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SEISMOLOGICAL BULLETIN

November, 1962

COAST & GEODETIC SURVEY
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U. S. DEPARTMENT OF COMMERCE

Luther H. Hodges, Secretary

COAST AND GEODETIC SURVEY—WASHINGTON

H. Arnold Karo, Director

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National Oceanic and Atmospheric Administration

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1962

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)
Montana State College
*Butte, Mont. (BUT)
Montana School of Mines
*Chicago, Ill. (CHI)
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)
Honolulu, Hawaii (HON)
*Hungry Horse, Mont. (HHM)
Bureau of Reclamation
Kipapa, Hawaii (KIP)
**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)
*Thule, Greenland (THU)
U. S. Army Ionosphere Station
Tucson, Ariz. (TUC)
Tucson, Ariz. Telemeter (TUT)
Ukiah, Calif. (UKI)
International Latitude Observatory
Washington, D. C. (WAS)

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

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the data from the horizontal components of the seismographs at all stations except College, Honolulu, and Tucson will not be published for earthquakes occurring outside the United States.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

All magnitude determinations are by Pasadena, unless otherwise stated. Minor earthquakes are listed at the end of the bulletin.

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:

Director
U. S. Coast and Geodetic Survey
Washington, D. C. 20230
ATTN: Seismology Data Center

Date	Origin Time G. C. T.	Lat.	Long.	Region, Remarks and Focal Depth
Nov.	h m s	°	°	
1	03 59 49.9	41.8 N.	144.8 E.	Off south coast of Hokkaido, Japan. h about 91 km.
1	09 16 44.7	29.0 N.	128.7 E.	Ryukyu Islands. h about 164 km.
1	09 47 15.6	23.7 S.	179.6 W.	Fiji Islands region. h about 525 km.
1	11 31 48.7	1.5 S.	77.8 W.	Ecuador. h about 181 km.
1	13 22 47.1	17.5 S.	168.5 E.	New Hebrides Islands. Felt at Port Vila. h about 33 km.
1	13 46 43.4	37.2 N.	70.0 E.	Hindu Kush. h about 132 km.
1	13 51 37.0	17.6 S.	168.5 E.	New Hebrides Islands. Felt at Port Vila. h about 21 km.
1	14 06 40.5	14.5 S.	167.6 E.	New Hebrides Islands. h about 204 km.
1	15 26 56.1	37.4 N.	70.0 E.	Hindu Kush. h about 124 km.
1	15 33 22.6	1.9 N.	133.0 E.	North of western New Guinea. h about 56 km.
1	15 52 42.4	1.8 N.	132.9 E.	North of western New Guinea. h about 54 km.
1	17 52 20.2	1.9 N.	132.8 E.	North of western New Guinea. h about 36 km.
1	23 20 59.6	43.9 N.	145.2 E.	Kurile Islands. h about 131 km.
2	06 54 19.4	17.6 S.	167.6 E.	New Hebrides Islands. h about 33 km.
2	13 23 03.9	36.3 N.	71.2 E.	Hindu Kush. h about 68 km.
2	14 46 39.2	10.0 S.	117.8 E.	South of Sumbawa. h about 33 km.
2	15 00 24.5	36.8 N.	141.2 E.	Near east coast of Honshu, Japan. h about 67 km.
2	15 12 37.2	10.2 S.	117.6 E.	South of Sumbawa. h about 33 km.
2	19 06 51.5	52.5 N.	170.7 W.	Fox Islands, Aleutian Islands. h about 60 km.
3	01 00 24.9	7.9 S.	158.3 E.	Solomon Islands. h about 86 km.
3	01 35 10.5	6.7 S.	105.2 W.	1500 km. southwest of Galapagos Islands. h about 33 km.
3	03 12 37.8	10.3 S.	117.8 E.	South of Sumbawa. h about 33 km.
3	04 34 09.6	2.7 S.	147.4 E.	Admiralty Islands. h about 33 km.
3	05 00 29.7	10.3 S.	117.8 E.	South of Sumbawa. h about 33 km.
3	14 22 14.9	72.1 N.	2.4 E.	Jan Mayen Island region. h about 37 km.
3	14 28 14.1	14.9 S.	167.4 E.	New Hebrides Islands. Felt on Santo. h about 124 km.
3	15 01 39.6	37.1 N.	95.5 E.	Tsinghai Province, China. h about 33 km.
3	15 38 08.5	2.5 S.	139.5 E.	Near north coast of New Guinea. h about 80 km.
3	18 05 06.2	37.6 S.	179.5 E.	Near east coast of North Island, New Zealand. h about 33 km.
3	19 04 30.7	4.1 S.	103.8 E.	Southern Sumatra. h about 108 km.
3	20 26 07.0	2.8 S.	129.2 E.	Ceram. h about 42 km.
4	06 18 31.5	44.3 N.	110.3 W.	Yellowstone National Park, Wyoming. h about 33 km.
4	10 57 03.7	40.3 N.	77.6 E.	Sinkiang Province, China. h about 33 km.
4	21 07 34.4	23.1 S.	176.5 W.	Tonga Islands. h about 33 km.
4	22 53 34.4	43.2 S.	75.6 W.	Off coast of southern Chile. h about 33 km. Mag. 5¾-6.
5	11 46 13.7	66.7 N.	7.0 E.	Off coast of Norway. h about 32 km.
5	20 54 41.1	49.8 S.	114.9 W.	South Pacific Ocean. h about 33 km.

Date	Origin Time G. C. T.	Lat.	Long.	Region, Remarks and Focal Depth
Nov.	h m s	°	°	
6	00 09 47.7	28.0 N.	55.6 E.	Southern Iran. Felt on Hormoz Islands. h about 30 km.
6	03 36 46.9	45.8 N.	122.5 W.	Washington-Oregon border. Felt. Slight damage in Washington and Oregon. h about 44 km. Mag. 4¾ (Brk); 5¼-5½ (Pal).
6	11 57 17.0	37.5 N.	119.0 W.	Fresno County, California. Felt in east-central California. h about 33 km. Mag. 4.3 (Brk).
6	12 23 22.7	4.0 S.	79.8 W.	Southern Ecuador. h about 84 km.
6	15 07 35.8	12.1 N.	124.1 E.	Near west coast of Samar, Philippine Islands. h about 200 km.
6	15 08 04.2	16.9 N.	68.5 W.	Mona Passage. h about 33 km.
6	20 48 44.3	10.5 N.	122.0 E.	Near west coast of Panay, Philippine Islands. h about 51 km.
6	21 26 50.3	4.8 S.	152.2 E.	Near south coast of New Ireland. Felt at Doilene, Karlai and Rabaul. h about 89 km.
7	03 56 38.4	13.3 N.	144.8 E.	Mariana Islands region. Felt. h about 121 km.
7	05 12 17.3	19.9 S.	178.5 W.	Fiji Islands. h about 600 km.
7	06 22 16.7	23.1 S.	179.9 W.	Fiji Islands region. h about 542 km.
7	11 44 37.3	20.0 S.	169.5 E.	Loyalty Islands region. h about 91 km.
7	12 57 45.7	40.5 N.	29.4 W.	Azores region. h about 33 km.
7	16 03 07.4	7.8 S.	119.8 E.	Flores Sea. h about 182 km.
7	20 02 12.8	20.4 N.	122.1 E.	Batan Islands. h about 57 km.
7	21 57 17.5	15.5 N.	120.3 E.	Near west coast of Luzon, Philippine Islands. h about 95 km.
7	22 26 33.8	51.5 N.	176.1 E.	Rat Islands, Aleutian Islands. h about 43 km.
8	00 02 10.0	15.1 S.	75.4 W.	Near coast of southern Peru. h about 44 km.
8	00 33 13.8	4.4 S.	105.5 W.	1700 km. southwest of Galapagos Islands. h about 33 km.
8	07 48 44.7	20.1 S.	168.6 E.	Loyalty Islands region. h about 33 km.
8	10 03 22.8	14.7 S.	167.1 E.	New Hebrides Islands. h about 86 km.
8	15 13 42.7	12.0 S.	166.8 E.	Santa Cruz Islands. h about 234 km.
8	16 29 32.5	15.0 S.	179.2 W.	Fiji Islands region. h about 408 km.
8	17 17 54.3	31.5 S.	180.0	Kermadec Islands region. h about 71 km.
8	18 43 42.4	17.9 S.	167.9 E.	Tonga Islands region. h about 33 km.
8	18 48 14.3	45.8 N.	147.5 E.	Kurile Islands. h about 186 km.
8	21 15 55.7	51.9 N.	175.0 E.	Near Islands, Aleutian Islands. h about 33 km.
9	01 11 03.4	33.5 N.	47.2 E.	Iraq-Iran border. Felt at Pol-E-Dokhtar. h about 44 km.
9	02 14 47.4	45.7 N.	26.7 E.	Central Rumania. h about 129 km.
9	04 47 20.4	10.4 N.	126.2 E.	Off east coast of Leyte, Philippine Islands. h about 33 km.
9	08 26 10.0	20.5 S.	178.8 W.	Fiji Islands. h about 522 km.
9	09 21 30.8	35.8 N.	140.3 E.	Near east coast of Honshu, Japan. h about 33 km.
9	13 51 38.5	27.5 N.	140.1 E.	Bonin Islands region. h about 452 km.
9	18 02 27.9	5.4 S.	132.5 E.	Banda Sea. h about 33 km.
9	18 08 47.9	40.3 N.	29.3 W.	Azores region. h about 33 km.
9	21 15 16.9	24.3 N.	109.3 W.	Gulf of California. h about 33 km.

