	50.3, 20.0N, 64.3W, m = 5.0					
		NORTH ATLANTIC OCEAN						
		PNS	P	23 56 50.8				
		LPB	P	23 56 54.5		0.9	10	37
			i	03.5				
	28	LPB	P	05 58 54				
		PNS	e(P)	05 58 54.2				
	28	USCGS 06 29	53.9, 57.5N, 153.9W, h = 28 km., m = 5.3					
		KOCHA K IS REG						
		PNS	eP	06 43 41				
	28	USCGS 10 19	10.0, 43.1N, 141.8E, h = 170 km., m = 44					
		HOKKAIDO, JAPAN REG						
		PNS	ePKP	10 38 25				
		LPB	ePKP	10 38 27				145
	28	USCGS 13 03	17.6, 30.7N, 132.5E, h = 24 km., m = 5.6					
		SOUTHEAST OF SHIKOKU, JAPAN						
		PNS	ePKP	13 23 14				
		LPB	ePKP	13 23 14.5				156
	28	PNS	iP	13 39 51.6				
		LPB	eP	13 40 54				
	28	USCGS 15 37	56.2, 24.1N, 142.7E, m = 5.2					
		VOLCANO IS REG						
		PNS	PKP	15 57 41.9				
			i	46.5				
		LPB	PKP	15 57 42		1.0	14	149
			i	48				
	28	PNS	e(P)	17 22 46.9				
	28	LPB	eP	18 03 55				
		PNS	eP	18 03 56.1				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	28	PNS	eP	18 51 37.4				
			eS	51.8				
	28	LPB	e(P)	20 52 08.5				
	28	PNS	eP	21 32 55.7				
		LPB	eP	21 32 56.5				
	28	LPB	eP	22 22 17				
	29	USCGS 00 33	02.4, 8.0N, 82.9W, m = 4.4					
		PANAMA, COSTA RICA BOR REG						
		LPB	eP	00 38 45.5				
		PNS	eP	00 38 53				29
	29	USCGS 0040	42.5, 19.9N, 64.1W, h = 32, m = 5.1					
		VIRGIN IS						
		PNS	P	00 47 45.3				
		LPB	P	00 47 46.5		1.0	10	36
	29	LPB	eP	01 05 40				
	29	PNS	iP	01 46 17.8				
		LPB	P	01 46 23		0.4	10	
	29	USCGS 01 55	20.4, 3.4S, 144.8E, h = 6 km., m = 5.5					
		NEAR NORTH OF NEW GUINEA						
		PNS	PKP	02 14 50.8				
		LPB	PKP	02 14 51.6		1.0	14	141
	29	LPB	P	02 29 49				
			eS	30 17.5				
		PNS	eP	02 29 56				
			S	30 29.5				
	29	LPB	eP	02 51 40				
			eS	52 09				
		PNS	eP	02 51 40.1				
	29	PNS	P	03 59 29				
	29	LPB	P	04 21 18.4				
		PNS	P	04 21 21.7		1.0	10	
	29	LPB	eP	05 54 13.5				
	29	LPB	eP	05 56 25.6				
	29	LPB	P	05 59 29.6		0.8	4	
	29	USCGS 06 24	21.6, 14.8S, 167.2E, h = 124 km., m = 5.4					
		NEW HERPIDES IS						

MONTH	DAY	STA	PHASE	TIME	STGN	PER	AMPL	DIST
JULY	29	PNS LPB	ePKP ePKP	06 42 51.2				117
				06 42 54.6				
29	LPR PNS	P P	P P	07 53 44				58
				07 53 46				
29	PNS LPB	eP eP	eP eP	10 01 12				85
				10 01 17				
29	LPB PNS	eP eP	eP eP	10 27 30				85
				10 27 31				
29	USCGS 13 07 00.6, 30.8S, 71.6W, m = 4.4 NEAR COAST OF CENTRAL CHILE							
29	LPR PNS	P eL P	P P P	13 10 28		1.0	16	14
				15				
				13 10 29.4				
29	LPB PNS	e(P) eP	e(P) eP	14 30 54.4				50
				14 31 07				
29	LPB PNS	eP S P	eP S P	15 50 18				50
				46.2				
29	PNS LPB	P P	P P	15 50 19.6				50
				D				
29	PNS LPB	P P	P P	22 46 04		1.0	36	80
				22 46 05.5				
30	USCGS 03 23 37.6, 22.4N, 142.8E, h = 20 km., m = 5.3 VOLCANO IS REG							
30	LPB PNS	PKP i PKP	PKP i PKP	03 43 25.5		1.0	10	50
				31				
30	PNS LPB	PKP PKP	PKP PKP	03 43 25				50
30	USCGS 04 18 44.5, 28.5N, 142.6E, m = 5.1 BONIN IS REG							
30	PNS LPB	PKP PKP	PKP PKP	04 38 29.4		0.7	22	50
				04 38 30		1.0	10	
30	PNS	eP	eP	05 09 19.1				50
30	LPB PNS	eP eP	eP eP	07 01 19				50
				07 01 23				
30	PNS LPB	eP eP	eP eP	07 52 23.2				85
				07 52 24.2				
30	LPB PNS	eP eP S	eP eP S	09 04 31				85
				09 04 43				
				05 18				
30	LPB PNS	eP P	eP P	10 09 53.5				85
				10 10 02.4				

MONTH	DAY	STA	PHASE	TIME				
JULY	30	PNS LPB	iP S	12 25 48.2		D		
				26 13				
30	PNS	e(P) e	e(P) e	12 25 48.5		D	0.9 153	
				12 44 55.4				
30	LPB	e(P) e(P)	e(P) e(P)	51 50				
				12 50 49.5				
30	PNS	P P	P P	14 36 09.9				
30	LPB PNS	eP P S	eP P S	16 50 15				
				16 50 19.2				
				51 17.8				
30	PNS	eP S	eP S	18 08 36.8				
				58.6				
30	PNS LPB	P eP	P eP	18 13 21				
				18 13 26				
30	PNS LPB	P eP	P eP	20 25 29.6				
				20 25 34				
30	LPB PNS	eP S P	eP S P	22 05 32				
				56.7				
				22 05 38.4				
30	PNS LPB	P eP	P eP	06 11				
30	PNS LPB	eP eP	eP eP	23 56 13.5				
				23 56 08.6				
31	LPB	eP	eP	01 00 47				
31	LPB	eP eS	eP eS	01 55 57				
				56 28				
31	PNS	eP eS	eP eS	01 55 57.8				
				56 39.3				
31	LPB	e(P)	e(P)	03 59 00				
31	USCGS 05 05 04.3, 27.6S, 66.2E, m = 5.3 SOUTH INDIAN OCEAN							
31	LPB	eP	eP	05 23 29.3			118	
31	PNS LPB	eP P	eP P	07 28 32				
				07 28 33.2				
31	LPB PNS	eP i eP	eP i eP	09 30 40.5				
				31 16				
				09 30 43.8				
31	PNS LPB	eP eS eP	eP eS eP	11 02 09.3		0.6	8	
				03 25.9				
				11 02 10				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
JULY	31	PNS	eP	12 15 25.4				
			i	16 00				
		LPB	P	12 15 39				
	31	PNS	eP	14 53 44				
		LPB	eP	14 53 46.5				
	31	USCGS 19 31 29.9, 19.3S, 67.7W, h = 172 km., m = 4.1 SOUTHERN BOLIVIA						
		PNS	iP	19 32 24.1	C			
	31	LPB	eP	20 22 59				
		PNS	P	20 23 02.5				
	31	LPB	iP	21 32 20.5	C			
			S	56.2				
	31	PNS	eP	22 36 06.1				
	31	LPB	P	22 51 05.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	01	USCGS 01 09 38.9, 21.5S, 66.7W, h = 228 km., m = 4.3 SOUTHERN BOLIVIA						
		LPB	iP	01 10 56.5	C	0.8	90	4
			iS	11 56				
		PNS	iP	01 11 00.7	C			
			eS	12 05.6				
	01	PNS	iP	01 28 09.8	D			
			S	38.6				
		LPB	iP	01 28 14	D	0.8	82	
			S	47.4				
	01	USCGS 02 22 39.4, 11.8S, 75.2W, h = 1 km., m = 4.7 PERU						
		PNS	P	02 24 40				
			e	25 01				
			eS	26 57.6				
			eL	27.3				
		LPB	P	02 24 45.5		1.0	24	8
	01	LPB	P	04 07 03.3				
		PNS	eP	04 07 09.6				
			S	52.6				
	01	PNS	P	04 33 45.9				
	01	PNS	iP	05 47 36.3	C			
			iS	48 02.6				
		LPB	iP	05 47 39.2	C			
			i	48 06.5				
	01	PNS	P	06 00 31.5		1.0	16	
		LPB	P	06 00 37		1.0	10	
	01	LPB	eP	06 11 02				
		PNS	eP	06 11 05.6				
	01	LPB	P	06 40 15.6		1.0	8	
	01	PNS	eP	06 40 43.7				
		LPB	eP	06 40 44.5				
	01	PNS	eP	13 11 31.3				
	01	USCGS 13 06 49.1, 18.8N, 64.4W, h = 4.7 km., m = 5.0 VIRGIN IS						
		PNS	P	13 13 41				
		LPB	P	13 13 42.5		0.8	35	40



MONTH	DAY	STA	PHASE	TIME	SIGN	DEP	AMPL	DIST
AUGUST	01	USCGS PERU		19 02 10.9, 11.8S, 75.2W, h = 2 km., m = 5.1				
		PNS	p	19 04 11.3	G	1.0	41	
			eS	06 36				
			eL	07.1				
		LPB	p	19 04 17.5	D	0.9	39	8
01		USCGS PERU		19 32 13.5, 13.5S, 72.5W, h = 46 km., m = 4.5				
		PNS	p	19 33 27.3				
			i	41.6				
			eS	34 50				
			eL	35.1				
		LPB	eP	19 33 31				
01		PNS	eP	22 40 14				
02		USCGS KURILE IS		23 43 44.9, 45.6N, 150.7E, h = 38 km., m = 5.6				
		LPB	ePKP	00 03 03				10 137
			eL	48				
		PNS	ePKP	00 03 04.4				
			eL	48.5				
02		USCGS KURILE IS		00 34 16.9, 45.3N, 151.1E, h = 21 km., m = 5.3				
		PNS	ePKP	00 53 41				
		LPB	ePKP	00 53 40.5				137
02		PNS	eP	02 43 50.9				
02		USCGS NEAR COAST OF NORTHERN CHILE		02 55 11.6, 20.7S, 70.9W, m = 4.3				
		LPB	p	02 56 25.5		0.7	11	5
		PNS	p	02 56 26.5				
			e	50.7				
02		USCGS EAST NEW GUINEA REG		04 30 29.2, 6.5S, 146.9E, h = 17 km., m = 5.3				
		LPB	ePKP	04 49 55				139
		PNS	ePKP	04 49 51				
02		USCGS OFF COAST OF GUERRERO, MEXICO		07 36 45.5, 15.2N, 98.2W, m = 4.3				
		LPB	eP	04 44 52				
		PNS	eP	04 44 55				

MONTH	DAY	STA	PHASE	TIME	SIGN	DEP	AMPL	DIST
AUGUST	02	PNS LPB	eP eP	04 53 37.5 04 53 38				
	02	PNS LPB	eP eP	05 01 51.6 05 01 56				
	02	USCGS SOUTHERN SUMATRA		04 43 50.9, 5.6S, 104.5E, h = 79 km., m = 5.4				
		LPB	ePKP	05 03 41				157
		PNS	ePKP e	05 03 42 04 28				
02		LPB	eP	06 21 29				
02		LPB	p	07 53 14.5				
		PNS	p	07 55 17.9				
02		PNS	eP eS	08 00 34.2 56				
		LPB	eP	08 00 37.5				
02		PNS	p S	08 28 19.6 43.2				
		LPB	p S	08 28 19.7 49.5		0.7	8	
02		USCGS KURILE IS		10 17 54.1, 45.3N, 151.0E, h = 38 km., m = 4.9				
		PNS	ePKP	10 37 17				
02		LPB	eP S	11 17 23 44.4				
		PNS	eP S	11 17 31 59				
02		PNS	eP	11 28 48.6				
02		USCGS PERU		13 50 00, 8.5S, m = 4.7				
		PNS	eP i	13 52 41.2 57.7				
		LPB	eP	13 52 51.5				
02		USCGS MARIANA IS REG		14 05 34.4, 15.3N, 147.7E, h = 55 km., m = 4.5				
		LPB	ePKP	14 25 09				
		PNS	ePKP	14 25 11				
02		PNS	p eS	14 41 17.1 42 20.1				
02		LPB	eP	15 27 16				
		PNS	eP	15 27 17.4				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	02	USCGS 20 12	44.4, 2.6S, 126.6E, h = 28 km., m = 5.6					
		CERAM SEA						
		LPB	ePKP	20 32 42.6				156
			eL	26.8				
		PNS	ePKP	20 32 43.1				
			eL	21 27				
	02	LPB	e(P)	21 47 04				
	02	PNS	P	21 55 33.8	D			
			S	56.8				
	03	USCGS 00 22 32	4.2S, 153.0E, h = 65 km., m = 5.3					
		NEW IRELAND REG						
		PNS	ePKP	00 41 39.1				
			i	42 05.1				
			PKS	45 13.5				
			eL	01 26.9				
		LPB	eP	00 41 49.6				134
			iPKS	45 15				
			L	27				
	03	LPB	eP	00 53 38				
		PNS	eP	00 53 54.6				
	03	PNS	eP	02 09 37.6				
			eS	10 02.6				
	03	PNS	iP	02 53 38.6	D			
			S	54 00.8				
		LPB	P	02 53 41.5				
	03	PNS	eP	03 08 44.2				
			eS	09 07.8				
	03	LPB	eP	04 00 02				
		PNS	iP	04 00 04.4	D			
			S	38.8				
	03	USCGS 04 19 41.4, 24.9N, 123.2E, h = 62 km., m = 5.3						
		SOUTHWESTERN RYUKYU IS						
		PNS	ePKP	04 39 41.4				
		LPB	ePKP	04 39 41.5				166
	03	PNS	eP	07 18 18.6				
		LPB	eP	07 18 23				
	03	LPB	iP	07 19 12	C	0.7	39	
		PNS	iP	07 19 16.2	C			

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	03	USCGS 07 48	11.4, 45.4N, 151.8E, h = 13 km., m = 5.3					
		KURILE IS						
		LPB	ePKP	08 07 46				137
		PNS	ePKP	08 07 47				
	03	LPB	eP	10 19 53				
		PNS	eP	10 19 54.6				
	03	LPB	P	12 05 50				
		PNS	eP	12 05 54				
	03	PNS	eP	17 53 52.2				
		LPB	eP	17 53 52.7				
	03	USCGS 21 17 16.9, 13.3N, 88.3W, h = 52 km., m = 4.3						
		EL SALVADOR						
		PNS	eP	21 24 10.6				
		LPB	eP	21 24 14				
	03	USCGS 23 04 16.2, 32.8S, 70.9W, h = 83 km., m = 4.1						
		CHILE-ARGENTINA						
		LPB	P	23 08 02				16
		PNS	P	23 08 04.6				
	04	PNS	eP	01 22 17.3				
	04	USCGS 01 59 17.4, 0.4N, 98.7E, h = 67 km., m = 5.4						
		NORTHERN SUMATRA						
		PNS	ePKP	02 19 19				
		LPB	ePKP	02 19 21				159
	04	PNS	P	03 05 12.9	D	0.7	14	
		LPB	P	03 05 17		1.0	24	
	04	USCGS 02 56 11.9, 7.1S, 117.2E, h = 599 km., m = 4.7						
		BALI SEA						
		PNS	ePKP	03 11 52.8				
		LPB	ePKP	03 11 53				
			eL	04 03				
	04	LPB	eP	03 55 10.7				
			S	40.8				
		PNS	eP	03 55 12.8				
			eS	37.8				
	04	USCGS 04 04 59.7, 20.3S, 69.1W, h = 121 km., m = 4.3						
		NORTHERN CHILE						
		LPB	P	04 05 59		1.0	370	4
			eL	06				
		PNS	P	04 06 00.7				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	04	USCGS 04 18 35.7, 41.6S, 85.3W, m = 4.9 WEST CHILE RISE						
		LPR	P	04 24 35.6				29
		PNS	eP	04 24 36.2				
	04	LPR	P	06 11 17.4				
	04	PNS	eP	06 38 08.9				
		LPR	P	06 38 13.5				
			e	40 15				
	04	LPR	eP	09 21 56				
		S		23 10				
		PNS	eP	09 21 59.8				
			eS	23 17.6				
	04	LPR	e(P)	10 43 16.5				
	04	LPR	eP	10 51 00				
		PNS	eP	10 51 02.6				
	04	USCGS 13 57 00.7, 35.7N, 36.7W, m = 4.5 NORTH ATLANTIC RIDGE						
		PNS	eP	13 57 03				
		LPR	eP	13 57 06				
	04	PNS	eP	16 40 56.6				
	04	USCGS 17 19 19.6, 5.7S, 125.3E, h = 521 km., m = 6.2 BANDA SEA						
		LPR	iPKP	17 38 15.5	C	1.2	604	
			eSS	18 01 40				
		PNS	iPKP	17 38 15.4	C			
			eL	18 30				
	04	PNS	iP	20 24 01.5				
		LPR	eP	20 24 02				
	04	PNS	e(P)	20 40 06				
	04	USCGS 21 50 02.3, 26.9S, 70.9W, m = 5.3 NEAR COAST OF NORTHERN CHILE						
		LPR	eP	21 52 33.5				11
			eL	56.4				
		PNS	P	21 52 35.6				
			S	55 10				
			L	56				
	04	PNS	eP	22 42 01.8				
		LPR	eP	22 42 09.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	04	LPR	eP	22 55 20				
		PNS	eP	22 55 21.6				
	05	LPR	eP	01 03 26.5				
	05	USCGS 01 50 50.0, 26.9S, 70.8W, m = 4.3 NEAR COAST OF NORTHERN CHILE						
		LPR	P	01 53 22.7				11
			i	39.5				
			eL	57.2				
		PNS	eP	01 53 25.6				
			i	41.3				
			eL	56.9				
	05	USCGS 02 11 00.1, 26.7S, 70.9W, m = 4.1 NEAR COAST OF NORTHERN CHILE						
		LPR	eP	02 13 33				11
			e	48				
			eL	17				
		PNS	eP	02 13 33.4				
			e	50.8				
			S	16 09.2				
	05	USCGS PROP AFTERSHOCK CHILE						
		LPR	eP	02 29 24				
		PNS	eP	02 29 24.9				
			S	32 20				
	05	USCGS 02 13 09.6, 1.3N, 126.2E, h = 34 km., m = 6.1 MOLUCCA PASSAGE						
		PNS	PKP	02 32 52				
			PP	37 38				
			L	03 29.5				
		LPR	ePKP	02 33 08				159
	05	LPR	eP	03 32 08				
		PNS	eP	03 32 12.1				
	05	USCGS 03 20 52.4, 1.2N, 126.3E, h = 47 km., m = 5.1 MOLUCCA PASSAGE						
		PNS	ePKP	03 40 50.6				
		LPR	PKP	03 40 51				159
	05	LPR	P	05 58 18				
			i	34.5				
			S	42.7				
		PNS	eP	05 58 25				
	05	USCGS 06 13 27.1, 55.2S, 1.5W, m = 5.1 BOUVET IS REG						
		LPR	P	06 23 56			1.0	14
		PNS	P	06 23 58.6			1.2	35
			eL	45.3				63



