SEISMOLOGICAL BULLETIN OF SYOWA STATION, ANTARCTICA, 2002

Koji Yoshii[1] and Masaki Kanao[2]

[1] Graduate School of Science, Kyoto University,
Kita-shirakawa Oiwake-cho, Sakyo-ku, Kyoto 606-8502
[2] National Institute of Polar Research, 9-10, Kaga 1-chome,
Itabashi-ku, Tokyo 173-8515

1. Introduction

Seismic observations at Syowa Station (69.0°S, 39.6°E), East Antarctica were started using a short-period seismometer with 1.0 s natural period in 1959 (Eto, 1962). A long-period seismograph was installed and phase readings of the teleseismic events have been reported currently to the United States Geological Survey (USGS), and to the International Seismological Centre (ISC) since 1967 (Kaminuma *et al.*, 1968). A three-component broadband seismometer (STS-1; Wielandt and Steim, 1986) was installed in 1989, for making a contribution to the Federation of Digital broadband Seismograph Networks (FDSN; http://www.fdsn.org/) as an important key station in the Japanese PACIFIC21 network (http://pacific21.eri.u-tokyo.ac.jp). A distribution of FDSN stations in Antarctic continent and the distribution of PACIFIC21 stations in 2001 at present are shown in Figs. 1 and 2, respectively.

All of the observation systems at Syowa Station were maintained in 2002 by one of the authors (K. Yoshii) throughout the wintering season of the 43rd Japanese Antarctic

Research Expedition (JARE-43). He also scaled the arrival times for seismic events and reported to ISC and USGS through that wintering season.

In this data report, we would like to introduce the seismic observations at present in 2002, scaled read-out travel-time data and detected teleseismic earthquake list, in addition to the procedures for public use by Internet service.

2. Observations

The seismic observation systems at Syowa Station were all replaced to the current ones by one of the authors in 1997 (Kanao, 1999). The block diagram of the new recording system is illustrated in Fig. 3.

2.1. Seismographic hut and seismographs

Seismic observations at Syowa Station had been carried out mainly by two types of seismometers, one called a short-period (HES) with 1.0 s natural period of the pendulum and it had been operated since 1967 (Kaminuma *et al.*, 1968). The overall frequency responses and the magnifications of the HES are shown in Fig. 4. A three-component broadband seismometer (Streckeisen STS-1) with the digital recording system has been operating since 1990 (Nagasaka *et al.*, 1992). The amplitude and phase responses for the velocity output (Broadband; BRB) are shown in Fig. 5 (after Streckeisen and Messegeraete, 1987).

The new seismographic hut was constructed in 1996 and the whole sensors were moved inside it in 1997. The new hut is located about 200 m north from the old vault, with geodetic coordinates of 69°00'24.0"S, 39°35'06.0"E and the elevation is 20 m above mean sea level. Since the broadband seismographs are largely affected by a change of temperature and atmospheric conditions, the sensor room was covered doubly by adiabatic walls, with a surface covered by titanium to keep constant temperature in the room.

Seismic signals of the HES and STS-1 seismometers are transmitted to the Earth Science Laboratory (ESL) via analog cables of 600 m in length. The cables were mounted on racks, which connect the main buildings of Syowa Station, and laid parallel with the other electric power cables of the Station.

2.2. Acquisition system at Earth Science Laboratory

A three-component analogue output by HES is digitized at 200 Hz over sampling by a 24-bit analog-to-digital (A/D) converter, generating triggered signals of 80 and 1 Hz re-sampling data and the continuous outputs of 20 Hz data. A three-component broadband signals of STS-1 are also digitized to create the triggered output of 80 Hz re-sampling data and the continuous outputs of 20, 1, 0.1 and 0.01 Hz data, respectively. All the data had been created as a Mini_SEED volume, which is a standard format for data exchange in the global seismology. The digitized data are automatically transmitted from A/D converter to the workstation via TCP/IP protocol (DP/UX software). All kinds of the data are stored in 10 GB hard-disk of the workstation, then copied into DAT or 8 mm tape in every five months interval. A recording condition of A/D converter has been continuously monitored by a personal computer via RS-232C serial port (Kermit software).

A remote-centering operation for the STS-1 sensors can also be carried out by keyboard commands from the computer. A reference clock for the new system has also been calibrated to the Coordinated Universal Time (UTC) from Global Positioning System (GPS). Two sets of thermal pen-recorders for HES and BRB output of STS-1, however, have now been operated for monitoring at ESL. Boom-position output (POS) of STS-1 seismograph has been monitored by RD2212 type analogue-recorder. A temperature in the sensor room is also recorded continuously by the same recorder.

2.3. Data transmission via INMARSAT

The digital waveforms of broadband and short-period seismographs have been transmitted via the INMARSAT telecommunication link from Syowa Station to National Institute of Polar Research (NIPR) since 1993. In 2002 season, continuous data of HES

with 20 Hz sampling had been automatically transmitted to NIPR. The UUCP protocol has been used for the file transfer. In addition, phase read-out data are reported by email directly from Syowa to USGS/NEIC regularly with time delay of a day, in order to make a contribution to the Quick Earthquake Determination (QED) email services and to the Preliminary Determination for Epicenters (PDE) weekly/monthly bulletins.

3. Data

Since there is a delay time of 1-2 years between the publication of this report and the observing wintering period, the Preliminary Determination of Epicenters (PDE) reports by NEIC are referred to and only the seismograms of teleseismic events are edited. The arrival-time data and the corresponding hypocentral data of teleseismic events are presented in this report.

3.1. Phase read-out data

The phase arrival-time of teleseismic events was detected on the short-period monitoring seismograms. Most phases were scaled on the vertical component, and 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 one which is within 3 s time difference. The phases which identified as *P*- and *S*-waves are listed in Table 1. The phase *K* denotes the *PKP* phase, which can be identified within 3 s difference by comparing the observed travel time with that of calculated one. While *X* denotes the clear phase whose wave type can be identified but the travel time was within 3-10 s difference in observed and calculated times. Symbols *E* and *I* in the phase column denote emergent and sharp onsets, respectively. The initial ground motion is denoted by + for upward and - for downward direction. Arrival time is given in UTC and the accuracy of the read-out data is limited to 0.2 s. The teleseismic events identified in the PDE are labeled by the serial numbers (#-xxx) in the table. These serial numbers

correspond to those in Table 2. The events without serial numbers are teleseisms whose locations have not been determined by NEIC.

3.2. Teleseismic events

The list of hypocentral parameters of the teleseismic events is shown in Table 2, together with the same serial numbers as given in the remarks of Table 1. Figure 6 shows the hypocenters of 1059 teleseismic events whose initial phases were detected at Syowa.

Figure 7 indicates the relationship between the annual mean number of detected teleseismic events and body-wave magnitude (Mb) in bars of 0.1 magnitude. The events were divided into three groups (1) all events (solid circles),(2) shallow events with depths less than 50 km (open squares), (3) intermediate and deep events larger than 50 km depths (crosses). The peak number of all events for magnitude exists around 4.7-4.9, where the number of earthquakes per year is about 100. Detection capability of teleseismic events has been evaluated by ISC from global seismic networks for the ten years (Ringdal, 1986). It is pointed out that the magnitude threshold of earthquake detection gradually increases with increasing southern latitude. The bias problem of network magnitude determination is significant at small and middle magnitudes, particularly in the southern high latitude.

4. Publication

The person maintained the seismic equipment through the year is basically given priority for using any data obtained at Syowa Station with time limit of two years. These data are transmitted to NIPR and then to be stored in the file server, and can be obtained upon request by Internet service and/or UNIX media (*i.e.*, CD-R, DAT, 8 mm-tape, *etc.*) with a permission of the NIPR members. If anybody would like to use the two-year period data, please contact to *kanao@nipr.ac.jp* concerning the availability.

Hypocenters, arrival-times detected at Syowa Station, and digital waveforms for recent several years are available from Internet services upon request. They are stored in the directories under /pub/HYPO, /pub/ATIME and /pub/STS of UNIX workstation (133.57.3.14), and accessible by use of 'anonymous ftp' command. Data access by use of WWW servers is also supplied by the ftp address; ftp://geotgx.nipr.ac.jp/pub.

Archived data after two years from the JARE-period are stored and freely available from both the ftp sites in NIPR and the PACIFIC21 center of the Earthquake Research Institute (ERI), the University of Tokyo. Any questions concerning data availability from ERI should be directed to *takeuchi @eri.u-tokyo.ac.jp*.

5. Data Processing Staff

A seismic observation system at Syowa Station was designed by M. Kanao and by K. Shibuya of the National Institute of Polar Research. Ms. A. Ibaraki has kindly assisted preparing this data report. Readers can refer to the URL sites below for finding data directory or access; http://geotgx.nipr.ac.jp/~kanao/seismic_obs.

References

Eto, T. (1962): On the electromagnetic seismographs at Syowa Base. Nankyoku Shiryô (Antarct. Rec.), **14**, 48-50 (in Japanese with English abstract).

Kaminuma, K. and Chiba, H. (1973): The new seismographic vault and the detection capability of Syowa Station, Antarctica. Nankyoku Shiryô (Antarct. Rec.), **46**, 67-82 (in Japanese with English abstract).

Kaminuma, K., Eto, T. and Yoshida, M. (1968): Seismological observation at Syowa Station, Antarctica. Nankyoku Shiryô (Antarct. Rec.), **33**, 65-70 (in Japanese with English abstract).

Kanao, M. (1999): Seismological bulletin of Syowa Station, Antarctica, 1997. JARE Data Rep., **236** (Seismology 33), 1-65.

Nakanishi, T. and M. Kanao (2000): Seismological bulletin of Syowa Station, Antarctica, 1999. JARE Data Rep., **254** (Seismology 35), 1-59.

Nagasaka, K., Kaminuma, K. and Shibuya, K. (1992): Seismological observations by a three-component broadband digital seismograph at Syowa Station, Antarctica. Recent Progress in Antarctic Earth Science, ed. by Y. Yoshida *et al.* Tokyo, Terra Sci. Publ., 595-601.

Ringdal, F. (1986): Study of magnitudes, seismicity and earthquake detectability using a global network. Bull. Seismol. Soc. Am., **76**, 1641-1659.

Streckeisen, G. and Messegeraete, A. G. (1987): Very-broad-band Feedback Seismometers STS-1V/VBB and STS-1H/VBB Manual. 34-35.

Wielandt, E. and Steim, J. M. (1986): A digital very-broad-band seismograph. Ann. Geophys., **4**, 227-232.

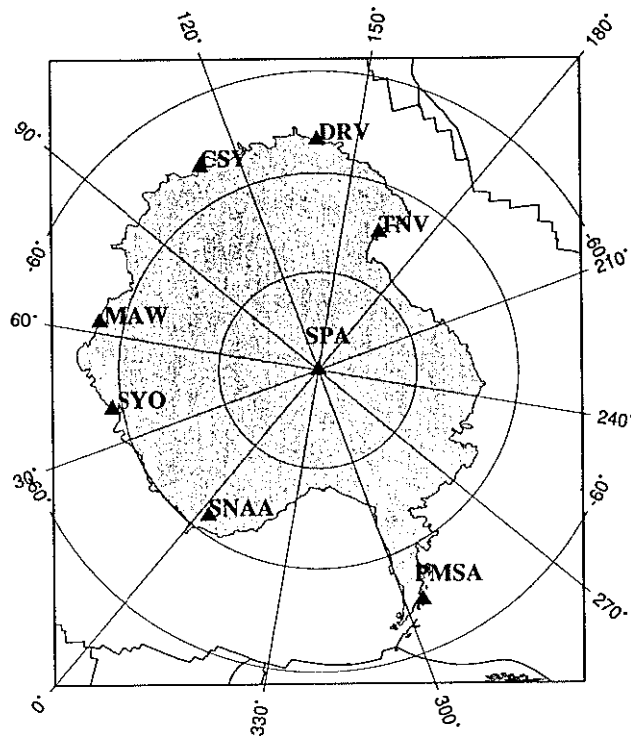

Fig. 1. A distribution of FDSN stations in Antarctic continent. Syowa (SYO), Mawson (MAW), Casey (CSY), Dumont d'Urville (DRV), Terra Nova Bay (TNV), South Pole (SPA), Palmer (PMSA), Sanae (SNAA).

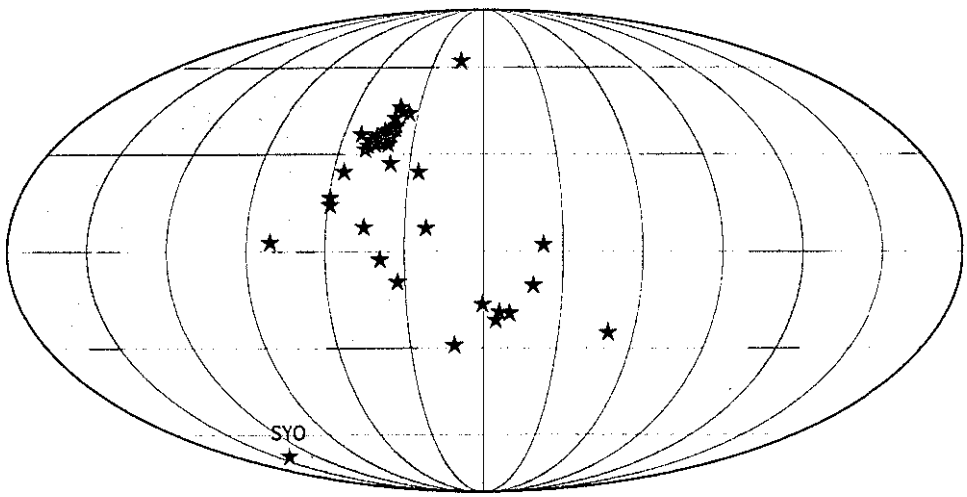

Fig. 2. PACIFIC21 station map in 2001 (http://pacific21.eri.u-tokyo.ac.jp).

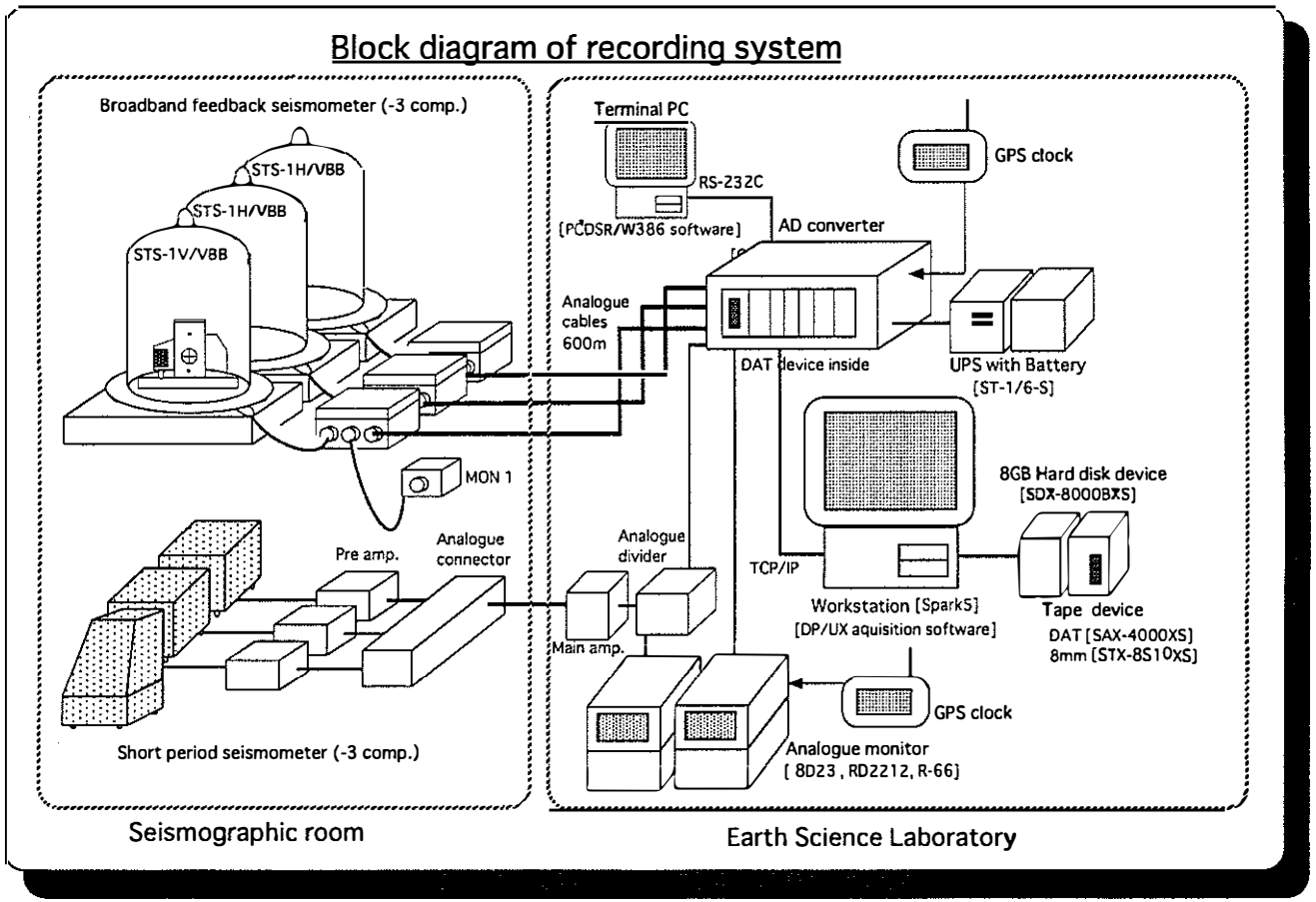

Fig. 3. Block diagram of new recording system for the STS and HES seismographs at Syowa Station. Left figure: Seismographic room; Right figure: Earth Science Laboratory.

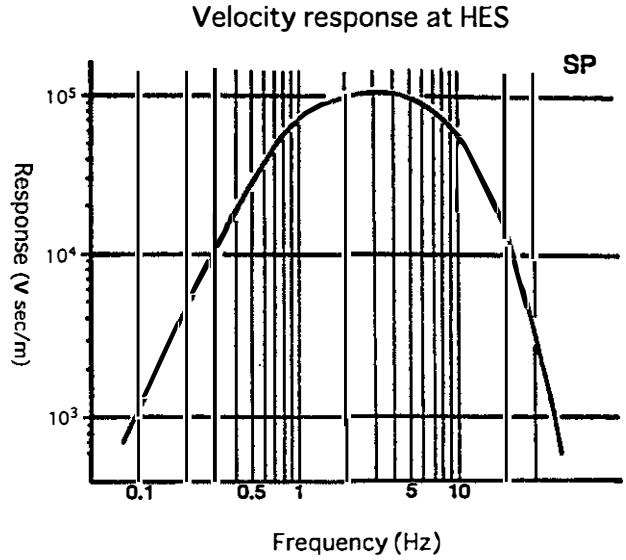

Fig. 4. Over-all frequency responses of the HES seismographs.

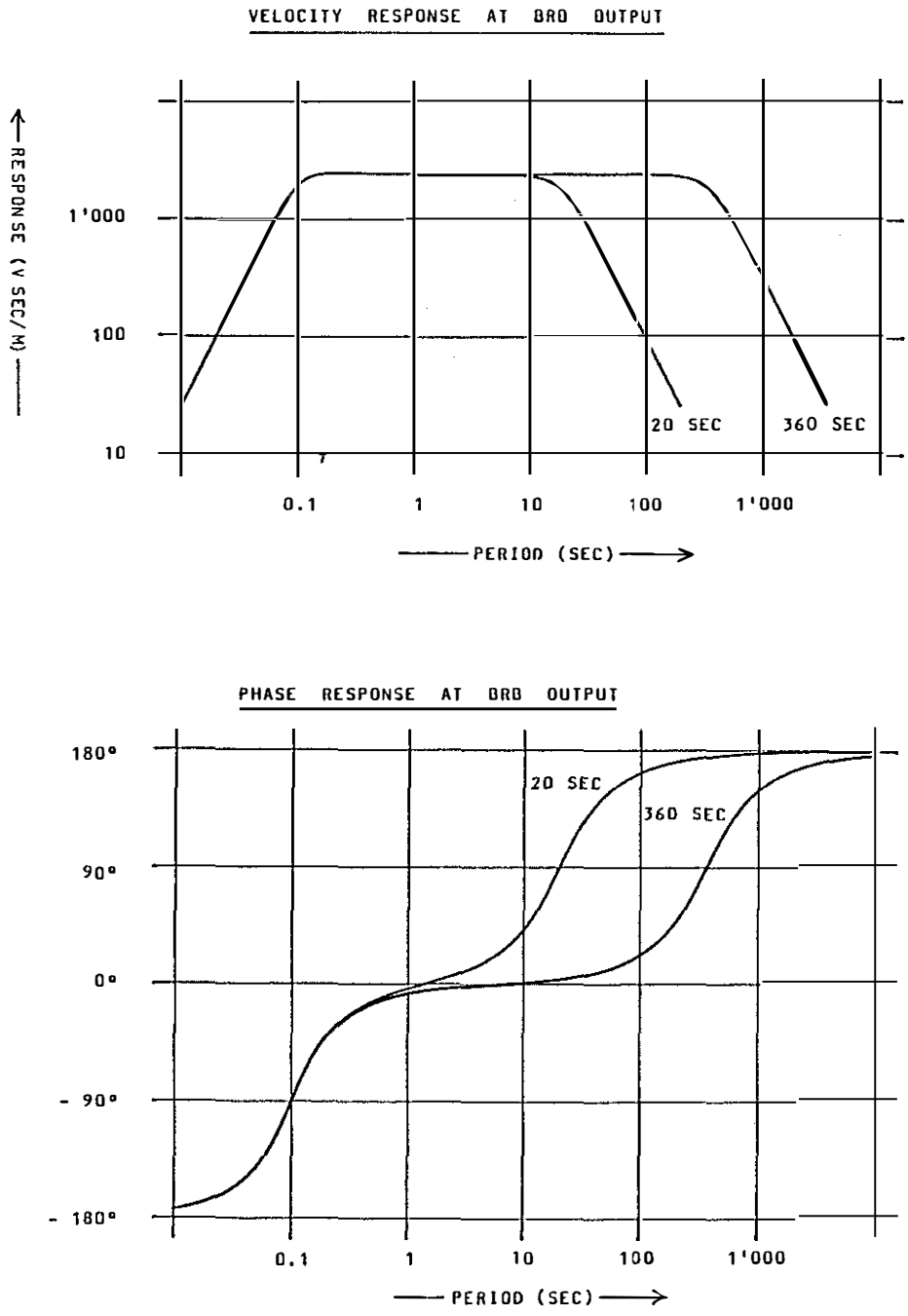

Fig. 5. Amplitude responses (upper figure) and phase responses (lower figure) for the velocity (BRB) output of the broadband seismograph (STS) in the two distinct signal modes of 20-s and 360-s (after Streckeisen and Messegeraete, 1987).

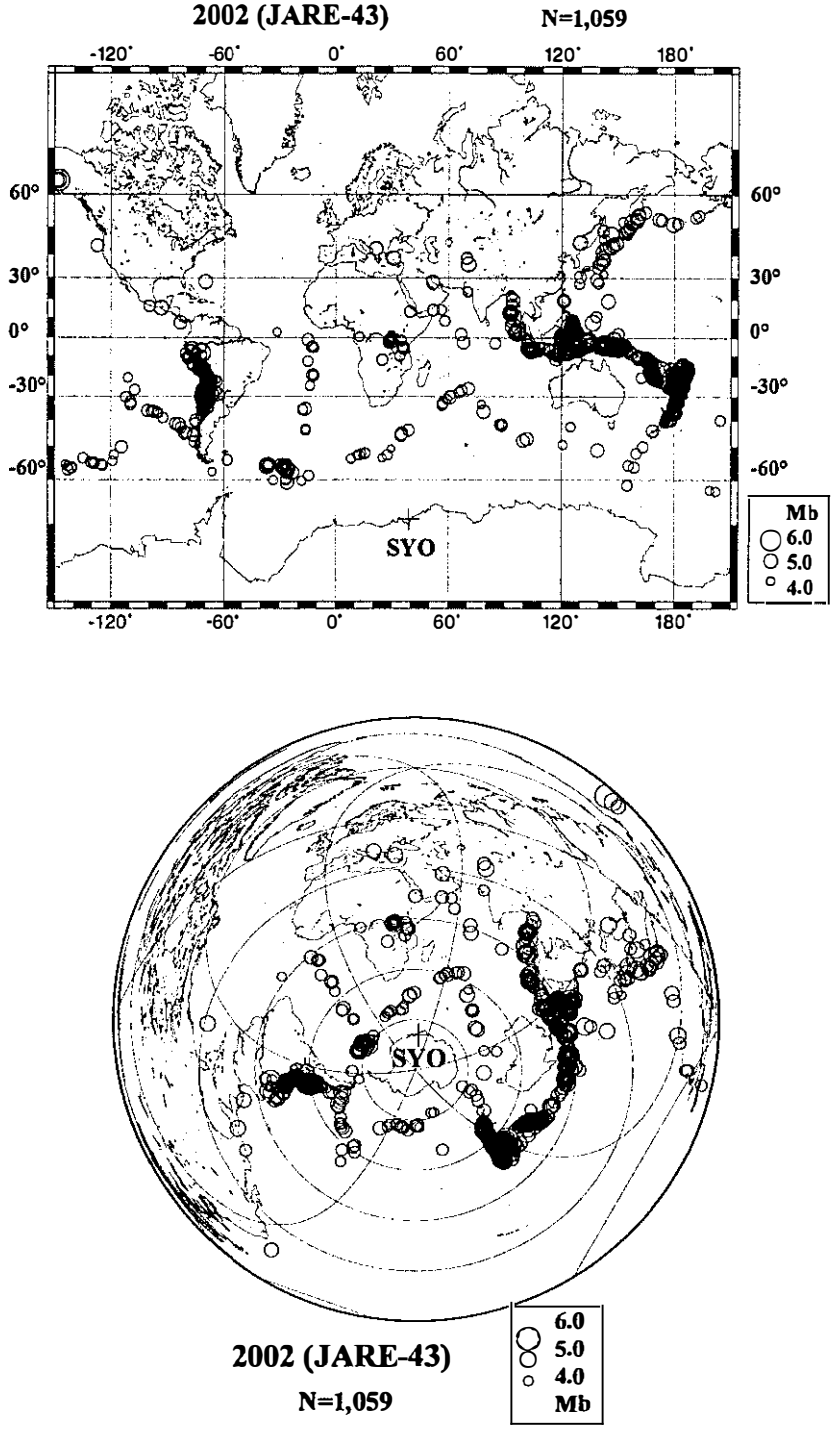

Fig. 6. Epicenters of the 1059 earthquakes recorded at Syowa Station. The sizes of earthquake circles are proportional to the body-wave magnitude (Mb) determined by the National Earthquake Information Center (NEIC) (upper: Mercator Projection, lower: Azimuthal Equidistant Projection).

