SEISMOLOGICAL BULLETIN OF SYOWA STATION, ANTARCTICA, 2008

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1. Introduction

Seismic observations at Syowa Station (69.0°S, 39.6°E), East Antarctica were started using a short-period seismometer with 1.0 s natural period in 1959 (Eto, 1962). A long-period seismograph was installed and phase readings of teleseismic events (i.e., detection of arrival times and amplitudes for significant seismic phases) have been reported in near real-time to the United States Geological Survey (USGS) and to the International Seismological Centre (ISC) since 1967 (Kaminuma *et al.*, 1968). A three-component broadband seismometer (STS-1; Wielandt and Steim, 1986) was installed in 1989, in order to contribute to the Federation of Digital broadband Seismograph Networks (FDSN; http://www.fdsn.org), together with the other key stations of the PACIFIC21 Japanese regional network. A distribution map of the FDSN stations in Antarctica is shown in Fig. 1.

All of the observation systems at Syowa Station were maintained in 2008 by one of the authors (Y. Aoyama) throughout the wintering season of the 49th Japanese Antarctic Research Expedition (JARE-49). In this report, we introduce the seismic observations in 2008, scaled

read-out travel-time data and detected teleseismic earthquake list, followed by the procedures for public use via internet service.

2. Observations

The original seismic observation systems at Syowa Station were replaced with the current operating ones by one of the authors (M. Kanao) in 1997 (Kanao, 1999). A block diagram of the current recording system is illustrated in Fig. 2.

2.1. Seismographic hut and seismographs

Seismic observations at Syowa Station have been carried out mainly by two types of seismometers. One is called a short-period seismometer (HES) with 1.0 Hz eigenfrequency of the pendulum which has been operated since 1967 (Kaminuma *et al.*, 1968). The overall frequency responses and the magnifications of the HES seismographs (Hagiwara, 1958) are shown in Fig. 3. Another is a three-component broadband seismometer (Streckeisen STS-1) with digital recording system which has been operating since 1990 (Nagasaka *et al.*, 1992). The amplitude and phase responses for the velocity output (Broadband; BRB) are shown in Fig. 4 (after Streckeisen and Messegeraete, 1987).

The seismographic hut was re-constructed in 1996 and all of the sensors were moved inside it in 1997. The new hut is located about 200 m north from the old vault, with WGS84 geodetic coordinates of 69°00'24.0"S, 39°35'06.0"E and elevation 20 m above mean sea level. Since the long-period output signals from the broadband seismographs can be affected by variations in temperature and atmospheric conditions, the seismometers were installed in the thermally insulated small room of the hut. In addition, the whole surface of the hut was covered by titanium in order to maintain constant temperature.

Seismic signals of the HES and STS-1 are transmitted to the Earth Science Laboratory (ESL) via analog cables 600 m in length through the main buildings of Syowa Station.

2.2. Acquisition system at Earth Science Laboratory

Three-component analogue outputs by HES have been digitized at 200 Hz sampling frequency by a 24-bit analog-to-digital (A/D) converter, generating triggered signals of 80 and 1 Hz re-sampling data and 20 Hz continuous outputs. Signals of a three-component broadband STS-1 have also been digitized to create triggered output of 80 Hz re-sampling data and continuous outputs of 20, 1, 0.1 and 0.01 Hz data, respectively. All the waveform data were formatted as a Mini_SEED volume, which is a standard format for data exchange in global seismology. The digitized data are automatically transmitted from the A/D converter to a workstation via TCP/IP protocol. All data are stored in the 40 GB hard-disk of the workstation, then copied onto DAT or 8 mm tape at three month intervals. The recording status of the A/D converter has been continuously monitored by a personal computer via an RS-232C serial port.

Remote-centering operation of the mass position for the STS-1 sensors can be carried out by keyboard commands from the computer using 'Kermit' communication software. The reference clock for the new system has been calibrated to Universal Time Coordinated (UTC) by detecting time codes by GPS. Long-term analog-recorders for the HES and BRB output of the STS-1 have been operated for monitoring at ESL. Boom-POSition output (POS) of the STS-1 seismograph has been monitored by RD2212 type analogue-recorder, together with the temperature in the sensor room.

2.3. Data transmission via INTELSAT

Digital waveforms of both broadband and short-period seismographs have been transmitted via INMARSAT telecommunication link from Syowa Station to the National Institute of Polar Research (NIPR) since 1993. Waveform data transmission was greatly improved by using an INTELSAT communication link established in February 2004. During the 2008 winter season,

continuous data of both HES and STS-1 with 20 Hz sampling were automatically transmitted to NIPR once a day from the acquisition workstation. The UUCP protocol has been used for the data transfer.

In addition to remote monitoring operation of the data acquisition system from NIPR, Internet access to Syowa facilities has significantly advanced since 2005 via the INTELSAT system. Moreover, a web-camera using the Station LAN was installed inside ESL, followed by improvement of monitoring of the analogue recorders when nobody can access the ESL during bad weather.

3. Data

By using the waveform data transmitted via INTELSAT, the arrival-time information on the major seismic phases (here we say 'read-out data') is regularly reported from NIPR to USGS/NEIC (National Earthquake Information Center) via email, for contributions to the Preliminary Determination for Epicenters (PDE) weekly & monthly bulletins. The Quick Earthquake Determination (QED) services offered from NEIC have been used to identify the seismograms of teleseismic events. The arrival-time data and corresponding hypocentral data of the teleseismic events are listed in this report.

The phase arrival-times of teleseismic events were detected on the short-period digital monitoring seismograms. Most phases were scaled on the vertical component; only clear phases of shear waves were scaled on the horizontal components. These phases were identified by comparing the observed travel-time with the calculated time within a time difference of 3 s. The phases identified as *P*- and *S*-waves are listed in Table 1. The phase *K* denotes the *PKP* phase, which can be identified within 3 s of the time difference by comparing the observed travel-time with the calculated time. *X* denotes the clear phase whose wave type

can be identified but the observed travel time was within 3-10 s of the calculated time. Symbols *E* and *I* in the phase column denote emergent and sharp onsets, respectively. The initial ground motion is denoted by + for upward and - for downward motion. Arrival time is given in UTC and the accuracy of the read-out data is 0.2 s. The teleseismic events identified in the PDE are labeled by the serial numbers (#-xxx) in the table. These serial numbers correspond to those in Table 2. The events without serial numbers are teleseisms whose locations have not been determined by NEIC.

The list of hypocentral parameters for individual teleseismic events is presented in Table 2, identified by the same serial numbers as given in the remarks in Table 1. Fig. 5 shows the hypocenters of the teleseismic events whose initial phases were detected at Syowa Station.

4. Publication

The seismic waveform data are continuously transmitted to NIPR and stored in the data library server, and are accessible upon request by Internet service and/or UNIX formatted media (*i.e.,* CD-R, DAT, 8 mm-tape, *etc.*). The present authors hereby grant permission for use of these data in scientific papers. All kinds of archived seismic data (arrival times, hypocenter, waveform data by analog & digital, related document reports) of Syowa Station have been accumulated and are available from the data library server (POLARIS, URL; http://polaris.nipr.ac.jp/~pseis/syowa). These can be accessed by use of the 'ftp' command with password. If you are interested in using these data for scientific purposes, please contact *kanao@nipr.ac.jp* concerning availability.

Archived data that have passed two years since the JARE observation period are stored and freely available from both the NIPR ftp site and the PACIFIC21 center of the Japan Marine Science and Technology Agency. Any questions concerning data availability from PACIFIC21 shall be directed to *y-ishihara@jamstec.go.jp*.

5. Data Processing Staff

The seismic observation system at Syowa Station was designed by M. Kanao and K. Shibuya of NIPR. The authors express their sincere thanks to Ms. A. Ibaraki of NIPR for her efforts in scaling the seismic data. Readers can refer to the following URL for the data access: http://polaris.nipr.ac.jp/~pseis/syowa.

References

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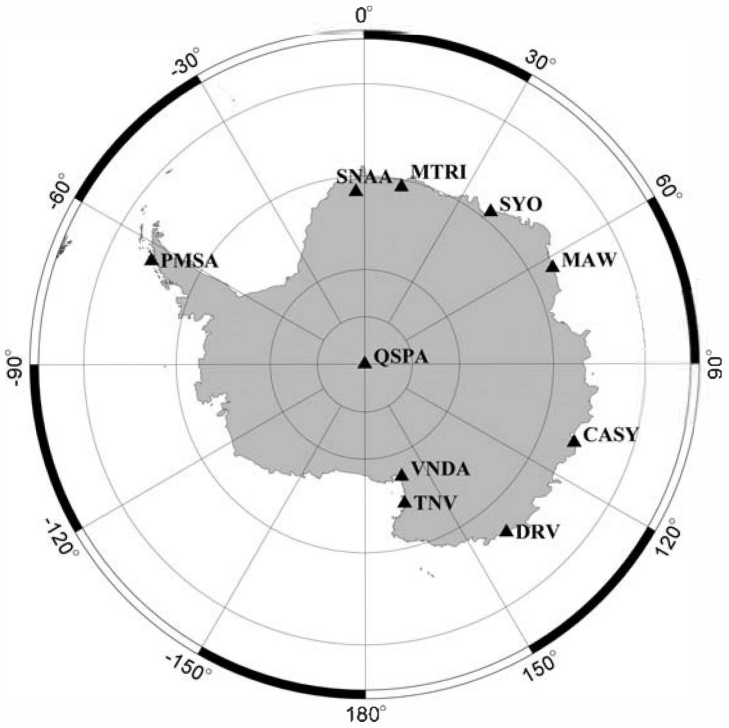

Fig. 1. Distribution of FDSN stations on the Antarctic continent in 2010. Syowa (SYO), Mawson (MAW), Casey (CASY), Dumont d'Urville (DRV), Terra Nova Bay (TNV), Vanda (VNDA), South Pole (QSPA), Palmer (PMSA), Sanae (SNAA), Maitri (MTRI).

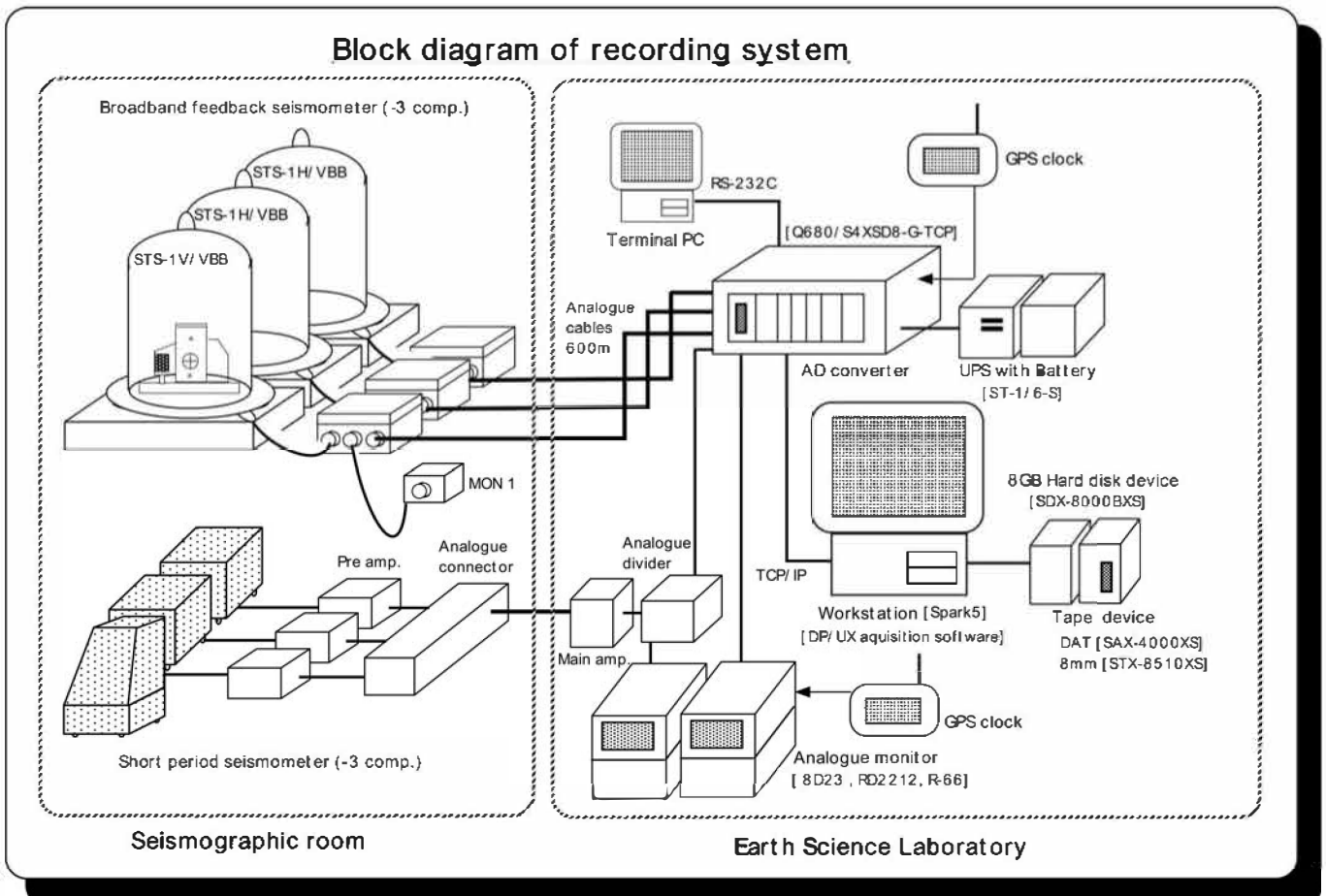

Fig. 2. Block diagram of new recording system for the STS and HES seismographs at Syowa Station. Left figure: Seismographic room; Right figure: Earth Science Laboratory.

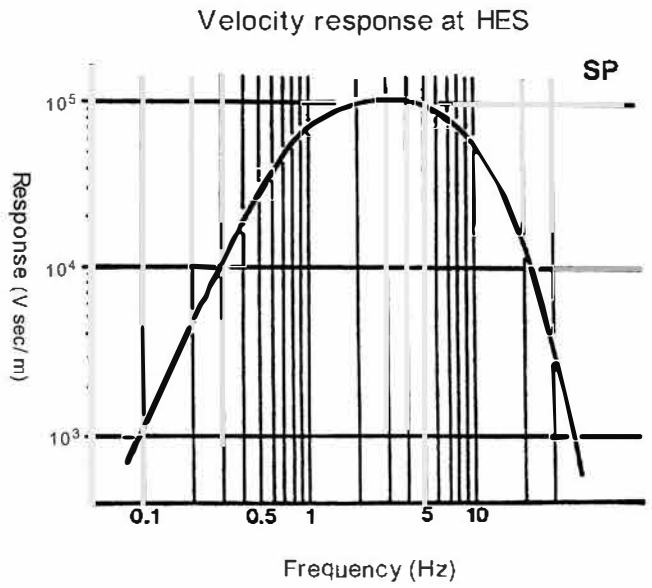

Fig. 3. Over-all frequency responses of the HES seismographs (Modified after Hagiwara, 1958).

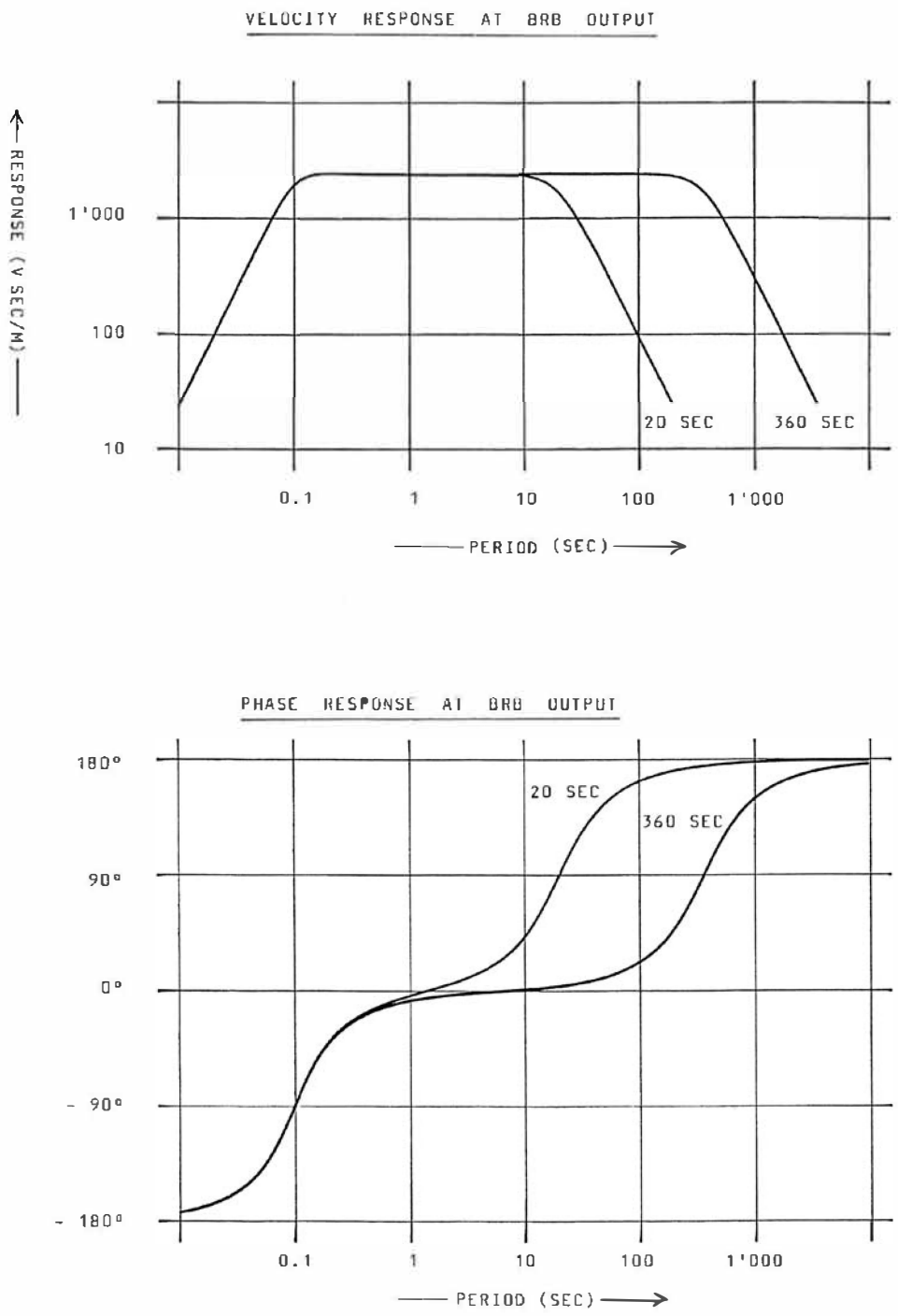

Fig. 4. Amplitude responses (upper figure) and phase responses (lower figure) for the velocity (BRB) output of the broadband seismograph (STS) in the two distinct signal modes of 20-s and 360-s (after Streckeisen and Messegeraete, 1987).

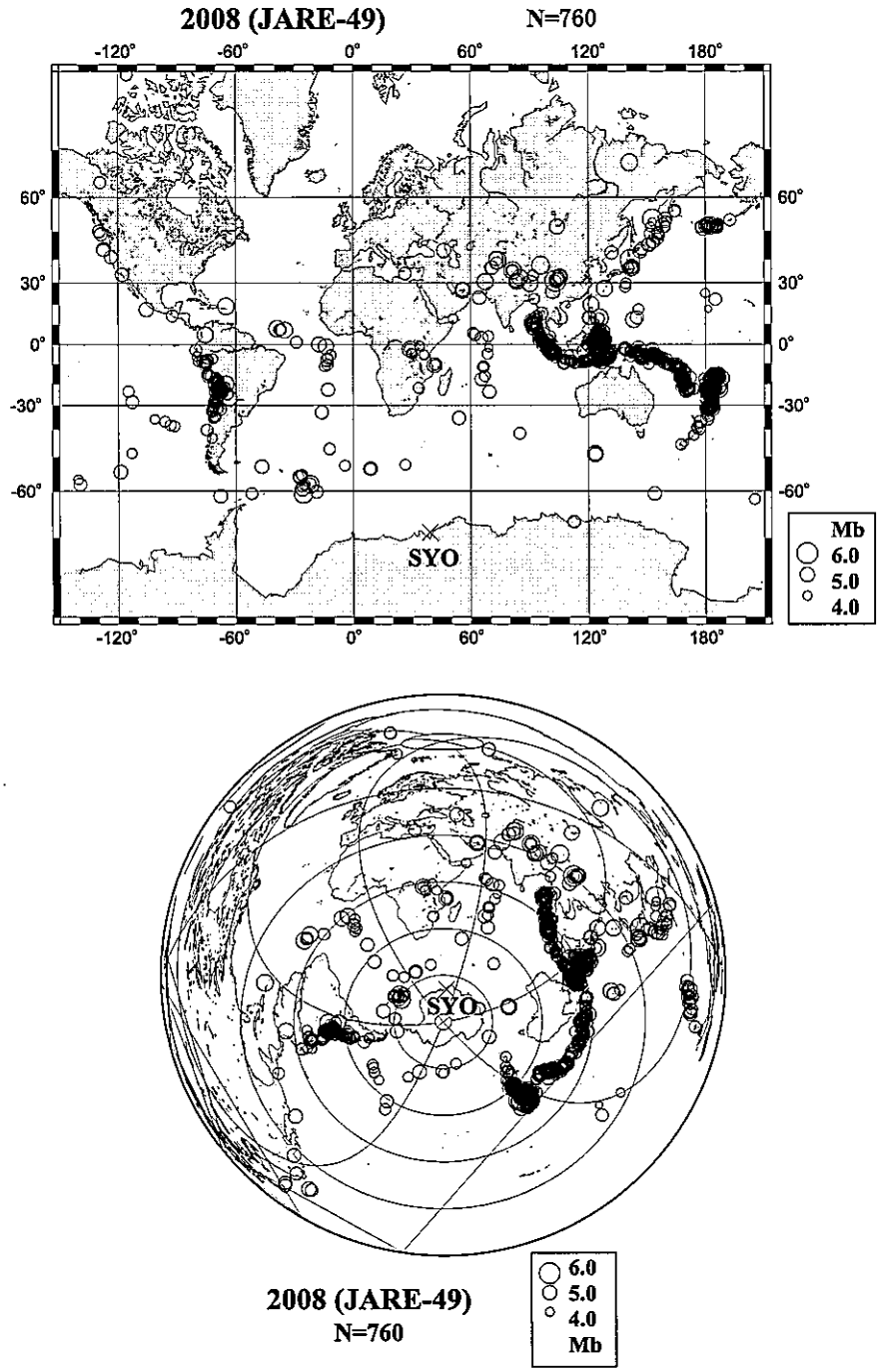

Fig. 5. Epicenters of the 760 earthquakes recorded at Syowa Station. The sizes of earthquake circles are proportional to the body-wave magnitude (Mb) determined by the National Earthquake Information Center (NEIC) (upper: Mercator Projection, lower: Azimuthal Equidistant Projection).

Table 1. List of phase arrival-time data in 2008.

Date	Phase	Time H M	S	Remarks
Jan.				
1	+EPZ	0318	45.0	
1	-EPZ	0318	52.8	
1	-EPZ	0335	31.4	
1	-EPZ	0516	13.0	
1	+EPZ	0643	17.2	
1	+EPKiKPZ	0651	01.2	#-1
1	+EPZ	0859	10.5	
1	-EPZ	1020	16.0	
1	+EPZ	1338	03.1	
1	-EPZ	1354	40.0	
1	+EPZ	1439	48.4	
1	-EPZ	1827	51.6	
1	-IPZ	1907	56.6	#-2
1	-IPZ	1908	09.0	
1	ESH	1918	46.8	#-2
1	-EPZ	1926	02.0	#-3
1	-EPZ	1926	14.1	
1	-EsPZ	1926	25.8	#-3
1	-EPZ	2239	45.4	
2	-EXZ	0854	09.4	#-4
2	+EsPZ	0854	21.1	#-4
2	+EPZ	1157	30.8	#-5
2	-EPcPZ	1157	31.6	#-5
2	+EPZ	1530	03.2	
2	+EpPZ	2339	35.6	#-6
3	+EPZ	0223	26.4	
3	-EPZ	1128	07.4	#-7
3	-EpPZ	1128	10.6	#-7
3	+EPZ	1625	04.2	
3	+EPZ	2038	34.4	
4	-EPZ	0059	02.1	
4	-EPZ	0059	13.2	
4	-EPZ	0138	04.8	#-8
4	-IsZP	0138	37.6	#-8
4	+EPZ	0155	47.8	
4	-EPZ	0155	50.6	
4	-EPZ	0155	55.4	
4	-EPZ	0741	09.0	#-9
4	+EPcPZ	0741	19.8	#-9
4	-IpPZ	0741	23.0	#-9
4	+EPZ	1042	52.3	
4	-EPZ	1335	20.4	
4	+EPZ	1739	43.4	
4	+EPZ	2235	42.8	
5	+EPZ	0351	15.0	
5	+IPZ	0741	02.0	#-10
5	-IPcPZ	0741	14.8	#-10
5	-IpPZ	0741	27.9	#-10
5	ESH	0750	32.0	
5	+EPZ	1121	19.0	
5	+EPZ	1121	41.7	
5	+EPZ	1121	52.3	
5	-EPZ	1204	49.3	
5	+EPZ	1250	22.8	
5	-EXZ	2004	23.8	#-11
5	-EXZ	2004	35.0	#-11
5	-EPZ	2004	13.4	#-12
5	+EPZ	2014	15.0	#-13
5	+EPcPZ	2014	19.4	#-13
5	-EpPZ	2014	32.6	#-13
5	+EPZ	2207	44.0	
5	-EPZ	2311	29.9	
6	+EPZ	0121	07.0	
6	-EPZ	0121	11.2	
6	+IPZ	0532	35.2	
6	ESH	0538	53.6	
6	+EPZ	0906	19.8	
6	-EPZ	0906	26.2	#-14
6	-EPcPZ	0906	45.4	#-14
6	-IXZ	1842	11.0	#-15
7	+EPZ	1928	01.4	#-16
7	-IPZ	1928	09.2	#-16
7	+EPZ	1951	25.4	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
7	-IPZ	1951	47.0	
8	+EPZ	0748	40.5	
8	+EPZ	0952	41.0	
8	+EPZ	1036	15.7	
8	-EPcPZ	1036	25.0	#-17
8	+EPZ	1059	34.2	
8	-EPZ	1253	36.6	
8	+IPZ	1253	49.6	
8	+EPZ	1310	10.0	
8	-EPZ	1556	53.4	
8	-IPZ	1557	31.2	
8	+EPZ	1639	33.4	
8	-EPZ	1916	47.0	
8	-EPZ	1936	17.8	#-18
8	-IPcPZ	1936	21.4	#-18
8	-IpPZ	1936	30.3	#-18
8	-EPZ	1943	35.0	
8	-EPZ	1943	40.0	
8	+EPZ	2013	07.0	
8	-EPZ	2045	40.4	
8	+EPZ	2315	17.0	#-19
9	+EPZ	0103	00.4	
9	-EPZ	0157	08.2	#-20
9	+EPcPZ	0157	14.6	#-20
9	+EPZ	0214	30.0	
9	-EPZ	0845	10.0	
9	-EPZ	0845	21.6	
9	+EPZ	1039	22.4	#-21
9	+EXZ	1039	42.2	#-21
9	+EPZ	1434	04.8	
9	+EPZ	2012	01.2	
9	+EPZ	2051	37.4	
9	+IPZ	2141	30.0	
9	-EPZ	2146	00.4	#-22
9	-EPZ	2324	09.6	
9	+EPZ	2357	04.0	
9	+EPZ	2357	10.8	
10	+EPZ	0144	02.0	
10	+EPZ	0144	38.8	
10	+EPKPdfZ	0157	11.8	#-23
10	+EPKiKPZ	0157	20.0	#-23
10	+IPZ	0157	34.4	
10	+EPZ	0522	16.0	
10	+EPZ	0523	02.4	
10	+EPZ	0738	02.9	
10	+EPZ	0810	41.0	
10	+EPZ	0833	20.0	
11	+EPZ	0941	22.6	
11	+EPZ	1604	08.6	
12	-EPZ	0838	54.0	#-24
12	-EPZ	0845	20.9	
12	-EPZ	0910	35.1	
12	+IPZ	1026	30.8	#-25
12	+EPZ	1038	13.8	
12	+EPZ	1038	22.2	
12	+EPZ	1547	35.4	#-26
12	-EPcPZ	1547	38.2	#-26
12	+EpPZ	1548	12.8	#-26
12	+EsPZ	1548	29.4	#-26
12	+EPZ	1550	06.0	#-27
12	-EPcPZ	1550	07.9	#-27
12	+EPZ	1831	04.9	
12	-EpPdiffZ	2258	36.4	#-28
12	+EsPdiffZ	2258	41.2	#-28
13	+EPZ	0127	51.8	
13	+EPZ	1129	43.4	#-29
13	-EpPZ	1129	48.2	#-29
13	-EPZ	1502	50.8	
13	-EPZ	1609	28.2	
13	-EPZ	1609	32.0	
13	+EPZ	1933	27.8	
13	+EPZ	1399	35.7	
13	-EPZ	2204	34.8	
13	-EPZ	2204	40.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
14	+IPZ	0126	49.4	#-30
14	+EpPZ	0126	54.6	#-30
14	-EPZ	0155	05.0	
14	-EPZ	0155	24.0	
14	+EPZ	0423	35.8	
14	+EPZ	0711	56.4	
14	+EPZ	1218	40.6	
14	-IPZ	1351	19.8	#-31
14	+EPcPZ	1351	22.1	#-31
14	-IpPZ	1351	34.6	#-31
14	-EPZ	2135	01.0	#-32
14	-EPcPZ	2135	20.6	#-32
14	+EpPZ	2135	25.4	#-32
15	+EPZ	0833	06.4	
15	-EPZ	1803	46.1	#-33
15	-IPcPZ	1803	47.1	#-33
15	ESH	1813	24.8	#-33
15	+EPZ	2214	30.0	
16	-EPZ	0110	14.6	
16	+EPZ	0548	35.3	
16	+EPKiKPZ	1213	07.0	#-34
16	+EPZ	1505	49.6	
16	+EPZ	1635	15.1	
17	+EPZ	0750	12.6	
17	+EPZ	1053	10.6	
17	+EPZ	1242	39.3	
17	-EPZ	1519	38.9	
17	-IPKPdfZ	1558	51.6	#-35
17	-IPKPbcZ	1558	56.0	#-35
17	-EPZ	1741	07.4	
17	-EPZ	1741	13.0	
18	+EPZ	0232	16.8	
18	-IPZ	0819	45.8	#-36
18	-IPcPZ	0819	48.0	#-36
18	+EPZ	0948	28.0	
18	+EPZ	1044	01.4	
18	+EPZ	1942	45.0	#-37
18	-IPcPZ	1942	46.3	#-37
18	+EpPZ	1945	01.8	#-37
18	ESH	1952	24.0	#-37
18	+EPZ	2041	39.2	
18	+EPZ	2144	13.6	#-38
18	+EPcPZ	2144	25.4	#-38
18	+EPZ	2257	40.6	
18	-EPZ	2359	19.6	#-39
18	+EpPZ	2359	33.0	#-39
19	-EPZ	0220	34.6	
19	+EPZ	0823	05.0	
19	+IPZ	1357	14.0	#-40
19	-IPcPZ	1357	17.6	#-40
19	ESH	1407	13.0	#-40
19	+EPZ	1632	01.0	
19	-EPZ	1632	04.4	
19	-EPZ	1854	10.4	
19	-EPZ	2332	53.4	
19	-EOZ	2332	57.0	
20	+EPZ	0438	15.2	
20	-EPZ	0519	07.6	
20	-EPZ	0601	38.9	
20	-EPZ	0601	41.0	
20	-IPZ	0620	32.9	
20	-EPZ	1040	16.6	#-41
20	+EpPZ	1040	39.3	#-41
20	+EPZ	1142	11.6	
20	+EPZ	1526	22.5	#-42
20	-EPcPZ	1526	32.4	#-42
20	-EPZ	1851	52.8	
20	-IPZ	1851	54.4	
20	+EPZ	2050	33.0	
21	-EPZ	0335	29.6	#-43
21	+EPZ	1005	26.2	
21	-EPZ	1005	33.2	
21	+EPZ	1236	01.6	
21	+EPZ	1236	07.2	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
21	+EPZ	1538	32.0	#-44
22	+EPZ	0709	16.6	
22	+EpPZ	0809	10.4	#-45
22	+EPZ	0832	06.6	
22	-EPZ	0921	21.8	#-46
22	+EPcPZ	0921	30.4	#-46
22	+EpPZ	0921	36.0	#-46
22	+EPZ	1102	28.0	#-47
22	-EPcPZ	1102	31.2	#-47
22	-EpPZ	1102	42.4	#-47
22	+EPZ	1241	18.4	#-48
22	-EPZ	1727	01.4	#-49
22	-EPcPZ	1727	05.8	#-49
23	-EPZ	0625	26.2	#-50
23	-EPcPZ	0625	53.4	#-50
23	+EPPZ	0628	57.6	#-50
23	+EPZ	0908	36.4	
23	+EPZ	1051	17.6	#-51
23	-EPZ	1232	52.0	#-52
23	+EPZ	1354	02.6	#-53
23	+EPZ	1354	10.6	
23	+EPZ	1902	38.1	
23	-IPZ	1405	55.0	#-54
23	-IPcPZ	1405	56.8	#-54
23	+EPZ	1545	25.6	
23	+EPZ	1545	39.2	
23	+EPZ	1850	17.8	
23	-IPZ	1850	31.0	
23	+EpPZ	1935	38.4	#-55
23	+EsPZ	1935	46.4	#-55
23	+EPZ	2136	26.0	
23	-EPZ	2246	24.0	
24	-EPZ	0137	50.7	
24	+EPZ	0338	45.6	
24	-EPZ	0547	38.6	
24	+EPZ	0734	28.0	
24	+EPZ	1215	27.0	#-56
24	+EPcPZ	1215	39.0	#-56
24	-EPZ	1638	08.4	
24	+EPZ	1638	12.0	
24	+EPZ	1736	27.6	
24	-IPZ	2016	52.2	#-57
24	-IPcPZ	2016	53.5	#-57
24	-EpPZ	2017	20.4	#-57
24	+EPZ	2138	06.0	
24	+EPZ	2242	47.6	
24	-IPZ	2242	49.6	
24	-IPZ	2242	56.0	
24	ESH	2253	39.2	
25	-EPZ	0033	47.4	
25	+EPZ	0752	32.2	#-58
25	+EPZ	1432	16.4	
25	+EPZ	1432	31.5	#-59
25	+EPZ	1553	28.0	
25	+EPZ	1728	10.8	#-60
25	-EpPZ	1728	21.4	#-60
25	+EPZ	2041	31.8	
25	+EPZ	2140	22.6	
25	+EPZ	2140	26.8	
25	+EPZ	2245	18.0	
26	+EXZ	0314	41.9	#-61
26	-EXZ	0315	06.8	#-61
26	+EsPZ	0620	25.0	#-62
26	+EPZ	0823	19.0	
26	+EPZ	0948	24.2	
26	+EpPZ	1813	29.6	#-63
27	+EPPZ	1302	30.0	#-64
28	-EXZ	0424	38.8	#-65
28	-IXZ	0424	53.6	#-65
28	-EPZ	0545	22.4	
28	+EpPZ	0712	39.0	#-66
28	+EPZ	0752	57.4	
28	+IPZ	1043	29.6	#-67
28	-IpPZ	1043	43.4	#-67