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST		PNS	PKP	09 00 13.2				
		LPB	PKP	09 00 17.4		0.9	15	149
			e	02 15				
06		USCGS	08 50	53.3, 32.5N, 140.6E, h = 67 km., m = 4.3				
				SOUTH OF HONSHU, JAPAN				
		PNS	PKP	09 10 36.4				
		LPB	PKP	09 10 38.3				
06		LPB	e(P)	10 00 20				
06		USCGS	10 56	31.3, 21.0S, 67.5W, h = 186 km., m = 4.0				
				CHILE-BOLIVIA BOR REG				
		LPB	iP	10 57 40.2	C	1.0	590.0	4
			eS	58 33.5				
			eL	59				
		PNS	iP	10 57 44.1	C			
			S	58 38.6				
06		LPB	P	15 07 06.5		1.2	21	
		PNS	P	15 07 07.4		1.4	31	
06		USCGS	14 59	23.7, 58.0S, 25.4W, h = 65 km., m = 4.6				
				SOUTH SANDWICH IS REG				
		LPB	eP	15 08 28				
		PNS	eP	15 08 31.3				
06		USCGS	15 41	50.4, 10.8N, 43.2W, m = 5.2				
		LPB	P	15 48 56.4		1.6	162	37
			eL	54.7				
		PNS	P	15 48 56.6				
			S	54 46				
			L	16 00.5				
06		USCGS	17 15	40.3, 7.5S, 148.3W, m = 5.1				
				LINE IS REG				
		LPB	eP	17 27 25				78
		PNS	eP	17 27 26.8				
06		PNS	eP	17 35 51.7				
			eS	36 12.6				
06		PNS	eP	17 41 11.3				
		LPB	eP	17 41 12				
06		PNS	iP	19 32 19.6	D			
			S	42.6				
		LPB	eP	19 32 21.4				
			eS	49.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	06	PNS	eP	20 22 07.1				
	06	PNS	eP	20 23 43.9				
		LPB	eP	20 23 51				
	06	LPB	P	20 40 11				
			eS	41 37				
		PNS	P	20 40 15.1	D			
			eS	41 43.3				
	06	LPB	eP	21 23 20				
			eS	24 02				
		PNS	eP	21 23 26				
			S	24 12.5				
	07	PNS	eP	01 22 23.4				
		LPB	eP	01 22 27				
	07	PNS	eP	01 27 57.8				
		LPB	eP	01 28 02				
	07	USCGS	01 49	33.2, 5.3S, 154.1E, h = 116 km., m = 5.2				
				SALOMON IS				
		PNS	ePKP	02 08 38.3				
			e	09 27.4				
			eL	52.6				
		LPB	PKP	02 08 39.5		1.0	8	133
			eL	52.8				
	07	PNS	iP	02 43 49.4				
			S	44 34.4				
		LPB	eP	02 43 51				
			eS	44 47				
	07	PNS	eP	04 13 54.8				
		LPB	eP	04 13 58				
	07	LPB	eP	04 50 15.5				
		PNS	eP	04 50 21.9				
	07	LPB	eP	06 18 02				
		PNS	eP	06 18 09.8				
	07	USCGS	06 46	08.3, 52.2N, 158.9E, h = 69 km., m = 5.1				
				NEAR EAST COAST OF KAMCHATKA				
		PNS	ePKP	07 05 10.1				
		LPB	PKP	07 05 10.6		0.8	7	130
	07	LPB	eP	07 09 17				
		PNS	eP	07 09 17				
	07	PNS	iP	09 09 11.9	D			
			P	09 09 13.4				
			eS	38.7				
	07	LPB	eP	10 06 39				
		PNS	eP	10 06 42.6				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	07	LPB PNS	eP eP	14 22 27.1 14 22 33				
	07	LPB PNS	iP P	15 23 35.7 15 23 47.5	D	0.8	37	2
	07	PNS	iP eS	16 40 34.1 56.2	D			
	07	PNS	eP	23 52 07.1				
	08	LPB PNS	P P	01 39 00.6 01 39 08		0.8 0.9	11 17	
	08	PNS	eP eS	02 16 56.5 17 26.8				
	08	LPB PNS	eP eP	02 20 55.5 02 20 55				
	08	LPB PNS	eP eP	02 45 49.4 02 45 55.5				
	08	USCGS 05 12		01.6, 21.2S, 68.6E, h = 74 km., m = 5.4				
				CHILE-BOLIVIA BOR REG				
		PNS	iP S eL	05 13 14 14 15 14.9	D	1.0	63	
		LPB	P	05 13 21.3		0.8	36	4
	08	USCGS 05 02		01.5, 7.2N, 125.7E, h = 52 km., m = 5.2				
				MINDANAO, PHILIPPINE IS				
		PNS	ePKP	05 22 05				
	08	LPB PNS	P e P	06 17 17.4 18 02.2 06 17 32	C			
						1.0	70	
	08	USCGS 06 30		57.1, 36.4N, 70.9E, h = 198 km., m = 5.8				
				HINDU KUSH REG				
		LPB	PKP i	06 49 52.8 50 02.5				139
		PNS	PKP i	06 49 52.8 50 02.3				
	08	PNS	e(P) i	07 01 20.2 46				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	08	USCGS 07 47		27.3, 1.1S, 78.7W, h = 16 km., m = 4.6				
				ECHIADOR				
		PNS (P) LPB P		07 51 33.1 07 51 48				
						0.9	98	18
	08	LPB PNS	eP eP	09 01 22.4 09 01 31.5				
	08	USCGS 11 08		14.8, 47.7S, 15.8W, m = 5.9				
				SOUTH ATLANTIC RIDGE				
		PNS	P L	11 17 22 33		1.6	118	
		LPB	P	11 17 28.5		1.5	220	53
	08	USCGS 12 46		46.7, 47.5S, 15.7W, m = 5.0				
				SOUTH ATLANTIC RIDGE				
		PNS	eP eL	12 56 04.4 13 11.7				
	08	USCGS 12 53		08.7, 47.7S, 15.8W, m = 4.8				
				SOUTH ATLANTIC RIDGE				
		LPB PNS	eP eP	13 02 25 13 02 25.6				
	08	PNS	eP	13 12 50.5				
	08	PNS	P S	15 34 06.4 28.8	D	0.5	9	
	08	USCGS 16 10		59.3, 26.6S, 70.8W, h = 34 km., m = 4.8				
				NEAR COAST OF NORTHERN CHILE				
		LPB	eP PP	16 13 29 45.5				10
		PNS	eP PP L	16 13 30.8 48.8 16.8				
	08	USCGS 20 02		30.6, 35.9N, 10.7W, m = 4.2				
				NORTH ATLANTIC OCEAN				
		PNS	eP	20 14 07.4				
	08	USCGS 20 44		21.0, 6.1S, 129.7E, h = 196 km., m = 5.9				
				BANDA SEA				
		LPB	PKP eL	21 03 49.6 55.8	C	0.7	63	151
		PNS	PKP SS eL	21 03 49.8 26 48 56.8	C	1.6	212	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	08	LPB	e(P)	23 16 38				
	09	PNS	iP	00 10 42.2	D			
			S	11 05.8				
		LPB	p	00 10 44.6				
			S	11 09.5				
	09	HSCGS	00 24 10.9, 27.0S, 69.7W, h = 25 km., m = 4.4					
			NORTHERN CHILE					
		PNS	eP	00 26 48				
			e	27 05.2				
		LPB	eP	00 26 50				11
	09	HSCGS	01 51 07.8, 23.9S, 66.8W, h = 207 km., m = 4.1					
			JULIUY, PROV ARGENTINA					
		LPB	P	01 52 58.2				8
		PNS	eP	01 52 59.5				
	09	LPB	P	04 12 18.4		1.0	20	
	09	PNS	eP	04 21 18				
			S	25.4				
		LPB	eP	04 21 20.5				
	09	PNS	P	05 15 02.4				
		LPB	P	05 15 03.4				
	09	LPB	eP	06 06 20				
		PNS	eP	06 06 11				
	09	LPB	eP	06 46 28				
		PNS	eP	06 46 32.4				
			S	47 56.2				
	09	PNS	iP	08 45 19.8	D			
			iS	42				
		LPB	P	08 45 21		1.0	10	
			S	44.5				
	09	LPB	iP	08 58 14	D	0.5	35	
			S	38.7				
		PNS	P	08 58 14.3	D			
			S	40				
	09	PNS	e(P)	10 51 27				
		LPB	eP	10 51 33				
	09	PNS	eP	11 16 33				
			S	49.3				
	09	LPB	P	15 33 37		0.8	15	
		PNS	P	15 33 39		0.8	18	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	09	LPB	P	16 16 09.8				
	09	HSCGS	18 28 02.4, 57.4S, 25.8W, h = 14 km.,					
			SOUTH SANDWICH IS REG					
		LPB	P	18 37 10.7				
		PNS	P	18 37 13.7				
	09	HSCGS	23 15 27.7, 27.3S, 70.0W, h = 127 km.,					
			NEAR COAST OF NORTHERN CHILE					
		LPB	eP	23 18 01				11
		PNS	eP	23 18 04				
	10	PNS	eP	02 13 02.2				
		LPB	eP	02 13 06				
	10	PNS	eP	02 31 17.4				
		LPB	eP	02 31 20				
	10	HSCGS	02 39 33.9, 15.6S, 74.1W, h = 83 km., m = 4.8					
			NEAR COAST OF PERU					
		PNS	P	02 40 56.1		1.0	32	5
		LPB	P	02 41 01.5				
			i	23.5				
	10	HSCGS	03 33 57.1, 19.3N, 65.3W, m = 4.1					
			PUERTO RICO REGION					
		LPB	eP	03 40 50				
		PNS	eP	03 40 51.8				
	10	HSCGS	04 05 13.3, 5.2S, 154.0E, h = 124 km., m = 5.0					
			SALOMON IS					
		PNS	ePKP	04 24 29				
	10	PNS	eP	04 47 59.6				
	10	HSCGS	04 57 06.1, 7.1N, 73.1W, h = 124 km., m = 4.2					
			NORTHERN COLOMBIA					
		LPB	eP	05 02 03		1		23
			i	40				
		PNS	eP	05 02 03.6				
	10	PNS	eP	05 14 41				
		LPB	eP	05 14 44.5				
	10	PNS	eP	06 07 14.8				
		LPB	P	06 07 15				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	10	PNS	iP	06 11 54.8 12 17.7	D	0.5	4	
	10	USCGS SALTA	06 50 25.2, 24.0S, 66.8W, h = 217 km., m = 3.7					
		LPB	P	06 52 14 53 20				8
		PNS	eP	06 52 16.8 53 42.8				
	10	LPB	eP	07 59 28.5 07 59 32				
	10	LPB	e(P)	11 50 50				
	10	LPB	P	13 30 02 32.5				
		PNS	iP	13 30 02.4 32.4	D	0.4	15	
	10	PNS	eP	15 06 43				
		LPB	eP	15 06 48				
	10	USCGS CARLSBERG RIDGE	15 41 48.5, 8.4N, 57.8E, m = 5.0					
		LPB	ePKP	16 00 25				127
		PNS	ePKP	16 00 25.6				
	10	PNS	P	17 41 55.7				
		LPB	eP	17 41 59				
	10	LPB	eP	18 44 32				
		PNS	e(P)	18 44 35.4				
	10	PNS	P	19 51 14.4 36.9				
		LPB	eP	19 51 15				
	10	LPB	eP	21 34 08				
	11	PNS	eP	00 26 27.6				
		LPB	eP	00 26 29				
	11	LPB	eP	01 15 06.5				
		PNS	P	01 14 58		0.5	2	
	11	LPB	P	01 26 04.2		0.7	9	
		PNS	P	01 26 08.5		0.6	13	
	11	USCGS NORTHERN CHILE	03 43 49.8, 23.6S, 68.4W, h = 105 km., m = 4.7					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	11	LPB	P	03 45 32	C			7
		PNS	iP	03 46 23.6 45 35.2	C	0.8	90	
	11	LPB	eP	05 25 26				
		PNS	eP	05 25 29				
	11	PNS	P	06 02 00.2	D	0.6	12	
		LPB	eP	06 02 01				
	11	PNS	eP	07 48 18				
		LPB	eP	07 48 23.4				
	11	PNS	eP	08 25 28				
		LPB	eP	08 25 31				
	11	PNS	eP	10 18 09.4				
		LPB	eP	10 18 11				
	11	LPB	P	10 29 06.5				
		S		36.2				
		PNS	P	10 29 06.8				
		S		36.4				
	11	PNS	eP	12 21 50.4				
		S		22 12.6				
	11	USCGS CHILE-ARGENTINA BOR REG	13 01 54.8, 23.8S, 67.8W, h = 190 km., m = 4.1					
		LPB	eP	13 03 39.4				7
		PNS	P	13 03 42.9				
		eS		04 58				
	11	USCGS CENTRAL MID-ATLANTIC RIDGE	13 33 04.1, 1.0N, 28.5W, m = 5.0					
		LPB	P	13 41 02.5				42
		eL		54				
		PNS	P	13 41 03		1.0	40	
		eL		53.9				
	11	USCGS PERU	16 15 16.5, 11.6S, 74.7W, h = 82 km., m = 4.2					
		LPB	eP	16 16 55				8
		e		17 18				
		PNS	eP	16 16 59.7				
		i		17 20				
	11	PNS	eP	16 36 24				
		LPB	eP	16 36 27				
	11	PNS	P	17 19 17.7				
		eS		40				

MONTH	DAY	STA	PHASE	TIME	SIGN	PEP	AMPL	DIST
AUGUST	11	USCGS VIRGIN IS		48 36.8, 19.9N, 64.4W, h = 33 km., m = 4.3				
		LPB	eP	18 55 40				36
		PNS	eP	18 55 39.4				
	11	USCGS SOUTH ATLANTIC RIDGE		20 07 11.9, 19.7S, 11.7W, m = 4.8				
		LPB	eP	20 16 32.5				
		PNS	eP	20 16 35				
	11	USCGS NORTH ATLANTIC OCEAN		20 16 35.0, 20.1N, 64.3W, m = 4.9				
		LPB	eP	20 23 37				36
		PNS	eP	20 23 38				
	11	LPB	eP	20 32 14.5				
			e	35 16				
		PNS	eP	20 32 16.8				
			e	35 22.8				
	11	USCGS NEAR COAST OF PERU		20 46 55.0, 17.2S, 70.0W, h = 146 km., m = 3.9				
		PNS	iP	20 47 28.6	D			
			S	53.2				
		LPB	iP	20 47 31.4	D	1.0	224	2
			iS	58				
			i	53 48.5				
	11	USCGS VIRGIN IS		20 46 41.6, 19.9N, 64.3W, h = 10 km., m = 5.0				
		PNS	P	20 53 47.4				
		LPB	P	20 53 48.5		1.0	42	36
	11	USCGS KURILE IS		21 26 37.6, 43.4N, 147.9E, h = 43 km., m = 5.7				
		PNS	ePKP	21 46 04.2				
		LPB	PKP	21 46 04.5				140
			i	47 00				
			eL	22 35				
	11	USCGS KURILE IS		21 27 25.8, 43.6N, 147.8E, h = 14 km., m = 5.9				
		PNS	PKP	21 46 55.8				
		LPB	ePKP	21 46 56.5				140



MONTH	DAY	STA	PHASE	TIME	SIGN	PEP	AMPL	DIST
AUGUST	11	USCGS KURILE IS.		21 27 36.0; 43.5N, 147.8E; h=45; m=6.2				
		PNS	ePKP	21 47 01.6				139°5
	11	USCGS HOKKAIDO, JAPAN REG.		21 55 35.3; 44.0N, 145.7E; h=66; m=5.5				
		LPB	ePKP	22 14 40				140°4
		PNS	ePKP	22 14 45.4				
	11	USCGS KURILE IS. REG.		22 01 17.9; 43.5N, 147.3E; m=5.3				
		PNS	PKP	22 20 46				
	11	USCGS KURILE IS. REG.		22 10 51.5; 43.7N, 148.5E; m=5.3				
		LPB	ePKP	22 30 18				139°5
		PNS	ePKP	22 30 19.6				
	11	USCGS KURILE IS. REG.		22 15 43.9; 44.2N, 148.4E; m=4.8				
		PNS	ePKP	22 35 09				139°5
	11	USCGS OFF COAST OF JAPAN		22 27 44.7; 42.7N, 147.4E; m=5.0				
		PNS	ePKP	22 47 14				140°0
	11	USCGS OFF COAST OF HOKKAIDO, JAPAN		22 42 00.3; 42.7N, 147.2E; m=5.1				
		PNS	ePKP	23 01 30				140°0
	11	USCGS KURILE IS.		22 54 00.4; 44.0N, 148.3E; h=59; m=5.4				
		PNS	PKP	23 13 22.8				
		LPB	ePKP	23 13 23				139°5
	11	USCGS KURILE IS.		23 02 53.8; 43.1W, 147.8E; m=5.5				
		LPB	ePKP	23 22 21				139°5
		PNS	PKP	23 22 22				
	11	USCGS KURILE IS.		23 14 51.1; 43.4N, 147.6E; m=5.0				139°5
		PNS	ePKP	23 34 19.4				139°5
	11	PNS	ePKP	23 36 14				
	11	USCGS KURILE IS.		23 19 00.2; 43.4N, 148.3E; m=5.1				
		PNS	ePKP	23 38 29				
		LPB	ePKP	23 38 35				139°5