Date	Origin Time G. C. T.	Lat.	Long.	Region, Remarks and Focal Depth
Nov.	h m s	°	°	
10	01 32 03.7	27.9 N.	55.7 E.	Southern Iran. Slight damage at Bandar-Abbas. Felt at Bandar-Lengeh, Minab and on Qeshm, Hormoz. h about 33 km.
10	01 33 15.9	43.8 N.	147.3 E.	Kurile Islands. h about 33 km. Mag. 6½-6¾.
10	02 26 19.1	12.8 N.	143.6 E.	Mariana Islands region. h about 37 km.
10	07 17 13.0	18.1 S.	169.0 E.	New Hebrides Islands. h about 70 km.
10	11 03 36.8	19.3 N.	121.1 E.	Near north coast of Luzon, Philippine Islands. h about 32 km.
10	19 32 05.4	38.3 N.	141.8 E.	Near east coast of Honshu, Japan. h about 100 km.
10	21 13 25.5	9.8 S.	123.8 E.	Near north coast of Timor Island. h about 33 km.
10	22 13 48.9	30.1 S.	179.1 W.	Kermadec Islands region. h about 215 km.
11	03 52 19.4	1.2 S.	78.8 W.	Ecuador. h about 59 km.
11	06 24 48.6	18.5 N.	145.6 E.	Mariana Islands. h about 107 km.
11	07 39 15.4	23.9 S.	69.5 E.	1200 km. southeast of Mascarene Islands. h about 33 km.
11	10 31 48.3	23.8 S.	69.4 E.	1200 km. southeast of Mascarene Islands. h about 33 km.
11	11 31 44.5	55.8 N.	113.1 E.	Lake Baikal region, U.S.S.R. h about 33 km. Mag. 6¼.
11	11 57 47.9	19.3 S.	177.6 W.	Fiji Islands. h about 547 km.
11	14 30 44.8	15.8 S.	167.8 E.	New Hebrides Islands. h about 154 km.
11	15 15 33.6	17.2 N.	40.7 E.	Red Sea. h about 34 km.
11	16 09 57.6	12.9 S.	166.5 E.	Santa Cruz Islands. Felt at Port Vila. h about 77 km. Mag. 6¼.
11	21 45 20.5	48.9 N.	128.8 W.	Vancouver Island region. h about 33 km.
11	22 14 18.7	43.2 S.	76.0 W.	Off coast of southern Chile. h about 33 km. Mag. 6½-6¾.
12	12 49 10.8	26.0 N.	128.4 E.	Ryukyu Islands. h about 40 km.
12	16 16 56.1	35.5 N.	135.8 E.	Southern Honshu. h about 33 km.
12	19 32 38.0	51.5 N.	178.4 W.	Andreanof Islands, Aleutian Islands. h about 57 km.
12	20 55 38.6	17.8 S.	13.5 W.	South Atlantic Ocean. h about 33 km.
13	08 54 39.1	42.0 N.	141.9 E.	Near south coast of Hokkaido, Japan. h about 61 km.
13	09 58 13.4	52.9 N.	166.7 W.	Fox Islands, Aleutian Islands. h about 69 km.
13	21 47 46.6	56.1 S.	27.2 W.	Sandwich Islands. h about 33 km.
14	04 38 09.7	18.7 N.	81.1 W.	300 km. northeast of Swan Islands. h about 33 km.
14	05 15 42.1	15.2 S.	167.9 E.	New Hebrides Islands. h about 40 km.
14	07 23 50.3	26.5 S.	176.2 W.	Kermadec Islands region. h about 33 km.
14	07 48 05.5	35.7 N.	140.8 E.	Central Honshu, Japan. h about 61 km.
14	07 56 29.2	35.6 N.	140.8 E.	Central Honshu, Japan. h about 60 km.
14	16 11 08.4	20.3 N.	45.9 W.	North Atlantic Ocean. h about 33 km.
14	21 59 16.1	0.3 S.	123.0 E.	Celebes. h about 92 km.
15	11 30 38.6	21.0 S.	178.4 W.	Fiji Islands. h about 590 km.
15	13 48 40.1	36.0 N.	140.3 E.	Central Honshu, Japan. h about 90 km.
15	14 55 26.9	14.5 S.	166.9 E.	New Hebrides Islands. h about 33 km.
15	15 51 57.6	38.3 S.	73.2 W.	Central Chile. h about 33 km.

Date	Origin Time G. C. T.	Lat.	Long.	Region, Remarks and Focal Depth
Nov.	h m s	°	°	
15	16 09 26.9	38.4 S.	73.6 W.	Central Chile. h about 33 km.
15	16 25 09.4	6.9 S.	146.7 E.	Near coast of North-East New Guinea. h about 40 km.
15	23 25 15.7	8.7 S.	79.8 W.	Near coast of northern Peru. h about 45 km. Mag. 6.
16	02 19 48.7	18.0 S.	178.4 W.	Fiji Islands. h about 612 km.
16	06 39 08.2	1.0 S.	78.6 W.	Ecuador. Slight damage at Ambato. h about 33 km.
16	07 18 36.1	32.3 S.	111.1 W.	Easter Island region. h about 33 km. Mag. 6½-6¾.
16	09 52 25.1	19.0 N.	145.3 E.	Mariana Islands. h about 207 km.
16	21 10 01.8	13.5 N.	93.2 E.	Andaman Islands. h about 33 km. Mag. 6-6¼ (Pal).
16	22 45 41.9	13.8 N.	92.9 E.	Andaman Islands. h about 33 km.
17	00 00 07.2	21.0 S.	68.6 W.	Bolivia. h about 144 km.
17	01 13 23.7	2.6 N.	126.9 E.	Molucca Sea. h about 39 km.
17	11 07 15.4	16.3 N.	98.2 W.	Near coast of Oaxaca, Mexico. h about 12 km.
17	14 21 30.6	2.8 N.	121.7 E.	Celebes Sea. h about 609 km.
17	22 28 27.1	63.3 N.	150.7 W.	South-central Alaska. h about 121 km.
18	06 43 08.3	0.2 S.	125.1 E.	Molucca Sea. h about 56 km.
18	07 38 27.4	16.0 N.	46.7 W.	North Atlantic Ocean. h about 30 km.
18	12 00 26.7	16.4 S.	174.1 W.	Tonga Islands region. h about 129 km.
19	04 15 36.1	24.3 N.	122.6 E.	Near east coast of Taiwan. h about 53 km.
19	10 14 29.4	50.0 S.	114.3 W.	South Pacific Ocean. h about 33 km.
19	13 58 57.6	60.7 S.	152.9 E.	700 km. southwest of Macquarie Island. h about 33 km.
19	14 30 32.2	6.8 N.	73.0 W.	Colombia. h about 160 km.
19	16 49 29.3	5.2 S.	152.6 E.	New Britain region. h about 62 km.
19	21 44 50.3	53.8 N.	163.5 W.	Unimak Island region. h about 33 km.
20	06 54 07.1	56.1 N.	159.1 E.	Kamchatka. h about 32 km.
20	07 32 41.0	56.2 N.	159.1 E.	Kamchatka. h about 23 km.
20	10 11 11.2	6.1 S.	154.5 E.	Solomon Islands. Felt at Karoola and Rabaul. h about 69 km.
20	12 59 53.1	1.7 N.	126.4 E.	Celebes. h about 37 km.
20	16 02 14.5	42.6 N.	143.4 E.	Hokkaido, Japan. h about 40 km.
20	17 55 50.1	2.7 S.	141.7 E.	Near coast of North-East New Guinea. h about 33 km.
20	20 45 46.9	27.9 N.	54.9 E.	Southern Iran. h about 34 km.
21	07 07 42.3	49.8 S.	114.8 W.	South Pacific Ocean. h about 33 km.
21	15 04 15.4	26.0 N.	128.2 E.	Ryukyu Islands. h about 33 km.
21	19 40 25.7	21.1 S.	179.2 W.	Fiji Islands. h about 626 km.
22	01 30 03.1	14.3 N.	92.8 W.	Near coast of Chiapas, Mexico. h about 33 km.
22	03 09 48.3	42.8 N.	143.0 E.	Near east coast of Hokkaido, Japan. h about 53 km.
22	06 53 35.8	1.7 S.	76.9 W.	Peru-Ecuador border. h about 166 km.
22	07 37 25.8	18.2 S.	167.6 E.	New Hebrides Islands. h about 33 km.
22	08 37 12.6	20.6 S.	178.5 W.	Fiji Islands. h about 605 km.

Date	Origin Time G. C. T.	Lat.	Long.	Region, Remarks and Focal Depth
Nov.	h m s	°	°	
22	13 53 08.5	50.7 N.	129.1 W.	Vancouver Island region. h about 33 km.
22	14 20 14.6	45.1 N.	150.0 E.	Kurile Islands. h about 60 km.
22	20 33 25.6	30.2 S.	178.6 W.	Kermadec Islands. h about 298 km.
22	23 55 28.3	24.1 S.	176.8 W.	Tonga Islands region. h about 391 km.
23	00 30 05.3	15.1 S.	75.6 W.	Near coast of southern Peru. h about 33 km.
23	00 44 49.3	15.4 S.	76.0 W.	Near south coast of Peru. h about 33 km.
23	07 16 37.7	17.7 S.	167.9 E.	New Hebrides Islands. h about 33 km.
23	10 41 57.6	4.0 S.	142.3 E.	Near coast of North-East New Guinea. h about 100 km.
23	23 05 47.4	21.5 S.	179.3 W.	Fiji Islands. h about 69 km.
24	07 31 49.1	10.9 N.	62.9 W.	Near north coast of Venezuela. h about 33 km.
24	08 10 11.1	18.6 S.	175.3 W.	Tonga Islands. h about 36 km.
24	10 34 07.7	24.8 S.	180.0	Fiji Islands region. h about 500 km.
24	14 21 39.4	54.9 N.	161.6 E.	Near east coast of Kamchatka. h about 29 km.
24	15 52 15.6	49.6 N.	155.9 E.	Kurile Islands region. h about 35 km.
24	16 19 44.9	9.8 N.	40.7 W.	Mid-Atlantic Ocean. h about 33 km.
24	17 22 59.5	2.5 S.	148.9 E.	Admiralty Islands region. h about 32 km.
25	09 51 22.8	10.6 N.	125.2 E.	Near east coast of Leyte, Philippine Islands. h about 47 km.
25	12 48 44.3	11.9 S.	77.3 W.	Near coast of central Peru. h about 33 km.
25	14 55 59.6	5.9 S.	148.4 E.	New Britain. h about 33 km.
25	17 34 48.5	16.7 N.	94.0 W.	Near coast of Chiapas, Mexico. h about 125 km.
25	22 58 10.2	74.8 N.	14.1 E.	Svalbard region. h about 33 km.
26	01 41 05.8	36.2 N.	70.1 E.	Hindu Kush. h about 121 km.
26	05 29 30.2	39.8 N.	77.2 E.	Sinkiang Province, China. h about 14 km.
26	13 28 33.7	42.2 N.	144.4 E.	Off southeast coast of Hokkaido, Japan. h about 33 km.
26	15 58 46.2	23.8 S.	175.8 W.	Tonga Islands. h about 19 km.
27	04 07 17.5	51.6 N.	177.6 W.	Andreanof Islands, Aleutian Islands. h about 33 km.
27	06 52 57.8	25.1 N.	122.9 E.	Ryukyu Islands. h about 148 km.
27	12 07 12.7	14.9 N.	119.9 E.	Near west coast of Luzon, Philippine Islands. h about 35 km.
27	16 50 27.7	12.2 N.	143.8 E.	Mariana Islands. h about 33 km.
27	18 00 00.159			37°07'22" N., 116°01'44" W. Nevada Test Site. ANACOSTIA. Shot elevation 1072.3 meters (AEC).
28	02 35 48.8	12.1 N.	143.7 E.	Mariana Islands. h about 33 km.
28	05 02 36.1	22.4 S.	10.5 W.	South Atlantic Ocean. h about 33 km.
28	05 09 15.0	22.5 S.	10.7 W.	South Atlantic Ocean. h about 33 km.
28	05 53 13.0	24.3 N.	141.3 E.	Volcano Islands. h about 82 km.
28	15 25 58.7	9.9 N.	93.4 E.	Andaman Islands region. h about 53 km.
28	21 06 49.9	42.5 N.	142.3 E.	Off south coast of Hokkaido, Japan. h about 33 km.

Date	Origin Time G. C. T.	Lat.	Long.	Region, Remarks and Focal Depth
Nov.	h m s	°	°	
29	02 20 27.8	14.0 N.	55.1 E.	200 km. north of Socotra. h about 33 km.
29	03 58 32.1	29.4 S.	177.9 W.	Kermadec Islands. h about 140 km.
29	09 03 51.4	22.2 S.	175.9 W.	Tonga Islands. h about 33 km.
29	12 44 32.8	13.9 N.	145.4 E.	Mariana Islands. h about 100 km.
29	19 06 37.6	17.3 S.	168.5 E.	New Hebrides Islands. Felt at Port Vila and Tongoa. h about 33 km. Mag. 5¾-6 (Pal).
29	22 51 55.2	39.0 N.	70.7 E.	Tadzhik S.S.R. h about 49 km.
30	16 02 05.9	24.3 N.	94.8 E.	Burma. h about 98 km.
30	16 53 24.6	3.2 N.	127.1 E.	Molucca Passage. h about 58 km.
30	21 11 30.0	10.8 N.	124.7 E.	Leyte, Philippine Islands. h about 64 km.
30	21 51 25.1	17.6 N.	99.7 W.	Guerrero, Mexico. 1 killed, slight damage at Acapulco. Felt at Toluca and Cuernavaca. h about 57 km. Mag. 5-5¼ (Pal).
30	23 07 51.6	5.5 S.	145.9 E.	Near coast of North-East New Guinea. h about 79 km.
30	23 51 05.7	34.4 N.	116.8 W.	San Bernardino County, California. Felt at Big Bear. h about 33 km. Mag. 4.3.