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
28	+EPZ	1204	11.0	
28	+EPZ	2234	05.4	
28	+EPZ	2234	12.4	
29	+EPZ	1504	32.2	
30	+IPZ	0745	06.0	
30	-IPZ	0745	08.4	
31	+EPZ	0946	46.6	#-68
Feb.				
1	-IPZ	1221	39.2	
1	-IPZ	1221	53.8	
1	ESH	1231	16.2	
2	+IPZ	0033	40.6	#-69
2	+EPZ	0923	38.6	
2	+EPZ	1708	24.0	
3	+IPZ	0745	04.0	#-70
3	+IpPZ	0745	07.3	#-70
3	-EPZ	0939	42.0	
3	+EPZ	1107	11.7	#-71
3	+EPZ	1107	02.6	#-72
3	+EPcPZ	1310	26.9	#-73
3	-EPZ	1430	46.0	#-74
3	-EPZ	1723	25.6	
3	+EPZ	1723	41.2	
3	+EPZ	1744	07.4	#-75
3	+EPcPZ	1744	10.0	#-75
3	+EPZ	1843	12.4	
3	-EPZ	1843	14.2	
3	+EPZ	2038	05.0	
4	+EPZ	1712	06.0	
4	+EPZ	1713	24.0	#-76
5	-EPcPZ	0609	14.8	#-77
6	+EPZ	0046	26.6	
6	+EPZ	2106	40.0	
7	-IPZ	0803	43.8	#-78
7	-EPZ	0937	11.8	#-79
7	-IPZ	2109	43.8	
7	-EPZ	2141	34.8	#-80
8	+EPZ	0932	21.2	
8	+EPZ	0932	27.8	
8	+IPZ	1609	09.2	
9	-EPZ	1449	55.2	
10	-IPZ	1227	47.6	#-81
10	-IsPZ	1227	51.4	#-81
11	+EPZ	1649	44.9	
11	+EPZ	2122	20.2	
11	+EPZ	2122	31.8	
11	-EPZ	2305	23.9	
12	+EPZ	1730	16.6	
13	-IPZ	2011	04.0	
13	-IPZ	2011	06.4	
13	-IPZ	2011	42.4	
14	+EPZ	0218	34.4	
14	-EPZ	0738	03.6	
14	+EPZ	0811	42.0	#-82
14	-EPZ	1523	16.0	
14	-EPZ	1735	47.2	
14	+EPZ	2320	25.2	
15	-EPZ	0015	17.4	
15	-EPZ	0108	03.8	
15	-EPZ	0108	07.0	
15	-EPZ	0304	02.0	
15	+EPZ	2339	37.0	
16	+IPZ	1456	45.6	
16	-IPZ	1456	47.7	
16	ESH	1506	39.2	
17	NONE			
18	-EPZ	0059	13.0	
18	-EPZ	0304	29.4	
18	+EPZ	0308	36.4	
18	+EPZ	0439	06.0	
18	-EPZ	0728	39.4	
18	+EPZ	0901	44.2	#-83
18	-EPZ	1006	31.4	#-84
18	+IPZ	1541	38.2	#-85

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
19	-EPZ	0636	42.0	
19	+EPZ	0824	35.4	
19	+EPZ	1013	07.6	
19	-EPZ	1013	13.2	
19	-IPZ	1104	49.4	
19	+EPZ	1616	00.6	
19	-EPcPZ	1713	33.2	#-86
20	+EPZ	0634	32.4	
20	-EPZ	0643	00.2	
20	-EPZ	0643	11.4	
20	+EPZ	0654	46.4	
20	+IPZ	0820	49.0	
20	ESN	0832	14.6	
20	-EPZ	0839	50.2	
20	-EPZ	0840	24.2	
20	+EPZ	1219	05.2	
20	+EPZ	1219	27.8	
20	+EPZ	1257	23.4	#-87
20	-EPZ	1740	42.0	
21	+EPZ	0107	25.2	
21	+EPZ	0305	56.4	
21	+EPZ	0305	57.7	
21	-EPZ	0428	52.3	#-88
21	-EPcPZ	0428	54.4	#-88
21	-EPZ	0703	33.6	
21	-EPZ	0830	25.6	
21	-EPZ	0830	30.5	
21	+EPZ	0835	37.6	
21	+EPZ	0905	41.4	
21	+EPZ	0905	45.4	
21	-EPZ	1137	10.0	
21	-EPZ	1249	44.8	
21	-IPZ	1412	19.4	
21	-IPZ	1435	53.4	
21	-EPZ	1706	45.8	
21	-EPZ	1706	52.4	
21	+EPZ	1742	01.8	
21	-EPZ	1755	49.6	
21	+EPZ	1803	02.0	
21	-EPZ	1939	34.0	
21	+EPZ	2154	45.0	#-89
21	+EPPZ	2158	20.0	#-89
21	+EPZ	2213	20.4	
22	-EPZ	0007	41.0	
22	-EPZ	0007	48.4	
22	-EXZ	0012	16.8	#-90
22	-EPZ	1755	19.7	
22	-EPZ	2152	12.6	
22	-EPZ	2152	17.1	
23	-IPZ	1603	22.5	
23	+IPZ	1603	28.6	
24	+EPZ	0448	17.6	#-91
24	+EPcPZ	0448	26.0	#-91
24	-EsPZ	0448	31.6	#-91
24	+EPZ	0531	36.3	
24	+EPZ	1046	17.8	
24	-EPZ	1458	15.2	#-92
24	-EpPZ	1458	21.0	#-92
24	-EPcPZ	1458	24.0	#-92
24	+EPZ	1736	37.0	
24	+EPZ	2350	31.0	
25	+EPZ	0848	25.6	
25	-IPZ	0848	31.0	
25	-EPZ	0922	40.0	#-93
25	-EPcPZ	0922	44.6	#-93
25	-EPZ	1048	37.0	
25	+EPZ	1604	08.2	
25	+EPZ	1817	56.0	#-94
25	+IPZ	1818	08.2	#-94
25	-EPZ	2114	11.8	
25	-IPZ	2114	20.2	
25	-IPZ	2114	43.6	
26	+EPZ	0311	12.0	
26	+EPZ	1037	15.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
27	+EPZ	0214	10.8	
27	+EPZ	0451	13.0	
27	+EPZ	0451	16.0	
27	+EPZ	0505	52.0	#-95
27	-EpPZ	0506	03.0	#-95
28	+EPZ	0131	20.0	
28	+EPZ	0905	12.4	
28	+EPZ	1250	41.0	
28	-IPKPdfZ	1214	30.4	#-96
28	-IPKiKPZ	1214	39.6	#-96
28	-EPZ	1852	29.2	
28	+EPZ	1852	36.2	
29	-EPZ	0250	03.4	
29	-EPZ	0250	07.0	
29	-EPZ	0719	51.0	
29	+EPZ	1618	12.0	
29	+EPZ	1618	15.4	
29	+EPZ	2101	07.8	
29	+EPZ	2301	43.6	#-97
29	+EpPZ	2301	45.4	#-97
Mar.				
1	+EPZ	1145	19.2	
1	+EPZ	1654	01.7	
1	-EPKPdfZ	1910	58.4	#-98
1	+EPKiKPZ	1911	03.1	#-98
1	-IPZ	2003	52.0	#-99
1	-EPcPZ	2004	01.8	#-99
1	+EpPKPbcZ	2016	06.0	#-100
1	+EPZ	2016	18.0	
1	+EPZ	2037	17.6	
1	+EPZ	2037	22.9	
1	+EPZ	2206	11.4	#-101
1	+EpPZ	2206	20.6	#-101
1	-EPcPZ	2206	32.0	#-101
1	-EPZ	2318	12.0	
2	+EPZ	0437	34.8	
2	+EPZ	0532	36.0	
2	+EPZ	0848	08.5	
2	+EPZ	1835	01.0	
2	-EPZ	1835	08.0	
2	+EPZ	2208	10.4	#-102
2	+IpPZ	2208	12.0	#-102
3	+EPZ	0125	30.4	
3	+EPZ	0125	37.8	
3	-EPZ	0249	22.0	#-103
3	+EpPZ	0249	30.7	#-103
3	-EPZ	0408	18.4	
3	+EPZ	0650	34.2	
3	+EPZ	1323	43.4	
3	-EPdiffZ	1403	52.8	#-104
3	+IPdiffZ	1425	01.0	#-105
3	-IpPdiffZ	1425	10.0	#-105
3	+IPcPZ	1800	31.2	#-106
4	+EPZ	0440	05.3	
4	-EPZ	1805	55.0	
4	-EPZ	1805	58.0	
4	+EXZ	1944	27.8	#-107
4	-EPZ	2134	46.0	
4	+EPZ	2225	54.4	
5	+EPZ	2356	19.8	
6	-EPZ	0134	51.4	
6	-EPZ	0135	05.2	
6	+EPZ	0202	00.5	
6	+EPcPZ	0348	15.0	#-108
6	-EsPZ	0348	21.0	#-108
6	+EPZ	0439	36.2	#-109
6	-EPZ	0746	08.6	#-110
6	+EsPZ	0746	13.4	#-110
6	+EPZ	0848	00.6	
6	-EPZ	0958	04.8	
6	-IpPZ	1230	47.0	#-111
6	+EPZ	1513	39.6	
6	-EPZ	1513	42.4	
6	+EPZ	1956	49.4	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
6	+EPZ	2112	02.4	#-112
6	+EPcPZ	2112	06.5	#-112
6	+EPZ	2150	08.5	
6	+EPZ	2150	16.8	
6	-EPZ	2237	36.4	
7	-EPZ	0449	04.0	
7	+EPZ	0612	17.8	
7	-EPZ	0612	25.0	
7	+EPZ	0812	03.8	
7	+EpPdiffZ	0812	17.8	#-113
7	-EPZ	0835	29.6	
7	-EPcPZ	0904	48.6	#-114
7	+EXZ	0905	02.6	#-114
7	-EXZ	1713	54.6	#-115
7	+EPZ	2152	34.6	
7	+EPZ	2247	01.2	#-116
7	+EXZ	2247	14.6	#-116
8	+EXZ	0051	34.8	
8	+EPZ	0910	30.8	
8	-EPZ	0910	40.4	
8	+EPZ	1635	36.7	
8	+EPZ	1645	54.3	
8	+EPZ	1802	20.8	#-117
9	+EPZ	0318	02.6	
9	-EpPZ	1534	00.4	#-118
9	-EsPZ	1534	09.0	#-118
9	-EPZ	2029	36.6	
9	+EPZ	2029	39.4	
9	+EPZ	2058	26.0	
9	+EPZ	2114	48.6	
9	-EPZ	2114	50.6	
10	-EPZ	0040	42.2	#-119
10	-EPcPZ	0040	51.2	#-119
10	-EpPZ	0040	55.4	#-119
10	-EPZ	0517	52.4	#-120
10	-EpPZ	0518	07.0	#-120
10	+IPZ	0954	03.0	
10	-IPZ	0954	04.2	
10	-IPZ	0954	09.2	
10	-IPZ	0954	34.5	
10	-EPZ	1125	16.6	
10	-EXZ	1237	08.0	#-121
10	+EPZ	1657	44.0	
10	+EPZ	1830	27.8	
10	+EPZ	2019	16.0	
11	-EPZ	0223	33.9	
11	-EPZ	0232	23.0	
11	+EPZ	0847	11.8	
11	-EPZ	1847	35.6	
11	+EPZ	2013	22.0	
11	+EPZ	2048	06.8	
12	-EPZ	0219	48.6	#-122
12	-IPcPZ	0219	50.0	#-122
12	+EPZ	0817	15.0	
12	-EPZ	1136	16.3	
12	+IPZ	1149	38.6	#-123
12	-IPcPZ	1149	42.6	#-123
12	+EPZ	1231	16.4	
12	+IPZ	1345	17.4	
12	+EPZ	2249	10.0	
13	-EPZ	0129	40.4	#-124
13	-EPcPZ	0129	42.0	#-124
13	-EpPZ	0129	57.6	#-124
13	-EPZ	0810	07.2	
13	+EPZ	0810	21.5	
13	+EXZ	0857	28.6	#-125
13	-IPZ	1333	55.0	
13	+IPZ	1334	03.2	
13	-EPZ	2055	13.6	
14	+EsPZ	0330	53.2	#-126
14	+EPZ	0706	07.4	
14	-EPZ	1012	03.4	#-127
14	+EPZ	1105	29.6	
14	+EPZ	1601	07.3	#-128

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
14	-EPcPZ	1601	10.6	#-128
14	+EsPZ	1601	23.6	#-128
14	-IPZ	1614	57.0	#-129
14	+EPcPZ	1614	58.2	#-129
14	+EpPZ	1615	06.8	#-129
14	-EPZ	1658	22.7	
14	+EPZ	2154	32.3	
14	-EPZ	2241	12.6	
14	-EPZ	2250	56.4	
15	+EPZ	0235	18.6	
15	-EPZ	0235	22.0	
15	+EPZ	0413	07.7	
15	-EPZ	0428	50.3	
15	-EPZ	0922	28.4	
15	-EPZ	1210	52.8	
15	+IPZ	1455	38.0	
15	-IPZ	1455	48.6	
15	ESH	1505	47.0	
15	+EXZ	2148	41.8	#-130
16	-EPZ	0101	21.3	#-130
16	-EPcPZ	0101	25.4	#-130
16	+EPZ	0434	05.0	
16	-EpPZ	0629	11.9	#-131
16	+EPZ	0859	16.2	
16	-EPZ	0917	10.8	
16	-EPZ	0917	29.0	
16	+IPZ	1055	08.6	#-132
16	-EPcPZ	1055	13.9	#-132
16	+EPZ	1132	25.4	
16	+EPZ	1251	04.0	#-133
16	+EPZ	1947	09.0	
16	+EpPZ	2317	30.0	#-134
17	+EPZ	0022	19.2	
18	-IPZ	0834	46.0	#-135
18	+EPZ	1404	06.4	
18	+EPZ	1544	19.4	
18	-EPZ	1544	32.8	
18	+EPZ	1714	24.0	
19	+EpPZ	1209	12.4	#-136
19	+EPZ	2006	29.9	
20	+EPZ	0037	08.0	
20	+EPZ	0139	15.1	
20	+IPZ	1228	31.6	#-137
20	-IPZ	1423	55.6	#-138
20	-IPcPZ	1423	58.2	#-138
20	-EPZ	1858	15.0	
20	-EpPdiffZ	2247	26.0	#-139
20	+EpPKiKPZ	2251	31.6	#-139
20	-IPdiffZ	2253	15.8	#-140
20	+EPKiKPZ	2257	23.0	#-140
20	+EpdiffZ	2304	22.7	#-141
20	-EPZ	2311	05.6	
21	+EPZ	0116	40.0	
21	+EPZ	0131	11.2	
21	-EPZ	1418	48.8	
21	+EPZ	1531	55.8	
21	+EPZ	1532	01.0	
21	+EPZ	1758	01.6	
21	+EPZ	1758	06.0	
21	+EPZ	1914	33.0	
21	-EPZ	1914	35.0	
21	-EPZ	2227	03.8	
21	+EPZ	2227	07.6	
22	+EPZ	0009	06.0	
22	-EPZ	0010	15.4	
22	-EPZ	0010	19.5	
22	+EPZ	0421	38.0	#-142
22	-EPZ	0749	13.0	
22	+EPZ	1333	01.9	
22	-EPZ	1643	02.8	
22	-EPKPdfZ	2143	41.5	#-143
22	+EPKPabZ	2144	11.4	#-143
22	+EPPZ	2147	50.3	#-143
22	-EPZ	2350	56.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
23	+EPZ	0432	02.4	
23	+EPZ	0721	46.0	
23	+EPZ	2109	54.0	
23	+EPZ	2338	00.4	
23	+EPZ	2338	15.4	
24	+EPZ	0401	36.8	
24	-EPZ	0620	29.2	
24	-EPZ	0620	32.0	
24	-EPZ	0715	15.0	
24	-EPZ	0715	20.0	
24	-EPZ	0715	36.0	
24	-EPZ	0737	45.2	
24	-EPZ	0737	47.0	
24	-EPZ	1318	21.2	
24	-EPZ	1856	40.4	
24	-EPZ	2050	51.8	
24	ESH	2100	34.5	
24	+EPZ	2202	54.2	
25	+EPZ	0023	41.0	
25	+EPZ	0023	45.8	
25	+EPZ	0206	02.9	
25	+EPZ	1509	08.0	
25	-EPZ	1520	13.4	
25	-EPZ	1703	35.0	
25	+EPZ	2035	27.7	
25	+EPZ	2254	47.4	
26	+EPZ	0041	14.0	
26	+EPZ	0113	00.2	
26	-EPZ	0639	16.4	
26	+EPZ	0639	21.4	
26	+EPZ	0857	00.0	
26	-EPZ	1057	20.0	
26	-EPZ	1409	10.0	
26	+EXZ	1801	31.8	#-144
26	+EpPdiffZ	1850	25.0	#-145
26	+EPdiffZ	2020	17.0	#-146
27	+EPZ	0128	27.0	
27	+EPZ	0447	03.6	
27	-EPZ	1647	16.6	
27	+EPZ	1938	35.8	#-147
27	+EPZ	2007	18.8	
27	-EPZ	2110	13.0	
27	-EPZ	2110	16.0	
27	+EPZ	2136	26.9	
28	-EPcPZ	0148	19.0	#-148
28	+EpPZ	0148	36.7	#-148
28	+EPZ	0246	09.8	#-148
28	+EPZ	0310	34.0	
28	-EPZ	0650	43.2	
28	-EPZ	0650	45.4	
28	-EXZ	1605	42.6	#-149
28	-EXZ	1605	51.8	#-149
28	-EPZ	1651	02.8	
28	-EPZ	1651	09.6	
28	+EPZ	1811	34.6	
28	+EPZ	1812	01.4	
28	+EPZ	2139	13.7	
28	+EPZ	2139	18.4	
28	+EPZ	2228	15.0	
28	+EPZ	2256	03.8	
28	-EPZ	2317	15.8	
28	+EPZ	2342	07.6	
29	-EPZ	0144	24.2	
29	+EPZ	0144	33.6	
29	+IPZ	0206	35.0	#-150
29	-EPcPZ	0206	38.0	#-150
29	+IPZ	0236	02.6	#-151
29	+EPZ	1304	07.4	
29	+EPZ	1304	14.0	
29	+EPZ	1424	37.2	
29	+EPZ	1517	50.0	
29	+EPZ	1743	03.0	#-152
29	+IXZ	1743	07.5	#-152
29	ESH	1753	15.0	#-152

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
29	-EPZ	1823	30.0	
29	-EPZ	2220	15.1	
30	+EPZ	0634	22.8	
30	-EXZ	1323	21.0	#-153
30	+EPZ	1505	30.2	
30	-EPZ	1722	04.8	
30	-EPZ	1722	07.6	
30	-IPZ	1722	50.8	
30	+EPZ	1834	24.2	
30	+EPZ	1834	34.8	
30	+EPZ	2047	09.6	
30	+IPZ	2139	58.2	
30	+EPZ	2224	51.4	#-154
31	+EPZ	0520	07.0	
31	-EPZ	1008	01.6	
31	-EPZ	1342	00.6	
31	+EXZ	1649	45.4	#-155
31	-EPZ	1916	20.4	
Apr.				
1	+EPZ	0250	05.4	#-156
1	-EPZ	0747	56.0	
1	+EPZ	1346	26.6	#-157
1	+EXZ	1347	10.4	#-157
1	+EPZ	1715	25.2	
2	-EPZ	0038	52.2	#-158
2	-EPZ	0900	33.6	#-159
2	-EPcPZ	0900	41.8	#-159
2	-EPdiffZ	1034	46.0	#-160
2	+EPZ	1143	15.0	
2	-EPZ	1235	05.2	
2	+EPZ	1447	04.0	
2	+EpPZ	1447	08.2	
2	-EsPZ	1447	09.6	
2	-IpPZ	1921	25.4	#-161
2	-IPZ	1922	24.4	#-162
2	ESH	1932	25.2	
3	+EPZ	0141	05.6	
3	-EPZ	0936	10.0	
3	+EPZ	1614	49.5	
3	+EPZ	1717	51.4	#-163
3	-EPcPZ	2012	30.0	#-164
3	+EpPZ	2012	35.4	#-164
3	+EPZ	2154	02.0	#-165
3	+EPcPZ	2154	04.7	#-165
3	+EPZ	2248	38.4	
4	-EPKPdfZ	0338	37.0	#-166
4	+EPZ	0416	08.2	
4	-EPZ	1022	51.8	
4	+EPZ	1122	47.6	
4	-EPZ	1354	05.0	
4	+EPZ	1446	40.6	
4	+EPcPZ	2041	40.5	#-167
5	+EPZ	0104	43.6	
5	+EPZ	0953	19.0	
5	-EPZ	0953	31.4	
5	+EPZ	1018	13.4	
5	-EPZ	1856	05.6	
5	+EPZ	1931	31.8	
6	-EPZ	0206	38.0	
6	+EPZ	0518	25.4	
6	-EPKPbcZ	0743	20.8	#-168
6	-EPZ	0921	09.8	
6	-EPZ	0921	12.0	
6	-EPZ	1719	29.0	
6	+EPZ	2021	19.2	
6	-EPZ	2029	34.6	
6	+EPZ	2044	39.4	
6	+EPZ	2113	06.5	
6	-EPZ	2321	08.3	
7	+EPZ	0238	34.2	
7	-EPZ	0643	24.2	
7	-EPZ	0643	43.0	#-169
7	-EPZ	2247	47.8	
8	-EPZ	0203	37.2	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
8	-IPZ	0203	34.6	
8	+EPZ	0718	21.5	
8	+EPZ	0910	57.2	
8	+EPZ	0929	04.4	
8	-EPZ	1315	39.8	
8	-IPZ	1553	42.0	
8	+EPZ	1617	32.4	
8	+EPZ	1920	24.6	
8	-EPZ	1927	47.6	
8	+EPZ	2204	09.6	
8	-EPZ	2246	26.0	
9	-EPZ	1125	44.9	
9	-IPZ	1125	49.8	
9	-IPZ	1125	53.6	
9	+EPZ	1136	04.8	
9	+IPZ	1258	37.0	
9	ESH	1309	01.2	
9	+EPZ	1315	42.2	
9	-EPZ	1424	08.4	
9	-EPZ	1424	11.4	
9	+EPZ	1433	45.0	
9	-EPZ	1434	32.8	
9	+EPZ	1440	15.0	
9	+IPZ	1500	15.4	
9	-EPZ	1500	20.6	
9	-IPZ	1500	43.0	
9	+EPZ	1919	30.0	
9	+EPZ	1936	54.0	
9	+EPZ	1948	05.4	
9	+EPZ	2148	43.3	
10	+IPZ	0122	32.8	
10	+EPZ	0848	33.3	
10	+EPZ	0848	38.0	
10	-IPZ	1318	29.2	
10	-IPZ	1318	46.5	
10	-EPZ	1338	02.0	
10	+EPZ	1357	42.3	
11	+EPZ	0320	44.6	
11	-EPZ	0356	11.0	
11	-EPZ	0356	17.5	
11	+EPZ	0521	19.2	
11	+EPZ	0521	29.4	
11	-EPZ	0954	23.2	
11	+EPZ	1221	01.6	
11	+EPZ	1306	35.2	
11	+EPZ	1413	41.8	
11	+EPZ	1606	37.3	
11	+EPZ	1606	54.4	
11	+EPZ	1648	20.0	
11	-EPZ	1648	23.4	
11	+EPZ	1757	24.6	
11	-EPZ	1757	30.2	
11	+IPZ	1757	40.8	
11	+EPZ	1809	32.0	
11	+EPZ	1848	34.7	
11	-EPZ	2252	01.0	
11	+EPZ	2344	12.1	
12	-IPZ	0038	49.2	
12	+EPZ	0713	21.7	
12	-EPZ	0713	40.8	
12	-EPZ	1209	26.6	
12	+EPZ	1456	37.6	
12	+EPZ	1705	56.6	
12	+EPZ	1706	04.0	
12	+EPZ	1834	20.0	
12	+EPZ	1843	42.6	
12	+EPZ	2253	01.6	
13	-EPZ	0143	55.2	
13	-EPZ	0252	47.4	
13	-EPZ	0304	10.8	
13	+IPZ	0914	09.2	
13	+EPZ	1422	35.9	
13	-IPZ	1810	25.0	
14	+EPZ	0117	02.6	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
14	+EPZ	0327	46.8	#-170
14	+EPcPZ	0327	51.2	#-170
14	-IPZ	0950	29.5	
14	-IPZ	0957	47.2	
14	ESH	1001	44.6	
14	+EPZ	1024	03.0	
14	+EPZ	1136	20.0	
14	+EPZ	1349	30.0	
14	+EPZ	1955	06.8	
14	+EPZ	1955	30.0	
15	+EPZ	0045	33.0	
15	+EPZ	0045	41.8	
15	-EPZ	0323	02.6	
15	+EPZ	0650	50.4	
15	-IPZ	0650	51.6	
15	-EPZ	1526	09.9	
15	-EPZ	1526	14.4	
15	+EPZ	1737	51.0	
15	+IPZ	1737	55.0	
15	+EPZ	2151	27.7	
15	+EpPKPdfZ	2319	48.4	#-171
15	-EPKPbcZ	2319	53.9	#-171
16	-EPZ	0048	42.4	
16	-EPZ	0048	44.2	
16	-EPZ	0114	06.0	
16	-EPZ	0320	38.4	
16	-EPZ	0320	40.4	
16	-EpPKPdfZ	0614	14.0	#-172
16	-IPZ	0614	41.0	
16	+EPZ	0710	13.0	
16	+EPZ	0824	28.6	#-173
16	-IPcPZ	0824	30.3	#-173
16	+EPZ	0850	49.0	
16	+EPZ	0850	53.6	
16	+EPZ	1941	27.5	
16	+EPZ	1941	32.2	
16	+EPZ	1941	44.9	
16	-EPZ	2311	01.0	
16	-EPZ	2311	11.0	
17	-EPZ	0346	00.4	
17	+EPZ	0809	15.8	
17	+EPZ	0841	39.0	#-174
17	-EPZ	0841	48.5	#-174
17	-IPZ	0849	51.0	
17	+EPZ	1032	53.7	
17	-EPZ	1343	28.0	
17	+EPZ	1719	40.5	
17	-EPZ	1719	42.5	
17	-IPZ	1917	40.0	
17	+EPZ	2125	14.4	
17	-EPZ	2304	51.2	
17	-EPZ	2304	53.2	
18	-EPZ	0754	12.8	
18	-EPZ	0754	15.5	
18	+EPZ	0945	02.8	
18	+EPZ	0945	05.8	
18	+EPZ	1324	30.5	
18	+EPZ	1536	05.2	
18	+EPZ	1938	29.4	
18	+EPZ	2008	23.5	
18	+EPZ	2051	02.0	
18	+IPZ	2051	04.2	
18	ESH	2101	01.0	
18	+EPZ	2123	04.8	
18	+IPZ	2322	35.0	
19	+EPZ	0324	40.4	#-175
19	-IPZ	0324	44.2	#-175
19	-IPZ	0611	07.6	
19	ESH	0621	35.4	
19	+EPZ	0652	08.8	
19	+EPZ	1033	28.2	#-176
19	+EpPZ	1033	30.0	#-176
19	+EPZ	1145	12.5	
19	-EPZ	1505	56.7	#-177

