USCGS
1,40

SEISMOLOGICAL BULLETIN

January, 1965

MSI - 289

COAST & GEODETIC SURVEY
APR 18 1966
LIBRARY BRANCH

MAR - 9

CONTENTS

List of stations 1
Station constants 2
Provisional epicenters 6
Seismogram interpretations 16
World epicenter map 1964 40

U. S. DEPARTMENT OF COMMERCE

John T. Connor, Secretary

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

Robert M. White, Administrator

COAST AND GEODETIC SURVEY—WASHINGTON

James C. Tison Jr., Director

FOR OFFICIAL DISTRIBUTION

National Oceanic and Atmospheric Administration

ERRATA NOTICE

One or more conditions of the original document may affect the quality of the image, such as:

Discolored pages
Faded or light ink
Binding intrudes into the text

This has been a co-operative project between the NOAA Central Library and the Climate Database Modernization Program, National Climate Data Center (NCDC). To view the original document, please contact the NOAA Central Library in Silver Spring, MD at (301) 713-2607 x124 or Library.Reference@noaa.gov

HOV Services
Imaging Contractor
12200 Kiln Court
Beltsville, MD 20704-1387
March 4, 2011

1965

The instrumental results of the following stations are tabulated in this report.

Albuquerque, New Mexico (ALQ) WWNSS
**Balboa Heights, C. Z. (BHP) WWNSS
The Panama Canal Co.
*Boulder City, Nev. (BCN)
Bureau of Reclamation
*Bozeman, Mont. (BOZ) WWNSS
*Bozeman, Mont. (BZM)
Montana State College
*Butte, Mont. (BUT)
Montana School of Mines
*Chicago, Ill. (CHK)
University of Chicago and
U. S. Weather Bureau
College, Alaska (COL) WWNSS
*Columbia, S. C. (CSC)
University of South Carolina
*Eureka, Nev. (EUR)
Eureka Corporation Limited
*Flaming Gorge, Utah (FGU)
Bureau of Reclamation
*Glen Canyon, Ariz. (GCA)
Bureau of Reclamation
Guam, M. I. (GUA) WWNSS
Honolulu, Hawaii (HON)
*Hungry Horse, Mont. (HHM)
Bureau of Reclamation
Kipapa, Hawaii (KIP) WWNSS
**Philadelphia, Pa. (PHI)
The Franklin Institute
**Rapid City, S. D. (RCD) WWNSS
South Dakota State School of Mines
*Salt Lake City, Utah (SLC)
University of Utah
San Juan, Puerto Rico (SJG) WWNSS
Sitka, Alaska (SIT)
Tucson, Ariz. (TUC) WWNSS
Ukiah, Calif. (UKI)
International Latitude Observatory
Washington, D. C. (WAS)

*Indicates a station maintained by a local institution in cooperation with the Coast and Geodetic Survey.
**Indicates a station operating on an independent basis.
Other stations are observatories of the Coast and Geodetic Survey.
WWNSS indicates the observatories are part of the World-Wide Network of Standard Seismographs.

All seismogram interpretations are made or revised at Washington except those for Balboa Heights. Beginning January 1, 1959, the data from the horizontal components of the seismographs at all stations except College, Honolulu, and Tucson will not be published for earthquakes occurring outside the United States. The horizontal instruments will continue in operation and the seismograms for the local and regional earthquakes will be scaled and the data published.

All magnitudes are m_b values of Gutenberg and Richter determined by the C&GS from the P phase only unless otherwise noted. The magnitude quoted is an average value determined from data forwarded by cooperating Standard Stations and other observatories. Mag. (PAS), (PAL), (BRK) are as reported by Pasadena, Palisades and Berkeley respectively.

All coordinates of epicenters, origin times and focal depths have been calculated with the use of an electronic computer. The epicenters quoted in this bulletin are those previously reported on the Preliminary Determination of Epicenter cards with some refinement and minor additions.

All seismograms are on file in the Coast and Geodetic Survey. Requests for information on seismogram copies of the World-Wide Network observatories should be addressed to:

U. S. Department of Commerce
Coast and Geodetic Survey
Seismology Division
Washington Science Center
Rockville, Maryland 20852

STATION AND INSTRUMENTAL CONSTANTS (JAN. 1965)

Station	Position	Instrument	Foundation and Elevation	To	T_g	T_s	V	Σ	Paper Speed	Time Break Reference Point	Ground Motion Trace "Up"
Albuquerque, N. Mex.	Log cos 9.91367	Std-SP	Granite.	Z 1.0	0.75		200,000	17:1	60mm/min	Beginning	Up
H. J. Wirz	Lat. 34°56.5' N		1,853 m.	N 1.0	0.75		200,000				N
In Charge	Long. 106°27.5' W			E 1.0	0.75		200,000				E
		Std-LP		Z 30	100		3,000	Critical	15mm/min	Beginning	Up
				N 30	100		3,000				N
				E 30	100		3,000				E
Balboa Heights, C. Z.	Long cos 9.99467	Std-SP	Basalt.	Z 1.0	0.75		12,500	17:1	60mm/min	Beginning	Up
T. C. Herter	Lat. 8°57'39" N		36 m.	N 1.0	0.75		12,500				N
In Charge	Long. 79°33'29" W			E 1.0	0.75		12,500				E
		Std-LP		Z 30	100		750	Critical	15mm/min	Beginning	Up
				N 30	100		750				N
				E 30	100		750				E
Boulder City, Nev.	Log cos 9.90806	B, Paper	Fractured	Z 1.18	0.5	1.2	130,000	9:1	60mm/min	Beginning	Up
V. B. Uehling	Lat. 35°58'51" N	Z	Monzonite.								
In Charge	Long. 114°50'02" W	Mass 100 lb.	776 m.								
Bozeman, Mont.	Log cos 9.84437	Spg, N&E	Alluvium gla-	N 11.1	8.3		8,000	3:1	30mm/min	Beginning	N
A. J. M. Johnson	Lat. 45°40'01" N		cial drift	E 10.9	7.6		8,000	11:1			E
In Charge	Long. 111°02"43" W	W-L, Z	and lake de-	Z 1.1	1.7		24,000	Under	60mm/min		Up
			posit 500'					damped			
			thick over								
			gneiss and								
			schist.								
			1,490 m.								
Bozeman, Mont.	Log cos 9.84489	Std-SP	Granite	Z 1.0	0.75		200,000	17:1	60mm/min	Beginning	Up
A. J. M. Johnson	Lat. 45°36'00.0"N		gneiss	N 1.0	0.75		200,000				N
In Charge	Long.111°38'00.0"W		1,575 m.	E 1.0	0.75		200,000				E
		Std-LP		Z 30	100		3,000	Critical	15mm/min	Beginning	Up
				N 30	100		3,000				N
				E 30	100		3,000				E
Butte, Mont.	Log cos 9.84167	W-A, N	Rhyolite 30 m.	N 8.02			316	50:1	15mm/min	Beginning	S
S. W. Nile	Lat. 46°00.8' N	Mass 2g	thick resting								
In Charge	Long. 112°33.8' W	W-L, N&E	on granite.	N 8.0	3.8		12,000	Near crit.	30mm/min		N
			1,758 m.	E 8.0	3.9		12,000	Near crit.			W
		B, Paper, Z		Z 1.1	0.5		50,000	Near crit.	60mm/min		Up
		Mass 100 lb.									
Chicago, Ill.	Log cos 9.87251	McC-R, N&E	Limestone.	N 10			335	15:1	15mm/min	End	N
W. F. Schmidt	Lat. 41°47.3' N	Mass 2.5 kg.	180 m.	E 10			335	15:1			W
In Charge	Long. 87°36.0' W										

Station	Position	Instrument	Foundation and Elevation		To	Tg	Ts	V		Paper Speed	Time Break Reference Point	Ground Motion Trace "Up"
*College, Alaska	Log cos 9.62825	W-L, Film, Z	Granite	Z	1.19	0.45		40,000**	Near crit.	15mm/min	Beginning	Up
J. B. Townshend	Lat. 64°51.6' N	B, Film, N&E	schist	N	1.36	0.45		50,000**	Near crit.			N
In Charge	Long. 147°50.1' W		180 m.	E	1.40	0.45		50,000	Near crit			E
		W, N		N	9.5	12.0		1,000	Near crit			N
1College Outpost	Log Cos 9.62757	Std-SP	Weathered	Z	1.0	0.75		100,000	17:1	60mm/min	Beginning	Up
J. B. Townshend	Lat. 64°54'00" N		schist	N	1.0	0.75		100,000				N
In Charge	Long. 147°47'30" W		320 m.	E	1.0	0.75		100,000				E
		Std-LP		Z	30	100		1,500	Critical	15mm/min	Beginning	Up
				N	30	100		1,500				N
				E	30	100		1,500				E
		B, paper, Z		Z	1.5	0.53		223,000	Near crit.	60mm/min	Beginning	Up
Columbia, S. C.	Log cos 9.91857	W-L, Z, N&E	Consolidated	Z	1.1	1.6		24,000	Under	60mm/min	Beginning	Up
L. G. Barre	Lat. 34°00' N		sand 150'	N	8.0	4.1		13,000	damped	30mm/min		N
In Charge	Long. 81°02' W		thick over	E	8.0	4.1		13,000				E
			granite.94 m.									
Eureka, Nevada	Log cos 9.87826	B, Paper, Z	Dolomite	Z	1.08	0.55		200,000	Near crit.	60mm/min	Beginning	Up
W. DePaoli	Lat. 39°29'00" N	Mass 100 lb.	bedrock									
In Charge	Long. 115°58'12"		2,178 m.									
Flaming Gorge, Utah	Log cos 9.87826	B-VR, Film, Z,	Quartzite	Z	1.0	0.2		116,000**	10:1	15mm/min	Beginning	Up
F. D. Lorde	Lat. 40°55'36" N	N&E	1,982 m.	N	1.0	0.2		116,000**				N
In Charge	Long. 109°23'10" W			E	1.0	0.2		116,000**				E
Glen Canyon, Ariz.	Log cos 9.90250	B-VR, Film, Z,	Navajo	Z	1.0	0.2		48,070**	10:1	15mm/min	Beginning	Up
V. E. Larson	Lat. 36°58'25" N	N&E	sandstone	N	1.0	0.2		48,070**				N
In Charge	Long. 111°35'35" W		1,339	E	1.0	0.2		48,070**				E
Guam, Mariana Islands	Log Cos 9.98776	Std-SP	Fractured	Z	1.0	0.75		6,250	17:1	60mm/min	Beginning	Up
W. S. Jacobs	Lat. 13°32'18" N		volcanic	N	1.0	0.75		6,250				N
In Charge	Long. 144°54'42" E		tuff	E	1.0	0.75		6,250				E
		Std-LP	230 m.	Z	30	100		750	Critical	30mm/min	Beginning	Up
				N	30	100		750				N
				E	30	100		750				E
	Log cos 9.98768	W-L, Z	Volcanics	Z	1.01	1.6		5,000	Near crit.	30mm/min	Beginning	Up
	Lat. 13°35'16" N		147 m.	N	7.35	7.0		3,000	Near crit.			N
	Long. 144°51'58" E	Spg, N&E		E	7.09	7.2		3,000	Near crit.			E
*Honolulu, Hawaii	Log cos 9.96926	M-S, N&E	Coral. 3 m.	N	12			124	20:1	30mm/min	Beginning	N
F. J. Tucker	Lat. 21°18'13" N	Mass 1 lb.		E	12			142	20:1			W
In Charge	Long. 158°05'44" W	HTL, Z		Z	0.5	0.5		20,000		60mm/min		Up
		Lamont, Z, N&E		Z	15	100		1,700		15mm/min		Up
				N	15	100		1,200				N
				E	15	100		1,400				E

Station	Position	Instrument	Foundation and Elevation		To	Tg	Ts	V	Σ	Paper Speed	Time Break Reference Point	Ground Motion Trace "Up"
Hungry Horse, Mont.	Log cos 9.82255	B-VR, Z	Argillaceous	Z	1.05	0.5		188,000	Near crit.	60mm/min	Beginning	Up
R. E. Wendt	Lat. 48°20'58" N		limestone	N	1.05	92			Near crit.	30mm/min		Up
In Charge	Long. 114°01'39" W	W-L, N&E	(Belt series)	N	3.5	3.9		10,000	Near crit.			N
			1,100 m.	E	3.4	4.1		10,000	Near crit.			E
Kipapa, Hawaii	Log cos 9.96891	Std-SP	Basalt.	Z	1.0	0.75		12,500	17:1	60mm/min	Beginning	Up
F. J. Tucker	Lat. 21°25'24" N		70 m.	N	1.0	0.75		12,500				N
In Charge	Long. 158°00'54" W			E	1.0	0.75		12,500				E
		Std-LP		Z	30	100		750	Critical	15mm/min	Beginning	Up
				N	30	100		750				N
				E	30	100		750				E
		B-VR, Z		Z	1.09	0.2		30,000	Near crit.	60mm/min	Beginning	Up
*Philadelphia, Pa.	Log cos 9.88452	W, N&E	Cape May	N	9.0	5.4		1,400	15:1	20mm/min	End	S
J. H. Sharp	Lat. 39°57'32" N	Mass 500 g.	sand and	E	9.2	4.1		1,400	15:1			E
In Charge	Long. 103°12'30" W		gravel. 5 m.									
Rapid City, S. Dak.	Log cos 9.85637	Std-SP	Shale.	Z	1.0	0.75		12,500	17:1	60mm/min	Beginning	Up
E. L Tullis	Lat. 44°04'30" N		995 m.	N	1.0	0.75		12,500				
In Charge	Long. 103°13'30" W			E	1.0	0.75		12,500				
		Std-LP		Z	30	100		750	Critical	15mm/min	Beginning	Up
				N	30	100		750				N
				E	30	100		750				E
Salt Lake City, Utah	Log cos 9.98732	McC-R, N&E	Bonneville	N	4.5	1.56	0.99	12,300	17:1	15mm/min	Beginning	N
A. M Anderson	Lat. 40°45'55" N	Mass 2.5 kg.	Lake Beds	E	4.9	1.37	0.99	12,700	17:1			W
In Charge	Long. 111°50'54" W	W-L, Z	1,425 m	Z	1.2	1.72	0.96	23,000	17:1	60mm/min		Up
San Juan, P. R.	Log cos 9.97794	Std-SP	Volcanic	Z	1.0	0.75		50,000	17:1	60mm/min	Beginning	Up
M. Vazquez	Lat. 18°06'42" N		breccia	N	1.0	0.75		50,000				N
In Charge	Long. 66°09'00" W		457 m.	E	1.0	0.75		50,000				E
		Std-LP		Z	30	100		750	Over	15mm/min	Beginning	Up
				N	30	100		750	damped			N
				E	30	100		750				E
*Sitka, Alas.	Log cos 9.73544	W, N&E	Graywacke.	N	7.5	16.5	8.2	1,000	20:1	15mm/min	Beginning	S
K. Cravens	Lat. 57°03'25" N	Mass 500 g.	19 m	E	7.5	13.2	8.2	1,000	5.5:1			E
In Charge	Long. 135°19'28" W	W-L, Z		Z	1.12	1.5		10,000				Up
Tucson, Ariz.	Log cos 9.92696	Std-SP	Metamorphics	Z	1.0	0.75		200,000	17:1	60mm/min	Beginning	Up
C. J. Beers	Lat. 32°18'35" N		985 m.	N	1.0	0.75		200,000				N
In Charge	Long. 110°46'56" W			E	1.0	0.75		200,000				E
		Std-LP		Z	30	100		1,500	Critical	30mm/min	Beginning	Up
				N	30	100		1,500				N
				E	30	100		1,500				E
	Log cos 9.92725	W-A, N&E	Caliche or	N	8.0			466	Critical	30mm/min	Beginning	S
	Lat. 32°14.8 N	Mass 2.3 g.	gravels 100-	E	8.0			457	Critical			E
	Long. 110°50.1' W	B, Z (LP)	300 m. thick.	Z	1.0	77		50,000	Near crit.	30mm/min		Up
		(SP)	700 m.			0.236		50,000		60mm/min		Up

Station	Position	Instrument	Foundation and Elevation	T_o	T_g	T_s	V	Σ	Paper Speed	Time Break Reference Point	Ground Motion Trace "Up"
Ukiah, Calif.	Log cos 9.88968	McC-R, N&E	Alluvium	Z 11.9			75	Near crit.	30mm/min	Beginning	S
L. F. Cacuette	Lat. 39°08' N	Mass 10 kg.	180 m. deep.	E 11.6			75				W
In Charge	Long. 123°13' W	W-L, Z	199 m.	Z 1.1	1.4		24,000		60mm/min		Up
Washington, D. C.	Log cos 9.89117	W-L, Z	Recent alluvium on schistose granite. 0 m.	Z 1.5	4.0		10,000		30mm/min		Up
	Lat. 38°53'33" N	Visible recorder			Pen 0.5						
	Long. 77°01'59" W										

*These stations operate visible recording seismographs of Coast and Geodetic Survey design similar to the one at Washington.

**Magnifications for film records are stated as read using an 8 power viewer.

B-Benioff Moving Coil, B-VR - Benioff Variable Reluctance, W - Wenner, McC-R - McComb-Romberg, W-A - Wood-Anderson, M-S - Milne-Shaw, HTL - Houston Technical Laboratory, Spg - Sprengnether, Std - World-Wide Network Standardized Seismograph, W-L - Wilson-Lamison.

1The seismometer is in a vault about 2.1 miles northeast of the main station. The signal is carried by cable to the main vault where it is fed intó a galvanometer and recorded on photographic paper.

DATE 1965	ORIGIN TIME G. C. T.	LAT.	LONG.	FOCAL DEPTH	MAG CGS	REGION AND REMARKS
JAN	H M S	DEG	DEG	KM		
1	02 56 48*	19.1 N	107.9 W	33	3.7	OFF COAST OF JALISCO, MEXICO.
1	03 44 16.6	5.4 S	154.3 E	136		SOLOMON ISLANDS.
1	07 41 31*	34.0 N	117.6 W	14	4.6	SOUTHERN CALIFORNIA. FELT AT FONTANA. MAG. 4 (PAS), 3 3/4-4 (BRK).
1	08 04 16.2	34.0 N	117.6 W	14	5.2	SOUTHERN CALIFORNIA. FELT AT ARROWHEAD, FONTANA, LOS ANGELES AND RIVERSIDE. MAG. 4 1/2 (PAS), 4 1/2 (BRK).
1	09 56 44*	36.4 N	122.5 W	14	4.3	CENTRAL CALIFORNIA. MAG. 3 1/2 (BRK).
1	10 02 49.8	19.6 N	68.5 W	33	4.5	NORTH ATLANTIC OCEAN.
1	11 39 31*	13.6 N	92.9 W	33	4.5	OFF COAST OF CHIAPAS, MEXICO.
1	12 09 12*	84.1 N	114.9 E	33	4.6	NORTH OF SEVERNAYA ZEMLYA.
1	12 46 43.4	23.5 N	121.2 E	33	5.2	TAIWAN.
1	13 34 40*	19.9 N	121.6 E	23		PHILIPPINE ISLANDS REGION.
1	17 32 27.8	35.8 N	4.5 E	33	4.4	ALGERIA. FELT AT M'SILA.
1	19 34 20*	11.8 S	166.3 E	24		SANTA CRUZ ISLANDS.
1	19 59 38.2	40.3 N	124.6 W	20	4.8	NEAR COAST OF NORTHERN CALIF.
1	20 02 38*	61.7 N	148.9 W	33	4.3	SOUTHERN ALASKA.
1	20 59 20*	19.3 S	69.6 W	174	4.2	NORTHERN CHILE.
1	21 38 29.2	35.7 N	4.4 E	10	5.2	ALGERIA. FOUR KILLED, 40 INJURED AND MAJOR PROPERTY DAMAGE AT M'SILA. MAG. 5 1/4-5 1/2 (PAS).
2	05 25 03*	16.0 S	70.4 W	33	4.4	SOUTHERN PERU.
2	09 36 53.9	22.1 S	179.4 W	555	4.6	SOUTH OF FIJI ISLANDS.
2	10 11 35.1	25.5 N	122.5 E	136	4.7	TAIWAN REGION.
2	13 44 18.9	19.1 N	145.4 E	142	6.1	MARIANA ISLANDS. MAG. 6 1/2 (BRK), 5 3/4-6 (PAL).
2	18 10 15.5	19.1 N	145.4 E	145	5.3	MARIANA ISLANDS.
2	19 23 44*	18.4 N	104.7 W	33	4.0	NEAR COAST OF JALISCO, MEXICO.
3	10 55 28.0	0.3 S	124.9 E	39	5.0	MOLUCCA SEA.
3	15 40 18.3	29.3 N	141.7 E	42	5.1	SOUTH OF HONSHU, JAPAN.
3	21 53 30.2	30.7 N	129.5 E	259	4.1	KYUSHU, JAPAN.
3	23 13 50.4	60.2 N	151.2 W	93	5.6	KENAI PENINSULA, ALASKA. FELT AT HOMER.
4	03 41 23*	59.9 N	153.6 W	122	5.4	SOUTHERN ALASKA. FELT AT HOMER.
4	04 06 47.3	39.9 N	117.9 W	33	4.6	NEVADA. MAG. 4 1/2 (BRK).
4	05 21 55.7	7.4 S	127.9 E	148	5.0	BANDA SEA.
4	07 07 31.1	19.1 S	177.5 W	570	5.5	FIJI ISLANDS REGION.
4	11 29 48.2	1.8 N	127.2 E	84	5.8	HALMAHERA.
4	19 39 59.3	34.6 N	138.6 E	86	4.5	NEAR S. COAST OF HONSHU, JAPAN.
4	20 48 54.9	67.4 N	136.2 W	33	4.5	NORTHERN YUKON TERRITORY, CANADA.
4	21 12 51*	22.3 S	179.5 W	535	4.6	SOUTH OF FIJI ISLANDS.

DATE 1965	ORIGIN TIME G. C. T.	LAT.	LONG.	FOCAL DEPTH	MAG CGS	REGION AND REMARKS
JAN	H M S	DEG	DEG	KM		
4	22 24 54.7	20.0 N	143.9 E	59	4.9	MARIANA ISLANDS REGION.
5	00 51 33.6	7.3 S	106.7 E	89	5.3	JAVA.
5	06 24 10*	13.3 N	90.8 W	33	4.3	NEAR COAST OF GUATEMALA.
5	07 32 26*	39.2 N	120.2 W	14	5.0	NORTHERN CALIFORNIA. MAG. 3 1/4 (BRK).
5	13 01 46*	38.0 N	138.8 E	33	4.1	NEAR WEST COAST OF HONSHU, JAPAN.
5	13 46 16.2	6.3 S	154.3 E	10	5.1	SOLOMON ISLANDS.
5	14 18 36*	14.3 N	93.3 W	53	4.7	NEAR COAST OF CHIAPAS, MEXICO.
5	17 21 29*	51.4 N	170.7 W	33	4.5	FOX ISLANDS, ALEUTIAN ISLANDS.
5	18 05 58.6	20.3 S	174.1 W	33	6.0	TONGA ISLANDS. MAG. 6 3/4 (PAS), 6 1/4 (BRK).
5	19 29 38.0	14.7 N	93.1 W	47	4.4	NEAR COAST OF CHIAPAS, MEXICO.
5	20 34 20.7	13.9 N	120.8 E	159	5.0	MINDORO, PHILIPPINE ISLANDS.
5	20 45 50.6	34.6 N	138.8 E	363	4.7	NEAR S. COAST OF HONSHU, JAPAN. FELT ON OSHIMA ISLAND.
5	23 00 14.8	15.3 S	173.1 W	33	5.3	TONGA ISLANDS.
5	23 22 29.4	9.7 N	126.3 E	12	4.9	MINDANAO, PHILIPPINE ISLANDS.
6	00 55 27.4	7.0 S	122.9 E	546	5.4	FLORES SEA.
6	02 01 22.2	44.9 N	112.7 W	7	5.1	EASTERN IDAHO. FELT IN SOUTHWESTERN MONTANA AND EASTERN IDAHO.
6	08 21 14.9	33.9 N	137.4 E	33	4.5	NEAR S. COAST OF HONSHU, JAPAN.
6	09 19 01.2	41.4 S	85.4 W	33	5.5	WEST CHILE RISE.
6	09 51 06.0	22.7 S	171.5 E	64	4.5	LOYALTY ISLANDS REGION.
6	11 27 49*	16.3 S	177.5 E	109	4.9	FIJI ISLANDS.
6	15 26 32.8	9.5 S	79.4 W	44	4.5	OFF COAST OF NORTHERN PERU.
6	16 30 37*	0.8 S	81.5 W	19	4.6	OFF COAST OF ECUADOR.
6	18 27 36.0	60.1 N	151.8 W	76	5.2	KENAI PENINSULA, ALASKA. FELT AT HOMER.
6	22 47 56.5	10.2 S	161.6 E	50	5.0	SOLOMON ISLANDS.
7	05 01 50*	51.0 N	176.9 E	33	4.4	RAT ISLANDS, ALEUTIAN ISLANDS.
7	05 40 41*	22.9 S	171.5 E	33	4.5	LOYALTY ISLANDS REGION.
7	08 29 27*	16.9 N	94.3 W	71	3.7	OAXACA, MEXICO.
7	10 22 17.5	36.5 N	26.9 E	45	5.1	DODECANESE ISLANDS.
7	11 05 01.4	14.4 N	92.7 W	69	4.1	NEAR COAST OF CHIAPAS, MEXICO.
7	11 39 33*	10.5 N	69.7 W	33	5.3	VENEZUELA.
7	11 57 30*	3.2 S	76.8 W	33	4.5	NORTHERN PERU.
7	12 54 09.4	19.3 N	145.5 E	120	5.2	MARIANA ISLANDS.
7	14 17 34*	14.7 S	69.3 W	115	4.3	PERU-BOLIVIA BORDER REGION.
7	15 56 32.5	16.2 N	97.2 W	43	5.5	OAXACA, MEXICO. FELT AT MEXICO CITY.
7	17 09 03*	9.9 N	93.8 E	12		NICOBAR ISLANDS REGION.
7	18 49 35.0	18.6 N	120.9 E	33	4.8	LUZON, PHILIPPINE ISLANDS.