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	11	USCGS 23 21	43.1; 43.4N 143.5E; m=5.2					
		KURILE IS.						
		PNS	ePKP	23 41 11.4				
		LPB	ePKP	23 41 13			139°5	
	11	PNS	ePKP	23 44 01				
		LPB	ePKP	23 44 05				
	11	USCGS 23 34	08.4; 43.3N, 148.0E; h=32; m=5.1					
		KURILE IS. REG.						
		PNS	ePKP	23 53 26				
		LPB	ePKP	23 53 28			139°5	
	11	USCGS 23 36	15.0; 44.5N, 147.4E; m=4.9					
		KURILE IS.						
		PNS	ePKP	23 55 43.8				
		LPB	ePKP	23 55 47			139°5	
	11	USCGS 23 39	29.0; 42.9N, 146.7E; m=5.0					
		OFF COAST OF HOKKAIDO, JAPAN						
		PNS	ePKP	23 59 08				
		LPB	ePKP	23 59 11			139°6	
	11	USCGS 23 42	03.5; 43.7N, 147.8E; h=43; m=5.6					
		KURILE IS.						
		LPB	ePKP	00 01 29.5				139°5
			e	04 18				
		PNS	ePKP	00 01 30				
			e	04 23				
	11	USCGS 23 48	48.9; 43.7N, 147.0E; m=5.3					
		KURILE IS.						
		LPB	ePKP	00 08 14				
		PNS	ePKP	00 08 18				
	11	USCGS 23 52	56.9; 1.7N, 126.5E; h=34; m=6.1					
		MOLUCCA PASSAGE						
		PNS	PKP	00 12 56.3		1.8	224	
		LPB	PKP	00 12 57		1.1	65	159°3
	12	USCGS 00 15	28.4; 43.7N, 147.7E; h=20; m=5.3					
		KURILE IS.						
		PNS	ePKP	00 34 51.6				
		LPB	ePKP	00 34 53				
	12	USCGS 00 25	45.4; 44.5N, 148.7E; h=36; m=5.1					
		KURILE IS.						
		PNS	ePKP	00 45 07.6				
		LPB	ePKP	00 45 09			139°5	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	12	USCGS 00 47	30.3; 1.8N, 126.2E; h=54; m=4.9					
		MOLUCCA PASSAGE						
		LPB	ePKP	01 07 26.4				159°3
		PNS	ePKP	01 07 27				
	12	USCGS 00 53	36; 43.4N; 147.3E; h=30; m=5.0					
		KURILE IS.						
		PNS	ePKP	01 13 11				
		LPB	ePKP	01 13 13.4			139°5	
	12	USCGS 01 03	07.3; 43.5N, 147.2E; m=4.8					
		KURILE IS.						
		LPB	ePKP	01 22 40.5				
		PNS	ePKP	01 22 48				
	12	USCGS 01 28	22.0; 43.0N, 147.7E; m=4.8					
		KURILE IS.						
		PNS	ePKP	01 47 55				
		LPB	ePKP	01 47 59				
	12	LPB	eP	02 10 14				
		PNS	iP	02 10 21.7				
			S	44.3				
	12	USCGS 02 21	53; 1.7N 126.3E; h=67; m=5.0					
		MOLUCCA PASSAGE						
		PNS	PKP	02 41 48.7				159°3
		LPB	ePKP	02 41 49				
	12	USCGS 02 28	42.1; 1.7N, 126.5E; h=52; m=5.2					
		MOLUCCA PASSAGE						
		LPB	ePKP	02 48 34.8				159°3
		PNS	ePKP	02 48 38				
	12	USCGS 02 36	51.5; 43.9N, 148.3E; m=5.1					
		KURILE IS. REG.						
		LPB	ePKP	02 56 15.5				139°5
		PNS	PKP	02 56 16.2		1.2	10	
	12	USCGS 02 44	47.8; 42.7N, 147.4E; m=4.4					
		OFF COAST OF HOKKAIDO, JAPAN						
		PNS	ePKP	03 04 14				140°4
	12	USCGS 03 09	08.7; 44.6N, 148.5E; m=5.0					
		KURILE IS.						
		PNS	ePKP	03 28 43				
		LPB	ePKP	03 28 45				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	12	USCGS 03 33		37.2; 43.1N, 147.6E; m=5.5				
								KURILE IS.
		LPB	ePKP	03 53 02				139°5
		PNS	ePKP	03 53 05.6				
			pp	56 41				
	12	USCGS 03 58		19.9; 43.5N, 148.7E; m=4.5				
								KURILE IS. REG.
		LPB	ePKP	04 17 50.5				139°5
			e	19 22				
		PNS	ePKP	04 17 55.4				
	12	USCGS 04 10		00.0; 47.6S, 15.2W; m=4.8				
								SOUTH ATLANTIC RIDGE
		LPB	eP	04 19 13				53°6
		PNS	eP	04 19 17				
	12	USCGS 04 12		52.2; 43.3N, 146.7E; h=86; m=48				
								KURILE IS.
		LPB	ePKP	04 32 17				139°5
		PNS	ePKP	04 32 17.4				
	12	USCGS 04 29		08.7; 43.8N, 147.9E; m=4.4				
								KURILE IS.
		LPB	ePKP	04 48 33				
		PNS	ePKP	04 48 35				
	12	USCGS 04 48		25.1; 43.0N, 147.8E; m=5.0				
								KURILE IS.
		LPB	ePKP	05 07 54.5				139°5
		PNS	PKP	05 07 53.6				
	12	USCGS		04 53 36.5; 43.3N, 147.5E; m=5.7				
								KURILE ISLANDS
		LPB	PKP	05 13 05.6		1.3	68	139°5
		PNS	PKP	05 13 04.4		1.4	68	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	12	USCGS 05 03		26.9; 43.6N, 148.0E; m=6.0				
								KURILE IS. REG.
		LPB	ePKP	05 22 47				139°5
			e	26 15.6				
		PNS	PKP	05 22 53.2		1.5	88	
			e	26 10				
	12	USCGS 05 08		59.0; 43.2N, 147.0E; m=5.4				
								KURILE IS.
		PNS	ePKP	05 28 32				
		LPB	ePKP	05 28 34				139°5
	12	USCGS		05 53 28.2; 43.7N, 148.5E; m=5.4				
								KURILE IS. REG.
		LPB	PKP	06 12 55		1.0	18	139°5
		PNS	PKP	06 12 57.2				
	12	LPB	P	06 24 18				
		PNS	eP	06 24 22				
	12	LPB	P	06 57 55.5				
	12	USCGS		06 38 49; 43.1N, 147.5E; m=5.3				
								KURILE IS.
		LPB	ePKP	06 58 11.4				139°5
		PNS	PKP	06 58 17.9				
	12	USCGS		07 03 45.2; 43.2N, 147.0E; h=35; m=4.8				
								KURILE ISLANDS
		PNS	ePKP	07 23 15.8				
		LPB	ePKP	07 23 16.5				
			i	34				
	12	LPB	P	07 23 34		1.0	23	
		PNS	P	07 23 36.8				
	12	USCGS 07 10		41.4; 43.7N, 147.9E; m=5.3				
								KURILE IS.
		PNS	PKP	07 30 08.4				
		LPB	PKP	07 30 09.7				139°5
	12	USCGS 07 38		10.7; 43.9N, 147.7E; m=4.9				
								KURILE IS.
		LPB	ePKP	07 57 38				
		PNS	ePKP	07 57 39				
	12	USCGS 07 54		51.0; 42.6N, 146.6E; h=62; m=4.7				
								OFF COAST OF HOKKAIDO, JAPAN
		PNS	ePKP	08 14 24.4				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	12	LPB	ePKP e	08 14 31 18 32				
	12	USCGS 09 21		54.6; 7.2S, 154.9E; h=43; m=5.1				SOLOMON IS.
		DNS	ePKP	09 41 06.2				
		LPB	ePKP	09 41 08 45 09.8				131°0
	12	USCGS 09 25		38.7; 43.1N; 147.6E; m=5.3				KURILE IS.
		PNS	PKP	09 45 09				
		LPB	PKP	09 45 09.5	1.0	16		139°5
	12	USCGS 09 33		43.2; 43.6N; 147.5E; h=34; m=5.6				KURILE IS.
		PNS	ePKP	09 53 10.6	1.2	24		
		LPB	ePKP	09 53 11.2	1.2	37		139°5
	12	PNS	eP	11 30 00				
		LPB	eP	11 30 05.5				
	12	USCGS 11 21		21.6; 43.9N, 148.7E; h=29; m=5.4				KURILE IS.
		PNS	PKP	11 40 46				
		LPB	PKP	11 40 49	1.1	17		139°5
		PKS		44 20.6				
	12	USCGS 11 32		24.3; 43.2N 147.E; h=10; m=5.2				KURILE IS.
		LPB	ePKP	11 51 54.5				139°5
		PNS	ePKP	11 51 56.3				
	12	USCGS 12 21		19.0; 1.7N; 126.3E; h=30; m=5.8				MOLUCCA PASSAGE
		PNS	PKP	12 41 18.8	1.6	81		
		LPB	PKP	12 41 19.5	1.3	83		159°3
		PP		45 25 45 28				
	12	USCGS 12 55		40.5; 1.7N; 126.2E; h=67; m=4.9				MOLUCCA PASSAGE
		LPB	ePKP	13 15 36.5				159°3
		PNS	ePKP	13 15 39				
	12	USCGS 13 16		35.5; 43.5N, 148.4E; h33 m4.7				KURILE IS REG.
		LPB	ePKP	13 36 00				139°5
		PNS	ePKP	13 36 02				
	12	USCGS 13 18		08.2; 43.5N, 148.0E; m5.6				KURILE IS.
		LPB	PKP	13 37 35	1.0	25		139°5
		PNS	PKP	13 37 35.4	1.0	18		

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	12	LPB	eP PNS i	15 18 32.7 15 18 40 45.9				
	12	USCGS 16 43		36.8; 43.7N, 147.9E; h24; m4.8				KURILE IS.
	12	LPB	ePKP PNS ePKP	17 03 04.5 17 03 05.2				
	12	USCGS 17 08		37.3; 43.5N, 148.2E; m4.8				KURILE IS.
		LPB	ePKP	17 28 03				
		PNS	PKP	17 28 04.8				139°5
	12	LPB	eP eS	18 18 38 09				
		PNS	p iS	18 18 43.2 19 06		06	6	
	12	PNS	eP	18 31 56				
		LPB	eP e	18 31 57 38 07				
	12	LPB	eP	18 38 10				
		PNS	eP	18 38 11.2				
	12	LPB	eP	18 51 55				
	12	USCGS 21 16		11.3; 42.9N, 146.6E; m5.4				OFF COAST OF HOKKAIDO, JAPAN
		LPB	ePKP ePP	21 35 39.5 39 09				140°4
		PNS	ePKP PP	21 35 41 39 14				
	12	USCGS 21 56		31.4; 43.3N, 147.4E; h14; m4.8				KURILE IS.
		LPB	ePKP	22 16 05				139°5
		PNS	ePKP	22 16 05.6				
	12	USCGS 23 05		57.1 43.3N, 147.7E; m5.0				KURILE ISLANDS
		PNS	ePKP	23 25 24				
		LPB	ePKP	23 25 25.6				130°5
	12	USCGS 23 15		48.9; 43.3N, 147.8E; m4.8				KURILE IS.
		PNS	ePKP	23 35 07.6				
		LPB	ePKP	23 35 09.5				130°5
		PNS	iP iS	00 24 08.4 30.8	C	05	12	
		LPB	eP	00 24 14				

AUGUST

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	13	PNS	eP S	00 53 07.6 30				
	13	PNS	eP	01 10 59.4				
		LPB	eP	01 11 01				
	13	USCGS		02 07 07.3; 43.8N, 148.7E; h35; m4.8				
				KURILE IS.				139°5
		PNS	ePKP	02 26 30.8				
		LPB	ePKP	02 26 35				
	13	PNS	P	03 18 20		1.0	23	
		LPB	P	03 18 25		1.0	22	
		CCH	P	03 18 48.7				
	13	LPB	P	03 41 50				
		CCH	eP	03 41 50.5				
		PNS	eP	03 41 51				
	13	LPB	eP	03 48 34.5				
			i	42.5				
	13	USCGS		03 47 14.2; 43.8N, 148.5E; m4.6				
				KURILE IS.				139°5
		LPB	ePKP	04 06 45				
		PNS	ePKP	04 06 46				
	13	USCGS		04 28 18.0; 43.5N; 148.0E; m5.2				
				KURILE IS.				139°5
		LPB	ePKP	04 47 45.7		1.2	21	
		PNS	ePKP	04 47 45.7		1.2		
	13	USCGS		07 24 05.1; 43.1N, 147.0E; m4.7				
				KURILE IS.				
		LPB	ePKP	07 43 39.2				
		PNS	ePKP	07 43 38				
	13	LPB	S	05 34 22				
	13	USCGS		08 31 32.2; 44.0N, 147.7E; m5.6				
				KURILE IS.				139°5
		LPB	ePKP	08 50 55.5				
		PNS	ePKP	08 50 56.8				
	13	LPB	eP	09 44 50				
		PNS	eP	09 44 53				
	13	LPB	P	10 21 42				
	13	LPB	eP	11 12 49.5				
		PNS	eP	11 12 50				
	13	LPB	eP	11 53 22.5				
		PNS	eP	11 53 24				

AUGUST

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	13	PNS	eP	12 05 16				
	13	USCGS		12 13 07.0; 43.2N, 147.9E; h14 ; m4.8				
				KURILE IS.				
		PNS	ePKP	12 32 40				
		LPB	ePKP	12 32 48				139°5
	13	LPB	eP	12 49 29				
		PNS	eP	12 49 31				
			S	50 01.5				
	13	USCGS		12 30 48.3; 43.3N, 147.8E; m4.8				
		LPB	ePKP	12 50 10				
		PNS	ePKP	12 50 16				
	13	LPB	eP	16 00 36				
		PNS	eP	16 00 36.8				
		CCH	eP	16 24 46.5		07	6	
	13	PNS	eP	16 35 19.6				
	13	USCGS		17 07 13.8; 42.8N, 146.6E; m4.7				
				OFF COAST OF HOKKAIDO, JAPAN.				
		PNS	ePKP	17 26 43				
		LPB	ePKP	17 26 46				139°5
	13	PNS	eP	19 08 56.4				
			e	09 50				
	13	USCGS		19 33 41.2; 43.9N, 147.8E; h73, m5.1				
				KURILE IS.				
		PNS	ePKP	19 53 03				
	13	USCGS		20 09 15.8; 43.6N, 148.1E; h33, m4.6				
				KURILE IS.				
		LPB	ePKP	20 28 42				139°5
		PNS	ePKP	20 28 43				
	13	PNS	eP	21 09 37.8				
	13	LPB	P	21 21 35		1.0	16	
		PNS	P	21 21 37.2				
			eS	23 05.6				
	13	USCGS		22 02 06.0; 15.2S, 71.9E; h119, m4.2				
				SOUTHERN PERU				
		LPB	P	22 03 05		1.1	137	3°7
			eS	57				
		PNS	iP	22 03 05.1				
			S	52				
		CCH	P	22 03 32.6				
	13	USCGS		22 57 07.4; 44.0N, 148.5E; m 5.6				
				KURILE IS.				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	13	PNS	ePKP	23 16 23				
			e	50				
		CCH	ePKP	23 16 24.9				
		LPB	ePKP	23 16 25				139°5
	14	USCGS		00 17 01.7; 22.6N, 141.9E; h228, m4.3				
				VOLCANO IS. REG.				
		LPB	ePKP	00 36 29				151°2
		PNS	ePKP	00 36 30				
	14	CCH	iP	00 43 04.2				
			iS	07.7				
	14	LPB	eP	00 43 46				
			S	13				
		PNS	eP	00 43 51.7				
			S	44 22.7				
	14	USCGS		00 29 32.3; 1.6N, 126.3E; m5.4				
				MOLUCCA PASSAGE				
		LPB	ePKP	00 49 31.5				159°3
		CCH	ePKP	00 49 34.5				
		PNS	ePKP	00 49 36				
	14	PNS	eP	02 31 09				
			S	51.3				
	14	USCGS		03 07 29.5; 43.0N, 147.5E; m4.7				
				KURILE IS.				
		PNS	ePKP	03 26 58				
		LPB	ePKP	03 26 58.5				139°5
	14	CCH	iP	03 44 05.4 (local)				
	14	USCGS		04 47 54.3; 4.33N, 147.8E; h48, m4.6				
				KURILE IS.				
		PNS	ePKP	05 07 17				
		LPB	ePKP	05 07 21.5				139°5
	14	PNS	eP	07 44 08.6				
		LPB	eP	07 44 09				
				44				
	14	LPB	eP	08 04 20				
	14	USCGS		08 59 49.6; 43.1N 147.5E; m4.7				
		PNS	ePKP	09 19 12.8				
		LPB	ePKP	09 19 13.6				139°5
	14	USCGS		10 43 46.1; 24.2S, 66.8W; h174; m4.0				
				SALTA PROVINCE, ARGENTINA				
		LPB	P	10 45 38.5		0.6	7	8°1
		PNS	P	10 45 42.2		0.5		
			S	47 09				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	14	USCGS		10 58 01.7; 5.4S; 152.0E; m5.6				
				NEW BRITAIN REGION				
		PNS	ePKP	11 17 21.6				
			PKS	20 52				
		LPB	ePKP	11 17 22				134°1
			PKS	20 53.4				
	14	USCGS		11 51 12.5; 43.1N, 147.5E; m4.7				
				KURILE IS.				
		PNS	ePKP	12 10 41.4				
		LPB	ePKP	12 10 46				139°5
	14	PNS	e(P)	14 24 12				
		LPB	eP	14 24 15				
	14	USCGS		14 19 01.6; 43.1N, 147.5E; m6.1				
				KURILE IS.				
		LPB	ePKP	14 38 20				
			pPKP	30.4				
			eL	15 26.2				
		PNS	ePKP	14 38 21.6				
			pPKP	30.4				
			eL	15 26				
	14	CCH	eP	14 38 25.2				
	14	USCGS		14 38 16.4; 43.0N, 147.9E; h15; m4.8				
				KURILE IS.				
		LPB	ePKP	14 57 46				
		PNS	ePKP	14 57 47				
	14	PNS	eP	15 07 58				
			eS	08 38.8				
	14	USCGS		1538 18.2; 43.0N, 147.7E; m4.9				
				KURILE IS.				
		LPB	ePKP	15 57 44				
		PNS	PKP	15 57 45.4				139°5
	14	USCGS		16 27 37.8; 43.9N, 148.4E; m5.2				
				KURILE IS.				
		LPB	eP	16 47 02				139°5
			eP	16 47 03.6				
	14	USCGS		16 58 40.1; 43.5N, 147.6E; m4.8				
				KURILE IS.				
		LPB	ePKP	17 18 07.8				
		PNS	ePKP	17 18 09				139°5
	14	PNS	P	17 16 19		04	6	
			eS	47.8				
	14	PNS	eP	17 59 01				
			eS	25				

AUGUST

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	14	USCGS KURILE IS.		18 21 36.5; 43.0N, 147.6E; m4.7				
		PNS ePKP		18 41 09.6				139°5
		LPB ePKP		18 41 14				
	14	PNS P		19 24 20.4				
	14	USCGS		20 15 41.8; 42.9N, 147.5E; h46; m4.6				
		OFF COAST OF HOKKAIDO, JAPAN						
		LPB ePKP		20 35 16				139°5
	14	USCGS		22 12 22; 43.9N, 148.6E; m5.2				
		KURILE IS. REG.						
		LPB ePKP		22 31 47				139°5
		PNS PKP		22 31 48.4				
		PNS eP		23 22 30				
		LPB eP		23 22 34				
	15	USCGS		23 48 36.0; 52.2N, 160.5E; m4.8				
		OFF EAST COAST OF KAMCHATKA						
		LPB ePKP		00 07 41				128°2
		PNS ePKP		00 07 43				
	15	USCGS		01 43 11.6; 9.5N, 83.9W; h9; m4.4				
		COSTA RICA						
		PNS eP		01 49 21				29°8
		LPB eP		01 49 16				
		CCH eP		01 49 35.9				
	15	LPB eP		01 59 32				
		PNS eP		01 59 31.8				
		CCH eP		01 59 35.6				
	15	PNS P		02 19 25.8				
	15	USCGS		03 29 14.1; 43.5N, 147.4E; m5.5				
		KURILE IS.						
		LPB PKP		03 48 35				139°5
		i		43				
		PNS PKP		03 48 34.8				
		i		42				
		CCH eP		03 48 35.9				
	15	USCGS		03 37 52.8; 3.5S, 144.4E; h22, m5.4				
		NEAR COAST OF NEW GUINEA						
		GCH ePKP		03 57 22.8				145°9
		PNS ePKP		03 57 23.4				
		LPB ePKP		03 57 24.6				

