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COAST & GEODETIC SURVEY

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U. S. DEPARTMENT OF COMMERCE

John T. Connor, Secretary

COAST AND GEODETIC SURVEY—WASHINGTON

H. Arnold Karo, Director

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National Oceanic and Atmospheric Administration

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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)
*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 (SJP)
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the data from the horizontal components of the seismographs at all stations except College, Honolulu, and Tucson will not be published for earthquakes occurring outside the United States.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.

Mag. (CGS) is m_b of Gutenberg and Richter computed from the P phase only. 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 the respective stations.

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

Date 1963	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth and Remarks
December	h m s	°	°	
1	04 26 12.8	56.1 N.	111.8 E.	Lake Baikal region. h about 33 km. Mag. 5.3 (CGS).
1	07 46 55*	3.9 S.	146.3 E.	Bismark Sea. h about 33 km. Mag. 5.6 (CGS).
1	08 50 42*	38.3 S.	73.9 W.	Near coast of central Chile. h about 55 km. Mag. 4.4 (CGS).
1	09 34 56*	7.4 N.	93.5 E.	Nicobar Islands. h about 27 km.
1	11 52 52.9	4.6 S.	154.8 E.	Solomon Islands region. h about 479 km. Mag. 4.6 (CGS).
1	13 33 55.6	45.3 N.	150.7 E.	Kurile Islands. h about 35 km. Mag. 4.3 (CGS).
1	15 50 31.1	45.9 N.	152.5 E.	Kurile Islands. h about 33 km. Mag. 4.1 (CGS).
1	15 57 12.0	44.5 N.	150.7 E.	Kurile Islands. h about 40 km. Mag. 4.4 (CGS).
1	16 06 14.8	21.2 S.	68.4 W.	Northern Chile. h about 61 km. Mag. 4.5 (CGS).
1	16 15 01*	28.9 N.	130.0 E.	Ryukyu Islands. h about 31 km. Mag. 4.8 (CGS).
1	16 44 12*	11.6 S.	167.0 E.	Santa Cruz Islands. h about 33 km. Mag. 4.5 (CGS).
1	17 34 58*	44.6 N.	150.7 E.	Kurile Islands. h about 40 km. Mag. 4.1 (CGS).
1	17 44 33*	44.9 N.	150.3 E.	Kurile Islands. h about 40 km. Mag. 4.4 (CGS).
1	19 06 14*	20.7 S.	68.0 W.	Chile-Bolivia border. h about 33 km. Mag. 4.3 (CGS).
2	00 24 03.1	15.3 S.	173.7 W.	Samoa Islands region. h about 348 km. Mag. 4.0 (CGS).
2	05 16 42*	54.9 N.	159.1 E.	Kamchatka. h about 110 km. Mag. 3.9 (CGS).
2	06 49 08.7	7.9 N.	16.5 E.	Austria. Slight damage at Wiener-Neustadt and Bratislava. h about 43 km. Mag. 4.5 (CGS).
2	06 52 20*	54.1 N.	134.2 W.	Queen Charlotte Islands. h about 33 km. Mag. 3.9 (CGS).
2	06 57 20*	54.0 N.	134.5 W.	Queen Charlotte Island region. h about 33 km. Mag. 3.6 (CGS).
2	09 46 37*	48.0 N.	145.2 E.	Sea of Okhotsk. h about 448 km. Mag. 4.1 (CGS).
2	11 45 38.5	48.1 N.	154.7 E.	Kurile Islands. h about 50 km. Mag. 4.5 (CGS).
2	13 37 25*	44.4 S.	15.6 W.	Tristan da Cunha Islands region. h about 33 km.
2	15 37 38*	1.4 N.	84.6 W.	Off coast of Ecuador. h about 33 km. Mag. 4.3 (CGS).
2	17 32 28*	24.8 S.	179.7 E.	Fiji Islands region. h about 550 km. Mag. 3.9 (CGS).
2	20 55 58.8	80.1 N.	0.6 W.	Svalbard region. h about 33 km. Mag. 5.1 (CGS).
2	23 52 38.3	51.5 N.	174.0 W.	Andreanof Islands, Aleutian Islands. h about 55 km. Mag. 4.9 (CGS).
3	03 44 39.2	45.4 N.	151.6 E.	Kurile Islands. h about 45 km. Mag. 4.3 (CGS).
3	04 17 58*	4.2 S.	102.9 E.	Near south coast of Sumatra. h about 50 km. Mag. 5.2 (CGS).
3	04 35 53.8	38.2 S.	69.0 W.	Neuquen Province, Argentina. h about 65 km. Mag. 4.1 (CGS).
3	05 09 22.0	46.2 N.	153.0 E.	Kurile Islands. h about 40 km. Mag. 5.1 (CGS).
3	07 13 37.5	6.2 S.	147.6 E.	North-East New Guinea. h about 97 km. Mag. 5.2 (CGS).

Date 1963	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth and Remarks
December	h m s	°	°	
3	07 21 10*	12.6 N.	144.3 E.	Mariana Islands. h about 45 km. Mag. 4.6 (CGS).
3	08 39 07.4	46.1 N.	152.9 E.	Kurile Islands. h about 45 km. Mag. 4.7 (CGS).
3	12 16 15.8	15.2 S.	173.2 W.	Tonga Islands. h about 33 km. Mag. 4.5 (CGS).
3	12 23 54*	18.1 N.	105.2 W.	Off coast of Colima,Mexico. h about 33 km. Mag. 4.0 (CGS).
3	13 27 31*	45.7 N.	153.3 E.	Kurile Islands. h about 45 km. Mag. 4.4 (CGS).
3	13 43 08*	11.3 S.	167.4 E.	Santa Cruz Islands region. h about 51 km. Mag. 4.3 (CGS).
3	14 33 38*	18.5 S.	177.8 W.	Fiji Islands region. h about 615 km. Mag. 3.9 (CGS).
3	17 12 01.6	2.2 N.	84.5 W.	Off coast of Ecuador. h about 56 km. Mag. 5.2 (CGS).
3	21 15 10.4	12.2 S.	166.0 E.	Santa Cruz Islands. h about 33 km. Mag. 5.1 (CGS).
3	21 30 05.7	12.0 S.	166.0 E.	Santa Cruz Islands. h about 40 km. Mag. 4.8 (CGS).
3	23 03 41.6	22.4 S.	69.3 W.	Northern Chile. h about 18 km. Mag. 6¼ (PAS), 6.1 (CGS).
4	00 13 22.4	12.1 S.	166.1 E.	Santa Cruz Islands. h about 39 km. Mag. 4.1 (CGS).
4	00 44 37.4	34.0 S.	179.3 W.	Kermadec Islands. h about 33 km. Mag. 4.8 (CGS).
4	01 27 34.1	46.2 N.	153.1 E.	Kurile Islands. h about 20 km. Mag. 5.2 (CGS).
4	01 35 24.5	45.3 N.	153.4 E.	Kurile Islands. h about 60 km. Mag. 4.1 (CGS).
4	02 30 18.1	31.3 N.	55.4 E.	Iran. h about 46 km.
4	02 43 30.4	45.9 N.	153.2 E.	Kurile Islands. h about 50 km. Mag. 4.8 (CGS).
4	02 53 42*	4.8 S.	130.1 E.	Ceram region. h about 33 km.
4	03 13 07.1	8.3 S.	83.1 W.	Off coast of Peru. h about 33 km. Mag. 4.6 (CGS).
4	03 21 08*	19.5 N.	108.1 W.	Revilla Gigedo Islands. h about 33 km. Mag. 3.8 (CGS).
4	04 18 46.3	19.5 N.	108.3 W.	Revilla Gigedo Islands region. h about 33 km. Mag. 4.8 (CGS).
4	04 21 22.6	7.1 S.	80.4 W.	Near coast of northern Peru. h about 45 km. Mag. 4.4 (CGS).
4	06 45 45*	45.9 N.	152.2 E.	Kurile Islands. h about 45 km. Mag. 3.9 (CGS).
4	08 24 17.1	46.1 N.	152.9 E.	Kurile Islands. h about 33 km. Mag. 5.3 (CGS).
4	09 34 50.4	17.9 S.	178.4 W.	Fiji Islands region. h about 574 km. Mag. 4.1 (CGS).
4	10 23 22*	25.7 N.	46.3 W.	North Atlantic Ocean. h about 33 km. Mag. 4.1 (CGS).
4	15 44 52.9	46.0 N.	153.2 E.	Kurile Islands region. h about 40 km. Mag. 4.9 (CGS).
4	15 49 47.1	46.6 N.	153.3 E.	Kurile Islands region. h about 33 km. Mag. 4.1 (CGS).
4	15 59 42.1	35.5 S.	102.8 W.	Easter Islands region. h about 33 km. Mag. 6 (PAL), 4.6 (CGS).
4	16 38 30.118			37°02'23" N., 116°01'46" W. Nevada Test Site. SARDINE. Shot elevation 957.68 meters (AEC).
4	21 32 34.9	43.6 N.	71.6 W.	New Hampshire. Slight damage at Laconia. h about 33 km. Mag. 3.7 (CGS).
5	04 07 42.8	17.3 N.	80.1 E.	Southern India. h about 33 km.

Date 1963	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth and Remarks
December	h m s	°	°	
5	04 23 22.2	35.7 S.	103.1 W.	Easter Island region. h about 33 km. Mag. 4.8 (CGS).
5	06 51 02*	37.2 N.	87.0 W.	Western Kentucky. h about 33 km.
5	11 29 49.4	7.4 N.	77.3 W.	Northern Colombia. Felt Balboa Heights, C.Z. h about 33 km. Mag. 4.7 (CGS).
5	13 04 27.4	12.2 N.	143.9 E.	Mariana Islands region. h about 33 km. Mag. 4.5 (CGS).
5	15 45 17.4	46.7 N.	151.0 E.	Kurile Islands. h about 65 km. Mag. 3.9 (CGS).
5	16 41 45*	60.5 N.	147.4 W.	Kenai Peninsula, Alaska. h about 33 km. Mag. 3.5 (CGS).
5	20 07 46.3	52.2 N.	171.1 E.	Near Islands, Aleutian Islands. h about 50 km. Mag. 4.6 (CGS).
5	22 40 50*	8.8 S.	131.1 E.	Arafura Sea. h about 163 km. Mag. 4.5 (CGS).
5	23 28 56.9	12.8 N.	143.5 E.	Mariana Islands. h about 94 km. Mag. 4.8 (CGS).
6	00 56 03*	18.0 S.	176.9 W.	Fiji Islands. h about 33 km. Mag. 4.1 (CGS).
6	01 56 42.8	5.8 S.	150.3 E.	New Britain. h about 61 km. Mag. 5.3 (CGS).
6	03 16 20.5	43.8 N.	134.9 E.	Sikhota Alin, U.S.S.R. h about 335 km. Mag. 3.8 (CGS).
6	04 12 49*	25.6 S.	68.6 W.	Northern Chile. h about 105 km. Mag. 4.4 (CGS).
6	05 17 10*	44.7 N.	150.2 E.	Kurile Islands region. h about 60 km. Mag. 4.1 (CGS).
6	06 51 58*	46.5 N.	152.6 E.	Kurile Islands. h about 50 km. Mag. 4.4 (CGS).
6	08 34 23.7	37.5 N.	118.5 W.	Mono County, California. Felt Bishop and Oakhurst. h about 15 km. Mag. 5-5¼ (PAS), 4.3 (CGS).
6	13 54 22*	36.4 N.	118.2 W.	Inyo County, California. Felt Keeler and Lone Pine. h about 15 km. Mag. 4.4 (CGS).
6	18 14 32.1	7.1 S.	80.5 W.	Near coast of Peru. h about 33 km. Mag. 4.4 (CGS).
6	22 07 29.8	45.5 N.	152.4 E.	Kurile Islands. h about 20 km. Mag. 4.3 (CGS).
7	04 07 52.8	22.1 S.	179.4 W.	Fiji Islands. h about 546 km. Mag. 5.5 (CGS).
7	04 46 52.2	18.8 S.	169.2 E.	New Hebrides Islands. h about 227 km. Mag. 4.7 (CGS).
7	05 07 43*	21.0 S.	178.6 W.	Fiji Islands. h about 560 km. Mag. 3.8 (CGS).
7	06 47 47.0	44.9 N.	149.0 E.	Kurile Islands. h about 33 km. Mag. 4.6 (CGS).
7	06 53 18*	45.1 N.	149.8 E.	Kurile Islands. h about 40 km. Mag. 4.3 (CGS).
7	09 06 41.3	30.9 N.	51.3 E.	Southern Iran. h about 64 km.
7	10 32 39.5	20.8 S.	174.0 E.	Fiji Islands region. h about 33 km. Mag. 4.6 (CGS).
7	11 25 54.1	45.8 N.	153.0 E.	Kurile Islands. h about 55 km. Mag. 4.1 (CGS).
7	15 17 57.3	12.3 N.	143.9 E.	Mariana Islands region. h about 33 km. Mag. 5.1 (CGS).
7	17 27 25.6	29.3 S.	178.5 W.	Kermadec Islands. h about 209 km. Mag. 4.9 (CGS).
8	07 53 15.1	46.4 N.	153.0 E.	Kurile Islands. h about 20 km. Mag. 5.2 (CGS).
8	10 49 19.2	11.9 S.	166.0 E.	Santa Cruz Islands. h about 44 km. Mag. 4.2 (CGS).
8	11 08 04.7	39.9 N.	58.7 E.	Turkmen S.S.R. h about 33 km. Mag. 4.5 (CGS).

Date 1963	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth and Remarks
December	h m s	°	°	
8	12 08 49*	35.5 N.	143.3 E.	Off east coast of Honshu, Japan. h about 33 km. Mag. 4.0 (CGS).
8	15 18 10*	36.5 N.	70.8 E.	Hindu Kush. h about 212 km.
8	20 31 45.7	45.3 N.	151.3 E.	Kurile Islands. h about 40 km. Mag. 4.4 (CGS).
8	20 39 38.9	45.3 N.	151.2 E.	Kurile Islands. h about 50 km. Mag. 4.3 (CGS).
9	01 45 18.2	43.6 N.	110.1 W.	Western Wyoming. h about 33 km. Mag. 4.0 (CGS).
9	02 24 08.5	45.6 N.	151.4 E.	Kurile Islands. h about 55 km. Mag. 4.3 (CGS).
9	05 38 29.5	54.9 N.	159.4 W.	Alaska Peninsula. h about 45 km. Mag. 5.1 (CGS).
9	05 39 25.7	44.9 N.	110.3 W.	Yellowstone National Park, Wyoming. h about 33 km. Mag. 3.7 (CGS).
9	08 33 57.6	44.0 N.	150.4 E.	Kurile Islands. h about 50 km. Mag. 4.7 (CGS).
9	10 53 39.4	21.1 S.	178.0 W.	Fiji Islands region. h about 435 km. Mag. 5.0 (CGS).
9	11 22 27.3	7.6 N.	126.8 E.	Near east coast of Mindanao, Philippine Islands. h about 139 km. Mag. 4.5 (CGS).
9	12 22 42.0	45.2 N.	151.2 E.	Kurile Islands. h about 50 km. Mag. 4.7 (CGS).
9	12 29 01.6	45.3 N.	151.2 E.	Kurile Islands. h about 45 km. Mag. 4.4 (CGS).
9	18 01 55*	36.1 N.	71.2 E.	Hindu Kush. h about 157 km. Mag. 5.0 (CGS).
9	19 17 49.6	25.2 S.	179.5 E.	Fiji Islands region. h about 533 km. Mag. 4.5 (CGS).
9	21 08 17*	43.7 N.	150.9 E.	Kurile Islands. h about 50 km. Mag. 4.3 (CGS).
9	21 09 56.1	11.4 S.	166.4 E.	Santa Cruz Islands. h about 167 km. Mag. 4.4 (CGS).
10	00 56 52*	34.8 N.	134.7 E.	Honshu, Japan. h about 249 km. Mag. 4.1 (CGS).
10	02 32 04.6	5.4 N.	82.5 W.	South of Panama. h about 35 km. Mag. 4.2 (CGS).
10	03 31 21.1	6.2 S.	128.1 E.	Banda Sea. Felt: Darwin. h about 366 km. Mag. 5.6 (CGS).
10	05 52 31.3	7.0 N.	73.1 W.	Colombia. h about 142 km. Mag. 3.9 (CGS).
10	06 30 54.8	58.1 S.	26.4 W.	Sandwich Islands. h about 110 km.
10	07 26 36.5	8.7 S.	79.8 W.	Near coast of Peru. h about 33 km. Mag. 4.5 (CGS).
10	09 28 29*	45.8 N.	151.7 E.	Kurile Islands. h about 50 km. Mag. 4.7 (CGS).
10	13 08 08.7	7.2 N.	125.1 E.	Near east coast of Mindanao, Philippine Islands. h about 33 km. Mag. 4.7 (CGS).
10	14 42 11.2	7.1 S.	155.5 E.	Solomon Islands. h about 88 km. Mag. 4.6 (CGS).
10	14 49 42.6	18.1 S.	68.5 W.	Western Bolivia. h about 79 km. Mag. 5.3 (CGS).
10	15 39 49.2	21.3 S.	174.4 W.	Loyalty Islands region. h about 33 km. Mag. 4.5 (CGS).
10	17 27 02.2	36.3 N.	137.1 E.	Near west coast of Honshu, Japan. h about 247 km. Mag. 4.1 (CGS).
10	20 03 13.0	17.1 N.	60.4 W.	Leeward Islands region. h about 33 km. Mag. 4.5 (CGS).
10	22 26 10*	34.1 N.	116.7 W.	San Bernardino County, California. h about 14 km. Mag. 4.8 (CGS).

Date 1963	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth and Remarks
December	h m s	°	°	
11	00 47 48.3	15.1 S.	173.6 W.	Tonga Islands region. Felt Apia. h about 33 km. Mag. 6 (PAS), 5.6 (CGS).
11	02 31 19.4	17.8 S.	178.6 W.	Fiji Islands region. h about 537 km. Mag. 4.9 (CGS).
11	03 54 39.5	7.2 S.	125.5 E.	Banda Sea. h about 145 km. Mag. 5.3 (CGS).
11	06 06 45*	19.6 N.	145.7 E.	Mariana Islands. h about 110 km. Mag. 4.5 (CGS).
11	09 12 15.5	45.3 N.	150.1 E.	Kurile Islands. h about 43 km. Mag. 4.5 (CGS).
11	09 22 36*	32.1 N.	130.2 E.	Near west coast of Kyushu, Japan. h about 170 km. Mag. 4.2 (CGS).
11	10 02 02*	8.0 N.	126.1 E.	Near east coast of Mindanoa, Philippine Islands. h about 33 km.
11	11 12 30.3	24.2 S.	179.3 E.	Fiji Islands. h about 540 km. Mag. 4.7 (CGS).
11	17 08 12.3	51.1 N.	179.3 W.	Andreanof Islands, Aleutian Islands. h about 32 km. Mag. 5.3 (CGS).
11	17 12 45.1	51.1 N.	179.4 W.	Andreanof Islands, Aleutian Islands. h about 33 km. Mag. 4.7 (CGS).
11	17 25 12.5	51.3 N.	179.5 W.	Andreanof Islands, Aleutian Islands. h about 33 km. Mag. 4.9 (CGS).
11	17 43 17.4	51.0 N.	179.3 W.	Andreanof Islands, Aleutian Islands. h about 33 km. Mag. 4.5 (CGS).
11	18 09 17.2	51.0 N.	179.7 W.	Andreanof Islands, Aleutian Islands. h about 33 km. Mag. 4.6 (CGS).
11	18 28 48.3	51.3 N.	179.2 W.	Andreanof Islands, Aleutian Islands. h about 33 km. Mag. 4.7 (CGS).
11	19 12 59.6	51.3 N.	179.5 W.	Andreanof Islands, Aleutian Islands. h about 54 km. Mag. 4.7 (CGS).
11	19 28 02.7	51.3 N.	179.4 W.	Andreanof Islands, Aleutian Islands. h about 33 km. Mag. 4.8 (CGS).
11	20 25 13.5	51.3 N.	179.4 W.	Andreanof Islands, Aleutian Islands. h about 33 km. Mag. 4.6 (CGS).
12	00 38 24.6	18.7 N.	107.0 W.	Off coast of Jalisco, Mexico. h about 33 km. Mag. 4.5 (CGS).
12	04 12 56*	8.3 S.	128.5 E.	Timor region. h about 179 km. Mag. 4.7 (CGS).
12	09 47 02*	22.8 S.	178.9 W.	Fiji Islands region. h about 33 km. Mag. 4.2 (CGS).
12	14 04 03.2	46.0 N.	149.9 E.	Kurile Islands. h about 33 km. Mag. 4.1 (CGS).
12	15 02 48*	4.5 N.	97.2 E.	Northern Sumatra. h about 33 km. Mag. 6.1 (CGS).
12	16 02 00.149			37°07'52"N., 116°02'38"W. Nevada Test Site. EAGLE. Shot elevation 1113.43 meters (AEC).
12	17 04 45*	11.1 S.	163.0 E.	Solomon Islands region. h about 33 km. Mag. 4.7 (CGS).
12	17 59 23*	32.4 S.	69.0 W.	San Juan Province, Argentina. h about 51 km. Mag. 4.4 (CGS).
12	20 54 34.8	5.7 N.	73.1 W.	Colombia. h about 140 km. Mag. 4.9 (CGS).
12	22 26 42.2	19.8 S.	174.1 W.	Tonga Islands. h about 33 km. Mag. 4.4 (CGS).

Date 1963	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth and Remarks
December	h m s	°	°	
12	23 24 36.6	46.3 N.	150.5 E.	Kurile Islands. h about 90 km. Mag. 5.2 (CGS).
13	02 47 14*	25.9 N.	126.1 E.	Ryukyu Islands. h about 109 km. Mag. 4.6 (CGS).
13	04 16 13.5	2.7 S.	78.4 W.	Ecuador. h about 109 km. Mag. 4.5 (CGS).
13	05 28 07.3	6.9 N.	77.1 W.	Northern Colombia. h about 33 km. Mag. 4.0 (CGS).
13	06 54 46.4	15.9 S.	168.2 E.	New Hebrides Islands. h about 33 km. Mag. 4.6 (CGS).
13	12 15 19.9	56.2 N.	159.0 W.	Alaska Peninsula. h about 149 km. Mag. 4.2 (CGS).
13	16 12 36*	14.5 S.	167.5 E.	New Hebrides Islands. h about 159 km. Mag. 3.5 (CGS).
13	19 57 27.4	14.5 N.	91.9 W.	Guatemala. h about 139 km. Mag. 4.0 (CGS).
13	21 10 21.0	3.5 S.	140.1 E.	Western New Guinea. h about 44 km. Mag. 5.8 (CGS).
13	22 20 19.4	44.3 N.	149.1 E.	Kurile Islands. h about 40 km. Mag. 4.4 (CGS).
14	00 05 39.8	2.3 S.	61.2 W.	Northern Brazil. h about 36 km. Mag. 4.8 (CGS).
14	01 45 13.8	17.9 S.	178.3 W.	Fiji Islands region. h about 550 km. Mag. 4.3 (CGS).
14	01 56 09.7	5.2 S.	151.7 E.	New Britain region. h about 54 km. Mag. 4.9 (CGS).
14	03 44 01.1	45.4 N.	150.1 E.	Kurile Islands. h about 33 km. Mag. 4.6 (CGS).
14	05 07 41.2	13.8 S.	169.9 E.	New Hebrides Islands. h about 614 km. Mag. 4.4 (CGS).
14	06 49 34.6	44.5 N.	151.7 E.	Kurile Islands. h about 45 km. Mag. 4.5 (CGS).
14	07 35 21.6	2.8 S.	140.8 E.	Near north coast of New Guinea. h about 33 km.
14	07 51 07.9	62.7 N.	149.5 W.	Central Alaska. h about 95 km. Mag. 5.1 (CGS).
14	10 26 47.0	5.0 N.	82.6 W.	South of Panama. h about 33 km. Mag. 4.5 (CGS).
14	11 42 50.1	5.4 S.	152.3 E.	New Britain. h about 43 km. Mag. 5.1 (CGS).
14	12 55 07.9	43.6 N.	110.3 W.	Western Wyoming. h about 33 km. Mag. 4.1 (CGS).
14	15 06 05*	7.1 S.	155.7 E.	Solomon Islands. h about 95 km. Mag. 4.5 (CGS).
14	17 34 01*	41.7 N.	139.4 E.	Near south coast of Hokkaido, Japan. h about 33 km. Mag. 3.9 (CGS).
14	18 46 37.7	44.5 N.	114.8 W.	Central Idaho. h about 33 km. Mag. 3.9 (CGS).
14	19 13 53.3	22.8 S.	70.5 W.	Near coast of northern Chile. h about 48 km. Mag. 4.5 (CGS).
14	23 02 48*	44.7 N.	149.1 E.	Kurile Islands. h about 33 km. Mag. 4.0 (CGS).
15	00 05 01*	18.0 S.	178.5 W.	Fiji Islands region. h about 638 km. Mag. 3.4 (CGS).
15	03 20 18*	44.3 N.	149.5 E.	Kurile Islands. h about 15 km. Mag. 4.0 (CGS).
15	03 39 49.4	52.6 N.	169.3 W.	Fox Islands, Aleutian Islands. h about 26 km. Mag. 3.9 (CGS).
15	05 37 13.8	18.1 S.	178.0 W.	Fiji Islands. h about 650 km. Mag. 3.6 (CGS).
15	07 02 36.5	28.6 N.	129.9 E.	Ryukyu Islands. h about 33 km. Mag. 4.8 (CGS).
15	07 33 20.2	34.3 N.	88.8 E.	Tibet. h about 33 km. Mag. 4.8 (CGS).

Date 1963	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth and Remarks
December	h m s	°	°	
15	10 22 53.7	44.1 N.	149.2 E.	Kurile Islands. h about 45 km. Mag. 4.1 (CGS).
15	11 36 23.6	39.2 N.	114.2 W.	Eastern Nevada. h about 33 km. Mag. 3.5 (CGS).
15	13 12 15.1	44.3 N.	150.3 E.	Kurile Islands. h about 45 km. Mag. 4.2 (CGS).
15	15 05 18.4	4.7 S.	102.9 E.	Near coast of Sumatra. h about 72 km. Mag. 5.0 (CGS).
15	15 44 22.3	51.0 N.	128.8 W.	Vancouver Island region. h about 33 km. Mag. 4.0 (CGS).
15	16 54 23.6	16.3 N.	97.7 W.	Oaxaca, Mexico. h about 35 km. Mag. 4.2 (CGS).
15	17 32 37.2	9.4 S.	124.1 E.	Timor region. h about 33 km. Mag. 4.5 (CGS).
15	19 24 12*	10.9 S.	164.2 E.	Solomon Islands region. h about 33 km. Mag. 4.2 (CGS).
15	19 34 45.5	4.8 S.	108.0 E.	Java Sea. Felt Djakarta. h about 650 km. Mag. 6.4 (CGS).
16	01 51 30.6	6.4 S.	105.4 E.	Near west coast of Sumatra. Slight damage at Labuan and Menes. Felt at Djakarta. Small seismic sea wave reported at Labuan. h about 64 km. Mag. 6.0 (CGS).
16	02 06 38.2	6.3 S.	105.5 E.	Near west coast of Sumatra. h about 33 km.
16	02 45 35.3	6.2 S.	105.4 E.	Near west coast of Sumatra. h about 55 km. Mag. 5.0 (CGS).
16	04 16 43.0	6.3 S.	105.5 E.	Near west ocast of Sumatra. h about 63 km. Mag. 5.8 (CGS).
16	05 08 14.8	5.0 S.	133.8 E.	Off coast of western New Guinea. h about 39 km. Mag. 5.0 (CGS).
16	05 17 14.4	17.1 N.	147.0 E.	Mariana Islands region. h about 48 km. Mag. 4.6 (CGS).
16	06 23 20.4	12.2 N.	88.4 W.	Off coast of El Salvador. h about 34 km. Mag. 4.3 (CGS).
16	06 27 23.8	17.4 S.	167.9 E.	New Hebrides Islands. h about 33 km.
16	10 49 52.5	13.9 N.	90.9 W.	Near coast of Guatemala. h about 59 km. Mag. 4.3 (CGS).
16	11 09 30.4	45.8 N.	142.6 E.	Southern Sakhalin. h about 258 km. Mag. 4.8 (CGS).
16	13 47 56.4	37.1 N.	20.9 E.	Ionian Sea. h about 15 km. Mag. 5.6 (CGS).
16	14 18 04.9	49.1 S.	127.1 E.	About 2,000 km. south of Australia. h about 33 km. Mag. 5.3 (CGS).
16	15 18 34.8	15.2 S.	173.7 W.	Samoa Islands. Felt: Faleolo Airport , Western Samoa. h about 33 km. Mag. 4.8 (CGS).
16	16 06 35.2	6.5 S.	105.3 E.	Sunda Strait. h about 46 km. Mag. 6.0 (CGS).
16	16 41 09.5	1.6 S.	78.0 W.	Ecuador. h about 170 km. Mag. 4.8 (CGS).
17	04 12 38.5	22.2 N.	144.4 E.	Volcano Islands region. h about 101 km. Mag. 4.4 (CGS).
17	08 33 23*	33.4 S.	178.6 W.	Kermadec Islands. h about 383 km. Mag. 4.0 (CGS).
17	10 19 10.0	6.5 S.	146.8 E.	Eastern New Guinea. h about 33 km. Mag. 4.8 (CGS).
17	10 58 12.0	36.7 N.	71.2 E.	Hindu Kush. h about 203 km. Mag. 4.2 (CGS).
17	13 52 30.5	45.6 N.	151.7 E.	Kurile Islands. h about 33 km. Mag. 3.9 (CGS).
17	23 22 11.2	52.9 N.	165.4 W.	Fox Islands, Aleutian Islands. h about 33 km. Mag. 4.9 (CGS).