DATE 1965	ORIGIN TIME G. C. T.	LAT.	LONG.	FOCAL DEPTH	MAG CGS	REGION AND REMARKS
JAN	H M S	DEG	DEG	KM		
7	18 52 25.9	3.6 N	74.0 W	20	4.3	COLOMBIA. FELT AT BOGOTA.
7	21 17 33.6	17.1 N	119.8 E	33	4.2	PHILIPPINE ISLANDS REGION.
8	10 23 17*	56.7 N	152.2 W	33	4.3	KODIAK ISLAND REGION.
8	10 31 38*	56.7 N	152.5 W	33	4.3	KODIAK ISLAND REGION.
8	11 25 56.6	56.3 N	153.5 W	33	4.5	KODIAK ISLAND REGION.
8	12 49 49.9	34.2 S	179.7 E	37	5.1	SOUTH OF KERMADEC ISLANDS.
8	16 31 10.6	44.6 N	149.5 E	36	4.6	KURILE ISLANDS.
8	17 43 32.6	18.2 S	172.6 W	392	4.2	TONGA ISLANDS REGION.
8	18 49 46.0	59.4 S	24.0 W	39	5.9	SOUTH SANDWICH ISLANDS REGION.
8	20 24 56*	33.8 S	179.3 E	33	6.4	SOUTH OF KERMADEC ISLANDS.
8	21 08 06.0	13.2 S	112.0 W	33	4.9	NORTHERN EASTER I. CORDILLERA. MAG. 5 1/4-5 1/2 (PAS), 5 (BRK).
8	23 16 20.4	34.2 S	179.8 E	20		SOUTH OF KERMADEC ISLANDS.
9	00 19 40*	57.6 N	150.5 W	22	4.2	GULF OF ALASKA.
9	01 42 44*	34.2 S	179.5 W	33	5.7	SOUTH OF KERMADEC ISLANDS.
9	03 29 42.6	46.4 N	153.1 E	28	4.7	KURILE ISLANDS.
9	04 11 49.8	36.4 N	27.6 E	39	4.4	DODECANESE ISLANDS. FELT.
9	04 28 56*	34.2 S	179.9 E	74	4.9	SOUTH OF KERMADEC ISLANDS.
9	06 17 19*	44.5 N	149.6 E	33	4.6	KURILE ISLANDS.
9	06 47 21.9	18.0 S	175.4 W	229	5.0	TONGA ISLANDS.
9	11 19 22.2	3.5 S	150.3 E	32	4.7	NEW IRELAND REGION.
9	12 03 11.4	32.2 S	66.9 W	132	4.7	SAN LUIS PROVINCE, ARGENTINA.
9	13 32 46.4	11.9 N	126.2 E	5	6.1	PHILIPPINE ISLANDS REGION.
9	14 35 12*	9.7 S	80.1 W	33	4.4	OFF COAST OF NORTHERN PERU.
9	17 08 52*	34.5 S	179.9 E	33		SOUTH OF KERMADEC ISLANDS.
9	20 37 12*	31.6 N	115.0 W	33	4.2	BAJA CALIFORNIA.
10	02 48 01*	14.5 N	92.2 W	33	3.9	NEAR COAST OF CHIAPAS, MEXICO.
10	02 52 23.9	45.8 N	26.6 E	128	5.3	RUMANIA. FELT.
10	02 56 56.3	5.6 S	154.5 E	126	5.0	SOLOMON ISLANDS.
10	03 43 45*	3.3 S	81.4 W	78	4.8	NEAR COAST OF NORTHERN PERU.
10	07 37 35.1	5.8 S	147.3 E	113	6.5	EAST NEW GUINEA REGION. FELT AT IOMA.
10	08 18 17.6	18.5 N	68.3 W	143	4.2	MONA PASSAGE.
10	09 01 06*	8.9 S	108.6 W	33	4.2	NORTHERN EASTER I. CORDILLERA.
10	10 04 40.7	33.0 S	70.3 W	33	4.4	CHILE-ARGENTINA BORDER REGION.
10	13 17 48*	58.7 N	157.1 W	33	4.6	ALASKA PENINSULA.
10	13 36 30.7	13.5 S	166.6 E	32	6.5	NEW HEBRIDES ISLANDS. MAG. 6 3/4 (PAS), 5 3/4-6 (BRK).
10	14 54 01.0	35.2 N	111.3 E	33	4.7	EASTERN CHINA.
10	16 39 20*	24.3 S	180.0 W	518		SOUTH OF FIJI ISLANDS.

DATE 1965	ORIGIN TIME G. C. T.	LAT.	LONG.	FOCAL DEPTH	MAG CGS	REGION AND REMARKS
JAN	H M S	DEG	DEG	KM		
10	17 30 12*	3.2 S	146.7 E	64		BISMARCK SEA.
10	18 00 41.1	3.4 S	146.2 E	39	5.1	BISMARCK SEA.
10	19 38 56*	28.2 S	66.9 W	175	4.8	CATAMARCA PROVINCE, ARGENTINA.
10	20 10 04*	43.2 N	16.8 E	11		YUGOSLAVIA.
10	23 45 38*	3.4 S	146.1 E	24	5.2	BISMARCK SEA.
11	00 21 58.9	3.6 S	146.1 E	33	5.2	BISMARCK SEA.
11	00 37 19*	58.6 N	151.4 W	33		KODIAK ISLAND REGION.
11	02 37 14*	10.8 N	62.2 W	80	4.2	NEAR COAST OF VENEZUELA.
11	04 10 04.4	14.0 N	89.5 W	144	5.0	GUATEMALA. FELT AT SAN SALVADOR, EL SALVADOR.
11	06 48 22.3	6.5 S	154.4 E	100	5.3	SOLOMON ISLANDS.
11	07 19 30.3	33.9 S	179.9 E	33	4.6	SOUTH OF KERMADEC ISLANDS.
11	09 09 16*	6.0 S	130.5 E	129	5.6	BANDA SEA.
11	09 27 40*	16.8 S	76.6 W	33	4.3	OFF COAST OF PERU.
11	09 44 58*	30.0 N	130.3 E	33	4.9	KYUSHU, JAPAN.
11	10 15 58.9	22.7 S	174.8 W	33	4.5	TONGA ISLANDS REGION.
11	10 48 28*	24.5 N	109.0 W	33	4.8	GULF OF CALIFORNIA.
11	11 24 23*	34.1 S	179.2 E	33	4.7	SOUTH OF KERMADEC ISLANDS.
11	11 36 52*	21.3 S	179.1 W	642	4.3	FIJI ISLANDS REGION.
11	13 40 59*	24.7 N	109.2 W	33	4.2	GULF OF CALIFORNIA.
11	16 25 58*	14.2 N	92.0 W	33	3.9	NEAR COAST OF CHIAPAS, MEXICO.
11	16 57 27.0	61.1 N	151.0 W	59	5.4	SOUTHERN ALASKA.
11	19 25 39*	60.3 N	146.0 W	33	3.9	SOUTHERN ALASKA.
11	20 14 33.5	43.0 N	139.2 E	189	5.3	EASTERN SEA OF JAPAN.
11	22 47 06.3	48.8 N	153.5 E	102	5.0	KURILE ISLANDS.
12	03 19 10.3	12.3 N	88.9 W	39	4.3	OFF COAST OF CENTRAL AMERICA. FELT AT SAN SALVADOR, EL SALVADOR.
12	04 41 18*	21.1 S	174.7 W	123	4.9	TONGA ISLANDS.
12	05 57 12*	8.4 N	103.4 W	33	4.1	OFF COAST OF MEXICO.
12	06 57 08*	13.5 S	166.4 E	70	4.5	NEW HEBRIDES ISLANDS.
12	09 20 38*	8.5 N	121.4 E	33	5.6	MINDANAO, PHILIPPINE ISLANDS.
12	09 34 21*	23.8 S	179.9 W	514		SOUTH OF FIJI ISLANDS.
12	10 08 47.7	56.0 S	27.4 W	33	5.8	SOUTH SANDWICH ISLANDS REGION.
12	12 49 36*	60.3 N	147.8 W	33	4.1	SOUTHERN ALASKA.
12	13 32 24.0	27.6 N	88.0 E	23	6.1	SIKKIM.
12	13 36 51.0	9.7 S	75.0 W	48	5.4	PERU.
12	13 55 20.0	27.3 N	87.7 E	33	5.3	NEPAL.
12	14 35 45*	18.1 S	178.3 W	563	5.0	FIJI ISLANDS REGION.
12	15 54 34*	34.0 S	179.4 E	11	5.2	SOUTH OF KERMADEC ISLANDS.

DATE 1965	ORIGIN TIME G. C. T.	LAT.	LONG.	FOCAL DEPTH	MAG CGS	REGION AND REMARKS
JAN	H M S	DEG	DEG	KM		
12	16 18 11*	34.7 N	111.8 E	33	4.9	EASTERN CHINA.
12	18 55 53.6	34.2 S	179.3 E	187	5.2	SOUTH OF KERMADEC ISLANDS.
12	20 31 02*	46.7 N	27.5 W	33	4.4	NORTH ATLANTIC RIDGE.
12	20 50 12.3	5.5 S	102.5 E	33	5.6	SOUTHERN SUMATRA.
13	00 18 30*	44.7 N	149.3 E	33	4.3	KURILE ISLANDS.
13	00 24 51*	15.2 S	172.3 W	40	4.5	SAMOA ISLANDS REGION.
13	02 19 49*	10.1 N	86.3 W	33	4.8	OFF COAST OF COSTA RICA.
13	03 40 54.5	45.0 N	112.6 W	33	3.8	MONTANA.
13	03 44 23.3	44.9 N	112.7 W	33	3.8	EASTERN IDAHO. FELT AT VIRGINIA CITY, MONTANA.
13	03 46 36*	43.5 S	75.2 W	33	4.7	OFF COAST OF SOUTHERN CHILE.
13	05 34 33.8	3.3 S	150.4 E	33	4.7	NEW IRELAND REGION.
13	06 42 33*	14.6 N	92.1 W	33	3.9	NEAR COAST OF CHIAPAS, MEXICO.
13	08 40 57.0	39.0 N	140.7 E	19	5.0	HONSHU, JAPAN.
13	16 57 16.0	36.5 S	98.6 W	33	5.1	SOUTHERN PACIFIC OCEAN.
13	22 15 24.6	0.0 S	123.9 E	127		NORTHERN CELEBES.
13	23 23 54.8	44.5 N	110.2 W	33		YELLOWSTONE NATIONAL PARK, WYO.
14	01 10 42*	48.6 N	154.3 E	33	4.8	KURILE ISLANDS.
14	01 33 14.6	30.2 N	129.0 E	140	5.3	KYUSHU, JAPAN.
14	08 25 17.5	5.5 S	81.3 W	32	5.3	NEAR COAST OF NORTHERN PERU.
14	08 28 45.3	6.2 S	149.9 E	63	5.6	NEW BRITAIN REGION.
14	12 18 59.3	6.8 N	72.9 W	166	4.9	NORTHERN COLOMBIA.
14	12 30 11.1	39.6 N	110.2 W	0	4.5	UTAH. COAL MINE ROCKBURST IN EASTERN UTAH.
14	16 00 00.0					37° 07' 08"N. 116° 01' 29"W. NEVADA TEST SITE "WOOL" SHOT ELEVATION 1016.2 METERS (AEC).
14	17 21 17.6	2.3 N	126.9 E	94	5.5	MOLUCCA PASSAGE.
14	18 46 20.4	38.8 S	176.0 E	82	5.8	NORTH ISLAND, NEW ZEALAND.
14	19 35 36*	14.1 N	93.1 W	33	3.9	NEAR COAST OF CHIAPAS, MEXICO.
14	21 57 46*	51.9 N	177.1 W	33	4.2	ANDREANOF ISLANDS, ALEUTIAN IS.
14	22 04 26.6	5.3 N	76.3 W	117	5.0	COLOMBIA. FELT AT ARMERO, MANIZALES AND PEREIRA.
14	23 54 00*	14.4 N	92.9 W	33	4.8	NEAR COAST OF CHIAPAS, MEXICO.
15	00 34 15.2	36.5 N	71.0 E	245	5.4	AFGHANISTAN-USSR BORDER REGION.
15	03 30 22.2	20.9 S	177.8 W	597	5.3	FIJI ISLANDS REGION.
15	03 52 06.3	18.5 N	145.6 E	204	4.7	MARIANA ISLANDS.
15	05 59 58.5	49.9 N	79.0 E	0	6.3	EASTERN KAZAKH SSR. MAG. 5 1/2-5 3/4 (BRK), 5 3/4-6 (PAL).
15	06 57 40*	14.6 N	92.8 W	33	3.9	NEAR COAST OF CHIAPAS, MEXICO.
15	14 56 46*	37.2 N	22.5 E	108	4.3	SOUTHERN GREECE.

DATE 1965	ORIGIN TIME G. C. T.	LAT.	LONG.	FOCAL DEPTH	MAG CGS	REGION AND REMARKS
JAN	H M S	DEG	DEG	KM		
15	15 27 22*	35.1 N	111.7 E	58	5.1	EASTERN CHINA.
15	15 28 35*	46.3 N	139.7 E	471	4.2	NEAR E. COAST OF EASTERN RUSSIA.
15	18 34 07.6	23.6 N	121.7 E	33	5.6	TAIWAN.
15	19 24 33.1	2.0 S	12.8 W	33	5.1	NORTH OF ASCENSION ISLAND.
15	20 13 27.8	18.6 S	178.7 W	685	5.3	FIJI ISLANDS REGION.
15	20 44 27*	16.5 S	172.6 W	33	4.8	SAMOA ISLANDS REGION.
15	21 07 35.1	13.3 S	166.4 E	85	5.2	NEW HEBRIDES ISLANDS. MAG. 4 3/4 (BRK).
15	23 17 36.0	13.3 S	166.3 E	8	5.5	NEW HEBRIDES ISLANDS.
15	23 47 27.8	35.7 N	4.3 E	31	4.7	ALGERIA. FELT AT M'SILA.
16	01 10 42.3	20.7 S	178.7 W	520	4.7	FIJI ISLANDS REGION.
16	01 23 18*	13.7 S	166.7 E	52	4.8	NEW HEBRIDES ISLANDS.
16	05 30 12.1	13.5 S	166.1 E	53	4.8	NEW HEBRIDES ISLANDS.
16	05 54 14*	13.9 N	93.0 W	33	3.9	OFF COAST OF CHIAPAS, MEXICO.
16	05 59 01*	54.3 N	164.6 W	33	4.4	UNIMAK ISLAND REGION.
16	06 34 16.6	5.7 S	151.3 E	60	5.7	NEW BRITAIN REGION. FELT AT PAIMALMAL.
16	10 50 07*	3.1 N	99.2 W	33	4.3	EAST CENTRAL PACIFIC OCEAN.
16	11 32 37.4	56.6 S	27.4 W	101	6.1	SOUTH SANDWICH ISLANDS REGION.
16	12 51 28.6	25.6 S	180.0 W	445	4.9	SOUTH OF FIJI ISLANDS.
16	16 22 14*	2.2 S	79.8 W	122	4.7	NEAR COAST OF ECUADOR.
16	16 59 28.5	2.5 S	78.2 W	33	4.5	ECUADOR.
16	20 28 08*	19.7 S	68.7 W	236	4.1	CHILE-BOLIVIA BORDER REGION.
16	21 28 39*	51.6 N	170.7 W	33	4.7	FOX ISLANDS, ALEUTIAN ISLANDS.
16	22 45 29.4	4.4 S	133.0 E	33	5.5	WEST NEW GUINEA REGION.
17	00 58 29*	56.9 N	151.7 W	33	4.4	KODIAK ISLAND REGION.
17	02 13 28.6	58.3 N	151.8 W	33	5.3	KODIAK ISLAND REGION. MAG. 4 1/4 (BRK).
17	02 48 32.8	28.1 S	135.7 E	33	3.3	SOUTH AUSTRALIA.
17	03 39 33*	34.5 N	27.8 E	44	4.8	EASTERN MEDITERRANEAN SEA.
17	08 19 44.5	15.1 S	173.7 W	33	5.4	TONGA ISLANDS. FELT ON SAMOA ISLANDS.
17	09 01 07.2	16.4 S	174.3 W	123	5.3	TONGA ISLANDS.
17	10 43 17.5	24.5 S	178.4 E	568	5.5	SOUTH OF FIJI ISLANDS.
17	19 22 42*	0.1 S	103.7 W	33	4.5	NORTHERN EASTER I. CORDILLERA.
17	20 57 41.3	6.8 S	109.1 E	242	6.5	JAVA.
18	00 03 11.9	37.7 S	72.9 W	52	5.3	CENTRAL CHILE. FELT AT CONCEPCION.
18	00 19 59.8	30.1 N	138.6 E	415	4.8	SOUTH OF HONSHU, JAPAN.
18	03 28 25.8	37.9 N	72.1 E	33	4.9	TADZHIK SSR.
18	05 49 13.2	7.2 N	73.2 W	108	4.0	NORTHERN COLOMBIA.
18	06 57 12*	31.1 N	116.6 W	33	4.9	BAJA CALIFORNIA.

DATE 1965	ORIGIN TIME G. C. T.	LAT.	LONG.	FOCAL DEPTH	MAG CGS	REGION AND REMARKS
JAN	H M S	DEG	DEG	KM		
18	15 21 56.1	37.1 N	95.6 E	39	4.9	TSINGHAI PROVINCE, CHINA.
18	15 57 18.9	18.3 S	167.5 E	33	4.6	NEW HEBRIDES ISLANDS. FELT AT PORT VILA.
18	16 16 05*	18.3 S	167.7 E	33		NEW HEBRIDES ISLANDS. FELT AT PORT VILA.
18	20 08 14*	37.4 N	113.2 W	33	4.1	UTAH.
18	22 38 23*	18.2 S	178.0 W	569	3.5	FIJI ISLANDS REGION.
19	00 38 27*	38.0 N	119.1 W	33		CALIFORNIA-NEVADA BORDER REGION. MAG. 3-3 1/2 (BRK).
19	01 52 51*	41.5 S	89.7 W	33	4.4	SOUTHERN PACIFIC OCEAN.
19	09 14 36.8	14.5 N	91.7 W	121	4.3	GUATEMALA.
19	15 18 41.6	28.1 S	66.8 W	146	5.2	CATAMARCA PROVINCE, ARGENTINA.
19	17 22 18.8	23.1 S	66.2 W	207	4.1	JUJUY PROVINCE, ARGENTINA.
19	17 57 37.4	7.1 S	129.2 E	126	4.9	BANDA SEA.
19	19 41 30.2	9.1 S	107.7 E	261	4.4	SOUTH OF JAVA.
19	21 04 44.4	32.3 S	178.2 W	33	4.8	SOUTH OF KERMADEC ISLANDS.
20	01 33 12.8	32.5 S	178.0 W	33	4.9	SOUTH OF KERMADEC ISLANDS.
20	02 06 09.6	4.9 S	142.3 E	96	5.5	NEW GUINEA.
20	06 28 28.4	52.2 N	170.9 W	25	4.2	FOX ISLANDS, ALEUTIAN ISLANDS.
20	09 18 34.9	18.4 S	167.6 E	10	5.0	NEW HEBRIDES ISLANDS.
20	09 45 56.4	67.3 N	136.2 W	33	4.1	NORTHERN YUKON TERRITORY, CANADA.
20	12 51 56.4	2.6 N	128.3 E	98	4.6	HALMAHERA.
20	16 42 50.9	60.0 N	146.8 W	33	4.4	SOUTHERN ALASKA.
20	20 27 05.5	46.3 N	152.3 E	33	4.6	KURILE ISLANDS.
21	02 04 43.7	15.9 S	173.2 W	33	5.1	TONGA ISLANDS.
21	02 41 01.6	33.6 N	136.1 E	13	4.4	NEAR S. COAST OF SOUTHERN HONSHU.
21	06 09 58*	34.2 S	179.8 E	33	5.9	SOUTH OF KERMADEC ISLANDS. MAG. 5 3/4-6 (BRK).
21	11 37 21*	18.0 S	178.5 W	600	4.3	FIJI ISLANDS REGION.
21	12 35 54*	32.3 S	66.4 W	26	4.5	SAN LUIS PROVINCE, ARGENTINA.
21	13 31 29.4	34.6 N	86.9 E	33	5.0	TIBET.
21	15 48 06*	29.8 S	179.4 W	246	4.1	KERMADEC ISLANDS.
21	16 36 46.2	56.2 N	163.1 E	119	4.4	NEAR EAST COAST OF KAMCHATKA.
21	16 57 51.4	18.6 S	169.3 E	260	4.9	NEW HEBRIDES ISLANDS. FELT AT PORT VILA.
21	20 43 55.0	12.3 N	86.7 W	138	4.4	NICARAGUA.
21	21 37 26.2	12.8 S	169.0 E	639	4.5	SANTA CRUZ ISLANDS REGION.
22	00 45 12*	41.2 N	129.0 W	47	4.9	OFF COAST OF NORTHERN CALIFORNIA.
22	02 41 35*	20.1 N	94.5 E	76	5.5	BURMA.
22	04 13 04*	6.8 S	130.9 E	81	4.4	BANDA SEA.
22	05 18 27.9	19.7 S	176.1 W	210	4.7	FIJI ISLANDS REGION.