Date and Station		Phase (GCT)
		h m s
Nov. 1		
EUR	iP	00 59 24
Nov. 1		
EUR	eP	04 02 09
Nov. 1		
ALQ	eP	04 11 53
COL	eP	04 07 47
EUR	eP	04 10 59
Nov. 1		
BUT	iP	05 18 55
	i	19 21
Nov. 1		
BUT	iP	06 12 50
	iS	13 14
HHM	iP	06 12 44
	iS	13 04
Nov. 1		
EUR	e(P)	07 09 55
	e	10 03
Nov. 1		
COL	eP	09 14 30
Nov. 1		
COL	eP	09 40 14
Nov. 1		
COL	eP	09 59 28
	epP	10 01 24
EUR	eP	09 59 05
Nov. 1		
ALQ	iP	11 39 50
	ipP	40 30
COL	eP	11 43 54
EUR	eP	11 40 54
	ePcP	41 52
	ePP	42 39
SJP	eP	11 36 36
	ipP	37 09
Nov. 1		
COL	e(P)	13 35 31
Nov. 1		
COL	iP	13 58 06
	ipP	58 37
	i	59 32
EUR	e(P)	14 00 38
Nov. 1		
COL	iP	14 04 30
EUR	iP	14 04 40
	i	05 06

Date and Station		Phase (GCT)
		h m s
Nov. 1		
COL	iP	14 18 59
	epP	19 53
EUR	eP	14 19 14
Nov. 1		
EUR	iP	15 12 03
Nov. 1		
EUR	iP	15 29 02
Nov. 1		
ALQ	eP'	15 51 43
	iPP	52 06
COL	iP	15 45 47
EUR	eP	15 47 27
	eP'	51 45
	e	53 02
GUA	eP	15 37 16
	e	37 24
	ePP	37 49
HON	eP	15 44 33
KIP	e(P)	15 44 35
SJP	eP'	15 53 16
Nov. 1		
COL	eP	16 05 08
Nov. 1		
COL	iP	16 56 24
Nov. 1		
EUR	iP	17 25 38
Nov. 1		
ALQ	eP'	18 10 35
	i	10 58
COL	iP	18 04 46
EUR	eP	18 06 29
	eP'	10 44
GUA	eP	17 56 14
	i	56 22
SJP	eP'	18 12 16
Nov. 1		
ALQ	eP	19 30 00
Nov. 1		
EUR	iP	20 20 42
Nov. 1		
ALQ	eP	21 11 41
Nov. 1		
EUR	eP	22 51 56
UKI	e(P)	22 51 42

Date and Station		Phase (GCT)
		h m s
Nov. 1		
ALQ	eP	23 32 46
COL	iP	23 28 38
EUR	iP	23 31 55
	i	32 13
	i	32 41
HHM	iP	23 31 26
Nov. 2		
FGU	eP	00 11 10
	eS	11 42
Nov. 2		
ALQ	e(P)	02 50 26
BCN	e(P)	02 49 05
	e(S)	49 43
EUR	iP	02 49 42
	i	50 05
	iL	51 24
GCA	e(P)	02 49 30
	eL	50 50
Nov. 2		
EUR	iP	06 42 17
Nov. 2		
EUR	eP	06 46 25
Nov. 2		
COL	e(P)	07 07 20
EUR	eP	07 07 32
Nov. 2		
EUR	iP	07 17 50
Nov. 2		
EUR	e(P)	10 30 19
Nov. 2		
COL	iP	13 34 36
Nov. 2		
ALQ	eP'	15 05 44
	i	05 56
	ePP	08 18
COL	eP'	15 04 20
EUR	iP'	15 05 38
GUA	iP	14 53 35
	iPP	55 15
HON	iP	14 59 34
HHM	eP'	15 05 32
KIP	eP	14 59 34
Nov. 2		
ALQ	iP	15 12 55
BUT	eP	15 11 56

Date and Station		Phase (GCT)
		h m s
COL	iP	15 09 10
	i	09 34
EUR	iP	15 12 08
	ipP	12 21
GUA	e(P)	15 05 24
HHM	eP	15 11 43
SJP	eP'	15 08 06
	i	08 28
Nov. 2		
COL	e(P)	15 26 17
EUR	eP'	15 31 39
Nov. 2		
UKI	iP	18 07 01
Nov. 2		
COL	eP	19 10 48
EUR	iP	19 14 16
	iPcP	16 23
	iScP	20 08
HHM	iP	19 13 45
	iPcP	16 13
TUC	eP	19 15 20
TUT	eP	19 15 20
Nov. 2		
BCN	e(P)	22 36 00
	i	36 30
Nov. 2		
ALQ	eP	23 09 04
Nov. 3		
COL	iP	01 12 42
	ipP	13 05
EUR	iP	01 13 28
SJP	eP'	01 19 40
Nov. 3		
ALQ	eP	01 42 11
	i	42 56
EUR	iP	01 43 41
	iPcP	45 13
Nov. 3		
ALQ	eP	02 29 06
Nov. 3		
EUR	eP'	03 31 37
Nov. 3		
COL	iP	03 37 59
Nov. 3		
COL	iP	03 50 34

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Date and Station		Phase (GCT)
		h m s
Nov. 3		
COL	iP	04 48 51
	i	49 11
EUR	eP	04 48 28
Nov. 3		
EUR	eP'	05 19 30
SJP	eP'	05 21 53
	e	22 16
Nov. 3		
EUR	eP	06 51 59
Nov. 3		
EUR	iP	07 09 28
	i	09 55
Nov. 3		
COL	iP	07 44 35
	i	45 17
Nov. 3		
COL	eP	11 08 11
Nov. 3		
COL	iP	14 30 01
EUR	iP	14 32 22
Nov. 3		
COL	eP	14 40 43
EUR	iP	14 40 58
	ipP	41 29
Nov. 3		
COL	iP	15 12 30
HHM	iP	15 14 42
Nov. 3		
ALQ	eP	15 56 32
COL	eP	15 50 42
TUC	iP	15 55 43
TUT	e(P)	15 55 45
Nov. 3		
EUR	e(P)	19 17 36
	eP'	23 30
Nov. 3		
FGU	e(P)	21 21 25
	i	21 27
	e(S)	21 45
Nov. 4		
EUR	eP	01 54 51
Nov. 4		
FGU	eP	02 13 33
	eS	13 57
Nov. 4		
EUR	eP	02 44 53

Date and Station		Phase (GCT)
		h m s
Nov. 4		
SJP	eP	03 59 21
Nov. 4		
EUR	iP	04 59 25
	e	05 00 20
FGU	eP	04 58 47
Nov. 4		
BOZ	e(P)	06 13 14
BUT	i(P)	06 13 29
	i(S)	14 00
EUR	eP	06 14 21
FGU	eP	06 13 39
	i	13 46
	iS	14 28
HHM	e(P)	06 14 02
	e(S)	15 10
SLC	eP	06 13 51
	e(S)	14 34
Nov. 4		
ALQ	e(P)	06 20 19
BOZ	e(P)	06 18 58
BUT	iP	06 19 10
	iS	19 43
EUR	iP	06 20 05
FGU	eP	06 19 22
	i	19 27
	iS	20 10
GCA	e(P)	06 20 09
HHM	eP	06 19 44
	eS	20 52
SLC	eP	06 19 30
	eS	20 12
Nov. 4		
FGU	eP	06 26 38
	eS	27 24
Nov. 4		
BUT	i(P)	11 22 53
Nov. 4		
ALQ	eP	12 06 24
BCN	e(P)	12 05 14
	i	05 21
	i	06 01
EUR	iP	12 05 58
FGU	e(P)	12 06 37
GCA	eP	12 05 44
	e	06 44

Date and Station		Phase (GCT)
		h m s
TUC	e(P)	12 05 30
TUT	e(P)	12 05 32
Nov. 4		
GUA	iP	12 50 51
Nov. 4		
BOZ	e(P)	13 42 35
BUT	iP	13 43 21
EUR	eP	13 43 45
FGU	eP	13 43 00
	i	43 05
	iS	43 51
HHM	e(P)	13 43 23
Nov. 4		
FGU	eP	14 23 42
	eS	24 04
Nov. 4		
SLC	eP	14 43 14
	eS	44 04
Nov. 4		
EUR	eP	15 49 10
Nov. 4		
ALQ	iP	16 28 48
COL	e(P)	16 31 13
EUR	eP	16 29 47
Nov. 4		
HHM	e(P)	17 49 38
	eS	50 22
Nov. 4		
ALQ	eP	19 03 14
Nov. 4		
EUR	iP	19 42 32
FGU	eP	19 42 55
Nov. 4		
THU	e(P)	19 54 38
Nov. 4		
COL	iP	21 20 37
EUR	eP	21 20 09
	e	20 34
Nov. 4		
THU	e(P)	21 53 31
	e	54 44
Nov. 4		
ALQ	eP	21 56 46
Nov. 4		
ALQ	iP	23 05 57
	i(S)	16 20

Date and Station		Phase (GCT)
		h m s
BHP	iP	23 02 43
	iS	10 10
BCN	e(P)	23 06 16
BOZ	e(P)	23 06 50
BUT	eP	23 06 54
COL	iP'	23 12 24
EUR	iP	23 06 32
	iPKKP	24 04
FGU	eP	23 06 28
GCA	eP	23 06 14
HHM	e(P)	23 07 05
SLC	eP	23 06 30
SJP	eP	23 03 50
THU	eP'	23 12 21
TUC	eP	23 05 51
TUT	eP	23 05 51
Nov. 5		
BOZ	e(P)	00 37 00
Nov. 5		
EUR	e(P)	00 43 39
FGU	eP	00 43 28
	i	43 30
	eS	44 03
SLC	iP	00 42 57
	i(S)	43 19
Nov. 5		
FGU	eP	04 46 00
	eS	46 25
Nov. 5		
EUR	eP	05 24 41
Nov. 5		
EUR	eP	06 33 25
Nov. 5		
GUA	e(P)	09 45 20
Nov. 5		
GUA	e(P)	10 14 54
Nov. 5		
ALQ	eP	10 43 52
EUR	iP	10 45 01
FGU	eP	10 44 34
SJP	e(P)	10 41 38

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Date and Station		Phase (GCT)
Nov. 5		h m s
ALQ	eP	11 26 20
GUA	e(P)	11 34 12
Nov. 5		
ALQ	eP	11 57 04
COL	eP	11 54 46
EUR	eP	11 56 57
FGU	eP	11 56 33
Nov. 5		
FGU	eP	12 23 33
	eS	24 19
Nov. 5		
ALQ	iP	20 10 36
Nov. 5		
ALQ	iP	21 07 14
EUR	iP	21 07 34
Nov. 5		
ALQ	eP	21 44 02
Nov. 5		
ALQ	eP	22 58 43
Nov. 5		
ALQ	eP	23 20 10
	i	20 26
COL	iP	23 25 48
Nov. 6		
COL	iP	00 22 24
EUR	iP'	00 28 23
	iPP	29 11
THU	eP	00 21 01
	i	21 27
	i	21 42
Nov. 6		
EUR	eP	00 57 16
Nov. 6		
FGU	e(P)	01 51 32
Nov. 6		
ALQ	iP	03 40 34
	eS	45 24
	iL	47 04
BCN	e(P)	03 39 18
	eL	42 28
BOZ	eP	03 38 43
	eL	41 02
BUT	iP	03 38 27
COL	eP	03 41 58

