

**SEISMOLOGICAL BULLETIN OF SYOWA STATION,  
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**1. Introduction**

Seismic observations at Syowa Station (69.0°S, 39.6°E), East Antarctica, began in 1959 using a short-period seismometer with a natural period of 1.0 s (Eto, 1962). In 1967, a long-period seismograph was installed, and phase readings of teleseismic events (i.e., the detection of arrival times and amplitudes for significant seismic phases) were reported in near real-time to the United States Geological Survey (USGS) and to the International Seismological Centre (ISC) (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 other key stations of the PACIFIC21 Japanese regional network. Figure 1 shows the present-day distribution of FDSN stations in Antarctica.

During 2010, all of the observation systems at Syowa Station were maintained by one of the present authors (I. Tsuwa) throughout the wintering season of the 51st Japanese Antarctic Research Expedition (JARE-51). In this report, we introduce the seismic observations made in

2010, and provide scaled read-out travel-time data and a list of detected teleseismic earthquakes. We also provide information on public access to these data via the Internet.

## 2. Observations

The original seismic observation systems at Syowa Station were replaced with the current recording system (see Fig. 2) by one of the present authors (M. Kanao) in 1997 (Kanao, 1999).

### 2.1. Seismographic hut and seismographs

Seismic observations at Syowa Station have generally been carried out using two types of seismometers. The first is a short-period seismometer (HES) with a 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. The second is a three-component broadband seismometer (Streckeisen STS-1) with a digital recording system, which has been operating since 1990 (Nagasaka *et al.*, 1992). For this seismometer, the amplitude and phase responses for the velocity output (Broadband; BRB) are shown in Fig. 4 (after Streckeisen and Messegeraete, 1987).

The current seismographic hut was built in 1996, and all of the sensors in the old vault were moved into the new hut in 1997. The new hut is located about 200 m north of the old vault, at WGS84 geodetic coordinates of 69°00'24.0"S, 39°35'06.0"E (20 m above mean sea level). Because the long-period output signals from the broadband seismographs may be affected by variations in temperature and atmospheric conditions, the seismometers were installed in a small, thermally insulated room in the hut. The entire outside surface of the hut is covered by titanium to maintain a constant temperature.

Seismic signals from 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 the Earth Science Laboratory**

The three-component analog outputs of HES were digitized at a sampling frequency of 200 Hz by a 24-bit analog-to-digital (A/D) converter, generating triggered signals of 80-Hz and 1-Hz re-sampling data and 20-Hz continuous outputs. The signals of the three-component broadband STS-1 were also digitized to create triggered output of 80-Hz re-sampling data and continuous outputs of 20-, 1-, 0.1-, and 0.01-Hz data. 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 were automatically transmitted from the A/D converter to a workstation via TCP/IP protocol. All data were stored on the 40-GB hard disk of the workstation, and then copied onto DAT or 8-mm tape at 3-month intervals. The recording status of the A/D converter was continuously monitored by a personal computer via an RS-232C serial port.

Remote-centering 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 are operated in ESL. The boom-POSITION output (POS) of the STS-1 seismograph is monitored by an RD2212-type analog recorder, together with the temperature in the sensor room.

## **2.3. Data transmission via INTELSAT**

Since 1993, the digital waveforms of both broadband and short-period seismographs have been transmitted from Syowa Station to the National Institute of Polar Research (NIPR) via an INMARSAT telecommunication link. Waveform data transmission was greatly improved by using an INTELSAT communication link, established in February 2004. During the 2010 winter season, continuous data of both HES and STS-1 (sampling frequency of 20 Hz) were automatically transmitted to NIPR once a day from the acquisition workstation, using the UUCP protocol for data transfer.

In addition to remote monitoring of the data acquisition system from NIPR, Internet access to the Syowa facilities has improved markedly since 2005, with the development of the INTELSAT system. Moreover, a Web camera, employing the Station LAN, was installed inside ESL, followed by improved monitoring of the analogue recorders during periods when incapable access to the ESL due to bad weather.

### 3. Data

By using the waveform data transmitted via INTELSAT, arrival-time information of major seismic phases (herein termed 'read-out data') is regularly sent from NIPR to USGS/NEIC (National Earthquake Information Center) via email, to contribute to the weekly and monthly Preliminary Determination for Epicenters (PDE) bulletins. The Quick Earthquake Determination (QED) services offered by NEIC are used to identify the seismograms of teleseismic events. This report lists the arrival-time data and corresponding hypocentral data of teleseismic events recorded during 2010. The phase arrival-times of teleseismic events are detected on 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 a time difference of 3 s by comparing the observed travel-time with the calculated time. *X* denotes a clear phase whose wave type can be identified but for which the observed travel time was within 3–10 s of the calculated time. The symbols *E* and *I* in the phase column denote emergent and sharp onsets, respectively. The initial ground motion is denoted by + for upward motion and by - 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 indicated by serial numbers (#-xxx) in the table.



These serial numbers correspond to those in the list of hypocentral parameters in Table 2. Events without serial numbers are teleseisms whose locations have not been determined by NEIC. Figure 5 shows the hypocenters of the teleseismic events whose initial phases were detected at Syowa Station.

#### **4. Publication**

The seismic waveform data, which are continuously transmitted to NIPR and stored in the data library server, are accessible upon request via the Internet and/or by UNIX-formatted media (CD-R, DAT, etc.). The present authors hereby grant permission for the use of these data in scientific publications. All kinds of archived seismic data (e.g., arrival times, hypocenters, analog and digital waveform data, and related document reports) recorded at Syowa Station have been accumulated and are available from the data library server (POLARIS; URL: <http://polaris.nipr.ac.jp/~pseis/syowa>). These data can be accessed by using the 'ftp' command with a password. If you are interested in using these data for scientific research, please contact [kanao@nipr.ac.jp](mailto:kanao@nipr.ac.jp) for information on availability of the data.

Archived data (i.e., data collected more than 2 years ago) are stored and are freely available from both the NIPR ftp site and from the PACIFIC21 center of the Japan Marine Science and Technology Agency. Any questions concerning data availability from PACIFIC21 should be directed to [y-ishihara@jamstec.go.jp](mailto: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. Information on data access is available at <http://polaris.nipr.ac.jp/~pseis/syowa>.

### References

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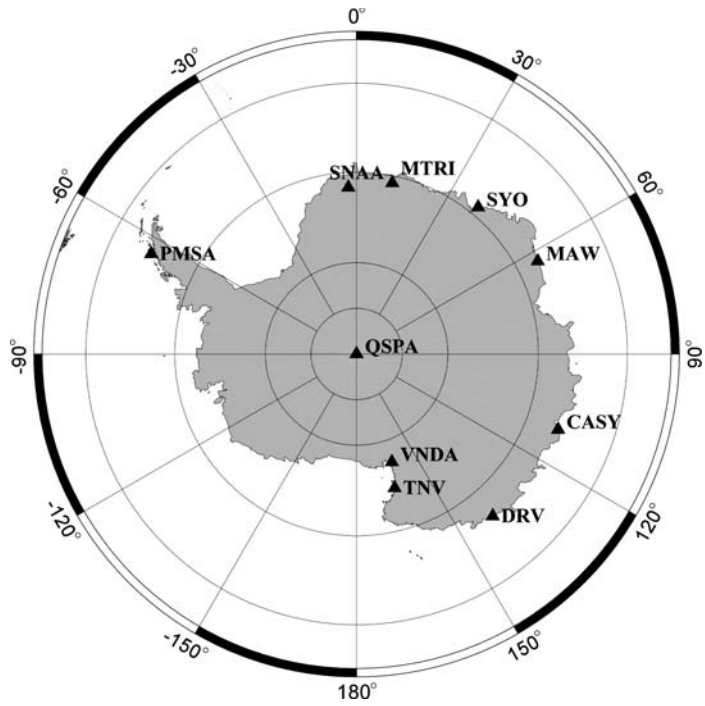


Fig. 1. Distribution of FDSN stations on the Antarctic continent in 2012. Syowa (SYO), Mawson (MAW), Casey (CASY), Dumont d'Urville (DRV), Terra Nova Bay (TNV), Vanda (VVDA), South Pole (QSPA), Palmer (PMSA), Sanae (SNAA), Maitri (MTRI).

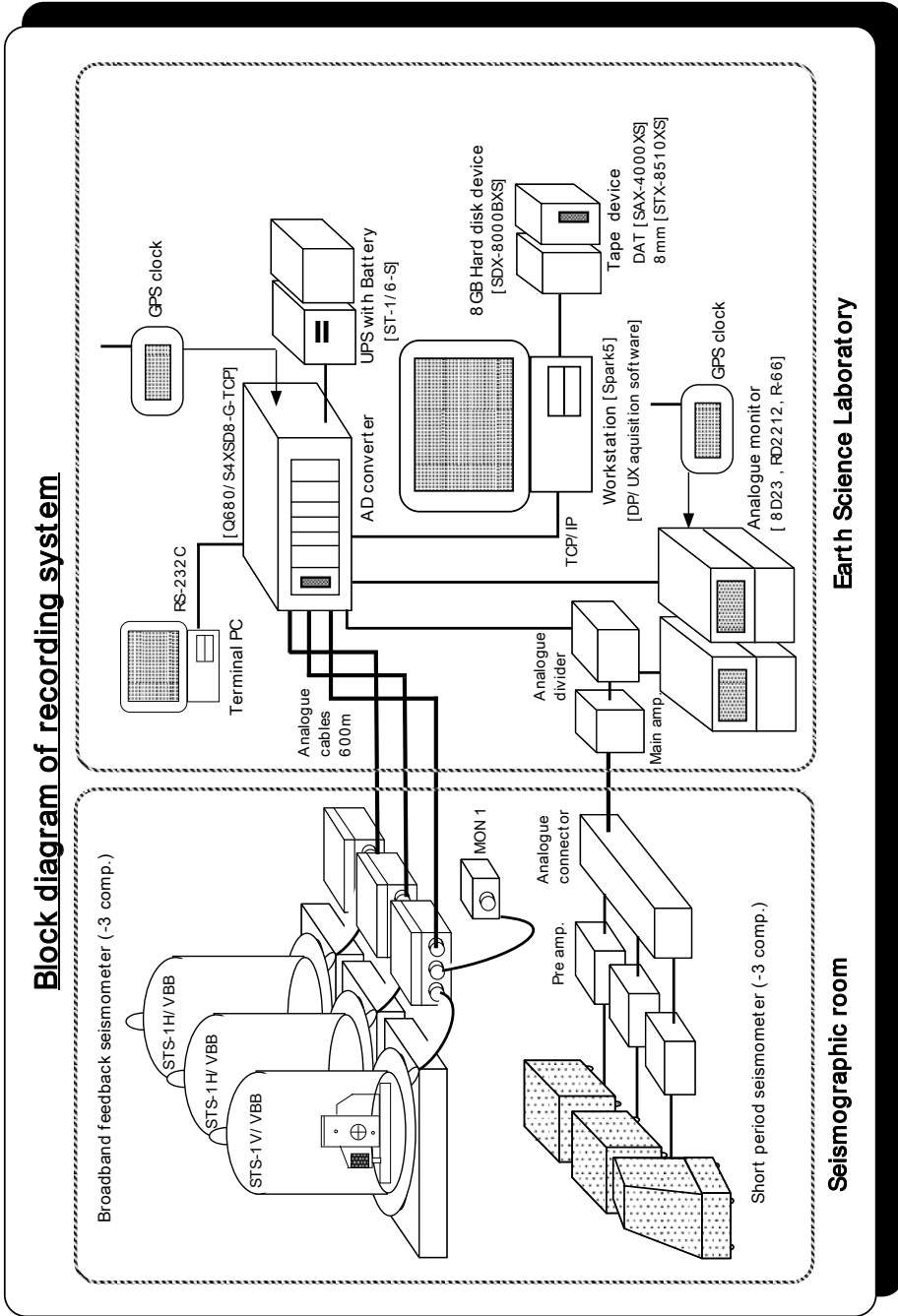


Fig. 2. Block diagram of new recording system for the STS and HES seismographs at Syowa Station. Left figure: Seismographic room; Right figure: Earth Science Laboratory.

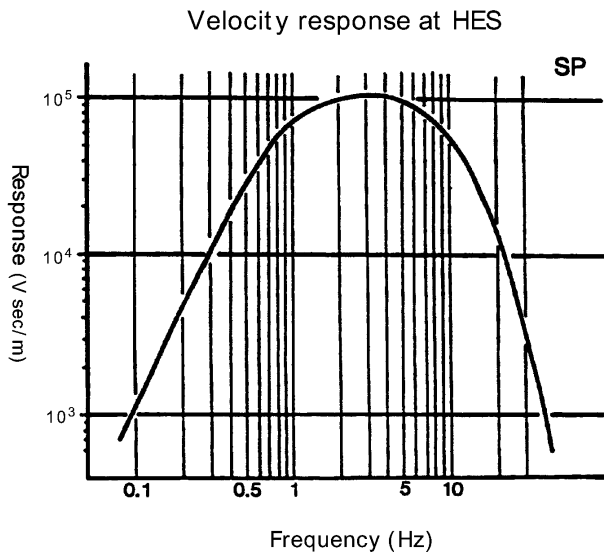


Fig. 3. Over-all frequency responses of the HES seismographs. (Modified after Hagiwara, 1958).

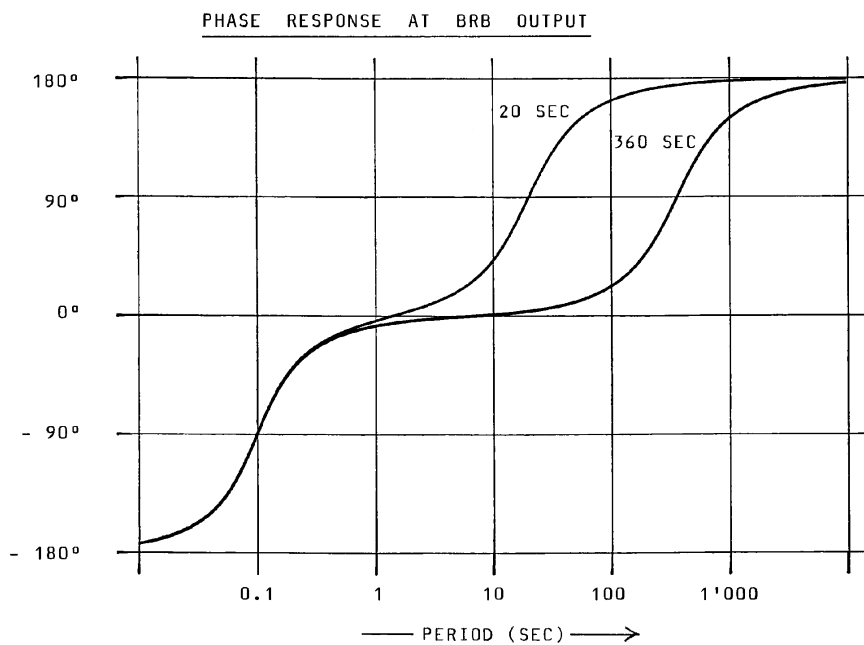
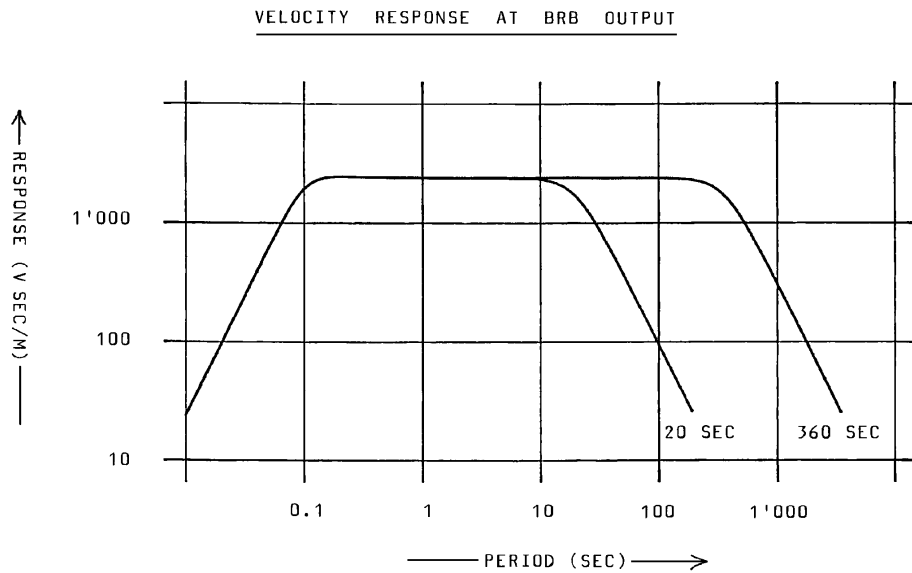


Fig. 4. Amplitude responses (upper figure) and phase responses (lower figure) for the velocity (BRB) output of the broadband seismograph (STS) in the two distinct signal modes of 20-s and 360-s (after Streckeisen and Messegeraete, 1987).

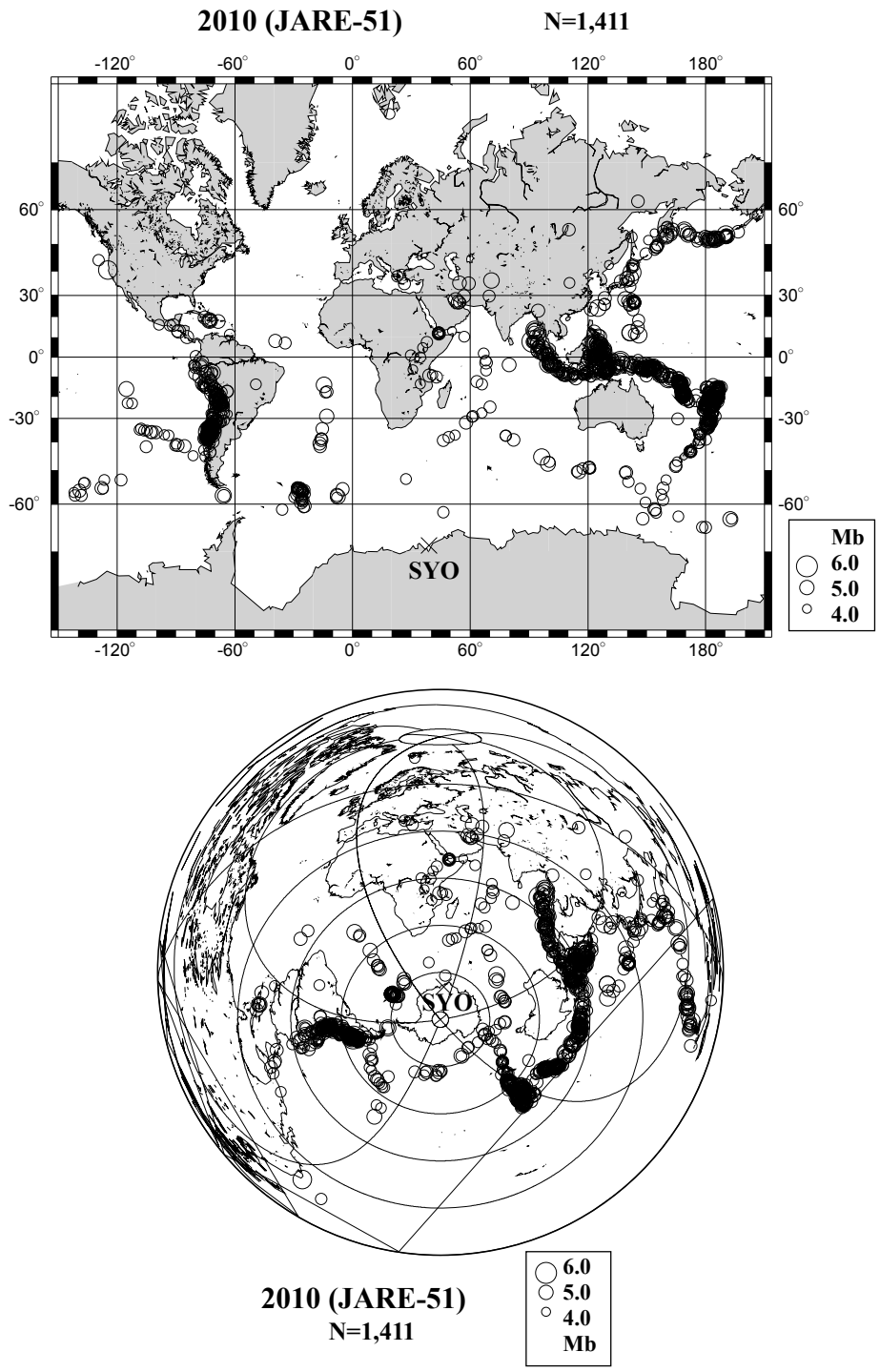


Fig. 5. Epicenters of the 1,411 earthquakes recorded at Syowa Station. The sizes of earthquake circles are proportional to the body-wave magnitude (Mb) determined by the National Earthquake Information Center (NEIC) (upper: Mercator Projection, lower: Azimuthal Equidistant Projection ).

Table 1. List of phase arrival-time data in 2010.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
Jan.					7	−IPZ	0840	03.6	
1	+EPZ	0417	02.2		8	+EPPZ	0444	34.0	#-14
1	−EPZ	0417	05.1		8	+EPZ	0954	02.4	
1	+EPZ	0743	14.0		8	−EPZ	1118	17.4	
1	+EPZ	0951	12.6		8	+EPZ	1614	15.6	
1	+EPZ	1554	37.7	#-1	8	+EPZ	2118	34.4	
2	+EPZ	0022	41.0	#-2	9	−EXZ	0029	26.0	#-15
3	+EPZ	0210	41.8		9	+EPZ	0605	02.6	
3	+EPZ	0212	07.1		9	+EPZ	0911	42.5	
3	−IPZ	0424	37.8	#-3	9	+EPZ	0947	29.4	
3	−IPZ	0923	10.6	#-4	9	+EPZ	1331	24.5	
3	−EPZ	1145	34.0		9	+EPZ	1722	07.6	
3	+EPZ	1145	37.7		10	−EXZ	0036	49.2	#-16
3	+EPZ	1334	08.0	#-5	10	+EPKPdfZ	0047	23.2	#-17
3	−EPZ	2052	03.6		10	−EPKPbcZ	0047	26.4	#-17
3	−EPZ	2052	15.3		10	−IPKPabZ	0047	33.0	#-17
3	+EPcPZ	2201	11.0	#-6	10	+EPZ	0225	56.2	
3	−EpPZ	2201	20.6	#-6	10	+EPZ	0322	23.0	
3	+EPZ	2249	34.6	#-7	10	+EPZ	0322	26.4	
3	−IpPZ	2249	39.4	#-7	10	−EPZ	0822	12.2	#-18
3	ESH	2300	16.4	#-7	10	−EPcPZ	0822	15.9	#-18
4	+EXZ	0430	49.6	#-8	10	+EPcPZ	1340	28.0	#-19
4	+EPZ	1016	16.2	#-9	10	+EPZ	1449	42.0	#-20
4	−EPZ	1141	24.0		10	+EPZ	1449	46.5	#-20
4	−EPZ	1141	37.8		10	+EPZ	1627	19.4	
4	+EPZ	1155	07.9		10	−EPZ	2257	23.6	#-21
4	+EPZ	1318	03.4		11	+EPZ	0025	09.4	
4	+EpPZ	1437	38.6	#-10	11	+EPZ	0354	39.2	
4	+EPZ	1724	04.1		11	−EPZ	0354	50.0	
4	+EXZ	2139	43.6	#-11	11	−EPZ	0612	28.0	
5	+EPZ	1449	42.4		11	+EPZ	0612	40.2	
5	+EPZ	1711	31.6		11	−EXZ	0800	50.6	#-22
5	+EPZ	1714	49.8		11	+EPZ	0826	17.5	#-23
6	+EPZ	0958	24.4		11	+EPZ	1011	38.0	
6	−EPZ	1337	01.9		11	−EPZ	1011	43.0	
6	−IpPZ	1646	08.8	#-12	11	−EPZ	1256	54.5	
6	+EPZ	1740	46.2	#-13	11	+EPZ	1441	39.2	



Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
11	+EPZ	1936	01.3		13	+EPZ	1703	45.0	
11	-EPZ	2306	07.0		13	-EPZ	1703	49.4	
11	+EPZ	2331	14.9		13	-EPZ	1731	04.3	
12	+EPZ	0058	35.0		13	+EPZ	1731	09.4	
12	+EPZ	0301	28.6		13	-EPZ	2102	32.0	
12	-EPZ	0433	38.4		13	+EPZ	2125	22.2	
12	+EPZ	0519	08.8		14	+EPZ	0003	05.8	
12	+EPZ	0601	35.7		14	-IPZ	0236	02.6	
12	+EPZ	0732	14.7		14	+EPZ	0442	45.6	
12	+EPZ	1110	46.3		14	+EPZ	0904	44.6	
12	+EPZ	1746	44.8	#-24	14	-EPZ	1303	46.0	
12	+EPZ	1820	08.0		14	+EPZ	1305	07.0	
12	-EPZ	2035	01.2		14	+EPZ	1635	33.6	#-34
12	-EPZ	2211	42.0		14	+EPZ	1817	23.2	
12	-EPZ	2211	53.3		14	+EPKpdfZ	1905	32.4	#-35
12	-EXZ	2220	23.6	#-25	14	+EPZ	2004	09.0	
12	+EPZ	2226	00.6		14	+EPZ	2021	41.2	
12	+EPZ	2258	04.8		14	-EPZ	2131	19.4	#-36
12	-EPZ	2326	25.4		15	+EPZ	0020	10.0	#-37
12	-EXZ	2324	18.6	#-26	15	-EPZ	0123	03.0	
13	-EXZ	0102	02.0	#-27	15	+EpPZ	1025	49.8	#-38
13	-EPZ	0120	41.4		15	+EPZ	1050	22.0	#-39
13	-EPZ	0147	07.5		15	+EPcPZ	1050	35.2	#-39
13	+EPZ	0209	11.8		16	-EPZ	1728	18.7	
13	+EPZ	0226	06.5		16	+EPZ	1741	49.4	
13	+EPZ	0404	09.6	#-28	17	-EPcPZ	0959	54.3	#-40
13	+EPZ	0453	11.0		17	-EPZ	1207	54.8	#-41
13	-EPZ	0522	39.6	#-29	17	-EpPZ	1207	55.6	#-41
13	+EPZ	0704	42.7		17	+IPZ	2249	59.2	#-42
13	+EPZ	0808	03.0	#-30	17	+EPcPZ	2250	10.8	#-42
13	+EPZ	0847	01.8		18	-EPZ	0032	39.0	
13	+EPZ	0931	36.4		18	-EPZ	0121	01.8	
13	+EPZ	1002	50.4		18	+EPZ	0121	40.8	
13	+EPZ	1219	27.2		18	-EpPZ	0402	35.0	#-43
13	-EPPZ	1503	22.4	#-31	18	+EPZ	0757	53.4	
13	-EPZ	1634	33.2	#-32	18	-EPZ	0829	33.0	#-44
13	+EPZ	1702	16.2	#-33	18	-EPZ	0958	07.2	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
18	-EPZ	0958	13.0		20	+EPZ	1429	53.6	
18	+EPZ	1231	16.6		20	+EPZ	1816	06.2	
18	-EPZ	1231	31.0	#-45	20	-IPZ	1915	33.0	#-55
18	+EPZ	1239	17.4		20	+EXZ	2005	09.2	#-56
18	-EPZ	1239	44.5		20	+EPZ	2050	13.0	
18	-EPZ	1307	41.8		20	-EPZ	2309	06.0	#-57
18	+EPZ	1433	49.6	#-46	21	+EPZ	0001	22.0	
18	+EPZ	1559	45.0		21	+EpPZ	0025	53.7	#-58
18	+IPZ	1622	15.6	#-47	21	+EPZ	0525	02.7	#-59
18	-IPcPZ	1622	17.0	#-47	21	+EXZ	1713	38.7	#-60
18	-EPZ	2148	16.6	#-48	21	+EPZ	1109	08.0	
18	+EPZ	2234	06.5	#-49	21	+EPZ	1125	19.7	
18	+EpPZ	2234	11.2	#-49	21	+EPZ	1633	03.5	
18	+EPcPZ	2244	04.8	#-50	21	+EPZ	2040	05.8	
18	-EPZ	2310	05.0		21	+EPZ	2253	09.6	
19	+EPZ	0030	03.2	#-51	22	+EPZ	0111	04.5	
19	+EPZ	0030	47.9		22	+EXZ	0137	25.2	#-61
19	-EPZ	0132	43.1		22	+EPZ	0658	26.5	#-62
19	+EPZ	0334	36.5		22	+EXZ	0658	30.3	#-62
19	+EPZ	0337	16.1		22	-EPZ	0744	33.5	
19	+EPZ	0426	36.6		22	+EPZ	0751	52.8	
19	-EPZ	0656	13.6		22	+EPZ	0935	07.4	
19	+EPZ	0656	20.0		22	+EPZ	1328	14.3	
19	+EPZ	0810	27.0		22	-EPZ	1407	30.5	
19	+EpPZ	0822	01.5	#-52	22	+EPZ	1432	03.9	
19	+EPZ	1114	19.6		22	-EPZ	1602	05.2	
19	+EPZ	1435	45.5		22	+EPZ	1716	04.8	
19	-IPZ	1739	22.0	#-53	22	-EPZ	2156	27.9	
19	-IsPZ	1739	32.8	#-53	23	-EPZ	0030	14.8	
20	-EPZ	0355	01.4		23	-EPZ	0141	15.6	
20	+IPZ	0615	59.0		23	+EPZ	0201	12.3	
20	ESH	0624	23.4		23	-EPZ	0524	17.2	
20	-EPZ	0701	22.0		23	+EPZ	0839	15.8	
20	+EPZ	0918	26.4		23	+EPZ	0839	37.5	
20	-EPZ	1117	06.0		23	+EPZ	0921	22.3	
20	-EPZ	1123	18.0		23	-IPZ	0935	03.4	#-63
20	+EPZ	1334	07.2	#-54	23	-EPZ	0952	30.6	#-64

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
23	-EsPZ	0952	36.0	#-64	25	-EPZ	2305	30.0	
23	+EPZ	1854	28.2	#-65	25	-IPZ	2305	31.2	
24	+EPZ	0109	31.0	#-66	26	+EPZ	0135	24.0	
24	+EsPZ	0109	37.8	#-66	26	-EPZ	0210	21.2	
24	+EPZ	0250	14.0		26	+EPZ	0402	27.2	
24	+EXZ	0251	07.0	#-67	26	+EPZ	0953	47.6	
24	+EPZ	0550	45.9	#-68	26	-EXZ	1529	48.0	#-78
24	+EsPZ	0550	57.0	#-68	26	-EpPZ	1529	54.0	#-78
24	+EPZ	1001	24.0		26	-EPZ	1626	26.8	
24	+EPZ	1408	24.4		26	+EPZ	1626	49.4	#-79
24	+EsPZ	1432	11.2	#-69	26	-EPZ	1728	20.5	
24	+IPZ	1605	52.5	#-70	26	+EPZ	2001	29.1	
24	+EPZ	1653	48.4		26	+EPZ	2224	28.4	#-80
24	-EPZ	1827	26.2		26	+EXZ	2226	33.5	#-80
24	-EPZ	1827	55.4		26	-EPZ	2255	51.0	
24	-EPZ	1839	52.6	#-71	27	+EPZ	0120	30.0	
24	-EpPZ	1840	56.0	#-71	27	-EPZ	0315	42.0	
24	-EsPZ	1903	48.4	#-72	27	+EPZ	0526	01.9	
24	+EPZ	2202	17.2		27	+EPZ	0630	37.0	
24	-EPZ	2202	19.7		27	-EPZ	0731	06.0	
24	+EPZ	2349	40.5	#-73	27	+EPZ	1054	30.4	
25	+EPZ	0101	09.4		27	+IPZ	1128	26.4	#-81
25	+EPZ	0336	32.6		27	-IsPZ	1128	32.6	#-81
25	+EPZ	0336	43.0		27	+EPZ	1239	25.2	#-82
25	+EPZ	0738	15.2		27	-IPZ	1627	53.2	
25	+EPZ	0825	05.5		27	+EPZ	1628	06.2	
25	+EPZ	0956	20.3		27	+IPZ	1753	20.0	#-83
25	+EPZ	1305	12.0		27	+IsPZ	1753	27.8	#-83
25	+EPZ	1552	52.5		27	+EXZ	1911	54.2	#-84
25	+EPZ	1420	00.8	#-74	27	+EPcPZ	1912	00.5	#-84
25	-EPZ	1607	25.6	#-75	27	+EPZ	1952	18.6	
25	+EPcPZ	1607	37.2	#-75	27	+EPZ	1952	24.6	
25	+EPKPdfZ	1724	04.0	#-76	28	-EPZ	0047	40.2	
25	+EPZ	1941	41.8		28	-EPZ	0312	34.0	
25	+EPZ	2151	45.8		28	-EPZ	0312	38.0	
25	+EPZ	2226	02.6		28	+EPZ	0348	32.0	
25	+EpPKPdfZ	2329	07.4	#-77	28	-EPcPZ	0413	05.6	#-85

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
28	+EPZ	0445	25.2		31	+EPZ	1005	04.0	
28	-EPZ	0456	03.3		31	+EPZ	1008	02.2	#-96
28	-EPZ	0634	48.6		31	+EPZ	1239	42.9	
28	+EPZ	0635	32.5		31	-EPZ	1538	42.6	
28	+EPZ	0726	23.2		31	-EPZ	1538	44.4	
28	+IPZ	0815	24.5		31	+EPZ	2000	04.3	
28	+EPZ	0824	38.0		Feb.				
28	-IPZ	0824	47.0		1	+EPZ	0135	36.8	
28	+EPZ	0949	23.0	#-86	1	+EPcPZ	1227	12.0	#-97
28	+EPZ	1008	23.4	#-87	1	-EsPZ	1227	16.4	#-97
28	+EPZ	1211	17.5		1	+EPZ	1501	16.6	
28	-EPZ	1231	14.0		1	+EPZ	2131	19.0	#-98
28	-EPZ	1455	01.0		1	-EPZ	2241	25.0	
28	-EPZ	1925	50.2		2	-EPZ	1233	17.0	
28	+EPZ	2214	04.6		2	-IPZ	1233	20.4	
28	+EPZ	2244	19.0	#-88	2	+EPZ	1312	15.4	
28	-EPcPZ	2244	28.2	#-88	2	-EPZ	1503	17.4	
29	+EPZ	0003	33.2		2	+EPZ	1505	05.6	
29	+EPZ	0021	23.4		2	+EPZ	1505	18.4	
29	+EPZ	0724	23.0		3	NIL			
29	-EPZ	0828	02.8	#-89	4	-EPZ	1314	26.4	#-99
29	+IPZ	0932	29.0		4	+EPZ	2040	03.2	
29	+EPZ	1435	45.6	#-90	4	-EPZ	2040	06.1	
29	+EPZ	1652	09.6		4	+EPZ	2316	32.6	
29	+EPZ	2113	11.4		5	+EPZ	0016	05.3	
29	+EPZ	2135	28.4		5	+EPZ	0046	33.6	#-100
30	-EPZ	0434	35.0	#-91	5	-EPZ	0346	15.0	
30	-IPZ	0601	19.8	#-92	5	+EPZ	0428	16.6	
30	+EPZ	0727	30.6		5	+EXZ	0706	02.4	#-101
30	+EPZ	0727	34.4		5	-EPZ	0958	54.6	
30	-EPZ	1307	34.8		5	-EPZ	1038	22.0	
30	-EPZ	1650	08.0	#-93	5	+EPZ	1332	14.0	
30	+EPZ	1930	49.8	#-94	6	-EPZ	0020	04.0	
31	+EPZ	0239	20.4		6	-EPZ	0253	45.0	
31	-EPZ	0317	04.0		6	+EPZ	0504	05.6	
31	-EPZ	0714	33.6	#-95	6	+EPZ	0504	15.6	
31	+EPZ	0855	33.2		7	-IPZ	1429	26.1	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
7	-EPZ	1721	53.8		11	+EPZ	0124	49.9	#-109
7	ESH	1730	11.6		11	+EPZ	0217	26.2	
7	-EPZ	1808	26.0	#-102	11	+EXZ	0833	53.6	#-110
7	+EPZ	1945	16.8		11	+EXZ	0925	32.6	#-111
7	-EPZ	2134	26.0		11	-EPZ	1159	35.2	#-112
7	+IPZ	2239	49.6		11	+EPZ	1654	12.5	
7	ESH	2249	23.5		11	+IPZ	1854	43.2	
7	-EPZ	2312	44.4		11	+IPZ	1917	54.1	#-113
7	+IPZ	2334	23.6	#-103	12	+IPZ	1214	02.7	
7	-EPZ	2359	26.4		13	-EPZ	0247	07.4	#-114
8	-EPZ	0249	01.2		13	+EPZ	1306	08.2	
8	-EPZ	0312	22.2		13	-EPZ	1535	32.0	
8	+EPZ	0337	42.2		13	+EPZ	1734	06.0	
8	+EPZ	0539	30.5		14	-EPZ	0316	16.4	#-115
8	+EPZ	1214	39.2	#-104	14	-EPZ	0442	36.8	
8	+EPZ	1357	25.6	#-105	15	-IPZ	2203	57.7	
8	+EPZ	1652	49.0		15	-IPZ	2204	34.6	
8	+EPZ	1841	13.0		15	ESH	2214	03.0	
8	+EPZ	1959	09.0		16	+EPZ	2024	15.0	
8	+EPZ	2037	10.2		16	+EPZ	2024	26.0	
8	+EPZ	2104	05.0		17	+EPZ	0644	45.2	
9	-EPZ	0116	57.1	#-106	17	+EPZ	1158	49.6	
9	+EPZ	0515	37.2		17	-EPZ	1302	38.8	
9	+EPZ	0521	09.0		17	-EPZ	1949	58.0	
9	-EPZ	0559	28.0		18	+EPZ	0131	04.6	
9	+EPZ	0559	36.2		18	-IPZ	0134	49.0	
9	+EPZ	0717	03.6		18	ESH	0150	06.0	
9	+EpPZ	1032	47.6	#-107	18	-EPZ	1157	54.3	
9	+EPZ	1538	11.2		18	-EPZ	1708	35.3	
10	+EPZ	0731	41.0		18	-EPZ	1836	06.6	
10	-EPZ	1127	18.8		18	-IPZ	2108	00.0	#-116
10	+EpPZ	1155	24.2	#-108	18	+EPZ	2116	08.4	
10	+EPZ	1235	38.4		19	-EPZ	0010	11.2	
10	+EPZ	1347	22.6		19	+EPZ	0315	07.0	
10	+EPZ	1347	34.0		19	+EPZ	0642	11.0	
10	+EPZ	1935	13.4		19	+EPZ	0803	13.6	
10	-EPZ	1935	18.8		19	-EPcPZ	1126	03.0	#-117

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
19	+EPZ	1220	16.2		23	+EPZ	0535	15.0	
19	-EPZ	1250	13.2		23	+EPZ	0617	27.2	#-125
19	-EPZ	1658	04.8		23	+EPZ	0646	07.0	
19	+EPZ	1838	02.7		23	+EPZ	0655	06.3	
19	-EPZ	2121	16.8		23	+EPZ	1029	14.2	#-126
20	+EPZ	0136	21.6		23	-EPZ	1039	53.4	
20	-EPZ	0417	23.6		23	-EPKPbcZ	1102	35.7	#-127
20	-EPZ	1110	24.5		23	-EPKPdfZ	1102	40.0	#-127
20	+EPZ	1110	31.9		23	-EPZ	1417	29.2	
20	+EPZ	1244	54.2		23	-EPZ	1530	15.6	
20	-IPZ	1348	42.7		23	+EpPZ	1549	35.4	#-128
20	-EPZ	1348	46.0		23	+EPZ	1837	29.2	
20	-EPZ	2046	01.6		23	-EPZ	1937	05.8	
20	+EPZ	2251	04.7		23	+EPZ	2238	52.4	#-129
20	+EPZ	2303	01.6		23	+EPZ	2251	01.1	#-130
21	+EPZ	0240	55.4		23	+EPZ	2326	22.0	
21	-EPZ	0345	06.0		24	-EPZ	0030	09.3	
21	+EPZ	0648	34.6		24	-EPZ	1021	10.0	
21	-EXZ	0744	01.2	#-118	24	-EPZ	1209	28.1	#-131
21	+EPZ	0950	10.6		25	+EXZ	0823	35.4	#-132
21	-EPZ	0950	13.4	#-119	25	-EPZ	1138	51.0	#-133
21	+EPZ	1414	08.5		25	-EPZ	1234	18.0	#-134
21	+EPZ	1807	38.2		25	+EPZ	1518	16.0	
22	+EPZ	0015	47.3		25	+EPZ	1518	17.6	
22	-EPZ	0521	26.7		25	+EPZ	1729	27.9	
22	-EPZ	0521	28.4		25	+EPcPZ	1908	13.5	#-135
22	-EPZ	0713	18.6		25	+EPZ	2218	39.0	
22	+EPZ	0713	30.7		26	+EPZ	0016	27.0	
22	+EPZ	0737	11.0	#-120	26	-IPZ	0017	01.2	#-136
22	+EsPZ	0737	26.0	#-120	26	+EPZ	0339	43.6	
22	+EPZ	0742	29.6		26	-EPZ	0339	47.7	
22	-EPZ	0855	04.4	#-121	26	+EPZ	0420	52.3	
22	+EPZ	0855	28.0		26	+EPZ	0454	23.4	
22	-EPZ	1116	49.4	#-122	26	+IPdiffZ	0456	28.5	
22	+EPZ	1314	02.6		26	+EPZ	0654	20.6	
22	-EPZ	1856	14.8	#-123	26	+EPZ	0850	11.2	#-137
22	-EPZ	2001	02.8	#-124	26	+EPZ	1632	07.5	#-138

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
26	-EPZ	1708	05.6		27	+EPZ	1733	01.2	
26	+EPZ	2206	08.4		27	-IPZ	1735	00.0	#-162
27	-IPZ	0644	44.4	#-139	27	+EPZ	1754	03.2	#-163
27	-IPZ	0747	41.3	#-140	27	+EPZ	1807	26.4	#-164
27	+IPZ	0757	13.8	#-141	27	+EPZ	1825	46.0	#-165
27	-EPZ	0801	30.4	#-142	27	+EPZ	1833	33.2	#-166
27	-IsPZ	0801	43.4	#-142	27	-EPZ	1852	10.0	#-167
27	-EXZ	0824	04.4	#-143	27	+EPZ	1910	48.8	
27	-IPZ	0836	05.2	#-144	27	+EPZ	2020	53.2	
27	+EPZ	0858	24.2	#-145	27	+EPZ	2111	19.0	#-168
27	-EpPZ	0858	31.2	#-145	27	-EPZ	2152	20.0	
27	-EXZ	0904	32.0	#-146	27	+EPZ	2159	07.2	#-169
27	-EsPZ	0911	13.6	#-147	27	+EPZ	2209	30.7	#-170
27	+EPZ	0953	45.9		27	+EPZ	2230	39.0	#-171
27	+EPZ	0953	53.2		27	+EPZ	2233	10.2	#-172
27	-EPZ	1009	37.7	#-148	27	+EPZ	2312	18.4	
27	-EsPZ	1009	50.0	#-148	27	+EPZ	2312	21.2	
27	-EPZ	1020	55.2	#-149	27	+EPZ	2323	01.2	
27	+EPZ	1041	07.9	#-150	27	+EPZ	2323	10.0	
27	+EPZ	1104	47.5	#-151	27	-EPZ	2345	55.4	#-173
27	-EpPZ	1104	56.6	#-151	27	-EpPZ	2346	05.0	#-173
27	+EPZ	1137	16.2	#-152	28	-EPZ	0011	15.2	#-174
27	+EpPZ	1137	28.0	#-152	28	-EPZ	0111	37.0	#-175
27	+EPZ	1155	30.0	#-153	28	-EPZ	0119	02.2	#-176
27	-EsPZ	1155	44.6	#-153	28	+IpPZ	0119	12.6	#-176
27	-EPZ	1213	06.4		28	-EPZ	0135	16.8	#-177
27	+IPZ	1213	11.4		28	-EpPZ	0135	26.0	#-177
27	+EXZ	1239	27.0	#-154	28	+EXZ	0143	32.4	#-178
27	+EXZ	1309	09.0	#-155	28	+EPZ	0156	09.6	#-179
27	+EPZ	1323	26.2	#-156	28	-EPZ	0209	25.0	#-180
27	+EPZ	1404	44.7	#-157	28	+EPZ	0215	05.9	#-181
27	+EPZ	1431	05.2		28	+EPZ	0223	54.9	#-182
27	+EPZ	1452	20.2	#-158	28	+EPZ	0248	44.6	#-183
27	+EPZ	1556	48.0		28	+EPZ	0324	10.0	#-184
27	-EPZ	1631	29.0	#-159	28	-EPZ	0324	54.0	#-185
27	+EpPZ	1643	06.0	#-160	28	+EPZ	0353	17.8	#-186
27	+EPZ	1722	28.6	#-161	28	-EPZ	0415	33.0	#-187

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
28	+EsPZ	0423	42.0	#-188	28	-EPZ	1854	54.6	#-212
28	+EPZ	0428	25.0	#-189	28	+EPZ	1920	32.8	#-213
28	+EPZ	0439	39.8	#-190	28	-EPZ	1959	02.2	
28	+EpPZ	0439	50.2	#-190	28	+EPZ	2141	06.4	
28	+EXZ	0506	22.4	#-191	28	+EPZ	2213	44.0	#-214
28	-EXZ	0514	30.4	#-192	28	-EPZ	2251	55.0	#-215
28	+EPZ	0515	03.0		28	+EPZ	2355	37.5	#-216
28	+EPZ	0524	17.8	#-193	28	+EPZ	2359	23.0	#-217
28	-EPZ	0525	15.0		28	-EsPZ	2359	39.4	#-217
28	+EPZ	0746	48.0	#-194	Mar.				
28	+EPZ	0749	18.2		1	+EPZ	0011	41.2	#-218
28	+EPZ	0818	19.5	#-195	1	+EPZ	0059	50.7	#-219
28	-EPZ	0845	47.6		1	-IPZ	0121	29.0	#-220
28	+EPZ	0925	34.4	#-196	1	-EPZ	0255	18.6	#-221
28	+EpPZ	0925	45.6	#-196	1	-EPZ	0318	15.0	#-222
28	-EPZ	1053	30.0	#-197	1	-EXZ	0318	24.6	#-222
28	+EpPZ	1053	38.6	#-197	1	-EPZ	0403	28.0	#-223
28	-EPZ	1124	55.4	#-198	1	+EPZ	0536	17.8	
28	-IPZ	1136	07.4	#-199	1	-EPZ	0547	21.5	#-224
28	ESH	1145	00.6	#-199	1	-EPZ	0551	03.0	
28	-EPZ	1201	13.4	#-200	1	-EPZ	0654	20.4	
28	+EPZ	1211	43.6	#-201	1	-EPZ	0739	54.6	#-225
28	-EPZ	1225	40.0	#-202	1	+EPZ	0749	44.4	#-226
28	+EPZ	1229	14.0	#-203	1	+EPZ	0759	47.6	#-227
28	-EPcPZ	1358	11.4	#-204	1	-EPZ	0828	26.0	
28	+EPZ	1358	34.0		1	+EPZ	0857	28.8	#-228
28	+EPZ	1412	00.5		1	-EPZ	0908	55.0	#-229
28	+EPZ	1501	16.2	#-205	1	-EPZ	0933	28.2	#-230
28	+EPZ	1506	05.2	#-206	1	+EPZ	1027	42.5	
28	-EPZ	1537	28.8	#-207	1	-EPZ	1054	02.0	
28	+EPZ	1556	58.3	#-208	1	+EPZ	1149	32.7	
28	-EpPZ	1557	05.3	#-208	1	-EPZ	1230	59.0	#-231
28	+EsPZ	1557	09.7	#-208	1	+IXZ	1231	02.4	#-231
28	+EXZ	1618	44.0	#-209	1	-IPZ	1237	53.2	#-232
28	-EPZ	1830	25.4	#-210	1	-EPZ	1258	24.0	
28	-EsPZ	1830	43.6	#-210	1	+EPZ	1319	54.4	#-233
28	+EPZ	1835	47.5	#-211	1	-EPZ	1326	27.0	



Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
1	+EPZ	1447	11.0	#-234	2	+EPcPZ	1153	38.8	#-252
1	+EsPZ	1447	25.2	#-234	2	+IPZ	1227	01.4	#-253
1	+EPcPZ	1447	40.5	#-234	2	+EpPZ	1227	11.4	#-253
1	+EPZ	1603	05.2	#-235	2	+EPZ	1348	16.4	
1	+EPZ	1647	22.2		2	+EPZ	1417	18.0	#-254
1	-EPZ	1707	16.0	#-236	2	+EPZ	1437	12.2	
1	+EPZ	1751	16.0		2	+EPZ	1535	54.4	#-255
1	+EXZ	1734	08.7	#-237	2	-EPZ	1538	26.2	#-256
1	-EPZ	1834	20.8		2	-EPZ	1638	39.8	#-257
1	+EPZ	1910	29.6		2	+EPZ	1807	43.4	#-258
1	+EPZ	1946	29.4		2	-EPZ	1923	35.0	#-259
1	-EPZ	2201	39.0	#-238	2	-EpPZ	0923	44.6	#-259
1	-EPZ	2251	03.4	#-239	2	+EPZ	2108	28.4	#-260
1	+EPZ	2337	30.3	#-240	2	-EsPZ	2108	40.0	#-260
1	-EsPZ	2337	48.8	#-240	2	-EPZ	2119	28.6	
2	+EPZ	0048	28.6		2	-EPZ	2132	11.4	
2	+EPZ	0113	58.2	#-241	2	-EpPZ	2134	01.0	#-261
2	-EPZ	0219	40.0	#-242	2	+EPZ	2155	02.4	
2	+EsPZ	0219	49.8	#-242	2	-EPZ	2207	38.0	#-262
2	+EPZ	0305	14.0		2	+EPZ	2221	07.7	
2	+EPZ	0355	36.6	#-243	3	+EPZ	0103	02.0	
2	-EpPZ	0355	45.1	#-243	3	+EPZ	0201	55.0	#-263
2	+EPZ	0359	16.3	#-244	3	+EpPZ	0202	05.4	#-263
2	+EPZ	0419	59.6	#-245	3	+EPZ	0307	41.2	
2	+EPZ	0439	12.0	#-246	3	-EPZ	0307	46.4	
2	+EpPZ	0439	21.4	#-246	3	-EPZ	0430	25.6	
2	+EPZ	0543	34.7		3	-EpPZ	0627	12.7	#-264
2	+EPZ	0621	31.2	#-247	3	-EPZ	0720	09.3	#-265
2	+EPZ	0705	40.2	#-248	3	+EpPZ	0720	20.4	#-265
2	-EPZ	0835	00.2		3	+EPZ	0832	43.8	
2	+EPZ	0912	46.2		3	-EPZ	0832	49.2	
2	-EPZ	0955	39.6	#-249	3	+EPZ	1051	17.4	
2	+EXZ	0955	45.6	#-249	3	-EPcPZ	1127	01.6	#-266
2	+EPZ	1055	09.2	#-250	3	+EPZ	1145	12.0	
2	-EPcPZ	1055	12.2	#-250	3	+EPZ	1146	01.6	
2	+EPZ	1141	06.9	#-251	3	+EPZ	1146	13.0	
2	+EpPZ	1141	15.4	#-251	3	-EPZ	1307	35.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
3	-EPZ	1431	23.4	#-267	4	-EpPZ	2131	35.0	#-279
3	-EPZ	1458	35.2		4	+EPZ	2250	52.6	#-280
3	-EPZ	1536	11.9	#-268	4	ESH	2300	29.6	#-280
3	-IpPZ	1536	21.3	#-268	5	-EPZ	0345	10.0	#-281
3	-EPZ	1618	30.9		5	-EpPZ	0345	17.7	#-281
3	+EPZ	1709	48.0		5	-EpPZ	0747	29.4	#-282
3	-EPZ	1754	53.9	#-269	5	-EPZ	1134	37.0	#-283
3	+IpPZ	1755	29.6	#-269	5	-EpPZ	1134	48.2	#-283
3	+EPZ	2009	11.6		5	-IPZ	1157	35.6	
3	-EPZ	2009	13.2		5	+EXZ	1239	36.2	#-284
3	+EPZ	2042	01.4		5	+EPZ	1618	43.5	
3	+EPZ	2128	05.8		5	+EXZ	2029	10.8	#-285
3	-EPZ	2134	17.4	#-270	6	+EPZ	0041	43.4	
3	-EXZ	2150	12.0	#-271	6	-EPZ	0133	47.6	#-286
3	-EPZ	2225	34.0		6	+EXZ	0250	15.0	#-287
3	-EPZ	2306	09.0		6	-EPZ	0320	06.0	#-288
3	+EXZ	2307	21.9	#-272	6	+EPZ	0827	16.6	
3	+EPZ	2355	07.8		6	-EPZ	0842	12.2	
4	-EPZ	0049	27.4		6	+EPZ	0937	06.6	#-289
4	-EPZ	0056	04.0		6	+EPZ	1134	03.0	#-290
4	-EPZ	0210	33.7	#-273	6	+EXZ	1223	42.0	#-291
4	+EPZ	0232	37.3		6	-EPZ	1456	57.8	#-292
4	+EPZ	0333	47.4	#-274	6	+EPZ	1627	03.4	
4	+EpPZ	0333	56.2	#-274	6	-EPZ	2059	48.6	#-293
4	+EPZ	0411	31.4		7	-IPZ	0342	44.6	#-294
4	+EPZ	0446	32.9		7	+EPZ	0457	19.4	#-295
4	-EPZ	0629	27.0		7	+EpPZ	0457	28.4	#-295
4	+EPZ	0728	39.6		7	-EPZ	0718	33.6	#-296
4	-EPZ	0914	04.6	#-275	7	+EPZ	0824	45.0	
4	-EXZ	0952	51.6	#-276	7	-EPZ	0824	51.0	
4	-EPZ	1146	34.6		7	+EPZ	1317	20.3	
4	+EPZ	1207	40.0		7	-EPZ	1515	12.8	#-297
4	-IPZ	1415	03.6	#-277	7	+EPZ	1610	01.6	#-298
4	ESH	1425	39.6	#-277	7	+EPZ	1713	01.1	#-299
4	-EPZ	1748	27.5	#-278	7	+EpPZ	1713	11.7	#-299
4	-IXZ	1748	35.6	#-278	7	-EPZ	1846	35.6	#-300
4	+EPZ	1939	15.3		7	-EPZ	2211	15.8	#-301

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
7	+EpPZ	2211	23.4	#-301	9	-EPZ	1857	34.6	
7	+EPZ	2357	28.4	#-302	9	+EPZ	2048	39.0	#-320
8	+EPZ	0251	04.6		9	+EPZ	2210	03.0	#-321
8	+EPZ	0243	03.7	#-303	9	+EXZ	2210	09.2	#-321
8	+EXZ	0451	06.8	#-304	9	+IPZ	2221	32.5	#-322
8	+EPZ	0540	05.0		10	+EPZ	0025	27.6	#-323
8	-EPZ	0751	39.6		10	+EPZ	0117	47.0	#-324
8	-EPZ	0818	38.8	#-305	10	-EPZ	0252	09.0	#-325
8	-EpPZ	0818	49.0	#-305	10	-EPZ	0413	09.0	
8	+EPZ	1004	54.8		10	+EPZ	0531	18.0	#-326
8	-EpPZ	1049	18.6	#-306	10	+EPZ	0623	02.0	
8	+EsPZ	1049	25.6	#-306	10	+EPZ	0623	04.6	
8	+EPZ	1107	20.0		10	+EPZ	0817	39.0	#-327
8	-EPZ	1107	40.2		10	+EPZ	0820	28.4	#-328
8	-EPZ	1158	35.5	#-307	10	-EXZ	0855	54.9	#-329
8	-EPcPZ	1158	49.6	#-307	10	+EpPZ	0856	09.2	#-329
8	+EXZ	1314	19.6	#-308	10	-EXZ	0914	37.6	#-330
8	+EPZ	1357	55.4	#-309	10	+EPZ	0948	23.0	#-331
8	+EPZ	1540	28.5		10	-EXZ	0948	30.0	#-331
8	+EPZ	1627	09.3	#-310	10	-EPZ	1231	39.0	#-332
8	+EPZ	1700	41.3	#-311	10	+EPZ	1257	24.4	#-333
8	+EpPZ	1700	46.2	#-311	10	+EPZ	1334	10.2	
8	-EPZ	1714	37.8	#-312	10	-EPZ	1334	17.0	
8	-EPZ	1801	33.6	#-313	10	+EPZ	1417	29.9	
8	-EPZ	1818	49.7	#-314	10	+EpPZ	1611	17.3	#-334
8	+EPZ	1854	15.0	#-315	10	+EPZ	1713	33.5	
8	-EPZ	2354	15.8	#-316	10	+EPZ	1713	52.0	
9	+EPZ	0128	35.2		10	+EPZ	2217	04.8	
9	-EPZ	0154	14.6		10	-EPZ	2217	11.6	
9	+EPZ	0448	05.0		11	+IPZ	0628	04.6	#-335
9	+EPZ	0448	07.9		11	ESH	0632	44.0	#-335
9	+EPZ	0619	02.6	#-317	11	-EPZ	0944	05.1	
9	-EPZ	0953	32.6		11	-EXZ	1102	09.0	#-336
9	-EPZ	1154	05.4	#-318	11	+EPZ	1244	32.5	#-337
9	+EXZ	1426	37.0	#-319	11	+EPZ	1420	25.4	
9	-EPZ	1507	32.0		11	ESH	1429	12.0	
9	-EPZ	1857	30.0		11	-IPZ	1506	09.6	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
11	ESH	1516	02.4		12	-EPZ	1541	47.0	
11	-IPZ	1516	40.0	#-338	12	-EPZ	1615	31.4	#-360
11	+EPZ	1536	07.3		12	-IPZ	1701	43.0	
11	-EPZ	1545	27.6	#-339	12	-IPZ	1701	47.2	
11	+EPZ	1557	02.4		12	-EPZ	1739	34.4	#-361
11	+EPZ	1605	14.8	#-340	12	-EPZ	1959	09.9	#-362
11	-IPZ	1634	30.0	#-341	12	+EXZ	2333	24.5	#-363
11	-IpPZ	1634	37.4	#-341	12	+EpPdiffZ	2333	55.5	#-363
11	+EPZ	1707	09.0	#-342	12	-EXZ	2337	31.8	#-363
11	+EPZ	1710	17.8	#-343	12	+EpPZ	2336	25.2	#-364
11	-EPZ	1729	30.2	#-344	12	+EsPZ	2336	28.5	#-364
11	+EpPZ	1729	38.4	#-344	13	+EPZ	0202	21.0	
11	-EPZ	1938	45.8	#-345	13	+EPZ	0202	34.0	
11	+EPZ	2022	01.6	#-346	13	+EXZ	0232	48.0	#-365
11	-IpPZ	2022	02.4	#-346	13	+EPZ	0325	29.4	#-366
11	-EPZ	2121	10.8	#-347	13	-EpPZ	0325	40.0	#-366
11	-EPZ	2200	45.0	#-348	13	-EPZ	0329	33.7	#-367
11	-EPZ	2244	26.0	#-349	13	+EPZ	0722	43.4	#-368
11	+EPZ	2332	25.0		13	-IpPZ	0722	44.0	#-368
11	+EPZ	2332	44.5	#-350	13	+EPcPZ	0736	41.0	#-369
12	-EPZ	0025	25.0		13	+EPZ	1031	10.5	#-370
12	-EPZ	0218	01.4		13	+EPZ	1045	03.2	#-371
12	-EPZ	0244	08.6		13	-EpPZ	1045	13.6	#-371
12	+EPZ	0310	15.4		13	-EPZ	1348	02.5	
12	-EXZ	0321	20.6	#-351	13	-EPZ	1533	15.2	#-372
12	+EPZ	0447	15.1		13	+EPKPdfZ	2202	18.0	#-373
12	-EPZ	0447	29.0		13	+EPKPbcZ	2202	24.3	#-373
12	+EPZ	0621	10.3	#-352	14	-EPZ	0110	18.8	
12	+EPZ	0655	37.7	#-353	14	-EPZ	0727	24.6	
12	+EpPZ	0655	44.6	#-353	14	-IPZ	0742	03.5	
12	+EPZ	0707	17.3	#-354	14	-EPZ	0827	10.4	
12	+EPZ	0904	03.6	#-355	14	+EPZ	1921	35.4	
12	-EPZ	0911	34.8	#-356	14	+EPZ	2044	34.8	
12	+EPZ	1050	03.8	#-357	14	-EPZ	2044	52.0	
12	+EXZ	1112	26.0	#-358	15	-EPZ	1119	02.6	
12	+EPZ	1336	02.8	#-359	15	+EPZ	2137	19.6	
12	-EPZ	1541	40.0		16	+IPZ	0232	29.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
16	+EPZ	0247	11.6		18	-EPZ	2240	26.4	
16	-IPZ	0315	05.6		18	+EPZ	2306	42.8	#-389
16	+EPZ	0519	09.0		19	-EXZ	0001	14.5	#-390
16	+EPZ	0818	00.5		19	+EPZ	0221	11.2	
16	+EPZ	1237	07.7		19	-EPZ	0221	15.0	
16	+IPZ	1237	19.4		19	+EPZ	0307	00.4	
17	-EPZ	0017	07.4		19	+EPZ	0307	08.6	
17	+EPZ	0142	27.9		19	+EPZ	0905	21.8	#-391
17	-EPcPZ	0458	10.4	#-374	19	-EXZ	0949	52.4	#-392
17	-EPZ	1319	27.4		19	+EPZ	1046	33.0	#-393
17	+EpPZ	1539	33.2	#-375	19	-EPZ	1102	51.0	#-394
17	+EPZ	1728	04.4	#-376	19	+EsPZ	1152	11.4	#-395
17	-EPZ	1748	13.2	#-377	19	+EPZ	1320	09.4	
17	-EPZ	1910	33.2	#-378	19	+EPZ	1320	14.7	
17	-EpPZ	1910	41.6	#-378	19	+EPZ	1431	32.1	#-396
17	+EsPZ	1910	45.2	#-378	19	+EPZ	1721	22.4	#-397
17	+EPZ	2332	20.9		19	-EpPZ	1721	36.3	#-397
17	+EPZ	2333	21.3		19	-EsPZ	1721	41.8	#-397
18	-EPZ	0040	40.0		19	-EPZ	1807	50.6	#-398
18	+EPZ	0207	48.6		19	+EPZ	1852	43.8	
18	+EPZ	0329	01.0	#-379	19	+EPZ	1852	50.0	
18	+EPZ	0336	23.0	#-380	19	+EPZ	2008	21.3	
18	-EpPZ	0638	31.4	#-381	19	-EPZ	2008	27.0	
18	+EPZ	0651	46.0	#-382	19	+EPZ	2214	23.7	#-399
18	-EpPZ	0651	50.0	#-382	20	-EPZ	0245	00.2	#-400
18	+EPZ	0720	25.6	#-383	20	-EPZ	0437	12.4	
18	+EPZ	0736	02.5	#-384	20	-EXZ	0549	43.6	#-401
18	-IPcPZ	0736	05.8	#-384	20	+EPZ	0721	27.7	
18	+EPZ	0849	08.2	#-385	20	+EPZ	1015	12.6	#-402
18	+EPZ	0926	18.2		20	-EXZ	1015	20.3	#-402
18	-EPZ	0926	22.6		20	+EPZ	1116	08.0	
18	-EXZ	0942	18.0	#-386	20	+EPZ	1137	12.3	
18	-EPZ	1414	08.2		20	-IPZ	1413	24.9	
18	+EPZ	1543	32.9		20	-EPZ	1447	24.0	
18	+EPZ	1903	20.2	#-387	20	-EPZ	1637	37.8	#-403
18	+EPZ	1956	15.2		20	+EXZ	1828	06.2	#-404
18	-EPZ	2001	08.0	#-388	20	+EPZ	1907	01.6	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
20	+EPZ	2131	49.8	#-405	24	+EPZ	1458	37.2	
20	-EPPZ	2215	50.4	#-406	25	-EPZ	0536	02.7	
21	-EPZ	0040	36.0		25	-EPZ	0943	41.4	
21	+EPZ	0238	17.9		25	+EPZ	1121	30.4	
21	+EPZ	0441	46.5	#-407	25	+EPZ	1408	22.0	#-421
21	-EPZ	0703	23.8	#-408	25	+EXZ	1408	30.0	#-421
21	+EPZ	0741	01.9		25	-EPZ	1525	24.0	
21	+EPZ	0741	04.1		25	-EPZ	1525	24.8	
21	+EsPZ	0841	29.2	#-409	25	+EXZ	1806	34.8	#-422
21	+EPZ	1434	44.3		25	+EPZ	2330	54.2	
21	+EPZ	1539	25.5	#-410	25	+EPZ	2330	56.7	
21	-EPZ	1841	31.2		26	+EPZ	0421	30.8	
21	+EPZ	1841	36.4		26	-EPZ	0546	03.4	#-423
21	-IPZ	1841	41.6		26	+EPZ	1041	12.2	#-424
21	+EPZ	2354	12.3	#-411	26	-EPZ	1051	17.0	
21	+EPcPZ	2354	16.8	#-411	26	-IPZ	1051	19.9	
22	+EPZ	0112	09.4		26	+EPZ	1310	01.4	
22	-EPZ	0112	36.4	#-412	26	-IPZ	1503	18.2	
22	+EPZ	0446	15.4	#-413	26	+EPZ	1733	38.9	
22	+EXZ	0607	31.3	#-414	26	-EPZ	2218	02.4	
22	+EPZ	0821	03.1		27	-EPZ	0034	08.6	
22	-EPZ	0902	09.6		27	-IPZ	0250	18.4	
22	+EXZ	0902	45.4	#-415	27	-IPZ	0346	43.0	
22	+EPZ	1217	14.6		27	-EPZ	0448	37.0	#-425
22	+EPZ	1354	28.9		27	+EPZ	0647	54.0	#-426
22	+EPZ	1639	09.9	#-416	27	+EPZ	1148	21.2	
22	+EPZ	1848	13.0		27	-IPZ	1148	23.3	
23	-EPZ	0644	58.0	#-417	28	+EPZ	0121	15.2	#-427
23	+EPcPZ	0645	16.8	#-417	28	+EpPZ	0121	34.0	#-427
23	+EPZ	0755	23.2		28	-EXZ	2126	01.4	#-428
23	+EPZ	0805	19.4	#-418	28	+EPZ	2149	01.8	#-429
23	+EPKpdfZ	1543	24.0	#-419	28	+IXZ	2149	08.0	#-429
23	+EXZ	1543	30.7	#-419	28	-EPZ	2153	48.2	#-430
23	+EPZ	1749	02.8		28	+EsPZ	2154	05.0	#-430
24	-EPZ	0134	11.8		29	+EPZ	0745	34.0	
24	+EPZ	1140	40.0	#-420	29	-EPZ	0745	39.4	
24	+EPZ	1216	02.0		29	+EPZ	1000	27.8	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
29	-EPZ	1000	30.2		1	+EPZ	2126	05.6	
29	+EPZ	1116	55.4		1	+EPZ	2251	02.4	
29	-EPZ	2029	15.6		2	-EPZ	0038	20.5	
30	+EPZ	0215	16.5		2	+EPZ	0254	07.3	#-440
30	+EXZ	0527	48.2	#-431	2	+EPcPZ	0402	48.4	#-441
30	-IPZ	0604	02.8		2	+EPZ	0526	48.4	
30	+IPZ	1707	44.2	#-432	2	-EPZ	0814	01.2	
30	-IPcPZ	1707	47.5	#-432	2	+EPZ	0923	26.6	
30	+EPZ	1849	07.1		2	+EPZ	0950	49.8	
30	-EPZ	1849	13.0		2	+EPZ	1814	02.4	
30	+EPZ	1940	54.6	#-433	2	-EPZ	1944	39.0	#-442
30	-EPZ	2026	11.0		2	+EPZ	2042	03.4	
30	+EPZ	2037	51.0		2	+EPZ	2132	35.7	
30	+EPZ	2038	16.6		2	-EPZ	2132	42.0	
30	+EPZ	2340	17.6		2	+EPZ	2308	36.0	
31	+EPZ	0348	29.8		2	+EPcPZ	2328	19.8	#-443
31	+EPZ	0348	30.6		3	-EPZ	0147	22.6	#-444
31	-EPZ	0623	20.0	#-434	3	+EPZ	0158	29.8	
31	+EPZ	0639	40.0	#-435	3	-EPZ	1506	07.2	
31	+EpPZ	0639	48.8	#-435	3	+EPZ	2046	11.6	
31	+EPZ	0820	27.8		4	-EPZ	0009	51.8	
31	-EPZ	1348	31.2		4	-EPZ	0010	00.6	
31	+EPZ	1353	30.4		4	-EPZ	0026	10.6	
31	+EPZ	1426	05.6		4	+EPZ	0715	34.3	#-445
31	+EPZ	1608	01.0		4	+EPZ	0747	05.2	
Apr.					4	+EPZ	0747	25.8	
1	-EPZ	0208	34.7		4	+EPZ	0943	13.4	#-446
1	-EPZ	0413	17.0		4	-EPcPZ	0943	16.4	#-446
1	+EPZ	1214	36.6		4	+EXZ	0952	34.4	#-447
1	+EPZ	1303	45.2	#-436	4	+EPZ	1432	38.3	#-448
1	+EXZ	1551	49.9	#-437	4	-EPZ	1823	34.2	
1	+EPZ	1554	40.2	#-438	4	-EPZ	1935	19.2	
1	+EpPZ	1554	41.6	#-438	4	+EPZ	2041	23.5	
1	+EPZ	1902	21.5		4	+EPZ	2104	29.0	
1	+EPZ	1953	41.0	#-439	4	+EPZ	2300	08.6	
1	+EPZ	2049	01.5		4	-EPZ	2300	14.1	
1	+EPZ	2107	46.8		4	-IPZ	2300	39.8	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
5	+EPZ	0051	03.8		9	+EPZ	2258	03.3	
5	-EpPZ	0343	01.0	#-449	10	+EXZ	0305	38.0	#-457
5	-EPZ	1018	10.5		10	-EPcPZ	0305	42.2	#-457
5	+EPZ	1424	03.6		10	-EPcZP	0629	15.0	#-458
5	+EPZ	2019	12.3		10	-EsPZ	0629	28.8	#-458
5	+IPZ	2248	43.8		10	-EPZ	0640	34.8	#-459
5	-IPZ	2248	49.8		10	+EPZ	0918	27.2	#-460
6	+IPZ	2227	13.0		10	+EPZ	1517	53.2	
6	-EPZ	2302	57.0		10	-EPZ	1706	38.8	
7	+EPZ	0016	12.4		10	-IPZ	1706	40.4	
7	+EPZ	0016	26.8		10	ESH	1717	05.2	
7	+EPZ	0712	24.5		10	+EPZ	1839	51.4	#-461
7	+IPZ	0712	29.0		10	-EPZ	2139	35.5	#-462
7	+EXZ	1024	44.6	#-450	10	+EPZ	2243	12.0	
7	+EPZ	1446	04.0	#-451	11	+EPZ	0012	40.3	
7	+EPcPZ	1446	05.4	#-451	11	-EPZ	0232	04.8	#-463
7	+EPZ	1815	01.0		11	+EsPZ	0335	24.9	#-464
7	+EPcPZ	2044	03.0	#-452	11	+EPZ	0507	33.2	
7	+EPZ	2051	46.7		11	+EPZ	0611	20.7	
7	+EPZ	2051	49.0		11	-EPZ	0825	36.6	
7	+EPZ	2117	54.0		11	-EPZ	0858	19.8	#-465
8	-EPZ	0109	08.6		11	+EPZ	0916	03.0	
8	+EPZ	0122	02.0		11	-EPZ	0916	18.4	
8	-EPZ	0219	13.9	#-453	11	-IPZ	0953	24.0	#-466
8	+EPZ	0438	13.6	#-454	11	-IPcPZ	0953	28.8	#-466
8	+EsPZ	0438	30.1	#-454	11	ESH	1004	22.5	#-466
8	+EPZ	0718	15.2		11	-EPZ	1038	40.9	#-467
8	-EPZ	0736	06.4		11	+EpPZ	1038	50.0	#-467
8	+EPZ	0810	09.3		11	+IXZ	1047	07.0	#-468
8	+EPZ	0909	49.2	#-455	11	+EPZ	1103	22.8	
8	-EPZ	1103	11.8		11	+EPZ	1103	26.4	
8	+EPZ	1510	27.6		11	+EPZ	1406	05.6	
8	-EPZ	2311	21.0		11	+EPZ	1608	05.4	
9	+EPZ	0025	11.0		11	+EPZ	1935	03.6	
9	+EPZ	1647	15.0	#-456	11	-IPZ	2226	24.2	
9	+EPZ	1753	15.2		11	ESH	2232	14.0	
9	+IPZ	2233	58.2		11	+EPZ	2304	37.4	#-469



Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
11	+EpPZ	2305	08.0	#-469	18	ESH	0037	09.4	
12	+EPKpdZ	0817	00.8	#-470	18	+EPZ	0506	15.0	
12	+EPZ	0912	06.7		18	-EPZ	0722	36.8	
12	-EPZ	0941	15.4		18	+EPZ	1342	48.4	
12	-EPZ	1000	37.4	#-471	18	-EPZ	1540	01.3	
12	+EPZ	1031	14.2		18	+EPZ	2146	43.6	
12	-EPZ	1031	16.8		19	+EPZ	0109	00.8	
12	+EPZ	1248	11.2	#-472	19	+EPZ	0843	18.6	
12	+EsPZ	1248	24.4	#-472	19	+EPZ	1402	23.6	
13	+EXZ	0108	50.0	#-473	19	+EPZ	1403	03.6	
13	-EPZ	0619	22.0		20	+EPZ	0048	49.0	
13	+EPZ	0714	18.1		20	-EPZ	0056	28.0	
13	-EPZ	0808	11.2	#-474	20	+EPZ	0127	05.8	
13	+EPZ	1824	14.2		20	+EPZ	0207	03.0	
13	-IPZ	2033	09.8	#-475	20	+EPZ	0724	47.0	
13	-IXZ	2039	32.6	#-475	20	+EPZ	0812	04.4	
14	+EPZ	0124	48.0	#-476	20	+EPZ	0812	10.0	
14	+EPZ	1249	10.8	#-477	20	-EPZ	1817	27.2	
15	-EPZ	0650	06.8		20	+EPZ	2126	32.6	
15	+EPZ	0917	29.8		21	-EPZ	1244	05.0	
15	+EPZ	1048	01.2		21	+EPZ	1653	18.6	
15	+EXZ	1352	39.0	#-478	21	-EPZ	1808	10.4	
15	+EPZ	1611	36.0		21	-EPZ	1834	01.0	
15	+EPZ	2016	03.0		21	-EPZ	2358	39.1	
15	-EPZ	2016	11.0		22	-EPZ	0123	28.0	
16	-EPZ	0019	24.0		22	+EPZ	0240	26.7	
16	+EPZ	0028	17.2		22	+EPZ	0347	17.2	
16	+EPZ	1153	11.4		22	+EPZ	0532	07.6	
16	+EPZ	2256	25.0	#-479	22	-EPZ	0718	26.0	
16	-EPcPZ	2256	29.0	#-479	22	-EPZ	0856	27.0	#-480
17	-EPZ	0026	06.3		22	+EPZ	1048	14.2	
17	-EPZ	0026	08.2		22	+EPZ	1525	02.6	
17	+EPZ	0505	42.4		22	+EPZ	1813	45.4	
17	-EPZ	2101	20.2		22	-EPZ	1813	48.2	
17	+EPZ	2101	26.1		22	+EPZ	2326	03.4	
18	-IPZ	0028	14.0		23	+EPZ	0328	28.6	
18	-EPZ	0028	23.0		23	-EPZ	0512	41.2	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
23	-EPcPZ	0703	55.0	#-481	May				
23	+EPZ	1113	20.2		1	-EPZ	1326	27.0	
23	+EPZ	1113	23.5		1	+EPZ	1451	52.4	#-490
23	-EPZ	1026	09.9	#-482	1	-EPZ	1634	43.0	#-491
23	-EPcPZ	1026	18.2	#-482	1	-EPZ	1646	41.6	#-492
23	+EPZ	1602	03.7		1	-EPcPZ	1646	52.3	#-492
23	+EPZ	1816	02.0		1	+EPZ	1941	04.4	
24	-EPcPZ	0013	19.0	#-483	1	+EPZ	2113	12.3	
24	-EPKiKPZ	0134	28.9	#-484	2	+EPPZ	0016	04.5	#-493
24	+EPZ	0308	26.4		2	-EXZ	0159	32.6	#-494
24	-EPZ	0424	04.8		2	+EPZ	0642	06.3	
24	-EPZ	0753	48.6	#-485	2	+EPZ	0642	09.0	
24	+EPZ	0853	45.6		2	+EPZ	0715	40.2	
24	-EPZ	0853	48.0		2	-EPZ	0821	02.0	
24	+EPZ	0925	08.0	#-486	2	+EPZ	1034	01.4	
24	+EPZ	1051	42.8		2	-EPZ	1420	49.4	#-495
24	+EPZ	1224	26.7	#-487	2	-EPZ	1439	41.1	
24	+EPZ	1522	17.4		2	-IPZ	1503	22.0	#-496
24	+EPZ	1728	11.8		2	+EpPZ	1503	29.8	#-496
24	-EPZ	2343	54.6		2	+EpPKPdfZ	2130	47.3	#-497
25	-EPZ	0310	06.3		3	+EXZ	0626	07.0	#-498
25	-IPZ	2216	11.5		3	+EPZ	0700	10.3	#-499
26	-IPZ	1159	38.2		3	+EPZ	1046	21.2	
27	+EpPZ	1724	45.0	#-488	3	+EPZ	1046	25.5	
27	+EPZ	2037	41.4		3	-EPZ	1046	38.4	
28	+EPZ	1416	22.8		3	-EPZ	1235	05.6	
28	+EPZ	1703	02.4		3	+EPcPZ	1850	45.0	#-500
28	+EPZ	1755	10.8		3	+EpPZ	2320	03.6	#-501
28	+EPZ	1835	07.3		3	+EXZ	2342	44.6	#-502
29	+EPZ	0202	34.2		4	-EPZ	0343	13.2	
29	+EPZ	0707	03.6		4	-EPZ	1311	02.0	
29	+EPZ	0907	00.0		4	-EPZ	1405	45.0	#-503
29	+EPZ	1350	36.0	#-489	4	-EpPZ	1405	49.4	#-503
30	-EPZ	0056	32.6		4	+EPZ	1624	30.4	#-504
30	+EPZ	0056	41.6		4	+EPcPZ	1624	43.4	#-504
30	+EPZ	0404	50.0		4	+EPZ	2013	31.3	
30	+EPZ	0653	24.0		4	-EPZ	2134	08.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
5	+EPZ	0949	44.0	#-505	8	+EPZ	1036	24.0	
5	-EPZ	1534	43.5	#-506	8	-EPZ	1537	25.4	
5	+EXZ	1640	46.0	#-507	8	+EPZ	1647	20.6	
5	-EPZ	1722	12.7	#-508	8	-EPZ	2102	13.0	
5	-EPZ	1757	20.5		8	+EPZ	2102	25.2	
6	-IPZ	0254	52.6	#-509	8	+EPZ	2203	22.4	#-519
6	-EPZ	0749	10.5		9	+EPZ	0038	25.3	
6	-EPcPZ	0852	42.8	#-510	9	-EPZ	0214	53.8	#-520
6	+EPZ	1048	19.3		9	+EpPZ	0215	05.5	#-520
6	+EPZ	1136	55.2	#-511	9	-EPZ	0340	19.0	#-521
6	+EPZ	1145	02.0	#-512	9	+IPZ	0611	59.0	#-522
6	-EPZ	1450	11.4		9	+IPcPZ	0612	04.0	#-522
6	+EPZ	2115	10.4		9	ESH	0622	09.8	
6	-EPZ	2202	07.0		9	+EPcPZ	0705	42.8	#-523
7	+EPZ	0125	03.0		9	-EPZ	1055	19.8	#-524
7	+EPZ	0137	07.4		9	+EPZ	1151	21.5	#-525
7	+EPZ	0209	05.5		9	-EPZ	1353	30.0	#-526
7	-EPZ	0451	37.2		9	-EPZ	1448	08.6	
7	-EPZ	0509	46.0		9	+EPZ	1611	24.8	
7	+EPZ	0542	24.6		9	-EPZ	1851	07.6	
7	-EPZ	0752	25.0	#-513	10	-EPZ	0715	24.6	#-527
7	-IPcPZ	0752	26.0	#-513	10	+EPZ	0901	23.4	
7	-EPZ	1046	49.0	#-514	10	+EPZ	1318	21.7	#-528
7	+EPZ	1246	44.4	#-515	10	+EPZ	1327	45.5	
7	+EPZ	1514	01.1		10	+EPZ	1513	39.6	#-529
7	+EPZ	1546	10.0		10	+EPZ	1546	10.1	
7	-EPKpbcZ	1806	15.6	#-516	10	-EPZ	2120	52.2	
7	+EPZ	2331	47.2		11	+EPZ	0906	21.7	
7	+EPZ	2333	24.6		11	+EPZ	1115	01.6	
8	-EPZ	0334	09.5	#-517	11	-EPZ	1140	29.9	
8	-EPZ	0355	05.9		11	-EPZ	1230	03.4	
8	+EPZ	0433	18.4		11	-EPZ	1340	04.6	
8	+EPZ	0453	13.8		11	+EPZ	1412	53.9	
8	+EXZ	0552	06.9	#-518	11	+EPZ	1628	07.9	
8	-IPcPZ	0552	13.6	#-518	11	+EPZ	1721	20.0	
8	+EPZ	0714	19.8		11	+EPZ	1721	25.1	
8	+EPZ	0948	23.6		12	+EPZ	0449	17.5	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
12	-EPZ	0924	05.8		21	+EPZ	1902	47.2	#-540
12	-EPZ	1307	33.4		21	-EPZ	2008	30.4	#-541
12	+EPcPZ	1644	47.5	#-530	22	+EPZ	0049	19.8	
12	+EPZ	2210	55.0	#-531	22	+EPZ	0147	14.4	
12	+EPZ	2334	07.5		22	+EPZ	0216	19.6	
13	-EPZ	0406	41.6	#-532	22	+EPZ	0624	44.6	#-542
13	+EPZ	0418	36.6		22	-EXZ	1011	41.0	#-543
13	+EPZ	0555	19.0		22	+IPZ	1059	00.4	#-544
13	+EPZ	0620	23.0		22	-EXZ	1059	09.2	#-544
13	+EPZ	0620	25.2		22	-EPZ	1154	07.0	
13	-EPZ	1535	52.0		22	-EPZ	1355	03.8	
13	+EPZ	2006	26.9		22	+EPZ	1454	41.0	
13	-EPZ	2050	02.0		22	-EPZ	1652	11.8	
14	+EPZ	1251	55.0		22	+EsPZ	1811	22.4	#-545
14	-EPZ	1512	01.7		23	+EPZ	0251	19.9	
14	+EPZ	1933	28.0		23	+EPZ	0929	24.2	
15	NIL				23	+EPZ	1052	03.6	
16	+EPZ	1914	54.0	#-533	23	-EPZ	1827	39.0	#-546
17	+EPZ	0244	19.8		23	+EPZ	1834	20.0	
17	-EPZ	1003	21.4	#-534	23	+EXZ	2032	13.0	#-547
17	-IPcPZ	1003	31.0	#-534	23	+EPZ	2213	18.0	
17	-EPZ	1658	34.4		23	+EPZ	2259	14.6	
17	+EPZ	1740	26.8		23	+IPZ	2259	15.8	
17	+EPZ	1958	34.6		23	+IPZ	2259	42.6	
17	+EXZ	2127	09.6	#-535	24	+EPZ	0018	07.0	
18	-IPZ	1211	33.2		24	+EPZ	0422	20.7	
19	-IPZ	0149	08.0	#-536	24	+EPZ	0440	03.4	
19	+IPZ	0251	03.0		24	+EPZ	0517	21.0	
19	-IXZ	0429	16.0	#-537	24	-EPZ	0832	35.2	
20	-IPZ	0817	22.0		24	+EPZ	1116	16.7	
21	+EPZ	0120	06.0		24	-EPZ	1303	09.6	
21	+EPZ	0335	29.0		24	-EXZ	1353	17.2	#-548
21	+EPZ	0423	06.6		24	+EpPZ	1428	52.5	#-549
21	+EPZ	0545	00.8		24	-IPZ	1630	25.0	#-550
21	-EPZ	0603	21.0	#-538	24	ESH	1640	27.0	#-550
21	+EPZ	0833	38.8		24	-EPZ	2156	04.0	
21	+EPZ	1505	17.0	#-539	25	+EPZ	0008	05.6	#-551

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
25	+EpPZ	0008	12.5	#-551	28	+EPZ	2249	08.2	
25	+EXZ	0039	57.8	#-552	28	-EPZ	2337	37.6	
25	+EPZ	0723	03.2		29	-EPZ	0219	23.0	
25	+IPZ	0927	31.3	#-553	29	+EPZ	0242	16.4	
25	-EPZ	1023	06.7		29	+EPZ	1128	43.6	#-565
25	+IPZ	1319	45.4	#-554	29	+EPZ	1955	45.0	
25	+EPZ	1423	07.0		30	-EPZ	0238	15.0	#-566
25	+EPZ	1544	03.1		30	+EPZ	0349	31.8	
25	+EPZ	1904	25.6		30	+EPZ	0900	39.6	#-567
25	-EPZ	2335	29.4		30	-EPZ	1203	24.0	
26	-EPZ	0800	48.2	#-555	30	-EPZ	1203	39.8	
26	+EXZ	0803	00.5	#-556	30	+EPZ	1655	51.0	
26	-EPZ	0911	45.0		30	+EPZ	1656	38.0	
26	+EPZ	1121	06.7		30	+EPZ	1947	28.4	
26	+EPZ	1607	34.4	#-557	31	+EPZ	0320	16.6	
26	+EPZ	2032	58.2		31	+EPZ	0703	33.0	
26	+EPZ	2048	27.6		31	-EPZ	0703	35.4	
26	+EPZ	2150	13.7		31	+EPZ	1030	17.8	
27	+EPZ	0404	35.8	#-558	31	-EPZ	1030	25.0	
27	+EPZ	1726	34.4		31	-EPZ	1300	03.0	
27	-IPZ	1727	40.0		31	+EPZ	1608	55.6	
27	ESH	1738	03.6		31	+EPZ	1654	50.3	
27	+EPZ	1758	21.2	#-559	31	-IPZ	2004	24.4	
27	+EsPZ	1758	39.2	#-559	31	ESH	2014	37.6	
27	+EPZ	1836	12.4		31	+EPZ	2054	45.2	
27	+IPZ	2100	52.3		31	+EPZ	2112	42.5	
27	+IPZ	2101	05.0		June				
27	-EXZ	2230	40.0	#-560	1	+EPZ	0421	08.0	
28	-EPZ	0204	01.2		1	+EPZ	0454	15.8	#-568
28	+EPZ	0437	13.0		1	-EPZ	1155	16.3	
28	+EPKpabZ	1028	31.2	#-561	1	+EXZ	1615	54.2	#-569
28	+EPcPZ	1510	49.0	#-562	1	-EPZ	1700	11.9	#-570
28	+EPZ	1828	09.3		1	+EPZ	1818	09.8	
28	-EPcPZ	1844	41.2	#-563	1	+EPZ	1851	28.8	
28	+EPZ	1935	18.8	#-564	1	+EPZ	2112	05.4	
28	-EPZ	1939	33.0		1	+EPZ	2341	42.9	
28	+IPZ	2047	45.6		2	-EPZ	0155	01.2	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
2	ESH	0159	49.2		6	+EPZ	2207	15.0	
2	+EPZ	0201	27.2		6	+EPZ	2214	07.1	
2	ESH	0205	21.0		7	+EPZ	0619	47.6	
2	+EPZ	0941	53.2	#-571	7	+EPZ	1413	36.0	
2	+EpPZ	0942	06.0	#-571	8	+EPcPZ	0644	42.0	#-578
2	+EPZ	1145	26.2		8	+EPZ	0709	24.6	
2	-EPZ	1702	16.5		8	+EPZ	0800	31.0	
2	+EPZ	1903	09.6		8	+EPZ	1417	24.4	
2	-EPZ	2211	37.8		8	+EPZ	2309	14.8	
3	+EPZ	0105	03.4		9	-IPZ	0406	59.8	#-579
3	+EPZ	0252	09.0		9	-EPZ	0712	37.8	#-580
3	+EPZ	0328	47.0		9	-EXZ	0910	29.8	#-581
3	+EPZ	0351	07.8		9	-EpPZ	1411	10.8	#-582
3	-EPZ	0452	12.0		9	+EPZ	1726	07.0	
3	+EPZ	0452	18.4		9	-EPZ	1848	08.8	
3	-EPZ	0602	56.4		9	+EPZ	2019	33.3	
3	+EPZ	0804	52.6		9	+EPZ	2211	19.0	
3	+EPZ	0839	26.8		9	-EPZ	2335	57.4	#-583
3	+EPZ	0936	27.2		10	-EXZ	0226	40.2	#-584
3	-EPZ	1335	07.4		10	+EPZ	0320	18.5	#-585
4	+EPZ	0344	04.5		10	-EsPZ	0320	33.4	#-585
4	+EPZ	0410	01.9		10	+EPZ	0621	35.2	#-586
4	+EPZ	0657	23.2		10	+EPZ	0949	43.6	
4	-EPZ	0706	33.0		10	+EPZ	0957	50.5	#-587
4	+EPZ	1114	24.6		10	+EPZ	1028	05.4	
4	+EPZ	1218	04.5		10	+EPZ	1348	02.2	#-588
4	+EPZ	1524	09.0	#-572	10	-EPZ	1501	43.8	
4	+EpPZ	1524	19.8	#-572	10	+EPZ	1614	01.3	
4	-EPZ	1620	02.8	#-573	11	+EPZ	0103	12.2	#-589
4	+EPZ	1851	21.6		11	+EPZ	0105	34.0	
5	+EpPZ	1751	34.0	#-574	11	+EPZ	0218	49.0	
5	-EPZ	1756	02.2	#-575	11	+EPZ	0525	32.6	
6	-IPZ	0231	31.4	#-576	11	-EPZ	0904	52.0	#-590
6	-IXZ	0231	44.2	#-576	11	+EsPZ	0905	06.0	#-590
6	-EPZ	0254	01.6		11	-EPZ	1716	44.6	
6	-EPZ	0510	03.4		11	+EPZ	1821	40.2	
6	+EPZ	1709	02.6	#-577	11	+EPcPZ	2107	31.8	#-591

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
11	-EPZ	2119	39.4		15	+EPZ	1747	29.3	#-610
12	+EPZ	0402	41.0	#-592	15	-EPZ	2213	07.0	#-611
12	-EPcPZ	0402	45.6	#-592	15	+EPZ	2333	48.6	
12	+EPZ	0403	05.2	#-593	16	+EPZ	0016	55.7	#-612
12	-EPZ	0454	34.0	#-594	16	+EPZ	0047	09.7	
12	+EPZ	0551	53.6		16	+EPZ	0105	33.2	#-613
12	+EPZ	0916	30.6	#-595	16	-EPZ	0318	19.0	
12	-EsPZ	0916	39.2	#-595	16	+EPZ	0329	26.0	#-614
12	-EPZ	1035	42.8		16	+EPZ	0357	06.6	
12	+EPZ	1423	17.8		16	-IPZ	0411	07.6	#-615
12	+EPZ	1713	02.0		16	+EPZ	0443	03.5	
12	-IPZ	1939	21.0	#-596	16	+EPZ	0615	12.4	
12	ESH	1950	23.0	#-596	16	-EXZ	0633	20.2	#-616
12	-EPZ	2254	23.6	#-597	16	+EPZ	0801	31.8	
13	-EPZ	0210	37.6	#-598	16	+EPZ	0929	21.8	#-617
13	+EPZ	0231	55.9	#-599	16	-EPZ	1237	47.7	#-618
13	+EPZ	0351	49.0		16	-EPZ	1333	25.0	
13	+EpPKPdfZ	0352	09.6	#-600	16	+EPZ	1737	30.4	
13	-EPZ	0556	30.2		16	+EPZ	1813	24.3	
13	+EXZ	0638	43.4	#-601	16	+EPZ	2127	24.0	
13	+EPZ	0718	07.5	#-602	16	+EPZ	2308	24.0	
13	+EPZ	1015	55.4		17	+EPZ	0024	46.3	
13	-EXZ	1224	24.0	#-603	17	-IPZ	1318	01.9	
13	+EPZ	1404	09.8		17	ESH	1327	14.0	
13	+EPZ	1550	35.0		17	-EPZ	1616	14.2	
13	+EPZ	1744	22.6		17	+EPZ	1648	12.8	#-619
13	+EPZ	1804	19.5	#-604	17	+EPZ	2220	36.2	#-620
13	-EpPZ	1804	36.0	#-604	18	+EPZ	0432	19.7	
13	+EPcPZ	2236	04.4	#-605	18	-EPZ	1017	08.3	
14	+EPZ	0209	14.4		18	-EPZ	1203	25.4	
14	+EPZ	0707	47.8		18	+EPZ	1407	15.4	
14	+EPZ	1123	06.8		18	+EPZ	1407	19.2	
14	+EPZ	1535	17.2	#-606	18	+EPZ	1628	29.3	
14	+EPdiffZ	2140	22.0	#-607	18	-EPZ	1829	16.4	
15	-EPZ	0446	27.7		18	-IPZ	2322	29.0	#-621
15	+EPZ	0830	05.4	#-608	18	-IXZ	2322	35.6	#-621
15	+EpPZ	1326	54.0	#-609	19	+EPZ	0534	35.2	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
19	+EXZ	1017	04.7	#-622	24	-EPZ	1334	34.4	#-637
19	+EPZ	1207	22.4		24	+EPZ	1400	40.6	#-638
19	+EPZ	1234	17.5		24	-EPZ	1438	39.9	#-639
19	-EPZ	2140	20.9	#-623	24	-EPcPZ	1438	45.0	#-639
20	+EPZ	0205	32.0		24	+EPZ	1648	32.2	
20	+EPcPZ	0223	09.4	#-624	24	+EPZ	1809	14.0	
20	+EPZ	0811	49.8	#-625	24	-EPZ	1825	10.1	
20	-EXZ	0851	40.2	#-626	25	-EPZ	1032	29.5	
20	-EPZ	1034	27.0	#-627	25	+EXZ	1040	23.0	#-640
20	+EPZ	1415	05.8		25	+EPZ	1353	57.5	
20	+EPZ	1523	04.6		25	+EPZ	1354	01.3	
20	+EPZ	1555	09.2		25	-EPZ	1444	43.7	#-641
20	+EPZ	1758	02.5		25	+EPZ	1628	39.2	
20	+EXZ	2120	03.9	#-628	25	+EPZ	1628	41.4	
20	+EPZ	2302	24.6		25	+EpPZ	2108	06.5	#-642
21	+EPZ	0505	56.7		26	-IPZ	0543	17.0	#-643
21	+EXZ	1036	08.0	#-629	26	ESH	0554	08.8	#-643
21	-EPZ	1420	57.0	#-630	26	-EPZ	0907	59.0	#-644
22	+EPZ	0515	55.5		26	+IPZ	1002	14.8	#-645
22	+EPZ	1448	44.2		26	+IpPZ	1002	39.2	#-645
22	+EPZ	2035	27.2	#-631	26	ESH	1011	44.0	#-645
22	+EXZ	2207	36.6	#-632	26	-EPZ	1144	36.0	
22	+IPZ	2228	09.2	#-633	26	+EPZ	1722	06.5	
22	+EPZ	2359	15.6		26	-EPZ	1853	21.4	#-646
23	-EPZ	0024	41.4	#-634	26	+EPZ	1911	00.5	
23	-EPZ	0053	30.0		26	+EPZ	1913	08.8	#-647
23	-EPZ	0120	43.0		26	+EPZ	1950	40.6	
23	+EPZ	0407	00.7		26	+EPZ	2256	15.8	#-648
23	+EPZ	0915	04.0		27	-EPZ	0322	48.8	#-649
23	+EPZ	0938	10.5		27	-EPZ	0726	16.6	#-650
23	+EPZ	0938	12.7		27	-EpPZ	0726	26.5	#-650
23	-EPZ	1554	03.8		27	-EPZ	0817	29.6	
23	+EPZ	1736	07.0		27	+EPZ	0859	25.0	#-651
24	+EPZ	0415	43.1		27	+EPZ	1855	00.7	
24	-EPZ	0421	07.0	#-635	27	-EPZ	2013	10.4	
24	-EXZ	0545	31.5	#-636	27	-EPZ	2109	02.0	
24	-EPZ	0721	05.0		27	-EPZ	2128	13.0	



Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
28	+EPZ	0000	43.2	#-652	30	+EPZ	2225	03.1	
28	+EPZ	0018	11.8		30	+EPZ	2225	08.4	
28	+EPZ	0030	42.6	#-653	30	-EPZ	2344	16.4	
28	-IPZ	0110	12.8		July				
28	+EXZ	0131	29.6	#-654	1	-EPZ	0320	23.9	#-668
28	+EPZ	0209	41.2		1	+EXZ	0702	11.9	#-669
28	+EPZ	0258	26.4		1	+EPZ	1517	28.0	
28	+EpPZ	0354	08.0	#-655	1	+EPZ	1517	47.6	
28	+EPZ	0640	23.5	#-656	1	-EPZ	1608	18.0	
28	+EsPZ	0640	40.0	#-656	1	-IXZ	1710	20.0	#-670
28	+EPZ	0716	16.0	#-657	1	+EPZ	2037	07.0	
28	+EPZ	0841	27.6		1	+EPZ	2108	55.2	#-671
28	-EPZ	0943	34.2	#-658	1	-EpPZ	2109	04.0	#-672
28	+EPZ	1226	19.6		2	+EPZ	0125	14.6	#-673
28	-EXZ	1836	03.0	#-659	2	+EPZ	0150	07.0	
28	+IPZ	2327	08.6	#-660	2	-IPZ	0616	55.8	#-674
29	+EPZ	0137	00.0	#-661	2	-IPcPZ	0616	56.8	#-674
29	-EPZ	0150	22.0	#-662	2	ESH	0627	23.0	#-674
29	-IpPZ	0150	28.7	#-662	2	+EPZ	0852	05.6	
29	-EPZ	1029	40.4		2	+EPZ	1014	38.3	
29	+EPZ	1206	47.4		2	+IXZ	1213	04.8	#-675
29	-EPZ	1210	03.8		2	-EPZ	1321	23.2	
29	+EPZ	1259	42.6	#-663	2	-IXZ	1836	01.0	
29	+EPZ	1308	27.3	#-664	2	-EPZ	1905	33.6	
29	-IpPZ	1308	40.0		3	-EPZ	0015	40.0	#-676
29	+EPZ	1415	29.5		3	-EpPZ	0015	49.8	#-676
29	+EPZ	1545	56.0	#-665	3	+EPZ	0037	21.0	
29	+EPZ	2003	21.5		3	-EPZ	0340	39.4	
30	-EPZ	0442	27.5	#-666	3	-EXZ	0434	41.6	#-677
30	-IPcPZ	0442	29.0	#-666	3	+EPZ	0523	04.6	
30	+EPZ	0451	24.5		3	+EXZ	1226	36.8	#-678
30	ESH	0451	59.6	#-666	3	+EPZ	1505	29.8	
30	-EPZ	1026	25.3		3	+EPZ	1926	13.5	
30	+EPZ	1106	47.0	#-667	4	+EPZ	0050	06.5	
30	+EPZ	1508	39.2		4	+EPZ	0710	51.0	#-679
30	-EPZ	1523	36.0		4	-EpPZ	0711	01.6	#-679
30	+EPZ	2038	12.5		4	-EPZ	0754	29.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
4	+EPZ	1117	42.2		8	+EPZ	0236	21.8	
4	+EPZ	1424	29.6		8	+EPZ	0600	20.0	#-689
4	-EPZ	2214	57.7		8	-EPZ	1259	50.6	#-690
4	-IPKPdZ	2215	00.4	#-680	8	-IPcPZ	1259	54.6	#-690
4	-IXZ	2217	14.8	#-680	8	ESH	1309	19.8	#-690
5	+EPZ	0239	47.3		8	+EPZ	2027	11.8	
5	-EPZ	1212	32.6		9	+EPZ	0141	32.0	
5	-EPZ	1427	35.2		9	-EPZ	0325	04.6	
5	+EPZ	1546	04.0		9	+EPZ	1025	17.0	#-691
5	+EPZ	1607	19.8	#-681	9	-EPcPZ	1025	30.8	
5	+EPZ	1727	23.2		9	+EPZ	1124	06.4	#-692
5	-EPZ	1727	27.6		9	-EPZ	1132	34.4	
5	-EPZ	1730	10.9		9	-EPZ	1408	40.0	
5	+EPZ	2155	49.0	#-682	9	-EPZ	1408	43.4	
6	-EXZ	0010	17.9	#-683	9	+EXZ	1537	10.0	#-693
6	-EPZ	0129	21.8	#-684	9	+EXZ	2306	55.8	#-694
6	-EPZ	0753	25.8		10	+EpPKiKPZ	1202	02.6	#-695
6	-EPZ	0819	27.0	#-685	10	+EPZ	1226	40.3	
6	-EpPZ	0819	28.4	#-685	10	-IPZ	1226	46.0	
6	-EPZ	1404	30.5	#-686	10	-IPZ	1426	07.8	
6	-EpPZ	1404	44.6	#-686	10	+EPZ	1517	23.3	
6	-EPZ	1650	11.4	#-687	10	+EPZ	1655	24.0	
6	-EPcPZ	1650	14.8	#-687	10	+EPZ	2134	41.0	
6	-EPZ	1807	44.3		10	+IPZ	2315	27.2	#-696
6	+EPZ	1810	22.7	#-688	11	+EXZ	0225	53.8	#-697
6	+EPZ	2037	16.3		11	-IPZ	0311	48.0	#-698
6	+EPZ	2243	14.4		11	+EPZ	1021	02.5	
7	-EPZ	0327	28.7		11	+EPZ	1021	05.8	
7	-EPZ	0514	35.6		11	-EPZ	1334	33.2	#-699
7	+EPZ	0520	01.9		11	+EPZ	1824	16.3	
7	-EPZ	0703	31.2		11	+EPZ	1824	17.9	
7	-EPZ	0724	23.6		11	+EPZ	2004	33.6	
7	+EPZ	0917	17.0		11	+EPZ	2032	55.9	
7	+EPZ	1112	11.6		11	+EPZ	2118	01.0	
7	+EPZ	1112	33.4		12	+IPZ	0022	51.2	#-700
7	-EPZ	1756	39.8		12	ESH	0032	37.5	
8	-EPZ	0015	13.0		12	+EPZ	0051	47.6	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
12	+EPZ	1026	33.0		16	+EPZ	1458	08.6	
12	-EPZ	1153	07.9		17	-EPZ	0116	43.0	#-711
12	+EPZ	1153	17.0		17	+EPZ	0231	30.3	
12	+EPZ	1212	20.1		17	+EXZ	0445	36.6	#-712
12	+EPZ	1212	24.6		17	-IPZ	0619	09.7	#-713
12	+EPZ	1256	50.1	#-701	17	ESH	0628	34.0	
12	+EPZ	2016	04.0		17	+EXZ	1633	08.0	#-714
13	+EPZ	0248	06.4		17	+EPZ	2045	15.0	#-715
13	-EXZ	0438	38.0	#-702	18	+EPZ	0124	11.4	
13	-EsPZ	0438	46.6	#-702	18	+EPZ	0254	40.4	#-716
13	-EPZ	1622	21.0		18	+EPZ	0339	31.8	#-717
13	+EPZ	2123	38.8	#-703	18	+EXZ	0616	37.4	#-718
14	+EPZ	0009	31.5		18	-IPKPabZ	0617	17.0	#-718
14	+EPZ	0422	58.2		18	-IPZ	1317	12.2	#-719
14	-EPZ	0750	25.4		18	ESH	1328	01.2	#-719
14	+EPZ	0831	32.4	#-704	18	-EPZ	1348	01.7	#-720
14	-EpPZ	0831	37.6	#-704	18	ESH	1359	02.0	#-720
14	-EPZ	0842	40.0		18	-EPZ	1413	36.0	
14	ESH	0851	10.2		18	+EPZ	2103	30.4	#-721
14	+EPZ	1121	17.8		18	+EPZ	2309	32.9	
14	+EPZ	1357	13.6		19	-EPZ	0112	00.5	
14	-EPZ	1516	06.9	#-705	19	+EXZ	0314	21.7	#-722
14	-EpPZ	1516	17.2	#-705	19	+EPKpdIZ	0840	26.0	#-723
14	+EPZ	1545	25.0		19	-EXZ	0841	02.4	#-723
15	-EPZ	0009	07.8		19	-EXZ	0843	08.2	#-724
15	-EPZ	0046	45.0	#-706	19	+EPZ	1032	34.7	
15	+EPZ	0236	32.3		19	+EPZ	1303	32.8	
15	-EPZ	0453	01.6		19	-EPZ	1445	13.0	#-725
15	-EPZ	1455	18.0	#-707	19	-EPZ	1516	02.5	
15	-EPZ	1724	10.6		19	-EPZ	1547	25.0	#-726
15	+EPZ	1833	30.0		19	-EPZ	1834	46.0	
16	+EPZ	0051	14.8		19	-EPZ	2140	46.2	
16	-EXZ	0236	54.0	#-708	19	-EPZ	2140	49.0	
16	-EPZ	0350	56.0		19	-EPZ	2248	05.0	
16	-EPZ	0417	37.4		20	-EPZ	0733	33.4	
16	+EPZ	0557	51.2	#-709	20	+EPZ	1101	40.0	#-727
16	+EPZ	0610	21.3	#-710	20	+EPZ	1103	30.5	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
20	+EPZ	1208	36.0		23	+EPZ	2352	22.0	
20	+EPZ	1208	57.0		24	-EPZ	0223	33.8	#-742
20	-EPZ	1209	00.0	#-728	24	-EPcPZ	0223	39.4	
20	+EPZ	1239	38.8		24	+EPZ	1608	42.4	
20	+EPZ	1728	43.6	#-729	24	-EPZ	1728	40.9	
20	+IpPZ	1728	45.2	#-729	25	-EPZ	0432	31.8	
20	-EPZ	1931	25.0	#-730	25	+IPKiKPZ	0438	34.6	#-743
20	ESH	1942	21.8	#-730	25	-EPZ	0557	19.6	
20	+EXZ	1951	35.0	#-731	25	-EPZ	0803	44.2	
20	-EPZ	2044	11.4	#-732	25	+EPZ	0831	41.6	
20	-EXZ	2259	27.6	#-733	25	-EPZ	11562	30.0	
21	+EPZ	0007	35.0	#-734	25	+EPZ	1233	52.0	
21	+EPZ	0612	19.8		25	-EPZ	1636	40.9	
21	-IPZ	0929	01.9		25	-EPZ	2046	19.8	#-744
21	+EPZ	1012	09.4		25	+EPZ	2116	15.0	
21	+IPZ	1141	12.6		25	-EPZ	2116	25.3	
21	+EPZ	1418	04.6		25	+EPZ	2307	01.6	
21	+EPZ	1507	35.8	#-735	26	-EPZ	0506	32.4	#-745
21	+EPZ	1548	53.3		26	-EPZ	0720	32.0	
21	+EPZ	1810	20.2		26	+EPZ	1332	23.2	#-746
21	+IPZ	2249	19.5	#-736	26	+EPZ	1412	20.7	
22	+EXZ	0457	42.5	#-737	26	+EPZ	1721	47.2	
22	+EPZ	0516	46.4		26	+IPZ	1742	40.1	#-747
22	+IPZ	0516	48.2		26	ESH	1751	55.0	#-747
22	+EPZ	0841	21.0		26	+EPZ	1802	27.0	
22	-EPZ	1346	11.0		26	+EPZ	2319	02.9	#-748
22	+IPZ	1839	09.4		26	+EPZ	2321	09.4	
22	+EPZ	1848	03.2		26	+EPZ	2321	19.4	
22	+IPZ	1848	11.0		26	+EPZ	2331	29.0	#-749
22	+EPZ	2217	42.0		27	+EPZ	0341	12.2	
22	-EXZ	2239	40.8	#-738	27	-EPZ	0341	15.0	
23	+EPZ	0302	34.8	#-739	27	-EPZ	0520	11.0	
23	-EPZ	0329	40.4		27	+EpPZ	0838	24.0	#-750
23	+EPZ	1859	10.6		27	+EPZ	1705	50.4	#-751
23	-EPZ	1944	18.0		27	+EPZ	2002	14.6	
23	-EPZ	2220	22.8	#-740	27	+EPZ	2245	44.0	
23	+IPZ	2303	26.2	#-741	27	+EPZ	2329	26.7	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
28	-EPKpdfZ	1151	42.0	#-752	31	-EPZ	0542	08.0	#-766
28	-EXZ	1228	12.6	#-753	31	+EPdiffZ	0706	44.4	#-767
28	-EPZ	1414	01.6		31	-EPZ	0919	31.0	
28	+EPZ	1515	18.3		31	+EPZ	1424	18.7	
28	+EPZ	1817	14.2		31	+EPZ	1509	03.2	
28	+EPZ	1834	07.4	#-754	31	+EPZ	1526	14.2	
28	+EPZ	2259	44.2		31	+EPZ	1749	37.5	
29	-EPZ	0744	06.0	#-755	31	+EPZ	2108	51.4	
29	-IPcPZ	0744	09.2	#-755	31	+EPZ	2109	06.4	
29	ESH	0753	42.2	#-755	Aug.				
29	+EPZ	1015	01.0	#-756	1	+EPZ	0105	30.8	
29	+EpPZ	1015	07.0	#-756	1	+EPZ	0152	05.4	
29	-EPZ	1139	29.4		1	+IPZ	0152	10.4	
29	+EPZ	1412	23.3	#-757	1	+IPZ	0411	36.5	
29	+EpPZ	1412	41.6	#-757	1	-EPZ	0736	04.0	#-768
29	+EPZ	1957	44.8		1	-IXZ	0736	13.3	#-768
29	-EPZ	2250	39.0		1	-EPZ	0741	00.4	#-769
29	+EPZ	2342	21.0		1	+EPZ	0805	22.4	
30	-IXZ	0415	50.0	#-758	1	-EPZ	0805	27.0	
30	-IXZ	0415	52.0	#-758	1	+EPZ	1053	47.4	
30	-IPKpdfZ	0447	43.6	#-759	1	+EPZ	1711	01.7	
30	-IpPKiKPZ	0447	53.6	#-759	1	+EPZ	1711	06.7	
30	-EPZ	0445	08.6	#-760	1	-EPZ	1939	12.5	
30	+EPZ	0654	43.7		1	+EPZ	2355	15.9	
30	+EPZ	0804	15.2		1	+EPZ	2355	17.6	
30	+EPZ	1146	10.8		2	+EPZ	0515	01.0	
30	+EPZ	1152	52.2	#-761	2	+IPZ	0955	47.1	
30	-EpPZ	1153	08.3	#-761	2	+EPZ	1110	14.6	
30	+EXZ	1404	09.2	#-762	2	+EPKpdfZ	1437	02.2	#-770
30	-EPPZ	1408	42.6	#-762	2	-EPKPbcZ	1437	06.4	#-770
30	-EPZ	1832	01.2	#-763	2	+EPZ	1728	24.5	
30	+EPKpdfZ	2100	55.0	#-764	2	-EPZ	215	26.9	
31	+EPZ	0201	17.4		2	+EPZ	2325	01.0	
31	+EPZ	0206	56.8		2	+EPZ	2325	06.7	
31	+IPZ	0207	00.8		3	+EXZ	0200	50.5	#-771
31	+EPZ	0441	21.8	#-765	3	+EpPZ	0201	15.2	#-771
31	+EXZ	0441	35.4	#-765	3	-EPZ	0308	13.8	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
3	+EPZ	0454	37.6		5	+EXZ	0505	14.2	#-783
3	+EPZ	0541	12.4	#-772	5	+IPZ	0522	25.0	#-784
3	-EPZ	0713	06.5		5	+EPZ	0540	21.4	
3	+EPZ	1118	06.6	#-773	5	-IPZ	0612	11.0	#-785
3	-IPZ	1221	20.0		5	-EPZ	0637	38.4	#-786
3	+IPZ	1221	26.9		5	-EpPZ	0637	46.6	#-786
3	+EPZ	1432	03.4		5	+EPZ	0649	12.4	#-787
3	+EPZ	1952	16.0	#-774	5	+EPZ	0742	38.1	
3	+EPZ	2230	58.6		5	-EPZ	1103	23.8	
3	-EPZ	2242	40.8		5	+EPZ	1103	32.9	
3	-IPZ	2242	46.8		5	+EPZ	1119	36.3	
3	+EPZ	2307	44.0		5	+EPZ	1613	48.4	
4	+EPZ	0056	22.3	#-775	5	-EPZ	1832	53.4	
4	+EPZ	0435	48.4	#-776	5	-EPZ	1851	42.0	
4	-EPZ	0458	29.0	#-777	5	+IXZ	1923	26.0	#-788
4	ESH	0508	42.0	#-777	5	+IPKiKPZ	1923	39.6	#-788
4	+EPZ	0639	49.0		5	+EPZ	2047	43.5	#-789
4	+EPZ	0639	53.2		5	+EPZ	2128	41.3	
4	+EPZ	0728	10.0		6	+EPZ	0111	24.3	
4	-IPZ	0728	17.0		6	-EPZ	0221	15.9	
4	ESH	0738	47.8		6	+EPZ	0256	10.9	#-790
4	+EPZ	1019	47.3	#-778	6	+EPZ	0339	44.6	
4	+EXZ	1318	10.0	#-779	6	-EPZ	0515	31.5	#-791
4	-EXZ	1318	20.9	#-779	6	ESH	0525	09.2	#-791
4	+IXZ	1318	36.0	#-779	6	+EPZ	0606	51.4	#-792
4	-EXZ	1544	56.4	#-780	6	-IPZ	0910	55.8	#-793
4	-EPZ	1616	25.8		6	-IXZ	0911	05.6	#-793
4	+EPZ	1946	30.6		6	ESH	0921	13.4	#-793
4	-EXZ	2211	08.9	#-781	6	+EPZ	1127	26.8	
4	+EXZ	2211	17.9	#-781	6	+EPZ	1127	34.4	
4	-IPZ	2214	45.8		6	+EPZ	1456	15.4	
4	ESH	2226	02.5		6	+EPZ	1925	27.2	
5	-EPZ	0007	19.8		6	+EPZ	2107	07.4	
5	+EPZ	0147	02.7		6	-EPZ	2115	47.5	#-794
5	-EPZ	0222	09.5	#-782	6	-EPZ	2125	54.6	
5	+EPZ	0351	01.4		7	-EPZ	0114	54.9	
5	+EpPZ	0505	10.2	#-783	7	-EPZ	0140	25.4	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
7	-EPZ	0140	33.6		9	-EPZ	2153	04.2	
7	-EPZ	0254	42.6		9	-EPZ	2234	42.8	#-801
7	+EPZ	0254	46.0		9	+EpPZ	2234	54.0	#-801
7	+EPZ	0818	04.5		9	-EPZ	2302	49.8	
7	-EPZ	0851	45.2		10	-EPdiffZ	0156	22.8	#-802
7	+EPZ	0938	24.0		10	+EPZ	0312	15.4	
7	+EPZ	1237	39.3		10	+EPZ	0312	49.2	
7	+EPZ	1304	54.8	#-795	10	-EPZ	0421	36.0	
7	-EXZ	1305	02.5	#-795	10	+EPZ	0446	05.5	
7	+EPZ	1816	07.4		10	+EPZ	0505	03.6	#-803
7	-EPZ	1852	35.7		10	-IPZ	0536	22.6	
7	+EPZ	2340	04.8		10	+IPZ	0555	13.0	
8	+EPZ	0442	45.0		10	+EPZ	0605	42.5	
8	-EPZ	0731	15.0		10	-EPZ	0627	12.6	#-804
8	+EPKpdfZ	1042	50.4	#-796	10	+EsPZ	0627	31.9	#-804
8	+EpPKiKPZ	1043	01.0	#-796	10	-EPZ	0714	33.3	
8	+EPZ	1138	47.8		10	+EPZ	0810	44.0	
8	+EXZ	1224	14.3	#-797	10	-EPZ	0815	32.6	#-805
8	-EPZ	1339	44.0		10	+EPZ	0821	07.8	
8	-EPZ	1416	13.0		10	+EPZ	0932	32.0	
8	-EPZ	1541	03.8		10	-EPZ	0932	38.0	
8	-EPZ	1729	06.0		10	+EPZ	1006	34.4	#-806
8	-EPZ	2237	05.2		10	-EPcPZ	1006	37.4	#-806
8	+EPZ	2341	01.8		10	-IsPZ	1006	50.0	#-806
9	+EPZ	0116	22.0		10	-EPZ	1026	22.4	
9	+IPZ	0345	14.5	#-798	10	-EPZ	1201	53.8	#-807
9	-EPcPZ	0345	23.8	#-798	10	+EpPZ	1225	31.8	#-808
9	ESH	0354	19.6	#-798	10	-EPZ	1252	21.0	#-809
9	+EPZ	0609	54.8		10	+EPZ	1315	42.4	
9	-EPZ	0610	08.2		10	-EPZ	1324	04.4	
9	+EPZ	1223	57.4	#-799	10	-IPZ	1353	00.0	
9	+EPZ	1303	25.0		10	-EPZ	1614	51.4	
9	+EPZ	1303	29.6		10	+EPZ	1917	50.0	#-810
9	+EPZ	1605	06.0		10	+EPcPZ	1917	52.7	#-810
9	+EPZ	1616	29.0		10	+EPZ	1941	06.4	
9	-EPZ	2038	35.2	#-800	10	-EPZ	2031	03.6	
9	+EpPZ	2038	41.5	#-800	10	+EPZ	2211	09.4	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
10	+EPZ	2247	31.6		12	+IPZ	1207	27.4	
10	-IPZ	2331	02.9	#-811	12	ESH	1219	44.4	
10	ESH	2341	32.2	#-811	12	-EPZ	1306	25.0	#-819
11	-EPZ	0018	28.0		12	+EPPZ	1309	45.8	#-819
11	-EPZ	0245	02.0	#-812	12	+EPZ	1454	16.0	
11	-EPZ	0301	09.3		12	-EPZ	1457	06.0	
11	+EPZ	0342	23.4	#-813	12	-EPZ	1801	56.6	
11	+IPZ	0347	57.2		12	+EPZ	2214	34.3	
11	ESH	0358	21.2		12	-EPZ	2214	43.0	
11	-EPZ	0448	27.2		12	+EPZ	2229	19.0	
11	+EPZ	0920	10.6	#-814	12	+EPZ	2248	34.0	
11	+EPZ	0930	31.0		13	-EPZ	0152	30.8	
11	+EPZ	1055	39.8		13	-EPZ	0155	35.4	
11	+EPZ	1110	03.0		13	+EPZ	0444	25.6	
11	-EPZ	1159	58.0		13	-EPZ	0452	03.0	
11	+EPZ	1444	04.3		13	+EPZ	0803	40.8	
11	-EPZ	1444	09.2		13	+EPZ	0810	46.8	
11	+EPZ	1556	20.9		13	+EPZ	1036	02.0	
11	+EPZ	1626	19.0		13	+EPZ	1328	19.8	
11	+EPZ	1742	17.2		13	+EPZ	1509	25.0	
11	+EPZ	1921	56.0		13	-EPZ	1519	38.0	
11	+EPZ	1922	04.8		13	+EPZ	1545	33.8	
11	-EPZ	1945	42.0		13	-EPZ	1613	28.4	
11	+EPZ	2023	29.7		13	+EPZ	2133	46.0	
11	-EPZ	2032	48.4		13	-EPZ	2137	32.7	
11	-EPZ	2120	54.7		13	+EPZ	2149	14.4	
11	-EPZ	2203	20.4		13	ESH	2157	21.4	
12	+EXZ	0011	30.4	#-815	13	-EPZ	2114	22.6	
12	+EPZ	0136	53.4	#-816	14	-EPcPZ	0144	24.7	#-820
12	+EPZ	0136	56.0	#-816	14	+EXZ	0152	32.4	#-821
12	+EPZ	0308	40.8	#-817	14	+EXZ	0153	50.0	#-821
12	-EPZ	0337	43.0		14	+EPZ	0237	39.0	#-822
12	+EPZ	0454	27.2		14	+EpPZ	0237	43.4	#-822
12	+EPZ	0454	43.5		14	+EPZ	0254	26.0	
12	+EPZ	0537	36.0		14	+EPZ	0307	27.8	
12	-EPZ	0550	19.4		14	+EPZ	0328	15.9	
12	+EPZ	0908	37.4	#-818	14	+EPZ	0427	23.5	



Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
14	+EPZ	0740	09.0		15	+EPZ	2007	56.6	
14	-EpPdiffZ	0744	31.4	#-823	15	+EPZ	2035	11.0	
14	-EpPKiKPZ	0748	44.2	#-823	15	+EPZ	2131	24.7	
14	+EXZ	0854	34.4	#-824	16	-EPZ	0035	00.6	
14	-EPZ	0922	31.0	#-825	16	+EPZ	0128	32.4	
14	+EPZ	0935	06.5		16	+EPZ	0302	55.7	
14	+EPZ	1049	04.4	#-826	16	+EPZ	0302	58.0	
14	-EXZ	1049	14.0	#-826	16	+EPZ	0340	14.0	
14	-EPZ	1056	29.4		16	-EPZ	0412	28.0	
14	-EPZ	1110	36.0		16	-EPZ	0440	18.0	
14	-EPZ	1111	43.0		16	+EPZ	0625	00.2	
14	-EPZ	1236	43.0		16	+EPZ	0821	05.4	
14	+IPZ	1723	34.4		16	+EPZ	0935	35.6	
14	+EPZ	2048	21.4		16	-EPZ	1449	22.5	
14	-EPZ	2219	28.4		16	-EXZ	1732	50.6	#-833
14	-EPdiffZ	2315	15.0	#-827	16	-EPZ	1901	48.0	
14	-EPZ	2341	29.9		16	+EPZ	1901	54.2	
15	+EPZ	0230	17.4		16	+IPZ	1908	17.9	#-834
15	-EPZ	0230	23.8		16	+EPcPZ	1908	26.0	#-834
15	+EXZ	0302	49.6	#-828	16	-IPZ	1947	25.0	
15	-EPZ	0321	16.5		16	ESH	1957	08.0	
15	-EPZ	0321	19.4		16	+EPZ	2114	43.2	
15	-EXZ	0503	19.5	#-829	16	+EPZ	2114	46.9	
15	+EPZ	0547	01.2		16	+EPZ	2143	36.0	
15	-EPZ	0601	35.4		16	-EPZ	2143	39.0	
15	+EPZ	0635	21.0		16	+EPZ	2206	45.8	
15	+EPZ	0801	00.4	#-830	16	-EPZ	2230	54.0	#-835
15	-EPZ	1032	26.4		17	-EPZ	0023	12.7	
15	+EPZ	1108	37.8		17	+EPZ	0115	43.1	
15	+EPZ	1109	21.0		17	+EPZ	0152	23.2	#-836
15	+EPZ	1133	39.8		17	+EPZ	0249	23.8	
15	+EPZ	1206	00.2	#-831	17	+EPZ	0333	07.2	
15	+EPZ	1321	56.0		17	-EPZ	0336	05.9	#-837
15	-EPZ	1344	22.8		17	-EPZ	0339	35.0	
15	+EPZ	1522	13.0	#-832	17	+EPZ	0646	39.4	
15	-IPcPZ	1522	14.0	#-832	17	+EPZ	1055	48.8	#-838
15	ESH	1532	53.0	#-832	17	-EPZ	1554	13.4	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
17	+EPZ	2215	11.6		21	-EPZ	0445	07.0	
17	+EPZ	2334	43.2		21	-EPZ	0555	04.7	#-848
18	-EPZ	1154	28.0		21	+EPZ	0839	04.4	
18	-EPZ	1154	47.9		21	+EPZ	1153	24.6	#-849
18	+EPZ	1647	01.2		21	+EPZ	1253	19.5	#-850
18	+EPZ	2002	00.5	#-839	21	-EPZ	1306	05.3	
18	-EPZ	2220	16.8		21	+IPZ	1505	54.4	
18	+EPZ	2351	24.8		21	-IPZ	1505	56.7	
19	+EPZ	0343	01.8	#-840	21	+EPZ	1655	42.6	
19	+EsPZ	0343	11.6	#-840	21	+EPZ	1836	25.2	
19	-EPZ	0454	26.3		21	+EPZ	1836	50.4	
19	+EPZ	0606	07.7		21	+EPZ	2042	06.9	
19	+EPZ	1341	02.5		22	-EPZ	0136	14.6	#-851
19	+EPZ	1442	04.5		22	-EPZ	0400	30.4	#-852
19	+EPZ	1557	13.2		22	-EPZ	0539	21.0	
19	+EPZ	1746	01.8		22	+EPZ	0604	03.4	
19	+EPZ	1924	04.0		22	+IPZ	0818	03.4	#-853
19	-EPZ	2143	24.0		22	+EPZ	0924	48.0	
19	+EXZ	2232	09.0	#-841	22	-EPZ	0951	41.6	
19	-EXZ	2232	18.6	#-841	22	+EPZ	1213	50.2	
20	-EPZ	0039	27.6		22	+EPZ	1219	07.5	
20	+EpPKPdz	0312	35.2	#-842	22	+IPZ	1732	52.6	
20	+EPZ	0403	01.6		22	+EPZ	1936	50.6	
20	+IPZ	0835	07.5		23	-EPZ	0357	21.8	#-854
20	+EpPZ	0901	02.5	#-843	23	+EPZ	1218	21.7	
20	+IPZ	1315	11.6	#-844	23	+EPZ	1535	09.2	
20	ESH	1325	25.4	#-844	23	+EPZ	1716	35.0	
20	-EPZ	1642	21.0		23	-EPZ	1738	57.7	
20	+EPZ	1717	45.5		23	-EPZ	1809	20.2	
20	+EXZ	1739	05.4	#-845	23	+EPZ	1903	20.8	
20	-EPZ	1809	22.7	#-846	24	+EPZ	0226	10.5	
20	+EXZ	1809	38.5	#-846	24	-EPZ	0226	12.4	
20	+EPZ	1838	08.6		24	+EPZ	0318	06.4	#-855
20	+EPZ	2205	46.8		24	+EXZ	0620	30.9	#-856
20	-EPZ	2237	05.2		24	-EPZ	0634	07.9	
21	+EPKPDfZ	0114	00.9	#-847	24	+EPZ	1650	15.3	
21	-EPZ	0243	20.8		24	+EPZ	1956	43.8	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
24	+EPZ	2208	18.4		27	+EPZ	0817	05.0	#-868
25	-EPZ	0153	03.0		27	-EPZ	0916	37.0	#-869
25	+EPZ	0246	40.2	#-857	27	+EPZ	1153	19.7	
25	+EPcPZ	0246	47.8	#-857	27	+EPZ	1531	17.0	
25	+EPZ	0413	57.1	#-858	27	+EPdiffZ	1937	56.6	#-870
25	-EpPZ	0414	02.3	#-858	27	+EPZ	1941	30.2	
25	+EPZ	0607	02.2		27	-EPZ	2023	02.6	
25	-EPZ	0637	42.0	#-859	27	+EPZ	2137	42.7	
25	+EPcPZ	0637	45.2	#-859	27	+EPZ	2205	41.8	
25	+EPZ	0653	34.0		27	+EPZ	2322	00.9	
25	-EPZ	0707	24.0		28	+EPZ	0025	03.4	
25	-EPZ	0804	50.8		28	+EPZ	0354	05.0	
25	-IPZ	0908	34.0	#-860	28	+EPZ	0722	47.0	
25	+EPZ	1147	56.6	#-861	28	-EPZ	0739	56.0	#-871
25	-EPZ	1214	11.9	#-862	28	-EPZ	0823	00.8	
25	-EpPZ	1214	31.0	#-862	28	-EPZ	0945	35.6	
25	+EPZ	1325	11.9		28	-EPZ	1206	11.6	
25	+EPZ	1325	27.4		28	-EPZ	1603	09.8	
25	+EPZ	1518	07.5		28	+EPZ	1656	13.4	
25	-EPZ	1650	01.0		28	-EPZ	1731	19.6	
25	-EPZ	2309	56.8	#-863	28	-EPZ	1912	04.4	
25	+EPZ	2326	00.4		28	+IPZ	2123	30.8	
26	+EPZ	0203	03.4		28	+EPZ	2255	28.0	
26	+EPZ	0301	45.5		28	+EPZ	2317	02.0	
26	+EPZ	0429	07.4		29	-EPZ	0041	16.2	
26	-EPZ	0717	26.0		29	-EpPZ	0143	36.5	#-872
26	-EPZ	0858	06.0		29	+EPZ	0644	05.8	#-873
26	+EPZ	1114	09.9		29	-EPZ	0654	15.7	#-874
26	-EPZ	1240	06.9		29	+EPZ	0708	02.4	
26	+EPKdfZ	1526	31.0	#-864	29	-EPZ	0822	15.0	
26	+EPZ	1923	04.8		29	-IPZ	0822	22.0	
26	+EPZ	2224	20.0		29	+EPZ	0901	20.6	#-875
27	-IPZ	0023	17.4	#-865	29	-EPZ	0934	44.0	
27	+EPZ	0453	48.4	#-866	29	-EPZ	1015	41.6	#-876
27	-EpPZ	0454	23.0	#-866	29	+EPZ	1203	28.0	
27	+EPZ	0655	08.4	#-867	29	+EPZ	1451	02.6	
27	+EPZ	0711	32.0		29	+EPZ	1632	57.6	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
29	+EPZ	1828	06.4		2	+EPZ	0909	01.5	
30	+EPZ	0526	00.2		2	+EPZ	0924	40.0	
30	-EPZ	0528	26.0	#-877	2	-EPZ	1046	05.4	
30	+EPZ	0909	08.6		2	+EPZ	1055	01.0	
30	-EPZ	0909	10.0		2	+EPZ	1335	07.4	
30	+EPZ	1151	43.8		2	-EPZ	1625	18.4	#-885
30	+EPZ	1226	20.4		3	+EPZ	0053	11.7	
30	+EPZ	1249	05.2	#-878	3	-EPZ	0242	10.0	#-886
30	+EPZ	1744	09.5		3	+EPZ	0353	26.1	
30	+EPZ	2007	33.4		3	-EPZ	0412	52.4	#-887
30	+EPZ	2338	42.4	#-879	3	+EPcPZ	0412	56.4	#-887
31	+EPZ	0810	03.0		3	-EPKpdZ	0432	04.0	#-888
31	+EPZ	1043	27.6		3	+EXZ	0429	13.0	#-889
31	-EPZ	1132	24.0		3	-EPZ	0533	23.0	
31	+EPZ	1317	45.8		3	-EPZ	0533	26.0	
31	-EPZ	2231	38.6		3	+EPZ	0613	03.4	
Sep.					3	-EPZ	0951	01.0	
1	+EPZ	0146	30.3		3	-EPZ	1037	40.0	
1	-EPZ	0159	19.0	#-880	3	-EPZ	1135	52.0	
1	+EPZ	0217	01.7		3	+EPZ	1551	43.2	
1	+EPZ	0532	43.0		3	-EPZ	1632	04.4	
1	-EPZ	0536	44.8		3	+EPZ	1646	03.7	#-890
1	+EPZ	0743	15.4		3	-EpPZ	1646	06.0	#-890
1	-EPZ	0743	17.4		3	ESH	1654	33.8	#-890
1	-EPZ	1447	16.6	#-881	3	-EpPZ	1703	22.2	#-891
1	+EPZ	1617	10.2		3	+EPZ	1718	35.0	#-892
1	+EPZ	1736	03.4		3	+EPcPZ	1718	47.2	#-892
1	+EXZ	2149	08.0	#-882	3	-EPZ	1805	27.0	#-893
1	+EPZ	2343	18.2		3	+EPZ	1810	45.4	
2	-EPZ	0004	04.0		3	+EPZ	1859	13.0	
2	+EPZ	0020	07.6		3	+EPZ	1917	19.8	#-894
2	-EXZ	0029	34.0	#-883	3	+EPZ	2136	49.0	
2	+EPZ	0350	26.4		3	+EPZ	2132	25.6	
2	+EPZ	0737	20.4		3	+EPZ	2223	14.4	#-895
2	-EXZ	0813	06.7	#-884	3	+EPcPZ	2223	41.9	#-895
2	+EPZ	0820	16.5		3	+EPZ	2337	04.2	
2	+EPZ	0836	01.0		4	-EPZ	0155	08.4	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
4	+EPZ	0327	10.0		5	+EPZ	0733	52.9	
4	+EPZ	0327	32.2		5	+IPZ	0733	59.8	
4	+EXZ	0352	13.6	#-896	5	+EPZ	0823	43.5	
4	-EPZ	0506	17.2	#-897	5	+IPZ	0833	07.9	#-907
4	-EPZ	0550	56.0		5	+EPZ	0906	05.0	
4	+EPZ	0635	41.6	#-898	5	+EPZ	0913	25.8	
4	+EPZ	0736	07.0		5	+EPZ	0919	47.7	
4	+EPZ	0801	50.0	#-899	5	+EPZ	1050	14.2	
4	+EPZ	0803	09.6	#-900	5	-EPZ	1232	32.2	#-908
4	+EpPZ	0803	49.9	#-900	5	+EPZ	1250	20.3	
4	-IPZ	0904	56.8	#-901	5	+EPZ	1545	07.9	
4	-IPcPZ	0904	58.6	#-901	5	+EPZ	1618	14.2	#-909
4	ESH	0915	42.6	#-901	5	+EPZ	1645	10.2	
4	+EPZ	0951	47.7		5	-IPZ	1747	06.4	#-910
4	+EPZ	1003	19.4		5	+IPcPZ	1747	09.5	#-910
4	+EPZ	1129	28.8		5	+EPZ	1755	36.8	
4	-EPZ	1142	35.0	#-902	5	+EPZ	1838	03.2	
4	-EPZ	1157	49.9	#-903	5	+EPZ	1838	06.6	
4	+EPZ	1302	47.8		5	+EPZ	1941	02.8	
4	+EPZ	1333	48.9		5	+EPZ	1941	18.1	
4	+EPZ	1645	06.0		5	+EPZ	2122	10.0	
4	+EPZ	1729	24.0	#-904	5	-EPZ	2359	54.2	#-911
4	+EpPZ	1729	30.4	#-904	5	ESH	0009	26.0	#-911
4	+EPZ	1736	19.8		6	-EpPZ	0331	14.0	#-912
4	-EPZ	2148	08.8		6	+EPZ	0347	07.8	
4	+EPZ	2231	08.0		6	+EXZ	0415	38.4	#-913
4	+EPZ	2236	21.9		6	+EPZ	0552	02.0	
4	+EPZ	2306	21.8	#-905	6	+EPZ	0737	04.8	
4	+EPZ	2316	00.8		6	-EPZ	0737	15.0	
5	+EPZ	0024	19.2		6	ESH	0747	34.7	
5	-EPZ	0202	15.6	#-906	6	+EPZ	0822	37.8	
5	-EPZ	0221	07.0		6	+EPZ	1006	17.5	#-914
5	-EPZ	0355	28.2		6	-EXZ	1006	25.0	#-914
5	+EPZ	0454	33.0		6	+EPZ	1107	56.0	
5	-EPZ	0539	01.5		6	-EPZ	1108	00.2	
5	+EPZ	0547	02.9		6	-EPZ	1118	17.3	
5	+EPZ	0652	47.3		6	+EPZ	1134	23.4	#-915

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
6	-EPZ	1151	11.0	#-916	8	+EPZ	1102	27.0	
6	+EPZ	1232	36.4		8	+EPZ	1149	58.4	#-930
6	-EPZ	1335	20.8		8	-EPPZ	1153	12.4	#-930
6	-EpPZ	1359	33.0	#-917	8	+EPZ	1209	01.7	
6	-IPZ	1727	14.2	#-918	8	+EPZ	1410	57.0	
6	-EPZ	2110	50.6	#-919	8	-EPZ	1640	45.0	
6	+EPZ	2259	21.0	#-920	8	+EPZ	1939	35.6	
7	+EPZ	0042	12.0		8	+EPZ	2105	29.6	
7	+EPZ	0108	03.9		9	+EPZ	0005	01.6	
7	-EPZ	0108	59.5		9	+EPZ	0127	17.6	
7	+EXZ	0224	21.9	#-921	9	+EPZ	0319	02.0	
7	-EPZ	0256	24.2		9	-EPZ	0320	01.0	
7	-EPZ	0349	28.9		9	-EPZ	0337	50.6	
7	-EPZ	1302	08.4	#-922	9	-EPZ	0429	35.4	#-931
7	-EPZ	1555	40.4	#-923	9	+EPcPZ	0430	05.8	#-931
7	+EPZ	1555	52.6		9	+EPZ	0507	15.5	
7	+EPZ	1555	55.8		9	-EPZ	0533	26.9	
7	+EXZ	1626	32.0	#-924	9	+EPZ	0738	27.4	#-932
7	+EXZ	1631	10.4	#-925	9	-IsPZ	0738	36.2	#-932
7	+EPPZ	1632	25.6	#-925	9	-EPZ	0754	05.9	#-933
7	+EPZ	1734	22.9		9	+EPZ	0756	41.5	
7	+EPZ	1804	02.4		9	-EPZ	0756	43.8	
7	+EPZ	2000	21.6	#-926	9	+EPZ	0818	04.3	
7	+EPZ	2004	12.6	#-927	9	+EPZ	0854	04.2	
7	+EPZ	2130	01.7		9	-EPZ	1037	00.2	
7	+EPZ	2152	39.0		9	+EPZ	1205	07.7	
8	+EPZ	0155	25.0		9	-EPZ	1214	20.0	
8	+EPZ	0228	24.0		9	+EPZ	1721	01.8	
8	+EPZ	0253	12.2		9	+EPZ	1907	52.2	
8	-EPZ	0316	48.4	#-928	9	-EPZ	2038	05.2	
8	+EPZ	0416	02.0		9	-EPZ	2346	36.0	
8	+EPZ	0452	09.8		10	-EPZ	0342	33.0	
8	-EPZ	0508	37.5		10	-EPZ	0453	00.2	
8	-EPZ	0517	03.2		10	+EPZ	0522	23.6	
8	+EPZ	0655	43.2		10	+EPZ	0738	18.2	
8	+EXZ	0813	44.6	#-929	10	-EXZ	0755	28.4	#-934
8	+EPZ	0817	35.4		10	-EPZ	1608	21.6	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
10	+EPZ	1953	17.0		13	+EPZ	1419	44.6	
11	+EPZ	0046	00.7		13	-EPZ	1655	30.0	
11	+EPZ	0146	08.8		13	+EPZ	1803	10.6	
11	+EPZ	0725	23.0	#-935	13	+EPZ	1934	13.0	
11	-EPZ	0757	42.6		13	+EPZ	2122	30.0	
11	-EpPZ	0822	15.0	#-936	13	-EPZ	2344	13.8	
11	-EPZ	0841	17.0	#-937	14	+EPZ	0334	02.6	#-945
11	+EPZ	0926	13.5		14	+EPZ	0601	34.5	
11	+EPZ	0928	13.1		14	+EPZ	0746	42.5	#-946
11	-EPZ	1155	45.0	#-938	14	+EPZ	0939	39.4	
11	+EPZ	1721	11.0		14	+EPZ	1005	19.9	
11	+EPZ	1908	46.6	#-939	14	+EPZ	1132	20.2	
11	+EpPZ	1909	01.1	#-939	14	+EPZ	1351	40.3	
11	+EPZ	2006	15.2		14	-EPZ	2223	49.8	
11	+EPZ	2055	05.4		15	-IPZ	0249	02.6	
12	+EPZ	0535	17.4		15	+EPZ	0333	03.4	
12	+EPZ	0607	54.2	#-940	15	+EPZ	0450	01.0	
12	+EPZ	0629	44.4		15	-EPPZ	0625	50.0	#-947
12	-EPZ	0714	36.0		15	+EPZ	1049	35.2	
12	+EpPZ	0718	11.2	#-941	15	+EPZ	1246	39.8	
12	+EPZ	0745	04.9		15	+EPZ	1355	24.6	#-948
12	+EXZ	0800	37.4	#-942	15	+EsPZ	1358	36.4	#-948
12	+IpPKPbcZ	0801	01.9	#-942	15	+EXZ	1856	04.5	#-949
12	+EPZ	0849	50.8		16	+EPZ	0010	52.6	#-950
12	+EPZ	1048	18.2		16	+EPZ	0207	37.0	#-951
12	-EPZ	1107	16.4		16	+EPZ	0356	20.6	
12	+EsPZ	1649	21.0	#-943	16	+EPZ	0441	32.2	
12	+EPZ	1853	33.4		16	-EPZ	0945	05.4	
12	+EPZ	1927	01.0		16	+EPZ	1541	26.4	
12	+EPZ	2119	50.4	#-944	16	+EpPZ	1549	25.0	#-952
12	+EPZ	2158	34.9		16	+EPZ	1648	07.4	
13	-EPZ	0350	27.6		16	+EPZ	1817	18.2	
13	+EPZ	0606	22.2		16	+EPZ	2142	04.0	
13	+IPZ	0727	55.4		17	+EPZ	0046	43.0	
13	-IPZ	0727	57.4		17	+EPZ	0136	37.9	
13	+IPZ	0728	39.4		17	+EPZ	0251	02.6	
13	-EPZ	0741	01.5		17	+EPZ	0251	05.8	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
17	+EPZ	0327	39.6		20	+EPZ	0336	20.4	
17	+EPZ	0336	54.0	#-953	20	ESH	0345	20.3	#-961
17	ESH	0346	20.6	#-953	20	-EPZ	0553	39.0	#-962
17	+EPZ	0602	49.1	#-954	20	+EXZ	0553	44.2	#-962
17	+EPZ	0703	05.0	#-955	20	+EPZ	1556	00.4	
17	+EPZ	0919	03.7		20	+EPZ	1355	04.6	#-963
17	+EXZ	1123	23.0	#-956	21	+EPZ	0216	00.4	
17	+EPZ	1447	04.0		21	+EPZ	0218	32.0	
17	+EPKiKPZ	1939	15.0	#-957	21	+EPZ	0506	33.1	
17	-IpPZ	1939	40.1	#-957	22	+EPZ	0706	07.0	#-964
17	-EPZ	1947	12.0	#-958	22	-IPZ	0812	49.0	#-965
17	-EPZ	1950	29.8		22	-IPcPZ	0812	54.0	#-965
17	+EPZ	2232	22.2	#-959	22	-IsPZ	0813	09.9	#-965
18	+EPZ	0329	28.2		22	+EPZ	1418	28.7	
18	+EPZ	0443	17.4		22	-EPZ	1606	08.0	#-966
18	-IPZ	0803	52.4		22	-EsPZ	1606	16.6	#-966
18	+EPZ	1008	36.8		22	-EPZ	1621	52.0	#-967
18	+EPZ	1035	40.0		23	+EPZ	0039	05.0	
18	-EPZ	1042	01.6		23	+EPZ	0403	39.6	
18	+EPZ	1020	01.4		23	-EPZ	0424	43.2	
18	+EPZ	1441	12.9	#-960	23	+EPKiKPZ	0548	17.7	#-968
19	+EPZ	0131	41.4		23	-EXZ	0548	30.0	#-968
19	+EPZ	0247	23.6		23	ESH	0558	36.4	
19	+EPZ	0636	04.2		23	+EPZ	1227	44.9	
19	+EPZ	0746	10.8		23	+EPZ	1306	12.4	#-969
19	+EPZ	1031	30.0		23	-IPZ	1646	50.0	#-970
19	+EPZ	1141	35.7		23	ESH	1655	43.6	#-970
19	+EPZ	1350	07.6		23	+EPKPdfZ	1732	51.0	#-971
19	+EPZ	1518	30.0		23	-IpPKPdfZ	1732	54.4	#-971
19	-EPZ	1818	05.2		24	+EPZ	1358	07.0	
19	+EPZ	2233	48.2		24	+EPZ	1509	23.6	
19	+EPZ	2356	08.4		24	+EPZ	1850	07.6	
20	+EPZ	0033	14.4		24	+EPZ	1914	18.6	#-972
20	+EPZ	0117	08.6		24	+EPZ	2136	01.4	
20	-EPZ	0232	13.0		24	+EPZ	2322	55.5	#-973
20	+EPZ	0240	05.4		25	-EPZ	0511	00.9	
20	+EPZ	0336	17.6	#-961	25	+EPZ	1552	13.0	



Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
25	+EPZ	2007	33.0		27	+EPZ	1908	22.9	
26	+EPZ	0031	32.1		27	+EPZ	1930	37.2	#-988
26	+EXZ	0036	11.2	#-974	27	+EPZ	2043	32.9	
26	+EPZ	0539	49.4	#-975	27	+EPcPZ	2047	57.0	#-989
26	+EPZ	0546	31.2	#-976	27	-EPZ	2232	00.8	
26	+EPZ	0631	35.7	#-977	27	+EPZ	2317	00.8	
26	-EpPZ	0631	44.8	#-977	28	+EPZ	0015	38.2	
26	+EPZ	0657	21.4	#-978	28	+EPZ	0053	05.6	
26	+EPZ	0731	16.8		28	+EPZ	0055	04.0	
26	+EPZ	0845	47.4		28	+EPZ	0122	03.3	
26	+EPZ	0845	54.2		28	-IPZ	0159	18.3	#-990
26	+EPZ	0939	05.7	#-979	28	+EXZ	0159	30.0	#-990
26	+EPZ	0947	08.6	#-980	28	-EPZ	0239	21.4	
26	+EPZ	1027	53.0	#-981	28	+EPZ	0346	06.4	
26	-EsPZ	1028	25.0	#-981	28	+EPZ	0405	27.0	
26	-EPZ	1121	35.2	#-982	28	+EPZ	0428	05.4	
26	+EPZ	1225	20.6	#-983	28	-EPZ	0440	02.0	
26	-EPcPZ	1225	24.6	#-983	28	-EPZ	0555	13.4	
26	-EPZ	1352	01.0		28	+EPZ	0945	44.2	#-991
26	+EPZ	1441	03.2		28	+EPZ	1106	53.0	
26	-EPZ	1732	13.2	#-984	28	+EPZ	1251	20.8	
26	+EPZ	1847	21.9		28	+EPZ	1332	49.6	
26	ESH	1857	49.5		28	+EPZ	1446	35.6	
26	+EPZ	2108	35.6		28	+EPZ	1548	17.9	
26	-EPZ	2157	23.2		28	+EPZ	1702	15.8	
26	+EPZ	2216	11.9		28	-EPZ	1752	42.4	#-992
26	+EPZ	2340	27.8		28	+EPZ	2049	48.4	
27	-EPZ	0051	49.0		28	+EPZ	2159	31.2	
27	+EPZ	0057	31.7	#-985	28	-EPZ	2202	02.5	
27	+EPZ	1320	00.5		28	-EPZ	2239	00.1	
27	-EPZ	1413	22.4	#-986	28	+EPZ	2348	56.0	
27	+EPZ	1438	28.6		29	-EPZ	0001	13.6	#-993
27	-EPZ	1438	30.0		29	+EPZ	0222	31.3	
27	+EPZ	1642	23.8		29	+EPZ	0314	02.4	
27	+EPZ	1642	36.0		29	+EPZ	0316	15.8	
27	+EPZ	1701	23.1	#-987	29	+EXZ	0425	20.2	#-994
27	+EPZ	1723	24.6		29	-EXZ	0426	31.8	#-994