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
19	-EpPZ	1506	00.2	#-177
19	+EPZ	1639	44.4	#-178
19	+EPZ	1703	02.2	#-178
19	-EsPZ	1703	07.0	#-178
19	+EPZ	1903	36.2	#-179
19	+EXZ	1915	06.3	#-180
19	-EPcPZ	1925	47.2	#-181
19	+EpPZ	1925	53.9	#-181
19	-EPZ	2140	42.8	
19	+EPZ	2210	30.8	
20	+EPZ	0547	23.5	
20	+EPZ	0741	27.0	
20	+EPZ	1039	36.2	#-182
20	+EPZ	1144	13.3	
20	-EXZ	1313	35.2	#-183
20	+EPZ	1844	03.4	
20	-EPZ	2018	40.4	
20	+EPZ	2221	45.5	#-184
21	+EPZ	0116	10.8	
21	+EXZ	0545	45.4	
21	+EPZ	1555	19.8	
21	-EPZ	1819	47.4	
21	-EPZ	1819	50.2	
21	+EPZ	2007	52.3	
21	-EPZ	2154	55.3	
21	+EPZ	2155	00.9	
22	+EPZ	1544	51.4	
22	-EPZ	1545	04.6	
23	-EPZ	0011	23.5	
23	-EPZ	0011	27.2	
23	-EPZ	0024	03.8	
23	+EPZ	0146	22.4	
23	+IPZ	1418	27.8	#-185
23	+EpPZ	1418	32.9	#-185
24	+EPZ	0004	33.0	
24	+EPZ	0004	37.0	
24	+EPZ	0131	39.5	
24	-EPZ	0131	42.2	
24	+EPZ	1223	16.6	
24	-EPZ	1451	00.0	
25	-EPZ	1500	13.1	
25	+EPZ	1517	01.2	
25	-EPZ	2127	02.0	
26	+EPZ	1457	37.6	
26	+EPZ	1540	02.4	
26	-EPZ	1540	07.3	
26	+EPZ	1620	10.0	
26	-EPZ	1737	05.0	
26	-EPZ	2244	15.5	
26	-EPZ	2244	23.0	
26	+EPZ	2344	20.2	
26	-IPZ	2344	28.2	
27	-EPZ	0127	49.0	
27	-EPZ	0127	58.6	
27	-EXZ	0514	16.0	#-186
27	+EPZ	1047	03.6	
27	-EPZ	1751	03.7	
28	+EPZ	0025	05.3	
28	+EPZ	0025	12.4	
28	+EPZ	0440	19.8	#-187
28	+EPZ	1411	34.6	
28	-EXZ	1411	44.2	#-188
28	+EPZ	1603	49.0	
28	+IPZ	1603	51.0	
28	+IPZ	1815	20.4	
28	+IPZ	1846	01.0	
28	ESH	1856	19.0	
28	-EPZ	2039	16.0	
28	-IPZ	2039	41.1	
28	+EPZ	2302	55.4	
29	+EPZ	0325	34.4	
29	+EPZ	0325	40.0	
29	-EPZ	0553	24.8	
29	+EPZ	0904	57.4	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
29	-IPZ	0905	01.0	
29	-EPZ	0959	54.4	
29	+EPZ	1605	38.0	
29	-EPZ	1921	44.2	#-189
29	+IPcPZ	1921	47.2	#-189
29	ESN	1931	25.0	#-189
29	+EPZ	2128	26.7	
30	-EPZ	0023	09.0	
30	+EPZ	0229	17.6	
30	+EPKPbcZ	0322	54.0	#-190
30	+EPZ	0532	20.3	
30	+EPZ	1106	04.0	
30	-EPZ	1142	05.8	
30	-EPZ	1318	25.5	
30	+EPZ	1812	48.0	#-191
30	+EPZ	1844	00.8	
30	+EPZ	2006	01.5	
30	-EPZ	2341	30.7	
May				
1	-IPZ	0510	18.4	
1	-IPZ	0510	22.1	
1	-EPZ	0534	20.8	
1	+EPZ	1341	31.7	
1	+EPZ	1924	43.0	
1	+EPZ	2354	34.2	
2	+EpPKPdfZ	0153	37.2	#-192
2	-EPdiffZ	0434	42.0	#-193
2	-EPZ	0920	59.5	
2	-EPZ	1631	49.2	
2	-EPZ	1910	25.2	
3	-EPZ	0104	46.0	
3	-EPZ	0115	05.8	
3	-EXZ	0405	28.8	#-194
3	+EPZ	1221	09.6	#-195
3	-EPZ	1331	26.0	
3	+EPZ	1352	24.6	
3	+EPZ	1604	00.8	
3	+EPZ	1733	10.8	
3	-EPZ	1750	35.4	
3	-EPZ	1914	52.4	#-196
3	-EpPZ	1915	03.8	#-196
3	+EPZ	1936	42.6	
3	+EPZ	2016	56.8	
3	+EPZ	2306	39.6	
4	+EPZ	0218	47.0	
4	-EPZ	0218	51.6	
4	+EPZ	0241	34.0	
4	+EPZ	0424	32.2	
4	+EPZ	1150	55.6	
4	-EPZ	1630	02.4	
4	+EPZ	1709	20.0	
4	-EPZ	1735	45.4	
4	-EPZ	1803	23.6	
5	-EPZ	0302	51.4	
5	+EPZ	0317	23.6	
5	-EPZ	1443	46.0	
5	-IPZ	1443	50.6	
5	-EPZ	1552	08.0	
5	+EPZ	1648	12.5	
5	-EXZ	1722	15.4	#-197
5	-EPZ	1748	17.0	
5	+EPZ	1919	36.0	
5	-EPZ	1919	43.6	
5	-EPZ	2152	24.6	
5	-EPZ	2152	28.2	
6	+EPZ	0249	44.8	
6	+EPZ	0249	48.0	
6	-EPZ	0601	04.0	
6	-EPZ	0956	00.4	
6	-EPZ	1019	01.8	
6	+EPZ	1254	40.0	
6	-EPZ	1254	51.6	
6	-EPZ	1607	02.5	
6	-EPZ	1658	29.4	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
6	-EPZ	1749	30.0	
6	-EPZ	1946	39.2	
6	+EPZ	2250	12.0	
6	+EPZ	2339	24.4	#-198
6	ESH	2349	10.6	#-198
7	-EPZ	0545	15.0	
7	+EPZ	1002	10.0	
7	+EPZ	1208	20.6	
7	+EPZ	1621	20.5	
7	-EPKPdfZ	1635	38.9	#-199
7	-EPKiKPZ	1635	43.0	#-199
7	+EPZ	1704	21.0	
7	+EPZ	1704	26.0	
8	-EPZ	0036	37.6	
8	-EPZ	0857	03.0	
8	-EPZ	0857	06.4	
8	+EPZ	1253	25.5	
8	+EPZ	1433	09.8	
9	+EPZ	0337	18.5	
9	-EPZ	1214	39.6	
9	-EPZ	2209	22.0	
9	-EPZ	2209	30.2	
9	-IXZ	2209	34.5	#-200
9	ESH	2216	07.4	
9	-EPZ	2245	49.6	
9	+EPZ	2245	53.5	
10	-EPZ	0647	06.5	
10	-EPZ	0913	07.9	
10	-EPZ	1156	01.6	
10	-EPZ	1440	30.6	
10	+EXZ	1545	14.9	#-201
10	-EPZ	1628	20.0	
10	-EPZ	1842	33.5	
10	-EPZ	1955	45.7	
10	-EPZ	1955	47.8	
11	+EPZ	0012	15.0	
11	-EXZ	0251	05.0	#-202
11	+EPZ	0343	17.6	
11	+EPZ	0419	10.0	#-203
11	-EPZ	1832	10.0	
12	+EPZ	0053	13.3	
12	-EPZ	0350	34.0	
12	-EPZ	0458	52.4	
12	+EPZ	0522	52.7	
12	-EPdiffZ	0642	30.4	#-204
12	+IPZ	0646	50.9	
12	-IXZ	0658	24.4	#-205
12	-EPdiffZ	0716	06.2	#-206
12	-EPZ	0758	19.8	
12	-EPZ	0846	41.0	
12	+EPZ	1143	51.0	
12	+EPZ	1312	04.6	
12	+EXZ	1547	20.8	#-207
12	-EPZ	1604	09.2	
12	-EPZ	1604	11.9	
12	-EPZ	1621	22.2	
12	+EPZ	1705	03.8	
12	-EPZ	1824	11.6	
12	-EPZ	2133	15.2	
12	+EPZ	2351	00.8	
13	+EPZ	0116	38.3	
13	+EPZ	0131	26.5	
13	+EPZ	0131	35.6	#-208
13	+EPZ	0203	35.0	
13	+EPZ	0343	35.0	
13	-EPZ	0347	18.6	
13	+EPZ	0403	36.4	
13	+EPZ	0608	08.2	
13	-EPZ	0822	36.8	
13	+EPZ	1240	22.8	
13	-EpPdiffZ	1428	38.0	
13	-EPZ	1432	02.3	
13	+EPZ	1612	20.8	
13	-EPZ	1612	23.6	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
13	+EPZ	1612	25.4	
13	+EPZ	2310	15.4	
14	+EPZ	0250	11.0	
14	-EPZ	0406	19.5	
14	+EPZ	0648	30.6	
14	+EPZ	0648	44.0	
14	+EPZ	1053	05.4	
14	+EPZ	1125	06.0	
14	+EPZ	1132	24.0	
14	+EXZ	1153	18.6	#-209
14	+EPZ	1317	09.6	
14	-EPZ	1323	56.2	
14	+EPZ	1630	58.3	
14	-EPZ	1657	35.0	
14	+EPZ	1923	46.9	
14	+EPZ	2033	58.0	
14	+EPZ	2117	53.2	
14	+EPZ	2213	15.4	
14	-EPZ	2326	06.0	
15	-EPZ	0230	46.5	
15	+EPZ	1429	27.0	
15	-IPZ	1429	32.0	
15	-IPZ	1429	35.0	
15	+EsPdiffZ	1440	02.0	
15	+EPZ	2150	16.0	
15	-IPZ	2150	19.0	
16	-EPZ	0158	13.0	
16	-EPZ	0158	14.8	
16	+EPZ	1118	27.5	
16	-EPZ	2000	22.2	
17	-EPZ	0451	13.0	
17	+EPZ	1908	28.3	
18	+EPZ	0238	41.8	
18	-EpPZ	1229	27.4	
18	-EPZ	1849	27.6	
18	-IPZ	0321	01.0	
18	+EPZ	0459	07.4	
18	+EPZ	0459	09.6	
19	+EPZ	0553	04.6	#-210
19	-EXZ	1029	15.6	#-211
19	+EpPZ	1439	05.8	#-212
19	-EXZ	1444	23.0	#-212
19	+EPZ	1501	35.0	#-213
19	+EPZ	1532	10.4	#-214
19	-EPZ	1914	26.0	
19	+EPZ	2347	18.2	
20	-EXZ	0521	42.0	#-215
20	+EpPZ	1234	53.4	#-216
20	-EPKPbcZ	1413	30.0	#-217
20	-EpPKPbcZ	1413	40.6	#-217
20	+EPZ	1526	00.8	
20	+EPZ	1614	58.0	
20	-EPZ	1719	50.4	#-218
20	+EsPZ	1720	10.0	#-218
20	+EPZ	1927	41.2	
20	+EPZ	2149	58.0	#-219
20	-EPZ	2339	00.0	
20	+EPcPZ	0258	43.2	
20	-EPZ	0543	05.6	
21	+EPcPZ	0258	43.2	#-220
21	-EPZ	0543	05.6	
21	-EPZ	0909	18.2	
21	-EPZ	1958	49.0	
21	+EPZ	1959	01.2	
21	-EPZ	2234	25.8	
21	-EPZ	2334	55.0	#-221
21	-EPZ	0747	41.5	
21	+EPZ	1152	40.4	
22	+EPZ	1423	08.4	
22	+EPZ	1423	11.5	
22	+EPZ	2025	59.0	
22	-EPZ	2026	02.4	
22	-EPZ	2118	24.0	
22	+EPZ	2030	26.4	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
22	+EPZ	2030	31.3	
23	-EPZ	0119	14.8	
23	-EPZ	0119	16.6	
23	+EPKPbcZ	0353	04.3	#-222
23	+EPZ	0611	11.3	
23	+EPZ	0918	25.0	
23	-EPZ	1044	38.4	
23	+EPZ	1948	40.5	#-223
23	+EpPZ	1948	43.2	#-223
23	-EPZ	2019	01.4	
23	+EPZ	2027	48.4	
23	-EPZ	2027	50.4	
23	-EPZ	2028	14.6	
23	ESH	2107	19.6	
23	+EPZ	2302	49.0	#-224
23	-EXZ	2302	50.4	#-224
23	ESH	2312	55.5	#-224
24	+EPZ	0720	48.3	
24	+EPZ	0752	43.6	#-225
24	-EPZ	0935	35.0	
24	ESH	0945	10.0	
24	-EPZ	1318	01.0	
24	-EPZ	1318	09.4	
24	-IPZ	1337	12.0	#-226
24	-EPcPZ	1337	15.0	#-226
24	-IpPZ	1337	25.0	#-226
24	+EPZ	1419	27.0	
24	-EPZ	1449	36.6	
24	+EsPZ	1802	22.5	#-227
24	-EPZ	1802	45.0	
24	-EPZ	1802	51.6	
24	-EPZ	1938	48.2	
24	-EPZ	1938	49.4	
24	-EPZ	2018	39.4	
24	-EPZ	2018	43.2	
24	-IPZ	2018	53.4	
25	-EPZ	0511	14.0	
25	-EPZ	0516	22.0	
25	-EPZ	0530	44.0	
25	+EPZ	0836	08.0	
25	-EPZ	0511	14.0	
25	-EPZ	0516	22.0	
25	-EPZ	0530	44.0	
25	+EPZ	0836	08.0	
25	-EPZ	1108	39.4	
25	-EPZ	1207	40.0	
25	-EPZ	1441	44.0	
25	-EPZ	1803	40.6	
25	+EPZ	2012	08.4	
25	-IPZ	2012	10.6	
26	-EPZ	0123	54.4	
26	-EPZ	0124	01.2	
26	-EPZ	0420	18.0	
26	+EPZ	1125	06.0	#-228
26	+EPcPZ	1125	16.2	#-228
26	-EPZ	1215	11.0	
26	-IPZ	1515	01.0	
27	-EPZ	0059	18.6	
27	-EPZ	0059	20.2	
27	-IPZ	0059	24.8	
27	-EPZ	1017	18.0	
27	-EPZ	1949	34.8	
28	-EPZ	0933	05.6	
28	+EPZ	1354	56.6	
28	-IPZ	1747	01.6	
28	+EPZ	1747	34.7	
28	ESH	1756	53.0	
28	-EPZ	2151	35.0	
29	+EPZ	1609	03.3	
30	+EPZ	1049	09.0	
30	-IPZ	1049	18.0	
31	+EPZ	0444	47.5	
31	+EPZ	0446	06.2	
31	+EPZ	1323	52.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
31	+EPZ	1400	43.0	
31	-EPZ	1409	07.0	
31	+IPZ	2328	14.5	
31	-EPZ	2344	38.4	
Jun.				
1	-EPZ	0036	11.6	
1	-IPZ	0036	15.2	
1	+EPZ	0632	12.8	
1	+EPZ	0632	14.8	
1	-IPZ	0955	11.0	#-229
1	-IPcPZ	0955	14.0	#-229
1	+EPZ	1030	43.4	
1	-EPZ	1037	35.9	
1	-EPZ	1046	05.6	#-230
1	-EPZ	1438	51.8	
1	-EPZ	1438	52.7	
1	+EPZ	1544	39.0	#-231
1	+EPZ	1611	33.8	#-232
1	-EPKPdfZ	1654	40.6	#-233
1	-EpPKPdfZ	1654	56.8	#-233
1	+EPZ	1718	41.0	
1	-EPZ	1718	50.0	
1	-EPZ	1811	09.6	
1	-EPZ	2044	31.4	
1	+IPZ	2308	12.2	#-234
1	-IPcPZ	2308	15.2	#-234
2	+EPZ	0127	38.0	
2	-EPZ	0432	56.8	
2	-EPZ	0433	01.5	
2	+EPZ	0508	30.0	
2	+EPZ	0902	45.0	
2	-EPZ	1052	44.0	
2	-EPZ	1052	44.9	
2	+EPZ	1137	26.7	
2	-EPZ	1214	18.7	
2	-EPZ	1257	54.6	
2	+EPZ	1538	26.4	
2	-EPZ	1627	44.0	
2	+EPZ	1632	40.2	
2	+EPZ	1641	44.6	
2	-EPZ	1731	44.5	
2	+EPZ	1959	45.6	#-235
2	-EPcPZ	1959	48.8	#-235
2	+EPZ	2048	46.6	
2	+EPZ	2128	13.0	
2	+EPZ	2346	51.0	
3	+EPZ	0303	14.7	
3	+EPZ	0333	36.0	
3	-EPZ	0333	38.8	
3	-EPZ	0637	18.4	
3	+EPZ	0807	17.2	
3	-EPZ	0913	27.4	
3	+EPZ	0923	40.0	
3	+EPcPZ	1028	01.5	#-236
3	+EPZ	1246	01.8	
3	-EPZ	1452	51.8	
3	+IPZ	1633	43.8	
3	-IPZ	1633	46.4	
3	-IPZ	1743	35.6	#-237
3	-IpPZ	1743	41.0	#-237
3	+EPZ	1807	12.7	#-238
3	-EPZ	1847	07.0	
3	+IPZ	1950	18.0	#-239
3	-EPZ	2115	50.2	#-240
3	-EPZ	2216	31.0	#-241
3	-IpPZ	2216	36.5	#-241
3	-EPcPZ	2302	01.8	#-242
3	+EPZ	2355	30.6	#-243
4	-EPZ	0138	04.6	#-244
4	+EPZ	0229	08.9	
4	+EPZ	0244	33.4	
4	+EPZ	1059	18.0	#-245
4	+EPZ	1208	15.8	
4	+EPZ	1504	12.5	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
4	+EPZ	1611	02.4	
4	+EPZ	1724	45.0	
4	+IPZ	1724	57.4	
4	-EPZ	2140	56.4	
4	-IPZ	2141	18.0	
5	+EPZ	0227	34.6	
5	+EPZ	0227	36.4	
5	-IPZ	0228	27.6	
5	+IPZ	0258	43.4	
5	-EPZ	0351	18.6	
5	+EPZ	0351	28.3	
5	+EPZ	0528	36.7	
5	+EPZ	0533	14.0	
5	-EPZ	0803	04.0	
5	-EPZ	1018	11.0	
5	+EPZ	1155	25.0	
5	+EpPZ	1212	51.4	#-246
5	+EPZ	1350	27.4	#-247
5	+EsPZ	1351	11.3	#-247
5	-EPZ	1505	02.0	
5	-EPZ	1517	13.0	
5	-EPZ	1543	36.4	#-248
5	-EPZ	1724	28.8	
5	-EPZ	1829	52.0	
5	+IPZ	1904	43.0	
5	+IPZ	1904	52.4	
5	-EPZ	1933	06.0	
6	+IPZ	0355	51.4	#-249
6	-IPZ	1354	56.7	#-250
6	+EPZ	1410	34.8	
6	+EPZ	2340	23.7	
7	+EPZ	0018	48.6	
7	+EPZ	0039	56.4	
7	-EPZ	0409	08.0	
7	+EPZ	0437	42.0	
7	-EPZ	0958	01.0	
7	+EPZ	1234	12.2	
7	-EPZ	1319	12.8	
7	+IPZ	2205	45.0	
7	+EpPdiffZ	2209	14.4	#-251
7	+IPZ	2215	21.6	#-252
7	-EpPZ	2221	14.2	#-253
8	+EPZ	0942	12.9	
8	+EPZ	1241	12.2	
8	-EPZ	1241	25.8	
8	+IPZ	1516	40.3	
8	+EPZ	1648	52.0	#-254
8	-EPZ	1846	45.0	
8	+EPZ	1940	37.8	
8	+EPZ	2252	01.0	
9	+EPZ	0403	40.8	
9	+EPZ	0652	35.6	
9	+EPZ	0652	52.2	
9	-EPZ	1634	38.4	
9	-EPZ	1634	41.6	
9	+EPZ	1638	20.4	
9	+EPZ	2046	13.4	
10	-EPZ	0426	10.2	
10	+IPZ	0426	18.6	
10	-EpPZ	0723	47.2	#-255
10	+EPZ	0757	45.0	#-256
10	-IPcPZ	0757	50.0	#-256
10	+EpPZ	0757	04.0	#-256
10	+EPZ	1137	03.6	
10	-EpPdiffZ	1151	13.3	#-257
10	+EPZ	1434	21.8	
10	-EPZ	1434	26.0	
10	-EPZ	1943	28.2	
10	-EPZ	1943	29.6	
11	-IPZ	0241	37.6	
11	+IPZ	0241	44.8	
11	ESH	0254	06.4	
11	-EPZ	0633	01.6	
11	-IXZ	0850	57.0	#-258

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
11	-EPZ	1238	36.0	
11	+EPZ	1325	25.8	#-259
11	-EPZ	1441	50.4	
11	+EPZ	1740	02.4	
12	-EXZ	0222	11.0	#-260
12	-EPcPZ	0222	23.4	#-260
12	+EPZ	0239	41.4	
12	+EPZ	0531	33.6	#-261
12	-EPcPZ	0531	47.3	#-261
12	-EPZ	0632	10.8	
12	-EPZ	1112	07.4	
13	NONE			
14	+EPZ	0744	41.2	#-262
14	-EPcPZ	0744	49.0	#-262
14	+EPZ	1308	10.5	#-263
14	+EPcPZ	1308	13.4	#-263
14	+EXZ	1414	41.8	#-264
14	+EPZ	1814	26.8	
14	+EPZ	1852	33.3	
14	-EPZ	2215	31.7	
15	+IPZ	0125	00.6	
15	-IPZ	0125	02.1	
15	ESH	0134	30.0	
15	-EPZ	0649	53.4	
15	+EPZ	0655	03.6	
15	-EPZ	0712	55.5	
15	+IPZ	0848	39.0	
15	-IPZ	0848	44.0	
15	-EPZ	1051	04.0	
15	+EPZ	1232	41.6	
15	-EXZ	1521	00.4	#-265
15	+EPZ	1942	09.0	
15	+EPZ	2342	55.6	
16	+EPZ	0253	50.6	#-266
16	-EPZ	0646	40.7	
16	-EPZ	1025	26.0	
16	-EPZ	2021	02.9	
16	+EPZ	2113	20.6	
16	+EPZ	2325	23.2	
16	+EPZ	2326	02.0	
17	-EPZ	0314	02.3	
17	+EPZ	0557	23.6	
17	+EPZ	2358	23.0	
18	+EPZ	0338	22.4	
18	+EPZ	0532	11.0	
18	+EPZ	0532	20.0	
18	+EPZ	1031	37.6	
18	-EPZ	1112	14.8	
18	-EPZ	1112	23.8	
18	-EXZ	1326	06.6	#-267
18	-EPZ	1706	07.4	
18	+EPZ	1847	20.0	
18	-EPZ	1911	41.5	
18	-EPZ	1911	43.4	
18	-EPZ	2017	54.6	
18	+EPZ	2018	05.2	
18	+EPcPZ	2158	52.2	#-268
18	+EPZ	2203	39.6	
19	-EPZ	0237	08.8	
19	-EPZ	0521	05.8	
19	-EPZ	0531	51.6	
19	-IPZ	0531	52.6	
19	-IXZ	0736	05.0	#-269
19	-IPZ	0755	57.4	
19	-EPZ	1313	12.6	
19	-EPZ	1313	14.4	
19	-EPZ	1924	02.6	
19	+EPZ	2048	48.3	
19	+EPZ	2053	08.7	
19	+EPZ	2222	13.6	
20	+IPZ	0031	10.0	
20	-EPZ	0328	06.6	#-270
20	+EPcPZ	0328	09.8	#-270
20	-EPZ	1134	17.8	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
20	+EPZ	1225	15.2	
20	+EPZ	2136	07.0	
20	+EPZ	2213	11.0	
21	+IPZ	0041	26.6	#-271
21	-IPcPZ	0041	30.6	#-271
21	+IPZ	0420	17.6	#-272
21	-EXZ	0420	28.0	#-272
21	-EPZ	0507	05.8	
21	+EPZ	0540	48.8	
21	-EPZ	0751	06.2	#-273
21	+EPZ	1643	38.0	
21	-EPZ	1901	55.2	
21	-EPZ	2254	23.0	#-274
21	+EPZ	2258	46.2	
22	+EPZ	0203	39.6	
22	+EPZ	0310	17.4	
22	+EPZ	0513	18.9	
22	-EPZ	1010	16.3	
22	+EPZ	1116	26.0	
22	-EPZ	1223	59.2	#-275
22	-EXZ	1224	08.9	#-275
22	-EPZ	1327	55.2	
22	-IPZ	1328	05.9	
22	+EPZ	1328	42.0	#-276
22	+EPZ	1432	13.4	
22	+EPZ	1514	33.0	
22	+EPZ	1702	14.4	
22	+EPZ	2016	11.2	
22	-EPZ	2022	53.0	
22	-EPZ	2357	07.5	
23	+IXZ	0016	21.7	#-277
23	-EPZ	0114	09.4	
23	-EPZ	0830	26.8	
23	+EPZ	1207	15.7	
23	-EPZ	1251	35.8	
23	-EPKPdfZ	1251	42.2	#-278
23	+EPZ	2005	49.6	
24	-EPZ	0350	48.0	
24	+EPZ	1524	22.0	
24	-EPZ	1926	35.8	#-279
24	+EPZ	1948	38.2	#-280
24	+EPZ	2001	09.0	#-281
24	+EPZ	2125	24.4	
24	-EPZ	2207	06.2	
25	-EXZ	0204	42.8	#-282
25	+EPcPZ	0204	52.4	#-282
25	-EPZ	0251	13.6	
25	-EPZ	0305	33.4	#-283
25	-EPcPZ	0305	41.2	#-283
25	-EPZ	1118	40.2	
25	+EPZ	1141	52.0	
25	+EPZ	1432	22.4	
25	+EPZ	1554	32.4	#-284
25	+IPZ	1554	34.2	#-284
25	-EPZ	1629	21.0	
25	-EPZ	1754	24.8	
25	+EPZ	2134	06.2	
26	-IPZ	0019	34.0	#-285
26	-EpPZ	0019	47.8	#-285
26	+EPZ	0731	02.8	
26	+EPZ	1246	58.2	#-286
26	+EXZ	1247	07.3	#-286
26	+EPZ	1703	33.6	
26	-IPZ	2131	56.0	#-287
26	-IpPZ	2132	08.8	#-287
26	+EPZ	2302	36.6	
27	+EPZ	0454	12.3	#-288
27	-EpPZ	0456	17.0	#-288
27	+EPZ	0848	05.6	
27	+IPZ	1153	01.0	#-289
27	-IPcPZ	1153	04.0	#-289
27	ESH	1204	00.2	#-289
27	-EPZ	1306	16.5	
27	+EPZ	1319	54.8	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
27	-IPZ	1320	00.6	
27	-EPZ	1428	21.0	#-290
27	+EPZ	1818	00.0	#-291
27	+EPZ	2218	02.4	
27	-EPZ	2347	44.0	#-292
28	-EPcPZ	0339	44.0	#-293
28	-EPZ	0447	50.0	#-294
28	-EPZ	0704	41.0	
28	-EPZ	0704	46.0	
28	-IPZ	0905	29.4	#-295
28	+EpPZ	0905	31.2	#-295
28	-IsPZ	0905	32.2	#-295
28	+EXZ	1026	42.0	#-296
28	-EPcPZ	1026	50.4	#-296
28	+EPZ	1223	50.7	#-297
28	+IPZ	1307	33.0	#-298
28	-IPcPZ	1307	35.0	#-298
28	-EPZ	1409	51.4	#-299
28	+EOZ	1542	00.0	#-299
28	-IPZ	1732	00.0	
28	+EPZ	1732	17.0	
28	+EPZ	1920	24.0	
29	+EPZ	0321	44.0	
29	+EPZ	0321	45.6	
29	-EPZ	0322	01.4	
29	+EPZ	0427	23.2	#-300
29	+EPZ	0511	15.0	
29	+EPZ	0542	06.0	
29	+EPZ	1230	02.8	
29	+EPZ	1521	14.5	
29	-EPZ	2006	20.4	
29	-EPZ	2006	22.8	
29	-EPZ	2108	15.4	
29	-EPZ	2111	29.0	
29	-IPZ	2111	42.4	
30	+EPZ	0133	29.4	
30	-IPZ	0416	52.4	#-301
30	-EsPZ	0416	58.0	#-301
30	-EPZ	0623	32.0	#-302
30	+IpPZ	0623	34.0	#-302
30	+EPZ	1724	01.0	
30	+EPZ	1724	07.5	
30	+EPZ	2327	23.6	
30	-EPZ	2353	05.4	
Jul.				
1	-EPZ	0030	23.2	#-303
1	-EPcPZ	0030	25.1	#-303
1	-EPZ	0053	44.6	
1	-EPZ	0200	30.4	
1	-IPZ	0200	37.0	
1	-EPZ	1046	39.4	
1	+EPZ	1200	02.4	
1	-EPZ	1334	08.5	
1	-EPZ	1525	12.4	#-304
1	-EPcPZ	1525	14.2	#-304
1	+EPZ	2337	24.7	
2	+EPZ	0039	02.0	
2	+EPZ	0317	22.7	
2	+EPZ	0317	24.0	
2	-EPZ	0710	02.0	
2	-EPZ	1212	41.6	
2	+EPZ	1257	49.4	#-305
2	-IPcPZ	1257	50.8	#-305
2	+EXZ	1937	14.0	#-306
2	+EPZ	2219	35.2	
2	+EPZ	2233	11.8	
2	-EPZ	2301	09.6	
3	+IPZ	0314	03.0	
3	-EPZ	0323	09.8	#-307
3	-EPZ	0323	29.0	#-307
3	+EPZ	0653	00.0	
3	+EPZ	0653	06.8	
3	+EPZ	0921	13.6	
3	-EPZ	0921	19.4	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
3	+EPZ	1052	42.4	
3	+EPZ	1052	47.3	
3	-EPZ	1516	16.0	
3	-EPZ	1516	26.4	
3	+EPZ	2041	34.2	
4	-EPZ	0515	02.0	
4	-EPZ	0515	09.8	
4	+EPZ	1717	37.0	
4	+EPZ	1952	06.7	
4	-EPZ	2105	03.0	
4	+EPZ	2140	08.4	
4	-EPZ	2323	06.4	
5	-EPZ	0057	44.4	#-308
5	+EXZ	0230	25.0	#-309
5	+IXZ	0230	29.4	#-309
5	ESH	0247	16.3	
5	+EPZ	0310	28.8	
5	-EPZ	0314	20.6	
5	-EPZ	1324	31.2	
5	-EPZ	1404	47.2	
5	+EPZ	1553	21.2	
5	+EPZ	1805	44.5	
5	-EPZ	2036	31.4	
5	+EPZ	2332	11.5	
6	+EPKPdfZ	0119	30.1	#-310
6	-EPKiKPZ	0119	34.0	#-310
6	-EpPKPdfZ	0119	40.2	#-310
6	+EPZ	0442	40.8	#-311
6	-EPcPZ	0442	45.0	#-311
6	-EPZ	0927	31.0	#-312
6	-EPKPdfZ	0927	45.5	#-312
6	-EPZ	1355	02.5	#-313
6	-EPZ	1749	07.2	#-314
6	-EPcPZ	1749	09.6	#-314
6	-EPZ	1852	50.6	
6	-EPZ	1923	11.0	
7	+EPZ	0056	19.4	
7	-EPZ	0250	16.0	
7	-EPZ	0457	45.4	#-315
7	-EPcPZ	0457	49.0	#-315
7	-EPZ	0646	07.9	
7	+EPZ	0759	49.6	
7	+EPZ	0800	02.4	
7	-EPZ	1506	00.4	
7	-EPZ	2145	17.0	#-316
7	-EPZ	2145	21.4	#-316
7	-EPZ	2232	44.0	
7	-IPZ	2232	47.2	
7	-IXZ	2304	00.0	#-317
8	-EPKPdfZ	0800	44.0	#-318
8	+EXZ	0801	08.4	#-318
8	-EPZ	0811	16.4	
8	+IPZ	0925	14.6	
8	ESH	0936	12.4	
8	+EPZ	1224	58.4	
8	+EPZ	1828	29.6	
8	+EPZ	1605	32.6	#-319
8	+EPcPZ	1605	44.8	#-319
9	-EXZ	0247	37.8	#-320
9	+EXZ	0247	55.2	#-320
9	+IPZ	0339	01.0	
9	-EPZ	0734	12.2	
9	+EPZ	0836	36.4	#-321
9	-EPcPZ	0836	39.6	#-321
9	-EXZ	1248	32.8	#-322
9	+EPKiKPZ	1248	44.6	#-322
9	+EPZ	1324	03.8	
9	+EPZ	1539	42.0	
9	-EPZ	1729	01.4	
9	-EPZ	1906	50.0	
9	-IPZ	2010	19.0	#-323
9	-EPZ	2010	42.8	
9	-EPZ	2229	35.2	#-324
9	+EPZ	2248	25.2	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
10	+EPZ	0254	38.2	
10	-EPZ	0359	04.0	#-325
10	+EXZ	0359	15.2	#-325
10	-EPZ	0529	02.8	#-326
10	+IPcPZ	0529	04.6	#-326
10	-EPZ	0642	42.4	#-327
10	+EPZ	0713	01.0	
10	+EPZ	1117	33.6	
10	-EPZ	1301	22.8	
10	-EPZ	1301	30.0	
10	-EXZ	1613	26.6	#-328
10	-EpPZ	1613	42.0	#-328
10	-EPZ	1745	45.6	#-329
10	+EPZ	2039	09.8	
11	+EPZ	0002	02.0	
11	+EPZ	0426	32.0	
11	+IXZ	0703	06.9	#-330
11	-EpPZ	0703	11.9	#-330
11	+EXZ	0939	08.4	#-331
11	+EpPZ	0939	13.7	#-331
11	+EPZ	1012	02.6	
11	-EPZ	1218	42.0	
11	-EPZ	1313	08.2	
11	-EPZ	1336	25.4	
11	+EPZ	2322	09.9	
12	+EpPKPdfZ	0021	34.0	#-332
12	+EPZ	0018	44.4	#-333
12	+EPZ	0112	06.4	
12	-EPZ	0553	19.4	
12	-EsPZ	0856	01.5	#-334
12	+EPZ	1012	37.6	
12	-EPZ	1642	36.0	
12	+EPZ	1917	25.0	
13	+EPZ	0407	05.4	
13	-EPZ	0856	47.5	
13	-EPZ	1016	20.8	
13	-IPZ	1016	39.6	
13	+EPZ	1533	05.8	
13	+EPZ	1636	25.6	#-335
13	+EPcPZ	1636	30.4	#-335
13	+EpPZ	1636	51.7	#-335
13	+EPZ	1745	31.2	#-336
13	-EPZ	1935	40.4	
13	-EPZ	1941	50.6	#-337
13	-EPcPZ	1942	00.6	#-337
14	-EPZ	0219	23.0	
14	+EPZ	0345	56.0	
14	+EPZ	0457	05.8	#-338
14	+EPcPZ	0457	10.3	#-338
14	-EPZ	0738	21.8	
14	-EPZ	1103	57.0	
14	+EPZ	1104	01.0	
14	-EPZ	1156	42.0	
14	+EPZ	1800	52.8	#-339
14	-EPcPZ	1801	05.6	#-339
14	+EPZ	1850	51.6	
14	+EPZ	2325	53.2	
15	+EPZ	0340	37.7	
15	ESH	0351	10.8	
15	-EPZ	0356	34.6	
15	-EPZ	0407	07.8	
15	+EPZ	0439	44.8	
15	+EXZ	0513	39.2	#-340
15	-EPZ	1100	33.8	
15	-EPZ	1100	45.2	
15	-EPZ	1232	35.2	
15	-EPZ	1438	52.0	
15	-EPZ	1719	16.0	
15	-EPZ	1929	26.4	#-341
15	-EpPZ	1929	30.0	#-341
15	+EPZ	2024	03.6	
15	+EPZ	2355	41.0	
15	-EPZ	2355	51.6	
16	+EPZ	0729	55.5	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
16	+EPZ	0730	02.3	
16	+EPZ	0824	09.3	
16	+EPZ	1300	47.0	#-342
16	+EpPZ	1300	50.8	#-342
16	-EPZ	1510	27.6	
16	-EPZ	1720	57.4	#-343
16	+EPcPZ	1721	07.6	#-343
16	ESH	1730	31.0	#-343
16	-EPZ	2135	09.7	
16	+EPZ	2237	02.2	#-344
17	+EPZ	0416	20.0	
17	+EPZ	0744	22.7	
17	+EPZ	0905	11.7	
17	+EPZ	1706	39.8	
17	+EPZ	2311	44.0	
17	+EPZ	2311	57.2	
17	+EPZ	2315	11.0	
18	-EPZ	1001	55.6	
18	+EPZ	1908	15.6	
18	+EPZ	2102	30.8	
18	+EPZ	2358	47.2	
19	+EPZ	0258	31.8	
19	-EPZ	0258	34.0	
19	+EPZ	0820	15.4	
19	-EXZ	0824	06.0	#-345
19	+EpPZ	0824	12.0	#-345
19	+IPZ	0940	06.0	#-346
19	-IpPZ	0940	09.6	#-346
19	ESH	0950	50.0	#-346
19	+EPZ	0947	31.0	#-347
19	-EsPZ	0947	38.0	#-347
19	+EXZ	1101	48.0	#-348
19	-EXZ	1114	20.0	
19	-EPZ	1128	29.0	#-349
19	-IPcPZ	1128	31.6	#-349
19	+EPZ	1158	45.6	#-350
19	+EPZ	1339	34.0	
19	+EPZ	1339	41.0	
19	+EPZ	1919	10.4	
19	+EPZ	1919	13.8	
19	-EPZ	2245	58.4	#-351
19	+IPZ	2252	06.2	#-352
19	ESH	2302	22.0	#-352
19	+EPZ	2331	54.0	#-353
20	-EPZ	0049	04.6	
20	+EPZ	0212	52.0	
20	-EPZ	0450	37.2	
20	+EXZ	0622	40.8	#-354
20	-EPZ	0833	24.6	#-355
20	-EPZ	1224	51.2	
20	-EPZ	1224	53.4	
20	+EPZ	2058	25.1	
20	+EPZ	2058	28.4	
20	+EPZ	2148	20.3	
20	+EPZ	2239	02.4	
20	-EPZ	2239	14.0	
21	+EPZ	0002	35.3	
21	+EPZ	0002	38.5	
21	-EPZ	0242	05.0	
21	+EPZ	0319	04.0	#-356
21	+EPZ	0448	21.0	
21	+EPZ	0528	36.2	
21	+EPZ	0823	33.0	
21	+EpPKPdfZ	1149	42.8	#-357
21	+EPZ	1150	00.8	
21	-EPZ	1600	56.8	#-358
21	+EPZ	2027	12.6	#-359
21	-EPZ	2036	02.0	
22	+EPZ	0403	59.0	
22	-EPZ	0732	38.2	#-360
22	+EXZ	0852	15.3	#-361
22	+EPZ	1842	48.2	#-362
22	+EpPZ	1844	51.6	#-362
22	-EXZ	2259	25.4	#-363