Date and Station		Phase (GCT)
		h m s
EUR	iP	03 38 43
FGU	eP	03 39 21
GCA	eP	03 39 38
HHM	iP	03 38 20
	i(S)	39 57
SLC	iP	03 39 03
	iS	41 41
SJP	eP	03 46 07
	i	47 11
TUC	eP	03 40 33
	eS	43 49
	eL	45 23
TUT	eP	03 40 33
	i(PP)	41 16
UKI	iP	03 38 25
	i	38 45
Nov. 6		
HHM	e(P)	04 17 38
Nov. 6		
SJP	eP	05 06 31
Nov. 6		
EUR	iP	05 26 31
Nov. 6		
COL	iP	06 33 23
EUR	eP	06 36 26
Nov. 6		
COL	eP	07 21 46
Nov. 6		
ALQ	iP	08 31 42
EUR	iP	08 32 10
FGU	eP	08 32 27
Nov. 6		
EUR	eP	09 33 35
Nov. 6		
EUR	eP	10 02 49
Nov. 6		
EUR	eP	10 11 33
Nov. 6		
FGU	e(P)	11 44 28
Nov. 6		
ALQ	eP	11 59 58
	i	12 00 26
EUR	iP	11 58 03
	i	58 47

Date and Station		Phase (GCT)
		h m s
FGU	eP	11 59 17
GCA	eP	11 58 46
	i	59 03
SLC	e(P)	11 59 15
Nov. 6		
ALQ	iP	12 31 41
	ipP	32 03
COL	eP	12 35 46
	isP	36 15
EUR	eP	12 32 45
	ipP	31 07
FGU	eP	12 32 28
SJP	eP	12 28 51
	ePP	29 22
Nov. 6		
ALQ	eP	15 15 24
COL	eP	15 19 15
EUR	eP	15 16 34
SJP	eP	15 08 42
	iL	09 06
Nov. 6		
EUR	iP	19 27 51
Nov. 6		
ALQ	iP	20 47 40
Nov. 6		
COL	eP	21 00 54
Nov. 6		
FGU	eP	21 36 28
	e(S)	36 35
Nov. 6		
COL	iP	21 39 01
	ipP	39 19
EUR	iP	21 40 03
HHM	eP	21 40 09
Nov. 6		
ALQ	eP	23 00 33
FGU	e(P)	22 59 15
	e(S)	59 41
Nov. 7		
GUA	iP	03 56 54
EUR	iP	04 09 21
Nov. 7		
COL	iP	05 24 04
	i(pP)	26 26
EUR	iP	05 23 42

Date and Station		Phase (GCT)
Nov. 7		h m s
EUR	iP	06 34 02
FGU	eP	06 34 26
Nov. 7		
UKI	iP	07 30 01
	eL	53 00
Nov. 7		
COL	eP'	12 02 45
EUR	eP	11 57 48
Nov. 7		
ALQ	iP	13 07 48
BOZ	eP	13 07 33
BUT	iP	13 07 40
COL	iP	13 08 21
EUR	eP	13 08 16
FGU	eP	13 07 42
HHM	eP	13 07 37
SLC	eP	13 07 53
SJP	eP	13 05 07
TUC	eP	13 08 19
TUT	eP	13 08 18
Nov. 7		
ALQ	eP	13 27 18
Nov. 7		
BOZ	eP'	16 21 42
COL	eP	16 16 26
EUR	iP'	16 21 41
	e(PKKP)	31 38
FGU	eP'	16 21 48
GCA	eP'	16 21 47
HHM	eP'	16 21 37
SLC	iP'	16 21 46
SJP	eP'	16 22 54
TUT	eP'	16 21 52
Nov. 7		
SJP	iP	17 25 18
Nov. 7		
COL	eP	20 13 31
Nov. 7		
HHM	e(P)	21 32 40
	eS	33 04

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Date and Station		Phase (GCT) h m s
Nov. 7		
ALQ	eP	22 36 12
COL	eP	22 31 33
EUR	iP	22 35 06
	e(pP)	35 21
	iPcP	36 37
SJP	iP	22 39 39
Nov. 8		
ALQ	iP	00 11 59
BHP	eP	00 07 25
EUR	iP	00 12 56
SJP	e(P)	00 08 54
FGU	eP	00 12 42
Nov. 8		
ALQ	eP	00 40 26
BHP	e(P)	00 44 08
COL	eP	00 44 57
EUR	iP	00 41 26
	e(PcP)	41 56
FGU	eP	00 41 17
	e	41 32
GCA	e(P)	00 41 01
HHM	eP	00 42 29
SLC	e(P)	00 41 33
SJP	eP	00 41 24
TUC	e(P)	00 40 21
	e(S)	46 10
	eL	49 07
TUT	e(P)	00 40 22
Nov. 8		
FGU	eP	01 16 07
	i	16 09
	eS	16 33
Nov. 8		
COL	e(P)	02 42 27
EUR	eP	02 39 05
Nov. 8		
EUR	iP	03 31 01
Nov. 8		
FGU	eP	04 15 17
	eS	15 24
Nov. 8		
FGU	eP	05 54 05
	eS	54 36

Date and Station		Phase (GCT) h m s
Nov. 8		
COL	iP	07 17 18
EUR	iP	07 18 01
Nov. 8		
COL	e(P)	08 01 46
EUR	iP	08 01 51
Nov. 8		
COL	iP	10 15 56
EUR	iP	10 16 13
Nov. 8		
COL	iP	15 25 46
EUR	iP	15 25 59
Nov. 8		
THU	e(P)	15 45 45
Nov. 8		
COL	iP	16 41 14
Nov. 8		
EUR	iP	17 30 57
Nov. 8		
UKI	e(P)	18 08 41
Nov. 8		
COL	iP	18 55 28
EUR	iP	18 58 49
Nov. 8		
ALQ	eP	20 41 20
EUR	iP	20 42 30
Nov. 8		
ALQ	eP	21 25 38
COL	iP	21 21 00
	e(S)	25 09
EUR	iP	21 24 34
HHM	e(P)	21 24 02
THU	e(P)	21 24 16
Nov. 9		
FGU	eP	00 09 27
HHM	iP	00 11 15
Nov. 9		
COL	iP	01 23 17
THU	eP	01 21 30
Nov. 9		
EUR	iP	02 27 29
Nov. 9		
COL	e(P)	04 59 22

Date and Station		Phase (GCT) h m s
Nov. 9		
ALQ	eP	06 07 53
EUR	eP	06 06 36
Nov. 9		
FGU	eP	07 15 40
	eS	16 12
Nov. 9		
COL	iP	08 38 06
	epP	40 10
Nov. 9		
ALQ	eP	09 34 10
BUT	eP	09 33 14
COL	iP	09 30 28
EUR	iP	09 33 24
FGU	iP	09 33 41
SLC	e(P)	09 33 34
THU	eP	09 32 19
	e	32 30
TUC	iP	09 34 05
TUT	eP	09 34 05
Nov. 9		
EUR	eP	13 54 19
HHM	e(P)	13 54 03
Nov. 9		
ALQ	eP	14 03 58
BOZ	eP	14 03 15
BUT	eP	14 03 11
COL	iP	14 00 47
EUR	iP	14 03 16
FGU	iP	14 03 34
HHM	eP	14 03 01
SLC	e(P)	14 03 26
Nov. 9		
BUT	eP	17 18 10
Nov. 9		
EUR	eP	18 00 39
GCA	eP	18 01 02
Nov. 9		
ALQ	eP	18 18 52
BOZ	eP	18 18 37
COL	eP	18 19 24
	e	19 40

Date and Station		Phase (GCT) h m s
EUR	iP	18 19 19
	i	19 56
GCA	eP	18 19 09
HHM	e(P)	18 18 40
Nov. 9		
ALQ	eP	21 17 53
EUR	eP	21 19 02
GCA	e(P)	21 18 16
Nov. 9		
COL	iP	22 47 55
	iL	49 08
Nov. 10		
FGU	iP	00 42 59
	eS	43 24
SLC	eP	00 42 27
Nov. 10		
ALQ	iP	01 45 07
	ePP	47 37
BOZ	eP	01 44 09
	ePcP	44 33
	e	44 44
	e	45 06
	ePP	46 39
	e	47 25
	ePPP	48 21
	eS	52 57
	eP'P'	02 12 35
BUT	iP	01 44 02
	i	44 30
	ePP	46 23
	i	47 02
	ePPP	48 10
	e	49 03
	iS	52 46
COL	iP	01 40 59
	iS	47 08
	i	47 34
EUR	iP	01 44 15
	eP'P'	02 12 16
FGU	iP	01 44 33
GCA	eP	01 44 41
HON	iP	01 42 11
	eS	49 24
	eL	56 09
HHM	iP	01 43 47
KIP	iP	01 42 10
	eS	49 23

Date and Station		Phase (GCT) h m s
SLC	iP	01 44 26
	ePcP	44 40
	e	45 10
	ePP	47 00
	e	47 21
	iS	53 32
	eP'P'	02 12 27
SJP	iP'	01 52 26
THU	iP	01 43 05
	e	43 58
TUC	iP	01 45 03
TUT	iP	01 45 03
UKI	eP	01 43 49
Nov. 10		
EUR	e(P)	02 39 16
GUA	eP	02 26 41
Nov. 10		
FGU	iP	02 59 07
Nov. 10		
FGU	eP	03 07 30
	e(S)	07 51
Nov. 10		
COL	eP	05 20 34
EUR	eP	05 21 25
Nov. 10		
EUR	eP	06 00 21
Nov. 10		
THU	e(P)	06 30 13
Nov. 10		
COL	eP	07 30 02
Nov. 10		
EUR	eP	09 32 39
Nov. 10		
FGU	eP	10 17 50
Nov. 10		
COL	iP	11 15 05
Nov. 10		
BUT	eP	11 28 39
Nov. 10		
FGU	eP	11 42 37
Nov. 10		
FGU	eP	12 09 37
Nov. 10		
HHM	eP	12 36 22
Nov. 10		
COL	eP	16 00 45

Date and Station		Phase (GCT) h m s
Nov. 10		
COL	eP	19 40 41
Nov. 10		
ALQ	eP	20 42 12
Nov. 11		
ALQ	eP	01 54 34
Nov. 11		
ALQ	eP	04 00 25
SJP	e(P)	04 00 25
Nov. 11		
EUR	eP	06 37 13
FGU	eP	06 37 32
	ipP	38 09
Nov. 11		
ALQ	iP	07 59 22
	i	08 00 31
BOZ	eP	07 59 12
	e	59 45
	ePP	08 03 26
BUT	e(P)	07 59 43
SLC	e(P)	07 59 18
	e	08 00 06
	ePP	03 51
TUC	eP	07 59 24
TUT	eP	07 59 25
	e	08 00 45
	ePP	04 37
Nov. 11		
ALQ	iP	10 13 49
Nov. 11		
ALQ	iP	11 44 11
BOZ	eP	11 43 08
BUT	iP	11 43 04
COL	iP	11 39 58
EUR	eP	11 43 32
GCA	e(P)	11 44 56
SLC	eP	11 43 33
TUC	eP	11 44 17
TUT	eP	11 44 17
Nov. 11		
BOZ	e(P)	12 09 43
COL	iP	12 09 32
EUR	iP	12 09 12