Date 1963	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth and Remarks
December	h m s	°	°	
18	00 30 02.6	24.8 S.	176.6 W.	Tonga Islands. Felt: Tonga, Fiji and Kermadec Islands. h about 46 km. Mag. 7¼-7½ (PAS), 6.5 (CGS).
18	01 42 13.5	7.4 S.	76.0 W.	Central Peru. h about 33 km. Mag. 4.0 (CGS).
18	02 50 31.0	45.5 N.	151.3 E.	Kurile Islands. h about 33 km. Mag. 5.2 (CGS).
18	03 09 05.5	45.8 N.	151.7 E.	Kurile Islands. h about 45 km. Mag. 4.4 (CGS).
18	06 38 30*	18.7 S.	179.1 W.	Fiji Islands. h about 300 km. Mag. 4.8 (CGS).
18	06 40 05.9	41.7 N.	82.5 E.	Sinkiang Province, China. h about 33 km. Mag. 5.2 (CGS).
18	10 06 51.0	43.7 N.	126.9 W.	Off coast of Oregon. h about 33 km. Mag. 4.2 (CGS).
18	12 21 50.1	29.9 S.	177.2 W.	Kermadec Islands. h about 130 km. Mag. 3.8 (CGS).
18	18 13 15.8	37.2 N.	140.7 E.	Near east coast of Honshu, Japan. h about 59 km. Mag. 4.2 (CGS).
18	19 30 06.1	46.2 N.	151.5 E.	Kurile Islands. h about 33 km. Mag. 4.3 (CGS).
19	01 47 34*	39.0 S.	70.4 W.	Neuquen Province, Argentina. h about 33 km. Mag. 4.3 (CGS).
19	04 34 52*	33.1 S.	68.7 W.	Mendoza Province, Argentina. h about 45 km. Mag. 4.5 (CGS).
19	08 24 18*	24.9 S.	179.3 W.	South of Fiji Islands. h about 33 km. Mag. 4.4 (CGS).
19	14 54 44*	8.3 S.	80.8 W.	Off coast central Peru. h about 33 km. Mag. 4.3 (CGS).
19	17 04 07.8	9.7 S.	79.1 W.	Near coast of central Peru. h about 56 km. Mag. 5.1 (CGS).
19	18 43 38.3	35.6 N.	25.7 E.	Near north coast of Crete. h about 33 km. Mag. 4.8 (CGS).
19	20 33 50.1	35.2 S.	68.0 W.	Mendoza Province, Argentina. h about 32 km. Mag. 5.3 (CGS).
19	22 34 59.8	52.0 N.	170.8 W.	Fox Islands, Aleutian Islands. h about 33 km. Mag. 4.4 (CGS).
20	00 23 50.2	8.6 S.	160.4 E.	Solomon Islands. Felt. h about 69 km. Mag. 5.5 (CGS).
20	00 47 18.4	45.5 N.	151.8 E.	Kurile Islands. h about 40 km. Mag. 4.2 (CGS).
20	04 09 15.1	45.0 N.	147.4 E.	Kurile Islands. h about 50 km. Mag. 5.1 (CGS).
20	04 20 12*	6.9 S.	129.5 E.	Banda Sea. h about 58 km. Mag. 4.4 (CGS).
20	04 52 32.6	14.8 S.	173.4 W.	Samoa Islands region. h about 33 km. Mag. 4.9 (CGS).
20	08 57 17.8	7.0 S.	129.3 E.	Banda Sea. h about 103 km. Mag. 5.5 (CGS).
20	10 48 04.2	5.2 S.	80.8 W.	Near coast of northern Peru. h about 55 km. Mag. 5.2 (CGS).
20	13 00 50.3	44.9 N.	111.7 W.	Hebgen Lake Montana area. Felt. h about 33 km. Mag. 4.3 (CGS).
20	15 49 44.9	12.8 S.	66.0 E.	Indian Ocean. h about 33 km. Mag. 5.6 (CGS).
20	16 24 05.1	12.7 S.	66.3 E.	Indian Ocean. h about 33 km.
20	16 46 14.4	12.6 S.	66.4 E.	Indian Ocean. h about 33 km. Mag. 4.9 (CGS).
20	17 29 48.7	51.8 N.	177.7 W.	Andreanof Islands, Aleutian Islands. h about 33 km. Mag. 4.4 (CGS).

Date 1963	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth and Remarks
December	h m s	°	°	
20	21 11 52.8	20.3 S.	174.8 W.	Tonga Islands. h about 33 km. Mag. 4.1 (CGS).
20	21 48 46.7	31.6 N.	141.8 E.	South of Honshu, Japan. h about 33 km. Mag. 4.2 (CGS).
20	22 28 31*	13.2 N.	88.0 W.	Near coast of El Salvador. h about 64 km. Mag. 4.3 (CGS).
21	00 29 30*	7.3 S.	155.1 E.	Solomon Islands. h about 133 km. Mag. 4.3 (CGS).
21	03 02 23*	39.3 N.	114.3 W.	Eastern Nevada. Felt: Lehman Cave National Monument. h about 33 km. Mag. 3.3 (CGS).
21	04 13 12.7	18.0 S.	178.3 W.	Fiji Islands. h about 595 km. Mag. 4.3 (CGS).
21	04 50 39.7	33.8 N.	51.5 E.	Iran. Felt: Kashan. h about 51 km. Mag. 4.5 (CGS).
21	08 34 36.7	7.1 S.	129.2 E.	Banda Sea. h about 143 km. Mag. 4.4 (CGS).
21	12 34 22.7	21.2 S.	175.8 W.	Tonga Islands. h about 90 km. Mag. 5.1 (CGS).
21	13 09 09.6	16.1 N.	119.7 E.	Near west coast of Luzon, Philippine Islands. Felt: Manila. h about 49 km. Mag. 5.6 (CGS).
21	16 10 21*	45.7 N.	151.1 E.	Kurile Islands. h about 40 km. Mag. 4.2 (CGS).
21	16 23 17.9	32.5 N.	141.0 E.	South of Honshu, Japan. h about 33 km. Mag. 4.3 (CGS).
21	22 04 09*	23.4 S.	178.8 W.	Tonga Islands region. h about 112 km. Mag. 4.2 (CGS).
22	01 20 11*	14.3 N.	93.0 W.	Off coast of Chiapas, Mexico. h about 33 km. Mag. 4.4 (CGS).
22	01 31 35.7	27.9 S.	67.2 W.	Catamarca Province, Argentina. h about 168 km. Mag. 4.1 (CGS).
22	02 50 30*	44.4 N.	114.6 W.	Idaho. h about 33 km. Mag. 4.4 (CGS).
22	02 54 08*	48.5 N.	119.9 W.	Northern Washington. Felt: Okanogan County. h about 33 km. Mag. 4.3 (CGS).
22	03 56 16*	32.2 S.	69.2 W.	Mendoza Province, Argentina. h about 33 km. Mag. 4.3 (CGS).
22	05 44 39*	44.4 N.	114.5 W.	Central Idaho. h about 33 km. Mag. 4.1 (CGS).
22	05 56 29.5	35.1 S.	67.9 W.	Mendoza Province, Argentina. h about 33 km. Mag. 4.7 (CGS).
22	11 57 27.4	6.1 S.	146.9 E.	North-East New Guinea. Felt: Lae. h about 102 km. Mag. 5.4 (CGS).
22	13 35 38.2	34.9 S.	173.9 E.	North Island, New Zealand. Moderate damage at Auckland. h about 82 km.
22	16 43 13.4	39.3 N.	114.3 W.	Eastern Nevada. h about 33 km. Mag. 3.3 (CGS).
22	18 00 32*	44.6 N.	149.4 E.	Kurile Islands. h about 65 km. Mag. 4.4 (CGS).
22	20 10 30*	45.3 N.	151.2 E.	Kurile Islands. h about 45 km. Mag. 4.1 (CGS).
22	23 13 55.2	6.9 N.	73.0 W.	Colombia. Felt: Bogota, Manizales and Bucaramanga. h about 153 km. Mag. 5.2 (CGS).
23	00 15 02.0	44.3 N.	114.7 W.	Central Idaho. h about 33 km.
23	00 28 59.1	44.2 N.	114.4 W.	Central Idaho. h about 33 km. Mag. 3.8 (CGS).
23	13 42 23.3	43.8 N.	150.5 E.	Kurile Islands. h about 33 km. Mag. 4.7 (CGS).
23	13 52 34.8	5.3 S.	144.9 E.	North-East New Guinea. h about 65 km.

Date 1963	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth and Remarks
December	h m s	°	°	
23	16 24 46*	24.5 N.	121.8 E.	Near east coast of Taiwan. h about 130 km. Mag. 4.7 (CGS).
23	17 58 40.8	25.8 S.	177.8 W.	Tonga Islands region. h about 140 km. Mag. 4.7 (CGS).
23	18 39 46.6	44.1 N.	149.4 E.	Kurile Islands. h about 65 km. Mag. 4.8 (CGS).
23	22 34 22.1	12.3 N.	72.8 W.	Off north coast of Colombia. h about 33 km. Mag. 4.5 (CGS).
24	01 14 06*	46.4 N.	152.2 E.	Kurile Islands. h about 40 km. Mag. 4.3 (CGS).
24	01 51 00*	44.8 N.	111.5 W.	Southwestern Montana. h about 33 km.
24	02 17 09*	51.7 N.	177.1 W.	Andreanof Islands, Aleutian Islands. h about 33 km. Mag. 4.0 (CGS).
24	02 26 01.4	45.2 N.	151.4 E.	Kurile Islands. h about 50 km. Mag. 4.5 (CGS).
24	02 40 42.6	6.6 S.	85.1 W.	West of Peru. h about 33 km. Mag. 4.3 (CGS).
24	02 42 31*	45.1 N.	151.2 E.	Kurile Islands. h about 45 km. Mag. 4.3 (CGS).
24	03 00 57.3	45.5 N.	151.3 E.	Kurile Islands. h about 50 km. Mag. 4.9 (CGS).
24	03 27 23.9	45.5 N.	151.5 E.	Kurile Islands. h about 45 km. Mag. 4.8 (CGS).
24	09 07 59.0	5.0 S.	155.1 E.	Solomon Islands. h about 197 km. Mag. 4.5 (CGS).
24	10 38 23.3	55.9 N.	161.0 E.	Near east coast of Kamchatka. h about 110 km. Mag. 4.5 (CGS).
24	11 18 15.2	13.1 S.	166.7 E.	Santa Cruz Islands. h about 61 km. Mag. 5.5 (CGS).
24	12 55 46.4	36.2 N.	139.7 E.	Honshu, Japan. Felt: Tokyo. h about 70 km. Mag. 4.8 (CGS).
24	14 24 59.6	10.0 N.	126.1 E.	Siargao, Philippine Islands. h about 33 km. Mag. 5.7 (CGS).
24	14 51 08*	39.5 N.	110.2 W.	Coal mine rockburst in eastern Utah. h about 33 km. Mag. 4.1 (CGS).
24	17 54 19.7	44.8 N.	111.1 W.	Hebgen Lake, Montana. h about 33 km. Mag. 4.7 (CGS).
24	18 37 06*	6.9 S.	147.4 E.	Eastern New Guinea. h about 49 km.
24	19 01 11.7	6.6 S.	146.8 E.	North-East New Guinea. h about 53 km.
24	21 05 54.6	53.0 S.	159.5 E.	Macquarie Islands region. h about 33 km. Mag. 5.8 (CGS).
24	23 55 59.9	31.1 N.	142.5 E.	South of Honshu, Japan. h about 33 km. Mag. 4.2 (CGS).
25	00 44 01.9	52.3 N.	158.7 E.	Near east coast of Kamchatka. h about 80 km. Mag. 4.7 (CGS).
25	02 59 05*	7.0 S.	129.8 E.	Banda Sea. h about 212 km. Mag. 4.3 (CGS).
25	05 20 21.0	17.7 S.	178.6 W.	Fiji Islands region. h about 523 km. Mag. 3.4 (CGS).
25	05 59 39.5	47.2 N.	149.0 E.	Sea of Okhotsk. h about 290 km. Mag. 4.2 (CGS).
25	09 00 02.7	52.0 N.	172.1 W.	Andreanof Islands, Aleutian Islands. h about 45 km. Mag. 4.7 (CGS).
25	09 20 33.3	19.0 S.	173.2 W.	Tonga Islands. h about 33 km. Mag. 4.8 (CGS).

Date 1963	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth and Remarks
December	h m s	°	°	
25	16 14 08*	37.2 N.	102.0 E.	Tsinghai Province, China. h about 33 km. Mag. 4.6 (CGS).
25	20 04 10.2	44.2 N.	114.5 W.	Idaho. h about 33 km. Mag. 3.7 (CGS).
25	20 18 16.5	18.9 S.	173.4 W.	Tonga Islands. h about 33 km. Mag. 4.6 (CGS).
25	23 02 52*	19.0 N.	108.4 W.	Off coast of Jalisco, Mexico. h about 33 km. Mag. 3.7 (CGS).
25	23 55 14.5	39.2 N.	114.2 W.	Eastern Nevada. Felt: Lehman Cave National Monument. h about 20 km. Mag. 3.6 (CGS).
26	01 30 52*	5.1 S.	102.3 E.	Near south coast of Sumatra. h about 40 km. Mag. 5.6 (CGS).
26	03 58 50.1	39.1 N.	114.2 W.	Eastern Nevada. h about 20 km. Mag. 3.5 (CGS).
26	05 35 15*	5.1 S.	129.3 E.	Banda Sea. h about 175 km. Mag. 4.6 (CGS).
26	07 58 22.4	76.5 N.	22.4 E.	Svalbard region. h about 33 km. Mag. 5.1 (CGS).
26	08 09 09*	46.6 N.	152.2 E.	Kurile Islands. h about 50 km. Mag. 4.5 (CGS).
26	08 48 52.1	69.3 N.	16.5 W.	About 300 km. north of Iceland. h about 33 km. Mag. 4.5 (CGS).
26	10 46 26.9	43.6 N.	148.3 E.	Kurile Islands. h about 33 km. Mag. 4.4 (CGS).
26	14 40 06*	39.6 N.	110.1 W.	Central Utah. h about 33 km. Mag. 3.7 (CGS).
26	16 23 54.2	1.4 N	126.7 E.	Molucca Sea. h about 65 km. Mag. 4.8 (CGS).
26	20 50 21.2	36.4 N.	71.3 E.	Hindu Kush. h about 140 km. Mag. 4.9 (CGS).
26	21 11 11.9	51.2 N.	169.8 W.	Fox Islands, Aleutian Islands. h about 33 km. Mag. 4.3 (CGS).
26	23 21 33.2	86.1 N.	73.2 E.	Arctic Ocean. h about 33 km. Mag. 4.3 (CGS).
27	00 09 59.5	13.4 S.	72.7 W.	Southern Peru. h about 42 km. Mag. 4.1 (CGS).
27	02 36 21.6	45.7 N.	123.4 W.	Northwestern Oregon. Felt: Northwestern Oregon and southwestern Washington. h about 33 km. Mag. 4.5 (CGS).
27	03 57 10*	14.5 N.	90.7 W.	Guatemala. h about 33 km. Mag. 3.9 (CGS).
27	05 21 38*	15.1 S.	175.2 W.	Tonga Islands. h about 33 km. Mag. 4.5 (CGS).
27	05 33 08.0	6.4 S.	105.2 E.	Sunda Strait. h about 33 km. Mag. 4.9 (CGS).
27	09 45 47.6	8.3 S.	156.5 E.	Solomon Islands. h about 33 km. Mag. 4.5 (CGS).
27	10 01 15.2	5.8 S.	105.5 E.	Flores Sea. h about 52 km. Mag. 5.0 (CGS).
27	12 48 45.6	45.9 N.	151.0 E.	Kurile Islands. h about 33 km. Mag. 4.1 (CGS).
27	23 46 48*	6.7 N.	83.9 W.	South of Costa Rica. h about 33 km. Mag. 4.1 (CGS).
28	01 44 05.0	36.6 N.	70.2 E.	Hindu Kush. h about 205 km. Mag. 5.0 (CGS).
28	04 35 07.8	20.2 S.	177.9 W.	Fiji Islands region. h about 507 km. Mag. 4.4 (CGS).
28	05 45 20.2	5.1 S.	153.5 E.	New Ireland region. h about 70 km. Mag. 5.5 (CGS).
28	06 57 09.9	14.4 N.	92.3 W.	Near coast of Guatemala. h about 33 km. Mag. 4.5 (CGS).

Date 1963	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth and Remarks
December	h m s	°	°	
28	08 22 21*	44.9 N.	111.0 W.	Yellowstone National Park, Wyoming. h about 33 km. Mag. 4.3 (CGS).
28	09 03 52.9	32.7 S.	178.9 W.	Kermadec Islands. h about 33 km. Mag. 5½-5¾ (PAL), 5.8 (CGS).
28	12 44 51*	18.1 N.	106.3 W.	Off coast of Jalisco, Mexico. h about 33 km. Mag. 3.9 (CGS).
28	14 26 19.5	39.2 N.	114.3 W.	Eastern Nevada. Felt: Lehman Cave National Monument. h about 33 km. Mag. 3.5 (CGS).
28	15 19 58*	39.0 N.	114.0 W.	Eastern Nevada. h about 33 km.
28	15 50 14.1	39.1 N.	114.2 W.	Eastern Nevada. h about 33 km. Mag. 3.3 (CGS).
28	16 48 37*	18.4 N.	106.0 W.	Off coast of Jalisco, Mexico. h about 33 km. Mag. 4.3 (CGS).
28	17 58 33.1	60.4 S.	51.8 W.	South Shetland Islands region. h about 49 km. Mag. 5½-5¾ (PAL), 5.4 (CGS).
28	19 17 24*	18.5 N.	105.8 W.	Off coast of Jalisco, Mexico. h about 33 km. Mag. 3.9 (CGS).
28	22 16 54*	30.4 N.	41.4 W.	North Atlantic Ocean. h about 33 km. Mag. 4.3 (CGS).
28	23 20 26.6	62.9 N.	154.0 W.	Central Alaska. h about 33 km. Mag. 4.2 (CGS).
28	23 55 07.7	53.0 S.	118.4 W.	South Pacific Ocean. h about 33 km. Mag. 5.0 (CGS).
29	01 42 13.7	39.1 N.	114.2 W.	Eastern Nevada. h about 33 km. Mag. 3.4 (CGS).
29	02 31 39*	18.4 N.	106.1 W.	Off coast of Jalisco, Mexico. h about 33 km. Mag. 3.8 (CGS).
29	03 00 09.7	30.9 S.	177.8 W.	Kermadec Islands. h about 33 km. Mag. 4.4 (CGS).
29	03 41 28*	18.8 N.	106.2 W.	Off coast of Jalisco, Mexico. h about 33 km. Mag. 4.1 (CGS).
29	04 02 03.8	39.1 N	114.2 W.	Eastern Nevada. Felt: Lehman Cave National Monument. h about 33 km.
29	04 06 12.2	39.1 N.	114.2 W.	Eastern Nevada. Felt: Lehman Cave National Monument. h about 33 km. Mag. 3.4 (CGS).
29	04 15 04.5	39.1 N.	114.3 W.	Eastern Nevada. Felt: Lehman Cave National Monument. h about 33 km. Mag. 4.0 (CGS).
29	04 34 31*	19.1 N.	105.9 W.	Off coast of Jalisco, Mexico. h about 33 km. Mag. 3.8 (CGS).
29	06 22 48*	18.6 N.	105.8 W.	Off coast of Jalisco, Mexico. h about 33 km. Mag. 4.4 (CGS).
29	06 39 00*	38.8 N.	114.6 W.	Eastern Nevada. Felt: Lehman Cave National Monument. h about 33 km. Mag. 3.7 (CGS).
29	07 48 23.2	77.9 N.	21.5 E.	Barents Sea. h about 33 km. Mag. 4.2 (CGS).
29	08 36 58.8	20.6 S.	169.8 E.	New Hebrides Islands. h about 65 km. Mag. 4.8 (CGS).
29	11 52 42.1	6.1 S.	148.9 E.	New Britain region. h about 86 km. Mag. 4.5 (CGS).
29	12 03 19*	6.5 S.	106.7 E.	Western Java. h about 33 km. Mag. 4.9 (CGS).
29	12 52 02.2	4.1 S.	151.9 E.	New Britain. Felt: Rabaul. h about 119 km. Mag. 4.9 (CGS).

Date 1963	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth and Remarks
December	h m s	°	°	
29	15 00 24.0	20.7 S.	178.4 W.	Fiji Islands region. h about 534 km. Mag. 4.8 (CGS).
29	17 15 39.2	18.5 S.	69.7 W.	Northern Chile. h about 113 km. Mag. 5.5 (CGS).
30	00 58 13.3	3.4 S.	128.8 E.	Banda Sea. h about 82 km. Mag. 5.0 (CGS).
30	01 15 24.5	21.6 N.	144.5 E.	Mariana Islands. h about 120 km. Mag. 5.2 (CGS).
30	03 12 52*	19.9 S.	177.8 W.	Fiji Islands region. h about 522 km. Mag. 4.2 (CGS).
30	03 28 53.5	44.4 N.	110.3 W.	Yellowstone National Park, Wyoming. h about 33 km. Mag. 4.0 (CGS).
30	03 57 09.2	54.4 N.	160.6 E.	Near east coast of Kamchatka. h about 33 km. Mag. 4.1 (CGS).
30	06 23 35.2	29.3 S.	176.8 W.	Kermadec Islands. h about 34 km. Mag. 4.7 (CGS).
30	06 52 24*	19.2 S.	69.4 W.	Chile-Bolivia border. h about 194 km. Mag. 3.8 (CGS).
30	07 30 33.4	14.4 S.	167.4 E.	New Hebrides Islands. h about 178 km.
30	08 27 45.1	18.8 N.	105.8 W.	Off coast of Jalisco, Mexico. h about 33 km. Mag. 3.9 (CGS).
30	10 20 02.7	19.8 S.	169.9 E.	Loyalty Islands. h about 33 km.
30	13 29 25.3	45.5 N.	150.6 E.	Kurile Islands. h about 40 km. Mag. 5.7 (CGS).
30	13 46 45.9	40.1 S.	84.3 W.	Off coast of Southern Chile. h about 33 km. Mag. 5.0 (CGS).
30	13 47 08.2	38.8 N.	122.9 W.	Mendacino County, California. Felt: Clear Lake area. h about 33 km. Mag. 4.7 (CGS).
30	15 04 14.2	9.4 N.	126.0 E.	Near east coast of Mindanoa, Philippine Islands. h about 102 km. Mag. 5.3 (CGS).
30	16 20 48*	18.3 S.	70.1 W.	Northern Chile. h about 150 km. Mag. 4.1 (CGS).
30	20 32 19.5	42.4 N.	142.8 E.	Hokkaido, Japan. h about 50 km. Mag. 4.6 (CGS).
30	20 52 12*	18.1 S.	172.6 W.	Tonga Islands. h about 33 km. Mag. 4.4 (CGS).
30	22 06 07.1	6.9 N.	94.7 E.	Nicobar Islands. h about 64 km. Mag. 5.6 (CGS).
30	23 39 27.2	2.5 S.	78.4 W.	Eduador. h about 33 km. Mag. 4.3 (CGS).
31	01 31 40*	21.5 S.	176.9 W.	Tonga Islands. h about 390 km. Mag. 4.1 (CGS).
31	04 28 04*	45.0 N.	151.3 E.	Kurile Islands. h about 33 km. Mag. 4.2 (CGS).
31	10 17 50*	19.0 N.	105.8 W.	Off coast of Jalisco, Mexico. h about 33 km. Mag. 3.8 (CGS).
31	10 21 52.3	19.1 S.	178.1 W.	Fiji Islands. h about 609 km. Mag. 4.5 (CGS).
31	10 45 17.7	45.2 N.	151.5 E.	Kurile Islands. h about 45 km. Mag. 4.5 (CGS).
31	12 56 57.6	63.7 N.	146.0 W.	Central Alaska. h about 33 km. Mag. 3.8 (CGS).
31	14 22 07*	12.4 N.	87.9 W.	Near west coast of Nicaragua. h about 77 km. Mag. 4.3 (CGS).
31	15 18 08*	38.4 N.	45.3 E.	Northwestern Iran. h about 33 km. Mag. 4.5 (CGS).
31	17 37 32.1	56.5 S.	26.0 W.	Sandwich Islands. h about 30 km. Mag. 6½ (PAL), 6.3 (CGS).
31	18 58 44*	7.1 S.	129.3 E.	Banda Sea. h about 100 km. Mag. 4.6 (CGS).

Date 1963	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth and Remarks
December	h m s	°	°	
31	19 16 54.9	17.4 S.	174.2 W.	Tonga Islands. Felt: Apia, Western Samoa. h about 80 km. Mag. 5.4 (CGS).
31	21 41 43*	16.6 N.	99.0 W.	Guerrero, Mexico. h about 33 km. Mag. 4.3 (CGS).