DATE 1965	ORIGIN TIME G. C. T.	LAT.	LONG.	FOCAL DEPTH	MAG CGS	REGION AND REMARKS
JAN	H M S	DEG	DEG	KM		
22	10 51 37.1	38.5 N	138.5 E	33	4.4	NEAR WEST COAST OF HONSHU, JAPAN.
22	15 11 14*	46.9 N	152.5 E	33	4.2	KURILE ISLANDS.
22	19 59 50*	21.5 S	170.1 E	33		LOYALTY ISLANDS REGION.
22	22 03 40*	44.2 N	151.0 E	33	4.4	KURILE ISLANDS REGION.
23	01 09 05*	16.4 N	95.8 W	33	3.8	OAXACA, MEXICO.
23	02 39 30.6	44.2 N	18.0 E	33	5.0	YUGOSLAVIA. FELT IN BOSNIA-HERCEGOVINA REPUBLIC.
23	04 23 57*	52.3 N	175.7 W	33	4.2	ANDREANOF ISLANDS, ALEUTIAN IS.
23	05 14 56*	50.1 S	163.0 E	33		AUCKLAND ISLANDS REGION.
23	05 47 32*	15.1 N	91.8 W	166	4.1	MEXICO-GUATEMALA BORDER REGION.
23	08 03 39.9	16.3 S	174.5 W	119	4.8	TONGA ISLANDS.
23	11 23 31.7	39.1 N	48.4 E	33	4.6	N.W. IRAN-USSR BORDER REGION.
23	14 48 28.0	8.3 S	75.1 W	33	4.2	PERU.
23	16 01 18.0	13.8 N	119.9 E	66	4.2	PHILIPPINE ISLANDS REGION.
23	16 42 05*	73.3 N	7.4 E	33	4.4	GREENLAND SEA.
23	20 07 31.4	8.8 N	83.1 W	46	4.5	COSTA RICA.
23	21 51 15*	36.9 N	140.9 E	58	5.1	NEAR EAST COAST OF HONSHU, JAPAN.
23	22 03 08.7	35.3 N	72.8 E	200	4.9	WEST PAKISTAN.
23	22 38 25.8	13.7 N	119.9 E	53		PHILIPPINE ISLANDS REGION.
23	23 24 29.6	7.4 N	123.9 E	627	5.3	MINDANAO, PHILIPPINE ISLANDS. FELT AT DAVAO.
24	00 11 12.1	2.4 S	126.0 E	6	6.6	CERAM SEA. 71 KILLED AND HEAVY DAMAGE ON SANANA ISLAND. SEISMIC SEA WAVE AT SANANA DESTROYED 90% OF THE CITY NAMLEA, BURU ISLAND ALSO HIT BY WAVE. FELT AT DAVAO, PHILIPPINES AND ON HALMAHERA. MAG. 7 1/2-7 3/4 (PAS), 7 3/4 (BRK).
24	01 19 32.9	6.8 N	73.1 W	169	5.4	NORTHERN COLOMBIA. FELT AT BOGOTA, BUCARAMANGA AND SOGAMOSO.
24	02 31 19*	2.7 S	126.1 E	23		CERAM SEA.
24	02 41 43*	2.2 S	126.0 E	29	5.8	CERAM SEA.
24	06 14 28*	4.3 S	132.8 E	11	4.8	WEST NEW GUINEA REGION.
24	16 06 30.7	20.9 S	179.0 W	616	5.0	FIJI ISLANDS REGION.
24	16 38 17.4	51.4 N	170.3 W	33	4.4	FOX ISLANDS, ALEUTIAN ISLANDS.
24	19 57 01.4	54.4 N	162.2 W	20	5.0	ALASKA PENINSULA.
24	22 38 56.0	73.1 N	6.5 E	33	4.8	GREENLAND SEA.
25	01 11 54*	14.8 S	171.2 E	635	4.3	NEW HEBRIDES ISLANDS REGION.
25	04 14 21.2	37.9 N	138.9 E	33	4.6	NEAR WEST COAST OF HONSHU, JAPAN.
25	08 51 42.4	15.9 N	93.5 W	33	3.9	NEAR COAST OF CHIAPAS, MEXICO.
25	10 03 36.2	20.2 S	67.2 W	9	4.7	SOUTHERN BOLIVIA.
25	10 33 16*	12.9 S	167.2 E	205	4.8	SANTA CRUZ ISLANDS.
25	12 02 51.4	2.6 S	126.1 E	33	6.3	CERAM SEA.

DATE 1965	ORIGIN TIME G. C. T.	LAT.	LONG.	FOCAL DEPTH	MAG CGS	REGION AND REMARKS
JAN	H M S	DEG	DEG	KM		
25	12 15 34.1	6.0 N	125.9 E	166	5.3	MINDANAO, PHILIPPINE ISLANDS.
25	12 18 33.0	34.5 N	32.8 E	17	4.8	CYPRUS.
25	12 24 19*	45.5 N	110.3 W	33	4.0	MONTANA.
25	16 44 18.7	13.7 N	144.3 E	139	5.4	MARIANA ISLANDS.
25	16 54 02*	10.6 S	75.4 W	33		PERU.
25	20 22 56*	32.2 S	138.6 E	33	4.9	NEAR SOUTH COAST OF AUSTRALIA.
25	22 36 54*	11.4 S	75.2 W	115	4.2	PERU.
26	01 19 19*	61.4 N	152.4 W	135	4.1	SOUTHERN ALASKA.
26	01 53 31.9	34.6 N	135.2 E	357	4.5	NEAR S. COAST OF SOUTHERN HONSHU.
26	02 29 02*	28.4 N	131.1 E	33	4.8	RYUKYU ISLANDS REGION.
26	04 54 51.6	23.4 S	179.8 E	474	5.0	SOUTH OF FIJI ISLANDS.
26	06 25 32*	2.9 S	102.4 E	89	5.7	SOUTHERN SUMATRA.
26	07 22 36*	68.7 N	18.7 W	33	4.3	ICELAND REGION.
26	10 42 35.4	17.5 S	178.7 W	504	4.2	FIJI ISLANDS REGION.
26	10 49 33.5	2.4 S	126.0 E	33	5.2	CERAM SEA.
26	11 23 14*	28.2 N	111.7 W	33	4.5	GULF OF CALIFORNIA.
26	13 48 34*	0.4 S	81.1 W	33	4.2	OFF COAST OF ECUADOR.
26	14 17 49*	0.2 S	80.8 W	33	4.7	NEAR COAST OF ECUADOR.
26	16 54 34*	13.1 S	76.1 W	118	4.2	NEAR COAST OF PERU.
26	17 08 42*	42.7 N	141.2 E	33	4.2	HOKKAIDO, JAPAN REGION.
26	18 14 44.1	2.4 S	125.7 E	33	5.0	CERAM SEA.
26	23 22 18.4	29.6 N	142.0 E	33	4.4	SOUTH OF HONSHU, JAPAN.
26	23 47 38.2	36.1 N	139.5 E	104	5.4	HONSHU, JAPAN.
27	01 44 35.8	18.9 N	176.6 E	33	4.4	NORTH PACIFIC OCEAN.
27	11 10 20*	51.7 N	177.2 W	33	4.3	ANDREANOF ISLANDS, ALEUTIAN IS.
27	13 24 09*	28.6 N	111.7 W	33	4.2	GULF OF CALIFORNIA.
27	15 31 30*	36.7 N	139.6 E	89	3.9	HONSHU, JAPAN. FELT.
27	19 01 00*	48.8 N	154.8 E	33	4.5	KURILE ISLANDS.
27	19 24 50*	30.5 N	138.7 E	399	4.1	SOUTH OF HONSHU, JAPAN.
27	19 53 55.0	6.6 S	153.9 E	118	4.8	NEW BRITAIN REGION.
27	20 13 39*	22.0 S	179.5 W	563		SOUTH OF FIJI ISLANDS.
27	20 42 59.2	6.7 S	154.6 E	49	4.7	SOLOMON ISLANDS.
27	21 44 36.9	7.0 S	129.6 E	110	4.8	BANDA SEA.
28	00 24 54.6	6.1 S	154.4 E	45	4.9	SOLOMON ISLANDS.
28	02 20 57.4	15.6 S	168.1 E	151	4.3	NEW HEBRIDES ISLANDS.
28	02 34 03.0	2.5 S	102.5 E	33	5.6	SOUTHERN SUMATRA.
28	04 03 39.5	15.3 N	93.9 W	33	5.3	NEAR COAST OF CHIAPAS, MEXICO. MAG. 4 1/2 (BRK).
28	04 58 20*	22.6 N	45.5 W	33	4.2	NORTH ATLANTIC RIDGE.

DATE 1965	ORIGIN TIME G. C. T.	LAT.	LONG.	FOCAL DEPTH	MAG CGS	REGION AND REMARKS
JAN	H M S	DEG	DEG	KM		
28	05 35 00*	12.9 S	78.5 W	33	4.9	OFF COAST OF PERU.
28	08 15 43.6	23.9 S	66.7 W	203	4.1	JUJUY PROVINCE, ARGENTINA.
28	09 38 56*	28.9 S	72.2 W	70	4.2	OFF COAST OF CENTRAL CHILE.
28	16 15 35.0	4.0 S	104.2 W	33	5.0	NORTHERN EASTER I. CORDILLERA.
28	23 10 44.2	42.7 N	23.2 E	33	4.5	BULGARIA. SLIGHT DAMAGE AT RADOMIR.
29	00 11 22*	23.9 N	108.7 W	33	5.4	GULF OF CALIFORNIA. MAG. 4 1/4 (BRK).
29	01 22 57.0	36.1 N	140.3 E	33	4.4	NEAR EAST COAST OF HONSHU, JAPAN.
29	01 27 16*	37.6 N	122.4 W	14	4.0	CENTRAL CALIFORNIA.
29	01 40 48*	36.6 N	121.9 W	14	4.7	CENTRAL CALIFORNIA. MAG. 3 (BRK).
29	02 21 54.5	24.2 N	108.6 W	33	4.6	GULF OF CALIFORNIA. MAG. 3 1/2-3 3/4 (BRK).
29	03 28 18.0	21.2 S	178.9 W	550	4.8	FIJI ISLANDS REGION.
29	06 58 06.6	23.7 N	108.5 W	33	4.5	GULF OF CALIFORNIA.
29	08 20 42*	36.9 S	72.5 W	33	4.6	NEAR COAST OF CENTRAL CHILE.
29	09 35 25.7	54.8 N	161.7 E	33	5.8	NEAR EAST COAST OF KAMCHATKA. MAG. 4 1/2 (BRK).
29	10 29 22.8	18.9 S	169.1 E	149	4.0	NEW HEBRIDES ISLANDS.
29	10 52 00.0	20.3 S	177.6 W	447	4.1	FIJI ISLANDS REGION.
29	11 21 04.3	2.9 S	126.3 E	51	4.8	CERAM SEA.
29	20 06 02.4	35.6 N	73.6 E	33	5.7	NORTHWESTERN KASHMIR.
29	22 31 56.3	51.3 N	179.0 W	33		ANDREANOF ISLANDS, ALEUTIAN IS.
29	23 39 02.5	34.8 N	27.6 E	36	5.1	EASTERN MEDITERRANEAN SEA.
29	23 40 41.7	16.2 S	168.7 E	227	5.1	NEW HEBRIDES ISLANDS.
30	04 37 15.1	51.6 N	179.8 W	33	5.6	ANDREANOF ISLANDS, ALEUTIAN IS.
30	08 40 35*	32.6 S	178.3 W	55	5.0	SOUTH OF KERMADEC ISLANDS.
30	12 15 54*	5.9 S	129.9 E	149	5.5	BANDA SEA.
30	15 49 28.9	50.0 N	157.9 E	33	4.7	KURILE ISLANDS.
30	17 42 12.3	13.0 S	169.4 E	647	5.2	NEW HEBRIDES ISLANDS REGION.
30	18 06 21.2	12.9 S	169.5 E	649	5.4	SANTA CRUZ ISLANDS REGION.
31	03 09 17*	60.3 N	147.8 W	33	4.5	SOUTHERN ALASKA.
31	11 05 01*	60.2 N	146.1 W	33	4.3	SOUTHERN ALASKA.
31	12 01 43.9	47.1 N	153.2 E	33	4.5	KURILE ISLANDS.
31	12 57 29*	21.2 S	67.8 W	71	5.6	CHILE-BOLIVIA BORDER REGION. MAG. 5 (BRK).
31	14 57 24.9	21.1 S	67.8 W	71	5.1	CHILE-BOLIVIA BORDER REGION.
31	23 09 18.5	1.4 N	127.0 E	144	5.3	HALMAHERA.
31	23 36 13*	51.2 N	178.6 E	33	5.2	RAT ISLANDS, ALEUTIAN ISLANDS.
31	23 50 27.9	51.1 N	178.2 E	33	4.5	RAT ISLANDS, ALEUTIAN ISLANDS.

Date and Station	Phase (GCT)
	h m s
JAN 01	
ALQ EP	00 04 35.5
JAN 01	
TUC E(P)	01 16 10.3
JAN 01	
COL EP	02 41 02.7
JAN 1	
H-02 56 47.5	
19.1N 107.9W	
h ABOUT 033KM	
ALQ I(P)	03 00 34.2
JAN 01	
EUR E(P)	03 14 32.0
ALQ E(P)	03 14 34.5
JAN 01	
ALQ IP	03 42 09.5
I	44 08.3
JAN 1	
H-03 44 16.6	
5.4S 154.3E	
h ABOUT 136KM	
COL EP	03 56 22.1
EpP	56 54.0
EUR EP	03 57 19.0
JAN 01	
EUR FP	05 29 03.1
JAN 01	
FUR E(P)	06 55 01.5
JAN 01	
BOZ IP	07 18 41.2
E(S)	18 54.0
BUT EP	07 18 50.3
EL	19 10.3
JAN 01	
BUT E(P)	07 23 56.0
IL	23 32.3
JAN 01	
BOZ EP	07 26 46.7
JAN 01	
EUR EP	07 37 04.3
JAN 1	
H-07 41 31.2	
34.0N 117.6W	
h ABOUT 014KM	
BCN IP	07 42 20.0
I	42 25.3
IL	42 03.0
EUR IP	07 42 56.5
GCA F(P)	07 42 57.2

Date and Station	Phase (GCT)
	h m s
TUC E(P)	07 43 00.5
E(L)	44 40.6
ALQ E(P)	07 43 42.0
JAN 1	
H-08 04 16.2	
34.0N 117.6W	
h ABOUT 014KM	
BCN IP	08 05 04.0
I	05 13.1
IL	05 47.8
FUR IP	08 05 41.4
GCA IP	08 05 43.0
TUC EP	08 05 44.9
E(L)	07 25.0
ALQ IP	08 06 32.0
I	06 39.7
BOZ E(P)	08 07 21.8
BUT E(P)	08 07 25.0
E(L)	10 20.3
HHM EP	08 07 45.7
RCD EP	08 07 50.0
COL EP	08 11 21.0
JAN 01	
COL EP	08 59 20.0
E	59 37.6
BOZ EP	09 02 41.5
JAN 01	
COL EP	08 59 36.0
JAN 01	
TUC E(P)	09 46 14.0
JAN 01	
COL EP	09 54 18.0
JAN 1	
H-09 56 44.4	
36.4N 122.5W	
h ABOUT 014KM	
UKI E(P)	09 57 27.0
EUR EP	09 58 13.6
I	58 34.5
BCN E(P)	09 58 23.0
E	58 31.5
EL	59 54.8
TUC E(P)	09 59 18.0
JAN 01	
COL IP	09 58 16.2
JAN 1	
H-10 02 49.8	
19.6N 068.5W	
h ABOUT 033KM	

Date and Station	Phase (GCT)
	h m s
SJG IP	10 03 31.0
IL	04 07.0
ALQ E(P)	10 10 02.0
RCD E(P)	10 10 06.0
TUC E(P)	10 10 20.7
BOZ E(P)	10 10 56.0
E	11 05.3
BCN E(P)	10 11 04.5
HHM E(P)	10 11 16.0
COL EP	10 13 46.0
JAN 01	
COL EP	10 23 21.2
JAN 1	
H-11 39 30.5	
13.6N 092.9W	
h ABOUT 033KM	
ALQ IP	11 44 48.5
TUC EP	11 44 51.5
BCN EP	11 45 36.8
EUR IP	11 46 04.2
BOZ EP	11 46 27.4
COL IP	11 49 57.5
E	50 27.4
JAN 01	
TUC E(P)	12 04 16.0
JAN 1	
H-12 09 12.3	
84.1N 114.9E	
h ABOUT 033KM	
COL EP	12 14 50.0
BOZ EP	12 17 55.7
RCD EP	12 18 11.0
ALQ IP	12 19 15.3
TUC E(P)	12 19 31.2
JAN 01	
EUR IP	12 18 04.8
JAN 01	
TUC E(P)	12 40 34.0
JAN 1	
H-12 46 43.4	
23.5N 121.2E	
h ABOUT 033KM	
COL EP	12 57 49.0
HHM EP	12 59 56.8
JAN 01	
TUC E(P)	12 51 05.7

Date and Station	Phase (GCT)
	h m s
JAN 01	
BCN EP	13 30 45.0
JAN 1	
H-13 34 40.2	
19.9N 121.6E	
h ABOUT 023KM	
COL EP	13 46 06.0
JAN 01	
EUR E(P)	13 34 55.0
JAN 01	
TUC E(P)	16 32 23.0
JAN 01	
HHM E(P)	16 35 01.0
EL	35 57.8
JAN 01	
BOZ E(P)	16 37 24.5
JAN 01	
TUC E(P)	17 17 21.4
ALQ E(P)	17 17 45.0
JAN 01	
COL FP	17 24 44.7
JAN 1	
H-17 32 27.8	
35.8N 004.5E	
h ABOUT 033KM	
COL EP	17 44 22.0
ALQ E(P)	17 45 00.0
JAN 01	
TUC EP	17 35 27.0
E(L)	35 47.0
JAN 01	
COL IP	18 03 42.4
JAN 01	
ALQ EP	18 03 43.5
JAN 01	
BCN FP	18 43 57.3
EL	44 15.2
JAN 01	
COL IP	19 23 49.5
JAN 01	
ALQ EP	19 24 34.0
EUR EP	19 25 50.1
JAN 01	
COL IP	19 23 50.0
I	24 00.5
E	24 46.1
JAN 1	
H-19 34 20.2	
11.8S 166.3E	
h ABOUT 024KM	
COL EP	19 46 49.0

Date and Station	Phase (GCT)
	h m s
JAN 01	
COL IP	19 39 10.4
JAN 01	
COL IP	19 50 32.2
JAN 1	
H-19 59 38.2	
40.3N 124.6W	
h ABOUT 020KM	
UKI EP	20 00 06.2
F	00 12.0
EUR IP	20 01 17.2
BOZ E(P)	20 02 14.0
TUC E(P)	20 02 55.6
RCD E(P)	20 03 20.0
ALQ E(P)	20 03 21.0
JAN 1	
H-20 02 38.0	
61.7N 148.9W	
h ABOUT 033KM	
COL IP	20 03 29.5
HHM IP	20 07 48.9
EUR IP	20 08 45.4
JAN 01	
BCN IP	20 32 15.8
EL	32 34.0
GCA EP	20 32 19.0
JAN 01	
BCN EP	21 10 41.0
JAN 1	
H-21 38 29.2	
35.7N 004.4E	
h ABOUT 010KM	
CSC EP	21 49 31.0
RCD EP	21 50 22.0
F	50 35.0
E	50 41.0
COL EP	21 50 26.0
HHM E(P)	21 50 39.0
BOZ EP	21 50 44.2
BUT EP	21 50 44.3
FGU E(P)	21 50 53.8
SLC E(P)	21 51 01.7
ALQ EIP	21 51 05.0
GCA E(P)	21 51 13.0
EUR EP	21 51 20.7

Date and Station	Phase (GCT)
	h m s
TUC E(P)	21 51 23.2
F	51 25.5
BCN EP	21 51 27.7
E	51 30.5
JAN 01	
SJG E(P)	21 48 11.0
JAN 01	
BCN EP	22 40 29.8
EL	41 00.5
JAN 01	
TUC E(P)	23 13 01.3
JAN 02	
BCN EP	01 15 42.2
JAN 02	
COL EP	02 41 22.6
JAN 02	
COL EP	02 44 56.5
JAN 02	
COL EP	03 48 11.5
JAN 02	
BUT EP	04 04 57.3
IL	05 14.8
JAN 02	
TUC E(P)	04 25 32.0
E(L)	26 18.0
BCN E(P)	04 26 02.9
E	27 49.0
GCA E(P)	04 26 23.3
EUR EP	04 26 49.1
JAN 02	
EUR EP	04 58 20.9
JAN 2	
H-05 25 03.1	
16.0S 070.4W	
h ABOUT 033KM	
ALQ EP	05 35 16.0
JAN 2	
H-09 36 53.9	
22.1S 179.4W	
h ABOUT 555KM	
TUC EP	09 48 33.0
COL IP	09 48 53.3
JAN 2	
H-10 11 35.1	
25.5N 122.5E	
h ABOUT 136KM	
COL EP	10 22 16.0
BUT E(P)	10 24 34.0
JAN 02	
COL E(P)	10 53 38.0

Date and Station	Phase (GCT)
	h m s
BOZ E(P)	10 59 19.0
JAN 02	
BHP IP D	11 28 16.0
IS	28 53.0
JAN 2	
H-13 44 18.9	
19.1N 145.4E	
h ABOUT 142KM	
GUA IP	13 45 41.5
E(S)	46 51.0
KIP IP	13 53 20.8
HON EP	13 53 21.0
COL IP	13 54 30.2
SIT E(P)	13 55 07.0
UKI E(P)	13 56 10.5
HHM IP D	13 56 28.2
BUT IP D	13 56 35.3
EUR IP	13 56 38.0
BOZ EP	13 56 41.4
BCN IP D	13 56 48.5
EPP	57 26.0
SLC IP	13 56 50.0
GCA IP	13 56 57.7
FGU IP	13 56 58.0
TUC EP	13 57 09.6
E(S)	14 07 43.0
RCD IP	13 57 10.0
E	57 20.0
ESKS	14 07 31.0
ALQ IP	13 57 19.4
I	57 49.5
SJG EP'	14 03 07.5
I	03 17.0
I	06 30.0
JAN 02	
TUC E(P)	14 44 45.5
JAN 02	
TUC E(P)	15 02 12.4
JAN 02	
TUC EP	17 29 40.5
BCN EP	17 30 25.5
EUR IP	17 30 30.6
JAN 02	
COL IP	17 30 48.4
JAN 02	
TUC EP	17 30 31.5

Date and Station	Phase (GCT)
	h m s
ALQ I(P)	17 30 52.8
JAN 02	
EUR IP	18 07 34.1
JAN 2	
H-18 10 15.5	
19.1N 145.4E	
h ABOUT 145KM	
GUA IP	18 11 38.2
E(S)	12 40.8
COL IP	18 20 27.6
HHM IP	18 22 26.0
BOZ EP	18 22 37.5
BCN EP	18 22 45.0
TUC E(P)	18 23 05.8
RCD EP	18 23 06.5
ALQ IP	18 23 16.9
JAN 2	
H-19 23 43.6	
18.4N 104.7W	
h ABOUT 033KM	
TUC E(P)	19 27 09.4
ALQ E(P)	19 27 35.7
BCN EP	19 28 11.0
EUR IP	19 28 50.2
COL EP	19 33 10.5
E	33 25.8
JAN 02	
TUC E(P)	21 12 20.0
JAN 02	
TUC E(P)	22 15 52.0
JAN 02	
GUA IP	22 26 20.6
E(S)	26 27.0
JAN 02	
BOZ EP	23 10 19.0
JAN 02	
GUA EP	23 28 01.4
E(S)	28 08.0
JAN 03	
FGU IP	00 00 01.5
JAN 03	
BOZ EP	00 32 39.5
JAN 03	
TUC E(P)	02 22 40.5
ALQ E(P)	02 23 22.5
RCD E(P)	02 24 17.0

Date and Station	Phase (GCT)
	h m s
JAN 03	
GUA EP	05 11 11.5
ES	11 23.5
JAN 3	
H-10 55 28.0	
.3S 124.9E	
h ABOUT 039KM	
GUA EP	11 00 41.0
COL E(P)	11 08 28.6
TUC EP'	11 14 04.0
JAN 03	
COL EP	12 33 11.0
JAN 03	
SJG IP C	13 31 51.8
IL	32 39.5
JAN 3	
H-15 40 18.3	
29.3N 141.7E	
h ABOUT 042KM	
HHM IP C	15 52 11.1
BCN F(P)	15 52 42.5
RCD F(P)	15 52 56.0
JAN 03	
HHM F(P)	19 23 43.0
E	23 59.7
E	25 12.2
JAN 03	
TUC EP	20 48 40.5
F(S)	49 04.0
JAN 3	
H-21 53 30.2	
30.7N 129.5E	
h ABOUT 259KM	
COL EP	22 03 07.8
JAN 3	
H-23 13 50.4	
60.2N 151.2W	
h ABOUT 093KM	
COL IP	23 15 04.5
HHM EP	23 19 00.7
BUT F(P)	23 19 10.0
E	19 25.8
BCN EP	23 20 18.9
EpP	20 35.5
EPCP	23 01.0
ESCP	26 40.0
ALQ EP	23 21 02.9
IPCP	23 14.0
TUC EP	23 21 04.3
JAN 04	
GUA EP	00 42 40.9
E	43 39.0

Date and Station	Phase (GCT)
	h m s
JAN 04	
TUC E(P)	03 31 31.0
JAN 4	
H-09 41 22.9	
59.9N 153.6W	
h ABOUT 122KM	
COL IP	03 42 45.7
BCN E(PCP)	03 48 30.5
TUC E(PCP)	03 49 11.3
JAN 4	
H-04 06 47.3	
39.9N 117.9W	
h ABOUT 033KM	
EUR IP	04 07 13.0
BCN E(P)	04 08 17.8
IL	09 20.0
GCA E(P)	04 08 36.0
JAN 4	
H-05 21 55.7	
7.4S 127.9E	
h ABOUT 148KM	
TUC EP'	05 40 31.5
ALQ EP'	05 40 37.5
SJG EP'	05 41 42.5
I	42 32.0
JAN 4	
H-07 07 31.1	
19.1S 177.5W	
h ABOUT 570KM	
BCN IP C	07 18 47.7
EUR IP	07 18 52.8
TUC IP C	07 18 53.3
EpP	20 55.0
GCA IP	07 19 01.4
ALQ IP	07 19 14.2
IpP	21 18.8
COL IP	07 19 14.6
IPCP	19 22.3
IpP	21 18.7
EPP	22 40.2
BUT IP	07 19 18.8
HHM EP	07 19 20.0
BOZ EP	07 19 21.2
JAN 04	
COL EP	07 09 41.8
JAN 04	
TUC E(P)	08 31 07.8