Date and Station		Phase (GCT) h m s
Nov. 11		
FGU	eP	14 33 32
	eS	34 00
Nov. 11		
EUR	e(P)	15 01 26
Nov. 11		
FGU	eP	15 29 08
THU	eP	15 27 26
Nov. 11		
ALQ	iP	16 23 10
	ePKKP	40 06
BOZ	eP	16 23 09
	epP	23 33
	ePKKP	40 13
	eP'P'	48 25
BUT	eP	16 23 03
	epP	23 28
	ePKKP	40 16
	eP'P'	48 21
COL	iP	16 22 23
EUR	iP	16 22 44
	e	40 20
	iPKKP	41 12
	iP'P'	48 29
FGU	e(PKKP)	16 46 11
	i	46 48
GCA	eP	16 22 57
HON	eP	16 18 43
	eS	25 48
	eL	29 52
HHM	eP	16 23 02
	ipP	23 27
	ePKKP	40 17
	eP'P'	48 29
SLC	eP	16 23 00
	epP	23 24
	ePKKP	40 18
	eP'P'	48 26
SJP	iP'	16 28 59
	ipP'	29 24
TUC	eP	16 22 54
TUT	eP	16 22 55
UKI	eP	16 22 18
Nov. 11		
BUT	iP	18 44 45
Nov. 11		
FGU	eP	20 24 23
	i	24 30
	iS	24 27

Date and Station		Phase (GCT) h m s
Nov. 11		
BOZ	eP	21 17 35
	eS	17 47
BUT	iP	21 17 44
	iS	18 04
EUR	eP	21 18 56
HHM	e(P)	21 18 18
	iS	19 20
SLC	e(P)	21 18 24
	e(S)	19 22
Nov. 11		
ALQ	eP	21 24 55
BOZ	eP	21 24 16
BUT	iP	21 24 20
	iS	24 41
Nov. 11		
FGU	eP	21 33 12
Nov. 11		
ALQ	eP	21 50 12
BOZ	e(P)	21 48 21
	e	48 33
BUT	eP	21 48 02
COL	iP	21 49 40
	i	49 50
EUR	iP	21 48 30
GCA	e(P)	21 49 25
	e	49 28
HHM	eP	21 47 39
SLC	e(P)	21 48 47
UKI	iP	21 47 53
Nov. 11		
ALQ	eP	22 26 39
BHP	iP	22 23 27
BOZ	eP	22 26 48
	e	27 00
BUT	eP	22 26 57
	i	27 17
COL	eP	22 33 06
	i	33 09
EUR	iP	22 27 16
	ePKKP	44 46
GCA	eP	22 26 56

Date and Station		Phase (GCT)
		h m s
HON	eS	22 40 16
	e	40 55
	ePS	41 36
	eSS	46 24
	eL	59 54
HHM	eP	22 27 32
	e	28 32
SLC	eP	22 27 22
SJP	iP	22 24 34
	i	24 42
TUC	eP	22 26 35
TUT	eP	22 26 34
	i	26 38
	e	27 17
UKI	e(P)	22 27 29
Nov. 12		
FGU	eP	00 01 22
	i	01 24
	e(S)	01 49
Nov. 12		
FGU	eP	00 14 20
	i	14 22
	e(S)	14 47
Nov. 12		
FGU	e(P)	00 46 16
	eS	47 05
Nov. 12		
FGU	e(P)	00 53 09
	e	53 39
Nov. 12		
COL	iP	04 22 57
EUR	e(P)	04 27 41
Nov. 12		
EUR	eP	06 24 38
Nov. 12		
EUR	eP	07 55 09
GCA	eP	07 55 22
Nov. 12		
FGU	eP	08 06 11
	e(S)	06 34
Nov. 12		
COL	iP	08 37 45
	i	39 18
Nov. 12		
FGU	eP	11 12 10
	eS	12 44
Nov. 12		
ALQ	eP	11 21 13
	i	23 41

Date and Station		Phase (GCT)
		h m s
Nov. 12		
FGU	eP	12 09 30
Nov. 12		
BOZ	e(P)	13 02 11
BUT	eP	13 02 05
COL	iP	12 59 41
EUR	iP	13 02 15
SLC	e(P)	13 02 35
THU	e(P)	13 01 00
Nov. 12		
BOZ	e(P)	13 27 28
	e(S)	27 47
BUT	iP	13 27 42
	iS	28 09
Nov. 12		
EUR	eP	15 58 43
Nov. 12		
COL	eP	16 26 10
EUR	iP	16 29 06
Nov. 12		
ALQ	iP	19 41 49
BOZ	eP	19 40 38
	e	41 19
BUT	iP	19 40 37
COL	iP	19 37 16
	e(S)	41 01
EUR	iP	19 40 43
FGU	iP	19 41 07
HHM	iP	19 40 12
SLC	eP	19 41 56
SJP	iP	19 45 29
	i	45 35
Nov. 12		
COL	eP	19 54 09
EUR	i(P)	19 58 18
Nov. 13		
FGU	eP	02 40 42
	i(S)	40 47
Nov. 13		
COL	eP	03 30 45
EUR	eP	03 34 12
SJP	e(P)	03 39 16

Date and Station		Phase (GCT)
		h m s
Nov. 13		
EUR	eP	06 36 10
GCA	e(P)	06 37 12
Nov. 13		
ALQ	eP	07 57 05
Nov. 13		
COL	eP	08 11 18
EUR	eP	08 14 47
Nov. 13		
ALQ	iP	09 06 50
COL	iP	09 02 47
EUR	iP	09 06 01
FGU	iP	09 06 18
Nov. 13		
FGU	eP	09 21 49
	eS	22 14
Nov. 13		
ALQ	eP	10 07 07
COL	iP	10 01 48
EUR	iP	10 05 17
	ePcP	07 33
SJP	e(P)	10 10 25
FGU	eP	10 05 43
	iPcP	07 43
Nov. 13		
FGU	eP	12 13 16
Nov. 13		
GCA	e(P)	12 53 55
Nov. 13		
COL	e(P)	13 31 32
Nov. 13		
COL	eP'	22 07 26
	i	07 34
EUR	eP'	22 06 36
Nov. 13		
TUT	eP	22 54 03
Nov. 14		
ALQ	eP	01 44 00
COL	eP	01 48 39
EUR	e(P)	01 45 15
	i	45 25
Nov. 14		
COL	eP	05 28 21
EUR	iP	05 28 38

Date and Station		Phase (GCT)
		h m s
Nov. 14		
COL	iP	07 37 06
EUR	iP	07 36 33
Nov. 14		
ALQ	iP	08 00 40
BOZ	eP	07 59 50
	epP	08 00 02
BUT	iP	07 59 44
COL	iP	07 56 58
	iPP	57 41
EUR	iP	07 59 54
	i(pP)	08 00 02
FGU	iP	08 00 11
HON	eS	08 05 38
	eL	12 46
HHM	iP	07 59 31
	epP	59 43
KIP	e(P)	07 57 31
SLC	eP	08 00 12
	epP	00 24
TUC	eP	08 00 34
TUT	eP	08 00 34
Nov. 14		
COL	eP	08 05 23
EUR	iP	08 08 19
	e	08 48
Nov. 14		
EUR	e(P)	11 14 13
Nov. 14		
COL	e(P)	12 29 11
EUR	eP	12 31 16
Nov. 14		
EUR	e(P)	13 42 26
Nov. 14		
EUR	iP	14 29 59
Nov. 14		
COL	eP	14 40 27
	e	40 38
SJP	eP	14 33 12
Nov. 14		
COL	eP	16 02 41
EUR	eP	16 01 13
Nov. 14		
COL	eP	16 22 57
EUR	eP	16 21 28

Date and Station		Phase (GCT)
		h m s
SJP	eP	16 15 32
Nov. 14		
EUR	eP	17 24 36
Nov. 14		
HHM	eP	18 26 13
	iS	26 16
Nov. 14		
EUR	iP	19 07 44
HHM	eP	19 06 31
	iS	06 36
Nov. 14		
COL	iP	21 26 53
Nov. 14		
HHM	eP	21 39 57
	iS	40 01
Nov. 14		
ALQ	eP	21 57 29
EUR	iP	21 53 38
	i	53 41
	e	53 50
Nov. 14		
ALQ	iP'	22 18 03
COL	eP	22 12 07
EUR	eP'	22 17 46
FGU	eP'	22 17 54
HON	eP	22 11 40
	eL	36 44
KIP	eP	22 11 40
SJP	eP'	22 19 58
Nov. 14		
FGU	iP	22 29 45
	i(S)	29 48
Nov. 14		
COL	iP	22 51 02
	eS	51 48
	iL	52 14
EUR	eP	22 55 56
Nov. 14		
GCA	e(P)	00 39 05
	e	39 53
Nov. 15		
FGU	iP C	00 44 24
	iS	44 28
Nov. 15		
EUR	eP	01 57 08
Nov. 15		
EUR	eP	03 00 20

Date and Station		Phase (GCT)
Nov. 15		h m s
FGU	e(P)	03 11 24
	e(S)	11 59
Nov. 15		
FGU	eP	03 29 11
	eS	29 28
Nov. 15		
EUR	eP	03 46 53
Nov. 15		
FGU	eP	04 50 39
	eS	51 02
Nov. 15		
FGU	eP	05 18 53
Nov. 15		
COL	eP	05 38 51
Nov. 15		
EUR	iP	07 54 41
Nov. 15		
COL	eP	09 26 32
EUR	eP	09 28 50
Nov. 15		
FGU	eP	11 20 30
	eS	20 52
Nov. 15		
EUR	iP	11 32 12
Nov. 15		
COL	iP	11 42 32
	epP	44 4[illegible]
EUR	eP	11 42 1[illegible]
Nov. 15		
COL	iP	12 26 5[illegible]
Nov. 15		
GCA	e(P)	12 40 0[illegible]
Nov. 15		
ALQ	eP	14 01 14
COL	eP	13 57 31
EUR	eP	14 00 26
Nov. 15		
ALQ	iP	16 04 00
BCN	eP	16 04 22
BOZ	eP	16 05 03
BUT	iP	16 05 07
EUR	iP	16 04 38
	i	04 45
FGU	eP	16 04 32
	i	04 40

Date and Station		Phase (GCT)
		h m s
HHM	eP	16 05 13
TUT	e(P)	16 04 04
Nov. 15		
ALQ	eP	16 21 30
BCN	eP	16 21 53
BOZ	e(P)	16 22 31
BUT	iP	16 22 35
EUR	iP	16 22 09
FGU	eP	16 22 03
TUT	eP	16 21 26
Nov. 15		
BCN	eP	16 30 32
EUR	iP	16 30 42
SLC	eP	16 31 55
Nov. 15		
COL	eP	16 37 45
EUR	eP	16 38 48
SJP	iP'	16 44 45
	i	44 50
Nov. 15		
EUR	iP	16 47 43
Nov. 15		
EUR	eP	18 38 48
Nov. 15		
ALQ	eP	23 34 09
	e(S)	41 06
BHP	iP D	23 29 20
BCN	iP	23 34 48
BOZ	eP	23 35 26
	e(pP)	35 37
	e(PcP)	35 58
BUT	iP	23 35 32
	iPcP	36 19
COL	iP	23 38 05
EUR	iP	23 35 09
FGU	iP	23 34 54
GCA	eP	23 34 40
HON	e(S)	23 48 01
	e	48 40
	eL	00 03 05