Date and Station	Phase (GCT)
	h m s
DEC 01	
HON ET	00 05 28.0
KIP IT	00 05 30.0
DEC 01	
COL EP	00 12 52.0
DEC 01	
EUR EP	00 18 16.2
DEC 01	
COL IP	01 13 03.2
DEC 01	
GUA EP	01 28 55.1
DEC 01	
COL EP	02 03 12.0
DEC 01	
EUR EP	02 58 32.0
E	58 39.0
TUC E(P)	02 59 13.0
DEC 01	
EUR EP	03 02 32.0
DEC 01	
EUR EP	03 13 12.6
COL P	03 13 46.0
DEC 01	
EUR EP	03 13 13.0
E	13 24.1
DEC 01	
COL EP	04 12 08.0
DEC 01	
H-04 26 12.8	
56.1N 111.8E	
h ABOUT 033KM	
COL IP	04 34 26.3
HHM E(P)	04 37 27.0
I	37 41.0
EUR IP D	04 38 01.9
E	39 18.0
FGU IP	04 38 04.9
GCA EP	04 38 21.1
BCN EP	04 38 21.5
TUC IP	04 38 45.3
DEC 01	
COL IP	04 30 40.6
DEC 01	
BOZ IP	04 52 36.7
DEC 01	
EUR (P')	06 07 55.0
E	08 29.0
DEC 01	
EUR EP	06 10 40.6

Date and Station	Phase (GCT)
	h m s
DEC 01	
H-07 46 55.3	
3.9S 146.3E	
h ABOUT 033KM	
EUR E(P)	07 56 59.5
COL IP	07 59 39.1
DEC 01	
H-08 50 41.8	
38.3S 073.9W	
h ABOUT 055KM	
EUR EP	09 03 21.5
E	03 31.5
DEC 01	
H-09 34 55.7	
7.4N 093.5E	
h ABOUT 027KM	
EUR EP'	09 54 01.0
DEC 01	
TUC EP	10 37 14.0
DEC 01	
TUC E(P)	11 25 36.0
DEC 01	
TUC E(P)	11 39 46.0
DEC 01	
H-11 52 52.9	
04.6S 154.8E	
h ABOUT 479KM	
COL IP	12 04 16.2
EUR IP	12 05 12.5
E▸P	06 59.5
BCN EP	12 05 16.6
E▸P	07 08.0
DEC 01	
BCN EP	12 42 45.0
DEC 01	
H-13 33 55.6	
45.3N 150.7E	
h ABOUT 035KM	
COL IP	13 41 14.9
EUR EP	13 44 37.3
E▸P	44 47.8
DEC 01	
COL IP	14 21 06.1
DEC 01	
H-15 50 31.1	
45.9N 152.5E	
h ABOUT 033KM	
COL IP	15 57 39.9
EUR EP	16 01 04.9
ALQ E(P)	16 02 00.0

Date and Station	Phase (GCT)
	h m s
DEC 01	
H-15 57 12.0	
44.5N 150.7E	
h ABOUT 040KM	
COL IP	16 04 35.3
BOZ EP	16 07 47.3
EUR EP	16 07 55.7
E▸P	08 07.9
BCN EP	16 08 14.6
E▸P	08 26.1
DEC 01	
H-16 06 14.8	
21.2S 068.4W	
h ABOUT 061KM	
SJP E(P)	16 13 44.0
EUR EP	16 17 52.0
HHM EP	16 18 21.8
DEC 01	
H-16 15 00.9	
28.9N 130.0E	
h ABOUT 031KM	
COL IP	16 25 13.7
HHM EP	16 27 31.2
BUT EP	16 27 40.8
BOZ EP	16 27 46.0
EUR EP	16 27 49.8
I	28 01.4
FGU I(P)	16 28 06.0
DEC 01	
ALQ E(P)	17 07 13.0
DEC 01	
H-17 34 58.3	
44.6N 150.7E	
h ABOUT 040KM	
COL EP	17 42 21.0
EUR EP	17 45 41.1
DEC 01	
COL EP	17 36 18.0
DEC 01	
COL EP	17 39 16.0
DEC 01	
H-17 44 33.3	
44.9N 150.3E	
h ABOUT 040KM	
COL IP	17 51 55.8
BOZ EP	17 55 07.9
I▸P	55 19.2
EUR IP	17 55 16.7
I▸P	55 29.4

Date and Station	Phase (GCT)
	h m s
BCN EP	17 55 34.8
E▸P	55 47.9
SJP E(P)	17 58 51.5
DEC 01	
EUR IP	17 56 32.5
ES	56 51.4
DEC 01	
ALQ E(P)	18 11 21.0
DEC 01	
TUC E(P)	18 45 47.0
DEC 01	
EUR IP	19 16 23.5
ES	16 46.7
DEC 01	
TUC E(P)	20 54 55.0
DEC 01	
COL EP	21 05 12.0
DEC 01	
FGU EP	22 12 14.6
DEC 01	
ALQ E(P)	22 36 51.0
DEC 01	
EUR EP	23 21 49.9
DEC 01	
EUR EP	23 36 44.3
DEC 01	
COL EP	23 48 08.0
DEC 02	
H-00 24 03.1	
15.3S 173.7W	
h ABOUT 348KM	
BCN EP	00 35 11.7
TUC E(P)	00 35 17.0
EUR IP	00 35 20.8
GCA E(P)	00 35 24.6
ALQ E(P)	00 35 41.0
FGU E(P)	00 35 42.0
DEC 02	
COL IP	01 35 50.5
BUT E(P)	01 37 54.0
DEC 02	
EUR IP	04 48 00.0
DEC 02	
H-05 16 42.2	
54.9N 159.1E	
h ABOUT 110KM	
EUR EP	05 26 13.4
E▸P	26 19.8
EPCP	26 50.5

Date and Station	Phase (GCT)
	h m s
DEC 02	
EUR E(P)	05 24 18.2
DEC 02	
ALQ E(P)	05 48 54.0
DEC 02	
TUC E(P)	06 25 16.0
DEC 02	
H-06 49 08.7	
47.9N 016.5E	
h ABOUT 043KM	
EUR EP	07 01 37.0
I	02 05.7
DEC 02	
H-06 52 19.6	
54.1N 134.2W	
h ABOUT 033KM	
SIT EP	06 53 04.0
E(S)	53 43.3
EL	53 51.5
COL EP	06 55 21.0
HHM E(P)	06 55 33.0
E(L)	59 19.0
EUR EP	06 56 40.2
FGU EP	06 57 01.2
TUC E(P)	06 58 03.0
DEC 02	
H-06 57 19.9	
54.0N 134.5W	
h ABOUT 033KM	
SIT EP	06 58 06.0
I(S)	58 45.0
IL	58 54.0
COL EP	06 59 30.0
BUT E(P)	07 00 29.0
DEC 02	
H-09 46 37.0	
48.0N 145.2E	
h ABOUT 448KM	
COL IP	09 53 20.6
EUR IP	09 56 45.8
BCN EP	09 57 05.0
TUC EP	09 57 33.0
ALQ E(P)	09 57 36.0
DEC 02	
COL EP	10 16 42.0
DEC 02	
EUR EP	11 09 34.9
ES	10 12.7

Date and Station	Phase (GCT)
	h m s
DEC 02	
TUC EP	11 36 49.0
E	38 42.0
ALQ E(P)	11 37 49.0
DEC 02	
EUR EP	11 43 35.9
I	43 49.8
COL EP	11 47 13.0
DEC 02	
H-11 45 38.5	
48.1N 154.7E	
h ABOUT 050KM	
COL EP	11 52 21.0
EUR EP	11 55 53.1
I▸P	56 06.1
E(PCP)	56 27.5
FGU E(P)	11 56 15.3
BCN E(P)	11 56 18.0
TUC E(P)	11 56 46.0
ALQ E(P)	11 56 47.0
DEC 02	
H-13 37 25.1	
44.4S 015.6W	
h ABOUT 033KM	
EUR EP'	13 56 18.8
EPP	57 53.7
HHM EP'	13 56 23.1
COL IP'	13 57 02.4
DEC 02	
EUR EP	13 43 01.4
DEC 02	
EUR IP	14 17 31.4
TUC E(P)	14 17 33.0
DEC 02	
H-15 37 37.5	
01.4N 084.6W	
h ABOUT 033KM	
TUC E(P)	15 45 05.0
HHM E(P)	15 45 57.0
EUR EP	15 46 15.1
DEC 02	
COL EP	15 41 53.0
DEC 02	
TUC E(P)	16 17 22.0
DEC 02	
H-17 32 28.4	
24.8S 179.7E	
h ABOUT 550KM	
TUC EP	17 44 18.0

Date and Station	Phase (GCT)
	h m s
EUR EP	17 44 19.0
DEC 02	
COL P	17 35 04.0
FGU EP	17 40 41.9
DEC 02	
COL EP	18 00 38.0
EUR E(P)	18 01 02.3
DEC 02	
EUR E(P)	18 02 30.2
DEC 02	
EUR EP	18 43 46.5
DEC 02	
COL EP	19 20 07.0
DEC 02	
EUR E(P)	19 33 07.1
DEC 02	
GCA E(P)	19 58 32.1
DEC 02	
COL EP	20 10 05.0
EUR EP	20 13 30.1
DEC 02	
COL IP	20 12 58.9
DEC 02	
TUC E(P)	20 32 09.0
DEC 02	
H-20 55 58.8	
80.1N 000.6W	
h ABOUT 033KM	
COL IP	21 02 42.0
HHM EP	21 04 24.8
BUT EP	21 04 41.5
FGU EP	21 05 14.8
EUR IP	21 05 32.3
CSC E(P)	21 05 37.0
GCA EP	21 05 45.1
BCN EP	21 05 52.8
TUC EP	21 06 16.3
DEC 02	
ALQ E(P)	20 58 02.0
I	58 10.0
E(S)	58 49.0
DEC 02	
GUA EP	21 52 02.8
DEC 02	
ALQ IP	22 05 52.5

Date and Station	Phase (GCT)
	h m s
DEC 02	
GCA E(P)	22 07 45.6
E(S)	08 18.1
DEC 02	
TUC IP	22 56 07.3
DEC 02	
FGU EP	22 58 41.2
ES	59 01.2
DEC 02	
EUR EP	23 15 44.3
ES	16 07.8
DEC 02	
GUA IP	23 48 34.0
IS	48 46.0
DEC 02	
H-23 52 38.3	
51.5N 174.0W	
h ABOUT 055KM	
COL EP	23 56 55.0
HHM EP	23 59 52.0
I(▸P)	00 00 06.0
EUR IP	24 00 21.9
I▸P	00 34.4
E(PP)	02 27.8
BCN EP	24 00 44.1
FGU EP	24 00 45.5
I▸P	00 59.5
GCA EP	24 00 54.1
TUC EP	24 01 22.5
ALQ EP	24 01 30.0
I▸P	01 43.0
CSC EP	24 03 21.2
I(▸P)	03 35.5
DEC 03	
EUR E(P)	00 06 07.4
DEC 03	
BOZ EP	01 44 32.0
ES	45 02.0
EUR EP	01 45 04.8
DEC 03	
TUC E(P)	02 24 21.0
E	25 07.0
COL IP	02 27 17.8
DEC 03	
GUA EP	02 34 02.0
ES	34 32.0
DEC 03	
EUR EP	02 46 28.3
DEC 03	
EUR EP	02 54 57.0

Date and Station	Phase (GCT)
	h m s
DEC 03	
H-03 44 39.2	
45.4N 151.6E	
h ABOUT 045KM	
COL IP	03 51 53.2
BOZ EP	03 55 06.2
EUR IP	03 55 15.1
I▸P	55 27.6
DEC 03	
H-04 17 58.2	
4.2S 102.9E	
h ABOUT 050KM	
EUR EP'	04 37 06.3
FGU EP'	04 37 11.5
DEC 03	
COL EP	04 27 05.0
DEC 03	
H-04 35 53.8	
38.2S 069.0W	
h ABOUT 065KM	
EUR EP	04 48 40.8
E(▸P)	48 57.6
E(sP)	49 06.8
DEC 03	
EUR EP	04 40 23.5
FGU EP	04 40 34.5
TUC E(P)	04 40 41.0
DEC 03	
COL EP	04 53 40.0
DEC 03	
H-05 09 22.0	
46.2N 153.0E	
h ABOUT 040KM	
COL IP	05 16 26.6
HHM EP	05 19 21.5
BUT E(P)	05 19 30.6
BOZ IP	05 19 41.6
EUR IP	05 19 50.9
E(▸P)	20 02.9
FGU EP	05 20 09.5
BCN EP	05 20 10.9
I▸P	20 22.4
GCA EP	05 20 18.3
TUC EP	05 20 40.5
DEC 03	
BOZ IP	06 18 48.1
IS	19 08.5
FGU E(P)	06 19 31.9

Date and Station	Phase (GCT)
	h m s
ALQ EP	06 20 45.0
DEC 03	
H-07 13 37.5	
6.2S 147.6E	
h ABOUT 097KM	
COL E(P)	07 27 07.0
DEC 03	
H-07 21 09.8	
12.6N 144.3E	
h ABOUT 045KM	
GUA IP	07 21 29.5
EL	21 48.0
COL EP	07 32 15.0
EUR IP	07 34 04.3
I▸P	34 15.2
BOZ EP	07 34 09.9
FGU E(P)	07 34 23.4
DEC 03	
BCN EP	08 16 50.7
DEC 03	
EUR EP	08 18 42.4
DEC 03	
H-08 39 07.4	
46.1N 152.9E	
h ABOUT 045KM	
COL IP	08 46 12.1
BOZ IP	08 49 27.0
I▸P	49 38.5
EUR IP	08 49 36.4
E▸P	49 47.5
EsP	49 59.3
FGU EP	08 49 54.6
BCN EP	08 49 55.2
I▸P	50 07.7
EsP	50 17.8
GCA E(P)	08 50 02.8
TUC E(P)	08 50 37.5
DEC 03	
ALQ EP	09 50 30.5
I	50 42.0
DEC 03	
GUA IP	10 11 56.3
IS	12 10.0
DEC 03	
BOZ EP	11 20 47.0
DEC 03	
ALQ EP	11 33 38.0
BCN IP	11 34 43.8
EL	35 49.3
EUR EP	11 35 25.7

Date and Station	Phase (GCT)
	h m s
DEC 03	
H-12 16 15.8	
15.2S 173.2W	
h ABOUT 033KM	
EUR EP	12 28 02.5
TUC EP	12 28 02.6
EUR EP	12 28 02.8
GCA E(P)	12 28 12.9
COL EP	12 28 34.0
BOZ EP	12 28 35.0
DEC 03	
H-12 23 54.1	
18.1N 105.2W	
h ABOUT 033KM	
TUC E(P)	12 27 26.0
E	28 03.0
BCN EP	12 28 27.3
BOZ E(P)	12 29 44.0
DEC 03	
H-13 27 30.9	
45.7N 153.3E	
h ABOUT 045KM	
COL EP	13 34 36.0
EUR IP	13 37 59.8
I▸P	38 12.4
DEC 03	
ALQ EP	13 27 51.0
DEC 03	
H-13 43 07.5	
11.3S 167.4E	
h ABOUT 051KM	
COL EP	13 55 28.0
DEC 03	
H-14 33 38.1	
18.5S 177.8W	
h ABOUT 615KM	
EUR E(P)	14 44 42.5
COL IP	14 45 16.5
DEC 03	
ALQ E(P)	16 02 16.0
DEC 03	
COL IP	16 10 04.0
DEC 03	
H-17 12 01.6	
02.2N 084.5W	
h ABOUT 056KM	
BHP IP	17 14 03.0
SJP E(P)	17 17 15.0
TUC EP	17 19 23.5

Date and Station	Phase (GCT)
	h m s
GCA EP	17 19 56.5
BCN EP	17 20 03.8
FGU IP	17 20 11.0
EUR IP	17 20 29.5
COL EP	17 23 51.0
DEC 03	
COL IP	17 57 06.5
DEC 03	
COL EP	18 35 26.0
DEC 03	
COL EP	18 37 44.0
DEC 03	
TUC E(P)	19 55 52.0
EUR E(P)	19 56 12.0
BOZ EP	19 56 18.0
COL EP	19 56 23.0
DEC 03	
COL IP	20 44 26.2
DEC 03	
H-21 15 10.4	
12.2S 166.0E	
h ABOUT 032KM	
HON E(P)	21 23 47.0
ES	31 14.0
E	35 05.0
EL	37 24.0
COL EP	21 27 40.0
BCN I(P)	21 28 00.5
EUR EP	21 28 02.3
BOZ E(P)	21 28 23.0
KIP ES	21 31 14.0
E	35 27.0
EL	37 30.0
DEC 03	
H-21 30 05.7	
12.0S 166.0E	
h ABOUT 040KM	
COL EP	21 42 34.0
EUR EP	21 42 56.4
DEC 03	
EUR EP	22 21 22.7
ES	21 31.7
DEC 03	
TUC E(P)	22 25 06.0
DEC 03	
TUC IP	22 59 27.8
DEC 03	
HHM EP	23 02 14.0

Date and Station	Phase	(GCT) h m s
DEC 03		
H-23 03 41.6		
22.4S 069.3W		
h ABOUT 018KM		
BHP	IP	23 10 17.5
	IS	15 43.0
SJP	EP	23 11 21.2
	IPP	12 25.2
	IPCP	13 02.0
	ES	17 25.0
	EL	20 47.0
CSC	IP	23 13 31.0
WAS	IP	23 14 00.0
	I	14 12.0
ALQ	IP	23 14 35.0
	EPCP	15 28.5
	E	15 52.0
TUC	IP	23 14 36.0
	E	16 29.0
BCN	EP	23 15 08.4
	EPP	17 41.4
	EPPP	19 08.0
FGU	IP	23 15 13.9
EUR	IP	23 15 26.2
	EPP	15 39.4
	EPPP	19 45.2
BOZ	IP	23 15 40.0
BUT	IP	23 15 43.9
DEC 03		
EUR	E(P)	23 23 46.2
	E	24 07.7
DEC 03		
FGU	IP	23 25 06.7
	IS	25 39.7
DEC 03		
EUR	EP	23 27 24.7
DEC 03		
HHM	IP	23 30 56.8
DEC 03		
EUR	E(P)	23 42 55.4
TUC	E(P)	23 43 04.0
ALQ	E(P	23 43 08.0
DEC 04		
H-00 13 22.4		
12.1S 166.1E		
h ABOUT 039KM		
COL	E(P)	00 26 01.0
EUR	E(P)	00 26 12.3
DEC 04		

Date and Station	Phase	(GCT) h m s
DEC 04		
HHM	EP	00 37 35.0
DEC 04		
H-00 44 37.4		
34.0S 179.3W		
h ABOUT 033KM		
TUC	EP	00 57 45.0
EUR	EP	00 57 51.2
COL	EP	00 58 29.0
DEC 04		
H-01 27 34.1		
46.2N 153.1E		
h ABOUT 020KM		
COL	IP	01 34 41.8
BOZ	IP	01 37 55.0
EUR	IP	01 38 04.7
	I▸P	38 09.8
FGU	EP	01 38 23.9
BCN	EP	01 38 24.0
GCA	EP	01 38 32.0
TUC	EP	01 38 54.0
ALQ	E(P	01 39 00.0
KIP	ES	01 43 02.0
	EL	48 47.0
HON	ES	01 43 03.0
	E	46 23.0
	EL	48 43.0
DEC 04		
COL	IP	01 34 06.9
EUR	EP	01 38 34.7
	E	38 55.9
DEC 04		
H-01 35 24.5		
45.3N 153.4E		
h ABOUT 060KM		
COL	EP	01 42 31.0
BOZ	EP	01 45 42.0
EUR	EP	01 45 52.3
	I(▸P)	46 04.7
DEC 04		
H-02 30 18.1		
31.3N 055.4E		
h ABOUT 046KM		
COL	EP	02 42 37.0
DEC 04		
H-02 43 30.4		
45.9N 153.2E		

Date and Station	Phase	(GCT) h m s
HHM	EP	02 53 29.0
BUT	EP	02 53 44.7
BOZ	IP	02 53 49.7
EUR	IP	02 53 58.3
	I	54 23.1
BCN	EP	02 54 17.1
	E▸P	54 31.0
	E(▸P)	54 41.5
FGU	EP	02 54 17.6
GCA	EP	02 54 25.7
TUC	EP	02 54 47.0
ALQ	E(P	02 54 53.0
DEC 04		
ALQ	EP	03 06 48.0
BOZ	EP	03 08 09.0
DEC 04		
H-03 13 07.1		
08.3S 083.1W		
h ABOUT 033KM		
SJP	E(P)	03 19 24.0
TUC	EP	03 21 48.0
BCN	EP	03 22 29.2
FGU	IP	03 22 35.6
EUR	EP	03 22 49.2
DEC 04		
H-03 21 08.3		
19.5N 108.1W		
h ABOUT 033KM		
BCN	EP	03 25 10.6
EUR	EP	03 25 50.0
	EPP	26 10.9
DEC 04		
EUR	EP	03 59 10.3
DEC 04		
BCN	EP	04 03 06.1
	EL	03 33.0
DEC 04		
H-04 18 46.3		
19.5N 108.3W		
h ABOUT 033KM		
TUC	IP D	04 21 50.7
	E(L)	30 06.0
ALQ	EP	04 22 25.0
BCN	IP	04 22 49.1
	I	22 57.6

Date and Station	Phase	(GCT) h m s
EUR	IP	04 23 29.3
	I	24 32.3
	E	24 46.5
FGU	IP	04 23 33.3
BOZ	EP	04 24 19.0
HHM	EP	04 24 45.0
SJP	I(P)	04 26 22.0
	I(▸P)	26 37.5
COL	IP	04 27 56.2
DEC 04		
H-04 21 22.6		
07.1S 080.4W		
h ABOUT 045KM		
SJP	I(P)	04 27 22.0
	I▸P	27 37.5
TUC	EP	04 30 06.0
FGU	EP	04 30 49.8
EUR	EP	04 31 05.7
BOZ	EP	04 31 23.0
DEC 04		
COL	EP	04 25 42.0
DEC 04		
COL	IP	05 37 23.1
EUR	E(P)	05 40 37.6
	E	40 49.8
DEC 04		
EUR	EP	06 21 12.2
DEC 04		
COL	EP	06 31 53.0
EUR	E(P)	06 36 11.3
DEC 04		
H-06 45 44.7		
45.9N 152.2E		
h ABOUT 045KM		
COL	EP	06 52 53.0
EUR	EP	06 56 16.5
DEC 04		
H-08 24 17.1		
46.1N 152.9E		
h ABOUT 033KM		
COL	IP	08 31 22.9
HHM	EP	08 34 17.0
BOZ	E(P)	08 34 32.0
	I	34 38.0
BUT	EP	08 34 32.7

Date and Station	Phase (GCT)
	h m s
FGU E(P)	08 35 05.7
BCN EP	08 35 07.9
E>P	35 17.3
GCA E(P)	08 35 13.0
TUC EP	08 35 37.0
ALQ EP	08 35 41.0
HON E(S)	08 39 48.0
EL	45 25.0
DEC 04	
H-09 34 50.4	
17.9S 178.4W	
h ABOUT 574KM	
EUR EP	09 46 10.4
TUC EP	09 46 12.0
COL IP	09 46 29.4
DEC 04	
COL IP	09 43 11.5
DEC 04	
COL IP	11 08 37.2
DEC 04	
EUR EP	11 19 31.8
I	19 39.8
DEC 04	
COL EP	13 42 09.0
DEC 04	
BOZ EP	13 58 45.0
DEC 04	
H-15 44 52.9	
46.0N 153.2E	
h ABOUT 040KM	
COL IP	15 51 59.1
HHM EP	15 54 52.0
BOZ EP	15 55 13.0
EUR IP	15 55 21.4
BCN EP	15 55 41.3
DEC 04	
H-15 49 47.1	
46.6N 153.3E	
h ABOUT 033KM	
COL EP	15 56 49.0
EUR EP	16 00 13.1
DEC 04	
BHP EP	15 53 33.0
DEC 04	
H-15 59 42.1	
35.5S 102.8W	
h ABOUT 033KM	
EUR I(P)	16 10 21.8

Date and Station	Phase (GCT)
	h m s
TUC IP	16 10 38.0
ALQ EP	16 10 52.0
BCN EP	16 11 05.3
CSC E(P)	16 11 06.0
E	11 17.0
GCA E(P)	16 11 10.5
EUR EP	16 11 24.8
FGU EP	16 11 28.6
BOZ EP	16 11 54.5
BUT E(P)	16 12 00.0
HHM EP	16 12 11.0
HON ES	16 21 37.0
I	22 31.0
ESS	25 50.0
E	32 40.0
EL	35 48.0
KIP E(S)	16 22 31.0
E	32 42.0
EL	35 44.0
DEC 04	
EUR IP	16 35 58.1
DEC 04	
H-16 38 28.8	
36.9N 116.3W	
h ABOUT 000KM	
BCN IP	16 38 56.6
EUR IP	16 39 11.6
I	50 44.4
GCA EP	16 39 29.5
I	39 32.5
TUC EP	16 40 07.0
E	41 52.0
FGU IP	16 40 12.1
I	40 34.1
BOZ EP	16 40 49.0
HHM E(P)	16 41 19.0
DEC 04	
FGU EP	17 04 41.1
IS	05 17.6
EUR EP	17 04 52.2
GCA EP	17 04 53.9
E(S)	05 17.1
DEC 04	
ALQ E(P)	17 07 34.0
DEC 04	
ALQ E(P)	17 09 23.0

Date and Station	Phase (GCT)
	h m s
DEC 04	
ALQ EP	18 59 16.0
DEC 04	
EUR EP	19 52 41.2
E	53 00.9
DEC 04	
BCN EP	19 58 08.7
IL	58 19.7
EUR EP	19 59 04.8
DEC 04	
ALQ EP	20 44 51.0
DEC 04	
H-21 32 35.1	
43.6N 071.5W	
h ABOUT 033KM	
COL E(P)	21 41 12.0
DEC 04	
GCA E(P)	21 56 36.3
E(S)	57 07.1
DEC 04	
EUR EP	21 59 05.5
DEC 04	
COL EP	22 07 00.0
DEC 04	
EUR IP	22 13 12.5
DEC 04	
FGU EP	22 13 22.2
IS	13 42.4
DEC 04	
EUR IP	22 23 53.5
ES	24 10.0
FGU IP	22 24 48.9
DEC 04	
EUR EP	22 23 53.8
ES	24 10.0
DEC 04	
EUR EP	22 59 22.7
ES	59 44.3
TUC EP	23 00 53.0
DEC 04	
EUR IP	22 59 23.0
DEC 05	
COL EP	00 12 02.0
DEC 05	
COL IP	00 43 53.5
DEC 05	
TUC EP	02 06 49.0
E(S)	08 27.0
ALQ E(P)	02 07 38.0
EUR EP	02 07 47.6
FGU E(P)	02 08 45.5

Date and Station	Phase (GCT)
	h m s
DEC 05	
BCN E(P)	02 10 33.2
GCA E(P)	02 11 06.3
DEC 05	
FGU E(P)	02 13 03.2
DEC 05	
COL IP	03 23 43.2
DEC 05	
COL EP	03 28 31.0
BOZ E(P)	03 31 51.0
DEC 05	
BOZ EP	03 51 51.0
DEC 05	
H-04 23 22.2	
35.7S 103.1W	
h ABOUT 033KM	
TUC EP	04 34 19.0
ALQ F(P)	04 34 38.0
BCN E(P)	04 34 50.5
GCA E(P)	04 34 53.5
EUR EP	04 35 05.5
FGU EP	04 35 10.4
BOZ EP	04 35 35.0
BOZ E(P)	04 35 40.0
HHM E(P)	04 35 52.0
DEC 05	
COL EP	04 54 05.0
DEC 05	
TUC E(P)	05 08 43.0
BCN E(P)	05 09 47.4
EL	10 54.0
DEC 05	
TUC E(P)	05 21 39.0
DEC 05	
COL EP	06 04 10.0
DEC 05	
TUC E(P)	06 12 30.0
DEC 05	
COL EP	07 18 02.0
DEC 05	
EUR I(P)	10 22 14.3
DEC 05	
COL IP	10 31 00.9
DEC 05	
TUC E(P)	10 52 03.0
BCN E(P)	10 52 53.3
EL	54 03.0

Date and Station	Phase	Phase (GCT) h m s
GCA	E(P)	10 52 55.8
DEC 05		
TUC	EP	10 52 03.2
DEC 05		
BOZ	EP	11 10 08.0
DEC 05		
H-11 29 49.4		
7.4N 077.3W		
h ABOUT 033KM		
BHP	IP	11 30 31.0
	IS	31 09.0
SJP	IP	11 33 24.0
	I	33 32.0
	E	36 10.0
CSC	E(P)	11 35 34.0
	E(S)	39 40.0
ALQ	E(P)	11 37 10.0
	I	37 13.5
TUC	EP	11 37 22.0
GCA	E(P)	11 37 48.8
FGU	EP	11 37 56.4
BCN	EP	11 38 01.4
SLC	EP	11 38 07.2
EUR	IP	11 38 22.2
BUT	E(P)	11 38 26.0
BOZ	EP	11 38 30.0
HHM	EP	11 38 51.0
COL	EP	11 41 30.0
DEC 05		
EUR	IP	11 38 50.5
	E(S)	39 06.2
DEC 05		
H-13 04 27.4		
12.2N 143.9E		
h ABOUT 033KM		
GUA	IP	13 04 53.8
EUR	IP	13 17 26.5
DEC 05		
EUR	EP	15 11 20.0
DEC 05		
H-15 45 17.4		
46.7N 151.0E		
h ABOUT 065KM		
COL	EP	15 52 24.0
EUR	EP	15 55 50.9
	E▸P	56 07.2
DEC 05		
EUR	EP	16 34 52.3
DEC 05		
H-16 41 44.7		
60.5N 147.4W		
h ABOUT 033KM		
COL	IP	16 42 50.6
EUR	E(P)	16 47 38.6
DEC 05		
TUC	E(P)	16 49 20.0
BCN	E(P)	16 50 02.1
	EL	51 12.0
DEC 05		
GCA	E(P)	17 52 44.3
DEC 05		
SLC	E(P)	18 47 50.8
	E	47 54.8
	IS	48 20.0
FGU	EP	18 48 27.2
DEC 05		
H-20 07 46.3		
52.2N 171.1E		
h ABOUT 050KM		
COL	IP	20 13 00.7
BOZ	EP	20 16 29.0
EUR	IP	20 16 39.4
	E▸P	16 50.8
DEC 05		
EUR	E(P)	22 27 50.3
DEC 05		
TUC	IP	22 53 39.0
DEC 05		
SLC	E(P)	23 02 35.9
DEC 05		
H-23 28 56.9		
12.8N 143.5E		
h ABOUT 094KM		
GUA	IP	23 29 24.0
EUR	E(P)	23 41 48.6
DEC 05		
BCN	E(P)	23 42 21.6
	EL	43 01.6
DEC 06		
H-00 56 02.6		
18.0S 176.9W		
h ABOUT 033KM		
EUR	E(P)	01 08 14.0
DEC 06		
EUR	EP	01 48 32.1
DEC 06		
H-01 56 42.8		
5.8S 150.3E		
h ABOUT 061KM		
GUA	IP	02 01 15.3
COL	IP	02 09 03.9
EUR	EP	02 10 06.8
SJP	EP'	02 16 05.2
	I	16 11.5
	I	16 21.5
DEC 06		
EUR	E(P)	02 14 24.4
DEC 06		
EUR	E(P)	02 26 46.0
DEC 06		
H-03 16 20.5		
43.8N 134.9E		
h ABOUT 335KM		
COL	EP	03 24 15.0
EUR	EP	03 27 27.6
DEC 06		
H-04 12 48.7		
25.6S 068.6W		
h ABOUT 105KM		
TUC	EP	04 23 51.0
FGU	EP	04 24 28.0
EUR	EP	04 24 39.3
	E(▸P)	25 07.4
EUR	EP	04 24 40.1
DEC 06		
BOZ	EP	04 36 44.0
	I	39 13.0
DEC 06		
H-05 17 10.0		
44.7N 150.2E		
h ABOUT 060KM		
COL	EP	05 24 33.0
	I▸P	24 45.4
EUR	EP	05 27 52.4
	I▸P	28 05.1
DEC 06		
H-06 51 57.6		
46.5N 152.6E		
h ABOUT 050KM		
COL	IP	06 59 00.5
EUR	IP	07 02 25.8
	I▸P	02 40.1
BCN	E(P)	07 02 45.1
	E(▸P)	03 09.1
TUC	E(P)	07 03 16.0
	E(▸P)	03 30.0
DEC 06		
GCA	E(P)	06 52 59.5
DEC 06		
COL	EP	07 38 16.0
DEC 06		
SJP	IP	08 02 41.7
	IS	02 54.0
DEC 06		
H-08 34 23.5		
37.5N 118.5W		
h ABOUT 015KM		
EUR	IP	08 35 07.7
BCN	EP	08 35 14.6
	I	35 22.3
GCA	EP	08 35 46.5
	I	36 03.7
SLC	EP	08 35 56.1
	I	36 16.1
	I	36 58.6
	IS	37 37.1
FGU	IP	08 36 21.3
TUC	IP	08 36 24.0
	E	36 58.0
BUT	EP	08 36 44.0
	E(L)	38 59.3
HHM	EP	08 37 09.0
	E(L)	40 24.0
DEC 06		
FGU	E(P)	09 15 26.7
	E(S)	15 51.0
DEC 06		
EUR	EP	09 23 53.7
	IL	24 33.7
DEC 06		
BUT	IP	10 05 21.2
DEC 06		
EUR	EP	10 10 16.6
	IS	10 48.1
	IL	10 58.4
BCN	E(P)	10 10 25.5
	I	10 32.0
	IL	11 14.9
GCA	E(P)	10 11 06.3
	E	11 15.8
DEC 06		
EUR	EP	10 33 34.2
	IS	34 11.4
DEC 06		
EUR	IP	10 33 35.5
DEC 06		
EUR	EP	10 37 44.6
	EL	38 24.0
BCN	EP	10 37 56.5
	EL	38 [illegible].0