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
29	-IPKpZ	0819	02.2	#-995	30	+EPZ	1425	23.4	
29	-EPZ	1000	17.5		30	+EPZ	2342	38.2	#-1006
29	-IPZ	1145	51.4	#-996	Oct.				
29	-EPZ	1600	49.0		1	+EPZ	0109	14.0	
29	-EPZ	1640	23.8	#-997	1	-IPZ	0136	00.0	#-1007
29	+EpPZ	1640	35.4	#-997	1	-EPZ	0410	17.0	
29	-EPZ	1702	16.4		1	+EPZ	0410	20.7	
29	+EPZ	1723	34.6		1	+EXZ	0513	09.8	#-1008
29	ESH	1734	44.2		1	+EPZ	0601	34.5	
29	+EPZ	1750	02.0		1	-EPZ	0739	10.0	#-1009
29	-EPZ	1848	14.0		1	-IPZ	0738	23.4	#-1010
29	+EXZ	1902	40.5	#-998	1	+EPZ	0752	05.7	
29	+EPZ	1918	59.2	#-999	1	+EPZ	0845	05.1	
29	+EXZ	1919	31.6	#-999	1	+EpPZ	0923	08.2	#-1011
29	ESH	1929	04.6	#-999	1	+EPZ	1015	22.9	
29	-EPZ	2019	22.0		1	+EPZ	1015	24.4	
29	-EPZ	2019	24.4		1	+EPZ	1046	57.1	
29	ESH	2029	40.4		1	+EPZ	1057	26.4	#-1012
29	+EPZ	2044	28.2		1	+EPZ	1147	02.2	
29	+EXZ	2116	07.9	#-1000	1	-EPZ	1215	14.1	
29	+EPZ	2249	39.2		1	+EPZ	1524	30.4	
29	-EPZ	2310	31.0		1	+EPZ	1731	14.8	
29	+EPZ	2352	04.6		1	+EPZ	1822	01.3	
30	-IPZ	0036	49.0		1	+EPZ	1915	19.2	
30	+EPPZ	0043	57.6		1	+EPZ	2320	43.9	
30	-EPZ	0113	04.6	#-1001	2	+EPZ	0212	20.0	
30	+EPZ	0120	21.9	#-1002	2	+EPZ	0221	22.7	
30	+EXZ	0223	45.6	#-1003	2	+EPZ	0221	25.6	
30	-EPZ	0248	24.0		2	-EXZ	0246	30.7	#-1013
30	-EPZ	0509	08.9		2	+EPZ	0306	57.0	#-1014
30	+EPZ	0714	04.0		2	-EPcPZ	0307	01.9	#-1014
30	+EPZ	0755	25.7		2	+EPZ	0420	14.9	
30	+EPZ	0935	25.6		2	-EsPZ	0645	10.6	#-1015
30	+EPZ	1006	29.0	#-1004	2	+EXZ	1141	05.2	#-1016
30	+EXZ	1006	32.8	#-1004	2	+IXZ	1142	09.4	#-1016
30	+EPZ	1345	31.0	#-1005	2	-EPZ	1154	29.8	
30	+EPZ	1422	24.6		2	+EPZ	1242	26.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
2	+EPZ	1338	00.4		4	-EPcPZ	0524	06.2	#-1023
2	+EPZ	1500	50.6		4	+EPZ	0532	08.2	
2	-EPZ	1603	09.2		4	-EPZ	0656	35.0	
2	-EPZ	1714	18.9		4	-EPZ	0813	04.4	
2	+EPZ	2015	03.2		4	+EPZ	0924	27.0	
2	+EPZ	2021	18.6		4	+EPZ	0932	12.4	#-1024
2	+EPZ	2111	10.4		4	+EPZ	1021	10.5	
2	+EPZ	2119	00.6		4	+EPZ	1134	01.5	
2	-EPZ	2145	38.5		4	+EPZ	1205	00.8	
3	+EPZ	0050	02.4		4	+EPZ	1257	04.1	
3	+EPZ	0136	27.5		4	+EPZ	1318	13.0	
3	+EPZ	0150	00.6		4	+EPZ	1342	14.4	
3	-EPZ	0437	21.8	#-1017	4	+IPPZ	1347	46.0	#-1025
3	-EPZ	0516	02.0		4	-EPZ	1346	09.0	
3	-EPZ	0642	08.6	#-1018	4	+EPZ	1358	03.0	
3	+EPZ	0743	43.4	#-1019	4	+EpPdiffZ	1452	32.6	#-1026
3	+EsPZ	0744	00.2	#-1019	4	+EPZ	1455	15.1	
3	+EPZ	0833	00.3		4	+EPZ	1513	15.2	
3	+EPZ	0949	12.5		4	+EPZ	1513	18.1	
3	-IPZ	1039	45.4		4	-EPZ	1600	33.9	#-1027
3	-EPZ	1206	17.0		4	-EPZ	1603	09.8	
3	+EpPZ	1317	17.4	#-1020	4	+EPZ	1648	22.3	
3	+EPZ	1403	03.0		4	+EPZ	1653	45.2	#-1028
3	+EPZ	1448	42.0		4	+EpPZ	1653	54.2	#-1028
3	-EPZ	1449	06.2		4	+EPZ	1722	01.1	
3	+EpPdiffZ	1535	16.6	#-1021	4	+EPZ	1736	06.0	
3	+EPZ	1606	02.4		4	+EPZ	1758	16.3	
3	+EPZ	1654	15.4	#-1022	4	+EPZ	1805	55.4	
3	+EPZ	1715	07.5		4	-EPZ	1806	00.2	
3	-EPZ	1726	17.2		5	+EPZ	0040	34.4	
3	-EPZ	1749	14.4		5	+EPZ	0153	20.8	
3	-EPZ	1749	23.7		5	+EPZ	0315	17.2	
3	+EPZ	2044	48.5		5	+EPZ	0336	37.0	
3	+EPZ	2044	52.4		5	+IPZ	0348	38.0	#-1029
4	-IPZ	0017	49.7		5	+EXZ	0355	37.4	#-1030
4	-IPZ	0108	31.0		5	+EPZ	0441	03.2	
4	+EPZ	0524	02.5	#-1023	5	+EPZ	0441	06.2	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
5	-EXZ	0600	48.6	#-1031	7	+EPZ	0401	11.9	
5	+EPZ	0626	17.7		7	+EPZ	0448	00.6	
5	-EPZ	0802	08.8		7	+EPZ	0707	24.2	
5	-EPZ	0838	42.6	#-1032	7	-EPZ	0805	04.8	
5	+EPZ	0919	37.3		7	+EPZ	0818	13.8	
5	-EXZ	0957	10.4	#-1033	7	-EPZ	0900	37.6	
5	+EPZ	1433	00.5		7	+EPZ	0906	50.0	
5	+EPZ	1508	17.4		7	+EPZ	0920	14.4	
5	+EPZ	1935	21.6	#-1034	7	-EPZ	1732	04.9	
5	+EPZ	1945	47.6		7	+EPZ	1940	03.0	
5	+EPcPZ	1946	15.5	#-1035	7	+EPZ	2115	06.0	
5	+EpPZ	1946	46.0	#-1035	8	-EPZ	0209	44.0	
5	-EPZ	2042	58.0		8	-EXZ	0346	01.4	#-1041
5	+EXZ	2043	15.5	#-1036	8	+EPKpdfZ	0409	00.6	#-1042
5	+EsPZ	2043	28.3	#-1036	8	-EXZ	0439	41.0	#-1043
5	+EPZ	2220	37.0		8	-IPZ	0556	01.4	#-1044
5	-EXZ	2348	44.0	#-1037	8	+EPZ	0607	07.2	
6	-EPZ	0053	57.3		8	+EPZ	0607	15.3	
6	+EPZ	0216	15.3		8	-EPZ	0839	04.9	
6	+EPZ	0216	22.6		8	+EPZ	1152	12.6	
6	+EPZ	0431	06.0		8	+EPZ	1710	32.6	
6	+EPZ	0515	36.5		8	-EPZ	1710	36.0	
6	+EPZ	0742	01.0		8	+EPZ	1736	39.4	
6	+EPZ	1211	34.0		8	+EPZ	1903	41.7	
6	+EPZ	1551	05.0		8	-EPZ	1956	01.0	
6	+EPZ	1617	03.2		8	+EPZ	2028	45.0	#-1045
6	+EPdiffZ	1803	33.4	#-1038	8	+EPZ	2114	49.8	
6	+IPZ	1956	27.9		8	+EPZ	2140	11.6	
6	-EPZ	1956	32.0		8	+EPZ	2223	06.3	
6	-EPZ	2120	20.4	#-1039	8	+EPZ	2232	42.9	
6	+EPZ	2210	53.6		8	-EXZ	2352	19.4	#-1046
6	+EPZ	2219	29.8		9	+EPZ	0104	05.6	
6	+EPZ	2327	03.6		9	+EXZ	0208	45.9	#-1047
7	+EPZ	0152	33.2		9	-EPPZ	0213	06.0	#-1047
7	+EPZ	0155	29.8	#-1040	9	+EPZ	0231	56.5	
7	+EPZ	0207	06.4		9	+EPZ	0232	10.0	
7	+EPZ	0323	55.7		9	-EPZ	0303	34.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
9	+EPZ	0303	15.0		11	-EPZ	0237	02.6	
9	-EPZ	0303	22.6		11	+EPZ	0717	51.4	
9	-EPZ	0400	18.2		11	+EPZ	0802	26.7	
9	+EPZ	0432	02.0		11	+EPZ	0846	11.8	#-1053
9	+EPZ	0553	46.4		11	-EpPZ	0846	20.0	#-1053
9	+EPZ	0705	04.6		11	+EPZ	0905	32.0	
9	+EPZ	0757	19.8		11	+EPZ	1150	54.7	
9	+EPZ	0811	08.2		11	+EPZ	1258	52.3	
9	+EPZ	0819	07.2		11	-EPZ	1318	05.6	
9	-EPZ	0952	08.4		11	+EPZ	1345	03.7	
9	-EPZ	1316	37.8		11	-EPZ	1419	13.4	
9	+EPZ	1418	01.4	#-1048	11	+EPZ	1439	03.2	
9	+EpPZ	1418	33.6	#-1048	11	+EPZ	1511	04.5	
9	+EPZ	1622	02.3		11	+EPZ	1536	30.4	
9	+IPZ	1710	04.4		11	+IPZ	1645	05.1	
9	-EPdiffZ	1919	09.2	#-1049	11	-EPZ	1831	33.6	
9	-EpPKiKPZ	1923	27.0	#-1049	11	+EPZ	1953	30.0	
9	+EPZ	2006	31.0		11	+EPZ	2324	02.6	
9	+EPZ	2241	20.2		11	+EPZ	2334	14.6	
10	-EPZ	0001	02.8		12	+EPZ	0119	31.4	
10	+EPZ	0134	00.6		12	-EPZ	0205	10.4	
10	+EPZ	0152	21.6		12	+EPZ	0357	50.7	
10	-EPZ	0240	04.4		12	+EPZ	0432	33.6	#-1054
10	-EPZ	0447	01.0		12	+EPZ	0439	04.4	
10	+EPZ	0520	06.0		12	-EPZ	0712	43.6	#-1055
10	+EXZ	0601	38.6	#-1050	12	-EPZ	0840	02.6	
10	+EpPKPdfZ	0628	15.4	#-1051	12	+EPZ	0915	01.6	
10	-EXZ	0628	40.9	#-1051	12	+IPZ	1034	19.0	
10	+EPZ	0644	35.5		12	-IPZ	1034	36.4	
10	-EPZ	0833	40.8		12	ESH	1044	42.6	
10	-EPZ	0918	00.6		12	+EPZ	1107	09.1	
10	+EPZ	1148	02.4		12	-EPZ	1121	22.1	
10	+EPZ	1547	05.4		12	+EPZ	1357	07.1	
10	+EPZ	1600	13.3		12	+EPZ	1411	16.1	
10	+EPZ	2216	11.2		12	+EPZ	1933	13.7	
10	-EPZ	2233	41.3		12	-EPZ	1949	26.4	
11	+EPZ	0219	44.8	#-1052	13	-EPZ	1156	24.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
13	+EPZ	1156	30.2		16	+IpPZ	2004	35.4	#-1063
13	+EPZ	2109	45.7		16	-EPZ	2021	17.2	
13	+EPZ	2220	02.4		16	-EPZ	2139	00.8	
13	-EPZ	2345	39.2	#-1056	16	+EPZ	2210	12.0	
14	+EPZ	0004	01.7		17	-EPZ	0006	13.0	#-1064
14	-EPZ	0228	45.6		17	+EPZ	0212	46.6	
14	+EPZ	0623	06.3		17	+EPZ	0423	08.4	
14	-EPZ	0647	07.0		17	-EPZ	0601	03.6	
14	+EPZ	1013	27.4	#-1057	17	+EPZ	0606	39.2	#-1065
14	+EPcPZ	1014	16.0	#-1057	17	+EPZ	0705	18.6	
14	+EPZ	1314	01.6		17	+EPZ	0840	32.4	#-1066
14	+EXZ	1418	03.2	#-1058	17	+EPZ	1003	44.2	
14	+EPZ	2025	32.2		17	+EPZ	1125	01.6	
14	-EPZ	2242	04.9		17	-EPZ	1125	02.2	
15	+EPZ	0118	20.2		17	-EPZ	1305	05.8	
15	+EPZ	0205	23.5		17	+EPZ	1519	14.6	
15	+EPZ	0807	05.4		18	+EPZ	0318	23.3	
15	-EPZ	1104	05.4		18	-EPZ	0602	02.2	
15	-EPZ	1243	30.2		18	+EPZ	0617	39.4	
15	+EPZ	1256	10.0	#-1059	18	+EPZ	1713	32.5	
15	+EPZ	1310	16.4		18	+EPZ	2051	05.6	
15	+EPZ	1814	20.0		18	+EPZ	2324	30.6	
16	+EPZ	0112	37.2		19	-EPZ	0034	36.7	#-1067
16	+EPZ	0148	17.3		19	+EpPZ	0815	17.4	#-1068
16	-EPZ	0225	43.0		19	+EsPZ	0815	21.2	#-1068
16	+EPZ	0309	00.6		19	-EPKpZ	1025	56.5	#-1069
16	-EpPZ	1213	50.6	#-1060	19	+EsPKiKPZ	1026	17.0	#-1069
16	+EPZ	1311	17.2		19	+IPZ	1125	13.0	
16	-IPZ	1340	32.5	#-1061	19	+EPZ	1900	11.8	
16	+EPZ	1349	03.0		19	+EPZ	2052	24.7	#-1070
16	+EPZ	1400	16.5	#-1062	19	-EPZ	2153	43.0	
16	-IPZ	1556	48.0		19	+EPZ	2318	42.8	
16	+IPZ	1556	57.6		20	+EPZ	0536	06.0	
16	ESH	1607	04.4		20	+EPZ	0707	01.4	
16	+EPZ	1848	13.8		20	-EPZ	0707	05.6	
16	+EPZ	2004	11.8	#-1063	20	+EPZ	1138	27.5	#-1071
16	-IPcPZ	2004	13.2	#-1063	20	+EPZ	1310	17.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
20	+EPZ	1448	41.0	#-1072	23	+EPZ	0101	19.6	
20	+EpPZ	1505	13.0	#-1073	23	-EPZ	0107	10.0	#-1088
20	-EPZ	1525	33.0		23	-EPZ	0149	17.0	#-1089
20	+EPZ	1542	25.0	#-1074	23	+EPZ	0248	02.0	
21	+EPZ	0151	04.5		23	+EPZ	0318	41.4	#-1090
21	-EPZ	0232	09.0		23	-EPZ	0608	49.8	#-1091
21	+IPZ	0300	39.0	#-1075	23	+EPZ	0625	06.4	
21	-EPZ	0333	27.6		23	+EPZ	0731	02.2	
21	-EPZ	0456	21.2	#-1076	23	-EPZ	1015	02.4	
21	+EPZ	0542	41.6		23	+EXZ	1120	21.6	#-1092
21	-EXZ	0716	10.5	#-1077	23	+EPZ	1426	02.0	
21	+EPZ	0737	41.8	#-1078	23	+EXZ	1558	09.2	#-1093
21	-EPcPZ	0737	47.4	#-1078	23	-EXZ	1851	34.8	#-1094
21	+EPZ	1113	33.6	#-1079	23	+EPZ	1854	32.4	
21	-EPZ	1202	04.4	#-1080	24	+EPZ	0112	05.0	
21	+EpPZ	1222	51.8	#-1081	24	+EPZ	0152	05.6	
21	+EPZ	1316	20.4		24	-EPZ	0223	52.0	
21	+EXZ	1409	12.4	#-1082	24	+EPZ	0413	09.8	
21	-EPZ	1423	01.4		24	-EPZ	0413	22.6	
21	+EPZ	1646	13.3		24	+EPZ	0830	09.0	#-1095
21	-EPZ	1812	06.4		24	-EpPZ	0830	19.0	#-1095
21	+EPZ	2014	04.3		24	+EPZ	0923	33.6	#-1096
22	+EPZ	0016	32.4	#-1083	24	-EPcPZ	0923	36.8	#-1096
22	-EPZ	0305	35.6	#-1084	24	+EPZ	0938	20.4	#-1097
22	-EPZ	0316	32.4		24	-EPZ	1005	23.2	
22	-EPZ	0431	30.0	#-1085	24	-EPZ	1027	07.0	
22	-EPZ	0434	14.2		24	-EPZ	1058	22.6	#-1098
22	+IPZ	0551	07.4		24	+EPZ	1250	01.0	
22	+EPZ	0654	44.6		24	-EPZ	2328	48.0	#-1099
22	-EPZ	0742	01.0		25	+EPZ	0122	00.8	
22	+EXZ	1222	55.5	#-1086	25	+EPZ	0215	08.3	
22	+EPZ	1246	03.6		25	+EPZ	0314	24.7	
22	-EPZ	1447	03.8		25	-EPZ	0331	21.8	
22	-EPZ	1510	21.0		25	+EPZ	0458	09.6	
22	+IPZ	1943	13.4	#-1087	25	+EPZ	0736	08.9	
22	ESH	1952	51.4		25	+EpPZ	0756	04.6	#-1100
23	+EPZ	0046	00.6		25	+EPZ	0825	10.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
25	-EPZ	0825	33.4		28	+EPZ	0522	09.2	
25	-EPZ	1022	15.4		28	-EPZ	0607	02.5	
25	+EPZ	1031	43.6		28	+EPZ	1040	07.8	
25	-EPZ	1218	14.6		28	+EPZ	2358	03.8	
25	-EXZ	1454	09.0	#-1101	29	+EPZ	0141	00.9	
25	+EPZ	1715	25.8		29	-IPZ	0234	57.8	#-1114
25	+EPZ	1736	17.2		29	-EPZ	0247	35.8	
25	-EPZ	1812	05.0		29	+EPZ	1228	57.4	
25	-EPZ	1919	21.0		29	-IPZ	1422	58.0	#-1115
25	-EXZ	2311	42.0	#-1102	29	-EPZ	1435	34.0	
25	-EpPZ	2311	50.4	#-1102	29	-EPKpdZ	1649	02.0	#-1116
26	+EPZ	0113	42.7		29	-EPZ	2003	19.2	
26	-EXZ	0218	43.0	#-1103	30	+EPZ	0504	21.3	
26	+EPZ	0236	42.9		30	+EPZ	0634	17.2	
26	+EPZ	0528	27.2	#-1104	30	+EPZ	0718	59.0	#-1117
26	+EPZ	0539	06.5		30	-EPZ	0723	20.0	
26	+EPZ	0744	01.6		30	+EPZ	1050	51.7	#-1118
26	+EPZ	0906	01.5		30	-EPZ	1212	17.4	
26	-EPZ	0936	39.0		30	-IPZ	1528	01.0	
26	+EPZ	1103	10.0	#-1105	30	-EPZ	1757	27.4	#-1119
26	-EPZ	1115	30.0		30	+EPZ	1848	32.0	
26	-EPZ	1131	46.0	#-1106	30	+EPZ	2013	10.9	
26	+EPZ	1145	15.6	#-1107	30	-EPZ	2216	47.6	
26	+EPZ	1553	06.8		31	-EPZ	0041	03.0	
26	-EPZ	1618	40.0		31	-EPZ	0137	36.0	
26	-EPZ	1922	06.0		31	-EPZ	0721	22.8	#-1120
26	+EPZ	1942	07.6		31	+EpPZ	0721	29.0	#-1120
27	-EpPZ	0016	01.0	#-1108	31	-EPZ	0908	54.0	
27	+EPZ	0029	16.4	#-1109	31	-EPZ	1009	38.0	#-1121
27	+EPZ	1141	02.1		31	-EPZ	1033	05.0	
27	-EPZ	1851	41.0	#-1110	31	-EPZ	1222	32.5	
27	+EPZ	2020	56.0	#-1111	31	+EPZ	1414	13.2	
28	-EPZ	0106	10.5		31	+EPZ	1614	39.2	
28	+EPZ	0245	39.6		31	-EPZ	1632	00.3	
28	-EPZ	0306	25.0		31	-EXZ	1941	10.0	#-1122
28	-EPZ	0328	27.4	#-1112	31	+EPZ	2340	24.6	
28	+EPZ	0330	35.4	#-1113					



Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
Nov.					3	+EPZ	0451	03.8	
1	+EPZ	0312	02.6		3	+EPZ	0523	48.4	#-1127
1	-EPZ	0529	38.4		3	+EPcPZ	0523	53.6	#-1127
1	+EPZ	0554	36.2		3	+EPZ	0538	20.4	
1	+EPZ	0618	21.6		3	+EPZ	0810	19.6	
1	-EPZ	1008	34.2		3	+EXZ	0922	33.6	#-1128
1	+EPZ	1201	14.0		3	+EPZ	1057	58.0	#-1129
1	-EPZ	1302	09.4		3	+EpPZ	1058	09.9	#-1129
1	+EPZ	1533	06.7		3	-EPZ	1112	15.0	#-1130
1	-EPZ	1804	24.0		3	+EPZ	1348	03.0	
1	-EPZ	1820	55.4		3	-EPZ	1423	23.2	#-1131
1	+IPZ	1820	59.4		3	+EPZ	1441	00.5	
1	-EPZ	2019	20.0		3	-EPZ	1445	32.0	
1	+EPZ	2056	02.0		3	-EPZ	1753	02.0	
1	+EPZ	2221	13.2		3	+EPZ	1812	16.2	
1	+EPZ	2236	05.3		3	-EPZ	1914	00.0	
2	-EPZ	0143	43.0		3	-EPZ	1929	49.0	
2	+EPZ	0237	06.4		3	-EPZ	1956	13.0	
2	-EPZ	0410	02.4		3	-EPZ	2100	49.2	
2	+EPZ	0522	10.8		3	+EPZ	2212	04.8	
2	-EXZ	0653	00.2	#-1123	3	+EPZ	2234	27.2	
2	-EPZ	0711	15.0		3	-IPZ	2347	27.0	
2	-EPZ	0733	33.5		3	-EPZ	2347	32.0	
2	+EPZ	0734	15.8		3	ESH	2358	04.8	
2	+EPZ	1048	44.9	#-1124	4	+EXZ	0019	18.6	#-1132
2	-EPZ	1059	54.6		4	+EPKpabZ	0126	01.8	#-1133
2	-EPZ	1210	31.2		4	+EPZ	0234	25.9	
2	+EPZ	1241	38.4		4	+EPZ	0240	01.6	
2	+EPZ	1520	12.0		4	+EPZ	0255	18.0	
2	+EPZ	2120	00.9		4	-EPZ	0341	37.6	
2	+EPZ	2149	09.0		4	+IPZ	0401	15.5	#-1134
2	+EPZ	2320	34.8	#-1125	4	+EPZ	0420	10.8	
2	+EXZ	2320	45.3	#-1125	4	-EPZ	0432	04.4	
3	+EPZ	0212	07.4		4	+EPZ	0606	27.0	
3	+EPZ	0212	09.8		4	+EPZ	0848	00.6	
3	+EPZ	0304	49.2		4	-EpPZ	0910	51.0	#-1135
3	-EPZ	0313	26.8	#-1126	4	+EPZ	1009	01.4	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
4	-EPZ	1204	22.0		6	-EPZ	0312	12.6	
4	+EPZ	1220	02.6		6	-EPZ	0407	14.2	
4	+EPZ	1539	22.6		6	-EPZ	0527	13.2	
4	+EPZ	1616	39.2		6	+EPZ	0806	16.6	
4	+EXZ	1654	07.6	#-1136	6	+EPZ	0936	00.5	
4	-EpPZ	1654	20.0	#-1136	6	-EPZ	1007	20.0	
4	+EPZ	1704	24.0		6	+EPZ	1016	27.0	
4	-EPZ	1720	17.0		6	+EPZ	1151	11.0	
4	-EPZ	1725	03.0		6	-EPZ	1227	33.0	#-1142
4	+EPZ	1904	11.4		6	-EPZ	1409	10.0	
4	+EPZ	1904	18.0		6	+EPZ	1616	25.4	
4	-EPZ	1924	31.0		6	-EPZ	1654	04.0	
4	+EPZ	2014	13.0		6	-EPZ	1738	26.0	
4	-EPZ	2014	17.1		6	-EPZ	1815	42.0	
4	-EPZ	2108	27.8		6	+EPZ	1924	01.7	
4	+EPZ	2322	03.2		6	-EPZ	1937	13.0	#-1143
5	+IPZ	0129	59.0	#-1137	6	-EXZ	2113	28.4	#-1144
5	-EPcPZ	0130	03.3	#-1137	6	+EPZ	2119	36.6	
5	ESH	0139	06.6	#-1137	6	-EPZ	2143	12.2	
5	-EPZ	0451	00.0	#-1138	7	+EPZ	0928	00.0	
5	+EPZ	0455	23.2		7	+EPZ	0940	26.5	
5	+EPZ	0503	29.4	#-1139	7	+EPZ	0956	05.1	
5	+EPZ	0509	01.7		7	+EPZ	1142	49.0	#-1145
5	+EPZ	0916	31.2		7	-IPZ	1208	02.4	
5	+EPZ	0951	01.5		7	+EPZ	1231	31.0	
5	-EpPZ	1035	01.6	#-1140	7	+EPZ	1410	43.1	
5	+EPZ	1047	05.8		7	-EPZ	2002	42.4	
5	+EPZ	1125	06.6		7	+EPZ	2211	24.0	
5	-EPZ	1154	19.6		8	+EPZ	0621	13.4	
5	-EPZ	1331	39.0		8	+IPZ	0742	26.4	
5	-EpPdiffZ	1654	31.0	#-1141	8	+EPZ	0812	19.6	
5	-EPZ	1824	05.5		8	-IPZ	2152	58.4	#-1146
5	+EPZ	1911	01.1		9	-EPZ	0222	04.8	#-1147
5	-EPZ	1911	13.0		9	+EPZ	0546	45.6	
5	+EPZ	2026	15.7		9	+EPZ	0612	10.0	
5	-EPZ	2138	50.0		9	+EPZ	0651	08.2	
5	-EPZ	2325	02.0		9	-EPZ	0715	03.2	#-1148

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
9	+EpPZ	0715	25.0	#-1148	12	+IpPKPdfZ	0651	05.6	#-1161
9	-EPZ	0736	15.8		12	+EXZ	1006	43.0	#-1162
9	+EPZ	0801	16.2		12	+EPZ	1108	20.5	
9	+EPcPZ	1117	33.4	#-1149	12	-IPZ	1430	00.4	
9	+EpPZ	1128	54.0	#-1150	12	-IPZ	1430	05.2	
9	-IPZ	1250	32.0	#-1151	12	+EPZ	1912	49.0	#-1163
9	+EPcPZ	1250	45.6	#-1151	12	-IpPZ	1912	53.6	#-1163
9	+EPZ	1613	18.6	#-1152	12	-EPZ	2128	37.6	#-1164
9	+EPZ	1636	05.0		12	+EPZ	2205	20.0	
9	+EPZ	1747	07.6		13	+EPZ	0117	07.6	
9	-EPZ	2126	13.0		13	+EPKiKPZ	0454	03.0	#-1165
9	+EPZ	2347	18.7		13	+EPZ	0724	54.8	
10	-EPZ	0134	01.6	#-1153	13	-EPZ	0819	06.6	
10	+EPZ	0322	15.7	#-1154	13	-EPZ	1543	19.0	
10	-IXZ	0412	28.0	#-1155	13	+EPZ	1801	49.3	
10	ESH	0418	20.0	#-1155	13	-EPZ	2109	11.6	
10	-EPZ	0645	15.0		13	-EPZ	2314	05.0	#-1166
10	-EPZ	1101	11.0		14	+EPZ	0611	03.0	
10	-IPZ	1155	24.0	#-1156	14	+EPZ	0644	43.2	#-1167
10	-EPZ	1332	49.0		14	+EpPZ	0740	06.5	#-1168
10	+EPZ	1416	13.2		14	+EPZ	0840	01.0	
10	+EPZ	1708	04.3		14	+EPZ	0934	18.0	
10	+EPZ	2003	26.0		14	+EPZ	1017	05.5	
11	-EPZ	0138	13.0		14	-EXZ	1049	55.0	#-1169
11	-EPZ	0347	01.0	#-1157	14	+EPcPZ	1126	31.5	#-1170
11	+EPZ	0805	39.0		14	+EPZ	1143	07.0	
11	+EPZ	0916	06.0		14	+EPZ	1210	21.1	
11	+EPZ	1256	22.0		14	-EPZ	1251	32.5	
11	+EPZ	1337	44.0		14	+EPZ	1312	40.2	
11	+EPZ	1524	06.2		14	+EPZ	1445	36.5	#-1171
11	-EPZ	1536	08.4		14	+EPZ	1452	11.8	
11	+EPZ	1853	07.0	#-1158	14	+EXZ	1507	32.4	#-1172
11	-EPZ	2043	04.8	#-1159	14	-EPZ	1807	11.0	
12	+IPZ	0226	56.6	#-1160	14	+EPZ	1914	17.0	#-1173
12	ESH	0237	05.0	#-1160	14	+EPZ	1927	16.8	
12	-EPZ	0401	12.6		14	+EPZ	2000	08.0	
12	-EPKPdfZ	0650	55.6	#-1161	14	+EPZ	2136	18.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
14	-EpPZ	2234	49.0	#-1174	16	-EPZ	2328	01.0	
14	+EPZ	2311	08.0	#-1175	17	+EPZ	0003	22.8	
14	-EPZ	2323	10.0		17	-EPZ	0003	32.0	
14	+EPZ	2332	28.4		17	-EXZ	1352	14.0	#-1179
15	-EPZ	0105	00.8		17	+EPZ	1541	06.7	
15	+EPZ	0318	01.2		17	-EPZ	1605	51.9	#-1180
15	+EPZ	0355	56.2		17	-IXZ	1605	54.2	#-1180
15	+EPZ	0423	05.2		17	ESH	1616	15.0	#-1180
15	+EPZ	0506	41.0		17	+EPZ	1911	50.6	
15	-EPZ	0535	37.0		17	+EPZ	1926	27.2	
15	+EPZ	0552	16.6		17	+EPZ	1950	27.1	#-1181
15	-EPZ	0723	01.0		17	+EPZ	2124	51.6	
15	-EPZ	0751	43.0		18	+EPZ	0144	17.4	#-1182
15	+IPZ	0948	01.2		18	+EPZ	0202	46.0	
15	+EPZ	1007	00.4		18	-EPZ	0417	38.6	
15	+EPZ	1141	21.2		18	+EPZ	0431	24.2	
15	+EPZ	1307	13.2		18	+EpPZ	0518	15.0	#-1183
15	-EPZ	1618	02.0		18	+EPZ	0604	46.9	
15	+EPZ	1809	12.4		18	+EPZ	0625	19.0	
15	+EPZ	1910	01.8		18	+EPZ	0642	42.6	
16	+EPZ	0102	21.5		18	-EPZ	0646	32.0	
16	-EPZ	0152	47.0		18	+EPZ	0717	15.0	
16	+EPZ	0212	23.6		18	+EPZ	1053	08.2	
16	+EPZ	0244	54.4		18	+EPZ	1101	52.0	
16	-EPZ	0444	05.0		18	+EPZ	1216	13.0	
16	+EPZ	0458	02.1		18	+EPZ	1744	44.4	#-1184
16	-EXZ	0928	13.0	#-1176	18	+EPZ	1832	20.6	
16	-EPZ	1033	23.6		18	+EPZ	1944	28.6	
16	+EPZ	1150	15.6		18	+EPZ	2006	00.5	
16	+EPZ	1222	00.2		19	+EPZ	0237	05.0	
16	-EPZ	1452	01.2		19	+EPZ	0428	10.0	
16	+EPZ	1701	48.5		19	+EPZ	0428	13.6	
16	-EPZ	1855	42.0	#-1177	19	+EPZ	0556	01.9	
16	-EsPZ	1855	48.0	#-1177	19	+EPZ	1243	05.0	
16	-IPZ	2018	59.0	#-1178	19	+EPZ	1550	05.2	
16	-IPcPZ	2019	04.4	#-1178	19	+EPZ	2104	36.6	
16	ESH	2029	15.2		19	+EPZ	2104	47.4	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
19	+EPZ	2207	05.3	#-1185	22	+EPZ	1215	27.4	
20	-EpPZ	0220	00.9	#-1186	22	+EPZ	1425	06.4	#-1194
20	+EPZ	0312	03.8		22	+EPZ	1450	41.2	
20	+EPZ	0524	35.6		22	-EPZ	1630	16.0	#-1195
20	+EPZ	0531	28.2		22	+IpPZ	1630	18.0	#-1195
20	+EPZ	0541	58.0		22	ESH	1639	46.8	#-1195
20	-IPZ	0624	19.0	#-1187	22	+EPZ	1928	54.6	
20	-EPcPZ	0624	21.6	#-1187	23	+EPZ	0513	08.6	#-1196
20	+EPZ	0913	38.6		23	-EPZ	0914	02.0	
20	-EPZ	1001	08.0		23	-IPZ	0914	03.4	
20	+EpPKPdZ	1034	00.2	#-1188	23	ESH	0924	51.2	
20	+EXZ	1034	11.4	#-1188	23	+EPZ	1046	02.8	
20	+EPZ	1205	27.0		23	+EPZ	1244	05.8	
20	+EPZ	1508	36.2		23	-EPZ	1305	30.9	#-1197
20	+EPZ	1707	30.0		23	+EXZ	1308	45.6	#-1197
20	+EPZ	1825	32.2		23	-EPZ	1603	27.2	#-1198
20	-EPZ	1955	37.0		23	+EpPZ	1603	30.0	#-1198
20	+EPZ	2053	09.8	#-1189	23	+EPZ	1815	15.2	
21	+EPZ	0339	55.1		23	-EPZ	2035	43.0	#-1199
21	+EPZ	0346	22.2		23	+EPZ	2151	29.9	
21	-IPZ	0446	10.8		23	+EPZ	2346	36.9	
21	-EPZ	0501	51.0		24	-EPZ	0118	31.0	
21	+EPZ	1118	05.6		24	+EPZ	0146	00.3	#-1200
21	+EXZ	1150	39.2	#-1190	24	-EPZ	0227	41.3	
21	+EPKiKPZ	1150	47.2	#-1190	24	+EPZ	0558	23.4	
21	-EPZ	1246	08.0	#-1191	24	+EPZ	0619	36.8	
21	+EPZ	2206	27.5		24	+EPZ	0646	01.6	
21	+EPZ	2303	44.8	#-1192	24	+EPZ	0722	17.4	
22	+EPZ	0257	46.2		24	-EPZ	0821	30.6	
22	+EPZ	0449	13.0		24	+EPZ	0953	22.6	
22	+EPZ	0500	32.1		24	+EPZ	1022	47.3	
22	-EPZ	0523	07.0	#-1193	24	+EPZ	1033	17.5	
22	+EPZ	0546	25.3		24	+EPZ	1033	35.9	
22	+EPZ	0622	21.1		24	+EPZ	1123	03.0	
22	-EPZ	0701	19.0		24	-EPZ	1204	13.8	
22	+EPZ	0818	02.0		24	+EPZ	1219	41.4	
22	+EPZ	1138	36.0		24	-EPZ	1246	22.8	#-1201

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
24	+EPKiKPZ	1354	02.4	#-1202	26	+EPZ	0311	56.5	
24	+EsPdiffZ	1416	17.2	#-1203	26	+EPZ	0326	02.0	
24	+EPZ	1633	12.0		26	-EPZ	0617	23.4	#-1214
24	+EPZ	1633	19.2		26	+EPZ	0655	47.6	
24	+EPZ	1703	23.8		26	+EPZ	0712	46.5	
24	+EPZ	1703	26.0		26	+EPZ	0824	02.6	
24	+IPZ	1801	26.2	#-1204	26	+EPZ	1245	19.7	
24	-EPZ	1819	25.2		26	-EPZ	1247	14.0	#-1215
24	-EPZ	1847	21.6	#-1205	26	+EpPZ	1247	19.4	#-1215
24	+EPcPZ	2221	09.0	#-1206	26	-EPZ	1314	27.0	
24	+EPZ	2255	45.6		26	-IPZ	1748	56.6	#-1216
24	+EPZ	2310	04.0		26	+EPZ	1757	20.5	
25	-EPZ	0038	09.2	#-1207	26	ESH	1759	35.0	#-1216
25	+EPZ	0110	09.4		26	+EXZ	2017	05.6	#-1217
25	+EPZ	0219	15.6		26	+EPZ	2022	07.5	#-1218
25	+EPZ	0338	09.4	#-1208	26	-EPcPZ	2225	15.0	#-1219
25	+EPcPZ	0338	37.5	#-1208	27	+EPZ	0410	03.8	
25	+EPZ	0341	56.7		27	+EPZ	0733	20.6	#-1220
25	+EPdiffZ	0342	14.2	#-1209	27	+EPZ	0816	19.7	
25	+EPZ	0403	25.6		27	+EPZ	0816	44.4	
25	+EpPKiKPZ	0438	02.5	#-1210	27	+EPZ	0938	49.2	
25	+EPZ	0506	12.5	#-1211	27	-EPZ	1102	06.0	
25	+EpPZ	0506	32.4	#-1211	27	+EPZ	1121	57.1	
25	+EsPZ	0506	40.4	#-1211	27	+EPZ	1438	03.2	
25	+EPZ	0627	13.8		27	+EPZ	1438	05.0	
25	-EPZ	0711	19.0		27	+EPZ	1531	06.8	
25	+EPZ	0725	24.3		27	+EPZ	1824	19.3	#-1221
25	+EXZ	0835	19.6	#-1212	27	+EPZ	1916	35.0	
25	+EPZ	0921	19.6		27	+EPKPdfZ	1949	25.0	#-1222
25	+EPZ	0921	22.3		27	+IPKPbcZ	1949	29.2	#-1222
25	-EPZ	1009	48.4		27	+EPZ	2101	38.0	#-1223
25	-EPZ	1627	45.6	#-1213	27	+EPZ	2146	29.5	
25	+EPZ	1716	04.1		28	+EPZ	0243	30.6	
25	+EPZ	1903	29.6		28	+EPZ	0340	26.2	
25	+EPZ	1924	32.4		28	+EpPZ	0348	07.5	#-1224
25	+EPZ	1945	11.0		28	+EPZ	0548	13.4	
25	+EPZ	2345	06.2		28	-EPZ	0548	27.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
28	+EPZ	0830	22.0	#-1225	30	+EPZ	0155	03.0	
28	-EpPZ	0830	29.0	#-1225	30	+EPZ	0155	05.8	
28	+EPZ	1040	17.4		30	+EXZ	0210	40.9	#-1235
28	+EPZ	1048	25.9		30	+EPZ	0320	08.4	
28	+EPZ	1239	04.0		30	+EPKPdfZ	0342	32.8	#-1236
28	+EPZ	1501	37.2		30	+IPKiKPZ	0342	36.2	#-1236
28	+EPZ	1547	19.4		30	ESH	0350	33.4	#-1236
28	+EPZ	1659	02.8	#-1226	30	+EPZ	0414	02.7	
28	-EPZ	1957	37.0	#-1227	30	+EPZ	0424	12.7	
28	+EPcPZ	1957	45.0	#-1227	30	-EPZ	0507	00.4	
28	+EPZ	2218	02.0		30	+EPZ	0507	06.6	
28	+EPZ	2218	13.2		30	-EPZ	0528	43.5	#-1237
28	+EPZ	2346	05.0		30	-EPcPZ	0528	48.0	#-1237
29	+EPZ	0007	19.7		30	+EXZ	0531	51.6	#-1237
29	+EPZ	0147	24.2	#-1228	30	-EPZ	0852	01.2	
29	+EPZ	0223	40.4		30	+EsPKPabZ	0903	00.8	#-1238
29	+EPZ	0414	17.0		30	+EPZ	1345	08.2	
29	+EPZ	0602	44.0	#-1229	30	+EPZ	1733	42.8	
29	+EPZ	0707	02.0		30	-EPZ	1801	01.0	
29	+EPZ	0727	33.3		30	+EXZ	1814	11.6	#-1239
29	+EPZ	0918	28.4		30	-IpPKPdfZ	1814	30.0	#-1239
29	-EPZ	1012	05.0		30	-EPZ	1903	28.5	
29	-EPZ	1038	54.0	#-1230	30	-EPZ	2130	55.0	#-1240
29	+EXZ	1207	00.4	#-1231	30	+EpPZ	2131	01.2	#-1240
29	+EPZ	1311	13.3		30	+EXZ	2222	19.5	#-1241
29	+EXZ	1517	40.8	#-1232	30	+EPZ	2338	51.0	
29	-EPZ	1715	04.0		Dec.				
29	+EPZ	1810	02.4		1	+EPZ	0102	22.9	#-1242
29	+IPZ	2009	05.2		1	-EPZ	0202	01.2	
29	-IPZ	2009	18.5		1	+EPZ	0618	42.7	
29	ESH	2018	18.6		1	-EpPZ	1012	32.6	#-1243
29	-EXZ	2025	05.0	#-1233	1	+EPZ	1117	34.0	
29	-EPZ	2339	08.8		1	+EPZ	1117	44.5	
30	-EPZ	0102	17.4	#-1234	1	+EPZ	1214	29.2	
30	-EPZ	0121	03.0		1	+EPZ	1351	09.8	
30	+EPZ	0141	24.4		1	+EPZ	1552	16.8	
30	+EPZ	0141	57.0		1	+EPZ	1614	28.0	#-1244

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
1	+EPcPZ	1614	30.0	#-1244	3	-EPZ	1644	42.4	#-1251
1	+IPZ	1756	53.6		3	-EPZ	1653	01.6	
1	+EPZ	1836	37.0		3	+EPZ	1742	12.0	
1	+EPZ	2007	50.0		3	+EPZ	1935	40.0	
1	+EPZ	2132	01.8		3	-EPZ	2205	28.2	
1	+EPZ	2353	28.0		3	+EPZ	2341	02.0	
1	+EPZ	2353	32.7		4	+EPZ	0106	55.3	#-1252
2	-EPZ	0106	32.9		4	+EPZ	0107	03.0	
2	+EPZ	0116	20.7		4	-EPZ	0213	29.9	
2	-EPZ	0141	48.8		4	-IPZ	0605	44.6	#-1253
2	+EPZ	0153	35.2		4	+IpPZ	0605	49.6	#-1253
2	-EPZ	0251	10.0	#-1245	4	+EPZ	0634	40.8	
2	+EPcPZ	0251	22.5	#-1245	4	+EPZ	0656	00.4	
2	-EPZ	0316	49.6	#-1246	4	+EPZ	0842	27.0	
2	+EPZ	0325	02.4		4	+EPZ	0921	02.5	
2	-IPZ	0325	11.0	#-1247	4	-EPZ	1051	41.9	
2	-IsPZ	0325	29.4	#-1247	4	+EPZ	1058	21.8	
2	ESH	0335	38.0	#-1247	4	+EPZ	1112	27.6	
2	+EPZ	0555	38.5		4	+EPZ	1348	43.9	
2	+EXZ	0624	27.0	#-1248	4	+EPZ	1656	40.2	
2	+EPZ	0808	22.7		4	+EPZ	1836	18.4	
2	+EPZ	0815	20.5		4	+EPZ	2120	00.3	
2	+EPZ	0926	33.7		5	-EPZ	0417	09.0	
2	+EPZ	1626	05.3		5	+EPZ	0608	19.4	
2	+EPZ	1825	06.0		5	+EPZ	0623	02.2	
2	+EPZ	1917	40.1		5	-EPZ	0625	40.0	
2	+EPZ	2347	48.2	#-1249	5	+EPZ	0705	19.1	
2	+EpPZ	2347	54.5	#-1249	5	+EPZ	0705	27.4	
3	+EPZ	0539	36.4		5	+EXZ	0909	51.4	#-1254
3	+EPZ	0539	38.3		5	-EPZ	1301	06.0	#-1255
3	+EPZ	0643	23.0	#-1250	5	+EPZ	1408	51.7	#-1256
3	-EPcPZ	0643	25.2	#-1250	5	-EPcPZ	1409	01.6	#-1256
3	+EPZ	0807	10.4		5	-EPZ	1506	05.2	
3	+EPZ	1037	34.0		5	+EPZ	1549	21.6	
3	-EPZ	1042	16.0		5	+EPZ	1722	05.8	
3	+EPZ	1440	07.6		5	-IPZ	2155	52.4	
3	+EPZ	1621	01.6		5	+EPZ	2321	29.4	



Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
6	+EPZ	0154	07.8		8	+EPZ	0141	00.0	#-1266
6	-EPZ	0207	49.2	#-1257	8	+EPZ	0248	10.3	
6	+EPcPZ	0207	55.1	#-1257	8	+EPZ	0248	12.4	
6	-EPZ	0302	38.0	#-1258	8	-EPZ	0520	40.0	#-1267
6	+EPZ	0409	54.0		8	+EPcPZ	0520	43.0	#-1267
6	+EPZ	0434	06.2		8	-IPZ	0530	45.6	
6	+EPZ	0453	21.0		8	ESH	0541	17.8	
6	+EPZ	0453	37.4		8	+EXZ	0552	11.8	#-1268
6	+EPZ	0516	05.4		8	-EPZ	0556	00.6	#-1269
6	+EPZ	0808	20.2		8	-EPZ	0602	34.0	
6	+EPZ	0954	06.4		8	+EPZ	0701	32.0	
6	+EPZ	1108	19.4		8	+EPZ	0712	13.8	
6	+EPZ	1108	24.8		8	+EPZ	0835	53.0	
6	-EPZ	1638	18.8		8	-EPZ	0930	21.2	#-1270
6	+EPZ	1721	23.8		8	+EPZ	0943	16.0	
6	+EPZ	1821	01.2		8	+EPZ	1121	11.4	
6	+EPZ	1910	02.9		8	+EPZ	1121	16.0	
6	+EPZ	2034	17.2		8	-EPZ	1349	15.0	
7	+EPZ	0134	22.9		8	-EPcPZ	1453	45.0	#-1271
7	+EPcPZ	0426	44.2	#-1259	8	+EPZ	1543	15.0	#-1272
7	-IPZ	0432	24.0	#-1260	8	ESH	1553	18.4	
7	-IPZ	0432	26.0	#-1260	8	+EPZ	1639	07.4	
7	-EXZ	0536	05.0	#-1261	8	-EPZ	1731	45.0	#-1273
7	+EPZ	0751	56.4		8	-EPZ	1817	10.0	#-1274
7	+EPZ	0833	41.6		8	+EPZ	1817	48.0	
7	+EPZ	0944	50.4	#-1262	9	-IPZ	0415	27.4	#-1275
7	-EpPZ	0944	55.8	#-1262	9	+EPZ	0505	05.0	
7	+EPcPZ	0947	41.3	#-1262	9	+EPZ	0604	06.4	
7	+EPZ	1018	27.6		9	-EPZ	0625	13.9	
7	+EPZ	1251	09.8		9	+EPZ	0834	18.8	
7	+EpPKiKPZ	1551	04.8	#-1263	9	+EPZ	1401	22.0	
7	-EpPKPdfZ	1829	46.2	#-1264	9	-EPZ	1414	24.0	
7	+EPKiKPZ	1829	51.6	#-1264	9	-EXZ	1416	49.6	#-1276
7	+EXZ	1837	26.2	#-1265	9	-EPZ	1446	19.8	#-1277
7	-IpPKPdfZ	1837	34.0	#-1265	9	-EXZ	1446	23.4	#-1277
7	+EPZ	1848	05.0		9	+EPZ	1555	03.9	
8	+EPZ	0024	06.9		9	-EPZ	1636	08.6	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
9	-EPZ	1636	10.6		11	+EPZ	2133	12.4	#-1288
9	-EPZ	2332	33.8		11	+EXZ	2133	20.8	#-1288
10	-EXZ	0613	02.8	#-1278	11	+EPZ	2224	18.5	#-1289
10	+EPZ	0934	52.4	#-1279	11	+EPZ	2301	01.0	
10	+EPZ	1021	00.7	#-1280	12	+EPZ	0058	02.7	
10	+EPZ	1112	04.0		12	+EXZ	0441	21.7	#-1290
10	+EPZ	1112	09.0		12	+EPZ	0748	06.6	
10	+EPZ	1411	23.6		12	+EPZ	1006	07.4	
10	+EPZ	1411	26.3		12	+EPZ	1237	34.6	
10	+EXZ	1507	30.0	#-1281	12	+EPZ	1506	14.7	#-1291
10	+EPZ	1802	56.4		12	-EsPZ	1506	21.0	#-1291
10	+EPZ	1803	00.5		12	+EXZ	1507	31.0	#-1292
10	-EPZ	2016	00.8	#-1282	12	-EXZ	1511	08.4	#-1292
10	-EpPZ	2016	11.4	#-1282	12	+EPZ	1554	02.6	#-1293
11	+EPZ	0506	23.5		12	+EPZ	1607	51.4	#-1294
11	+EPZ	0651	50.9		12	-EPcPZ	1607	56.2	#-1294
11	-EPZ	0722	02.0		12	+EPZ	1611	26.0	#-1295
11	+EXZ	0811	04.5	#-1283	12	-EpPZ	1611	39.6	#-1295
11	-EPZ	0834	38.0		12	ESH	1621	37.3	#-1295
11	+EPZ	0922	34.0		12	-EPZ	1709	10.3	
11	-EPZ	0922	40.0		12	+EPZ	1709	22.4	
11	-IPZ	0922	46.2		12	+EPZ	1749	00.4	
11	+EPZ	1109	26.0		12	+IPZ	1802	40.3	#-1296
11	+EPKpdfZ	1109	41.0	#-1284	12	-IpPZ	1802	51.3	#-1296
11	-EPKpbcZ	1109	46.1	#-1284	12	ESH	1812	37.7	#-1296
11	+EPZ	1210	08.2		12	-EPZ	2045	32.0	#-1297
11	-EPZ	1226	21.7		12	+EpPZ	2045	39.6	#-1297
11	+EPZ	1354	52.4	#-1285	12	+EPZ	2146	04.0	
11	-IPcPZ	1354	54.0	#-1285	12	-EPZ	2304	08.0	
11	-EPZ	1547	08.8		12	+EPZ	2306	39.4	
11	-EPZ	1725	52.2	#-1286	12	-EPZ	2307	03.2	
11	-EpPZ	1726	02.4	#-1286	13	+IPZ	0127	38.2	#-1298
11	-EPZ	1731	08.0		13	-IPcPZ	0127	43.4	#-1298
11	+EPZ	1751	16.0		13	ESH	0137	55.2	#-1298
11	+EPZ	1751	21.6		13	+EPZ	0302	31.6	
11	+EXZ	2041	12.5	#-1287	13	+EPZ	0513	23.6	
11	-EPZ	2116	00.2		13	+EPZ	0520	15.1	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
13	+EPZ	0909	29.9	#-1299	15	+EPZ	0717	18.9	
13	+EPZ	0930	07.8		15	-EPZ	0758	18.0	
13	-EPZ	0930	17.0		15	+EPZ	0951	07.8	
13	-IPZ	1047	44.4		15	+EPZ	0951	13.0	
13	+EPZ	1206	39.4		15	-IPZ	1141	39.0	
13	+EPZ	1206	48.8		15	+EPZ	1151	40.5	
13	+EPZ	1316	05.2		15	+EPZ	1151	45.0	
13	+EPZ	1342	32.0	#-1300	15	+EPZ	1214	37.8	#-1308
13	ESH	1352	22.0		15	+EPcPZ	1214	43.6	#-1308
13	+EPZ	1832	29.0		15	-EPZ	1220	14.4	
13	+EPZ	1901	48.0		15	-EPKpdZ	1458	13.4	#-1309
13	+EPZ	2053	09.4	#-1301	15	+EPZ	1531	17.6	
14	+EPZ	0054	34.6		15	-EPZ	1542	02.0	
14	+EPZ	0127	56.2	#-1302	15	+EPZ	1725	28.7	
14	-EPZ	0553	02.6		15	+EPZ	1834	16.9	
14	+EPZ	0632	27.0		15	+EPZ	1849	35.0	
14	+EPZ	0913	03.6		15	-EPZ	2046	04.4	
14	+EPZ	1009	02.4		15	+EPZ	2231	45.2	
14	+EPZ	1222	04.5		16	+EPZ	0019	25.6	
14	+EPZ	1223	01.1		16	+EPZ	0123	24.6	
14	+EPZ	1309	25.8	#-1303	16	+EPZ	0123	28.7	
14	+EPZ	1452	28.0		16	-IPZ	0222	13.4	#-1310
14	+EPZ	1452	50.6		16	-IPcPZ	0222	24.2	#-1310
14	+EXZ	1454	01.4	#-1304	16	-EXZ	0227	50.0	#-1310
14	+EPZ	1622	14.6		16	+EPZ	0347	01.2	
14	+EPZ	1807	24.0	#-1305	16	+EPZ	0607	00.6	
14	+EpPZ	1807	33.6	#-1305	16	+EPZ	0634	01.4	
14	-EPZ	1814	53.0		16	+EPZ	0634	04.6	
14	+EPZ	1817	03.6		16	+IPZ	0724	33.8	#-1311
14	+EPZ	1818	31.5		16	-IPcPZ	0724	35.8	#-1311
14	+EPZ	1922	33.8		16	+EPZ	0810	00.4	
14	+EPZ	2013	15.2		16	+EPZ	0811	16.8	#-1312
14	+EPZ	2307	18.4	#-1306	16	+IPZ	0821	13.0	
15	+EPZ	0117	16.6		16	+EPZ	1010	05.0	
15	-EPZ	0141	09.4		16	+EPZ	1045	01.3	
15	-EXZ	0430	16.0	#-1307	16	+EPZ	1141	20.2	
15	+EPZ	0717	01.7		16	+EPZ	1220	44.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
16	+EPZ	1234	04.3		17	-EPZ	2107	21.6	#-1318
16	+EPZ	1234	21.6		17	+EPZ	2148	12.8	
16	+EPZ	1347	05.4		17	+EPZ	2226	22.6	#-1319
16	-EPZ	1642	41.0		17	+EpPZ	2228	26.2	#-1319
16	+EPZ	1651	56.5		17	-EPZ	2244	00.4	
16	-EPZ	1736	04.8		17	+EPZ	2257	22.0	
16	-EPZ	1847	09.5		17	-EPZ	2310	31.4	
16	+EPZ	1947	50.0	#-1313	17	+EPZ	2350	39.9	
16	+EPcPZ	1948	00.4	#-1313	18	+EPZ	0011	43.2	
16	+EPKiKPZ	1953	30.6	#-1313	18	+EPZ	0017	48.2	
16	+EPZ	2001	47.1		18	+EPZ	0035	19.1	
16	+EPZ	2012	30.7		18	-EPZ	0102	02.3	
16	+EPZ	2012	47.0		18	+EPZ	0202	38.6	
16	-EPZ	2044	35.0		18	-EPZ	0307	39.4	
16	+EPZ	2139	13.5		18	+EPZ	0416	21.2	#-1320
16	+EPZ	2256	52.4	#-1314	18	+EPZ	0450	17.6	
16	+EpPZ	2257	27.0	#-1315	18	-EPdifZ	0520	00.6	#-1321
17	+EPZ	0054	40.8		18	+EPZ	0606	11.6	
17	-EPZ	0310	05.6		18	-EPZ	0808	04.2	
17	-EPZ	0314	34.0		18	-EPZ	0826	01.2	
17	-EPZ	0354	41.4		18	+EPZ	0922	50.5	
17	+EPZ	0354	53.0		18	+EPZ	1115	07.4	
17	+EPZ	0444	31.4		18	+EPZ	1347	13.0	
17	-EPZ	1046	05.0		18	+EPZ	1445	00.5	
17	+EPZ	1207	06.2		18	-EXZ	1448	01.6	#-1322
17	-EXZ	1252	01.0	#-1316	18	+EPZ	1754	06.6	
17	+EXZ	1254	30.0	#-1317	18	-EPZ	1814	03.2	
17	+EPZ	1309	01.2		18	+EPZ	1919	36.0	#-1323
17	+IPZ	1334	58.0		18	+EPZ	1935	35.3	
17	-EPZ	1400	23.0		18	+EPZ	2021	01.0	
17	+EPZ	1522	04.4		18	+EPZ	2122	26.3	
17	+EPZ	1631	02.0		18	+EPZ	2237	18.4	
17	+EPZ	1656	37.0		18	-EPZ	2304	30.0	
17	+EPZ	1710	20.0		18	-EPZ	2309	06.0	#-1324
17	+EPZ	2006	43.6		18	+EPZ	2355	02.2	
17	-EPZ	2022	30.6		19	+EPZ	0512	18.8	
17	+EPZ	2043	42.2		19	+EPZ	0800	13.5	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
19	+EPZ	0818	15.0		21	+EPZ	0236	03.7	
19	-EXZ	0958	12.0	#-1325	21	-EPZ	0303	25.8	
19	-EpPZ	0958	16.5	#-1325	21	+EXZ	0411	13.5	#-1332
19	-EPZ	1022	19.8		21	-EXZ	0433	53.4	#-1333
19	-EPZ	1049	00.5		21	+EPZ	0516	51.0	
19	-EPZ	1102	15.4		21	-IPZ	0551	51.4	#-1334
19	-EPZ	1153	42.9		21	+EpPZ	0551	56.6	#-1334
19	+EPZ	1226	12.2	#-1326	21	-EPZ	0647	30.6	
19	+EPZ	1322	14.0		21	-EPZ	0718	01.0	
19	+EPZ	1602	58.2		21	+EPZ	0805	33.2	
19	+EPZ	1622	09.8		21	+EPZ	1158	03.0	
19	+EPZ	1644	47.0	#-1327	21	+EPZ	1218	37.1	
19	+EPZ	2056	38.3	#-1328	21	-EPZ	1420	01.6	#-1335
19	+EPZ	2058	38.4	#-1329	21	-EXZ	1420	05.3	#-1335
19	+EpPZ	2058	53.0	#-1329	21	-IpPZ	1420	09.4	#-1335
19	-EPZ	2138	14.8		21	+EPZ	1543	09.6	
19	+EPdiffZ	2239	31.0	#-1330	21	+IPZ	1738	15.0	
19	-EPZ	2311	01.2		21	+IPZ	1738	28.5	
20	+EPZ	0318	22.0		21	-IXZ	1757	52.5	#-1336
20	-EPZ	0328	35.0		21	+IPdiffZ	1756	01.6	#-1337
20	+EPZ	0457	50.5		21	+EPZ	1809	30.6	
20	+EPZ	0616	10.0		21	+EpPdiffZ	1808	44.4	#-1338
20	+EPZ	0727	11.6		21	+EPZ	1823	47.8	
20	+EPZ	0734	14.4		21	+EPZ	1842	57.0	#-1339
20	-EPZ	0734	45.4		21	+EPZ	1849	50.8	
20	-EPZ	0809	04.6		21	-EPdiffZ	1856	51.0	#-1340
20	-EPZ	1105	17.0		21	+pPdiffZ	1856	55.2	#-1340
20	-EPZ	1220	00.2		21	+EPZ	2012	35.3	
20	-EPZ	1350	01.3		21	+EPZ	2020	10.6	
20	+EPZ	1350	06.7		21	+EPZ	2036	33.4	
20	+EPZ	1534	18.0		21	-EPZ	2053	19.0	
20	+EpPKPdfZ	1740	17.4	#-1331	21	+EPdiffZ	2107	38.0	#-1341
20	+EPZ	2225	20.6		21	-EXZ	2107	50.7	#-1342
20	+EPZ	2225	25.0		21	+EPPZ	2119	49.2	#-1342
20	+EPZ	2249	42.0		21	+EPZ	2137	17.4	
20	-EPZ	2308	20.8		21	+EPZ	2153	24.6	
20	+EPZ	2353	02.0		21	+EXZ	2149	15.0	#-1343