Date and Station		Phase (GCT)
		h m s
HHM	iP	23 35 48
	ipP	36 01
	iPcP	36 22
SJP	iP	23 31 23
THU	iP	23 37 49
	e	38 42
TUC	iP	23 34 10
TUT	iP	23 34 10
Nov. 16		
FGU	e(P)	00 04 37
Nov. 16		
EUR	eP	00 12 18
Nov. 16		
EUR	eP	00 44 14
FGU	iP	00 45 30
	eS	46 02
Nov. 16		
COL	eP	01 21 21
EUR	iP	01 23 12
SLC	e(P)	01 23 25
Nov. 16		
COL	eP	02 13 30
EUR	eP	02 15 22
Nov. 16		
COL	eP	02 31 24
EUR	iP	02 31 06
FGU	eP	02 31 31
GCA	eP	02 31 15
TUC	eP	02 31 07
Nov. 16		
EUR	e(P)	03 02 33
Nov. 16		
FGU	eP	03 30 07
Nov. 16		
EUR	e(P)	05 05 24
Nov. 16		
EUR	iP	05 49 16
TUC	eP	05 48 29
TUT	e(P)	05 48 29
Nov. 16		
BOZ	e(P)	06 48 36
BUT	eP	06 48 43

Date and Station		Phase (GCT)
		h m s
COL	eP	06 51 27
CSC	eP	06 46 03
EUR	iP	06 48 24
FGU	eP	06 48 04
GCA	e(P)	06 47 52
HHM	eP	06 48 58
SLC	e(P)	06 48 13
SJP	e(P)	06 44 17
TUC	eP	06 47 22
TUT	e(P)	06 47 23
Nov. 16		
ALQ	eP	07 29 28
BHP	iP	07 27 35
BOZ	eP	07 30 30
	e	31 08
	e(PP)	33 32
BUT	iP	07 30 33
	i	31 43
	i(PP)	33 31
	eL	56 40
COL	eP	07 32 22
	ePP	36 46
EUR	iP	07 29 57
FGU	iP	07 30 03
GCA	eP	07 29 40
HON	e(S)	07 39 02
	e	43 36
	eL	46 54
HHM	eP	07 30 44
SLC	eP	07 30 03
	i	30 14
	i	30 20
	i	30 25
	e	31 17
	iS	39 32
	eL	54 34
TUC	iP	07 29 09
	eS	37 42
TUT	iP	07 29 11
Nov. 16		
COL	iP	10 02 32
EUR	iP	10 04 37
FGU	iP	10 04 57

Date and Station		Phase (GCT)
		h m s
HHM	eP	10 04 28
TUC	eP	10 05 09
TUT	eP	10 05 08
Nov. 16		
FGU	eP	10 28 01
	e	28 23
Nov. 16		
FGU	eP	11 35 59
	e	36 12
Nov. 16		
EUR	eP	11 44 41
Nov. 16		
FGU	eP	17 00 39
	eS	00 58
Nov. 16		
BOZ	e(P)	17 58 51
	e L	59 04
HHM	e(P)	17 59 37
	e	18 00 33
Nov. 16		
EUR	i(P)	18 16 55
Nov. 16		
EUR	eP	19 59 10
Nov. 16		
BOZ	eP'	21 22 48
BUT	eP'	21 29 54
COL	eP	21 22 58
	i	23 20
	iS	33 48
	ePKKP	40 37
EUR	iP'	21 28 55
	ePP	30 27
	ePKKP	38 57
FGU	iP'	21 29 05
HHM	e(P)	21 25 01
	eP'	28 15
THU	iP	21 22 57
	e	23 19
	e	23 40
TUT	eP'	21 29 11
Nov. 16		
EUR	iP	22 16 10
Nov. 16		
ALQ	iP'	23 04 47
COL	eP	22 58 37

Date and Station		Phase (GCT)
Nov. 16		h m s
HHM	eP	23 46 19
	eS	46 38
Nov. 17		
ALQ	iP	00 10 42
	i	11 13
EUR	eP	00 11 34
	epP	12 20
	e	17 14
FGU	eP	00 11 29
Nov. 17		
COL	eP	00 43 34
Nov. 17		
COL	e(P)	01 26 19
Nov. 17		
EUR	eP	02 45 59
Nov. 17		
FGU	eP	06 19 37
	eS	20 01
Nov. 17		
FGU	eP	07 12 23
	eS	13 01
Nov. 17		
BCN	eP	11 12 38
	eS	20 22
BOZ	eP	11 13 38
	eL	24 06
BUT	iP	11 13 44
	i	13 56
	i	14 20
COL	iP	11 17 15
	e	39 54
EUR	iP	11 13 08
	eS	22 03
	eL	22 35
FGU	iP	11 12 55
	e(S)	20 59
HHM	eP	11 14 06
SLC	eP	11 13 01
	e	13 09
	eL	21 47
TUC	iP	11 11 46
TUT	iP	11 11 46
Nov. 17		
FGU	iP	12 12 39
Nov. 17		
COL	iP	13 22 22
	i	22 33

Date and Station		Phase (GCT)
		h m s
EUR	iP	13 25 36
Nov. 17		
ALQ	iP'	14 39 18
COL	eP	14 33 15
	epP	35 25
	esP	36 27
	ePP	36 53
	e(PKKP)	47 50
EUR	eP'	14 39 00
	ePP	39 45
	e(pP')	41 37
	e(PKKP)	49 53
FGU	eP'	14 39 17
Nov. 17		
ALQ	iP	15 23 46
Nov. 17		
ALQ	iP	16 45 56
Nov. 17		
FGU	eP	17 57 28
	eS	57 48
Nov. 17		
COL	eP	19 49 46
EUR	iP	19 53 19
Nov. 17		
COL	eP	20 03 54
Nov. 17		
ALQ	eP	20 57 39
EUR	eP	20 58 28
Nov. 17		
BCN	eP	21 28 18
	eS	28 25
Nov. 17		
EUR	iP	22 21 13
Nov. 17		
ALQ	eP	22 35 45
COL	iP	22 29 02
	iS	29 26
EUR	iP	22 34 40
	eScP	41 01
HHM	iP	22 33 40
FGU	eP	22 35 51
	iPP	37 33
Nov. 18		
COL	eP	02 24 11
EUR	e(P)	02 27 28

Date and Station		Phase (GCT)
Nov. 18		h m s
FGU	e(P)	06 31 42
	eS	32 26
Nov. 18		
ALQ	iP'	07 01 58
COL	iP	06 55 58
	iPP	59 13
EUR	iP'	07 01 41
FGU	eP'	07 01 49
TUC	eP'	07 01 53
TUT	eP'	07 01 53
Nov. 18		
COL	iP	07 50 37
EUR	iP	07 49 01
FGU	eP	07 48 28
SLC	eP	07 47 40
TUC	eP	07 48 33
TUT	eP	07 48 33
Nov. 18		
EUR	e(P)	11 59 34
Nov. 18		
FGU	eP	12 08 42
	eS	09 09
Nov. 18		
COL	iP	12 12 40
	ipP	13 17
EUR	iP	12 12 10
	e(pP)	12 40
Nov. 18		
BCN	e(P)	15 00 15
Nov. 18		
ALQ	eP	16 05 04
Nov. 18		
EUR	iP	18 58 15
Nov. 19		
BHP	iP	00 34 13
	iS	34 23
Nov. 19		
EUR	e(P)	03 44 20
Nov. 19		
BUT	eP	04 13 50
COL	eP	04 09 43
Nov. 19		
COL	eP	04 26 32
	epP	26 47
EUR	eP	04 29 00
		h m s
HHM	eP	04 28 40
Nov. 19		
EUR	eP	04 55 49
Nov. 19		
COL	eP	07 36 01
	e	36 45
Nov. 19		
COL	eP	08 59 29
Nov. 19		
EUR	iP	10 27 19
	i	27 23
	e(S)	38 00
Nov. 19		
EUR	e(P)	10 41 57
	i	42 04
Nov. 19		
FGU	eP	11 04 32
	eS	04 54
Nov. 19		
COL	eP	14 13 39
Nov. 19		
ALQ	eP	14 38 08
BHP	eP	14 32 08
	eS	33 21
BCN	e(P)	14 38 56
COL	eP	14 42 11
	ePP	45 08
EUR	iP	14 39 16
	i(pP)	39 47
FGU	iP	14 38 49
SJP	iP	14 33 35
	iS	35 52
TUT	eP	14 38 20
Nov. 19		
COL	iP	17 01 45
Nov. 19		
BUT	e(P)	18 00 05
Nov. 19		
FGU	eP	21 15 48
	eS	16 22
Nov. 19		
ALQ	eP	21 52 37
	ePcP	54 26
COL	eP	21 48 03
EUR	iP	21 51 42
	i	51 52
Nov. 20		
COL	eP	00 13 06
EUR	iP	00 16 33
		h m s
Nov. 20		
ALQ	eP	00 47 26
	i	47 32
Nov. 20		
FGU	eP	01 34 52
	eS	35 18
Nov. 20		
BUT	e(P)	03 44 50
	i	44 55
Nov. 20		
HHM	eP	04 32 15
	iS	32 19
Nov. 20		
COL	iP	05 18 33
Nov. 20		
COL	eP	06 33 12
Nov. 20		
ALQ	iP	07 04 25
	i(PcP)	05 00
BCN	eP	07 04 04
BOZ	e(P)	07 03 29
BUT	eP	07 03 20
COL	iP	06 59 45
EUR	iP	07 03 43
FGU	eP	07 02 59
	i	03 50
SLC	eP	07 03 52
THU	e(P)	07 02 16
TUC	eP	07 04 39
TUT	eP	07 04 38
Nov. 20		
ALQ	eP	07 43 00
BCN	e(P)	07 42 26
BOZ	eP	07 42 01
BUT	iP	07 41 55
	e	41 59
	ePcP	42 34
COL	iP	07 38 20
	e	40 10
EUR	iP	07 42 18
	eScP	47 04
SLC	eP	07 42 26
THU	iP	07 40 51
TUC	eP	07 43 14
		h m s
TUT	eP	07 43 14
Nov. 20		
COL	eP	10 23 25
	ipP	23 47
EUR	eP	10 24 21
	ipP	24 36
Nov. 20		
COL	eP	13 12 38
Nov. 20		
BCN	i(P)	13 54 44
Nov. 20		
COL	iP	14 20 39
EUR	iP	14 24 37
Nov. 20		
BCN	eP	16 13 47
COL	iP	16 10 17
	ipP	10 30
EUR	iP	16 13 31
Nov. 20		
COL	iP	16 45 21
Nov. 20		
EUR	eP	17 05 21
Nov. 20		
COL	iP	18 08 19
Nov. 20		
ALQ	eP	20 21 30
COL	eP	20 58 24
Nov. 20		
ALQ	eP	21 33 36
Nov. 20		
FGU	iP	23 46 56
Nov. 21		
EUR	e(P)	00 57 40
FGU	eP	00 57 27
Nov. 21		
COL	eP	05 56 29
EUR	eP	05 59 51
Nov. 21		
ALQ	eP	07 20 14
EUR	iP	07 20 34
Nov. 21		
EUR	iP	10 05 39