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
22	-EXZ	2259	41.2	#-363
23	-EPZ	0109	26.6	
23	-EPZ	0109	27.8	
23	+EPZ	0312	31.2	
23	-EPZ	0527	12.6	
23	+EXZ	0818	07.4	#-364
23	+EPZ	1408	11.6	
23	-EPZ	1545	00.6	
23	-IPKPdfZ	1545	16.6	#-365
23	ESH	1549	10.0	
23	-EPKiKPZ	2013	18.9	#-366
24	+EPZ	0030	12.1	
24	-EPZ	0202	47.6	
24	-IPZ	0202	51.1	
24	+EPZ	0517	10.6	
24	+EPZ	0546	55.4	
24	+EPKiKPZ	0728	04.6	#-367
24	-EpPKiKPZ	0728	09.2	#-367
24	-EPZ	2056	33.6	
24	+EPZ	2229	49.9	
25	-EPZ	0049	08.2	
25	+EPZ	0326	25.6	
25	-EPZ	0353	13.2	
25	+EXZ	0513	15.4	#-368
25	+EPZ	0721	31.2	
25	+IPZ	0759	40.6	#-369
25	-IPZ	0759	50.6	#-369
25	ESH	0809	25.0	#-369
25	-EPZ	1224	21.4	#-370
25	-EsPZ	1224	32.4	#-370
25	-EPZ	1855	02.6	
25	-EPZ	2024	04.3	#-371
25	+EPZ	2340	34.6	
26	+EPZ	0548	24.3	#-372
26	+EPZ	0802	37.6	
26	-EPZ	1702	30.8	#-373
26	-EpPZ	1702	53.6	#-373
26	+EPZ	1751	01.6	#-374
26	+EPZ	1939	36.2	
27	+EPZ	0015	02.2	
27	+EPZ	0206	30.8	
27	+EPZ	0538	45.6	
27	-EPZ	0545	35.3	
27	-EPZ	1136	55.1	#-375
27	-EPZ	1743	11.3	
27	+EPZ	1816	55.5	
27	+EPZ	1816	58.0	
27	+EPZ	1942	34.6	#-376
27	+EPcPZ	1942	40.1	#-376
27	-EPZ	2118	33.0	
27	+EPZ	2127	43.1	
27	-EPZ	2127	46.0	
28	+EPZ	0234	32.6	
28	+EPZ	0355	20.6	#-377
28	-EPZ	0721	57.0	#-378
28	+EXZ	0722	02.1	#-378
28	+EPZ	0753	36.2	
28	+EpPKPdfZ	1326	49.0	#-379
29	+EPZ	0045	32.0	
29	+EPZ	0154	09.0	
29	-EPZ	0256	02.0	
29	-EPZ	0256	18.6	
29	-EPZ	0320	12.9	
29	+EPZ	0940	39.6	
29	+EPZ	1126	17.3	
29	-EPZ	1851	38.6	
29	+IPKPdfZ	1901	46.6	#-380
29	-EPZ	1907	57.6	
29	-IpPZ	1908	03.0	#-381
29	-EPZ	2105	56.5	#-382
29	+IPZ	2106	04.6	
29	+EPZ	2118	29.8	
30	+EPZ	0553	12.0	
30	-EPZ	0701	18.6	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
30	+EXZ	1312	49.0	#-383
30	-EPZ	2020	57.4	
30	ESH	1925	36.0	
31	+EPZ	0702	10.0	
31	+EPZ	0702	17.2	
31	+EPZ	1230	39.0	
31	+EPZ	1348	22.0	
Aug.				
1	+EPZ	0221	42.5	
1	+EPZ	0308	05.0	#-384
1	+EPZ	0629	54.2	#-385
1	+EPZ	0712	35.0	
1	+EPZ	0851	14.4	
1	+EPZ	0851	18.6	
1	+EPZ	0902	20.8	
1	+EPZ	1601	33.5	
2	-EPZ	0207	28.6	
2	+EPZ	0321	40.0	
2	+EPZ	1915	38.6	
3	-EPZ	0051	37.2	
3	-EPZ	0051	40.2	
3	+EPZ	0329	45.5	
3	+EPZ	0544	20.5	
3	+EPZ	1004	01.9	
3	+EPZ	1908	11.9	
4	-EPZ	0338	49.0	
4	+EPZ	0501	36.4	
4	+EPZ	0501	37.7	
4	+EPZ	1530	00.3	#-386
4	-IpPZ	1530	13.3	#-386
4	-EPdiffZ	1952	21.8	#-387
4	+EPZ	2014	08.8	
4	+IPZ	2057	26.2	#-388
4	ESH	2107	37.6	#-388
5	+EPZ	0100	02.8	
5	+EXZ	1007	51.0	#-389
5	+EPZ	1021	11.6	#-390
5	+EPZ	1417	12.7	#-391
5	-EPZ	1822	08.7	
5	-IPZ	2317	34.0	
5	-EPZ	2317	37.4	
6	-EPZ	0710	10.7	
6	-IPZ	0856	02.0	
6	-EPZ	2252	59.0	
6	-IPZ	2253	03.0	
6	ESH	2303	03.4	
6	+EPZ	2319	00.4	
7	+EPZ	0029	01.0	
7	+EPZ	0350	27.6	
7	+EPZ	0358	18.0	
7	+EXZ	0748	16.0	#-392
7	+EPZ	0754	54.0	
7	-EPZ	0937	34.2	
7	-EPZ	1035	49.2	#-393
7	+EPZ	1851	30.3	
7	-EPZ	1851	36.8	
8	+EPZ	0009	08.0	
8	+EPZ	0009	13.0	
8	+EPZ	0644	07.2	
9	+EPZ	0013	54.0	#-394
9	-EPcPZ	0014	01.4	#-394
9	-EXZ	0609	37.8	#-395
9	+EPZ	0731	32.5	
9	+EPZ	1205	33.0	
9	+EPZ	1644	31.0	
9	+EPZ	1819	25.4	
9	+EPZ	2221	07.8	
9	+EPZ	1845	20.5	#-396
10	+EPZ	0229	24.0	
10	-IPZ	0532	30.6	#-397
10	-EPZ	0833	19.9	#-398
10	-EsPZ	0833	28.3	#-398
10	+EPZ	0940	42.6	
10	+EPcPZ	1234	03.6	#-399

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
10	+EpPZ	1234	05.2	#-399
10	+EPZ	1314	20.2	#-400
10	+EPZ	2248	34.0	
11	-EPZ	0113	03.4	
11	+EPZ	1523	49.0	
11	+EPZ	1858	24.0	
11	+EPZ	2350	44.0	
11	-EPZ	2351	05.6	
12	+EPZ	0539	09.2	#-401
12	+EpPZ	0539	10.9	#-401
12	+EPZ	0621	08.0	#-402
12	+EpPZ	0622	30.0	#-402
12	+EPZ	2241	08.3	
13	+EPZ	0035	47.4	
13	+EPZ	0436	34.8	
13	+EPKPabZ	0855	23.4	#-403
13	-EPZ	1850	58.3	
13	-EPZ	2009	48.8	
13	+EPZ	2249	19.6	
14	+EPKPdfZ	1129	50.2	#-404
15	+EPZ	0344	07.6	
15	+EPZ	0452	48.4	
15	+EPZ	1041	24.3	
15	+EPZ	1539	01.0	
15	-EpPKPdfZ	1612	46.0	#-405
15	+EPZ	2010	49.7	
16	+EPZ	0255	01.0	
16	-EPZ	0326	07.0	
16	+EPZ	0459	31.0	#-406
16	-EXZ	0517	05.4	#-407
16	-EPZ	0737	43.5	#-408
17	-EPZ	0334	01.6	
17	+EPZ	1244	47.2	#-409
17	+EPcPZ	1244	54.2	#-409
17	-EPZ	1544	38.2	#-410
17	-EPZ	2106	34.4	#-411
17	-EPcPZ	2106	44.0	#-411
17	+EPZ	2135	11.9	
18	+EPZ	0301	15.5	
18	-IPZ	1005	16.6	#-412
18	+EpPZ	1007	15.4	#-412
18	+EPZ	2039	47.1	
19	+EPZ	0342	03.2	
19	+EPZ	0845	03.0	#-413
19	+EPZ	1110	09.6	#-414
19	+IXZ	1110	12.8	#-414
19	+EPZ	1214	28.6	
19	-EPZ	1234	06.0	
19	-EPZ	1350	40.4	#-415
19	-EPZ	1643	25.0	#-416
19	-EPcPZ	1643	27.4	#-416
20	+EPZ	0855	07.8	
20	-EPZ	1418	14.6	
20	+EPZ	1631	29.5	
20	+EPZ	2300	11.4	
21	-EXZ	0846	48.2	#-417
21	+IPZ	0944	13.4	#-418
21	-EPZ	1056	16.0	
21	+EPZ	1251	43.0	
21	-EPZ	1251	46.4	
21	-EPZ	1424	03.4	
21	+EPZ	1531	07.6	
21	-EPZ	1715	56.4	#-419
21	-EPcPZ	1716	01.6	#-419
21	+EPZ	2143	21.5	#-420
22	-EPZ	0232	35.0	
22	-EPZ	0232	40.6	
22	-EPZ	0757	00.6	#-421
22	+EXZ	1118	46.6	#-422
22	-EpPZ	1745	09.7	#-423
22	+EPZ	2116	08.8	#-424
23	+IXZ	0459	01.0	#-425
23	+EPZ	2137	54.5	
24	+EPZ	0311	10.4	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
24	+EPZ	0535	13.0	#-426
24	-IpPZ	0535	26.0	#-426
24	-EPZ	1547	19.5	#-427
24	+EPZ	1942	02.0	
25	-EPZ	0633	45.6	
25	-EPZ	1136	07.4	#-428
25	-IPcPZ	1136	36.4	#-428
25	+EPZ	1204	28.5	
25	-EPZ	1329	33.6	
25	-EPdiffZ	1336	07.2	#-429
25	-EPdiffZ	1353	48.8	#-430
25	+EPZ	1657	51.6	
26	-EPZ	0233	06.0	
26	-IPZ	0233	09.8	
26	+IPZ	0319	09.0	
26	+EPnZ	0811	12.8	#-431
26	-IPZ	0811	14.0	#-431
26	+EPZ	0834	26.0	#-432
26	-EPZ	2113	23.0	
26	-IPZ	2113	25.2	
26	-EPZ	2207	02.4	
27	+EPKPdfZ	0154	37.6	#-433
27	-EPZ	0453	17.0	#-434
27	ESH	0502	34.0	#-434
27	-EPZ	0540	34.0	
27	-EPZ	0543	55.0	
27	+IPZ	0656	15.0	#-435
27	-EpPZ	0656	18.6	#-435
27	ESH	0704	22.0	#-435
27	-EPZ	1356	25.0	
28	-EPZ	0311	19.2	#-436
28	+EXZ	0836	24.0	#-437
28	+EPZ	0908	36.5	#-438
28	+EPKPabZ	1258	13.0	#-439
28	-EPZ	1534	26.6	#-440
28	-IpPZ	1534	31.0	#-440
28	+EPZ	2348	12.0	
29	+EPZ	0009	46.8	#-441
29	-EXZ	0009	54.6	#-441
29	+EPZ	0353	54.5	
29	-EPZ	1011	47.8	
29	+EXZ	1032	43.4	#-442
30	+EPZ	0420	06.0	
30	-EPZ	0707	01.0	#-443
30	-IPcPZ	0707	02.5	#-443
30	+EPZ	0727	28.4	
30	-EpPKiKPZ	0849	19.1	#-444
30	-EPZ	1046	02.2	#-445
30	-EPcPZ	1046	09.0	#-445
30	-EPZ	1328	13.5	
30	+EPZ	1328	15.4	
30	-EPZ	1501	24.6	#-446
30	-EPcPZ	1501	26.4	#-446
30	+EPZ	1519	28.0	
31	-EPZ	0020	48.0	
31	-EPZ	0020	51.6	
31	-IPZ	0020	58.3	
31	-IPZ	0123	00.0	#-447
31	+EXZ	0703	33.2	#-448
31	+EPZ	1335	43.2	
31	+EPZ	1926	01.0	
Sep.				
1	+IPZ	0132	34.0	#-449
1	-EpPZ	0132	51.6	#-449
1	-IPZ	0412	38.4	#-450
1	ESH	0422	35.6	#-450
1	-EXZ	0544	30.0	#-451
1	-EPZ	0559	40.8	
1	+EPZ	0625	54.2	#-452
1	+EPZ	0625	58.0	#-452
1	+EPZ	0719	23.0	#-453
1	-EPZ	1113	48.3	#-454
1	+EPcPZ	1113	50.4	#-454
1	-EPZ	1134	02.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
1	-EPZ	1324	29.8	
1	-EXZ	1732	07.6	#-455
1	-EPcPZ	1732	11.4	#-455
1	+EPcPZ	2003	46.0	
1	-EPKPdfZ	2111	34.0	#-456
1	+EPZ	2331	07.6	
2	+EPZ	0852	14.6	
2	-EPcPZ	0912	16.0	#-457
2	+EPZ	1111	45.6	#-458
2	-EPZ	1141	03.5	#-459
2	+EPZ	1309	22.0	
2	+EPZ	1504	25.7	
2	+EPZ	1854	02.2	#-460
2	+EPZ	2014	14.6	#-461
3	+IPZ	1135	26.4	#-462
3	ESH	1143	50.4	
3	-EPZ	1203	15.2	
3	+EPcPZ	1228	56.2	#-463
3	-EPZ	1818	01.6	
3	+EPZ	1925	53.0	
4	-EPZ	0057	47.6	
4	+EPZ	0949	34.4	
4	-EPZ	0949	36.6	
4	+EPZ	1157	00.1	
4	+EPZ	1418	02.2	
4	-EPZ	1621	34.0	#-464
4	-IpPZ	1621	43.0	#-464
4	+EPZ	1800	26.0	
4	+EPZ	1834	44.4	
5	+EPZ	0229	02.8	
5	+EPZ	0523	32.2	#-465
5	+EsPZ	0523	47.3	#-465
5	-EPZ	1248	24.0	#-466
5	-EPcPZ	1248	28.6	#-466
5	+EPZ	1319	29.6	
5	+EPZ	1530	08.7	
5	-EPZ	1530	14.6	
5	+EPZ	1652	08.4	#-467
5	+EPZ	1919	30.4	
5	-EPZ	1919	32.0	
5	+EPZ	2049	57.0	
6	-EPZ	0238	01.0	
6	+EXZ	0605	38.0	#-468
6	-EPZ	0923	38.8	
6	+EXZ	1156	43.6	#-469
6	+EPZ	1327	43.4	
6	+EPZ	1749	06.6	
6	-EsPZ	2314	44.0	#-470
7	+EPZ	0053	32.3	
7	+EPZ	0211	17.0	
7	+EPZ	0216	06.0	
7	+EPZ	0214	17.2	#-471
7	-EpPZ	0214	20.6	#-471
7	-EPZ	0913	21.8	#-472
7	+EPZ	1124	13.2	
8	-IPZ	0315	41.6	
8	-IPZ	0316	05.0	
8	ESH	0326	24.0	
8	-EPZ	0702	41.4	
8	-EPZ	0755	55.0	
8	+EPZ	1055	19.0	#-473
8	+EPZ	1103	16.8	
8	+EPZ	1525	11.0	
8	+IPZ	1525	14.5	
8	+EPZ	1727	10.6	
8	-IPZ	1904	50.3	#-474
8	ESH	1915	32.0	#-474
8	+EPZ	2003	33.2	#-475
8	+EPZ	2158	11.4	
8	+EPZ	2216	04.6	
9	+IPZ	0319	19.8	#-476
9	-EPcPZ	0319	30.0	#-476
9	+EPZ	1116	09.7	
9	+EPZ	1123	34.4	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
9	+EPZ	1235	57.2	
9	-EPZ	1405	47.4	#-477
9	-EPZ	2331	30.8	
9	+EPZ	2331	42.4	
10	-EPZ	0019	11.4	
10	+EPZ	0242	05.6	
10	+EPZ	0312	40.8	#-478
10	+EPZ	1003	02.4	
10	-EPZ	1025	42.6	
10	-EPZ	1114	01.0	#-479
10	+EpPZ	1114	08.4	#-479
10	-EPZ	1321	28.8	#-450
10	-IpPZ	1321	32.0	#-450
10	+EPZ	1515	00.6	
10	-IPZ	1623	55.2	#-451
10	-IpPZ	1624	06.6	#-451
10	ESH	1634	07.4	#-451
11	-IPZ	0012	53.8	
11	ESH	0023	13.0	
11	-EPZ	0040	03.0	
11	+EPZ	0802	04.6	
11	+EPZ	0946	11.8	
11	-EPZ	1206	25.6	
11	-EPZ	1649	36.4	
11	+EPZ	1723	21.6	#-452
11	+EpPZ	1723	50.2	#-452
11	+IPZ	2116	17.2	
11	+IPZ	2118	21.8	
12	+EPZ	0320	39.5	
12	+EPZ	0735	56.8	
12	+EPZ	1656	40.0	
12	+EPZ	1656	45.4	
12	+IPZ	1759	24.2	
12	+EPZ	1803	24.0	
12	+EPZ	1918	54.8	
12	+EpPKPdfZ	2327	42.8	#-453
13	+EPKPbcZ	0009	48.6	#-454
13	-EPZ	0010	53.8	
13	+EXZ	0016	32.4	#-455
13	-EPZ	0028	17.4	
13	+IPZ	0744	31.6	#-456
13	+EPcPZ	0744	36.2	#-456
13	+EPZ	0949	45.2	
13	-IPPZ	0950	00.0	#-457
13	-EPKiKPZ	0950	05.7	#-457
13	+EPZ	1358	36.8	
13	+EPZ	1555	37.2	#-458
13	-EpPZ	1555	39.2	#-458
13	+EPZ	1834	34.0	
13	+EPZ	1915	03.9	
13	+EPZ	1931	14.0	#-459
13	+EPZ	2023	08.7	
13	-EPZ	2023	14.0	
14	+EPZ	0012	19.8	#-460
14	-EpPZ	0012	29.0	#-460
14	ESH	0022	25.6	#-460
14	+EPZ	0025	01.2	
14	+EPZ	0621	43.5	
14	-EPZ	0816	03.6	
14	+EPZ	0935	47.6	
14	-IPZ	1150	54.0	
14	+EPZ	1453	31.0	
14	-EPZ	1546	10.0	
14	-EPZ	1657	08.0	
14	+EPZ	1902	26.0	
14	-EPZ	1903	14.0	#-461
14	-EPZ	1945	42.6	
14	-EPZ	2030	58.4	#-462
14	-EPZ	2054	53.5	
15	+EPZ	0243	26.2	#-463
15	+EPZ	0335	04.5	
15	+EPZ	0434	01.0	
15	-EPZ	0546	04.3	
15	+EPZ	0938	09.9	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
15	+EPZ	0958	37.0	
15	+EXZ	0601	40.5	#-464
15	+EsPKPdfZ	0601	55.6	#-464
15	+EPZ	1601	26.0	#-465
15	+EPZ	2204	38.0	
15	-EPZ	2311	47.6	
15	+IPZ	2348	05.5	#-466
15	ESH	2357	25.4	#-466
16	-EPZ	0125	33.0	
16	-EPZ	0125	51.6	
16	+EPZ	0740	51.6	#-467
16	-EpPZ	0740	54.8	#-467
16	-EPZ	0817	10.6	#-468
16	+IPZ	0959	59.0	#-469
16	-IpPZ	1000	10.6	#-469
16	-IPZ	1127	50.0	#-470
16	-IPcPZ	1127	56.5	#-470
16	+EPZ	2112	38.6	
16	-EPZ	2208	22.6	#-471
17	+EPZ	0403	56.6	
17	-EPZ	0434	32.0	
17	-EPZ	0821	38.3	
17	+EPZ	0844	24.6	
18	-EPZ	0941	03.6	
18	+EPZ	1203	00.4	
18	+EPZ	1203	14.0	
18	-IPKPdfZ	1218	22.8	#-472
18	+EPZ	1320	04.3	
18	+IPZ	1859	52.4	#-473
18	+EXZ	2045	46.6	#-474
19	-EPZ	0043	33.2	
19	+EPZ	0127	43.6	
19	+EPZ	0233	02.0	
19	-EPZ	0336	36.4	#-475
19	+EPZ	0352	40.0	
19	+EPZ	1200	21.9	
19	+EPcPZ	1742	15.4	#-476
19	+EPZ	1842	13.5	
19	-EPZ	1846	46.5	#-477
19	-IPcPZ	1846	49.9	#-477
19	-EPZ	2128	49.6	#-478
19	-EpPZ	2128	50.7	#-478
19	-EXZ	2129	08.6	#-478
19	+EPZ	2302	03.8	#-479
20	-EXZ	0313	21.4	#-480
20	+EPZ	0411	24.5	#-481
20	+EXZ	0411	38.4	#-481
20	+EPdiffZ	0507	24.0	#-482
20	+EPKPabZ	0537	45.0	#-483
20	+EPZ	1247	48.5	
20	-EPZ	1455	25.0	#-484
20	+EpPZ	1455	37.2	#-484
20	-EsPZ	1455	43.6	#-484
20	-EPZ	1938	55.0	#-485
21	+IPZ	0655	01.5	
21	-EPZ	0718	36.0	#-486
21	+EXZ	1250	22.0	#-487
21	-EPZ	1635	15.0	#-488
21	-EpPZ	1637	19.7	#-488
21	-EPZ	1901	24.0	#-489
21	-IPcPZ	1901	35.6	#-489
21	+EPZ	2212	15.0	
22	+EPZ	0033	06.8	
22	-EPZ	0830	30.4	#-490
22	+EpPZ	0830	39.5	#-490
22	+EPZ	1323	08.6	#-491
22	-EPZ	1343	47.8	#-492
22	-EPcPZ	1343	50.6	#-492
22	+EsPZ	1806	47.6	#-493
22	+IPZ	2032	28.8	#-494
23	+EPcPZ	1532	35.5	#-495
23	+EPZ	2115	19.0	
24	+EpPKPdfZ	0252	09.0	#-496
24	-EPZ	0253	21.8	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
24	+EPZ	0613	45.0	#-497
24	+EPZ	1334	08.4	
24	-IPZ	1721	52.2	#-498
24	+IPZ	1741	24.8	
24	+EPZ	2251	08.8	
24	-EPZ	2251	13.6	
24	+EPZ	2323	03.4	
25	-EPZ	0216	36.4	
25	+EPZ	0229	40.0	
25	-EPZ	0407	49.0	
25	+EPZ	0501	46.6	#-499
25	+EPZ	0702	19.3	
25	-EPZ	1242	09.0	
25	+EPZ	1737	07.0	
26	+IPZ	0600	46.0	#-500
26	-IpPZ	0602	50.0	#-500
26	ESH	0610	48.2	#-500
26	-EPZ	0733	33.2	#-501
26	+EPZ	0815	47.5	
26	+EPZ	1334	52.6	
26	+EPZ	1335	02.0	
26	+EPZ	1604	07.6	
26	+EXZ	1846	34.4	#-502
26	-EPZ	1857	54.5	#-503
26	-EsPZ	1858	01.4	#-503
26	+EPZ	1912	13.4	
26	-EPZ	2322	27.4	#-504
26	+EPcPZ	2322	30.4	#-504
27	-EPZ	0318	32.8	#-505
27	+EPKiKPZ	0323	06.5	#-505
27	-EPdiffZ	0322	45.4	#-506
27	-IpPdiffZ	0322	51.5	#-506
27	+IPZ	0342	00.0	#-507
27	+EPZ	0343	25.0	
27	+EPZ	1018	02.9	
27	+EPZ	2326	42.6	
27	+EPZ	2336	11.3	
28	+EPZ	0421	19.3	
28	+EPZ	0849	53.6	
28	+EPZ	0924	09.8	
28	-EPZ	1355	12.0	#-508
28	+EPcPZ	1355	17.3	#-508
28	+EpPZ	1355	49.3	#-508
28	-EpPZ	1545	36.4	#-509
28	-EPZ	1835	48.2	
29	+EPZ	0324	40.0	
29	-EPZ	0434	31.8	
29	+EPZ	1126	10.3	
29	+EPZ	1126	20.8	
29	+EPZ	1315	14.4	#-510
29	-IPZ	1531	22.4	#-511
29	ESH	1541	12.0	#-511
29	-IPZ	1622	29.0	#-512
29	+IPcPZ	1622	39.0	#-512
29	+EPZ	1701	11.8	
29	+EPZ	1938	31.6	
29	+EPZ	1943	27.6	
29	-EPZ	1949	36.2	
29	+EPZ	2000	57.6	
29	-EPZ	2110	03.0	
29	+EPZ	2316	01.5	
29	+EPZ	2348	10.0	
30	+EPZ	0101	55.6	
30	+EPZ	0418	25.0	
30	+EPZ	0707	13.2	
30	+EPZ	0707	18.0	
30	-EPZ	0747	23.0	#-513
Oct.				
1	+EsPZ	0324	50.0	#-514
1	+EpPZ	0633	46.6	#-515
1	+EPZ	0956	14.0	
1	-EPZ	0956	24.4	
1	+EPZ	1055	23.2	
1	+EPZ	1309	04.0	

Table 1. Continued.

Date	Phase	Time H	M	S	Remarks
1	-EPZ	1426		53.4	#-516
1	-EPZ	1714		10.4	#-517
2	+EPZ	0428		48.0	
2	+EPZ	0447		30.0	
2	+EPZ	0500		08.4	
2	+EPZ	0604		55.3	
2	+EPZ	1314		46.4	#-518
2	-IPcPZ	1314		57.5	#-518
2	+EPZ	1504		04.5	
2	+EPZ	1711		28.4	
2	+EPZ	1918		40.6	
2	+EPZ	2101		03.0	
2	+IPZ	2340		23.6	#-519
2	-IPZ	2340		26.0	#-519
3	+EXZ	0037		40.0	#-520
3	-EPZ	0352		47.8	#-521
3	-EXZ	0352		49.8	#-521
3	-EpPZ	0539		33.0	#-522
3	+EXZ	0543		16.4	#-522
3	+EPZ	0543		34.8	#-523
3	-EPZ	0627		40.8	
3	-EPZ	0847		15.0	#-524
3	-EPZ	1613		56.6	
3	+EPZ	1906		11.2	
3	+EPZ	1951		33.6	
3	+EPZ	2133		09.8	
3	+EPZ	2318		04.2	
4	-EPZ	0015		40.8	
4	+EPZ	0421		49.0	
4	+EPZ	0639		02.2	
4	+EPZ	0802		43.0	#-525
4	+IpPZ	0802		50.0	#-525
4	+EPZ	0954		20.8	
4	+EPZ	1157		52.4	#-526
4	-EpPZ	1157		55.8	#-526
4	-EPZ	1502		22.4	#-527
4	+EPZ	1837		13.0	
5	+EPZ	0013		14.0	
5	-EPZ	0013		23.4	
5	+EPZ	0025		58.4	
5	-EPZ	0328		31.4	
5	+EPZ	0626		32.4	
5	+EPZ	0924		30.0	#-528
5	-IPcPZ	0924		42.4	#-528
5	ESH	0934		23.0	#-528
5	+EpPZ	1056		51.2	#-529
5	-EsPZ	1056		53.5	#-529
5	-EPZ	1421		33.0	#-529
5	+EPKiKPZ	1611		17.9	#-530
5	+EPZ	1640		34.6	
5	+EPZ	2123		28.3	
5	+EPZ	2257		52.6	
5	+EPZ	2356		17.2	
6	+EPZ	0030		17.7	#-531
6	+EPZ	0821		10.6	
6	-IpPKiKPZ	0849		13.2	#-532
6	-EPPZ	0849		16.8	#-532
6	-EPZ	0904		47.4	
6	-EPZ	1256		19.2	#-533
6	-EPZ	2037		40.6	
6	-EPZ	2108		51.4	#-534
6	+IPZ	2357		08.4	
7	+EPZ	0619		05.7	
7	+IPZ	0718		15.8	
7	+IPZ	0838		19.8	
7	-IPZ	1021		57.6	
7	-EPZ	1233		05.4	
7	+EPZ	1430		18.3	#-535
7	-EPZ	1604		52.0	
7	+EPZ	1655		28.2	
7	-EPZ	2210		12.2	
8	+EPZ	0720		22.2	
8	+EPZ	0743		46.4	
8	+EPZ	0819		11.6	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
8	+IXZ	0928	18.7	#-536
8	+EpPZ	0928	48.2	#-536
8	+EPZ	1202	54.4	#-537
8	+EPZ	1420	39.4	
8	-EPZ	1857	20.2	
9	-EPZ	0608	32.2	
9	-EPZ	1802	41.5	
9	-EPZ	1802	44.0	
9	ESH	1813	17.2	
9	+EPZ	2321	55.0	
10	+EPZ	0403	44.4	
10	-EPZ	0531	20.8	
10	+EPZ	0652	48.2	
10	+EPZ	1003	07.5	
10	+EPZ	1616	26.6	
10	-EPZ	2321	33.0	
11	-EXZ	0925	29.0	#-538
11	-EPZ	0925	49.2	
11	-EPZ	1002	47.0	
11	+EXZ	1058	45.0	#-539
11	+IPPZ	1059	35.2	#-539
11	-IPZ	1059	40.0	#-539
11	ESH	1105	27.0	
11	-EPZ	1235	21.6	#-540
11	-EPcPZ	1235	32.2	#-540
11	+EPZ	1724	04.2	
11	+EPZ	1932	45.6	
11	-EPZ	2008	29.8	
12	-EPZ	0051	35.4	
12	+EPZ	0138	43.2	
12	-EPZ	1745	28.0	
12	+IPZ	2106	51.4	#-541
12	ESH	2116	07.0	#-541
13	+EPZ	1220	24.0	#-542
13	-EPcPZ	1220	29.4	#-542
13	+EPZ	1312	19.4	
13	+EPZ	1312	32.4	
13	-EPZ	1608	29.8	
13	+EPZ	1726	54.2	
13	+EPZ	1916	13.4	
13	+EPZ	2357	30.8	
14	-EPZ	0119	18.3	
14	+EPZ	1704	44.5	#-543
14	-EPcPZ	1704	48.4	#-543
14	ESH	1714	39.0	#-543
14	-EPZ	2003	22.4	#-544
14	-EPZ	2247	54.6	
15	-EPZ	0030	07.8	
15	-EPZ	0817	48.0	
15	-EPZ	1440	56.0	#-545
15	-EPZ	1505	09.6	
15	-EPZ	1648	00.7	#-546
16	+EPZ	2016	48.8	
17	+EPZ	1210	02.0	
17	+EPZ	1507	31.6	
17	-EPZ	2017	16.5	
18	-EPZ	0107	28.0	#-547
18	+EPcPZ	0107	31.0	#-547
18	+EPZ	0407	13.6	
18	-EPZ	1038	27.0	#-548
18	+EPZ	1241	39.0	
18	+EPZ	1355	07.0	
18	+EPZ	1705	30.0	
19	-EPZ	0302	22.0	#-549
19	-IpPZ	0302	54.4	#-549
19	-IPZ	0523	10.7	#-550
19	ESH	0534	23.4	#-550
19	+EPZ	0623	38.8	
19	+IPZ	1307	41.2	#-551
19	-EPcPZ	1307	44.4	#-551
19	+EPZ	1407	23.6	
19	+EPZ	1933	16.5	
20	+EPZ	0039	41.6	
20	-EPZ	0346	19.5	#-552