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AUGUST

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	15	USCGS		04 32 20.4; 43.0N, 147.9E; m5.6				
		KURILE IS.						
		LPB ePKP		04 51 20				139°5
		CCH PKP		04 51 21				
		PNS PKP		04 51 29			1.2	44
	15	USCGS		06 18 36.5; 43.3N, 147.8E; h42, m4.8				
		KURILE IS.						
		LPB ePKP		06 38 05				139°5
		PNS ePKP		06 38 03				
	15	USCGS		07 21 47.6; 148.5E, 43.6N; h21; m4.9				
		KURILE IS.						
		PNS ePKP		07 41 15.4				139°5
		LPB ePKP		07 41 17.0				
	15	USCGS		08 41 54.9; 21.6N, 143.0E; h319; m6.1				
		MARANA ISLANDS REGION						
		CCH PKP		09 01 05.6				
		PNS iPKP		09 01 06.1				C
		LPB iPKP		09 01 07			1.2	465 149°4
	15	USCGS		09 25 30.7; 11.0S, 74.5W; h136; m3.9				
		PERU						
		PNS eP		09 27 25.5				
		LPB eP		09 27 30				7°6
		e		28 31.5				
	15	USCGS		09 48 00.1; 43.9N, 147.5E; m4.8				
		KURILE IS.						
		LPB ePKP		10 07 34.2				139°5
		PNS ePKP		10 07 33				
		PNS eP		10 09 21.6				
		S		46				
	15	LPB eP		10 53 52				
		PNS P		10 53 54			05	9
		iS		54 23.4				
	15	PNS e(P)		10 59 01.6				
		LPB eP		10 59 06				
	15	LPB eP		11 39 28				
		S		50.5				
		PNS eP		11 39 26.7				
		S		49.5				
	15	PNS P		14 39 10				
	15	USCGS		22 43 45.5; 42.9N, 147.6E; m5.1				
		OFF COAST OF HOKKAIDO, JAPAN						
		PNS ePKP		23 03 12.4				139°5
		LPB ePKP		23 03 12.5				

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## AUGUST

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	16	CCH	P	00 51 40.0				
		LPB	P	00 51 41.8	C	1.0	244	
			i(S)	00 52 26.5				
		PNS	P	00 51 43.8	C			
	16	USCGS		01 14 03.4; 17.0N, 147.3E; h34 m5.0				
				MARIANA ISLANDS REGION				
		PNS	PKP	01 33 42.8		1.8	82	
		LPB	PKP	01 33 43.5		1.4	36	146°9
	16	PNS	e(P)	02 03 29				
		LPB	eP	02 03 30				
	16	PNS	P	04 12 23'6		0.4	4	
		LPB	P	04 12 24.3				
			S	53				
	16	LPB	eP	04 18 55				
		PNS	eP	04 18 57				
	16	PNS	eP	05 13 21				
		LPB	eP	05 13 22				
	16	USCGS		08 47 51.0; 43.2N, 147.6E; h48, m.4.9				
				KURILE IS.				
		PNS	ePKP	09 07 18				
		LPB	ePKP	09 07 17				139°5
	16	CCH	eP	07 01 58.5				
		LPB	eP	07 02 08.5				
		PNS	eP	07 02 12.8				
	16	CCH	eP	08 44 31.5				
		PNS	eP	08 44 34				
		LPB	P	08 44 35				
	16	LPB	eP	08 59 07				
		PNS	eP	08 59 09				
	16	USCGS		09 03 13.9; 43.9N, 148°5E, h40; m5.2				
				KURILE IS. REG.				
		LPB	ePKP	09 22 39				139°5
		PNS	ePKP	09 22 38.7				
	16	LPB	eP	11 30 52				
	16	PNS	eP	15 05 31				
	16	USCGS		15 15 32.7; 43.3, 147.6E; h60; m5.7				
				KURILE IS.				
		PNS	PKP	15 34 56.9		1.2	13	139°5
		LPB	ePKP	15 34 56.9				
	16	USCGS		17 13 44.0; 43.2N, 147.7E; h53; m5.4				
				KURILE IS.				
		LPB	ePKP	17 33 10				139°5
		PNS	ePKP	17 33 11				

## AUGUST

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	16	LPB	P	18 29 25.2				
			eL	31.2				
		PNS	iP	18 29 27.9	D		0.8	120 6°9
	16	USCGS		18 42 36.5; 10.9N, 72.5W; h44; m3.6				
				VENEZUELA				
		LPB	eP	18 48 18				
		PNS	eP	18 48 20				28°3
	16	PNS	P	18 52 17.8				
			S	40				
	16	LPB	P	19 17 51.3			0.8	15
		PNS	P	19 17 55				
	16	LPB	eP	22 47 39.6				
		PNS	eP	22 47 43.6				
	17	PNS	eP	04 13 26.4				
		LPB	eP	04 13 28.3				
	17	LPB	P	04 43 46			0.8	7
			S	44 36.2				
		PNS	P	04 43 50				
	17	USCGS		07 20 11.6; 29.5S; 71.2W; h51; m4.9				
				NEAR COAST OF CENTRAL CHILE				
		LPB	P	07 23 23			1.2	12 12°5
			i	30.8				
			eL	27.5				
		PNS	P	07 23 24.5			1.6	
			eL	27.4				
	17	USCGS		10 10 29.8; 7.0S; 155.6E; h66; m5.1				
				SOLOMON IS.				
		LPB	PKP	10 29 37.5			1.0	12 130°5
			e	33 03				
		PNS	PKP	10 29 37.8				
	17	CCH	iP	10 32 31	(Local)			
	17	PNS	ePKP	12 14 14.8				
			PP	17 43.8				
		LPB	PKP	12 14 16				
			PP	17 41				
	17	LPB	eP	12 34 18				
		PNS	eP	12 34 16.6	D			
	17	USCGS		12 31 46.9; 2.5N, 126.7E; h40; m5.3				
				MOLUCCA PASSAGE				
		LPB	ePKP	12 51 40				
		PNS	ePKP	12 51 45				159°3
	17	LPB	eP	13 30 48.7				
		PNS	P	13 30 51.7				
			S	31 21.4				
	17	LPB	eP	14 27 22				
		PNS	eP	14 27 26.6				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	17	USCGS		15 02 41.3	1.3N		122.6E; h42; m5.3	
			NORTHERN CELEBES					
		PNS	ePKP	15 22 44				161°2
			e	23 27				
	17	LPB	eP	19 00 53				
		PNS	P	19 00 55.8				
			S	01 26.4				
	17	PNS	eP	19 30 32.4				
		LPB	eP	10 30 37				
	17	USCGS		20 13 08.2	25.3N		109.2W; m5.7	
			GULF OF CALIFORNIA					
		PNS	eP	20 22 52				
			i	55				
			S	30 52				
			eL	41.3				
		LPB	P	20 22 56.4		1.0	70	58°
			i	25 49.2				
		CCH	eP	20 23 03.4				
			i	07.3				
	17	USCGS		20 14 58.9	25.0N		109.5W; m6.1	
			GULF OF CALIFORNIA					
		PNS	P	20 24 46.6				
			S	32 50				
			eL	43				
	17	LPB	P	20 24 50		1.7	252	58°
	17	USCGS		20 27 25.2	25.4N		109.2E; h18; m5.4	
			GULF OF CALIFORNIA					
		PNS	eP	20 37 13				
		LPB	P	20 37 17		1.3	25	58°
	17	USCGS		22 20 42.4	25.1N		109.7W; m4.7	
			GULF OF CALIFORNIA					
		PNS	eP	22 30 30.6				58°
		LPB	eP	22 30 33				
	18	USCGS		01 04 04.7	56.0S		123.4W; m5.1	
			EASTER ISLAND CORDILLERA					
		LPB	eP	01 13 47.5				57°3
			i	21 52				
			eG	28				
			eL	31				
		PNS	P	01 13 57.2				
			S	21 53				
			eG	28.5				
			eL	31.6				
		CCH	eP	01 14 03.2				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	18	USCGS		01 39 24.4	24.8N		109.2W; m4.9	
			GULF OF CALIFORNIA					
		PNS	P	01 49 10.8			1.4	
		LPB	P	01 49 13.4			1.0	12 58°
	18	USCGS		02 29 25.5	24.6N		109.1W; h29; m4.7	
			GULF OF CALIFORNIA					
		PNS	eP	02 39 10				
		LPB	eP	02 39 13				58°
	18	LPB	eP	02 53 11.5				
		PNS	e(P)	02 53 12.6				
	18	USCGS		02 55 31.1	56.0S		122.7W; m5.2	
			EASTER ISLAND CORDILLERA					
		PNS	eP	03 05 14				
			ePP	07 40				
		LPB	P	03 05 15.2			1.2	21 57°3
			PP	07 41.5				
	18	USCGS		03 21 54.0	24.9N		109.0W; h22; m5.3	
			GULF OF CALIFORNIA					
		PNS	eP	03 31 37.6			2.5	
			pP	47				
		LPB	eP	03 31 40				58°
	18	USCGS		03 54 49.8	24.8N		109.5W; m5.3	
			GULF OF CALIFORNIA					
		PNS	P	04 04 32.5				
		LPB	P	04 04 34.3				58°
	18	USCGS		04 04 37.4	7.5N		80.7W; h33; m4.4	
			PANAMA					
		LPB	P	04 10 16.5				27°
		PNS	P	04 10 13.8				
	18	LPB	eP	04 31 42				
			eS	32 14				
		PNS	eP	04 31 51.4				
			eS	32 27.1				
	18	USCGS		05 25 48.8	34.2N		140.7E; h46; m4.8	
			NEAR COAST OF HONSHU, JAPAN					
		LPB	PKP	05 45 30				148°5
		PNS	PKP	05 45 33.6				
	18	LPB	eP	07 25 06				
		PNS	eP	07 25 10.6				
			eS	26 16.4				
	18	USCGS		07 51 06.9	24.8N		109.5W; h29; m4.8	
			GULF OF CALIFORNIA					
		PNS	eP	08 00 52				
		LPB	P	08 00 54			1.0	15 58°

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	18	PNS	eP	08 51 19				
		LPB	eP	08 51 24.5				
	18	LPB	e(P)	10 24 46.5				
		PNS	eP	10 24 52.2				
	18	USCGS		11 43 30.5; 43.8N, 148.6E; h39, m5.4				
				KURILE IS. REG.				
		LPB	ePKP	12 02 54.5				139°5
			PP	30				
		PNS	ePKP	12 02 51.7				
			PP	06 28.7				
	18	PNS	eP	13 37 20				
		LPB	eP	13 37 26				
	18	USCGS		13 44 27.8; 20.0N, 64.2W; m4.0				
				NORTH ATLANTIC OCEAN				
		LPB	eP	13 51 30				36°5
		PNS	eP	13 51 31.3				
	18	USCGS		14 57 57.1; 29.9N, 67.5E; h15; m5.0				
				WEST PAKISTAN				
		LPB	ePKP	15 17 20				137°9
		PNS	ePKP	15 17 23				
	18	LPB	P	23 58 20	C	0.8	16	
			S	59 11				
		PNS	iP	23 58 23.6	D			
	19	LPB	eP	01 05 20				
		PNS	eP	01 05 23.8				
	19	USCGS		01 39 08.3; 6.5S, 105.3E; h50, m5.1				
				SUNDA STRAIT				
		LPB	ePKP	01 59 03.2				156°8
			e	30.5				
		PNS	ePKP	01 50 04				
			i	33.8				
	19	LPB	eP	02 03 10.5				
		PNS	eP	02 03 10.8				
	19	LPB	P	02 20 30				
		PNS	eP	02 20 33				
	19	PNS	e(P)	04 49 53.6				
	19	LPB	P	05 02 10.2				
		PNS	eP	05 02 11				
	19	PNS	eP	06 02 22.8				
			S	47				
		LPB	eP	06 02 25				
			S	48				
	19	PNS	eP	09 07 45				
			iS	08 08				
	19	USCGS		08 49 54.8; 43.8N, 148.2E; h39; m5.6				
				KURILE IS.				
		PNS	PKP	09 09 20				
		LPB	PKP	09 09 21		1.0	14	138°9

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	19	USCGS		09 30 13.5; 43.6N, 148.2E; h45; m4.6				
				KURILE IS.				
		PNS	ePKP	09 49 39.3				
		LPB	ePKP	09 49 40				138°9
	19	PNS	e(P)	10 31 11.6				
		LPB	eP	10 31 14.5				
	19	LPB	iP	11 00 59.0	D			
			S	01 24				
		PNS	iP	11 00 59	D			
	19	PNS	iP	14 41 31.5	D			
			iS	53.8				
	19	USCGS		15 40 39.9; 41.9S, 71.2N; h14, m5.0				
				SOUTH CHILE-ARGENTINA BORDER REGION				
		PNS	eP	15 46 10.9				
			eL	56.1				
		LPB	eP	15 46 13.7			1.5	38
			L	55.8				25°3
	19	PNS	eP	16 14 21.7				
		LPB	eP	16 14 22.7				
	19	PNS	iP	16 24 37.5	D			
			S	25 00				
		LPB	iP	16 24 39.4	D			
	19	PNS	eP	16 39 35				
		LPB	eP	16 39 39				
	19	PNS	eP	17 31 10.6				
			eS	32 38.5				
		LPB	eP	17 31 13.5				
	19	USCGS		17 16 07.3; 56.7S, 142.1W; m4.4				
				SOUTH PACIFIC CORDILLERA				
		LPB	eP	17 37 00				67°4
		PNS	eP	17 37 07.4				
	19	PNS	eP	18 01 56.5				
		LPB	eP	18 01 59				
	19	PNS	eP	23 06 07.5				
		LPB	P	23 06 12				
	20	PNS	eP	01 25 16.4				
			S	39.2				
	20	LPB	e(P)	03 23 56				
	20	USCGS		06 32 49.7; 11.4S, 77.7W; h35; m4.6				
				OFF COAST OF PERU				
		PNS	eP	06 35 05				
			i	14.6				
			eS	37 30				
			eL	39.1				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
AUGUST	20	LPB	eP i eS e(L)	06 35 13 37 21 37 35 38.8				9°S	
	20	LPB	eP	07 23 30.5					
	20	USCGS KURIDE IS		07 50 05.5; 47.9N, 153.6E; h73; m5.8					
		LPB	ePKP e	08 09 15 45.3					
		PNS	ePKP e	08 09 16 46.2					
	20	PNS	eP S	09 32 04.3 27.4					
	20	PNS	eP S	10 54 49 55 12					
		LPB	eP	10 54 53					
	20	USCGS		11 23 35.5; 24.6N, 141.8E; h95; m5.2					
			VOLCANO ISLANDS REGION						
		PNS	ePKP i	11 43 13.4 19.2					
		LPB	ePKP i	11 43 14.4 20				151°O	
	20	PNS	eP	13 12 20.9					
	20	PNS	eP	15 31 08.8					
		LPB	eP	15 31 10					
	20	PNS	eP	16 36 43					
	20	USCGS		16 33 43.7; 39.4N, 144.5E; h35; m4.6					
			OFF COAST OF HONSHU, JAPAN						
		PNS	ePKP	16 53 15					
		LPB	ePKP	16 53 18				1443°4	
	20	USCGS		17 22 13.7; 149.7E, 5.3S; h27; m4.8					
			NEW BRITAIN REGION						
		PNS	ePKP	17 41 32.4				139°4	
	20	LPB	P S	20 16 49.3 17 22.8		0.9	187		
		PNS	eP i S	20 16 52.6 56.7 36.1					
	20	PNS	eP	21 09 28.4					
		LPB	eP	21 09 32					
	20	LPB	eP	21 27 43					
		PNS	eP	21 27 43.5					
	20	PNS	eP	21 36 14					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
AUGUST	20	PNS LPB	eP eP	23 15 20.4 23 15 25					
	20	PNS	eP S	23 19 10.8 41.4					
	20	PNS	P	23 20 18	D				
		LPB	iP	23 20 24	D	0.8	67		
	20	PNS	eP eS	23 49 16.6 40					
	21	PNS	eP	00 05 15.4					
		LPB	P	00 05 20					
	21	LPB	P	00 25 00					
		PNS	S	00 25 44.6					
		PNS	S	00 25 01					
	21	PNS	P S S	00 29 15 38 38					
		LPB	P	00 29 20					
	21	USCGS		00 28 36.8; 43.2N, 148.2; h50; m4.8					
			KURILE IS. REG.						
		PNS	ePKP	00 48 11					
		LPB	ePKP	00 48 13				139°S	
	21	PNS	eP S	02 05 27 49.4					
	21	LPB	eP P	02 05 31.7 02 10 24.6					
		PNS	S	02 10 53.3		0.5	16		
		PNS	eP eS	02 10 33 11 04.8					
	21	PNS	eP eS	02 32 26 48.5					
	21	LPB	eP	02 32 31					
		LPB	eP eS	02 56 31 57 24					
		PNS	eP S	02 56 32.8 57 19.6					
	21	USCGS		02 44 01.3; 43.0N, 147.3E; h36; m5.6					
			KURILE IS.						
		PNS	ePKP	03 03 31.6					
		LPB	ePKP	03 03 33.5				139°S	
	21	USCGS		03 32 11.5; 43.2N, 147.0E; h35; m5.1					
			KURILE IS.						
		LPB	ePKP	03 51 39.5					
		PNS	ePKP	03 51 40				139°S	
	21	LPB	eP e	04 00 32 02 00					
		PNS	eP	04 00 36.2					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	21	USCGS		04 47 27.2; 42.9N, 147.2E; h35;m4.6				
				OFF COAST OF HOKKAIDO, JAPAN				
		PNS	ePKP	05 07 10.6				
		LPB	ePKP	05 07 13.6				140°4
	21	PNS	eP	06 21 56.8				
			S	22 19				
		LPB	eP	06 22 03				
	21	LPB	P	06 33 39		0.7	7	
		PNS	eP	06 33 42				
			S	35 11.6				
	21	PNS	P	07 08 13.8				
			S	37.8				
	21	PNS	e(P)	08 10 53.4				
		LPB	eP	08 10 56.5				
	21	PNS	eP	09 39 31				
		LPB	eP	09 39 32				
	21	LPB	eP	09 50 43				
		PNS	eP	09 50 48.8				
			eS	52 13				
	21	USCGS		10 27 31.0; 59.9S; 27.7W; h126 ; m5.1				
				SOUTH SANDWICH IS. REG.				
		LPB	P	10 36 31.5		1.0	26	82°4
		PNS	P	10 36 34.3	D	0.8		
	21	LPB	eP	11 02 14				
			S	48.5				
		PNS	eP	11 02 22.2				
			S	03 07				
	21	USCGS		13 10 47.4; 17.3N, 105.4W; m4.9				
				OFF COAST OF JALISCO, MEXICO				
		LPB	eP	13 19 39.8				50°9
		PNS	P	13 19 45				
	21	USCGS		13 21 56.6; 36.3N, 140.8E; h67; m4.4				
				NEAR COAST OF HONSHU, JAPAN				
		LPB	ePKP	13 41 28				144°
		PNS	ePKP	13 41 24				
	21	USCGS		14 25 51.5; 23.2N, 110.6W; h15; m5.3				
				BAJA CALIFORNIA				
		PNS	P	14 35 37.9		1.0	31	
		CCH	eP	14 35 51.1				
		LPB	P	14 35 41.5		1.2	79	57°8
	21	PNS	eP	14 36 51.4				
			S	37 19.7				
	21	LPB	eP	20 02 50				
		PNS	P	20 02 52.5				
	21	PNS	eP	21 01 27				
			S	58.2				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	21	USCGS		21 09 45.6; 22.9N, 110.8W; m4.7				
				OFF COAST OF BAJA CALIFORNIA				
		PNS	P	21 19 30.5			1.0	12
		LPB	P	21 19 33.3			1.0	20
	21	PNS	P	22 39 40.3	D		0.4	8
		LPB	eP	22 39 43				
	22	PNS	eP	02 33 04				
		LPB	eP	02 33 06.7				
	22	CCH	P	05 15 15.6				
		LPB	P	05 15 19.5			1.0	10
		PNS	P	05 15 23				
	22	PNS	P	06 58 55.6	D		0.5	7
		LPB	P	06 53 56	D		0.5	14
	22	LPB	e(P)	08 20 46.5				
	22	USCGS		09 46 48.3; 14.3S, 73.3W; h93; m4.2				
				PERU				
		PNS	eP	09 48 04.4				
		LPB	P	09 48 10				5°5
		CCH	P	09 48 33.9				
	22	USCGS		10 04 36.4; 23.3N, 110.4W; h11; m5.5				
				BAJA CALIFORNIA				
		PNS	iP	10 14 23.2	C		1.0	
		LPB	P	10 14 23.2			1.0	60
		CCH	p	10 14 35.9				57°4
	22	CCH	iP	10 32 34.0				
		LPB	eP	10 32 50				
		PNS	eP	10 32 50.8				
	22	USCGS		12 59 47.3; 8.5S, 77.0W; h28; m4.5				
				PERU				
		PNS	eP	13 02 30.6				
		LPB	eP	13 02 37				
	22	USCGS		15 45 04.7 ; 7.6S; 156.0E; h80; m5.1				
				SOLOMON ISLANDS				
		PNS	ePKP	16 04 11.4			1.0	
		LPB	ePKP	16 04 11.6			1.0	32
								129°9
	22	PNS	eP	16 13 42.4				
		LPB	eP	16 13 46				
	22	PNS	eP	16 30 14.2				
		LPB	eP	16 30 25				
	22	PNS	eP	23 21 12				
			eS	35.8				
	23	USCGS		02 54 18.9; 39°7N; 144°3E; h37; m5.2				
				OFF COAST OF HONSHU, JAPAN				
		CCH	PKP	03 13 53.0				
		LPB	ePKP	03 13 50.5				
		PNS	ePKP	03 13 53.4				143°1