Date and Station	Phase (GCT)
	h m s
DEC 06	
EUR EP	11 20 11.6
ES	20 50.5
BCN EP	11 20 23.4
EL	21.07.5
DEC 06	
EUR IP	11 20 14.7
DEC 06	
EUR E(P)	11 56 50.1
DEC 06	
EUR EP	12 09 54.7
DEC 06	
EUR E(P)	12 10 52.8
DEC 06	
EUR IP	12 22 30.8
EL	23 13.3
BCN EP	12 22 45.5
EL	23 27.8
DEC 06	
H-13 54 21.5	
36.4N 118.2W	
h ABOUT 015KM	
EUR EP	13 55 17.0
IL	56 10.3
GCA E(P)	13 55 52.9
TUC E(P)	13 56 12.0
E(L)	58 03.0
DEC 06	
BCN EP	13 55 25.6
IL	55 43.9
DEC 06	
HHM E(P)	17 33 36.0
E(S)	35 03.0
DEC 06	
GUA EP	17 46 54.2
DEC 06	
COL EP	18 11 01.0
DEC 06	
H-18 14 32.1	
7.1S 080.5W	
h ABOUT 033KM	
BCN E(P)	18 23 51.8
FGU IP	18 24 01.0
EUR EP	18 24 15.7
BOZ IP	18 24 32.5
DEC 06	
EUR EP	19 53 26.6
DEC 06	
EUR EP	20 29 08.3

Date and Station	Phase (GCT)
	h m s
DEC 06	
EUR E(P)	21 13 54.5
DEC 06	
GCA E(P)	21 38 30.8
E(S)	39 02.4
DEC 06	
SLC E(P)	21 59 26.4
DEC 06	
H-22 07 29.8	
45.5N 152.4E	
h ABOUT 020KM	
COL IP	22 14 43.0
EUR IP	22 18 05.7
I(pP)	18 15.2
I(sP)	18 23.5
DEC 06	
TUC E(P)	22 43 51.0
DEC 06	
COL IP	23 31 52.7
DEC 06	
GUA EP	23 41 11.6
DEC 07	
FGU EP	02 45 47.8
DEC 07	
TUC E(P)	03 54 41.0
DEC 07	
H-04 07 52.8	
22.1S 179.4W	
h ABOUT 546KM	
KIP EP	04 15 44.0
BCN EP	04 19 27.7
EpP	21 35.2
EP'P'	45 48.0
EUR IP	04 19 32.8
EpP	21 42.5
E(pPP)	24 37.6
EPKKP	37 31.0
EP'P'	45 41.0
TUC IP	04 19 33.0
EpP	21 41.0
GCA IP	04 19 41.8
IpP	21 52.2
SLC E(P)	04 19 48.2
COL IP	04 19 54.5
FGU IP	04 19 56.5
BOZ IP	04 20 00.0
IpP	22 13.0
SJP EP'	04 25 36.5
DEC 07	
H-04 46 52.2	
18.8S 169.2E	
h ABOUT 227KM	

Date and Station	Phase (GCT)
	h m s
COL EP	04 59 23.0
BCN EP	04 59 27.2
EUR EP	04 59 30.3
TUC IP	04 59 35.5
GCA E(P)	04 59 41.5
DEC 07	
COL EP	06 07 49.0
DEC 07	
COL IP	06 24 05.8
DEC 07	
H-06 47 47.0	
44.9N 149.0E	
h ABOUT 033KM	
COL EP	06 55 15.0
BOZ EP	06 58 26.6
EUR EP	06 58 36.0
BCN E(P)	06 58 53.4
DEC 07	
H-06 53 18.1	
45.1N 149.8E	
h ABOUT 040KM	
COL EP	07 00 41.0
BOZ EP	07 03 53.0
EUR EP	07 04 03.1
IpP	04 15.1
DEC 07	
BOZ EP	07 42 37.0
ES	43 10.0
DEC 07	
BOZ IP	08 03 37.0
DEC 07	
H-09 06 41.3	
30.9N 051.3E	
h ABOUT 064KM	
COL EP	09 19 02.0
DEC 07	
TUC E(P)	09 42 14.0
DEC 07	
H-10 32 39.5	
20.8S 174.0E	
h ABOUT 033KM	
BCN E(P)	10 45 31.9
EUR E(P)	10 45 36.0
E	46 45.3
COL EP	10 45 38.0
TUC E(P)	10 45 39.0

Date and Station	Phase (GCT)
	h m s
GCA E(P)	10 45 43.0
DEC 07	
BOZ EP	11 14 37.0
DEC 07	
H-11 25 54.1	
45.8N 153.0E	
h ABOUT 055KM	
COL IP	11 32 59.1
BOZ E(P)	11 36 13.0
EUR E(P)	11 36 23.0
DEC 07	
BOZ E(P)	11 57 17.0
E	59 03.0
DEC 07	
UKI E(P)	12 04 21.0
IS	04 32.0
DEC 07	
UKI E(P)	15 17 37.3
ES	17 50.3
EUR IP	15 18 27.0
DEC 07	
H-15 17 57.3	
12.3N 143.9E	
h ABOUT 033KM	
GUA IP	15 18 23.0
COL EP	15 29 04.0
EUR IP	15 30 56.0
BOZ E(P)	15 31 00.0
DEC 07	
BCN IP	15 34 44.9
EL	34 56.9
DEC 07	
COL EP	16 33 57.0
DEC 07	
EUR EP	16 42 25.0
DEC 07	
EUR EP	17 14 53.8
DEC 07	
EUR EP	17 34 30.2
DEC 07	
H-17 37 25.6	
29.3S 178.5W	
h ABOUT 209KM	
TUC IP	17 49 58.0
EpP	50 51.0
EUR IP	17 50 01.8
I(PCP)	50 13.2
GCA EP	17 50 09.0
DEC 07	
GUA EP	18 29 24.0

Date and Station	Phase (GCT)
	h m s
DEC 07	
EUR EP	19 21 03.6
IL	21 42.6
BCN IP	19 21 15.8
ES	21 43.8
DEC 07	
EUR E(P)	19 32 25.2
DEC 07	
EUR E(P)	20 24 37.9
DEC 07	
BOZ E(P)	20 42 14.0
DEC 07	
BOZ EP	21 11 06.0
DEC 07	
GUA EP	21 25 18.0
DEC 07	
BHP IP	22 56 38.0
IS	57 08.0
DEC 07	
EUR E(P)	23 02 06.5
DEC 07	
EUR EP	23 10 12.9
DEC 07	
BOZ EP	23 25 06.0
DEC 08	
EUR EP	00 15 43.2
DEC 08	
BOZ EP	02 01 03.0
DEC 08	
BOZ E(P)	02 19 20.0
DEC 08	
EUR EP	02 24 42.8
DEC 08	
GUA EP	03 30 52.5
ES	31 12.0
DEC 08	
BOZ EP	03 40 40.0
ES	41 12.0
DEC 08	
EUR E(P)	03 43 59.2
DEC 08	
COL IP	04 18 30.0
EUR E(P)	04 24 48.5
DEC 08	
BOZ EP	04 24 38.8
DEC 08	
GCA E(P)	05 44 51.0
E(S)	45 11.5
FGU EP	05 45 05.1
ES	45 38.4
EUR EP	05 45 21.4

Date and Station	Phase (GCT)
	h m s
DEC 08	
TUC E(P)	06 29 44.0
E	30 26.0
DEC 08	
H-07 53 15.1	
46.4N 153.0E	
h ABOUT 020KM	
EUR IP	08 03 46.4
SLC EP	08 03 56.6
FGU EP	08 04 05.0
BCN IP	08 04 05.7
I	04 09.7
GCA EP	08 04 13.2
TUC E(P)	08 04 36.0
DEC 08	
BOZ EP	09 04 17.0
ES	04 36.0
DEC 08	
RCD E(P)	09 27 11.0
DEC 08	
BOZ EP	09 47 39.8
DEC 08	
BOZ E(P)	10 09 35.0
DEC 08	
TUC E(P)	11 04 44.0
DEC 08	
H-11 08 04.7	
39.9N 058.7E	
h ABOUT 033KM	
EUR E(P)	11 21 52.1
E	22 01.4
DEC 08	
H-12 08 49.3	
35.5N 143.3E	
h ABOUT 033KM	
EUR EP	12 20 33.2
DEC 08	
BOZ EP	12 11 17.0
DEC 08	
EUR EP	12 15 12.3
ES	15 50.2
DEC 08	
EUR EP	13 28 23.2
DEC 08	
BOZ E(P)	13 51 10.0
DEC 08	
GUA EP	17 27 25.0
DEC 08	
TUC E(P)	17 39 46.0
DEC 08	
EUR E(P)	19 49 20.6

Date and Station	Phase (GCT)
	h m s
DEC 08	
BOZ EP	19 53 22.0
DEC 08	
H-20 31 45.7	
45.3N 151.3E	
h ABOUT 040KM	
COL IP	20 39 02.2
EUR EP	20 42 24.0
DEC 08	
H-20 39 38.9	
45.3N 151.2E	
h ABOUT 050KM	
COL EP	20 46 54.0
EUR EP	20 50 16.9
I(pP)	50 31.2
DEC 08	
EUR IP	22 25 48.1
DEC 08	
BOZ EP	22 49 32.7
DEC 08	
TUC IP	23 03 53.0
DEC 09	
EUR EP	00 43 02.6
ES	43 26.7
DEC 09	
H-01 45 18.2	
43.6N 110.1W	
h ABOUT 033KM	
BOZ IP	01 45 55.8
IL	46 25.0
BUT EP	01 46 00.7
E	46 06.7
I(S)	46 44.7
FGU EP	01 46 01.7
I	46 03.0
SLC EP	01 46 07.3
IS	46 51.0
EUR IP	01 46 47.3
I(S)	47 41.0
GCA E(P)	01 46 57.6
BCN E(P)	01 47 20.8
COL EP	01 51 25.2
DEC 09	
TUC E(P)	01 48 43.0
DEC 09	
HHM EP	02 01 40.0
IL	03 04.0
DEC 09	
H-02 24 08.5	
45.6N 151.4E	
h ABOUT 055KM	

Date and Station	Phase (GCT)
	h m s
COL EP	02 31 20.0
EUR EP	02 34 45.8
I(pP)	34 58.0
BCN E(P)	02 35 03.3
EpP	35 16.4
DEC 09	
BOZ EP	03 10 37.0
E	10 55.0
DEC 09	
H-05 38 29.5	
54.9N 159.4W	
h ABOUT 045KM	
COL EP	05 41 12.0
HHM EP	05 44 23.0
I	44 34.0
BOZ EP	05 44 48.0
I	44 58.0
EUR IP	05 45 00.9
IpP	45 10.9
FGU IP	05 45 24.7
BCN E(P)	05 45 32.8
EpP	45 43.3
GCA EP	05 45 36.9
RCD IP	05 45 39.0
TUC IP	05 46 08.8
EpP	46 19.0
SJP EP	05 50 18.0
DEC 09	
H-05 39 25.7	
44.9N 110.3W	
h ABOUT 033KM	
BOZ IP	05 39 47.0
IL	40 07.0
BUT EP	05 39 56.6
I	40 00.6
E(S)	40 25.6
FGU EP	05 40 26.2
I	40 35.7
SLC EP	05 40 34.6
E	40 40.6
RCD E(P)	05 40 48.0
EUR E(P)	05 41 08.7
DEC 09	
HHM EP	05 40 46.0
I	41 42.0
EUR E(P)	06 24 03.5
BOZ EP	06 24 28.0
DEC 09	
COL IP	06 32 [illegible]3.2

Date and Station	Phase (GCT) h m s
DEC 09	
H-08 33 57.6	
44.0N 150.4E	
h ABOUT 050KM	
COL EP	08 41 24.0
BOZ EP	08 44 34.0
EUR IP	08 44 42.9
I▸P	44 57.1
EPCP	45 07.6
BCN EP	08 45 01.0
E▸P	45 15.5
EPCP	45 27.3
RCD E(P)	08 45 10.0
TUC EP	08 45 30.0
E(▸P)	45 46.0
DEC 09	
BOZ IP	10 50 50.1
DEC 09	
H-10 53 39.4	
21.1S 178.0W	
h ABOUT 435KM	
KIP EP	11 01 30.0
RUT I(P)	11 04 48.6
BOZ I(P)	11 04 50.5
E	06 57.0
E	07 35.0
BCN IP	11 05 17.5
E	05 57.5
E▸P	06 55.5
TUC IP D	11 05 21.5
E▸P	07 02.0
E(PKKP)	23 37.0
EUR IP	11 05 22.1
E(PKKP)	23 38.8
GCA EP	11 05 30.2
I	05 31.7
COL EP	11 05 45.0
FGU IP	11 05 46.6
HHM EP	11 05 51.0
DEC 09	
BOZ EP	11 06 57.0
E	07 35.0
DEC 09	
EUR E(P)	11 10 35.3
DEC 09	
RCD IP	11 21 13.0
DEC 09	
H-11 22 27.3	
7.6N 126.8E	
h ABOUT 139KM	
COL EP	11 34 29.0

Date and Station	Phase (GCT) h m s
RCD EP'	11 41 12.0
DEC 09	
TUC E(P)	11 31 41.0
DEC 09	
TUC E(P)	11 47 33.0
DEC 09	
RCD E(P)	11 58 44.0
DEC 09	
H-12 22 42.0	
45.2N 151.2E	
h ABOUT 050KM	
COL IP	12 29 58.0
BOZ EP	12 33 10.0
EUR EP	12 33 20.3
BCN E(P)	12 33 52.4
E▸P	34 06.1
TUC E(P)	12 34 09.0
DEC 09	
H-12 29 01.6	
45.3N 151.2E	
h ABOUT 045KM	
COL EP	12 36 17.0
BOZ EP	12 39 31.0
EUR EP	12 39 39.3
I▸P	39 52.4
DEC 09	
COL EP	12 47 05.0
DEC 09	
TUC E(P)	12 55 26.0
DEC 09	
COL IP	15 45 57.8
DEC 09	
EUR EP	16 11 26.8
DEC 09	
COL EP	16 48 36.0
DEC 09	
COL EP	17 25 15.0
DEC 09	
H-18 01 55.4	
36.1N 071.2E	
h ABOUT 157KM	
COL IP	18 13 19.2
DEC 09	
SLC EP	18 51 49.7
IS	08 52 18.2
EUR E(P)	18 52 31.6
E(S)	53 19.3
EUR EP	18 52 36.4

Date and Station	Phase (GCT) h m s
DEC 09	
H-19 17 49.6	
25.2S 179.5E	
h ABOUT 533KM	
TUC EP	19 29 44.0
E	30 01.0
EUR EP	19 29 44.7
COL IP	19 30 06.5
DEC 09	
EUR EP	20 56 48.8
I	56 50.1
E	57 10.8
DEC 09	
EUR IP	20 56 50.3
DEC 09	
H-21 08 17.4	
43.7N 150.9E	
h ABOUT 050KM	
COL EP	21 15 43.0
EUR EP	21 19 01.8
DEC 09	
H-21 09 56.1	
11.4S 166.4E	
h ABOUT 167KM	
COL IP	21 22 04.5
EUR IP	21 22 29.2
E▸P	23 06.7
TUC E(P)	21 22 39.0
DEC 09	
FGU EP	22 14 45.4
ES	15 02.4
DEC 09	
TUC E(P)	22 27 59.0
DEC 10	
TUC EP	00 38 05.0
E	38 44.0
DEC 10	
H-00 56 51.6	
34.8N 134.7E	
h ABOUT 249KM	
EUR IP	01 08 43C2
FGU E(P)	01 08 56.9
DEC 10	
BOZ F(P)	01 28 05.0
DEC 10	
H-02 32 04.6	
05.4N 082.5W	
h ABOUT 035KM	
BHP IP	02 33 14.0
IS	34 04.5
SJP IP	02 36 44.5

Date and Station	Phase (GCT) h m s
FGU EP	02 40 02.9
BOZ EP	02 40 38.5
DEC 10	
TUC E(P)	03 28 08.0
DEC 10	
H-03 31 21.1	
06.2S 128.1E	
h ABOUT 366KM	
GUA IP	03 36 22.1
I▸P	37 30.0
ES	40 22.0
COL EP	03 43 53.0
E	51 52.0
E	53 04.0
E	58 01.0
EUR IP'	03 49 20.7
EPP	50 16.5
ESKP	52 20.4
E(PPP)	53 11.6
EPKKP	04 00 03.2
BOZ EP'	03 49 23.0
FGU IP'	03 49 28.3
TUC EP'	03 49 31.0
E(PP)	51 22.0
ALQ EP'	03 49 37.0
SJP EP'1	03 50 40.5
E▸P'	51 26.0
E	53 05.0
HON ES	03 52 00.0
E	57 11.0
E	04 03 36.0
EL	08 50.0
DEC 10	
TUC E(P)	04 28 20.0
DEC 10	
KIP EP	04 48 35.5
ES	49 05.0
DEC 10	
EUR E(P)	05 50 41.5
DEC 10	
H-05 52 31.3	
07.0N 073.1W	
h ABOUT 142KM	
SJP EP	05 55 34.0
EUR EP	06 01 14.8
DEC 10	
TUC E(P)	05 58 25.0
DEC 10	
H-06 30 54.8	
58.1S 026.4W	
h ABOUT 110KM	
SJP IP'	06 43 07.1
E▸P	43 36.4

Date and Station	Phase	(GCT) h m s
BCN	EP'	06 49 31.7
	EpP'	50 06.7
	E(PP)	50 36.7
	E(pPP)	51 26.7
	E	59 47.2
	E	07 00 04.2
EUR	EP'	06 49 38.7
	EPKKP	59 34.8
	ESKKP	07 02 32.9
BOZ	EP'	06 49 42.0
	E	50 35.0
	E	58 22.8
HHM	EP'	06 49 47.0
COL	EP'	06 50 26.0
DEC 10		
ALQ	I(P)	07 00 04.0
DEC 10		
FGU	IP	06 59 41.8
DEC 10		
H-07 26 36.5		
8.7S 079.8W		
h ABOUT 033KM		
EUR	EP	07 36 32.8
COL	EP	07 39 27.0
DEC 10		
TUC	E(P)	08 16 39.0
DEC 10		
GCA	E(P)	08 21 37.4
DEC 10		
COL	IP	09 25 50.0
DEC 10		
H-09 28 38.6		
45.8N 151.7E		
h ABOUT 050KM		
BOZ	EP	09 39 04.0
	IpP	04 39 16.0
EUR	IP	09 39 13.4
	EpP	39 24.8
BCN	EP	09 39 31.6
	EpP	39 44.6
DEC 10		
COL	EP	10 21 43.0
DEC 10		
BOZ	EP	10 32 06.0
DEC 10		
GUA	IP	11 12 08.5
	ES	12 23.7
DEC 10		
COL	EP	11 24 26.0
DEC 10		
COL	EP	11 44 04.0
DEC 10		
SLC	E(P)	12 36 18.7
	ES	36 38.2
DEC 10		
COL	EP	13 10 29.0
RCD	E(P)	13 10 42.0
DEC 10		
TUC	E(P)	13 45 45.0
	E	46 40.0
DEC 10		
TUC	E(P)	13 56 56.0
DEC 10		
COL	EP	14 21 48.0
TUC	E(P)	14 27 22.0
DEC 10		
H-14 42 11.2		
07.1S 155.5E		
h ABOUT 088KM		
COL	EP	14 54 27.2
DEC 10		
H-14 49 42.6		
18.1S 068.5W		
h ABOUT 079KM		
SJP	EP	14 56 40.0
	E	57 11.5
ALQ	IP	15 00 09.0
TUC	IP	15 00 12.5
	E	00 29.0
BCN	IP	15 00 44.7
	E(pP)	01 15.7
RCD	E(P)	15 00 46.3
	E(pP)	01 18.0
FGU	IP	15 00 48.0
EUR	IP	15 01 03.1
	E	01 23.1
	E(sP)	01 51.4
BOZ	IP	15 01 15.0
	I(pP)	01 47.0
DEC 10		
EUR	IP	14 55 33.4
DEC 10		
H-15 39 49.2		
21.3S 174.4W		
h ABOUT 033KM		
EUR	EP	15 52 05.6
ALQ	E(P)	15 52 25.0
COL	IP	15 52 38.5
DEC 10		
COL	EP	16 11 02.0
DEC 10		
ALQ	E(P)	16 51 27.0
DEC 10		
GUA	IP	17 06 46.6
	IS	07 08.3
DEC 10		
H-17 27 02.2		
36.3N 137.1E		
h ABOUT 247KM		
COL	IP	17 35 45.0
EUR	E(P)	17 38 39.1
DEC 10		
COL	EP	17 33 30.0
DEC 10		
BOZ	EP	17 59 22.0
DEC 10		
GUA	E(P)	18 13 00.0
DEC 10		
COL	IP	18 54 54.8
SJP	IP	18 56 46.0
	IS	57 10.0
DEC 10		
H-20 03 13.0		
17.1N 060.4W		
h ABOUT 033KM		
SJP	IP	20 04 33.5
	IL	05 05.0
ALQ	IP	20 11 25.0
RCD	E(P)	20 11 28.0
	I(pP)	11 41.5
TUC	E(P)	20 11 44.0
	E	11 50.0
FGU	E(P)	20 11 54.7
BOZ	EP	20 12 15.0
	EpP	12 29.0
BCN	EP	20 12 19.5
	EpP	12 32.3
EUR	EP	20 12 28.6
COL	EP	20 14 44.0
DEC 10		
EUR	E(P)	20 27 19.6
DEC 10		
FGU	IP	21 05 49.5
DEC 10		
TUC	EP	21 48 40.0
DEC 10		
SLC	EP	21 58 09.4
	IS	58 39.4
FGU	IP	21 58 42.2
	ES	59 12.8
DEC 10		
EUR	IP	22 19 27.8
DEC 10		
H-22 26 09.7		
34.1N 116.7W		
h ABOUT 014KM		
BCN	IP	22 26 49.5
	I(S)	27 15.5
	IL	27 27.0
EUR	IP	22 27 32.8
	I	27 49.7
	EL	28 58.3
GCA	E(P)	22 27 40.2
DEC 10		
TUC	IP	23 00 24.0
DEC 10		
FGU	EP	23 02 26.0
	E(S)	02 48.6
DEC 10		
TUC	EP	23 02 27.0
EUR	E(P)	23 03 22.9
DEC 11		
H-00 47 48.3		
15.1S 173.6W		
h ABOUT 033KM		
KIP	EP	00 55 18.0
UKI	E(P)	00 59 10.6
BCN	EP	00 59 30.5
EUR	IP	00 59 36.9
	E	01 00 17.1
TUC	EP	00 59 37.0
GCA	IP	00 59 46.5
SLC	IP	00 59 55.3
ALQ	IP	01 00 00.0
FGU	IP	01 00 04.5
COL	EP	01 00 05.0
HHM	EP	01 00 08.1
BOZ	IP	01 00 09.0
	IpP	00 20.0
HON	E(S)	01 01 23.0
	EL	04 34.0
DEC 11		
H-02 31 19.4		
17.8S 178.6W		
h ABOUT 537KM		
HON	EP	02 38 39.0

Date and Station	Phase (GCT)
	h m s
KIP IP	02 38 40.0
BCN IP	02 42 37.9
IpP	44 36.4
EUR IP	02 42 43.0
E	42 46.5
EpP	45 57.7
TUC IP	02 42 44.5
EpP	44 45.0
GCA IP	02 42 52.4
COL IP	02 43 00.5
ALQ IP	02 43 05.0
EpP	45 09.0
HHM IP	02 43 09.6
BOZ IP	02 43 11.2
EpP	45 14.0
RCD E(P)	02 43 30.0
DEC 11	
GCA IP	02 34 34.9
IS	34 48.4
BCN FP	02 34 54.7
EL	35 35.7
EUR FP	02 34 57.2
E	35 01.6
ES	35 38.4
FGU IP	02 35 14.2
IS	35 59.3
DEC 11	
TUC E(P)	02 36 00.0
DEC 11	
COL EP	03 37 04.0
DEC 11	
H-03 54 39.5	
7.2S 125.5E	
h ABOUT 145KM	
EUR EP'	04 13 01.4
EPP	14 22.1
TUC EP'	04 13 13.0
DEC 11	
COL EP	04 01 23.0
DEC 11	
GUA E(P)	04 43 17.0
DEC 11	
H-06 06 44.9	
19.6N 145.7E	
h ABOUT 110KM	
COL EP	06 17 00.0
EUR EP	06 19 03.6
DEC 11	
COL EP	06 07 35.0

Date and Station	Phase (GCT)
	h m s
DEC 11	
COL EP	07 07 10.0
DEC 11	
COL EP	08 30 47.8
DEC 11	
H-09 12 15.5	
45.3N 150.1E	
h ABOUT 043KM	
COL IP	09 19 35.5
EUR EP	09 22 58.4
RCD IP	09 23 23.5
DEC 11	
H-09 22 35.7	
32.1N 130.2E	
h ABOUT 170KM	
EUR EP	09 34 58.7
EpP	35 37.5
DEC 11	
H-11 12 30.3	
24.2S 179.3E	
h ABOUT 540KM	
TUC EP	11 24 22.0
EUR EP	11 24 23.3
E	28 02.8
COL IP	11 24 43.5
DEC 11	
EUR EP	11 20 57.0
ES	21 16.6
DEC 11	
EUR EP	13 00 24.5
E(S)	01 51.7
DEC 11	
BOZ EP	16 18 39.0
EUR E(P)	16 20 19.0
I(S)	21 25.0
DEC 11	
HHM E(P)	16 20 01.0
DEC 11	
GUA IP	16 46 10.0
I	46 25.6
DEC 11	
EUR E(P)	17 00 40.5
DEC 11	
EUR E(P)	17 06 03.2
DEC 11	
H-17 08 12.3	
51.2N 179.3W	
h ABOUT 032KM	
COL EP	17 12 57.0
ES	16 24.0
KIP EP	17 14 56.0

Date and Station	Phase (GCT)
	h m s
HHM EP	17 15 54.0
BUT EP	17 16 07.7
BOZ EP	17 16 17.0
I	16 33.0
EUR IP	17 16 25.1
I	16 29.0
EPP	18 16.3
SLC E(P)	17 16 34.1
GCA EP	17 17 00.6
RCD EP	17 17 03.0
ALQ E(P)	17 17 30.0
I	17 34.5
SJP IP	17 21 08.5
DEC 11	
H-17 12 45.1	
51.1N 179.4W	
h ABOUT 033KM	
BOZ IP	17 20 50.2
EUR IP	17 20 59.4
I	21 02.7
DEC 11	
H-17 25 12.5	
51.3N 179.5W	
h ABOUT 033KM	
COL IP	17 29 59.0
BOZ IP	17 33 17.5
EUR EP	17 33 25.2
DEC 11	
H-17 43 17.4	
51.0N 179.3W	
h ABOUT 033KM	
COL IP	17 48 04.9
BOZ EP	17 51 21.0
EUR EP	17 51 31.3
DEC 11	
BOZ EP	18 03 26.0
HHM E(P)	18 03 57.0
EUR EP	18 04 03.0
DEC 11	
H-18 09 17.2	
51.0N 179.7W	
h ABOUT 033KM	
COL IP	18 14 06.3
BOZ EP	18 17 23.5
EUR EP	18 17 32.2
I	17 37.2

Date and Station	Phase (GCT)
	h m s
DEC 11	
COL EP	18 25 42.0
EUR E(P)	18 29 08.2
DEC 11	
H-18 28 48.3	
51.3N 179.2W	
h ABOUT 033KM	
COL IP	18 33 32.6
BOZ EP	18 36 52.8
EUR EP	18 37 00.2
DEC 11	
COL EP	18 31 05.0
DEC 11	
EUR E(P)	18 46 33.6
DEC 11	
H-19 12 59.6	
51.3N 179.5W	
h ABOUT 054KM	
COL EP	19 17 43.0
HHM EP	19 20 39.8
BOZ EP	19 21 02.8
I	21 12.0
EUR EP	19 21 10.5
FGU E(P)	19 21 35.0
TUC IP	19 22 09.5
DEC 11	
BOZ E(P)	19 17 21.0
DEC 11	
H-19 28 02.7	
51.3N 179.4W	
h ABOUT 033KM	
COL EP	19 32 49.0
EUR EP	19 36 15.7
DEC 11	
FGU E(P)	19 38 43.8
E(S)	39 18.0
DEC 11	
BOZ EP	19 51 07.0
DEC 11	
ALQ EP	19 56 59.0
DEC 11	
H-20 25 13.5	
51.3N 179.4W	
h ABOUT 033KM	
COL EP	20 29 59.0
BOZ EP	20 33 17.0
EUR EP	20 33 25.5
I	33 33.8