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
20	-IPZ	0506	50.4	#-553
20	-EPZ	0506	55.8	#-553
20	ESH	0517	18.0	
20	+EPZ	0643	19.4	
20	+EPZ	1112	38.4	
20	-EPZ	1226	01.4	
20	+EPZ	1252	34.7	
20	+EPZ	2219	14.1	
21	+EPZ	0340	00.8	
21	+EPZ	0849	38.5	
21	-EPZ	1312	53.6	#-554
21	+EPZ	1340	04.3	
21	+EPZ	2132	47.6	#-555
21	+EpPZ	2132	54.4	#-555
22	+EXZ	0404	02.0	#-556
22	+EPZ	0922	35.3	#-557
22	-EPcPZ	0922	40.9	#-557
22	+IPZ	1308	25.0	#-558
22	-IPcPZ	1308	27.0	#-558
22	ESH	1318	51.0	#-558
22	+EPZ	1715	29.2	#-559
22	-EPcPZ	1715	32.2	#-559
22	ESH	1725	12.0	#-559
22	+EPZ	2333	21.0	
23	+EPZ	0220	12.0	
23	-EPZ	0934	17.2	#-560
23	+IPZ	1017	48.0	#-561
23	+EPcPZ	1017	51.8	#-561
23	+EPZ	1305	47.2	
23	+EPZ	1745	01.4	
23	+EPZ	2154	29.6	
24	-EPZ	0038	10.0	#-562
24	-EPZ	1312	39.8	
25	-EPZ	0148	41.2	
25	-EXZ	0733	37.6	#-563
25	-EPZ	1123	20.6	
25	-EPZ	1123	25.4	
25	+EPZ	1808	25.0	
25	+EPZ	1937	29.6	#-564
25	-EPcPZ	1937	34.2	#-564
25	+EPZ	2023	24.8	
25	-EPZ	2023	29.5	
25	+EPZ	2210	06.4	
26	-EPKiKPZ	0146	56.2	#-565
26	-EPZ	0150	10.4	
26	+EsPZ	0507	37.8	#-566
26	+EPZ	0515	18.2	
26	+EPZ	0921	11.5	#-567
26	-EPcPZ	0921	14.8	#-567
26	-EXZ	0954	53.0	#-568
26	+EPZ	1051	20.9	
26	-EPZ	1051	34.8	
26	+EPZ	1345	35.2	
26	+EPZ	1402	16.8	
26	-EPZ	2124	01.3	
27	+EPZ	0556	26.5	#-569
27	-EpPZ	0557	00.7	#-569
27	-EPcPZ	0906	11.6	#-570
27	+EPZ	1844	20.0	
27	-IPZ	1919	22.5	#-571
27	-EPZ	2146	00.6	
27	-EPZ	2336	37.2	
28	+EPZ	0215	31.6	
28	+EPZ	1534	39.9	#-572
28	-EPZ	1607	36.0	#-573
28	-EPcPZ	1613	14.2	#-574
28	+EPZ	2324	12.8	
28	+EPZ	2323	50.0	
28	ESH	2334	33.0	
29	-EPZ	0655	00.8	
29	-EPZ	1021	42.2	
29	-EPPZ	1150	45.2	#-575
29	+EPZ	1311	01.6	
29	-EPZ	1616	21.2	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
29	+EPZ	1759	49.7	
29	+EPZ	2230	06.2	#-576
29	-EPZ	2325	45.0	
30	-EPZ	0144	14.8	#-577
30	+EpPZ	0144	20.2	#-577
30	-EPZ	0609	18.4	
30	+EPZ	0610	08.8	
30	-EXZ	0735	32.4	#-578
30	-EPZ	0938	56.6	
30	+EPZ	0939	00.3	
30	-EPZ	1350	45.4	
30	+EPZ	1414	41.4	
30	+EPZ	2251	02.0	#-579
30	+EPZ	2326	16.6	
31	-EPZ	0512	08.8	
31	+1PZ	0512	10.5	
31	+EPZ	1339	47.8	#-580
31	-EPZ	1340	06.8	#-581
31	+EpPZ	1340	13.0	#-581
31	-EPZ	1425	40.8	
31	-EPZ	1906	05.6	
31	-EPZ	1927	54.6	
31	+EPZ	2008	53.4	
31	+EpPKPabZ	2231	06.4	#-582
Nov.				
1	+EPZ	0126	23.4	#-583
1	+EPZ	0146	54.8	#-584
1	-EsPZ	0147	03.7	#-584
1	ESH	0157	23.5	#-584
1	+EPZ	0710	05.4	
1	-EPZ	1028	38.0	
1	+EPZ	1028	39.7	
1	+EPZ	1134	04.6	
1	-EPZ	1246	31.7	
1	-EPZ	1701	04.6	
2	+EPZ	0816	01.7	
2	+EPZ	0816	12.4	
2	+EXZ	1408	29.6	
2	-EpPKPdfZ	1408	42.8	#-585
2	-EPZ	1512	50.7	#-586
2	-EPcPZ	1513	00.0	#-586
2	+EPPZ	1513	04.0	#-586
2	+EPZ	1708	55.3	
2	+EPZ	2030	37.0	
3	+EPZ	0313	35.6	
3	+EPZ	0513	57.0	
3	+EPZ	0730	34.6	#-587
3	-EPZ	0850	30.8	
3	+EPZ	0911	08.2	
3	+EPZ	1008	30.6	
3	+EPZ	1515	47.0	
3	+EPZ	1515	50.6	
3	-EPZ	1531	36.9	
3	+EPZ	1934	08.2	#-588
3	+EPZ	1948	42.8	#-589
3	ESH	1958	37.4	#-589
3	+EXZ	2200	03.6	#-590
3	+EPZ	2343	47.4	
4	-EPZ	0333	31.8	
4	-EPZ	0749	33.7	#-591
4	-EXZ	0749	35.2	#-591
4	+EPZ	0804	36.9	
4	+EPZ	0847	08.4	
4	-EPZ	0936	19.6	
4	+EPZ	1043	14.8	#-592
4	+EPZ	1848	03.8	#-593
4	+1PcPZ	1848	05.0	#-593
4	ESH	1858	22.0	#-593
4	-EPZ	2132	51.8	
4	-EPZ	2224	34.6	
5	-EPZ	0021	34.2	
5	+EPZ	0120	20.6	#-594
5	+EPZ	0121	12.2	
5	+EPZ	0248	14.2	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
5	-EPZ	0354	21.8	#-595
5	+EPZ	0524	45.6	
5	-EPZ	0525	15.5	
5	-EPZ	0848	51.8	
5	-EPZ	0848	55.0	
5	+EPZ	1546	51.6	
5	-EPZ	1908	19.0	
6	+EPZ	0507	07.5	
6	+EPZ	0536	05.0	
6	+IPZ	0923	00.0	
6	-IPZ	0923	20.9	
6	ESH	0933	51.6	
6	+EPZ	1243	30.9	
6	-EPZ	1510	39.8	#-596
6	-EPZ	1910	08.3	
6	-EPZ	2256	55.2	#-597
6	+EPZ	2345	54.0	
7	+EPZ	0446	10.3	
7	+IPZ	0732	26.2	#-598
7	-IPZ	0732	29.8	#-598
7	+EPZ	0854	41.8	#-599
7	-EPZ	0904	06.6	
7	+IPZ	0952	51.6	
7	+EPZ	1509	24.0	
7	+EPZ	1616	45.2	
7	+EPZ	1616	48.4	
7	ESH	1627	12.0	
7	+EPZ	1735	39.7	
7	-EPZ	1856	37.2	
7	+EPZ	1856	42.4	
7	+EPZ	2016	07.0	
8	-EPZ	0607	14.2	
8	+EPZ	0802	54.4	#-600
8	+EPcPZ	0802	56.2	#-600
8	+EPZ	0928	44.2	#-601
8	-IPZ	1208	50.0	#-602
8	+EsPZ	1209	12.0	#-602
8	-EPZ	1212	05.8	
8	+EPZ	1801	05.0	
8	-EPcPZ	2108	11.8	#-603
9	+EPZ	0812	55.0	
9	-EPZ	1051	04.6	#-604
9	-EPcPZ	1051	09.6	#-604
9	+EPZ	1304	05.6	
9	+EPZ	1514	34.1	
9	+EPZ	2002	04.0	
9	+EPZ	2339	09.0	#-605
9	+EpPZ	2339	30.3	#-605
10	+EPZ	0134	35.2	
10	-EXZ	0140	36.6	#-606
10	+EPZ	0415	00.7	
10	+EXZ	0803	40.6	
10	+EPZ	0910	42.4	#-607
10	-EPcPZ	0910	51.3	#-607
10	-EPZ	1003	30.4	#-608
10	+EPcPZ	1003	41.2	#-608
10	-EPZ	1038	46.2	
10	-EPZ	1454	48.5	
10	-EPZ	1613	29.2	#-609
10	-EPZ	1727	31.6	#-610
10	+EPZ	1954	57.2	
10	-EPZ	1955	00.6	
11	+EPZ	0015	54.0	
11	+EPZ	0736	05.0	
11	+EPZ	1041	40.3	
11	-EPZ	1548	10.6	
11	-EPZ	2101	01.5	
12	+EpPZ	0035	31.6	#-611
12	-EPZ	0052	09.2	
12	-EPZ	0218	09.2	#-612
12	-EPcPZ	0218	10.8	#-612
12	+EPZ	0856	52.7	
12	-EPZ	1042	41.4	
12	-EPZ	1715	43.2	#-613

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
12	-EPcPZ	1715	46.0	#-613
12	+EPZ	2204	00.8	
13	-EPZ	0116	01.5	
13	+EPZ	0812	41.0	
13	+EPZ	0812	42.3	
13	+EPZ	1043	28.7	#-614
13	-EPcPZ	1043	30.8	#-614
13	+EPZ	1122	59.2	
13	-EPZ	1302	24.8	
13	-EPZ	1302	47.4	
13	-EPZ	1516	28.8	#-615
13	+EpPZ	1516	47.4	#-615
13	ESH	1521	28.4	#-615
13	+EPZ	1559	14.0	
13	+EPZ	1704	50.0	
13	+EPZ	1611	33.6	#-616
13	-IPZ	1822	21.0	
14	+EPZ	0039	01.0	
14	+EPZ	0039	13.3	
14	+EPZ	0041	20.8	
14	-EPKiKPZ	0208	37.2	#-617
14	-IPZ	0209	49.4	#-618
14	-IPZ	0248	34.6	#-619
14	-EPZ	0357	04.2	
14	-EPZ	0428	35.4	
14	+EPZ	0807	07.4	
14	-EPZ	0932	23.3	
14	+EPZ	1025	40.6	
14	+EPZ	1305	10.0	
14	+EPZ	1436	50.3	
14	-EPZ	1810	04.9	
14	-EPZ	2305	06.0	#-620
14	+EPcPZ	2305	11.0	#-620
14	+EPZ	2319	17.2	
14	+EPZ	2359	06.2	
15	-EpPKPdfZ	0423	31.6	#-621
15	-EPKPabZ	0423	40.8	#-621
15	+EPZ	0834	49.4	
15	+EPZ	1416	16.8	
15	+EPZ	1556	08.4	
15	+EPZ	2210	57.5	#-622
15	+EPZ	2322	51.5	
16	+EPZ	0028	06.2	
16	+EpPZ	0305	21.5	#-623
16	+EPZ	0802	03.5	
16	-EPZ	1233	21.6	#-624
16	-EPcZP	1233	25.2	#-624
16	-EPZ	1348	14.8	#-625
16	+EPZ	1550	24.4	
16	-IXZ	1715	19.0	#-626
16	ESH	1726	06.0	
16	-EXZ	1747	25.0	#-627
16	-EPcPZ	1747	29.6	#-627
16	+EXZ	1833	17.6	#-628
16	+EPZ	1922	25.0	#-629
16	-EPZ	2134	19.8	
16	+EPZ	2214	16.0	
16	+EPZ	2214	27.5	
16	+EXZ	2246	37.5	#-630
16	+EPZ	2358	21.8	
17	-IPZ	0612	55.6	#-631
17	-EPZ	0613	03.2	
17	ESH	0622	45.5	
17	-EPZ	0650	09.0	
17	-EPZ	1019	26.9	
17	-EPZ	1115	23.0	
17	-EPZ	1144	47.6	#-632
17	-EPcPZ	1144	49.7	#-632
17	-EPZ	1316	32.2	
17	-EPZ	1316	56.2	
17	+EPZ	1329	18.3	#-633
17	+EPcPZ	1329	21.2	#-633
17	-EpPKPdfZ	1400	20.8	#-634
17	+EPZ	1405	24.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
17	+EPZ	2300	21.4	
18	+EPZ	0420	58.0	
18	+EPZ	0431	44.0	
18	-EPZ	0458	05.4	
18	+EPKPabZ	0514	00.2	#-635
18	+EPZ	0558	36.4	
18	-EPZ	0558	44.6	
18	-EPZ	0559	30.0	#-636
18	+EPZ	1030	54.8	
18	+EPZ	1124	53.8	#-637
18	+EPZ	1258	35.6	#-638
18	-EXZ	1258	49.8	#-638
18	-EPZ	1415	45.6	#-639
18	-EPZ	1451	18.5	#-640
18	-IPZ	1451	31.8	
18	+EPZ	1853	39.6	
18	+EPZ	1853	41.6	
18	+EPZ	1914	04.2	
18	+EPZ	2054	37.0	#-641
18	-EPZ	2200	10.0	
19	-EPZ	1534	51.2	
19	-EPZ	1608	38.3	
19	+EPZ	1726	55.6	#-642
19	+EPZ	2050	27.8	#-643
19	-EPcPZ	2050	31.6	#-643
20	+EPZ	0257	38.2	
20	+EPZ	0612	11.6	
20	-IPZ	1053	00.0	
20	+EPZ	1514	06.3	
20	-EPZ	1937	56.4	
20	+EPZ	1938	02.2	
20	+EPZ	2216	16.4	
21	-EPZ	0101	51.4	
21	+EPZ	0441	17.8	
21	-IPZ	0508	25.6	#-644
21	+EpPZ	0509	05.4	#-644
21	+EPZ	0704	45.4	#-645
21	-IPZ	0718	27.3	#-646
21	-IPcPZ	0718	30.6	#-646
21	+EPZ	0913	28.6	
21	+EPZ	1140	43.0	
21	+EPZ	1255	48.8	
21	-EPZ	1255	51.6	
21	-EPZ	1408	20.0	#-647
21	+EPcPZ	1408	25.1	#-647
21	+EXZ	1408	52.4	#-647
21	+EPZ	2319	12.7	#-648
22	+EPZ	0016	13.2	
22	+EPZ	0251	50.7	
22	-EPZ	0530	11.0	
22	+EPZ	1053	22.8	
22	+EPZ	1612	45.5	#-649
22	-IsPZ	1612	53.4	#-649
22	-IpPZ	1614	13.5	#-650
22	-EPZ	1623	33.2	#-651
22	+EXZ	1623	42.2	#-651
22	+EPZ	1734	48.4	#-652
22	+EPcPZ	1734	54.6	#-652
22	+EPZ	1901	33.2	#-653
22	+EsPZ	1901	37.4	#-653
22	+EPZ	1915	03.6	
22	+EPZ	2038	48.0	#-654
22	+EPcPZ	2038	49.4	#-654
22	+EPZ	2317	51.2	
22	+EPZ	2318	07.6	
22	+EPZ	2345	59.4	
22	+EPZ	2346	08.6	
22	-EPZ	2354	51.4	
23	+IPZ	0806	11.6	#-655
23	-EPcPZ	0806	14.8	#-655
23	+EPZ	0910	32.8	#-656
23	-EPcPZ	0910	38.2	#-656
23	-EPZ	0924	18.4	#-657
23	-EPZ	1124	24.6	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
23	-EPZ	1210	55.4	#-658
23	-EXZ	1211	11.4	#-658
23	+EPZ	1231	01.6	#-659
23	+EPZ	2009	29.7	
23	-EPZ	2011	35.6	
23	-IPZ	2130	08.6	
24	-EPZ	0158	13.6	
24	+EPZ	0405	29.0	
24	-EPZ	0921	40.0	
24	+IPZ	0921	43.2	
24	ESH	0943	47.0	
24	+EPZ	1005	25.4	
24	ESH	1008	06.6	
24	+EPZ	1142	17.0	
24	+EPZ	1658	22.6	
24	-EPZ	1903	55.8	
24	+EPZ	2006	26.3	
25	-IPZ	0148	20.0	
25	-IPZ	0148	29.2	
25	ESH	0158	20.2	
25	-EPcPZ	0615	42.4	#-660
25	+EPZ	1424	43.8	
25	-EPZ	1517	15.0	#-661
25	+IPZ	1514	10.6	#-662
25	-IpPZ	1514	11.6	#-662
25	+EPZ	1624	52.0	
26	+EPZ	0223	01.2	#-663
26	+EPcPZ	0223	04.8	#-663
26	-EPZ	0414	29.4	#-664
26	+IpPZ	0414	44.2	#-664
26	+EPZ	0443	38.2	
26	-EPZ	0457	51.8	#-665
26	-EpPZ	0457	55.8	#-665
26	+EPZ	0536	39.3	
26	+EPZ	0536	44.5	
26	+EPZ	0704	12.2	
26	+EPZ	0812	49.6	
26	+EPZ	1035	54.6	
26	-EPZ	2102	06.4	
26	+EPZ	2159	12.4	
27	-EPZ	0317	13.6	#-666
27	+EPZ	0448	25.5	
27	+EPZ	0513	01.4	
27	-EXZ	0924	48.0	#-667
27	+EPZ	1715	38.6	
27	+EPZ	1744	05.6	#-668
27	-IPcPZ	1744	09.4	#-668
27	ESH	1754	41.0	#-668
27	+EPZ	1822	15.2	
28	+IPZ	0146	32.3	#-669
28	-EPZ	0324	17.0	#-670
28	+EpPZ	0324	36.4	#-670
28	-EPZ	0409	16.6	
28	-IPZ	0902	33.4	#-671
28	+EPZ	1014	01.6	
28	+EPZ	1146	16.0	
29	+EPZ	0509	17.3	
29	-IPZ	0611	24.0	#-672
29	+IPcPZ	0611	26.6	#-672
29	ESH	0621	34.4	#-672
29	+EPZ	2306	07.0	
30	+EPZ	1015	13.6	
30	+EPZ	1406	33.7	
Dec.				
1	-EPZ	0056	00.2	
1	+EPZ	0103	36.5	
1	+EPZ	0133	08.8	
1	+EPZ	0232	12.7	
1	+EPZ	1414	29.5	
1	+EPZ	1445	42.2	
1	-EPZ	1945	03.4	
1	-EPZ	2034	02.4	
2	+EPZ	0019	04.6	
2	-EPZ	0039	09.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
2	+EPZ	0127	02.4	
2	+EPZ	0512	22.0	
2	+EPZ	0642	07.5	
2	+EPZ	0904	14.6	
2	-EPZ	1207	04.4	
2	+EPZ	1718	06.7	#-673
3	+EPZ	0434	47.8	
3	+EPZ	0935	27.8	
3	+EPZ	1108	51.0	
3	-EPZ	1119	05.2	
3	-EPZ	1119	06.6	
3	-EPKPdfZ	1156	42.4	#-674
3	-EPKPabZ	1156	51.5	#-674
3	+EPZ	1936	25.3	
3	+EPZ	2200	50.2	
4	-EPZ	0020	00.6	
4	+EPZ	0020	08.7	
4	-EPZ	0251	44.8	
4	+EPZ	1658	44.6	#-675
4	-IPcPZ	1658	54.6	#-675
4	ESH	1708	20.4	
4	+EPZ	1743	44.9	
4	-EPKPdfZ	2308	38.8	#-676
4	-IPZ	2352	26.0	
4	-EPZ	2352	57.4	
5	-EPZ	0130	23.2	
5	-EPZ	0620	44.8	
5	-EPZ	0628	01.6	
5	+EPZ	0711	05.4	
5	-EPZ	0819	25.0	
5	+EPZ	1505	01.0	
5	-EPZ	1505	04.2	
5	+EPZ	2323	35.8	
5	+EPcPZ	2337	18.6	#-677
5	-EpPZ	2337	24.0	#-677
6	+EPZ	0055	45.6	#-678
6	-EsPZ	0055	57.0	#-678
6	+EPZ	0633	54.6	#-679
6	+EpPZ	0634	03.0	#-679
6	+EsPZ	0634	06.8	#-679
6	+EPZ	1106	57.8	
6	-IPcPZ	1107	02.5	
6	ESH	1116	34.4	
6	-EPZ	1125	28.4	
6	+EPZ	1133	34.0	
6	-EPZ	1133	38.8	
6	+EPZ	1324	33.2	
6	-EPZ	1450	13.2	
6	+EPZ	1502	04.4	
6	+EPZ	2349	07.4	#-680
6	+EPcPZ	2349	09.2	#-680
7	+EPZ	1043	27.4	
7	+EPZ	1139	44.6	
7	-EPZ	1315	41.6	
7	-EPZ	1349	52.0	#-681
7	-EPZ	1434	08.0	
7	-IsPdiffZ	1550	04.4	#-682
7	-EPZ	1601	45.3	#-683
7	+IPZ	1601	48.9	
7	+EPZ	1852	18.4	
7	+EPZ	1938	00.7	
7	+EPZ	2015	24.8	
7	-EPZ	2043	04.0	
7	+EPZ	2251	09.6	
7	+EPZ	2317	17.4	
7	+EPZ	2327	20.3	
8	-EPZ	0210	55.9	
8	-EPZ	0247	47.5	
8	-EPKiKPZ	0317	43.6	#-684
8	-EPZ	0346	12.4	
8	-EPZ	1025	01.6	
8	+EPZ	1034	01.3	
8	-EPZ	1206	34.1	
8	+EPZ	1409	47.0	#-685

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
8	+EpPZ	1410	03.0	#-685
8	+EPZ	1444	24.6	
8	+EPZ	1444	27.8	
8	+EPZ	1455	12.6	#-686
8	+EPZ	1632	01.3	
8	+EPZ	1845	51.6	
8	-EPZ	1845	54.0	
8	ESH	1852	16.0	
8	+EPZ	2248	18.4	
9	-EPZ	0319	43.0	
9	-EPZ	0448	44.4	
9	-EPZ	0546	05.6	#-687
9	+IPZ	0635	48.6	#-688
9	-IpPZ	0635	54.2	#-688
9	ESH	0645	37.6	#-688
9	-EPZ	0928	23.5	
9	-EpPZ	0942	44.4	#-689
9	+EPZ	1104	47.2	
9	+EPZ	1544	48.0	#-690
9	-EsPZ	1545	06.5	#-690
9	ESH	1554	28.0	#-690
9	+EPZ	1741	18.8	
9	-IPZ	1741	20.2	
9	ESH	1751	40.6	
9	+EPZ	1803	02.8	
9	+EPZ	1902	51.4	#-691
9	-EPZ	1902	53.6	#-691
9	-EPZ	1946	38.6	
9	-IPZ	2020	27.0	#-692
9	ESH	2030	11.0	#-692
9	-EPZ	2113	21.6	#-693
9	-EPcPZ	2113	24.0	#-693
10	-EPZ	0221	21.6	
10	+EPcPZ	1046	40.0	#-694
10	+EPZ	1122	38.3	
10	+EPZ	1328	29.0	#-695
10	-IPcPZ	1328	34.9	#-695
10	ESH	1339	45.0	#-695
10	-EPZ	1642	14.8	
10	-EPZ	2146	25.4	
10	+EPZ	2317	54.7	
10	+EPZ	2322	26.0	
11	-EPZ	0718	11.8	
11	+EPZ	1342	39.9	
11	+EPZ	1343	00.8	
11	+EPZ	1504	21.8	
11	+EPZ	1641	34.8	#-696
11	-EPcPZ	1641	36.4	#-696
11	-EXZ	1652	18.2	#-697
11	-EPZ	1718	01.0	
11	+EPZ	1744	19.3	
11	+EPZ	2041	28.5	
11	+EPZ	2106	47.2	#-698
11	+EpPZ	2106	53.4	#-698
11	+IPZ	2153	25.2	#-699
11	+IPcPZ	2153	29.0	#-699
11	-IpPZ	2154	00.2	#-699
11	ESH	2203	39.8	#-699
12	+EPZ	0132	01.6	
12	+EPZ	0701	17.3	
12	+EPZ	0744	53.3	
12	-EPZ	0820	11.6	
12	+EPZ	1058	07.7	#-700
12	+EPZ	1207	19.8	
12	-EPZ	1413	54.5	
12	+EPZ	1610	05.6	
13	-EPZ	0426	57.0	
13	+EPZ	0502	02.2	
13	+EPZ	0837	01.2	
13	+EPZ	0846	21.2	
13	-EPZ	0853	36.4	#-701
13	-IpPZ	0853	40.6	#-701
13	-EPZ	0907	41.4	#-702
13	+EPZ	0918	06.8	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
13	+EPZ	1316	13.2	
13	-EPZ	1913	17.0	#-703
13	+EsPZ	1913	35.0	#-703
13	+EPZ	2250	15.5	
13	-EPZ	2330	11.0	
13	+EPZ	2333	10.2	
13	-EPZ	2333	17.8	
14	+EPZ	0518	54.6	#-704
14	-EpPZ	0519	17.2	#-704
14	+EPZ	1429	01.6	
14	+EPZ	1648	35.0	
14	+EPZ	1738	03.8	
14	+EPZ	1857	23.2	
14	-EPZ	2041	56.4	#-705
14	-IPZ	2041	57.8	#-705
14	-EPZ	2239	56.6	
15	+EPZ	0035	05.1	
15	+EPZ	0529	54.6	
15	-EPZ	0530	06.6	
15	+EPZ	0802	51.8	
15	+EPZ	0900	44.6	
15	+EPZ	1044	50.3	
15	-EPZ	1516	16.2	
15	-IPZ	1531	23.0	
15	+IPZ	1541	15.5	
15	+EPZ	2334	17.0	
16	-EPZ	0942	31.5	
16	+EPZ	1029	13.0	#-706
16	-EPZ	1029	16.4	#-706
16	+EPZ	1120	50.3	
16	+EPZ	1124	23.4	
16	+EPZ	1203	37.5	
16	-EPZ	1230	09.9	
16	+EPZ	1449	31.4	
16	+EPZ	1621	17.9	
16	-EPZ	1841	31.6	
16	-EPZ	1841	33.8	
16	+EpPZ	2043	45.5	#-707
16	+EPZ	2337	21.6	
17	+EpPZ	0823	06.6	#-708
17	-EPZ	1107	56.2	#-709
17	-IPcPZ	1107	58.2	#-709
17	+EPZ	1400	18.3	#-710
17	+EpPZ	1618	46.2	#-711
17	-EPZ	1619	09.9	
17	-EPZ	2044	54.8	#-712
17	-EpPZ	2045	25.3	#-712
18	-EPZ	0054	56.8	
18	+EPZ	0210	01.9	
18	+EPZ	0316	01.7	#-713
18	-EPZ	0332	18.6	#-714
18	-EPcPZ	0332	21.5	#-714
18	+EPZ	0629	56.4	
18	-IPZ	0630	04.8	
18	+IPZ	0635	15.2	#-715
18	-EPZ	0705	52.5	
18	-EPZ	0818	55.0	
18	+EPZ	0819	01.0	
18	+EPZ	1012	21.7	
18	+EPZ	1535	51.4	
18	-IPZ	1603	09.8	#-716
18	-EPcPZ	1603	12.4	#-716
18	+EPZ	1634	17.5	
18	-EPZ	2048	44.7	
18	-IPZ	2109	07.4	#-717
18	-IPcPZ	2109	09.6	#-717
18	ESH	2118	41.2	
18	-IPZ	2130	19.8	
18	ESH	2139	11.4	
18	-IPZ	2201	19.9	
18	-IPZ	2201	22.0	
18	ESH	2210	13.0	
18	-EPZ	2244	18.8	
18	+EPZ	2341	01.1	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
19	-IPZ	0031	44.0	
19	+EPZ	0139	15.0	#-718
19	+EPZ	0152	14.0	
19	+EPZ	0223	44.9	
19	+EPZ	0435	03.6	
19	-EPZ	0740	57.6	#-719
19	+EPZ	0819	03.8	#-720
19	+EPZ	0933	49.6	
19	-IPZ	0946	56.0	
19	-IPZ	0946	57.2	
19	ESH	0955	47.0	
19	+EPZ	1101	00.6	
19	-EPZ	1408	19.6	#-721
19	+EPZ	1436	19.4	
19	-IPZ	1659	40.2	#-722
19	+EPcPZ	1700	09.6	#-722
19	-EPZ	1936	43.9	#-723
19	+EpPZ	1936	56.5	#-723
19	+EPZ	2015	19.9	#-724
19	+EPZ	2246	20.0	#-725
20	+EPZ	0125	17.2	
20	-EPZ	0622	16.6	#-726
20	-EsPZ	0622	22.0	#-726
20	+EPZ	0723	17.1	#-727
20	-EPZ	0902	48.2	
20	+EPKPdfZ	1048	25.6	#-728
20	+EPZ	1101	52.3	
20	+EPZ	1140	25.2	#-729
20	+EPZ	1232	06.0	
20	+EPZ	1232	20.4	
20	+EPZ	1437	06.4	
20	+EPZ	1556	31.2	
20	+EPZ	1556	32.7	
20	+EPZ	1608	17.4	
20	+EPZ	1654	01.6	#-730
20	+IPZ	1717	40.0	#-731
20	-IPcPZ	1718	07.0	#-731
20	+EPZ	1757	41.6	#-732
20	+EPcPZ	1757	44.2	#-732
20	+EPZ	2056	19.8	#-733
20	+EPcPZ	2056	23.5	#-733
20	+EPZ	2113	54.4	
20	+IPZ	2113	55.6	
20	-IPZ	2113	58.0	
20	-EPZ	2222	30.2	
20	+EXZ	2252	02.6	#-734
21	-EPZ	0516	25.8	
21	+EPZ	0624	11.0	
21	+EPZ	0659	42.6	#-735
21	+EPcPZ	0659	55.6	#-735
21	-EPZ	0822	00.8	
21	+EPZ	0822	14.2	
21	-EPZ	0935	50.2	
21	-EPZ	0936	04.6	
21	-EPZ	0954	38.4	
21	-EPZ	1400	11.2	#-736
21	-EPcPZ	1400	15.8	#-736
21	+EPZ	1541	05.0	
21	+EPZ	1541	29.0	
21	-EPZ	2003	01.4	
21	-EPZ	2138	06.1	
22	-EPZ	0402	03.4	
22	-EPZ	0548	15.0	
22	+EPZ	1036	41.8	
22	-EPZ	1314	18.0	
22	+EPZ	1320	02.6	
22	-EPZ	1404	33.8	#-737
22	+EPcPZ	1404	41.0	#-737
22	+EPZ	1610	27.7	
22	+EPZ	1710	00.3	
22	-EPZ	1812	28.6	
22	+EPZ	1819	29.9	#-738
22	+EPZ	1858	40.4	
22	+EPZ	1928	45.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks
22	+EPZ	2335	16.1	
22	-EPZ	2344	51.8	
23	-EPZ	0016	20.3	
23	+EPZ	0017	05.8	
23	+EPZ	0017	07.4	
23	+EPcPZ	0057	04.5	#-739
23	+EpPZ	0057	11.8	#-739
23	+EPZ	0107	14.8	
23	-EPZ	0126	06.4	
23	+EPZ	0935	07.8	
23	+EPZ	1040	01.8	
23	-IPZ	1128	26.0	
23	-IPZ	1128	38.5	
23	+EPZ	1419	37.4	
23	+EPZ	1804	47.2	#-740
23	-EpPZ	1805	09.2	#-740
23	-EPZ	1825	06.4	
23	+EXZ	2113	07.3	#-741
23	+EPZ	2135	30.0	
24	+EPZ	0044	33.7	
24	+EPZ	0621	11.2	
24	+EPZ	0924	35.6	#-742
24	+IPcPZ	0924	37.2	#-742
24	+EPZ	1007	03.3	
24	+EPZ	1019	04.4	
24	-EPZ	1019	22.2	
24	+EPZ	1037	55.0	
24	+EPZ	1100	06.5	
24	+EPZ	1332	24.1	
24	+EPZ	1412	18.8	
24	-EPZ	1501	51.6	
24	+EPZ	1712	12.0	
24	+EPZ	1827	13.4	
24	+EPZ	1913	00.5	
24	+EPZ	2045	15.4	
24	+EPZ	2157	08.2	
24	+EPZ	2239	45.8	
25	-EPZ	0023	33.2	
25	-EPZ	0024	13.2	
25	+EPZ	0036	07.7	
25	-EPZ	0128	23.5	
25	+EPZ	0212	28.0	
25	-EPZ	0245	00.6	
25	-IPZ	0333	21.6	#-743
25	ESH	0343	32.6	#-743
25	+EPZ	0423	54.3	
25	-EPZ	0516	02.5	
25	+EPZ	0516	19.8	
25	-EPZ	0536	48.2	
25	+EXZ	0832	29.6	#-744
25	+EPZ	0911	58.5	
25	-EPZ	1118	36.7	
25	+EPZ	1203	26.8	
25	-EPZ	1324	29.6	
25	+EPZ	1349	08.9	
25	-EPZ	1349	12.6	
25	-EPZ	1532	57.4	
25	+EPZ	1547	12.0	
25	+EPZ	1824	31.8	#-745
25	-EPcPZ	1824	33.9	#-745
25	-EPZ	2014	52.5	
25	+EPZ	2253	39.9	#-746
25	+EsPZ	2253	48.0	#-746
26	+IPZ	0326	55.3	#-747
26	-EPZ	0606	35.5	
26	+EPZ	0916	03.7	#-748
26	+EPZ	1047	47.3	
26	+EPZ	1054	06.8	
26	+EPZ	1519	13.9	
26	+EXZ	1641	24.0	#-749
26	-EPZ	1652	43.6	
26	+EPZ	2000	36.2	
26	-EPZ	2124	20.7	
27	+EPZ	0136	19.2	

Table 1. Continued.