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	23	PNS LPB	eP eP	03 47 13 03 47 15				
	23	CCH	P	04 09 03.4				
	23	CCH LPB PNS	P P P	04 14 52.2 04 14 59.6 04 15 03.2				
	23	PNS	e(P)	05 01 38.8				
	23	USCGS		06 39 21.5; 39.8N, 144.2E; h33; m5.2				
				OFF EAST COAST OF HONSHU, JAPAN				
		LPB PNS CCH	ePKP ePKP PKP	06 58 55 06 58 56 06 58 58.7				143°1
	23	USCGS		06 47 49.7; 44.0N, 148.2E; h35; m4.8				
				KURILE IS.				
		PNS LPB	ePKP ePKP	07 07 14.6 07 07 15.2				
	23	USCGS		07 54 27.1; 7.6S; 166.3E; h55; m5.0				
				SOLOMON IS.				
		PNS LPB	ePKP ePKP	08 13 35.3 08 13 35.5		1.0 1.0	12 14	130°5
	23	PNS LPB	eP eP	10 23 14.2 10 23 19				
	23	USCGS		12 02 58.1; 6.8N; 72.9W; h 180; m 4.6				
				NORTHERN COLOMBIA				
		PNS LPB	eP eP	12 07 53.7 12 07 55				23°4
	23	PNS LPB	iP P S	16 11 49.3 12 15.6 16 11 52.5 12 22.5				D
	23	PNS LPB	P eP	16 22 17.3 16 22 18.3				C
	23	USCGS		16 41 29.8; 14.0N, 92.8W; h65; m4.0				
				OFF COAST OF CHIAPAS, MEXICO				
		PNS	eP	16 49 02				38°5
	23	PNS LPB	P eP	18 26 26.3 18 26 17.6		07	12	
	23	LPB	eP	19 02 19				
	23	USCGS		19 05 11.8; 53.5S, 25.9E; h33; m5.2				
				SOUTH AFRICA				
		LPB PNS	P eP	19 17 19 19 17 20		1.0	9	79°
	23	LPB PNS	eP P	19 32 00 19 32 00.6				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	23	USCGS IRAN		19 16 17.7; 33.9N, 58.9E; h32; m5.1				
		PNS	ePKP	19 35 27				
	23	PNS LPB	eP eP	22 20 37 22 20 41				
	23	PNS	eP S	22 56 05.6 30				
	23	LPB PNS	eP eP	23 43 39.5 23 43 42				
	24	LPB	eP	00 44 05.6				
	24	PNS	iP iS	01 09 56.1 10 25.6				D
		LPB	P S	01 10 00 32.7			0.9	15
	24	USCGS		01 12 05.1; 39.6N, 144.5E; h35; m4.7				
				OFF EAST COAST OF HONSHU, JAPAN				
		LPB PNS LPB	eP ePKP eP P	01 31 21 01 31 24 02 29 52 02 30 09.5				143°6
			e(S)	33 51.6				
	24	PNS	P iS	02 33 25.6 52.7				
	24	PNS	P S	02 37 39.7 38 09.8				
	24	LPB	eP	02 39 09.5				
	24	USCGS		03 33 58.6; 43.4N; 147.4E; h 60; m4.6				
				KURILE IS.				
		PNS LPB	ePKP ePKP	03 53 31 03 53 32				139°5
	24	USCGS		09 31 26.2; 61.3S, 154.2E; h15; m5.1				
				BALLENY IS, REG.				
		CCH LPB PNS	P P P	09 44 48.3 09 44 51.5 09 44 52				96°6
	24	USCGS		10 46 36; 7.7S; 127.5E; h135; m5.7				
				BANDA SEA				
		LPB PNS	PKP PKP	11 06 17.6 11 06 18.4			1.0	18
	24	USCGS		12 39 30.1; 7.3S; 148.1E; h39; m4.7				
				EAST NEW GUINEA REGION				
		LPB	eP	12 58 51				137°
	24	PNS	eP	18 51 42				



AUGUST

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	24	PNS CCH	eP P	18 51 42 18 52 08.5				
	24	PNS	eP	14 50 04.5				
	24	CCII	eP	21 36 39.1				
	24	USCGS		22 03 03.8; 39.8N, 144.3E; h32 ; m5.4				
				OFF EAST COAST OF HONSHU, JAPAN				
	24	LPB PNS	ePKP ePKP i	22 22 27.2 22 22 33 39				143°8
	24	LPB PNS	eP eP	22 47 11 22 47 19.4				
	25	USCGS		01 06 20.1; 38.7N; 144.4E; h35; m4.9				
				OFF COAST OF HONSHU, JAPAN				
		LPB PNS	ePKP ePKP	01 25 51 01 25 53				143°
	25	PNS	eP S	01 26 57.4 27 21.4				
	25	PNS	P S	02 02 38.7 03 04				
	25	USCGS		02 38 07.8; 39.2S, 71.9W; h13; m4.7				
				SOUTH ARGENTINA-CHILE BORDER REGION				
		LPB PNS	P eP	02 43 13 02 43 13		1.0	34	22°5
	25	LPB PNS	eP eP	08 01 14.5 08 01 06				
	25	PNS	P	16 40 54.2		0.5	3	
	25	USCGS		17 02 55.3; 17.1N; 61.5W; h65; m4.8				
				LEEWARD ISLANDS				
		PNS LPB	eP eP	17 09 33 17 09 35				34°9
	25	PNS	eP	17 44 42.4				
	25	PNS LPB	ePKP ePKP	19 27 14.4 19 27 15				150°8
	25	USCGS		21 32 13.5; 126.0E; 0.4N; h33; m5.1-4.7				
				MOLUCCA PASSAGE				
		LPB PNS	PKP i PKP	21 52 12 49.2 21 52 13.2		1.2	18	153°
	25	PNS LPB	eP eP	22 41 53.8 22 41 58				

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AUGUST

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	26	PNS LPB	iP eP	00 10 26.8 00 10 27	D	0.5	20	
	26	LPB	eP	03 11 29				
	26	USCGS		03 14 59.3; 7.4S; 156.0E; h100; m4.8				
				SOLOMON IS.				
		PNS LPB	ePKP PKP	03 34 03 03 34 04		1.0	10	130°2
	26	LPB	eP	03 46 02.5				
	26	LPB	P	04 49 38				
	26	PNS	eP	06 24 57.6				
	26	LPB PNS	eP eP S	09 16 15 09 16 16.4 53				
	26	PNS LPB	e(P) eP	09 57 01 09 57 05.5				
	26	PNS	P S	12 49 10.3 32.6				
	26	PNS	P iS	13 08 51.4 09 17.4				
	26	PNS	e(P)	14 43 44.6				
	26	USCGS		16 58 02.3; 5.8S, 151.2E; h59; m5.6				
				NEW BRITAIN REGION				
		PNS	ePKP i PKS	17 17 01.4 20 21 00				
		LPB	ePKP	17 17 04.5				135°4
	26	PNS	P S	17 56 37.4 57.2				
	26	USCGS		19 13 13.1; 6.1S, 148°0E; h88 ; m4.9				
				NEW BRITAIN REG.				
		PNS LPB	ePKP e ePKP e	19 32 20 32.4 19 32 24 32				137°8
	26	PNS LPB	eP eP	19 36 01 19 36 04				
	26	PNS	eP	22 32 10				
	26	USCGS		23 39 06.4; 39.8N, 144.3E; h35; m4.9				
				OFF EAST COAST OF HONSHU, JAPAN				
		LPB PNS	ePKP ePKP	23 58 37 23 58 43.6				143°6
	27	LPB	eP	02 31 08				

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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	27	USCGS 01 12		55.2; 43.4N, 147.7E; h60; m5.1				
		KURILE IS.						
		PNS	PKP	02 32 47				139°7
		LPB	PKP	02 32 51.5				
		CCH	ePKP	02 32 54.8				
	27	USCGS 03 26		16.1; 43.7N, 147.6E; h50, m5.0				
		KURILE IS.						
		PNS	ePKP	03 45 40.6		1.0	10	139°7
		LPB	ePKP	03 45 41				
	27	USCGS 03 32		37.7; 43.7N, 147.4E; h50; m4.9				
		KURILE IS.						
		PNS	ePKP	03 52 02.7				139°8
		LPB	ePKP	03 52 03.5				
	27	USCGS 03 57		59.0; 57.4S; 26.3W; h97; m5.4				
		SOUTH IS. REG						
		CCH	P	04 06 39.5				
		LPB	P	04 06 55		0.7	12	51°2
		PNS	P	04 06 59				
	27	LPB	eP	05 28 31				
		PNS	eP	05 28 32.6				
	27	PNS	eP	05 51 27.8				
		LPB	eP	05 51 33				
	27	LPB	eP	08 56 11				
	27	LPB	eP	09 12 51.5				
		PNS	P	09 12 54.6				
	27	PNS	eP	13 12 10.4				
		LPB	eP	13 12 13.5				
	27	USCGS 13 23		12.5; 4.3S, 104.6E; h188; m5.6				
		SOUTHERN SUMATRA						
		LPB	ePKP	13 42 50.8				158°0
			iPKP2	43 26				
			ePP	47 08				
		PNS	ePKP	13 42 51				
			PKP2	43 27.8				
			ePP	47 08				
	27	USCGS 15 55		44.1; 17.3S; 70.1W; h152; m4.9				
		NEAR COAST OF PERU						
		PNS	iP	15 56 19	D			2°1
		LPB	P	15 56 22	D			
	27	PNS	eP	18 52 11				
			eS	53 58.6				
	27	PNS	P	19 37 38.2				
			S	38 06.5				
	27	USCGS 19 23		10.6; 28.7N, 143.8E; h20; m5.4				
		BONIN IS. REG.						

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	27	PNS	PKP	19 42 55.5				
			i	58				
		LPB	PKP	19 42 56		1.0	32	148°1
		CCH	eP	19 42 56.5				
			i	43 01.4				
	27	USCGS 16 51		02.7; 34.9N, 141.1E; h67; m5.0				
		OFF EAST COAST OF HONSHU, JAPAN						
		PNS	ePKP	20 10 40.6				148°2
		LPB	ePKP	20 10 43.5				
	27	LPB	P	23 02 40				C
		PNS	iP	23 02 43.6				C
	27	LPB	eP	23 27 15				
		PNS	P	23 27 20				
	28	PNS	eP	00 28 43				
		LPB	eP	00 28 45.5				
	28	PNS	eP	01 09 32.5				
			iS	54.6				
	28	LPB	eP	03 38 17.5				
		PNS	eP	03 38 18.8				
	28	USCGS 03 58		34.8; 39.1N, 73.6E; h20; m5.1				
		TADZHIK-SINKINAG BORDER REGION						
		LPB	ePKP	04 18 12				140°0
		PNS	ePKP	04 18 13.5				
	28	USCGS 04 06		21.9; 39.2N, 73.9E; h26; m5.1				
		TADZHIK-SINKIANG BORDER REGION.						
		PNS	ePKP	04 25 53				
	28	LPB	eP	05 46 30				
			eP	05 46 32.8				
	28	LPB	eP	00 25 53.5				
			S	26 18				
		PNS	eP	06 25 54.1				
			S	26 17.5				
	28	USCGS 07 59		01.5; 23.9S 66.7W; h199; m4.0				
		JUJUY PROVINCE, ARGENTINA						
		LPB	P	08 00 50				
		PNS	eP	08 00 53.6				
			S	02 20				
	28	LPB	eP	08 29 09				
		PNS	e(P)	08 29 12				
	28	USCGS 08 33		29.7; 8.0S, 80.4W; h20; m4.2				
		OFF COAST OF NORTHERN PERU						
		LPB	eP	08 37 01.5				14°6
			eL	41.6				
		PNS	eP	08 37 02.6				
			eS	41 40				
			eL	42.5				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	28	LPB	eP	10 41 26				
	28	LPB	eP	12 04 38				
		PNS	eP	12 04 42.2				
	28	USCGS 13 54 11.0; 31.5S, 177.9W; h29; m5.3-5.9 KERMADEC IS.						
		PNS	eP	14 07 49				
			SKS	18 20				
			L	39.7				
	28	LPB	eP	14 07 52.5				97°3
			SKS	18 24				
			L	39.8				
	28	LPB	eP	19 11 08.6				
		PNS	eP	19 11 09				
	28	USCGS 21 35 23.4; 43.5N, 147.7E; h52; m4.9 KURILE IS.						
		LPB	ePKP	21 54 48				140°2
		PNS	ePKP	21 54 53				
	28	PNS	P	22 13 59.1	C			
			S	14 31				
		LPB	P	22 14 04				
			S	40.6				
	29	PNS	iP	03 00 17.4	D			
			iS	42.2				
		LPB	eP	03 04 20				
			S	47.2				
	29	PNS	P	05 01 33.4	C			
			S	02 04.5				
		LPB	iP	05 01 36.8	C	0.6	4	
			eS	02 10.4	C			
	29	USCGS 05 25 35.1; 4.4N, 74.0W; h33; m4.0 COLOMBIA						
		PNS	eP	05 30 21				22°4
		LPB	eP	05 30 25				
	29	LPB	P	07 25 57		1.0	10	
		PNS	eP	07 25 57.8				
	29	LPB	P	07 49 48.4		1.0	60	
		PNS	P	07 49 50.8				
	29	LPB	P	09 02 42.5				
			e	03 08.5				
		PNS	eP	09 02 42.6				
	29	USCGS 10 02 49.6; 26.3N, 96.1E; h73; m5.4 BURMA						
		LPB	PKP	10 22 46		1.0	30	162°5
		PNS	PKP	10 22 46		1.4	40	



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	29	PNS	e(P)	11 18 22.4				
	29	LPB	eP	13 42 11.2			1.0	20
			S	47				
		PNS	P	13 42 11.8				
			S	51				
	29	LPB	eP	15 41 35				
	29	LPB	eP	22 26 00				
			S	35				
		PNS	eP	22 26 03				
			S	37.2				
	29	LPB	eP	22 48 37.2				
		PNS	eP	22 48 38				
	30	USCGS 01 26 29.5; 1.1S; 90.8W; h33; m5.5 GALAPAGOS IS.						
		PNS	P	01 32 08.2				
		LPB	P	01 32 13			1.2	40
								27°1
	30	PNS	e(P)	01 57 42				
		LPB	eP	01 57 42.5				
	30	USCGS 02 14 57.4; 21.9S, 62.2W; h96; m4.5 CHILE BOLIVIA REGION						
		LPB	eP	02 16 23				5°4
		PNS	P	02 16 25.4				
	30	LPB	P	03 03 27			1.0	10
		PNS	eP	03 03 28.4				
	30	PNS	eP	05 49 05.8				
		LPB	eP	05 49 07				
	30	USCGS 06 11 17.9; 19.9S, 70.4E; h21; m4.3 NEAR COAST OF NORTHERN CHILE						
		LPB	P	06 12 20.7	C		3.0	21
		PNS	P	06 12 21				4°0
			i	25.6				
	30	LPB	eP	07 02 10				
		PNS	eP	07 02 10				
	30	USCGS 06 52 34.7; 43.9N, 147.9E; h38, m5.0 KURILE IS.						
		LPB		07 12 00				139°4
		PNS		07 12 00.2				
	30	USCGS 07 11 39.5; 43.7N, 147.8E; h33; m5.4 KURILE IS.						
		LPB	ePKP	07 31 01				139°4
		PNS	ePKP	07 31 06				

AUGUST

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	30	USCGS 07 41		43.4; 43.7N, 147.9E; h33; m5.0				
		KURILE IS.						
		PNS	ePKP	08 01 10				139°4
		LPB	ePKP	08 01 11				
	30	USCGS 07 54		29.5; 43.4N, 146.5E; h43; m5.5				
		KURILE IS.						
		PNS	ePKP	08 13 50.0				140°5
			i	57				
		LPB	ePKP	08 13 51.5				
	30	USCGS 08 28		06.5; 43.6N, 147.8E; h33; m5.4-5.8				
		KURILE IS.						
		PNS	ePKP	08 47 32.6		1.0	15	139°4
		LPB	PKP	08 47 34				
	30	PNS	eP	09 23 56.3				
		LPB	eP	09 23 57				
	30	LPB	eP	09 35 14				
	30	LPB	eP	10 53 10				
		PNS	eP	10 53 12.5				
	30	USCGS 12 51		57.9; 5.7, 148.3E; h167; m5.2				
		NEW BRITAIN REG.						
		PNS	ePKP	13 10 53.2				138°0
		LPB	ePKP	13 10 55				
	30	USCGS 15 52		27.4; 26.9S, 26.9E; h14; m5.5				
		REPUBLIC OF SOUTH AFRICA						
		LPB	eP	16 05 18.5				87°0
		PNS	eP	16 05 19.4				
	30	USCGS 16 06		53.5; 14.2S, 73.3W; h92; m4.6				
		PERU						
		PNS	iP	16 08 10.6				5°4
		LPB	eP	16 08 16.2				
	30	LPB	eP	16 33 29				
		PNS	eP	16 33 31.6				
	30	PNS	p	18 53 35.5				
			iS	59				
	30	USCGS 18 53		24.2; 27.2S, 63.2W; h563; m4.2				
		SANTIAGO DEL ESTERO PROVINCE, ARGENTINA						
		LPB	eP	18 55 58				11°3
			i	58 15				
		PNS	eP	18 56 03.2				
			i	58 20				
	30	LPB	eP	20 06 13.2				
		PNS	eP	20 06 16				
	30	LPB	P	22 13 35		0.5	14	
				22 13 38.2				
				100				