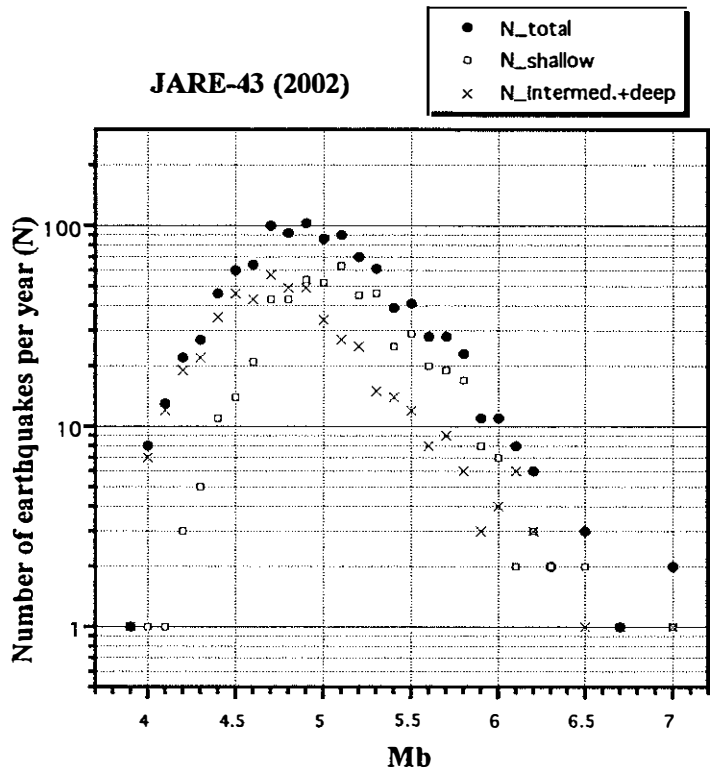

Fig. 7. Annual mean number of total detected earthquakes in 2002 against body-wave magnitude (Mb). The number of events for each group are marked with an increment of 0.1 Mb (solid circles (N-total), 1059 total events; open squares (N-shallow), shallow events of focal depth less than 50 km; crosses (N-Intermed.+deep), intermediate depth and deep events of focal depth larger than 50 km).

Table 1. List of phase arrival-time data in 2002.

Date	Phase	UTC hm	time s	Remarks
Jan.1	+epz	0922	37.2	#-1
	+epz	1048	46.1	#-2
	+epPz	1048	47.7	#-2
	+esPz	1048	48.5	#-2
	+ePPz	1050	45.6	#-2
	-ipz	1142	27.3	#-3
	+ePPz	1146	15.4	#-3
2	-epz	0035	46.7	#-4
	+ipz	0527	30.6	#-5
	+ipz	0534	50.4	#-6
	+ePPz	0538	32.0	#-6
	-epz	1037	3.0	#-7
	-ipz	1502	18.4	#-8
	ish	1512	10.3	#-8
	-epz	1534	6.8	#-9
	-ipz	1735	28.2	#-10
	-epz	1843	44.6	#-11
	-ipz	2256	16.9	#-12
	-esPz	2256	28.0	#-12
3	-ePKPbcz	0444	19.0	#-13
	+epPKPbcz	0444	31.0	#-13
	-ePKiKPz	0723	38.6	#-14
	+epPKiKPz	0724	14.8	#-14
	+ePKPdfz	0817	49.5	#-15
	+ePKiKPz	0817	51.0	#-15
	-esPKiKPz	0818	7.0	#-15
	-ipz	1030	18.1	#-16
	+epPKiKPz	1035	35.1	#-16
	-esPKiKPz	1035	40.5	#-16
	esh	1040	48.0	#-16
	-ipz	1147	50.3	#-17
	+epPz	1148	0.0	#-17
	+esPz	1148	2.5	#-17
4	-epz	0637	6.6	#-18
	+ipz	0855	28.3	#-19
	+iPcPz	0855	31.7	#-19
	esh	0904	40.4	#-19
	+epz	1004	20.3	#-20
	-esPz	1004	24.0	#-20
	-epz	1313	27.1	#-21
	+epPz	1522	24.0	#-22
	+epPKiKPz	1527	46.9	#-22
	+esPKiKPz	1527	55.5	#-22
	-epz	1922	55.0	#-23
	+epz	2253	13.8	#-24
5	+ipz	0242	20.5	#-25
	+iPcPz	0242	21.4	#-25
	+ePKiKPz	0247	16.0	#-25
	+esPz	1213	44.2	#-26
	+ipz	1834	27.7	#-27
6	-ePKPdfz	0153	5.0	#-28
	+ipz	1543	56.2	#-29
	+esPz	1544	9.0	#-29
	+ipz	1651	30.3	#-30
	+esPz	1651	42.3	#-30
	+epz	1720	23.7	#-31
	+epz	1722	36.3	#-31
	-ePcPz	1722	41.1	#-31
7	-ePnz	0052	0.3	#-32
	-ipz	0052	2.0	#-32
	+epPz	0750	48.3	#-33
	+ePKiKPz	1343	56.4	#-34
8	-epz	0620	37.4	#-35
	+ePnz	0803	36.4	#-36
	+epz	0803	37.6	#-36
	-esPz	1821	43.5	#-37
9	+epz	0115	9.7	#-38
	+ePcPz	0115	13.2	#-38
	-epPz	0116	55.8	#-38
	eSKSac	0124	40.3	#-38
	esh	0124	42.5	#-38
	+epz	0410	30.7	#-39
	+ePPz	0414	7.2	#-39
	+epPKiKPz	0415	28.6	#-39
	+ePdiffz	0700	21.4	#-40
	+eSKPdfz	0707	57.6	#-40
	+epz	0754	41.6	#-41
	+ePcPz	0754	49.6	#-41
	+esPz	0754	55.6	#-41
	+epz	0859	6.0	#-42
	+ePcPz	0859	7.1	#-42
	+epPz	0859	14.6	#-42
	-esPz	0859	20.2	#-42
	eSKSac	0909	28.1	#-42
	+epz	1442	23.4	#-43
	+ePKPdfz	1559	47.2	#-44
	+esPKPdfz	1600	34.9	#-44
	-epz	2134	30.3	#-45
	+epPz	2135	8.3	#-45
	-esPz	2135	23.0	#-45
	+ePcPz	2200	5.0	#-46
	+epPz	2200	11.4	#-46
	-esPz	2200	15.0	#-46
	eSKSac	2210	21.0	#-46
	esh	2210	23.8	#-46
10	+epPz	0006	10.4	#-47
	+ePPz	0009	55.8	#-47
	+ePKiKPz	0010	46.8	#-47
	+esPz	0117	42.9	#-48
	+ipz	0608	45.5	#-49

Date	Phase	UTC hm	time s	Remarks
	+ipPz	0608	53.5	#-49
	-epz	0747	53.9	#-50
	+ipz	0849	43.9	#-51
	-esPz	0849	55.4	#-51
	-epz	1128	4.3	#-52
	-ePcPz	1128	7.3	#-52
	+epPz	1128	9.6	#-52
	-esPz	1128	10.9	#-52
	-ePPz	1131	42.9	#-52
	eSKSac	1138	37.0	#-52
	esh	1139	3.0	#-52
11	-epz	0301	56.6	#-53
	+epPz	0312	35.7	#-54
	+ipz	0529	38.0	#-55
	-epPz	0529	46.9	#-55
	+esPz	0529	50.6	#-55
	-epz	0559	22.2	#-56
	+esPz	0559	34.8	#-56
	+epz	0801	48.4	#-57
	-epz	1104	32.3	#-58
	+esPz	1104	45.0	#-58
	+epPz	1130	10.9	#-59
	+epz	1231	17.8	#-60
	-epz	1730	27.4	#-61
	+epz	1805	29.0	#-62
	-epz	1930	24.1	#-63
	+epPKPdfz	2217	21.9	#-64
	-epz	2237	22.7	#-65
12	-epz	0113	41.0	#-66
	-ePKiKPz	0845	48.7	#-67
	+esPKiKPz	0845	58.0	#-67
	-epz	0951	50.4	
	+epz	2306	3.0	#-68
13	-epz	0234	37.5	#-69
	+epPz	0235	14.3	#-69
	+epz	0246	18.0	#-70
	-epz	0500	31.4	#-71
	-epz	1117	5.4	#-72
	+esPz	1117	17.0	#-72
	-epz	1424	3.4	#-73
	+isPz	1424	15.6	#-73
	+ePPz	1427	42.6	#-73
	+epz	1645	36.4	#-74
	+ePcPz	1645	37.2	#-74
	-epz	1803	58.3	
14	-epz	0251	1.5	#-75
	-esPz	0251	13.3	#-75
	-epz	1117	58.4	#-76
	+ePcPz	1118	3.0	#-76
	+ePKiKPz	1123	32.9	#-76
	-epPKiKPz	1123	33.6	#-76
	-epz	1518	6.9	#-77
	+epPz	1533	5.0	#-78
	+ePnPnz	1533	56.4	#-78
	+epz	1548	25.0	#-79
	-ePcPz	1548	30.6	#-79
	-epPz	1548	35.3	#-79
	-esPKiKPz	1651	1.8	#-80
15	-epz	0359	36.1	#-81
	-epz	0500	43.1	#-82
	+ePcPz	0500	45.2	#-82
	+epz	0509	10.5	#-83
	+epPz	0509	19.0	#-83
	-epz	0602	53.5	#-84
	+epz	0724	44.2	#-85
	+epPz	0724	52.2	
	-epz	0914	22.5	#-86
	+esPz	0914	36.0	#-86
16	-epz	0735	47.7	#-87
	-ePcPz	0735	57.1	#-87
	-epz	1313	54.2	#-88
	+epPz	1314	4.0	#-88
	-ipz	1718	31.0	#-89
	+epPz	1718	41.4	#-89
	+esPz	1718	43.5	#-89
	+epz	1856	36.0	#-90
	+ePPz	2329	52.6	#-91
17	+epz	0133	22.0	#-92
	-epz	0855	30.5	#-93
	+epz	1502	8.8	#-94
	+epPz	1502	15.0	#-94
	+epz	1848	31.8	#-95
	-epz	2012	27.1	#-96
	-esPz	2012	30.9	#-96
18	+epz	0742	38.8	#-97
19	-epz	0911	34.9	#-98
	+ePKPdfz	0925	32.3	#-99
	-epPKPdfz	0925	48.0	#-99
	+epPz	1522	34.5	#-100
	+epPz	1709	17.5	#-101
	+epPz	1720	27.5	#-102
	+ePKPabz	2013	21.5	#-103
	+esPKPdfz	2013	26.5	#-103
	+esPKPabz	2014	9.1	#-103
	-epz	2122	43.0	#-104
20	+epz	0025	43.0	#-105
	+esPz	0025	46.3	#-105
	eSKSac	0932	19.9	#-106
	-ipz	1312	21.4	#-107
21	+epz	0130	31.0	#-108

Date	Phase	UTC hm	time s	Remarks
	+esPz	0130	34.5	#-108
	+epPz	0211	15.0	#-109
	+esPKiKPz	0217	39.4	#-109
	+epz	0450	17.5	#-110
	-epPz	0450	21.0	#-110
	-esPz	0450	23.1	#-110
	+epPz	0802	55.5	#-111
	+ePPz	0805	10.0	#-111
	+epz	1351	36.1	#-112
	-ipz	1401	59.0	#-113
	+epz	1415	32.7	#-114
	-ePcPz	1415	45.4	#-114
	+ePKiKPz	1437	9.8	#-114
	-ipz	1555	13.3	#-115
	+ePPz	1558	38.0	#-115
	+epz	1702	4.0	#-116
	+ePcPz	1702	6.9	#-116
	-esPz	1702	16.5	#-116
22	+ePcPz	0113	56.0	#-117
	-epPKiKPz	0119	56.3	#-117
	-esPKiKPz	0119	58.2	#-117
	+epPz	1543	4.5	#-118
	-epz	1633	20.5	#-119
	-epPz	1701	59.0	#-120
	+esPKiKPz	1947	19.8	#-121
	+epz	2027	23.8	#-122
	-epPz	2027	32.0	#-122
23	+epz	0648	10.0	#-123
24	-epz	1536	22.0	#-124
	-epz	1824	22.2	#-125
25	-epz	0945	5.0	#-126
	+epz	1418	16.1	#-127
26	-epz	2209	19.6	#-128
27	+epz	0316	54.2	#-129
	-epz	1315	52.0	#-130
	+exz	1353	48.4	#-131
28	-epz	0015	53.7	#-132
	+exz	0059	51.5	#-133
	-epz	0542	19.3	#-134
	-epz	1523	5.6	#-135
29	+epz	1155	2.3	#-136
	+epz	1219	30.9	#-137
31	-exz	1936	12 0	#-138
Feb.1	-epz	2009	44.6	#-139
	+epz	2114	12.6	#-140
2	+epz	0735	37.3	#-141
3	-epz	0826	5.3	#-142
	+ePPz	0945	35.2	#-143
	-epPz	1312	3.5	#-144
	+epz	2313	20.2	#-145

Date	Phase	UTC hm	time s	Remarks
5	+epz	0807	57.0	#-146
	+iPcPz	0807	58.0	#-146
	+epPz	0810	3.4	#-146
	-epz	0902	0.5	#-147
	+ePcPz	0902	4.9	#-147
	+epz	1340	33.2	#-148
	-ePcPz	1340	34.4	#-148
	-epPz	1340	45.0	#-148
	+isPz	1340	48.8	#-148
	+iPPz	1344	15.5	#-148
	+ePKiKPz	1345	19.4	#-148
7	+epz	0328	59.1	#-149
	+ePcPz	0329	0.9	#-149
	-epPz	0329	8.2	#-149
	+epz	0616	33.9	#-150
	+ePcPz	0616	39.3	#-150
	+ePPz	0619	41.4	#-150
	+epz	0723	17.1	#-151
8	+exz	0619	13.3	#-152
	-ePcPz	0640	40.1	#-153
	+esh	0651	18.7	#-153
	+ePdiffz	0649	28.9	#-153
	-epz	1005	16.5	#-154
	+epz	1058	7.7	#-155
	+epz	1451	37.3	#-156
	+ePcPz	1451	41.3	#-156
	+ePcPz	1901	40.1	#-157
	+epPz	1901	41.9	#-157
	+esPz	1901	45.3	#-157
	+epPKiKPz	1907	17.0	#-157
	-esPKiKPz	1907	20.7	#-157
	+epz	2241	24.5	#-158
	+ePcPz	2241	25.3	#-158
	+epPKiKPz	2248	31.1	#-158
	-esh	2251	20.9	#-158
9	+ePdiffz	1528	53.9	#-159
	+esPdiffz	1529	7.7	#-159
	+epPKPdfz	1716	5.9	#-160
	-ePPz	1717	38.8	#-160
	+ipz	2207	42.2	
	-epPz	2304	16.0	#-161
	+esPz	2304	20.6	#-161
10	+ipz	0153	18.3	#-162
	+epPz	0153	55.5	#-162
	+esPz	0154	16.6	#-162
	+ePnPnz	0154	28.8	#-162
	+ePPz	0154	29.9	#-162
	+iPcPz	0156	1.1	#-162
	esh	0158	14.1	#-162
	-eScPz	0159	23.3	#-162

Date	Phase	UTC hm	time s	Remarks
11	+epz	0227	16.6	#-163
	-epz	0313	30.6	#-164
	+ePcPz	0313	30.9	#-164
	+esPz	0316	40.0	#-164
	+epz	0351	27.3	#-165
	+ePcPz	0351	28.0	#-165
	+epz	0533	7.8	#-166
	+ePcPz	0533	8.2	#-166
	-epPz	0533	18.3	#-166
	+epz	2327	11.7	#-167
12	+epz	1320	10.4	#-168
	+epPz	1320	13.2	#-168
	+ePcPz	1320	30.5	#-168
	-ePPz	1322	44.3	#-168
	-ePKiKPz	1326	21.7	#-168
	+ePKPdfz	1403	37.9	#-169
	+epPKPdfz	1403	48.7	#-169
	-epPKiKPz	1403	49.7	#-169
	-esPKPdfz	1403	52.4	#-169
	-epPz	1641	25.5	#-170
	+epPz	1641	32.5	#-170
	+ePnPnz	1642	3.4	#-170
	-ePPz	1642	18.9	#-170
	+ePcPz	1644	35.3	#-170
	+epPdiffz	2040	41.8	#-171
	+ePKiKPz	2044	44.1	#-171
	-ePPz	2044	48.8	#-171
	+epPKiKPz	2044	53.2	#-171
	+esPKiKPz	2044	58.1	#-171
	+epPdiffz	2109	35.5	#-172
	+esPdiffz	2109	40.0	#-172
	+ePKPdfz	2113	8.2	#-172
	+ePKiKPz	2113	9.2	#-172
	+esPKPdfz	2113	25.5	#-172
	+esPKiKPz	2113	26.7	#-172
	-ePPz	2114	14.5	#-172
	+ePcPz	2129	27.8	#-173
	+esPz	2129	39.7	#-173
	esh	2139	54.2	#-173
15	+epPz	0157	57.5	#-174
	+esPz	0157	58.4	#-174
	+iPcPz	0158	13.9	#-174
	+ePKiKPz	0204	3.5	#-174
	esh	0207	7.8	#-174
	+epz	0610	32.5	
	-epz	1013	48.0	
	+esPz	1417	7.9	#-175
	esh	1427	33.0	#-175
	+epz	1727	17.2	
	-epz	2225	27.9	

Date	Phase	UTC hm	time s	Remarks
16	-epz	0416	45.2	
	+epz	0705	22.1	
	+epz	0753	50.8	
	-epz	1807	50.1	
17	-epz	0715	45.8	
	+epz	0922	17.2	
	+epz	1034	30.5	
	-epz	1317	24.4	#-176
	-epPz	1317	34.1	#-176
19	+epz	0057	23.2	
	+epPz	1239	39.8	#-177
	+ePnPnz	1240	27.9	#-177
20	+exz	1511	12.6	#-178
	+epz	1558	0.2	#-179
	+epz	1841	7.2	#-180
	+esPz	1841	11.2	#-180
	+epz	1841	11.9	#-180
	+esPnz	1841	13.4	#-180
	+epPz	1841	14.9	#-180
	+epz	2203	17.7	#-181
21	+epz	0124	24.7	#-182
	+epPz	0124	38.7	#-182
	-esPz	0124	45.2	#-182
	+epz	0908	23.7	#-183
	+ePcPz	0908	53.0	#-183
	+ipPz	0908	54.4	#-183
	-esPz	0909	5.5	#-183
	-epz	1928	13.7	#-184
	+iPcPz	1928	14.2	#-184
	-epz	2032	48.8	
22	+epz	1138	40.4	
	+epz	2322	22.8	#-185
	-ePcPz	2322	36.9	#-185
	-esPz	2322	40.5	#-185
23	+ipz	1336	0.2	
	+epz	1339	57.4	
	+epz	1859	23.1	
	+epz	1950	13.1	#-186
24	+ipz	0220	22.2	
	-epz	0236	57.5	#-187
	+ePcPz	0236	58.5	#-187
	-epPz	0647	52.9	#-188
	+esPz	0647	54.7	#-188
	+ipz	1325	51.3	#-189
25	-epz	0509	48.7	
	-exz	0931	23.0	#-190
	-epz	1833	47.9	
26	-epz	0816	55.9	#-191
	+epz	0844	47.9	#-192
	+ePcPz	0844	51.6	#-192

Date	Phase	UTC hm	time s	Remarks
	-epPz	0845	13.1	#-192
	+esPz	0845	21.8	#-192
	-epz	1113	16.3	
	+epz	1623	47.4	#-193
	+ePcPz	1623	49.0	#-193
	+epz	1942	44.6	
27	+epz	0009	14.4	
	+epz	0038	33.2	
	-epz	0242	15.0	
	+epz	0739	53.5	
	-ipz	1057	3.4	
	-epz	1115	29.2	#-194
	+ePcPz	1115	30.2	#-194
	+epz	1453	54.6	#-195
28	+epz	0203	55.2	#-196
	+ePcPz	0203	56.6	#-196
	-epPz	0204	8.7	#-196
	+esPz	0204	14.5	#-196
	+epz	0637	15.3	#-197
	-epz	0646	33.4	#-198
	+ePcPz	0646	35.3	#-198
	-ipz	1327	27.3	
	+epz	2342	13.1	
Mar.1	-epz	1006	36.8	#-199
	+epPz	1006	48.2	#-199
	+esPz	1006	51.7	#-199
	+ePcPz	1006	52.7	#-199
	+ePKPdfz	1423	33.7	#-200
	-ePKPbcz	1423	35.1	#-200
	+ePKPabz	1423	36.4	#-200
	+ePKiKPz	1423	39.3	#-200
	+epz	2043	39.9	#-201
2	+epz	0323	12.6	#-202
	+epPz	0323	14.6	#-202
	-esPz	0323	17.3	#-202
	+ePcPz	0737	45.6	#-203
	+epPz	0737	49.2	#-203
	+esPz	0737	54.3	#-203
3	+epz	0725	57.2	#-204
	+epPz	0726	7.1	#-204
	-esPz	0726	11.4	#-204
	+exz	1206	56.8	#-205
4	-epz	2140	50.9	
	+epz	2209	23.7	
5	+exz	1046	58.4	#-206
	-epz	1408	41.7	#-207
	+epz	1717	36.7	#-208
	-ipz	2129	28.1	#-209
	+ePcPz	2129	29.6	#-209
	+epPz	2129	38.7	#-209
	esPv	2129	43.6	#-209
	eSKSac	2140	1.9	#-209
	esh	2140	34.9	#-209
6	+epz	0134	52.0	#-210
	+ePcPz	0134	52.8	#-210
	epPv	0134	59.5	#-210
	-epz	0533	49.1	
	+epz	1434	20.8	#-211
	+epPz	1434	22.0	#-211
	+esPz	1434	24.0	#-211
	-epz	1450	12.0	#-212
	+ePcPz	1450	12.6	#-212
	+epz	1733	52.9	#-213
	+ePcPz	1733	53.5	#-213
7	-epz	0451	6.0	
	+epz	2302	54.7	#-214
	-ePcPz	2303	5.8	#-214
8	-epz	0454	49.5	#-215
	+ePcPz	0454	50.6	#-215
9	-ipz	1233	24.1	#-216
	-epPz	1233	48.9	#-216
	-esPz	1234	6.1	#-216
	+ePnPnz	1234	31.4	#-216
	+ePPz	1234	34.9	#-216
	-ePcPz	1236	12.9	#-216
	esh	1238	22.7	#-216
	+eScPz	1239	43.7	#-216
10	+epz	2026	12.2	
11	+iPKiKPz	0205	13.7	
12	+epz	0144	23.9	
13	-epz	0957	58.0	
14	-epz	0319	53.9	
	-exz	1501	14.5	#-217
15	-epz	0139	36.1	
	+epz	0230	30.1	#-218
	+epz	0449	4.9	#-219
	+ePcPz	0449	8.3	#-219
	+epPz	0449	15.3	#-219
	+esPz	0449	19.7	#-219
16	+epz	0417	21.9	#-220
	+epPz	0417	30.9	#-220
	-esPz	0417	36.2	#-220
	+epz	1109	54.4	#-221
	-epz	1244	51.4	#-222
	+epz	1919	10.7	#-223
	+esPz	1919	22.6	#-223
	+epz	2103	8.1	#-224
	+ePcPz	2103	9.6	#-224
17	+ipz	0350	1.3	#-225
	+ePcPz	0350	4.0	#-225

Date	Phase	UTC hm	time s	Remarks
	-esPz	0350	29.3	#-225
	+epz	0841	30.1	#-226
	+ePcPz	0841	31.0	#-226
	+epPz	0841	39.7	#-226
	+esPz	0841	44.1	#-226
	+epz	1447	58.8	#-227
	eSKSac	1458	7.3	#-227
	-ipz	1803	18.1	#-228
	+ePcPz	1803	20.5	#-228
	esh	1812	52.7	#-228
	-ipz	1938	48.8	#-229
	+epPz	1938	51.5	#-229
	+esPz	1938	52.9	#-229
	-epz	2102	5.4	#-230
	-epPz	2102	14.0	#-230
	+esPz	2102	18.4	#-230
	esh	2111	34.4	#-230
	+ipz	2154	43.0	#-231
	-epPz	2154	53.5	#-231
	-esPz	2154	57.8	#-231
	-ePcPz	2155	0.9	#-231
	+esPz	2224	40.9	#-232
	+ePcPz	2224	45.4	#-232
	+epz	2351	9.2	#-233
	-ePcPz	2351	9.8	#-233
18	-epz	0215	2.8	#-234
	+epz	0321	43.9	#-235
	-epPz	0322	9.1	#-235
	+esPz	0322	15.5	#-235
19	+epz	0509	57.0	#-236
	-ePcPz	0510	1.0	#-236
	+epz	2226	30.5	#-237
	+ePcPz	2226	33.8	#-237
	eSKSac	2236	37.1	#-237
	esh	2236	40.5	#-237
20	+epz	0853	38.3	#-238
	+ePcPz	0853	42.2	#-238
	+epPz	0853	43.1	#-238
21	-epz	1943	28.2	#-239
22	-ipz	1233	1.9	#-240
	-epz	1750	6.1	#-241
23	+epz	0413	9.0	#-242
	+ePcPz	0413	13.4	#-242
	-epz	0528	41.9	#-243
	-ePcPz	0528	42.6	#-243
	-epPz	0529	12.2	#-243
	-epz	0851	42.6	
	-epz	1156	28.8	
	-epz	1319	27.8	#-244
	+ePcPz	1319	33.2	#-244