Date	Phase	Time H	M	S	Remarks
27	+EPZ	0214		40.0	
27	+EPZ	0808		37.0	
27	+EPZ	0809		23.0	
27	+EPZ	0947		30.6	#-750
27	+EPZ	1024		14.0	
27	-EPZ	1252		17.8	
27	-EPZ	1307		34.8	
27	+EPZ	1742		36.3	
27	-EPZ	2120		36.2	#-751
27	-EPZ	2128		23.9	
27	-EPZ	2217		48.2	
27	-EPZ	2241		01.5	
27	+EPZ	2337		18.5	
28	+EPZ	0440		03.1	
28	+EPZ	0915		26.5	
28	+EPZ	1002		08.5	
28	-EPZ	1023		10.6	
28	+EPZ	1323		27.0	
28	-EPKiKPZ	1351		07.6	#-752
28	+EsPKiKPZ	1351		29.8	#-752
28	-EPZ	1416		24.6	
28	-EPZ	1514		36.6	
28	+EPZ	1637		33.0	
28	+EPZ	2159		37.6	
28	-EPZ	2219		48.0	#-753
28	-EPcPZ	2219		52.4	#-753
28	-EPZ	2309		56.6	
28	-EPZ	2321		15.0	
29	+EPZ	0054		11.0	
29	+EPZ	0135		03.2	
29	+EPZ	0355		41.0	
29	+EPZ	0355		47.1	
29	+EXZ	0633		09.6	#-754
29	-EPZ	1423		38.2	
29	+EPZ	1451		44.6	#-755
29	+EPcPZ	1451		55.2	#-755
29	+EPZ	1504		26.4	
29	+EPZ	1653		46.2	
29	+EPZ	1938		17.0	
30	+EPZ	0333		55.0	#-756
30	+EPZ	0356		38.6	
30	+EPZ	0857		13.3	
30	+EPZ	1122		04.2	
30	+EPZ	1122		06.4	
30	-EPZ	1552		15.5	
30	-IPZ	1649		05.6	
30	-EPcPZ	1756		52.3	#-757
30	-IpPZ	2001		45.0	#-758
30	+EPcPZ	2001		54.3	#-758
30	+EPZ	2331		39.4	
31	+EPZ	0214		25.6	
31	-EPZ	0322		12.6	
31	-EPZ	0825		33.0	
31	+EPZ	1143		41.8	
31	+EPZ	1153		05.2	#-759
31	+IPZ	1414		28.8	#-760
31	-IXZ	1414		31.4	#-760
31	-IpPZ	1415		06.4	#-760
31	ESH	1424		27.8	#-760

Table 2. List of hypocenters of teleseismic events detected at Syowa Station.
The total number of events is 760.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-1	1	1	6	32	33.2	40.334	72.976	42	112.20	5.7	5.4	KYRGYZSTAN
#-2	1	1	18	55	3.5	-5.994	146.912	74	90.69	5.9	-	EASTERN NEW GUINEA REG, P.N.G.
#-3	1	1	19	13	8.1	-5.969	146.914	61	90.71	5.6	-	EASTERN NEW GUINEA REG, P.N.G.
#-4	1	2	8	42	27.0	-23.122	-70.586	37	75.16	5.1	-	OFFSHORE ANTOFAGASTA, CHILE
#-5	1	2	11	44	54.2	-23.669	-114.840	10	85.39	5.1	-	EASTER ISLAND REGION
#-6	1	2	23	26	58.5	-15.955	-72.891	74	82.64	4.8	-	SOUTHERN PERU
#-7	1	3	11	15	48.5	-5.927	122.669	10	82.20	5.5	-	SULAWESI, INDONESIA
#-8	1	4	1	26	28.5	-21.410	-68.217	97	75.99	5.7	-	ANTOFAGASTA, CHILE
#-9	1	4	7	29	18.5	-2.778	101.040	35	77.70	5.9	5.9	SOUTHERN SUMATRA, INDONESIA
#-10	1	5	7	29	33.4	-22.793	-68.420	103	74.77	5.5	-	ANTOFAGASTA, CHILE
#-11	1	5	19	51	24.3	-6.816	153.289	53	92.03	4.9	-	NEW BRITAIN REG, P.N.G.
#-12	1	5	19	55	29.7	-61.980	-155.066	10	48.63	4.9	-	PACIFIC-ANTARCTIC RIDGE
#-13	1	5	20	1	56.2	5.466	94.680	69	83.56	5.4	-	NORTHERN SUMATRA, INDONESIA
#-14	1	6	8	54	59.4	-9.364	107.377	35	73.61	5.2	-	SOUTH OF JAVA, INDONESIA
#-15	1	6	18	30	6.4	-18.246	-177.927	516	88.83	4.9	-	FIJI REGION
#-16	1	7	19	16	12.4	-30.181	-177.691	43	77.23	5.4	-	KERMADEC ISL., NEW ZEALAND
#-17	1	8	10	24	51.4	-21.804	-179.984	602	84.94	5.1	-	FIJI REGION
#-18	1	8	19	23	37.0	-3.952	131.382	35	87.16	5.7	5.5	CERAM SEA, INDONESIA
#-19	1	8	23	4	16.8	-5.623	110.210	551	78.09	4.6	-	JAVA SEA
#-20	1	9	1	45	34.8	-25.780	-178.931	381	81.28	4.6	-	SOUTH OF THE FIJI ISLANDS
#-21	1	9	10	28	22.5	-30.544	-71.789	35	68.60	4.8	-	OFFSHORE COQUIMBO, CHILE
#-22	1	9	21	33	18.7	2.519	128.623	229	92.21	5.3	-	HALMAHERA, INDONESIA
#-23	1	10	1	37	18.8	43.833	-127.275	10	153.85	5.7	5.9	OFF THE COAST OF OREGON
#-24	1	12	8	32	46.5	-56.428	-27.241	89	30.94	5.5	-	SOUTH SANDWICH ISLANDS REGION
#-25	1	12	10	13	25.9	4.161	126.917	69	93.14	5.2	-	KEPULAUAN TALAUD, INDONESIA
#-26	1	12	15	34	49.2	-4.472	144.141	148	91.17	4.7	-	NR N CST NEW GUINEA, P.N.G.
#-27	1	12	15	38	6.4	-7.484	-71.604	557	90.20	4.8	-	AMAZONAS, BRAZIL
#-28	1	12	22	44	48.1	22.797	92.395	38	99.49	5.0	-	INDIA-BANGLADESH BORDER REGION
#-29	1	13	11	16	36.2	-15.998	-173.066	10	91.98	5.1	-	TONGA
#-30	1	14	1	20	2.9	-35.405	53.835	10	34.60	5.4	-	SOUTHWEST INDIAN RIDGE
#-31	1	14	13	38	38.5	10.422	92.939	56	87.79	5.7	5.6	ANDAMAN ISLANDS, INDIA REGION
#-32	1	14	21	24	4.0	-29.113	-69.771	95	69.30	4.6	-	SAN JUAN, ARGENTINA

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
		h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-33	1	15	17	52	15.6	-21.905	-179.524	596	84.93	5.8	- FIJI REGION
#-34	1	16	11	54	44.4	32.349	85.146	12	106.85	6.0	5.8 WESTERN XIZANG
#-35	1	17	15	39	16.4	52.983	159.344	68	148.69	5.2	- OFF E CST KAMCHATKA, RUSSIA
#-36	1	18	8	8	8.7	-20.818	-178.934	586	86.12	4.6	- FIJI REGION
#-37	1	18	19	31	12.7	-20.875	-179.189	641	86.01	5.1	- FIJI REGION
#-38	1	18	21	33	1.4	-23.615	-66.661	194	73.42	4.3	- JUJUY, ARGENTINA
#-39	1	18	23	46	55.7	-15.117	-74.665	55	83.99	4.8	- NR CST S PERU
#-40	1	19	13	45	21.8	-21.783	-178.406	375	85.28	5.1	- FIJI REGION
#-41	1	20	10	27	23.0	1.815	126.820	77	90.91	5.1	- MOLUCCA SEA
#-42	1	20	15	15	15.5	-31.296	-179.957	342	75.70	4.9	- KERMADEC ISLANDS REGION
#-43	1	21	3	22	58.6	-0.064	123.775	159	88.07	4.9	- SULAWESI, INDONESIA
#-44	1	21	15	28	35.2	-10.562	41.553	10	58.47	4.9	- COMOROS REGION
#-45	1	22	7	55	53.2	-15.313	-175.319	35	92.22	5.5	6.0 TONGA
#-46	1	22	9	9	28.0	-19.806	-69.905	46	78.05	5.1	- TARAPACA, CHILE
#-47	1	22	10	49	26.6	-15.331	-175.664	41	92.14	5.6	- TONGA
#-48	1	22	12	29	4.5	3.501	95.420	35	81.91	4.8	- OFF WEST COAST OF N SUMATRA
#-49	1	22	17	14	54.4	0.938	97.410	27	80.07	5.1	- NIAS REGION, INDONESIA
#-50	1	23	6	13	27.0	-22.681	173.300	16	82.58	5.0	- SOUTHEAST OF LOYALTY ISLANDS
#-51	1	23	10	39	55.4	-6.802	125.284	540	82.32	4.7	- BANDA SEA
#-52	1	23	12	20	10.0	-20.491	-175.541	35	87.11	5.2	- TONGA
#-53	1	23	13	41	2.8	-11.158	164.919	37	91.46	5.0	- SANTA CRUZ ISLANDS REGION
#-54	1	23	13	54	23.9	-21.982	-179.550	586	84.85	4.6	- FIJI REGION
#-55	1	23	19	23	34.4	-2.892	101.117	50	77.62	5.1	- SOUTHERN SUMATRA, INDONESIA
#-56	1	24	12	3	39.3	-3.948	101.625	35	76.78	5.3	- SOUTHERN SUMATRA, INDONESIA
#-57	1	24	20	4	15.7	-0.153	124.043	108	88.08	5.2	- MOLUCCA SEA
#-58	1	25	7	40	48.8	-21.022	-178.694	528	85.97	4.6	- FIJI REGION
#-59	1	25	14	19	25.8	-5.990	153.241	35	92.80	4.7	- NEW IRELAND REG, P.N.G.
#-60	1	25	17	15	7.0	-6.066	151.806	35	92.26	4.9	- NEW BRITAIN REG, P.N.G.
#-61	1	26	3	1	46.3	-4.592	142.360	87	90.44	4.8	- NEW GUINEA, PAPUA NEW GUINEA
#-62	1	26	6	8	2.4	1.079	97.225	35	80.15	4.5	- NIAS REGION, INDONESIA
#-63	1	26	17	59	50.1	-2.915	-80.277	64	97.33	5.2	- NEAR THE COAST OF ECUADOR
#-64	1	27	12	48	0.5	-8.650	110.692	35	75.42	4.6	- JAVA, INDONESIA

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-65	1	28	4	5	13.5	49.660	155.856	48	144.72	5.1	-	KURIL ISLANDS
#-66	1	28	7	1	34.0	-30.828	-71.875	30	68.36	4.9	-	OFFSHORE COQUIMBO, CHILE
#-67	1	28	10	31	26.6	-27.851	-176.526	45	79.72	5.2	-	KERMADEC ISLANDS REGION
#-68	1	31	9	36	22.0	-34.942	-70.422	97	64.08	4.8	-	LIBERTADOR O'HIGGINS, CHILE
#-69	2	2	0	22	7.2	-22.093	-68.281	95	75.37	5.4	-	ANTOFAGASTA, CHILE
#-70	2	3	7	34	12.1	-2.318	28.944	10	67.03	5.9	5.8	LAC KIVU REGI
#-71	2	3	10	55	31.8	-8.920	111.230	35	75.36	4.7	-	JAVA, INDONESIA
#-72	2	3	10	56	9.8	-2.442	28.970	10	66.91	5.0	-	RWANDA
#-73	2	3	12	57	54.4	0.017	123.585	169	88.08	4.5	-	MINAHASA, SULAWESI, IND.
#-74	2	3	14	24	37.0	-56.265	-27.020	96	30.99	5.5	-	SOUTH SANDWICH ISLANDS REGION
#-75	2	3	17	31	32.2	-17.636	167.874	35	86.06	4.9	-	VANUATU
#-76	2	4	17	1	29.5	-20.123	-70.000	32	77.78	6.1	-	TARAPACA, CHILE
#-77	2	5	5	56	48.5	-3.526	118.072	23	82.80	5.7	5.3	SULAWESI, INDONESIA
#-78	2	7	7	50	55.3	1.225	122.665	36	88.88	5.3	5.3	MINAHASA, SULAWESI, INDONESIA
#-79	2	7	9	25	31.6	-22.585	-179.268	477	84.32	5.2	-	SOUTH OF THE FIJI ISLANDS
#-80	2	7	21	30	3.8	-23.492	179.969	513	83.28	5.1	-	SOUTH OF THE FIJI ISLANDS
#-81	2	10	12	22	2.7	-60.684	-25.544	8	27.20	6.5	6.5	SOUTH SANDWICH ISLANDS REGION
#-82	2	14	7	59	24.7	-8.307	128.617	29	82.11	5.0	-	TIMOR SEA
#-83	2	18	8	51	3.8	-31.353	-68.650	100	66.86	4.6	-	SAN JUAN, ARGENTINA
#-84	2	18	9	54	23.1	-21.607	170.383	125	82.90	5.4	-	SOUTHEAST OF LOYALTY ISLANDS
#-85	2	18	15	29	52.8	-21.334	-69.813	53	76.58	4.5	-	TARAPACA, CHILE
#-86	2	19	17	1	29.1	-2.450	99.930	13	77.65	5.6	-	KEPULAUAN MENTAWAI REGION, IND.
#-87	2	20	12	49	44.4	-53.034	-46.636	10	40.33	5.6	-	SOUTH ATLANTIC OCEAN
#-88	2	21	4	16	53.5	-18.389	-177.920	501	88.69	4.9	-	FIJI REGION
#-89	2	21	21	41	39.5	-2.157	138.690	11	91.44	5.5	5.3	PAPUA, INDONESIA
#-90	2	21	23	52	15.7	51.261	-177.336	71	155.34	5.5	-	ANDREANOF ISL., ALEUTIAN IS., ALASKA
#-91	2	24	4	36	28.4	-3.774	101.936	40	77.05	5.5	-	SOUTHERN SUMATRA, INDONESIA
#-92	2	24	14	46	21.6	-2.367	99.949	22	77.74	6.1	6.4	KEPULAUAN MENTAWAI REGION, INDONESIA
#-93	2	25	9	11	10.6	-24.162	179.926	493	82.62	4.8	-	SOUTH OF THE FIJI ISLANDS
#-94	2	25	18	6	5.5	-2.322	99.927	35	77.77	6.2	-	KEPULAUAN MENTAWAI REGION, INDONESIA
#-95	2	27	4	54	27.6	-34.678	-178.934	46	72.61	5.1	-	SOUTH OF KERMADEC ISLANDS
#-96	2	28	11	55	7.6	49.455	155.516	72	144.43	5.2	-	KURIL ISLANDS

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-97	2	29	22	51	34.3	-40.266	-74.589	10	60.39	5.2	-	OFFSHORE LOS LAGOS, CHILE
#-98	3	1	18	51	26.4	53.868	159.303	112	149.39	5.6	-	NR THE E COAST OF KAMCHATKA, RUSSIA
#-99	3	1	19	51	59.4	-20.175	-69.824	36	77.67	5.8	5.1	TARAPACA, CHILE
#-100	3	1	19	55	56.6	51.786	-179.446	35	155.11	5.2	-	ANDREANOF ISL., ALEUTIAN IS., ALASKA
#-101	3	1	21	54	54.3	-35.569	-179.346	35	71.66	5.6	-	EAST OF N ISL, NEW ZEALAND
#-102	3	2	21	58	56.7	-58.221	-139.691	10	52.77	5.4	5.0	PACIFIC-ANTARCTIC RIDGE
#-103	3	3	2	37	27.3	-2.160	99.845	25	77.90	5.8	6.2	KEPULAUAN MENTAWAI REGION, IND.
#-104	3	3	13	49	40.4	19.908	121.379	10	105.85	6.0	-	BABUYAN ISLANDS REG., PHILIPPINES
#-105	3	3	14	11	14.5	13.357	125.664	24	101.27	6.4	6.7	PHILIPPINE ISLANDS REGION
#-106	3	3	17	48	32.0	-4.478	101.386	28	76.20	5.5	-	SOUTHERN SUMATRA, IND.
#-107	3	4	19	24	30.6	52.335	-173.725	35	157.40	5.1	-	ANDREANOF ISL., ALEUTIAN IS., ALASKA
#-108	3	6	3	36	14.6	-2.268	99.726	35	77.76	5.4	-	KEPULAUAN MENTAWAI REGION, IND.
#-109	3	6	4	28	1.8	-23.655	-179.676	463	83.20	5.1	-	SOUTH OF THE FIJI ISLANDS
#-110	3	6	7	35	36.0	-5.399	36.053	10	63.64	4.7	-	TANZANIA
#-111	3	6	12	19	16.1	-24.549	-64.331	39	71.78	5.3	-	SALTA, ARGENTINA
#-112	3	6	21	0	40.3	-22.253	179.125	656	84.31	4.4	-	SOUTH OF THE FIJI ISLANDS
#-113	3	7	7	58	24.8	13.166	125.526	10	101.04	5.0	-	PHILIPPINE ISLANDS REGION
#-114	3	7	8	51	40.6	-6.339	154.916	74	93.01	4.7	-	BOUGAINVILLE REG, P.N.G.
#-115	3	7	16	54	56.3	36.474	140.420	35	127.73	5.2	-	NEAR E COAST HONSHU, JAPAN
#-116	3	7	22	35	2.5	-17.276	-70.052	98	80.47	5.2	-	SOUTHERN PERU
#-117	3	8	17	50	25.9	-13.767	170.470	617	90.47	4.4	-	VANUATU REGION
#-118	3	9	15	27	54.3	-58.117	-24.942	67	28.85	5.0	-	SOUTH SANDWICH ISL REGION
#-119	3	10	0	28	50.2	-8.331	117.226	41	78.02	5.0	-	SUMBAWA REG, IND.
#-120	3	10	5	6	12.3	-22.203	-70.026	42	75.84	4.9	-	ANTOFAGASTA, CHILE
#-121	3	10	12	24	0.8	1.492	126.476	53	90.49	4.9	-	MOLUCCA SEA
#-122	3	12	2	7	7.5	-16.554	167.231	36	86.93	5.3	-	VANUATU
#-123	3	12	11	36	55.2	-16.480	167.176	10	86.99	5.6	-	VANUATU
#-124	3	13	1	16	45.8	1.688	126.655	64	90.73	5.4	-	MOLUCCA SEA
#-125	3	13	8	41	7.5	43.043	146.539	54	135.73	5.6	-	KURIL ISLANDS
#-126	3	14	3	17	13.4	-4.589	153.039	67	94.05	5.0	-	NEW IRELAND REG, P.N.G.
#-127	3	14	9	59	4.9	-3.071	141.733	58	91.65	5.1	-	NEW GUINEA, PAPUA NEW GUINEA
#-128	3	14	15	48	33.8	-22.301	-174.734	35	85.49	5.1	-	TONGA REGION

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-129	3	14	16	2	22.4	-22.190	-175.035	35	85.54	5.4	-	TONGA REGION
#-130	3	15	21	36	19.4	-6.204	130.255	164	84.66	4.5	-	BANDA SEA
#-130	3	16	0	49	5.3	-6.263	130.419	130	84.66	4.9	-	BANDA SEA
#-131	3	16	6	17	54.0	-1.732	69.179	10	70.26	4.3	-	CARLSBERG RIDGE
#-132	3	16	10	43	11.6	-17.371	-69.911	136	80.33	4.7	-	SOUTHERN PERU
#-133	3	16	12	37	55.7	-6.184	-79.708	73	94.05	4.6	-	NEAR THE COAST OF NORTHERN PERU
#-134	3	16	23	5	27.2	-2.941	101.023	53	77.54	5.3	-	SOUTHERN SUMATRA, INDONESIA
#-135	3	18	8	22	48.0	-28.932	-177.469	25	78.49	5.8	6.1	KERMADEC ISLANDS REGION
#-136	3	19	11	55	53.3	-6.915	155.292	27	92.58	5.2	-	BOUGAINVILLE REG, P.N.G.
#-137	3	20	12	15	42.0	1.575	127.261	104	90.84	5.2	-	HALMAHERA, INDONESIA
#-138	3	20	14	10	40.4	6.192	126.934	45	95.04	6.0	5.7	MINDANAO, PHILIPPINES
#-139	3	20	22	32	57.9	35.490	81.467	10	109.08	6.3	7.3	WESTERN XIZANG
#-140	3	20	22	38	53.5	35.505	81.398	10	109.08	5.3	-	WESTERN XIZANG
#-141	3	20	22	49	57.6	35.457	81.409	10	109.03	5.0	-	WESTERN XIZANG
#-142	3	22	4	9	7.9	-0.051	123.354	151	87.93	4.9	-	MINAHASA, SULAWESI, IND.
#-143	3	22	21	24	11.2	52.176	-178.716	132	155.68	5.8	-	ANDREANOF ISL., ALEUTIAN IS., ALASKA
#-144	3	26	17	49	17.2	-7.649	128.330	156	82.62	4.5	-	KEPULAUAN BARAT DAYA, IND.
#-145	3	26	18	33	34.0	46.428	152.979	16	140.96	5.5	5.2	KURIL ISLANDS
#-146	3	26	20	6	5.8	13.594	144.879	70	108.34	5.4	-	GUAM REGION
#-147	3	27	19	25	41.2	-3.920	141.897	70	90.91	5.1	-	NEW GUINEA, PAPUA NEW GUINEA
#-148	3	28	1	35	18.9	1.858	128.470	67	91.54	4.9	-	HALMAHERA, INDONESIA
#-149	3	28	15	53	36.7	-4.542	128.414	254	85.55	4.9	-	BANDA SEA
#-150	3	29	1	53	37.0	1.065	126.260	8	90.01	5.4	-	MOLUCCA SEA
#-151	3	29	2	23	6.8	0.636	126.754	10	89.79	5.0	-	MOLUCCA SEA
#-152	3	29	17	30	50.1	2.855	95.296	20	81.25	5.8	6.5	SIMEULUE, INDONESIA
#-153	3	30	13	10	27.1	13.067	93.928	35	90.60	4.7	-	ANDAMAN ISL, INDIA REGION
#-154	3	30	22	12	51.4	0.114	98.242	49	79.55	5.4	-	NIAS REGION, INDONESIA
#-155	3	31	16	37	59.5	-2.932	101.117	63	77.58	4.7	-	SOUTHERN SUMATRA, INDONESIA
#-156	4	1	2	37	11.5	1.550	126.308	52	90.48	5.3	-	MOLUCCA SEA
#-157	4	1	13	33	28.9	-4.146	153.607	174	94.66	4.8	-	NEW IRELAND REG, P.N.G.
#-158	4	2	0	25	54.3	-6.928	155.757	94	92.72	4.9	-	BOUGAINVILLE REG, P.N.G.
#-159	4	2	8	48	49.7	-4.346	102.717	67	76.76	5.8	-	SOUTHERN SUMATRA, INDONESIA

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-160	4	2	10	19	40.6	25.373	179.720	485	130.59	4.5	-	SOUTH OF THE FIJI ISLANDS
#-161	4	2	19	9	6.3	-0.159	99.191	81	79.59	5.3	-	SOUTHERN SUMATRA, INDONESIA
#-162	4	2	19	10	19.4	-7.046	129.203	180	83.49	5.5	-	KEPULAUAN BARAT DAYA, IND.
#-163	4	3	17	4	39.5	-3.448	145.229	6	92.51	4.9	-	NEW IRELAND REG, P.N.G.
#-164	4	3	19	59	22.9	-6.063	151.093	27	92.02	4.8	-	NEW BRITAIN REG, P.N.G.
#-165	4	3	21	41	25.5	0.027	127.466	153	89.47	5.0	-	MINAHASA, SULAWESI, IND.
#-166	4	4	3	19	8.4	47.558	155.581	35	142.86	5.1	-	KURIL ISLANDS
#-167	4	4	20	29	22.0	2.849	95.476	50	81.30	4.9	4.2	SIMEULUE, INDONESIA
#-168	4	6	7	23	27.2	51.614	179.276	62	154.54	5.0	-	RAT ISL, ALEUTIAN ISLANDS, ALASKA
#-169	4	7	6	30	36.7	-3.587	145.176	35	92.36	4.5	-	NR N CST NEW GUINEA, P.N.G.
#-170	4	14	3	15	38.2	-7.043	129.185	150	83.49	5.1	-	KEPULAUAN BARAT DAYA, IND.
#-171	4	15	22	59	51.5	51.856	-179.361	11	155.19	6.1	6.4	ANDREANOF ISL, ALEUTIAN IS., ALASKA
#-172	4	16	5	54	19.6	51.878	-179.165	13	155.28	6.1	6.5	ANDREANOF ISL, ALEUTIAN IS., ALASKA
#-173	4	16	8	11	32.3	0.829	126.081	10	89.73	5.7	5.4	MOLUCCA SEA
#-174	4	17	8	29	7.9	8.264	91.780	35	85.40	5.4	-	NICOBAR ISL, INDIA REGION
#-175	4	19	3	12	25.1	-7.815	125.694	13	81.52	5.8	5.8	KEPULAUAN BARAT DAYA, IND.
#-176	4	19	10	21	12.5	-7.875	125.722	10	81.47	5.6	5.6	KEPULAUAN BARAT DAYA, IND.
#-177	4	19	14	53	40.8	-7.870	125.691	10	81.47	5.3	-	KEPULAUAN BARAT DAYA, IND.
#-178	4	19	16	27	29.0	-7.935	125.704	10	81.41	5.0	-	KEPULAUAN BARAT DAYA, IND.
#-178	4	19	16	50	45.4	-7.930	125.626	10	81.39	5.0	-	KEPULAUAN BARAT DAYA, IND.
#-179	4	19	18	51	16.2	-7.945	125.808	5	81.44	5.0	-	KEPULAUAN BARAT DAYA, IND.
#-180	4	19	18	57	23.6	2.578	94.534	19	80.76	4.7	-	NORTHERN SUMATRA, INDONESIA
#-181	4	19	19	13	17.5	-6.678	129.910	35	84.09	4.0	-	BANDA SEA
#-182	4	20	10	27	21.2	-8.086	125.769	10	81.29	4.6	-	FLORES REGION, INDONESIA
#-183	4	20	13	1	20.4	-7.850	125.685	3	81.48	5.6	5.1	KEPULAUAN BARAT DAYA, IND.
#-184	4	20	22	9	30.3	-7.953	125.683	27	81.39	4.5	-	KEPULAUAN BARAT DAYA, IND.
#-185	4	23	14	5	42.8	-3.860	131.446	10	87.27	5.3	5.3	CERAM SEA, INDONESIA
#-186	4	27	5	2	39.9	-7.782	107.876	40	75.26	5.0	-	JAVA, INDONESIA
#-187	4	28	4	27	15.9	2.907	127.467	35	92.16	5.2	-	HALMAHERA, INDONESIA
#-188	4	28	13	58	37.0	-7.126	156.094	35	92.64	4.6	-	BOUGAINVILLE REG, P.N.G.
#-189	4	29	19	10	2.1	-6.108	127.484	404	83.75	5.6	-	BANDA SEA
#-190	4	30	3	3	6.9	40.836	-123.497	29	150.34	5.4	4.9	OFF THE COAST OF NORTHERN CALIFORNIA

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-191	4	30	18	1	9.3	-4.238	103.277	108	77.05	4.8	-	SOUTHERN SUMATRA, INDONESIA
#-192	5	2	1	33	37.2	51.864	-177.528	14	155.80	6.3	6.8	ANDREANOF ISL, ALEUTIAN IS., ALASKA
#-193	5	2	4	20	17.1	17.850	-178.612	600	123.80	4.1	-	FIJI REGION
#-194	5	3	3	53	34.9	-3.015	101.319	50	77.56	5.6	-	KEPULAUAN MENTAWAI REG, IND.
#-195	5	3	12	8	8.9	1.772	126.549	10	90.77	4.2	-	MOLUCCA SEA
#-196	5	3	19	1	46.2	-6.640	155.091	35	92.78	5.4	5.4	BOUGAINVILLE REG, P.N.G.
#-197	5	5	17	9	18.4	-5.908	151.600	35	92.34	4.8	-	NEW BRITAIN REG, P.N.G.
#-198	5	6	23	27	37.6	-7.863	123.147	212	80.56	5.4	-	BANDA SEA
#-199	5	7	16	16	36.1	36.156	141.756	23	127.93	5.9	-	NR THE E COAST OF HONSHU, JAPAN
#-200	5	9	21	51	29.7	12.516	143.181	76	106.74	6.1	-	GUAM REGION
#-201	5	10	15	31	58.0	3.299	128.328	35	92.84	4.0	-	N OF HALMAHERA, INDONESIA
#-202	5	11	2	38	25.1	-7.666	128.493	47	82.66	4.4	-	KEPULAUAN BARAT DAYA, IND.
#-203	5	11	4	6	1.0	-5.186	152.498	47	93.31	4.7	-	NEW IRELAND REGION, P.N.G.
#-204	5	12	6	28	1.5	31.002	103.322	19	110.35	6.9	8.1	EASTERN SICHUAN CHINA
#-205	5	12	6	43	14.3	31.211	103.715	10	110.66	5.8	-	EASTERN SICHUAN CHINA
#-206	5	12	7	1	34.0	31.636	104.217	10	111.21	5.3	-	EASTERN SICHUAN CHINA
#-207	5	12	15	28	53.4	31.058	103.514	10	110.46	5.0	4.5	EASTERN SICHUAN CHINA
#-208	5	13	1	18	23.3	-4.011	152.164	35	94.31	4.0	-	NEW BRITAIN REG, P.N.G.
#-209	5	14	11	35	15.5	-4.646	152.966	72	93.98	4.7	-	NEW IRELAND REGION, P.N.G.
#-210	5	19	5	40	39.5	-7.141	130.576	35	83.90	5.3	-	KEPULAUAN TANIMBAR REG, IND.
#-211	5	19	10	8	36.3	42.503	131.872	513	130.09	5.4	-	EASTERN RUSSIA-N.E. CHINA
#-212	5	19	14	26	45.0	1.640	99.147	10	81.28	5.8	6.0	NORTHERN SUMATRA, INDONESIA
#-213	5	19	14	49	17.6	1.724	99.180	10	81.37	5.3	-	KEPULAUAN MENTAWAI REG, IND.
#-214	5	19	15	19	21.3	-5.731	147.200	127	91.03	5.2	-	E NEW GUINEA REG, P.N.G.
#-215	5	20	5	12	7.3	4.453	95.923	121	82.97	4.4	-	NORTHERN SUMATRA, INDONESIA
#-216	5	20	12	22	34.0	2.181	96.754	35	81.05	4.8	-	SIMEULUE, INDONESIA
#-217	5	20	13	53	35.6	51.162	178.759	27	153.99	5.8	6.0	RAT ISL., ALEUTIAN ISLANDS, ALASKA
#-218	5	20	17	8	0.2	-3.181	101.475	47	77.46	5.6	5.2	SUMATRA, INDONESIA
#-219	5	20	21	37	12.1	-8.580	-74.886	129	90.24	5.4	-	CENTRAL PERU
#-220	5	21	2	45	52.6	-9.981	150.891	39	88.26	5.1	-	NEW BRITAIN REGION, P.N.G.
#-221	5	21	23	23	9.2	-4.445	101.096	22	76.14	5.2	-	SOUTHERN SUMATRA, INDONESIA
#-222	5	23	3	33	9.8	51.638	177.916	55	154.11	5.3	-	RAT ISL., ALEUTIAN ISLANDS, ALASKA

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-223	5	23	19	35	34.7	7.313	-34.897	8	91.17	6.0	6.4	CENTRAL MID-ATLANTIC RIDGE
#-224	5	23	22	50	37.0	-7.061	129.483	125	83.58	5.8	-	KEPULAUAN BABAR, INDONESIA
#-225	5	24	7	40	42.3	-8.839	124.097	81	79.99	5.2	-	KEPULAUAN ALOR, INDONESIA
#-226	5	24	13	24	5.9	-7.181	156.069	29	92.58	5.8	5.5	SOLOMON ISLANDS
#-227	5	24	17	50	1.0	0.350	99.587	35	80.20	4.4	-	SUMATRA, INDONESIA
#-228	5	26	11	13	21.6	-9.333	116.260	50	76.74	4.7	-	SOUTH OF JAVA, INDONESIA
#-229	6	1	9	42	32.1	-4.583	129.532	10	85.91	5.5	4.9	BANDA SEA
#-230	6	1	10	33	28.3	-4.574	129.500	10	85.91	5.8	5.1	BANDA SEA
#-231	6	1	15	31	42.4	2.243	126.833	71	91.32	5.0	-	HALMAHERA, INDONESIA
#-232	6	1	15	59	48.7	-9.159	118.034	81	77.53	5.1	-	SUMBAWA REGION, INDONESIA
#-233	6	1	16	35	6.0	51.624	159.283	40	147.57	5.1	-	OFF E CST KAMCHATKA, RUSSIA
#-234	6	1	22	55	34.0	-4.592	129.593	10	85.92	5.4	-	BANDA SEA
#-235	6	2	19	47	16.2	-0.029	123.282	153	87.92	5.4	-	MINAHASA, SULAWESI, IND.
#-236	6	3	10	15	50.8	0.354	97.759	35	79.63	5.1	-	NIAS REGION, INDONESIA
#-237	6	3	17	31	32.3	-8.166	120.255	14	79.25	5.6	5.3	FLORES REGION, INDONESIA
#-238	6	3	17	55	8.8	-8.170	120.269	10	79.25	4.7	-	FLORES REGION, INDONESIA
#-239	6	3	19	38	16.0	-8.126	120.336	21	79.31	4.5	-	FLORES REGION, INDONESIA
#-240	6	3	21	3	46.7	-8.125	120.265	7	79.29	5.5	5.2	FLORES REGION, INDONESIA
#-241	6	3	22	4	27.8	-8.100	120.231	14	79.30	5.6	5.5	FLORES REGION, INDONESIA
#-242	6	3	22	49	57.0	-2.077	99.975	35	78.02	5.4	-	KEPULAUAN MENTAWAI REG, IND.
#-243	6	3	23	43	26.6	-8.142	120.127	10	79.22	4.8	-	FLORES REGION, INDONESIA
#-244	6	4	1	25	24.9	-0.627	122.639	46	87.14	5.2	-	SULAWESI, INDONESIA
#-245	6	4	10	47	15.0	-8.154	120.314	10	79.28	4.6	-	FLORES REGION, INDONESIA
#-246	6	5	12	0	13.8	-7.717	117.549	301	78.70	4.2	-	SOUTH OF SUMBAWA, INDONESIA
#-247	6	5	13	37	39.5	-8.733	-76.448	126	90.60	5.4	-	NORTHERN PERU
#-248	6	5	15	31	56.7	-9.747	114.155	28	75.61	4.7	-	SUMBAWA REGION, INDONESIA
#-249	6	6	3	42	50.6	-7.435	156.143	75	92.36	5.2	-	SOLOMON ISLANDS
#-250	6	6	13	42	48.9	-7.495	127.885	122	82.60	5.7	-	KEPULAUAN BARAT DAYA, INDONESIA
#-251	6	7	21	53	12.8	22.457	-175.069	35	129.11	5.3	-	TONGA REGION
#-252	6	7	22	3	18.1	-8.154	120.343	10	79.29	5.1	-	FLORES REGION, INDONESIA
#-253	6	7	22	9	4.5	-8.115	120.431	10	79.36	4.7	-	FLORES REGION, INDONESIA
#-254	6	8	16	35	46.2	3.715	126.621	41	92.61	4.9	-	KEPULAUAN TALAUD, INDONESIA