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Date and Station		Phase (GCT)
		h m s
UKI	iP	10 04 28
	i	04 34
	i	04 42
	i	04 48
Nov. 21		
COL	eP	15 14 48
Nov. 21		
COL	iP	18 35 04
	iS	35 54
Nov. 21		
COL	eP	19 39 36
Nov. 21		
COL	iP	19 52 12
	epP	54 30
EUR	eP	19 51 56
Nov. 21		
COL	e(P)	21 04 51
Nov. 21		
BCN	eP	23 38 18
	e	38 49
Nov. 22		
ALQ	iP	00 29 36
Nov. 22		
GCA	e(P)	00 35 54
Nov. 22		
HHM	eP	00 41 27
	e	42 12
Nov. 22		
EUR	iP	01 28 09
Nov. 22		
ALQ	iP	01 35 16
BCN	eP	01 36 03
COL	iP	01 40 26
EUR	iP	01 36 31
FGU	eP	01 36 13
TUC	eP	01 35 19
TUT	iP	01 35 20
	i	35 32
Nov. 22		
COL	eP	02 02 12
Nov. 22		
FGU	eP	02 34 18
	eS	34 37
Nov. 22		
FGU	eP	03 06 59
	eS	07 21

Date and Station		Phase (GCT)
Nov. 22		h m s
COL	eP	03 17 49
EUR	eP	03 21 05
Nov. 22		
FGU	eP	04 20 00
Nov. 22		
FGU	eP	06 15 18
	eS	15 37
Nov. 22		
ALQ	iP	07 01 44
COL	iP	07 05 46
	epP	06 29
EUR	eP	07 02 48
FGU	iP	07 02 28
TUC	eP	07 01 49
Nov. 22		
BCN	eP	07 50 27
COL	iP	07 50 20
	e	50 34
EUR	iP	07 50 30
FGU	eP	07 50 54
TUC	e(P)	07 50 37
Nov. 22		
FGU	eP	08 42 08
Nov. 22		
COL	iP	08 49 01
EUR	eP	08 43 25
FGU	eP	08 49 05
Nov. 22		
ALQ	eP	10 45 33
EUR	iP	10 45 54
Nov. 22		
COL	eP	13 57 08
EUR	eP	13 56 36
Nov. 22		
UKI	eP	14 00 59
	e	00 08
Nov. 22		
COL	iP	14 27 35
EUR	eP	14 30 55
Nov. 22		
COL	eP	15 26 45
EUR	iP	15 25 53

Date and Station		Phase (GCT)
		h m s
HON	iP	15 19 12
	iS	19 50
KIP	iP	15 19 14
	iS	19 50
Nov. 22		
BUT	iP	17 05 27
	i	05 42
Nov. 22		
UKI	iP	17 39 20
	e	39 29
Nov. 22		
TUC	e(P)	20 45 49
Nov. 22		
ALQ	eP	22 13 28
Nov. 23		
ALQ	eP	00 07 40
BCN	eP	00 07 14
BUT	e(P)	00 07 50
COL	eP	00 07 53
EUR	eP	00 07 22
GCA	e(P)	00 07 28
Nov. 23		
ALQ	iP	00 39 40
	iPcP	40 46
BHP	iP	00 35 22
BCN	eP	00 40 29
	e	40 37
COL	iP	00 43 31
	ePP	47 21
EUR	eP	00 40 52
FGU	eP	00 40 37
GCA	e(P)	00 40 24
SLC	eP	00 40 44
SJP	iP	00 36 53
	iPP	38 21
THU	e(P)	00 43 09
TUC	eP	00 39 57
TUT	eP	00 39 56
Nov. 23		
BCN	e(P)	00 55 14
COL	eP	00 58 16
EUR	iP	00 55 36

Date and Station		Phase (GCT)
		h m s
FGU	iP	00 55 23
GCA	e(P)	00 55 04
SLC	eP	00 55 29
SJP	eP	00 51 45
TUC	eP	00 54 42
TUT	eP	00 54 42
Nov. 23		
EUR	eP	01 09 28
Nov. 23		
BOZ	eP	01 41 06
	e	41 14
BUT	eP	01 41 10
	i	41 20
	i	41 42
	i	41 57
Nov. 23		
BOZ	eP	01 55 50
BUT	eP	01 55 56
	i	56 03
Nov. 23		
EUR	eP	05 57 28
Nov. 23		
COL	eP	06 32 45
EUR	iP	06 36 44
Nov. 23		
EUR	iP	07 04 17
Nov. 23		
FGU	eP	08 55 12
	iS	55 46
Nov. 23		
COL	iP	10 54 23
EUR	e(P)	10 55 40
Nov. 23		
ALQ	eP	12 01 02
COL	eP	12 05 02
EUR	e(P)	12 02 08
SJP	e(P)	11 57 28
Nov. 23		
BUT	i(P)	13 45 11
Nov. 23		
COL	iP	14 50 21
Nov. 23		
ALQ	eP	16 59 15
	i	59 30

Date and Station		Phase (GCT)
		h m s
Nov. 23		
COL	iP	18 28 19
Nov. 23		
FGU	eP	19 41 46
	e	42 19
Nov. 23		
ALQ	eP	23 17 40
COL	iP	23 17 40
	epP	19 55
	esP	21 18
EUR	iP	23 17 20
FGU	iP	23 17 43
GCA	iP	23 17 28
HON	iP	23 13 30
HHM	eP	23 17 46
KIP	iP	23 13 30
SLC	iP	23 17 36
TUT	iP	23 17 21
Nov. 23		
COL	iP	23 41 44
EUR	iP	23 44 20
	i	46 35
Nov. 24		
EUR	eP	00 46 15
FGU	iP	00 46 04
	eS	46 33
SLC	e(P)	00 45 58
Nov. 24		
EUR	iP	02 30 28
	i	30 52
Nov. 24		
FGU	iP	05 45 27
	i	45 50
GCA	e(P)	05 45 44
Nov. 24		
COL	eP'	06 56 11
	e	56 25
EUR	iP	06 52 18
	i	52 34
Nov. 24		
FGU	e(P)	07 05 34
	eS	06 16
Nov. 24		
BCN	eP	07 41 05
COL	eP	07 43 54

Date and Station		Phase (GCT)
		h m s
EUR	iP	07 41 20
FGU	eP	07 40 47
GCA	eP	07 42 51
SLC	e(P)	07 41 00
SJP	eP	07 33 44
	iS	35 07
TUC	eP	07 40 36
TUT	eP	07 40 36
Nov. 24		
FGU	e(P)	07 54 33
Nov. 24		
COL	iP	08 22 48
FGU	eP	08 22 46
Nov. 24		
COL	iP	09 40 18
Nov. 24		
COL	eP	10 46 25
EUR	iP	10 46 04
	i(pP)	47 16
	e(PP)	48 43
	e(sP)	48 58
SLC	e(P)	10 46 20
TUC	iP	10 46 02
TUT	eP	10 46 03
Nov. 24		
FGU	e(P)	12 41 12
	eS	41 49
Nov. 24		
BOZ	eP	13 14 32
BUT	i(P)	13 15 25
SLC	e(P)	13 14 30
	e	15 02
Nov. 24		
ALQ	iP	14 02 03
Nov. 24		
COL	eP	14 27 15
EUR	iP	14 31 09
	i	31 24
SLC	e(P)	14 31 18
FGU	eP	14 31 27
Nov. 24		
ALQ	iP	16 03 20

Date and Station		Phase (GCT)
		h m s
BCN	eP	16 02 41
	epP	02 54
BOZ	eP	16 02 14
	epP	02 27
COL	iP	15 58 48
	i	59 06
EUR	iP	16 02 23
FGU	eP	16 02 42
GCA	eP	16 02 50
HHM	eP	16 01 49
SLC	eP	16 02 32
THU	iP	16 01 17
	epP	01 34
Nov. 24		
BCN	eP	16 31 03
	e	31 10
	ePP	33 46
BOZ	eP	16 30 51
BUT	eP	16 30 58
COL	eP	16 32 35
	e	32 43
EUR	iP	16 31 11
FGU	eP	16 30 40
GCA	eP	16 31 50
HHM	eP	16 31 04
SLC	eP	16 30 51
	e	30 59
	e	30 10
	e	32 29
SJP	eP	16 25 20
THU	eP	16 30 44
	i	30 52
TUC	eP	16 30 44
TUT	eP	16 30 43
Nov. 24		
COL	eP	17 35 13
EUR	eP	17 36 26
Nov. 24		
GCA	eP	18 14 27
	e	15 43
Nov. 24		
EUR	iP	18 36 23
THU	e(P)	18 32 06

Date and Station		Phase (GCT)
		h m s
Nov. 24		
COL	iP	19 59 53
Nov. 24		
FGU	eP	23 17 17
	e(S)	17 40
Nov. 25		
FGU	e(P)	05 37 36
	e(S)	38 26
Nov. 25		
COL	eP	10 03 24
SJP	eP'	10 11 07
Nov. 25		
FGU	iP	12 05 39
Nov. 25		
EUR	e(P)	12 59 10
Nov. 25		
COL	eP'	15 08 28
EUR	iP	14 57 35
Nov. 25		
ALQ	iP	17 39 06
	ipP	39 55
BCN	eP	17 40 18
	epP	40 36
BOZ	eP	17 41 08
	epP	41 31
BUT	iP	17 41 15
	ipP	41 36
COL	eP	17 44 42
	ipP	45 04
EUR	iP	17 40 44
	ipP	41 03
	isP	41 21
	ePP	43 51
FGU	eP	17 40 26
GCA	e(P)	17 40 06
TUT	eP	17 39 31
Nov. 25		
COL	eP	18 49 34
EUR	e(P)	18 48 20
FGU	eP	18 47 33
Nov. 25		
BCN	eP	20 55 42
GCA	e(P)	20 55 42
Nov. 25		
SJP	e(P)	21 28 34