Date and Station	Phase (GCT)
	h m s
JAN 4	
H-11 29 48.2	
01.8N 127.2E	
h ABOUT 084KM	
GUA E(P)	11 34 19.0
E(S)	38 49.0
COL IP	11 42 20.5
EUR EP'	11 48 12.0
TUC EP'	11 48 23.5
ALQ IP'	11 48 28.3
JAN 04	
COL IP	12 02 17.7
JAN 04	
EUR EP	12 31 12.3
JAN 04	
BCN IP	15 18 08.4
IS	18 10.2
JAN 04	
BOZ E(P)	17 55 19.2
E(S)	55 53.0
JAN 04	
BOZ E(P)	17 57 18.2
E(S)	57 52.5
JAN 04	
BOZ E(P)	18 30 30.0
E(S)	31 05.0
JAN 04	
EUR EP	18 32 15.8
JAN 4	
H-19 39 59.3	
34.6N 138.6E	
h ABOUT 086KM	
COL EP	19 49 04.5
HHM EP	19 51 33.2
BOZ EP	19 51 50.0
JAN 04	
EUR EP	20 40 03.7
JAN 4	
H-20 48 54.9	
67.4N 136.2W	
h ABOUT 033KM	
COL IP	20 50 13.7
HHM EP	20 53 48.3
BOZ EP	20 54 22.2
TUC E(P)	20 55 10.2
E	56 13.8
ALQ IP	20 56 01.8

Date and Station	Phase (GCT)
	h m s
JAN 4	
H-21 12 50.9	
22.3S 179.5W	
h ABOUT 535KM	
TUC EP	21 24 32.5
JAN 04	
BOZ EP	21 37 00.5
JAN 04	
COL EP	21 38 46.2
JAN 04	
TUC EP	21 44 16.3
E(S)	44 35.0
JAN 04	
EUR IP	22 22 26.4
JAN 4	
H-22 24 54.7	
20.0N 143.9E	
h ABOUT 059KM	
COL EP	22 35 15.0
F	35 24.8
BUT EP	22 37 23.7
BOZ EP	22 37 28.0
BCN EP	22 37 38.5
E	37 53.5
TUC EP	22 37 58.5
ALQ IP	22 38 07.5
JAN 04	
BOZ EP	22 41 11.7
JAN 5	
H-00 51 33.6	
07.3S 106.7E	
h ABOUT 089KM	
BOZ EP'	01 10 35.3
EUR EP'	01 10 36.6
TUC EP'	01 10 38.0
ALQ EP'	01 10 49.5
I	14 25.0
JAN 05	
EUR IP	01 13 55.4
TUC E(P)	01 14 20.0
JAN 05	
GUA EP	02 16 00.6
F(S)	16 20.0
JAN 05	
EUR EP	03 56 17.8
TUC E(P)	03 56 32.0
JAN 05	
EUR EP	04 11 37.1

Date and Station	Phase (GCT)
	h m s
JAN 5	
H-06 24 10.1	
13.3N 090.8W	
h ABOUT 033KM	
ALQ IP	06 29 40.8
E	33 14.5
TUC EP	06 29 45.4
COL EP	06 34 45.0
JAN 05	
TUC E(P)	06 33 14.8
JAN 05	
EUR FP	06 45 57.1
JAN 5	
H-07 32 26.0	
39.2N 120.2W	
h ABOUT 014KM	
EUR EP	07 33 19.7
BCN E(P)	07 34 02.5
E	34 15.0
EL	34 14.5
JAN 5	
H-13 01 45.5	
38.0N 138.8E	
h ABOUT 033KM	
EUR EP	13 13 35.0
E	13 39.0
BCN EP	13 13 52.0
TUC EP	13 14 17.0
ALQ EP	13 14 23.0
JAN 5	
H-13 46 16.2	
6.3S 154.3E	
h ABOUT 010KM	
COL IP	13 58 40.5
EUR IP	13 59 35.4
BOZ E(P)	13 59 50.6
JAN 05	
BOZ EP	14 08 41.5
JAN 5	
H-14 18 36.2	
14.3N 093.3W	
h ABOUT 053KM	
ALQ IP	14 23 46.8
I	28 37.0
BCN EP	14 24 34.7
BOZ EP	14 25 25.0
HHM EP	14 25 51.4
COL EP	14 28 56.0
JAN 05	
TUC EP	14 28 40.5
BCN EP	14 29 25.0
JAN 5	
H-17 21 28.8	
51.4N 170.7W	
h ABOUT 033KM	
COL IP	17 25 37.7
HHM EP	17 28 27.9
BOZ EP	17 28 51.0
BCN EP	17 29 21.8
TUC EP	17 29 59.7
ALQ E(P)	17 30 07.1
JAN 5	
H-18 05 58.6	
20.3S 174.1W	
h ABOUT 033KM	
KIP EP	18 14 11.0
GUA EP	18 15 12.6
ES	22 49.0
BCN EP	18 18 03.0
TUC IP C	18 18 07.3
GCA IP	18 18 19.0
SLC IP	18 18 27.2
ALQ IP	18 18 30.1
E	20 04.9
FGU EP	18 18 35.5
BUT E(P)	18 18 38.0
BOZ FP	18 18 41.2
HHM EP	18 18 43.4
COL IP	18 18 44.0
JAN 05	
BCN EP	18 44 00.0
E	44 05.0
JAN 05	
TUC E(P)	18 47 11.5
JAN 05	
SLC E(P)	18 51 15.5
JAN 5	
H-19 29 38.0	
14.7N 093.1W	
h ABOUT 047KM	
ALQ FP	19 34 45.0
TUC EP	19 34 48.5
BCN EP	19 35 34.5
COL FP	19 39 55.9
JAN 05	
SJG IP	19 37 17.5
IS	37 30.0
JAN 5	
H-20 34 20.7	
13.9N 120.8E	
h ABOUT 159KM	
COL EP	20 46 03.0
JAN 5	
H-20 45 50.6	
34.6N 138.8E	
h ABOUT 363KM	
COL IP	20 54 24.1
HHM FP	20 56 54.5
EpP	57 46.5
BOZ FP	20 57 11.0
BCN EP	20 57 32.8
IpP	58 24.2
FGU EP	20 57 34.3
EpP	58 26.5
TUC FP	20 57 57.1
FpP	58 49.0
JAN 05	
TUC E(P)	22 16 26.4
GCA FP	22 17 08.0
F	17 42.5
JAN 5	
H-23 00 14.8	
15.3S 173.1W	
h ABOUT 033KM	
BCN EP D	23 11 56.2
F	12 06.4
TUC FP	23 12 02.0
GCA IP	23 12 12.3
ALQ IP	23 12 26.5
FGU EP	23 12 30.3
HHM EP	23 12 33.5
BOZ EP	23 12 34.5
COL IP	23 12 34.6
JAN 6	
H-00 55 27.4	
07.0S 122.9E	
h ABOUT 546KM	
GUA I(P)	01 00 53.0
COL EP	01 07 56.0
HHM IP'	01 13 16.2
BOZ EP'	01 13 17.0
BCN EP'	01 13 20.0
FGU IP'	01 13 23.5
GCA IP'	01 13 23.6
TUC EP'	01 13 26.8
ALQ IP'	01 13 32.5
I	15 37.3
CSC EP'	01 14 08.0
JAN 6	
H-02 01 22.2	
44.9N 112.7W	
h ABOUT 007KM	
BOZ I(P)	02 01 39.5
BUT IP	02 01 43.3
I(S)	02 01.3
BZM IP	02 01 45.1
I	01 47.1
HHM FP	02 02 18.5
I	02 29.5
I(S)	03 00.5
IL	03 14.5
SLC IP	02 02 26.0
FGU EP	02 02 33.5
I	02 37.0
BCN EP	02 03 35.0
I	04 08.7
EL	06 09.0
ALQ EP	02 04 02.0
IL	07 19.5
TUC E(P)	02 04 23.0
E	04 29.0
E(L)	07 55.0
CSC E(P)	02 07 03.0
COL IP	02 07 14.1
JAN 06	
BOZ EP	03 18 50.7
E(S)	19 07.0
JAN 06	
GUA E(P)	03 18 56.0
ES	19 14.2
JAN 06	
HHM E(P)	03 19 36.0
E(L)	20 26.0
JAN 06	
BOZ EP	03 34 19.6
E(S)	34 32.6
BUT IP	03 34 22.8
IL	34 39.3
HHM E(P)	03 34 59.0
E(L)	35 50.0

Date and Station	Phase (GCT)
	h m s
JAN 06	
BOZ EP	07 23 51.9
E(S)	24 08.4
JAN 6	
H-08 21 14.9	
33.9N 137.4E	
h ABOUT 033KM	
COL EP	08 30 35.0
JAN 6	
H-09 19 01.2	
41.4S 085.4W	
h ABOUT 033KM	
CSC E(P)	09 30 46.0
TUC EP	09 30 52.4
ALQ I(P)	09 31 05.0
BCN EP	09 31 18.2
GCA EP	09 31 18.2
BOZ FP	09 31 58.8
BUT IP	09 32 01.2
HHM E(P)	09 32 13.0
COL EP'	09 37 36.0
JAN 06	
BOZ E(P)	10 07 56.0
E(S)	07 10.5
JAN 06	
BUT EP	10 12 11.2
IL	12 27.7
JAN 06	
BOZ EP	10 25 53.0
E(S)	26 08.0
BUT EP	10 25 56.2
IL	25 13.0
JAN 06	
COL FP	11 16 40.0
JAN 6	
H-11 27 49.3	
16.3S 177.5E	
h ABOUT 109KM	
BCN E(P)	11 39 55.9
E	40 01.5
TUC E(P)	11 40 09.0
COL EP	11 40 14.0
GCA FP	11 40 16.2
JAN 06	
ALQ IP	11 45 30.2
JAN 06	
BOZ EP	12 25 49.6
E(S)	26 04.0

Date and Station	Phase (GCT)
	h m s
JAN 6	
H-15 26 32.8	
09.5S 079.4W	
h ABOUT 044KM	
SJG EP	15 32 43.5
E	33 14.5
ALQ E(P)	15 35 34.0
TUC E(P)	15 35 35.4
COL EP	15 39 27.0
JAN 6	
H-16 30 36.9	
00.8S 081.5W	
h ABOUT 019KM	
ALQ EIP	16 38 34.5
EUR EP	16 39 42.1
HHM FP	16 40 20.1
COL EP	16 42 50.5
JAN 6	
H-18 27 36.0	
60.1N 151.8W	
h ABOUT 076KM	
COL IP	18 28 53.3
SIT EP	18 29 42.1
HHM IP D	18 32 50.8
I	33 20.9
IPCP	36 26.3
BUT EP	18 33 11.2
BOZ EP	18 33 18.8
E▸P	33 39.8
EUR IP	18 33 43.6
BCN IP D	18 34 13.8
E▸P	34 31.2
IsP	34 40.2
IPCP	36 50.5
GCA EP	18 34 18.4
ALQ IP	18 34 52.2
I▸P	35 11.5
TUC IP D	18 34 54.5
EPCP	37 04.8
SJG E(P)	18 38 42.8
JAN 06	
BOZ IP C	20 33 30.6
ES	33 45.2
BUT IP	20 33 33.0
IL	33 51.8
HHM E(P)	20 34 19.0
EL	35 05.0
JAN 06	
EUR EP	20 49 06.4

Date and Station	Phase (GCT)
	h m s
JAN 6	
H-22 47 56.5	
10.2S 161.6E	
h ABOUT 050KM	
COL IP	23 00 20.8
EUR IP	23 00 56.8
JAN 07	
GUA EP	01 28 37.0
E(S)	28 43.5
JAN 07	
COL FP	03 16 06.0
JAN 07	
ALQ E(P)	03 23 34.5
JAN 7	
H-05 01 49.8	
51.0N 176.9E	
h ABOUT 033KM	
COL IP	05 06 51.5
JAN 7	
H-08 29 26.8	
16.9N 094.3W	
h ABOUT 071KM	
ALQ IP	08 34 06.4
TUC E(P)	08 34 10.3
JAN 07	
COL IP	10 10 37.0
JAN 7	
H-10 22 17.5	
36.5N 026.9E	
h ABOUT 045KM	
COL EP	10 34 17.0
RCD EP	10 35 04.0
HHM EP	10 35 07.3
BOZ EP	10 35 15.2
ALQ E(P)	10 35 45.0
JAN 07	
ALQ E(P)	10 39 12.0
JAN 7	
H-11 05 01.4	
14.4N 092.7W	
h ABOUT 069KM	
ALQ EP	11 10 11.5
TUC E(P)	11 10 12.8
BOZ E(P)	11 11 49.8
COL EP	11 15 19.0
JAN 7	
H-11 39 32.6	
10.5N 069.7W	
h ABOUT 033KM	

Date and Station	Phase (GCT)
	h m s
SJG EP	11 41 32.8
ALQ E(P)	11 47 19.0
TUC E(P)	11 47 39.3
JAN 07	
SJG E(P)	11 48 08.5
E	48 35.5
JAN 7	
H-11 57 30.4	
03.2S 076.8W	
h ABOUT 039KM	
ALQ IP	12 06 02.0
BOZ EP	12 07 19.2
JAN 7	
H-12 54 09.4	
19.3N 145.5E	
h ABOUT 120KM	
GUA FP	12 55 34.0
COL IP	13 04 23.0
HHM IP D	13 06 20.5
E	06 33.7
BUT IP	13 06 29.2
EUR IP	13 06 29.7
BOZ IP D	13 06 33.3
BCN EP	13 06 40.5
TUC FP	13 07 01.2
RCD EP	13 07 02.0
JAN 7	
H-14 17 33.7	
14.7S 069.3W	
h ABOUT 115KM	
ALQ I(P)	14 27 34.8
JAN 07	
SJG EP	14 53 08.8
ES	53 34.0
IL	53 36.2
JAN 7	
H-15 56 32.5	
16.2N 097.2W	
h ABOUT 043KM	
ALQ IP	16 01 08.6
IL	07 19.2
CSC E(P)	16 01 47.0
GCA IP	16 01 49.0
BCN IP	16 01 56.6
EL	09 56.0
FGU IP	16 02 11.5
RCD EP	16 02 24.0

Date and Station	Phase (GCT)
	h m s
FUR IP	16 02 25.6
SJG EP	16 02 36.0
I	02 43.7
I	02 47.4
BOZ EP	16 02 54.6
E	03 01.7
E(S)	08 06.0
BUT EP	16 03 00.5
HHM IP D	16 03 22.0
COL IP	16 06 30.5
JAN 07	
BHP IP D	16 14 15.0
IS	15 26.0
JAN 7	
H-17 09 03.2	
9.9N 093.8E	
h ABOUT 012KM	
SJG EP'	17 28 44.1
JAN 7	
H-18 49 35.0	
18.6N 120.9E	
h ABOUT 033KM	
HHM EP	19 03 07.4
JAN 7	
H-18 52 25.9	
3.6N 074.0W	
h ABOUT 020KM	
SJG EP	18 56 15.0
JAN 07	
GUA IP	20 54 06.2
E(S)	54 48.9
JAN 07	
COL EP	21 11 14.0
JAN 7	
H-21 17 33.6	
17.1N 119.8E	
h ABOUT 033KM	
COL EP	21 29 16.0
JAN 07	
FUR EP	21 26 17.9
JAN 07	
GCA E(P)	22 22 55.5
TUC E(P)	22 23 38.0
JAN 07	
BOZ E(P)	22 27 40.9
JAN 08	
BOZ EP	04 01 36.4
JAN 08	
BOZ E(P)	09 27 49.0

Date and Station	Phase (GCT)
	h m s
JAN 08	
GUA IP	10 17 51.3
ES	17 57.5
JAN 08	
GUA IP	10 20 09.2
ES	16 20 38.4
JAN 8	
H-10 23 17.1	
56.7N 152.2W	
h ABOUT 033KM	
COL EP	10 25 19.0
JAN 8	
H-10 31 38.1	
56.7N 152.5W	
h ABOUT 033KM	
COL IP	10 33 41.9
JAN 8	
H-11 25 56.6	
56.3N 153.5W	
h ABOUT 033KM	
COL EP	11 28 09.4
HHM EP	11 31 19.6
EUR EP	11 31 59.1
RCD EP	11 32 37.0
JAN 8	
H-12 49 49.9	
34.2S 179.7E	
h ABOUT 037KM	
EUR EP	13 03 09.6
JAN 8	
H-16 31 10.6	
44.6N 149.5E	
h ABOUT 036KM	
COL EP	16 38 44.8
BOZ EP	16 41 49.6
EUR EP	16 41 58.7
JAN 08	
GUA IP	16 44 25.0
JAN 08	
BOZ EP	17 02 31.5
JAN 8	
H-17 43 32.6	
18.2S 172.6W	
h ABOUT 392KM	
BOZ E(P)	17 55 22.2
COL IP	17 55 24.9
JAN 08	
EUR IP	18 25 55.9

Date and Station	Phase (GCT)
	h m s
JAN 8	
H-18 49 46.0	
59.4S 024.0W	
h ABOUT 039KM	
SJG EP	19 02 15.0
ALQ EP'	19 08 24.5
EPKKP	18 57.5
EUR IP'	19 08 41.4
BOZ EP'	19 08 46.6
BUT EP'	19 08 47.0
HHM EP'	19 08 52.7
COL IP'	19 09 41.0
I	09 55.3
JAN 08	
BOZ EP	19 17 47.9
E(S)	17 57.9
JAN 08	
ALQ E(P)	19 50 08.5
JAN 08	
HHM E(P)	20 39 05.0
EL	40 34.8
BUT IP	20 39 14.0
JAN 8	
H-21 08 06.0	
13.2S 112.0W	
h ABOUT 033KM	
TUC EP	21 16 22.0
E	16 31.4
E(S)	23 09.0
ALQ IP	21 16 45.0
GCA EP	21 17 01.0
BCN E(P)	21 17 03.5
EL	34 17.0
EUR IP	21 17 19.3
IPP	18 29.7
SLC EP	21 17 26.9
SJG EP	21 17 34.5
ES	25 22.0
EL	31 52.0
RCD EP	21 17 54.0
BOZ E(P)	21 18 00.0
HHM EP	21 18 17.7
E	18 25.3
COL IP	21 20 26.3
JAN 08	
BHP EP	21 26 50.0
JAN 08	
COL EP	21 42 16.0

Date and Station	Phase (GCT)
	h m s
JAN 08	
GCA E(P)	22 12 26.0
JAN 08	
FGU E(P)	22 16 23.5
JAN 8	
H-23 16 20.4	
34.2S 179.8E	
h ABOUT 020KM	
TUC E(P)	23 29 34.0
JAN 08	
EUR IP	23 23 21.3
JAN 08	
BOZ EP	23 28 42.5
JAN 08	
COL EP	23 49 56.2
JAN 9	
H-00 19 39.8	
57.6N 150.5W	
h ABOUT 022KM	
COL EP	00 21 29.0
JAN 09	
COL EP	00 43 27.6
JAN 09	
EUR IP	00 47 08.3
JAN 09	
SJG IP	00 51 21.7
IS	51 32.5
JAN 09	
EUR EP	00 54 48.6
JAN 9	
H-01 42 43.9	
34.2S 179.5W	
h ABOUT 033KM	
EUR E(P)	01 56 00.0
E	56 07.0
JAN 09	
TUC E(P)	02 34 10.0
ALQ E(P)	02 34 27.7
EUR EP	02 35 33.0
JAN 9	
H-03 29 42.6	
46.4N 153.1E	
h ABOUT 028KM	
COL IP	03 36 47.1
BOZ E(P)	03 40 01.9
E	40 14.2
EUR EP	03 40 12.2
RCD EP	03 40 38.0
ALQ E(P)	03 41 06.7

Date and Station	Phase (GCT)
	h m s
JAN 9	
H-04 28 55.6	
34.2S 179.9E	
h ABOUT 074KM	
TUC E(P)	04 42 00.3
EUR EP	04 42 11.2
JAN 09	
GCA IP	05 36 37.7
EUR EP	05 37 00.2
JAN 9	
H-06 17 19.2	
44.5N 149.6E	
h ABOUT 033KM	
COL EP	06 24 52.1
EUR EP	06 28 08.0
JAN 09	
FGU EP	06 35 16.6
I	35 19.5
JAN 9	
H-06 47 21.9	
18.0S 175.4W	
h ABOUT 229KM	
COL IP	06 59 33.4
F	59 50.5
EPP	07 00 41.7
JAN 09	
BUT E(P)	07 33 08.0
EL	33 25.0
JAN 09	
SIT E(P)	08 36 40.0
JAN 09	
COL EP	08 48 33.0
JAN 09	
GUA EP	09 05 46.0
ES	05 58.5
JAN 09	
GUA IP	09 28 12.2
ES	28 26.0
JAN 9	
H-11 19 22.2	
3.5S 150.3E	
h ABOUT 032KM	
COL EP	11 31 36.0
EUR EP	11 32 45.0
HHM EP	11 32 50.2
JAN 09	
HHM E(P)	11 58 03.0
E	58 20.2
E	59 17.2
BOZ E(P)	11 59 04.0
BUT E(P)	11 59 05.0

Date and Station	Phase (GCT)
	h m s
JAN 9	
H-12 03 11.4	
32.2S 066.9W	
h ABOUT 132KM	
TUC E(P)	12 14 47.0
ALQ IP	12 14 47.8
EUR IP	12 15 31.6
BOZ EP	12 15 44.5
JAN 09	
BOZ E(P)	13 13 42.5
FGU EP	13 14 21.8
JAN 9	
H-13 32 46.4	
11.9N 126.2E	
h ABOUT 005KM	
GUA IP	13 37 03.0
IS	40 30.0
HON EP	13 44 18.0
KIP EP	13 44 19.0
COL IP	13 44 44.5
HHM IP	13 46 34.8
BOZ F(P)	13 46 46.6
EUR EP	13 46 48.3
EPP	50 50.3
EPKKP	14 02 45.2
RCD EP'	13 51 15.0
BCN EP'	13 51 15.8
TUC EP'	13 51 20.7
E	51 52.2
EPKKP	14 02 23.0
ALQ EP'	13 51 25.6
EPKKP	14 02 18.2
BHP IP'D	13 52 31.0
SJG EP'	13 52 34.5
JAN 9	
H-14 35 12.4	
09.7S 080.1W	
h ABOUT 033KM	
ALQ I(P)	14 44 13.7
TUC E(P)	14 44 19.7
COL EP	14 48 08.0
JAN 09	
EUR EP	14 44 20.7
JAN 09	
HHM E(P)	15 00 20.0
E	01 12.4
BOZ E(P)	15 01 07.5

Date and Station	Phase (GCT)
	h m s
JAN 09	
BOZ IP	17 30 02.5
E(S)	30 33.8
JAN 09	
SJG EP	19 44 43.8
EL	45 35.8
JAN 09	
SJG EP	20 00 22.0
JAN 09	
ALQ E(P)	20 03 42.6
JAN 9	
H-20 37 12.1	
31.6N 115.0W	
h ABOUT 033KM	
TUC EP	20 38 08.1
E	38 21.6
E(S)	39 02.0
BCN IP	20 38 18.8
GCA EP	20 38 42.0
EUR EP	20 39 07.6
IL	41 21.0
ALQ E(P)	20 39 11.0
JAN 09	
COL EP	21 41 14.0
JAN 09	
TUC F(P)	21 57 39.9
BCN E(P)	21 57 56.0
JAN 10	
H-02 48 00.8	
14.5N 092.2W	
h ABOUT 033KM	
ALQ EP	02 53 15.5
TUC E(P)	02 53 33.0
JAN 10	
H-02 52 23.9	
45.8N 026.6E	
h ABOUT 128KM	
COL IP	03 03 20.9
HHM EP	03 04 20.8
E(PP)	05 00.6
RCD EP	03 04 21.0
BOZ EP	03 04 31.0
EUR IP	03 05 05.9
ALQ EP	03 05 06.0
BCN EP	03 05 19.3
TUC E(P)	03 05 24.3