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-255	6	10	7	10	23.1	-5.172	154.581	46	94.00	5.2	-	BOUGAINVILLE REGION, P.N.G.
#-256	6	10	7	44	36.5	5.248	126.387	57	93.96	5.2	-	MINDANAO, PHILIPPINES
#-257	6	10	11	36	44.9	33.242	92.087	10	109.38	5.0	-	WESTERN XIZANG
#-258	6	11	8	37	45.8	6.558	124.216	51	94.41	5.3	-	MINDANAO, PHILIPPINES
#-259	6	11	13	13	19.6	4.224	123.126	557	91.84	4.8	-	CELEBES SEA
#-260	6	12	2	9	57.2	-7.388	127.776	37	82.66	5.3	-	KEPULAUAN BARAT DAYA, IND.
#-261	6	12	5	19	57.4	-9.379	112.769	51	75.46	5.2	-	KURILISLANDSD
#-262	6	14	7	32	41.1	-8.192	120.346	35	79.25	4.5	-	FLORES SEA
#-263	6	14	12	55	25.1	-4.376	144.354	160	91.33	4.9	-	NR N CST NEW GUINEA, P.N.G.
#-264	6	14	14	1	2.6	8.191	126.500	78	96.75	4.9	-	MINDANAO, PHILIPPINES
#-265	6	15	15	9	30.7	-9.553	107.745	11	73.56	5.1	-	SOUTH OF JAVA
#-266	6	16	2	40	59.1	-5.583	154.029	189	93.44	4.9	-	BOUGAINVILLE REG, P.N.G.
#-267	6	18	13	13	10.9	1.975	128.408	73	91.63	5.4	-	HALMAHERA, INDONESIA
#-268	6	18	21	47	10.2	-7.646	108.086	110	75.46	4.3	-	JAVA, INDONESIA
#-269	6	19	7	25	16.9	-4.617	29.495	10	64.70	4.7	-	BANDA SEA
#-270	6	20	3	16	2.0	-4.789	148.955	607	92.51	4.9	-	BISMARCK SEA
#-271	6	21	0	29	16.3	-22.656	171.157	70	82.08	5.1	-	SOUTHEAST OF LOYALTY ISLANDS
#-272	6	21	4	9	4.2	-24.296	-67.053	148	72.91	4.2	-	SALTA, ARGENTINA
#-273	6	21	7	40	39.8	-35.663	-71.545	70	63.76	4.6	-	MAULE, CHILE
#-274	6	21	22	42	0.1	-15.865	-176.103	382	91.53	4.4	-	FIJI REGION
#-275	6	22	12	12	50.2	-23.870	-66.562	215	73.15	4.6	-	JUJUY, ARGENTINA
#-276	6	22	13	15	34.8	-8.784	157.897	10	91.63	5.2	-	SOLOMON ISLANDS
#-277	6	22	23	56	30.0	67.730	141.249	18	153.22	6.2	5.6	NORTHEASTERN SAKHA, RUSSIA
#-278	6	23	12	32	12.5	46.494	153.244	10	141.11	5.5	-	KURIL ISLANDS
#-279	6	24	19	14	44.1	-3.198	101.340	50	77.40	5.3	-	SOUTHERN SUMATRA, INDONESIA
#-280	6	24	19	35	35.1	-2.523	138.455	6	91.01	4.7	-	PAPUA, INDONESIA
#-281	6	24	19	48	9.9	-2.541	138.445	35	90.99	5.2	-	PAPUA, INDONESIA
#-282	6	25	1	52	38.4	1.379	97.176	34	80.42	5.3	5.1	NIAS REGION, INDONESIA
#-283	6	25	2	53	29.1	1.399	97.218	40	80.45	5.5	-	NIAS REGION, INDONESIA
#-284	6	25	15	41	27.8	-5.288	151.701	51	92.96	5.3	-	NEW BRITAIN REGION, P.N.G.
#-285	6	26	0	6	39.7	-8.887	-75.564	41	90.17	5.2	-	CENTRAL PERU
#-286	6	26	12	34	2.3	-8.904	-75.532	44	90.14	5.1	-	CENTRAL PERU

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-287	6	26	21	19	15.7	-20.762	-173.329	38	87.25	6.0	5.8	TONGA
#-288	6	27	4	42	29.5	-20.016	-178.192	571	87.05	4.6	-	FIJI REGION
#-289	6	27	11	40	14.1	11.008	91.855	17	88.05	6.5	6.7	ANDAMAN ISLANDS, INDIA REGION
#-290	6	27	14	16	21.8	0.247	96.699	35	79.20	5.0	-	NIAS REGION, INDONESIA
#-291	6	27	18	5	13.6	10.892	91.855	26	87.93	5.2	-	ANDAMAN ISL, INDIA REGION
#-292	6	27	23	34	36.7	-15.128	-173.778	25	92.70	5.1	-	TONGA
#-293	6	28	3	26	52.7	10.886	91.916	28	87.95	4.9	-	ANDAMAN ISL, INDIA REGION
#-294	6	28	4	35	5.3	10.899	91.749	27	87.91	5.1	-	ANDAMAN ISL, INDIA REGION
#-295	6	28	8	56	57.3	-33.064	-16.032	10	47.05	5.5	4.7	SOUTHERN MID-ATLANTIC RIDGE
#-296	6	28	10	15	30.8	-27.572	179.641	475	79.24	4.6	-	KERMADEC ISLANDS REGION
#-297	6	28	12	10	44.4	-6.534	154.939	34	92.83	5.0	-	BOUGAINVILLE REG, P.N.G.
#-298	6	28	12	54	46.4	10.849	91.715	15	87.85	5.9	6.0	ANDAMAN ISLANDS, INDIA REGION
#-299	6	28	13	57	4.0	10.733	91.697	10	87.74	5.0	-	ANDAMAN ISLANDS, INDIA REGION
#-299	6	28	15	29	14.5	10.998	91.977	35	88.07	5.4	-	ANDAMAN ISLANDS, INDIA REGION
#-300	6	29	4	14	35.2	10.755	91.632	10	87.74	5.0	-	ANDAMAN ISL, INDIA REGION
#-301	6	30	4	5	59.8	-38.329	-93.222	10	67.04	5.0	-	WEST CHILE RISE
#-302	6	30	6	17	43.3	-58.169	-22.014	10	27.78	6.3	6.7	SOUTH SANDWICH ISLANDS REGION
#-303	7	1	0	17	29.7	-10.370	-75.486	10	88.74	5.4	-	CENTRAL PERU
#-304	7	1	15	13	44.3	-23.530	179.865	529	83.22	4.6	-	SOUTH OF THE FIJI ISLANDS
#-305	7	2	12	46	3.5	-19.234	-177.600	576	87.93	4.6	-	FIJI REGION
#-306	7	2	19	24	34.8	-6.191	130.855	42	84.88	4.7	-	BANDA SEA
#-307	7	3	3	2	36.6	-23.324	-179.812	569	83.49	5.6	-	SOUTH OF THE FIJI ISLANDS
#-308	7	5	0	46	15.9	-23.890	-179.916	518	82.92	4.6	-	SOUTH OF THE FIJI ISLANDS
#-309	7	5	2	12	4.6	53.888	152.869	636	147.10	6.7	-	SEA OF OKHOTSK
#-310	7	6	1	0	8.8	45.402	151.017	22	139.38	5.5	5.5	KURIL ISLANDS
#-311	7	6	4	30	27.1	-25.398	-176.377	49	82.15	5.5	-	SOUTH OF THE FIJI ISLANDS
#-312	7	6	9	8	20.1	45.420	150.931	10	139.37	5.7	5.4	KURIL ISLANDS
#-313	7	6	13	23	7.7	-17.756	-178.459	555	89.20	4.4	-	FIJI REGION
#-314	7	6	17	36	30.9	-5.093	145.656	231	91.11	4.8	-	E NEW GUINEA REG, P.N.G.
#-315	7	7	4	44	55.5	-16.459	-174.083	118	91.33	5.0	-	TONGA
#-316	7	7	21	39	26.0	-58.047	-22.155	10	27.92	5.2	-	SOUTH SANDWICH ISL REGION
#-317	7	7	22	43	50.7	51.917	-177.064	67	155.99	5.4	-	ANDREANOF ISL, ALEUTIAN IS., ALASKA

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
		h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-318	7 8	7	42	10.7	27.506	128.358	43	115.31	6.0	5.5	RYUKYU ISLANDS, JAPAN
#-319	7 8	15	54	17.3	-22.967	-66.733	195	74.05	4.5	-	JUJUY, ARGENTINA
#-320	7 9	2	34	46.3	-12.478	166.459	67	90.63	5.0	-	SANTA CRUZ ISLANDS
#-321	7 9	8	24	19.2	-20.936	168.703	61	83.11	5.5	-	LOYALTY ISLANDS
#-322	7 9	12	29	41.1	49.259	151.399	282	142.79	5.0	-	NORTHWEST OF KURIL ISLANDS
#-323	7 9	19	58	40.5	-23.091	-70.128	47	75.04	4.6	-	ANTOFAGASTA, CHILE
#-324	7 9	22	17	42.6	-1.799	101.139	69	78.66	5.1	-	SOUTHERN SUMATRA, INDONESIA
#-325	7 10	3	46	47.3	-21.014	168.643	63	83.02	5.2	-	LOYALTY ISLANDS
#-326	7 10	5	16	27.7	-15.212	167.545	122	88.30	5.3	-	VANUATU
#-327	7 10	6	29	49.9	0.906	125.962	35	89.75	5.1	-	MOLUCCA SEA
#-328	7 10	16	1	2.8	-19.859	169.348	35	84.31	5.2	-	VANUATU
#-329	7 10	17	32	29.1	6.497	124.651	38	94.51	5.2	-	MINDANAO, PHILIPPINES
#-330	7 11	6	51	37.7	-9.527	107.594	13	73.53	5.5	4.8	SOUTH OF JAVA, INDONESIA
#-331	7 11	9	28	19.0	-11.216	-14.496	10	67.01	5.0	-	ASCENSION ISLAND REGION
#-332	7 12	0	1	26.7	51.606	-176.382	63	155.94	5.1	-	ANDREANOF ISL, ALEUTIAN IS., ALASKA
#-333	7 12	0	8	56.7	-45.725	167.253	115	59.09	5.0	-	SOUTH ISLAND OF NEW ZEALAND
#-334	7 12	8	42	36.9	-10.732	161.673	73	90.92	5.1	-	SOLOMON ISLANDS
#-335	7 13	16	24	28.4	-9.073	124.056	101	79.76	4.9	-	TIMOR REGION
#-336	7 13	17	33	49.0	-21.535	-67.964	35	75.79	5.0	-	POTOSI, BOLIVIA
#-337	7 13	19	30	26.2	-21.835	-67.190	173	75.26	4.4	-	POTOSI, BOLIVIA
#-338	7 14	4	44	54.2	2.232	96.535	43	81.04	5.5	-	SIMEULUE, INDONESIA
#-339	7 14	17	49	10.5	-21.261	-68.132	46	76.10	4.9	-	POTOSI, BOLIVIA
#-340	7 15	5	7	11.5	-47.351	-12.090	10	32.95	5.1	5.3	SOUTHERN MID-ATLANTIC RIDGE
#-341	7 15	19	17	42.1	-22.550	-70.267	20	75.59	4.8	-	ANTOFAGASTA, CHILE
#-342	7 16	12	48	41.3	-28.227	-175.733	10	79.50	4.9	-	KERMADEC ISLANDS REGION
#-343	7 16	17	9	25.6	-30.986	-178.599	141	76.27	5.2	-	KERMADEC ISLANDS, NEW ZEALAND
#-344	7 16	22	25	52.3	-7.266	120.282	549	80.10	4.7	-	FLORES SEA
#-345	7 19	8	13	59.3	-11.141	66.403	10	60.50	4.6	-	MID-INDIAN RIDGE
#-346	7 19	9	27	1.4	-11.032	164.509	10	91.46	6.1	6.4	SANTA CRUZ ISLANDS REGION
#-347	7 19	9	34	27.0	-11.035	164.507	10	91.46	5.5	-	SANTA CRUZ ISLANDS REGION
#-348	7 19	10	49	0.5	-10.242	-75.349	24	88.82	4.8	-	CENTRAL PERU
#-349	7 19	11	15	29.1	-11.020	164.487	43	91.47	5.2	-	SANTA CRUZ ISLANDS REGION

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-350	7	19	11	45	41.1	-10.976	164.626	10	91.55	5.2	-	SANTA CRUZ ISLANDS REGION
#-351	7	19	22	34	16.8	-20.106	-178.476	578	86.90	4.7	-	FIJI REGION
#-352	7	19	22	39	53.2	-17.264	-177.350	395	89.91	5.9	-	FIJI REGION
#-353	7	19	23	19	58.4	-0.453	96.963	35	78.61	5.3	-	SW OF SUMATRA, INDONESIA
#-354	7	20	6	11	6.5	-8.684	111.260	60	75.59	5.3	-	JAVA, INDONESIA
#-355	7	20	8	21	42.5	4.883	62.149	10	75.60	5.2	-	CARLSBERG RIDGE
#-356	7	21	3	8	22.5	-31.550	-69.048	99	66.80	4.7	-	SAN JUAN, ARGENTINA
#-357	7	21	11	30	29.4	37.213	142.060	22	128.98	5.7	6.1	OFF THE E COAST OF HONSHU, JAPAN
#-358	7	21	15	47	58.0	-10.993	164.441	54	91.48	5.0	-	SANTA CRUZ ISLANDS REGION
#-359	7	21	20	14	49.1	-23.341	-175.416	70	84.34	4.8	-	TONGA REGION
#-360	7	22	7	19	46.9	-15.164	-174.331	147	92.56	4.3	-	TONGA
#-361	7	22	8	39	32.0	-18.197	-174.944	94	89.47	4.5	-	TONGA
#-362	7	22	18	31	15.8	-22.250	-179.585	585	84.58	4.3	-	SOUTH OF THE FIJI ISLANDS
#-363	7	22	22	46	23.7	-15.008	-173.115	66	92.94	5.1	-	TONGA
#-364	7	23	8	12	42.3	-66.860	112.561	10	26.05	5.3	-	ANTARCTICA
#-365	7	23	15	26	19.8	39.802	141.463	108	131.07	6.7	-	EASTERN HONSHU, JAPAN
#-366	7	23	19	54	45.2	32.784	105.551	10	112.68	5.8	-	SICHUAN-GANSU BORDER REGION, CHINA
#-367	7	24	7	9	30.2	32.789	105.564	10	112.69	5.6	5.4	SICHUAN-GANSU BORDER REGION, CHINA
#-368	7	25	5	1	28.0	-18.035	-178.987	606	88.82	4.5	-	FIJI REGION
#-369	7	25	7	48	10.8	-22.310	-68.040	119	75.09	4.8	-	ANTOFAGASTA, CHILE
#-370	7	25	12	13	7.5	-28.081	-70.902	18	70.62	5.1	-	ATACAMA, CHILE
#-371	7	25	20	11	11.3	-5.901	146.609	74	90.67	5.3	-	EASTERN NEW GUINEA REG, P.N.G.
#-372	7	26	5	35	36.8	11.570	91.710	31	88.54	5.4	-	ANDAMAN ISL, INDIA REGION
#-373	7	26	16	49	53.0	10.330	93.158	82	87.77	5.1	-	ANDAMAN ISL, INDIA REGION
#-374	7	26	17	39	28.4	-21.541	-68.163	126	75.85	4.7	-	POTOSI, BOLIVIA
#-375	7	27	11	25	40.6	-7.311	121.942	533	80.65	4.5	-	FLORES SEA
#-376	7	27	19	30	50.9	-7.374	126.467	317	82.21	5.0	-	KEPULAUAN BARAT DAYA, IND.
#-377	7	28	3	43	2.2	-24.704	-176.141	45	82.87	4.9	-	SOUTH OF THE FIJI ISLANDS
#-378	7	28	7	10	4.3	-1.118	99.759	81	78.86	5.2	-	KEPULAUAN MENTAWAI REG, IND.
#-379	7	28	13	6	43.6	51.365	-179.016	62	154.89	5.0	-	ANDREANOF ISL, ALEUTIAN IS., ALASKA
#-380	7	29	18	42	14.9	33.734	-117.906	13	142.42	5.6	-	GREATER LOS ANGELES AREA, CALIFORNIA
#-381	7	29	18	54	35.4	-2.696	152.647	10	95.71	5.4	-	NEW IRELAND REGION, P.N.G.

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-382	7	29	20	56	22.6	-54.684	-118.941	10	55.26	5.6	5.4	SOUTHERN EAST PACIFIC RISE
#-383	7	30	12	59	14.3	-21.923	-179.499	581	84.92	5.2	-	FIJI REGION
#-384	8	1	2	56	41.1	-22.022	-67.209	173	75.09	4.6	-	POTOSI, BOLIVIA
#-385	8	1	6	18	39.0	-22.286	-66.524	213	74.62	4.9	-	JUJUY, ARGENTINA
#-386	8	4	15	16	53.2	-5.099	151.835	45	93.18	5.2	-	NEW BRITAIN REGION, P.N.G.
#-387	8	4	19	38	26.3	34.186	26.533	31	103.61	5.3	-	CRETE, GREECE
#-388	8	4	20	45	13.8	-5.908	130.214	173	84.92	6.1	-	BANDA SEA
#-389	8	5	9	49	17.3	32.745	105.511	6	112.64	5.9	6.0	SICHUAN-GANSU BORDER REG., CHINA
#-390	8	5	10	8	12.2	13.883	93.596	35	91.29	5.3	-	ANDAMAN ISL, INDIA REGION
#-391	8	5	14	4	23.0	1.717	127.558	107	91.08	4.9	-	HALMAHERA, INDONESIA
#-392	8	7	7	27	44.7	53.597	-167.401	50	160.37	5.2	-	FOX ISL, ALEUTIAN ISLANDS, ALASKA
#-393	8	7	10	24	45.0	-30.236	-179.972	424	76.73	4.7	-	KERMADEC ISLANDS REGION
#-394	8	9	0	1	59.0	-8.164	117.753	39	78.36	4.8	-	SUMBAWA REGION, INDONESIA
#-395	8	9	6	1	49.2	-60.568	153.765	10	42.32	5.6	5.9	WEST OF MACQUARIE ISLAND
#-396	8	9	18	32	46.6	-14.763	167.237	156	88.65	5.1	-	VANUATU
#-397	8	10	5	19	51.5	-18.865	-174.711	120	88.86	4.7	-	TONGA
#-398	8	10	8	20	31.7	11.051	91.841	10	88.08	5.8	6.1	ANDAMAN ISLANDS, INDIA REGION
#-399	8	10	12	21	11.9	10.939	91.721	13	87.94	5.4	5.4	ANDAMAN ISLANDS, INDIA REGION
#-400	8	10	13	1	30.6	10.978	91.836	2	88.01	5.1	-	ANDAMAN ISL, INDIA REGION
#-401	8	12	5	25	58.2	-11.424	166.220	38	91.57	5.2	5.4	SANTA CRUZ ISLANDS
#-402	8	12	6	9	5.3	-20.600	-177.406	346	86.64	5.1	-	FIJI REGION
#-403	8	13	8	35	1.9	83.675	114.812	10	156.67	5.4	4.9	NORTH OF SEVERNAYA ZEMLYA
#-404	8	14	11	10	29.4	44.017	147.552	10	136.94	5.5	-	KURIL ISLANDS
#-405	8	15	15	52	51.2	82.114	-17.542	10	153.86	5.0	-	NEAR N COAST OF GREENLAND
#-406	8	16	4	46	49.8	-16.698	-174.610	183	91.00	4.8	-	TONGA
#-407	8	16	5	3	58.0	-7.009	157.627	36	93.23	5.2	-	SOLOMON ISLANDS
#-408	8	16	7	25	57.4	5.707	61.234	10	76.28	5.1	4.4	CARLSBERG RIDGE
#-409	8	17	12	33	24.6	-29.435	-179.126	301	77.68	4.7	-	KERMADEC ISLANDS REGION
#-410	8	17	15	39	9.1	-52.845	-4.380	10	25.67	4.9	-	SOUTHERN MID-ATLANTIC RIDGE
#-411	8	17	20	54	49.5	-9.125	119.146	105	77.96	4.6	-	SUMBA REGION, INDONESIA
#-412	8	18	9	53	29.4	-19.682	179.938	531	86.99	5.2	-	SOUTH OF THE FIJI ISLANDS
#-413	8	19	8	33	55.5	-8.218	-13.492	10	69.56	5.3	-	ASCENSION ISLAND REGION

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
		h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-414	8 19	10	58	1.0	-28.436	-112.830	10	80.39	5.5	-	EASTER ISLAND REGION
#-415	8 19	13	37	28.0	-14.901	-173.228	10	93.02	5.1	-	SAMOA ISLANDS REGION
#-416	8 19	16	30	13.2	-15.023	-173.525	8	92.85	5.6	5.9	TONGA
#-417	8 21	8	33	23.9	-15.217	-173.237	10	92.71	5.3	-	TONGA
#-418	8 21	9	32	57.9	-25.183	-68.664	108	72.61	5.3	-	ANTOFAGASTA, CHILE
#-419	8 21	17	3	59.7	-25.108	-177.731	191	82.17	4.8	-	SOUTH OF THE FIJI ISLANDS
#-420	8 21	21	30	48.0	-0.380	119.610	60	86.29	4.9	-	MINAHASA, SULAWESI, INDONESIA
#-421	8 22	7	47	39.7	-17.797	65.440	6	53.79	5.5	5.7	MAURITIUS - REUNION REGION
#-422	8 22	10	59	49.5	36.477	140.391	44	127.73	5.1	-	NEAR E COAST HONSHU, JAPAN
#-423	8 22	17	39	7.4	-58.559	-24.899	55	28.51	4.7	-	SOUTH SANDWICH ISL REGION
#-424	8 22	21	3	24.7	-8.339	-74.236	147	90.26	5.2	-	CENTRAL PERU
#-425	8 23	4	47	18.1	-4.661	125.789	430	84.50	4.7	-	BANDA SEA
#-426	8 24	5	23	45.2	-33.259	-179.397	45	73.90	5.3	-	SOUTH OF KERMADEC ISLANDS
#-427	8 24	15	35	5.9	-21.231	-176.863	221	86.13	4.7	-	FIJI REGION
#-428	8 25	11	25	16.6	-39.652	176.483	10	66.89	5.4	-	NORTH ISLAND OF NEW ZEALAND
#-429	8 25	13	21	59.0	30.893	83.614	12	105.10	6.1	6.5	WESTERN XIZANG
#-430	8 25	13	39	38.9	30.800	83.382	10	104.96	5.3	-	WESTERN XIZANG
#-431	8 26	8	7	8.6	-52.506	26.426	10	17.53	5.0	-	SOUTH OF AFRICA
#-432	8 26	8	23	2.2	-25.312	179.620	475	81.44	4.4	-	SOUTH OF THE FIJI ISLANDS
#-433	8 27	1	35	32.1	51.620	104.135	16	129.67	5.8	6.2	LAKE BAYKAL REGION, RUSSIA
#-434	8 27	4	42	6.9	-21.671	-65.574	278	74.87	5.0	-	POTOSI, BOLIVIA
#-435	8 27	6	46	19.4	-10.691	41.373	10	58.34	5.8	-	COMOROS REGION
#-436	8 28	2	59	37.7	-8.623	119.266	154	78.47	5.2	-	FLORES REGION
#-437	8 28	8	17	33.4	17.578	145.661	221	112.32	5.0	-	ALAMAGAN REG., N MARIANA ISLAND
#-438	8 28	8	56	44.0	-17.994	-178.513	577	88.96	4.5	-	FIJI REGION
#-439	8 28	12	37	34.8	50.183	-129.606	10	160.39	5.3	-	VANCOUVER ISLAND, CANADA REGION
#-440	8 28	15	22	24.9	-0.009	-17.421	16	78.57	5.8	-	NORTH OF ASCENSION ISLAND
#-441	8 28	23	56	49.9	-11.091	161.996	29	90.68	5.0	-	SOLOMON ISLANDS
#-442	8 29	10	20	55.3	1.050	121.039	560	88.13	5.0	-	MINAHASA, SULAWESI, IND.
#-443	8 30	6	54	7.6	-6.154	147.302	75	90.67	6.1	-	EASTERN NEW GUINEA REG, P.N.G.
#-444	8 30	8	30	54.0	26.276	101.918	17	105.49	5.7	5.8	SICHUAN-YUNNAN BORDER REG., CHINA
#-445	8 30	10	34	6.2	-28.738	-177.342	53	78.70	5.1	-	KERMADEC ISLANDS REGION

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-446	8	30	14	48	23.7	-7.035	155.852	82	92.65	5.0	-	SOLOMON ISLANDS
#-447	8	31	1	15	25.1	-61.211	-67.764	10	39.78	5.6	4.9	DRAKE PASSAGE
#-448	8	31	6	52	1.7	-22.262	-68.181	128	75.18	4.7	-	ANTOFAGASTA, CHILE
#-449	9	1	1	21	49.2	-39.131	175.604	66	67.21	5.2	-	NORTH ISLAND OF NEW ZEALAND
#-450	9	1	4	0	39.4	-25.390	-177.686	171	81.90	5.7	-	SOUTH OF THE FIJI ISLANDS
#-451	9	1	5	31	26.0	-15.305	-176.363	20	92.02	5.1	-	FIJI REGION
#-452	9	1	6	14	27.2	-23.324	-179.917	556	83.47	5.2	-	SOUTH OF THE FIJI ISLANDS
#-453	9	1	7	6	16.8	-15.254	-176.399	10	92.07	5.4	5.6	FIJI REGION
#-454	9	1	11	1	18.6	-22.899	-174.899	51	84.87	5.2	-	TONGA REGION
#-455	9	1	17	19	11.5	4.544	126.054	109	93.18	5.7	-	KEPULAUAN TALAUD, INDONESIA
#-456	9	1	20	53	28.2	29.723	139.327	377	121.24	5.0	-	IZU ISLANDS, JAPAN REGION
#-457	9	2	9	0	4.3	0.599	98.038	35	79.95	5.1	-	NIAS REGION, INDONESIA
#-458	9	2	11	0	4.0	-8.391	120.493	194	79.12	5.1	-	FLORES REGION, INDONESIA
#-459	9	2	11	28	12.4	-5.839	145.561	67	90.37	5.0	-	E NEW GUINEA REG, P.N.G.
#-460	9	2	18	41	41.3	-20.508	169.243	49	83.66	5.2	-	VANUATU
#-461	9	2	20	1	5.4	-15.370	-173.281	17	92.55	5.4	-	TONGA
#-462	9	3	11	25	14.3	-26.725	-63.196	570	69.38	5.8	-	SANTIAGO DEL ESTERO, ARGENTINA
#-463	9	3	12	16	6.3	-10.435	161.304	139	91.10	5.2	-	SOLOMON ISLANDS
#-464	9	4	16	9	50.9	-31.537	-177.818	22	75.88	5.4	-	KERMADEC ISLANDS REGION
#-465	9	5	5	12	13.2	-26.686	-70.791	42	71.89	4.7	-	OFFSHORE ATACAMA, CHILE
#-466	9	5	12	35	47.8	-13.234	166.853	183	90.01	5.3	-	VANUATU
#-467	9	5	16	45	54.8	-55.744	-26.736	53	31.29	4.8	-	SOUTH SANDWICH ISL. REGION
#-468	9	6	5	47	40.1	36.504	70.916	192	108.12	5.5	-	HINDU KUSH REGION, AFGHANISTAN
#-469	9	6	11	38	56.8	28.268	138.920	523	119.77	5.0	-	BONIN ISLANDS, JAPAN REGION
#-470	9	6	23	2	2.6	-7.324	130.885	35	83.84	4.9	-	KEPULAUAN TANIMBAR REG, IND.
#-471	9	7	2	5	33.7	-23.715	69.487	10	48.84	5.4	5.0	MID-INDIAN RIDGE
#-472	9	7	9	0	28.6	12.926	92.392	41	90.03	5.2	-	ANDAMAN ISL, INDIA REGION
#-473	9	8	10	43	29.9	-2.216	100.482	67	78.05	5.2	-	KEPULAUAN MENTAWAI REGION, IND.
#-474	9	8	18	52	8.2	-13.514	166.967	122	89.77	6.4	-	VANUATU
#-475	9	8	19	51	45.0	-17.529	179.528	613	88.99	5.2	-	FIJI
#-476	9	9	3	7	32.1	-3.853	103.162	61	77.38	5.4	-	SOUTHERN SUMATRA, INDONESIA
#-477	9	9	13	53	52.8	-19.670	-177.920	470	87.44	4.7	-	FIJI REGION

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep (km)	Epicentral distance (deg)	Magnitude Mb	Ms	Region
			h	m	s	(deg)	(deg)					
#-478	9	10	3	0	30.7	2.491	96.298	42	81.21	5.2	-	SIMEULUE, INDONESIA
#-479	9	10	11	0	34.7	26.823	55.825	15	96.62	6.1	6.0	SOUTHERN IRAN
#-450	9	10	13	8	14.9	8.090	-38.748	10	93.22	6.2	6.5	CENTRAL MID-ATLANTIC RIDGE
#-451	9	10	16	12	3.9	-20.234	-69.131	38	77.39	5.6	5.3	TARAPACA, CHILE
#-452	9	11	17	11	34.5	-19.651	-69.040	106	77.91	5.1	-	TARAPACA, CHILE
#-453	9	12	23	7	51.0	56.352	164.054	15	153.02	5.5	5.7	KOMANDORSKIYE OSTROVA, RUSSIA REG.
#-454	9	12	23	49	52.9	56.219	164.298	10	153.01	5.1	-	KOMANDORSKIYE OSTROVA, RUSSIA REG.
#-455	9	13	0	4	4.9	-3.776	128.939	102	86.45	5.5	-	SERAM, INDONESIA
#-456	9	13	7	32	16.0	-21.269	167.924	52	82.59	5.3	-	LOYALTY ISLANDS
#-457	9	13	9	32	1.3	4.779	-75.489	132	103.05	6.0	-	COLOMBIA
#-458	9	13	15	45	26.4	-48.718	-113.139	10	60.49	4.8	-	SOUTHERN EAST PACIFIC RISE
#-459	9	13	19	19	13.7	-20.237	-177.803	388	86.91	4.7	-	FIJI REGION
#-460	9	14	0	0	8.4	-8.739	126.871	18	81.08	5.7	5.5	EAST TIMOR REGION
#-461	9	14	18	51	7.4	-7.459	128.197	139	82.75	5.1	-	KEPULAUAN BARAT DAYA, IND.
#-462	9	14	20	18	53.5	-23.610	-177.321	198	83.71	4.9	-	SOUTH OF THE FIJI ISLANDS
#-463	9	15	2	31	36.5	-20.108	-177.743	504	87.05	4.5	-	FIJI REGION
#-464	9	15	5	41	48.6	51.434	-178.323	53	155.17	5.2	-	ANDREANOF ISL, ALEUTIAN IS., ALASKA
#-465	9	15	15	50	51.4	-4.993	30.211	10	64.28	4.8	-	LAKE TANGANYIKA REGION, TANZANIA
#-466	9	15	23	36	52.8	-24.142	-66.772	157	72.97	5.2	-	SALTA, ARGENTINA
#-467	9	16	7	28	25.2	0.954	-29.017	10	83.20	5.2	-	CENTRAL MID-ATLANTIC RIDGE
#-468	9	16	8	5	17.8	-25.979	-177.632	194	81.34	4.6	-	SOUTH OF THE FIJI ISLANDS
#-469	9	16	9	46	58.2	-16.623	-172.704	35	91.43	5.2	-	SAMOA ISLANDS REGION
#-470	9	16	11	15	41.3	-8.741	126.855	35	81.07	5.9	-	EAST TIMOR REGION
#-471	9	16	21	56	41.1	-20.201	-68.389	114	77.18	4.9	-	POTOSI, BOLIVIA
#-472	9	18	11	58	50.8	51.969	158.346	67	147.52	5.7	-	NR THE E COAST OF KAMCHATKA, RUSSIA
#-473	9	18	18	46	45.3	-4.712	153.271	84	94.01	5.0	-	NEW IRELAND REG, P.N.G.
#-474	9	18	20	32	45.4	10.917	91.783	13	87.94	5.3	-	ANDAMAN ISL, INDIA REGION
#-475	9	19	3	24	42.4	-17.558	-178.584	584	89.37	4.4	-	FIJI REGION
#-476	9	19	17	29	53.5	-24.529	-175.856	53	83.10	4.8	-	SOUTH OF TONGA
#-477	9	19	18	34	24.3	-23.990	-175.907	56	83.61	5.1	-	TONGA REGION
#-478	9	19	21	17	35.4	-7.098	-13.025	10	70.48	4.9	-	ASCENSION ISLAND REGION
#-479	9	19	22	49	3.3	-11.167	164.491	29	91.33	5.4	5.1	SANTA CRUZ ISLANDS REGION

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-480	9	20	2	54	37.5	38.420	73.423	146	110.40	5.3	-	TAJIKISTAN
#-481	9	20	4	0	23.7	-29.309	-70.506	68	69.35	4.6	-	COQUIMBO, CHILE
#-482	9	20	4	52	27.1	14.459	-92.211	61	117.50	5.2	-	OFFSHORE GUATEMALA
#-483	9	20	5	16	10.5	63.588	-129.029	10	172.78	5.2	-	NORTHWEST TERRITORIES, CANADA
#-484	9	20	14	43	5.4	-16.126	-73.761	42	82.75	5.4	4.8	NEAR THE COAST OF SOUTHERN PERU
#-485	9	20	19	27	23.3	-7.080	126.256	445	82.41	4.7	-	KEPULAUAN BARAT DAYA, IND.
#-486	9	21	7	5	46.9	-3.976	141.437	102	90.70	4.9	-	NEW GUINEA, PAPUA NEW GUINEA
#-487	9	21	12	38	51.9	-23.103	179.427	519	83.55	4.5	-	SOUTH OF THE FIJI ISLANDS
#-488	9	21	16	23	20.8	-17.730	-178.619	562	89.19	4.4	-	FIJI REGION
#-489	9	21	18	50	17.6	-31.363	-179.996	340	75.63	5.2	-	KERMADEC ISLANDS REGION
#-490	9	22	8	17	23.5	-5.987	150.982	33	92.06	5.2	-	NEW BRITAIN REG, P.N.G.
#-491	9	22	13	10	45.5	-24.251	-175.906	35	83.36	4.7	-	SOUTH OF TONGA
#-492	9	22	13	30	38.2	15.563	96.112	35	93.62	5.4	4.9	NEAR SOUTH COAST OF MYANMAR
#-493	9	22	17	53	29.0	-9.765	160.214	35	91.41	4.9	-	SOLOMON ISLANDS
#-494	9	22	20	20	59.3	-23.445	-179.574	540	83.42	5.3	-	SOUTH OF THE FIJI ISLANDS
#-495	9	23	15	20	9.0	-24.298	-175.427	35	83.40	4.7	-	SOUTH OF TONGA
#-496	9	24	2	33	5.4	17.635	-105.521	10	124.12	5.7	6.2	OFF THE COAST OF COLIMA, MEXICO
#-497	9	24	6	0	50.5	-10.213	161.398	93	91.34	5.1	-	SOLOMON ISLANDS
#-498	9	24	17	12	16.1	-22.687	-12.771	10	55.63	5.4	-	SOUTHERN MID-ATLANTIC RIDGE
#-499	9	25	4	48	53.8	-16.108	-173.572	113	91.77	4.3	-	TONGA
#-500	9	26	5	48	51.9	-17.636	-178.239	572	89.36	4.8	-	FIJI REGION
#-501	9	26	7	23	3.3	-42.218	173.818	23	63.87	4.9	-	SOUTH ISLAND OF NEW ZEALAND
#-502	9	26	18	34	3.4	-15.338	-74.393	52	83.70	4.6	-	NEAR COAST OF SOUTHERN PERU
#-503	9	26	18	46	18.7	3.106	65.431	10	74.35	5.4	5.4	CARLSBERG RIDGE
#-504	9	26	23	10	4.6	-5.688	130.712	109	85.30	5.3	-	BANDA SEA
#-505	9	27	3	4	51.8	13.453	120.612	10	99.57	5.5	-	MINDORO, PHILIPPINES
#-506	9	27	3	9	4.9	13.470	120.603	10	99.59	5.7	5.6	MINDORO, PHILIPPINES
#-507	9	27	3	29	33.6	-15.551	167.441	200	87.95	4.9	-	VANUATU
#-508	9	28	13	42	57.6	-6.318	130.176	144	84.52	5.1	-	BANDA SEA
#-509	9	28	15	34	12.7	-35.880	-101.230	10	71.09	4.7	-	SOUTHEAST OF EASTER ISLAND
#-510	9	29	13	3	58.0	-24.086	-66.999	120	73.09	4.6	-	SALTA, ARGENTINA
#-511	9	29	15	19	31.8	-29.749	-177.678	36	77.65	6.5	6.7	KERMADEC ISLANDS, NEW ZEALAND