Date and Station	Phase	Phase (GCT) h m s
DEC 11		
COL	EP	21 13 19.0
DEC 11		
EUR	E(P)	21 25 12.3
DEC 11		
COL	IP	21 32 03.9
DEC 11		
FGU	EP	21 33 01.5
	IS	33 22.0
DEC 11		
EUR	EP	21 45 45.7
	IS	46 05.2
DEC 11		
SLC	E(P)	22 00 02.7
FGU	EP	22 00 34.0
DEC 11		
FGU	EP	22 10 12.8
	E(S)	10 42.2
DEC 11		
TUC	E(P)	22 20 34.0
DEC 11		
BUT	EP	22 43 51.7
HHM	E(P)	22 44 37.0
DEC 11		
ALQ	EP	22 58 45.0
DEC 11		
COL	EP	23 00 52.0
DEC 11		
FGU	E(P)	23 20 43.1
DEC 12		
FUR	IP	00 29 42.6
	ES	30 01.3
DEC 12		
H-00 38 24.6		
18.7N 107.0W		
h ABOUT 033KM		
TUC	IP D	00 41 42.6
	E	42 08.0
ALQ	EP	00 42 12.0
BCN	EP	00 42 41.5
GCA	EP	00 42 43.0
EUR	IP	00 43 19.4
	I	43 37.2
FGU	IP	00 43 20.6
RCD	E(P)	00 43 52.0
COL	EP	00 47 41.0
DEC 12		
FUR	E(P)	02 36 02.8

Date and Station	Phase	Phase (GCT) h m s
DEC 12		
EUR	E(P)	03 14 17.5
DEC 12		
COL	IP	03 14 42.6
DEC 12		
H-04 12 55.9		
8.3S 128.5E		
h ABOUT 179KM		
EUR	EP'	04 31 09.6
DEC 12		
TUC	E(P)	04 54 28.0
COL	IP	04 57 06.3
DEC 12		
FGU	E(P)	05 58 46.1
	ES	59 20.0
DEC 12		
COL	EP	06 27 40.0
DEC 12		
FGU	E(P)	07 01 04.7
DEC 12		
EUR	E(P)	07 02 35.4
DEC 12		
EUR	EP	13 15 22.1
	ES	15 44.9
DEC 12		
H-14 04 03.2		
46.0N 149.9E		
h ABOUT 033KM		
COL	EP	14 11 21.0
DEC 12		
ALQ	E(P)	15 48 58.0
	E	49 17.0
DEC 12		
COL	EP	15 57 05.0
DEC 12		
H-16 02 00.2		
37.1N 116.0W		
h ABOUT 000KM		
BCN	IP	16 02 28.2
EUR	IP	16 02 40.5
GCA	E(P)	16 02 49.9
	E	02 58.4
	I	03 05.9
SLC	EP	16 03 18.5
	I	03 30.5
	I(L)	04 26.5
TUC	E(P)	16 03 38.0
	E(L)	05 26.0
FGU	EP	16 03 39.8
BOZ	E(P)	16 04 18.0

Date and Station	Phase	Phase (GCT) h m s
DEC 12		
EUR	EP	16 45 35.7
	ES	45 54.1
DEC 12		
H-17 04 45.7		
11.1S 163.0E		
h ABOUT 033KM		
COL	EP	17 17 16.0
EUR	E(P)	17 17 48.7
DEC 12		
BOZ	IP	17 51 21.9
DEC 12		
SIT	EP	19 22 52.0
	ES	23 17.0
DEC 12		
COL	EP	19 26 44.0
DEC 12		
COL	EP	19 45 29.0
DEC 12		
FGU	EP	20 17 18.7
	IS	17 38.8
DEC 12		
H-20 54 34.8		
05.7N 073.1W		
h ABOUT 140KM		
BHP	IP	20 56 19.0
	IS	57 32.0
ALQ	IP	21 02 18.0
	I	02 22.5
TUC	IP	21 02 31.5
GCA	IP	21 02 55.4
RCD	I(P)	21 02 59.0
FGU	IP	21 02 59.2
BCN	EP	21 03 08.4
EUR	IP	21 03 27.0
	E▸P	04 03.6
BOZ	IP	21 03 31.0
	E▸P	04 07.5
HHM	EP	21 03 51.4
COL	EP	21 06 23.0
DEC 12		
SLC	EP	20 57 48.1
	IS	58 15.6
FGU	EP	20 58 20.7
	E(S)	58 51.2
EUR	E(P)	20 58 32.8
	E	59 21.5
DEC 12		
COL	EP	21 09 18.0

Date and Station	Phase	Phase (GCT) h m s
DEC 12		
BOZ	EP	21 44 44.0
	ES	50 17.0
DEC 12		
FGU	IP	21 49 49.2
	IS	50 24.2
DEC 12		
H-22 26 42.2		
19.8S 174.1W		
h ABOUT 033KM		
COL	IP	22 39 26.3
DEC 12		
EUR	EP	22 37 05.0
	E(S)	37 38.9
DEC 12		
HHM	E(P)	22 48 03.0
DEC 12		
SLC	E(P)	23 12 27.7
EUR	EP	23 13 22.6
	E	13 42.7
DEC 12		
COL	EP	23 24 06.0
DEC 12		
H-23 24 36.6		
46.3N 150.5E		
h ABOUT 090KM		
COL	IP	23 31 44.5
HON	IP	23 33 10.3
KIP	EP	23 33 11.0
HHM	IP	23 34 39.0
BOZ	IP	23 34 59.0
	I▸P	35 22.0
EUR	IP	23 35 08.8
	E▸P	35 31.3
	E(PCP)	35 35.4
FGU	EP	23 35 26.2
BCN	IP	23 35 27.8
	I▸P	35 50.0
	I(PCP)	35 55.0
GCA	EP	23 35 34.6
TUC	IP	23 35 57.0
	E▸P	36 21.0
	E(PCP)	36 25.0
ALQ	IP	23 36 02.0
	I▸P	36 25.0
DEC 13		
BOZ	EP	00 16 53.0
	IL	17 09.0
EUR	EP	00 18 11.6

Date and Station	Phase (GCT)
	h m s
DEC 13	
H-02 47 14.4	
25.9N 126.1E	
h ABOUT 109KM	
BOZ EP	03 00 12.0
DEC 13	
TUC E(P)	03 30 13.0
DEC 13	
H-04 16 13.5	
2.7S 078.4W	
h ABOUT 109KM	
SJP E(P)	04 21 21.5
E	21 41.2
ALQ IP	04 24 27.0
IpP	24 59.0
TUC E(P)	04 24 33.0
EpP	25 05.0
EUR EP	04 25 31.8
EpP	26 02.1
E(PCP)	26 35.1
BOZ EP	04 25 44.8
EpP	26 14.0
DEC 13	
COL IP	04 21 06.4
DEC 13	
H-05 28 07.3	
6.9N 077.1W	
h ABOUT 033KM	
BHP IP	05 28 56.0
IS	29 37.0
SJP EP	05 31 46.0
I	32 01.0
EUR E(P)	05 36 45.8
BOZ EP	05 36 52.2
DEC 13	
EUR EP	06 51 45.9
DEC 13	
H-06 54 46.4	
15.9S 168.2E	
h ABOUT 033KM	
COL EP	07 07 29.0
EUR EP	07 07 42.2
DEC 13	
GUA IP	07 30 09.0
IS	30 28.0
DEC 13	
TUC E(P)	08 42 16.0
DEC 13	
EUR EP	08 59 29.5
BOZ EP	08 59 49.0

Date and Station	Phase (GCT)
	h m s
DEC 13	
BOZ EP	09 12 30.0
IS	12 41.0
RCD E(P)	09 13 09.0
DEC 13	
EUR EP	09 24 15.3
E(S)	24 45.1
DEC 13	
COL EP	10 05 44.0
DEC 13	
EUR EP	11 53 57.9
ES	54 21.2
DEC 13	
H-12 15 19.9	
56.2N 159.0W	
h ABOUT 149KM	
COL EP	12 17 45.0
EUR EP	12 21 39.7
TUC E(P)	12 22 47.0
DEC 13	
COL IP	13 50 28.7
DEC 13	
GUA IP	13 50 42.5
ES	50 53.8
DEC 13	
GUA EP	14 44 41.3
DEC 13	
EUR E(P)	16 10 49.9
DEC 13	
GUA EP	16 35 06.1
DEC 13	
GUA E(P)	17 04 12.8
DEC 13	
ALQ E(P)	17 25 28.0
DEC 13	
EUR EP	18 13 54.5
ES	14 17.8
DEC 13	
COL EP	18 31 29.0
DEC 13	
COL EP	19 08 22.1
DEC 13	
FGU IP	19 13 27.0
GCA EP	19 13 43.6
DEC 13	
COL EP	19 16 14.0
DEC 13	
H-19 57 27.4	
14.5N 091.9W	
h ABOUT 139KM	

Date and Station	Phase (GCT)
	h m s
COL IP	20 07 40.1
DEC 13	
COL EP	21 29 03.0
DEC 13	
FGU IP	21 53 26.1
IS	53 47.1
DEC 13	
H-22 20 19.4	
44.3N 149.1E	
h ABOUT 040KM	
COL IP	22 27 49.4
BOZ EP	22 31 00.0
EUR EP	22 31 09.7
E(pP)	31 21.9
DEC 13	
EUR EP	22 41 00.8
DEC 14	
H-00 05 39.8	
02.3S 061.2W	
h ABOUT 036KM	
SJP I(P)	00 10 26.1
I	10 41.8
ALQ E(P)	00 15 19.0
TUC EP	00 15 33.0
EpP	15 45.0
GCA EP	00 15 52.8
FGU E(P)	00 15 57.4
BCN EP	00 16 05.7
EpP	16 18.0
EUR IP	00 16 20.0
EpP	16 33.2
COL IP	00 18 39.1
DEC 14	
EUR EP	00 47 20.0
DEC 14	
BOZ EP	01 09 43.0
DEC 14	
H-01 45 13.8	
17.9S 178.3W	
h ABOUT 550KM	
BCN EP	01 56 30.2
EUR IP	01 56 35.2
TUC IP	01 56 36.5
GCA IP	01 56 44.9
COL IP	01 56 53.6
FGU EP	01 56 59.1
BOZ EP	01 57 04.0
EpP	59 08.0

Date and Station	Phase (GCT)
	h m s
DEC 14	
H-01 56 09.7	
05.2S 151.7E	
h ABOUT 054KM	
COL IP	02 08 28.0
EUR IP	02 09 28.6
DEC 14	
COL IP	02 06 38.5
DEC 14	
EUR EP	02 18 11.4
DEC 14	
SIT EP	02 51 10.0
IL	51 37.5
DEC 14	
BOZ EP	03 42 27.1
DEC 14	
H-03 44 01.1	
45.4N 150.1E	
h ABOUT 033KM	
BOZ EP	03 54 39.9
EpP	54 49.0
EUR IP	03 54 44.3
DEC 14	
COL IP	04 06 22.3
DEC 14	
COL EP	04 27 18.0
DEC 14	
COL EP	05 42 17.0
DEC 14	
H-06 49 34.6	
44.5N 151.7E	
h ABOUT 045KM	
BOZ E(P)	07 00 06.0
EUR IP	07 00 14.0
E(PCP)	00 36.7
DEC 14	
COL IP	06 49 37.5
EUR IP	06 52 57.7
DEC 14	
SJP IP	07 21 38.2
EL	21 59.0
DEC 14	
EUR E(P)	07 39 02.7
DEC 14	
H-07 51 07.9	
62.7N 149.5W	
h ABOUT 095KM	
COL IP	07 51 44.6
SIT EP	07 53 13.5
E	53 33.3
EL	55 53.6

Date and Station	Phase	(GCT)
		h m s
HHM	IP	07 56 17.6
	E(L)	08 03 09.6
BUT	IP	07 56 39.6
BOZ	IP	07 56 46.9
	IpP	57 10.0
FUR	IP	07 57 16.6
	IpP	57 35.1
	IsP	57 41.2
	PCP	08 00 21.9
	SCP	03 48.2
	E	04 25.1
SLC	IP	07 57 21.1
FGU	IP	07 57 28.7
	ESCP	08 03 53.0
RCD	EP	07 57 29.0
BCN	EP	07 57 47.0
	E(pP)	58 07.5
GCA	E(P)	07 57 50.2
ALQ	EP	07 58 20.0
TUC	IP	07 58 27.5
	EpP	58 52.0
HON	EP	07 58 49.0
KIP	EP	07 58 49.0
SJP	EP	08 02 14.8
DEC 14		
COL	IP	08 07 23.9
DEC 14		
BUT	E(P)	08 54 15.0
BOZ	EP	08 54 16.0
	E	54 50.0
EUR	EP	08 54 49.7
	E	56 01.2
DEC 14		
H-10 26 47.0		
5.0N 082.6W		
h ABOUT 033KM		
BHP	IP	10 28 01.0
	IS	29 02.0
SJP	IP	10 31 30.0
ALQ	E(P)	10 33 55.0
TUC	EP	10 34 03.0
GCA	EP	10 34 34.3
BCN	EP	10 34 44.8
FGU	IP	10 34 47.2
FUR	IP	10 35 07.3
	E	35 31.8
	E	35 55.1

Date and Station	Phase	(GCT)
		h m s
HHM	EP	10 35 46.8
COL	E(P)	10 38 36.0
DEC 14		
H-11 42 50.1		
05.4S 152.3E		
h ABOUT 043KM		
COL	IP	11 55 08.9
EUR	EP	11 56 09.9
DEC 14		
BOZ	IP	12 25 44.8
	IS	56 12.0
DEC 14		
EUR	EP	12 44 14.3
	E	45 23.1
COL	IP	12 48 44.8
DEC 14		
COL	IP	12 48 54.0
DEC 14		
H-12 55 07.9		
43.6N 110.3W		
h ABOUT 033KM		
FGU	IP	12 55 50.7
BUT	EP	12 55 51.1
	I(S)	56 32.0
SLC	E(P)	12 55 56.2
	E(S)	56 38.4
HHM	E(P)	12 56 29.0
	E	57 52.0
RCD	E(P)	12 56 31.0
FUR	EP	12 56 36.8
	I	57 11.4
	I	13 56 04.1
GCA	E(P)	12 57 05.9
TUC	E(P)	12 58 32.0
	E(L)	13 01 00.0
DEC 14		
TUC	E(P)	13 55 15.0
	E	55 57.0
EUR	E(P)	13 56 01.0
BCN	E(P)	13 56 08.6
	E	56 13.1
	EL	57 37.6
DEC 14		
EUR	E(P)	15 05 02.9
DEC 14		
H-15 06 04.9		
07.1S 155.7E		
h ABOUT 095KM		
COL	EP	15 18 19.0
FUR	EP	15 19 12.2

Date and Station	Phase	(GCT)
		h m s
DEC 14		
COL	IP	16 29 51.3
DEC 14		
GUA	EP	16 52 31.5
DEC 14		
ALQ	E(P)	17 05 31.0
DEC 14		
H-17 34 01.3		
41.7N 139.4E		
h ABOUT 033KM		
EUR	EP	17 45 36.2
DEC 14		
BOZ	EP	18 05 35.2
	E(S)	06 08.0
EUR	EP	18 06 12.3
	E	06 24.3
	E(S)	07 32.0
DEC 14		
HHM	E(P)	18 06 58.0
	E(S)	07 02.0
DEC 14		
BHP	IP	18 17 10.0
	IS	17 48.0
DEC 14		
H-18 46 37.7		
44.5N 114.9W		
h ABOUT 033KM		
BUT	EP	18 47 14.1
	EL	47 48.0
BOZ	E(P)	18 47 17.0
	E(S)	47 43.0
HHM	E(P)	18 47 35.0
	E(S)	48 41.0
EUR	EP	18 47 52.6
DEC 14		
BOZ	EP	18 51 00.0
	E(S)	51 36.0
DEC 14		
SLC	EP	18 59 25.1
DEC 14		
H-19 13 53.3		
22.8S 070.5W		
h ABOUT 048KM		
ALQ	E(P)	19 24 42.0
BCN	EP	19 25 14.4
	E	25 30.0
EUR	EP	19 25 33.4
	F	25 56.7
DEC 14		
BCN	IP	19 29 35.9
	IS	29 47.9
DEC 14		
BCN	E(P)	20 15 02.3

Date and Station	Phase	(GCT)
		h m s
EUR	EP	20 15 24.6
BOZ	E(P)	20 16 07.0
DEC 14		
EUR	E(P)	20 32 24.0
DEC 14		
TUC	E(P)	21 21 14.0
EUR	EP	21 21 17.2
DEC 14		
TUC	IP	21 53 53.0
DEC 14		
TUC	EP	22 55 00.0
DEC 14		
H-23 02 47.6		
44.7N 149.1E		
h ABOUT 033KM		
COL	EP	23 10 16.0
DEC 14		
SLC	E(P)	23 09 21.7
	ES	10 54.7
DEC 14		
BCN	EP	23 28 45.7
DEC 14		
EUR	EP	23 34 35.8
DEC 15		
H-00 05 01.1		
18.0S 178.5W		
h ABOUT 638KM		
EUR	EP	00 16 16.4
DEC 15		
COL	EP	01 53 30.0
DEC 15		
COL	EP	01 58 40.0
DEC 15		
COL	EP	02 53 10.0
DEC 15		
COL	IP	02 55 04.2
DEC 15		
H-03 20 18.1		
44.3N 149.5E		
h ABOUT 015KM		
COL	EP	03 27 51.0
EUR	EP	03 31 10.2
DEC 15		
GUA	IP	03 24 55.5
	ES	25 08.0
DEC 15		
H-03 39 49.4		
52.6N 169.3W		
h ABOUT 026KM		
COL	EP	03 [illegible] 0.0

Date and Station	Phase (GCT) h m s
EUR EP	03 47 13.4
DEC 15	
COL IP	04 45 42.4
DEC 15	
COL EP	05 15 21.0
DEC 15	
H-05 37 13.8	
18.1S 178.0W	
h ABOUT 650KM	
EUR E(P)	05 48 26.6
DEC 15	
H-07 02 36.5	
28.6N 129.9E	
h ABOUT 033KM	
COL IP	07 12 50.6
BOZ EP	07 15 22.9
EUR EP	07 15 29.2
RCD E(P)	07 15 50.0
DEC 15	
H-07 33 20.2	
34.3N 088.8E	
h ABOUT 033KM	
COL IP	07 44 40.8
DEC 15	
H-10 22 53.7	
44.1N 149.2E	
h ABOUT 045KM	
COL I(P)	10 30 37.0
BOZ EP	10 33 34.1
EpP	33 46.5
EUR EP	10 33 43.8
IpP	33 57.0
DEC 15	
COL EP	10 42 52.0
DEC 15	
BUT EP	10 57 12.1
I	57 16.1
ES	57 39.1
BOZ EP	10 57 16.8
ES	57 47.0
EUR EP	10 57 48.8
E	57 54.7
EL	59 09.8
DEC 15	
H-11 36 23.6	
39.2N 114.2W	
h ABOUT 033KM	
EUR IP	11 36 47.8
GCA EP	11 37 11.3
I	37 16.1
BCN EP	11 37 12.6
E(S)	37 44.3
IL	37 58.6
BOZ E(P)	11 38 14.0
ALQ E(P)	11 38 24.0
TUC E(P)	11 38 33.0
E	40 13.0
DEC 15	
EUR EP	12 10 10.7
DEC 15	
BOZ E(P)	12 31 56.0
EUR E(P)	12 33 33.7
DEC 15	
H-13 12 15.1	
44.3N 150.3E	
h ABOUT 045KM	
COL EP	13 19 41.0
EUR EP	13 22 59.7
DEC 15	
COL IP	14 57 23.1
DEC 15	
H-15 05 18.4	
04.7S 102.9E	
h ABOUT 072KM	
EUR EP'	15 24 25.9
FSKP	27 57.6
DEC 15	
SIT EP	15 11 21.2
EL	11 47.5
DEC 15	
COL EP	15 14 05.0
DEC 15	
COL EP	15 15 14.7
DEC 15	
COL IP	15 30 42.7
DEC 15	
H-15 44 22.3	
51.0N 128.8W	
h ABOUT 033KM	
BUT E(P)	15 47 10.0
UKI EP	15 47 19.4
BOZ E(P)	15 47 27.0
E(S)	51 12.0
EUR EP	15 47 52.2
I	47 56.2
COL EP	15 48 20.0
E(L)	53 36.0
BCN E(P)	15 48 31.5
RCD EP	15 48 38.0
E	48 48.0
TUC EP	15 49 24.0
DEC 15	
EUR E(P)	16 40 23.6
DEC 15	
COL IP	16 53 16.5
EUR E	16 59 33.6
DEC 15	
H-16 54 23.6	
16.3N 097.7W	
h ABOUT 035KM	
TUC EP	16 58 53.0
ALQ E(P)	16 58 58.0
BCN E(P)	16 59 34.4
ELG	17 08 16.4
GCA EP	16 59 39.5
DEC 15	
EUR EP	17 00 42.5
DEC 15	
H-17 32 37.2	
09.4S 124.1E	
h ABOUT 033KM	
EUR EP'	17 51 26.9
E	58 02.4
DEC 15	
EUR EP	18 37 46.3
ALQ E(P)	18 38 55.0
E(S)	39 35.0
DEC 15	
H-19 24 12.2	
10.9S 164.2E	
h ABOUT 033KM	
EUR EP	19 37 06.1
BCN EP	19 37 06.7
DEC 15	
H-19 34 45.5	
04.8S 108.0E	
h ABOUT 650KM	
GUA IP	19 41 34.0
IS	46 59.0
KIP EP	19 47 06.0
HON EP	19 47 07.0
EP'P'	20 11 42.0
F(SKPP')	14 25.0
BCN E(P)	19 49 22.1
E	50 07.8
E	50 33.1
EP'	52 28.8
I	52 47.6
EPP	54 50.1
ISKP	55 09.6
ESKKP	20 04 48.1
E	05 40.0
BOZ EP	19 49 43.0
IP'	52 39.0
IPP	54 44.0
I	56 43.0
EUR EP	19 49 50.2
P'	52 37.2
(SKKP)	20 05 07.8
E	05 38.0
E	05 59.4
ALQ E(P)	19 50 40.0
E	52 46.0
EPP	55 27.0
GCA E(P')	19 52 30.3
E	52 36.0
I	52 49.8
EpP	55 14.8
UKI EP'	19 52 32.0
EpP'	55 03.0
EPKKP	20 03 06.0
SLC EP'	19 52 32.4
I	52 44.6
IpP'	55 07.2
HHM EP'	19 52 34.0
RCD EP'	19 52 34.0
BUT IP'	19 52 36.3
IPP	54 56.1
TUC EP'	19 52 42.5
IpP'	55 25.0
E(SKS)	58 52.0
WAS IP'	19 53 12.6
IpP'	55 35.6
E	59 43.6
CSC IP'	19 53 21.0
SJP IP'	19 53 30.0
I	53 39.0
I	58 30.0
BHP IP'	19 53 42.0
I	20 04 43.0
DEC 15	
GUA EP	19 46 59.0
DEC 15	
BOZ EP	20 31 33.2
EUR EP	20 31 43.0
DEC 15	
EUR IP	22 23 44.1
E	24 24.4
DEC 15	
SLC E(P)	22 34 07.0
DEC 16	
EUR E(P)	01 01 41.6
DEC 16	
EUR EP	01 32 15.8
ES	32 47.2

Date and Station	Phase	Phase (GCT) h m s
DEC 16		
H-01 51 30.6		
6.4S 105.4E		
h ABOUT 064KM		
GUA	EP	01 59 33.0
EUR	EP'	02 10 28.4
	IP'	10 37.6
	EPP	12 48.7
	ESKP	13 45.8
	ISKP	13 58.1
UKI	EP'	02 10 29.0
HHM	IP'	02 10 29.0
BUT	EP'	02 10 33.0
	ESKP	13 59.0
SLC	EP'	02 10 33.5
	EP'	10 40.0
	EPP	13 07.0
	ESKP	14 07.0
BCN	EP'	02 10 34.8
	EPP	12 47.3
	ESKP	14 06.0
BOZ	EP'	02 10 35.0
TUC	EP'	02 10 42.0
	EPP	13 30.0
	EPKS	14 23.0
RCD	EP'	02 10 44.0
ALQ	EP'	02 10 44.0
	I	10 57.0
	I	29 28.0
GCA	EP'	02 10 45.7
WAS	EP'	02 11 07.0
CSC	EP'	02 11 16.0
BHP	EP'	02 11 34.0
SJP	EP'	02 11 36.0
	E	12 32.0
	E	16 15.0
HON	E	02 16 24.0
	EL	37 02.0
DEC 16		
H-02 06 38.2		
6.3S 105.5E		
h ABOUT 033KM		
BOZ	E(P')	02 25 31.0
	E	25 45.0
HHM	EP	02 25 39.9
EUR	EP'	02 25 47.5
	ESKP	29 08.3
	EPKS	29 19.7
DEC 16		
H-02 45 35.3		
6.2S 105.4E		
h ABOUT 055KM		
EUR	EP'	03 04 41.5
DEC 16		
H-04 16 43.0		
6.3S 105.5E		
h ABOUT 063KM		
BOZ	EP'	04 35 53.0
ALQ	EP'	04 36 03.0
DEC 16		
EUR	EP	04 35 21.7
	ES	35 40.8
DEC 16		
EUR	EP	04 39 11.1
ALQ	E(P)	04 39 32.0
TUC	EP	04 39 37.0
DEC 16		
SIT	EP	05 02 10.0
	IL	02 27.0
DEC 16		
H-05 17 14.4		
17.1N 147.0E		
h ABOUT 048KM		
GUA	EP	05 18 15.6
EUR	EP	05 29 43.7
	E	29 50.5
DEC 16		
EUR	I(P)	05 21 55.6
DEC 16		
EUR	E(P)	05 48 15.9
DEC 16		
EUR	EP	06 19 34.1
DEC 16		
H-06 23 20.4		
12.2N 088.4W		
h ABOUT 034KM		
ALQ	EP	06 29 09.0
TUC	E(P)	06 29 13.0
GCA	E(P)	06 29 49.2
EUR	I(P)	06 30 25.2
BOZ	IP	06 30 42.8
DEC 16		
EUR	E(P)	06 32 51.5
DEC 16		
EUR	EP	07 47 26.9
	ES	48 05.1
DEC 16		
EUR	E(P)	08 12 23.2
DEC 16		
EUR	EP	09 26 57.8
	ES	27 17.3
DEC 16		
H-10 49 52.5		
13.9N 090.9W		
h ABOUT 059KM		
TUC	E(P)	10 55 20.0
EUR	EP	10 56 31.8
DEC 16		
ALQ	EP	10 50 16.0
DEC 16		
H-11 09 27.8		
46.0N 142.6E		
h ABOUT 235KM		
COL	IP	11 16 53.2
	IPP	18 01.0
KIP	E(P)	11 18 29.0
HHM	EP	11 19 42.9
	I	19 46.8
	E(PCP)	20 17.0
BOZ	EP	11 19 59.1
	I	20 03.5
	EPP	21 10.0
BOZ	IP	11 20 03.5
EUR	IP	11 20 15.6
	IPCP	20 56.5
	EPP	22 57.6
SLC	EP	11 20 24.3
BCN	EP	11 20 29.9
BCN	IP	11 20 34.2
GCA	EP	11 20 40.1
TUC	IP	11 21 01.5
ALQ	EP	11 21 03.0
DEC 16		
TUC	E(P)	11 38 00.0
DEC 16		
EUR	E(P)	12 40 33.2
DEC 16		
SJP	EP	12 59 49.5
DEC 16		
BOZ	EP	13 34 29.0
EUR	EP	13 34 40.7
DEC 16		
SJP	EP	13 37 46.5
	E	38 01.0
DEC 16		
H-13 47 56.4		
37.1N 020.9E		
h ABOUT 015KM		
HHM	EP	14 00 37.3
BOZ	EP	14 00 44.0
BUT	IP	14 00 45.0
SLC	IP	14 01 03.1
ALQ	IP	14 01 12.0
	E(PP)	04 56.0
GCA	E(P)	14 01 13.9
EUR	IP	14 01 16.3
BCN	EP	14 01 27.8
TUC	EP	14 01 31.6
DEC 16		
H-14 18 04.9		
49.1S 127.1E		
h ABOUT 033KM		
EUR	EP'	14 37 22.0
	E	37 26.5
	E(SKP)	40 49.6
TUC	EP'	14 37 23.0
BOZ	EP'	14 37 28.0
DEC 16		
BHP	IP D	14 36 47.0
	IS	37 32.0
DEC 16		
GUA	EP	15 09 27.0
	ES	09 41.0
DEC 16		
H-15 18 34.8		
15.2S 173.7W		
h ABOUT 033KM		
KIP	EP	15 26 05.0
EUR	EP	15 30 22.7
TUC	EP	15 30 23.5
SLC	E(P)	15 30 42.1
ALQ	E(P)	15 30 48.0
BOZ	EP	15 30 55.5
	E(PCP)	31 07.5
DEC 16		
H-16 06 35.2		
06.5S 105.3E		
h ABOUT 046KM		
EUR	EP'	16 25 43.7
ALQ	EP'	16 26 02.0
DEC 16		
GUA	IP	16 09 26.0
DEC 16		
EUR	E(P)	16 21 59.8
DEC 16		
GUA	EP	16 19 46.0