Date and Station	Phase (GCT)
	h m s
JAN 10	
H-02 56 56.3	
05.6S 154.5E	
h ABOUT 126KM	
COL IP	03 09 02.8
EUR IP	03 09 59.6
JAN 10	
H-03 43 44.5	
03.3S 081.4W	
h ABOUT 078KM	
ALQ IP	03 51 52.7
TUC E(P)	03 51 55.8
RCD EP	03 52 40.0
EUR IP	03 52 57.4
BOZ EP	03 53 14.0
HHM EP	03 53 36.6
JAN 10	
SJG E(P)	03 48 50.0
JAN 10	
H-07 37 35.1	
5.8S 147.3E	
h ABOUT 113KM	
GUA EP	07 41 55.2
E(S)	45 29.0
HON EP	07 47 32.0
KIP IP	07 47 32.0
COL IP	07 49 57.1
EUR IP	07 51 04.2
IPP	55 03.2
BCN EP	07 51 08.0
EPP	55 13.0
HHM EP	07 51 09.6
EP'P'	08 15 25.0
BOZ F(P)	07 51 17.0
RCD EP'	07 56 12.0
CSC EP'	07 56 29.0
SJG EP'	07 56 57.8
ALQ EPKKP	08 07 25.5
JAN 10	
H-08 18 17.6	
18.5N 068.3W	
h ABOUT 143KM	
SJG IP C	08 18 53.4
IS	19 22.0
ALQ EIP	08 25 15.5
BCN EP	08 26 17.2

Date and Station	Phase	(GCT)
		h m s
BOZ	EP	08 26 19.2
HHM	EP	08 26 38.7
COL	IP	08 29 08.8
JAN 10		
SJG	EP	09 54 42.0
	FL	55 33.5
JAN 10		
BOZ	E(P)	11 27 26.0
	E	28 06.0
JAN 10		
H-13 17 47.8		
58.7N 157.1W		
h ABOUT 033KM		
COL	IP	13 19 40.5
EUR	EP	13 24 16.4
JAN 10		
H-13 36 30.7		
13.5S 166.6E		
h ABOUT 032KM		
GUA	EP	13 43 17.0
	IS	48 43.0
HON	EP	13 45 15.0
KIP	EP	13 45 16.0
COL	IP	13 49 03.4
	ES	59 20.0
	EP'P'	14 15 17.7
EUR	IP	13 49 23.8
	IPKKP	14 07 01.9
	EP'P'	15 06.2
BCN	EP	13 49 24.0
	EPKKP	14 07 01.5
	EP'P'	15 13.6
TUC	EP	13 49 34.5
	E(SKS)	14 00 00.0
GCA	EP	13 49 39.4
HHM	EP	13 49 44.8
	ESKS	14 00 02.8
	EPKKP	06 35.0
SLC	E(P)	13 49 45.9
BOZ	E(P)	13 49 48.0
	ESKS	14 00 15.0
FGU	E(P)	13 49 51.0
	I	49 52.5
ALQ	EP	13 49 54.7
	EPP	53 47.5
	EPKKP	14 06 47.5
RCD	EP'	13 50 14.0

Date and Station	Phase	(GCT)
		h m s
SJG	EP'	13 55 34.0
	I▸P'	56 02.5
	EPP	57 42.0
	ESKP	58 52.0
	E	14 09 37.0
RCD	EP'P'	14 14 37.3
JAN 10		
H-14 54 01.0		
35.2N 111.3E		
h ABOUT 033KM		
COL	IP	15 04 25.0
HHM	EP	15 06 45.9
BUT	EP	15 06 58.7
EUR	EP	15 07 18.0
JAN 10		
H-16 39 19.7		
24.3S 180.0W		
h ABOUT 518KM		
BCN	EP	16 51 09.0
TUC	IP C	16 51 13.5
EUR	IP	16 51 13.9
ALQ	EIP	16 51 32.5
COL	IP	16 51 36.0
JAN 10		
BHP	IP C	17 21 45.0
	IS	22 07.0
JAN 10		
H-17 30 12.2		
3.2S 146.7E		
h ABOUT 064KM		
COL	EP	17 42 34.0
JAN 10		
H-18 00 41.1		
3.4S 146.2E		
h ABOUT 039KM		
COL	EP	18 13 03.0
JAN 10		
EUR	EP	19 24 00.4
JAN 10		
BOZ	EP	19 28 12.2
JAN 10		
H-19 38 56.0		
28.2S 066.9W		
h ABOUT 175KM		
ALQ	IP	19 50 09.5
	I(▸P)	50 53.0
TUC	EP	19 50 10.2
BCN	EP	19 50 38.5
	E▸P	51 20.4
RCD	E(P)	19 50 43.0

Date and Station	Phase	(GCT)
		h m s
EUR	IP	19 50 55.3
BOZ	EP	19 51 08.0
BUT	EP	19 51 12.1
	E▸P	51 56.1
HHM	EP	19 51 23.9
	I	51 26.4
	I▸P	52 06.0
JAN 10		
COL	E(P)	19 43 48.5
JAN 10		
BCN	EP	19 54 44.0
FGU	IP	19 55 55.3
GCA	EP	19 56 13.7
JAN 10		
H-20 10 03.8		
43.2N 016.8E		
h ABOUT 011KM		
HHM	EP	20 22 12.6
JAN 10		
BCN	E(P)	20 39 54.0
	IL	40 49.4
JAN 10		
BCN	E(P)	20 44 20.5
JAN 10		
SLC	EP	21 28 37.2
EUR	EP	21 29 23.6
JAN 10		
BCN	IP C	21 54 12.2
	IS	54 13.5
JAN 10		
TUC	IP	22 25 33.2
	ES	25 53.0
BCN	EP	22 26 49.2
JAN 10		
FGU	IP	22 46 01.5
	IS	46 22.0
JAN 10		
H-23 45 38.3		
03.4S 146.1E		
h ABOUT 024KM		
COL	EP	23 58 02.0
JAN 11		
H-00 21 58.9		
03.6S 146.1E		
h ABOUT 033KM		
COL	EP	00 34 20.0
JAN 11		
GUA	IP	00 38 50.4
	ES	39 00.1

Date and Station	Phase	(GCT)
		h m s
JAN 11		
H-00 37 19.1		
58.6N 151.4W		
h ABOUT 033KM		
COL	IP	00 38 55.4
HHM	EP	00 42 33.1
JAN 11		
H-04 10 04.4		
14.0N 089.5W		
h ABOUT 144KM		
CSC	E(P)	04 14 48.0
SJG	E(P)	04 14 54.6
TUC	EP	04 15 35.1
GCA	EP	04 16 05.5
BCN	EP	04 16 16.5
	E▸P	16 52.5
RCD	EP	04 16 21.0
BUT	EP	04 17 05.5
	E	17 24.5
HHM	EP	04 17 26.2
	E	18 14.7
COL	EP	04 20 23.0
JAN 11		
ALQ	EP	04 15 02.3
	E	15 24.3
EUR	EP	04 16 18.9
JAN 11		
TUC	E(P)	04 22 18.2
JAN 11		
TUC	E(P)	05 59 52.8
EUR	EP	06 01 49.6
JAN 11		
H-06 48 22.3		
06.5S 154.4E		
h ABOUT 100KM		
EUR	IP	07 01 30.9
BCN	EP	07 01 33.5
JAN 11		
TUC	E(P)	06 52 20.4
JAN 11		
H-07 19 30.3		
33.9S 179.9E		
h ABOUT 039KM		
TUC	E(P)	07 32 40.0
BCN	EP	07 32 40.5
EUR	EP	07 32 47.3

Date and Station	Phase (GCT)
	h m s
JAN 11	
H-09 27 39.5	
16.8S 076.6W	
h ABOUT 033KM	
EUR EP	09 38 31.8
JAN 11	
H-09 44 58.3	
30.0N 130.3E	
h ABOUT 033KM	
COL EP	09 55 06.2
BOZ EP	09 57 37.0
EUR EP	09 57 43.8
JAN 11	
H-10 15 58.9	
22.7S 174.8W	
h ABOUT 033KM	
EUR E(P)	10 28 22.0
ALQ E(P)	10 28 40.0
COL EP	10 28 53.0
JAN 11	
H-10 48 27.6	
24.5N 109.0W	
h ABOUT 033KM	
TUC EP	10 50 21.0
E(L)	52 08.0
ALQ IP	10 51 02.5
BCN EP	10 51 27.5
FUR IP	10 52 14.1
RCD EP	10 53 03.0
E	53 11.0
BOZ EP	10 53 13.5
BUT EP	10 53 17.4
COL EP	10 57 00.0
JAN 11	
BCN EP	10 55 29.0
JAN 11	
H-11 24 23.4	
34.1S 179.2E	
h ABOUT 033KM	
TUC E(P)	11 37 37.8
FUR FP	11 37 42.9
JAN 11	
GUA FP	11 26 58.6
ES	27 08.7
JAN 11	
H-11 36 51.9	
21.3S 179.1W	
h ABOUT 642KM	
BCN FP	11 48 14.5
EUR EP	11 48 19.5
TUC EP	11 48 19.7
ALQ IP	11 48 40.6
COL IP	11 48 42.3
BOZ EP	11 48 48.0
JAN 11	
SJG IP C	13 16 47.0
IS	16 58.2
JAN 11	
H-13 40 58.9	
24.7N 109.2W	
h ABOUT 033KM	
TUC E(P)	13 42 50.0
ALQ F(P)	13 43 30.5
EUR EP	13 44 43.8
BOZ E(P)	13 45 42.2
JAN 11	
TUC FP C	14 04 48.7
E	17 04 56.6
JAN 11	
EUR EP	14 22 40.8
JAN 11	
TUC E(P)	14 58 48.0
JAN 11	
H-16 25 58.4	
14.2N 092.0W	
h ABOUT 033KM	
ALQ EP	16 31 15.5
TUC E(P)	16 31 21.4
EUR EP	16 32 31.1
JAN 11	
COL EP	16 29 17.0
JAN 11	
H-16 57 27.0	
61.1N 151.0W	
h ABOUT 059KM	
COL IP	16 58 29.1
IS	59 32.0
HHM IP	17 02 41.7
BUT E(P)	17 02 49.0
BOZ IP C	17 03 10.0
E	03 17.7
EUR IP	17 03 36.8
I(PCP)	06 34.6
RCD EP	17 03 56.0
E	04 03.5
BCN EP C	17 04 07.2
E	04 14.5
EPCP	06 44.5
ALQ EIP	17 04 44.7
IPCP	06 58.0
JAN 11	
TUC EP	17 25 00.5
ALQ IP	17 25 11.0
JAN 11	
COL EP	18 28 25.7
JAN 11	
H-19 25 38.5	
60.3N 146.0W	
h ABOUT 033KM	
COL EP	19 26 49.0
HHM EP	19 30 30.1
JAN 11	
H-20 14 33.5	
43.0N 139.2E	
h ABOUT 189KM	
COL IP	20 22 32.4
SIT E(P)	20 23 33.8
HHM IP	20 25 18.0
BOZ IP C	20 25 36.4
BCN IP C	20 26 04.0
RCD IP	20 26 07.0
E	26 14.0
TUC IP C	20 26 31.0
E	26 53.8
ALQ IP	20 26 34.5
JAN 11	
EUR IP	21 25 46.8
JAN 11	
BCN EP	21 35 00.5
IL	35 23.0
JAN 11	
BCN IP C	21 54 48.0
IS	54 52.0
JAN 11	
COL IP	21 58 20.3
JAN 11	
BCN EP	22 05 43.0
E	05 56.2
EUR EP	22 06 21.8
JAN 11	
H-22 47 06.3	
48.8N 153.5E	
h ABOUT 102KM	
COL IP	22 53 45.7
BOZ IP D	22 57 07.0
EUR IP	22 57 18.2
BCN IP D	22 57 38.0
RCD EP	22 57 43.0
TUC E(P)	22 58 08.2
ALQ IP	22 58 12.5
JAN 11	
BCN IP	23 00 18.0
IS	00 30.0
JAN 11	
HHM EP	23 56 45.0
JAN 12	
EUR EP	01 38 34.3
I	39 13.5
BCN E(P)	01 38 36.0
EL	39 24.0
JAN 12	
SJG IP C	03 15 11.0
I	15 18.0
JAN 12	
SJG IP C	03 17 31.5
IS	17 40.0
JAN 12	
H-03 19 10.3	
12.3N 088.9W	
h ABOUT 039KM	
BOZ E(P)	03 26 30.7
JAN 12	
BUT E(P)	04 22 14.0
IL	22 29.3
JAN 12	
H-04 41 17.6	
21.1S 174.7W	
h ABOUT 123KM	
BCN EP	04 53 16.0
E	53 53.5
TUC EP	04 53 20.2
FUR IP	04 53 22.5
GCA F(P)	04 53 31.5
ALQ EIP	04 53 42.8
BOZ E(P)	04 53 53.3
COL IP	04 53 55.9
JAN 12	
COL EP	05 29 48.1
JAN 12	
H-05 57 12.2	
08.4N 103.4W	
h ABOUT 033KM	
TUC EP	06 02 32.0
EUR EP	06 03 45.6

Date and Station	Phase	(GCT) h m s
JAN 12		
H-06 57 08.2		
13.5S 166.4E		
h ABOUT 070KM		
COL	EP	07 09 38.0
JAN 12		
BUT	EP	08 35 50.3
	IL	36 06.3
JAN 12		
BCN	IP	08 54 11.1
	IL	54 37.3
EUR	EP	08 54 41.8
JAN 12		
TUC	E(P)	09 20 24.2
JAN 12		
TUC	E(P)	09 28 24.8
JAN 12		
TUC	E(P)	09 53 59.8
ALQ	E(P)	09 54 40.5
JAN 12		
H-10 08 47.7		
56.0S 027.4W		
h ABOUT 033KM		
HHM	EP'	10 27 46.3
COL	FP'	10 28 29.0
JAN 12		
EUR	EP	10 36 37.6
TUC	E(P)	10 38 09.7
JAN 12		
BUT	EP	10 43 03.3
	IL	43 20.3
JAN 12		
BOZ	IP	12 27 09.3
	ES	27 23.9
BUT	EP	12 27 12.3
	IL	27 29.3
JAN 12		
H-12 49 36.0		
60.3N 147.8W		
h ABOUT 033KM		
COL	IP	12 50 44.3
HHM	EP	12 54 36.3
BOZ	EP	12 55 05.5
EUR	EP	12 55 32.8
JAN 12		
BUT	EP	13 29 47.8
	IL	30 05.0
JAN 12		
H-13 32 24.0		
27.6N 088.0E		
h ABOUT 023KM		
COL	IP	13 44 24.2
	E	44 35.2
	E	46 58.4
HHM	EP	13 46 17.8
BOZ	EP	13 46 32.3
RCD	E(P)	13 46 50.0
EUR	EP	13 46 56.0
SLC	E(P)	13 46 59.5
BCN	EP'	13 51 04.5
	EPP	51 53.0
JAN 12		
H-13 36 51.0		
9.7S 075.0W		
h ABOUT 048KM		
SJG	IP C	13 42 47.2
BCN	E(P)	13 45 47.7
ALQ	IP	13 46 08.8
FGU	IP	13 46 52.1
EUR	IP	13 47 08.6
	I	50 55.8
BOZ	IP	13 47 22.5
	E	47 30.0
HHM	IP	13 47 42.7
COL	IP	13 49 53.4
JAN 12		
SJG	E(P)	13 47 38.5
JAN 12		
H-13 55 20.0		
27.3N 087.7E		
h ABOUT 033KM		
COL	IP	14 07 20.0
JAN 12		
EUR	EP	14 01 58.7
JAN 12		
H-14 35 45.4		
18.1S 178.3W		
h ABOUT 563KM		
TUC	EP	14 47 08.5
COL	I(P)	14 47 25.4
BOZ	EP	14 47 34.9
JAN 12		
BCN	EP	14 45 01.0
JAN 12		
EUR	EP	14 50 06.5
BCN	IP C	14 50 19.4
	IS	50 21.2
JAN 12		
H-16 18 10.9		
34.7N 111.8E		
h ABOUT 033KM		
COL	EP	16 28 35.0
HHM	E(P)	16 31 00.0
BOZ	E(P)	16 31 12.2
EUR	E(P)	16 31 32.7
JAN 12		
ALQ	E(P)	16 41 04.6
TUC	E(P)	16 41 11.8
JAN 12		
BOZ	EP	17 16 08.5
	E(L)	16 29.3
JAN 12		
HHM	EP	17 38 42.9
JAN 12		
GUA	EP	18 12 36.2
	E	12 47.0
JAN 12		
EUR	EP	18 31 07.7
JAN 12		
H-18 55 53.6		
34.2S 179.3E		
h ABOUT 187KM		
EUR	EP	19 08 55.5
JAN 12		
EUR	EP	19 00 38.7
JAN 12		
TUC	E(P)	19 30 22.5
JAN 12		
SJG	IP C	19 59 25.0
	IS	59 32.5
JAN 12		
SJG	IP C	20 03 39.9
	IS	03 48.8
JAN 12		
EUR	EP	20 24 28.0
JAN 12		
H-20 31 01.8		
46.7N 027.5W		
h ABOUT 033KM		
HHM	EP	20 40 34.0
BOZ	EP	20 40 36.3
	E	40 48.2
COL	E(P)	20 41 04.0
JAN 12		
BCN	EP	20 43 48.1
	EL	44 20.0
JAN 12		
TUC	E(P)	20 47 08.3
JAN 12		
H-20 50 12.3		
05.5S 102.5E		
h ABOUT 033KM		
HHM	EP'	21 09 15.0
JAN 12		
BCN	IP	22 01 07.5
EUR	IP	22 01 46.0
JAN 12		
FGU	EP	23 27 51.7
	E(S)	28 11.8
GCA	E(P)	23 28 11.5
	E(S)	28 47.5
JAN 12		
COL	FP	23 45 50.0
JAN 13		
H-00 18 29.8		
44.7N 149.3E		
h ABOUT 033KM		
COL	IP	00 25 59.0
JAN 13		
H-00 24 51.4		
15.2S 172.3W		
h ABOUT 040KM		
COL	IP	00 37 08.2
JAN 13		
TUC	E(P)	01 25 06.5
JAN 13		
TUC	E(P)	01 29 16.2
JAN 13		
H-02 19 49.2		
10.1N 086.3W		
h ABOUT 033KM		
ALQ	I(P)	02 26 05.3
BOZ	EP	02 27 34.7
JAN 13		
SJG	IP C	02 38 38.0
	IL	39 03.5
JAN 13		
BOZ	E(P)	02 41 47.6
JAN 13		
BOZ	IP	02 52 57.4
BUT	EP	02 53 01.0
	IL	53 17.0
JAN 13		
H-03 40 54.5		
45.0N 112.6W		
h ABOUT 033KM		
BOZ	IP	03 41 10.7
BUT	IP	03 41 14.0
BZM	EP	03 41 16.6

Date and Station	Phase (GCT)
	h m s
HHM E(P)	03 41 50.0
EUR E(P)	03 42 25.0
JAN 13	
BOZ E(P)	03 43 02.3
SLC E(P)	03 43 22.4
E	45 27.7
JAN 13	
HHM E(P)	03 44 15.0
IL	45 37.5
JAN 13	
H-03 44 23.3	
44.9N 112.7W	
h ABOUT 033KM	
BOZ IP	03 44 41.2
BUT IP	03 44 43.0
IL	45 03.0
BZM EP	03 44 46.2
SLC E(P)	03 45 27.1
HHM I(P)	03 45 28.0
IL	46 16.0
FGU E(P)	03 45 37.2
EUR E(P)	03 45 55.0
RCD E(P)	03 46 18.0
E	46 27.0
COL E(P)	03 49 11.5
JAN 13	
H-03 46 35.9	
43.5S 075.2W	
h ABOUT 033KM	
TUC E(P)	03 58 54.0
ALQ IP	03 59 00.3
I	59 08.7
JAN 13	
BCN EP	03 48 58.2
F	49 08.5
JAN 13	
EUR EP	03 51 58.3
BCN EP	03 52 25.8
ALQ E(P)	03 54 08.7
JAN 13	
H-05 34 33.8	
3.3S 150.4E	
h ABOUT 033KM	
COL EP	05 46 48.0
JAN 13	
H-06 42 33.0	
14.6N 092.1W	
h ABOUT 033KM	
ALQ IP	06 47 46.9

Date and Station	Phase (GCT)
	h m s
EUR EP	06 49 02.3
JAN 13	
TUC E(P)	08 19 00.6
JAN 13	
H-08 40 57.0	
39.0N 140.7E	
h ABOUT 019KM	
COL EP	08 49 35.0
HHM EP	08 52 13.5
BOZ EP	08 52 31.3
EUR IP	08 52 39.3
BCN EP	08 52 55.5
RCD EP	08 53 02.0
TUC EP	08 53 21.7
ALQ IP	08 53 27.0
JAN 13	
GCA IP C	11 47 35.0
IS	47 49.2
BCN E(P)	11 48 19.2
ALQ E(P)	11 48 28.0
EUR EP	11 48 31.4
JAN 13	
TUC E(P)	11 58 55.6
JAN 13	
BOZ E(P)	14 15 19.5
JAN 13	
SJG IP	15 51 53.0
IL	52 23.0
JAN 13	
EUR EP	15 59 12.2
JAN 13	
BOZ EP	16 18 14.5
JAN 13	
H-16 57 16.0	
36.5S 098.6W	
h ABOUT 033KM	
SJG IP	17 07 36.8
TUC EP	17 08 20.6
ALQ E(P)	17 08 34.5
BCN EP	17 08 49.6
EUR EP	17 09 07.2
BUT E(P)	17 09 35.0
BOZ E(P)	17 09 36.0
HHM EP	17 09 54.0

Date and Station	Phase (GCT)
	h m s
JAN 13	
BOZ IP	17 00 42.7
ES	00 48.3
JAN 13	
COL IP	17 01 39.2
JAN 13	
COL EP	17 19 47.0
JAN 13	
BCN IP C	19 45 08.6
IS	45 12.3
JAN 13	
BOZ E(P)	20 15 32.5
JAN 13	
TUC E(P)	20 35 43.0
JAN 13	
TUC E(P)	20 44 27.0
JAN 13	
H-22 15 24.6	
.0S 123.9E	
h ABOUT 127KM	
COL EP	22 28 08.0
ALQ IP'	22 34 07.2
JAN 13	
BOZ E(P)	22 15 27.0
JAN 13	
H-23 23 54.8	
44.5N 110.2W	
h ABOUT 033KM	
BOZ IP C	23 24 20.3
ES	24 40.0
BUT EP	23 24 29.1
IL	25 03.1
SLC E(P)	23 25 03.2
HHM E(P)	23 25 05.0
E	25 12.5
RCD E(P)	23 25 10.0
EUR EP	23 25 32.7
JAN 13	
EUR EP	23 38 51.2
JAN 14	
BCN EP	00 35 42.5
EL	36 30.0
EUR EP	00 36 01.4
JAN 14	
EUR EP	01 01 43.8
JAN 14	
H-01 10 42.3	
48.6N 154.3E	
h ABOUT 033KM	
COL IP	01 17 26.9

Date and Station	Phase (GCT)
	h m s
BOZ IP D	01 20 47.8
EUR IP	01 20 58.1
ALQ IP	01 21 54.0
JAN 14	
BCN EP	01 31 49.0
JAN 14	
H-01 33 14.6	
30.2N 129.0E	
h ABOUT 140KM	
COL IP	01 43 09.9
BCN E(P)	01 45 04.5
F	45 11.0
HHM IP	01 45 29.0
BUT EP	01 45 39.2
BOZ EP	01 45 43.7
EUR IP	01 45 50.8
RCD EP	01 46 09.5
TUC EP	01 46 26.5
ALQ E(P)	01 46 31.0
JAN 14	
BOZ E(P)	01 39 57.1
JAN 14	
TUC IP C	05 49 36.3
E	49 55.0
JAN 14	
BCN IP	07 28 45.5
IL	29 22.0
TUC EP	07 29 22.4
EUR EP	07 29 29.4
JAN 14	
H-08 25 17.5	
05.5S 081.3W	
h ABOUT 032KM	
BHP EP D	08 28 45.0
I	31 36.0
SJG IP C	08 31 07.0
I	31 12.5
E(S)	35 52.0
CSC IP	08 32 46.0
EpP	32 54.0
ALQ IP	08 33 46.0
IpP	33 56.5
TUC EP	08 33 47.2
F	40 42.0
GCA EP	08 34 19.3
BCN EP C	08 34 25.8
IpP	34 35.5