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Date and Station		Phase (GCT)
		h m s
Nov. 25		
SLC	e(P)	22 32 02
	e(S)	32 29
Nov. 25		
FGU	eP	22 40 00
	eS	40 34
Nov. 25		
BCN	eP	22 55 50
	eS	56 42
EUR	iP	22 54 56
GCA	e(P)	22 56 18
Nov. 25		
EUR	eP	23 08 24
Nov. 26		
COL	iP	01 52 34
	i	53 02
Nov. 26		
BOZ	e(P)	05 42 52
	e	44 28
	ePP	46 44
BUT	eP	05 42 49
	ePP	46 36
COL	iP	05 40 39
EUR	ePP	05 46 45
SJP	eP'	05 48 37
THU	e(P)	05 39 51
Nov. 26		
ALQ	eP	07 49 02
Nov. 26		
ALQ	eP	10 55 57
	i	58 34
BOZ	e(P)	10 54 53
	e	56 03
	e	56 36
BUT	e(P)	10 55 00
	i	55 11
	i	56 13
	i	57 09
COL	eP	11 01 27
	e	07 14
EUR	e(P)	10 55 34
FGU	e(P)	10 54 25
	e	54 30
TUC	e(P)	10 54 47
TUT	e(P)	10 54 50
Nov. 26		
ALQ	eP	13 40 41
		h m s
BOZ	e(P)	13 39 48
BUT	e(P)	13 39 36
	e	39 45
COL	iP	13 36 35
EUR	eP	13 39 49
FGU	eP	13 36 06
	eS	36 42
Nov. 26		
BCN	iP	16 11 12
	epP	11 26
BOZ	eP	16 11 50
	e(pP)	11 58
BUT	iP	16 11 46
	ipP	11 59
COL	iP	16 11 49
EUR	iP	16 11 18
FGU	eP	16 11 42
GCA	iP	16 11 26
HHM	eP	16 11 48
KIP	iP	16 07 26
SLC	eP	16 11 34
Nov. 26		
ALQ	eP	20 19 45
Nov. 26		
COL	eP	23 07 25
Nov. 27		
BUT	i(P)	03 59 40
Nov. 27		
ALQ	eP	04 16 28
COL	eP	04 11 52
EUR	iP	04 15 20
SJP	eP	04 20 08
Nov. 27		
ALQ	eP	07 06 47
	eP'	11 04
BCN	eP	07 06 21
	e(pP)	07 08
	eP'	10 21
BOZ	eP	07 06 02
	epP	06 39
BUT	iP	07 05 58
	e	06 16
	epP	06 40
		h m s
COL	iP	07 03 38
EUR	eP	07 06 09
	ipP	06 51
	iP'	09 57
FGU	eP	07 06 21
GUA	eP	06 57 56
	ePP	58 28
HHM	e(P)	07 05 48
KIP	iP	07 04 06
SLC	eP	07 06 15
SJP	eP'	07 12 03
	ePP	15 18
TUC	eP	07 06 43
	eP'	06 54
TUT	eP	07 06 43
	eP'	10 54
Nov. 27		
FGU	e(P)	09 54 19
Nov. 27		
ALQ	eP	11 46 10
	i	47 41
COL	eP	11 39 53
Nov. 27		
COL	eP	12 19 06
Nov. 27		
ALQ	iP	16 27 19
Nov. 27		
BCN	eP	17 03 37
BOZ	eP	17 03 35
	eP'	07 11
BUT	iP	17 03 30
COL	iP	17 01 36
EUR	iP	17 03 27
FGU	eP	17 03 47
GUA	iP	16 50 54
SLC	eP	17 03 39
Nov. 27		
ALQ	eP	18 02 02
BUT	e(S)	18 04 57
EUR	iP	18 00 41
FGU	eP	18 01 41
		h m s
GCA	eP	18 00 58
	i	02 05
	iS	01 50
SLC	eP	18 01 18
	e(S)	01 39
TUT	e(P)	18 01 36
Nov. 27		
ALQ	eP	18 26 08
BCN	eP	18 24 05
BUT	i(P)	18 26 07
COL	iP	18 31 04
EUR	iP	18 24 17
SLC	e(P)	18 25 15
Nov. 27		
ALQ	iP	19 36 51
Nov. 27		
EUR	eP	19 48 46
Nov. 27		
EUR	e(P)	21 52 17
	i	53 22
Nov. 27		
EUR	iP	22 25 47
Nov. 27		
EUR	iP	22 28 42
Nov. 28		
COL	iP	00 24 05
EUR	e(P)	00 27 58
Nov. 28		
COL	eP	00 41 06
EUR	eP	00 46 22
Nov. 28		
ALQ	iP	02 49 28
	iP'	53 28
BCN	eP	02 48 55
BOZ	eP	02 48 57
	eP'	52 27
BUT	iP	02 48 50
	i	48 57
	i	49 02
COL	iP	02 46 57
EUR	iP	02 48 48
FGU	eP	02 49 08
GUA	iP	02 36 00

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Date and Station		Phase (GCT)
		h m s
HHM	eP	02 48 44
SJP	eP'	02 55 14
TUC	eP	02 49 18
TUT	eP	02 49 18
Nov. 28		
EUR	eP	03 04 56
Nov. 28		
BUT	i(P)	03 23 54
EUR	eP	03 23 27
Nov. 28		
BOZ	eP	03 42 33
	e(S)	42 43
BUT	iP	03 42 47
	iS	43 07
FGU	eP	03 43 19
HHM	e(P)	03 43 31
	eS	44 25
Nov. 28		
COL	eP	04 10 14
Nov. 28		
SJP	eP	05 20 12
Nov. 28		
ALQ	iP	06 06 18
BCN	eP	06 05 48
	epP	05 21
BOZ	eP	06 05 38
BUT	iP	06 05 32
	ipP	06 04
COL	iP	06 03 12
EUR	iP	06 05 36
	ipP	06 07
FGU	eP	06 05 54
	epP	06 21
GCA	eP	06 05 56
HHM	eP	06 05 24
TUC	eP	06 06 11
TUT	eP	06 06 11
Nov. 28		
BOZ	e(P)	14 06 29
	e(S)	06 41
BUT	iP	14 06 38
	iS	06 56

Date and Station		Phase (GCT)
Nov. 28		h m s
ALQ	iP'	15 45 09
	ipP'	48 24
BCN	eP'	15 45 01
COL	iP	15 39 06
EUR	iP'	15 44 54
FGU	iP'	15 44 56
SJP	iP'	15 45 33
Nov. 28		
ALQ	eP	17 46 16
	i	46 20
Nov. 28		
ALQ	eP	20 08 10
	i	08 16
BCN	eP	20 08 13
	e	08 20
COL	eP	20 06 20
EUR	iP	20 08 02
FGU	eP	20 08 00
Nov. 28		
COL	iP	21 07 11
Nov. 28		
COL	eP	21 14 58
Nov. 28		
FGU	eP	23 43 14
	eS	43 37
Nov. 28		
THU	e(P)	23 59 22
	i	00 01 13
	i	02 12
Nov. 29		
COL	eP	04 1 47
EUR	eP	04 1 15
	ipP	1 51
SJP	eP'	04 8 24
TUC	eP	04 11 12
Nov. 29		
ALQ	eP	07 43 41
BUT	e(P)	07 44 10
COL	eP	07 43 55
EUR	iP	07 43 23
SLC	e(P)	07 43 54
TUC	eP	07 43 20

Date and Station		Phase (GCT)
Nov. 29		h m s
EUR	iP	09 10 06
Nov. 29		
ALQ	iP	09 16 35
BCN	eP	09 16 09
BOZ	eP	09 16 47
BUT	iP	09 16 44
	e	17 16
COL	iP	09 16 45
EUR	iP	09 16 14
FGU	eP	09 16 40
GCA	iP	09 16 23
TUC	eP	09 16 13
TUT	eP	09 16 14
Nov. 29		
COL	eP	09 35 35
Nov. 29		
BHP	iP	10 13 25
	iS	13 34
Nov. 29		
BUT	iP	11 34 45
	iS	35 06
Nov. 29		
COL	eP	12 50 19
	e	58 49
EUR	iP	12 57 13
	ipP	57 30
GUA	iP	12 44 49
Nov. 29		
ALQ	e(P)	13 31 53
COL	eP	13 31 05
Nov. 29		
COL	eP	15 49 51
EUR	iP	15 53 24
Nov. 29		
ALQ	eP	16 03 16
	i	03 33
COL	eP	16 09 03
TUT	e(P)	16 03 46
Nov. 29		
COL	eP	16 15 02
Nov. 29		
ALQ	iP	19 03 15

Date and Station		Phase (GCT)
Nov. 29		h m s
ALQ	eP	19 20 06
BCN	eP	19 19 35
	e	26 25
COL	eP	19 19 27
	i	19 42
EUR	iP	19 19 37
HON	e(PP)	19 17 52
	eS	22 52
	eL	29 36
KIP	eS	19 22 57
	eL	27 35
TUC	eP	19 19 48
TUT	iP	19 19 48
UKI	e(P)	19 19 13
Nov. 29		
BUT	eL	19 50 49
Nov. 29		
ALQ	eP	20 49 30
Nov. 29		
ALQ	iP	23 07 14
COL	iP	23 03 17
Nov. 29		
COL	eP	06 01 31
Nov. 30		
EUR	eP	07 57 58
Nov. 30		
FGU	iP	10 42 53
	e(S)	43 12
Nov. 30		
COL	iP	11 41 38
Nov. 30		
COL	eP	16 13 53
Nov. 30		
COL	eP	17 05 57
Nov. 30		
ALQ	iP	17 47 28
Nov. 30		
FGU	eP	18 09 58
	e	09 13
Nov. 30		
FGU	iP	19 21 09
	i	21 34
Nov. 30		
BUT	iP	19 56 00
COL	eP	19 57 13

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Date and Station		Phase (GCT)
		h m s
Nov. 30		
COL	eP	21 23 30
Nov. 30		
BUT	i(P)	21 46 32
Nov. 30		
ALQ	iP	21 55 38
	iS	59 16
BCN	iP	21 56 22
	eScP	22 03 30
BOZ	eP	21 57 27
	epP	57 42
	ePP	58 37
	ePcP	22 00 19
	eScS	07 22
BUT	iP	21 57 34
	epP	57 48
	ePP	58 50
	ePcP	22 00 37
	eScS	08 11
COL	iP	22 01 06
EUR	iP	21 56 55
	ipP	57 05
	isP	57 11
FGU	eP	21 56 30
	ipP	56 42
	e	22 02 14
	eL	04 40
HON	e(S)	22 08 38
	eL	16 08
SLC	eP	21 56 50
	e	57 11
	ePP	57 50
	e	58 09
	e	58 26
	ePcP	59 24
	e	22 05 50
SJP	e(P)	21 57 55
THU	eP	22 01 34
	ipP	01 44
TUC	eP	21 55 32
	eS	59 02
	iL	22 00 45
TUT	iP	21 55 32
	eS	59 02
	iL	22 00 50
Nov. 30		
BOZ	eP	23 17 54
BUT	iP	23 18 08
	iS	18 29
Nov. 30		
COL	iP	23 20 20

Date and Station		Phase (GCT)
		h m s
EUR	eP	23 21 08
SJP	iP'	23 27 25
Nov. 30		
ALQ	eP	23 53 12
BCN	iP	23 51 41
	i	51 46
	iS	52 16
EUR	iP	23 52 24
FGU	eP	23 53 18
	e(S)	55 48
TUC	eP	23 52 27
	iS	53 56
	iL	54 03
TUT	e(P)	23 52 27

Date and Station	Phase (GCT)
	h m s
Local and Minor Earthquakes	
November	
ALQ	
2	14.2
3	19.9
19	10.9
BCN	
28	19.2
BOZ	
29	21.0
	21.9
COL	
1	11.1
4	07.1
6	20.8
10	16.6
	23.6
12	22.5
13	07.5
	10.8
	18.6
14	03.9
	17.0
16	12.7
19	22.7
25	17.4
	22.2
29	20.0
30	00.8
EUR	
2	22.5
	23.3
3	11.4
16	20.4
18	07.4
19	22.5
20	18.7
28	03.4
FGU	
8	00.8
9	09.5
13	12.9
15	00.6
	05.1
16	06.1
	19.9
17	23.5
18	00.6
19	22.7
24	12.9
	13.2
28	00.8
29	10.7
30	00.7
	20.1
	22.4
GCA	
1	21.2
3	19.9

Date and Station	Phase (GCT)
	h m s
GCA	
3	23.7
6	06.1
7	23.6
11	01.9
12	02.6
	02.7
16	14.7
26	21.3
27	11.7
28	05.3
HHM	
1	10.6
	11.1
3	09.6
4	23.5
5	18.6
16	22.9
22	04.5
SLC	
8	00.7
SJP	
4	00.3
7	18.2
12	05.1
21	21.9
	22.2
	22.7
	22.8
	22.9
23	07.8
SIT	
8	19.9
TUC	
23	23.1
UKI	
5	05.4
	06.5
	07.1
7	06.5
8	13.5