Date and Station	Phase (GCT)
	h m s
DEC 16	
H-16 41 09.5	
1.6S 078.0W	
h ABOUT 170KM	
ALQ IP	16 49 11.5
IpP	49 49.0
BCN E(P)	16 49 55.2
EUR EP	16 50 16.3
I	50 22.9
IPCP	51 20.0
BOZ IP	16 50 29.9
EPCP	51 09.0
DEC 16	
ALQ E(P)	17 12 58.0
DEC 16	
COL EP	17 45 38.0
DEC 16	
BUT E(P)	17 54 07.0
DEC 16	
FGU EP	18 09 21.5
IS	09 42.5
DEC 16	
GUA EP	19 29 43.3
E	30 15.1
DEC 16	
BCN IP	20 23 33.2
GCA E(P)	20 24 18.2
F(S)	24 53.2
EUR EP	20 24 30.4
ES	25 28.1
DEC 16	
COL EP	21 31 26.0
DEC 16	
TUC IP	21 57 47.0
DEC 16	
EUR EP	22 23 01.0
DEC 16	
EUR E(P)	22 26 42.9
DEC 16	
SLC EP	22 51 27.7
FGU EP	22 52 00.1
DEC 16	
TUC EP	22 57 36.0
DEC 16	
GUA IP	23 16 19.0
IS	16 35.2
DEC 16	
BUT IP	23 46 13.0
DEC 17	
SJP	00 44 48.0
EL	01 19 51.0

Date and Station	Phase (GCT)
	h m s
DEC 17	
EUR EP	02 15 55.8
ES	16 13.1
DEC 17	
TUC E(P)	02 52 18.0
DEC 17	
GUA EP	04 04 10.5
DEC 17	
EUR E(P)	04 16 45.4
DEC 17	
H-04 12 38.5	
22.2N 144.4E	
h ABOUT 101KM	
GUA IP	04 14 43.5
E	14 55.8
E	15 12.2
COL EP	04 22 38.0
EUR EP	04 24 55.9
IpP	25 21.3
FGU E(P)	04 25 15.7
ALQ E(P)	04 25 53.0
TUC E(P)	04 26 00.0
DEC 17	
EUR E	04 41 44.9
DEC 17	
GUA EP	05 23 59.0
E	24 17.0
DEC 17	
TUC E(P)	05 42 41.0
DEC 17	
BUT EP	06 55 00.0
ES	55 22.0
GUA E(P)	06 56 53.0
COL EP	06 59 06.0
DEC 17	
UKI EP	09 14 13.0
DEC 17	
H-10 19 10.0	
06.5S 146.8E	
h ABOUT 033KM	
COL EP	10 31 44.5
FUR E(P)	10 32 52.4
DEC 17	
H-10 58 12.0	
36.7N 071.2E	
h ABOUT 203KM	
COL EP	11 09 28.0
DEC 17	
FGU EP	12 47 25.1
ES	47 59.3

Date and Station	Phase (GCT)
	h m s
DEC 17	
TUC E(P)	13 01 23.0
DEC 17	
FGU E(P)	13 34 45.3
ES	35 23.3
DEC 17	
H-13 52 30.5	
45.6N 151.7E	
h ABOUT 033KM	
COL EP	13 59 44.0
BOZ EP	14 02 58.0
EUR EP	14 03 07.5
DEC 17	
BUT EP	14 53 28.1
ES	53 51.1
DEC 17	
BUT EP	14 57 12.1
IS	57 32.1
DEC 17	
COL IP	15 18 50.7
DEC 17	
SLC EP	15 19 28.9
DEC 17	
COL EP	15 40 50.0
DEC 17	
SLC E(P)	17 32 03.4
ES	32 43.9
DEC 17	
COL EP	18 32 04.0
DEC 17	
FGU EP	18 53 45.7
ES	54 06.6
DEC 17	
COL EP	18 59 47.0
DEC 17	
COL FP	19 35 53.0
DEC 17	
COL EP	20 08 41.0
DEC 17	
COL EP	20 35 03.0
DEC 17	
TUC IP	21 56 04.0
DEC 17	
FGU IP	22 28 38.2
IS	28 58.1
DEC 17	
SLC E(P)	22 49 20.5
F	49 43.5
DEC 17	
EUR EP	22 50 44.8
ES	51 16.3

Date and Station	Phase (GCT)
	h m s
DEC 17	
TUC IP	22 55 50.5
DEC 17	
H-23 22 11.2	
52.9N 165.4W	
h ABOUT 033KM	
COL EP	23 25 40.0
BOZ EP	23 29 04.0
EUR IP	23 29 11.7
F	29 23.9
I	29 56.7
BCN EP	23 29 36.4
FGU IP	23 29 37.4
GCA IP	23 29 47.5
TUC EP	23 30 16.5
IpP	30 28.5
ALQ EP	23 30 23.0
DEC 17	
ALQ IP	23 26 31.5
I	26 33.8
DEC 17	
EUR EP	23 35 52.4
DEC 18	
H-00 30 02.6	
24.8S 176.6W	
h ABOUT 046KM	
HON IP	00 38 48.6
I	39 27.0
EPP	40 49.0
ES	45 58.0
IsS	46 40.0
E	47 48.0
I	48 42.0
ISS	49 39.0
IsSS	50 25.0
KIP IP	00 38 49.0
I	39 27.0
IS	45 57.0
I	48 40.0
GUA EP	00 39 22.0
E	44 27.1
E	46 42.6
E	49 06.2
UKI EP	00 42 14.6
I	42 47.4
EPP	43 29.0
EPPP	47 15.0
ES	52 21.0
E	53 09.0
P'P'	01 09 02.0
ESKPP'	12 23.0

Date and Station	Phase	Phase (GCT) h m s
BCN	IP D	00 42 30.5
	E	43 08.5
	EPP	45 47.1
	ES	52 25.8
	ESP	53 41.3
	ESS	57 59.8
	EsSS	59 22.8
	EPKKP	01 00 45.8
	EP'P'	08 55.3
	E	09 26.8
	E	12 04.8
	P'P'P'	29 16.8
	pP'P'P	29 59.8
TUC	IP D	00 42 33.6
	E(SCS)	53 47.0
	EPKKP	01 00 44.0
EUR	IP	00 42 35.8
	EPKKP	01 01 00.3
GCA	IP	00 42 44.0
SIT	EP	00 42 52.0
	IS	53 20.0
SLC	IP	00 42 52.5
	I	43 55.5
	IPP	46 33.0
ALQ	IP	00 42 54.0
FGU	IP	00 43 00.2
BUT	EP	00 43 01.1
	E(S)	52 58.0
BOZ	EP	00 43 05.0
	E(S)	53 08.0
HHM	EP	00 43 05.1
COL	EP	00 43 06.0
	ES	53 34.0
BHP	IP	00 43 46.0
	IPP	47 56.0
SJP	E(P)	00 44 48.0
	EP'	48 41.0
	EpP'	49 19.0
	EPP	49 46.0
	ESKS	55 20.0
	ESKKS	56 12.0
	ES	57 27.0
	IPKKP	59 14.5
	ESP	59 23.0
DEC 18		
EUR	IP	00 56 27.7
	ES	56 44.9
DEC 18		
FGU	I(P)	01 00 30.8
	I	08 43.1
DEC 18		
COL	EP	01 28 07.0
DEC 18		
H-02 50 31.0		
45.5N 151.3E		
h ABOUT 033KM		
COL	IP	02 57 46.2
HHM	EP	03 00 39.6
BOZ	IP	03 00 59.0
	IpP	01 13.0
EUR	IP	03 01 09.0
	I	02 08.5
SLC	EP	03 01 18.7
FGU	E(P)	03 01 26.9
BCN	EP	03 01 27.8
	EpP	01 39.0
GCA	EP	03 01 35.8
TUC	EP	03 01 57.0
ALQ	E(P)	03 02 02.0
DEC 18		
EUR	EP	02 57 22.1
DEC 18		
BUT	E(P)	03 00 40.0
DEC 18		
H-03 09 05.5		
45.8N 151.7E		
h ABOUT 045KM		
COL	EP	03 16 17.0
BOZ	EP	03 19 30.5
	EpP	19 43.0
EUR	IP	03 19 39.5
	IpP	19 53.1
DEC 18		
BUT	E(P)	04 51 34.0
	ES	51 54.0
DEC 18		
H-06 38 30.1		
18.7S 179.1W		
h ABOUT 300KM		
COL	I(P)	06 50 54.1
DEC 18		
H-06 40 05.9		
41.7N 082.5E		
h ABOUT 033KM		
BOZ	EP	06 53 13.0
EUR	IP	06 53 38.1
DEC 18		
ALQ	E(P)	06 58 19.0
DEC 18		
EUR	E(P)	07 10 20.9
GUA	EP	07 21 09.2
	E	21 25.5
DEC 18		
COL	EP	07 32 22.0
DEC 18		
EUR	E(P)	08 02 44.6
	I	02 57.3
DEC 18		
EUR	E(P)	08 23 17.2
DEC 18		
EUR	EP	08 40 21.7
DEC 18		
EUR	EP	08 45 29.7
DEC 18		
COL	EP	08 53 42.0
DEC 18		
TUC	E(P)	09 46 04.0
DEC 18		
H-10 06 51.0		
43.7N 126.9W		
h ABOUT 033KM		
EUR	E(P)	10 09 11.9
BOZ	EP	10 09 29.5
DEC 18		
COL	EP	10 08 28.0
DEC 18		
EUR	E(P)	10 54 12.5
DEC 18		
EUR	EP	11 09 54.3
DEC 18		
EUR	E(P)	11 31 40.6
DEC 18		
BOZ	IP	11 35 11.5
BUT	EP	11 35 22.0
	IS	35 33.0
DEC 18		
BCN	E(P)	11 47 52.3
	EL	48 26.0
EUR	EP	11 48 27.2
DEC 18		
H-12 21 50.1		
29.9S 177.2W		
h ABOUT 130KM		
TUC	E(P)	12 34 24.0
EUR	E(P)	12 34 32.7
COL	EP	12 35 07.0
DEC 18		
COL	EP	13 55 03.0
DEC 18		
EUR	EP	14 36 39.7
DEC 18		
EUR	EP	15 39 43.1
	ES	40 08.3
DEC 18		
COL	EP	16 13 55.0
DEC 18		
COL	EP	16 13 55.0
DEC 18		
COL	EP	16 19 46.0
DEC 18		
COL	EP	17 28 18.0
DEC 18		
GCA	EP	18 06 46.2
	IS	07 29.6
DEC 18		
EUR	EP	18 11 55.9
	ES	12 15.1
DEC 18		
BHP	IP	18 18 22.0
	IS	19 04.0
DEC 18		
H-18 13 15.8		
37.2N 140.7E		
h ABOUT 059KM		
EUR	EP	18 24 59.3
	E(pP)	25 11.5
FGU	E(P)	18 25 18.5
DEC 18		
GCA	EP	19 29 25.3
	E(S)	29 39.8
DEC 18		
H-19 30 06.1		
46.2N 151.5E		
h ABOUT 033KM		
EUR	EP	19 40 40.5
DEC 18		
ALQ	E(P)	20 03 18.0
DEC 18		
COL	EP	20 46 38.0
DEC 18		
BCN	E(P)	21 10 59.3
	EL	11 36.0
DEC 18		
BCN	E(P)	21 11 54.9
	IL	12 26.0
DEC 18		
EUR	E(P)	21 24 16.2
DEC 18		
EUR	E(P)	21 26 40.7
	E	27 29.8
SLC	E(P)	21 27 16.4
DEC 18		
TUC	EP	21 47 50.0
DEC 18		
TUC	IP	21 58 19.0

Date and Station	Phase (GCT)
	h m s
DEC 18	
FGU EP	22 04 08.9
IS	04 28.6
DEC 18	
EUR EP	22 20 17.3
ES	20 57.5
DEC 18	
FGU IP	22 40 55.6
DEC 18	
TUC IP	22 53 50.6
DEC 18	
TUC E(P)	23 34 50.0
DEC 18	
BCN E(P)	23 46 44.7
EL	47 17.0
EUR E(P)	23 46 59.5
DEC 19	
SJP EP	01 24 46.0
DEC 19	
EUR E(P)	01 37 03.7
DEC 19	
EUR EP	02 34 15.5
ES	34 38.3
DEC 19	
EUR EP	02 50 48.6
ES	51 07.8
DEC 19	
BOZ IP	04 19 58.2
DEC 19	
H-04 34 51.5	
33.1S 068.7W	
h ABOUT 045KM	
ALQ E(P)	04 46 38.0
EUR EP	04 47 21.3
DEC 19	
FGU IP	08 08 02.6
IS	08 24.1
GCA EP	08 08 12.5
EUR EP	08 08 36.7
DEC 19	
BCN E(P)	08 27 41.3
DEC 19	
BOZ EP	09 06 34.0
DEC 19	
BOZ EP	09 15 49.0
E	16 56.0
DEC 19	
TUC E(P)	09 27 43.0
E	28 51.0
DEC 19	
EUR E(P)	11 28 12.2
FGU E(P)	11 28 30.0
DEC 19	
EUR E(P)	11 43 31.7
DEC 19	
COL EP	12 32 34.0
DEC 19	
TUC EP	13 05 02.6
ALQ E(P)	13 05 08.0
DEC 19	
BOZ EP	13 10 45.1
ES	11 19.0
FGU IP	13 10 53.0
IS	11 27.5
EUR E(P)	13 11 26.6
DEC 19	
TUC EP	14 12 03.0
EUR IP	14 13 17.8
DEC 19	
COL EP	14 49 51.0
DEC 19	
H-14 54 43.6	
8.3S 080.8W	
h ABOUT 033KM	
FGU E(P)	15 04 19.2
DEC 19	
ALQ E(P)	16 06 11.0
DEC 19	
FGU IP	16 16 24.5
BOZ EP	16 16 32.8
E	17 13.0
EUR E(P)	16 16 41.3
SLC E(P)	16 16 47.7
HHM E(P)	16 17 49.0
COL EP	16 21 43.0
DEC 19	
EUR E(P)	16 18 02.3
DEC 19	
EUR E	16 45 36.1
DEC 19	
ALQ IP	16 48 02.0
I	48 25.0
I	49 00.0
EUR E(P)	16 48 40.7
DEC 19	
TUC E(P)	16 49 22.0
FGU E(P)	16 51 14.3
DEC 19	
H-17 04 07.8	
09.7S 079.1W	
h ABOUT 056KM	
BHP IP	17 08 25.0
SJP EP	17 10 20.0
CSC EP	17 12 06.0
TUC IP	17 13 10.2
GCA IP	17 13 40.0
BCN EP	17 13 46.0
E▸P	14 00.8
EP'P'	43 47.0
FGU IP	17 13 54.2
I	14 10.0
RCD IP	17 13 57.0
E	14 06.0
SLC IP	17 14 00.7
EUR IP	17 14 08.8
EP'P'	43 45.4
BOZ IP	17 14 26.0
I▸P	14 41.0
BUT EP	17 14 29.4
HHM IP	17 14 47.4
HON E(P)	17 16 40.0
E	28 08.0
E	32 10.0
E	42 18.0
DEC 19	
ALQ IP	17 28 09.5
I	28 20.0
DEC 19	
COL IP	17 32 01.5
DEC 19	
EUR E(P)	17 51 26.5
DEC 19	
EUR E(P)	17 53 43.1
DEC 19	
H-18 43 38.3	
35.6N 025.7E	
h ABOUT 033KM	
HHM EP	18 56 31.6
DEC 19	
COL EP	19 19 09.0
DEC 19	
EUR EP	19 41 22.3
DEC 19	
SJP EP	19 51 56.4
DEC 19	
H-20 33 50.1	
35.2S 068.0W	
h ABOUT 032KM	
ALQ EP	20 45 45.0
I	46 00.0
TUC E(P)	20 45 47.0
GCA EP	20 46 10.8
BCN EP	20 46 14.4
FGU EP.	20 46 22.1
I	46 23.4
RCD E(P)	20 46 25.0
EUR IP	20 46 30.9
EPCP	46 33.9
BOZ EP	20 46 45.0
E	47 02.0
BUT EP	20 46 48.8
DEC 19	
EUR EP	20 54 05.9
DEC 19	
H-22 34 59.8	
52.0N 170.8W	
h ABOUT 033KM	
COL IP	22 39 03.0
BOZ EP	22 42 21.0
I▸P	42 33.0
EPCP	44 33.0
EUR IP	22 42 27.8
I▸P	42 39.7
BCN EP	22 42 51.9
E▸P	43 04.0
FGU EP	22 42 53.5
GCA E(P)	22 43 03.3
TUC EP	22 43 30.5
ALQ E(P)	22 43 34.0
SJP EP	22 47 30.5
DEC 19	
RCD E(P)	22 43 26.0
DEC 19	
TUC E(P)	22 52 53.0
DEC 19	
FGU EP	23 05 16.7
E(S)	05 46.2
DEC 20	
COL EP	00 12 11.0
DEC 20	
H-00 23 50.2	
8.6S 160.4E	
h ABOUT 069KM	

Date and Station	Phase	Time (GCT) h m s
GUA	E(P)	00 29 28.6
COL	IP	00 36 06.5
EUR	IP	00 36 46.8
	I	36 54.4
	E	37 24.1
	E(PP)	40 13.9
BCN	EP	00 36 47.8
	I	36 56.0
GCA	E(P)	00 37 01.0
TUC	EP	00 37 01.5
	E	37 09.0
BOZ	EP	00 37 06.0
	E	37 14.0
SLC	EP	00 37 01.8
	I	37 09.8
FGU	EP	00 37 10.0
ALQ	E(P)	00 37 23.0
HON	E(S)	00 40 05.0
	EL	47 10.0
DEC 20		
H-00 47 18.4		
45.5N 151.8E		
h ABOUT 040KM		
COL	EP	00 54 31.0
EUR	EP	00 57 54.0
	(pP)	58 07.2
BCN	E(P)	00 58 08.5
	E	58 25.5
DEC 20		
SJP	EP	01 21 18.7
	EL	21 35.5
DEC 20		
SJP	EP	01 33 15.5
	EL	33 33.5
DEC 20		
GUA	IP	01 45 49.0
	IS	46 03.0
DEC 20		
COL	IP	02 10 10.4
DEC 20		
TUC	E(P)	03 22 38.0
DEC 20		
H-04 09 15.1		
45.0N 147.4E		
h ABOUT 050KM		
COL	IP	04 16 48.0
EUR	IP	04 20 08.8
FGU	IP	04 20 25.9
BCN	EP	04 20 27.0
ALQ	IP	04 21 00.0
DEC 20		
H-04 52 32.6		
14.8S 173.4W		
h ABOUT 033KM		
KIP	EP	05 00 00.0
TUC	E(P)	05 04 19.0
	E	04 33.0
EUR	E(P)	05 04 32.8
COL	IP	05 04 51.6
DEC 20		
COL	EP	05 14 43.0
DEC 20		
EUR	E(P)	05 21 56.2
DEC 20		
EUR	E	07 29 27.2
DEC 20		
COL	EP	08 01 47.0
DEC 20		
H-08 57 17.8		
07.0S 129.3E		
h ABOUT 103KM		
HON	IP	09 09 01.0
KIP	IP	09 09 01.2
COL	EP	09 10 20.0
EUR	EP	09 12 00.0
	IP'	15 46.6
	E	18 36.4
	EPKKP	26 26.1
FGU	IP'	09 15 55.0
TUC	EP'	09 15 57.0
BOZ	EP'	09 15 490.
ALQ	EP'	09 16 01.0
SJP	EP'	09 17 07.5
	E	17 25.7
	I	17 52.7
DEC 20		
COL	EP	09 03 21.0
DEC 20		
SJP	EP	09 04 08.5
	EL	04 27.5
DEC 20		
EUR	I(P)	09 06 42.9
DEC 20		
BCN	EP	09 15 27.6
DEC 20		
COL	EP	09 27 23.0
DEC 20		
BCN	EP	10 28 34.4
	I(S)	29 04.4
	IL	29 09.5
TUC	E(P)	10 29 11.0
	E	29 29.0
EUR	EP	10 29 22.0
	I	30 09.8
	E(L)	30 44.5
GCA	E(P)	10 29 29.0
ALQ	E(P)	10 30 27.0
DEC 20		
H-10 48 04.2		
05.2S 080.8W		
h ABOUT 055KM		
SJP	EP	10 53 48.3
ALQ	IP	10 56 30.5
	IpP	56 40.0
TUC	IP	10 56 32.2
GCA	EP	10 57 03.0
FGU	IP	10 57 17.2
SLC	EP	10 57 24.8
EUR	IP	10 57 33.2
	IpP	57 42.7
BOZ	IP	10 57 50.3
	IpP	58 00.0
HHM	EP	10 58 13.1
COL	EP	11 00 35.0
DEC 20		
H-13 00 50.3		
44.9N 111.7W		
h ABOUT 033KM		
BOZ	IP	13 01 03.0
	IS	01 12.0
BUT	IP	13 01 13.5
HHM	IP	13 01 48.1
	IL	02 48.6
SLC	EP	13 01 52.8
	I	02 01.8
	IS	02 54.3
FGU	EP	13 01 54.9
	I	02 02.2
EUR	EP	13 02 18.5
	I	02 21.0
	EL	03 54.2
RCD	EP	13 02 22.0
	I	02 43.0
GCA	IP	13 02 47.5
	I	03 20.5
BCN	EP	13 03 05.1
	E	05 06.7
	EL	05 40.7
ALQ	E(P)	13 03 22.0
TUC	E(P)	13 03 57.0
	E	07 23.0
COL	EP	13 06 43.0
DEC 20		
BOZ	EP	15 46 00.0
EUR	E(P)	15 46 15.7
DEC 20		
H-15 49 44.9		
12.8S 066.0E		
h ABOUT 033KM		
BOZ	EP'	16 09 25.8
BUT	IP'	16 09 26.6
FGU	EP'	16 09 32.0
ALQ	EP'	16 09 40.0
EUR	EP'	16 09 42.8
	E(P')	09 56.2
	ESKP	13 32.0
DEC 20		
EUR	E(P)	15 51 27.3
DEC 20		
BOZ	E(P)	15 57 26.0
EUR	EP	15 57 43.3
DEC 20		
BOZ	EP	16 03 42.2
DEC 20		
BOZ	EP	16 05 54.8
DEC 20		
TUC	E(P)	16 10 25.0
DEC 20		
ALQ	E(P)	16 13 46.0
TUC	E(P)	16 14 07.0
DEC 20		
H-16 24 05.1		
12.7S 066.3E		
h ABOUT 033KM		
BOZ	EP'	16 43 45.2
FGU	EP'	16 43 58.0
EUR	EP'	16 44 01.7
	ESKP	47 50.1
	E	47 57.5
ALQ	E(P')	16 44 30.0
TUC	E(P')	16 44 46.0

Date and Station	Phase (GCT)
	h m s
DEC 20	
H-16 46 14.4	
12.6S 066.4E	
h ABOUT 033KM	
RCD EP'	17 05 56.0
FGU IP'	17 06 06.1
EUR IP'	17 06 10.5
ESKP	10 03.7
ALQ E(P')	17 06 34.0
DEC 20	
TUC E(P)	17 10 52.0
DEC 20	
BUT E(P)	17 14 34.0
DEC 20	
H-17 29 48.7	
51.8N 177.7W	
h ABOUT 033KM	
COL EP	17 34 22.0
TUC E(P)	17 38 51.0
DEC 20	
EUR IP	17 36 24.9
ES	36 46.7
DEC 20	
GCA E(P)	17 50 49.2
E(S)	51 15.9
DEC 20	
FGU E(P)	18 17 16.6
DEC 20	
EUR IP	18 40 24.1
DEC 20	
EUR E(P)	18 47 30.1
DEC 20	
FGU IP	19 02 34.9
IS	02 55.3
DEC 20	
ALQ E(P)	20 30 29.0
DEC 20	
H-21 11 52.8	
20.3S 174.8W	
h ABOUT 033KM	
EUR EP	21 24 05.6
COL EP	21 24 40.0
DEC 20	
H-21 48 46.7	
31.6N 141.8E	
h ABOUT 033KM	
COL EP	21 58 06.7
DEC 20	
TUC EP	21 56 01.5
DEC 20	
TUC IP	22 19 06.0

Date and Station	Phase (GCT)
	h m s
DEC 20	
GCA E(P)	22 21 19.2
ES	21 50.5
DEC 20	
FGU IP	22 28 26.5
DEC 20	
H-22 28 31.2	
13.2N 088.0W	
h ABOUT 064KM	
FGU E(P)	22 35 06.2
DEC 20	
GCA I(P)	22 39 51.5
DEC 21	
H-00 29 30.5	
7.3S 155.1E	
h ABOUT 133KM	
COL EP	00 41 44.0
EUR EP	00 42 37.0
DEC 21	
UKI IP	01 39 00.0
ES	39 15.0
EUR EP	01 40 11.6
E	41 50.1
DEC 21	
COL IP	02 03 06.6
DEC 21	
TUC E(P)	02 24 04.0
DEC 21	
GUA EP	02 25 50.1
E	28 39.9
DEC 21	
H-03 02 21.9	
39.2N 114.3W	
h ABOUT 033KM	
EUR IP	03 02 44.7
E(S)	03 03.1
BCN E(P)	03 03 10.1
EL	03 54.6
GCA EP	03 03 12.2
ES	03 47.5
DEC 21	
COL EP	03 12 05.0
DEC 21	
SJP EP	03 28 44.4
DEC 21	
COL EP	03 31 11.0
DEC 21	
H-04 13 12.7	
18.0S 178.3W	
h ABOUT 595KM	
EUR IP	04 24 30.9
TUC EP	04 24 32.5

Date and Station	Phase (GCT)
	h m s
DEC 21	
H-04 50 39.7	
33.8N 051.5E	
h ABOUT 051KM	
COL EP	05 02 46.0
DEC 21	
TUC E(P)	05 11 22.0
DEC 21	
TUC EP	05 48 42.0
DEC 21	
BOZ EP	07 15 12.0
DEC 21	
EUR E(P)	07 56 43.2
DEC 21	
FGU EP	09 09 34.1
EUR E(P)	09 10 08.3
DEC 21	
COL IP	10 16 02.3
DEC 21	
HHM EP	11 47 05.3
I	48 39.8
DEC 21	
COL EP	12 15 03.0
DEC 21	
HHM EP	12 22 52.8
DEC 21	
H-12 34 22.7	
21.2S 175.8W	
h ABOUT 090KM	
KIP IP	12 42 36.0
I▸P	42 58.0
GUA IP	12 43 23.8
I▸P	43 49.0
BCN EP	12 46 28.6
E▸P	46 53.0
TUC IP	12 46 34.0
EUR IP	12 46 35.7
I▸P	47 00.8
E	47 21.1
GCA IP	12 46 44.3
SLC EP	12 46 52.8
ALQ EP	12 46 55.0
I(▸P)	47 22.0
FGU IP	12 47 00.5
I▸P	47 25.7
BUT EP	12 47 03.7
E▸P	47 28.7
COL IP	12 47 04.9
BOZ EP	12 47 05.2
E▸P	47 27.0

Date and Station	Phase (GCT)
	h m s
DEC 21	
ALQ E(P)	12 38 53.0
DEC 21	
EUR EP	13 05 04.2
TUC E(P)	13 05 06.0
DEC 21	
H-13 09 09.6	
16.1N 119.7E	
h ABOUT 049KM	
GUA EP	13 14 26.0
COL IP	13 20 56.6
HON IP	13 21 02.5
E(S)	31 00.0
E	36 10.0
EL	44 11.0
EUR EP	13 23 14.0
EP'	26 56.2
IPP	27 26.9
E	27 44.1
EPKKP	39 19.4
E	39 31.2
FGU E(P)	13 23 25.7
BOZ E(P')	13 27 20.0
GCA EP'	13 27 41.7
TUC EP'	13 27 44.0
E	28 21.0
E(PKKP)	38 41.0
BCN EP'	13 27 44.9
DEC 21	
H-16 10 20.8	
45.7N 151.1E	
h ABOUT 040KM	
COL EP	16 17 33.0
EUR I(P)	16 21 08.9
I	21 14.4
DEC 21	
H-16 23 17.9	
32.5N 141.0E	
h ABOUT 033KM	
GUA EP	16 27 41.2
COL E(P)	16 32 36.7
BOZ EP	16 35 16.0
EUR EP	16 35 20.3
BCN E(P)	16 35 22.2
E(▸P)	35 34.7
BCN EP	16 35 34.7
FGU EP	16 35 38.8