Date and Station	Phase	Phase (GCT) h m s
RCD	EP	08 34 35.5
	E▸P	34 45.0
SLC	EP	08 34 40.3
EUR	IP	08 34 48.5
BOZ	EP	08 35 06.7
	E▸P	35 19.8
	ES	43 08.0
BUT	EP	08 35 10.2
	E(S)	42 15.2
HHM	EP	08 35 28.4
	I▸P	35 38.9
JAN 14		
H-08 28 45.3		
6.2S 149.9E		
h ABOUT 063KM		
GUA	IP	08 39 18.0
COL	IP	08 41 11.2
EUR	EP	08 42 10.6
SJG	EP'	08 48 10.0
JAN 14		
BCN	EP	10 00 51.0
JAN 14		
BCN	E(P)	10 10 45.0
	EL	12 28.0
JAN 14		
BCN	EP	10 27 16.1
JAN 14		
TUC	E(P)	10 30 04.0
JAN 14		
H-12 18 59.3		
6.8N 072.9W		
h ABOUT 166KM		
BHP	IP D	12 20 35.0
	IS	21 47.0
SJG	IP D	12 22 00.0
	IS	24 14.2
ALQ	EP	12 26 33.5
TUC	IP D	12 26 47.7
RCD	EP	12 27 04.0
BCN	EP	12 27 24.9
EUR	IP	12 27 43.1
BOZ	EP	12 27 47.0
JAN 14		
H-12 30 11.1		
39.6N 110.2W		
h ABOUT 000KM		
SLC	IP	12 30 42.0
EUR	EP	12 31 20.9
BCN	EP	12 31 31.0
ALQ	EP	12 31 36.0
BOZ	EP	12 31 46.1
RCD	EP	12 31 57.0
TUC	E(P)	12 32 10.5
	E(L)	34 01.0
JAN 14		
BOZ	EP	14 34 37.0
JAN 14		
COL	IP	15 43 09.1
JAN 14		
H-16 00 00.0		
37.1N 116.1W		
h ABOUT 000KM		
BCN	IP C	16 00 27.8
EUR	IP	16 00 40.3
GCA	EP	16 00 59.8
	I	01 05.0
SLC	E(P)	16 01 18.3
	E	01 33.9
TUC	E(P)	16 01 36.5
	E(L)	03 26.0
FGU	E(P)	16 01 39.9
ALQ	E(P)	16 02 00.6
BUT	E(P)	16 02 17.0
BOZ	EP	16 02 20.1
HHM	E(P)	16 02 47.0
	E	06 12.5
JAN 14		
BCN	EP	16 24 21.5
	IL	24 45.5
EUR	IP	16 24 33.1
GCA	IP	16 25 00.8
TUC	E(P)	16 25 47.5
ALQ	EP	16 26 22.8
JAN 14		
H-17 21 17.6		
02.3N 126.9E		
h ABOUT 094KM		
COL	EP	17 33 48.5
JAN 14		
H-19 35 36.0		
14.1N 093.1W		
h ABOUT 033KM		
ALQ	EP	19 40 50.0
TUC	E(P)	19 40 54.6
BOZ	E(P)	19 42 28.4
COL	EP	19 46 00.5
JAN 14		
EUR	EP	19 56 16.9
JAN 14		
COL	EP	20 32 51.0
JAN 14		
EUR	IP	21 14 20.9
BOZ	E(P)	21 16 02.4
JAN 14		
EUR	EP	21 20 49.2
JAN 14		
BCN	IP	21 57 20.5
	EL	58 44.0
EUR	IP	21 57 58.7
JAN 14		
H-21 57 45.6		
51.9N 177.1W		
h ABOUT 033KM		
COL	EP	22 02 16.0
EUR	EP	22 05 45.6
JAN 14		
H-22 04 26.6		
5.3N 076.3W		
h ABOUT 117KM		
BHP	IP D	22 05 36.0
	IS	06 34.0
SJG	IP	22 08 05.0
	ES	10 51.0
ALQ	EP	22 11 58.3
EUR	EP	22 13 05.7
BOZ	EP	22 13 15.9
COL	EP	22 16 10.5
JAN 14		
COL	EP	22 23 48.0
JAN 14		
EUR	EP	23 52 35.8
JAN 14		
H-23 54 00.4		
14.4N 092.9W		
h ABOUT 033KM		
ALQ	IP	23 59 12.5
TUC	EP	23 59 14.7
	E(▸P)	59 25.0
CSC	E(P)	23 59 52.0
BCN	EP	24 00 01.1
	E	00 09.2
EUR	IP	24 00 28.1
BUT	EP	24 00 58.5
COL	IP	24 04 22.0
JAN 15		
H-00 34 15.2		
36.5N 071.0E		
h ABOUT 245KM		
COL	IP C	00 45 27.4
	I▸P	46 24.6
JAN 15		
BCN	EP	00 57 55.4
HHM	EP	01 00 35.8
JAN 15		
BCN	EP	02 36 42.5
JAN 15		
BCN	IP D	03 11 43.5
	E▸P	11 56.5
JAN 15		
H-03 30 22.2		
20.9S 177.8W		
h ABOUT 597KM		
UKI	E(P)	03 41 24.5
EUR	IP	03 41 48.4
TUC	IP D	03 41 49.0
GCA	IP	03 41 57.4
COL	IP D	03 42 11.4
	E▸P	44 12.0
BUT	IP	03 42 15.5
HHM	EP	03 42 16.6
BOZ	IP D	03 42 17.7
JAN 15		
H-03 52 06.3		
18.5N 145.6E		
h ABOUT 204KM		
COL	EP	04 02 15.0
HHM	EP	04 04 10.6
	E▸P	05 04.6
EUR	EP	04 04 19.4
BOZ	EP	04 04 24.0
	E▸P	05 17.5
TUC	E(P)	04 04 50.8
	E(▸P)	05 45.0
	E	08 17.5
JAN 15		
TUC	E(P)	04 00 07.3

Date and Station	Phase (GCT)
	h m s
JAN 15	
FGU IP	04 42 13.0
JAN 15	
H-05 59 58.5	
49.9N 079.0E	
h ABOUT 000KM	
COL IP	06 10 07.5
HHM IP	06 12 18.6
BUT IP	06 12 31.5
BOZ IP C	06 12 34.4
RCD IP	06 12 44.0
E	12 53.0
SLC IP	06 12 58.3
FGU IP	06 12 58.5
UKI E(P)	06 13 00.0
EUR IP	06 13 02.5
GCA IP	06 13 16.0
BCN IP C	06 13 19.5
I	13 27.0
E	16 44.0
EPP	17 09.0
EPKKP	30 25.0
ALQ IP C	06 13 27.2
TUC IP C	06 13 37.5
EPKKP	30 11.6
JAN 15	
COL EP	06 39 29.0
JAN 15	
H-06 57 40.0	
14.6N 092.8W	
h ABOUT 033KM	
TUC E(P)	07 02 54.0
BCN EP	07 03 39.0
E	03 47.1
JAN 15	
COL EP	06 59 05.5
JAN 15	
EUR EP	08 13 16.8
JAN 15	
EUR EP	08 40 52.1
JAN 15	
COL EP	12 11 56.0
JAN 15	
H-14 56 45.6	
37.2N 022.5E	
h ABOUT 108KM	

Date and Station	Phase (GCT)
	h m s
HHM EP	15 09 18.8
JAN 15	
H-15 27 22.1	
35.1N 111.7E	
h ABOUT 058KM	
COL EP	15 37 44.5
HHM EP	15 40 04.8
BOZ EP	15 40 20.2
EUR EP	15 40 36.4
JAN 15	
H-15 28 34.7	
46.3N 139.7E	
h ABOUT 471KM	
COL IP	15 35 44.4
E	35 58.0
I	36 26.4
BOZ EP	15 38 57.2
EUR EP	15 39 06.0
JAN 15	
FGU E(P)	17 02 19.0
E(S)	02 39.0
JAN 15	
BCN E(P)	17 06 09.2
JAN 15	
EUR EP	17 13 16.2
JAN 15	
BCN IP	17 27 19.1
IS	27 26.0
JAN 15	
H-18 34 07.6	
23.6N 121.7E	
h ABOUT 033KM	
COL EP	18 45 12.0
HHM EP	18 47 20.0
EUR EP	18 47 42.3
ALQ EP'	18 52 29.0
JAN 15	
BCN E(P)	18 51 57.0
JAN 15	
H-19 24 33.1	
02.0S 012.8W	
h ABOUT 033KM	
ALQ I(P)	19 37 50.7
JAN 15	
H-20 13 27.8	
18.6S 178.7W	
h ABOUT 685KM	
ALQ I(P)	20 24 00.0
BCN EP	20 24 37.0

Date and Station	Phase (GCT)
	h m s
EUR EP	20 24 41.8
TUC EP	20 24 43.2
COL IP	20 25 00.4
E(PP)	27 31.0
ALQ IP	20 25 04.0
HHM EP	20 25 09.0
BOZ EP	20 25 10.7
BUT I(P)	20 26 04.7
JAN 15	
FUR EP	20 17 19.1
JAN 15	
TUC E(P)	20 24 05.8
JAN 15	
H-20 44 27.0	
16.5S 172.6W	
h ABOUT 033KM	
TUC EP	20 56 15.3
ALQ I(P)	20 56 40.1
COL IP	20 56 52.9
JAN 15	
H-21 07 35.1	
13.3S 166.4E	
h ABOUT 085KM	
COL IP	21 20 03.0
E	20 39.7
JAN 15	
SLC FP	21 57 47.4
JAN 15	
TUC IP	22 22 50.6
ES	23 09.8
JAN 15	
BOZ EP	22 25 35.7
JAN 15	
BCN IP C	22 43 20.8
IS	43 39.5
GCA IP	22 43 22.9
ES	43 41.5
JAN 15	
H-23 17 36.0	
13.3S 166.3E	
h ABOUT 008KM	
COL EP	23 30 12.0
BCN EP	23 30 33.5
EUR IP	23 30 33.8
TUC E(P)	23 30 45.7
JAN 15	
COL EP	23 41 31.0

Date and Station	Phase (GCT)
	h m s
JAN 15	
H-23 47 27.8	
35.7N 004.3E	
h ABOUT 031KM	
COL EP	23 59 23.5
BOZ EP	23 59 40.2
ALQ EP	24 00 02.0
EUR E(P)	24 00 17.9
TUC E(P)	24 00 21.8
JAN 16	
H-01 10 42.3	
20.7S 178.7W	
h ABOUT 520KM	
BCN EP	01 22 12.4
EUR IP	01 22 17.0
TUC EP	01 22 17.3
ALQ I(P)	01 22 38.0
IPP	24 40.0
COL IP	01 22 38.8
BOZ EP	01 22 46.0
JAN 16	
H-01 23 18.0	
13.7S 166.7E	
h ABOUT 052KM	
COL EP	01 35 53.0
JAN 16	
H-05 30 12.1	
13.5S 166.1E	
h ABOUT 053KM	
COL IP	05 42 43.4
E	42 48.6
IPP	42 54.0
EUR FP	05 43 06.2
JAN 16	
H-05 54 14.1	
13.9N 093.0W	
h ABOUT 033KM	
ALQ E(P)	05 59 28.2
TUC E(P)	05 59 32.5
JAN 16	
H-05 59 01.0	
54.3N 164.6W	
h ABOUT 033KM	
COL EP	06 02 12.0
EUR EP	06 05 59.8
E	06 08.8
RCD EP	06 06 34.0
ALQ E(P)	06 07 08.0

Date and Station	Phase (GCT)
	h m s
JAN 16	
H-06 34 16.6	
5.7S 151.3E	
h ABOUT 060KM	
EUR IP	06 47 37.8
BCN EP	06 47 42.2
EpP	47 53.5
ALQ E(P)	06 48 18.2
SJG EP'	06 53 55.5
JAN 16	
TUC E(P)	08 44 16.0
BCN EP	08 45 11.0
JAN 16	
TUC E(P)	08 55 52.3
JAN 16	
H-10 50 06.5	
3.1N 099.2W	
h ABOUT 033KM	
BCN EP	10 57 05.5
EUR E(P)	10 57 35.0
HON E(P)	11 00 12.0
JAN 16	
H-11 32 37.4	
56.6S 027.4W	
h ABOUT 101KM	
SJG IP	11 44 42.5
EPP	48 08.2
E(S)	55 27.0
ALQ IP'	11 51 03.7
I	51 55.8
EPKKP	12 01 51.0
TUC EP'	11 51 04.3
EpP'	51 54.5
RCD EP'	11 51 12.0
BCN IP'	11 51 13.6
EPP	52 35.0
ESKP	54 37.5
EPKKP	12 01 34.7
EpPKKP	02 00.0
EUR IP'	11 51 20.3
IPP	52 56.1
EPKKP	12 01 21.9
BOZ EP'	11 51 24.6
EPKKP	12 01 11.2
BUT IP'	11 51 25.5
IPP	52 08.9
HHM EP'	11 51 29.1
COL IP'	11 52 09.2
IP'	52 17.5
I	52 26.0

Date and Station	Phase (GCT)
	h m s
JAN 16	
H-12 51 28.6	
25.6S 180.0W	
h ABOUT 445KM	
BCN EP	13 03 26.0
TUC IP C	13 03 30.2
EUR IP	13 03 31.0
ALQ IP	13 03 50.0
BOZ EP	13 03 59.6
JAN 16	
EUR IP	15 55 47.9
JAN 16	
H-16 22 14.3	
02.2S 079.8W	
h ABOUT 122KM	
ALQ IP	16 30 17.0
TUC E(P)	16 30 21.2
BCN EP	16 30 59.5
EUR IP	16 31 22.3
BOZ EP	16 31 37.2
EpP	31 59.0
JAN 16	
H-16 59 28.5	
02.5S 078.2W	
h ABOUT 033KM	
ALQ I(P)	17 07 50.2
TUC E(P)	17 07 52.8
BOZ EP	17 09 09.0
JAN 16	
H-20 28 08.1	
19.7S 068.7W	
h ABOUT 236KM	
ALQ I(P)	20 38 26.6
JAN 16	
H-21 28 39.4	
51.6N 170.7W	
h ABOUT 033KM	
COL EP	21 32 46.0
HHM EP	21 35 38.1
BOZ EP	21 36 01.5
EUR IP	21 36 08.1
BCN EP	21 36 31.5
TUC EP	21 37 09.7
ALQ I(P)	21 37 17.8
JAN 16	
EUR EP	21 57 54.2

Date and Station	Phase (GCT)
	h m s
SLC EP	21 58 23.7
JAN 16	
COL EP	22 24 52.0
BOZ EP	22 28 08.4
ALQ I(P)	22 29 27.5
EUR FP	22 29 48.0
JAN 16	
ALQ E(P)	22 36 29.0
JAN 16	
BCN EP	22 43 30.0
EL	44 05.0
JAN 16	
H-22 45 29.4	
04.4S 133.0E	
h ABOUT 033KM	
COL E(P)	22 58 26.0
EUR E(P)	22 58 48.8
JAN 17	
COL IP	00 52 34.1
JAN 17	
H-00 58 28.8	
56.9N 151.7W	
h ABOUT 033KM	
COL EP	01 00 27.8
HHM EP	01 03 43.1
EUR FP	01 04 28.0
JAN 17	
H-02 13 28.6	
58.3N 151.8W	
h ABOUT 033KM	
COL EP	02 15 09.0
HHM IP	02 18 44.6
IpP	18 54.1
F	22 32.1
E	25 57.1
BUT EP	02 19 04.1
IpP	19 14.1
BOZ EP	02 19 12.5
E(L)	24 00.0
EUR IP	02 19 33.1
FGU IP	02 19 52.5
RCD IP C	02 20 02.0
EpP	20 11.0
BCN IP D	02 20 02.5
EpP	20 11.8
EPCP	22 54.0
ESCP	26 25.0
GCA EP	02 20 09.0

Date and Station	Phase (GCT)
	h m s
TUC IP D	02 20 44.8
EpP	20 53.0
JAN 17	
EUR IP	02 26 14.2
JAN 17	
H-03 39 33.3	
34.5N 027.8E	
h ABOUT 044KM	
COL EP	03 51 41.4
JAN 17	
COL IP	05 09 06.5
JAN 17	
EUR EP	06 52 19.1
JAN 17	
H-08 19 44.5	
15.1S 173.7W	
h ABOUT 033KM	
UKI E(P)	08 31 06.2
BCN EP D	08 31 27.6
EUR IP	08 31 32.1
TUC EP	08 31 32.6
EpP	31 45.2
GCA IP	08 31 43.7
SLC EP	08 31 51.9
ALQ IP	08 31 57.8
BUT EP	08 32 02.5
EpP	32 15.0
COL EP	08 32 03.0
BOZ EP	08 32 05.1
EpP	32 17.3
HHM EP	08 32 05.1
EPCP	35 12.1
RCD E(P)	08 32 39.0
JAN 17	
H-09 01 07.2	
16.4S 174.3W	
h ABOUT 123KM	
BCN IP D	09 12 46.5
EUR IP	09 12 52.4
TUC IP D	09 12 53.0
GCA IP	09 13 03.0
SLC EP	09 13 10.7
ALQ IP	09 13 16.3
FGU I(P)	09 13 20.0
COL EP	09 13 21.0
BUT IP	09 13 21.0

Date and Station	Phase	(GCT) h m s
HHM	IP	09 13 23.0
BOZ	IP D	09 13 24.0
	EPCP	13 38.7
RCD	E(P)	09 13 47.0
JAN 17		
TUC	E(P)	09 38 31.5
JAN 17		
H-10 43 17.5		
24.5S 178.4E		
h ABOUT 568KM		
UKI	E(P)	10 54 49.0
BCN	IP D	10 55 05.5
	E▸P	57 08.5
EUR	IP	10 55 10.1
	I▸P	57 14.3
TUC	IP D	10 55 10.1
	E▸P	57 12.9
GCA	IP	10 55 18.6
SLC	IP	10 55 25.7
COL	IP	10 55 29.3
	E▸P	57 32.0
ALQ	IP	10 55 29.8
	I▸P	57 34.0
FGU	IP	10 55 33.9
BUT	IP	10 55 36.0
	E▸P	57 43.0
	E(PP)	59 30.0
HHM	EP	10 55 36.3
	E▸P	57 42.3
BOZ	EP	10 55 37.5
	E▸P	57 45.5
RCD	E(P)	10 55 50.0
SJG	IP'C	11 01 04.0
	I▸P'	03 47.0
JAN 17		
BCN	E(P)	11 06 39.5
TUC	E(P)	11 06 40.8
JAN 17		
EUR	EP	16 23 34.3
JAN 17		
BCN	EP	16 38 32.5
JAN 17		
EUR	EP	16 54 46.2
JAN 17		
COL	IP	17 35 11.5
JAN 17		
H-19 22 42.2		
.1S 103.7W		
h ABOUT 033KM		

Date and Station	Phase	(GCT) h m s
BCN	EP	19 29 55.5
	E	30 01.5
	E	30 05.5
FUR	EP	19 30 24.5
ALQ	E(P)	19 30 37.0
BUT	E(P)	19 31 10.0
HHM	EP	19 31 26.0
COL	EP	19 34 07.2
JAN 17		
BUT	EP	19 54 57.0
JAN 17		
EUR	EP	19 55 40.9
JAN 17		
BUT	EP	20 01 29.0
	EL	01 54.0
EUR	EP	20 02 11.8
JAN 17		
TUC	E(P)	20 11 02.3
JAN 17		
H-20 57 41.3		
06.8S 109.1E		
h ABOUT 242KM		
COL	EP	21 11 09.0
EUR	EP'	21 16 13.8
	IP'	16 22.2
	IPP	18 18.9
	ESKKP	29 04.1
HHM	IP'	21 16 14.1
	E▸P'	17 11.6
	ESKP	19 09.0
BCN	EP'	21 16 16.5
	EP'	16 27.0
	EPP	18 39.4
	ISKP	19 29.0
	E▸PKS	20 35.0
	ESKSP	25 58.0
	ESKKP	29 06.4
BUT	IP'	21 16 19.0
	IPP	19 15.0
	ISKP	19 34.0
	ESKKP	29 11.0
TUC	EP'	21 16 20.8
	E	16 37.4
	ESKP	19 44.0
BOZ	EP'	21 16 21.2
	ESKP	19 18.0
SLC	IP'	21 16 25.9
	ISKP	19 27.7
ALQ	IP'	21 16 30.0
	I	16 38.0
GCA	EP'	21 16 30.5
	ISKP	19 35.5

Date and Station	Phase	(GCT) h m s
RCD	EP'	21 16 31.0
	ISKP	19 38.0
CSC	EP'	21 17 09.0
SJG	EP'D	21 17 21.5
	E▸P'	18 18.5
JAN 17		
TUC	E(P)	21 03 32.5
ALQ	EP	21 03 52.0
BCN	EP	21 04 04.0
JAN 17		
EUR	EP	21 28 02.1
JAN 17		
COL	EP	21 27 13.2
	I	27 37.7
	F	27 47.6
JAN 17		
FGU	IP	22 19 32.8
JAN 17		
EUR	IP	22 21 20.3
JAN 18		
H-00 03 11.9		
37.7S 072.9W		
h ABOUT 052KM		
SJG	EP	00 12 45.5
TUC	EP	00 15 06.5
ALQ	IP	00 15 10.5
	I	15 19.8
GCA	EP	00 15 31.5
BCN	EP	00 15 34.0
	E	15 41.5
EUR	I(P)	00 15 40.9
BOZ	E(P)	00 16 07.2
BUT	IP	00 16 09.9
	I	16 19.1
HHM	EP	00 16 21.7
RCD	E(P)	00 16 47.0
COL	EP'	00 21 52.1
JAN 18		
H-00 19 59.8		
30.1N 138.6E		
h ABOUT 415KM		
COL	IP	00 29 00.0
HHM	IP	00 31 18.6
BUT	IP D	00 31 28.9
EUR	EP	00 31 36.3
BCN	EP	00 31 50.0

Date and Station	Phase	(GCT) h m s
JAN 18		
COL	IP	01 14 29.5
	I	15 45.5
JAN 18		
FGU	IP	01 15 44.5
JAN 18		
COL	EP	01 56 45.9
	E	57 49.3
JAN 18		
TUC	E(P)	02 26 36.1
JAN 18		
H-03 28 25.8		
37.9N 072.1E		
h ABOUT 033KM		
COL	EP	03 39 53.0
JAN 18		
COL	EP	03 59 05.0
	E	59 44.0
JAN 18		
TUC	E(P)	05 12 26.5
BCN	E(P)	05 12 30.0
	EL	13 29.3
JAN 18		
EUR	EP	05 29 51.4
	I	30 39.0
BCN	E(P)	05 29 55.5
JAN 18		
TUC	E(P)	05 38 19.0
JAN 18		
BUT	IP	06 51 21.3
	IL	51 37.8
JAN 18		
H-06 57 11.7		
31.1N 116.6W		
h ABOUT 033KM		
BCN	IP	06 58 27.2
	IL	59 48.7
TUC	EP	06 58 28.5
GCA	IP	06 58 57.5
EUR	IP	06 59 15.0
JAN 18		
BUT	EP	07 54 34.8
	IL	54 52.3
BZM	FP	07 54 40.0
HHM	FP	07 55 23.0
FUR	EP	07 55 45.6
JAN 18		
COL	EP	08 14 59.0
JAN 18		
TUC	E(P)	08 22 32.3

Date and Station	Phase (GCT)
	h m s
JAN 18	
BCN E(P)	13 17 09.0
EL	17 58.5
TUC E(P)	13 17 33.5
JAN 18	
FUR EP	13 22 15.2
BCN E(P)	13 22 25.0
JAN 18	
EUR EP	13 40 34.7
BCN E(P)	13 40 49.5
JAN 18	
BCN E(P)	13 50 32.0
JAN 18	
H-15 21 56.1	
37.1N 095.6E	
h ABOUT 039KM	
COL IP	15 32 47.0
HHM EP	15 34 58.8
JAN 18	
H-15 57 18.9	
18.3S 167.5E	
h ABOUT 033KM	
COL EP	16 10 14.2
EUR EP	16 10 24.1
JAN 18	
ALQ EP	17 01 00.0
JAN 18	
EUR EP	17 04 40.1
JAN 18	
FGU E(P)	17 15 13.5
E(S)	15 32.0
JAN 18	
SLC EP	19 00 34.8
FGU IP	19 01 07.8
JAN 18	
SJG IP	19 53 48.5
IS	53 52.5
JAN 18	
H-20 08 14.4	
37.4N 113.2W	
h ABOUT 033KM	
GCA IP D	20 08 36.9
EL	08 53.0
BCN I(P)	20 08 52.4
IL	09 26.5
EUR EP	20 08 59.3
SLC EP	20 09 10.2
FGU E(P)	20 09 23.0
ALQ EP	20 09 40.5

Date and Station	Phase (GCT)
	h m s
JAN 18	
EUR EP	22 07 17.5
JAN 18	
H-22 38 22.8	
18.2S 178.0W	
h ABOUT 569KM	
EUR E(P)	22 49 44.3
ALQ E(P)	22 49 58.0
JAN 18	
COL IP	23 21 29.7
JAN 19	
H-00 38 27.1	
38.0N 119.1W	
h ABOUT 033KM	
EUR IP	00 39 10.5
I	39 18.0
BCN E(P)	00 39 35.0
JAN 19	
H-01 52 50.6	
41.5S 089.7W	
h ABOUT 033KM	
EUR EP	02 05 19.8
JAN 19	
COL IP	05 05 25.2
JAN 19	
EUR IP	06 18 39.9
JAN 19	
COL EP	07 30 01.0
JAN 19	
H-09 14 36.8	
14.5N 091.7W	
h ABOUT 121KM	
ALQ IP	09 19 45.5
BCN EP	09 20 34.5
EUR EP	09 21 01.7
BOZ E(P)	09 21 22.0
COL EP	09 24 53.0
I	25 30.0
JAN 19	
BCN E(P)	09 24 52.8
JAN 19	
COL EP	09 25 28.0
JAN 19	
SJG EP	11 47 13.8
IL	47 53.8
JAN 19	
SJG IP	11 53 21.5
IS	53 47.2
JAN 19	
SJG IP	12 51 33.2
IS	51 59.4