Date	Phase	UTC hm	time s	Remarks
	-epz	1347	10.9	
24	+epz	0608	0.9	#-245
	-ePcPz	0608	2.7	#-245
	+epPz	0608	7.7	#-245
	+esPz	0608	16.9	#-245
	-epz	0815	54.2	#-246
	-ePcPz	0815	55.4	#-246
	-epz	1015	21.0	
	+epz	1221	58.9	#-247
	-epPz	1222	2.7	#-247
	+esPz	1222	3.7	#-247
	+epz	1650	35.1	#-248
	-epPz	1650	38.0	#-248
	-esPz	1650	39.2	#-248
	-epz	1900	4.0	#-249
	+ePcPz	1900	16.9	#-249
25	-ePKPdfz	0637	43.3	#-250
	+esPKPdfz	0637	58.9	#-250
	+epz	0639	58.1	#-251
	+ePcPz	0639	59.1	#-251
	-epz	0714	52.4	
	-epz	1227	17.6	
	+epz	1234	49.0	
26	-epz	0543	38.6	#-252
	+ePcPz	0543	41.9	#-252
	+epPz	0545	48.1	#-252
28	+epz	0035	47.9	#-253
	+ePcPz	0035	48.5	#-253
	+epz	0152	8.2	#-254
	-ipz	0507	57.1	#-255
	+ePcPz	0508	8.8	#-255
	+epPz	0508	25.8	#-255
	-esPz	0508	36.9	#-255
	esh	0517	32.0	#-255
	eSKSac	0517	48.3	#-255
	-epz	1008	32.9	#-256
	+ePcPz	1008	45.9	#-256
	+epz	2156	21.0	#-257
	+ePcPz	2156	34.7	#-257
	esh	2205	41.2	#-257
29	+epz	0334	28.7	#-258
30	-epz	1518	56.6	#-259
	+ePcPz	1519	0.7	#-259
	+epPz	1519	27.7	#-259
31	-epz	0722	25.0	
Apr.1	+epz	2010	34.7	#-260
	-epPz	2010	51.6	#-260
	+ePcPz	2010	54.9	#-260
	-esPz	2010	58.7	#-260
	esh	2019	36.4	#-260

Date	Phase	UTC hm	time s	Remarks
2	+epz	0200	3.3	
	+epz	0422	12.5	#-261
	+epz	0422	12.5	#-261
	-epz	0429	57.6	
	+epz	0559	32.4	
3	-epz	0517	29.8	
	-epz	0933	58.8	
	-epz	1548	55.3	
	-epz	2012	26.1	
	+epz	2257	41.2	
4	+epz	0418	47.6	
	-epz	2102	34.8	#-262
	+ePcPz	2102	38.2	#-262
	-epPz	2102	46.2	#-262
5	+epz	2315	39.4	#-263
	+ePcPz	2315	40.0	#-263
6	+epz	0522	23.1	
	-epz	1620	21.2	#-264
	-ePcPz	1620	21.5	#-264
7	+epz	1418	24.6	
8	+epz	0146	13.8	#-265
	-epz	0357	24.2	#-266
	-epPz	0357	26.7	#-266
	+esPz	0357	28.5	#-266
	+ePcPz	0358	57.1	#-266
	+ePPz	0359	15.1	#-266
	+epz	0958	16.4	
9	-epz	0751	46.9	
10	-epz	1021	47.4	#-267
	+epPz	1021	53.7	#-267
	-esPz	1021	58.5	#-267
11	+epz	0645	50.1	#-268
12	+epz	0215	41.5	
13	-epz	1548	55.3	#-269
	+ePcPz	1548	56.3	#-269
	-epz	2012	26.1	
	+epz	2257	41.2	#-270
14	+ipz	0418	47.7	#-271
	+iPcPz	0418	48.6	#-271
	+epPz	0418	56.9	#-271
	+esPz	0419	0.9	#-271
	+epz	0636	20.5	#-272
15	+epz	0717	19.0	#-273
	+ipz	2319	55.4	#-274
	+epPz	2320	18.9	#-274
17	-epz	0222	4.0	#-275
	+epz	1042	10.3	#-276
	-ePcPz	1042	13.4	#-276
	-epz	1654	44.9	#-277
	-ePcPz	1654	48.1	#-277
	+epPz	1654	55.4	#-277
	+esPz	1654	58.5	#-277
18	+epz	0122	33.5	#-278
	+ePcPz	0122	34.4	#-278
	+epz	0907	1.2	#-279
	+ePcPz	0907	2.0	#-279
	+epz	1423	12.2	#-280
	+epPz	1423	18.0	#-280
	+esPz	1423	22.8	#-280
	+ipz	1619	50.5	#-281
	-epPz	1620	7.7	#-281
	-ePcPz	1620	11.2	#-281
	+esPz	1620	15.0	#-281
	-ePPz	1622	25.9	#-281
	esh	1629	2.6	#-281
	eSKSac	1629	52.3	#-281
	+epz	1806	46.1	#-282
	-epPz	1807	1.7	#-282
	+ePcPz	1807	7.3	#-282
	-esPz	1807	9.2	#-282
	+epz	1935	2.8	#-283
	+epPz	1935	19.0	#-283
	-ePcPz	1935	23.6	#-283
	-esPz	1935	24.6	#-283
	-epz	2214	39.1	#-284
	-epPz	2214	55.2	#-284
	+ePcPz	2214	58.3	#-284
	+esPz	2215	2.2	#-284
	+epz	2220	17.4	
	+epz	2335	21.1	#-285
	-epPz	2335	36.6	#-285
	+ePcPz	2335	40.6	#-285
	+esPz	2335	42.6	#-285
19	-epz	0029	36.4	#-286
	-ePcPz	0029	37.7	#-286
	-epPz	0029	44.8	#-286
	-esPz	0029	49.8	#-286
20	+epz	0947	48.2	#-287
	+ePcPz	0947	58.8	#-287
	+epz	1612	47.5	#-288
	+epPz	1612	57.5	#-288
	-esPz	1613	1.7	#-288
	-epz	2252	56.6	#-289
	+epPz	2253	6.5	#-289
	-esPz	2253	10.8	#-289
21	+epz	1548	45.7	#-290
	+epz	1811	3.2	#-291
	+ePcPz	1811	5.2	#-291
	+epPz	1811	13.8	#-291
	+esPz	1811	16.7	#-291

Date	Phase	UTC hm	time s	Remarks
	+epz	1935	12.8	#-292
	+ePcPz	1935	19.8	#-292
22	+epz	0209	30.4	#-293
	-ePcPz	0209	31.3	#-293
	+epPz	0209	43.6	#-293
	+esPz	0209	49.2	#-293
	-epz	1111	35.6	#-294
	-ePcPz	1111	36.4	#-294
23	+ipz	1518	11.3	#-295
	-ePcPz	1518	12.1	#-295
	-epz	2158	55.5	
24	+epz	1109	30.8	#-296
	+epPz	1109	32.0	#-296
	-esPz	1109	32.8	#-296
	+ePcPz	1110	36.0	#-296
	+epz	2100	29.6	#-297
	+epPz	2100	39.0	#-297
	+esPz	2100	42.0	#-297
	+ePcPz	2100	44.2	#-297
25	+epz	1419	42.2	
26	+epz	0207	9.0	
	+epz	0225	15.4	
	-iPKPdfz	0734	52.9	#-298
	+ePKPbcz	0734	58.1	#-298
	+ePKiKPz	0735	0.4	#-298
	+ePKPabz	0735	2.6	#-298
	+epPKPdfz	0735	4.6	#-298
	+esPKPdfz	0735	7.9	#-298
	+epPKPbcz	0735	9.3	#-298
	+epPKiKPz	0735	10.4	#-298
	-esPKPbcz	0735	11.6	#-298
	+epPKPabz	0735	12.3	#-298
	+epz	1205	54.2	#-299
	+ePcPz	1205	55.4	#-299
	-epz	1518	52.0	#-300
	-ePcPz	1518	56.6	#-300
	+epPz	1519	0.2	#-300
	-esPz	1519	2.8	#-300
	-epz	1624	42.4	
	-epz	1635	35.5	
27	-epz	0043	44.7	#-301
	-ePcPz	0043	48.2	#-301
	+epz	1821	51.3	#-302
28	+epz	0004	44.1	#-303
	-epz	0133	29.7	#-304
	+ePcPz	0133	32.2	#-304
	+epPz	0133	32.4	#-304
	+esPz	0133	34.6	#-304
	esh	0144	4.5	#-304
29	-epz	0707	17.3	
30	+epz	0612	56.3	
	-epz	0637	41.9	#-305
	+ePcPz	0637	48.7	#-305
	+epPz	0637	54.5	#-305
	+esPz	0637	58.0	#-305
	-epz	1134	34.9	#-306
	-epPz	1134	36.1	#-306
	+esPz	1134	38.5	#-306
May 1	+epz	1413	17.4	#-307
2	+epz	0406	7.5	#-308
	+epz	0612	39.1	
	-epz	0925	30.5	
3	+ipz	0224	45.7	#-309
	esPKiKPh	0233	33.3	#-309
	+epz	2243	54.6	#-310
	-ePcPz	2243	55.2	#-310
4	+epz	0031	2.4	#-311
	-epz	0712	43.9	#-312
	+ePcPz	0712	44.7	#-312
	+epz	0821	36.6	#-313
5	+epz	0604	18.3	#-314
	+epPz	0604	38.8	#-314
	-epz	1701	39.4	#-315
	-ePcPz	1701	40.8	#-315
6	+epz	0255	7.1	
	+ePcPz	0255	9.2	
	+epPz	0255	15.2	
	-esPz	0255	18.0	
	+epz	2009	6.3	
	+ePcPz	2009	11.8	
7	+epz	0225	48.3	#-316
	+epz	0738	25.4	#-317
	+ePcPz	0738	57.5	#-317
	+epPz	0738	58.6	#-317
	+epz	0941	22.4	#-318
	+epz	1528	39.0	#-319
	+ePcPz	1528	42.8	#-319
	+epPz	1528	53.7	#-319
	+esPz	1528	58.7	#-319
	esh	1539	6.8	#-319
8	+ePKPdfz	0432	29.1	#-320
	-ePKPbcz	0432	32.9	#-320
	-ePKiKPz	0432	34.6	#-320
	+ePKPabz	0432	36.8	#-320
	+epPKPdfz	0432	47.8	#-320
	+epPKPbcz	0432	50.1	#-320
	-epPKiKPz	0432	51.6	#-320
	+esPKPdfz	0432	52.6	#-320
	-epPKPabz	0432	53.8	#-320
	+esPKPbcz	0432	55.3	#-320

Date	Phase	UTC hm	time s	Remarks
	+epz	0538	44.8	#-321
	-ePcPz	0538	46.2	#-321
	+epPz	0539	18.4	#-321
	-esPz	0539	31.8	#-321
	eSKSac	0549	1.4	#-321
	esh	0549	24.8	#-321
	+epz	0646	37.0	
	+epz	1435	22.2	
	+epz	1859	10.3	
	-ePKPdfz	2005	3.6	#-322
	+ePKPbcz	2005	8.6	#-322
	+ePKiKPz	2005	9.5	#-322
	-ePKPabz	2005	15.3	#-322
	-epPKPdfz	2005	20.9	#-322
	+epPKPbcz	2005	20.4	#-322
	+epPKiKPz	2005	31.9	#-322
	-esPKPdfz	2005	34.0	#-322
	+epPKPabz	2005	36.5	#-322
	+esPKPabz	2005	41.4	#-322
9	-epz	1730	49.8	
	-ipz	2354	21.2	#-323
	+ePcPz	2354	22.3	#-323
	+epPz	2355	3.2	#-323
	+esPz	2355	24.0	#-323
	-ePKiKPz	2359	9.5	#-323
10	-epz	0932	8.6	#-324
	+epz	1222	4.5	#-325
	+ePcPz	1222	5.3	#-325
	+epz	1937	27.8	
	+epz	2104	50.5	#-326
	+esPz	2104	56.8	#-326
11	-epz	0834	16.5	#-327
	-epPz	0834	26.6	#-327
	+esPz	0834	30.2	#-327
	+ePcPz	0834	33.4	#-327
	-epz	1056	3.0	#-328
	+ePcPz	1056	3.5	#-328
	+epPz	1056	16.0	#-328
	+esPz	1056	20.8	#-328
	+epz	1217	44.3	#-329
	-ePcPz	1217	45.2	#-329
12	-epz	1731	26.5	
	+epz	2325	41.1	#-330
	+ePcPz	2325	42.4	#-330
	+epPz	2325	51.3	#-330
	+esPz	2325	55.6	#-330
	+ePPz	2329	7.1	#-330
13	+epz	0324	33.6	#-331
	+ePcPz	0324	34.5	#-331
	+epz	1331	36.2	#-332
	-epz	1509	54.3	
	-ePdiffz	2011	27.6	#-333
	-epPdiffz	2011	37.6	#-333
14	-epz	0438	0.1	#-334
	-ePcPz	0438	4.0	#-334
	+epz	1703	40.0	#-335
	+epPz	1703	42.7	#-335
	+esPz	1703	43.9	#-335
	+ePPz	1705	8.7	#-335
	+ePnPnz	1705	10.9	#-335
	+ePPz	1705	21.4	#-335
	+ePcPz	1705	50.9	#-335
	eScP	1709	38.8	#-335
	+epz	2234	27.4	#-336
	+ePcPz	2234	29.0	#-336
	+epPz	2234	38.6	#-336
	+esPz	2234	40.7	#-336
15	+epz	0340	19.7	#-337
	+ePcPz	0340	22.4	#-337
	+epPz	0340	30.8	#-337
	+esPz	0340	33.4	#-337
	-epz	0932	23.1	#-338
	-ePcPz	0932	36.4	#-338
	+epz	1820	46.8	#-339
	-ePcPz	1820	50.5	#-339
16	+epz	0640	17.9	
	+epz	1328	14.8	#-340
	+ePcPz	1328	16.5	#-340
	+epPz	1328	26.2	#-340
	-esPz	1328	29.9	#-340
	+epz	1520	22.9	#-341
	-ePcPz	1520	24.9	#-341
	+epz	1726	54.8	#-342
17	-epz	0505	28.5	#-343
	+epz	1210	20.2	#-344
	+ePcPz	1210	22.0	#-344
	+epz	1401	25.9	#-345
	-ePcPz	1401	31.9	#-345
	+epz	2110	49.4	
18	+epz	0435	37.4	#-346
	+ePcPz	0435	38.4	#-346
19	-epz	0755	46.1	
	+epz	0956	52.9	
	+epz	1911	50.5	#-347
	+epz	2004	31.1	
	-epz	2218	46.4	#-348
20	+epz	0309	45.5	#-349
	-epz	1409	55.4	#-350
	+ePcPz	1409	58.1	#-350
	-epPz	1410	4.7	#-350

Date	Phase	UTC hm	time s	Remarks
	-epz	2039	40.4	#-351
	+epPz	2039	42.4	#-351
	+esPz	2039	43.4	#-351
21	+epz	0540	10.9	#-352
	+ePcPz	0540	13.6	#-352
	+epPz	0540	22.3	#-352
	+esPz	0540	25.4	#-352
	+epz	1833	28.4	#-353
	+ePcPz	1833	33.1	#-353
	+epz	2328	6.6	
22	+epz	0239	12.4	#-354
	+epz	1609	37.9	#-355
	+epPz	1609	47.8	#-355
	-epz	1739	31.2	
	-epz	1908	33.2	#-356
	-epPz	1908	36.1	#-356
	-esPz	1908	37.0	#-356
	+ePcPz	1908	52.6	#-356
	+ePPz	1911	7.0	#-356
	+epz	2052	56.2	#-357
	-epPz	2053	6.2	#-357
	-esPz	2053	11.2	#-357
23	+epz	0002	26.0	#-358
	-epPz	0002	35.5	#-358
	+esPz	0002	39.3	#-358
	+epz	0720	17.5	#-359
	+epz	1437	58.5	#-360
	-ePcPz	1437	59.2	#-360
	-epz	1515	27.4	
	+epz	1524	29.3	#-361
	-epz	1603	13.1	#-362
	+epPz	1603	25.1	#-362
	-esPz	1603	32.5	#-362
	-ePcPz	1603	37.7	#-362
	+ePPz	1605	42.0	#-362
	+epz	1631	29.4	
	+epz	2217	34.2	#-363
	+epPz	2217	41.3	#-363
	-ePcPz	2217	47.2	#-363
	+esPz	2217	50.8	#-363
	+epz	2341	21.8	
	-epPz	2341	24.5	
24	-epz	0034	5.5	#-364
	-epPz	0034	21.6	#-364
	+esPz	0034	29.0	#-364
	-ePcPz	0034	33.4	#-364
	-ePPz	0036	33.4	#-364
	-epz	1010	33.6	#-365
	+ePcPz	1010	36.7	#-365
25	+epz	1435	48.3	#-366
	+ePcPz	1435	49.1	#-366
26	-epz	0023	13.8	#-367
	-ePcPz	0023	15.2	#-367
	-epPz	0023	39.1	#-367
	+esPz	0023	51.4	#-367
	+ePPz	0026	49.4	#-367
	eSKSac	0033	33.8	#-367
	esh	0034	59.5	#-367
	+epz	0931	5.9	#-368
	+ePcPz	0931	12.9	#-368
	+epPz	0931	32.3	#-368
	-epz	2318	34.5	#-369
	-ePcPz	2318	36.1	#-369
27	-epz	1436	57.7	#-370
	-epz	1843	39.9	#-371
	+epPz	1843	50.1	#-371
	+ePcPz	1843	52.4	#-371
	+esPz	1843	54.7	#-371
28	-epz	0415	25.7	#-372
	+epPz	0415	31.7	#-372
	-esPz	0415	35.4	#-372
	-ePcPz	0415	48.8	#-372
	-epz	0443	35.9	
	-epz	1702	54.4	#-373
	-epPz	1703	20.8	#-373
	-esPz	1703	36.3	#-373
	+ePnz	1704	1.9	#-373
	+ePPz	1704	6.8	#-373
	-ePcPz	1705	42.5	#-373
	esh	1707	55.7	#-373
	-eScPz	1709	13.1	#-373
	+epz	1952	37.8	
	-ePdiffz	2149	19.1	#-374
29	+epz	0221	33.8	
	+epz	0753	15.8	
30	-epz	0851	52.8	#-375
	+ePcPz	0851	54.0	#-375
	+epPz	0852	15.6	#-375
	+esPz	0852	23.2	#-375
	+epz	1257	48.9	#-376
	-ePcPz	1257	51.6	#-376
	+epPz	1257	59.2	#-376
	+esPz	1258	3.7	#-376
	+epz	1453	56.4	#-377
	+ePcPz	1453	59.8	#-377
	-epPz	1454	36.0	#-377
	-esPz	1454	55.7	#-377
	-ePPz	1457	16.7	#-377
31	+ePKPbcz	0629	14.3	#-378
	-ePKiKPz	0629	15.4	#-378

Date	Phase	UTC hm	time s	Remarks
	-epPKPdfz	0629	18.1	#-378
	-esPKPdfz	0629	22.2	#-378
	+epPKPbcz	0629	26.2	#-378
	-esPKPbcz	0629	29.0	#-378
Jun.1	+epz	1527	34.0	
2	+epz	0611	3.8	#-379
	-ePcPz	0611	12.0	#-379
	-epPz	0611	29.5	#-379
	+esPz	0611	41.3	#-379
	-epz	2159	8.2	#-380
	+ePcPz	2159	14.7	#-380
	+epPz	2159	18.1	#-380
	-esPz	2159	20.4	#-380
3	-epz	0221	42.8	#-381
	-ePcPz	0221	45.7	#-381
	-epPz	0223	32.4	#-381
	-epz	0603	20.7	
	+ePKPdfz	0932	52.6	#-382
	+ePKiKPz	0932	53.7	#-382
	+ePPz	0934	23.9	#-382
	-epPKPdfz	0934	49.5	#-382
	-epz	1534	36.1	#-383
	+ePcPz	1534	37.8	#-383
	+epPz	1534	49.6	#-383
	+esPz	1534	54.1	#-383
4	+epz	0951	50.2	#-384
	+epPz	0951	59.1	#-384
	+esPz	0952	3.1	#-384
	+ePcPz	0952	12.1	#-384
	-epz	1342	31.2	
	+epz	1437	50.9	#-385
5	-epz	0138	1.9	#-386
	+ePcPz	0138	3.0	#-386
	-epPz	0138	48.5	#-386
	-epz	0250	7.5	#-387
	+ePcPz	0250	8.0	#-387
	-epz	1025	23.7	#-388
	-ePcPz	1025	27.0	#-388
	+epz	1222	6.7	#-389
	+ePcPz	1222	7.7	#-389
	-epz	2055	40.8	#-390
6	+epz	0101	13.2	#-391
	+epPz	0101	18.0	#-391
	+esPz	0101	19.1	#-391
	+epz	0231	54.5	#-392
	+ePcPz	0231	55.3	#-392
	+epz	0655	1.0	#-393
	+epPz	0655	15.3	#-393
	+esPz	0655	24.0	#-393
	+epz	0725	32.8	#-394
	+ePcPz	0725	33.9	#-394
	eSKSac	0734	57.5	#-394
	esh	0735	10.4	#-394
	+epz	1942	33.8	#-395
	-ePcPz	1942	37.6	#-395
7	+epz	0007	17.8	#-396
	+epPz	0007	27.4	#-396
	-esPz	0007	29.7	#-396
	+epz	0650	18.8	
	+epz	1221	50.6	#-397
	-ePcPz	1221	58.7	#-397
	+epPz	1222	1.3	#-397
	+esPz	1222	5.6	#-397
8	+epz	2245	22.6	
9	+epz	1646	8.2	#-398
	-ePcPz	1646	8.4	#-398
	-epPz	1646	38.1	#-398
	-esPz	1646	48.8	#-398
10	-epz	0306	24.7	#-399
	-ePcPz	0306	26.0	#-399
	+epPz	0306	54.2	#-399
	+esPz	0307	6.7	#-399
	+epz	1138	25.4	
11	+epz	1723	47.6	#-400
	-ePcPz	1724	2.0	#-400
12	+epz	0557	12.1	
	+epz	0639	59.0	#-401
	+ePcPz	0640	0.1	#-401
	+epPz	0640	10.3	#-401
13	-epz	0134	19.2	#-402
	+epPz	0134	21.9	#-402
	-esPz	0134	23.9	#-402
	-ePnz	0135	39.4	#-402
	+ePPz	0135	41.3	#-402
14	+epz	0642	28.6	#-403
	-epPz	0642	31.3	#-403
	+esPz	0642	32.8	#-403
	-ePcPz	0644	48.9	#-403
	+epz	1300	21.0	
15	+epz	2308	5.6	#-404
	-ePcPz	2308	7.5	#-404
	+epPz	2308	19.2	#-404
	+esPz	2308	22.5	#-404
16	+epz	0013	9.2	#-405
	-ePcPz	0013	11.9	#-405
	-epPz	0013	19.6	#-405
	-esPz	0013	23.3	#-405
	-epz	0414	35.7	#-406
	+ePcPz	0414	37.1	#-406
	-epz	0707	8.3	#-407

Date	Phase	UTC hm	time s	Remarks
	+ePcPz	0707	9.3	#-407
	eSKSac	0716	42.9	#-407
	esh	0717	6.9	#-407
	+epz	1842	47.2	#-408
	+ePcPz	1842	54.3	#-408
	esh	1852	24.4	#-408
	eSKSac	1852	38.5	#-408
17	-epz	0110	30.0	#-409
	+ePcPz	0110	32.3	#-409
	-epz	0703	17.3	#-410
	-ePcPz	0703	20.2	#-410
	esh	0713	24.6	#-410
	-epz	1615	38.3	#-411
	+epz	1714	56.9	
	-epz	2139	20.5	#-412
	-ePcPz	2139	22.3	#-412
	+epPz	2139	31.9	#-412
	+esPz	2139	36.5	#-412
	+ePPz	2142	59.4	#-412
	+ePKiKPz	2144	14.6	#-412
	+epPKiKPz	2144	25.8	#-412
	eSKSac	2149	50.3	#-412
	esh	2150	13.2	#-412
18	+epz	0521	8.5	#-413
	+ePcPz	0521	10.8	#-413
	+epz	0745	39.0	#-414
	+ePcPz	0745	39.8	#-414
	+epz	0852	44.0	
	-epz	1407	19.6	#-415
	+epPz	1407	34.5	#-415
	-esPz	1407	40.3	#-415
	+ePcPz	1407	44.5	#-415
	-ePPz	1409	48.9	#-415
	+epPKiKPz	1413	58.4	#-415
	+esPKiKPz	1414	4.2	#-415
	esh	1416	15.0	#-415
	eSKSac	1417	10.0	#-415
	-epz	1435	32.7	
	-epz	1604	55.1	#-416
	-epz	1913	6.3	#-417
	+ePcPz	1913	7.1	#-417
	-epz	2329	7.0	
19	-epz	0016	41.8	
	-epz	0910	28.3	#-418
	-epPKPdfz	0935	40.7	#-419
	-esPKPdfz	0935	43.8	#-419
	+epz	1357	47.6	#-420
	+ePcPz	1357	48.8	#-420
	+epz	2258	24.5	#-421
	+ePcPz	2258	26.6	#-421
	+epPz	2258	32.8	#-421
	+epz	2320	57.2	#-422
	-ePcPz	2321	3.9	#-422
	+epPz	2321	8.1	#-422
	-esPz	2321	11.3	#-422
20	+epz	0006	43.1	#-423
	-ePcPz	0006	45.5	#-423
	-epPz	0006	53.3	#-423
	+esPz	0006	55.6	#-423
	+epz	0538	39.9	#-424
	+ePcPz	0538	44.6	#-424
	+epPz	0538	50.5	#-424
	-esPz	0538	54.0	#-424
	+epz	0716	34.4	
	-epz	0918	3.1	#-425
	-ePcPz	0918	4.5	#-425
	+epPz	0918	13.4	#-425
	-epz	1155	3.0	#-426
	-epz	2047	24.8	#-427
	-ePcPz	2047	31.5	#-427
	+epPz	2047	32.8	#-427
	+esPz	2047	37.4	#-427
21	-epz	0018	50.2	#-428
	+ePcPz	0018	51.5	#-428
	+epPz	0019	0.6	#-428
	+esPz	0019	6.5	#-428
	+epz	0519	9.1	#-429
	+ePcPz	0519	17.4	#-429
	+epPz	0519	18.9	#-429
	-esPz	0519	23.5	#-429
	+epz	0603	12.2	
22	-epz	0804	19.6	
	+epz	1626	51.7	#-430
23	-epz	0341	29.4	
	+epz	1121	37.7	#-431
	+epPz	1121	54.S	#-431
	+ePcPz	1122	2.8	#-431
	+ePPz	1124	6.4	#-431
	-epz	1401	23.2	#-432
	+epPz	1401	27.5	#-432
	+esPz	1401	29.3	#-432
	+ePPz	1402	25.1	#-432
24	+epz	1916	32.2	#-433
25	+epz	0713	10.0	#-434
	-epPz	0713	19.0	#-434
	+esPz	0713	21.9	#-434
	-ePcPz	0713	36.1	#-434
	-epz	2007	26.0	#-435
	-epPz	2007	28.7	#-43S
	+esPz	2007	30.1	#-435