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
21	+EPZ	2157	05.4		22	+EPZ	1250	05.8	
21	-EPZ	2203	21.3		22	+EPZ	1313	08.0	
21	+EPZ	2220	25.4		22	+EPZ	1339	04.0	
21	-EPZ	2304	02.7		22	+EPZ	1351	02.4	
21	+EPZ	2353	28.0		22	+EPZ	1404	20.2	
22	+EPZ	0052	32.4		22	+EPZ	1411	30.0	
22	+EPZ	0056	19.4		22	-EPZ	1417	05.6	
22	+EPZ	0117	11.4		22	-EPZ	1431	05.0	
22	+EPZ	0125	42.4		22	-EPZ	1514	19.3	
22	+EXZ	0150	03.4	#-1344	22	+EPZ	1521	15.5	
22	+EPZ	0156	13.0		22	+EPZ	1521	29.4	
22	+EPZ	0246	15.5		22	+EPZ	1613	24.1	
22	-EPZ	0410	12.6		22	+EPZ	1613	30.8	
22	+EPZ	0431	45.4		22	+EPZ	1918	53.0	
22	+EXZ	0523	06.3		22	+EPZ	2046	35.2	#-1347
22	+EPZ	0556	43.0		22	+EpPZ	2046	38.8	#-1347
22	+EPZ	0627	45.3		22	+EPZ	2054	21.0	
22	+EPZ	0655	02.5		22	+EPZ	2118	14.2	
22	+EPZ	0747	16.5		22	-EPZ	2208	25.4	
22	-EPZ	0755	03.6		22	-EPZ	2208	45.4	
22	+EPPZ	0812	02.1	#-1345	22	+EPZ	2218	37.0	
22	+EPZ	0821	15.0		22	+EPZ	2344	09.7	
22	+EPZ	0821	19.2		23	+EPZ	0047	03.2	
22	+EPZ	0826	02.1		23	+EPZ	0127	33.0	
22	+EPZ	0853	51.0		23	-EPZ	0149	57.8	
22	-EPZ	0918	01.6		23	+EPZ	0156	36.6	
22	+EPZ	0918	03.3		23	+EPZ	0204	00.5	
22	+EPZ	0925	36.2		23	-EPZ	0208	04.4	
22	+EPZ	0937	28.6		23	+EPZ	0221	14.6	
22	+EPZ	1002	02.1		23	+EXZ	0226	42.0	#-1348
22	+EPZ	1015	29.2		23	-EPZ	0348	25.0	
22	+EPZ	1022	34.0		23	+EPZ	0524	12.2	
22	-EPZ	1025	21.0		23	+EPZ	0634	29.2	
22	-EPZ	1154	50.0		23	+EPZ	0705	52.2	
22	-EPZ	1155	00.4		23	+EPdiffZ	0816	39.6	#-1349
22	+EPZ	2141	28.6		23	-EPZ	0826	37.0	
22	-EXZ	1241	34.6	#-1346	23	+EPZ	1208	19.0	#-1350

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
23	+EPZ	1233	05.6		24	-EPZ	1222	13.0	
23	-EXZ	1240	45.6	#-1351	24	+EPZ	1412	06.4	
23	+EPZ	1321	22.8		24	+EPZ	1423	01.5	
23	+EPZ	1334	20.0		24	+EPZ	1826	42.0	
23	+EPZ	1334	24.2		24	+EPZ	1840	01.2	
23	+EPZ	1351	06.2		24	-EPZ	2238	37.6	
23	+IPKpZ	1420	22.8	#-1352	24	-EPZ	2322	08.8	#-1357
23	-IpPKpZ	1420	28.0	#-1352	25	+EPZ	0255	16.9	#-1358
23	+EPZ	1444	27.3		25	-EPcPZ	0255	18.4	#-1358
23	+EPZ	1455	40.4		25	-EPZ	0332	33.9	
23	+EPZ	1508	21.8		25	+EPZ	0402	00.8	
23	+EPZ	1508	31.6		25	+EPZ	0402	09.2	
23	+EPZ	1613	56.8	#-1353	25	+EPZ	0408	29.0	
23	+EPcPZ	1614	01.2	#-1353	25	+EPZ	0536	00.5	
23	-EPZ	1639	56.4		25	+EPZ	0617	02.6	
23	-EPZ	1640	06.3		25	+EXZ	0645	07.0	#-1359
23	-EPZ	1647	02.2		25	-EPZ	0648	45.5	#-1360
23	+EPZ	1647	16.0		25	+EPZ	0658	29.8	
23	-EPZ	1716	02.0		25	+EPZ	0658	46.1	
23	+EPZ	1716	06.2		25	-EPZ	0659	13.4	
23	+EPZ	1722	02.0		25	+EPZ	0703	15.4	
23	+EXZ	1737	37.8	#-1354	25	+EXZ	0707	02.9	#-1361
23	+EPZ	1810	21.5		25	-EPZ	0720	00.0	
23	-EPZ	1810	28.2		25	-EPZ	0803	10.0	
23	+EPZ	1825	37.9		25	+EPZ	0807	11.2	
23	+EPZ	2024	11.2		25	-EPZ	0810	06.2	
23	-EPZ	2340	02.0		25	-EXZ	0814	34.0	#-1362
24	-EPKIPZ	0059	19.6	#-1355	25	+EPZ	1124	06.8	
24	-EPZ	0100	00.9		25	+EXZ	1210	19.4	#-1363
24	-EPZ	0146	28.7		25	+EPZ	1241	48.0	#-1364
24	-EPZ	0236	29.8		25	+EPZ	1329	02.8	
24	+EPZ	0349	02.4		25	+EPZ	1329	05.0	
24	+EPZ	0349	09.0		25	-IPZ	1329	06.0	
24	-EPZ	0557	16.6	#-1356	25	ESH	1339	46.6	
24	-IpPZ	0557	18.2	#-1356	25	+EPZ	1411	33.2	#-1365
24	+EPZ	0937	31.6		25	-EPcPZ	1411	37.4	#-1365
24	+EPZ	1222	02.5		25	+EPZ	1424	39.0	

Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
25	+EPZ	1434	03.0		26	-EPZ	0705	16.4	#-1382
25	-EPZ	1437	06.0		26	+EpPZ	0705	19.8	#-1382
25	+EXZ	1457	05.2	#-1366	26	+EPZ	0902	11.0	
25	+EPZ	1514	10.6		26	+EPZ	0931	01.4	
25	+EPZ	1514	17.8		26	+EPZ	1045	41.9	#-1383
25	+EPZ	1532	01.5		26	-EPZ	1047	00.5	
25	+EPZ	1538	24.2		26	+EXZ	1149	18.4	#-1384
25	-EPZ	1538	49.0	#-1367	26	+EXZ	1149	31.8	#-1384
25	+EPZ	1541	03.4	#-1368	26	+EPZ	1210	00.2	
25	-EPcPZ	1541	07.0	#-1368	26	-EPZ	1220	16.4	
25	+EsPZ	1605	27.4	#-1369	26	+EPZ	1346	32.4	#-1385
25	+EPZ	1619	00.2		26	ESH	1357	00.2	#-1385
25	+EPZ	1634	42.4	#-1370	26	+EPZ	1423	40.3	
25	+EPZ	1643	21.8		26	+EPZ	1427	00.6	
25	-EXZ	1706	27.2	#-1371	26	-EPZ	1725	26.4	
25	-EPZ	1714	58.0	#-1372	26	+IPZ	1950	51.6	
25	+EPZ	1724	11.0	#-1373	26	-IPZ	1951	14.8	
25	+EpPZ	1724	23.0	#-1373	27	-EPZ	0116	29.6	
25	-EPZ	1851	18.4	#-1374	27	-EPZ	0203	55.8	#-1386
25	+EPcPZ	1851	23.4	#-1374	27	+EPZ	0248	37.6	
25	-EPZ	1905	02.0	#-1375	27	-EPZ	0255	50.0	
25	+EsPKPabZ	2003	10.0	#-1376	27	-EPZ	0314	20.0	
25	+EXZ	2238	29.6	#-1377	27	+EPZ	0407	29.7	
25	+EPZ	2254	00.2	#-1378	27	+EPZ	0415	05.8	
25	+EpPZ	2254	05.8	#-1378	27	+EPZ	0513	03.0	
25	-EPZ	2332	40.8		27	+EPZ	0556	32.0	
26	+EPZ	0008	01.0		27	-EPZ	0654	09.2	
26	-EPZ	0025	07.0	#-1379	27	+EPZ	0845	25.2	
25	+EPZ	0112	49.4	#-1380	27	+EPZ	0858	01.0	
26	+EpPZ	0112	54.2	#-1380	27	-EPZ	1204	05.0	
26	+EPZ	0113	03.2		27	+EPZ	1321	02.0	
26	-EPZ	0124	34.0		27	-EPZ	1449	03.4	
26	+EPZ	0203	00.8		27	-EPZ	1535	55.6	#-1387
26	+EPZ	0226	06.7		27	+EpPZ	1536	00.4	#-1387
26	-EPZ	0606	09.4		27	+EPZ	1656	51.0	
26	+EPZ	0630	26.4	#-1381	27	-EPZ	1657	15.4	
26	-EpPZ	0630	29.6	#-1381	27	+EPZ	1711	02.0	#-1388



Table 1. Continued.

Date	Phase	Time H M	S	Remarks	Date	Phase	Time H M	S	Remarks
27	-EXZ	1952	42.0	#-1389	29	-EPZ	0706	47.0	
27	+EPZ	2009	09.6		29	ESH	0717	14.6	
27	+EPZ	2015	12.5		29	+EPZ	0843	45.8	
27	+EXZ	2045	55.8	#-1390	29	-EPZ	0958	49.6	#-1399
27	+EPZ	2137	00.4		29	-EpPZ	0958	55.0	#-1399
27	-EPZ	2325	09.2		29	+EPZ	1123	06.0	#-1400
27	+EPZ	2325	15.0		29	+EPZ	1349	02.1	
28	+EPZ	0005	37.2	#-1391	29	+EPZ	1444	19.4	
28	-EpPZ	0005	44.8	#-1391	29	-EXZ	1450	45.4	#-1401
28	+EPZ	0108	15.0		29	-EPZ	1451	01.0	
28	+EPZ	0108	29.7		29	+EPZ	1644	22.2	
28	+EPZ	0148	00.6		29	+EPZ	1655	23.4	
28	+EPZ	0233	03.4	#-1392	29	+EPZ	1725	02.4	
28	+EPZ	0251	07.0	#-1393	29	-EPZ	1750	03.0	
28	-EPZ	0411	19.4		29	+EPZ	1856	15.2	
28	-EPZ	0411	22.4		29	+EPZ	1914	03.0	
28	-EPZ	0418	00.5		29	-EPZ	2123	05.0	#-1402
28	+EPZ	0448	30.9		29	-EPZ	2338	33.4	#-1403
28	+EPZ	0551	05.6		30	-EPZ	0445	20.0	
28	+IPZ	0845	45.0	#-1394	30	+EPZ	0455	03.2	
28	ESH	0855	18.2	#-1394	30	-EPZ	0515	04.0	
28	-EPZ	0915	41.0		30	+EPZ	0545	05.0	
28	-EPZ	1220	00.0		30	+EPZ	0656	13.4	#-1404
28	-EPZ	1222	43.0		30	+EXZ	0656	18.6	#-1404
28	+EPZ	1406	07.5		30	+IPZ	0716	26.6	#-1405
28	-EXZ	1508	43.4	#-1395	30	-IXZ	0716	49.2	#-1405
28	-EXZ	1509	00.8	#-1395	30	ESH	0724	05.4	
28	+EPZ	1711	54.6	#-1396	30	+EPZ	0740	25.9	
28	+EPZ	1808	03.3		30	-EPZ	0924	21.4	#-1406
28	+EPZ	2140	44.2		30	+EpPZ	0924	37.0	#-1406
28	+EPZ	2156	00.4		30	+EPZ	0945	30.2	
28	-IPZ	2156	21.2	#-1397	30	+EPZ	1149	01.6	
28	+EXZ	2214	49.4	#-1398	30	-EPZ	1152	10.4	
29	+EPZ	0011	02.2		30	-EXZ	1222	18.0	#-1407
29	-EPZ	0251	00.9		30	-EXZ	1222	38.8	#-1407
29	+EPZ	0354	01.3		30	-EPZ	1306	06.4	
29	+EPZ	0705	34.6		30	-EPZ	1403	39.4	

Table 1. Continued.

Date	Phase	Time		Remarks
		H M	S	
30	+EPZ	1419	48.0	
30	+EPZ	1450	02.0	
30	+EPZ	1546	39.0	
30	-EPZ	1556	18.4	
30	+EPZ	1703	50.0	
30	+EPZ	1704	00.4	
30	+EPZ	1817	32.6	
30	-EPZ	1918	28.0	
30	+IPZ	2015	44.0	
30	+EPZ	2048	50.0	
30	-EPZ	2133	27.4	
30	-EPZ	2134	57.0	#-1408
30	+EPPZ	2138	09.9	#-1408
30	+EPZ	2148	01.0	
30	+EPZ	2149	02.6	
30	-EPZ	2358	41.8	#-1409
30	-IpPZ	2358	44.9	#-1409
31	-EPZ	0047	05.9	
31	+EPZ	0205	40.0	
31	+EXZ	0423	34.3	#-1410
31	-EPZ	0442	06.0	
31	+EPZ	0557	06.1	
31	+EPZ	0607	14.0	
31	+EPZ	0638	41.7	
31	-EPZ	0646	01.0	
31	+EPZ	0741	18.4	
31	+EPZ	1819	11.6	
31	+EPZ	2035	23.0	
31	+EPZ	2354	18.0	
31	-EpPZ	2322	08.8	#-1411

Table 2. List of hypocenters of teleseismic events detected at Syowa Station.  
The total number of events is 1, 411.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-1	1/1	15	43	7.1	-24.324	-179.827	462	5.1	-	82.51	SOUTH OF THE FIJI ISLANDS
#-2	1/2	0	10	9.5	-20.020	-175.316	139	5.0	-	87.61	TONGA
#-3	1/3	4	11	39.6	-5.300	145.876	34	5.6	5.5	90.99	EASTERN NEW GUINEA REG, PAPUA NEW GUINEA
#-4	1/3	9	10	38.8	-13.899	167.210	203	5.0	-	89.47	VANUATU
#-5	1/3	13	22	36.8	-22.523	-68.407	102	4.8	-	75.01	ANTOFAGASTA, CHILE
#-6	1/3	21	48	5.5	-8.732	157.496	26	6.0	6.4	91.56	SOLOMON ISLANDS
#-7	1/3	22	36	28.1	-8.800	157.370	25	6.4	7.1	91.45	SOLOMON ISLANDS
#-8	1/4	4	17	49.8	-8.906	157.620	25	5.8	5.1	91.43	SOLOMON ISLANDS
#-9	1/4	10	4	41.9	-21.006	-178.951	619	5.2	-	85.93	FIJI REGION
#-10	1/4	14	24	21.9	-8.497	157.143	35	5.3	-	91.67	SOLOMON ISLANDS
#-11	1/4	21	28	31.4	-7.267	120.506	525	4.9	-	80.17	FLORES SEA
#-12	1/6	16	38	35.8	-41.643	-16.503	10	5.3	-	39.47	SOUTHERN MID-ATLANTIC RIDGE
#-13	1/6	17	27	54.8	-4.399	151.760	195	5.3	-	93.81	NEW BRITAIN REG, P.N.G.
#-14	1/8	4	30	37.0	-31.361	-179.615	396	4.7	-	75.71	KERMADEC ISLANDS REGION
#-15	1/9	0	16	37.9	-7.562	147.004	35	4.7	-	89.25	E NEW GUINEA REG, P.N.G.
#-16	1/10	0	25	4.9	-7.830	107.926	70	5.0	-	75.24	JAVA, INDONESIA
#-17	1/10	0	27	38.7	40.645	-124.763	22	6.5	6.1	150.36	OFFSHORE NORTHERN CALIFORNIA
#-18	1/10	8	9	44.9	-0.020	123.183	174	5.2	-	87.90	SULAWESI, INDONESIA
#-19	1/10	13	27	30.9	-6.071	147.458	71	5.0	-	90.80	EASTERN NEW GUINEA REG, PAPUA NEW GUINEA
#-20	1/10	14	36	44.1	-11.930	166.256	10	4.7	-	91.10	SANTA CRUZ ISLANDS
#-21	1/10	22	44	30.8	-16.800	-174.215	87	5.3	-	90.98	TONGA
#-22	1/11	7	49	2.2	-19.301	-177.967	531	4.5	-	87.79	FIJI REGION
#-23	1/11	8	14	19.2	-17.430	-178.874	534	4.3	-	89.43	FIJI REGION
#-24	1/12	17	40	13.5	-37.140	52.178	10	4.8	-	32.67	SOUTH INDIAN OCEAN
#-25	1/12	22	0	41.6	18.369	-72.823	10	5.9	-	114.88	HAITI REGION
#-26	1/12	23	14	33.6	-13.800	34.494	10	4.8	-	55.28	MALAWI
#-27	1/13	0	43	27.9	18.537	-72.486	10	5.0	-	114.91	HAITI REGION
#-28	1/13	3	52	24.3	-20.226	-68.893	83	5.0	-	77.32	TARAPACA, CHILE
#-29	1/13	5	2	57.7	18.369	-72.932	10	5.6	5.7	114.91	HAITI REGION
#-30	1/13	7	54	59.8	5.177	127.317	119	5.0	-	94.23	PHILIPPINE ISLANDS REGION
#-31	1/13	14	43	44.7	18.453	-72.922	10	5.3	-	114.99	HAITI REGION

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-32	1/13	16	21	23.3	-15.712	-174.633	10	5.3	-	91.96	TONGA
#-33	1/13	16	49	7.2	-15.424	-175.069	10	5.0	-	92.16	TONGA
#-34	1/14	16	22	37.7	-11.966	166.209	57	5.3	-	91.05	SANTA CRUZ ISLANDS
#-35	1/14	18	46	25.0	42.381	142.959	56	5.0	-	133.88	HOKKAIDO, JAPAN REGION
#-36	1/14	21	19	28.0	-17.906	-178.252	591	4.6	-	89.10	FIJI REGION
#-37	1/15	0	6	47.1	7.182	126.000	28	5.3	-	95.63	MINDANAO, PHILIPPINES
#-38	1/15	10	14	3.2	-32.006	-177.478	10	5.4	-	75.49	SOUTH OF KERMADEC ISLANDS
#-39	1/15	10	38	37.2	-31.634	-177.598	10	5.2	-	75.83	KERMADEC ISLANDS REGION
#-40	1/17	9	46	40.5	-6.109	152.597	10	5.5	5.1	92.47	NEW BRITAIN REGION, PAPUA NEW GUINEA
#-41	1/17	12	0	1.1	-57.675	-65.908	5	6.1	6.0	42.30	DRAKE PASSAGE
#-42	1/17	22	38	13.9	-32.047	-177.825	3	5.3	-	75.38	SOUTH OF KERMADEC ISLANDS
#-43	1/18	3	51	1.1	-34.970	-108.556	10	5.0	-	73.30	SOUTHERN EAST PACIFIC RISE
#-44	1/18	8	18	25.4	-6.323	114.312	512	5.3	-	78.86	BALI SEA
#-45	1/18	12	19	13.0	-6.318	130.578	123	5.1	-	84.66	BANDA SEA
#-46	1/18	14	27	31.0	-55.996	-27.698	38	4.9	-	31.44	SOUTH SANDWICH ISL REGION
#-47	1/18	16	9	15.2	-12.421	166.169	10	5.5	5.4	90.60	SANTA CRUZ ISLANDS
#-48	1/18	21	35	29.1	-18.358	-173.375	83	5.2	-	89.60	TONGA
#-49	1/18	22	22	19.0	-21.945	-70.437	30	5.0	-	76.21	OFFSHORE ANTOFAGASTA, CHILE
#-50	1/18	22	31	0.2	-8.784	157.536	38	5.3	-	91.52	SOLOMON ISLANDS
#-51	1/19	0	17	0.7	-8.946	158.036	35	5.1	-	91.52	SOLOMON ISLANDS
#-52	1/19	7	59	44.3	-36.814	177.224	228	4.8	-	69.78	OFF EAST COAST OF THE NORTH ISLAND, N.Z
#-53	1/19	17	28	15.3	-27.565	-65.782	27	5.2	-	69.45	TUCUMAN, ARGENTINA
#-54	1/20	13	23	17.1	-31.207	-69.124	42	4.8	-	67.15	SAN JUAN, ARGENTINA
#-55	1/20	19	7	43.6	-57.726	-65.632	40	5.3	-	42.18	DRAKE PASSAGE
#-56	1/20	19	53	14.3	-17.644	-178.705	543	4.6	-	89.26	FIJI REGION
#-57	1/20	22	56	57.5	-20.032	-177.201	345	5.1	-	87.23	FIJI REGION
#-58	1/21	0	15	14.0	-36.281	-73.160	42	5.2	-	63.67	OFFSHORE BIO-BIO, CHILE
#-59	1/21	5	12	16.2	1.382	122.178	45	4.7	-	88.85	MINAHASA, SULAWESI, IND.
#-60	1/21	17	0	51.4	1.461	122.167	32	5.1	-	88.92	MINAHASA, SULAWESI, IND.
#-61	1/22	1	24	51.6	-19.475	175.240	35	5.4	-	86.14	SOUTH OF THE FIJI ISLANDS
#-62	1/22	6	46	16.1	3.038	93.760	27	5.0	-	80.97	OFF WEST COAST OF N SUMATRA

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-63	1/23	9	23	4.0	-17.495	-63.832	10	5.3	-	78.19	SANTA CRUZ, BOLIVIA
#-64	1/23	9	40	31.6	-17.422	-63.882	10	5.2	-	78.27	SANTA CRUZ, BOLIVIA
#-65	1/23	18	43	47.7	-37.168	176.856	259	4.7	-	69.36	NORTH ISLAND OF NEW ZEALAND
#-66	1/24	1	2	9.6	-31.892	57.865	10	5.4	-	38.64	SOUTHWEST INDIAN RIDGE
#-67	1/24	2	36	14.4	35.498	110.626	18	5.0	-	116.75	SHAANXI-SHANXI BORDER REGION, CHINA
#-68	1/24	5	38	26.8	-8.215	129.032	19	5.4	-	82.34	KEPULAUAN BABAR, INDONESIA
#-69	1/24	14	19	0.0	-9.170	157.714	10	5.6	5.2	91.21	SOLOMON ISLANDS
#-70	1/24	15	53	29.3	-15.999	167.765	217	5.0	-	87.61	VANUATU
#-71	1/24	18	27	25.9	-13.751	167.058	268	4.9	-	89.57	VANUATU
#-72	1/24	18	48	52.5	-20.977	-179.063	643	4.8	-	85.93	FIJI REGION
#-73	1/24	23	37	6.1	0.232	120.634	112	4.9	-	87.23	MINAHASA, SULAWESI, IND.
#-74	1/25	14	8	27.7	-32.897	179.782	35	5.3	-	74.09	SOUTH OF KERMADEC ISLANDS
#-75	1/25	15	55	44.4	-4.310	102.655	75	5.3	-	76.78	SOUTHERN SUMATRA, INDONESIA
#-76	1/25	17	4	7.0	58.633	-153.516	100	5.0	-	168.30	KODIAK ISLAND REGION, ALASKA
#-77	1/25	23	9	1.7	51.323	-178.093	57	5.1	-	155.15	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-78	1/26	15	22	5.5	-39.131	-15.850	10	5.5	5.0	41.48	TRISTAN DA CUNHA REGION
#-79	1/26	16	14	32.5	-8.173	129.015	35	4.9	-	82.37	KEPULAUAN BABAR, INDONESIA
#-80	1/26	22	12	32.5	-17.724	-178.735	534	4.8	-	89.17	FIJI REGION
#-81	1/27	11	20	36.8	-38.614	-15.937	10	5.2	-	41.98	TRISTAN DA CUNHA REGION
#-82	1/27	12	31	35.7	-38.765	-15.758	10	5.1	-	41.78	TRISTAN DA CUNHA REGION
#-83	1/27	17	42	45.2	-14.139	-14.563	10	5.9	5.6	64.26	SOUTHERN MID-ATLANTIC RIDGE
#-84	1/27	19	0	33.1	-7.126	125.108	529	5.1	-	81.95	KEPULAUAN BARAT DAYA, IND.
#-85	1/28	4	1	20.7	-9.872	108.865	38	5.0	-	73.64	SOUTH OF JAVA, INDONESIA
#-86	1/28	9	37	22.0	-29.111	-174.911	35	4.9	-	78.78	KERMADEC ISLANDS REGION
#-87	1/28	9	55	24.4	3.042	126.578	74	5.1	-	91.97	KEPULAUAN TALAUD, INDONESIA
#-88	1/28	22	32	21.2	-28.334	-176.423	55	4.7	-	79.27	KERMADEC ISLANDS REGION
#-89	1/29	8	15	31.5	-19.184	169.342	35	5.1	-	84.96	VANUATU
#-90	1/29	14	24	32.9	-23.997	-66.412	167	5.0	-	72.98	SALTA, ARGENTINA
#-91	1/30	4	28	23.8	-56.018	-27.809	115	4.5	-	31.46	SOUTH SANDWICH ISL REGION
#-92	1/30	5	50	10.1	-28.147	-70.648	48	5.5	-	70.48	ATACAMA, CHILE
#-93	1/30	16	37	1.4	2.456	126.851	10	4.8	-	91.52	MOLUCCA SEA

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-94	1/30	19	21	27.5	-57.670	-141.430	10	5.1	5.1	53.32	PACIFIC-ANTARCTIC RIDGE
#-95	1/31	7	2	47.8	-2.904	100.874	68	5.3	-	77.53	KEPULAUAN MENTAWAI REGION, INDONESIA
#-96	1/31	9	55	46.2	-25.445	-176.694	35	5.1	-	82.04	SOUTH OF THE FIJI ISLANDS
#-97	2/1	12	14	32.4	-23.191	-112.330	10	4.9	-	85.48	EASTER ISLAND REGION
#-98	2/1	21	20	15.4	-37.060	-95.958	10	4.8	-	68.86	SOUTHEAST OF EASTER ISLAND
#-99	2/4	13	2	35.8	-20.417	-177.469	490	5.2	-	86.80	FIJI REGION
#-100	2/5	0	33	53.1	-23.045	-114.668	10	4.9	4.8	85.98	EASTER ISLAND REGION
#-101	2/5	6	59	5.8	-47.897	99.689	1	5.8	6.1	35.87	SOUTHEAST INDIAN RIDGE
#-102	2/7	17	55	54.9	0.189	124.024	188	4.9	-	88.39	MINAHASA, SULAWESI, IND.
#-103	2/7	23	22	55.3	-23.291	-179.733	550	5.3	-	83.54	SOUTH OF THE FIJI ISLANDS
#-104	2/8	12	8	31.7	-56.158	-24.520	35	5.1	-	30.19	SOUTH SANDWICH ISL REGION
#-105	2/8	13	44	59.9	-24.067	-175.878	10	5.4	-	83.54	SOUTH OF TONGA
#-106	2/9	1	3	44.5	-15.053	-173.479	10	5.3	5.8	92.83	TONGA
#-107	2/9	10	21	41.3	-38.942	-179.966	10	5.1	-	68.27	EAST OF N ISL, NEW ZEALAND
#-108	2/10	11	42	8.2	-7.121	154.825	27	5.4	-	92.24	BOUGAINVILLE
#-109	2/11	1	18	52.8	-57.454	-25.693	73	5.0	-	29.61	SOUTH SANDWICH ISL REGION
#-110	2/11	8	22	57.0	-37.337	-93.832	10	4.9	-	68.12	WEST CHILE RISE
#-111	2/11	9	18	21.6	-39.131	82.064	10	5.3	-	37.60	MID-INDIAN RIDGE
#-112	2/11	11	51	54.8	-40.504	-16.798	10	5.4	-	40.58	SOUTHERN MID-ATLANTIC RIDGE
#-113	2/11	19	5	30.7	-24.182	-175.804	38	5.4	-	83.45	SOUTH OF TONGA
#-114	2/13	2	34	28.6	-21.894	-174.769	11	6.0	6.2	85.88	TONGA
#-115	2/14	3	4	52.9	-33.330	-179.246	96	5.1	-	73.86	SOUTH OF KERMADEC ISLANDS
#-116	2/18	20	56	34.3	-22.899	-67.991	113	5.3	-	74.53	ANTOFAGASTA, CHILE
#-117	2/19	11	13	20.6	-21.715	-175.256	10	5.4	-	85.96	TONGA
#-118	2/21	7	29	8.9	42.524	130.711	564	4.5	-	129.71	CHINA-RUSSIA-N KOREA BDR REG
#-119	2/21	9	42	3.8	-27.541	65.956	10	4.8	-	44.37	INDIAN OCEAN TRIPLE JUNCTION
#-120	2/22	7	24	45.9	-23.749	-175.940	35	5.2	-	83.84	TONGA REGION
#-121	2/22	8	42	39.4	-23.811	-175.874	35	5.3	-	83.80	TONGA REGION
#-122	2/22	11	4	40.4	-27.142	-176.522	14	5.2	-	80.42	KERMADEC ISLANDS REGION
#-123	2/22	18	43	51.3	-23.926	-175.701	36	5.0	-	83.72	TONGA REGION
#-124	2/22	19	48	38.6	-24.172	-175.846	35	5.1	-	83.45	SOUTH OF TONGA
#-125	2/23	6	5	2.9	-23.845	-175.837	46	5.1	-	83.77	TONGA REGION

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-126	2/23	10	16	6.4	6.317	126.371	65	4.7	-	94.95	MINDANAO, PHILIPPINES
#-127	2/23	10	43	11.4	49.729	155.784	59	5.3	-	144.75	KURIL ISLANDS
#-128	2/23	15	36	10.2	-15.007	-172.891	53	5.0	-	92.98	SAMOA ISLANDS REGION
#-129	2/23	22	27	27.7	-23.987	-68.867	98	4.7	-	73.79	ANTOFAGASTA, CHILE
#-130	2/23	22	38	31.6	-23.843	-175.921	1	5.3	-	83.76	TONGA REGION
#-131	2/24	11	58	1.6	-30.308	165.834	35	5.2	-	73.39	NORTHWEST OF NEW ZEALAND
#-132	2/25	8	3	40.5	51.703	-176.019	42	5.2	-	156.14	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-133	2/25	11	26	34.3	-23.894	-175.714	94	5.0	-	83.74	TONGA REGION
#-134	2/25	12	21	51.0	-14.979	167.154	216	4.9	-	88.42	VANUATU
#-135	2/25	18	55	15.4	-10.264	161.208	83	4.9	-	91.23	SOLOMON ISLANDS
#-136	2/26	0	11	51.0	-55.882	-5.052	6	5.4	5.3	23.46	SOUTHERN MID-ATLANTIC RIDGE
#-137	2/26	8	37	0.3	6.477	126.803	92	5.7	-	95.26	MINDANAO, PHILIPPINES
#-138	2/26	16	18	57.3	5.848	125.711	61	5.1	-	94.28	MINDANAO, PHILIPPINES
#-139	2/27	6	34	14.2	-35.909	-72.730	35	7.2	8.5	63.89	OFFSHORE MAULE, CHILE
#-140	2/27	7	37	18.0	-36.847	-72.652	35	6.0	-	62.99	BIO-BIO, CHILE
#-141	2/27	7	46	49.3	-36.793	-72.950	34	5.3	-	63.13	BIO-BIO, CHILE
#-142	2/27	7	51	5.1	-36.435	-72.611	35	5.4	-	63.36	BIO-BIO, CHILE
#-143	2/27	8	13	16.1	-33.005	-71.581	35	5.6	-	66.24	OFFSHORE VALPARAISO, CHILE
#-144	2/27	8	25	29.7	-34.727	-72.407	35	6.1	-	64.89	OFFSHORE MAULE, CHILE
#-145	2/27	8	48	5.7	-38.481	-75.332	35	5.6	-	62.27	OFF COAST ARAUCANIA, CHILE
#-146	2/27	8	53	26.6	-35.073	-71.760	35	5.0	-	64.37	MAULE, CHILE
#-147	2/27	9	0	17.3	-33.367	-71.617	35	5.6	-	65.91	VALPARAISO, CHILE
#-148	2/27	9	59	20.5	-38.120	-73.591	35	5.8	-	62.09	OFFSHORE BIO-BIO, CHILE
#-149	2/27	10	10	14.8	-33.713	-72.154	35	5.6	-	65.76	OFFSHORE VALPARAISO, CHILE
#-150	2/27	10	30	30.6	-34.139	-72.949	35	6.0	-	65.60	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-151	2/27	10	54	23.5	-36.833	-73.398	35	5.4	-	63.23	OFFSHORE BIO-BIO, CHILE
#-152	2/27	11	27	0.1	-38.112	-73.573	35	5.2	-	62.09	OFFSHORE BIO-BIO, CHILE
#-153	2/27	11	45	3.3	-36.233	-73.190	35	5.4	-	63.73	OFFSHORE BIO-BIO, CHILE
#-154	2/27	12	19	51.3	25.979	128.434	10	5.2	-	113.94	RYUKYU ISLANDS, JAPAN
#-155	2/27	12	58	33.2	-33.443	-70.944	35	5.1	-	65.64	REGION METROPOLITANA, CHILE
#-156	2/27	13	12	52.4	-35.014	-71.660	35	5.0	-	64.40	MAULE, CHILE

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-157	2/27	13	54	4.0	-33.269	-71.834	35	5.2	-	66.07	OFFSHORE VALPARAISO, CHILE
#-158	2/27	14	41	51.1	-35.678	-72.521	35	5.1	-	64.04	MAULE, CHILE
#-159	2/27	16	21	13.8	-38.266	-73.434	35	5.5	-	61.91	BIO-BIO, CHILE
#-160	2/27	16	32	21.3	-34.986	-72.356	35	5.2	-	64.63	OFFSHORE MAULE, CHILE
#-161	2/27	17	11	49.0	-33.982	-71.792	35	5.5	-	65.40	LIBERTADOR O'HIGGINS, CHILE
#-162	2/27	17	24	30.8	-36.314	-73.160	19	5.6	-	63.64	OFFSHORE BIO-BIO, CHILE
#-163	2/27	17	43	37.5	-36.491	-73.015	40	5.5	-	63.43	OFFSHORE BIO-BIO, CHILE
#-164	2/27	17	56	52.4	-34.780	-71.526	35	5.3	-	64.57	LIBERTADOR O'HIGGINS, CHILE
#-165	2/27	18	15	23.0	-37.527	-73.696	21	5.6	-	62.67	OFFSHORE BIO-BIO, CHILE
#-166	2/27	18	23	11.8	-37.618	-73.818	35	5.3	-	62.63	OFFSHORE BIO-BIO, CHILE
#-167	2/27	18	41	50.7	-37.581	-73.501	35	5.1	-	62.57	BIO-BIO, CHILE
#-168	2/27	21	0	37.2	-33.827	-73.037	35	5.2	-	65.92	OFF COAST VALPARAISO, CHILE
#-169	2/27	21	48	26.1	-33.968	-72.140	29	5.0	-	65.51	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-170	2/27	21	59	8.3	-36.794	-73.311	35	5.2	-	63.24	OFFSHORE BIO-BIO, CHILE
#-171	2/27	22	20	3.8	-35.094	-72.712	35	5.1	-	64.64	OFFSHORE MAULE, CHILE
#-172	2/27	22	22	32.5	-34.072	-71.308	35	5.2	-	65.16	REGION METROPOLITANA, CHILE
#-173	2/27	23	35	14.7	-33.867	-72.226	35	5.2	-	65.63	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-174	2/28	0	0	49.3	-36.591	-73.273	35	5.3	-	63.42	OFFSHORE BIO-BIO, CHILE
#-175	2/28	1	1	11.3	-36.816	-73.379	35	5.3	-	63.24	OFFSHORE BIO-BIO, CHILE
#-176	2/28	1	8	23.0	-34.148	-71.943	31	5.5	-	65.29	LIBERTADOR O'HIGGINS, CHILE
#-177	2/28	1	24	40.8	-34.878	-73.165	35	4.7	-	64.98	OFFSHORE MAULE, CHILE
#-178	2/28	1	33	11.7	-36.620	-72.688	35	5.3	-	63.22	BIO-BIO, CHILE
#-179	2/28	1	45	28.9	-34.448	-73.688	36	5.3	-	65.54	OFF COAST OF LIBERTADOR O'HIGGINS, CHILE
#-180	2/28	1	58	49.3	-34.857	-72.557	32	5.2	-	64.81	OFFSHORE MAULE, CHILE
#-181	2/28	2	4	29.3	-34.466	-73.474	35	4.9	-	65.45	OFF COAST OF LIBERTADOR O'HIGGINS, CHILE
#-182	2/28	2	13	11.5	-33.329	-72.196	35	4.8	-	66.13	OFFSHORE VALPARAISO, CHILE
#-183	2/28	2	38	30.4	-38.223	-73.529	30	5.4	-	61.98	OFFSHORE BIO-BIO, CHILE
#-184	2/28	3	13	40.0	-35.168	-72.673	39	4.9	-	64.56	OFFSHORE MAULE, CHILE
#-185	2/28	3	14	11.5	-33.923	-73.206	35	5.0	-	65.88	OFF COAST VALPARAISO, CHILE
#-186	2/28	3	33	49.6	25.952	128.385	35	5.2	-	113.90	RYUKYU ISLANDS, JAPAN
#-187	2/28	4	4	51.3	-33.742	-73.093	35	4.9	-	66.01	OFF COAST VALPARAISO, CHILE



Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-188	2/28	4	12	52.0	-34.806	-72.744	35	4.6	-	64.92	OFFSHORE MAULE, CHILE
#-189	2/28	4	17	51.8	-34.738	-72.191	35	5.0	-	64.81	OFFSHORE MAULE, CHILE
#-190	2/28	4	29	12.3	-34.912	-69.616	35	5.0	-	63.86	MENDOZA, ARGENTINA
#-191	2/28	4	55	49.3	-33.932	-71.985	35	5.3	-	65.50	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-192	2/28	5	4	5.5	-35.232	-71.214	35	5.0	-	64.06	MAULE, CHILE
#-193	2/28	5	13	59.2	-37.458	-73.014	35	5.3	-	62.54	BIO-BIO, CHILE
#-194	2/28	7	36	30.0	-37.763	-73.141	35	5.0	-	62.29	BIO-BIO, CHILE
#-195	2/28	8	7	46.4	-35.182	-72.517	35	5.0	-	64.50	OFFSHORE MAULE, CHILE
#-196	2/28	9	14	53.3	-33.640	-71.838	35	5.2	-	65.73	OFFSHORE VALPARAISO, CHILE
#-197	2/28	10	43	10.3	-38.518	-75.313	35	5.1	-	62.23	OFF COAST ARAUCANIA, CHILE
#-198	2/28	11	14	25.9	-35.460	-72.794	35	5.0	-	64.33	OFFSHORE MAULE, CHILE
#-199	2/28	11	25	36.0	-34.864	-71.569	46	6.2	5.8	64.51	LIBERTADOR O'HIGGINS, CHILE
#-200	2/28	11	50	38.3	-34.976	-72.563	35	5.1	-	64.71	OFFSHORE MAULE, CHILE
#-201	2/28	12	1	14.6	-35.830	-72.794	35	4.9	-	63.98	OFFSHORE MAULE, CHILE
#-202	2/28	12	13	26.6	2.052	98.924	48	5.1	-	81.60	NORTHERN SUMATRA, INDONESIA
#-203	2/28	12	19	0.4	-38.187	-73.379	35	5.2	-	61.97	BIO-BIO, CHILE
#-204	2/28	13	47	6.0	-35.328	-72.918	35	5.0	-	64.49	OFFSHORE MAULE, CHILE
#-205	2/28	14	50	32.7	-33.844	-73.191	26	5.2	-	65.95	OFF COAST VALPARAISO, CHILE
#-206	2/28	14	55	24.5	-33.880	-73.286	33	5.1	-	65.94	OFF COAST VALPARAISO, CHILE
#-207	2/28	15	26	54.9	-35.085	-72.061	30	5.0	-	64.45	MAULE, CHILE
#-208	2/28	15	46	24.8	-35.330	-72.165	29	5.2	-	64.26	MAULE, CHILE
#-209	2/28	16	13	49.0	-58.242	-8.005	35	4.9	-	22.72	EAST OF SOUTH SANDWICH ISL
#-210	2/28	18	19	51.9	-34.892	-71.783	35	5.0	-	64.55	MAULE, CHILE
#-211	2/28	18	25	15.5	-35.824	-73.414	35	4.9	-	64.17	OFFSHORE BIO-BIO, CHILE
#-212	2/28	18	44	30.3	-36.647	-72.491	33	5.1	-	63.13	BIO-BIO, CHILE
#-213	2/28	19	10	6.8	-36.825	-73.483	35	4.9	-	63.26	OFFSHORE BIO-BIO, CHILE
#-214	2/28	22	3	5.7	-34.202	-72.007	35	4.9	-	65.26	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-215	2/28	22	41	29.2	-36.840	-73.528	27	5.0	-	63.26	OFFSHORE BIO-BIO, CHILE
#-216	2/28	23	45	6.0	-35.275	-72.257	35	5.0	-	64.34	MAULE, CHILE
#-217	2/28	23	49	5.0	-37.356	-72.952	35	5.1	-	62.61	BIO-BIO, CHILE
#-218	3/1	0	1	27.1	-38.306	-73.746	35	5.0	-	61.97	OFFSHORE BIO-BIO, CHILE

Table 2. Continued.