Date and Station	Phase	(GCT) h m s
DEC 21		
TUC	E(P)	17 25 21.0
	E	25 37.0
	E(S)	26 36.0
BCN	E(P)	17 26 13.6
	EL	27 48.0
EUR	E(P)	17 26 55.4
DEC 21		
COL	EP	18 17 10.0
DEC 21		
EUR	E(P)	18 36 48.4
FGU	EP	18 37 53.4
DEC 21		
COL	EP	18 58 33.0
DEC 21		
BHP	IP	18 59 23.0
	IS	19 00 02.0
DEC 21		
GUA	IP	19 45 14.8
	IS	45 33.6
DEC 21		
TUC	IP	21 51 55.8
DEC 21		
H-22 04 09.5		
23.4S 178.8W		
h ABOUT 112KM		
COL	EP	22 17 04.0
SJP	E(P')	22 22 57.6
	E	23 38.5
DEC 21		
TUC	IP	22 54 26.2
DEC 22		
EUR	E(P)	00 29 52.0
DEC 22		
H-01 20 11.0		
14.3N 093.0W		
h ABOUT 033KM		
ALQ	E(P)	01 25 21.0
TUC	EP	01 25 27.3
FGU	IP	01 26 20.5
EUR	EP	01 26 37.9
HHM	EP	01 27 30.0
COL	EP	01 30 32.0
DEC 22		
H-01 31 35.7		
27.9S 067.2W		
h ABOUT 168KM		
EUR	EP	01 43 34.2
DEC 22		
H-02 50 29.8		
44.4N 114.6W		
h ABOUT 033KM		
BUT	EP	02 51 03.9
	E	51 08.9
	I(S)	51 29.9
BOZ	EP	02 51 08.9
	E	51 13.1
	IL	51 42.0
HHM	E(P)	02 51 35.0
	E(S)	52 08.0
EUR	EP	02 51 40.1
	ES	52 40.7
FGU	E(P)	02 51 47.0
DEC 22		
H-02 54 08.2		
48.5N 119.9W		
h ABOUT 033KM		
HHM	E(P)	02 55 08.0
	ES	55 48.0
BOZ	EP	02 55 41.0
EUR	E(P)	02 56 27.9
FGU	E(P)	02 56 34.0
DEC 22		
TUC	E(P)	02 55 27.0
ALQ	E(P)	02 55 29.0
DEC 22		
BUT	E(P)	02 56 24.0
	E	56 34.0
DEC 22		
H-03 56 15.9		
32.3S 069.2W		
h ABOUT 033KM		
ALQ	E(P)	04 07 59.0
EUR	EP	04 08 43.8
DEC 22		
COL	EP	03 56 50.0
DEC 22		
H-05 44 39.2		
44.4N 114.5W		
h ABOUT 033KM		
BUT	EP	05 45 12.0
	E	45 16.9
	I(S)	45 38.9
BOZ	EP	05 45 17.5
	I	45 21.5
	IL	45 55.0
HHM	E(P)	05 45 42.0
	E(L)	46 53.0
EUR	EP	05 45 52.9
	E(S)	46 55.6
FGU	E(P)	05 45 56.1
	E	47 13.6
DEC 22		
COL	EP	05 47 03.0
DEC 22		
H-05 56 29.5		
35.1S 067.9W		
h ABOUT 033KM		
ALQ	E(P)	06 08 28.0
TUC	E(P)	06 08 30.0
GCA	E(P)	06 08 48.7
EUR	IP	06 09 10.8
	I	09 14.8
	E	09 52.3
DEC 22		
EUR	E(P)	07 10 14.9
	E	11 06.5
TUC	E(P)	07 11 53.0
DEC 22		
EUR	EP	07 24 52.7
DEC 22		
TUC	E(P)	08 14 32.0
	E	14 44.0
DEC 22		
SJP	EP	08 25 08.0
DEC 22		
COL	EP	08 42 35.0
DEC 22		
EUR	EP	09 16 52.2
DEC 22		
EUR	E(P)	10 55 16.6
DEC 22		
H-11 57 27.4		
6.1S 146.9E		
h ABOUT 102KM		
COL	EP	12 09 53.0
EUR	EP	12 11 04.3
SJP	EP'	12 16 56.2
	E▸P'	17 26.0
DEC 22		
BCN	EP	16 22 20.8
	E	23 11.6
	E	24 20.1
DEC 22		
H-16 43 13.4		
39.3N 114.3W		
h ABOUT 033KM		
EUR	EP	16 43 36.2
	ES	43 55.2
GCA	E(P)	16 44 04.5
BCN	E(P)	16 44 10.1
	EL	44 50.1
DEC 22		
COL	EP	17 05 25.0
DEC 22		
COL	EP	17 19 03.0
DEC 22		
ALQ	E(P)	17 42 28.0
DEC 22		
H-18 00 32.2		
44.6N 149.4E		
h ABOUT 065KM		
COL	IP	18 07 56.8
EUR	IP	18 11 17.5
	E▸P	11 34.1
DEC 22		
TUC	E(P)	18 01 04.0
DEC 22		
EUR	EP	18 59 11.6
ALQ	E(P)	18 59 31.0
DEC 22		
COL	EP	19 55 03.0
DEC 22		
H-20 10 29.6		
45.3N 151.2E		
h ABOUT 045KM		
COL	IP	20 17 46.3
EUR	EP	20 21 06.2
DEC 22		
EUR	EP	22 23 07.2
	ES	23 45.0
DEC 22		
COL	IP	23 09 48.1
DEC 22		
H-23 13 55.2		
06.9N 073.0W		
h ABOUT 153KM		
BHP	IP	23 15 31.0
SJP	EP	23 16 57.5
	I	19 17.5
ALQ	IP	23 21 30.0
TUC	IP	23 21 43.8
GCA	IP	23 22 07.2
FGU	IP	23 22 12.4
BCN	IP	23 22 20.8
	E▸P	23 11.8
	EPP	24 20.8
EUR	IP	23 22 38.2
BUT	IP	23 22 48.8

Date and Station	Phase (GCT)
	h m s
COL IP	23 25 34.5
DEC 22	
TUC EP	23 27 08.0
DEC 22	
COL IP	23 47 54.1
DEC 23	
H-00 15 02.0	
44.3N 114.7W	
h ABOUT 033KM	
BUT IP	00 15 38.0
IL	16 12.0
BOZ EP	00 15 42.0
IL	16 20.0
HHM EP	00 16 03.5
I	17 02.0
SLC E(P)	00 16 07.1
E	16 13.1
E(L)	17 06.0
EUR IP	00 16 15.4
EL	17 25.9
FGU EP	00 16 18.9
I	16 28.9
IL	17 25.4
BCN E(P)	00 17 04.1
EL	19 18.3
GCA E(P)	00 17 04.5
DEC 23	
COL IP	00 22 37.1
DEC 23	
BUT IP	00 23 11.9
ES	23 36.9
EUR EP	00 23 50.1
DEC 23	
H-00 28 59.1	
44.2N 114.4W	
h ABOUT 033KM	
BUT EP	00 29 32.9
I	29 35.9
HHM EP	00 30 04.0
E(S)	30 47.0
EUR EP	00 30 10.9
E	30 30.2
FGU E(P)	00 30 23.9
DEC 23	
BOZ EP	00 38 13.0
E(S)	38 49.0
DEC 23	
BOZ EP	00 44 37.0
E(S)	45 04.0
DEC 23	
COL EP	01 52 45.0

Date and Station	Phase (GCT)
	h m s
DEC 23	
EUR IP	02 29 33.7
ES	29 52.8
DEC 23	
GCA E(P)	03 38 32.8
DEC 23	
COL IP	04 45 16.0
DEC 23	
TUC E(P)	08 35 24.0
DEC 23	
FGU E(P)	08 44 33.0
ES	44 53.0
COL EP	08 47 56.0
DEC 23	
COL EP	09 29 20.0
DEC 23	
COL IP	09 39 09.6
DEC 23	
COL EP	10 30 35.0
DEC 23	
EUR IP	11 02 50.6
ES	03 10.0
DEC 23	
BUT E(P)	11 07 04.0
ES	07 33.0
BOZ EP	11 07 04.0
EUR EP	11 07 38.2
IS	08 48.8
DEC 23	
TUC E(P)	12 45 45.0
DEC 23	
FGU IP	12 52 29.0
DEC 23	
EUR EP	13 06 43.7
ES	47 31.0
DEC 23	
COL EP	13 26 56.0
DEC 23	
H-13 42 23.3	
43.8N 150.5E	
h ABOUT 033KM	
COL IP	13 49 51.5
EUR IP	13 53 10.6
E(▸P)	53 24.0
BCN EP	13 53 28.8
ALQ E(P)	13 54 02.0
DEC 23	
FGU E(P)	13 53 52.8
DEC 23	
COL EP	16 00 49.0

Date and Station	Phase (GCT)
	h m s
DEC 23	
H-16 24 46.2	
24.5N 121.8E	
h ABOUT 130KM	
COL EP	16 35 35.0
DEC 23	
GUA EP	16 52 18.1
DEC 23	
BOZ E(P)	17 04 50.0
EUR EP	17 05 23.3
DEC 23	
H-17 58 40.8	
25.8S 177.8W	
h ABOUT 140KM	
TUC IP	18 11 07.0
E▸P	11 43.0
EUR IP	18 11 10.3
E▸P	11 45.5
ALQ E(P)	18 11 26.0
COL IP	18 11 40.0
DEC 23	
TUC E(P)	18 35 29.0
E	35 52.0
DEC 23	
H-18 39 46.6	
44.1N 149.4E	
h ABOUT 065KM	
COL EP	18 47 15.0
EUR IP	18 50 33.8
E(PCP)	51 15.9
FGU EP	18 50 51.5
BCN EP	18 50 52.4
E▸P	51 09.4
TUC E(P)	18 51 20.0
ALQ E(P)	18 51 25.0
DEC 23	
HHM E(P)	19 19 41.0
ES	20 17.0
DEC 23	
EUR EP	21 23 47.4
E	24 10.1
DEC 23	
FGU EP	22 14 45.1
IS	15 04.1
DEC 23	
EUR EP	22 17 51.9
E	18 04.1
E	18 45.4
DEC 23	
H-22 34 22.1	
12.3N 072.8W	
h ABOUT 033KM	

Date and Station	Phase (GCT)
	h m s
BHP IP	22 36 07.0
IS	37 17.0
SJP EP	22 36 27.5
IL	38 06.5
ALQ E(P)	22 41 39.0
TUC EP	22 41 56.0
BCN E(P)	22 42 20.1
EUR EP	22 42 50.9
E	43 07.6
COL EP	22 45 48.0
DEC 23	
TUC IP	23 10 26.8
DEC 23	
BOZ IP	23 19 10.1
I(L)	19 25.0
BUT IP	23 19 15.9
HHM EP	23 20 00.2
I(S)	20 34.0
FGU EP	23 20 22.8
DEC 24	
BUT EP	00 07 06.9
ES	07 47.9
DEC 24	
EUR IP	00 32 25.6
IS	32 44.7
DEC 24	
H-01 14 06.5	
46.4N 152.2E	
h ABOUT 040KM	
COL IP	01 21 12.0
EUR E(P)	01 24 48.9
DEC 24	
TUC E(P)	01 25 43.0
FGU EP	01 26 28.9
DEC 24	
H-01 50 58.1	
44.8N 111.5W	
h ABOUT 020KM	
BOZ EP	01 51 13.1
IL	51 28.0
BUT IP	01 51 27.0
ES	51 46.9
FGU E(P)	01 52 01.4
HHM E(P)	01 52 10.2
E(S)	53 11.0
EUR EP	01 52 32.6
DEC 24	
COL IP	02 12 48.0

Date and Station	Phase	(GCT)
		h m s
DEC 24		
H-02 17 08.7		
51.7N 177.1W		
h ABOUT 033KM		
COL	EP	02 21 41.0
EUR	IP	02 25 09.5
DEC 24		
H-02 26 01.4		
45.2N 151.4E		
h ABOUT 050KM		
COL	IP	02 33 17.2
EUR	EP	02 36 38.5
	E▸P	36 52.9
BCN	EP	02 36 57.5
	E▸P	37 11.0
ALQ	E(P)	02 37 43.0
DEC 24		
H-02 40 42.6		
6.6S 085.1W		
h ABOUT 033KM		
ALQ	E(P)	02 49 04.0
BCN	E(P)	02 49 43.2
FGU	IP	02 49 52.9
EUR	IP	02 50 06.8
DEC 24		
H-02 42 31.0		
45.1N 151.2E		
h ABOUT 045KM		
COL	IP	02 49 48.5
EUR	IP	02 53 10.9
DEC 24		
H-03 00 57.3		
45.4N 151.3E		
h ABOUT 050KM		
COL	IP	03 08 12.4
HHM	EP	03 11 04.2
EUR	IP	03 11 34.3
	E▸P	11 47.6
BCN	EP	03 11 57.1
	E▸P	12 11.1
GCA	E(P)	03 12 06.5
TUC	E(P)	03 12 36.5
ALQ	E(P)	03 12 41.0
DEC 24		
H-03 27 23.9		
45.5N 151.5E		
h ABOUT 045KM		
COL	IP	03 34 38.0

Date and Station	Phase	(GCT)
		h m s
BOZ	EP	03 37 49.0
	(▸P)	38 04.0
EUR	IP	03 38 01.0
	I▸P	38 14.6
BCN	EP	03 38 20.0
	E▸P	38 33.0
FGU	E(P)	03 38 21.5
TUC	E(P)	03 39 01.0
DEC 24		
COL	EP	05 08 02.0
EUR	E(P)	05 11 39.2
DEC 24		
EUR	EP	09 30 22.4
DEC 24		
FGU	EP	10 19 49.7
	I	19 52.3
	IS	20 17.8
DEC 24		
H-10 38 23.3		
55.9N 161.0E		
h ABOUT 110KM		
COL	EP	10 43 49.0
EUR	EP	10 47 44.9
	E▸P	48 09.9
DEC 24		
BCN	IP	11 14 44.4
	ES	15 11.9
EUR	EP	11 15 25.8
	E(S)	16 46.1
DEC 24		
H-11 18 15.2		
13.1S 166.7E		
h ABOUT 061KM		
KIP	EP	11 27 12.0
COL	EP	11 30 44.0
BCN	EP	11 31 03.3
	E(▸P)	31 16.6
	E(sP)	31 24.8
	E	32 06.8
	E	32 14.8
EUR	IP	11 31 04.0
	E▸P	31 17.4
	sP	31 26.5
	E(PP)	34 31.7
	sPP	34 53.4
	E(PKKP	48 31.7
TUC	EP	11 31 14.5
	EPKKP	48 41.0
	E	48 53.0
FGU	E(P)	11 31 24.5
BOZ	E(P)	11 31 27.0
	EPKKP	48 28.0

Date and Station	Phase	(GCT)
		h m s
ALQ	E(P)	11 31 31.0
DEC 24		
H-12 55 46.4		
36.2N 139.7E		
h ABOUT 070KM		
COL	EP	13 04 39.1
BOZ	EP	13 07 29.2
	E▸P	07 42.0
EUR	IP	13 07 36.5
	E(▸P)	07 49.5
BCN	E(P)	13 07 51.9
	E▸P	08 04.4
TUC	IP	13 08 17.2
ALQ	E(P)	13 08 21.0
DEC 24		
BUT	EP	13 03 07.0
	ES	03 28.0
DEC 24		
FGU	EP	13 29 45.5
	IS	30 20.0
DEC 24		
H-14 51 08.0		
39.5N 110.2W		
h ABOUT 000KM		
FGU	IP	14 51 37.0
	IS	51 58.2
SLC	IP	14 51 39.4
GCA	IP	14 51 55.7
EUR	EP	14 52 17.0
	I	52 27.5
	I	52 31.0
	E	34 03.6
ALQ	E(P)	14 52 33.0
DEC 24		
TUC	EP	14 53 20.3
	E	54 54.0
DEC 24		
ALQ	E(P)	17 30 30.0
DEC 24		
H-17 54 19.7		
44.8N 111.1W		
h ABOUT 033KM		
BOZ	IP	17 54 34.1
	I(S)	54 48.0
BUT	IP	17 54 46.0
SLC	EP	17 55 20.9
FGU	FP	17 55 22.2
HHM	EP	17 55 22.2
	IL	56 26.2

Date and Station	Phase	(GCT)
		h m s
EUR	EP	17 55 58.1
	E(L)	57 38.6
DEC 24		
RCD	E(P)	18 14 19.0
DEC 24		
BCN	EP	18 36 43.3
	ES	36 56.8
DEC 24		
EUR	E(P)	18 38 11.0
	I	38 18.0
DEC 24		
SJP	EP	18 53 05.5
	ES	53 36.4
	IL	54 51.4
DEC 24		
H-19 01 11.7		
6.6S 146.8E		
h ABOUT 053KM		
COL	EP	19 13 45.0
GCA	E(P)	19 04 32.8
DEC 24		
BUT	IP	19 16 20.0
	ES	16 39.0
DEC 24		
COL	EP	19 17 39.0
DEC 24		
FGU	IP	19 40 36.7
DEC 24		
H-21 05 54.6		
53.0S 159.5E		
h ABOUT 033KM		
KIP	IP	21 18 18.4
EUR	EP'	21 24 36.9
BOZ	EP'	21 24 48.0
COL	EP'	21 24 49.0
DEC 24		
COL	IP	21 09 13.2
DEC 24		
EUR	EP	21 30 31.4
DEC 24		
FGU	EP	21 52 00.1
	ES	52 19.1
DEC 24		
FGU	E(P)	22 33 35.1
	ES	33 52.8
DEC 24		
COL	EP	22 36 05.0
DEC 24		
EUR	FP	22 40 57.2
DEC 24		
BCN	EP	23 07 11.2
	ES	07 22.9

Date and Station	Phase (GCT)
	h m s
COL IP	23 10 12.9
DEC 24	
COL IP	23 10 20.5
DEC 25	
BCN E(P)	00 30 25.5
DEC 25	
H-00 44 01.9	
52.3N 158.7E	
h ABOUT 080KM	
EUR IP	00 53 45.6
I	53 52.9
I(pP)	54 05.0
FGU EP	00 54 02.7
BCN EP	00 54 05.2
GCA EP	00 54 13.5
ALQ E(P)	00 54 42.0
DEC 25	
BHP IP C	00 55 44.0
IS	56 29.0
DEC 25	
FGU EP	01 28 57.7
IS	29 31.7
DEC 25	
EUR EP	01 45 07.5
ES	45 24.6
DEC 25	
EUR EP	01 59 10.8
ES	59 29.3
DEC 25	
BHP IP	04 02 38.5
IS	02 56.0
DEC 25	
H-05 20 21.0	
17.7S 178.6W	
h ABOUT 523KM	
TUC E(P)	05 30 47.0
EUR EP	05 31 44.3
DEC 25	
H-05 59 39.5	
47.2N 149.0E	
h ABOUT 290KM	
COL IP	06 06 27.3
TUC E(P)	06 09 42.0
EUR IP	06 09 53.1
IpP	11 00.1
DEC 25	
COL EP	08 01 15.0
DEC 25	
H-09 00 02.7	
52.0N 172.1W	
h ABOUT 045KM	

Date and Station	Phase (GCT)
	h m s
COL EP	09 04 10.0
BOZ EP	09 07 28.5
IpP	07 38.0
EUR IP	09 07 37.1
I	07 43.5
E(pP)	08 52.1
TUC E(P)	09 07 39.6
FGU EP	09 08 01.9
BCN E(P)	09 08 09.9
E(pP)	08 24.9
ALQ IP	09 08 46.0
DEC 25	
H-09 20 33.3	
19.0S 173.2W	
h ABOUT 033KM	
TUC E(P)	09 31 35.0
EUR E(P)	09 32 47.5
FGU EP	09 33 02.9
COL IP	09 33 11.0
KIP ET	09 40 24.0
DEC 25	
COL IP	09 42 29.5
DEC 25	
TUC E(P)	10 44 16.0
EUR E(P)	10 45 14.4
DEC 25	
COL EP	15 22 07.0
DEC 25	
H-16 14 08.4	
37.2N 102.0E	
h ABOUT 033KM	
COL EP	16 24 45.0
DEC 25	
BHP IP C	17 54 29.0
IS	55 08.0
DEC 25	
BUT E(P)	18 16 48.0
IL	17 19.4
BOZ EP	18 16 54.0
ES	16 22.0
EUR EP	18 17 27.1
DEC 25	
COL EP	18 28 45.0
DEC 25	
COL EP	19 12 23.0
DEC 25	
H-20 04 10.2	
44.2N 114.5W	
h ABOUT 033KM	

Date and Station	Phase (GCT)
	h m s
BUT EP	20 04 46.9
IS	05 28.9
BOZ EP	20 04 50.0
ES	05 22.0
EUR EP	20 05 22.4
E(L)	06 29.5
FGU E(P)	20 05 36.7
SLC E(P)	20 06 05.7
DEC 25	
EUR E(P)	20 14 58.7
DEC 25	
H-20 18 16.5	
18.9S 173.4W	
h ABOUT 033KM	
TUC E(P)	20 30 17.0
COL IP	20 30 54.9
DEC 25	
HHM E(P)	21 05 26.4
E(S)	06 19.0
DEC 25	
BUT E(P)	22 14 03.0
E(S)	14 19.0
H-23 02 52.4	
19.0N 108.4W	
h ABOUT 033KM	
BCN EP	23 07 00.0
EUR EP	23 07 43.9
DEC 25	
H-23 55 14.5	
39.2N 114.2W	
h ABOUT 020KM	
EUR IP	23 55 39.0
ES	55 57.4
GCA EP	23 56 07.0
FGU E(P)	23 56 18.0
TUC E(P)	23 57 19.0
E	59 04.0
DEC 26	
TUC E(P)	00 13 15.0
DEC 26	
COL EP	00 17 25.0
DEC 26	
ALQ E(P)	00 14 54.0
BCN E(P)	00 15 42.7
E	15 45.4
EUR EP	00 15 47.9
I	15 50.1

Date and Station	Phase (GCT)
	h m s
DEC 26	
H-01 30 51.7	
05.1S 102.3E	
h ABOUT 040KM	
FGU EP'	01 50 00.8
EUR EP'	01 50 02.0
TUC EP'	01 50 09.0
ALQ EP'	01 50 13.0
DEC 26	
FGU E(P)	02 38 09.7
DEC 26	
GCA EP	03 10 51.0
EUR EP	03 11 26.5
E(S)	12 07.4
DEC 26	
H-03 58 50.1	
39.1N 114.2W	
h ABOUT 020KM	
EUR IP	03 59 15.9
E(S)	59 36.1
GCA E(P)	03 59 38.6
BCN EP	03 59 40.1
E(S)	04 00 14.7
IL	00 27.7
FGU E(P)	03 59 54.4
DEC 26	
HHM E(P)	07 57 33.0
DEC 26	
H-07 58 22.4	
76.5N 022.4E	
h ABOUT 033KM	
COL IP	08 05 44.4
BUT IP	08 07 47.9
F	08 11.9
BOZ IP	08 07 49.0
FGU IP	08 08 20.0
EUR IP	08 08 37.4
IpP	09 19.4
GCA E(P)	08 08 49.0
ALQ IP	08 08 57.0
BCN EP	08 08 59.1
EPCP	09 32.3
TUC IP	08 09 17.4
SJP EP	08 09 44.6
DEC 26	
H-08 09 09.4	
46.6N 152.2E	
h ABOUT 050KM	

Date and Station	Phase	(GCT)
		h m s
COL	IP	08 16 16.1
EUR	EP	08 19 38.9
	E(pP)	19 52.8
DEC 26		
TUC	E(P)	08 46 46.0
	E	48 02.0
DEC 26		
H-08 48 52.1		
69.3N 016.5W		
h ABOUT 033KM		
COL	EP	08 56 42.0
ALQ	E(P)	08 57 45.0
BOZ	E(P)	08 57 45.0
FGU	EP	08 58 14.0
EUR	EP	08 58 39.2
TUC	E(P)	08 59 11.0
DEC 26		
H-10 46 26.9		
43.6N 148.3E		
h ABOUT 033KM		
COL	EP	10 54 06.0
EUR	IP	10 57 24.0
	E	57 30.2
BCN	EP	10 57 58.0
DEC 26		
FGU	E(P)	11 16 31.6
	E(S)	17 04.1
DEC 26		
HHM	E(P)	12 58 25.0
	ES	59 16.0
DEC 26		
EUR	IP	13 54 23.2
	ES	54 40.8
DEC 26		
EUR	EP	13 58 01.9
	ES	58 21.5
DEC 26		
H-14 40 06.2		
39.6N 110.1W		
h ABOUT 033KM		
FGU	IP	14 40 31.2
GCA	IP	14 40 52.2
	I(S)	41 28.4
EUR	EP	14 41 14.1
	E	41 21.8
DEC 26		
ALQ	E(P)	14 56 41.0
DEC 26		
BOZ	E(P)	15 16 24.0
	ES	16 55.0

Date and Station	Phase	(GCT)
		h m s
DEC 26		
EUR	EP	15 16 55.8
DEC 26		
H-16 23 54.2		
01.4N 126.7E		
h ABOUT 065KM		
COL	EP	16 36 32.0
EUR	EP'	16 42 21.3
	EPP	42 56.7
TUC	EP'	16 42 33.0
ALQ	EP'	16 42 36.0
DEC 26		
SJP	EP	16 44 13.5
DEC 26		
COL	EP	18 38 33.0
DEC 26		
BOZ	IP	19 22 53.9
DEC 26		
EUR	EP	20 44 13.7
DEC 26		
H-20 50 21.2		
36.4N 071.3E		
h ABOUT 140KM		
COL	IP	21 01 45.3
DEC 26		
H-21 11 11.9		
51.2N 169.8W		
h ABOUT 033KM		
COL	IP	21 15 18.4
EUR	IP	21 18 36.1
TUC	EP	21 19 38.0
ALQ	E(P)	21 19 44.0
DEC 26		
DEC 26		
FGU	EP	22 29 34.5
	ES	29 55.0
DEC 26		
TUC	IP	22 51 52.0
DEC 26		
H-23 21 33.2		
86.1N 073.2E		
h ABOUT 033KM		
COL	EP	23 27 25.0
EUR	EP	23 31 07.0
TUC	E(P)	23 31 51.0
DEC 27		
BCN	E(P)	00 25 04.7
DEC 27		
TUC	E(P)	00 45 52.0

Date and Station	Phase	(GCT)
		h m s
DEC 27		
COL	EP	01 25 20.0
DEC 27		
BCN	E(P)	02 24 04.1
	E	24 23.6
	E	24 34.2
DEC 27		
H-02 36 21.6		
45.7N 123.4W		
h ABOUT 033KM		
UKI	E(P)	02 38 03.5
HHM	EP	02 38 08.4
	E(S)	39 19.0
BUT	EP	02 38 10.8
	E	40 20.8
BOZ	EP	02 38 20.0
	E	40 19.0
EUR	IP	02 38 24.1
	E	38 35.9
	E	41 21.9
SLC	EP	02 38 45.5
FGU	EP	02 39 03.6
GCA	E(P)	02 39 24.2
TUC	E(P)	02 40 16.0
ALQ	E(P)	02 40 18.0
COL	EP	02 41 30.0
DEC 27		
FGU	E(P)	02 55 58.6
DEC 27		
H-03 57 09.8		
14.5N 090.7W		
h ABOUT 033KM		
TUC	E(P)	04 02 38.0
EUR	IP	04 03 46.2
COL	E(P)	04 07 32.0
COL	E(P)	04 07 43.0
DEC 27		
EUR	EP	04 07 50.9
DEC 27		
H-05 21 37.8		
15.1S 175.2W		
h ABOUT 033KM		
TUC	EP	05 33 33.5
EUR	EP	05 33 34.1
GCA	E(P)	05 33 41.9
COL	IP	05 33 56.5
ALQ	E(P)	05 33 57.0

Date and Station	Phase	(GCT)
		h m s
FGU	E(P)	05 34 00.0
DEC 27		
COL	EP	05 25 33.0
DEC 27		
H-05 33 08.0		
6.4S 105.2E		
h ABOUT 033KM		
EUR	EP'	05 52 18.6
DEC 27		
COL	IP	06 53 37.2
DEC 27		
EUR	IP	06 56 50.0
FGU	EP	06 56 56.8
DEC 27		
TUC	E(P)	07 38 02.0
DEC 27		
EUR	E(P)	08 28 21.2
DEC 27		
FGU	E(P)	09 02 25.3
	IS	02 57.8
DEC 27		
COL	EP	09 13 12.0
DEC 27		
GUA	IP	09 22 34.8
DEC 27		
H-09 45 47.6		
08.3S 156.5E		
h ABOUT 033KM		
COL	EP	09 58 13.0
EUR	EP	09 59 03.3
DEC 27		
H-10 01 15.2		
05.8S 105.5E		
h ABOUT 052KM		
EUR	EP'	10 20 22.6
DEC 27		
SJP	IP	10 45 48.9
	ES	46 00.0
DEC 27		
COL	EP	11 13 39.0
DEC 27		
EUR	EP	12 27 40.7
DEC 27		
GUA	IP	12 33 53.4
	IS	34 08.0
DEC 27		
COL	EP	12 36 14.0
DEC 27		
H-12 48 45.6		
45.9N 151.0E		
h ABOUT 033KM		

Date and Station	Phase (GCT)
	h m s
COL EP	12 56 00.0
BOZ E(P)	12 59 15.0
EUR EP	12 59 24.9
DEC 27	
BOZ EP	13 55 33.0
E(S)	56 00.0
EUR EP	13 56 01.6
DEC 27	
COL EP	14 49 08.0
DEC 27	
COL IP	16 27 35.3
DEC 27	
COL EP	16 59 06.0
DEC 27	
SLC EP	18 45 11.6
DEC 27	
COL EP	19 02 31.0
DEC 27	
RCD E(P)	20 15 03.0
DEC 27	
COL EP	20 37 51.0
DEC 27	
COL EP	21 28 13.0
DEC 27	
COL EP	21 39 05.0
DEC 27	
EUR EP	21 49 35.0
TUC EP	21 50 07.0
DEC 27	
COL IP	22 16 42.0
DEC 27	
TUC E(P)	22 55 16.0
DEC 27	
FGU EP	23 00 00.4
IS	00 20.1
DEC 27	
EUR E(P)	23 36 13.1
DEC 27	
H-23 46 48.5	
6.7N 083.9W	
h ABOUT 033KM	
BHP IP	23 48 02.0
IS	48 48.0
TUC E(P)	23 53 48.0
COL EP	23 58 13.0
DEC 28	
COL EP	00 28 32.0