Date	Phase	UTC hm	time s	Remarks
	+ePcPz	2007	47.2	#-435
	-epz	2102	12.2	#-436
	+esPz	2102	17.1	#-436
	+epz	2156	59.0	#-437
	+epPz	2157	3.4	#-437
	-epz	2158	52.3	#-438
	-ePcPz	2159	7.1	#-438
	+epz	2310	40.7	#-439
	+esPz	2310	45.5	#-439
	+ePcPz	2310	54.8	#-439
26	+epz	0649	43.0	#-440
	-epz	0728	8.6	#-441
	+epPz	0728	19.6	#-441
	+esPz	0728	24.3	#-441
	+ePcPz	0728	33.5	#-441
	+ePPz	0730	40.1	#-441
	+epz	1615	5.0	#-442
27	+epz	0409	9.6	#-443
	+ePcPz	0409	11.1	#-443
	-epPz	0409	18.0	#-443
	+esPz	0409	22.5	#-443
	-epz	0602	13.7	#-444
	+epPz	0602	17.1	#-444
	+ePcPz	0602	25.9	#-444
	+ePPz	0605	1.9	#-444
	esh	0611	51.0	#-444
	eSKSac	0612	24.7	#-444
	-epz	0728	49.2	#-445
	+ePcPz	0728	50.9	#-445
	+epPz	0729	36.4	#-445
	+esPz	0729	56.2	#-445
	+ePPz	0732	24.8	#-445
	+ePKiKPz	0733	44.1	#-445
	+esPKiKPz	0734	51.6	#-445
	eSKSac	0738	59.5	#-445
	esh	0739	22.8	#-445
	+epz	0749	58.2	#-446
	-ePcPz	0749	59.5	#-446
	+epPz	0750	8.1	#-446
	-epz	0824	19.7	#-447
	+ePcPz	0824	22.9	#-447
	-epz	1451	24.2	#-448
	+ePcPz	1451	39.2	#-448
	+epz	1637	10.0	
	+epz	2000	55.2	#-449
	+epPz	2001	5.7	#-449
28	-epz	0052	14.0	#-450
	-epPz	0052	20.5	#-450
	-ePcPz	0052	29.6	#-450
	-epz	0735	5.5	#-451

Date	Phase	UTC hm	time s	Remarks
	+epz	1737	21.2	
	-epz	2052	9.8	#-452
	+epPz	2052	20.1	#-452
	+esPz	2052	24.3	#-452
	+epz	2319	17.8	#-453
	-ePcPz	2319	23.1	#-453
29	-epz	0251	59.9	#-454
	-ePcPz	0252	0.8	#-454
	-epPz	0252	10.0	#-454
	+esPz	0252	14.3	#-454
	+ePKiKPz	0256	53.2	#-454
	esh	0302	52.7	#-454
	-epz	0349	4.0	
	-epz	1125	32.1	#-455
	+ePcPz	1125	33.3	#-455
	+epz	1232	20.3	#-456
	-ePcPz	1232	22.8	#-456
	+esPz	1233	4.8	#-456
	-epz	1430	52.2	#-457
	-ePcPz	1430	53.3	#-457
	+epPz	1431	16.4	#-457
	-epPKiKPz	1436	18.4	#-457
	+epz	2210	10.6	
30	+epz	0420	4.9	#-458
	-epPz	0420	6.7	#-458
	-ePcPz	0420	11.7	#-458
	+epz	0429	12.6	
	+epPz	0429	15.1	
	+ePcPz	0429	22.1	
	+epz	0847	16.9	#-459
	+ePcPz	0847	18.5	#-459
	+epPz	0847	42.3	#-459
	+esPz	0847	55.0	#-459
	+epz	1346	34.0	#-460
	+ePcPz	1346	38.7	#-460
	-epPz	1346	46.5	#-460
	+esPz	1346	52.0	#-460
	-epz	1954	27.4	#-461
	-ePcPz	1954	32.2	#-461
	-epz	2002	12.1	#-462
	-ePcPz	2002	16.6	#-462
	esh	2011	23.2	#-462
	eSKSac	2011	27.6	#-462
	-epz	2141	4.9	#-463
	+ePcPz	2141	7.1	#-463
	-epPz	2143	17.1	#-463
	-ePKiKPz	2146	11.9	#-463
	eSKSac	2150	28.0	#-463
	esh	2150	37.0	#-463
Jul.2	+esPz	0208	33.9	#-464

Date	Phase	UTC hm	time s	Remarks
	+epz	2031	51.1	#-465
	-epPz	2031	57.5	#-465
	+esPz	2032	0.4	#-465
	-ePcPz	2032	17.5	#-465
3	+epz	0716	47.0	
	-epz	0849	37.7	#-466
	-epPz	0850	27.5	#-466
	+esPz	0850	47.5	#-466
	-epz	1600	24.2	#-467
	-ePcPz	1600	25.5	#-467
	+epPz	1600	36.4	#-467
	+esPz	1600	41.2	#-467
	-epz	2313	22.5	#-468
5	-epz	0627	41.9	#-469
	+ePcPz	0627	43.5	#-469
	eSKSac	0637	38.6	#-469
	esh	0637	53.2	#-469
	+ePcPz	1324	37.9	#-470
	-epz	1353	2.1	#-471
	+ePcPz	1353	20.7	#-471
	+epz	1852	28.5	#-472
6	-epz	1413	37.1	#-473
	+epPz	1413	47.1	#-473
	+esPz	1413	51.5	#-473
7	-epz	2345	34.6	#-474
8	-epz	1122	13.3	#-475
	-ePcPz	1122	14.1	#-475
	-epPz	1122	23.5	#-475
	+esPz	1122	28.1	#-475
	-ePcPz	2143	58.2	#-476
	+epPz	2144	6.4	#-476
9	-epz	1404	31.6	#-477
	+ePcPz	1404	37.0	#-477
	-epz	1425	56.5	#-478
	-epz	1518	50.1	#-479
	+ePcPz	1518	53.7	#-479
	+esPz	1519	43.1	#-479
	+ePKPbcz	1900	34.6	#-480
10	+epz	0335	23.3	#-481
	+ePcPz	0335	24.2	#-481
	-epz	0851	48.6	#-482
	+epz	1114	37.0	#-483
	+epPz	1114	39.5	#-483
	+esPz	1114	40.8	#-483
	-epz	1116	23.0	#-484
	+ePcPz	1116	24.9	#-484
	+epPz	1116	32.5	#-484
	+esPz	1116	35.4	#-484
11	-epz	0632	57.8	
12	-epz	0121	12.1	#-485

Date	Phase	UTC hm	time s	Remarks
	+epPz	0121	22.1	#-485
	+esPz	0121	25.8	#-485
	+ePcPz	0121	36.1	#-485
	-epz	0613	8.3	#-486
	+epz	1059	45.0	#-487
	+ePnz	1059	46.1	#-487
	+epPz	1059	47.7	#-487
	+esPz	1059	48.2	#-487
13	+epz	2316	6.1	#-488
14	+epz	1648	27.4	#-489
	+epPz	1648	37.6	#-489
	+esPz	1648	42.2	#-489
	+epz	1842	32.2	
15	+epz	0057	51.2	#-490
	-epPz	0058	0.4	#-490
	-esPz	0058	4.4	#-490
	-epz	1509	23.0	#-491
	+epPz	1509	25.0	#-491
	-esPz	1509	26.4	#-491
	+ePPz	1510	46.4	#-491
17	+ePKPdfz	0239	44.6	#-492
	+ePKiKPz	0239	52.0	#-492
	-epPKPdfz	0240	26.7	#-492
	-epPKiKPz	0240	29.4	#-492
	+esPKPdfz	0240	38.8	#-492
	+esPKiKPz	0240	45.7	#-492
	-epz	0722	38.6	#-493
	-ePcPz	0722	39.4	#-493
	+epz	1352	33.0	
18	+epz	0136	50.3	#-494
	+epPz	0136	55.0	#-494
	+esPz	0136	58.3	#-494
	-ePcPz	0137	10.7	#-494
	-epz	0240	43.8	#-495
	+epPz	0240	52.1	#-495
	+esPz	0240	54.7	#-495
	-ePcPz	0241	16.0	#-495
	-epz	2203	7.3	#-496
	+epPz	2203	9.6	#-496
	+esPz	2203	11.8	#-496
19	+epz	0107	50.4	#-497
	-epz	0152	12.5	#-498
	-ePcPz	0152	13.4	#-498
	-epz	0251	19.4	#-499
	+ePcPz	0251	21.3	#-499
	+epPz	0251	30.5	#-499
	+esPz	0251	33.2	#-499
	-epz	0653	25.8	#-500
	-epPz	0653	28.0	#-500
	+esPz	0653	29.4	#-500

Date	Phase	UTC hm	time s	Remarks
	+ePcPz	0654	28.0	#-500
	+epz	0706	25.8	#-501
	+epPz	0706	42.6	#-501
	+esPz	0706	53.4	#-501
	+epz	0835	13.6	#-502
	+epPz	0835	16.2	#-502
	+esPz	0835	17.0	#-502
	+epz	1058	27.9	#-503
	+ePcPz	1058	41.0	#-503
	+epz	1641	45.4	#-504
21	-epz	1106	39.4	#-505
	-ePcPz	1106	46.6	#-50S
22	+epz	0215	44.6	#-506
	-epPz	0215	55.0	#-506
	-esPz	0215	58.2	#-506
	+epz	0443	31.8	#-507
	-epPz	0443	33.1	#-507
	-epz	1129	19.1	#-508
	+ePcPz	1129	23.2	#-508
23	+epz	0148	41.0	#-509
	-ePcPz	0148	43.7	#-509
	-epPz	0148	51.5	#-509
	+esPz	0148	55.9	#-509
	+epz	0420	1.7	
	-epz	0630	35.4	#-510
	-ePcPz	0630	37.5	#-510
	+epPz	0631	17.6	#-510
	-epz	0708	44.0	#-511
	+epz	1939	30.6	#-512
	+ePcPz	1939	32.9	#-512
	+epPz	1939	39.7	#-512
	+esPz	1939	43.3	#-512
	+epz	2247	58.0	#-513
	+epPz	2248	3.0	#-513
24	+epz	0316	589	#-514
	-ePcPz	0317	8.3	#-514
	-epPz	0317	9.5	#-514
	+esPz	0317	13.1	#-514
	-epz	0639	53.0	#-515
	-ePcPz	0639	54.7	#-515
27	+exz	0334	11.0	#-516
28	-epz	0249	30.8	
	-epz	0742	12.2	
	+epPz	1336	22.1	#-517
	+esPz	1336	23.6	#-517
	-epz	1816	13.3	
	-epz	1913	13.4	#-518
	+ePcPz	1913	14.3	#-518
29	-epz	0726	57.1	#-519
	-epPz	0727	7.1	#-519

Date	Phase	UTC hm	time s	Remarks
	-epz	0732	31.2	#-520
	-epz	1204	12.5	#-521
	-epz	2353	14.2	#-522
	+ePcPz	2353	15.1	#-522
30	+epz	0701	3.6	#-523
	-epPz	0701	9.9	#-523
	+esPz	0701	15.2	#-523
	+ePcPz	0704	12.7	#-523
	esh	0705	52.9	#-523
	eScP	0707	55.3	#-523
	+epz	1107	8.4	
	+epz	1709	11.2	#-524
	-epPz	1709	19.7	#-524
	-esPz	1709	23.3	#-524
	esh	1714	18.6	#-524
	-epz	2014	27.8	#-525
	-ePcPz	2014	30.6	#-525
	+epPz	2014	53.7	#-525
	+esPz	2015	3.6	#-S2S
	eSKSac	2024	39.5	#-525
	esh	2024	43.7	#-525
Aug.2	-epz	0816	58.7	#-526
	+ePcPz	0817	1.5	#-526
	-epz	0923	5.0	#-527
	-epz	1903	7.5	#-528
	+epPz	1903	17.7	#-528
	+esPz	1903	21.3	#-528
	-ePcPz	1903	26.6	#-528
	-epz	2017	33.0	#-529
	+ePKPdfz	2329	41.0	#-530
4	+epz	0623	53.8	#-531
	+epPz	1000	23.3	#-532
	-esPz	1000	28.9	#-532
	+epz	1524	43.5	#-533
	+epPz	1524	46.5	#-533
5	+epz	0222	25.1	#-534
	+epPz	0223	13.8	#-534
	-epz	0609	7.2	#-535
	-epz	0904	23.0	#-536
	-ePcPz	0904	24.1	#-536
	+epPz	0906	37.4	#-536
6	-epz	0618	30.5	#-537
	+epz	0740	37.3	#-538
	+epz	0855	14.8	#-539
	+epz	1439	19.8	#-540
	+epz	1904	30.5	#-541
	-esPz	1904	43.8	#-541
7	-epz	0502	26.4	#-542
	-epPz	0503	9.3	#-542
	+esPz	0503	28.3	#-542

Date	Phase	UTC hm	time s	Remarks
	+ePPz	0505	47.5	#-542
	eSKSac	0512	34.8	#-542
	esh	0512	41.4	#-542
	+epz	0603	53.4	#-543
8	+ePPz	0018	5.7	#-544
	-epz	0426	27.6	#-545
	-epPz	0426	38.0	#-545
	+esPz	0426	42.5	#-545
	+epz	0851	38.5	#-546
9	+epz	1152	8.2	#-547
	+epz	1343	29.9	#-548
	eSKSac	1353	25.4	#-548
	esh	1353	50.0	#-548
10	-epz	1608	26.1	#-549
11	+epz	0518	42.8	#-550
	-epPz	0520	46.6	#-550
	-ePcPz	1222	3.1	#-551
	-epz	1256	56.9	#-552
	+epPz	1256	59.8	#-552
	+esPz	1257	0.9	#-552
	+epz	1327	23.4	#-553
	+ePcPz	1327	25.1	#-553
	+epPz	1327	32.8	#-553
	-epz	2128	7.3	#-554
	-ePcPz	2128	8.7	#-554
	+epz	2258	48.3	#-555
	+epz	2309	14.4	#-556
12	-epz	0311	45.7	#-557
	-ePcPz	0311	47.5	#-557
	-epPz	0312	14.4	#-557
	+esPz	0312	26.2	#-557
	eSKSac	0321	57.9	#-557
	esh	0322	2.6	#-557
	+epz	0522	4.9	#-558
	+ePcPz	0522	7.1	#-558
	-epPz	0523	46.7	#-558
	esh	0531	56.4	#-558
13	-epz	0617	13.4	#-559
	+epPz	0617	23.1	#-559
	-ePcPz	0617	27.0	#-559
	+epz	2042	30.1	#-560
	-ePcPz	2042	30.6	#-560
	+epPz	2044	40.3	#-560
	+epz	2147	49.6	#-561
	-epPz	2148	38.7	#-561
14	+epz	0813	8.7	#-562
	+ePcPz	0813	10.2	#-562
	-epPz	0813	19.3	#-562
	-esPz	0813	22.5	#-562
	-ePdiffz	1326	25.5	#-563
	-esPdiffz	1326	39.5	#-563
	-ePPz	1330	29.1	#-563
	+ePKiKPz	1330	52.6	#-563
	+epz	1416	24.4	
	+epz	1924	23.3	#-564
15	+epz	0137	25.7	#-565
	+ePcPz	0137	26.8	#-565
	-epz	0543	6.8	#-566
	+epPz	0543	15.3	#-566
	esh	0553	42.1	#-566
	-epz	0616	34.0	#-567
	-ePcPz	0616	37.5	#-567
	+epPz	0616	44.4	#-567
	-esPz	0616	49.8	#-567
	-epz	1231	3.7	#-568
	-ePcPz	1231	4.9	#-568
16	-epz	0039	39.6	#-569
	-ePcPz	0039	49.4	#-569
	+epz	0221	15.8	#-570
	+epz	0339	50.3	#-571
	+epPz	0339	58.7	#-571
	-epz	0541	34.7	#-572
	+epPz	0541	43.6	#-572
	+epz	1101	47.8	#-573
	+epz	1630	20.9	#-574
	+ePcPz	1630	25.6	#-574
	-epPz	1630	33.8	#-574
	-esPz	1630	38.5	#-574
17	+exz	0617	49.1	#-575
	-epz	0832	17.3	#-576
	+ePcPz	0832	42.3	#-576
	+epPz	0832	57.3	#-576
	esh	0841	6.2	#-576
	+epz	1644	2.9	#-577
18	+epz	0254	42.0	#-578
	+epz	0955	23.7	#-579
	+ePcPz	0955	27.1	#-579
	-epz	1700	43.8	#-580
	+epPz	1700	58.5	#-580
	-epz	1754	1.2	
19	-epz	0756	10.0	#-581
	-epz	1112	36.8	#-582
	+ePcPz	1112	38.3	#-582
	+epz	1119	39.0	#-583
	+ePcPz	1119	41.1	#-583
	eSKSac	1128	56.1	#-583
	esh	1129	1.1	#-583
	-epz	1134	21.4	#-584
	-ePcPz	1134	23.1	#-584
	+epPz	1136	39.2	#-584

Date	Phase	UTC hm	time s	Remarks
	eSKSac	1143	37.4	#-584
	esh	1143	44.6	#-584
	-epz	1157	3.1	#-585
	+ePcPz	1157	4.2	#-585
	-epz	1224	36.2	#-586
	-ePcPz	1224	37.2	#-586
	-epz	1238	1.1	#-586
	-ePcPz	1238	2.3	#-586
	eSKSac	1247	26.5	#-586
	esh	1247	39.2	#-586
	+epz	1303	13.9	#-587
	+ePcPz	1303	17.4	#-587
	-esPz	1306	38.2	#-587
	eSKSac	1312	28.6	#-587
	esh	1312	32.1	#-587
	-epz	1323	8.3	#-588
	+ePcPz	1323	11.4	#-588
	+ePPz	1326	32.2	#-588
	eSKSac	1332	23.6	#-588
	esh	1332	29.3	#-588
	+epz	1342	52.7	#-589
	+ePcPz	1342	56.1	#-589
	+epPz	1343	31.2	#-589
	eSKSac	1352	57.1	#-589
	esh	1353	2.1	#-589
	-epz	1520	33.0	#-590
	-ePcPz	1520	36.2	#-590
	esh	1530	3.2	#-590
	-epz	1931	47.0	#-591
	+ePcPz	1931	50.0	#-591
20	+epz	0126	10.4	#-592
	+ePcPz	0126	24.1	#-592
	+esPz	0126	29.4	#-592
	-epz	0156	30.1	#-593
	+ePcPz	0156	33.4	#-593
	esh	0206	8.2	#-593
	-epz	1136	19.1	#-594
	+ePcPz	1136	20.7	#-594
	esh	1145	57.1	#-594
	-epz	1323	18.8	#-595
	+ePcPz	1323	20.9	#-595
	eSKSac	1332	44.9	#-595
	esh	1332	56.3	#-595
21	-epz	0345	37.9	#-596
	-epz	0420	36.4	#-597
	+epz	1221	37.1	#-598
	-ePcPz	1221	40.6	#-598
	-epPz	1221	49.7	#-598
	+esPz	1221	53.1	#-598
	+ePKPbcz	1731	11.3	#-599
	-esPKPdfz	1731	16.0	#-599
	+esPKPbcz	1731	26.9	#-599
	+epz	2005	42.9	#-600
22	-epz	0715	13.9	#-601
	+ePKPbcz	0958	50.0	#-602
	-epPKPdfz	0958	53.4	#-602
	-ePKPabz	0958	59.4	#-602
	-epz	1131	27.9	#-603
	-ePcPz	1131	29.7	#-603
	+epz	1521	45.3	#-604
	-epz	1555	57.0	#-605
	+ePcPz	1556	0.1	#-605
	-epPz	1556	36.4	#-605
	+esPz	1556	54.8	#-605
	eSKSac	1606	3.9	#-605
	esh	1606	11.2	#-605
23	-epz	0009	45.0	#-606
	+ePcPz	0009	46.1	#-606
	+epPz	0011	59.3	#-606
	eSKSac	0019	8.8	#-606
	esh	0019	24.2	#-606
	+epz	1324	28.6	#-607
	-ePcPz	1324	30.5	#-607
	-epPz	1324	31.3	#-607
	+esPz	1324	34.0	#-607
	+exz	1711	38.8	#-608
	-epz	1804	32.1	#-609
	+epPz	1804	41.9	#-609
	+ePcPz	1804	43.3	#-609
	-esPz	1804	46.1	#-609
	-epz	1822	22.2	#-610
24	-epz	0226	54.9	#-611
	+epPz	0226	57.6	#-611
	+esPz	0226	59.1	#-611
	-epz	0305	37.2	#-612
	-epPz	0305	49.1	#-612
	+epz	1500	34.0	#-613
	-ePcPz	1500	39.5	#-613
	+ePKPdfz	1900	6.6	#-614
	+ePKiKPz	1900	10.2	#-614
	-epPKPdfz	1900	12.2	#-614
	-esPKPdfz	1900	13.5	#-614
	+esPKiKPz	1900	15.2	#-614
	-epz	2034	29.6	#-615
25	+epz	0404	45.4	#-616
	+ePcPz	0404	50.8	#-616
	+epPz	0404	55.8	#-616
	+esPz	0405	1.7	#-616
	+epz	0453	56.2	#-617
	+ePcPz	0453	57.0	#-617

Date	Phase	UTC hm	time s	Remarks
	+epPz	0455	54.7	#-617
	eSKSac	0503	28.1	#-617
	esh	0503	44.1	#-617
	-epz	0511	40.7	#-618
	+ePcPz	0511	46.1	#-618
	+epPz	0511	49.9	#-618
	-esPz	0511	55.2	#-618
	+epz	0609	56.8	#-619
	-ePcPz	0610	0.9	#-619
	+epz	0624	46.0	#-620
	-epz	0627	20.9	#-621
	+ePKPdfz	1730	46.3	#-622
	+epz	1746	22.3	#-622
	-ePcPz	1746	34.8	#-622
26	+epz	0044	48.5	#-623
	+epz	1407	29.0	#-624
	-epz	1506	50.0	#-625
	-epPz	1507	0.0	#-625
	-epz	1748	42.9	#-626
	-epPz	1748	53.1	#-626
	-esPz	1748	57.7	#-626
	esh	1758	35.9	#-626
	-epz	1925	57.4	#-627
	eSKSac	1935	21.9	#-627
	esh	1935	34.2	#-627
	-epz	2315	13.0	#-628
27	-epz	0316	56.8	#-629
	-epz	0654	32.6	#-630
	-epz	1048	6.4	#-631
	-ePcPz	1048	8.1	#-631
	esh	1057	42.8	#-631
28	-epz	1007	10.4	#-632
	+ePcPz	1009	58.4	#-632
	esh	1012	11.1	#-632
	+epz	1339	21.3	#-633
	+exz	1744	20.5	#-634
	+epz	2119	13.2	#-635
29	+epz	0239	55.7	#-636
	-ePcPz	0240	7.9	#-636
	-epPz	0240	29.2	#-636
	-esPz	0240	41.3	#-636
	esh	0249	33.4	#-636
	eSKSac	0249	56.6	#-636
	-epz	0449	38.4	#-637
	+ePcPz	0449	42.0	#-637
	+epz	0550	5.7	#-638
	+epPz	0550	12.7	#-638
	-esPz	0550	18.1	#-638
	+epz	0635	39.6	#-639
	+epz	1131	35.3	#-640
30	-epz	0355	10.1	#-641
	+epz	0520	17.1	#-642
	+ePcPz	0520	19.7	#-642
	-ePKPdfz	0617	41.2	#-643
	-ePKiKPz	0617	42.9	#-643
	+epPKPdfz	0617	57.0	#-643
	+epz	0631	25.8	#-644
	+ePcPz	0631	30.2	#-644
	-esPz	0631	38.4	#-644
	+epz	2208	45.2	#-645
	-ePcPz	2208	58.2	#-645
	esh	2218	3.5	#-645
	+epz	2245	21.8	#-646
	+epPz	2245	31.2	#-646
	-esPz	2245	35.0	#-646
31	+epz	0244	31.0	#-647
	+epPz	0244	48.0	#-647
	+epz	0522	14.5	#-648
	+ePcPz	0522	20.5	#-648
	+epz	0701	20.1	#-649
	+esPz	0702	11.9	#-649
	+ePcPz	0935	18.8	#-650
	-epz	1134	57.2	#-651
	-ePcPz	1135	0.9	#-651
	-epz	1328	7.6	#-652
	+epPz	1328	14.1	#-652
	-ePcPz	1328	21.6	#-652
	+epz	1503	30.9	#-653
	eSKSac	1513	35.5	#-653
	-epz	1627	24.8	#-654
	+exz	2302	42.2	#-655
Sep.1	+epz	0000	19.5	#-656
	-epz	0320	37.8	#-657
	+ePcPz	0320	38.7	#-657
	+epz	0422	42.8	#-658
	+epz	0923	3.3	#-659
	-ePcPz	0923	4.3	#-659
	+epPz	0923	11.8	#-659
	-epz	1252	51.5	#-660
	+ePcPz	1253	1.4	#-660
	+epz	1525	3.3	#-661
	-ePcPz	1525	7.1	#-661
	-epz	1727	29.9	#-662
	+epPz	1727	32.5	#-662
	-epz	2141	11.4	#-663
	+ePcPz	2141	12.2	#-663
	-epPz	2141	21.1	#-663
	+esPz	2141	26.6	#-663
	+ePPz	2144	52.1	#-663
3	+epz	2042	12.1	#-664