No.	Date	Origin time UTC			Geographic	Coordinates	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s	Latitude (deg)	Longitude (deg)		Mb	Ms		
#-219	3/1	0	49	15.1	-34.660	-72.556	35	4.8	-	65.00	OFFSHORE MAULE, CHILE
#-220	3/1	1	10	58.3	-35.163	-71.704	43	5.4	-	64.27	MAULE, CHILE
#-221	3/1	2	44	42.1	-35.049	-72.491	23	5.9	5.4	64.62	OFFSHORE MAULE, CHILE
#-222	3/1	3	7	50.6	-36.125	-72.796	40	5.1	-	63.71	BIO-BIO, CHILE
#-223	3/1	3	53	16.0	-38.638	-73.122	35	5.0	-	61.47	ARAUCANIA, CHILE
#-224	3/1	5	36	57.3	-36.804	-73.516	35	4.9	-	63.29	OFFSHORE BIO-BIO, CHILE
#-225	3/1	7	29	15.6	-33.834	-72.252	35	4.7	-	65.67	OFFSHORE VALPARAISO, CHILE
#-226	3/1	7	39	17.3	-35.966	-72.696	35	4.9	-	63.83	MAULE, CHILE
#-227	3/1	7	49	6.5	-35.250	-72.891	35	5.3	-	64.55	OFFSHORE MAULE, CHILE
#-228	3/1	8	46	59.4	-35.404	-71.025	35	4.9	-	63.84	MAULE, CHILE
#-229	3/1	8	58	33.9	-37.721	-74.483	35	5.3	-	62.72	OFFSHORE BIO-BIO, CHILE
#-230	3/1	9	23	0.1	-35.620	-71.760	35	4.8	-	63.86	MAULE, CHILE
#-231	3/1	12	20	18.8	-34.513	-73.636	35	5.2	-	65.46	OFF COAST OF LIBERTADOR O'HIGGINS, CHILE
#-232	3/1	12	27	15.9	-34.216	-71.821	35	5.3	-	65.19	LIBERTADOR O'HIGGINS, CHILE
#-233	3/1	13	9	29.2	-36.556	-73.429	35	4.5	-	63.50	OFFSHORE BIO-BIO, CHILE
#-234	3/1	14	36	29.9	-34.359	-73.432	30	5.3	4.7	65.54	OFF COAST OF LIBERTADOR O'HIGGINS, CHILE
#-235	3/1	15	52	38.6	-36.772	-73.609	35	4.9	-	63.35	OFFSHORE BIO-BIO, CHILE
#-236	3/1	16	56	49.9	-36.305	-72.479	35	5.2	-	63.45	BIO-BIO, CHILE
#-237	3/1	17	23	32.8	-34.795	-73.924	19	5.0	-	65.28	OFF COAST OF LIBERTADOR O'HIGGINS, CHILE
#-238	3/1	21	51	1.0	-33.898	-71.424	45	5.0	-	65.36	REGION METROPOLITANA, CHILE
#-239	3/1	22	40	20.1	-34.380	-73.560	35	4.9	-	65.56	OFF COAST OF LIBERTADOR O'HIGGINS, CHILE
#-240	3/1	23	26	59.7	-34.986	-71.768	46	4.9	-	64.46	MAULE, CHILE
#-241	3/2	1	3	36.5	-37.590	-73.498	31	4.8	-	62.56	BIO-BIO, CHILE
#-242	3/2	2	9	35.0	-39.796	-71.242	19	5.3	-	59.85	NEUQUEN, ARGENTINA
#-243	3/2	3	44	58.2	-34.473	-72.625	27	5.0	-	65.19	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-244	3/2	3	48	36.6	-33.774	-71.669	26	5.0	-	65.55	VALPARAISO, CHILE
#-245	3/2	4	9	28.8	-35.884	-73.502	35	5.1	-	64.14	OFFSHORE BIO-BIO, CHILE
#-246	3/2	4	28	46.3	-36.667	-73.372	39	5.1	-	63.38	OFFSHORE BIO-BIO, CHILE
#-247	3/2	6	10	54.2	-34.392	-72.555	35	5.5	-	65.25	OFFSHORE LIBERTADOR O'HIGGINS, CHILE

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-248	3/2	6	55	11.1	-35.942	-73.182	35	4.6	-	63.99	OFFSHORE BIO-BIO, CHILE
#-249	3/2	9	44	57.4	-34.025	-73.544	35	5.1	-	65.89	OFF COAST OF LIBERTADOR O'HIGGINS, CHILE
#-250	3/2	10	42	22.3	-10.752	166.079	185	5.3	-	92.18	SANTA CRUZ ISLANDS
#-251	3/2	11	30	32.0	-35.143	-72.654	35	5.3	-	64.58	OFFSHORE MAULE, CHILE
#-252	3/2	11	42	34.8	-35.098	-71.541	35	5.0	-	64.28	MAULE, CHILE
#-253	3/2	12	16	35.3	-36.542	-73.314	35	5.2	-	63.48	OFFSHORE BIO-BIO, CHILE
#-254	3/2	14	7	12.5	-39.469	-73.517	68	4.9	-	60.82	OFFSHORE LOS LAGOS, CHILE
#-255	3/2	15	25	9.2	-33.316	-71.742	22	4.9	-	66.00	OFFSHORE VALPARAISO, CHILE
#-256	3/2	15	27	49.8	-34.187	-72.166	36	4.8	-	65.32	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-257	3/2	16	28	11.2	-35.730	-72.269	35	4.8	-	63.92	MAULE, CHILE
#-258	3/2	17	57	1.6	-33.841	-72.123	27	5.0	-	65.63	OFFSHORE VALPARAISO, CHILE
#-259	3/2	19	12	56.3	-34.253	-72.112	41	5.1	-	65.24	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-260	3/2	20	57	46.3	-34.002	-72.291	24	4.9	-	65.53	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-261	3/2	21	23	19.3	-35.985	-73.438	35	4.8	-	64.03	OFFSHORE BIO-BIO, CHILE
#-262	3/2	21	56	41.0	-30.386	-69.311	10	5.2	-	67.97	SAN JUAN, ARGENTINA
#-263	3/3	1	51	20.2	-34.961	-72.646	32	5.3	-	64.74	OFFSHORE MAULE, CHILE
#-264	3/3	6	16	22.7	-33.620	-71.959	35	5.1	-	65.78	OFFSHORE VALPARAISO, CHILE
#-265	3/3	7	9	41.5	-35.945	-72.459	35	4.9	-	63.77	MAULE, CHILE
#-266	3/3	11	13	57.7	3.160	127.084	65	5.0	-	92.26	KEPULAUAN TALAUD, INDONESIA
#-267	3/3	14	21	0.8	-37.075	-72.829	35	4.8	-	62.84	BIO-BIO, CHILE
#-268	3/3	15	25	36.3	-34.645	-72.434	34	4.9	-	64.97	OFFSHORE MAULE, CHILE
#-269	3/3	17	44	25.2	-36.454	-73.078	19	5.6	-	63.49	OFFSHORE BIO-BIO, CHILE
#-270	3/3	21	24	2.7	-38.465	-73.696	35	5.1	-	61.80	OFFSHORE ARAUCANIA, CHILE
#-271	3/3	21	37	0.0	3.683	127.254	35	4.8	-	92.81	KEPULAUAN TALAUD, INDONESIA
#-272	3/3	22	54	12.6	3.784	127.106	64	4.7	-	92.85	KEPULAUAN TALAUD, INDONESIA
#-273	3/4	1	59	50.6	-33.164	-72.101	36	5.6	5.9	66.25	OFFSHORE VALPARAISO, CHILE
#-274	3/4	3	23	17.9	-35.835	-72.558	20	4.8	-	63.91	MAULE, CHILE
#-275	3/4	9	3	42.4	-37.495	-74.556	35	5.1	-	62.96	OFFSHORE BIO-BIO, CHILE
#-276	3/4	9	39	43.1	-1.448	145.458	60	5.0	-	94.46	ADMIRALTY ISL REG., P.N.G.
#-277	3/4	14	2	29.7	-13.612	167.103	193	6.1	-	89.72	VANUATU

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-278	3/4	17	37	49.6	-34.049	-71.997	35	5.3	-	65.40	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-279	3/4	21	17	57.5	-19.857	-177.748	407	4.9	-	87.30	FIJI REGION
#-280	3/4	22	39	25.3	-22.273	-68.357	104	6.3	-	75.23	ANTOFAGASTA, CHILE
#-281	3/5	3	34	33.8	-34.476	-71.569	35	5.6	5.1	64.87	LIBERTADOR O'HIGGINS, CHILE
#-282	3/5	7	36	43.8	-35.353	-73.171	35	4.8	-	64.54	OFFSHORE MAULE, CHILE
#-283	3/5	11	24	12.4	-36.750	-73.302	35	4.9	-	63.28	OFFSHORE BIO-BIO, CHILE
#-284	3/5	12	28	59.0	-34.969	-72.303	35	5.0	-	64.63	OFFSHORE MAULE, CHILE
#-285	3/5	20	18	39.0	-34.868	-72.684	35	4.8	-	64.84	OFFSHORE MAULE, CHILE
#-286	3/6	1	23	22.0	-36.777	-73.152	35	5.1	-	63.21	OFFSHORE BIO-BIO, CHILE
#-287	3/6	2	37	45.4	0.036	123.401	147	4.6	-	88.03	MINAHASA, SULAWESI, IND.
#-288	3/6	3	9	30.5	-34.664	-72.028	35	4.9	-	64.83	LIBERTADOR O'HIGGINS, CHILE
#-289	3/6	9	26	35.4	-35.653	-72.976	35	4.7	-	64.20	OFFSHORE MAULE, CHILE
#-290	3/6	11	23	36.3	-36.338	-73.063	35	4.7	-	63.59	OFFSHORE BIO-BIO, CHILE
#-291	3/6	12	10	58.3	-13.103	166.655	108	5.4	-	90.08	VANUATU
#-292	3/6	14	45	44.2	-23.596	-66.288	184	4.6	-	73.31	SALTA, ARGENTINA
#-293	3/6	20	47	29.8	-5.567	123.302	35	4.7	-	82.76	BANDA SEA
#-294	3/7	3	32	7.5	-34.635	-72.419	35	4.7	-	64.98	OFFSHORE MAULE, CHILE
#-295	3/7	4	46	34.0	-33.050	-71.721	32	5.1	-	66.24	OFFSHORE VALPARAISO, CHILE
#-296	3/7	7	5	23.1	-16.268	-115.255	10	5.8	5.8	92.76	SOUTHERN EAST PACIFIC RISE
#-297	3/7	15	4	34.7	-34.354	-72.181	35	4.7	-	65.17	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-298	3/7	15	59	44.8	-37.967	-73.300	27	5.4	5.6	62.15	BIO-BIO, CHILE
#-299	3/7	17	2	28.1	-34.758	-72.568	35	4.9	-	64.91	OFFSHORE MAULE, CHILE
#-300	3/7	18	36	0.6	-34.635	-71.777	35	5.1	-	64.78	LIBERTADOR O'HIGGINS, CHILE
#-301	3/7	22	0	36.2	-34.085	-71.849	26	5.5	-	65.32	LIBERTADOR O'HIGGINS, CHILE
#-302	3/7	23	46	57.6	-36.170	-72.971	17	5.4	-	63.72	OFFSHORE BIO-BIO, CHILE
#-303	3/8	2	32	47.5	-38.057	-73.437	35	4.9	-	62.11	BIO-BIO, CHILE
#-304	3/8	4	40	26.2	-33.073	-71.931	35	5.0	-	66.28	OFFSHORE VALPARAISO, CHILE
#-305	3/8	8	7	58.0	-33.691	-71.848	35	5.1	-	65.68	OFFSHORE VALPARAISO, CHILE
#-306	3/8	10	38	26.8	-33.681	-71.996	35	4.8	-	65.74	OFFSHORE VALPARAISO, CHILE
#-307	3/8	11	47	20.9	-21.756	-65.469	223	4.8	-	74.76	POTOSI, BOLIVA
#-308	3/8	13	3	44.0	-34.562	-73.872	37	5.0	-	65.48	OFF COAST OF LIBERTADOR O'HIGGINS, CHILE

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-309	3/8	13	47	21.5	-34.525	-71.579	24	5.1	-	64.83	LIBERTADOR O'HIGGINS, CHILE
#-310	3/8	16	16	20.2	-32.485	-71.568	24	4.7	-	66.72	OFFSHORE VALPARAISO, CHILE
#-311	3/8	16	49	52.1	-32.566	-71.564	22	5.0	-	66.64	OFFSHORE VALPARAISO, CHILE
#-312	3/8	17	3	19.1	-25.640	-66.457	24	5.6	-	71.47	SALTA, ARGENTINA
#-313	3/8	17	50	45.9	-32.583	-71.626	24	5.4	-	66.65	OFFSHORE VALPARAISO, CHILE
#-314	3/8	18	8	2.6	-32.438	-71.481	23	5.3	-	66.74	OFFSHORE VALPARAISO, CHILE
#-315	3/8	18	43	27.1	-32.364	-71.413	24	5.1	-	66.78	VALPARAISO, CHILE
#-316	3/8	23	43	28.3	-32.535	-71.500	18	5.1	-	66.65	OFFSHORE VALPARAISO, CHILE
#-317	3/9	6	0	41.8	11.253	125.457	41	5.2	-	99.23	SAMAR, PHILIPPINES
#-318	3/9	11	43	47.4	-37.499	-73.539	35	4.6	-	62.65	BIO-BIO, CHILE
#-319	3/9	14	6	52.3	51.579	-173.520	35	5.6	5.5	156.80	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-320	3/9	20	37	53.3	-32.550	-71.414	39	4.9	-	66.61	VALPARAISO, CHILE
#-321	3/9	21	59	23.5	-34.701	-73.863	34	5.0	-	65.35	OFF COAST OF LIBERTADOR O'HIGGINS, CHILE
#-322	3/9	22	10	47.5	-33.816	-72.329	11	5.1	-	65.71	OFFSHORE VALPARAISO, CHILE
#-323	3/10	0	14	49.8	-33.726	-71.340	52	4.9	-	65.50	REGION METROPOLITANA, CHILE
#-324	3/10	1	7	57.2	-43.059	-75.778	38	4.8	-	58.15	OFF COAST LOS LAGOS, CHILE
#-325	3/10	2	41	48.3	-36.973	-72.554	35	5.4	-	62.85	BIO-BIO, CHILE
#-326	3/10	5	19	6.4	-18.476	168.915	215	5.1	-	85.53	VANUATU
#-327	3/10	8	6	9.7	-23.592	-179.919	530	4.7	-	83.21	SOUTH OF THE FIJI ISLANDS
#-328	3/10	8	7	24.7	7.141	-34.367	10	5.2	-	90.82	CENTRAL MID-ATLANTIC RIDGE
#-329	3/10	8	45	23.2	-34.970	-73.737	35	5.1	-	65.06	OFF COAST OF LIBERTADOR O'HIGGINS, CHILE
#-330	3/10	9	4	13.5	-36.266	-73.005	35	5.1	-	63.64	OFFSHORE BIO-BIO, CHILE
#-331	3/10	9	37	59.4	-36.845	-73.462	35	5.1	-	63.24	OFFSHORE BIO-BIO, CHILE
#-332	3/10	12	20	59.1	-33.530	-72.298	35	5.5	5.5	65.97	OFFSHORE VALPARAISO, CHILE
#-333	3/10	12	46	41.5	-33.318	-72.548	35	4.7	-	66.24	OFFSHORE VALPARAISO, CHILE
#-334	3/10	16	0	51.1	-38.034	-74.925	14	4.9	-	62.56	OFF COAST ARAUCANIA, CHILE
#-335	3/11	6	22	18.3	-57.262	-27.903	306	5.7	-	30.54	SOUTH SANDWICH ISLANDS REGION
#-336	3/11	10	51	41.3	-34.205	-71.697	52	5.0	-	65.16	LIBERTADOR O'HIGGINS, CHILE
#-337	3/11	12	31	26.6	-15.349	-173.303	33	5.1	-	92.57	TONGA
#-338	3/11	15	6	1.9	-34.408	-71.907	29	6.0	-	65.03	LIBERTADOR O'HIGGINS, CHILE
#-339	3/11	15	34	49.6	-34.355	-71.736	25	5.0	-	65.03	LIBERTADOR O'HIGGINS, CHILE

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-340	3/11	15	54	36.7	-34.345	-71.875	23	5.0	-	65.08	LIBERTADOR O'HIGGINS, CHILE
#-341	3/11	16	23	52.4	-34.372	-71.760	32	5.0	-	65.02	LIBERTADOR O'HIGGINS, CHILE
#-342	3/11	16	56	33.3	-34.407	-71.852	36	5.3	-	65.02	LIBERTADOR O'HIGGINS, CHILE
#-343	3/11	16	59	42.4	-34.483	-71.791	35	4.8	-	64.93	LIBERTADOR O'HIGGINS, CHILE
#-344	3/11	17	18	50.7	-34.256	-71.845	23	5.1	-	65.16	LIBERTADOR O'HIGGINS, CHILE
#-345	3/11	19	28	7.6	-34.307	-71.772	25	5.5	-	65.09	LIBERTADOR O'HIGGINS, CHILE
#-346	3/11	20	11	20.1	-34.327	-71.680	2	5.8	-	65.04	LIBERTADOR O'HIGGINS, CHILE
#-347	3/11	21	9	9.0	-7.498	128.215	174	5.0	-	82.72	KEPULAUAN BARAT DAYA, IND.
#-348	3/11	21	50	7.6	-34.324	-71.711	33	4.9	-	65.05	LIBERTADOR O'HIGGINS, CHILE
#-349	3/11	22	34	6.8	-37.612	-73.376	37	5.5	-	62.50	BIO-BIO, CHILE
#-350	3/11	23	20	24.1	-23.784	-175.865	74	5.1	-	83.82	TONGA REGION
#-351	3/12	3	10	49.4	-34.343	-71.782	37	4.7	-	65.06	LIBERTADOR O'HIGGINS, CHILE
#-352	3/12	6	10	34.4	-34.488	-71.823	23	5.0	-	64.93	LIBERTADOR O'HIGGINS, CHILE
#-353	3/12	6	44	58.8	-34.346	-71.978	34	4.8	-	65.11	LIBERTADOR O'HIGGINS, CHILE
#-354	3/12	6	56	39.7	-34.301	-71.887	25	4.9	-	65.13	LIBERTADOR O'HIGGINS, CHILE
#-355	3/12	8	53	23.2	-34.512	-71.834	17	4.7	-	64.92	LIBERTADOR O'HIGGINS, CHILE
#-356	3/12	9	0	56.2	-34.287	-71.661	35	4.8	-	65.07	LIBERTADOR O'HIGGINS, CHILE
#-357	3/12	10	39	27.4	-34.291	-71.888	35	4.8	-	65.14	LIBERTADOR O'HIGGINS, CHILE
#-358	3/12	11	2	15.8	-38.043	-72.385	35	4.9	-	61.81	ARAUCANIA, CHILE
#-359	3/12	13	25	26.7	-34.211	-71.823	35	4.9	-	65.19	LIBERTADOR O'HIGGINS, CHILE
#-360	3/12	16	4	53.3	-34.152	-71.710	35	5.1	-	65.21	LIBERTADOR O'HIGGINS, CHILE
#-361	3/12	17	27	41.1	-0.873	99.921	77	4.8	-	79.14	SOUTHERN SUMATRA, INDONESIA
#-362	3/12	19	48	31.3	-34.475	-71.679	10	4.9	-	64.90	LIBERTADOR O'HIGGINS, CHILE
#-363	3/12	23	19	55.6	23.053	94.582	106	5.5	-	100.33	MYANMAR
#-364	3/12	23	25	58.6	-37.453	-73.758	14	4.7	-	62.76	OFFSHORE BIO-BIO, CHILE
#-365	3/13	2	22	5.6	-34.447	-71.637	35	4.7	-	64.92	LIBERTADOR O'HIGGINS, CHILE
#-366	3/13	3	15	3.8	-36.597	-73.197	35	5.1	-	63.39	OFFSHORE BIO-BIO, CHILE
#-367	3/13	3	19	9.7	-36.490	-73.044	35	5.3	-	63.44	OFFSHORE BIO-BIO, CHILE
#-368	3/13	7	12	3.3	-34.392	-71.931	4	5.2	-	65.06	LIBERTADOR O'HIGGINS, CHILE
#-369	3/13	7	23	43.7	-4.238	142.822	83	4.8	-	90.93	NEW GUINEA, PAPUA NEW GUINEA
#-370	3/13	10	20	47.7	-37.250	-73.514	35	4.8	-	62.88	BIO-BIO, CHILE
#-371	3/13	10	34	43.3	-37.562	-73.436	35	5.2	5.5	62.56	BIO-BIO, CHILE

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-372	3/13	15	22	39.2	-34.410	-71.378	35	5.1	-	64.87	LIBERTADOR O'HIGGINS, CHILE
#-373	3/13	21	42	39.1	52.794	160.354	26	5.4	-	148.90	OFF THE EAST COAST OF KAMCHATKA, RUSSIA
#-374	3/17	4	46	15.1	-4.663	102.813	71	5.4	-	76.50	SOUTHERN SUMATRA, INDONESIA
#-375	3/17	15	33	15.6	-58.168	-29.696	24	4.9	-	30.48	SOUTH SANDWICH ISL REGION
#-376	3/17	17	17	36.2	-36.132	-73.166	35	4.8	-	63.81	OFFSHORE BIO-BIO, CHILE
#-377	3/17	17	38	37.3	-43.902	-72.675	35	5.2	-	56.49	AISEN, CHILE
#-378	3/17	19	0	7.5	-36.455	-72.918	27	5.0	3.9	63.44	OFFSHORE BIO-BIO, CHILE
#-379	3/18	3	18	24.5	-34.328	-71.753	35	5.1	-	65.06	LIBERTADOR O'HIGGINS, CHILE
#-380	3/18	3	25	50.1	-34.645	-71.328	35	4.8	-	64.64	LIBERTADOR O'HIGGINS, CHILE
#-381	3/18	6	28	50.7	-48.696	164.680	10	5.3	5.3	55.70	OFF WEST COAST OF THE SOUTH ISLAND, N.Z
#-382	3/18	6	42	8.8	-48.528	164.933	10	5.1	-	55.92	OFF W COAST OF S ISL, N.Z.
#-383	3/18	7	7	32.3	1.344	126.451	61	5.1	-	90.34	MOLUCCA SEA
#-384	3/18	7	24	11.2	-19.462	-177.651	513	4.9	-	87.70	FIJI REGION
#-385	3/18	8	36	23.5	0.947	120.816	25	5.0	-	87.96	MINAHASA, SULAWESI, IND.
#-386	3/18	9	32	24.4	-43.723	-72.578	10	5.2	-	56.63	LOS LAGOS, CHILE
#-387	3/18	18	51	50.8	-22.285	-179.543	604	5.0	-	84.56	SOUTH OF THE FIJI ISLANDS
#-388	3/18	19	49	36.4	-21.712	-68.074	139	4.8	-	75.66	POTOSI, BOLIVA
#-389	3/18	22	56	26.7	-38.246	-73.694	21	4.8	-	62.01	OFFSHORE BIO-BIO, CHILE
#-390	3/18	23	49	14.4	-27.179	-176.504	64	5.0	-	80.38	KERMADEC ISLANDS REGION
#-391	3/19	8	54	49.9	-35.461	-72.827	28	5.4	-	64.33	OFFSHORE MAULE, CHILE
#-392	3/19	9	30	39.8	54.467	110.227	10	5.3	-	133.85	LAKE BAYKAL REGION, RUSSIA
#-393	3/19	10	36	1.9	-35.464	-72.365	36	4.8	-	64.19	MAULE, CHILE
#-394	3/19	10	50	6.1	-5.264	147.709	172	5.3	-	91.65	E NEW GUINEA REG, P.N.G.
#-395	3/19	11	38	39.5	4.021	127.055	78	4.8	-	93.05	KEPULAUAN TALAUD, INDONESIA
#-396	3/19	14	20	48.2	-33.147	-72.003	35	5.0	-	66.24	OFFSHORE VALPARAISO, CHILE
#-397	3/19	17	10	48.8	-34.397	-71.734	46	5.2	-	64.99	LIBERTADOR O'HIGGINS, CHILE
#-398	3/19	17	57	12.4	-34.440	-71.660	21	4.8	-	64.93	LIBERTADOR O'HIGGINS, CHILE
#-399	3/19	22	4	9.1	-38.462	-73.582	35	4.9	-	61.77	OFFSHORE ARAUCANIA, CHILE
#-400	3/20	2	34	43.3	-37.936	-73.254	38	4.8	-	62.16	BIO-BIO, CHILE
#-401	3/20	5	39	27.9	-38.097	-74.824	31	4.7	-	62.47	OFF THE COAST OF ARAUCANIA, CHILE
#-402	3/20	10	4	36.8	-34.376	-71.712	35	5.0	-	65.00	LIBERTADOR O'HIGGINS, CHILE

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#403	3/20	16	27	20.3	-37.760	-73.231	35	4.9	-	62.32	BIO-BIO, CHILE
#404	3/20	18	8	9.1	19.704	-75.301	17	5.5	5.3	116.98	CUBA REGION
#405	3/20	21	21	14.1	-34.470	-71.749	26	5.1	-	64.93	LIBERTADOR O'HIGGINS, CHILE
#406	3/20	21	55	48.9	16.080	-91.274	73	5.3	-	118.76	CHIAPAS, MEXICO
#407	3/21	4	29	23.8	-14.856	-177.722	422	4.7	-	92.19	FIJI REGION
#408	3/21	6	55	37.7	-29.400	60.852	10	5.0	-	41.58	SOUTHWEST INDIAN RIDGE
#409	3/21	8	30	42.7	-35.343	-71.135	35	4.8	-	63.93	MAULE, CHILE
#410	3/21	15	28	56.3	-36.404	-73.209	22	4.7	-	63.57	OFFSHORE BIO-BIO, CHILE
#411	3/21	23	41	30.4	-14.744	167.134	87	5.2	-	88.64	VANUATU
#412	3/22	1	0	38.8	-16.169	-69.454	167	5.0	-	81.31	SOUTHERN PERU
#413	3/22	4	36	7.2	-17.564	-13.056	10	5.2	-	60.55	SOUTHERN MID-ATLANTIC RIDGE
#414	3/22	5	56	30.2	-26.517	178.372	619	4.9	-	80.00	SOUTH OF THE FIJI ISLANDS
#415	3/22	8	52	21.2	-41.165	-89.081	10	5.3	-	63.37	SOUTHEAST OF EASTER ISLAND
#416	3/22	16	26	32.4	-15.219	167.457	116	4.9	-	88.27	VANUATU
#417	3/23	6	33	26.6	-33.904	-178.646	10	5.4	-	73.42	SOUTH OF KERMADEC ISLANDS
#418	3/23	7	54	44.9	-34.949	-72.498	32	4.4	-	64.71	OFFSHORE MAULE, CHILE
#419	3/23	15	23	39.3	52.874	171.986	24	5.3	4.7	153.10	NEAR ISLANDS, ALEUTIAN ISLANDS, ALASKA
#420	3/24	11	30	12.9	-36.517	-73.495	35	5.0	-	63.55	OFFSHORE BIO-BIO, CHILE
#421	3/25	13	57	53.8	-35.891	-72.691	35	5.0	-	63.89	OFFSHORE MAULE, CHILE
#422	3/25	17	53	48.3	0.559	126.988	39	5.0	-	89.80	MOLUCCA SEA
#423	3/26	5	33	12.9	-18.413	-173.218	42	5.1	-	89.58	TONGA
#424	3/26	10	30	41.3	-35.186	-72.056	35	4.9	-	64.36	MAULE, CHILE
#425	3/27	4	37	56.8	-33.513	-71.792	46	4.7	-	65.83	OFFSHORE VALPARAISO, CHILE
#426	3/27	6	37	7.2	-32.364	-69.124	24	4.7	-	66.07	MENDOZA, ARGENTINA
#427	3/28	1	8	24.9	-10.158	-78.027	66	5.4	-	89.75	NEAR THE COAST OF CENTRAL PERU
#428	3/28	21	13	44.6	-5.597	122.796	27	5.1	-	82.55	SULAWESI, INDONESIA
#429	3/28	21	38	28.0	-35.387	-73.385	30	5.5	5.8	64.57	OFFSHORE MAULE, CHILE
#430	3/28	21	43	16.3	-35.273	-72.769	35	5.5	-	64.49	OFFSHORE MAULE, CHILE
#431	3/30	5	16	14.6	-31.274	-178.792	89	5.2	-	75.95	KERMADEC ISLANDS REGION
#432	3/30	16	54	47.6	13.609	92.884	42	6.4	6.3	90.83	ANDAMAN ISLANDS, INDIA REGION
#433	3/30	19	29	13.6	-31.457	-178.497	35	5.0	-	75.83	KERMADEC ISLANDS REGION
#434	3/31	6	11	30.7	-9.106	117.408	45	4.7	-	77.36	SUMBAWA REGION, INDONESIA



Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#435	3/31	6	27	49.9	-9.366	117.394	24	4.6	-	77.11	SUMBAWA REGION, INDONESIA
#436	4/1	12	53	8.1	-34.521	-71.725	11	5.2	-	64.87	LIBERTADOR O'HIGGINS, CHILE
#437	4/1	15	41	7.8	-34.849	-71.805	49	4.9	4.9	64.59	LIBERTADOR O'HIGGINS, CHILE
#438	4/1	15	46	51.2	-61.213	153.913	10	5.4	5.2	41.79	BALLENY ISLANDS REGION
#439	4/1	19	43	1.0	-34.119	-71.951	20	5.0	-	65.32	LIBERTADOR O'HIGGINS, CHILE
#440	4/2	2	42	7.5	-7.653	127.487	177	5.1	-	82.31	KEPULAUAN BARAT DAYA, IND.
#441	4/2	3	50	22.9	-24.736	-176.124	34	5.1	-	82.84	SOUTH OF THE FIJI ISLANDS
#442	4/2	19	34	12.5	-35.984	-72.580	48	5.1	-	63.77	MAULE, CHILE
#443	4/2	23	15	31.2	0.796	126.466	101	5.0	-	89.83	MOLUCCA SEA
#444	4/3	1	35	33.5	-31.288	-176.910	10	5.3	4.9	76.29	KERMADEC ISLANDS REGION
#445	4/4	7	2	40.8	-10.049	161.358	106	4.8	-	91.48	SOLOMON ISLANDS
#446	4/4	9	31	45.3	-23.837	-179.902	528	4.8	-	82.97	SOUTH OF THE FIJI ISLANDS
#447	4/4	9	40	58.2	-22.418	-179.242	475	4.9	-	84.49	SOUTH OF THE FIJI ISLANDS
#448	4/4	14	19	42.9	1.625	126.800	53	4.8	-	90.73	MOLUCCA SEA
#449	4/5	3	32	11.0	-33.338	-71.187	35	4.6	-	65.81	REGION METROPOLITANA, CHILE
#450	4/7	10	4	40.5	52.181	-173.516	91	5.2	-	157.33	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#451	4/7	14	33	3.6	-3.767	141.939	34	6.0	5.7	91.07	NEW GUINEA, PAPUA NEW GUINEA
#452	4/7	20	32	40.9	-27.095	179.255	500	4.8	-	79.63	KERMADEC ISLANDS REGION
#453	4/8	2	8	30.9	-33.232	-71.944	35	4.6	-	66.14	OFFSHORE VALPARAISO, CHILE
#454	4/8	4	26	9.3	-27.532	-175.895	42	5.0	-	80.15	KERMADEC ISLANDS REGION
#455	4/8	8	58	20.9	-5.074	105.054	212	5.0	-	76.85	SUNDA STRAIT, INDONESIA
#456	4/9	16	34	26.1	-9.605	149.807	35	5.3	-	88.26	E NEW GUINEA REG, P.N.G.
#457	4/10	2	53	24.0	-7.164	129.559	97	5.3	-	83.51	KEPULAUAN BABAR, INDONESIA
#458	4/10	6	16	12.1	-4.771	145.741	35	5.0	-	91.44	NR N CST NEW GUINEA, P.N.G.
#459	4/10	6	30	2.1	-40.661	-89.978	7	5.0	5.2	64.06	WEST CHILE RISE
#460	4/10	9	6	28.1	-6.999	128.358	226	4.7	-	83.23	BANDA SEA
#461	4/10	18	27	16.5	-17.459	167.924	41	4.6	-	86.25	VANUATU
#462	4/10	21	29	7.1	-34.691	-71.387	72	4.9	-	64.61	LIBERTADOR O'HIGGINS, CHILE
#463	4/11	2	19	6.7	-12.955	166.517	10	5.3	5.5	90.19	SANTA CRUZ ISLANDS
#464	4/11	3	25	48.7	-55.764	-127.091	10	5.0	-	54.81	PACIFIC-ANTARCTIC RIDGE
#465	4/11	8	45	12.3	-5.208	152.441	41	5.5	-	93.27	NEW BRITAIN REGION, PAPUA NEW GUINEA

Table 2. Continued.

No.	Date	Origin time UTC			Geographic	Coordinates	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s	Latitude (deg)	Longitude (deg)		Mb	Ms		
#466	4/11	9	40	25.6	-10.879	161.109	21	6.6	7.0	90.61	SOLOMON ISLANDS
#467	4/11	10	28	6.7	-34.675	-71.703	35	4.9	-	64.72	LIBERTADOR O'HIGGINS, CHILE
#468	4/11	10	40	41.9	-58.732	-25.717	107	4.9	-	28.67	SOUTH SANDWICH ISL REGION
#469	4/11	22	54	4.0	-31.966	-67.605	124	4.9	-	65.96	SAN JUAN, ARGENTINA
#470	4/12	7	57	22.5	76.939	18.917	10	5.0	-	146.46	SVALBARD REGION
#471	4/12	9	48	41.6	-8.946	124.045	112	4.9	-	79.87	KEPULAUAN ALOR, INDONESIA
#472	4/12	12	36	47.7	-35.357	-104.748	22	5.0	-	72.26	SOUTHEAST OF EASTER ISLAND
#473	4/13	0	55	41.5	-4.396	153.528	66	5.4	-	94.40	NEW IRELAND REG, P.N.G.
#474	4/13	7	58	8.3	-28.176	-63.224	555	4.2	-	68.04	SANTIAGO DEL ESTERO, ARG.
#475	4/13	20	27	0.8	-56.274	-27.258	100	5.8	-	31.07	SOUTH SANDWICH ISLANDS REGION
#476	4/14	1	16	58.2	-29.089	61.358	10	5.1	-	41.98	SOUTHWEST INDIAN RIDGE
#477	4/14	12	36	38.1	-18.689	167.289	10	5.1	-	84.90	VANUATU
#478	4/15	13	40	59.1	-31.206	-177.862	42	5.2	-	76.19	KERMADEC ISLANDS REGION
#479	4/16	22	44	15.6	-23.770	-177.096	165	5.2	-	83.60	SOUTH OF THE FIJI ISLANDS
#480	4/22	8	50	21.1	-56.536	-25.726	35	5.1	-	30.32	SOUTH SANDWICH ISL REGION
#481	4/23	6	52	17.5	-21.080	-179.252	626	4.8	-	85.79	FIJI REGION
#482	4/23	10	14	18.2	-18.047	-69.278	131	4.7	-	79.49	TARAPACA, CHILE
#483	4/24	0	0	26.9	-10.535	161.241	124	5.0	-	90.98	SOLOMON ISLANDS
#484	4/24	1	17	7.8	-17.987	-69.625	140	4.6	-	79.66	TARAPACA, CHILE
#485	4/24	7	41	0.8	-1.850	128.204	27	6.0	-	87.98	KEPULAUAN OBI, INDONESIA
#486	4/24	9	14	51.5	-38.180	-73.794	35	4.6	-	62.10	OFFSHORE BIO-BIO, CHILE
#487	4/24	12	11	55.6	-6.316	131.046	35	4.5	-	84.83	KEPULAUAN TANIMBAR REG, IND.
#488	4/27	17	17	12.8	-50.577	115.499	10	5.6	-	39.25	W INDIAN-ANTARCTIC RIDGE
#489	4/29	13	40	14.0	-36.491	-72.359	35	4.9	-	63.24	BIO-BIO, CHILE
#490	5/1	14	41	8.3	-33.185	-71.929	35	5.0	-	66.18	OFFSHORE VALPARAISO, CHILE
#491	5/1	16	28	46.8	-58.513	-26.222	35	5.1	-	29.01	SOUTH SANDWICH ISL REGION
#492	5/1	16	34	51.6	-9.085	117.458	48	5.1	-	77.39	SUMBAWA REGION, INDONESIA
#493	5/1	23	57	14.8	14.971	145.423	126	5.4	-	109.81	ROTA REGION, N MARIANA ISL
#494	5/2	1	47	41.0	-17.716	-178.638	576	4.5	-	89.20	FIJI REGION
#495	5/2	14	9	20.4	-23.338	-179.854	541	4.6	-	83.47	SOUTH OF THE FIJI ISLANDS
#496	5/2	14	52	43.4	-34.213	-71.864	35	5.8	5.6	65.20	LIBERTADOR O'
#497	5/2	21	10	39.6	51.897	-175.312	92	5.1	-	156.53	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA

Table 2. Continued.

No.	Date	Origin time UTC			Geographic	Coordinates	Dep	Magnitude		Epicentral distance	Region
		h	m	s	Latitude (deg)	Longitude (deg)		Mb	Ms		
#-498	5/3	6	12	35.5	-4.027	-80.832	28	4.6	-	96.44	PERU-ECUADOR BORDER REGION
#-499	5/3	6	49	30.6	-34.025	-71.813	35	4.8	-	65.36	LIBERTADOR O'HIGGINS, CHILE
#-500	5/3	18	39	45.9	-37.075	-73.545	35	4.9	-	63.05	OFFSHORE BIO-BIO, CHILE
#-501	5/3	23	9	38.0	-38.271	-74.309	23	5.8	5.9	62.16	OFFSHORE BIO-BIO, CHILE
#-502	5/3	23	30	4.7	-0.779	122.535	19	5.2	-	86.96	SULAWESI, INDONESIA
#-503	5/4	13	55	5.0	-34.108	-72.359	12	4.9	-	65.45	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-504	5/4	16	12	55.3	-21.867	-68.235	92	5.4	-	75.57	ANTOFAGASTA, CHILE
#-505	5/5	9	38	23.4	-35.886	-102.982	10	5.3	4.9	71.42	SOUTHEAST OF EASTER ISLAND
#-506	5/5	15	24	10.9	-35.513	-72.838	30	4.9	-	64.29	OFFSHORE MAULE, CHILE
#-507	5/5	16	29	3.1	-4.063	101.085	27	5.9	6.6	76.50	SOUTHERN SUMATRA, INDONESIA
#-508	5/5	17	9	8.6	-6.259	154.825	59	5.6	-	93.05	BOUGAINVILLE REG, P.N.G.
#-509	5/6	2	42	47.9	-18.046	-70.526	37	6.6	5.9	79.90	OFFSHORE TARAPACA, CHILE
#-510	5/6	8	40	26.6	-25.686	-177.692	85	4.8	-	81.61	SOUTH OF THE FIJI ISLANDS
#-511	5/6	11	24	29.2	-18.802	168.435	67	5.0	-	85.09	VANUATU
#-512	5/6	11	35	31.2	-55.546	-127.935	10	5.5	-	55.08	PACIFIC-ANTARCTIC RIDGE
#-513	5/7	7	39	29.8	3.530	127.958	140	5.7	-	92.92	KEPULAUAN TALAUD, INDONESIA
#-514	5/7	10	38	13.6	-24.878	70.004	10	5.2	-	47.83	MID-INDIAN RI
#-515	5/7	12	35	19.4	-24.385	179.804	512	4.4	-	82.38	SOUTH OF THE FIJI ISLANDS
#-516	5/7	17	46	14.2	44.369	-129.441	10	5.1	-	154.66	OFF THE COAST OF OREGON
#-517	5/8	3	22	9.6	-8.085	118.251	12	5.6	5.5	78.61	SUMBAWA REGION, INDONESIA
#-518	5/8	5	39	28.4	-0.690	122.541	20	5.4	5.2	87.04	SULAWESI, INDONESIA
#-519	5/8	21	52	51.5	-36.053	-73.409	25	4.8	-	63.96	OFFSHORE BIO-BIO, CHILE
#-520	5/9	2	2	38.2	-8.181	128.929	40	5.5	-	82.34	TIMOR SEA
#-521	5/9	3	29	38.1	-33.951	-72.053	29	4.9	-	65.50	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-522	5/9	5	59	42.4	3.743	96.026	45	6.7	7.3	82.32	NORTHERN SUMATRA, INDONESIA
#-523	5/9	6	54	30.6	-34.283	-73.221	35	4.7	-	65.55	OFF COAST OF LIBERTADOR O'HIGGINS, CHILE
#-524	5/9	10	44	59.5	-37.478	-73.624	34	4.9	-	62.70	OFFSHORE BIO-BIO, CHILE
#-525	5/9	11	38	51.2	-1.427	119.288	35	5.0	-	85.20	SULAWESI, INDONESIA
#-526	5/9	13	43	0.2	-36.626	-74.604	28	4.8	-	63.78	OFF COAST OF BIO-BIO, CHILE
#-527	5/10	7	3	52.5	-22.214	-179.526	570	4.6	-	84.63	SOUTH OF THE FIJI ISLANDS
#-528	5/10	13	5	24.8	-12.095	166.207	47	5.1	-	90.92	SANTA CRUZ ISLANDS

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-529	5/10	15	1	43.9	-17.919	-178.504	530	4.1	-	89.03	FIJI REGION
#-530	5/12	16	32	47.9	-3.585	100.705	35	4.7	-	76.83	KEPULAUAN MENTAWAI REG, IND.
#-531	5/12	21	59	0.0	-20.128	-177.958	436	4.7	-	86.99	FIJI REGION
#-532	5/13	3	56	8.1	-35.076	-72.637	35	4.8	-	64.63	OFFSHORE MAULE, CHILE
#-533	5/16	19	6	38.3	-34.540	-15.381	13	5.3	-	45.48	TRISTAN DA CUNHA REGION
#-534	5/17	9	51	19.5	-7.604	119.757	35	5.1	-	79.59	FLORES SEA
#-535	5/17	21	16	39.0	-36.686	-73.267	35	4.9	-	63.33	OFFSHORE BIO-BIO, CHILE
#-536	5/19	1	36	32.9	-13.098	167.125	204	5.2	-	90.22	VANUATU
#-537	5/19	4	15	44.3	-5.019	-77.495	138	6.0	-	94.45	NORTHERN PERU
#-538	5/21	5	50	59.7	-20.695	168.538	35	4.8	-	83.30	LOYALTY ISLANDS
#-539	5/21	14	53	2.2	-5.880	130.403	170	4.8	-	85.01	BANDA SEA
#-540	5/21	18	52	11.6	-34.512	-71.602	33	5.7	-	64.84	LIBERTADOR O'HIGGINS, CHILE
#-541	5/21	19	56	54.7	-9.477	112.838	62	4.6	-	75.40	SOUTH OF JAVA, INDONESIA
#-542	5/22	6	15	18.2	-56.298	-139.105	15	5.4	5.4	54.69	PACIFIC-ANTARCTIC RIDGE
#-543	5/22	9	58	56.3	-20.602	168.441	37	5.2	-	83.37	LOYALTY ISLANDS
#-544	5/22	10	47	16.1	-21.663	-70.175	35	4.8	-	76.39	OFFSHORE ANTOFAGASTA, CHILE
#-545	5/22	17	57	58.7	-15.109	-172.442	40	4.6	-	92.96	SAMOA ISLANDS REGION
#-546	5/23	18	15	34.8	-7.825	128.700	146	4.9	-	82.59	KEPULAUAN BARAT DAYA, IND.
#-547	5/23	20	19	39.6	-17.949	168.826	117	5.5	-	86.01	VANUATU
#-548	5/24	13	40	48.6	-19.850	-175.479	139	4.7	-	87.75	TONGA
#-549	5/24	14	18	5.9	-34.386	-71.774	37	4.5	-	65.01	LIBERTADOR O'HIGGINS, CHILE
#-550	5/24	16	18	29.2	-8.077	-71.547	583	6.0	-	89.62	ACRE, BRAZIL.
#-551	5/24	23	57	35.5	-36.360	-73.222	22	5.0	-	63.62	OFFSHORE BIO-BIO, CHILE
#-552	5/25	0	28	28.5	-21.655	-179.108	622	4.9	-	85.26	FIJI REGION
#-553	5/25	9	19	32.5	-65.410	179.905	10	5.2	-	42.84	BALLENY ISLANDS REGION
#-554	5/25	13	9	26.0	-37.620	-72.896	35	5.1	-	62.35	ARAUCANIA, CHILE
#-555	5/26	7	48	52.3	-10.005	121.647	10	5.0	-	78.03	SAVU SEA
#-556	5/26	7	51	9.7	-10.069	121.384	31	5.0	-	77.88	SAVU SEA
#-557	5/26	15	55	56.9	-9.306	113.566	66	4.8	-	75.81	SOUTH OF JAVA, INDONESIA
#-558	5/27	3	54	2.0	-34.739	-71.703	44	4.6	-	64.66	LIBERTADOR O'HIGGINS, CHILE
#-559	5/27	17	45	29.9	-13.656	166.780	35	5.2	-	89.59	VANUATU
#-560	5/27	22	20	17.9	-37.337	-74.162	18	5.2	-	62.99	OFFSHORE BIO-BIO, CHILE

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-561	5/28	10	7	47.1	53.782	-163.395	30	5.3	-	161.61	UNIMAK ISLAND REGION, ALASKA
#-562	5/28	14	57	58.5	-13.658	166.290	69	4.9	-	89.45	VANUATU
#-563	5/28	18	32	40.4	-3.904	100.963	16	5.3	-	76.61	KEPULAUAN MENTAWAI REGION, INDONESIA
#-564	5/28	19	22	30.2	1.671	127.322	115	4.5	-	90.96	HALMAHERA, INDONESIA
#-565	5/29	11	15	53.0	-13.875	166.595	35	4.9	-	89.33	VANUATU
#-566	5/30	2	27	43.7	-34.763	-71.539	45	4.7	-	64.59	LIBERTADOR O'HIGGINS, CHILE
#-567	5/30	8	48	22.1	-15.243	-73.316	100	4.5	-	83.44	SOUTHERN PERU
#-568	6/1	4	41	24.9	-13.840	166.796	35	4.8	-	89.41	VANUATU
#-569	6/1	16	5	29.5	-36.824	-73.507	14	4.9	4.6	63.27	OFFSHORE BIO-BIO, CHILE
#-570	6/1	16	47	32.0	-17.877	169.103	40	5.4	5.4	86.16	VANUATU
#-571	6/2	9	28	53.5	-6.159	149.412	34	5.5	5.7	91.38	NEW BRITAIN REGION, PAPUA NEW GUINEA
#-572	6/4	15	12	40.7	-9.833	108.066	35	5.0	-	73.40	SOUTH OF JAVA, INDONESIA
#-573	6/4	16	8	36.5	-24.567	179.827	494	4.8	-	82.21	SOUTH OF THE FIJI ISLANDS
#-574	6/5	17	39	8.1	13.205	50.772	10	4.5	-	82.64	GULF OF ADEN
#-575	6/5	17	43	17.6	1.593	127.386	147	5.2	-	90.91	HALMAHERA, INDONESIA
#-576	6/6	2	20	1.5	-32.932	-179.351	51	5.3	4.9	74.23	SOUTH OF KERMADEC ISLANDS
#-577	6/6	16	57	27.0	-8.584	112.405	88	5.1	-	76.08	JAVA, INDONESIA
#-578	6/8	6	32	25.4	-17.249	-72.535	44	4.8	-	81.30	NEAR COAST OF SOUTHERN PERU
#-579	6/9	3	54	53.0	-15.099	-70.389	148	5.0	-	82.63	SOUTHERN PERU
#-580	6/9	7	0	20.1	-20.114	169.135	99	5.1	-	84.01	VANUATU
#-581	6/9	8	57	41.2	1.960	127.156	113	5.7	-	91.17	HALMAHERA, INDONESIA
#-582	6/9	13	58	58.8	-20.425	-68.642	111	4.4	-	77.05	POTOSI, BOLIVA
#-583	6/9	23	23	17.8	-18.590	169.465	10	5.5	5.9	85.57	VANUATU
#-584	6/10	2	13	21.4	7.299	126.871	48	5.1	5.0	96.05	MINDANAO, PHILIPPINES
#-585	6/10	3	8	29.8	-30.691	-177.571	35	5.0	-	76.75	KERMADEC ISL, NEW ZEALAND
#-586	6/10	6	10	5.0	-22.760	-68.586	113	4.9	-	74.85	ANTOFAGASTA, CHILE
#-587	6/10	9	46	53.4	-29.215	-68.222	38	4.7	-	68.71	LA RIOJA, ARGENTINA
#-588	6/10	13	36	8.0	-12.966	169.400	649	4.9	-	90.96	SANTA CRUZ ISLANDS REGION
#-589	6/11	0	52	40.2	-34.661	-71.355	64	4.6	-	64.63	LIBERTADOR O'HIGGINS, CHILE
#-590	6/11	8	54	18.0	-34.717	-71.849	27	5.0	-	64.73	LIBERTADOR O'HIGGINS, CHILE
#-591	6/11	20	55	3.3	-25.055	-176.277	10	5.0	-	82.50	SOUTH OF THE FIJI ISLANDS

Table 2. Continued.