Date and Station	Phase (GCT)
	h m s
JAN 19	
BOZ E(P)	14 05 14.0
JAN 19	
SJG IP	14 38 06.0
IS	13 38 31.4
JAN 19	
SJG IP	14 55 44.0
IS	56 09.8
JAN 19	
H-15 18 41.6	
28.1S 066.8W	
h ABOUT 146KM	
ALQ IP	15 29 58.0
IPP	30 34.3
BCN EP	15 30 27.0
EPP	31 06.5
RCD E(P)	15 30 32.5
EUR IP	15 30 44.0
BOZ EP	15 30 56.5
HHM IP	15 31 11.9
EPP	31 49.4
JAN 19	
RCD EP	16 41 51.0
E(S)	41 55.0
JAN 19	
BOZ EP	17 06 56.5
JAN 19	
H-17 22 18.8	
23.1S 066.2W	
h ABOUT 207KM	
TUC EP	17 33 07.7
COL EP'	17 40 32.1
JAN 19	
SJG IP	17 31 31.0
IS	32 48.2
JAN 19	
SJG IP	19 16 47.0
IS	17 08.0
JAN 19	
RCD EP	20 30 14.0
E(S)	30 17.0
JAN 19	
H-21 04 44.4	
32.3S 178.2W	
h ABOUT 033KM	
TUC EP	21 17 44.5
BCN E(P)	21 17 45.0
E	17 58.0
EUR EP	21 17 50.4
ALQ EP	21 18 04.0

Date and Station	Phase (GCT)
	h m s
JAN 19	
BOZ EP	21 51 16.0
JAN 19	
SLC EP	22 02 32.7
FGU EP	22 03 05.8
JAN 19	
BCN EP	22 09 21.0
E	09 27.2
EL	10 41.5
JAN 20	
H-01 33 12.8	
32.5S 178.0W	
h ABOUT 033KM	
TUC EP	01 46 12.2
EUR EP	01 46 18.6
ALQ EP	01 46 32.3
COL EP	01 46 56.0
JAN 20	
H-02 06 09.6	
04.9S 142.3E	
h ABOUT 096KM	
COL EP	02 18 39.0
JAN 20	
TUC E(P)	02 06 32.0
JAN 20	
TUC E(P)	05 25 29.6
JAN 20	
H-06 28 28.4	
52.2N 170.9W	
h ABOUT 025KM	
COL EP	06 32 31.0
EUR EP	06 35 59.1
BCN EP	06 36 21.5
E	36 38.0
JAN 20	
BCN E(P)	07 39 48.1
JAN 20	
TUC E(P)	08 38 01.0
JAN 20	
COL IP	08 39 21.5
JAN 20	
TUC E(P)	09 01 55.2
JAN 20	
H-09 18 34.9	
18.4S 167.6E	
h ABOUT 010KM	
COL EP	09 31 32.0
BCN EP	09 31 41.3
E	31 50.5
EUR EP	09 31 43.6

Date and Station	Phase (GCT)
	h m s
TUC E(P)	09 31 47.5
JAN 20	
H-09 45 56.4	
67.3N 136.2W	
h ABOUT 033KM	
COL EP	09 47 15.0
IL	48 24.0
HHM EP	09 50 50.1
EUR EP	09 52 05.2
TUC E(P)	09 53 15.0
JAN 20	
BHP IP C	12 44 17.0
IS	44 41.0
JAN 20	
H-12 51 56.4	
2.6N 128.3E	
h ABOUT 098KM	
COL E(P)	13 04 31.6
JAN 20	
GUA IP	13 42 02.0
IS	42 19.0
JAN 20	
H-16 42 50.9	
60.0N 146.8W	
h ABOUT 033KM	
COL IP	16 44 04.8
I	44 10.8
HHM EP	16 47 45.2
BOZ EP	16 48 17.0
ALQ IP	16 49 52.5
TUC EP	16 49 55.4
JAN 20	
FGU E(P)	16 47 44.0
E	47 50.7
E(S)	48 10.0
FUR EP	16 48 19.0
I	48 43.0
JAN 20	
H-20 27 05.5	
46.3N 152.3E	
h ABOUT 033KM	
COL IP	20 34 13.0
E	34 21.9
HHM E(P)	20 37 15.0
I	37 22.7
BOZ E(P)	20 37 28.1
EUR EP	20 37 38.0
I	37 53.1
BCN E(P)	20 37 43.5
F	37 56.7
E	38 11.0

Date and Station	Phase (GCT)
	h m s
TUC EP	20 38 26.1
ALQ EP	20 38 31.5
JAN 20	
UKI E(P)	23 12 25.8
E(S)	12 35.8
JAN 20	
UKI E(P)	23 14 56.4
E(S)	15 07.0
JAN 21	
BCN E(P)	00 22 26.0
E	22 32.1
EUR EP	00 22 38.3
JAN 21	
EUR EP	01 00 54.3
ALQ EP	01 01 10.8
JAN 21	
H-02 04 43.7	
15.9S 173.2W	
h ABOUT 033KM	
BCN EP	02 16 28.5
TUC E(P)	02 16 29.8
EUR IP	02 16 34.5
ALQ IP	02 16 57.8
BOZ EP	02 17 07.0
E	17 16.3
COL IP	02 17 07.6
JAN 21	
H-02 41 01.6	
33.6N 136.1E	
h ABOUT 013KM	
COL E(P)	02 50 29.8
BUT E(P)	02 53 10.0
BOZ E(P)	02 53 18.7
EUR EP	02 53 24.0
JAN 21	
TUC EP	04 27 59.2
JAN 21	
BCN IP D	05 14 40.3
I	14 41.9
EUR EP	05 15 38.2
JAN 21	
H-06 09 58.4	
34.2S 179.8E	
h ABOUT 033KM	
COL E(P)	06 22 52.4
TUC EP	06 23 10.2

Date and Station	Phase (GCT)
	h m s
BCN E(P)	06 23 15.0
E(PP)	26 50.0
EUR EP	06 23 17.7
JAN 21	
COL IP	06 48 50.1
JAN 21	
EUR EP	07 06 30.5
BCN E(P)	07 06 41.6
E	06 48.5
EL	07 32.0
JAN 21	
H-11 37 20.6	
18.0S 178.5W	
h ABOUT 600KM	
EUR EP	11 48 38.7
TUC E(P)	11 48 40.2
COL EP	11 48 57.5
ALQ EP	11 49 01.4
JAN 21	
H-12 35 54.1	
32.3S 066.4W	
h ABOUT 026KM	
ALQ EP	12 47 45.0
JAN 21	
COL EP	13 28 51.0
JAN 21	
H-13 31 29.4	
34.6N 086.9E	
h ABOUT 033KM	
COL EP	13 42 49.7
JAN 21	
H-15 48 06.1	
29.8S 179.4W	
h ABOUT 246KM	
TUC E(P)	16 00 36.8
COL E(P)	16 01 12.5
JAN 21	
BOZ EP	16 22 15.2
JAN 21	
H-16 36 46.2	
56.2N 163.1E	
h ABOUT 119KM	
COL EP	16 41 59.0
EUR EP	16 45 56.5
JAN 21	
H-16 57 51.4	
18.6S 169.3E	
h ABOUT 260KM	
COL IP	17 10 18.4
BCN EP	17 10 23.0

Date and Station	Phase (GCT)
	h m s
EUR IP	17 10 24.9
TUC E(P)	17 10 30.3
ALQ EP	17 10 49.3
JAN 21	
BOZ EP	17 47 39.3
JAN 21	
BOZ EP	18 10 07.7
JAN 21	
BOZ EP	19 12 12.0
JAN 21	
H-20 43 55.0	
12.3N 086.7W	
h ABOUT 138KM	
SJG IP	20 48 28.5
ALQ I(P)	20 49 43.2
TUC E(P)	20 49 50.0
JAN 21	
TUC E(P)	21 09 52.9
BCN IP	21 10 34.5
IL	11 20.5
JAN 21	
TUC E(P)	21 22 03.3
E	22 42.5
JAN 21	
H-21 37 26.2	
12.8S 169.0E	
h ABOUT 639KM	
COL IP	21 48 50.8
BCN EP	21 49 05.5
EUR IP	21 49 06.4
TUC EP	21 49 15.1
JAN 22	
H-00 45 12.4	
41.2N 129.0W	
h ABOUT 047KM	
EUR EP	00 47 37.5
JAN 22	
EUR EP	02 31 25.5
JAN 22	
H-02 41 34.7	
20.1N 094.5E	
h ABOUT 076KM	
COL E(P)	02 53 53.5
ALQ IP'	03 00 23.3
TUC EP'	03 00 24.0
JAN 22	
H-05 18 27.9	
19.7S 176.1W	
h ABOUT 210KM	

Date and Station	Phase	(GCT)
		h m s
BCN	EP	05 30 16.9
	E▸P	31 11.5
TUC	EP	05 30 21.7
FUR	EP	05 30 22.3
GCA	IP	05 30 31.5
ALQ	EIP	05 30 43.5
	I▸P	31 39.8
COL	IP	05 30 49.9
BOZ	EP	05 30 52.4
	E	31 11.8
JAN 22		
EUR	EP	07 23 03.3
JAN 22		
BCN	E(P)	07 31 53.5
JAN 22		
COL	IP	09 46 38.8
JAN 22		
EUR	EP	09 47 22.5
JAN 22		
EUR	EP	10 23 46.4
	I	24 19.5
BCN	E(P)	10 23 56.4
	EL	24 40.0
JAN 22		
BCN	E(P)	10 25 28.5
	EL	26 16.0
JAN 22		
H-10 51 37.1		
38.5N 138.5E		
h ABOUT 033KM		
COL	IP	11 00 22.5
BOZ	EP	11 03 18.5
EUR	EP	11 03 26.6
BCN	EP	11 03 43.0
ALQ	IP	11 04 13.5
JAN 22		
COL	IP	15 02 03.7
JAN 22		
H-15 11 14.2		
46.9N 152.5E		
h ABOUT 033KM		
COL	EP	15 18 17.9
EUR	EP	15 21 42.4
JAN 22		
BHP	IP	19 47 05.0
	IS	47 50.0

Date and Station	Phase	(GCT)
		h m s
JAN 22		
H-22 03 40.1		
44.2N 151.0E		
h ABOUT 033KM		
COL	IP	22 11 06.1
BOZ	EP	22 14 16.1
JAN 22		
EUR	EP	22 17 50.2
JAN 22		
TUC	E(P)	22 40 25.8
JAN 22		
TUC	EP	22 51 35.0
EUR	EP	00 32 10.7
JAN 23		
H-01 09 04.8		
16.4N 095.8W		
h ABOUT 033KM		
ALQ	E(P)	01 13 45.0
TUC	E(P)	01 13 45.5
JAN 23		
H-04 23 57.2		
52.3N 175.7W		
h ABOUT 033KM		
COL	EP	04 28 19.0
EUR	EP	04 31 49.8
JAN 23		
H-08 03 39.9		
16.3S 174.5W		
h ABOUT 119KM		
BCN	EP	08 15 20.5
EUR	EP	08 15 26.1
TUC	EP	08 15 26.5
ALQ	IP	08 15 49.8
FGU	EP	08 15 53.5
COL	IP	08 15 55.1
BOZ	EP	08 15 58.0
JAN 23		
H-11 23 31.7		
39.1N 048.4E		
h ABOUT 033KM		
COL	IP	11 35 14.8
JAN 23		
COL	IP	11 52 16.2
BOZ	EP	11 55 28.7
JAN 23		
COL	IP	12 55 20.8
JAN 23		
EUR	EP	14 44 23.6

Date and Station	Phase	(GCT)
		h m s
JAN 23		
H-14 48 28.0		
08.3S 075.1W		
h ABOUT 033KM		
COL	EP	15 01 26.3
JAN 23		
H-16 01 18.0		
13.8N 119.9E		
h ABOUT 066KM		
COL	EP	16 13 13.0
JAN 23		
COL	EP	16 33 50.0
JAN 23		
H-16 42 05.2		
73.3N 007.4E		
h ABOUT 033KM		
COL	EP	16 49 48.6
JAN 23		
TUC	E(P)	19 16 07.5
	E(L)	16 28.4
JAN 23		
H-20 07 31.4		
08.8N 083.1W		
h ABOUT 046KM		
BHP	IP C	20 08 25.0
	IS	09 06.0
SJG	EP	20 11 52.5
ALQ	E(P)	20 14 10.0
	EPCP	16 49.5
TUC	EP	20 14 18.7
BCN	E(P)	20 14 58.8
	E	15 01.5
EUR	EP	20 15 24.8
BOZ	EP	20 15 37.1
COL	IP	20 18 49.0
JAN 23		
EUR	IP	21 03 00.5
TUC	E(P)	21 03 16.1
	E	03 43.1
JAN 23		
BOZ	EP	21 08 29.0
JAN 23		
H-21 51 14.9		
36.9N 140.9E		
h ABOUT 058KM		
COL	IP	22 00 02.2
HHM	EP	22 02 35.7
BUT	EP	22 02 49.1
BOZ	EP	22 02 53.2

Date and Station	Phase	(GCT)
		h m s
BCN	EP	22 03 16.0
	E▸P	03 29.7
FGU	E(P)	22 03 17.0
TUC	E(P)	22 03 40.5
ALQ	EP	22 03 46.2
	E▸P	04 00.8
JAN 23		
SLC	EP	21 53 55.5
FGU	EP	21 54 28.0
EUR	EP	21 54 45.7
JAN 23		
H-22 03 08.7		
35.3N 072.8E		
h ABOUT 200KM		
COL	IP	22 14 29.0
JAN 23		
H-22 38 25.8		
13.7N 119.9E		
h ABOUT 053KM		
COL	EP	22 50 24.1
JAN 23		
H-23 24 29.6		
07.4N 123.9E		
h ABOUT 627KM		
COL	IP	23 35 50.4
ALQ	IP'	23 42 07.5
	IPP	44 41.7
TUC	EPP	23 44 04.5
FGU	EPP	23 44 34.3
BUT	EPP	23 44 43.0
JAN 24		
H-00 11 12.1		
02.4S 126.0E		
h ABOUT 006KM		
GUA	EP	00 16 34.0
	E(S)	20 55.0
HON	EP	00 23 14.0
KIP	EP	00 23 16.0
COL	IP	00 24 15.4
	EPP	27 42.0
	ESKS	35 00.0
	IP'P'	50 04.0
SIT	E(P)	00 24 45.0
	E(S)	35 16.0
HHM	E(P)	00 25 54.0
	E	26 03.7
	EP'	29 28.7
BUT	E(P)	00 26 05.0
	EP'	30 05.0

Date and Station	Phase (GCT)
	h m s
BCN EP	00 26 08.0
FP'	29 37.2
IP'	30 12.5
FPP	30 53.0
ESKS	36 33.5
EPKKP	40 45.5
E	48 31.5
SLC E(P)	00 26 11.0
E	26 17.8
FGU E(P)	00 26 19.0
EP'	30 00.9
GCA E(P)	00 26 24.5
IP'	30 00.0
TUC EP	00 26 31.2
IP'	30 06.0
ALQ EP	00 26 45.0
IPP	31 46.5
I	41 48.5
BOZ (P'	00 29 55.6
WAS EP'	00 30 32.0
EPP	31 40.0
CSC EP'	00 30 36.0
ESKP	33 42.0
E	33 50.0
PHI EP'	00 30 51.2
BHP IP'C	00 31 07.0
SJG IP'	00 31 15.5
FP'	32 11.5
FPP	35 43.0
E(PPP)	39 08.0
JAN 24	
EUR IP	00 17 42.8
JAN 24	
COL E(P)	01 01 45.5
F	02 02.9
JAN 24	
H-01 19 32.9	
6.8N 073.1W	
h ABOUT 169KM	
BHP IP	01 21 08.0
IS	22 21.0
SJG IP	01 22 30.5
IS	24 47.5
ALQ EP	01 27 07.5
TUC EP	01 27 20.0
GCA EP	01 27 44.0
COL EP	01 31 10.0

Date and Station	Phase (GCT)
	h m s
JAN 24	
H-02 31 18.6	
02.7S 126.1E	
h ABOUT 023KM	
COL EP	02 44 20.0
TUC EP'	02 50 09.0
ALQ IP'	02 50 14.7
JAN 24	
H-02 41 43.0	
2.2S 126.0E	
h ABOUT 029KM	
ALQ IP'	03 00 39.0
JAN 24	
COL EP	05 28 03.0
JAN 24	
COL EP	07 15 03.0
JAN 24	
EUR EP	07 44 23.3
JAN 24	
COL IP	12 09 16.0
JAN 24	
H-16 06 30.7	
20.9S 179.0W	
h ABOUT 616KM	
COL IP	16 18 20.1
JAN 24	
H-16 38 17.4	
51.4N 170.3W	
h ABOUT 033KM	
COL EP	16 42 25.0
EUR EP	16 45 41.9
JAN 24	
H-19 57 01.4	
54.4N 162.2W	
h ABOUT 020KM	
COL IP	20 00 05.5
EUR EP	20 03 50.2
EPP	03 56.6
JAN 24	
GUA EP	20 01 28.0
JAN 24	
ALQ I(P)	20 06 53.4
JAN 24	
EUR IP	22 12 50.6
JAN 24	
TUC E(P)	22 16 45.0
JAN 24	
H-22 38 56.0	
73.1N 006.5E	
h ABOUT 033KM	
COL EP	22 46 40.6

Date and Station	Phase (GCT)
	h m s
JAN 25	
H-01 11 53.7	
14.8S 171.2F	
h ABOUT 635KM	
COL IP	01 23 24.6
EUR IP	01 23 32.8
JAN 25	
H-04 14 21.2	
37.9N 138.9F	
h ABOUT 033KM	
COL EP	04 23 08.7
EUR EP	04 26 12.2
JAN 25	
SLC EP	04 27 38.1
FGU EP	04 27 40.5
IS	28 11.6
BOZ E(P)	04 27 45.5
BUT F(P)	04 27 58.0
EL	27 41.2
JAN 25	
FGU E(P)	04 30 41.0
IS	31 13.0
BOZ E(P)	04 30 46.5
BUT E(P)	04 30 59.0
EL	30 40.2
JAN 25	
EUR EP	04 32 14.0
JAN 25	
FGU E(P)	04 44 04.0
EL	44 32.0
JAN 25	
BZM EP	04 47 48.9
JAN 25	
BOZ E(P)	06 00 29.5
JAN 25	
H-10 03 36.2	
20.2S 067.2W	
h ABOUT 009KM	
SJG EP	10 11 02.5
ALQ EP	10 14 26.8
EUR EP	10 15 19.6
BOZ EP	10 15 31.8
HHM EP	10 15 48.3
I	16 20.1
JAN 25	
H-10 33 16.4	
12.9S 167.2E	
h ABOUT 205KM	
COL IP	10 45 28.1
IPP	46 20.5

Date and Station	Phase (GCT)
	h m s
JAN 25	
H-12 02 51.4	
02.6S 126.1F	
h ABOUT 033KM	
COL EP	12 15 52.7
JAN 25	
H-12 18 33.0	
34.5N 032.8E	
h ABOUT 017KM	
COL IP	12 30 49.1
JAN 25	
H-12 24 19.2	
45.5N 110.3W	
h ABOUT 033KM	
BOZ IP C	12 24 35.7
E(S)	24 46.5
BUT IP	12 24 46.7
IL	25 05.2
HHM E(P)	12 25 22.0
E	25 32.6
EL	26 25.1
EUR EP	12 26 07.5
JAN 25	
COL EP	13 11 09.0
JAN 25	
GUA EP	13 54 58.2
JAN 25	
COL IP	14 01 16.8
JAN 25	
SJG IP	14 21 08.2
IS	21 15.0
JAN 25	
ALQ IP	15 52 48.0
EUR EP	15 53 27.5
JAN 25	
H-16 44 18.7	
13.7N 144.3F	
h ABOUT 139KM	
GUA IP	16 44 39.2
HHM EP	16 56 51.3
E(PP)	57 46.1
EUR IP	16 56 58.0
BOZ EP	16 57 03.0
BCN EP D	16 57 07.8
SLC IP	16 57 10.3
TUC EP	16 57 27.2
ALQ IP	16 57 38.1
SJG EP'	17 03 27.5

Date and Station	Phase	Phase (GCT) h m s
JAN 25		
H-16 54 01.5		
10.6S 075.4W		
h ABOUT 033KM		
COL	EP	17 07 08.6
JAN 25		
SJG	IP C	17 25 07.0
	IS	25 13.2
JAN 25		
SJG	IP C	18 59 51.0
	IS	59 59.7
JAN 25		
EUR	EP	19 05 03.5
JAN 25		
SJG	IP C	20 11 18.2
	IS	11 23.3
JAN 26		
H-01 19 18.9		
61.4N 152.4W		
h ABOUT 135KM		
COL	IP	01 20 21.7
EUR	EP	01 25 27.7
JAN 26		
HHM	EP	01 25 03.0
BOZ	E(P)	01 25 31.5
TUC	E(P)	01 27 09.7
JAN 26		
BOZ	E(P)	01 29 12.5
JAN 26		
HHM	IP	01 31 28.0
JAN 26		
H-01 53 31.9		
34.6N 135.2E		
h ABOUT 357KM		
BOZ	EP	02 05 03.7
EUR	IP	02 05 10.4
BCN	EP	02 05 25.0
ALQ	I(P)	02 05 53.6
JAN 26		
H-02 29 01.8		
28.4N 131.1E		
h ABOUT 033KM		
BOZ	EP	02 41 44.0
JAN 26		
BOZ	EP	02 46 46.4
JAN 26		
BOZ	EP	04 35 02.5
	E	35 09.5
JAN 26		
H-04 54 51.6		
23.4S 179.8E		
h ABOUT 474KM		
EUR	EP	05 06 44.7
TUC	EP	05 06 44.8
COL	EP	05 07 04.0
ALQ	IP	05 07 04.2
BOZ	EP	05 07 12.0
JAN 26		
H-06 25 32.1		
2.9S 102.4E		
h ABOUT 089KM		
HHM	EP'	06 44 22.9
BOZ	EP'	06 44 29.0
EUR	IP'	06 44 33.6
ALQ	EP'	06 44 41.0
JAN 26		
BOZ	E(P)	06 47 41.0
EUR	IP	06 47 43.8
TUC	EP	06 48 09.6
ALQ	IP	06 48 13.2
JAN 26		
EUR	EP	07 25 52.2
JAN 26		
H-10 42 35.4		
17.5S 178.7W		
h ABOUT 504KM		
TUC	E(P)	10 54 03.2
COL	IP	10 54 19.0
JAN 26		
H-10 49 33.5		
02.4S 126.0E		
h ABOUT 033KM		
COL	EP	11 02 33.0
ALQ	EP'	11 08 28.2
JAN 26		
H-11 23 14.4		
28.2N 111.7W		
h ABOUT 033KM		
TUC	EP	11 24 15.5
	E(S)	25 18.0
ALQ	EP	11 25 12.0
	I	25 48.3
	IL	27 35.5
BCN	EP	11 25 12.1
	ES	26 51.5
	EL	27 42.5
GCA	E(P)	11 25 27.0
EUR	IP	11 26 05.2
	IL	29 32.0
BOZ	EP	11 27 19.2
HHM	EP	11 27 47.9
JAN 26		
BUT	IP	11 50 12.2
	IL	50 28.2
TUC	E(P)	11 51 17.5
	E	51 32.7
JAN 26		
TUC	EP	12 00 28.0
	E(S)	01 39.0
ALQ	E(P)	12 01 24.0
JAN 26		
BCN	EP	12 03 44.3
	E	03 58.0
JAN 26		
H-13 48 33.8		
00.4S 081.1W		
h ABOUT 033KM		
SJG	EP	13 53 42.2
ALQ	E(P)	13 56 26.5
BOZ	EP	13 57 50.6
JAN 26		
H-14 17 49.0		
-0.2S 080.8W		
h ABOUT 033KM		
SJG	EP	14 22 55.5
ALQ	IP	14 25 43.5
TUC	E(P)	14 25 47.0
BOZ	EP	14 27 06.4
HHM	E(P)	14 27 30.0
JAN 26		
COL	EP	15 44 40.0
JAN 26		
H-17 08 41.8		
42.7N 141.2E		
h ABOUT 033KM		
COL	EP	17 16 51.0
BOZ	EP	17 19 57.2
JAN 26		
H-18 14 44.1		
02.4S 125.7E		
h ABOUT 033KM		
COL	EP	18 27 44.0
ALQ	EP'	18 33 39.5
JAN 26		
EUR	EP	18 49 56.5
JAN 26		
COL	EP	20 05 16.0
JAN 26		
TUC	EP	22 19 06.3
	E(S)	19 14.0
JAN 26		
EUR	EP	22 52 25.2
JAN 26		
H-23 47 38.2		
36.1N 139.5E		
h ABOUT 104KM		
GUA	IP	23 52 32.0
	E(S)	56 36.0
COL	IP	23 56 28.6
HHM	IP	23 59 01.7
BUT	IP	23 59 13.3
BOZ	EP	23 59 18.0
EUR	IP	23 59 24.9
SLC	EP	23 59 34.7
BCN	EP D	23 59 40.2
	EpP	00 00 14.8
FGU	EP	23 59 41.8
GCA	EP	23 59 48.0
TUC	EP D	24 00 05.5
	EpP	00 27.2
ALQ	EIP	24 00 10.7
	IpP	00 32.5
JAN 27		
H-01 44 35.8		
18.9N 176.6E		
h ABOUT 033KM		
COL	E(P)	01 53 42.0
EUR	EP	01 54 49.0
ALQ	I(P)	01 55 40.5
JAN 27		
BCN	EP	01 47 01.1
	EpP	47 14.0
JAN 27		
BOZ	E(P)	04 44 27.2
JAN 27		
GUA	EP	04 50 54.5
	E(S)	51 11.0
JAN 27		
EUR	EP	04 53 27.1
JAN 27		
SJG	IP C	05 44 55.2
	IS	45 06.9