Date	Phase	UTC hm	time s	Remarks
	-ePcPz	2042	14.3	#-664
4	+epz	0355	3.2	#-665
	-epz	0708	23.5	#-666
	-epPz	0708	49.4	#-666
	+esPz	0709	0.5	#-666
	+epz	0818	2.7	#-667
	+ePcPz	0818	5.0	#-667
	eSKSac	0827	31.6	#-667
	esh	0827	36.6	#-667
	+epz	1447	42.1	#-668
	+epPz	1447	50.8	#-668
	+esPz	1447	54.2	#-668
5	+epz	0253	13.8	#-669
	-ePcPz	0253	19.7	#-669
	+epPz	0253	24.5	#-669
	-ePKPabz	0359	45.9	#-670
	-epPKPabz	0359	56.7	#-670
	+esPKPabz	0400	1.9	#-670
	+epz	1215	52.8	#-671
	-epz	2147	52.8	#-672
6	+epz	1121	6.4	#-673
	-epz	2138	15.9	#-674
	-ePcPz	2138	17.6	#-674
	-esPz	2138	31.2	#-674
7	+epz	0211	37.2	#-675
	+ePcPz	0211	46.3	#-675
	-epz	0243	40.2	#-676
	+esPz	0244	22.2	#-676
	esh	0254	21.0	#-676
	-epz	0826	44.0	#-677
	eSKSac	0836	49.1	#-677
	esh	0837	4.6	#-677
	+epz	1051	53.7	#-678
	+ePcPz	1051	58.1	#-678
	+epPz	1053	44.6	#-678
	eSKSac	1101	22.1	#-678
	esh	1101	26.4	#-678
	+epz	1146	41.1	#-679
	+epz	1814	38.2	#-680
	+epPz	1814	46.8	#-680
	-ePcPz	1817	42.9	#-680
	esh	1819	27.4	#-680
	+eScPz	1821	19.4	#-680
	-epz	2148	26.7	#-681
	-ePcPz	2148	30.2	#-681
	+epPz	2149	25.4	#-681
8	-epz	0344	24.4	#-682
	+epPz	0344	26.8	#-682
	-esPz	0344	29.0	#-682
	+ePPz	0345	57.9	#-682

Date	Phase	UTC hm	time s	Remarks
	-ePcPz	0346	23.7	#-682
	+epz	0432	19.7	#-683
	-ePcPz	0432	20.5	#-683
	-epz	1225	37.6	#-684
	+epPz	1227	47.3	#-684
	esh	1235	13.3	#-684
	-epz	1327	21.4	#-685
	eSKSac	1336	44.1	#-685
	esh	1336	52.8	#-685
	+epz	1508	49.5	#-686
	+epz	1741	44.0	#-687
	-epPz	1741	53.5	#-687
	-epz	1857	31.5	#-688
	+epPz	1857	34.0	#-688
	+esPz	1857	36.6	#-688
	eSKSac	1908	8.5	#-688
	esh	1908	40.8	#-688
	+epz	2118	43.9	#-689
	-epPz	2118	55.8	#-689
	+esPz	2118	59.7	#-689
	+epz	2131	20.4	#-690
	+epz	2220	59.1	#-691
	+ePcPz	2221	0.6	#-691
	+epPz	2221	8.1	#-691
	+esPz	2221	13.5	#-691
	+esPz	2315	41.0	#-692
	-ePcPz	2315	46.3	#-692
9	+epz	0129	42.5	#-693
	+ePcPz	0129	44.6	#-693
	+epPz	0130	30.2	#-693
	-epz	0327	5.8	#-694
	+epPz	0327	8.3	#-694
	-esPz	0327	10.6	#-694
	-ePPz	0330	45.2	#-694
	-epz	0421	0.2	#-695
	+epz	0559	21.1	#-696
	+epPz	0559	25.2	#-696
	-epz	0816	25.8	#-697
	+ePcPz	0816	27.2	#-697
	eSKSac	0825	50.6	#-697
	esh	0826	0.5	#-697
	-epz	1334	54.3	#-698
	+ePcPz	1334	55.4	#-698
10	+epz	0245	33.5	#-699
	-ePcPz	0245	38.3	#-699
	+epz	0451	2.1	#-700
	+epPz	0451	13.0	#-700
	-esPz	0451	21.0	#-700
	-epz	1238	8.7	#-701
	+ePcPz	1238	9.8	#-701

Date	Phase	UTC hm	time s	Remarks
	+epz	1553	26.4	#-702
	+ePcPz	1553	29.4	#-702
	eSKSac	1603	34.5	#-702
	+epz	2007	0.1	#-703
	+epz	2107	48.9	#-704
	+esPz	2107	53.5	#-704
11	-epz	1421	44.6	#-705
	-ePcPz	1421	45.9	#-705
	+epPz	1421	55.8	#-705
	-esPz	1422	1.0	#-705
	-epz	1433	18.3	#-706
	+epz	2001	11.1	#-707
	-ePcPz	2001	12.2	#-707
12	+epz	2322	22.8	#-708
	+ePcPz	2322	29.8	#-708
13	-epz	0110	21.8	#-709
	+epz	1036	24.8	
	-epz	1749	15.5	#-710
	+ePcPz	1749	19.1	#-710
	esh	1758	43.5	#-710
	-epz	2241	29.0	#-711
	+ePcPz	2241	30.4	#-711
	+epPz	2241	39.8	#-711
	+esPz	2241	43.9	#-711
	eSKSac	2251	55.6	#-711
	esh	2252	19.8	#-711
	-epz	2327	6.5	#-712
	+ePcPz	2327	7.6	#-712
	+epPz	2327	14.7	#-712
	+esPz	2327	18.7	#-712
	+epz	2357	45.2	#-713
	+ePcPz	2357	46.7	#-713
	-epPz	2357	55.4	#-713
	-esPz	2357	58.4	#-713
14	+epz	0114	36.7	#-714
	+esPz	0219	53.3	#-715
	-epz	0854	35.1	#-716
	+ePcPz	0854	36.6	#-716
	+epz	1725	8.2	#-717
	-epz	2011	35.5	#-718
	+ePcPz	2011	36.4	#-718
	-epPz	2011	46.8	#-718
	+esPz	2011	50.7	#-718
	-epz	2225	35.2	#-719
	-ePcPz	2225	36.6	#-719
	-epPz	2225	44.1	#-719
	+esPz	2225	48.0	#-719
15	-ePKPdfz	0857	38.7	#-720
	-ePKiKPz	0857	40.0	#-720
	-iPPz	0900	7.8	#-720

Date	Phase	UTC hm	time s	Remarks
	+epz	1906	27.7	#-721
	+epz	2003	39.3	#-722
	+ePcPz	2003	43.9	#-722
	-epz	2205	7.1	#-723
	-ePcPz	2205	17.3	#-723
	+epz	2333	5.3	#-724
16	+epz	0236	35.7	#-725
	+epz	0533	10.5	#-726
	-epz	1336	9.5	#-727
	+ePcPz	1336	10.4	#-727
	-epPz	1336	12.9	#-727
	eSKSac	1346	40.0	#-727
	esh	1347	4.1	#-727
	+epz	1907	34.9	#-728
	+ePcPz	1907	37.1	#-728
	-epPz	1907	39.0	#-728
	+epz	2247	20.9	#-729
	+ePcPz	2247	25.9	#-729
	+epPz	2247	34.0	#-729
17	-epz	0544	48.8	#-730
	+ePcPz	0544	50.3	#-730
	-epPz	0544	52.2	#-730
	-esPz	0544	53.7	#-730
	-epz	0804	42.7	#-731
	-epz	1133	32.0	#-732
	+epPz	1133	35.0	#-732
	+esPz	1133	36.8	#-732
	esh	1144	27.0	#-732
	+epz	1437	38.6	
	-epz	1522	53.7	
	-epz	1603	28.6	
18	-epz	1214	34.9	#-733
	+ePcPz	1214	35.9	#-733
	+epPz	1214	46.8	#-733
	+esPz	1214	49.0	#-733
	-epz	1234	7.2	#-734
	-epz	1748	32.8	#-735
	+epz	1919	20.7	#-736
	-ePcPz	1919	25.2	#-736
	+epPz	1919	33.7	#-736
	esh	1929	37.2	#-736
	-epz	1941	56.9	#-737
	-epz	1942	12.0	
19	+epz	0010	10.6	#-738
	+ePcPz	0010	12.2	#-738
	eSKSac	0019	37.6	#-738
	esh	0019	52.3	#-738
	-epz	0737	51.2	#-739
	+epPz	0737	56.7	#-739
	+esPz	0738	1.5	#-739

Date	Phase	UTC hm	time s	Remarks
	esh	0742	47.0	#-739
	-epz	1133	37.7	#-740
	-epPz	1133	39.6	#-740
	+esPz	1133	45.0	#-740
20	-epz	0349	57.4	#-741
	+ePcPz	0349	58.4	#-741
	+epPz	0350	6.5	#-741
	+esPz	0350	10.1	#-741
	-epz	1346	42.9	#-742
	+epPz	1346	46.8	#-742
	+esPz	1346	48.6	#-742
	+ePPz	1350	18.3	#-742
	eSKSac	1357	38.8	#-742
	esh	1358	11.6	#-742
	-epz	1516	24.4	#-743
	+epPz	1516	30.0	#-743
	+esPz	1516	34.6	#-743
	+epz	1545	47.3	#-744
	+epz	1556	38.3	#-745
	esh	1607	41.3	#-745
	+epz	2157	21.3	
21	-epz	0512	54.7	#-746
	-epz	1946	17.5	#-747
	+epz	2125	6.2	#-748
	+ePcPz	2125	7.6	#-748
	+epPz	2127	12.1	#-748
	esh	2134	40.2	#-748
	-epz	2321	37.1	#-749
	-ePcPz	2321	38.2	#-749
	+epPz	2322	24.0	#-749
22	+epz	0135	11.9	#-750
	+epPz	0135	20.2	#-750
	-esPz	0135	24.3	#-750
	-epz	1132	20.0	#-751
	-ePcPz	1132	24.6	#-751
	+epPz	1132	52.8	#-751
	-epz	1310	57.4	#-752
	+epPz	1311	2.6	#-752
	+esPz	1311	6.7	#-752
	+epz	1812	43.2	#-753
	-epz	1851	42.4	#-754
	-epz	2119	45.5	#-755
	+epPz	2119	47.7	#-755
	+epz	2226	7.7	#-756
	+ePcPz	2226	12.3	#-756
	+epPz	2226	16.3	#-756
	+esPz	2226	22.5	#-756
23	+epz	0034	5.5	#-757
	+ePcPz	0034	9.9	#-757
	+epPz	0035	55.5	#-757

Date	Phase	UTC hm	time s	Remarks
	-epz	0737	42.5	#-758
	+epz	2219	54.9	#-759
	-ePcPz	2220	0.5	#-759
	-esPz	2220	8.3	#-759
24	-epz	0239	33.4	#-760
	+ePcPz	0239	35.5	#-760
	+esPz	0239	49.0	#-760
	eSKSac	0250	4.0	#-760
	esh	0250	29.5	#-760
	+epz	0408	4.2	#-761
	esh	0416	50.8	#-761
	eSKSac	0417	49.2	#-761
	+epz	0426	16.0	#-762
	-ePcPz	0426	16.9	#-762
	+epPz	0426	25.9	#-762
	+esPz	0426	29.2	#-762
	eSKSac	0436	44.1	#-762
	+epz	0514	5.7	#-763
	+ePKPdfz	0920	12.5	#-764
	-epz	1342	55.1	#-765
	+epz	2307	25.1	#-766
	+epPz	2307	35.7	#-766
	+esPz	2307	39.0	#-766
	eSKSac	2317	55.9	#-766
	esh	2318	23.1	#-766
	+epz	2314	31.9	#-767
	+epPz	2314	38.0	#-767
	+esPz	2314	41.2	#-767
	eSKSac	2325	1.3	#-767
	esh	2325	27.5	#-767
25	-epz	0226	3.7	#-768
	+ePcPz	0226	6.1	#-768
	-epz	0521	39.0	
	-epz	2108	28.5	#-769
	+ePcPz	2108	31.3	#-769
	+epz	2329	39.7	
26	+epz	0953	46.8	#-770
	-epz	1305	26.3	#-771
	+epPz	1305	28.9	#-771
	-esPz	1305	30.0	#-771
	+epz	1344	31.6	#-772
	-epz	1612	39.6	#-773
	+ePcPz	1612	43.6	#-773
	-epz	1918	10.8	#-774
	+ePcPz	1918	21.6	#-774
27	-epz	0152	56.2	#-775
	+ePcPz	0153	2.9	#-775
	-epPz	0153	5.3	#-775
	-epz	1422	51.0	#-776
	-ePcPz	1422	53.7	#-776

Date	Phase	UTC hm	time s	Remarks
	-epPz	1423	16.1	#-776
	+esPz	1423	30.9	#-776
28	+epz	1443	52.0	
29	-epz	0347	31.4	#-777
	esh	0358	11.1	
	+epz	0956	12.9	#-778
	+epPz	0956	16.5	#-778
	+epz	2327	23.5	#-779
	-ePcPz	2327	39.1	#-779
30	-epz	1303	1.3	#-780
	+ePcPz	1303	3.1	#-780
	-epz	1316	25.3	#-781
	-epPz	1316	47.4	#-781
	-ePcPz	1317	0.6	#-781
	+ePPz	1318	50.6	#-781
	esh	1324	54.3	#-781
Oct.1	+epz	0445	13.7	#-782
	+epPz	0445	24.4	#-782
	-epz	0731	56.8	#-783
	+esPz	0732	13.0	#-783
	-epz	0859	59.4	#-784
	+ePcPz	0900	0.4	#-784
	+epPz	0900	11.0	#-784
	-epz	1835	44.1	#-785
	+epz	2224	31.4	#-786
2	+epz	0150	43.6	#-787
	+ePcPz	0150	48.9	#-787
	-epz	0731	8.6	#-788
	+epPz	0731	16.5	#-788
	+epz	1726	31.8	#-789
	+ePcPz	1726	44.6	#-789
	+epz	1946	56.2	#-790
	+ePcPz	1946	58.0	#-790
	-epPz	1947	7.6	#-790
3	+epz	0150	35.9	
	-epz	0439	9.8	#-791
	+ePcPz	0439	13.0	#-791
	-epPz	0439	18.7	#-791
	esh	0450	4.1	#-791
	-ePKPbcz	1616	26.2	#-792
	+ePKiKPz	1616	28.3	#-792
	-esPKPdfz	1616	36.0	#-792
	-esPKPbcz	1616	42.1	#-792
	+esPKiKPz	1616	44.1	#-792
	-epz	1916	36.1	#-793
	+ePcPz	1916	42.7	#-793
	+epPz	1917	49.0	#-793
	-esPz	1918	21.1	#-793
	esh	1926	2.4	#-793
	eSKSac	1926	18.3	#-793

Date	Phase	UTC hm	time s	Remarks
	-epz	2008	37.6	#-794
4	+epz	1243	13.6	#-795
	-epPz	1243	43.5	#-795
	+ePcPz	1246	10.7	#-795
	esh	1248	2.1	#-795
	+epPKPabz	1437	5.2	#-796
	-epz	1917	25.5	#-797
	+ePcPz	1917	27.2	#-797
	+epPz	1919	40.3	#-797
	eSKSac	1926	47.1	#-797
	esh	1927	4.0	#-797
5	+epz	0601	12.7	
	-epz	1956	29.5	#-798
6	+epz	1132	50.9	#-799
	+epPz	1132	59.8	#-799
	+epz	1558	35.4	#-800
	+ePcPz	1558	43.2	#-800
	+epz	1639	3.1	#-801
7	-epz	1745	22.8	#-802
	-epPz	1745	31.9	#-802
	+esPz	1745	37.9	#-802
	-epz	1912	41.9	#-803
	-ePcPz	1912	43.8	#-803
	-epPz	1913	40.2	#-803
	eSKSac	1922	41.3	#-803
	esh	1922	51.7	#-803
8	-epz	0131	8.2	#-804
	+epPz	0131	11.7	#-804
	-epz	0938	34.9	
	+epz	1537	29.1	#-805
	+ePcPz	1537	40.9	#-805
9	+epz	1107	2.5	#-806
	+epz	1137	19.0	#-807
	+epz	1241	29.7	#-808
	+ePcPz	1241	35.3	#-808
	+epz	2006	20.8	#-809
	+epPz	2006	30.8	#-809
	+esPz	2006	36.9	#-809
10	+epz	0557	31.6	#-810
	-ePcPz	0557	32.2	#-810
	eSKSac	0607	2.8	#-810
	+epz	1103	22.4	#-811
	+epPz	1103	25.1	#-811
	-esPz	1103	27.5	#-811
	+ePPz	1106	56.6	#-811
	eSKSac	1113	58.3	#-811
	esh	1114	22.0	#-811
	+epz	1241	27.4	#-812
	+epPz	1241	30.5	#-812
	+ePPz	1245	0.8	#-812

Date	Phase	UTC hm	time s	Remarks
	eSKSac	1251	54.0	#-812
	esh	1252	18.5	#-812
	-epz	1405	53.3	#-813
	+epPz	1406	3.2	#-813
	+esPz	1406	8.8	#-813
	+epz	1429	21.1	#-814
	+ePcPz	1429	24.3	#-814
	+epz	1846	39.3	#-815
	+ePcPz	1846	41.0	#-815
	-epPz	1846	43.4	#-815
	+esPz	1846	45.1	#-815
	eSKSac	1857	5.9	#-815
	esh	1857	31.1	#-815
	-epz	2133	0.0	#-816
	-ePcPz	2133	1.0	#-816
	+epPz	2133	3.9	#-816
	+ePPz	2136	33.6	#-816
	+ePKiKPz	2137	53.8	#-816
	eSKSac	2143	28.7	#-816
	esh	2143	52.6	#-816
11	+epPz	0013	43.0	#-817
	+esPz	0013	44.6	#-817
	eSKSac	0024	7.4	#-817
	esh	0024	32.5	#-817
	-epz	0310	44.9	
	+epz	0947	3.9	#-818
	+epPz	0947	13.3	#-818
	+esPz	0947	18.0	#-818
	+epz	1357	30.8	#-819
	-epz	1529	27.9	#-820
	-epPz	1529	37.8	#-820
	-esPz	1529	41.4	#-820
	+epz	1708	50.2	#-821
	+ePcPz	1708	52.3	#-821
	-epPz	1708	53.3	#-821
	+epz	1859	42.5	#-822
	+ePcPz	1859	44.1	#-822
	-epz	1901	27.1	
	esh	1909	27.5	#-822
	+epz	1933	12.3	#-823
	+epz	1954	32.9	#-824
	-ePcPz	1954	35.5	#-824
	+epPz	1954	45.9	#-824
	+esPz	1954	50.3	#-824
	+epz	2216	26.3	#-825
	+ePPz	2220	8.0	#-825
12	-epz	0801	16.9	#-826
	+ePcPz	0801	19.1	#-826
	-epPz	0803	14.1	#-826
	eSKSac	0810	42.9	#-826
	esh	0810	46.5	#-826
	+ePKPdfz	1118	39.2	#-827
	+ePKiKPz	1118	40.8	#-827
	+epPKPdfz	1118	49.6	#-827
	+epPKiKPz	1118	51.1	#-827
	+epz	1453	56.9	#-828
	+epz	2021	11.8	#-829
	+epPz	2023	9.6	#-829
	+esPz	2024	3.2	#-829
	eSKSac	2030	50.3	#-829
	esh	2031	16.9	#-829
	-epz	2038	43.4	
	+epz	2103	17.5	
13	+epz	2108	23.9	#-830
14	-epz	0003	22.3	#-831
	+ePcPz	0003	48.9	#-831
	+ePKPdfz	1431	50.8	#-832
	-epz	1755	9.3	#-833
	+ePcPz	1755	13.1	#-833
	+epPz	1757	13.2	#-833
15	+epz	1055	49.5	#-834
	+epPz	1057	58.5	#-834
	+epz	1108	13.8	#-835
	-ePcPz	1108	19.7	#-835
	+epz	1941	32.6	#-836
	-epz	2341	2.9	#-837
	+epPz	2341	9.0	#-837
16	+epz	0002	53.4	#-838
	+epPz	0003	18.0	#-838
	+epz	0144	47.6	#-839
	+epPz	0145	0.1	#-839
	-epz	0850	8.9	#-840
	-ePcPz	0850	10.0	#-840
	-ePKPdfz	1031	49.2	#-841
	-ePKPbcz	1031	51.7	#-841
	-ePKPabz	1031	53.6	#-841
	+epPKPbcz	1032	19.6	#-841
	+epPKPabz	1032	21.9	#-841
	+epPKiKPz	1032	24.0	#-841
	+esPKPdfz	1032	28.9	#-841
	-epz	1108	54.4	#-842
	-epz	1133	23.7	#-843
	-ePcPz	1133	29.1	#-843
	+epPz	1133	33.2	#-843
	+esPz	1133	36.7	#-843
	+ePKiKPz	1138	49.8	#-843
	+epPKiKPz	1138	58.1	#-843
	-epz	1426	20.9	#-844
	+epPz	1426	31.3	#-844
	-esPz	1426	33.9	#-844

Date	Phase	UTC hm	time s	Remarks
	eSKSac	1436	50.2	#-844
	esh	1437	21.0	#-844
17	-epz	0202	31.9	#-845
	-epPz	0202	40.4	#-845
	+ePcPz	0203	34.0	#-845
	-epz	0435	37.7	#-846
	-ePcPz	0435	39.0	#-846
	eSKSac	0445	5.0	#-846
	esh	0445	23.6	#-846
	+epz	0535	1.8	#-847
	-ePcPz	0535	2.5	#-847
	+epPz	0535	13.0	#-847
	-esPz	0535	16.1	#-847
	-epz	1805	44.1	#-848
	-epPz	1805	53.1	#-848
	+esPz	1805	57.3	#-848
	eSKSac	1816	13.7	#-848
	esh	1816	33.8	#-848
	+epz	1827	17.4	#-849
18	+epz	0822	29.7	#-850
	+esPz	0822	42.3	#-850
	+epz	1126	22.8	#-851
	-epz	1144	50.7	#-852
	+epz	1553	56.0	
	-epz	2238	59.2	#-853
	+esPz	2239	8.6	#-853
19	+epz	0056	55.7	#-854
	+epPz	0056	58.2	#-854
	+esPz	0056	59.4	#-854
	-ePPz	0100	31.1	#-854
	esh	0107	49.5	#-854
	+epz	0448	6.4	#-855
	-epz	0815	24.6	#-856
	-epPz	0815	26.9	#-856
	-ePPz	0817	27.0	#-856
	+epz	1837	2.3	#-857
	+ePcPz	1837	4.2	#-857
	-esPz	1837	53.2	#-857
20	-ePKPdfz	0154	30.1	#-858
	+ePKPbcz	0154	32.6	#-858
	-ePKiKPz	0154	34.1	#-858
	+epPKPdfz	0154	40.8	#-858
	+epz	0827	28.1	#-859
21	+epz	1226	58.9	#-860
	+epPz	1227	8.3	#-860
	+esPz	1227	12.4	#-860
22	+epz	0644	13.6	#-861
	+epPz	0644	15.2	#-861
	+esPz	0644	17.1	#-861
	+ePnz	0644	45.1	#-861

Date	Phase	UTC hm	time s	Remarks
	-ipz	1150	49.3	#-862
	-ePcPz	1150	50.8	#-862
	-epPz	1152	50.9	#-862
	eSKSac	1200	19.5	#-862
	esh	1200	35.8	#-862
	+exz	1820	33.4	#-863
	+epz	1900	29.5	#-864
23	-epz	0214	32.1	#-865
	-epz	0749	21.9	#-866
	+ePcPz	0749	31.2	#-866
	+ePKPdfz	1147	24.1	#-867
	+epPKPdfz	1147	30.6	#-867
	+esPKPdfz	1147	33.0	#-867
	+ePKPabz	1148	57.2	#-867
	+epPKPabz	1149	3.4	#-867
	+esPKPabz	1149	4.6	#-867
	+ePPz	1152	54.0	#-867
	+epz	1512	2.9	#-868
	+ePcPz	1512	24.5	#-868
	-epPz	1512	33.9	#-868
	-esPz	1512	46.1	#-868
	+epz	1926	24.0	#-869
	-ePcPz	1926	34.5	#-869
	-epPz	1927	45.7	#-869
	+esPz	1928	23.1	#-869
	esh	1935	34.1	#-869
	eSKSac	1935	58.1	#-869
	+epz	2214	40.9	
24	+ePKPdfz	0353	51.6	#-870
	+ePKiKPz	0354	5.6	#-870
	-epPKPdfz	0354	11.6	#-870
	+epPKiKPz	0354	15.2	#-870
	+esPKiKPz	0354	18.1	#-870
	-epz	0619	34.8	#-871
	+epPz	0619	36.6	#-871
	-esPz	0619	39.3	#-871
	-ePcPz	0620	1.6	#-871
	+ePKiKPz	0625	59.6	#-871
	esh	0628	33.1	#-871
	+epz	0723	15.8	#-872
	+epPz	0723	19.6	#-872
	+ePcPz	0723	42.0	#-872
	-epz	0820	2.7	#-873
	+epz	1022	16.0	#-874
	+exz	1313	13.8	#-875
	+epz	1459	45.0	#-876
	-epz	2206	7.6	#-877
	-ePcPz	2206	11.0	#-877
	-epPz	2206	25.8	#-877
	-esPz	2206	31.9	#-877