AUGUST

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
AUGUST	30	LPB	P	22 13 35			0.5	14
		PNS	P	22 13 38.2				
	30	LPB	P	23 34 55.4			1.0	20
		PNS	P	23 34 58.6			1.0	17
	31	USCGS 23 55		49.5; 3.4S, 139.9E; h30; m5.1				
		WEST NEW GUINEA						
		PNS	PKP	00 15 29.5				
		LPB	PKP	00 15 30			1.3	22
		CCH	PKP	00 15 30.5				146°1
	31	LPB	eP	04 27 50.5				
		PNS	eP	04 27 51				
	31	LPB	eP	05 21 44				
		PNS	eP	05 21 41				
			eS	22 04.6				
	31	LPB	eP	05 44 39.5				
		PNS	eP	05 44 47.7				
	31	PNS	eP	08 12 33.2				
		LPB	eP	08 12 34				
	31	LPB	P	10 01 55.5			1.0	32
		PNS	P	10 01 59.3			1.0	32
	31	LPB	P	10 08 06.6			1.0	14
		PNS	P	10 08 09.6			1.0	15
	31	LPB	eP	10 26 43				
		PNS	eP	10 26 46.8				
	31	USCGS 13 05		08.6; 4.5S; 102.3E; h64; m5.5				
		SOUTHERN SUMATRA						
		PNS	ePKP	13 25 01.4				
			e	33.8				
		LPB	ePKP	13 25 08.6				156°8
	31	USCGS 14 25		15.0; 33.3S; 68.9W; h154; m4.1				
		MENDOZA PROVINCE, ARGENTINA						
		LPB	eP	14 29 01.7				16°4
		PNS	eP	14 29 05.2				
	31	LPB	eP	15 14 54				
	31	PNS	P	15 57 22				
		LPB	P	15 57 28.5			0.7	18
			S	58 27.5				
	31	PNS	iP	19 48 05.4				
		LPB	eP	19 48 05.5				
				101				



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MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
AUGUST	31	PNS	iP	19 48 05.4	D				
		LPB	eP	19 48 05.5					
	31	PNS	eP	22 31 23					
		eS		32 23					
	31	USCGS		23 46 33.4; 17.7N, 101.5W; h72; m5.0 NEAR COAST OF GUERRERO, MEXICO					
		PNS	eP	23 54 57					
		LPB	P	23 55 00		1.0	14	47°4	
		CCH		23 55 11.9					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
SEPTEMBER	1	PNS	eP	00 00 26					
	1	LPB	eP	00 48 28					
		PNS	eP	00 48 30					
	1	PNS	eP	01 19 09					
	1	USCGS		03 26 00.2; 11.9N, 125.6E; h58; m5.0 SAMAR, PHILIPPINE IS.					
		PNS	ePKP	03 46 03.4					
		LPB	ePKP	03 46 03.5				166°5	
	1	PNS	eP	04 09 22.6					
	1	USCGS		04 35 22.8; 39.6S, 16.2W SOUTH ATLANTIC RIDGE					
		LPB	eP	04 44 20				50°5	
		PNS	eP	04 44 22.5					
	1	PNS	e(P)	06 47 38.4					
		LPB	e(P)	06 47 40					
	1	USCGS		08 14 55.1; 58.9S, 149.1E; h--; m5.1 WEST OF MACQUARIE IS.					
		PNS	eP	08 28 29					
		LPB	eP	08 28 32				98°7	
	1	LPB	eP	08 55 02.8					
		PNS	eP	08 55 06.4					
	1	USCGS		09 45 57.6; 40.5N, 143.8E; h--; m5.0 OFF EAST COAST OF HONSHU, JAPAN					
		PNS	ePKP	10 05 31					
		LPB	ePKP	10 05 32				143°8	
	1	USCGS		09 49 52.0; 43.5N, 147°6E; h--; m5.3 KURILE IS.					
		PNS	ePKP	10 09 22.2					
		LPB	ePKP	10 09 29				139°8	
	1	LPB	eP	12 37 20.8					
		PNS	eP	12 37 23.8					
	1	LPB	eP	12 48 04					
		PNS	eP	12 48 06.7					
	1	LPB	eP	16 17 13.5					
		PNS	iP	16 17 13.5					
		S		38.6					
	1	USCGS		18 03 12.1; 3.8S, 80.6W; h57; m4.7 PERU-ECUADOR BORDER REGION					
		PNS	eP	18 07 11.8					
		LPB	eP	18 07 16.6				18°	
		CCH	eP	18 07 35.4					
	1	PNS	e(P)	19 06 45					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	1	PNS	P	20 26 51.4				
	1	LPB	eP	22 44 49.8				
		PNS	P	22 44 52				
	2	USCGS 03 47 09.1; 27.7S, 66.5W; h174; m5.5 CATAMARCA PROVINCE, ARGENTINA						
		CCH	P	03 49 30.8	C			
		LPB	P	03 49 46.5		1.0	45	
		PNS	P	03 49 50	C			
	2	LPB	eP	07 42 58				
	2	PNS	eP	11 24 30.5				
	2	PNS	eP	12 01 22.4				
		LPB	eP	12 01 24				
	2	USCGS 12 07 16.5; 36.3, 137.7E; h10; m4.5 HONSHU, JAPAN						
		PNS	ePKP	12 26 55				
		LPB	ePKP	12 27 00				152°1
	2	USCGS 12 37 05.6; 29.8N, 137.3E; h48.6; m4.4 SOUTH OF HONSHU, JAPAN						
		PNS	ePKP	12 56 08				
	2	PNS	eP	16 30 41.4				
		LPB	eP	16 30 47				
	2	USCGS 16 35 40.8; 17.8S, 72.5W; h36; m5.0 NEAR COAST OF PERU						
		PNS	iP	16 36 40.8	C			
		LPB	P	16 36 44.6	C			
		CCH	iP	16 37 03.2	C			
	2	LPB	eP	16 56 21				
		PNS	eP	16 56 22.8				
	2	PNS	eP	17 19 48.2				
	2	CCH	eP	17 24 19.8				
		PNS	eP	17 24 58				
		LPB	eP	17 25 02				
	2	LPB	P	17 33 13				
	2	PNS	e(P)	20 05 40.8				
	2	USCGS 20 39 39.9; 55.6S, 26.9W; h--; m5.4 SOUTH SANDWICH IS. REG.						
		LPB	eP	20 48 34				
		PNS	P	20 48 38	C	0.8	22	50°5
	2	PNS	eP	20 56 37.2				
	2	PNS	eP	22 02 08.2				
		LPB	eP	22 02 09				
	2	PNS	eP	23 08 34.4				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	3	USCGS 01 32 00 .8; 4.4N, 128.4E; h58; m5.2 NORTH OF HALMAHERA						
		LPB	ePKP	01 51 50				
		PNS	ePKP	01 51 52				160°1
	3	USCGS 03 50 04.5; 8.5S, 108.3W; h--; m4.3 NORTHERN EASTER I. CORDILLERA						
		PNS	eP	03 57 35.8				
			e	59 46				
		LPB	eP	03 57 38				
		CCH	eP	03 57 51.9				39°6
	3	PNS	eP	04 45 32				
		LPB	eP	04 45 36				
		CCH	eP	04 46 01.9				
	3	PNS	eP	06 42 25				
			eS	49.6				
	3	PNS	iP	09 28 50.6	C			
		LPB	eP	09 28 51.6	C			
		CCH	iP	09 29 12.6	C			
	3	USCGS 12 19 03.5; 21.9S, 68.3W; h119; m4.4 CHILE-BOLIVIA BORDER REGION.						
		CCH	P	12 20 16.5	D			
		PNS	iP	12 20 26.7	D	0.9	55	
		LPB	eP	12 20 27				6°7
	3	PNS	eP	15 24 24.4				
			eS	25.50				
	3	PNS	eP	15 28 46.8				
	3	PNS	eP	16 36 49				
	3	USCGS 16 20 21.5; 31.5N, 140.2E; h16; m5.3 SOUTH OF HONSHU, JAPAN						
		PNS	ePKP	16 40 12				148°2
			i	16.8				
		LPB	ePKP	16 40 18				
		CCH	ePKP	16 40 19.0				
	3	PNS	eP	19 24 14.5				
			S	38				
	3	USCGS 22 09 23.1; 32.9N, 131.2E; h98; m4.8 KYUSHU, JAPAN						
		LPB	ePKP	22 29 06.5				
		PNS	ePKP	22 29 07				156°1
	3	PNS	eP	22 34 49				
			e	56.8				
		LPB	P	22 34 50.7				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	4	USCGS 00 07 37.9; 22.1S, 68.6W; h115; m4.1 NORTHERN CHILE						
		CCH	eP	00 08 53.7				
		i		55.7				
		LPB	eP	00 09 00.6				5°4
		i		20.6				
		PNS	eP	00 09 02		1.0	28	
	4	CCH	eP	00 16 06.7				
		LPB	eP	00 16 20				
		PNS	eP	00 16 22				
	4	PNS	eP	01 16 52.2				
		i		17 00				
		LPB	P	01 16 54.6				
	4	PNS	eP	01 59 17.2				
		LPB	eP	01 59 21.5				
	4	LPB	P	02 21 22.6				
		PNS	iP	02 21 24.8				C
	4	USCGS 03 08 52.0; 46.6N, 153.5E; h--; m5.4 KURILE IS.						
		CCH	eP	03 28 00.7				
		PNS	ePKP	03 28 09.2		1.4	31	
		LPB	PKP	03 28 10				134°
	4	PNS	eP	05 32 01.5				
	4	USCGS 06 25 28.1; 13.2N, 88.4W; h53; m4.6 EL SALVADOR						
		PNS	eP	06 32 21.4		0.8	11	
		LPB	eP	06 32 24.5				36°9
		CCH	P	06 32 37.8				
	4	CCH	P	07 15 51.6				
		LPB	P	07 16 00				
		PNS	P	07 16 01.6		0.7	9	
	4	PNS	eP	09 10 58.4				
	4	USCGS 10 08 21.8; 19.9N, 64.3W; h--; m3.7 VIRGIN ISLANDS.						
		LPB	eP	10 15 23				36°4
		PNS	eP	10 15 23.2				
	4	PNS	P	10 47 52.3		0.4	3	
		eS		48 16.2				
	4	LPB	P	14 45 33				
		PNS	eP	14 45 33.8				
		i		50				
	4	PNS	eP	16 36 06.2				
	4	USCGS 16 29 00.2; 7.0S, 129.2E; h164; m5.3 BANDA SEA						

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	4	LPB	ePKP	16 48 31.8				
		PNS	ePKP	16 48 33.2				150°1
		i		38.8				
		CCH	PKP	16 48 36.6				
	4	USCGS 17 18 48.8; 35.3N, 39.1E; h--; m4.7 JORDAN-SIRIA BORDER REGION						
		PNS	ePKP	17 37 29				
	4	PNS	eP	17 40 15.8				
		LPB	eP	17 40 20				
	4	CCH	eP	19 48 43.5				
		PNS	eP	19 48 54				
	4	PNS	eP	20 26 05.4				
	4	USCGS 21 12 39.5; 43.8N, 147.4E; h60; m5.6 KURILE IS.						
		PNS	ePKP	21 32 02				
		LPB	ePKP	21 32 03.5				
	5	CCH	P	01 32 23.2				
		LPB	P	01 32 31				
		PNS	P	01 32 34.3				C 0.8 27
	5	PNS	P	00 51 24.6				
		eS		52 05.4				
		LPB	eP	00 51 35				
		e(S)		52 21				
	5	CCH	P	02 25 35.7				
		LPB	eP	02 25 40				
		PNS	eP	02 25 43				
	5	LPB	P	04 49 32				
		PNS	P	04 49 35.4				0.5 11
	5	PNS	eP	05 15 12				
		LPB	eP	05 15 07.4				
	5	LPB	eP	06 37 04				
	5	PNS	P	07 21 23				0.4 4
	5	LPB	P	07 44 19.6				
		PNS	eP	07 44 22				
	5	PNS	eP	08 18 15.8				
		LPB	eP	08 18 18				
	5	LPB	eP	10 08 57.8				
		S		25.5				
		PNS	P	10 08 59				0.5 4
		S		09 28				
	5	PNS	eP	10 35 02				
	5	USCGS 11 42 14.0; 22.7N, 121.7E; h33; m5.6 TAIWAN REGION						
		PNS	PKP	12 02 21.4				C 1.4 69
		LPB	PKP	12 02 21.6				169°5

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	5	USCGS 12 02		55.1; 13.2N, 145.0E; h55; m4.7				
		MARIANA IS.						
		PNS	ePKP	12 22 35.5				148°4
		LPB	ePKP	12 22 39				
	5	LPB	P	13 01 47				
		PNS	P	13 01 47.8				
		CCH	P	13 01 51.6				
	5	LPB	e(P)	14 29 38				
	5	PNS	eP	14 44 44.4				
		LPB	eP	14 44 52.7				
			S	45 25.5				
	5	PNS	eP	15 57 46.6				
		LPB	eP	15 57 53				
	5	USCGS 15 44		57.1; 31.1N, 140.6E; h143; m4.4				
		SOUTH OF HONSHU, JAPAN						
		PNS	ePKP	16 04 28.5				148°4
		LPB	ePKP	16 04 29				
	5	USCGS 16 07		06.4; 5.3S, 154.0E; h180; m5.4				
		SOLOMON IS.						
		PNS	ePKP	16 26 32				
	6	PNS	eP	00 48 36				
	6	LPB	eP	00 53 42				
	6	PNS	eP	06 50 33				
	6	PNS	P	07 40 44				
	6	USCGS 07 43		29.8; 43.7N; 147.3E; h--; m5.5				
		KURILE IS.						
		CCH	ePKP	08 02 52.2				139°8
		LPB	ePKP	08 02 57				
		PNS	ePKP	08 02 58				
	6	LPB	eP	08 16 52				
		PNS	eP	08 16 54				
		CCH	eP	08 17 00.2				
	6	PNS	iP	09 29 12		D		
		LPB	iP	09 29 13		D		
		CCH	P	09 29 28.2				
	6	PNS	e(P)	09 58 34.6				
		LPB	eP	09 58 37				
	6	LPB	eP	10 16 21				
		PNS	P	10 16 21.5				
	6	USCGS 14 30		39.5; 36.9N, 11.9W; h--; m5.7				
		NORTH ATLANTIC OCEAN						
		CCH	P	14 42 15.1				75°6
		LPB	eP	14 42 20				
		PNS	P	14 42 20.4				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	6	USCGS 14 49		55.9; 2.8S, 157.8E; h15; m5.8				
		SOLOMON IS.						
		PNS	ePKP	15 09 05.4				
		LPB	ePKP	15 09 06.5				127°9
	6	LPB	eP	16 05 05				
		PNS	P	16 05 06				
	6	USCGS 16 17		15.5; 30.0N, 140.6E; h89; m5.3				
		SOUTH OF HONSHU, JAPAN						
		LPB	ePKP	16 36 54.5				150°5
		PNS	PKP	16 36 55.2				
		CCH	eP	16 37 02.2				
	6	PNS	eP	17 16 03.3				
		LPB	eP	17 16 12				
	6	USCGS 17 08		03.2; 8.9S, 157.9E; h10; m5.8				
		SOLOMON IS.						
		CCH	ePKP	07 27 02.2				
		PNS	PKP	17 27 12.6				
		LPB	PKP	17 27 13				127°9
	6	LPB	P	19 15 24.4				
		eS		16 23.5				
		PNS	iP	19 15 28.5				
			S	16 21.4				
	6	PNS	P	20 21 23.2				
		LPB	P	20 21 27				
	7	USCGS 00 23		44.8; 33.6N, 131.5E; h91; m5.2				
		KYUSHU, JAPAN						
		PNS	ePKP	00 43 30				
		LPB	ePKP	00 43 30.5				154°8
	7	USCGS 01 15		47.2; 28.7S, 69.7W; h84; m4.6				
		CHILE ARGENTINA BORDER REGION						
		CCH	eP	01 18 30.7				
		LPB	eP	01 18 39.4				12°7
		PNS	P	01 18 41.8				
	7	USCGS 03 06		02.2; 8.9S, 157.7E; h--; m5.6				
		SOLOMON IS.						
		PNS	ePKP	03 25 08.2				
		LPB	ePKP	03 15 08.7				127°8
		CCH	eP	03 15 09.7				
	7	PNS	P	04 13 52.4				
			S	14 15				
		LPB	eP	04 13 58				
	7	USCGS 05 00		46.1; 2.8N, 128.6E; h217; m5.0				
		HALMAHERA						
		CCH	ePKP	05 20 21.3				
		LPB	ePKP	05 20 21.7				159°5
		PNS	ePKP	05 20 22				



SEPTEMBER

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	7	USCGS SOLOMON IS.	06 21	05.1; 9.0S, 158.0E;	h35;	m5.2		
		LPB	ePKP	06 40 11.7				127°8
		PNS	ePKP	06 40 12.1				
		CCH	ePKP	06 40 14.7				
	7	LPB	eP	07 06 29				
	7	CCH	eP	08 23 55.0				
			i	56.8				
	7	LPB	eP	08 24 00				
		PNS	P	08 24 03.7				
			eS	58				
	7	USCGS SOLOMON IS.	08 40	34.3; 6.6S, 155.8E;	h173;	m5.3		
		CCH	eP	08 59 28.3				
		PNS	ePKP	08 59 28.6				
			i	09 02 37.6				130°5
		LPB	PKP	08 59 29				
			i	09 02 38.2				
	7	LPB	eP	09 31 44				
	7	USCGS NEAR COAST OF GUERRERO, MEXICO	09 36	21.0; 16.5N; 98.7W;	h56;	m4.8		
		PNS	eP	09 44 26.5				
		LPB	eP	09 44 30.6				45°0
		CCH	eP	09 44 34.4				
	7	LPB	eP	12 42 01				
			eS	43 10				
		PNS	P	12 42 04.4				
			eS	43 20				
	7	USCGS SOUTH OF HONSHU, JAPAN	13 48	20.3; 30.5N, 141.0E;	h97;	m4.5		
		PNS	ePKP	14 08 00.6				
	7	LPB	eP	14 21 38				
			S	22 12.5				
		PNS	eP	14 21 38.5				
		CCH	P	14 21 55.9				
	7	CCH	iP	14 22 14.4				
	7	USCGS BANDA SEA	16 03	18.1; 6.4S; 130.2E;	h132;	m5.0		
		PNS	ePKP	16 23 08				
	7	USCGS OFF COAST OF JALISCO, MEXICO	17 19	04.7; 18.8N, 107.1W;	h--;	m3.8		
		PNS	eP	17 28 11				53°
		LPB	eP	17 28 14.6				