Date and Station	Phase (GCT)
	h m s
DEC 28	
H-01 44 05.0	
36.6N 070.2E	
h ABOUT 205KM	
COL IP	01 55 22.2
DEC 28	
EUR E(P)	02 01 33.2
DEC 28	
BHP IP C	02 35 03.0
IS	35 41.0
TUC E(P)	02 40 34.0
DEC 28	
COL EP	03 44 41.0
DEC 28	
FGU EP	04 18 19.8
DEC 28	
H-04 35 07.8	
20.2S 177.9W	
h ABOUT 507KM	
TUC EP	04 46 40.0
EUR IP	04 46 40.2
COL IP	04 47 02.1
BOZ EP	04 47 08.5
COL E(P)	04 48 01.0
DEC 28	
H-05 45 20.2	
05.1S 153.5E	
h ABOUT 070KM	
GUA E(P)	05 49 53.0
I	50 15.0
KIP IP	05 54 41.3
HON EP	05 54 42.0
ES	06 02 14.0
EL	10 00.0
COL IP	05 57 29.6
HHM E(P)	05 58 31.0
EUR EP	05 58 31.1
(E>P)	58 50.8
(PP)	06 02 08.9
EPKKP	15 36.6
BCN E(P)	05 58 35.7
E	58 53.6
EPP	06 02 21.1
BOZ E(P)	05 58 44.0
FGU E(P)	05 58 52.5
TUC E(P)	05 58 56.0
GCA E(P)	05 59 10.1
ALQ E(P)	05 59 13.0
E(PP)	06 02 22.0

Date and Station	Phase (GCT)
	h m s
SJP EP'	06 04 39.2
E	05 06.5
E(PP)	08 08.0
DEC 28	
H-06 57 09.9	
14.4N 092.3W	
h ABOUT 033KM	
ALQ EP	07 02 23.0
TUC EP	07 02 28.0
BCN EP	07 03 13.3
FGU IP	07 03 21.3
EUR EP	07 03 40.6
BUT E(P)	07 04 09.0
HHM EP	07 04 29.6
COL EP	07 07 32.0
DEC 28	
COL EP	06 59 09.0
DEC 28	
COL EP	07 07 07.0
DEC 28	
BOZ EP	07 23 27.9
BUT EP	07 23 36.7
I	23 41.6
I(S)	24 00.7
FGU E(P)	07 24 15.3
HHM EP	07 24 16.6
EUR EP	07 24 57.8
DEC 28	
BOZ EP	08 00 23.0
ES	00 56.0
DEC 28	
H-08 22 21.1	
44.9N 111.0W	
h ABOUT 033KM	
BOZ IP	08 22 35.5
I(S)	22 48.0
BUT EP	08 22 42.7
I	22 47.7
IL	23 11.7
FGU EP	08 23 21.9
I	23 31.6
HHM EP	08 23 23.6
I	09 04.6
SLC E(P)	08 23 27.7
E	23 32.7
RCD E(P)	08 23 43.7
EUR E(P)	08 24 03.7
ES	25 15.9

Date and Station	Phase (GCT)
	h m s
DEC 28	
H-09 03 52.9	
32.7S 178.9W	
h ABOUT 033KM	
HON IP	09 13 40.4
I	14 01.0
IS	22 08.0
KIP IP	09 13 40.6
I	14 00.0
BCN EP	09 16 55.4
EPKKP	34 19.4
TUC IP	09 16 56.4
EPKKP	34 16.5
EUR IP	09 17 02.6
E(PP)	21 02.4
EPKKP	34 35.5
E(P'P')	42 19.3
E(SKPP')	45 36.4
GCA IP	09 17 08.9
ALQ EP	09 17 16.0
EPP	21 06.0
FGU IP	09 17 23.6
E(PKKP)	34 00.9
BOZ EP	09 17 31.0
HHM EP	09 17 31.6
COL IP	09 17 34.8
DEC 28	
BUT E(P)	09 32 26.0
DEC 28	
COL IP	10 00 25.6
DEC 28	
EUR E(P)	10 27 52.3
DEC 28	
COL EP	12 23 28.0
DEC 28	
EUR EP	12 32 33.6
DEC 28	
H-12 44 50.7	
18.1N 106.3W	
h ABOUT 033KM	
TUC E(P)	12 48 19.0
FGU E(P)	12 49 53.4
EUR E(P)	12 49 58.5
DEC 28	
TUC E(P)	13 40 42.0
EUR EP	13 41 43.9
DEC 28	
ALQ E(P)	13 48 51.0

Date and Station	Phase	(GCT)
		h m s
DEC 28		
H-14 26 19.5		
39.2N 114.3W		
h ABOUT 033KM		
EUR IP		14 26 43.3
SLC EP		14 27 02.5
BCN E(P)		14 27 08.2
	E(S)	27 42.2
	IL	27 54.7
GCA EP		14 27 10.7
FGU EP		14 27 22.0
DEC 28		
EUR EP		14 40 23.4
DEC 28		
H-15 19 58.1		
39.0N 114.0W		
h ABOUT 033KM		
EUR IP		15 20 24.8
BCN E(P)		15 20 48.1
	EL	21 35.4
DEC 28		
BCN E(P)		15 29 53.7
	EL	30 40.1
ALQ E(P)		15 30 13.0
DEC 28		
EUR E(P)		15 31 14.2
DEC 28		
H-15 50 14.1		
39.1N 114.2W		
h ABOUT 033KM		
EUR IP		15 50 38.2
GCA E(P)		15 51 06.3
DEC 28		
H-16 48 37.4		
18.4N 106.0W		
h ABOUT 033KM		
TUC EP		16 52 02.0
BCN EP		16 53 03.7
EUR EP		16 53 37.0
FGU EP		16 53 38.6
SLC E(P)		16 53 40.2
DEC 28		
TUC IP		16 50 08.0
ALQ E(P)		16 50 32.0
	I	50 40.0
	E	51 19.0
	E	52 29.0
GCA E(P)		16 51 03.5

Date and Station	Phase	(GCT)
		h m s
DEC 28		
EUR EP		17 20 56.2
	E(S)	21 43.3
DEC 28		
FGU EP		17 30 22.1
DEC 28		
H-17 58 33.1		
60.4S 051.8W		
h ABOUT 049KM		
EUR EP'		18 16 57.0
	EPKKP	27 52.1
FGU EP'		18 17 22.6
DEC 28		
ALQ E(P)		18 16 29.0
UKI EP		18 16 43.2
TUC E(P)		18 16 54.0
BOZ EP		18 18 10.0
DEC 28		
COL IP		18 32 00.0
DEC 28		
H-19 17 24.2		
18.5N 105.8W		
h ABOUT 033KM		
TUC E(P)		19 20 48.0
GCA E(P)		19 21 46.9
BCN EP		19 21 47.5
FGU E(P)		19 22 23.9
EUR E(P)		19 22 23.9
DEC 28		
COL EP		19 39 36.0
DEC 28		
BOZ IP		21 28 55.9
DEC 28		
TUC IP		21 56 12.2
DEC 28		
H-22 16 53.6		
30.4N 041.4W		
h ABOUT 033KM		
EUR EP		22 27 03.0
COL EP		22 28 00.0
DEC 28		
H-23 20 26.6		
62.9N 154.0W		
h ABOUT 033KM		
COL IP		23 21 16.8
EUR EP		23 26 58.9
FGU EP		23 27 10.5

Date and Station	Phase	(GCT)
		h m s
DEC 28		
H-23 55 07.7		
53.0S 118.4W		
h ABOUT 033KM		
TUC EP		24 07 40.0
BCN E(P)		24 07 50.2
EUR EP		24 08 15.5
DEC 29		
ALQ E(P)		00 22 56.0
DEC 29		
BCN EP		00 58 13.0
	ES	58 24.6
DEC 29		
BOZ EP		01 27 43.8
DEC 29		
H-01 42 13.7		
39.1N 114.2W		
h ABOUT 033KM		
EUR IP		01 42 38.5
	EL	42 58.3
DEC 29		
EUR E(P)		01 58 41.4
DEC 29		
TUC E(P)		02 15 23.0
EUR EP		02 16 09.9
	F	16 57.0
DEC 29		
H-02 31 39.1		
18.4N 106.1W		
h ABOUT 033KM		
TUC E(P)		02 35 04.0
EUR EP		02 36 39.0
DEC 29		
H-03 00 09.7		
30.9S 177.8W		
h ABOUT 033KM		
TUC E(P)		03 13 05.0
FUR EP		03 13 11.3
	E	13 26.9
ALQ E(P)		03 13 27.0
DEC 29		
COL EP		03 23 52.0
DEC 29		
BOZ IP		03 29 20.0
	IS	29 40.0
DEC 29		
H-03 41 28.3		
18.8N 106.2W		
h ABOUT 033KM		
TUC EP		03 44 46.5
ALQ E(P)		03 45 14.0

Date and Station	Phase	(GCT)
		h m s
FGU E(P)		03 46 23.8
EUR IP		03 46 24.7
	E	46 25.7
	E	46 56.5
BOZ EP		03 47 09.0
DEC 29		
H-04 02 03.8		
39.1N 114.2W		
h ABOUT 033KM		
EUR IP		04 02 28.1
GCA E(P)		04 02 49.7
BCN E(P)		04 02 51.6
	EL	03 39.4
DEC 29		
H-04 06 12.2		
39.1N 114.2W		
h ABOUT 033KM		
EUR IP		04 06 36.2
	I(S)	06 55.4
GCA E(P)		04 06 58.9
DEC 29		
H-04 15 04.5		
39.1N 114.3W		
h ABOUT 033KM		
EUR IP		04 15 28.5
SLC EP		04 15 45.5
	I	15 48.0
	IL	16 23.0
GCA IP		04 15 50.1
	I	15 54.5
	I(S)	16 28.2
BCN IP		04 15 52.1
	IS	16 27.2
	IL	16 40.1
FGU IP		04 16 06.3
BOZ E(P)		04 16 46.0
TUC E(P)		04 16 47.0
	E	17 16.0
	E(L)	18 52.0
ALQ EP		04 16 52.0
	I	17 23.0
DEC 29		
H-04 34 30.9		
19.1N 105.9W		
h ABOUT 033KM		
TUC EP		04 37 47.5
EUR EP		04 39 25.9
FGU E(P)		04 39 36.8
DEC 29		
EUR IP		04 49 [illegible]
	IS	[illegible]

Date and Station	Phase (GCT)
	h m s
DEC 29	
EUR IP	04 55 53.3
IS	56 12.6
DEC 29	
H-06 22 47.7	
18.6N 105.8W	
h ABOUT 033KM	
TUC EP	06 26 09.5
ALQ EP	06 26 35.0
BCN EP	06 27 10.5
GCA EP	06 27 11.9
FGU E(P)	06 27 46.8
EUR IP	06 27 47.7
E	28 00.1
BOZ EP	06 28 32.0
DEC 29	
H-06 39 00.4	
38.8N 114.6W	
h ABOUT 033KM	
EUR IP	06 39 22.7
ES	39 42.0
DEC 29	
H-07 48 23.2	
77.9N 021.5E	
h ABOUT 033KM	
COL EP	07 55 32.0
DEC 29	
COL EP	08 23 11.0
DEC 29	
EUR EP	10 02 26.5
DEC 29	
COL EP	12 10 45.0
DEC 29	
COL EP	12 45 13.0
DEC 29	
H-12 52 02.2	
4.1S 151.9E	
h ABOUT 119KM	
COL IP	13 04 07.0
EUR IP	13 05 08.2
DEC 29	
BOZ IP	13 39 56.5
DEC 29	
EUR E(P)	13 55 52.1
DEC 29	
H-15 00 24.0	
20.7S 178.4W	
h ABOUT 534KM	
EUR IP	15 11 56.9
TUC IP	15 11 57.0

Date and Station	Phase (GCT)
	h m s
ALQ EP	15 12 16.0
COL IP	15 12 19.1
BOZ EP	15 12 25.0
DEC 29	
BCN EP	15 04 38.3
DEC 29	
H-17 15 39.2	
18.5S 069.7W	
h ABOUT 113KM	
BHP IP C	17 21 32.0
SJP EP	17 22 34.2
E	22 49.0
E	23 22.0
CSC IP	17 24 49.0
ALQ IP	17 26 00.8
TUC IP	17 26 03.6
GCA IP	17 26 29.0
BCN IP	17 26 36.1
E▸P	27 00.3
E	27 36.3
RCD IP	17 26 38.0
FGU IP	17 26 39.0
SLC IP	17 26 45.9
EUR IP	17 26 54.3
I	27 08.0
E	28 08.0
EPP	29 36.4
BOZ IP	17 27 06.2
I▸P	27 33.0
BUT IP	17 27 10.7
I▸P	27 37.6
HHM IP	17 27 24.8
E▸P	27 48.1
COL IP	17 29 19.9
GUA EP'	17 35 09.1
DEC 29	
EUR EP	18 47 13.7
DEC 29	
BOZ EP	20 43 28.2
I	43 43.0
DEC 29	
ALQ E(P)	21 20 05.0
I	20 09.0
GCA E(P)	21 20 31.5
DEC 29	
SLC EP	21 38 44.2
IS	39 15.0
FGU EP	21 39 17.4

Date and Station	Phase (GCT)
	h m s
EUR EP	21 39 29.2
E(S)	40 16.6
DEC 29	
TUC EP	21 55 58.5
E	56 17.0
ALQ E(P)	21 56 46.0
DEC 29	
COL EP	22 27 20.0
DEC 29	
COL IP	23 19 03.0
DEC 30	
COL EP	00 49 04.0
DEC 30	
GUA E(P)	00 52 14.3
DEC 30	
H-00 58 13.3	
3.4S 128.8E	
h ABOUT 082KM	
EUR EP'	01 16 28.6
E	16 41.9
ALQ EP'	01 16 58.0
DEC 30	
GUA EP	01 17 22.1
ES	18 54.0
DEC 30	
SJP EP	01 19 55.2
E	21 00.0
DEC 30	
H-01 15 24.5	
21.6N 144.5E	
h ABOUT 120KM	
KIP IP	01 24 24.0
COL EP	01 25 28.0
HHM IP	01 27 31.1
E▸P	29 56.1
BUT EP	01 27 39.8
I(▸P)	28 09.8
EUR IP	01 27 41.2
I	28 01.9
I▸P	28 09.9
BCN EP	01 27 52.6
E▸P	28 19.0
SLC EP	01 27 53.2
FGU IP	01 28 01.0
GCA IP	01 28 02.5
TUC EP	01 28 14.5
ALQ E(P)	01 28 21.0

Date and Station	Phase (GCT)
	h m s
DEC 30	
TUC E(P)	01 31 49.0
DEC 30	
COL EP	02 46 57.0
EUR E(P)	02 50 28.7
DEC 30	
H-03 12 51.7	
19.9S 177.8W	
h ABOUT 522KM	
EUR EP	03 24 18.5
TUC E(P)	03 24 21.0
DEC 30	
H-03 28 53.5	
44.4N 110.3W	
h ABOUT 033KM	
BUT EP	03 29 29.9
E(S)	30 02.0
FGU EP	03 29 47.4
I	29 51.7
I	29 54.7
IL	30 40.7
EUR EP	03 30 30.3
RCD E(S)	03 30 35.0
DEC 30	
H-03 57 09.2	
54.4N 160.6E	
h ABOUT 033KM	
COL EP	04 02 53.0
EUR EP	04 06 44.2
DEC 30	
EUR EP	04 04 48.4
DEC 30	
HHM E(P)	04 30 05.0
E(S)	31 16.0
DEC 30	
GUA IP	04 38 56.8
ES	39 11.0
DEC 30	
EUR I(P)	04 51 18.0
DEC 30	
H-06 23 35.2	
29.3S 176.8W	
h ABOUT 034KM	
EUR EP	06 36 26.5
DEC 30	
TUC E(P)	07 03 11.0
DEC 30	
H-07 30 33.4	
14.4S 167.4E	
h ABOUT 178KM	
COL IP	07 42 53.0

Date and Station	Phase	(GCT)
		h m s
EUR	I(P)	07 43 10.6
DEC 30		
COL	EP	07 32 13.0
DEC 30		
H-08 27 45.1		
18.8N 105.8W		
h ABOUT 033KM		
TUC	E(P)	08 31 06.0
FGU	E(P)	08 32 36.8
EUR	EP	08 32 42.2
DEC 30		
ALQ	E(P)	09 41 29.0
FGU	E(P)	09 42 24.4
EUR	EP	09 42 43.6
COL	EP	09 46 34.0
DEC 30		
H-10 20 02.7		
19.8S 169.9E		
h ABOUT 033KM		
COL	EP	10 33 01.0
DEC 30		
EUR	E	11 47 36.1
DEC 30		
EUR	EP	12 46 17.0
TUC	E(P)	12 46 38.0
DEC 30		
TUC	E(P)	13 17 13.0
BCN	E(P)	13 17 34.8
	EL	19 01.8
DEC 30		
H-13 29 25.3		
45.5N 150.6E		
h ABOUT 040KM		
COL	IP	13 36 43.1
KIP	P	13 38 04.0
UKI	EP	13 39 38.8
	E>P	39 49.0
BUT	IP	13 39 51.4
	I	40 14.9
EUR	IP	13 40 06.1
	I	40 50.3
	UPP	42 11.4
	E(PPP)	44 26.1
SLC	IP	13 40 16.1
FGU	IP	13 40 23.7
BCN	IP C	13 40 24.8
	I>P	40 37.3
	I>P	40 46.3

Date and Station	Phase	(GCT)
		h m s
RCD	IP	13 40 32.0
TUC	IP	13 40 53.8
CSC	IP	13 42 12.8
	E>P	42 24.8
HON	ES	13 45 14.0
	E	48 40.0
	EL	51 22.0
DEC 30		
H-13 46 45.9		
40.1S 084.3W		
h ABOUT 033KM		
TUC	EP	13 58 32.0
BCN	EP	13 58 57.8
FGU	EP	13 59 13.2
EUR	EP	13 59 15.2
	E	14 08 40.0
BUT	E(P)	13 59 29.0
DEC 30		
H-13 47 08.2		
38.8N 122.9W		
h ABOUT 033KM		
UKI	IP	13 47 17.0
	IL	47 26.0
EUR	IP	13 48 26.8
	IL	49 35.7
BCN	E(P)	13 48 41.3
	E	48 53.8
	E	49 13.3
	EL	51 33.8
DEC 30		
ALQ	IP	13 55 59.5
DEC 30		
COL	EP	14 06 58.0
DEC 30		
HHM	IP	14 39 36.7
DEC 30		
H-15 04 14.2		
9.4N 126.0E		
h ABOUT 102KM		
GUA	I(P)	15 08 36.0
KIP	IP	15 15 41.4
COL	IP	15 16 13.3
SJP	EP'	15 23 50.2
DEC 30		
EUR	EP	15 22 27.3
DEC 30		
TUC	E(P)	15 33 32.0
EUR	E(P)	15 33 50.0
	E	34 10.8

Date and Station	Phase	(GCT)
		h m s
DEC 30		
TUC	E(P)	15 47 12.0
DEC 30		
UKI	IP	16 47 54.4
	IS	48 06.0
DEC 30		
COL	EP	16 48 16.0
DEC 30		
UKI	IP	16 50 30.8
	IS	50 40.0
EUR	EP	16 51 39.5
DEC 30		
EUR	E(P)	17 12 48.0
COL	EP	17 16 40.0
DEC 30		
COL	EP	17 44 31.0
DEC 30		
COL	EP	18 17 40.0
DEC 30		
COL	EP	18 38 12.0
DEC 30		
H-20 32 19.5		
42.4N 142.8E		
h ABOUT 050KM		
COL	IP	20 40 23.3
EUR	IP	20 43 38.5
	E>P	43 51.9
BCN	EP	20 43 54.7
	E	44 12.7
FGU	EP	20 43 55.0
TUC	E(P)	20 44 23.0
ALQ	E(P)	20 44 28.0
DEC 30		
H-20 52 12.2		
18.1S 172.6W		
h ABOUT 033KM		
COL	IP	21 04 45.0
DEC 30		
HHM	E(P)	21 05 03.0
	ES	05 39.0
DEC 30		
HHM	EP	21 43 10.0
DEC 30		
COL	EP	21 51 32.0
DEC 30		
SLC	EP	22 05 58.2
FGU	IP	22 06 29.0

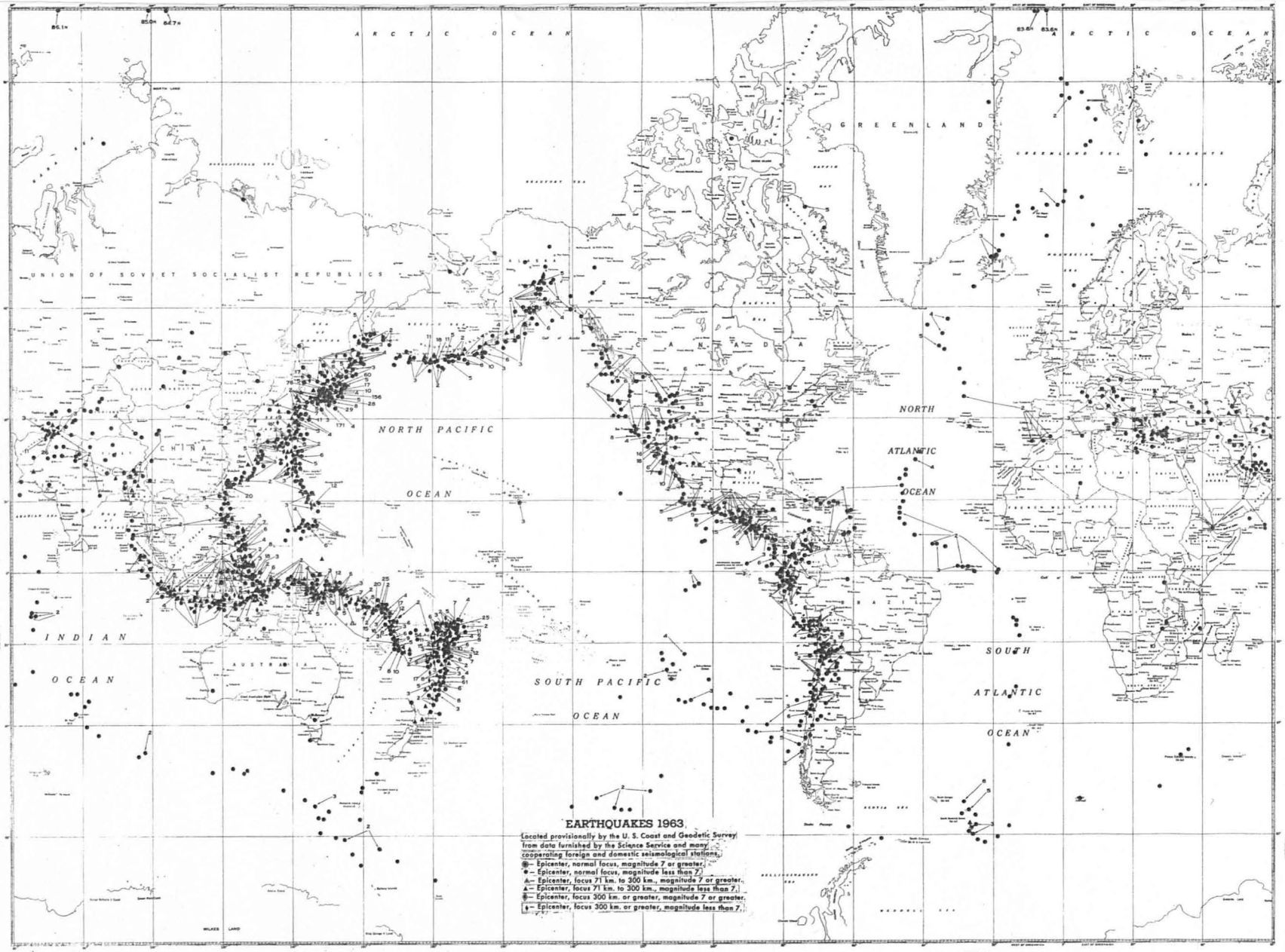
Date and Station	Phase	(GCT)
		h m s
DEC 30		
H-22 06 07.1		
06.9N 094.7E		
h ABOUT 064KM		
EUR	IP'	22 25 04.4
	E>P'	25 20.2
FGU	IP'	22 25 06.5
ALQ	IP'	22 25 19.5
TUC	EP'	22 25 20.0
DEC 30		
EUR	I(P)	22 44 26.9
DEC 30		
COL	EP	23 23 47.0
DEC 30		
H-23 39 27.2		
02.5S 078.4W		
h ABOUT 033KM		
ALQ	E(P)	23 47 47.0
TUC	E(P)	23 47 54.0
EUR	E(P)	23 48 53.7
DEC 31		
EUR	E(P)	00 46 37.6
TUC	E(P)	00 46 50.0
DEC 31		
COL	EP	02 09 30.0
DEC 31		
COL	EP	03 25 06.0
DEC 31		
EUR	EP	04 05 56.2
TUC	E(P)	04 07 31.0
DEC 31		
H-04 28 04.2		
45.0N 151.3E		
h ABOUT 033KM		
COL	IP	04 35 23.1
EUR	EP	04 38 45.3
DEC 31		
COL	EP	04 58 24.0
DEC 31		
COL	EP	05 12 00.0
DEC 31		
BCN	IP	08 46 36.8
	IS	46 45.8
DEC 31		
COL	IP	09 07 24.2
DEC 31		
EUR	I(P)	09 45 07.1

Date and Station	Phase (GCT)
	h m s
DEC 31	
H-10 17 50.5	
19.0N 105.8W	
h ABOUT 033KM	
TUC E(P)	10 21 09.0
FGU E(P)	10 22 31.6
FUR EP	10 22 45.1
DEC 31	
H-10 21 52.3	
19.1S 178.1W	
h ABOUT 609KM	
FUR EP	10 33 13.1
TUC E(P)	10 33 14.0
COL IP	10 33 33.1
DEC 31	
GUA E(P)	10 26 10.9
DEC 31	
COL EP	10 35 50.0
DEC 31	
H-10 45 17.7	
45.2N 151.5E	
h ABOUT 045KM	
COL IP	10 52 32.4
FUR EP	10 55 55.4
E(pP)	56 07.4
DEC 31	
COL EP	13 55 20.0
DEC 31	
H-14 22 07.1	
12.4N 087.9W	
h ABOUT 077KM	
FGU EP	14 28 46.9
SLC E(P)	14 29 03.8
BOZ EP	14 29 27.0
DEC 31	
COL EP	14 47 30.0
DEC 31	
H-15 18 08.4	
38.4N 045.3E	
h ABOUT 033KM	
COL EP	15 29 55.0
DEC 31	
COL EP	15 32 25.0
DEC 31	
COL IP	17 06 06.0
DEC 31	
EUR EP	17 22 12.3
DEC 31	
EUR EP	17 28 25.0

Date and Station	Phase (GCT)
	h m s
DEC 31	
H-17 37 32.1	
56.5S 026.0W	
h ABOUT 030KM	
BHP IP	17 49 33.0
SJP IP C	17 49 48.5
ALQ EP'	17 56 05.0
TUC EP'	17 56 09.0
E	56 59.0
BCN EP'	17 56 18.2
E	56 33.7
EPP	57 34.1
SLC EP'	17 56 21.8
EPP	57 34.8
EUR IP'	17 56 24.8
EPP	58 02.0
EPKKP	18 06 22.6
BOZ IP'	17 56 28.5
E	57 05.0
BUT EP'	17 56 29.9
HHM EP'	17 56 32.4
EPP	17 58 28.0
E(SKS)	18 02 45.0
COL EP'	17 57 13.0
I	57 22.5
DEC 31	
HHM EP	18 29 19.5
DEC 31	
TUC E(P)	18 48 44.0
DEC 31	
H-19 16 54.9	
17.4S 174.2W	
h ABOUT 080KM	
HON EP	19 24 39.0
KIP EP	19 24 39.0
UKI EP	19 28 23.1
E	28 53.6
BCN EP	19 28 42.9
E(pP)	28 14.0
TUC IP	19 28 47.7
E(pP)	29 13.0
EUR IP	19 28 47.9
E(pP)	29 15.5
GCA EP	19 28 57.8
SLC EP	19 29 06.6
ALQ IP	19 29 10.0
FGU IP	19 29 14.7
BUT EP	19 29 17.7
IpP	29 48.9

Date and Station	Phase (GCT)
	h m s
COL IP	19 29 19.2
BOZ IP	19 29 19.8
IpP	29 50.0
DEC 31	
EUR EP	19 22 20.8
DEC 31	
ALQ E(P)	19 39 22.0
DEC 31	
BUT EP	20 55 49.9
FS	56 17.9
DEC 31	
SLC EP	21 14 37.3
FGU E(P)	21 15 10.0
DEC 31	
H-21 41 42.7	
16.6N 099.0W	
h ABOUT 033KM	
TUC EP	21 46 04.0
ALQ E(P)	21 46 08.0
GCA EP	21 46 49.4
BCN EP	21 46 55.8
GCA I(P)	21 47 01.0
FGU FP	21 47 13.2
EUR IP	21 47 24.9
BOZ EP	21 47 57.5
COL EP	21 51 34.3
DEC 31	
FGU EP	21 49 02.3
IS	49 23.0
DEC 31	
BCN EP	21 51 01.2
FS	51 10.8
DEC 31	
EUR EP	21 55 20.0
E(S)	56 01.2
DEC 31	
FGU E(P)	22 09 11.8
E(S)	09 33.5
DEC 31	
ALQ E(P)	22 20 06.0
GCA E(P)	22 20 16.8
E(S)	20 50.8
TUC E(P)	22 24 18.0
DEC 31	
DEC 31	
FGU EP	22 58 25.6
FS	58 48.2

Date and Station	Phase (GCT)
	h m s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Located provisionally by the U. S. Coast and Geodetic Survey from data furnished by the Science Service and 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.