Date	Phase	UTC hm	time s	Remarks
	esh	2216	25.8	#-877
	+epz	2224	21.8	
25	+epz	1200	39.8	#-878
	-epz	1327	49.9	
	+ePKPdfz	1459	24.0	#-879
	+epz	2051	55.1	#-880
26	-epz	1419	23.0	#-881
	+epz	1509	24.3	#-882
	-ePcPz	1509	37.4	#-882
	esh	1518	43.9	#-882
	-epz	1632	36.6	#-883
	+ePcPz	1632	39.8	#-883
	eSKSac	1642	6.7	#-883
	esh	1642	24.5	#-883
	+epz	1908	6.6	#-884
	+epPz	1908	18.4	#-884
	+esPz	1908	21.9	#-884
	esh	1919	9.7	#-884
28	+epz	0051	43.8	#-885
	-epz	0250	2.5	#-886
	+epPz	0250	10.9	#-886
	+esPz	0250	14.3	#-886
	-ePcPz	0250	19.0	#-886
	+epz	0600	56.4	#-887
	+epPz	0601	8.1	#-887
	+epz	1328	8.5	#-888
	+epPz	1328	17.9	#-888
	+esPz	1328	21.3	#-888
	-epz	1448	16.6	#-889
	+ePcPz	1448	22.1	#-889
29	-epz	0251	41.5	#-890
	-esPz	0252	46.7	#-890
	esh	0301	37.1	#-890
	eSKSac	0301	39.6	#-890
	+epz	0408	19.3	#-891
30	+epz	0403	13.8	#-892
	-ePcPz	0403	14.8	#-892
	-epPz	0403	54.8	#-892
	+esPz	0404	13.3	#-892
	+epz	1236	33.6	#-893
	+ePcPz	1236	39.1	#-893
	-epPz	1237	4.7	#-893
	-esPz	1237	17.1	#-893
	-epz	1455	56.4	#-894
	-ePcPz	1455	57.8	#-894
	+epPz	1456	19.1	#-894
	+esPz	1456	29.9	#-894
	eSKSac	1506	19.9	#-894
	esh	1506	41.2	#-894
	+epz	1638	58.1	#-895
	+ePcPz	1639	3.0	#-895
	+epPz	1639	9.4	#-895
	-esPz	1639	14.3	#-895
	-ePPz	1642	7.0	#-895
	esh	1649	13.9	#-895
	eSKSac	1649	25.2	#-895
31	-epz	0236	47.3	
	-epz	1219	2.0	#-896
	+ePcPz	1219	4.4	#-896
	+epPz	1219	9.4	#-896
	-esPz	1219	14.6	#-896
	+epz	1632	1.8	#-897
	+ePcPz	1632	9.0	#-897
	-epPz	1632	11.9	#-897
	+esPz	1632	15.3	#-897
	+epz	2047	4.3	#-898
	-epPz	2047	13.1	#-898
	-epz	2135	23.4	#-899
	-epPz	2135	33.6	#-899
Nov.1	-epz	0516	36.6	#-900
	+ePcPz	0516	38.4	#-900
	+epPz	0516	41.4	#-900
	+esPz	0516	43.5	#-900
	-epz	0828	34.5	#-901
	-epPz	0828	42.7	#-901
	-esPz	0828	45.8	#-901
	-epz	1354	18.6	#-902
	-ePcPz	1354	20.4	#-902
	esh	1404	14.7	#-902
2	+epz	0012	15.7	#-903
	+ePcPz	0012	19.3	#-903
	esh	0021	38.7	#-903
	eSKSac	0021	43.7	#-903
	+epz	0138	24.9	#-904
	-ePcPz	0138	30.8	#-904
	+epPz	0138	34.0	#-904
	+esPz	0138	38.1	#-904
	+ePPz	0141	32.9	#-904
	esh	0148	36.1	#-904
	eSKSac	0148	43.7	#-904
	+epz	0255	8.5	#-905
	+ePcPz	0255	13.2	#-905
	+epPz	0255	20.5	#-905
	+esPz	0255	25.0	#-905
	esh	0305	13.0	#-905
	+epz	0500	39.2	#-906
	-ePcPz	0500	40.1	#-906
	+epPz	0500	48.9	#-906
	+esPz	0500	54.4	#-906
	esh	0511	27.1	#-906

Date	Phase	UTC hm	time s	Remarks
	+epz	0623	6.1	#-907
	-ePcPz	0623	19.1	#-907
	esh	0632	24.6	#-907
	+epz	0959	2.7	#-908
	+ePcPz	0959	9.2	#-908
	+epPz	0959	15.4	#-908
	-esPz	0959	17.4	#-908
	esh	1009	11.4	#-908
	eSKSac	1009	17.9	#-908
	+epz	1007	49.6	#-909
	-ePcPz	1007	51.4	#-909
	+epPz	1008	7.5	#-909
	-esPz	1008	16.0	#-909
	+epz	1602	36.2	#-910
	+epPz	1602	44.2	#-910
	+epz	2241	35.2	#-911
	eSKSac	2251	13.1	#-911
	esh	2251	35.3	#-911
3	+epz	0029	16.2	
	+epz	0307	20.9	#-912
	+epPz	0307	49.5	#-912
	-ePKPdfz	0356	47.2	#-913
	-ePPz	0359	2.7	#-913
	-epz	0949	51.5	#-914
	+ePcPz	0949	53.0	#-914
	+epz	1436	40.1	#-915
	+ePcPz	1436	41.7	#-915
	+epPz	1438	12.1	#-915
	-ePKPdfz	2232	46.3	#-916
	+ePKPabz	2234	19.0	#-916
4	+epz	0329	49.3	#-917
	+epPz	0329	51.3	#-917
	-esPz	0329	53.4	#-917
	+ePcPz	0330	25.5	#-917
	+epz	0836	26.1	#-918
	-epPz	0836	29.9	
	-esPz	0836	32.8	
5	-epz	0222	31.1	#-919
	-ePKPdfz	0905	36.3	#-920
	+eSKPdfz	0908	23.7	#-920
	+epz	2233	17.9	#-921
	-ePcPz	2233	19.2	#-921
	eSKSac	2242	51.1	#-921
	esh	2243	8.8	#-921
6	+epz	0324	30.9	#-922
	-ePcPz	0325	54.2	#-922
	+epz	0340	3.8	#-923
	+esPz	0340	19.0	#-923
	+epz	1332	13.6	#-924
	-ePcPz	1332	21.8	#-924

Date	Phase	UTC hm	time s	Remarks
	-ePcPz	2327	47.3	#-925
	+epPz	2328	0.0	#-925
	-esPz	2328	10.5	#-925
7	+epz	1228	45.5	#-926
	+ePKPdfz	1533	53.5	#-927
	-ePKPbcz	1534	3.4	#-927
	+epPKPdfz	1534	6.5	#-927
	+esPKPdfz	1534	9.5	#-927
	+ePKPabz	1534	17.4	#-927
8	-epz	0839	56.4	#-928
	-ePKPabz	1756	27.3	#-929
	+epz	1855	40.8	
	-epz	2240	53.4	
9	+epz	0407	52.3	#-930
	-ePcPz	0407	55.4	#-930
	+epz	0540	31.9	#-931
	-esPz	0540	38.1	#-931
	-epz	0615	17.6	#-932
	-epPz	0615	24.5	#-932
	+esPz	0615	28.9	#-932
	+ePcPz	0616	19.9	#-932
	+epz	2009	58.5	#-933
10	+epz	0656	31.2	#-934
	-epz	1106	25.3	#-935
	-epPz	1106	31.9	#-935
	+esPz	1106	35.6	#-935
	+epz	1115	52.6	#-936
	+epz	2056	24.5	
	-epz	2207	18.9	#-937
	+epPz	2207	28.0	#-937
11	-epz	0138	9.8	#-938
	-epPz	0138	17.2	#-938
	+epz	0150	10.1	#-939
	-epz	0742	39.3	#-940
	+ePcPz	0742	45.3	#-940
	+epPz	0742	48.0	#-940
	+esPz	0742	51.9	#-940
	+epz	0931	21.8	#-941
	+epz	1650	33.2	#-942
	-ePcPz	1650	37.2	#-942
	-epPz	1652	34.5	#-942
	eSKSac	1700	0.8	#-942
	esh	1700	7.9	#-942
12	+epz	0145	16.1	#-943
	+ePcPz	0145	25.1	#-943
	-epPz	0145	26.4	#-943
	-esPz	0145	30.3	#-943
	-epz	0152	57.4	#-944
	-epPz	0153	21.0	#-944
	-esPz	0153	31.4	#-944

Date	Phase	UTC hm	time s	Remarks
	+ePPz	0154	7.3	#-944
	-ePcPz	0155	49.9	#-944
	esh	0157	55.0	#-944
	+eScPz	0159	20.2	#-944
	+epz	0224	36.5	
	+epz	0328	58.5	#-945
	-epPz	0329	9.7	#-945
	+esPz	0329	12.2	#-945
	esh	0339	52.4	#-945
	-epz	1021	46.3	#-946
	-ePcPz	1021	51.0	#-946
	+epz	1244	48.9	#-947
	+epz	1318	25.1	#-948
	+epPz	1318	54.3	#-948
	+esPz	1319	6.3	#-948
	esh	1328	2.4	#-948
	+epz	1454	28.0	
13	+epz	0129	47.1	#-949
	+ePcPz	0129	50.1	#-949
	+epPz	0130	22.8	#-949
	-epz	0318	47.6	#-950
	+epPz	0318	56.7	#-950
	+esPz	0319	1.2	#-950
	+epz	0336	17.9	#-951
	-ePcPz	0336	19.4	#-951
	-epPz	0338	33.8	#-951
	esh	0346	1.4	#-951
	+epz	0840	48.7	#-952
	-ePcPz	0840	50.5	#-952
	-epPz	0842	54.9	#-952
	-epz	1605	31.3	#-953
	+epz	2242	47.8	#-954
	+ePcPz	2242	52.3	#-954
	esh	2252	24.2	#-954
	eSKSac	2252	34.6	#-954
	+epz	2256	24.5	#-955
14	+epz	1117	17.9	#-956
	-ePcPz	1117	18.3	#-956
	-epz	1537	21.4	#-957
	+epPz	1537	29.5	#-957
	-esPz	1537	31.7	#-957
	+ePnz	1538	35.4	#-957
15	-epz	0548	36.7	#-958
	-epz	1312	29.0	#-959
	-epPz	1312	34.7	#-959
	-esPz	1312	38.6	#-959
	+ePcPz	1315	2.7	#-959
	esh	1317	58.2	#-959
	-epz	2005	23.0	#-960
	-epPz	2005	30.7	#-960
	+esPz	2005	34.5	#-960
	-epz	2133	3.0	#-961
	-epz	2207	31.3	#-962
	+esPz	2207	37.3	#-962
	-ePcPz	2207	49.9	#-962
	+ePPz	2210	13.3	#-962
16	-epz	0652	24.1	#-963
	+ePcPz	0652	28.4	#-963
	-epz	1023	16.8	#-964
	-ePcPz	1025	51.1	#-964
	esh	1028	47.5	#-964
	-ePKPdfz	1225	50.5	#-965
	+ePKiKPz	1225	54.4	#-965
	+epPKPbcz	1226	16.8	#-965
	-epPKiKPz	1226	20.1	#-965
	+esPKPbcz	1226	26.0	#-965
	+epz	2034	41.5	#-966
	+ePcPz	2034	46.0	#-966
	+epz	2055	56.1	#-967
	+ePcPz	2055	59.9	#-967
	+ePPz	2059	9.3	#-967
	+esPz	2059	13.8	#-967
	esh	2105	7.3	#-967
17	-epz	0311	10.7	#-968
	+ePcPz	0311	15.9	#-968
	-epPz	0311	23.4	#-968
	-ePKiKPz	0316	42.3	#-968
	+ePKPdfz	0512	19.0	#-969
	+ePKiKPz	0512	22.1	#-969
	+eSKPdfz	0515	9.8	#-969
18	-epz	0858	50.3	#-970
	-ePcPz	0859	3.5	#-970
	-epz	1516	27.3	#-971
	-epz	2303	43.6	#-972
	-epPz	2303	56.1	#-972
	-esPz	2303	58.8	#-972
19	-epz	0425	11.2	#-973
	esh	0434	1.8	#-973
23	+epz	0117	11.0	#-974
	-epz	1345	13.1	#-975
	-epz	1500	47.3	#-976
	+epz	2150	51.0	
24	-epz	1254	43.9	#-977
	+epz	1257	17.6	
25	+epz	1800	21.0	#-978
	-epz	1846	32.2	#-979
26	+epz	0108	8.2	
	+epz	2257	57.0	#-980
	+epz	2317	59.6	#-981
	+epz	2355	1.0	#-982

Date	Phase	UTC hm	time s	Remarks
27	-epz	0209	1.0	#-983
	+pez	0614	8.2	#-984
	-epz	1556	26.9	#-985
	-epz	1656	10.1	#-986
	+epz	1808	21.3	#-987
29	-epz	0628	9.0	#-988
	+epz	0830	8.0	
	+epz	2016	30.5	#-989
30	-epz	0839	49.5	#-990
	-epz	0856	22.8	#-991
	-epz	0902	15.7	#-992
	+epz	2203	49.8	#-993
Dec.1	-epz	0239	15.7	#-994
	+epz	0259	51.6	#-995
	-epz	0305	31.2	#-996
	+epz	0340	0.3	#-997
	-epz	0647	17.8	
	-epz	0650	9.8	
	+epz	0809	7.8	#-998
	-epz	1237	40.7	#-999
	+epz	1449	4.7	#-1000
	+epz	1956	11.7	#-1001
	-epz	2119	56.3	#-1002
	+epz	2311	25.9	#-1003
2	-epz	0136	29.0	#-1004
	+epz	0209	5.4	#-1005
	-epz	1355	12.4	#-1006
	-epz	1840	22.8	#-1007
3	+epz	0649	17.8	#-1008
	-epz	1950	45.3	
	+epz	2025	50.6	#-1009
	+epz	2148	21.0	#-1010
4	+epz	1144	18.2	#-1011
	+epz	1540	19.5	#-1012
	-epz	1632	8.8	#-1013
	+epz	2114	1.6	#-1014
5	-epz	1358	1.1	#-1015
	+epz	1740	47.1	#-1016
6	+epz	1317	27.8	#-1017
	+epz	2203	57.2	#-1018
	+epz	2229	27.5	#-1019
	-epz	2253	41.3	
7	+epz	0610	15.0	#-1020
	-epz	0634	47.6	#-1021
	-epz	0710	33.5	
	+epz	1716	42.1	#-1022
	+epz	1921	4.2	#-1023
8	-epz	0644	4.4	#-1024
9	+epz	1457	55.7	#-1025
10	+epz	0138	40.2	#-1026
	+epz	0439	21.8	#-1027
	+epz	0553	13.2	
	-epz	2121	22.1	
11	+exz	0402	39.4	#-1028
	-exz	1013	29.5	#-1029
	-epz	1239	12.0	#-1030
12	-epz	0413	51.9	#-1031
	-epz	0843	56.4	#-1032
	+epz	2254	24.7	#-1033
13	+epz	1643	38.1	#-1034
	+exz	1937	25.1	#-1035
14	+epz	0129	3.1	#-1036
	+epz	0551	10.9	
	-epz	0711	27.1	
15	+epz	0815	9.3	
	-epz	0936	23.4	#-1037
	-epz	1345	21.9	#-1038
16	+epz	0958	50.2	#-1039
	-epz	1250	57.1	#-1040
	-epz	1626	25.3	#-1041
17	-epz	0145	18.6	
	+epz	0439	2.5	#-1042
	+epz	1005	24.2	
	-epz	1620	40.6	#-1043
18	+epz	1418	29.9	#-1044
19	+epz	1945	7.7	
20	-epz	1427	56.9	#-1045
21	-epz	0743	5.6	#-1046
22	+epz	1414	43.1	#-1047
23	+epz	0301	34.3	#-1048
24	+epz	1308	9.6	
	-epz	1502	34.7	
25	+epz	0906	21.7	#-1049
	-epz	2119	15.5	#-1050
26	-epz	1010	49.9	#-1051
	+epz	2231	4.6	#-1052
27	+epz	1340	46.8	#-1053
	+epz	2026	45.2	#-1054
28	-epz	0332	32.8	#-1055
	+epz	0956	2.9	
	-epz	1102	7.4	#-1056
	-epz	1951	4.4	#-1057
29	+epz	0709	27.8	#-1058
	+epz	1928	22.6	#-1059

Table 2. List of hypocenters of teleseismic events detected at Syowa Station. The total number of events is 1059.

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
1.	1 01	09	10	54.3	-32.12	-177.34	33	75.57	4.6		SOUTH OF THE KERMADEC ISLANDS
2.	1 01	10	39	06.8	-55.21	-129.00	10	55.80	5.2	5.5	PACIFIC-ANTARCTIC RIDGE
3.	1 01	11	29	22.7	6.30	125.65	138	94.42	5.9		MINDANAO, PHILIPPINES
4.	1 02	00	23	07.3	-4.66	130.78	33	86.11			BANDA SEA
5.	1 02	05	15	41.7	-18.12	-178.55	629	88.92	4.9		FIJI ISLANDS REGION
6.	1 02	05	23	01.8	-18.02	-178.56	631	89.01	5.0		FIJI ISLANDS REGION
7.	1 02	10	24	07.6	-16.33	177.92	33	89.87	5.4	5.1	FIJI ISLANDS
8.	1 02	14	50	33.4	-17.98	178.74	666	88.46	5.3		FIJI ISLANDS
9.	1 02	15	22	16.7	-17.90	178.78	600	88.55	4.8		FIJI ISLANDS
10.	1 02	17	22	48.7	-17.60	167.86	21	86.13	6.3	7.5	VANUATU ISLANDS
11.	1 02	18	31	02.8	-17.77	167.99	10	86.00	4.7		VANUATU ISLANDS
12.	1 02	22	43	35.6	-17.97	168.09	10	85.84	5.1	5.1	VANUATU ISLANDS
13.	1 03	04	24	26.5	52.49	173.30	33	152.92	5.2	4.5	NEAR ISLANDS, ALEUTIAN ISLANDS, ALASKA
14.	1 03	07	05	27.6	36.09	70.69	129	107.29	5.8		HINDU KUSH REGION, AFGHANISTAN
15.	1 03	07	58	28.5	44.38	149.52	33	137.58	5.4	4.9	KURIL ISLANDS
16.	1 03	10	17	36.3	-17.66	168.00	10	86.11	5.8	6.4	VANUATU ISLANDS
17.	1 03	11	35	09.1	-17.94	168.02	10	85.85	5.2		VANUATU ISLANDS
18.	1 04	06	24	24.0	-17.60	168.13	10	86.20	4.9		VANUATU ISLANDS
19.	1 04	08	44	20.4	-26.37	178.28	614	80.25	5.0		SOUTH OF THE FIJI ISLANDS
20.	1 04	09	55	46.8	-55.91	155.62	10	47.01	5.0		MACQUARIE ISLAND REGION
21.	1 04	13	02	18.8	-0.14	29.76	10	69.07	4.8	4.5	LAKE EDWARD REGION, UGANDA
22.	1 04	15	09	58.9	1.95	97.92	42	80.93	5.3		NORTHERN SUMATRA, INDONESIA
23.	1 04	19	10	14.5	-17.92	168.05	10	85.88	4.7	4.7	VANUATU ISLANDS
24.	1 04	22	40	32.5	-17.79	168.01	10	85.98	4.8		VANUATU ISLANDS
25.	1 05	02	29	58.1	0.61	123.60	274	88.41	5.2		MINAHASSA PENINSULA, SULAWESI
26.	1 05	12	02	55.1	-33.37	-68.49	33	65.35	4.8		MENDOZA PROVINCE, ARGENTINA
27.	1 05	18	22	41.0	-17.84	178.89	639	88.63	4.9		FIJI ISLANDS
28.	1 06	01	33	39.7	48.78	154.96	45	143.29	5.5	4.7	KURIL ISLANDS
29.	1 06	15	31	13.6	-17.51	167.97	10	86.25	5.2	5.1	VANUATU ISLANDS
30.	1 06	16	38	47.1	-17.53	168.13	10	86.27	5.1	5.5	VANUATU ISLANDS
31.	1 06	17	09	53.2	-17.48	168.06	10	86.30	5.1		VANUATU ISLANDS
32.	1 07	00	48	01.7	-52.72	27.52	10	17.31	5.0	4.8	SOUTH OF AFRICA
33.	1 07	07	37	21.4	-8.05	-74.39	152	90.87	4.7		PERU-BRAZIL BORDER REGION
34.	1 07	13	26	26.4	18.96	144.96	599	113.05	5.7		MARIANA ISLANDS
35.	1 08	06	08	00.8	-5.30	130.94	33	85.58	4.8		BANDA SEA
36.	1 08	07	59	39.5	-53.60	24.81	10	16.93	4.4		SOUTH OF AFRICA
37.	1 08	18	08	45.6	0.63	119.94	33	87.12	4.5		MINAHASSA PENINSULA, SULAWESI
38.	1 09	01	03	38.5	-24.34	-179.74	489	82.64	5.2		SOUTH OF THE FIJI ISLANDS
39.	1 09	03	57	23.5	-3.30	143.90	33	92.04	5.0	4.6	NEAR NORTH COAST OF NEW GUINEA, P.N.G.
40.	1 09	06	45	57.5	38.67	69.90	33	109.70	5.2	5.2	TAJIKISTAN
41.	1 09	07	42	41.1	-28.89	-175.88	33	78.98	5.0	4.6	KERMADEC ISLANDS REGION
42.	1 09	08	46	23.7	-17.62	168.09	10	86.18	5.0	4.9	VANUATU ISLANDS
43.	1 09	14	34	34.6	-33.45	77.73	10	41.53	4.3		MID-INDIAN RIDGE
44.	1 09	15	41	01.8	34.13	139.46	129	124.90	4.9		NEAR THE SOUTH COAST OF HONSHU, JAPAN
45.	1 09	21	22	05.7	-4.07	129.19	156	86.08	4.9		BANDA SEA
46.	1 09	21	47	29.9	-6.30	129.80	33	84.24	5.0		BANDA SEA
47.	1 09	23	52	41.9	23.56	70.20	10	94.94	4.8		SOUTHERN INDIA
48.	1 10	01	04	39.7	-19.20	-173.31	33	88.91	4.8		TONGA ISLANDS
49.	1 10	05	56	03.4	-17.57	167.91	10	86.17	5.5	5.7	VANUATU ISLANDS
50.	1 10	07	35	04.5	-5.89	146.20	115	90.42	4.4		EASTERN NEW GUINEA REGION, P.N.G.