SEPTEMBER



From the ISC collection scanned by SISMOS

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	7	USCGS KURILE IS. REG.	18 43	37.8; 43.4N, 148.1E;	h--;	m4.9		
		PNS	ePKP	19 03 05				
		LPB	ePKP	19 03 07				138°5
	7	USCGS SOUTHERN PERU	20 29	02.8; 16.8S, 71.1W;	h170;	m3.8		
		PNS	P	20 29 44.8				
		LPB	P	20 29 49				2°7
		CCH	eP	20 30 00.4				
	7	LPB	eP	21 21 19				
		PNS	e(P)	21 21 25				
	8	USCGS SOUTHERN PERU	07 25	01.4; 16.9S; 70.4W;	h83;	m4.0		
		PNS	eP	07 25 46.4				
			e	50.6				
		CCH	P	07 26 05.2				
			i	19.4				
	8	USCGS OFF COAST OF CENTRAL CHILE	09 47	09.2; 30.9S, 72.0W;	h--;	m4.4		
		CCH	eP	09 50 37.1				
		PNS	eP	09 50 39.4				
	8	PNS	iP	09 51 43.7				D
	8	USCGS NORTHERN PERU	12 43	40.0 6.1S, 77.5W;	h125;	m4.1		
		PNS	eP	12 46 46.2				
			e	56.8				
	8	USCGS NEW IS. REG.	12 45	34.6; 5.1S, 153.4E;	h47;	m5.2		
		PNS	ePKP	13 04 45				
			i	08 16				
	8	PNS	eP	15 07 45.8				
			eS	08 08.6				
	8	PNS	iP	15 19 41.8				D
		CCH	P	15 19 56.0				
	8	PNS	eP	18 38 51.6				
		CCH	P	18 39 04.7				
	8	PNS	eP	19 48 37.9				
	8	PNS	eP	20 11 35.5				
	8	PNS	eP	22 04 13.6				
	8	LPB	P	22 45 43.6				
		PNS	eP	22 44 45				
			S	45 28.2				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	11	PNS	eP	03 36 59.6				
		CCH	eP	03 37 03.3				
		LPB	eP	03 37 04				
	11	CCH	eP	03 43 10.3				
		LPB	eP	03 43 21				
	11	PNS	eP	04 57 16.1				
	11	PNS	eP	05 30 09.2				
	11	PNS	eP	06 40 10.6				
		CCH	P	06 40 14.9				
		LPB	eP	06 40 12.6				
	11	PNS	eP	07 50 52.8				
	11	LPB	P	08 42 01				
		PNS	P	08 41 59.3	D			
	11	LPB	eP	08 59 43				
		PNS	eP	08 59 42.8				
		CCH	P	08 59 48.2				
	11	CCH	P	09 17 22.7				
		LPB	P	09 17 37.6				
		PNS	P	09 17 41.4	C			
	11	LPB	eP	09 28 41.7				
		PNS	eP	09 28 45.8				
	11	PNS	eP	13 28 38.4				
	11	PNS	eP	15 53 07				
	11	PNS	eP	17 30 29.3				
31 08.5								
11	PNS	e(P)	19 04 52					
11	PNS	P	20 12 59.3					
			13 03					
			14 48					
11	LPB	eP	20 13 07					
			20 23 05.6					
11	LPB	P	23 26 07					
			33.3					
			23 26 08	D				
12	PNS	eP	02 25 07.6					
12	PNS	eP	03 00 56.7					
12	CCH	P	04 16 00.2					
			04 16 09.5					
	PNS	P	48					
			04 16 13.5	C				
12	CCH	eP	04 34 30.6					
			04 34 45.3					
			04 34 48.8					



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	12	PNS	eP	04 42 43				
				eS	43 51.8			
				LPB	eP	04 42 47		
	12	PNS	e(P)	05 15 44.4				
				43 40.5				
	12	USCGS	05 08 01.6; 36.4N; 70.9E; h198; m5.1					
	12	LPB	ePKP	05 27 06.5				139°8
				PNS	ePKP	05 27 07		
	12	CCH	iP	06 07 01.8				
	12	USCGS	07 15 50; 51.3N, 179.2W; h44; m5.0					
	12	PNS	ePKP	07 34 30				
				USCGS	07 42 43.7; 51.1N, 179.1W; h48; m5.0			
	12	PNS	ePKP	08 01 15				
				USCGS	08 00 16.8; 51.1N, 179.3W; h49; m5.2			
	12	PNS	ePKP	08 18 56				116°2
				LPB	ePKP	08 19 00		
	12	USCGS	08 06 08.8; 51.1N, 179.2W; h55; m5.0					
	12	PNS	ePKP	08 24 48				116°2
				LPB	ePKP	08 24 50		
	12	USCGS	08 09 24.4; 51.1N, 179.2W; h4.6; m5.1					
	12	PNS	ePKP	08 28 03				116°2
				LPB	ePKP	08 28 05		
	12	PNS	eP	08 30 53				
	12	CCH	iP	09 14 11.0				
LPB				eP	09 14 25.7			
PNS				P	09 14 29.8			
12	USCGS	08 57 07.3; 51.2N, 179.2W; h48; m6.0						
12	PNS	ePKP	09 15 46.8				116°2	
			e	16 50				
			LPB	ePKP	09 15 47			
12	PNS	eP	09 26 23					
			LPB	eP	09 26 25			
12	LPB	eP	10 16 30.5					
			PNS	P	10 16 33.2			

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	12	PNS	eP	13 13 41				
	12	PNS	eP	15 13 50.8				
	12	USCGS 15 00	18.8; 51.3N, 179.2W; h53; m5.6					
		ANDREANOF IS., ALEUTIAN IS.						
		LPB	ePKP	15 18 58				116°9
		PNS	ePKP	15 19 02				
	12	USCGS 16 22	34.7; 32.4S, 67.1W; h139; m3.7					
		MENDOZA PROVINCE, ARGENTINA						
		LPB	P	16 26 11.4				15°6
		PNS	P	16 26 15				
	12	LPB	e(P)	19 11 32				
			S	26				
	12	PNS	eP	21 48 08.4				
	12	PNS	iP	22 53 20	D			
		LPB	P	22 53 21	D	0.6	12	
			S	45				
		CCH	P	22 53 37.0				
	13	PNS	eP	00 43 52.6				
		LPB	eP	00 43 53				
	13	LPB	P	01 15 19.5				
		PNS	iP	01 15 27.2	D			
	13	LPB	e(P)	01 19 47.8				
	13	USCGS 19 52	58.0; 22.9S; 68.4W; h106; m5.4					
		NORTHERN CHILE						
		CCH	iP	10 54 25.5				
		LPB	P	10 54 32.5		0.7	42	6°3
		PNS	iP	10 54 35.7	C			
	13	USCGS 11 19	03.0; 33.8N, 141.6E; h35; m5.0					
		OFF EAST COAST OF HONSHU, JAPAN						
		LPB	ePKP	11 38 46.6				148°8
		PNS	PKP	11 38 48				
	13	USCGS 11 52	15.3; 43.6N, 147.6E; h52; m5.5					
		KURILE IS.						
		LPB	ePKP	12 11 38				139°9
		PNS	ePKP	12 11 39.6				
		LPB	eP	13 08 32				
		PNS	eP	13 08 36.4				
	13	LPB	P	14 17 50				
		PNS	eP	14 17 51.8				
	13	PNS	eP	19 46 41.4				
	13	PNS	P	22 02 01.4	C			
		LPB	P	22 02 05				
	13	LPB	eP	23 26 05.5				
				116				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	14	USCGS 01 11	57.6; 19.6N, 109.3W; h--; m4.6					
		REVILLA GIGEDO IS. REG.						
		PNS	P	01 21 20				
		LPB	P	01 21 22.8				54°
		CCH	eP	01 21 34.6				
	14	PNS	P	02 42 44.4	D			
			S	43 07.6				
	14	PNS	eP	03 56 49.2				
			S	57 18				
		LPB	eP	03 56 52				
	14	LPB	eP	05 47 46.3				
		PNS	eP	05 47 46.3				
		CCH	eP	05 48 03.2				
	14	PNS	eP	06 02 04.2				
			S	31				
		LPB	eP	06 02 06				
			eS	31.4				
	14	LPB	eP	07 03 19.5				
		PNS	eP	07 03 21.4				
	14	USCGS 10 02	20.2; 6.3N, 125.3E; h35; m5.3					
		MINDANAO, PHILIPPINE IS.						
		LPB	ePKP	10 22 23				163°8
		PNS	ePKP	10 22 23.8				
	14	PNS	eP	13 08 32.2				
		LPB	eP	13 08 44.4				
	14	USCGS 14 46	21.1; 39.6N, 74.9E; h--; m5.1					
		SOUTHERN SINKIANG PROVINCE, CHINA.						
		PNS	ePKP	15 05 45.2				
		LPB	ePKP	15 05 50				139°8
	14	PNS	eP	15 41 01				
			S	45				
	14	PNS	eP	16 04 17				
	14	USCGS 16 15	24.8; 39.7N, 74.9E; h--; m5.5					
		SOUTHERN SINKIANG PROVINCE, CHINA						
		CCH	ePKP	16 34 42.8				
		PNS	ePKP	16 34 46				
			e	56				
		LPB	ePKP	16 34 49				139°8
	14	LPB	eP	16 46 08.5				
		PNS	eP	16 46 22.4				
	14	PNS	eP	18 35 30				
		LPB	eP	18 35 39.5				
		CCH	eP	18 35 40.3				
	14	PNS	eP	19 18 40.8				
			S	19 02.6				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	15	PNS	eP	00 13 30.6				
		LPB	eP	00 13 31.5				
15	PNS	P	04 12 33.5					
	LPB	eP	04 12 38.5					
15	CCH	eP	04 13 03.1					
	LPB	eP	04 24 37.5					
15	PNS	eP	04 24 39.6					
	PNS	iP	05 55 40.6	D				
15	LPB	iP	05 55 40.7	D				
	CCH	eP	05 55 54.6					
15	LPB	eP	06 47 22.5					
	PNS	eP	06 47 25.2					
15	CCH	eP	06 47 55.1					
	USCGS 07 14 25.8; 69.0W, 18.6S; h117; m5.2 NORTHERN CHILE							
15	LPB	iP	07 15 03.4	C			2°3	
		iS	34.4					
15	PNS	iP	07 15 04.8	C				
		S	40					
15	CCH	iP	07 15 10.8					
	15	LPB	eP	08 12 08				
15	PNS	eP	08 20 47.4					
	LPB	eP	08 20 50.7					
15	LPB	eP	10 32 41.7					
	PNS	P	10 32 43					
15		S	33 06					
	USCGS 12 47 22.4; 17.4N, 101.4W; h--; m4.9 NEAR COAST OF GUERRERO, MEXICO							
15	CCH	eP	12 55 50.4					
	PNS	eP	12 55 50.6				46°8	
15	LPB	eP	12 56 00					
	USCGS 16 59 37.6; 29.4N, 140.9E; h103; m4.7 SOUTH OF HONSHU, JAPAN							
15	PNS	ePKP	17 19 15.4					
		i	20					
15	LPB	PKP	17 19 16		0.5	14	150°5	
	15	LPB	eP	18 09 30.5				
15		S	10 01.5					
	PNS	iP	18 09 33.7	D				
15		S	10 03					
	USCGS 18 47 41.3; 45.5N, 151°6E; h44; m5.3 KURILE IS.							
15	PNS	ePKP	19 07 00.2					
	LPB	eP	22 51 56					
15	PNS	eP	22 51 58.7					



MONTH	DAY	STA	PHASE	TIME					
SEPTEMBER	16	CCH	P	00 40 53.9					
		LPB	eP	00 41 20					
		PNS	eP	00 41 24.6					
16	USCGS 01 17 14.6; 45.6N, 151.6E; h60; m5.0 KURILE IS.								
	PNS	ePKP	01 36 32.4						
16	PNS	P	01 48 19.7	D					
		e	50 54						
16	LPB	P	01 48 25	D					
		e	50 59						
16	CCH	P	01 48 45.1						
	USCGS 02 06 02.1; 36.8S, 72.4W; h59; m4.5 NEAR COAST OF CENTRAL CHILE								
16	CCH	P	02 10 32.5	D					
	LPB	P	02 10 39				19°8		
16	PNS	P	02 10 41						
	16	PNS	iP	05 23 36.6	D				
		S	24 00.6						
16	LPB	P	05 23 39						
		eS	24 03.5						
16	CCH	eP	07 14 13.1						
	LPB	eP	07 14 19.5						
16	PNS	eP	07 14 21.8						
	16	PNS	e(P)	08 50 44					
LPB		eP	08 50 48.5						
16	PNS	eP	09 26 02.7						
		S	43						
16	LPB	eP	09 26 06.5						
	16	LPB	P	09 48 35					
		eS	49 07.9						
16	PNS	P	09 48 43.2						
		S	49 17						
16	USCGS 13 37 15.3; 10.2N, 66.8W; h11; m4.6 NEAR COAST OF VENEZUELA								
	16	PNS	P	13 42 53.6					
LPB		P	13 42 55.5				27°		
16		e	51 16						
	CCH	eP	13 43 01.0						
16	CCH	eP	13 50 49.5						
	16	PNS	P	14 00 18.2					
		S	45						
16	LPB	P	14 00 21						
	USCGS 19 25 42.3; 15.5N, 93.1W; h104; m5.0 NEAR COAST OF CHIGUAGUA, MEXICO								
16	PNS	eP	14 33 07.8						
	LPB	eP	14 33 11						
16	CCH	eP	14 33 22.7					40°S	

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	16	USCGS 14 30 00.0; 116.5W, 37.3N; h0; m6.2 SOUTHERN NEVADA						
		PNS	iP	14 41 13.5	C	1.2	138	
		LPB	iP	14 41 16.2	C			
		CCH	P	14 41 24.0	C			
	16	PNS	eP	15 09 04				
			i	15				
		LPB	eP	15 09 12				
	16	LPB	eP	20 43 28.5				
		PNS	eP	20 43 31				
	16	LPB	eP	20 52 23.5				
			S	53 00				
		PNS	eP	20 52 31.4				
	16	LPB	eP	22 56 33.5				
		PNS	eP	22 56 37				
	17	USCGS 01 23 54.1; 59.0S, 24.8W; h33; m5.1 SOUTH SANDWICH IS. REG.						
		CCH	eP	01 32 50.8				53°1
		LPB	eP	01 33 09				
		PNS	eP	01 33 11.2				
	17	PNS	P	01 42 29.2				
			S	48.2				
		LPB	eP	01 42 36.4				
	17	USCGS 02 48 46.0; 17.8S, 69.6W; h158; m3.9 PERU-BOLIVIA BORDER REGION						
		PNS	iP	02 49 21.7	D			
			eS	48				
		LPB	iP	02 49 22.5	D			1°8
		CCH	iP	02 49 35.5	D			
	17	CCH	eP	04 47 54.5				
		LPB	P	03 48 05.5				
		PNS	P	03 48 09.2				
	17	LPB	eP	03 57 57				
		PNS	eP	03 58 00				
	17	PNS	eP	05 15 29.6				
		LPB	eP	05 15 31				
	17	PNS	eP	12 22 47.2				
	17	PNS	eP	13 24 33				
		LPB	eP	13 24 35.5				
	17	PNS	eP	18 33 46.6				
	17	USCGS 18 43 48.7; 36.2S, 27.1W; h--; m4.9 SOUTH SANDWICH IS. REG.						
		PNS	eP	18 52 47				
	17	USCGS 18 40 45.8; 31.1N, 131.3E; h8; m6.2 KYUSHU, JAPAN						
		CCH	eP	19 00 44.9				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	17	PNS	PKP	19 00 46.5		2.0	147	
			i	01 25.4				
			eL	19 55.5				
	17	CCH	e(P)	19 04 41.1				
		PNS	eP	19 04 45.2				
	17	USCGS 18 51 07.8; 31.2N, 131.4E; h23; m5.5 KYUSHU, JAPAN						
		PNS		19 11 08				
	18	CCH	P	06 14 17.0				
		LPB	eP	06 14 34				
		PNS	P	06 14 36.4				
	18	CCH	P	06 22 31.1				
		LPB	eP	06 22 46				
		PNS	P	06 22 50.8				
			S	23 49.6				
	18	USCGS 07 11 38.7; 17.8S, 71.7W; h50; m4.3 NEAR COAST OF PERU						
		PNS	P	07 12 35				
		LPB	eP	07 12 37	C			4°5
	18	LPB	eP	07 40 39				
		PNS	eP	07 40 40.4				
	18	PNS	iP	07 59 20	D			
		LPB	eP	07 59 22	D			
			eS	42				
		CCH	iP	07 59 34.6				
	18	PNS	eP	08 16 39				
			eS	53.6				
	18	LPB	eP	08 31 30				
			i	48				
		PNS	eP	08 31 31				
			i	46				
	18	PNS	iP	09 58 28.4	D			
			S	51				
		LPB	eP	09 58 30				
	18	LPB	eP	11 03 20				
			e	35				
		PNS	eP	11 03 22.6				
			e	30				
	18	LPB	eP	12 05 42				
		PNS	iP	12 05 46.6	C			
	18	USCGS 11 52 37.6; 43.3N, 146.9E; h50; m4.9 KURILE IS.						
		LPB	ePKP	12 12 04				138°8
		PNS	ePKP	12 12 05				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	18	USCGS 11 57 33.0; 3.2S, 136.4E; h50; m5.4 WEST NEW GUINEA						
		CCH	PKP	12 17 17.6				
		PNS	ePKP	12 17 18				
			i	20				
		LPB	ePKP	12 17 18.5				148°S
	18	PNS	P	12 43 03.4				
		LPB	eP	12 43 09				
	18	PNS	eP	18 48 57.2				
			S	49 22.4				
	18	PNS	iP	19 16 50				
	19	LPB	e(P)	00 20 08				
	19	PNS	eP	00 59 18.4				
	19	USCGS 01 29 37.4; 6.1N, 125.4E; h95; m5.7 MINDANADO, PHILIPPINE IS.						
		CCH	P	01 49 28.4				
		PNS	PKP	01 49 33				
		LPB	PKP	01 49 33.5	1.0	30		162°9
	19	PNS	eP	02 32 16.8				
		LPB	eP	02 32 20				
	19	USCGS 02 45 46.1; 41.4S, 80.2W; h82; m4.2 PERU-ECUADOR BORDER REGION						
		PNS	eP	02 49 38.4				
		LPB	eP	02 49 41				17°2
	19	USCGS 03 39 57.0; 55.9S, 27.8W; h65; m5.4 SOUTH SANDWICH IS.						
		LPB	P	03 48 46.5	1.0	16		50°S
		PNS	P	03 48 49.5				
	19	USCGS 05 00 17.2; 24.7S, 70.0W; h55; m4.7 NEAR COAST OF NORTHERN CHILE						
		CCH	eP	05 02 13.3				
			i	18.7				
		LPB	eP	05 02 20.7	1.0	14		9°0
			i	29.5				
		PNS	eP	05 02 23.5				
			i	32				
	19	LPB	eP	05 31 04.5				
		PNS	eP	05 31 08				
	19	PNS	iP	06 08 42.3				
		LPB	eP	06 08 45				
	19	LPB	eP	07 06 29.5				
			iS	35.5				
		PNS	eP	07 06 30				
			eS	41				
		CCH	eP	07 06 38.8				
	19	LPB	eP	07 24 29.5				
		PNS	eP	07 24 31.4				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	19	LPB	eP	08 42 05.5				
	19	PNS	eP	11 24 16.4				
		LPB	eP	11 24 23.1				
	19	LPB	eP	16 08 41				
		PNS	eP	16 08 45				
	19	LPB	eP	18 19 25.5				
			eS	59.2				
		PNS	P	18 19 30.6				
			S	57				
	19	LPB	eP	20 57 47				
		PNS	P	20 57 49				
	19	USCGS 20 54 12.4; 58.4N, 32.3W; h--; m4.5 NORTH ATLANTIC OCEAN						
		PNS	eP	21 96 25				
	19	LPB	eP	23 35 55				
		PNS	eP	23 36 01.4				
	20	LPB	eP	00 52 35.5				
			S	53 17				
		PNS	eP	00 52 35.9				
			S	53 18				
	20	USCGS 00 56 51.3; 32.2W, 58.1N, h--; m5.0 NORTH ATLANTIC OCEAN						
		PNS	eP	01 09 02				
	20	USCGS 01 07 38.4; 58.2N, 32.5W; h--; m5.0 NORTH ATLANTIC OCEAN						
		LPB	eP	01 19 48				
		PNS	eP	01 19 49				81°9
	20	USCGS 01 13 04.6; 58.1N, 32.1W; h--; m5.2 NORTH ATLANTIC OCEAN						
		PNS	eP	01 25 12.8				
		LPB	eP	01 25 14				82°9
	20	USCGS 05 08 57.6; 58.3N; 32.2W; h--; m5.6 NORTH ATLANTIC OCEAN						
		LPB	P	05 21 05.7				81°9
		PNS	P	05 21 06.2				
	20	USCGS 08 04 45.6; 34.1S, 70.0W; h105; m4.2 CHILE ARGENTINA BORDER REGION						
		LPB	eP	08 08 49				19°8
		PNS	eP	08 08 56				
	20	USCGS 08 56 44.8; 3.1S, 142.0E; h38; m5.1 NEAR COAST OF NEW GUINEA						
		LPB	PKP	09 16 19.5				
		PNS	PKP	09 16 19.6	1.0	70		144°0
	20	LPB	eP	10 12 04.5				