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-512	9	29	16	10	38.2	-29.909	-177.633	35	77.50	5.3	-	KERMADEC ISL, NEW ZEALAND
#-513	9	30	7	35	21.6	-9.569	124.564	35	79.48	4.6	-	TIMOR REGION
#-514	10	1	3	12	25.2	1.816	96.779	27	80.71	4.8	-	NIAS REGION, INDONESIA
#-515	10	1	6	19	47.7	-17.698	-178.727	567	89.20	4.8	-	FIJI REGION
#-516	10	1	14	15	53.3	-0.863	33.868	25	68.23	4.6	-	LAKE VICTORIA REGION, UGANDA
#-517	10	1	17	3	47.1	-34.962	-70.640	99	64.13	5.1	-	MAULE, CHILE
#-518	10	2	13	3	2.9	-31.097	-178.028	49	76.27	5.2	-	KERMADEC ISLANDS REGION
#-519	10	2	23	28	9.2	-23.003	169.844	10	81.42	5.7	5.4	SOUTHEAST OF THE LOYALTY ISLANDS
#-520	10	3	0	25	27.1	-23.016	169.691	10	81.37	5.2	4.8	SOUTHEAST OF THE LOYALTY ISLANDS
#-521	10	3	3	40	28.2	-22.315	171.149	10	82.41	5.3	-	SOUTHEAST OF THE LOYALTY ISLANDS
#-522	10	3	5	26	21.5	7.493	-36.898	5	92.02	5.1	5.1	CENTRAL MID-ATLANTIC RIDGE
#-523	10	3	5	30	27.1	7.417	-37.507	10	92.16	5.2	-	CENTRAL MID-ATLANTIC RIDGE
#-524	10	3	8	34	5.6	-15.317	-173.485	10	92.57	4.9	-	TONGA
#-525	10	4	7	56	52.5	-59.314	-25.950	35	28.32	5.8	5.3	SOUTH SANDWICH ISLANDS REGION
#-526	10	4	11	47	6.0	-38.820	-91.169	10	66.10	5.0	-	WEST CHILE RISE
#-527	10	4	14	50	31.7	-30.449	-177.260	46	77.05	5.4	-	KERMADEC ISLANDS, NEW ZEALAND
#-528	10	5	9	12	36.1	-30.208	-177.177	10	77.30	5.8	6.2	KERMADEC ISLANDS, NEW ZEALAND
#-529	10	5	10	44	56.2	-30.607	-176.845	10	76.97	5.2	-	KERMADEC ISLANDS REGION
#-529	10	5	14	9	50.1	-31.156	-177.721	35	76.27	5.2	-	KERMADEC ISLANDS REGION
#-530	10	5	15	52	49.3	39.515	73.768	28	111.53	6.3	6.9	KYRGYZSTAN
#-531	10	6	0	18	28.4	-18.323	-68.734	135	79.05	5.1	-	ORURO, BOLIVIA
#-532	10	6	8	30	45.8	29.761	90.320	12	105.61	6.1	6.2	EASTERN XIZANG
#-533	10	6	12	43	58.8	5.403	94.503	54	83.45	4.9	-	NORTHERN SUMATRA, INDONESIA
#-534	10	6	20	56	29.8	-15.265	-177.119	397	91.91	4.8	-	FIJI REGION
#-535	10	7	14	18	24.2	-5.577	128.651	341	84.67	4.4	-	BANDA SEA
#-536	10	8	9	15	29.9	-12.092	166.564	109	91.03	5.1	-	SANTA CRUZ ISLANDS
#-537	10	8	11	51	48.2	-36.933	-96.027	10	69.00	4.9	-	WEST CHILE RISE
#-538	10	11	9	6	10.8	43.388	46.306	16	112.53	5.7	5.5	CAUCASUS REGION, RUSSIA
#-539	10	11	10	40	13.8	19.160	-64.786	23	112.77	6.2	5.9	VIRGIN ISLANDS REGION
#-540	10	11	12	23	30.0	-29.789	-176.907	35	77.76	5.4	-	KERMADEC ISLANDS REGION
#-541	10	12	20	55	42.1	-20.060	-64.940	356	76.16	6.0	-	CHUQUISACA, BOLIVIA
#-542	10	13	12	7	48.7	-21.203	-174.660	46	86.58	5.1	-	TONGA

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-543	10	14	16	52	52.7	-21.489	-178.139	404	85.62	5.0	-	FIJI REGION
#-544	10	14	19	51	35.7	4.044	69.003	10	75.90	5.0	-	NORTH INDIAN OCEAN
#-545	10	15	14	28	18.4	-16.078	166.780	67	87.26	5.3	-	VANUATU
#-546	10	15	16	35	51.5	-6.522	129.506	172	84.09	4.6	-	BANDA SEA
#-547	10	18	0	54	40.9	-6.967	147.233	90	89.88	5.8	-	EASTERN NEW GUINEA REG, P.N.G.
#-548	10	18	10	26	41.8	-20.518	-177.892	536	86.62	4.7	-	FIJI REGION
#-549	10	19	2	56	14.8	-55.901	-28.206	168	31.69	4.9	-	SOUTH SANDWICH ISL REGION
#-550	10	19	5	10	33.8	-21.864	-173.814	29	86.08	6.8	7.0	TONGA
#-551	10	19	12	55	2.1	-21.960	-173.697	12	86.01	5.8	5.3	TONGA
#-552	10	20	3	39	17.3	-60.550	-51.834	10	35.86	5.2	-	SCOTIA SEA
#-553	10	20	4	54	22.1	0.109	120.637	121	87.11	6.1	-	MINAHASA, SULAWESI, INDONESIA
#-554	10	21	13	0	49.6	-7.435	127.762	148	82.61	5.4	-	KEPULAUAN BARAT DAYA, INDONESIA
#-555	10	21	21	21	54.0	-10.424	-13.129	10	67.35	5.1	-	ASCENSION ISLAND REGION
#-556	10	22	3	52	24.3	-31.742	-177.311	48	75.78	5.0	-	KERMADEC ISLANDS REGION
#-557	10	22	9	10	39.0	-26.085	-177.648	170	81.23	4.8	-	SOUTH OF THE FIJI ISLANDS
#-558	10	22	12	55	57.3	-18.418	-175.356	233	89.17	5.8	-	TONGA
#-559	10	22	17	3	47.9	-24.668	-178.790	378	82.39	5.2	-	SOUTH OF THE FIJI ISLANDS
#-560	10	23	9	21	14.9	5.962	125.790	128	94.41	5.8	-	MINDANAO, PHILIPPINES
#-561	10	23	10	4	35.3	-2.634	145.563	10	93.39	6.0	6.3	ADMIRALTY ISLANDS REG., P.N.G.
#-562	10	24	0	26	9.4	-26.580	-177.446	128	80.79	5.1	-	SOUTH OF THE FIJI ISLANDS
#-563	10	25	7	21	23.9	-22.253	170.672	35	82.35	5.1	-	SOUTHEAST OF LOYALTY ISLANDS
#-564	10	25	19	24	53.4	-17.189	167.231	41	86.32	5.7	-	VANUATU
#-565	10	26	1	28	56.2	36.528	70.669	210	108.10	5.6	-	HINDU KUSH REGION, AFGHANISTAN
#-566	10	26	4	56	10.7	-5.573	-11.477	10	71.49	4.9	-	ASCENSION ISLAND REGION
#-567	10	26	9	8	34.7	-0.139	123.023	80	87.73	5.5	-	SULAWESI, INDONESIA
#-568	10	26	9	43	18.7	-20.687	-179.038	616	86.22	4.6	-	FIJI REGION
#-569	10	27	5	43	50.1	-14.646	167.223	127	88.76	5.1	-	VANUATU
#-570	10	27	8	54	9.2	-20.974	-70.357	35	77.10	4.3	-	OFFSHORE TARAPACA, CHILE
#-571	10	27	19	8	17.0	-27.239	-69.318	113	70.90	4.9	-	ATACAMA, CHILE
#-572	10	28	15	23	50.2	-32.464	-71.809	28	66.81	4.7	-	OFFSHORE VALPARAISO, CHILE
#-573	10	28	15	56	7.9	-23.891	-179.957	522	82.91	4.9	-	SOUTH OF THE FIJI ISLANDS
#-574	10	28	16	0	2.8	-3.515	145.863	16	92.66	5.4	5.9	NR N COAST OF NEW GUINEA, P.N.G.

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-575	10	29	11	32	43.4	30.567	67.520	14	101.76	6.1	6.6	PAKISTAN
#-576	10	29	22	17	1.2	4.193	126.631	61	93.06	5.2	-	KEPULAUAN TALAUD, INDONESIA
#-577	10	30	1	32	40.1	-24.005	-70.344	27	74.25	5.3	-	ANTOFAGASTA, CHILE
#-578	10	30	7	19	4.4	-16.489	-173.578	96	91.40	4.8	-	TONGA
#-579	10	30	22	38	11.7	1.426	126.998	94	90.61	5.0	-	MOLUCCA SEA
#-580	10	31	13	29	40.8	-11.637	66.277	10	59.99	4.7	-	MID-INDIAN RIDGE
#-581	10	31	13	30	1.5	-11.476	66.481	10	60.18	5.2	-	MID-INDIAN RIDGE
#-582	10	31	22	10	36.0	51.617	-174.427	45	156.56	5.1	-	ANDREANOF ISL, ALEUTIAN IS., ALASKA
#-583	11	1	1	13	9.6	-3.410	148.691	10	93.72	5.3	5.8	BISMARCK SEA
#-584	11	1	1	34	26.5	-6.642	129.258	10	83.89	5.4	-	BANDA SEA
#-585	11	2	13	48	42.8	51.612	-174.382	36	156.57	5.7	5.8	ANDREANOF ISL, ALEUTIAN IS., ALASKA
#-586	11	2	15	1	0.3	-29.985	-177.044	45	77.54	5.2	-	KERMADEC ISLANDS, NEW ZEALAND
#-587	11	3	7	18	2.6	-4.453	154.130	413	94.54	4.4	-	BOUGAINVILLE REG, P.N.G.
#-588	11	3	19	22	2.3	1.201	97.281	35	80.28	5.4	-	NIAS REGION, INDONESIA
#-589	11	3	19	36	21.3	-16.286	-176.325	370	91.07	5.1	-	FIJI REGION
#-590	11	3	21	40	6.5	51.537	159.421	36	147.55	5.0	-	OFF E CST KAMCHATKA, RUSSIA
#-591	11	4	7	38	29.6	-36.940	-96.114	10	69.01	4.9	-	WEST CHILE RISE
#-592	11	4	10	31	58.9	-27.772	-70.974	14	70.93	4.5	-	ATACAMA, CHILE
#-593	11	4	18	35	45.1	-17.122	168.425	207	86.70	5.7	-	VANUATU
#-594	11	5	1	9	24.3	-31.197	179.524	452	75.69	4.6	-	KERMADEC ISLANDS REGION
#-595	11	5	3	41	43.4	-17.241	-174.428	187	90.50	5.1	-	TONGA
#-596	11	6	14	57	38.7	-6.405	154.911	88	92.94	4.9	-	BOUGAINVILLE REG, P.N.G.
#-597	11	6	22	44	42.7	-18.625	169.105	223	85.44	5.1	-	VANUATU
#-598	11	7	7	19	35.4	-14.862	168.049	13	88.77	6.0	6.3	VANUATU
#-599	11	7	8	43	17.7	-24.069	178.696	547	82.45	4.9	-	SOUTH OF THE FIJI ISLANDS
#-600	11	8	7	49	58.9	-15.198	-174.277	121	92.53	5.4	-	TONGA
#-601	11	8	9	15	51.8	-15.220	-174.210	140	92.53	5.3	-	TONGA
#-602	11	8	11	57	25.6	-38.147	176.030	203	68.25	4.4	-	NORTH ISLAND OF NEW ZEALAND
#-603	11	8	20	55	37.7	-6.749	129.283	10	83.80	4.6	-	BANDA SEA
#-604	11	9	10	38	47.9	-7.171	129.465	75	83.47	5.3	-	KEPULAUAN BABAR, INDONESIA
#-605	11	9	23	28	18.8	-30.632	-70.685	89	68.17	4.8	-	COQUIMBO, CHILE
#-606	11	10	1	22	2.6	37.589	95.836	19	114.47	6.4	6.4	NORTHERN QINGHAI, CHINA

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-607	11	10	8	58	40.7	-0.247	100.013	35	79.77	5.2	-	SOUTHERN SUMATRA, INDONESIA
#-608	11	10	9	52	1.8	-32.069	-179.214	121	75.09	5.2	-	SOUTH OF KERMADEC ISLANDS
#-609	11	10	16	0	30.1	-8.825	-79.156	67	91.37	4.6	-	NEAR COAST OF NORTHERN PERU
#-610	11	10	17	15	15.3	-6.682	130.268	128	84.21	4.6	-	BANDA SEA
#-611	11	12	0	22	6.0	-7.468	-74.395	156	91.13	4.8	-	NORTHERN PERU
#-612	11	12	2	4	51.8	6.982	126.340	45	95.56	5.0	-	MINDANAO, PHILIPPINES
#-613	11	12	17	3	9.3	-17.395	167.152	49	86.10	4.9	-	VANUATU
#-614	11	13	10	31	35.3	-21.761	-178.132	370	85.36	5.0	-	FIJI REGION
#-615	11	13	15	10	16.0	-55.985	-27.251	88	31.29	5.5	-	SOUTH SANDWICH ISLANDS REGION
#-616	11	13	16	2	9.1	-56.950	-140.520	10	54.04	4.7	4.8	PACIFIC-ANTARCTIC RIDGE
#-617	11	14	1	48	37.1	43.494	-127.398	10	153.53	5.3	4.8	OFF THE COAST OF OREGON
#-618	11	14	2	5	9.4	-53.734	8.681	10	20.66	5.6	5.5	BOUVET ISLAND REGION
#-619	11	14	2	43	54.4	-53.825	8.584	10	20.61	5.1	-	BOUVET ISLAND REGION
#-620	11	14	22	53	1.4	-21.616	170.535	161	82.93	5.5	-	SOUTHEAST OF THE LOYALTY ISLANDS
#-621	11	15	4	3	25.5	51.436	-175.036	49	156.21	5.1	-	ANDREANOF ISL., ALEUTIAN IS., ALASKA
#-622	11	15	21	58	29.9	-19.086	168.482	54	84.83	5.1	-	VANUATU
#-623	11	16	2	52	54.3	13.069	51.088	10	82.52	4.7	-	GULF OF ADEN
#-624	11	16	12	20	37.4	10.836	91.727	30	87.85	5.4	-	ANDAMAN ISLANDS, INDIA REGION
#-625	11	16	13	36	37.6	-8.974	110.189	44	74.94	4.5	-	JAVA, INDONESIA
#-626	11	16	17	2	32.6	1.290	122.100	30	88.74	6.5	7.0	MINAHASA, SULAWESI, INDONESIA
#-627	11	16	17	34	38.6	1.314	122.122	35	88.77	5.6	-	MINAHASA, SULAWESI, INDONESIA
#-628	11	16	18	20	32.5	1.135	121.769	35	88.47	5.5	-	MINAHASA, SULAWESI, INDONESIA
#-629	11	16	19	12	49.0	-43.601	-72.024	79	56.58	4.8	-	LOS LAGOS, CHILE
#-630	11	16	22	33	47.3	1.367	122.263	10	88.87	5.1	-	MINAHASA, SULAWESI, INDONESIA
#-631	11	17	6	0	59.1	-5.668	128.804	308	84.64	5.3	-	BANDA SEA
#-632	11	17	11	31	53.2	-11.478	166.096	86	91.48	5.0	-	SANTA CRUZ ISLANDS
#-633	11	17	13	16	34.9	-16.823	171.989	38	87.91	5.3	-	VANUATU REGION
#-634	11	17	13	40	11.3	79.698	-115.453	10	167.52	5.1	-	ARCTIC OCEAN
#-635	11	18	4	52	51.3	79.742	-115.331	10	167.48	5.3	-	ARCTIC OCEAN
#-636	11	18	5	46	55.5	4.789	124.825	316	92.98	4.8	-	CELEBES SEA
#-637	11	18	11	12	22.7	-19.002	169.517	38	85.18	5.1	-	VANUATU
#-638	11	18	12	46	3.3	-19.196	169.064	10	84.88	5.0	-	VANUATU

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-639	11	18	14	3	17.2	-18.892	169.479	54	85.28	5.5	5.3	VANUATU
#-640	11	18	14	38	49.9	-18.890	169.582	54	85.31	5.4	4.7	VANUATU
#-641	11	18	20	41	31.1	-4.441	152.743	87	94.10	4.9	-	NEW BRITAIN REG, P.N.G.
#-642	11	19	17	14	19.8	8.648	93.633	41	86.29	5.4	-	NICOBAR ISL, INDIA REGION
#-643	11	19	20	38	58.8	-22.160	-179.724	596	84.64	5.2	-	SOUTH OF THE FIJI ISLANDS
#-644	11	21	4	55	54.5	0.110	123.590	152	88.16	4.8	-	MINAHASA, SULAWESI, IND.
#-645	11	21	6	58	29.1	-55.530	-26.067	35	31.22	5.0	-	SOUTH SANDWICH ISL REGION
#-646	11	21	7	5	35.0	-8.948	159.558	118	91.99	6.0	-	SOLOMON ISLANDS
#-647	11	21	13	55	44.7	-14.778	167.114	130	88.60	4.9	-	VANUATU
#-648	11	21	23	7	43.7	-24.178	-69.197	47	73.72	5.0	-	ANTOFAGASTA, CHILE
#-649	11	22	16	0	59.1	-4.411	101.218	10	76.21	5.9	-	SOUTHERN SUMATRA, INDONESIA
#-650	11	22	16	1	39.6	-22.503	171.165	59	82.23	5.7	-	SOUTHEAST OF THE LOYALTY ISLANDS
#-651	11	22	16	11	46.7	-4.531	101.358	10	76.14	5.7	-	SOUTHERN SUMATRA, INDONESIA
#-652	11	22	17	22	34.7	-22.389	171.289	56	82.37	5.5	-	SOUTHEAST OF LOYALTY ISLANDS
#-653	11	22	18	49	42.5	-1.159	-13.925	10	76.42	5.9	-	NORTH OF ASCENSION ISLAND
#-654	11	22	20	25	52.3	-9.056	-75.578	43	90.01	5.1	-	CENTRAL PERU
#-655	11	23	7	53	45.3	-20.251	-175.570	170	87.34	5.1	-	TONGA
#-656	11	23	8	58	18.3	-22.455	171.294	40	82.31	5.3	-	SOUTHEAST OF THE LOYALTY ISLANDS
#-657	11	23	9	12	8.9	-22.537	171.266	89	82.22	4.8	-	SOUTHEAST OF THE LOYALTY ISLANDS
#-658	11	23	11	57	48.5	-4.650	153.045	74	94.00	5.2	-	NEW IRELAND REG, P.N.G.
#-659	11	23	12	18	53.6	-21.527	-177.083	272	85.80	4.7	-	FIJI REGION
#-660	11	25	6	3	16.3	-19.619	169.969	94	84.70	4.9	-	VANUATU
#-661	11	25	15	4	44.5	-22.775	-175.225	35	84.93	5.3	-	TONGA REGION
#-662	11	25	15	5	37.9	-21.905	33.324	10	47.23	5.0	-	MOZAMBIQUE
#-663	11	26	2	10	42.1	-22.842	-175.734	117	84.77	4.6	-	TONGA REGION
#-664	11	26	4	2	8.3	-20.437	169.267	48	83.74	5.3	-	VANUATU
#-665	11	26	4	47	1.7	-4.952	68.560	10	66.98	4.9	-	CHAGOS ARCHIPELAGO REGION
#-666	11	27	3	4	57.4	-15.857	-73.473	76	82.92	5.1	-	S PERU
#-667	11	27	9	17	48.0	-41.612	85.069	10	36.31	5.2	-	SOUTHEAST INDIAN RIDGE
#-668	11	27	17	31	27.5	-17.759	167.579	10	85.87	5.5	-	VANUATU
#-669	11	28	1	34	5.9	-22.774	-175.309	70	84.92	5.2	-	TONGA REGION
#-670	11	28	3	11	49.4	-22.995	-175.143	66	84.73	4.8	-	TONGA REGION

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-671	11	28	8	50	48.2	-4.745	101.739	27	76.07	5.7	5.9	SOUTHERN SUMATRA, INDONESIA
#-672	11	29	5	59	16.6	-18.692	-177.716	386	88.44	5.7	-	FIJI REGION
#-673	12	2	17	5	56.9	-20.313	169.712	163	83.97	5.0	-	VANUATU
#-674	12	3	11	37	5.0	53.072	159.574	44	148.85	5.2	-	NR E COAST KAMCHATKA, RUSSIA
#-675	12	4	16	47	9.7	-21.288	-68.150	115	76.08	5.5	-	POTOSI, BOLIVIA
#-676	12	4	22	50	3.2	52.972	152.753	538	146.33	4.3	-	NORTHWEST OF KURIL ISLANDS
#-677	12	5	23	24	37.0	8.756	94.117	28	86.54	5.1	-	NICOBAR ISL, INDIA REGION
#-678	12	6	0	43	7.0	8.749	94.027	25	86.50	5.1	-	NICOBAR ISL, INDIA REGION
#-679	12	6	6	21	48.3	-27.858	-176.621	35	79.70	4.9	-	KERMADEC ISLANDS REGION
#-680	12	6	23	36	47.0	-19.375	-175.938	262	88.12	4.9	-	TONGA
#-681	12	7	13	36	20.5	26.957	55.874	10	96.76	5.6	5.2	SOUTHERN IRAN
#-682	12	7	15	31	23.7	51.478	151.733	443	144.75	4.7	-	SEA OF OKHOTSK
#-683	12	7	15	49	57.9	-29.942	-177.891	56	77.42	5.1	-	KERMADEC ISL, NEW ZEALAND
#-684	12	8	2	58	8.8	48.858	156.276	32	144.20	5.0	-	EAST OF THE KURIL ISLANDS
#-685	12	8	13	58	43.7	-29.200	-71.082	53	69.63	4.7	-	COQUIMBO, CHILE
#-686	12	8	14	41	43.3	26.920	55.850	6	96.72	5.4	4.7	S IRAN
#-687	12	9	5	33	15.4	1.209	126.897	81	90.37	5.1	-	MOLUCCA SEA
#-688	12	9	6	24	0.1	-31.090	-176.970	18	76.48	6.2	6.7	KERMADEC ISLANDS REGION
#-689	12	9	9	29	23.2	-5.847	150.832	73	92.14	5.3	-	NEW BRITAIN REG, P.N.G.
#-690	12	9	15	31	50.2	-2.774	139.340	47	91.09	5.6	5.4	NEAR THE NORTH COAST OF PAPUA, IND.
#-691	12	9	18	51	14.1	-20.829	-178.871	585	86.12	5.1	-	FIJI REGION
#-692	12	9	20	8	49.4	-20.212	-178.719	617	86.75	5.1	-	FIJI REGION
#-693	12	9	21	0	51.4	7.693	92.237	30	84.98	5.2	-	NICOBAR ISL, INDIA REGION
#-694	12	10	10	35	15.8	-31.782	-177.895	277	75.63	4.7	-	KERMADEC ISLANDS REGION
#-695	12	10	13	15	36.7	-12.348	166.525	72	90.77	5.7	-	SANTA CRUZ ISLANDS
#-696	12	11	16	29	10.6	-19.081	-175.366	238	88.52	4.9	-	TONGA
#-697	12	11	16	40	36.3	-30.923	-176.623	10	76.70	4.8	-	KERMADEC ISLANDS REGION
#-698	12	11	20	55	1.4	-5.891	105.308	16	76.17	5.2	-	SUNDA STRAIT, INDONESIA
#-699	12	11	21	40	52.2	0.068	123.438	132	88.07	6.2	-	MINAHASA, SULAWESI, INDONESIA
#-700	12	12	10	46	18.0	-31.101	-176.838	10	76.49	5.1	-	KERMADEC ISLANDS REGION
#-701	12	13	8	45	36.4	-48.968	123.427	10	43.35	6.0	5.8	WESTERN INDIAN-ANTARCTIC RIDGE
#-702	12	13	8	59	41.5	-49.003	123.489	10	43.34	5.4	-	W INDIAN-ANTARCTIC RIDGE

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep (km)	Epicentral distance (deg)	Magnitude Mb	Ms	Region
			h	m	s	(deg)	(deg)					
#-703	12	13	19	0	37.0	-3.112	129.782	45	87.37	5.2	-	SERAM, INDONESIA
#-704	12	14	5	13	7.7	-58.814	-26.051	78	28.73	5.0	-	SOUTH SANDWICH ISL REGION
#-705	12	14	20	36	29.9	-60.123	-18.780	10	25.22	5.5	-	EAST OF THE SOUTH SANDWICH ISLANDS
#-706	12	16	10	19	39.8	-16.287	67.105	10	55.59	5.0	-	MID-INDIAN RIDGE
#-707	12	16	20	31	54.1	-31.229	-176.649	10	76.40	5.1	-	KERMADEC ISLANDS REGION
#-708	12	17	8	10	0.1	-7.244	147.767	58	89.80	5.0	-	E NEW GUINEA REG, P.N.G.
#-709	12	17	10	55	59.5	-17.774	-178.341	530	89.21	5.2	-	FIJI REGION
#-710	12	17	13	48	0.0	6.790	94.778	145	84.85	5.1	-	NICOBAR ISL., INDIA REGION
#-711	12	17	16	6	58.0	-6.066	103.490	35	75.40	5.6	4.6	SOUTHWEST OF SUMATRA, INDONESIA
#-712	12	17	20	34	0.5	-36.940	177.320	115	69.68	5.3	-	OFF E COAST OF N ISL, N.Z.
#-713	12	18	3	3	33.5	1.300	122.170	35	88.77	4.5	-	MINAHASA, SULAWESI, IND.
#-714	12	18	3	20	4.7	-17.021	168.586	256	86.84	5.2	-	VANUATU
#-715	12	18	6	22	19.1	-6.948	156.668	135	92.99	4.9	-	SOLOMON ISLANDS
#-716	12	18	15	50	17.3	2.306	127.130	108	91.48	5.5	-	MOLUCCA SEA
#-717	12	18	20	57	39.5	-23.482	179.978	543	83.29	5.3	-	SOUTH OF THE FIJI ISLANDS
#-718	12	19	1	27	20.2	-1.725	99.798	28	78.30	4.7	-	KEPULAUAN MENTAWAI REGION, IND.
#-719	12	19	7	30	6.0	-32.537	-72.020	12	66.81	5.2	-	OFFSHORE VALPARAISO, CHILE
#-720	12	19	8	6	11.3	1.267	126.879	58	90.42	5.0	-	MOLUCCA SEA
#-721	12	19	13	57	32.0	-32.523	-71.640	35	66.71	5.1	-	OFFSHORE VALPARAISO, CHILE
#-722	12	19	16	48	49.2	-32.522	-71.772	11	66.75	5.0	-	OFFSHORE VALPARAISO, CHILE
#-723	12	19	19	25	57.0	-32.475	-71.627	46	66.75	4.9	-	OFFSHORE VALPARAISO, CHILE
#-724	12	19	20	2	21.1	-9.967	160.465	47	91.29	5.2	-	SOLOMON ISLANDS
#-725	12	19	22	33	20.5	-9.941	160.366	35	91.29	5.4	-	SOLOMON ISLANDS
#-726	12	20	6	10	29.7	-31.150	-177.757	10	76.27	5.1	-	KERMADEC ISLANDS REGION
#-727	12	20	7	12	5.4	-23.999	-66.627	179	73.05	4.6	-	JUJUY, ARGENTINA
#-728	12	20	10	29	21.6	36.538	142.420	10	128.51	5.9	6.3	OFF THE EAST COAST OF HONSHU, JAPAN
#-729	12	20	11	29	36.8	-32.431	-71.769	35	66.83	5.0	-	OFFSHORE VALPARAISO, CHILE
#-730	12	20	16	43	8.7	-32.402	-71.923	12	66.91	4.9	-	OFFSHORE VALPARAISO, CHILE
#-731	12	20	17	7	0.8	-31.569	-68.068	106	66.47	5.3	-	SAN JUAN, ARGENTINA
#-732	12	20	17	44	45.0	-2.747	139.002	38	90.99	5.5	-	NEAR THE NORTH COAST OF PAPUA, IND.
#-733	12	20	20	44	42.4	-6.914	127.003	420	82.83	4.4	-	BANDA SEA
#-734	12	20	22	40	18.0	-30.237	-178.575	35	77.00	5.1	-	KERMADEC ISL, NEW ZEALAND

Table 2. Continued.

No.	Date		Origin time UTC			Geographic Coordinates Latitude	Longitude	Dep	Epicentral distance	Magnitude		Region
			h	m	s	(deg)	(deg)	(km)	(deg)	Mb	Ms	
#-735	12	21	6	48	14.6	-22.849	-67.914	103	74.55	4.7	-	ANTOFAGASTA, CHILE
#-736	12	21	13	47	51.9	4.786	95.014	54	83.01	5.5	5.1	NORTHERN SUMATRA, INDONESIA
#-737	12	22	13	52	40.7	-17.676	-69.067	144	79.77	4.8	-	LA PAZ, BOLIVIA
#-738	12	22	18	6	31.9	-17.314	-172.610	35	90.77	5.0	-	TONGA REGION
#-739	12	23	0	44	30.4	-23.133	-174.681	39	84.68	5.0	-	TONGA REGION
#-740	12	23	17	51	48.7	2.406	128.656	77	92.12	5.4	-	HALMAHERA, INDONESIA
#-741	12	23	20	57	20.4	36.485	142.379	9	128.44	5.1	-	OFF E COAST OF HONSHU, JAPAN
#-742	12	24	9	11	34.0	-17.344	-171.873	9	90.87	5.9	5.6	TONGA REGION
#-743	12	25	3	20	29.3	5.751	125.406	205	94.08	6.0	-	MINDANAO, PHILIPPINES
#-744	12	25	8	11	58.6	49.125	-128.634	10	159.22	5.5	5.5	VANCOUVER ISLAND, CANADA REGION
#-745	12	25	18	12	7.6	5.309	124.242	434	93.25	5.5	-	MINDANAO, PHILIPPINES
#-746	12	25	22	40	23.7	23.394	64.495	13	94.24	5.6	-	OFF THE COAST OF PAKISTAN
#-747	12	26	3	15	44.2	-24.038	-66.712	185	73.04	4.8	-	JUJUY, ARGENTINA
#-748	12	26	9	4	27.1	-21.527	-68.433	99	75.95	4.8	-	ANTOFAGASTA, CHILE
#-749	12	26	16	30	1.6	-32.485	-179.056	193	74.72	4.9	-	SOUTH OF KERMADEC ISLANDS
#-750	12	27	9	35	7.9	-0.242	122.778	214	87.55	4.6	-	SULAWESI, INDONESIA
#-751	12	27	21	7	48.8	-14.835	167.757	40	88.72	5.1	-	VANUATU
#-752	12	28	13	31	37.9	48.315	154.341	52	143.05	5.3	-	KURIL ISLANDS
#-753	12	28	22	7	30.2	-22.377	173.907	47	83.01	5.1	-	SOUTHEAST OF LOYALTY ISLANDS
#-754	12	29	6	18	23.0	32.286	105.224	10	112.12	5.0	-	SICHUAN-GANSU BDR REG, CHINA
#-755	12	29	14	40	15.5	-23.005	-68.500	101	74.59	4.8	-	ANTOFAGASTA, CHILE
#-756	12	30	3	20	56.0	5.425	125.716	135	93.89	5.1	-	MINDANAO, PHILIPPINES
#-757	12	30	17	43	51.0	-10.601	161.158	57	90.89	5.1	-	SOLOMON ISLANDS
#-758	12	30	19	49	52.5	-4.265	101.190	20	76.34	5.7	-	SOUTHERN SUMATRA, INDONESIA
#-759	12	31	11	39	57.5	4.905	127.435	77	94.02	5.4	-	KEPULAUAN TALAUD, INDONESIA
#-760	12	31	14	2	27.5	-25.348	-177.611	154	81.96	5.3	-	SOUTH OF THE FIJI ISLANDS