Date and Station	Phase (GCT)
	h m s
EUR EP	05 51 47.2
JAN 27	
BOZ E(P)	09 01 54.6
JAN 27	
BOZ E(P)	09 12 49.5
JAN 27	
FGU EP	09 49 56.0
ES	50 24.0
EUR EP	09 50 16.6
JAN 27	
COL EP	09 59 13.0
JAN 27	
BOZ E(P)	10 55 22.2
JAN 27	
H-11 10 19.5	
51.7N 177.2W	
h ABOUT 033KM	
COL EP	11 14 52.0
EUR EP	11 18 20.5
JAN 27	
GUA EP	11 57 44.9
ES	57 56.0
JAN 27	
EUR EP	12 31 31.6
JAN 27	
TUC E(P)	13 17 40.4
F	19 00.1
JAN 27	
H-13 24 08.7	
28.6N 111.7W	
h ABOUT 033KM	
TUC EP	13 25 05.7
E	25 21.6
E(S)	26 09.5
ALQ EP	13 26 02.2
I	26 46.5
EL	28 24.2
EUR EP	13 26 52.7
BCN FL	13 28 10.0
E	28 32.5
E	28 37.0
JAN 27	
BOZ EP	13 59 21.2
JAN 27	
H-15 31 30.0	
36.7N 139.6E	
h ABOUT 089KM	
COL EP	15 40 18.0
EUR EP	15 43 15.9
JAN 27	
TUC EP	17 02 02.4
F	02 09.8

Date and Station	Phase (GCT)
	h m s
BCN E(P)	17 02 13.0
E	02 50.5
EL	03 54.0
EUR E(P)	17 02 50.0
GCA E(P)	17 02 52.0
ALQ E(P)	17 03 04.0
JAN 27	
COL EP	17 26 49.0
JAN 27	
EUR EP	18 20 24.9
JAN 27	
BOZ E(P)	18 26 19.5
JAN 27	
H-19 01 00.4	
48.8N 154.8E	
h ABOUT 033KM	
COL IP	19 07 41.7
BOZ EP	19 11 03.5
ALQ I(P)	19 12 10.0
JAN 27	
TUC E(P)	19 08 25.0
JAN 27	
FGU EP	19 23 23.0
ES	23 43.5
JAN 27	
H-19 53 55.0	
06.6S 153.9E	
h ABOUT 118KM	
COL EP	20 06 09.0
EUR IP	20 07 02.4
JAN 27	
H-20 13 38.5	
22.0S 179.5W	
h ABOUT 563KM	
COL IP	20 25 38.2
JAN 27	
GCA EP	22 39 48.5
ES	40 01.0
JAN 28	
H-00 24 54.6	
06.1S 154.4E	
h ABOUT 045KM	
COL EP	00 37 12.0
EUR EP	00 38 08.5
JAN 28	
EUR EP	01 21 58.0
JAN 28	
COL EP	01 52 48.0

Date and Station	Phase (GCT)
	h m s
JAN 28	
H-02 20 57.4	
15.6S 168.1E	
h ABOUT 151KM	
BCN EP	02 33 36.9
JAN 28	
H-02 34 03.0	
02.5S 102.5E	
h ABOUT 033KM	
HHM EP'	02 52 59.4
BOZ EP'	02 53 05.5
ESKP	56 06.7
EUR EP'	02 53 08.6
ISKP	56 12.7
TUC EP'	02 53 11.2
ESKP	56 39.2
ALQ EP'	02 53 15.5
I	53 25.7
IPP	54 54.3
SJG EP'	02 54 00.0
E	54 43.5
FGU ESKP	02 56 21.8
BCN ESKP	02 56 23.5
E	56 34.4
JAN 28	
H-04 03 39.5	
15.3N 093.9W	
h ABOUT 033KM	
CSC EP	04 08 32.0
ALQ IP	04 08 39.8
I	08 44.2
TUC EP D	04 08 43.3
E(S)	13 00.0
GCA IP	04 09 19.5
BCN IP D	04 09 29.5
F	09 44.2
EUR IP	04 09 56.1
SJG E(P)	04 10 16.0
E	13 39.0
E	13 54.0
BOZ EP	04 10 20.0
E	10 33.0
BUT EP	04 10 26.3
HHM EP	04 10 46.9
COL IP	04 13 52.7
JAN 28	
H-04 58 20.1	
22.6N 045.5W	
h ABOUT 033KM	
SJG EP	05 02 51.8

Date and Station	Phase (GCT)
	h m s
JAN 28	
H-05 34 59.8	
12.9S 078.5W	
h ABOUT 033KM	
SJG FP	05 41 33.5
TUC E(P)	05 44 23.3
ALQ IP	05 44 27.5
IPP	44 37.7
EUR IP	05 45 24.5
BOZ EP	05 45 42.0
EPP	45 52.7
HHM IP	05 46 02.4
I	46 05.4
COL IP	05 48 12.0
JAN 28	
H-08 15 43.6	
23.9S 066.7W	
h ABOUT 203KM	
ALQ IP	08 26 33.5
JAN 28	
H-09 38 56.3	
28.9S 072.2W	
h ABOUT 070KM	
ALQ E(P)	09 50 10.8
JAN 28	
BOZ EP	09 54 40.0
JAN 28	
EUR EP	10 35 14.8
JAN 28	
SJG EP	12 02 09.7
JAN 28	
TUC EP	14 52 14.0
E	52 35.4
BCN E(P)	14 52 25.0
EL	53 45.3
JAN 28	
H-16 15 35.0	
04.0S 104.2W	
h ABOUT 033KM	
ALQ E(P)	16 23 01.5
BCN EP	16 23 17.5
BOZ E(P)	16 24 26.6
HHM EP	16 24 48.4
COL EP	16 27 20.0
JAN 28	
GCA EP	17 29 39.0
E(S)	29 59.8
JAN 28	

Date and Station	Phase	(GCT)
		h m s
BCN	IP	19 16 38.5
	IS	16 56.3
GCA	EP	19 16 40.3
	ES	16 57.5
EUR	EP	19 17 11.4
JAN 28		
BOZ	E(P)	20 02 09.2
JAN 28		
GUA	EP	20 14 42.3
	E(S)	14 56.0
JAN 29		
H-00 11 22.1		
23.9N 108.7W		
h ABOUT 033KM		
ALQ	IP	00 14 03.1
	IL	17 36.4
BCN	EP D	00 14 31.0
	EL	19 22.0
GCA	EP	00 14 33.5
SLC	IP	00 15 20.8
EUR	I(P)	00 16 17.8
	I	20 46.0
BUT	EP	00 16 18.8
HHM	EP	00 16 42.4
	E(L)	24 57.0
SJG	EP	00 18 56.0
COL	EP	00 20 00.0
WAS	E(S)	00 27 04.0
JAN 29		
H-01 22 57.0		
36.1N 140.3E		
h ABOUT 033KM		
COL	EP	01 31 53.0
EUR	EP	01 34 49.5
TUC	E(P)	01 35 29.3
JAN 29		
H-01 27 15.8		
37.6N 122.4W		
h ABOUT 014KM		
UKI	E(P)	01 27 52.5
EUR	EP	01 28 39.4
JAN 29		
H-01 40 48.4		
36.6N 121.9W		
h ABOUT 014KM		
EUR	EP	01 42 11.3
	I	42 26.1

Date and Station	Phase	(GCT)
		h m s
JAN 29		
H-02 21 54.5		
24.2N 108.6W		
h ABOUT 033KM		
TUC	EP	02 23 53.8
	E(L)	26 22.8
ALQ	EP	02 24 31.2
	EL	27 41.0
BCN	EP	02 24 58.5
	EL	30 30.0
EUR	IP	02 25 46.1
SLC	EP	02 25 48.2
BOZ	E(P)	02 26 41.0
BUT	E(P)	02 26 46.0
HHM	E(P)	02 27 09.0
CSC	EP	02 27 27.0
COL	E(P)	02 30 27.0
WAS	E(S)	02 38 26.0
JAN 29		
EUR	IP	02 31 07.9
JAN 29		
H-03 28 18.0		
21.2S 178.9W		
h ABOUT 550KM		
BCN	EP	03 39 48.0
EUR	EP	03 39 53.1
TUC	EP	03 39 53.6
ALQ	EIP	03 40 13.4
COL	IP	03 40 14.6
	E(pP)	42 13.5
BOZ	EP	03 40 21.5
JAN 29		
COL	EP	04 03 46.0
	I	04 25.4
JAN 29		
H-06 58 06.6		
23.7N 108.5W		
h ABOUT 033KM		
TUC	E(P)	07 00 12.8
ALQ	EP	07 00 49.5
BCN	EP	07 01 18.3
	EL	05 48.0
EUR	IP	07 02 04.9
SLC	EP	07 02 08.2
BOZ	EP	07 03 01.5
BUT	EP	07 03 04.9

Date and Station	Phase	(GCT)
		h m s
HHM	EP	07 03 29.7
COL	E(P)	07 06 54.0
JAN 29		
H-08 20 42.0		
36.9S 072.5W		
h ABOUT 033KM		
TUC	EP	08 32 36.3
ALQ	EIP	08 32 40.0
EUR	EP	08 33 19.6
JAN 29		
SJG	EP	08 52 12.6
	IS	52 41.0
	IL	52 46.0
JAN 29		
H-09 35 25.7		
54.8N 161.7E		
h ABOUT 033KM		
COL	IP C	09 41 01.7
HHM	IP	09 44 16.6
	EPCP	45 36.1
BOZ	IP C	09 44 40.1
	EpP	44 50.5
EUR	IP	09 44 55.3
SLC	IP	09 45 04.4
BCN	IP C	09 45 17.5
	E	45 33.5
	E	45 40.0
	EP'P'	10 14 59.7
GCA	IP	09 45 24.5
BUT	I(P)	09 45 33.9
TUC	EP	09 45 51.3
	E	46 00.0
ALQ	IP	09 45 53.4
	EP'P'	10 14 52.3
JAN 29		
H-10 52 00.0		
20.3S 177.6W		
h ABOUT 447KM		
TUC	E(P)	11 03 37.0
COL	EP	11 04 00.3
JAN 29		
H-11 21 04.3		
2.9S 126.3E		
h ABOUT 051KM		
COL	E(P)	11 34 13.0
ALQ	IP'	11 39 57.3
JAN 29		
EUR	FP	12 11 17.2

Date and Station	Phase	(GCT)
		h m s
JAN 29		
BOZ	EP	17 18 53.3
JAN 29		
EUR	EP	17 20 35.2
	I	21 47.6
JAN 29		
BUT	EP	17 19 57.4
	IL	19 22.4
BOZ	EP	17 20 03.0
	E(S)	20 39.5
HHM	E(P)	17 20 17.0
	E	20 32.0
	EL	21 29.0
JAN 29		
BCN	IP	17 40 56.5
	IL	41 06.9
JAN 29		
SLC	FP	18 23 39.1
JAN 29		
BCN	EP	18 26 37.5
	I	26 39.5
JAN 29		
BCN	E(P)	18 27 38.1
	E	27 40.5
JAN 29		
H-20 06 02.4		
35.6N 073.6E		
h ABOUT 033KM		
COL	IP	20 17 41.5
JAN 29		
EUR	EP	20 18 01.3
JAN 29		
H-22 31 56.3		
51.3N 179.0W		
h ABOUT 033KM		
COL	EP	22 36 40.0
HHM	EP	22 39 36.7
BOZ	IP C	22 39 59.6
EUR	IP	22 40 07.6
BCN	EP	22 40 30.5
	E	40 43.0
ALQ	EP	22 41 13.7
CSC	EP	22 43 00.0
JAN 29		
COL	IP	23 28 22.5
JAN 29		
H-23 39 02.5		
34.8N 027.6E		
h ABOUT 036KM		
COL	E(P)	23 51 22.0

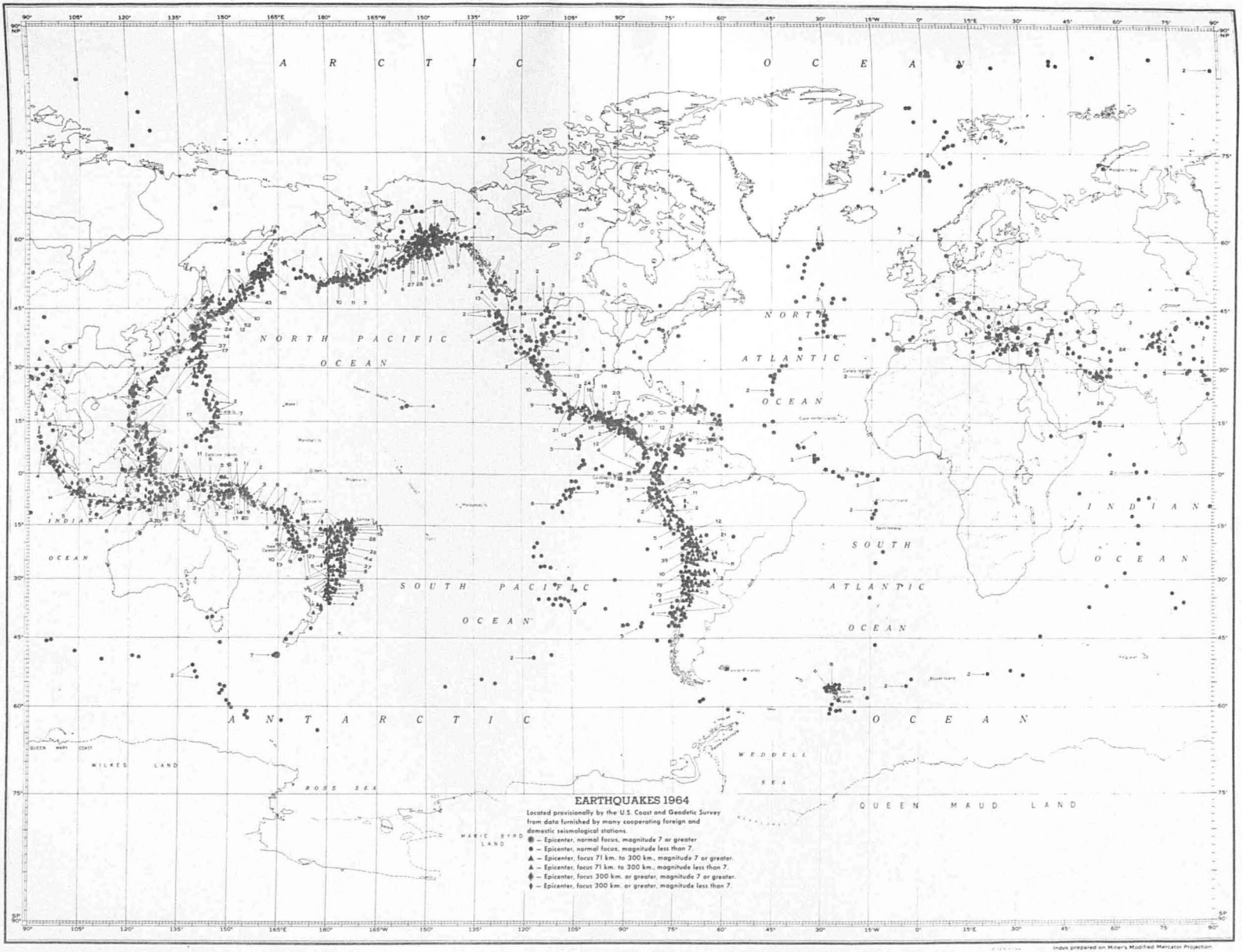
Date and Station	Phase (GCT)
	h m s
JAN 29	
SJG EP	23 44 53.0
JAN 30	
BCN IP D	00 36 18.4
JAN 30	
GUA EP	01 13 35.0
ES	13 51.0
JAN 30	
EUR EP	01 57 03.0
JAN 30	
TUC E(P)	02 16 46.8
JAN 30	
BHP IP D	02 46 52.0
IS	47 41.0
JAN 30	
SJG EP	02 50 11.0
I	50 14.5
JAN 30	
BOZ EP	03 04 06.3
JAN 30	
H-04 37 15.1	
51.6N 179.8W	
h ABOUT 033KM	
COL EP	04 41 59.0
HHM EP	04 44 56.8
BOZ IP	04 45 20.7
EUR IP	04 45 29.4
SLC EP	04 45 41.9
BCN EP	04 45 51.7
E	46 08.5
TUC EP	04 46 28.4
E	46 45.2
ALQ EIP	04 46 35.0
JAN 30	
BHP IP D	08 26 55.0
IS	27 19.0
JAN 30	
H-08 40 35.2	
32.6S 178.3W	
h ABOUT 055KM	
BCN EP	08 53 33.0
TUC EP	08 53 34.0
EUR EP	08 53 39.5
JAN 30	
TUC E(P)	09 56 11.3
JAN 30	
COL IP	11 06 14.2
JAN 30	
COL EP	11 44 40.0

Date and Station	Phase (GCT)
	h m s
JAN 30	
COL EP	12 08 43.0
JAN 30	
COL E(P)	12 32 48.0
JAN 30	
COL EP	12 39 29.0
JAN 30	
SJG IP C	13 04 50.4
I	05 20.2
IS	10 36.5
JAN 30	
EUR EP	13 47 24.5
JAN 30	
GCA IP	13 49 17.5
EL	49 34.5
BCN EP	13 49 28.7
EL	49 58.5
EUR EP	13 49 40.4
I	49 45.9
TUC E(P)	13 50 25.8
JAN 30	
TUC E(P)	15 29 33.4
BCN E(P)	15 30 40.5
JAN 30	
H-15 49 28.9	
50.0N 157.9E	
h ABOUT 033KM	
COL IP	15 55 50.2
BOZ EP	15 59 16.0
E	59 26.6
EUR IP	15 59 26.8
BCN EP	15 59 47.5
JAN 30	
COL IP	16 25 18.8
JAN 30	
H-17 42 12.3	
13.0S 169.4E	
h ABOUT 647KM	
GUA EP	17 48 22.0
COL IP C	17 53 35.8
E▸P	55 56.7
EUR IP	17 53 45.9
IPP	57 23.5
BCN EP	17 53 49.5
E	54 15.0
TUC EP	17 53 59.5
ALQ IP	17 54 18.0
E▸P	56 34.5
SJG IP'C	18 00 03.8
E▸P'	02 22.5

Date and Station	Phase (GCT)
	h m s
JAN 30	
H-18 06 21.2	
12.9S 169.5E	
h ABOUT 649KM	
COL IP D	18 17 44.0
E▸P	20 04.6
EPP	21 12.5
BCN IP D	18 17 58.4
EUR IP	18 17 59.1
TUC IP D	18 18 08.0
HHM EP	18 18 17.7
BOZ EP	18 18 22.5
ALQ IP	18 18 26.3
SJG IP'C	18 24 13.2
JAN 30	
EUR EP	18 11 42.5
JAN 30	
EUR EP	21 25 26.3
JAN 30	
EUR EP	22 20 15.0
JAN 31	
H-03 09 17.2	
60.3N 147.8W	
h ABOUT 033KM	
COL EP	03 10 27.3
HHM IP	03 14 19.6
I	14 30.6
BOZ E(P)	03 14 48.5
EUR EP	03 15 14.1
TUC EP	03 16 26.4
JAN 31	
GUA EP	04 45 21.8
ES	45 40.6
JAN 31	
EUR EP	06 44 38.6
JAN 31	
BCN EP	08 41 09.5
JAN 31	
EUR EP	10 59 38.3
JAN 31	
H-11 05 01.4	
60.2N 146.1W	
h ABOUT 033KM	
COL EP	11 06 14.0
HHM EP	11 09 52.5
TUC EP	11 12 04.1

Date and Station	Phase (GCT)
	h m s
JAN 31	
H-12 01 43.9	
47.1N 153.2E	
h ABOUT 033KM	
COL EP	12 08 43.0
EUR EP	12 12 08.7
BCN E(P)	12 12 27.5
JAN 31	
EUR EP	12 40 17.6
JAN 31	
H-12 57 29.1	
21.2S 067.8W	
h ABOUT 071KM	
SJG IP	13 04 50.4
ISCP	10 40.5
E&S	11 33.5
EL	13 23.0
ALQ IP	13 08 15.0
I	08 47.7
TUC IP D	13 08 17.5
GCA IP	13 08 43.0
BCN IP D	13 08 48.8
RCD IP C	13 08 50.5
I▸P	09 23.0
FGU IP	13 08 53.2
EUR IP	13 09 06.5
BOZ EP	13 09 18.5
E	09 52.2
HHM IP	13 09 35.4
JAN 31	
ALQ E(P)	13 36 52.3
JAN 31	
COL E(P)	14 00 03.0
JAN 31	
H-14 57 24.9	
21.1S 067.8W	
h ABOUT 071KM	
SJG EP	15 04 47.5
I	05 12.2
ALQ EIP	15 08 10.0
TUC EP	15 08 12.8
BCN EP	15 08 43.0
E▸P	09 11.5
EUR EP	15 09 01.8
BOZ EP	15 09 15.0
HHM EP	15 09 31.4
JAN 31	
BOZ EP	18 43 42.5

Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)	Date and Station	Phase (GCT)
	h m s		h m s		h m s		h m s
JAN 31							
H-23 36 13.4							
51.2N 178.6E							
h ABOUT 033KM							
COL EP	23 41 07.0						
HHM EP	23 44 06.6						
BOZ EP	23 44 28.0						
E	44 34.5						
EUR IP	23 44 35.3						
SLC EP	23 44 50.7						
BCN E(P)	23 44 59.2						
I	45 01.2						
TUC EP	23 45 34.5						
ALQ EP	23 45 41.2						
SJG EP	23 49 15.5						
JAN 31							
H-23 50 27.9							
51.1N 178.2E							
h ABOUT 033KM							
COL EP	23 55 23.0						
BOZ EP	23 58 44.2						
EUR IP	23 58 52.2						
TUC E(P)	23 59 51.0						
JAN 31							
EUR EP	23 53 10.1						


ARCTIC OCEAN
NORTH PACIFIC OCEAN
NORTH ATLANTIC OCEAN
INDIAN OCEAN
SOUTH PACIFIC OCEAN
SOUTH ATLANTIC OCEAN
INDIAN OCEAN
ANTARCTIC OCEAN
WILKES LAND
ROSS SEA
WEDDELL SEA
QUEEN MAUD LAND
MARIE BYRD LAND
EARTHQUAKES 1964
Located provisionally by the U.S. Coast and Geodetic Survey from data furnished by many cooperating foreign and domestic seismological stations.
— Epicenter, normal focus, magnitude 7 or greater
— Epicenter, normal focus, magnitude less than 7.
— Epicenter, focus 71 km. to 300 km., magnitude 7 or greater.
— Epicenter, focus 71 km. to 300 km., magnitude less than 7.
— Epicenter, focus 300 km. or greater, magnitude 7 or greater.
— Epicenter, focus 300 km. or greater, magnitude less than 7.
Index prepared on Miller's Modified Mercator Projection