SEPTEMBER

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
SEPTEMBER	20	PNS	eP	10 12 08.4					
	20	LPB	eP	11 30 31					
	20	LPB	eP	12 52 46					
		PNS	eP	12 52 51.2					
	20	LPB	eP	13 16 33.2					
		PNS	eP	13 16 41					
	20	PNS	eP	13 41 00					
		LPB	eP	13 41 10.5					
	20	USCGS 15 26 41.5; 1.8N, 10.10W; h--; m5.5 EAST CENTRAL PACIFIC OCEAN							
		PNS	P	15 33 49.7					
			S	39 40					
			L	45.2					
		LPB	P	15 33 53.9				36°9	
			eS	39 42					
	20	PNS	eP	16 40 42.2					
		LPB	eP	16 40 48					
	20	PNS	P	17 50 50.5					
			S	51 37					
	20	LPB	P	21 24 08.8					
			eS	25 09.4					
		PNS	P	21 24 13				C	
			S	25 15.3					
	20	PNS	eP	22 32 36					
	21	USCGS 02 00 54.3; 23.6S, 68.1W; h120; m5.5 NORTHERN CHILE							
		PNS	eP	00 02 26.6					
			i	43.8					
		LPB	eP	00 02 29					
			e	36					
	21	PNS	eP	00 41 40					
			S	42 19.6					
		LPB	P	00 41 47				1.0 24	
	21	LPB	P	00 49 43					
		PNS	eP	00 49 52					
	21	LPB	P	01 49 04					
		PNS	eP	01 49 13					
	21	LPB	eP	02 02 36					
		PNS	P	02 02 38.7				D	
	21	PNS	eP	07 33 11					
		LPB	P	07 33 22.6					
	21	LPB	P	10 25 28.5					
		PNS	eP	10 25 29.2					
	21	USCGS 11 28 25.0; 15.8S, 74.7W; h59; m4.7 NEAR COAST OF PERU							

SEPTEMBER



From the ISC collection scanned by SISMOS

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST	
SEPTEMBER	21	PNS	eP	11 29 54.6					
		LPB	P	11 30 00				5°5	
	21	PNS	eP	14 52 19.6					
	21	PNS	eP	16 05 28					
		LPB	eP	16 05 31					
	21	PNS	P	17 37 22				D	
			S	45.4					
	21	PNS	eP	17 44 22					
		LPB	eP	17 44 24.5					
	21	PNS	eP	18 18 03					
	21	LPB	eP	18 39 08					
		PNS	P	18 39 12					
	21	PNS	iP	20 03 38.1				D	
			iS	04 07.2					
	21	PNS	eP	20 52 58					
		LPB	eP	20 53 04.5					
		CCH	eP	20 53 22.8					
	21	USCGS 21 29 21.7; 2.7N; 95.8W; h--; m4.9 OFF WEST OAST OF NORTHERN SUMATRA							
		PNS	ePKP	21 49 19					
		LPB	ePKP	21 50 06				160°2	
	22	PNS	eP	01 37 53.8					
			e	38 06.8					
	22	USCGS 01 40 20.8; 5.6S, 68.1E; h14; m5.1 CHAGOS ARCHIPIELAGO REGION							
		LPB	ePKP	01 59 36				130°5	
		PNS	ePKP	01 59 37					
	22	USCGS 01 46 13.5; 2.9N, 95.9E; h--; m5.3 OFF COAST OF NORTHERN SUMATRA							
		CCH	eP	02 06 04.7					
		LPB	ePKP	02 06 12.5				160°2	
			e	50.5					
		PNS	ePKP	02 06 13					
			e	51.4					
	22	USCGS 02 35 44.4; 43.6N, 147.5E; h42; m5.0 KURILE IS.							
		PNS	ePKP	02 55 10.6					
		LPB	ePKP	02 55 12				138°8	
	22	USCGS 03 52 37.4; 2.9N, 95.9E; h--; m5.3 OFF WEST COAST OF NORTHERN SUMATRA							
		LPB	ePKP	04 12 22				160°2	
			i	13 21.7					
		PNS	ePKP	04 12 25					
			e	13 22.2					

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	22	LPB	eP	05 44 36				
		PNS	eP	05 44 37.4				
		CCH	eP	05 44 37.7				
22	PNS	eP	06 14 15					
		S	44					
22	LPB	eP	06 14 18					
		eP	06 30 53.5					
22	PNS	eP	06 30 57.6					
		USCGS 09 14 31.4; 21.7S, 66.8W; h208; m4.8 SOUTHERN BOLIVIA						
22	CCH	iP	09 15 33.5	C				
		LPB	iP	09 15 51.4	C			5°6
		PNS	iP	09 15 55.4	C			
		eS	16 52					
22	LPB	eP	12 01 12					
		CCH	P	12 01 12.4				
		PNS	eP	12 01 12.8				
22	PNS	eP	13 32 02.8					
22	USCGS 13 47 52.2; 5.0N, 32.6W; h--; m5.7 CENTRAL MID-ATLANTIC RIDGE	CCH	P	13 55 22.1				
		PNS	P	13 55 37				
		LPB	P	13 55 37.5				48°7
22	PNS	eP	15 59 01					
22	USCGS 16 14 58.8; 4.4N, 81.3E; h0; m5.1 SOUTHERN SINKIANG PROVINCE, CHINA	CCH	ePKP	16 34 42.4				
		LPB	ePKP	16 34 43.5				146°8
		PNS	ePKP	16 34 48.7				
22	PNS	P	22 08 59.7					
		S	09 25.2					
22	USCGS 22 02 08.3; 0.5N, 26.2W; h--; m4.8 CENTRAL MID-ATLANTIC RIDGE	CCH	eP	22 10 06.0				
		LPB	eP	22 10 22	1.0	17		45°
		PNS	eP	22 10 23.4				
23	USCGS 01 22 03.3; 27.3S, 113.4W; h--; m5.3 EASTER ISLANDS REG.	PNS	P	01 30 02.3				
		LPB	P	01 30 04	1.1	27		43°2
		CCH	P	01 30 10.5				
23	CCH	eP	02 16 25.9					
		LPB	P	02 16 39				
		PNS	P	02 16 41.2	D			
23	PNS	eP	06 59 36.4					
		LPB	eP	06 59 45.5				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	23	PNS	P	14 42 40				
		LPB	eP	14 42 42.6				
23	PNS	e(P)	14 48 12.6					
		P	18 38 30					
23	PNS	eP	19 09 29					
23	PNS	eP	19 49 41.8					
		S	50 08.6					
23	CCH	P	20 14 13.4					
		PNS	P	20 14 26.1	D			
23	PNS	eP	20 48 56.2					
23	PNS	eP	21 21 00					
		S	22					
23	LPB	eP	21 48 11.5					
		PNS	eP	21 48 12.2				
23	LPB	eP	22 09 13					
		PNS	eP	22 09 16.2				
23	USCGS 22 37 22.6; 18.7N, 107.1W; h--; m4.9 OFF COAST OF JALISCO, MEXICO	PNS	eP	22 46 28.2				
		S	54 12.8					
		eL	23 01					
		LPB	eP	22 46 32	1.0	10		52°2
23	CCH	eS	54 17					
		L	23 00					
		eP	22 46 39.8					
23	PNS	eP	23 13 41.8					
24	USCGS 00 14 30.9; 5.1S, 81.6W; h45; m4.1 NEAR COAST OF NORTHERN PERU	PNS	eP	00 18 27.6				
		LPB	P	00 18 33	1.0	20		17°1
		CCH	eP	00 18 49.4				
24	LPB	eP	00 56 43					
		PNS	eP	00 56 44.8				
24	LPB	eP	01 01 30.6					
		PNS	01 01 37.2					
24	USCGS 02 51 26.8; 8.0N, 81.0W; h42; m4.2 PANAMA	PNS	eP	02 57 10				
		LPB	eP	02 57 16.5				28°8
		CCH	eP	02 57 24.6				
24	LPB	eP	03 01 57.5					
24	USCGS 03 10 21.3; 18.7N, 107.0W; h--; m4.2 OFF COAST OF JALISCO, MEXICO							



MONTH	DAY	STA	PHASE	TIME	SIGNATURE	PER	AMPL	DIST
SEPTEMBER	24	PNS LPB CCH	eP eP eP	03 19 26 03 19 30 03 19 38.3				52°2
	24	USCGS NORTH		03 58 56.5 ; 52.5N, 31.8W; h--; m5.2 ATLANTIC RIDGE				
		CCH PNS LPB	eP eP eP	04 10 37.2 04 10 40 04 10 44.9				74°8
	24	USCGS NORTH		04 20 52.9 ; 52.6N, 31.8W; h--; m5.2 ATLANTIC RIDGE				
		CCH PNS LPB	p eP eP	04 32 32.5 04 32 36.2 04 32 38				74°8
	24	LPB PNS	eP eP	08 56 43 08 56 45.4				
	24	LPB PNS	eP eP	09 44 17 09 44 20.6				
	24	LPB PNS	eP eP	12 09 22.5 12 09 24.5		C		
	24	LPB PNS	eP iP	14 49 52.8 14 49 55		C		
	24	PNS	eP S	15 52 05.2 44.4				
	24	PNS	eP	15 58 54				
	24	LPB	eP eP	16 36 00 16 36 06				
	24	USCGS NORTH		18 03 19.0 ; 15.2N, 45.8W; j--; m5.8 ATLANTIC RIDGE				
		CCH LPB	P P	18 10 34.5 18 10 41.5		1.8	774	37°8
		PNS	eL iP e	19 18 10 41.6 12 22		C		
	24	USCGS NORTH		19 00 57.1 ; 15.3N, 45.7W; h--; 4.7 ATLANTIC RIDGE				
		PNS	iP	19 08 20		C		
	24	USCGS CENTRAL		19 06 51.5 ; 0.8N, 27.2W; h--; m4.7 MID-ATLANTIC RIDGE				
		PNS		19 15 00				
	24	LPB PNS	eP eP eS	20 45 35.7 20 45 43.6 46 13.5				
	24	USCGS NORTH		22 26 16.5 ; 15.5N, 46.0W; h--; m4.3 ATLANTIC RIDGE				

MONTH	DAY	STA	PHASE	TIME	SIGNATURE	PER	AMPL	DIST
SEPTEMBER	24	PNS LPB	eP eP	22 33 37.8 22 33 39				38°7
	24	PNS LPB	eP eP e	23 23 30.6 24 02 23 23 31.5 50				
	25	USCGS NORTH		00 44 30.7 ; 15.3N, 45.5W; h--; 4:5 ATLANTIC RIDGE				
		LPB PNS	eP eP	00 51 54 00 51 54.5				38°7
	25	PNS LPB	iP iP iS	02 25 15.8 02 25 18.7 47		C C		0.8 210
	25	USCGS NORTH		04 40 09.5 ; 15.3N, 45.6W; h--; m4.4 ATLANTIC RIDGE				
		LPB PNS	P eP	04 47 33.5 04 47 33.6			0.9 8	38°7
	25	LPB PNS	P eP S	05 47 36.5 05 47 40 49 06.8				
	25	USCGS CATAMARCA		05 57 22.0 ; 27.9S, 66.8W; h141; m4.0 PROVINCE, ARGENTINA				
		CCH LPB PNS	P P P	05 59 44.7 06 00 02.5 06 00 06.9			D	13°5
	25	CCH LPB PNS	P P i P	10 09 06.1 10 09 15.6 49.5 10 09 17.6			D	
	25	PNS LPB CCH	iP S P	13 43 50 44 21 13 43 54.6 30.5 13 44 14.1			C C C	0.7 22
	25	PNS	eP eS	16 35 43.4 30 20				
	25	PNS	eP	21 29 21				
	26	PNS LPB	eP eS eP S	00 50 24 51 01.4 00 50 25.3 57.7				
	26	PNS LPB CCH	iP S eP	04 11 56.8 12 16.4 04 12 05.7 04 12 19.7		D		
	26	PNS CCH LPB	eP eP ep	06 59 28.4 06 59 28.7 06 59 34.2				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	26	USCGS SALTA CCH PNS LPB	08 22 54.3; 24.0S, 66.5W; h188; m3.8 PROVINCE, ARGENTINA	08 24 26.5 08 24 48.5 26 15 08 24 48.4	P iP S P			9°0
	26	PNS	eP	12 52 32.6				
	26	CCH LPB PNS	P eP eS iP S	15 50 04.2 15 50 19 51 27.5 15 50 24 51 31.4				
	26	LPB PNS	eP eP	18 31 31.4 18 31 35.2				
	27	LPB PNS	eP P S	00 30 12.5 00 30 17 41.8				
	27	PNS	eP	01 16 00				
	27	USCGS LPB PNS	04 02 16.3; 43.9N, 147.0E; h42; m5.4 KURILE IS.	04 21 38.4 04 21 41.4	ePKP ePKP			139°8
	27	PNS	eP	04 38 48.6				
	27	LPB PNS	eP iP	05 05 15.2 05 05 15.4				
	27	CCH PNS LPB	eP eP eP	06 05 54.4 06 06 25.6 06 06 28.8				
	27	PNS	P	08 23 33.5				
	27	PNS	eP	08 47 21.4				
	27	USCGS CCH LPB PNS	09 04 02.8; 60.9S, 56.0W; h---; m5.8 SOUTH ATLANTIC ISLANDS	09 12 04.7 09 12 13.4 09 12 20.8 17 53.4	P iP P i			44°2
	27	PNS LPB	eP	09 43 30 09 43 31.2				
	27	CCH LPB PNS	P eP eP	11 55 19.8 11 55 20.6 11 55 24.2				
	27	LPB PNS	eP eP	12 20 44.9 12 20 56.6				
	27	PNS LPB	eP eP	14 13 59.4 14 14 05.6				



MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	27	PNS LPB	eP eP	18 39 00.2 18 39 03.4				
	27	USCGS SOUTH OF JAVA	19 13 48.6; 9.4S, 107.8E; h---; m5.6					
		PNS LPB	ePKP ePKP	19 33 42.2 19 33 49.9				1.0 20 153°8
	27	LPB PNS	eP eP	19 46 21.5 19 46 26.6				
	28	LPB	eP	01 09 09				
	28	PNS CCH LPB	P P P	07 39 34.2 07 39 34.7 07 39 35.5				1.0 12
	28	LPB	P	08 00 24				
	28	LPB PNS	eP eP	10 30 48 10 30 50.5				
	28	CCH LPB PNS	P eP iP	11 07 31.2 11 07 38.8 11 07 42.5				C
	28	USCGS PERU	11 52 59.1; 12.1S, 74.3W; h45; m5.0					
		PNS LPB CCH	iP eP P	11 54 43.2 11 54 49.3 11 55 09.4				7°2
	28	PNS	eP	13 01 53.6				
	28	USCGS PERU BOLIVIA BORDER REGION	14 42 15.7; 16.7S, 69.5W; h201; m3.8					
		PNS LPB CCH	iP iP P	14 42 47.1 14 42 49.7 14 43 05.2	D D D			1°4
	28	CCH LPB	eP eP	18 18 37.9 18 18 41.8 18 18 42.6				1.0 14
	28	PNS	eP S	19 27 13.6 25.8				
	28	PNS	eP S	20 04 07.2 43.4				
	28	CCH LPB	P eP eP	20 09 52.5 20 09 53 20 09 53.8				
	28	PNS LPB	e(P) eP	21 27 36.2 21 27 39				
	28	LPB	eP	23 11 02				

MONTH	DAY	STA	PHASE	TIME	SIGN	PER	AMPL	DIST
SEPTEMBER	29	PNS CCH LPB	eP eP eP	00 11 35 00 11 43.9 00 11 46.5				
	29	PNS LPB	iP eP eS	01 27 51.7 28 13 01 27 53 28 19.5	D			
	29	CCH LPB PNS	eP eP eP	01 50 39.7 01 50 47.7 01 50 50.6				
	29	PNS LPB	eP eP	02 41 24 02 41 31				
	29	PNS LPB	eP P	04 42 54.6 04 42 55				
	29	LPB PNS	eP eP	08 57 29 08 57 38				
	29	LPB PNS	eP eP	09 42 01 09 42 04.2				
	29	PNS LPB	eP eP	10 00 15 10 00 18				
	29	LPB PNS	eP eP	11 14 48.5 11 14 48.6				
	29	LPB PNS	eP eS eP S	11 50 45 21 11 50 48.4 51 28.4				
	29	PNS S	P S	14 18 55.4 19 21.6				
	29	USCGS 16 BANDA SEA		20 00.4; 7.2S, 128.8E; h145; m5.7				
		CCH LPB PNS	PKP PKP PKP	16 39 30.1 16 39 35 16 39 35		1.4	135	151°2
	29	PNS LPB	iP eP	18 05 49.2 18 05 53.6	C			
	29	PNS LPB	eP eP	18 18 04.6 18 18 07				
	29	LPB PNS CCH	P eS P S P	20 07 13 48.8 20 07 14.8 49.2 20 07 33.5				
	29	USCGS 20 REPUBLIC OF SOUTH AFRICA		03 32.8; 32.9S, 19.7E; h--; m5.9				
		LPB	P el	20 15 33 40.8		1.0	16	79°2

MONTH	DAY	STA	PHASE	TI				
SEPTEMBER	29	PNS	P S eL	20 15 35.2 25 30 40.5				
	29	LPB PNS	eP eP	21 52 01 21 52 04.4				
	30	LPB	P	00 08 11		0.7	28	
	30	LPB	eP	00 57 47				
	30	PNS LPB	eP eP	01 27 23.6 01 27 26				
	30	USCGS 04		11 16.1; 31.9S, 177.9W; h--; m5.4				
		KERMADEC IS.						
		LPB PNS	P eP	04 24 49.5 04 24 49				98°
	30	PNS LPB	eP eP	04 28 43 04 28 44				
	30	LPB	eP	05 42 45				
		S PNS	S eP	43 13 05 43 52.6 43 26				
	30	LPB PNS	eP eP	08 24 33.5 08 24 36				
	30	LPB	eP	08 43 40.6				
		PNS	eP	08 43 46				
	30	LPB PNS	eP eP	13 23 30.2 13 23 36				
	30	PNS	iP S	14 53 05.1 32				
	30	PNS	eP	16 31 30				
	30	USCGS 17		51 41.8; 31.9S, 178.0W; h--; m5.4				
		KERMADEC ISLANDS						
		PNS	PKP PP SKS PS eL	18 05 13.8 09 10 16 00 18 06 37.2				
		LPB	P PP SKS PS eL	18 05 15.6 09 11 15 56 18 56 37		1.4	405	97°2
	30	USCGS 18		26 12.1; 30.3N, 140.9E; h82; m4.6				
		SOUTH OF HONSHU, JAPAN						
		LPB PNS	ePKP ePKP	18 45 46 18 45 50				148°5
	30	PNS LPB	iP P	20 50 34 20 50 35.5	D			
	30	LPB	eP	23 01 57		0.8	82	