No.	Date	Origin time UTC			Geographic	Coordinates	Dep	Magnitude		Epicentral distance	Region
		h	m	s	Latitude (deg)	Longitude (deg)		Mb	Ms		
#-592	6/12	3	49	59.1	1.030	120.093	43	5.0	-	87.78	MINAHASA, SULAWESI, IND.
#-593	6/12	3	51	53.0	-28.383	-71.345	34	5.1	-	70.48	OFFSHORE ATACAMA, CHILE
#-594	6/12	4	41	50.2	1.045	120.120	33	4.8	-	87.80	MINAHASA, SULAWESI, IND.
#-595	6/12	9	5	4.5	-35.311	-106.216	10	4.9	-	72.57	SOUTHERN EAST PACIFIC RISE
#-596	6/12	19	26	50.3	7.848	91.919	35	7.0	7.5	85.04	NICOBAR ISLANDS, INDIA REGION
#-597	6/12	22	41	29.5	-10.872	166.116	114	5.3	-	92.07	SANTA CRUZ ISLANDS
#-598	6/13	1	57	55.3	0.799	127.466	139	4.7	-	90.19	HALMAHERA, INDONESIA
#-599	6/13	2	20	23.0	-17.836	-66.639	269	5.0	-	78.81	COCHABAMBA, BOLIVIA
#-600	6/13	3	32	57.2	37.377	141.611	27	6.2	5.6	128.97	NEAR THE EAST COAST OF HONSHU, JAPAN
#-601	6/13	6	26	5.0	7.739	92.029	35	5.1	-	84.96	NICOBAR ISL, INDIA REGION
#-602	6/13	7	5	36.8	7.768	91.930	35	5.1	-	84.96	NICOBAR ISL, INDIA REGION
#-603	6/13	12	13	24.8	-0.182	34.513	10	4.9	-	68.89	LAKE VICTORIA REGION, KENYA
#-604	6/13	17	51	24.5	-5.982	147.637	58	5.2	-	90.95	E NEW GUINEA REG, P.N.G.
#-605	6/13	22	22	57.7	3.765	126.620	70	5.0	-	92.66	KEPULAUAN TALAUD, INDONESIA
#-606	6/14	15	24	34.1	-34.315	-73.385	16	4.8	-	65.57	OFF COAST OF LIBERTADOR O'HIGGINS, CHILE
#-607	6/14	21	25	27.5	13.142	-89.193	12	5.2	-	115.34	OFFSHORE EL SALVADOR
#-608	6/15	8	19	25.5	-31.303	-68.280	104	4.3	-	66.79	SAN JUAN, ARGENTINA
#-609	6/15	13	16	58.0	-45.057	-81.313	13	4.8	-	57.79	OFF COAST OF AISEN, CHILE
#-610	6/15	17	36	11.8	-27.862	-72.259	35	4.7	-	71.25	OFF COAST OF ATACAMA, CHILE
#-611	6/15	22	6	56.9	-61.283	-35.894	16	5.1	-	30.27	SCOTIA SEA
#-612	6/16	0	4	52.8	-6.448	129.196	232	5.4	-	84.05	BANDA SEA
#-613	6/16	0	53	1.8	-1.419	119.378	57	5.1	-	85.24	SULAWESI, INDONESIA
#-614	6/16	3	16	27.5	-2.170	136.552	18	6.7	7.1	90.67	NEAR THE NORTH COAST OF PAPUA, INDONESIA
#-615	6/16	3	58	8.5	-2.324	136.507	10	6.2	-	90.51	NEAR THE NORTH COAST OF PAPUA, INDONESIA
#-616	6/16	6	20	23.9	-1.873	136.226	35	4.8	-	90.83	BIAK REGION, INDONESIA
#-617	6/16	9	19	7.3	-36.181	-70.960	119	4.7	-	63.10	MAULE, CHILE.
#-618	6/16	12	24	42.5	2.633	128.514	41	5.1	-	92.28	HALMAHERA, INDONESIA
#-619	6/17	16	35	34.6	-1.178	123.687	45	5.1	-	87.00	SULAWESI, INDONESIA
#-620	6/17	22	7	55.4	0.620	123.274	88	4.6	-	88.53	MINAHASA, SULAWESI, IND.
#-621	6/18	23	9	33.3	13.231	93.134	35	6.1	5.9	90.53	ANDAMAN ISLANDS, INDIA REGION
#-622	6/19	10	0	50.0	41.400	142.484	34	5.0	-	132.85	HOKKAIDO, JAPAN REGION

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-623	6/19	21	30	1.5	-38.085	-73.091	17	4.8	-	61.98	ARAUCANIA, CHILE
#-624	6/20	2	10	35.5	7.877	92.090	38	4.5	-	85.11	NICOBAR ISL, INDIA REGION
#-625	6/20	8	2	51.7	-53.164	159.855	10	4.8	-	50.42	MACQUARIE ISLAND REGION
#-626	6/20	8	38	49.9	-3.939	136.331	10	4.8	-	88.93	PAPUA, INDONESIA
#-627	6/20	10	21	35.0	-5.879	146.654	78	5.3	-	90.71	E NEW GUINEA REG, P.N.G.
#-628	6/20	21	8	50.6	-36.112	-100.170	10	5.3	-	70.66	SOUTHEAST OF EASTER ISLAND
#-629	6/21	10	23	21.5	-16.927	166.877	35	5.0	-	86.48	VANUATU
#-630	6/21	14	8	38.2	4.593	95.024	65	4.7	-	82.83	NORTHERN SUMATRA, INDONESIA
#-631	6/22	20	23	57.9	-22.878	-68.519	99	4.5	-	74.72	ANTOFAGASTA, CHILE
#-632	6/22	21	52	46.7	28.833	128.557	42	5.4	-	116.60	RYUKYU ISLANDS, JAPAN
#-633	6/22	22	16	22.0	-19.193	-177.452	578	5.1	-	88.00	FIJI REGION
#-634	6/23	0	11	46.8	-5.681	146.415	69	4.9	-	90.81	E NEW GUINEA REG, P.N.G.
#-635	6/24	4	8	38.2	7.702	91.893	35	5.4	-	84.89	NICOBAR ISL, INDIA REGION
#-636	6/24	5	32	27.5	-5.497	151.156	40	5.8	5.8	92.58	NEW BRITAIN REGION, PAPUA NEW GUINEA
#-637	6/24	13	24	9.0	-36.914	-73.695	28	5.0	-	63.24	OFFSHORE BIO-BIO, CHILE
#-638	6/24	13	49	6.8	-34.440	-107.746	10	4.9	-	73.68	SOUTHERN EAST PACIFIC RISE
#-639	6/24	14	27	21.0	-25.632	179.214	528	4.8	-	81.04	SOUTH OF THE FIJI ISLANDS
#-640	6/25	10	29	25.3	-35.623	-71.664	35	4.9	-	63.83	MAULE, CHILE
#-641	6/25	14	33	56.5	-32.565	-71.613	35	4.9	-	66.66	OFFSHORE VALPARAISO, CHILE
#-642	6/25	20	55	39.8	-25.586	-176.715	37	4.9	-	81.90	SOUTH OF THE FIJI ISLANDS
#-643	6/26	5	30	19.5	-10.642	161.449	35	6.4	6.8	90.94	SOLOMON ISLANDS
#-644	6/26	8	56	24.8	-32.911	-177.934	35	5.2	-	74.52	SOUTH OF KERMADEC ISLANDS
#-645	6/26	9	50	43.9	-8.067	108.057	75	6.0	-	75.06	JAVA, INDONESIA
#-646	6/26	18	40	14.1	-4.590	-77.199	113	5.1	-	94.76	NORTHERN PERU
#-647	6/26	19	1	18.9	-18.876	-69.088	107	5.6	-	78.65	TARAPACA, CHILE
#-648	6/26	22	43	59.8	-6.088	130.319	147	5.1	-	84.79	BANDA SEA
#-649	6/27	3	12	26.3	-38.034	-75.113	35	4.6	-	62.62	OFF COAST ARAUCANIA, CHILE
#-650	6/27	7	15	51.7	-36.829	-73.462	35	5.0	-	63.25	OFFSHORE BIO-BIO, CHILE
#-651	6/27	8	47	42.0	-4.489	101.346	28	5.4	5.2	76.18	SOUTHERN SUMATRA, INDONESIA
#-652	6/27	23	47	32.1	5.271	126.984	49	5.4	-	94.20	MINDANAO, PHILIPPINES
#-653	6/28	0	18	15.3	-18.351	168.103	81	4.9	-	85.44	VANUATU
#-654	6/28	1	18	39.3	0.517	126.125	27	4.8	-	89.45	MOLUCCA SEA

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-655	6/28	3	43	34.0	-36.570	-73.547	20	4.7	-	63.52	OFFSHORE BIO-BIO, CHILE
#-656	6/28	6	27	31.1	-13.483	166.985	35	5.1	-	89.81	VANUATU
#-657	6/28	7	4	47.7	-23.440	179.544	525	5.0	-	83.24	SOUTH OF THE FIJI ISLANDS
#-658	6/28	9	32	20.2	-23.023	-66.320	208	4.6	-	73.86	JUJUY, ARGENTINA
#-659	6/28	18	22	59.5	-8.966	160.813	35	5.3	-	92.35	SOLOMON ISLANDS
#-660	6/28	23	14	35.0	-18.229	167.992	31	5.0	-	85.53	VANUATU
#-661	6/29	1	24	3.0	-4.772	153.843	164	5.2	-	94.14	NEW IRELAND REG, P.N.G.
#-662	6/29	1	40	0.0	-37.883	-73.622	25	6.0	5.2	62.32	OFFSHORE BIO-BIO, CHILE
#-663	6/29	12	49	14.9	-36.168	-73.253	35	4.8	-	63.80	OFFSHORE BIO-BIO, CHILE
#-664	6/29	12	55	33.2	-17.761	-173.556	35	5.2	-	90.16	TONGA
#-665	6/29	15	32	54.6	-17.186	-173.132	10	5.0	-	90.80	TONGA
#-666	6/30	4	31	2.1	-23.314	179.096	581	5.8	-	83.27	SOUTH OF THE FIJI ISLANDS
#-667	6/30	10	54	52.3	-0.767	99.737	90	5.3	-	79.19	SOUTHERN SUMATRA, INDONESIA
#-668	7/1	3	7	48.8	-21.603	-174.953	36	5.0	-	86.13	TONGA
#-669	7/1	6	50	57.2	-31.820	-72.734	35	4.6	-	67.70	OFF COAST OF COQUIMBO, CHILE
#-670	7/1	16	57	46.1	-5.163	129.363	10	5.7	-	85.31	BANDA SEA
#-671	7/1	20	58	16.8	-35.466	-73.255	15	5.1	-	64.46	OFFSHORE MAULE, CHILE
#-672	7/1	20	58	23.5	-35.601	-71.507	35	5.1	-	63.81	MAULE, CHILE
#-673	7/2	1	12	46.5	-14.403	167.309	212	4.7	-	89.01	VANUATU
#-674	7/2	6	4	3.3	-13.638	166.504	29	5.8	6.2	89.53	VANUATU
#-675	7/2	12	0	19.0	-13.665	166.504	79	5.3	-	89.50	VANUATU
#-676	7/3	0	5	6.9	-34.713	-71.473	47	5.1	-	64.62	LIBERTADOR O'HIGGINS, CHILE
#-677	7/3	4	22	12.7	-21.738	-174.962	31	5.2	-	86.00	TONGA
#-678	7/3	12	13	33.1	-11.334	163.540	62	5.3	-	90.89	SOLOMON ISLANDS
#-679	7/4	6	57	44.9	-8.452	-80.426	29	5.3	-	92.12	OFF THE COAST OF NORTHERN PERU
#-680	7/4	21	55	52.2	39.691	142.418	27	6.4	6.1	131.31	NEAR THE EAST COAST OF HONSHU, JAPAN
#-681	7/5	15	57	36.5	-54.020	-136.960	10	4.8	-	56.94	PACIFIC-ANTARCTIC RIDGE
#-682	7/5	21	47	28.2	-57.397	157.322	11	5.0	-	45.98	MACQUARIE ISLAND REGION
#-683	7/5	23	58	49.9	1.702	66.832	10	5.0	-	73.21	CARLSBERG RID
#-684	7/6	1	16	22.4	-8.891	157.574	46	5.2	-	91.43	SOLOMON ISLANDS
#-685	7/6	8	12	2.0	-50.482	114.336	10	4.9	-	38.93	W INDIAN-ANTARCTIC RIDGE
#-686	7/6	13	54	2.3	-35.576	-71.920	47	5.0	-	63.95	MAULE, CHILE



Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-687	7/6	16	38	7.0	-22.386	171.697	143	5.1	-	82.47	SOUTHEAST OF LOYALTY ISLANDS
#-688	7/6	18	2	10.1	-53.724	140.638	10	5.1	-	44.77	WEST OF MACQUARIE ISLAND
#-689	7/8	5	49	44.5	-34.379	-71.864	35	4.7	-	65.05	LIBERTADOR O'HIGGINS, CHILE
#-690	7/8	12	48	20.3	-23.963	-179.792	490	5.4	-	82.87	SOUTH OF THE FIJI ISLANDS
#-691	7/9	10	13	39.9	-6.067	105.494	73	5.2	-	76.07	SUNDA STRAIT, INDONESIA
#-692	7/9	11	16	16.9	-49.256	120.507	14	5.2	-	42.10	W INDIAN-ANTARCTIC RIDGE
#-693	7/9	15	17	48.0	52.184	142.168	20	5.1	-	141.96	SAKHALIN, RUSSIA
#-694	7/9	22	57	32.1	-45.370	-75.050	96	5.0	-	55.82	OFF COAST OF AISEN, CHILE
#-695	7/10	11	43	32.7	11.144	145.988	13	6.1	6.1	106.44	SOUTH OF THE MARIANA ISLANDS
#-696	7/10	23	4	23.1	-30.574	179.957	400	5.1	-	76.39	KERMADEC ISLANDS REGION
#-697	7/11	2	24	6.0	-61.948	46.294	10	5.1	-	7.67	SOUTH INDIAN OCEAN
#-698	7/11	3	0	5.2	-30.816	-178.281	57	5.0	-	76.50	KERMADEC ISL, NEW ZEALAND
#-699	7/11	13	23	36.9	-38.937	177.087	10	5.1	-	67.70	NORTH ISLAND OF NEW ZEALAND
#-700	7/12	0	11	22.1	-22.073	-68.181	120	6.2	-	75.36	ANTOFAGASTA, CHILE
#-701	7/12	12	44	47.8	-17.018	-70.034	95	4.7	-	80.71	SOUTHERN PERU
#-702	7/13	4	26	25.4	1.457	97.160	29	5.2	-	80.49	NIAS REGION, INDONESIA
#-703	7/13	21	12	31.0	-27.896	-70.724	67	4.8	-	70.74	ATACAMA, CHILE
#-704	7/14	8	21	13.2	-38.005	-73.324	22	5.3	-	62.12	BIO-BIO, CHILE
#-705	7/14	15	5	50.8	-38.150	-73.195	35	5.4	5.5	61.95	BIO-BIO, CHILE
#-706	7/15	0	36	2.0	-34.153	-72.303	9	5.1	-	65.39	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-707	7/15	14	42	44.0	-22.394	-175.128	35	4.9	-	85.32	TONGA REGION
#-708	7/16	2	25	23.6	-21.262	-68.201	117	5.0	-	76.13	POTOSI, BOLIVA
#-709	7/16	5	45	52.2	-8.284	118.584	36	5.0	-	78.54	SUMBAWA REGION, INDONESIA
#-710	7/16	5	58	26.2	-8.239	118.603	44	4.9	-	78.59	SUMBAWA REGION, INDONESIA
#-711	7/17	1	3	49.6	-5.757	147.073	70	5.0	-	90.97	E NEW GUINEA REG, P.N.G.
#-712	7/17	4	34	1.3	-20.606	-178.906	616	4.8	-	86.33	FIJI REGION
#-713	7/17	6	7	43.0	-24.691	-69.819	49	5.7	4.7	73.44	ANTOFAGASTA, CHILE
#-714	7/17	16	20	2.7	-15.591	-175.065	10	5.3	-	92.00	TONGA
#-715	7/17	20	35	31.8	-54.297	-136.622	10	5.2	-	56.65	PACIFIC-ANTARCTIC RIDGE
#-716	7/18	2	43	43.6	-30.742	-71.245	46	4.7	-	68.24	COQUIMBO, CHILE
#-717	7/18	3	29	37.7	-41.807	-73.418	38	5.0	-	58.63	GOLFO DE ANCUD, LOS LAGOS, CHILE

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-718	7/18	5	56	47.3	52.884	-169.715	25	6.4	6.7	159.08	FOX ISLANDS, ALEUTIAN ISLANDS, ALASKA
#-719	7/18	13	4	11.6	-6.010	150.402	47	6.2	7.1	91.84	NEW BRITAIN REGION, PAPUA NEW GUINEA
#-720	7/18	13	34	59.3	-5.940	150.565	35	6.1	7.3	91.97	NEW BRITAIN REGION, PAPUA NEW GUINEA
#-721	7/18	20	50	30.7	-6.220	150.535	60	5.1	-	91.69	NEW BRITAIN REGION, PAPUA NEW GUINEA
#-722	7/19	3	1	12.6	-6.470	150.176	35	5.2	-	91.34	NEW BRITAIN REGION, PAPUA NEW GUINEA
#-723	7/19	8	20	30.4	52.629	-169.277	10	5.4	-	158.98	FOX ISLANDS, ALEUTIAN ISLANDS, ALASKA
#-724	7/19	8	23	14.6	52.704	-169.566	10	5.5	-	158.96	FOX ISLANDS, ALEUTIAN ISLANDS, ALASKA
#-725	7/19	14	24	40.3	52.673	-169.507	10	5.0	-	158.95	FOX ISLANDS, ALEUTIAN ISLANDS, ALASKA
#-726	7/19	15	34	23.0	-6.087	151.013	51	5.0	-	91.97	NEW BRITAIN REG, P.N.G.
#-727	7/20	10	49	28.0	-8.411	125.429	10	4.6	-	80.87	EAST TIMOR REGION
#-728	7/20	11	56	29.1	-0.065	122.957	157	4.6	-	87.77	SULAWESI, INDONESIA
#-729	7/20	17	19	51.8	-29.031	-13.090	19	5.7	5.5	49.80	SOUTHERN MID-ATLANTIC RIDGE
#-730	7/20	19	18	24.1	-5.912	150.665	54	5.6	6.3	92.02	NEW BRITAIN REGION, PAPUA NEW GUINEA
#-731	7/20	19	38	9.4	27.009	53.855	10	5.6	-	96.63	SOUTHERN IRAN
#-732	7/20	20	31	10.2	-6.051	150.661	48	5.3	-	91.89	NEW BRITAIN REG, P.N.G.
#-733	7/20	22	49	1.0	-37.341	-73.972	43	5.0	-	62.93	OFFSHORE BIO-BIO, CHILE
#-734	7/20	23	54	35.6	-2.924	141.000	47	5.1	-	91.53	NR N CST NEW GUINEA, P.N.G.
#-735	7/21	14	56	7.3	-23.845	-69.180	82	4.5	-	74.03	ANTOFAGASTA, CHILE
#-736	7/21	22	36	38.6	-15.234	168.203	83	5.3	-	88.46	VANUATU
#-737	7/22	4	45	4.9	-2.834	128.091	43	4.8	-	87.03	CERAM SEA, INDONESIA
#-738	7/22	22	26	49.2	1.401	126.967	70	5.2	-	90.58	MOLUCCA SEA
#-739	7/23	2	49	33.3	-16.127	-173.462	47	4.7	-	91.78	TONGA
#-740	7/23	22	8	11.5	6.698	123.475	612	6.4	-	94.28	MORO GULF, MINDANAO, PHILIPPINES
#-741	7/23	22	51	12.8	6.469	123.532	584	6.9	-	94.08	MORO GULF, MINDANAO, PHILIPPINES
#-742	7/24	2	11	25.4	0.984	99.524	41	5.3	-	80.78	NORTHERN SUMATRA, INDONESIA
#-743	7/25	4	21	38.4	6.808	123.732	600	4.9	-	94.47	MORO GULF, MINDANAO, PHILIPPINES
#-744	7/25	20	30	55.3	6.731	123.585	598	5.1	-	94.35	MORO GULF, MINDANAO, PHILIPPINES
#-745	7/26	4	54	56.6	-10.443	112.084	8	4.8	-	74.23	SOUTH OF JAVA, INDONESIA
#-746	7/26	13	19	16.3	-4.902	153.384	75	4.9	-	93.87	NEW IRELAND REG, P.N.G.

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-747	7/26	17	31	31.4	-24.194	-67.033	192	5.3	-	73.00	SALTA, ARGENTINA
#-748	7/26	23	6	50.1	6.636	123.198	626	5.7	-	94.12	MORO GULF, MINDANAO, PHILIPPINES
#-749	7/26	23	19	15.9	-24.462	-177.046	91	5.0	-	82.93	SOUTH OF THE FIJI ISLANDS
#-750	7/27	8	26	20.2	-3.634	101.897	86	4.9	-	77.17	SOUTHERN SUMATRA, INDONESIA
#-751	7/27	16	54	13.0	-7.323	126.378	378	4.9	-	82.22	KEPULAUAN BARAT DAYA, IND.
#-752	7/28	11	31	46.4	52.600	-169.391	10	5.2	-	158.92	FOX ISLANDS, ALEUTIAN ISLANDS, ALASKA
#-753	7/28	12	7	43.2	52.738	-169.489	10	5.0	-	159.01	FOX ISLANDS, ALEUTIAN ISLANDS, ALASKA
#-754	7/28	18	21	15.6	-12.252	165.455	78	5.3	-	90.56	SANTA CRUZ ISLANDS
#-755	7/29	7	31	57.3	6.505	123.222	637	6.1	-	94.01	MORO GULF, MINDANAO, PHILIPPINES
#-756	7/29	10	4	48.3	-38.985	-73.048	24	4.8	-	61.13	ARAUCANIA, CHILE
#-757	7/29	13	59	21.8	-15.551	-172.745	64	4.8	-	92.47	SAMOA ISLANDS REGION
#-758	7/30	3	56	13.6	52.507	159.832	23	6.1	6.3	148.48	OFF THE EAST COAST OF KAMCHATKA, RUSSIA
#-759	7/30	4	28	1.5	52.462	159.922	8	5.4	-	148.48	OFF E CST KAMCHATKA, RUSSIA
#-760	7/30	4	37	19.0	-61.414	154.212	3	5.2	-	41.68	BALLENY ISLANDS REGION
#-761	7/30	11	39	56.1	2.096	126.632	62	5.3	-	91.11	MOLUCCA SEA
#-762	7/30	13	50	14.7	35.246	59.293	33	5.5	-	105.33	NORTHEASTERN IRAN
#-763	7/30	18	19	39.1	-21.455	-176.340	154	4.8	-	86.01	FIJI REGION
#-764	7/30	20	43	5.4	27.686	139.674	498	4.8	-	119.50	BONIN ISLANDS, JAPAN REGION
#-765	7/31	4	28	23.2	-6.153	150.305	64	5.1	-	91.68	NEW BRITAIN REG, P.N.G.
#-766	7/31	5	29	29.6	-18.168	-174.830	147	4.7	-	89.52	TONGA
#-767	7/31	6	52	57.8	29.703	56.812	4	5.5	-	99.58	S IRAN
#-768	8/1	7	25	3.1	-31.501	179.673	382	4.8	-	75.43	KERMADEC ISLANDS REGION
#-769	8/1	7	28	6.7	0.122	129.580	51	4.9	-	90.32	HALMAHERA, INDONESIA
#-770	8/2	14	17	15.7	62.071	145.552	21	5.3	4.9	150.77	MAGADANSKAYA OBLAST', RUSSIA
#-771	8/3	1	48	12.7	10.945	93.132	83	5.1	-	88.35	ANDAMAN ISL, INDIA REGION
#-772	8/3	5	29	18.2	-19.924	-70.357	34	5.0	-	78.08	OFFSHORE TARAPACA, CHILE
#-773	8/3	11	5	4.6	2.590	128.768	42	4.8	-	92.33	HALMAHERA, INDONESIA
#-774	8/3	19	42	13.1	-9.498	39.060	10	5.4	-	59.51	TANZANIA
#-775	8/4	0	43	7.1	6.572	126.861	81	5.1	-	95.37	MINDANAO, PHILIPPINES
#-776	8/4	4	24	33.4	-23.827	-66.521	149	5.3	-	73.18	JUJUY, ARGENTINA
#-777	8/4	4	46	21.5	-26.953	-177.148	24	5.7	5.8	80.48	SOUTH OF THE FIJI ISLANDS

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-778	8/4	10	7	12.0	-21.878	-174.980	35	5.2	-	85.86	TONGA
#-779	8/4	12	58	24.2	51.441	-178.635	27	6.2	6.2	155.08	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-780	8/4	15	34	25.3	-36.667	-73.596	33	4.8	-	63.44	OFFSHORE BIO-BIO, CHILE
#-781	8/4	21	51	27.9	51.471	-178.559	69	5.4	-	155.13	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-782	8/5	2	9	36.9	-4.886	131.092	61	4.7	-	86.18	BANDA SEA
#-783	8/5	4	52	45.4	-17.343	-70.229	81	4.7	-	80.47	SOUTHERN PERU
#-784	8/5	5	9	22.8	-6.007	150.616	39	5.2	-	91.92	NEW BRITAIN REGION, PAPUA NEW GUINEA
#-785	8/5	6	1	47.5	-37.428	-73.268	18	5.4	5.5	62.64	BIO-BIO, CHILE
#-786	8/5	6	27	16.2	-37.420	-73.265	24	5.2	-	62.65	BIO-BIO, CHILE
#-787	8/5	6	38	51.8	-37.443	-73.461	35	4.7	-	62.68	BIO-BIO, CHILE
#-788	8/5	19	4	4.5	49.522	155.440	67	5.1	-	144.46	KURIL ISLANDS
#-789	8/5	20	35	50.8	-20.036	-70.493	38	5.2	-	78.02	OFFSHORE TARAPACA, CHILE
#-790	8/6	2	43	11.7	-6.219	150.140	59	4.8	-	91.56	NEW BRITAIN REG, P.N.G.
#-791	8/6	5	3	59.2	-21.762	-179.446	592	5.2	-	85.09	FIJI REGION
#-792	8/6	5	53	53.2	-15.589	-173.790	84	4.5	-	92.24	TONGA
#-793	8/6	8	58	39.6	-7.392	128.463	57	5.5	-	82.91	KEPULAUAN BARAT DAYA, IND.
#-794	8/6	21	5	27.4	-38.220	-73.596	16	5.1	-	62.00	OFFSHORE BIO-BIO, CHILE
#-795	8/7	12	51	58.0	-13.427	167.851	38	5.2	-	90.10	VANUATU
#-796	8/8	10	23	0.4	50.719	175.612	10	5.0	-	152.56	RAT ISLANDS, ALEUTIAN ISLANDS, ALASKA
#-797	8/8	12	4	28.9	51.299	-178.544	29	5.7	5.0	154.99	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-798	8/9	3	34	15.7	-6.104	113.007	595	5.2	-	78.61	JAVA, INDONESIA
#-799	8/9	12	13	43.6	-38.541	-72.700	34	5.1	-	61.44	ARAUCANIA, CHILE
#-800	8/9	20	25	52.8	-20.897	-174.708	27	5.2	-	86.87	TONGA
#-801	8/9	22	21	44.4	13.536	92.768	32	5.4	-	90.72	ANDAMAN ISL, INDIA REGION
#-802	8/10	1	41	3.7	28.627	142.242	17	5.0	-	121.28	BONIN ISLANDS, JAPAN REGION
#-803	8/10	4	52	41.0	-14.079	-72.694	87	5.0	-	84.34	CENTRAL PERU
#-804	8/10	6	14	37.0	-17.445	167.697	37	5.3	-	86.20	VANUATU
#-805	8/10	8	2	57.0	-17.640	167.719	35	4.8	-	86.02	VANUATU
#-806	8/10	9	53	59.1	-17.692	167.691	35	5.0	-	85.96	VANUATU
#-807	8/10	11	49	18	-17.466	167.764	35	5.1	-	86.20	VANUATU

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude	Coordinates Longitude	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s	(deg)	(deg)		Mb	Ms		
#-808	8/10	12	12	45.7	-18.023	167.705	35	4.8	-	85.65	VANUATU
#-809	8/10	12	39	46.9	-17.565	167.714	35	4.8	-	86.09	VANUATU
#-810	8/10	19	5	15.5	-17.713	167.813	43	5.3	-	85.97	VANUATU
#-811	8/10	23	18	32.3	-14.454	167.257	195	5.4	-	88.95	VANUATU
#-812	8/11	2	32	25.5	-17.294	167.683	50	4.6	-	86.34	VANUATU
#-813	8/11	3	29	49.7	-17.865	167.614	35	5.2	-	85.77	VANUATU
#-814	8/11	9	6	44.8	26.837	55.749	10	4.4	-	96.63	S IRAN
#-815	8/11	23	58	2.5	-5.445	154.117	127	5.3	-	93.60	BOUGAINVILLE REG, P.N.G.
#-816	8/12	1	24	18.6	-12.021	-72.310	43	4.9	-	86.15	CENTRAL PERU
#-817	8/12	2	56	1.5	-17.936	167.864	35	4.9	-	85.77	VANUATU
#-818	8/12	8	56	2.2	-17.504	167.588	35	5.3	-	86.11	VANUATU
#-819	8/12	12	53	49.2	-17.343	167.736	35	5.2	-	86.31	VANUATU
#-820	8/14	1	32	34.1	-7.601	105.740	31	4.9	-	74.71	JAVA, INDONESIA
#-821	8/14	1	34	0.3	26.217	141.155	100	5.3	-	118.69	BONIN ISLANDS, JAPAN REGION
#-822	8/14	2	24	58.6	-17.579	168.034	10	4.6	-	86.16	VANUATU
#-823	8/14	7	30	17.0	12.349	141.490	10	6.0	6.0	105.98	MARIANA ISLANDS REGION
#-824	8/14	8	40	43.1	11.324	-62.499	157	5.0	-	104.68	OFFSHORE SUCRE, VENEZUELA
#-825	8/14	9	11	6.2	-24.661	179.730	504	4.7	-	82.09	SOUTH OF THE FIJI ISLANDS
#-826	8/14	10	36	0.5	-5.768	150.966	35	5.0	-	92.26	NEW BRITAIN REG, P.N.G.
#-827	8/14	23	1	4.3	12.243	141.446	13	6.1	6.3	105.87	MARIANA ISLANDS REGION
#-828	8/15	2	51	20.7	-22.068	-179.769	602	4.7	-	84.72	SOUTH OF THE FIJI ISLANDS
#-829	8/15	4	51	46.0	-19.110	-67.466	190	4.4	-	77.90	ORURO, BOLIVIA
#-830	8/15	7	50	36.4	-36.829	-71.087	10	5.2	-	62.54	NEUQUEN, ARGENTINA
#-831	8/15	11	53	19.1	-21.807	-174.573	10	5.0	-	86.00	TONGA
#-832	8/15	15	9	30.1	-5.708	148.337	183	5.8	-	91.44	NEW BRITAIN REGION, PAPUA NEW GUINEA
#-833	8/16	17	20	12.2	-17.417	167.816	14	5.2	-	86.26	VANUATU
#-834	8/16	18	56	11.9	-7.556	128.655	138	5.3	-	82.82	KEPULAUAN BARAT DAYA, IND.
#-835	8/16	22	19	15.7	-8.692	112.470	62	5.0	-	76.00	JAVA, INDONESIA
#-836	8/17	1	39	32.1	11.600	95.045	35	5.3	-	89.52	ANDAMAN ISL, INDIA REGION
#-837	8/17	3	22	51.1	-5.364	-80.036	66	5.2	-	94.93	NEAR COAST OF NORTHERN PERU
#-838	8/17	10	43	57.6	-30.087	-177.252	35	5.2	-	77.40	KERMADEC ISL, NEW ZEALAND
#-839	8/18	19	49	9.3	-16.121	-174.139	132	4.9	-	91.66	TONGA

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-840	8/19	3	31	33.0	-9.585	107.055	21	4.9	-	73.29	SOUTH OF JAVA, INDONESIA
#-841	8/19	22	19	20.6	11.138	95.121	35	5.0	-	89.10	ANDAMAN ISL, INDIA REGION
#-842	8/20	2	52	35.0	51.338	-178.509	50	5.1	-	155.03	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-843	8/20	8	47	37.0	-6.631	154.019	97	5.0	-	92.44	BOUGAINVILLE REG, P.N.G.
#-844	8/20	13	8	54.2	-55.790	-27.797	77	5.0	-	31.63	SOUTH SANDWICH ISL REGION
#-845	8/20	17	26	8.4	-5.357	151.024	108	4.8	-	92.67	NEW BRITAIN REG, P.N.G.
#-846	8/20	17	56	14.0	-6.594	154.242	19	5.5	6.1	92.55	BOUGAINVILLE REGION, PAPUA NEW GUINEA
#-847	8/21	0	54	18.3	53.607	162.941	36	5.2	-	150.48	OFF E CST KAMCHATKA, RUSSIA
#-848	8/21	5	42	52.9	2.220	96.715	24	5.6	5.8	81.08	SIMEULUE, INDONESIA
#-849	8/21	11	41	36.6	-8.101	110.392	10	4.7	-	75.83	JAVA, INDONESIA
#-850	8/21	12	40	45.0	-14.238	-76.252	26	4.3	-	85.33	NR CST CEN PERU
#-851	8/22	1	25	41.0	-34.757	-71.717	47	4.5	-	64.65	LIBERTADOR O'HIGGINS, CHILE
#-852	8/22	3	49	58.0	-36.532	-73.718	19	5.0	-	63.60	OFFSHORE BIO-BIO, CHILE
#-853	8/22	8	6	31.9	-21.106	-67.234	145	5.1	-	75.95	POTOSI, BOLIVA
#-854	8/23	3	46	2.5	-25.450	179.439	526	4.9	-	81.27	SOUTH OF THE FIJI ISLANDS
#-855	8/24	3	6	24.0	-8.364	120.699	182	5.0	-	79.22	FLORES REGION, INDONESIA
#-856	8/24	6	7	57.7	-6.061	133.520	45	5.3	-	85.95	KEPULAUAN ARU REG, INDONESIA
#-857	8/25	2	35	2.0	-21.172	-68.912	123	4.8	-	76.44	TARAPACA, CHILE
#-858	8/25	4	6	17.5	-49.551	117.336	10	5.1	-	40.76	W INDIAN-ANTARCTIC RIDGE
#-859	8/25	6	25	12.3	0.392	123.874	174	5.3	-	88.53	MINAHASA, SULAWESI, IND.
#-860	8/25	8	55	53.3	-0.837	124.500	41	5.4	-	87.60	MOLUCCA SEA
#-861	8/25	11	36	40.0	-27.137	-70.720	40	4.5	-	71.44	ATACAMA, CHILE
#-862	8/25	12	2	38.1	-22.529	-68.756	73	5.1	-	75.12	ANTOFAGASTA, CHILE
#-863	8/25	22	57	18.1	-21.848	-174.491	10	5.2	-	85.98	TONGA
#-864	8/26	15	8	4.6	36.118	136.758	276	5.4	-	126.11	NEAR THE WEST COAST OF HONSHU, JAPAN
#-865	8/27	0	17	6.7	-55.872	-27.700	128	5.3	-	31.54	SOUTH SANDWICH ISL REGION
#-866	8/27	4	40	57.8	-7.447	-75.142	135	5.2	-	91.39	N PERU
#-867	8/27	6	42	21.7	-6.187	146.388	109	4.9	-	90.33	E NEW GUINEA REG, P.N.G.
#-868	8/27	8	4	1.1	-5.853	152.341	59	4.6	-	92.63	NEW BRITAIN REG, P.N.G.
#-869	8/27	9	10	13.7	-55.533	-27.914	35	5.2	-	31.88	SOUTH SANDWICH ISL REGION
#-870	8/27	19	23	49.5	35.490	54.470	7	5.6	5.5	105.12	NORTHERN IRAN

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-871	8/28	7	26	48.7	4.052	126.971	41	4.6	-	93.05	KEPULAUAN TALAUD, INDONESIA
#-872	8/29	1	30	35.0	-0.105	125.071	72	4.6	-	88.49	MOLUCCA SEA
#-873	8/29	6	37	48.9	-55.814	-26.967	35	5.4	-	31.32	SOUTH SANDWICH ISL REGION
#-874	8/29	6	43	28.5	-41.789	-105.124	10	5.2	-	66.06	SOUTHERN EAST PACIFIC RISE
#-875	8/29	8	51	1.0	-37.633	-73.389	35	4.7	-	62.48	BIO-BIO, CHILE
#-876	8/29	10	2	46.0	-0.485	132.826	60	4.8	-	90.91	NEAR N COAST PAPUA, IND.
#-877	8/30	5	16	0.1	-19.291	-175.753	201	4.6	-	88.24	TONGA
#-878	8/30	12	35	57.2	-5.557	149.805	10	5.0	-	92.07	NEW BRITAIN REG, P.N.G.
#-879	8/30	23	25	40.6	-16.053	-173.274	39	5.3	-	91.88	TONGA
#-880	9/1	1	46	23.7	-6.883	150.183	59	5.0	-	90.95	NEW BRITAIN REG, P.N.G.
#-881	9/1	14	34	40.9	-17.986	167.455	35	4.8	-	85.62	VANUATU
#-882	9/1	21	37	15.2	-17.640	-178.417	536	4.8	-	89.32	FIJI REGION
#-883	9/2	0	16	40.9	12.759	92.642	30	5.1	-	89.94	ANDAMAN ISL, INDIA REGION
#-884	9/2	8	1	8.6	0.154	97.175	35	4.7	-	79.25	NIAS REGION, INDONESIA
#-885	9/2	16	12	44.5	8.309	91.768	29	4.6	-	85.44	NICOBAR ISL, INDIA REGION
#-886	9/3	2	29	10.2	-6.129	150.010	44	5.0	-	91.60	NEW BRITAIN REG, P.N.G.
#-887	9/3	4	0	16.8	-17.577	168.184	35	4.9	-	86.20	VANUATU
#-888	9/3	4	13	18.6	53.432	153.813	458	4.3	-	147.08	SEA OF OKHOTSK
#-889	9/3	4	19	13.6	-13.960	65.876	10	5.1	-	57.63	MID-INDIAN RIDGE
#-890	9/3	16	35	41.8	-43.550	172.180	10	5.3	-	62.25	SOUTH ISLAND OF NEW ZEALAND
#-891	9/3	16	52	55.2	-43.554	172.437	10	5.1	-	62.30	SOUTH ISLAND OF NEW ZEALAND
#-892	9/3	17	6	50.3	-3.659	101.922	68	5.5	-	77.15	SOUTHERN SUMATRA, INDONESIA
#-893	9/3	17	55	3.6	-43.496	172.246	5	4.1	-	62.31	SOUTH ISLAND OF NEW ZEALAND
#-894	9/3	19	6	58.8	-43.626	172.306	10	4.5	-	62.20	SOUTH ISLAND OF NEW ZEALAND
#-895	9/3	22	12	35.0	-31.675	-67.973	94	4.9	-	66.35	SAN JUAN, ARGENTINA
#-896	9/4	3	39	18.7	-2.485	138.588	35	5.1	-	91.09	PAPUA, INDONESIA
#-897	9/4	4	55	56.6	-43.541	171.977	8	5.0	-	62.21	SOUTH ISLAND OF NEW ZEALAND
#-898	9/4	6	23	52.0	-30.371	-177.742	35	4.7	-	77.03	KERMADEC ISL, NEW ZEALAND
#-899	9/4	7	49	22.1	-14.900	-75.331	44	4.7	-	84.41	NR CST CEN PERU
#-900	9/4	7	50	25.4	-7.836	-74.342	163	4.9	-	90.77	N PERU
#-901	9/4	8	52	4.1	-17.367	-173.998	69	5.9	-	90.46	TONGA
#-902	9/4	11	30	2.2	-14.508	-76.088	27	5.2	-	85.02	NEAR THE COAST OF CENTRAL PERU

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-903	9/4	11	51	58.9	-59.054	-25.485	35	5.4	-	28.35	SOUTH SANDWICH ISL REGION
#-904	9/4	17	18	1.6	-24.694	-65.389	24	4.8	-	71.99	SALTA, ARGENTINA
#-905	9/4	23	0	2.9	-38.028	49.022	16	5.1	-	31.46	SOUTHWEST INDIAN RIDGE
#-906	9/5	1	49	56.4	-16.232	167.913	234	4.7	-	87.42	VANUATU
#-907	9/5	8	20	12.3	-5.995	147.688	56	5.3	-	90.95	E NEW GUINEA REG, P.N.G.
#-908	9/5	12	19	20.2	5.975	126.622	78	4.7	-	94.72	MINDANAO, PHILIPPINES
#-909	9/5	16	6	31.8	-18.983	-67.394	142	4.9	-	77.99	ORURO, BOLIVIA
#-910	9/5	17	34	18.0	-0.598	127.442	35	5.4	-	88.88	HALMAHERA, INDONESIA
#-911	9/5	23	48	26.2	-23.735	-180.000	524	5.3	-	83.05	SOUTH OF THE FIJI ISLANDS
#-912	9/6	3	20	46.0	-37.785	-73.423	39	4.9	-	62.35	BIO-BIO, CHILE
#-913	9/6	4	2	28.1	-3.982	142.932	64	5.1	-	91.21	NR N CST NEW GUINEA, P.N.G.
#-914	9/6	9	54	31.5	-30.920	-178.070	35	5.2	-	76.43	KERMADEC ISL, NEW ZEALAND
#-915	9/6	11	24	1.1	-43.596	172.572	10	5.0	-	62.29	SOUTH ISLAND OF NEW ZEALAND
#-916	9/6	11	40	50.2	-43.573	172.005	10	5.2	-	62.19	SOUTH ISLAND OF NEW ZEALAND
#-917	9/6	13	46	25.8	-10.945	162.159	21	5.6	5.4	90.86	SOLOMON ISLANDS
#-918	9/6	17	15	36.3	-4.185	103.536	131	5.2	-	77.19	SOUTHERN SUMATRA, INDONESIA
#-919	9/6	20	58	15.4	-17.400	167.211	35	5.0	-	86.11	VANUATU
#-920	9/6	22	48	33.6	-40.143	176.657	17	5.2	-	66.45	NORTH ISLAND OF NEW ZEALAND
#-921	9/7	2	11	4.3	26.980	54.500	31	5.2	-	96.66	SOUTHERN IRAN
#-922	9/7	12	49	1.5	-14.362	-176.236	35	5.4	-	92.97	FIJI REGION
#-923	9/7	15	45	15.1	-6.567	30.781	10	4.6	-	62.68	LAKE TANGANYIKA REGION, TANZANIA
#-924	9/7	16	13	32.2	-15.880	-179.304	10	5.7	6.0	90.85	FIJI REGION
#-925	9/7	16	25	31.3	-59.031	-25.677	96	4.9	-	28.43	SOUTH SANDWICH ISL REGION
#-926	9/7	19	49	57.0	-43.437	172.590	1	5.0	-	62.44	SOUTH ISLAND OF NEW ZEALAND
#-927	9/7	19	54	29.6	-53.198	-118.068	16	5.2	-	56.64	SOUTHERN EAST PACIFIC RISE
#-928	9/8	3	5	7.8	-20.691	-179.051	553	4.5	-	86.21	FIJI REGION
#-929	9/8	8	1	20.3	-20.766	170.315	10	5.3	-	83.69	VANUATU
#-930	9/8	11	37	32.2	-20.664	169.803	10	5.9	6.2	83.66	VANUATU
#-931	9/9	4	18	49.8	-40.363	176.471	22	4.9	-	66.20	NORTH ISLAND OF NEW ZEALAND
#-932	9/9	7	28	1.9	-37.016	-73.433	16	5.8	6.0	63.07	OFFSHORE BIO-BIO, CHILE
#-933	9/9	7	42	36.8	-6.035	125.823	521	5.4	-	83.23	BANDA SEA



Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-934	9/10	7	44	44.0	-33.937	-72.322	35	4.4	-	65.60	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-935	9/11	7	12	31.7	-1.068	129.249	14	5.6	5.6	89.09	PAPUA REGION, INDONESIA
#-936	9/11	8	8	52.6	-3.084	148.336	10	4.8	-	93.91	BISMARCK SEA
#-937	9/11	8	28	24.2	-1.145	129.372	9	4.9	-	89.06	PAPUA REGION, INDONESIA
#-938	9/11	11	43	8.7	7.789	94.075	10	5.4	5.5	85.60	NICOBAR ISL, INDIA REGION
#-939	9/11	18	55	24.8	-4.262	-80.591	54	5.1	-	96.15	PERU-ECUADOR BORDER REGION
#-940	9/12	6	0	32.2	-63.467	148.006	10	5.3	-	38.44	BALLENY ISLANDS REGION
#-941	9/12	7	5	7.3	-16.821	-172.694	35	4.8	-	91.24	SAMOA ISLANDS REGION
#-942	9/12	7	40	52.4	51.479	-178.533	34	5.3	-	155.14	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-943	9/12	16	35	55.5	5.664	124.656	34	5.0	-	93.73	MINDANAO, PHILIPPINES
#-944	9/12	21	8	45.3	-29.586	-71.457	35	4.7	-	69.39	OFFSHORE COQUIMBO, CHILE
#-945	9/14	3	23	39.1	-37.168	-73.516	35	4.8	-	62.95	OFFSHORE BIO-BIO, CHILE
#-946	9/14	7	33	28.7	5.641	124.645	44	5.2	-	93.71	MINDANAO, PHILIPPINES
#-947	9/15	6	5	49.0	15.929	-93.072	96	5.1	-	119.15	CHIAPAS, MEXICO
#-948	9/15	13	43	53.6	-22.025	-179.449	606	4.8	-	84.83	SOUTH OF THE FIJI ISLANDS
#-949	9/15	18	42	57.2	5.987	126.021	83	5.0	-	94.52	MINDANAO, PHILIPPINES
#-950	9/16	0	0	21.3	-30.933	-65.555	167	4.9	-	66.26	CORDOBA, ARGENTINA
#-951	9/16	1	54	39.9	-16.058	-173.861	80	5.6	-	91.77	TONGA
#-952	9/16	15	36	2.1	5.756	123.876	39	4.8	-	93.54	CELEBES SEA
#-953	9/17	3	25	29.0	-21.566	-67.054	168	5.3	-	75.46	POTOSI, BOLIVA
#-954	9/17	5	52	3.2	-33.615	-71.994	25	4.8	-	65.80	OFFSHORE VALPARAISO, CHILE
#-955	9/17	6	52	43.6	-37.506	-73.599	32	4.8	-	62.66	BIO-BIO, CHILE
#-956	9/17	11	10	19.9	-16.350	-172.367	9	4.9	-	91.76	SAMOA ISLANDS REGION
#-957	9/17	19	21	15.1	36.438	70.787	220	5.9	-	108.03	HINDU KUSH REGION, AFGHANISTAN
#-958	9/17	19	34	7.5	3.677	126.542	48	5.2	-	92.55	KEPULAUAN TALAUD, INDONESIA
#-959	9/17	22	19	46.6	-21.214	-174.398	51	4.8	-	86.61	TONGA
#-960	9/18	14	29	14.1	-17.331	-178.851	524	5.0	-	89.53	FIJI REGION
#-961	9/20	3	25	29.0	-28.085	-66.515	188	4.7	-	69.21	CATAMARCA, ARGENTINA
#-962	9/20	5	42	56.4	-33.640	-72.001	27	5.3	-	65.78	OFFSHORE VALPARAISO, CHILE
#-963	9/20	13	44	43.0	-37.963	-75.062	34	4.7	-	62.67	OFF COAST OF BIO-BIO, CHILE
#-964	9/22	6	54	0.3	-16.121	179.889	484	4.5	-	90.44	FIJI

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-965	9/22	8	0	14.3	-13.399	-76.149	49	5.9	5.1	86.09	NEAR COAST OF CENTRAL PERU
#-966	9/22	15	54	40.7	-23.755	-64.964	18	4.3	-	72.73	JUJUY, ARGENTINA
#-967	9/22	16	9	58.5	-21.192	-177.867	413	4.2	-	85.97	FIJI REGION
#-968	9/23	5	28	35.5	52.231	179.760	168	5.5	-	155.22	RAT ISLANDS, ALEUTIAN ISLANDS, ALASKA
#-969	9/23	12	53	9.4	-5.910	151.656	40	5.5	-	92.35	NEW BRITAIN REGION, PAPUA NEW GUINEA
#-970	9/23	16	36	18.3	-34.895	-71.620	50	5.3	-	64.49	MAULE, CHILE.
#-971	9/23	17	13	3.8	54.451	163.107	14	5.4	-	151.21	OFF E CST KAMCHATKA, RUSSIA
#-972	9/24	19	1	32.4	-7.783	-74.348	151	5.7	-	90.82	NORTHERN PERU
#-973	9/24	23	11	26.4	-22.457	179.210	571	4.4	-	84.13	SOUTH OF THE FIJI ISLANDS
#-974	9/26	0	23	25.2	-14.375	167.816	59	5.1	-	89.18	VANUATU
#-975	9/26	5	29	51.5	-40.398	-72.870	61	5.1	-	59.77	LOS LAGOS, CHILE
#-976	9/26	5	33	31.4	5.747	126.056	148	5.3	-	94.31	MINDANAO, PHILIPPINES
#-977	9/26	6	20	2.0	-24.189	-70.251	28	4.7	-	74.05	ANTOFAGASTA, CHILE
#-978	9/26	6	44	36.7	-14.344	167.881	74	5.2	-	89.23	VANUATU
#-979	9/26	9	26	22.1	-12.637	166.736	144	4.9	-	90.55	SANTA CRUZ ISLANDS
#-980	9/26	9	34	15.5	-4.487	152.032	189	4.8	-	93.82	NEW BRITAIN REG, P.N.G.
#-981	9/26	10	16	15.0	-21.155	-68.130	92	5.1	-	76.2	POTOSI, BOLIVA
#-982	9/26	11	8	44.4	-5.580	146.459	95	5.4	-	90.92	EASTERN NEW GUINEA REG, PAPUA NEW GUINEA
#-983	9/26	12	12	41.7	-5.312	133.928	30	6.1	5.8	86.80	KEPULAUAN KAI, INDONESIA
#-984	9/26	17	20	34.0	-21.032	-178.874	551	4.8	-	85.92	FIJI REGION
#-985	9/27	0	45	44.8	-18.066	-68.992	146	4.6	-	79.38	ORURO, BOLIVIA
#-986	9/27	14	1	16.6	-21.871	170.895	156	4.7	-	82.77	SOUTHEAST OF LOYALTY ISLANDS
#-987	9/27	16	49	49.9	-20.967	-179.145	628	4.7	-	85.93	FIJI REGION
#-988	9/27	19	18	14.0	-22.704	-175.412	97	5.0	-	84.97	TONGA REGION
#-989	9/27	20	35	30.8	-14.876	-75.392	75	4.8	-	84.45	NEAR COAST OF CENTRAL PERU
#-990	9/28	1	48	15.7	-29.385	-71.034	62	5.1	-	69.44	COQUIMBO, CHILE
#-991	9/28	9	37	46.3	-65.339	178.291	10	5.1	-	42.68	BALLENY ISLANDS REGION
#-992	9/28	17	41	51.2	-30.234	-69.270	89	4.5	-	68.10	SAN JUAN, ARGENTINA
#-993	9/28	23	48	46.2	-22.812	-175.294	63	5.2	-	84.88	TONGA REGION
#-994	9/29	4	14	48.2	-36.687	177.018	300	5.3	-	69.86	OFF E COAST OF N ISL, N.Z.
#-995	9/29	7	59	56.3	37.275	139.877	5	5.7	5.1	128.26	EASTERN HONSHU, JAPAN

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-996	9/29	11	33	32.2	4.949	94.715	57	5.2	-	83.08	OFF W CST N SUMATRA
#-997	9/29	16	29	50.6	-34.657	-71.530	46	4.9	-	64.69	LIBERTADOR O'HIGGINS, CHILE
#-998	9/29	18	49	36.1	-15.491	-172.276	35	5.4	-	92.62	SAMOA ISLANDS REGION
#-999	9/29	19	6	49.2	-7.288	129.164	137	5.2	-	83.25	KEPULAUAN BABAR, INDONESIA
#-1000	9/29	21	3	26.6	-4.858	133.682	18	5.2	-	87.13	NEAR S COAST PAPUA, IND.
#-1001	9/30	1	2	46.0	-37.991	-72.983	40	4.6	-	62.03	ARAUCANIA, CHILE
#-1002	9/30	1	7	38.9	-5.203	133.883	10	5.4	4.8	86.88	KEPULAUAN KAI, INDONESIA
#-1003	9/30	2	11	2.8	-4.932	133.861	10	5.6	5.3	87.13	NEAR S COAST PAPUA, IND.
#-1004	9/30	9	54	10.0	5.095	94.791	52	5.5	-	83.24	NORTHERN SUMATRA, INDONESIA
#-1005	9/30	13	32	22.6	-5.129	152.575	35	5.4	-	93.39	NEW BRITAIN REG, P.N.G.
#-1006	9/30	23	30	45.8	-7.923	-71.316	623	5.0	-	89.69	AMAZONAS, BRAZIL
#-1007	10/1	1	24	26.5	-10.927	113.782	18	5.5	-	74.37	SOUTH OF JAVA, INDONESIA
#-1008	10/1	5	0	18.5	5.276	125.417	188	4.9	-	93.64	MINDANAO, PHILIPPINES
#-1009	10/1	7	26	9.0	-17.595	-173.072	10	5.1	-	90.41	TONGA
#-1010	10/1	7	26	20.7	-18.872	169.584	286	5.0	-	85.32	VANUATU
#-1011	10/1	9	9	35.3	5.863	125.595	98	4.8	-	94.25	MINDANAO, PHILIPPINES
#-1012	10/1	10	51	40.1	-58.874	-25.151	56	4.7	-	28.37	SOUTH SANDWICH ISL REGION
#-1013	10/2	2	33	58.5	-21.755	-174.547	35	5.0	-	86.06	TONGA
#-1014	10/2	2	54	22.4	-17.442	168.045	56	5.0	-	86.30	VANUATU
#-1015	10/2	6	31	52.7	-19.064	168.966	180	4.7	-	84.98	VANUATU
#-1016	10/2	11	29	5.5	-6.552	128.758	238	5.4	-	83.79	BANDA SEA
#-1017	10/3	4	30	15.9	-47.342	100.340	10	5.0	5.2	36.58	SOUTHEAST INDIAN RIDGE
#-1018	10/3	6	29	34.7	-0.891	120.530	44	4.8	-	86.14	MINAHASA, SULAWESI, INDONESIA
#-1019	10/3	7	31	4.6	-16.684	167.511	39	4.9	-	86.88	VANUATU
#-1020	10/3	13	4	43.0	-5.802	127.483	19	5.0	-	84.04	BANDA SEA
#-1021	10/3	15	21	2.3	35.113	26.460	38	5.2	-	104.54	CRETE, GREECE
#-1022	10/3	16	42	48.4	-32.518	-179.453	105	5.1	-	74.61	SOUTH OF KERMADEC ISLANDS
#-1023	10/4	5	11	33.5	-14.828	-75.875	49	4.9	-	84.65	NEAR COAST OF CENTRAL PERU
#-1024	10/4	9	21	51.0	-43.509	172.472	10	5.2	-	62.35	SOUTH ISLAND OF NEW ZEALAND
#-1025	10/4	13	28	38.8	24.269	125.151	32	6.2	6.0	111.21	SOUTHWESTERN RYUKYU ISLANDS, JAPAN
#-1026	10/4	14	35	26.8	48.019	154.010	71	5.1	-	142.68	KURIL ISLANDS
#-1027	10/4	15	52	41.9	-59.495	149.385	10	4.9	-	42.18	WEST OF MACQUARIE ISLAND