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
51.	1 10	08	36	45.7	-17.72	-172.42	33	90.51	S.3	S.3	TONGA ISLANDS REGION
52.	1 10	11	14	56.9	-3.21	142.43	11	91.60	6.0	6.6	NEAR NORTH COAST OF NEW GUINEA, P.N.G.
53.	1 11	02	48	57.1	-5.40	154.35	144	93.61	4.6		SOLOMON ISLANDS
54.	1 11	03	02	54.8	-54.89	-130.62	10	56.20	5.0	S.1	PACIFIC-ANTARCTIC RIDGE
55.	1 11	05	16	30.2	-10.59	165.29	33	92.09	S.4	S.6	SANTA CRUZ ISLANDS
56.	1 11	05	46	16.1	-10.65	165.17	33	91.99	S.1		SANTA CRUZ ISLANDS
57.	1 11	07	48	39.3	3.63	126.47	33	92.24	4.7		TALAUD ISLANDS, INDONESIA
58.	1 11	10	52	43.1	-30.07	-177.96	59	77.45	5.0		KERMADEC ISLANDS, N.Z.
59.	1 11	11	17	20.8	0.40	119.66	33	86.81	S.2		MINAHASSA PENINSULA, SULAWESI
60.	1 11	12	20	01.2	-28.80	-70.83	45	70.32			CENTRAL CHILE
61.	1 11	17	18	24.4	0.41	96.38	33	79.00	4.S		OFF THE WEST COAST OF NORTHERN SUMATRA
62.	1 11	17	52	22.2	-10.61	165.19	33	92.03	4.9	4.8	SANTA CRUZ ISLANDS
63.	1 11	19	18	20.8	1.70	122.22	482	88.92	4.6		MINAHASSA PENINSULA, SULAWESI
64.	1 11	22	01	17.6	31.59	142.35	40	123.65	4.4		SOUTHEAST OF HONSHU, JAPAN
65.	1 11	22	25	13.0	-7.43	128.39	142	82.69	4.6		BANDA SEA
66.	1 12	01	01	02.0	-17.93	167.92	10	85.84	4.7	4.9	VANUATU ISLANDS
67.	1 12	08	26	52.9	28.28	-69.57	10	122.95	5.7	4.9	OFF THE EAST COAST OF THE UNITED STATES
68.	1 12	22	54	11.8	-18.11	-178.98	594	88.84	4.S		FIJI ISLANDS REGION
69.	1 13	02	21	53.8	-17.55	-174.44	156	90.30	4.7		TONGA ISLANDS
70.	1 13	02	33	35.4	-17.41	167.80	10	86.30	4.9	5.0	VANUATU ISLANDS
71.	1 13	04	47	40.7	4.42	125.71	200	92.70	4.7		TALAUD ISLANDS, INDONESIA
72.	1 13	11	04	19.8	-20.45	-173.96	33	87.57	5.5	S.7	TONGA ISLANDS
73.	1 13	14	10	56.5	-S.65	151.07	44	92.30	S.9	6.4	NEW BRITAIN REGION, P.N.G.
74.	1 13	16	32	54.1	-17.43	167.81	10	86.27	S.3	S.8	VANUATU ISLANDS
75.	1 14	02	38	37.7	-20.68	169.41	52	83.60	S.1		VANUATU ISLANDS
76.	1 14	11	05	53.8	-30.14	-111.85	10	78.94	5.0	S.1	EASTER ISLAND REGION
77.	1 14	15	06	57.0	-31.43	-179.89	354	75.74	4.6		KERMADEC ISLANDS REGION
78.	1 14	15	26	38.8	-55.55	-25.91	33	31.52	4.7		SOUTH SANDWICH ISLANDS REGION
79.	1 14	15	36	26.4	-19.38	-69.23	33	78.58	5.5	S.2	NORTHERN CHILE
80.	1 14	16	32	12.9	-15.59	-174.83	200	92.14	4.0		TONGA ISLANDS
81.	1 15	03	48	36.1	-30.64	-71.69	48	68.88	4.S		NEAR THE COAST OF CENTRAL CHILE
82.	1 15	04	47	59.8	-17.33	167.72	10	86.35	5.5	6.1	VANUATU ISLANDS
83.	1 15	04	56	27.5	-17.39	167.82	10	86.32	S.4		VANUATU ISLANDS
84.	1 15	05	51	28.7	-23.69	179.85	600	83.18	4.4		SOUTH OF THE FIJI ISLANDS
85.	1 15	07	12	58.0	-6.31	105.21	10	75.53	S.8	6.3	SUNDA STRAIT, INDONESIA
86.	1 15	09	01	15.9	-S.53	151.10	41	92.42	5.5	6.1	NEW BRITAIN REGION, P.N.G.
87.	1 16	07	23	52.5	-19.30	-68.94	33	78.56	S.1		CHILE-BOLIVIA BORDER REGION
88.	1 16	13	00	46.7	3.32	127.98	33	92.49	4.8		TALAUD ISLANDS, INDONESIA
89.	1 16	17	05	34.9	-6.09	142.56	10	88.98	5.5	5.1	NEW GUINEA, P.N.G.
90.	1 16	18	45	22.3	-36.23	-97.12	10	70.31	4.9		WEST CHILE RISE
91.	1 16	23	09	52.0	15.50	-93.13	80	118.91	S.8		CHIAPAS, MEXICO
92.	1 17	01	21	48.4	-20.80	-179.14	657	86.19	4.3		FIJI ISLANDS REGION
93.	1 17	08	42	47.6	-17.44	167.71	10	86.24	4.7		VANUATU ISLANDS
94.	1 17	14	49	25.1	-17.37	167.83	10	86.34	S.3	S.2	VANUATU ISLANDS
95.	1 17	18	37	06.3	-23.26	-68.72	108	74.80	4.9		NORTHERN CHILE
96.	1 17	20	01	29.2	-1.68	29.08	15	67.58	4.7		LAC KIVU REGION, DEM. REP. OF THE CONGO
97.	1 18	07	31	23.3	-24.38	-67.05	148	73.21	5.0		CHILE-ARGENTINA BORDER REGION
98.	1 19	08	58	43.9	1.49	126.98	102	90.44	4.8		NORTHERN MOLUCCA SEA
99.	1 19	09	06	16.6	43.92	147.27	55	136.37	S.7	S.1	KURIL ISLANDS
100.	1 19	15	10	07.3	-21.43	-176.30	224	86.17	4.4		FIJI ISLANDS REGION

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
101.	1 19	16	55	53.9	-5.94	148.46	71	91.15	5.0		NEW BRITAIN REGION, P.N.G.
102.	1 19	17	09	29.1	-1.93	29.58	10	67.30	4.6		RWANDA
103.	1 19	19	52	56.4	54.00	-167.26	124	160.51	5.1		FOX ISLANDS, ALEUTIAN ISLANDS
104.	1 19	21	09	58.2	-7.96	-74.46	144	90.98	4.5		PERU-BRAZIL BORDER REGION
105.	1 20	00	14	44.3	-1.68	28.98	10	67.59	4.9	4.6	LAC KIVU REGION, DEM. REP. OF THE CONGO
106.	1 20	09	07	41.4	11.08	138.67	33	103.53	5.1	4.8	WESTERN CAROLINE ISLANDS, MICRONESIA
107.	1 20	13	07	11.4	-45.92	34.89	10	23.27	5.3	5.4	PRINCE EDWARD ISLANDS REGION
108.	1 21	01	19	32.6	-1.73	28.85	10	67.56	4.6		LAC KIVU REGION, DEM. REP. OF THE CONGO
109.	1 21	02	00	14.0	-1.51	28.94	10	67.77	4.2		LAC KIVU REGION, DEM. REP. OF THE CONGO
110.	1 21	04	39	21.6	-1.78	29.04	10	67.50	4.9	4.5	LAC KIVU REGION, DEM. REP. OF THE CONGO
111.	1 21	07	52	29.4	-41.47	-85.64	10	62.67	5.2	5.0	WEST CHILE RISE
112.	1 21	13	38	34.3	-9.68	159.70	33	91.28	4.8		SOLOMON ISLANDS
113.	1 21	13	50	58.8	-31.26	179.63	437	75.81	4.5		KERMADEC ISLANDS REGION
114.	1 21	14	03	51.6	-5.63	102.34	33	75.22	5.0	5.1	SOUTHERN SUMATRA, INDONESIA
115.	1 21	15	42	29.3	-15.26	167.37	100	88.23	4.6		VANUATU ISLANDS
116.	1 21	16	49	42.3	-21.54	170.12	33	82.96	5.1	4.8	SOUTHEAST OF THE LOYALTY ISLANDS
117.	1 22	01	02	32.2	-1.79	28.97	10	67.49	4.0		LAC KIVU REGION, DEM. REP. OF THE CONGO
118.	1 22	15	32	05.5	-1.52	28.99	10	67.76	4.9	4.7	LAC KIVU REGION, DEM. REP. OF THE CONGO
119.	1 22	16	22	22.3	-1.55	29.00	10	67.72	4.4		LAC KIVU REGION, DEM. REP. OF THE CONGO
120.	1 22	16	51	00.3	-1.46	29.25	10	67.79	4.2		LAC KIVU REGION, DEM. REP. OF THE CONGO
121.	1 22	19	29	48.6	-5.57	-11.39	10	71.59	4.7		ASCENSION ISLAND REGION
122.	1 22	20	15	06.3	3.49	95.63	33	81.69	5.3	5.0	OFF THE WEST COAST OF NORTHERN SUMATRA
123.	1 23	06	37	30.8	-40.40	175.20	49	66.07	4.6		NORTH ISLAND OF NEW ZEALAND
124.	1 24	15	24	05.0	3.51	95.61	33	81.71	5.3	5.3	OFF THE WEST COAST OF NORTHERN SUMATRA
125.	1 24	18	12	05.2	3.53	95.66	33	81.74	5.6	5.6	OFF THE WEST COAST OF NORTHERN SUMATRA
126.	1 25	09	34	45.6	-36.14	-71.48	102	63.71	4.2		CENTRAL CHILE
127.	1 25	14	05	58.4	3.48	95.68	33	81.70	5.0	4.4	OFF THE WEST COAST OF NORTHERN SUMATRA
128.	1 26	22	03	27.3	-59.80	-26.42	33	28.49	4.8		SOUTH SANDWICH ISLANDS REGION
129.	1 27	03	04	14.5	-21.70	-174.55	33	86.24	5.1	5.3	TONGA ISLANDS
130.	1 27	13	04	19.2	-33.53	-178.64	33	73.95	4.9		SOUTH OF THE KERMADEC ISLANDS
131.	1 27	13	42	43.7	0.78	29.72	10	69.98	4.7		LAKE EDWARD REGION, DEM REP OF THE CONGO
132.	1 28	00	03	28.3	-21.84	-176.23	117	85.78	4.6		FIJI ISLANDS REGION
133.	1 28	00	49	19.7	-33.58	178.62	500	73.36	4.3		SOUTH OF THE KERMADEC ISLANDS
134.	1 28	05	30	08.9	-21.24	170.33	154	83.30	4.5		SOUTHEAST OF THE LOYALTY ISLANDS
135.	1 28	15	09	55.8	-15.30	-173.23	33	92.72	5.5	6.1	TONGA ISLANDS
136.	1 29	11	42	26.5	9.48	93.57	94	86.77	4.7		NICOBAR ISLANDS, INDIA REGION
137.	1 29	12	07	06.4	-7.55	129.09	26	82.83	4.8		BANDA SEA
138.	1 31	19	24	24.3	-22.37	-70.13	33	76.08	4.6		NEAR THE COAST OF NORTHERN CHILE
139.	2 01	19	58	39.4	-31.90	-179.46	350	75.37	4.1		KERMADEC ISLANDS REGION
140.	2 01	21	01	28.8	-14.61	167.42	100	88.86	4.4		VANUATU ISLANDS
141.	2 02	07	29	27.2	-56.14	-27.41	144	31.59	4.3		SOUTH SANDWICH ISLANDS REGION
142.	2 03	08	14	52.4	-24.18	-66.74	185	73.30	4.6		SALTA PROVINCE, ARGENTINA
143.	2 03	09	26	43.3	38.63	30.90	10	107.52	5.7	5.6	WESTERN TURKEY
144.	2 03	12	59	32.8	-15.65	-72.03	33	82.99	4.9	4.7	SOUTHERN PERU
145.	2 03	23	02	12.2	-37.51	177.13	10	69.25	4.3		OFF EAST COAST OF THE NORTH ISLAND, N.Z.
146.	2 05	07	56	3.8	-17.84	-178.69	584	89.16	4.7		FIJI ISLANDS REGION
147.	2 05	08	49	37.0	-7.34	129.48	33	83.16	4.5		BANDA SEA
148.	2 05	13	27	24.6	-5.35	151.25	39	92.64	5.8	6.3	NEW BRITAIN REGION, P.N.G.
149.	2 07	03	15	53.4	3.03	126.29	33	91.61	5.5	5.4	TALAUD ISLANDS, INDONESIA
150.	2 07	06	05	11.4	-27.42	-179.00	428	79.81	4.4		KERMADEC ISLANDS REGION

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
151.	2 07	07	18	39.0	-52.19	13.92	10	20.77	4.5		SOUTHWEST OF AFRICA
152.	2 08	06	07	40.1	-29.31	-178.06	200	78.16	4.3		KERMADEC ISLANDS, N.Z.
153.	2 08	06	27	53.7	-20.61	-173.75	33	87.46	4.9	5.1	TONGA ISLANDS
154.	2 08	09	53	33.3	-32.32	-177.39	33	75.36	4.4		SOUTH OF THE KERMADEC ISLANDS
155.	2 08	10	46	10.3	-8.85	124.27	110	79.89	5.1		TIMOR REGION
156.	2 08	14	40	10.S	-24.83	179.92	500	82.09	4.6		SOUTH OF THE FIJI ISLANDS
157.	2 08	18	49	31.9	-28.25	-177.13	33	79.37	5.1		KERMADEC ISLANDS REGION
158.	2 08	22	29	26.4	2.17	121.81	550	89.22	4.9		CELEBES SEA
159.	2 09	15	15	14.3	1.98	150.21	33	99.14	5.2	4.8	EASTERN CAROLINE ISLANDS, MICRONESIA
160.	2 09	16	56	8.2	46.08	142.72	349	136.61	4.9		SAKHALIN, RUSSIA
161.	2 09	22	50	47.8	-3.73	151.31	10	94.17	5.2	5.0	NEW IREL.AND REGION, P.N.G.
162.	2 10	01	47	6.2	-55.91	-29.00	193	32.33	5.7		SOUTH SANDWICH ISLANDS REGION
163.	2 11	02	15	44.4	-23.84	-179.84	500	83.10	4.5		SOUTH OF THE FIJI ISLANDS
164.	2 11	03	01	32.6	-13.91	170.42	600	90.33	5.0		VANUATU ISLANDS REGION
165.	2 11	03	39	35.0	-18.04	-178.51	591	89.01	4.9		FIJI ISLANDS REGION
166.	2 11	05	20	31.3	-14.59	167.28	161	88.84	4.7		VANUATU ISLANDS
167.	2 11	23	16	38.3	-32.11	-67.03	135	66.04	4.0		MENDOZA PROVINCE, ARGENTINA
168.	2 12	13	08	58.0	-37.16	-179.50	33	70.27	4.7		EAST OF THE NORTH ISLAND, N.Z.
169.	2 12	13	44	37.3	36.59	140.95	45	127.64	5.6	5.0	NEAR THE EAST COAST OF HONSHU, JAPAN
170.	2 12	16	35	29.9	-59.78	-26.24	33	28.44	5.2	5.1	SOUTH SANDWICH ISLANDS REGION
171.	2 12	20	26	25.3	19.24	121.20	33	104.82	4.9	5.0	PHILIPPINE ISLANDS REGION
172.	2 12	20	54	33.4	27.36	129.50	33	115.21	5.0	5.0	RYUKYU ISLANDS, JAPAN
173.	2 12	21	16	55.7	-18.46	168.59	33	85.51	4.6		VANUATU ISLANDS
174.	2 15	01	46	37.8	-36.23	-100.30	10	70.97	5.3	5.4	SOUTHEAST OF EASTER ISLAND
175.	2 15	14	04	8.9	-20.39	-173.91	33	87.63	4.8		TONGA ISLANDS
176.	2 17	13	03	52.7	28.09	51.76	33	97.23	5.6	5.0	SOUTHERN IRAN
177.	2 19	12	33	24.1	-56.74	-25.44	33	30.43	5.4	5.3	SOUTH SANDWICH ISLANDS REGION
178.	2 20	15	06	31.8	-52.13	15.62	10	20.37	4.9	4.5	SOUTHWEST OF AFRICA
179.	2 20	15	53	23.9	-52.13	15.72	10	20.35	5.0	4.9	SOUTHWEST OF AFRICA
180.	2 20	18	36	32.6	-52.10	15.76	10	20.36	4.8		SOUTHWEST OF AFRICA
181.	2 20	21	51	8.6	-7.40	128.19	136	82.64	4.6		BANDA SEA
182.	2 21	01	11	22.5	-9.64	160.94	49	91.70	5.3	5.1	SOLOMON ISLANDS
183.	2 21	08	57	46.0	-31.69	-67.36	121	66.54	5.2		SAN JUAN PROVINCE, ARGENTINA
184.	2 21	19	16	18.6	-18.04	-178.43	562	89.02	4.7		FIJI ISLANDS REGION
185.	2 22	23	10	56.2	-25.51	-70.12	48	73.16	5.1	4.6	NEARTHE COAST OF NORTHERN CHILE
186.	2 23	19	37	13.8	-4.45	151.98	155	93.72	5.5		NEW BRITAIN REGION, P.N.G.
187.	2 24	02	24	31.5	-5.65	130.76	109	85.18	5.5		BANDASEA
188.	2 24	06	37	37.2	-44.11	168.58	12	61.07	5.3	5.4	SOUTH ISLAND OF NEW ZEALAND
189.	2 24	13	14	48.3	-5.70	110.90	545	78.06	5.2		JAVA SEA
190.	2 25	09	18	57.7	-7.43	125.76	33	81.74	4.8		BANDASEA
191.	2 26	08	0S	25.1	-25.15	-70.66	33	73.67	4.1		NEAR THE COAST OF NORTHERN CHILE
192.	2 26	08	32	48.9	-18.30	-69.71	92	79.75	5.5		NORTHERN CHILE
193.	2 26	16	11	57.9	-20.24	-177.81	517	87.02	4.5		FIJI ISLANDS REGION
194.	2 27	11	03	36.9	-17.95	-178.63	600	89.07	4.1		FIJI ISLANDS REGION
195.	2 27	14	42	22.4	-23.11	179.57	532	83.69	4.7		SOUTH OF THE FIJI ISLANDS
196.	2 28	01	50	48.9	-5.69	151.26	40	92.33	6.0	6.3	NEW BRITAIN REGION, P.N.G.
197.	2 28	06	25	39.1	-21.60	-68.18	124	76.17	4.6		CHILE-BOLIVIA BORDER REGION
198.	2 28	06	33	26.5	-5.85	151.30	33	92.19	5.4		NEW BRITAIN REGION, P.N.G.
199.	3 01	09	55	4.2	-33.19	-179.39	33	74.13	5.3	5.1	SOUTH OFTHE KERMADECISLANDS
200.	3 01	14	04	49.9	52.09	152.56	452	145.17	4.7		NORTHWEST OF THE KURIL ISLANDS

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
201.	3 01	20	32	1.5	-22.36	-69.33	100	75.83	4.4		NORTHERN CHILE
202.	3 02	03	14	54.6	-35.72	-17.62	10	45.50	4.9	5.5	SOUTHERN MID-ATLANTIC RIDGE
203.	3 02	07	25	25.8	-17.08	-73.28	33	82.05	5.1	4.6	OFF THE COAST OF PERU
204.	3 03	07	16	15.6	-45.84	-76.12	10	56.10	5.3	5.6	OFF THE COAST OF SOUTHERN CHILE
205.	3 03	11	57	10.9	-45.72	-75.68	10	56.09	5.4		OFF THE COAST OF SOUTHERN CHILE
206.	3 05	10	34	25.3	-6.91	129.03	33	83.40	5.1	4.3	BANDA SEA
207.	3 05	14	00	4.3	-62.89	-158.10	10	47.79	4.7		PACIFIC-ANTARCTIC RIDGE
208.	3 05	17	07	42.3	-11.78	24.76	10	57.98	5.1	4.5	ZAMBIA
209.	3 05	21	16	9.1	6.03	124.25	31	93.67	6.3	7.2	MINDANAO, PHILIPPINES
210.	3 06	01	21	33.2	5.98	124.47	33	93.70	4.7		MINDANAO, PHILIPPINES
211.	3 06	14	25	58.5	-35.53	-17.61	10	45.66	4.9	4.5	SOUTHERN MID-ATLANTIC RIDGE
212.	3 06	14	36	55.8	5.85	124.81	33	93.70	5.0	4.7	MINDANAO, PHILIPPINES
213.	3 06	17	20	58.9	-16.20	-173.99	126	91.70	4.7		TONGA
214.	3 07	22	51	41.7	-22.50	-66.26	262	74.70	5.1		JUJUY PROVINCE, ARGENTINA
215.	3 08	04	43	16.8	-22.03	-179.52	607	84.93	4.9		SOUTH OF THE FIJI ISLANDS
216.	3 09	12	27	11.2	-56.02	-27.33	118	31.66	5.8		SOUTH SANDWICH ISLANDS REGION
217.	3 14	14	50	2.3	-7.32	123.30	534	80.95	4.0		BANDA SEA
218.	3 15	02	17	38.2	5.66	125.41	227	93.74	4.6		MINDANAO, PHILIPPINES
219.	3 15	04	36	35.5	-4.19	123.28	21	83.84	5.3	4.8	BANDA SEA
220.	3 16	04	05	45.6	-33.08	-178.56	33	74.40	4.7		SOUTH OF THE KERMADEC ISLANDS
221.	3 16	10	58	39.7	-22.82	-66.10	239	74.35	4.2		JUJUY PROVINCE, ARGENTINA
222.	3 16	12	33	31.2	-25.01	-68.56	109	73.13	4.5		CHILE-ARGENTINA BORDER REGION
223.	3 16	19	07	1.3	-27.23	-176.59	33	80.47	5.0	4.4	KERMADEC ISLANDS REGION
224.	3 16	20	50	2.2	-6.20	151.41	33	91.90	5.0	4.4	KERMADEC ISLANDS REGION
225.	3 17	03	37	19.9	0.68	122.32	79	88.02	5.6		MINAHASSA PENINSULA, SULAWESI
226.	3 17	08	28	37.1	1.33	123.27	33	88.96	4.9		MINAHASSA PENINSULA, SULAWESI
227.	3 17	14	36	20.4	-23.11	-70.17	66	75.41	4.7		NEAR THE COAST OF NORTHERN CHILE
228.	3 17	17	51	47.1	-23.62	179.89	527	83.26	4.7		SOUTH OF THE FIJI ISLANDS
229.	3 17	19	33	33.7	-45.22	35.11	10	23.96	5.5	5.7	PRINCE EDWARD ISLANDS REGION
230.	3 17	20	50	32.4	-33.26	-179.73	33	74.00	5.6	5.3	SOUTH OF THE KERMADEC ISLANDS
231.	3 17	21	43	31.1	-36.82	-179.79	36	70.54	5.8	5.2	EAST OF THE NORTH ISLAND, N.Z.
232.	3 17	22	13	18.2	-36.87	-179.74	35	70.50	5.2	5.1	EAST OF THE NORTH ISLAND, N.Z.
233.	3 17	23	39	19.6	-17.96	-179.49	618	88.88	4.8		FIJI REGION
234.	3 18	02	01	58.1	-8.62	-79.98	49	92.12	5.1	4.5	NEAR THE COAST OF NORTHERN PERU
235.	3 18	03	09	56.9	-20.39	-69.00	92	77.57	5.5		NORTHERN CHILE
236.	3 19	04	58	23.1	-23.54	-179.51	517	83.46	5.0		SOUTH OF THE FIJI ISLANDS
237.	3 19	22	14	14.9	-6.49	129.90	148	84.10	5.7		BANDA SEA
238.	3 20	08	41	46.0	-27.87	-177.89	138	79.59	4.5		KERMADEC ISLANDS REGION
239.	3 21	19	32	7.1	-31.86	-179.60	200	75.38	4.9		KERMADEC ISLANDS REGION
240.	3 22	12	21	10.7	-18.61	178.49	557	87.80	5.0		FIJI ISLANDS
241.	3 22	17	36	59.2	4.59	126.32	76	93.07	5.7		TALAUD ISLANDS, INDONESIA
242.	3 23	04	00	58.0	-7.42	128.07	126	82.57	4.8		BANDA SEA
243.	3 23	05	15	51.3	1.40	128.11	115	90.76	5.5		HALMAHERA, INDONESIA
244.	3 23	13	07	5.4	-16.57	-73.77	33	82.68	4.9	4.6	NEAR THE COAST OF PERU
245.	3 24	05	55	13.3	-16.66	172.02	33	88.13	5.1	4.9	VANUATU ISLANDS REGION
246.	3 24	08	3	18.2	-13.71	167.21	200	89.66	5.0		VANUATU ISLANDS
247.	3 24	12	11	48.3	-43.03	-82.70	10	60.45	5.1	4.7	WEST CHILE RISE
248.	3 24	16	42	37.5	-57.78	-66.09	10	42.65	4.4		DRAKE PASSAGE
249.	3 24	18	48	53.6	-23.98	-66.69	214	73.46	4.6		JUJUY PROVINCE, ARGENTINA
250.	3 25	06	18	13.6	49.49	155.72	33	144.16	5.0	4.5	KURIL ISLANDS

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
251.	3 25	06	28	16.8	-21.30	-178.78	558	85.79	4.5		FIJI REGION
252.	3 26	05	32	31.4	-26.31	178.27	630	80.31	4.9		SOUTH OF THE FIJI ISLANDS
253.	3 28	00	23	10.4	-12.40	166.97	238	90.84	4.9		SANTA CRUZ ISLANDS
254.	3 28	01	40	21.1	-31.22	-178.36	33	76.25	4.4		KERMADEC ISLANDS REGION
255.	3 28	04	56	22.4	-21.66	-68.33	125	76.16	6.1		CHILE-BOLIVIA BORDER REGION
256.	3 28	09	56	57.7	-21.73	-68.22	126	76.06	4.8		CHILE-BOLIVIA BORDER REGION
257.	3 28	21	45	6.6	-24.14	-66.85	170	73.37	4.8		SALTA PROVINCE, ARGENTINA
258.	3 29	03	21	40.9	-12.99	166.78	118	90.23	5.0		SANTA CRUZ ISLANDS
259.	3 30	15	06	46.2	-7.43	127.93	125	82.52	5.1		BANDA SEA
260.	4 01	19	59	32.4	-29.67	-71.38	71	69.69	6.1		NEAR THE COAST OF CENTRAL CHILE
261.	4 02	04	10	58.7	-21.93	-65.82	280	75.08	4.7		SOUTHERN BOLIVIA
262.	4 04	20	50	10.3	-6.77	129.79	45	83.80	5.1		BANDA SEA
263.	4 05	23	02	29.3	-15.28	-173.43	33	92.71	5.3	5.5	TONGA
264.	4 06	16	08	28.0	-17.92	-178.61	587	89.10	4.5		FIJI REGION
265.	4 08	01	35	59.4	-36.92	-70.49	145	62.69	4.7		CHILE-ARGENTINA BORDER REGION
266.	4 08	03	48	55.2	-51.07	139.27	10	46.73	5.6	6.1	WESTERN INDIAN-ANTARCTIC RIDGE
267.	4 10	10	09	21.2	-20.74	169.29	33	83.51	5.4	5.7	VANUATU ISLANDS
268.	4 11	06	35	37.7	-27.43	-63.44	550	69.19	4.4		SANTIAGO DEL ESTERO PROVINCE, ARGENTINA
269.	4 13	15	36	2.4	1.10	125.38	54	89.50	5.6		NORTHERN MOLUCCA SEA
270.	4 13	22	45	1.4	-13.12	167.18	190	90.21	4.8		VANUATU ISLANDS
271.	4 14	04	05	23.9	7.32	126.66	33	95.72	5.4	5.1	MINDANAO, PHILIPPINES
272.	4 14	06	24	49.0	-22.04	-179.73	600	84.87	4.2		SOUTH OF THE FIJI ISLANDS
273.	4 15	07	11	26.1	-60.01	-26.47	33	28.36	5.0		SOUTH SANDWICH ISLANDS REGION
274.	4 15	23	08	21.1	-22.75	-68.97	91	75.36	5.2		NORTHERN CHILE
275.	4 17	02	11	8.1	-30.17	-67.45	33	67.98			SAN JUAN PROVINCE, ARGENTINA
276.	4 17	10	30	41.6	-24.43	179.94	508	82.48	4.4		SOUTH OF THE FIJI ISLANDS
277.	4 17	16	42	22.9	-24.71	-176.46	33	82.95	5.1	4.6	SOUTH OF THE FIJI ISLANDS
278.	4 18	01	10	50.7	-20.50	-178.40	575	86.64	4.2		FIJI REGION
279.	4 18	08	53	52.2	3.41	126.89	33	92.19	5.3	5.1	TALAUD ISLANDS, INDONESIA
280.	4 18	14	17	23.9	-60.66	-25.84	10	27.67	5.7	5.6	SOUTH SANDWICH ISLANDS REGION
281.	4 18	16	08	36.7	-27.54	-70.59	62	71.42	6.2		NEAR THE COAST OF NORTHERN CHILE
282.	4 18	17	55	30.9	-27.61	-70.53	54	71.34	4.7		NEAR THE COAST OF NORTHERN CHILE
283.	4 18	19	23	47.5	-27.57	-70.55	53	71.38	4.9		NEAR THE COAST OF NORTHERN CHILE
284.	4 18	22	03	23.8	-27.60	-70.51	55	71.34	4.6		NEAR THE COAST OF NORTHERN CHILE
285.	4 18	23	24	5.8	-27.58	-70.39	53	71.32	5.0		NEAR THE COAST OF NORTHERN CHILE
286.	4 19	00	16	49.3	9.84	93.59	33	87.11	5.0	4.7	NICOBAR ISLANDS, INDIA REGION
287.	4 20	09	36	49.9	-31.46	179.72	435	75.63	4.2		KERMADEC ISLANDS REGION
288.	4 20	15	59	57.8	-16.38	173.26	33	88.70	6.0	5.5	FIJI REGION
289.	4 20	22	39	45.0	5.30	124.38	33	93.04	4.9	5.3	MINDANAO, PHILIPPINES
290.	4 21	15	42	20.8	-55.59	-27.56	33	32.07	4.3		SOUTH SANDWICH ISLANDS REGION
291.	4 21	18	02	42.9	-20.73	162.48	33	81.66			NEW CALEDONIA
292.	4 21	19	24	3.4	-5.36	108.34	450	77.49	5.1		JAVA SEA
293.	4 22	01	56	22.0	-6.28	154.77	48	92.93	5.2	5.2	BOUGAINVILLE REGION, P.N.G.
294.	4 22	10	58	35.1	5.65	125.57	157	93.79	4.4		MINDANAO, PHILIPPINES
295.	4 23	15	05	31.6	-12.52	166.94	217	90.72	5.3		SANTA CRUZ ISLANDS
296.	4 24	10	51	50.9	42.44	21.47	10	111.94	5.6	5.6	SERBIA, YUGOSLAVIA
297.	4 24	20	48	53.4	-33.36	-179.12	33	74.02	4.6		SOUTH OF THE KERMADEC ISLANDS
298.	4 26	07	15	11.5	53.51	160.63	63	149.22	5.9		NEAR THE EAST COAST OF KAMCHATKA, RUSSIA
299.	4 26	11	52	58.1	-6.86	156.30	147	92.88	4.9		SOLOMON ISLANDS
300.	4 26	15	06	39.3	-27.47	-176.84	33	80.19	5.3	5.3	KERMADEC ISLANDS REGION