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-1028	10/4	16	43	17.8	-36.305	-73.298	38	5.0	-	63.69	OFFSHORE BIO-BIO, CHILE
#-1029	10/5	3	36	47.8	-20.857	-177.768	467	5.2	-	86.31	FIJI REGION
#-1030	10/5	3	44	33.4	-36.111	178.648	147	4.3	-	70.75	OFF E CST N ISL, N.Z.
#-1031	10/5	5	45	47.4	25.459	141.126	10	5.1	-	117.98	VOLCANO ISL, JAPAN REGION
#-1032	10/5	8	26	28.1	6.764	123.687	602	5.0	-	94.41	MORO GULF, MINDANAO, PHILIPPINES
#-1033	10/5	9	44	47.8	-18.907	-176.085	241	4.8	-	88.55	FIJI REGION
#-1034	10/5	19	22	4.4	-3.423	150.975	35	5.1	-	94.47	NEW IRELAND REG, P.N.G.
#-1035	10/5	19	34	23.3	-8.537	118.540	166	4.4	-	78.29	SUMBAWA REGION, INDONESIA
#-1036	10/5	20	29	50.7	-4.771	153.332	75	5.3	-	93.98	NEW IRELAND REG, P.N.G.
#-1037	10/5	23	42	40.6	-57.269	-24.507	57	5.2	-	29.34	SOUTH SANDWICH ISL REGION
#-1038	10/6	17	49	43.8	29.750	69.555	10	5.2	-	101.27	PAKISTAN
#-1039	10/6	21	7	12.2	-6.054	150.879	35	5.1	-	91.96	NEW BRITAIN REG, P.N.G.
#-1040	10/7	1	42	51.9	0.947	124.405	181	5.0	-	89.24	MINAHASA, SULAWESI, IND.
#-1041	10/8	3	26	14.0	51.459	-175.390	21	6.2	6.3	156.12	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-1042	10/8	3	49	11.6	51.457	-175.279	35	5.9	-	156.16	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-1043	10/8	4	19	16.8	51.451	-175.341	35	5.3	-	156.13	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-1044	10/8	5	43	7.7	2.842	128.222	116	5.9	-	92.37	HALMAHERA, INDONESIA
#-1045	10/8	20	16	55.4	-13.880	-49.218	10	5.0	-	76.42	TOCANTINS-GOIAS BORDER REGION, BRAZIL
#-1046	10/8	23	32	26.2	51.447	-175.156	43	5.0	-	156.19	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-1047	10/9	1	54	4.7	10.206	-84.301	92	5.5	-	111.04	COSTA RICA
#-1048	10/9	14	4	47.9	-2.656	-76.604	123	5.3	-	96.40	PERU-ECUADOR BORDER REGION
#-1049	10/9	19	4	52.3	38.197	22.769	27	5.1	-	107.88	GREECE
#-1050	10/10	5	48	19.7	-23.320	-179.830	550	4.8	-	83.49	SOUTH OF THE FIJI ISLANDS
#-1051	10/10	6	8	15.4	51.432	-175.217	37	5.4	-	156.15	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-1052	10/11	2	7	45.5	-8.254	120.257	41	4.5	-	79.17	FLORES REGION, INDONESIA
#-1053	10/11	8	35	31.8	-33.798	-71.750	38	4.9	-	65.55	VALPARAISO, CHILE
#-1054	10/12	4	20	34.4	2.642	122.155	540	4.8	-	90.02	CELEBES SEA
#-1055	10/12	7	1	3.7	-21.136	-68.529	97	4.7	-	76.35	ANTOFAGASTA, CHILE
#-1056	10/13	23	32	51.6	-13.850	167.798	75	4.9	-	89.68	VANUATU
#-1057	10/14	10	3	31.6	-10.306	42.832	15	5.2	-	58.76	COMOROS REGIO

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-1058	10/14	13	58	53.8	42.337	142.902	35	5.4	-	133.82	HOKKAIDO, JAPAN REGION
#-1059	10/15	12	43	55.3	3.645	95.446	49	5.1	-	82.05	OFF WEST COAST OF N SUMATRA
#-1060	10/16	12	3	7.9	-34.986	-72.131	33	4.8	-	64.57	MAULE, CHILE
#-1061	10/16	13	27	46.2	-20.420	-173.939	10	5.7	5.7	87.48	TONGA
#-1062	10/16	13	51	41.1	-55.569	158.372	20	5.2	-	47.87	MACQUARIE ISLAND REGION
#-1063	10/16	19	51	51.1	6.639	94.333	93	5.7	-	84.58	NICOBAR ISLANDS, INDIA REGION
#-1064	10/16	23	59	46.4	-55.488	-28.057	10	5.2	-	31.96	SOUTH SANDWICH ISL REGION
#-1065	10/17	5	54	8.9	-22.517	-175.185	36	4.8	-	85.19	TONGA REGION
#-1066	10/17	8	27	49.9	-11.713	-72.231	10	5.2	-	86.42	CENTRAL PERU
#-1067	10/19	0	24	5.0	-41.301	-90.345	11	5.0	-	63.54	SOUTHEAST OF EASTER ISLAND
#-1068	10/19	8	6	50.6	-63.508	-166.853	10	4.9	-	46.23	PACIFIC-ANTARCTIC RIDGE
#-1069	10/19	10	6	12.8	55.143	160.167	35	5.0	-	150.70	KAMCHATKA PENINSULA, RUSSIA
#-1070	10/19	20	39	40.3	-20.326	-173.797	35	5.6	-	87.59	TONGA
#-1071	10/20	11	27	26.4	-31.329	-179.971	404	4.4	-	75.67	KERMADEC ISLANDS REGION
#-1072	10/20	14	35	57.6	-20.401	-173.735	35	5.2	-	87.53	TONGA
#-1073	10/20	14	52	32.2	-19.747	168.048	41	4.5	-	84.08	VANUATU
#-1074	10/20	15	29	34.2	1.860	127.216	105	4.6	-	91.09	HALMAHERA, INDONESIA
#-1075	10/21	2	49	56.0	-34.737	-73.721	10	5.9	5.5	65.28	OFF COAST OF LIBERTADOR O'HIGGINS, CHILE
#-1076	10/21	4	45	43.1	-34.742	-72.974	28	4.8	-	65.05	OFFSHORE MAULE, CHILE
#-1077	10/21	7	3	50.1	4.569	124.569	351	4.8	-	92.68	CELEBES SEA
#-1078	10/21	7	25	43.6	-25.807	-177.624	154	5.0	-	81.51	SOUTH OF THE FIJI ISLANDS
#-1079	10/21	11	0	35.0	-6.176	150.840	59	5.3	-	91.83	NEW BRITAIN REG, P.N.G.
#-1080	10/21	11	50	32.3	-33.377	-178.618	16	5.2	-	73.94	SOUTH OF KERMADEC ISLANDS
#-1081	10/21	12	9	43.8	1.158	126.189	67	4.9	-	90.07	MOLUCCA SEA
#-1082	10/21	13	56	26.9	-20.178	-173.951	10	5.0	-	87.71	TONGA
#-1083	10/22	0	4	22.6	-5.854	130.058	206	4.8	-	84.91	BANDA SEA
#-1084	10/22	2	52	54.4	-20.344	-173.862	36	5.1	-	87.57	TONGA
#-1085	10/22	4	18	59.1	-5.329	146.870	285	4.9	-	91.30	E NEW GUINEA REG, P.N.G.
#-1086	10/22	12	11	10.3	-18.703	-177.749	612	4.6	-	88.42	FIJI REGION
#-1087	10/22	19	31	37.8	-20.827	-68.331	132	5.4	-	76.58	POTOSI, BOLIVIA
#-1088	10/23	0	54	28.0	-20.291	-173.818	45	5.1	-	87.63	TONGA
#-1089	10/23	1	38	14.0	-29.593	-71.112	44	5.2	-	69.27	COQUIMBO, CHILE

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-1090	10/23	3	9	15.1	-56.882	-141.947	10	4.8	-	54.11	PACIFIC-ANTARCTIC RIDGE
#-1091	10/23	5	58	27.9	-37.711	-73.349	15	5.7	5.1	62.40	BIO-BIO, CHILE
#-1092	10/23	11	8	22.5	4.713	35.789	10	4.8	-	73.76	LAKE RUDOLF REG, KENYA-SUDAN
#-1093	10/23	15	47	40.6	-36.851	-71.873	35	4.7	-	62.76	BIO-BIO, CHILE
#-1094	10/23	18	37	56.0	9.274	125.736	43	5.0	-	97.49	MINDANAO, PHILIPPINES
#-1095	10/24	8	20	26.0	-47.228	165.541	35	4.7	-	57.28	OFF W CST S ISL, NZ
#-1096	10/24	9	11	12.7	-19.715	168.067	78	5.2	-	84.12	VANUATU
#-1097	10/24	9	26	28.2	-20.223	-177.542	478	4.7	-	86.98	FIJI REGION
#-1098	10/24	10	46	56.5	-22.049	-66.760	163	4.5	-	74.91	POTOSI, BOLIVA
#-1099	10/24	23	15	49.9	-5.462	154.225	132	5.4	-	93.62	BOUGAINVILLE REG, P.N.G.
#-1100	10/25	7	45	20.8	-34.924	-72.564	25	4.9	-	64.75	OFFSHORE MAULE, CHILE
#-1101	10/25	14	42	22.7	-3.484	100.114	21	6.5	7.3	76.73	KEPULAUAN MENTAWAI REGION, INDONESIA
#-1102	10/25	22	59	53.6	-3.254	100.471	19	5.8	5.9	77.06	KEPULAUAN MENTAWAI REGION, INDONESIA
#-1103	10/26	2	8	28.9	-41.541	-85.755	10	5.4	5.0	62.21	WEST CHILE RISE
#-1104	10/26	5	16	54.9	-21.916	-179.484	580	4.8	-	84.93	FIJI REGION
#-1105	10/26	10	51	25.6	-3.762	99.769	30	5.3	-	76.36	SW OF SUMATRA, INDONESIA
#-1106	10/26	11	19	45.4	-7.598	128.320	198	4.8	-	82.66	KEPULAUAN BARAT DAYA, IND.
#-1107	10/26	11	33	21.2	-2.499	99.923	26	5.3	-	77.60	KEPULAUAN MENTAWAI REG, IND.
#-1108	10/27	0	4	3.0	-3.490	99.634	31	5.1	-	76.57	SW OF SUMATRA, INDONESIA
#-1109	10/27	0	17	30.4	-3.523	99.583	30	5.0	-	76.52	SW OF SUMATRA, INDONESIA
#-1110	10/27	18	46	2.7	-60.427	-24.488	34	5.4	-	27.01	SOUTH SANDWICH ISL REGION
#-1111	10/27	20	9	2.4	-18.967	-69.462	86	4.8	-	78.69	TARAPACA, CHILE
#-1112	10/28	3	16	16.1	-6.448	130.021	167	5.1	-	84.34	BANDA SEA
#-1113	10/28	3	17	25.0	-5.553	153.696	36	5.7	5.6	93.36	NEW IRELAND REGION, PAPUA NEW GUINEA
#-1114	10/29	2	25	2.3	-12.534	63.299	10	5.2	-	58.58	SOUTH INDIAN OCEAN
#-1115	10/29	14	11	53.3	-29.472	-71.547	35	5.0	-	69.52	OFFSHORE COQUIMBO, CHILE
#-1116	10/29	16	30	27.7	23.423	142.878	58	5.2	-	116.74	VOLCANO ISL, JAPAN REGION
#-1117	10/30	7	7	22.0	-20.887	-178.571	598	4.9	-	86.12	FIJI REGION
#-1118	10/30	10	39	24.5	-24.960	179.635	501	5.0	-	81.78	SOUTH OF THE FIJI ISLANDS
#-1119	10/30	17	45	46.6	-7.750	122.471	264	4.9	-	80.43	FLORES SEA
#-1120	10/31	7	10	40.8	-33.652	-71.856	30	5.3	-	65.72	OFFSHORE VALPARAISO, CHILE

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-1121	10/31	9	58	10.2	-23.857	179.954	527	5.0	-	82.92	SOUTH OF THE FIJI ISLANDS
#-1122	10/31	19	23	44.8	-6.188	130.535	150	4.8	-	84.77	BANDA SEA
#-1123	11/2	6	39	56.3	-5.399	151.540	47	5.5	5.5	92.80	NEW BRITAIN REGION, PAPUA NEW GUINEA
#-1124	11/2	10	38	25.3	-36.491	-71.530	69	4.7	-	62.99	BIO-BIO, CHILE
#-1125	11/2	23	8	7.7	-19.293	168.560	47	5.5	5.0	84.65	VANUATU
#-1126	11/3	3	1	50.0	-6.451	103.927	42	5.4	-	75.18	SOUTHWEST OF SUMATRA, INDONESIA
#-1127	11/3	5	11	34.2	-7.559	126.494	39	4.9	-	82.04	KEPULAUAN BARAT DAYA, IND.
#-1128	11/3	9	9	54.3	-2.867	128.866	35	4.5	-	87.27	CERAM SEA, INDONESIA
#-1129	11/3	10	45	22.8	-13.617	-76.073	38	5.0	-	85.86	NEAR THE COAST OF CENTRAL PERU
#-1130	11/3	11	4	0.6	-58.846	158.311	10	5.1	-	44.90	MACQUARIE ISLAND REGION
#-1131	11/3	14	10	26.3	2.536	126.244	62	5.5	-	91.38	MOLUCCA SEA
#-1132	11/3	23	59	20.1	51.168	-176.561	47	5.0	-	155.51	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-1133	11/4	1	5	47.6	51.241	-176.470	43	5.0	-	155.6	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-1134	11/4	3	48	49.1	-15.274	167.404	210	5.0	-	88.20	VANUATU
#-1135	11/4	8	59	7.3	-8.012	104.624	31	4.8	-	73.94	SW OF SUMATRA, INDONESIA
#-1136	11/4	16	48	32.1	-60.693	-24.809	31	5.1	-	26.94	SOUTH SANDWICH ISL REGION
#-1137	11/5	1	17	23.5	-17.591	167.827	35	5.1	-	86.09	VANUATU
#-1138	11/5	4	38	1.9	2.336	127.014	54	4.6	-	91.47	MOLUCCA SEA
#-1139	11/5	4	53	2.0	-36.135	-72.558	29	4.6	-	63.63	BIO-BIO, CHILE
#-1140	11/5	10	14	3.4	35.929	139.846	53	5.0	-	127.04	NEAR S COAST HONSHU, JAPAN
#-1141	11/5	16	40	41.5	12.773	123.045	36	5.6	-	99.79	MASBATE REGION, PHILIPPINES
#-1142	11/6	12	15	42.8	-18.825	-69.217	109	5.2	-	78.74	TARAPACA, CHILE
#-1143	11/6	19	29	28.5	-62.103	154.771	10	5.0	-	41.21	BALLENY ISLANDS REGION
#-1144	11/6	20	57	9.0	46.626	149.626	152	5.2	-	139.93	KURIL ISLANDS
#-1145	11/7	11	31	19.9	-22.098	-179.662	600	4.6	-	84.72	SOUTH OF THE FIJI ISLANDS
#-1146	11/8	21	40	10.7	-4.220	142.136	115	5.6	-	90.71	NEW GUINEA, PAPUA NEW GUINEA
#-1147	11/9	2	9	54.4	-15.112	-71.412	135	4.6	-	82.95	S PERU
#-1148	11/9	7	3	30.3	-8.654	110.009	63	5.4	-	75.18	JAVA, INDONESIA
#-1149	11/9	11	5	32.5	-9.549	119.278	60	4.7	-	77.61	SUMBA REGION, INDONESIA
#-1150	11/9	11	16	50.0	-1.875	99.164	45	5.1	-	77.95	KEPULAUAN MENTAWAI REGION, INDONESIA
#-1151	11/9	12	39	0.0	-8.143	107.240	54	5.2	-	74.71	JAVA, INDONESIA

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-1152	11/9	16	2	5.5	-24.232	-66.757	161	4.4	-	72.88	SALTA, ARGENTINA
#-1153	11/10	1	23	31.0	-36.438	-73.362	7	5.1	-	63.59	OFFSHORE BIO-BIO, CHILE
#-1154	11/10	3	9	27.0	0.463	126.125	54	5.2	-	89.40	MOLUCCA SEA
#-1155	11/10	4	5	24.7	-45.475	96.409	12	6.0	6.5	36.78	SOUTHEAST INDIAN RIDGE
#-1156	11/10	11	43	43.5	-28.944	-178.373	182	5.2	-	78.30	KERMADEC ISLANDS REGION
#-1157	11/11	3	34	6.6	1.459	126.439	51	5.1	-	90.44	MOLUCCA SEA
#-1158	11/11	18	47	22.7	-59.508	-26.195	91	5.4	-	28.27	SOUTH SANDWICH ISLANDS REGION
#-1159	11/11	20	29	58.9	-6.304	154.707	46	5.7	5.4	92.97	BOUGAINVILLE REGION, PAPUA NEW GUINEA
#-1160	11/12	2	14	46.1	-6.545	130.045	168	5.8	-	84.26	BANDA SEA
#-1161	11/12	6	31	11.6	54.641	161.367	37	5.0	-	150.74	NR E COAST KAMCHATKA, RUSSIA
#-1162	11/12	9	46	18.8	52.803	-169.806	37	5.1	-	158.98	FOX ISLANDS, ALEUTIAN ISLANDS, ALASKA
#-1163	11/12	19	1	30.0	-35.945	-102.233	10	5.4	5.3	71.22	SOUTHEAST OF EASTER ISLAND
#-1164	11/12	21	16	41.4	-30.140	-177.199	4	5.2	-	77.36	KERMADEC ISL, NEW ZEALAND
#-1165	11/13	4	35	39.5	17.879	-68.530	95	5.6	-	112.92	DOMINICAN REPUBLIC REGION
#-1166	11/13	23	3	28.4	-6.958	68.104	11	4.9	-	64.92	CHAGOS ARCHIPELAGO REGION
#-1167	11/14	6	32	28.0	11.989	43.955	10	5.4	-	81.07	NEAR THE COAST OF DJIBOUTI
#-1168	11/14	7	27	40.7	12.534	43.977	23	4.9	-	81.62	NEAR THE COAST OF YEMEN
#-1169	11/14	10	37	25.6	11.750	44.080	10	4.5	-	80.84	GULF OF ADEN
#-1170	11/14	11	14	11.6	11.647	44.044	10	4.5	-	80.73	GULF OF ADEN
#-1171	11/14	14	33	19.4	12.004	43.853	10	5.2	-	81.09	NEAR THE COAST OF YEMEN
#-1172	11/14	14	55	25.7	12.068	43.784	14	5.1	-	81.15	NEAR THE COAST OF YEMEN
#-1173	11/14	19	1	16.0	-16.533	-173.274	27	5.2	-	91.41	TONGA
#-1174	11/14	22	22	30.6	11.955	43.629	10	5.1	-	81.03	NEAR THE COAST OF DJIBOUTI
#-1175	11/14	22	59	53.0	-22.704	-66.642	207	4.8	-	74.26	JUJUY, ARGENTINA
#-1176	11/16	9	8	40.5	51.963	157.858	22	5.0	-	147.34	NR E COAST KAMCHATKA, RUSSIA
#-1177	11/16	18	44	38.4	-3.016	68.146	10	5.3	-	68.80	CHAGOS ARCHIPELAGO REGION
#-1178	11/16	20	6	38.5	-5.889	130.703	118	5.8	-	85.11	BANDA SEA
#-1179	11/17	13	39	24.6	-12.167	165.906	40	5.1	-	90.77	SANTA CRUZ IS
#-1180	11/17	15	53	31.6	-7.798	129.454	23	5.6	5.7	82.88	KEPULAUAN BABAR, INDONESIA
#-1181	11/17	19	38	1.2	-15.658	-74.967	23	5.1	-	83.58	NEAR COAST OF SOUTHERN PERU
#-1182	11/18	1	31	53.3	-15.656	-74.714	35	5.0	-	83.50	NEAR THE COAST OF SOUTHERN PERU



Table 2. Continued.

No.	Date	Origin time UTC			Geographic	Coordinates	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s	Latitude (deg)	Longitude (deg)		Mb	Ms		
#-1183	11/18	5	5	37.5	-4.960	126.628	24	4.9	-	84.52	BANDA SEA
#-1184	11/18	17	33	9.3	-27.575	-178.446	279	4.9	-	79.62	KERMADEC ISLANDS REGION
#-1185	11/19	21	55	15.5	1.156	100.111	213	5.5	-	81.13	NORTHERN SUMATRA, INDONESIA
#-1186	11/20	2	9	33.5	-37.939	-73.714	27	5.2	-	62.30	OFFSHORE BIO-BIO, CHILE
#-1187	11/20	6	12	4.0	-17.183	168.509	242	5.2	-	86.67	VANUATU
#-1188	11/20	10	14	0.3	51.623	-176.935	41	5.2	-	155.78	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-1189	11/20	20	40	23.4	-20.443	-174.026	10	5.1	-	87.44	TONGA
#-1190	11/21	11	32	3.7	51.206	150.852	477	4.7	-	144.21	SEA OF OKHOTSK
#-1191	11/21	12	31	45.4	23.819	121.664	47	5.6	5.1	109.58	TAIWAN
#-1192	11/21	22	51	41.2	6.482	95.775	263	4.7	-	84.86	NICOBAR ISL, INDIA REGION
#-1193	11/22	5	9	51.2	8.124	-39.428	5	5.4	-	93.49	CENTRAL MID-ATLANTIC RIDGE
#-1194	11/22	14	12	59.6	-18.783	169.282	269	5.1	-	85.33	VANUATU
#-1195	11/22	16	18	43.4	-33.636	-178.930	10	5.6	5.9	73.62	SOUTH OF THE KERMADEC ISLANDS
#-1196	11/23	5	2	22.7	-31.170	-70.435	100	4.8	-	67.59	SAN JUAN, ARGENTINA
#-1197	11/23	12	53	0.9	-17.431	167.854	96	4.8	-	86.26	VANUATU
#-1198	11/23	15	55	15.1	-55.729	146.758	17	5.0	-	44.76	WEST OF MACQUARIE ISLAND
#-1199	11/23	20	23	7.8	-22.640	-174.982	10	5.3	-	85.11	TONGA REGION
#-1200	11/24	1	34	33.4	-34.100	-178.640	60	4.8	-	73.23	SOUTH OF KERMADEC ISLANDS
#-1201	11/24	12	34	16.9	-18.902	169.320	248	5.1	-	85.23	VANUATU
#-1202	11/24	13	36	21.2	12.310	44.080	10	4.6	-	81.40	NEAR THE COAST OF YEMEN
#-1203	11/24	14	1	18.3	16.339	-98.628	23	5.0	-	121.11	OFFSHORE GUERRERO, MEXICO
#-1204	11/24	17	48	54.0	-15.620	167.694	138	5.0	-	87.95	VANUATU
#-1205	11/24	18	35	53.2	-24.348	-179.618	530	5.1	-	82.53	S OF FIJI ISL.
#-1206	11/24	22	8	40.9	-14.390	-71.410	61	4.9	-	83.63	CENTRAL PERU
#-1207	11/25	0	26	20.8	-20.567	-177.748	485	4.8	-	86.60	FIJI REGION
#-1208	11/25	3	27	29.5	-32.178	-70.009	101	4.9	-	66.52	SAN JUAN, ARGENTINA
#-1209	11/25	3	28	7.2	11.843	143.571	33	5.1	-	106.25	SOUTH OF THE MARIANA ISLANDS
#-1210	11/25	4	19	40.8	0.453	-79.906	38	5.1	-	100.40	NEAR THE COAST OF ECUADOR
#-1211	11/25	4	54	49.9	-25.067	-69.681	72	4.9	-	73.05	ANTOFAGASTA, CHILE
#-1212	11/25	8	28	53.4	-55.516	-28.463	40	4.8	-	32.08	S SANDWICH ISL REGION
#-1213	11/25	16	15	33.9	-22.750	171.444	58	5.0	-	82.06	SOUTHEAST OF LOYALTY ISLANDS
#-1214	11/26	6	6	10.1	-23.472	-66.534	186	4.8	-	73.51	JUJUY, ARGENTINA

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-1215	11/26	12	33	42.5	28.090	52.575	10	5.7	5.2	97.61	SOUTHERN IRAN
#-1216	11/26	17	36	12.8	-3.355	131.017	21	5.7	5.7	87.59	CERAM SEA, INDONESIA
#-1217	11/26	20	4	24.9	-3.541	131.156	10	4.4	-	87.46	CERAM SEA, INDONESIA
#-1218	11/26	20	9	19.8	-3.369	131.064	5	4.7	-	87.59	CERAM SEA, INDONESIA
#-1219	11/26	22	12	28.9	-2.661	129.203	31	5.2	-	87.59	SERAM, INDONESIA
#-1220	11/27	7	21	12.8	-20.339	169.658	179	4.8	-	83.93	VANUATU
#-1221	11/27	18	11	13.3	3.859	128.063	57	5.9	-	93.26	NORTH OF HALMAHERA, INDONESIA
#-1222	11/27	19	29	38.3	55.109	160.388	18	5.2	-	150.75	KAMCHATKA PENINSULA, RUSSIA
#-1223	11/27	20	48	37.5	3.838	127.874	111	5.1	-	93.18	KEPULAUAN TALAUD, INDONESIA
#-1224	11/28	3	37	18.4	-33.839	-72.236	14	4.6	-	65.66	OFFSHORE VALPARAISO, CHILE
#-1225	11/28	8	19	46.0	-34.537	-71.713	27	5.3	-	64.86	LIBERTADOR O'HIGGINS, CHILE
#-1226	11/28	16	47	38.5	-24.126	179.097	546	5.1	-	82.48	SOUTH OF THE FIJI ISLANDS
#-1227	11/28	19	45	20.3	-6.569	130.575	114	5.2	-	84.43	BANDA SEA
#-1228	11/29	1	37	12.5	-17.872	-13.715	10	5.1	-	60.46	SOUTHERN MID-ATLANTIC RIDGE
#-1229	11/29	5	49	50.2	-5.086	145.185	74	4.9	-	90.95	EASTERN NEW GUINEA REG, PAPUA NEW GUINEA
#-1230	11/29	10	27	19.5	-8.103	106.817	36	5.0	-	74.60	SOUTH OF JAVA, INDONESIA
#-1231	11/29	11	56	37.4	-35.104	-71.778	67	4.7	-	64.35	MAULE, CHILE.
#-1232	11/29	15	2	11.2	33.771	141.505	42	5.1	-	125.69	OFF E COAST OF HONSHU, JAPAN
#-1233	11/29	20	11	51.3	-16.591	-174.195	124	4.9	-	91.18	TONGA
#-1234	11/30	0	49	43.0	-17.586	-174.546	218	5.2	-	90.14	TONGA
#-1235	11/30	1	59	44.0	-29.728	-71.651	45	4.8	-	69.32	OFFSHORE COQUIMBO, CHILE
#-1236	11/30	3	24	41.7	28.361	139.155	489	5.9	-	119.94	BONIN ISLANDS, JAPAN REGION
#-1237	11/30	5	17	6.5	-21.157	-178.951	574	5.1	-	85.78	FIJI REGION
#-1238	11/30	8	42	22.4	52.232	-169.557	18	5.2	-	158.55	FOX ISLANDS, ALEUTIAN ISLANDS, ALASKA
#-1239	11/30	17	54	48.3	48.943	154.906	41	5.4	-	143.78	KURIL ISLANDS
#-1240	11/30	21	19	44.6	-4.046	79.893	11	5.6	-	70.36	SOUTH INDIAN OCEAN
#-1241	11/30	22	2	57.2	48.908	154.915	45	5.1	-	143.76	KURIL ISLANDS
#-1242	12/1	0	50	21.4	2.622	99.041	161	5.4	-	82.18	NORTHERN SUMATRA, INDONESIA
#-1243	12/1	10	1	43.0	-33.759	-71.736	22	5.0	-	65.59	VALPARAISO, CHILE
#-1244	12/1	16	1	27.3	-15.904	-178.948	15	5.6	5.9	90.91	FIJI REGION.
#-1245	12/2	2	39	36.0	-21.720	-68.366	101	4.5	-	75.75	ANTOFAGASTA, CHILE

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-1246	12/2	3	5	17.0	-22.097	-68.697	108	4.8	-	75.51	ANTOFAGASTA, CHILE
#-1247	12/2	3	12	9.8	-5.993	149.965	33	5.9	6.7	91.72	NEW BRITAIN REGION, PAPUA NEW GUINEA
#-1248	12/2	6	11	24.2	-0.752	133.349	35	4.3	-	90.85	NEAR N COAST PAPUA, IND.
#-1249	12/2	23	39	58.1	-49.187	120.603	10	5.3	-	42.20	W INDIAN-ANTARCTIC RIDGE
#-1250	12/3	6	30	51.6	-18.179	-175.257	199	5.0	-	89.43	TONGA
#-1251	12/3	16	31	48.9	-4.983	144.636	78	4.9	-	90.86	NEAR NORTH COAST OF NEW GUINEA, P.N.G.
#-1252	12/4	0	59	1.8	-49.654	121.506	10	4.7	-	42.11	W INDIAN-ANTARCTIC RIDGE
#-1253	12/4	5	57	54.1	-49.330	120.605	10	5.3	-	42.08	W INDIAN-ANTARCTIC RIDGE
#-1254	12/5	8	50	32.5	48.955	154.912	68	5.2	-	143.79	KURIL ISLANDS
#-1255	12/5	12	48	39.0	-21.923	174.906	9	5.2	-	83.69	VANUATU REGION
#-1256	12/5	13	57	2.6	-31.259	-177.683	10	4.9	-	76.18	KERMADEC ISLANDS REGION
#-1257	12/6	1	55	40.7	-9.010	126.990	42	5.1	-	80.87	EAST TIMOR REGION
#-1258	12/6	2	50	47.7	-17.717	-178.421	596	4.6	-	89.25	FIJI REGION
#-1259	12/7	4	14	39.0	-16.930	-71.130	123	4.8	-	81.15	S PERU
#-1260	12/7	4	27	22.2	-57.961	-7.533	10	5.8	5.9	22.76	EAST OF THE SOUTH SANDWICH ISLANDS
#-1261	12/7	5	31	5.8	-57.487	-7.898	14	5.5	-	23.24	EAST OF SOUTH SANDWICH ISL
#-1262	12/7	9	38	31.3	-55.746	-26.800	26	5.5	-	31.32	S SANDWICH ISL REGION
#-1263	12/7	15	33	46.2	-37.412	-73.676	23	4.8	-	62.77	OFFSHORE BIO-BIO, CHILE
#-1264	12/7	18	9	51.1	54.302	169.020	10	5.3	-	153.2	KOMANDORSKIYE OSTROVA, RUSSIA REGION
#-1265	12/7	18	17	39.3	54.362	169.128	10	6.1	5.5	153.29	KOMANDORSKIYE OSTROVA, RUSSIA REGION
#-1266	12/8	1	29	32.1	-23.310	179.290	544	4.9	-	83.32	SOUTH OF THE FIJI ISLANDS
#-1267	12/8	5	8	3.2	-20.617	-174.817	65	5.1	-	87.12	TONGA
#-1268	12/8	5	46	9.9	-56.350	-25.520	35	5.1	-	30.39	SOUTH SANDWICH ISLANDS REGION
#-1269	12/8	5	49	52.2	-56.409	-25.622	38	5.3	-	30.39	SOUTH SANDWICH ISLANDS REGION
#-1270	12/8	9	18	49.5	-32.343	-179.568	55	5.5	-	74.76	SOUTH OF KERMADEC ISLANDS
#-1271	12/8	14	41	24.2	-22.470	-176.019	146	5.2	-	85.08	SOUTH OF THE FIJI ISLANDS
#-1272	12/8	15	31	5.8	-6.689	129.885	172	5.6	-	84.07	BANDA SEA
#-1273	12/8	17	19	1.2	-19.792	-174.533	35	5.1	-	87.98	TONGA
#-1274	12/8	18	10	58.5	-56.362	-25.512	22	5.0	-	30.38	SOUTH SANDWICH ISLANDS REGION
#-1275	12/9	4	4	6.5	-7.148	125.124	538	5.0	-	81.94	KEPULAUAN BARAT DAYA, IND.

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-1276	12/9	13	59	55.2	-5.444	154.236	133	5.0	-	93.64	BOUGAINVILLE REGION, PAPUA NEW GUINEA
#-1277	12/9	14	40	9.6	-56.353	-25.713	19	5.2	-	30.46	S SANDWICH ISL REGION
#-1278	12/10	6	0	15.8	-1.635	132.028	39	4.9	-	89.55	PAPUA, INDONESIA
#-1279	12/10	9	23	8.4	-20.305	-177.957	554	5.1	-	86.82	FIJI REGION
#-1280	12/10	10	13	44.0	-37.351	78.037	10	5.0	-	38.03	MID-INDIAN RIDGE
#-1281	12/10	14	59	14.0	-62.968	166.067	29	5.0	-	42.82	BALLENY ISLANDS REGION
#-1282	12/10	20	9	41.1	-55.761	-27.701	52	4.9	-	31.62	SOUTH SANDWICH ISL REGION
#-1283	12/11	7	58	42.9	0.253	122.044	206	5.1	-	87.75	MINAHASA, SULAWESI, IND.
#-1284	12/11	10	49	59.2	52.874	162.380	32	5.2	-	149.69	OFF E CST KAMCHATKA, RUSSIA
#-1285	12/11	13	43	21.0	-21.843	-179.333	606	5.6	-	85.03	FIJI REGION
#-1286	12/11	17	13	35.1	-25.403	-176.348	44	5.0	-	82.15	SOUTH OF THE FIJI ISLANDS
#-1287	12/11	20	35	2.2	-56.819	-25.354	42	5.0	-	29.98	SOUTH SANDWICH ISL REGION
#-1288	12/11	21	22	49.1	-37.093	-73.471	49	4.8	-	63.01	OFFSHORE BIO-BIO, CHILE
#-1289	12/11	22	11	7.4	-3.497	145.963	18	5.0	-	92.71	NR N CST NEW GUINEA, P.N.G.
#-1290	12/12	4	28	38.2	-0.014	123.621	117	4.5	-	88.06	SULAWESI, INDONESIA
#-1291	12/12	14	53	9.3	-6.414	150.303	14	5.3	5.3	91.43	NEW BRITAIN REG, P.N.G.
#-1292	12/12	14	54	27.3	-6.272	150.305	10	5.2	-	91.57	NEW BRITAIN REG, P.N.G.
#-1293	12/12	15	40	57.2	-6.253	150.373	10	5.1	-	91.61	NEW BRITAIN REG, P.N.G.
#-1294	12/12	15	55	36.1	-21.592	-176.612	205	4.9	-	85.82	FIJI REGION
#-1295	12/12	15	59	19.7	-6.004	117.705	33	5.4	-	80.36	BALI SEA
#-1296	12/12	17	50	37.7	-27.879	-176.971	31	5.5	5.2	79.61	KERMADEC ISLANDS REGION
#-1297	12/12	20	34	22.2	0.781	29.663	22	4.9	-	70.08	LAKE EDWARD REGION, DEM REP OF THE CONGO
#-1298	12/13	1	14	42.9	-6.533	155.640	140	6.1	-	93.06	BOUGAINVILLE REGION, PAPUA NEW GUINEA
#-1299	12/13	8	56	43.9	-18.395	-174.578	85	5.1	-	89.34	TONGA
#-1300	12/13	13	30	50.4	-8.090	119.807	193	5.2	-	79.16	FLORES REGION, INDONESIA
#-1301	12/13	18	51	4.1	-33.926	-72.968	19	5.4	-	65.80	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-1302	12/14	1	16	22.3	-32.420	-179.584	35	5.3	-	74.68	SOUTH OF KERMADEC ISLANDS
#-1303	12/14	13	3	17.5	-56.564	-25.628	30	4.9	-	30.27	SOUTH SANDWICH ISL REGION
#-1304	12/14	14	33	27.1	52.200	-169.416	30	5.3	4.8	158.56	FOX ISLANDS, ALEUTIAN ISLANDS, ALASKA
#-1305	12/14	17	54	16.0	4.188	126.571	31	4.7	-	93.04	KEPULAUAN TALAUD, INDONESIA

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-1306	12/14	20	1	0.3	3.861	95.993	59	5.0	-	82.42	OFF WEST COAST OF N SUMATRA
#-1307	12/15	4	23	3.3	-37.403	78.171	10	5.1	-	38.02	MID-INDIAN RIDGE
#-1308	12/15	12	3	33.3	-26.794	178.801	650	5.0	-	79.82	S OF FIJI ISL.
#-1309	12/15	14	38	52.0	53.962	158.337	187	5.1	-	149.11	NR E COAST KAMCHATKA, RUSSIA
#-1310	12/16	2	10	24.4	-30.264	-177.982	39	5.5	4.8	77.09	KERMADEC ISLANDS, NEW ZEALAND
#-1311	12/16	7	11	59.4	-10.801	-73.500	122	5.3	-	87.69	CENTRAL PERU
#-1312	12/16	8	1	8.2	-9.246	40.815	15	4.8	-	59.77	OFF THE COAST OF TANZANIA
#-1313	12/16	19	36	23.8	-21.119	-67.276	188	4.9	-	75.95	POTOSI, BOLIVA
#-1314	12/16	22	45	14.9	-20.966	-68.486	123	5.1	-	76.50	ANTOFAGASTA, CHILE
#-1315	12/16	22	45	15.0	-21.076	-68.750	142	4.1	-	76.48	TARAPACA, CHILE
#-1316	12/17	12	42	18.2	-53.143	-126.465	10	5.0	-	57.38	SOUTHERN EAST PACIFIC RISE
#-1317	12/17	12	42	33.0	2.847	98.918	157	4.5	-	82.36	N SUMATRA, IND.
#-1318	12/17	20	56	41.4	-31.425	-68.481	114	4.7	-	66.74	SAN JUAN, ARGENTINA
#-1319	12/17	22	14	26.7	-8.484	-71.440	568	5.0	-	89.20	ACRE, BRAZIL
#-1320	12/18	4	4	29.8	-17.865	-178.447	589	4.6	-	89.10	FIJI REGION
#-1321	12/18	5	6	21.7	10.394	126.167	14	5.4	-	98.68	PHILIPPINE ISLANDS REGION
#-1322	12/18	14	35	26.4	-5.466	147.316	204	4.9	-	91.32	EASTERN NEW GUINEA REG, PAPUA NEW GUINEA
#-1323	12/18	19	8	53.2	-34.074	-71.979	10	4.8	-	65.37	OFFSHORE LIBERTADOR O'HIGGINS, CHILE
#-1324	12/18	22	56	41.5	5.514	94.759	40	5.1	-	83.63	NORTHERN SUMATRA, INDONESIA.
#-1325	12/19	9	48	57.2	-57.690	-138.225	10	5.2	-	53.29	PACIFIC-ANTARCTIC RIDGE
#-1326	12/19	12	14	24.6	7.551	37.837	10	5.1	-	76.56	ETHIOPIA
#-1327	12/19	16	32	51.1	-17.634	-178.755	544	4.8	-	89.26	FIJI REGION
#-1328	12/19	20	43	36.8	-12.787	167.728	45	5.0	-	90.68	SANTA CRUZ ISL.
#-1329	12/19	20	48	5.3	-34.718	-71.666	52	4.8	-	64.67	LIBERTADOR O'HIGGINS, CHILE
#-1330	12/19	22	25	5.5	18.489	145.736	173	5.2	-	113.19	PAGAN REGION, NORTHERN MARIANA ISLANDS
#-1331	12/20	17	21	26.3	13.046	-88.640	68	5.6	-	115.08	OFFSHORE EL SALVADOR
#-1332	12/21	3	59	38.4	-8.703	111.199	55	5.7	-	75.55	JAVA, INDONESIA
#-1333	12/21	4	21	29.2	0.135	122.200	181	4.9	-	87.69	MINAHASA, SULAWESI, INDONESIA
#-1334	12/21	5	40	16.2	-8.331	105.116	33	4.7	-	73.81	SOUTH OF JAVA, INDONESIA
#-1335	12/21	14	7	48.2	2.695	95.905	21	5.7	5.8	81.28	SIMEULUE, INDONESIA
#-1336	12/21	17	39	5.9	27.192	143.396	10	5.4	-	120.39	BONIN ISLANDS, JAPAN REGION

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-1337	12/21	17	40	47.7	27.018	143.214	10	5.6	-	120.16	BONIN ISLANDS, JAPAN REGION
#-1338	12/21	17	53	22.6	27.212	143.393	10	5.4	6.0	120.40	BONIN ISLANDS, JAPAN REGION
#-1339	12/21	18	31	28.4	-34.508	-179.442	11	5.2	-	72.68	S KERMADECC ISL.
#-1340	12/21	18	41	38.8	27.044	143.295	10	5.1	-	120.21	BONIN ISLANDS, JAPAN REGION
#-1341	12/21	20	52	25.4	26.644	143.645	10	5.1	-	119.97	BONIN ISLANDS, JAPAN REGION
#-1342	12/21	20	59	33.9	26.763	143.582	10	5.1	-	120.06	BONIN ISLANDS, JAPAN REGION
#-1343	12/21	21	33	50.6	26.637	143.497	11	5.0	-	119.91	BONIN ISLANDS, JAPAN REGION
#-1344	12/22	1	31	17.9	26.669	143.540	10	5.5	-	119.96	BONIN ISLANDS, JAPAN REGION
#-1345	12/22	7	51	45.7	26.864	143.599	10	5.4	-	120.16	BONIN ISLANDS, JAPAN REGION
#-1346	12/22	12	26	29.4	27.020	143.270	15	5.1	-	120.18	BONIN ISLANDS, JAPAN REGION
#-1347	12/22	20	40	28.7	-39.356	46.241	15	5.2	-	29.91	SOUTHWEST INDIAN RIDGE
#-1348	12/23	2	7	57.4	27.004	143.335	10	5.0	-	120.19	BONIN ISLANDS, JAPAN REGION
#-1349	12/23	8	1	25.6	27.177	143.356	10	5.0	-	120.36	BONIN ISLANDS, JAPAN REGION
#-1350	12/23	11	55	27.7	-18.345	-173.924	30	5.1	-	89.51	TONGA
#-1351	12/23	12	25	13.9	27.022	143.417	10	5.2	-	120.24	BONIN ISLANDS, JAPAN REGION
#-1352	12/23	14	0	32.7	53.127	171.177	20	6.1	6.3	153.02	NEAR ISLANDS, ALEUTIAN ISLANDS, ALASKA
#-1353	12/23	16	1	34.5	-19.704	168.463	59	5.3	-	84.23	VANUATU
#-1354	12/23	17	26	32.2	-1.952	67.976	10	4.9	-	69.82	CARLSBERG RIDGE
#-1355	12/24	0	39	22.8	52.905	171.074	22	5.1	-	152.80	NR ISL, ALEUTIAN ISL, ALASKA
#-1356	12/24	5	48	53.1	-63.597	-167.330	4	5.8	5.8	46.09	PACIFIC-ANTARCTIC RIDGE
#-1357	12/24	23	10	56.6	-23.028	-66.345	219	4.6	-	73.86	JUJUY, ARG.
#-1358	12/25	2	42	39.4	-21.185	-174.288	35	4.9	-	86.66	TONGA
#-1359	12/25	6	24	45.3	26.861	143.995	10	5.0	-	120.30	BONIN ISLANDS, JAPAN REGION
#-1360	12/25	6	38	10.3	-31.555	-66.885	118	4.9	-	66.11	LA RIOJA, ARGENTINA
#-1361	12/25	6	48	19.9	26.835	143.935	10	5.1	-	120.25	BONIN ISLANDS, JAPAN REGION
#-1362	12/25	7	55	50.2	27.249	143.367	10	5.1	-	120.43	BONIN ISLANDS, JAPAN REGION
#-1363	12/25	11	59	40.6	-36.797	177.092	227	4.9	-	69.77	OFF E CST N ISL, N.Z.
#-1364	12/25	12	29	39.0	10.339	56.906	10	4.9	-	80.34	CARLSBERG RIDGE
#-1365	12/25	13	59	10.7	-19.395	167.915	75	5.5	-	84.39	VANUATU REGION
#-1366	12/25	14	44	34.5	-19.136	168.210	10	5.6	-	84.71	VANUATU
#-1367	12/25	15	26	21.1	-19.427	168.029	25	5.4	-	84.39	VANUATU
#-1368	12/25	15	28	37.2	-19.676	167.941	26	5.2	-	84.12	VANUATU REGION

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-1369	12/25	15	52	26.9	-2.896	129.772	45	4.6	-	87.57	SERAM, INDONE
#-1370	12/25	16	22	14.1	-19.323	167.908	25	5.0	-	84.45	VANUATU REGION
#-1371	12/25	16	54	0.9	-19.323	167.958	32	5.2	-	84.47	VANUATU REGION
#-1372	12/25	17	2	27.3	-19.345	167.887	10	5.2	-	84.43	VANUATU REGION
#-1373	12/25	17	11	44.8	-19.448	167.938	28	5.2	-	84.34	VANUATU REGION
#-1374	12/25	18	38	49.7	-19.683	168.184	12	5.4	-	84.18	VANUATU
#-1375	12/25	18	52	31.3	-19.245	167.946	10	5.3	-	84.54	VANUATU REGION
#-1376	12/25	19	42	30.5	51.384	-176.226	59	5.3	-	155.80	ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
#-1377	12/25	22	26	2.4	-19.839	168.108	10	5.2	-	84.01	VANUATU
#-1378	12/25	22	41	29.0	-19.322	167.899	9	5.1	-	84.45	VANUATU REGION
#-1379	12/26	0	12	37.3	-19.506	168.100	10	5.0	-	84.33	VANUATU
#-1380	12/26	1	0	21.3	-19.915	168.163	10	5.6	-	83.95	VANUATU
#-1381	12/26	6	17	57.5	-19.723	168.178	10	5.4	-	84.14	VANUATU
#-1382	12/26	6	52	47.3	-19.736	168.201	10	5.0	-	84.13	VANUATU
#-1383	12/26	10	33	12.6	-19.479	168.066	10	5.3	-	84.35	VANUATU
#-1384	12/26	11	29	42.6	52.078	175.033	49	5.1	-	153.50	RAT ISLANDS, ALEUTIAN ISLANDS, ALASKA
#-1385	12/26	13	34	4.3	-19.820	168.215	10	5.3	-	84.06	VANUATU
#-1386	12/27	1	51	25.3	-19.337	167.788	10	5.2	-	84.41	VANUATU REGION
#-1387	12/27	15	27	28.0	-50.806	139.153	17	5.1	-	46.87	W INDIAN-ANTARCTIC RIDGE
#-1388	12/27	17	2	33.7	-50.774	139.447	10	5.5	-	46.98	W INDIAN-ANTARCTIC RIDGE
#-1389	12/27	19	40	14.0	-19.256	167.909	17	5.5	-	84.52	VANUATU REGION
#-1390	12/27	20	33	16.3	-19.625	167.985	10	5.2	-	84.18	VANUATU REGION
#-1391	12/27	23	53	8.6	-19.790	168.233	12	5.5	-	84.09	VANUATU
#-1392	12/28	2	20	29.6	-19.420	168.140	10	5.2	-	84.42	VANUATU
#-1393	12/28	2	47	11.1	-52.929	27.310	10	5.0	-	16.98	SOUTH OF AFRICA
#-1394	12/28	8	34	17.5	-23.401	-179.802	551	5.7	-	83.42	SOUTH OF THE FIJI ISLANDS
#-1395	12/28	15	2	46.9	-58.050	-25.180	84	4.7	-	28.99	SOUTH SANDWICH ISL REGION
#-1396	12/28	16	59	11.0	-20.086	-173.947	32	5.4	4.6	87.80	TONGA
#-1397	12/28	21	43	50.8	-19.518	167.988	16	5.5	-	84.29	VANUATU REGION
#-1398	12/28	22	2	20.7	-19.085	167.997	16	5.0	-	84.71	VANUATU REGION
#-1399	12/29	9	46	19.9	-19.554	168.173	10	5.0	-	84.30	VANUATU

Table 2. Continued.

No.	Date	Origin time UTC			Geographic Latitude (deg)	Coordinates Longitude (deg)	Dep (km)	Magnitude		Epicentral distance (deg)	Region
		h	m	s				Mb	Ms		
#-1400	12/29	11	10	38.1	-19.764	168.115	10	5.1	-	84.08	VANUATU
#-1401	12/29	14	35	41.7	-17.710	-178.450	581	4.7	-	89.25	FIJI REGION
#-1402	12/29	21	10	36.0	-19.559	168.120	10	5.2	-	84.28	VANUATU
#-1403	12/29	23	27	1.6	-23.084	-179.916	528	5.2	-	83.70	SOUTH OF THE FIJI ISLANDS
#-1404	12/30	6	49	57.9	-56.071	-26.733	37	5.0	-	31.04	SOUTH SANDWICH ISL REGION
#-1405	12/30	6	56	38.1	52.972	171.367	36	5.3	-	152.96	NR ISL, ALEUTIAN ISL, ALASKA
#-1406	12/30	9	11	54.9	-19.266	167.793	43	4.9	-	84.48	VANUATU REGION
#-1407	12/30	12	2	41.0	51.687	177.356	47	5.3	-	153.96	RAT ISL, ALEUTIAN ISL, ALASKA
#-1408	12/30	21	22	31.1	-19.974	168.379	22	5.1	-	83.95	VANUATU
#-1409	12/30	23	46	59.7	-31.994	-178.047	11	5.2	-	75.39	KERMADEC ISLANDS REGION
#-1410	12/31	4	11	3.5	-19.118	167.973	10	5.2	-	84.67	VANUATU REGION
#-1411	12/31	23	1	6.1	36.720	140.752	74	5.1	-	128.07	NEAR THE EAST COAST OF HONSHU, JAPAN