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
301.	4 27	00	32	40.5	-26.68	178.14	641	79.92	4.4		SOUTH OF THE FIJI ISLANDS
302.	4 27	18	10	47.6	-28.53	-70.51	105	70.47	4.1		CENTRAL CHILE
303.	4 27	23	53	53.5	-30.94	-67.39	33	67.24	5.3	4.8	SAN JUAN PROVINCE, ARGENTINA
304.	4 28	01	20	49.6	2.92	-31.15	10	85.90	4.4		CENTRAL MID-ATLANTIC RIDGE
305.	4 30	06	25	47.7	-29.75	-177.74	51	77.79	5.3		KERMADEC ISLANDS, N.Z.
306.	4 30	11	29	51.2	-53.79	8.31	10	21.00	4.7		BOUVET ISLAND REGION
307.	5 01	14	00	14.4	2.18	126.55	33	90.93	4.7		MOLUCCA SEA
308.	5 02	03	53	18.9	-6.43	146.75	105	90.11	4.9		EASTERN NEW GUINEA REGION, P.N.G.
309.	5 03	02	14	5.7	-22.75	-63.69	530	73.60	5.1		SALTA PROVINCE, ARGENTINA
310.	5 03	22	32	4.1	-18.18	-178.31	619	88.91	4.8		FIJI REGION
311.	5 04	00	20	19.4	-21.89	-63.71	545	74.41	4.1		SOUTHERN BOLIVIA
312.	5 04	07	00	48.2	-17.90	-178.74	560	89.09	5.3		FIJI REGION
313.	5 04	08	08	29.2	-7.03	155.90	47	92.58	5.3	5.0	SOLOMON ISLANDS
314.	5 05	05	53	50.7	-35.35	-71.09	89	64.32	5.0		CENTRAL CHILE
315.	5 05	16	49	55.3	-19.74	-178.35	600	87.39	4.7		FIJI REGION
316.	5 07	02	14	40.6	-30.94	-179.32	400	76.33	4.1		KERMADEC ISLANDS REGION
317.	5 07	07	27	51.1	-32.08	-67.36	133	66.18	4.7		MENDOZA PROVINCE, ARGENTINA
318.	5 07	09	30	38.8	-31.44	-68.63	106	67.18	4.4		SAN JUAN PROVINCE, ARGENTINA
319.	5 07	15	16	6.9	-19.03	168.67	33	84.98	5.6	5.4	VANUATU ISLANDS
320.	5 08	04	12	49.1	52.30	160.18	44	148.08	5.4	5.2	OFF THE EAST COAST OF KAMCHATKA, RUSSIA
321.	5 08	05	26	0.3	-17.95	-174.57	131	89.89	5.4		TONGA
322.	5 08	19	45	18.8	53.81	160.77	39	149.51	5.8	5.4	NEAR THE EAST COAST OF KAMCHATKA, RUSSIA
323.	5 09	23	41	30.8	2.65	128.30	173	91.99	5.7		HALMAHERA, INDONESIA
324.	5 10	09	21	35.4	-33.35	-70.42	99	65.97	4.8		CHILE-ARGENTINA BORDER REGION
325.	5 10	12	09	18.2	-5.64	148.15	178	91.32	5.2		NEW BRITAIN REGION, P.N.G.
326.	5 10	20	54	3.7	-40.85	176.69	14	65.95	4.7		NORTH ISLAND OF NEW ZEALAND
327.	5 11	08	22	48.4	-25.96	-70.90	33	72.99	5.2	4.5	NEAR THE COAST OF NORTHERN CHILE
328.	5 11	10	43	7.8	-10.42	-78.51	47	89.96	5.5	5.0	NEAR THE COAST OF PERU
329.	5 11	12	05	45.6	-17.93	-178.44	520	89.13	4.5		FIJI REGION
330.	5 12	23	12	52.9	-1.14	127.09	33	88.04	5.7	5.6	KEPULAUAN OBI, INDONESIA
331.	5 13	03	11	25.6	-5.61	151.32	33	92.41	4.9	4.9	NEW BRITAIN REGION, P.N.G.
332.	5 13	13	20	48.4	-12.50	-14.72	10	66.05	5.0	4.4	SOUTHERN MID-ATLANTIC RIDGE
333.	5 13	19	57	22.9	19.13	121.24	33	104.74	5.6	5.3	BABUYAN ISLANDS REGION, PHILIPPINES
334.	5 14	04	26	44.0	-7.18	120.58	527	80.11	4.8		FLORES SEA
335.	5 14	16	56	10.4	-36.52	78.93	10	39.00	5.6	6.1	MID-INDIAN RIDGE
336.	5 14	22	21	26.5	1.64	127.09	33	90.62	4.9		HALMAHERA, INDONESIA
337.	5 15	03	27	35.5	-21.41	-174.26	10	86.58	5.4	5.7	TONGA
338.	5 15	09	20	55.3	-23.06	-68.20	126	74.82	4.9		NORTHERN CHILE
339.	5 15	18	09	22.9	-24.75	178.88	526	81.95	4.1		SOUTH OF THE FIJI ISLANDS
340.	5 16	13	15	5.3	-5.41	151.55	33	92.68	5.3	5.0	NEW BRITAIN REGION, P.N.G.
341.	5 16	15	07	35.6	-5.18	146.19	151	91.08	4.3		EASTERN NEW GUINEA REGION, P.N.G.
342.	5 16	17	16	13.5	-38.74	175.85	131	67.80			NORTH ISLAND OF NEW ZEALAND
343.	5 17	04	54	18.2	-26.10	178.28	600	80.51	4.7		SOUTH OF THE FIJI ISLANDS
344.	5 17	11	58	1.4	-5.28	129.83	168	85.20	5.0		BANDA SEA
345.	5 17	13	49	21.2	-26.77	-177.31	83	80.77	4.9		SOUTH OF THE FIJI ISLANDS
346.	5 18	04	22	42.9	-14.33	166.99	33	89.01	4.9	4.4	VANUATU ISLANDS
347.	5 19	18	58	43.0	-5.20	151.84	60	92.97	4.7		NEW BRITAIN REGION, P.N.G.
348.	5 19	22	06	16.0	-19.15	-175.59	200	88.52	5.1		TONGA
349.	5 20	02	58	51.0	-37.13	177.51	140	69.70	4.7		OFF EAST COAST OF THE NORTH ISLAND, N.Z.
350.	5 20	13	57	25.2	-6.50	130.52	33	84.31	4.5		BANDA SEA

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
351.	5 20	20	32	23.4	-32.74	57.18	10	37.67	4.9	4.4	SOUTHWEST INDIAN RIDGE
352.	5 21	05	27	8.7	2.03	126.59	33	90.80	4.9		MOLUCCA SEA
353.	5 21	18	21	6.2	-24.42	-177.27	33	83.07	5.1	4.5	SOUTH OF THE FIJI ISLANDS
354.	5 22	02	26	6.9	-16.09	-172.08	41	92.17	5.0		SAMOA ISLANDS REGION
355.	5 22	15	57	54.4	-31.44	-178.93	33	75.92	4.8		KERMADEC ISLANDS REGION
356.	5 22	18	57	19.4	-36.34	-97.91	10	70.37	5.3	5.2	WEST CHILE RISE
357.	5 22	20	39	45.8	4.17	126.57	33	92.78	5.1	4.6	KEPULAUAN TALAUD, INDONESIA
358.	5 22	23	49	15.3	4.15	126.48	33	92.73	5.2	4.5	KEPULAUAN TALAUD, INDONESIA
359.	5 23	07	09	21.6	-36.13	178.56	242	70.88	4.4		OFF EAST COAST OF THE NORTH ISLAND, N.Z.
360.	5 23	14	24	51.5	4.27	126.68	65	92.91	4.9		KEPULAUAN TALAUD, INDONESIA
361.	5 23	15	12	53.6	-21.68	-68.13	114	76.08	4.2		CHILE-BOLIVIA BORDER REGION
362.	5 23	15	52	15.2	-30.75	-71.20	52	68.62	5.7		NEAR THE COAST OF CENTRAL CHILE
363.	5 23	22	05	51.8	-5.82	102.06	10	74.95	5.5	5.4	SOUTHERN SUMATRA, INDONESIA
364.	5 24	00	23	15.9	-31.97	-70.95	60	67.41	5.3		CHILE-ARGENTINA BORDER REGION
365.	5 24	09	59	17.3	-25.34	179.48	600	81.51	4.6		SOUTH OF THE FIJI ISLANDS
366.	5 25	14	23	51.0	-21.21	-177.87	394	86.06	4.5		FIJI REGION
367.	5 26	00	10	21.0	1.83	127.24	109	90.85	5.8		HALMAHERA, INDONESIA
368.	5 26	09	19	20.9	-20.04	-68.53	119	77.74	4.7		CHILE-BOLIVIA BORDER REGION
369.	5 26	23	07	5.7	-23.67	179.96	550	83.23	4.4		SOUTH OF THE FIJI ISLANDS
370.	5 27	14	26	0.5	-29.35	-69.28	100	69.32	4.1		CHILE-ARGENTINA BORDER REGION
371.	5 27	18	31	59.4	-7.51	108.16	33	75.43	4.8		JAVA, INDONESIA
372.	5 28	04	04	22.S	-28.94	-66.80	22	68.90	6.0	5.7	CATAMARCA PROVINCE, ARGENTINA
373.	5 28	16	56	41.8	-56.03	-27.71	133	31.78	4.8		SOUTH SANDWICH ISLANDS REGION
374.	5 28	21	33	55.1	16.44	-99.36	9	121.54	5.1		OFFSHORE GUERRERO, MEXICO
375.	5 30	08	39	15.8	9.66	93.29	82	86.86	4.6		NICOBAR ISLANDS, INDIA REGION
376.	5 30	12	45	15.5	-1.39	119.69	33	85.1S	5.1	4.6	SULAWESI, INDONESIA
377.	5 30	14	41	40.3	-19.14	169.00	158	84.97	5.6		VANUATU ISLANDS
378.	5 31	06	09	20.9	52.81	171.79	33	152.65	5.4	5.1	NEAR ISLANDS, ALEUTIAN ISLANDS, ALASKA
379.	6 02	05	59	14.9	-19.74	-68.99	101	78.17	5.1		CHILE-BOLIVIA BORDER REGION
380.	6 02	21	46	57.2	-26.95	-176.29	33	80.80	5.1	5.0	SOUTH OF THE FIJI ISLANDS
381.	6 03	02	10	10.8	-23.80	-179.93	500	83.13	4.5		SOUTH OF THE FIJI ISLANDS
382.	6 03	09	15	00.7	27.56	139.78	489	119.08	5.0		BONIN ISLANDS, JAPAN REGION
383.	6 03	15	21	41.2	-18.00	-173.22	46	90.10	5.0	4.7	TONGA
384.	6 04	09	40	41.4	-29.47	-71.79	33	70.00	4.8		NEAR THE COAST OF CENTRAL CHILE
385.	6 04	14	26	36.S	-26.83	-70.01	89	71.90	4.0		NEAR THE COAST OF NORTHERN CHILE
386.	6 05	01	25	22.6	-12.54	166.90	209	90.69	4.7		SANTA CRUZ ISLANDS
387.	6 05	02	38	06.0	-17.71	-178.50	500	89.33	4.8		FIJI REGION
388.	6 05	10	13	31.2	-6.63	127.90	313	83.25	4.8		BANDA SEA
389.	6 05	12	10	14.6	-9.25	-71.26	582	88.72	4.5		PERU-BRAZIL BORDER REGION
390.	6 05	20	44	14.4	-25.17	179.74	500	81.73	4.1		SOUTH OF THE FIJI ISLANDS
391.	6 06	00	53	43.1	-31.04	59.23	10	39.66	4.7		SOUTHWEST INDIAN RIDGE
392.	6 06	02	20	06.8	-19.19	-177.64	600	88.07	4.3		FIJI REGION
393.	6 06	06	41	47.3	-4.58	153.31	56	94.04	4.9		NEW IRELAND REGION, P.N.G.
394.	6 06	07	14	00.0	-21.78	-179.47	610	85.18	4.6		FIJI REGION
395.	6 06	19	30	24.1	-24.44	-177.12	140	83.08	4.6		SOUTH OF THE FIJI ISLANDS
396.	6 06	23	53	48.4	-0.88	148.33	10	95.83	5.7	6.0	ADMIRALTY ISLANDS REG., P.N.G.
397.	6 07	12	09	40.8	-26.73	-176.69	33	80.94	4.9		SOUTH OF THE FIJI ISLANDS
398.	6 09	16	32	59.6	6.13	125.92	110	94.36	5.0		MINDANAO, PHILIPPINES
399.	6 10	02	53	47.0	-15.51	167.55	116	88.04	5.2		VANUATU ISLANDS
400.	6 11	17	12	34.4	-23.95	-66.62	190	73.47	4.3		JUJUY PROVINCE, ARGENTINA

No.	Date	Origin time UTC			Geographic Coordinates		Depth	Epicentral distance	Magnitude		Region
		h	m	s	Latitude (deg)	Longitude (deg)	(km)	(deg)	mb	MS	
401.	6 12	06	27	20.7	-0.23	123.06	88	87.44	4.9		SULAWESI, INDONESIA
402.	6 13	01	27	19.4	-47.80	99.75	10	35.92	5.5	6.6	SOUTHEASTINOIAN RIDGE
403.	6 14	06	35	17.2	-47.22	101.89	10	37.19	S.4	5.0	SOUTHEAST INDIAN RIDGE
404.	6 15	22	54	58.1	3.47	126.33	33	92.04	4.8		KEPULAUAN TALAUD, INDONESIA
405.	6 16	00	00	25.6	0.50	119.90	35	86.98	5.7	5.5	MINAHASA, SULAWESI, INDONESIA
406.	6 16	04	02	57.5	-20.80	-179.15	600	86.20	4.7		FIJI REGION
407.	6 16	06	55	13.2	-17.87	-178.70	569	89.13	5.7		FIJI REGION
408.	6 16	18	31	10.8	-2.34	102.56	232	78.38	5.4		SOUTHERN SUMATRA, INDONESIA
409.	6 17	00	58	56.3	-23.49	-179.95	500	83.41	4.2		SOUTH OF THE FIJI ISLANDS
410.	6 17	06	51	03.4	-5.92	129.97	179	84.65	5.0		BANDA SEA
411.	6 17	16	03	08.7	-15.17	167.32	200	88.30	4.8		VANUATU ISLANDS
412.	6 17	21	26	22.9	-12.59	166.38	33	90.49	6.0	6.7	SANTA CRUZ ISLANDS
413.	6 18	05	09	09.7	-21.50	-177.91	360	85.78	4.6		FIJI REGION
414.	6 18	07	34	07.4	-22.32	-179.66	600	84.61	4.5		SOUTH OF THE FIJI ISLANDS
415.	6 18	13	56	22.8	-30.81	-71.12	54	68.55	6.0		NEAR THE COAST OF CENTRAL CHILE
416.	6 18	15	54	04.5	-31.64	-68.89	33	67.07	4.8		SAN JUAN PROVINCE, ARGENTINA
417.	6 18	19	00	05.3	-3.85	141.82	33	90.80	5.1	4.5	NEW GUINEA, P.N.G.
418.	6 19	08	58	43.5	-30.84	-178.20	63	76.65	4.9		KERMAOEC ISLANDS, N.Z.
419.	6 19	09	16	27.9	36.13	141.71	33	127.50	5.1	4.9	NEAR THE EAST COAST OF HONSHU, JAPAN
420.	6 19	13	44	45.0	-6.72	154.93	80	92.56	5.0	4.7	BOUGAINVILLE REGION, P.N.G.
421.	6 19	22	45	51.5	-19.24	169.67	33	85.04	5.1	5.2	VANUATU ISLANDS
422.	6 19	23	08	24.5	-19.21	169.64	33	85.07	5.5	5.2	VANUATU ISLANDS
423.	6 19	23	54	11.0	-19.28	169.67	33	85.01	5.1		VANUATU ISLANDS
424.	6 20	05	26	10.6	-23.47	-175.52	33	84.33	5.1	4.8	TONGA REGION
425.	6 20	09	04	53.8	-15.23	-173.46	33	92.75	4.9	5.0	TONGA
426.	6 20	11	42	50.4	-19.33	169.03	200	84.79	4.8		VANUATU ISLANDS
427.	6 20	20	35	12.9	-17.93	-71.43	25	80.65	5.3	4.5	NEAR THE COAST OF PERU
428.	6 21	00	05	44.8	-4.50	146.77	33	91.92	5.8	5.5	EASTERN NEW GUINEA REGION, P.N.G.
429.	6 21	05	07	11.9	-6.42	113.40	42	78.27	5.0		JAVA, INDONESIA
430.	6 22	16	14	41.1	-6.82	129.32	167	83.59	4.7		BANDA SEA
431.	6 23	11	10	42.2	-30.84	-71.17	67	68.53	5.6		NEAR THE COAST OF CENTRAL CHILE
432.	6 23	13	55	09.0	-60.11	-33.08	10	30.56	4.6		SCOTIA SEA
433.	6 24	19	04	16.2	-14.81	-71.82	122	83.70	4.8		CENTRAL PERU
434.	6 25	07	02	20.1	-40.22	178.49	33	66.92	5.0		OFF EAST COAST OF THE NORTH ISLAND, N.Z.
435.	6 25	19	55	58.8	-4.83	-12.27	10	72.56	4.9	4.7	NORTH OF ASCENSION ISLAND
436.	6 25	20	50	43.5	-4.86	-12.39	10	72.56	4.7		NORTH OF ASCENSION ISLAND
437.	6 25	21	48	40.2	-26.95	67.19	10	45.13	5.1		INDIAN OCEAN TRIPLE JUNCTION
438.	6 25	21	47	23.7	-4.93	-12.38	10	72.50	5.2	5.2	NORTH OF ASCENSION ISLAND
439.	6 25	22	59	11.8	-4.96	-12.38	10	72.47	5.1	4.7	NORTH OF ASCENSION ISLAND
440.	6 26	06	38	13.4	-4.74	-12.30	10	72.65	4.9		NORTH OF ASCENSION ISLAND
441.	6 26	07	17	11.3	-30.60	-71.00	65	68.71	5.3		CHILE-ARGENTINA BORDER REGION
442.	6 26	16	02	29.1	-18.09	167.57	33	85.59	4.7		VANUATU ISLANDS
443.	6 27	03	56	08.8	-12.16	166.17	33	90.85	4.8		SANTA CRUZ ISLANDS
444.	6 27	05	50	35.1	-6.96	104.18	11	74.58	6.0	6.9	SUNDA STRAIT, INOONESIA
445.	6 27	07	16	10.3	-13.28	167.05	187	90.03	6.0		VANUATU ISLANDS
446.	6 27	07	37	08.3	-19.69	-173.19	33	88.45	5.2		TONGA
447.	6 27	08	12	53.0	-24.07	179.91	547	82.82	4.5		SOUTH OF THE FIJI ISLANDS
448.	6 27	14	39	45.2	-6.90	103.94	10	74.56	5.1	4.3	SOUTHWEST OF SUMATRA, INDONESIA
449.	6 27	19	47	41.1	-4.25	152.68	48	94.14	4.8	4.7	NEW BRITAIN REGION, P.N.G.
450.	6 28	00	40	35.2	-6.98	103.99	10	74.51	5.3	4.7	SOUTHWEST OF SUMATRA, INDONESIA

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
451.	6 28	07	22	51.6	-6.96	123.32	33	81.30	4.8		BANDA SEA
452.	6 28	20	39	10.6	-12.56	166.54	33	90.56	5.3	5.0	SANTA CRUZ ISLANDS
453.	6 28	23	07	22.5	-16.02	-69.46	215	81.79	4.3		PERU-BOLIVIA BORDER REGION
454.	6 29	02	39	0.7	-12.40	166.52	33	90.71	5.9	5.9	SANTA CRUZ ISLANDS
455.	6 29	11	13	58.5	-21.19	-179.19	638	85.81	4.9		FIJI REGION
456.	6 29	12	20	4.6	-6.83	129.20	122	83.53	5.1		BANDA SEA
457.	6 29	14	18	3.4	-14.62	168.01	57	89.01	5.2		VANUATU ISLANDS
458.	6 30	04	08	1.3	8.74	58.20	10	78.65	5.0	4.9	CARLSBERG RIDGE
459.	6 30	08	35	0.3	-15.40	-72.88	107	83.49	5.1		SOUTHERN PERU
460.	6 30	13	34	14.9	-25.21	-175.67	46	82.61	5.2	4.5	SOUTH OF TONGA
461.	6 30	19	43	22.4	-26.29	178.19	650	80.31	4.6		SOUTH OF FIJI ISLANDS
462.	6 30	19	51	6.9	-26.34	178.21	650	80.27	4.9		SOUTH OF FIJI ISLANDS
463.	6 30	21	29	36.3	-22.20	179.25	620	84.49	5.5		SOUTH OF FIJI ISLANDS
464.	7 02	01	55	36.7	-5.41	133.82	33	86.51	4.9		KEPULAUAN KAI, INDONESIA
465.	7 02	20	21	0.2	-31.15	-67.76	27	67.17	5.5	5.0	SAN JUAN PROVINCE, ARGENTINA
466.	7 03	08	37	12.6	-20.24	-175.93	203	87.39	4.8		TONGA
467.	7 03	15	47	32.2	-12.61	166.46	96	90.49	5.0	4.7	SANTA CRUZ ISLANDS
468.	7 03	23	00	18.4	-5.03	147.34	31	91.61	5.6	6.2	EASTERN NEW GUINEA REGION, P.N.G.
469.	7 05	06	15	28.9	-20.62	-177.16	280	86.78	5.2		FIJI REGION
470.	7 05	13	13	23.6	-36.85	-179.49	40	70.57	4.5		EAST OF THE NORTH ISLAND, N.Z.
471.	7 05	13	41	44.7	-40.01	-155.70	10	70.71	5.0	4.5	SOUTH PACIFIC OCEAN
472.	7 05	18	45	12.3	-43.82	-15.92	10	37.70	4.3		SOUTHERN MID-ATLANTIC RIDGE
473.	7 06	14	02	12.9	-31.27	-178.37	228	76.20	4.7		KERMADEC ISLANDS REGION
474.	7 07	23	36	7.2	-24.88	-13.53	10	54.08	4.6		SOUTHERN MID-ATLANTIC RIDGE
475.	7 08	11	09	9.3	-5.02	147.34	33	91.62	5.2	5.4	EASTERN NEW GUINEA REGION, P.N.G.
476.	7 08	21	31	4.2	1.48	127.22	100	90.51	4.5		HALMAHERA, INDONESIA
477.	7 09	13	53	17.0	-27.12	179.02	500	79.68	4.8		KERMADEC ISLANDS REGION
478.	7 09	14	14	8.2	-20.56	-178.24	500	86.62	4.2		FIJI REGION
479.	7 09	15	06	40.9	-7.26	128.47	150	82.87	5.1		KEPULAUAN BARATDAYA, INDONESIA
480.	7 09	18	40	35.6	43.52	-127.17	10	90.00	5.5	5.5	OFF THE COAST OF OREGON
481.	7 10	03	23	14.1	-18.48	-177.91	400	88.70	4.5		FIJI REGION
482.	7 10	08	40	9.7	-21.21	-68.21	113	76.54	4.1		CHILE-BOLIVIA BORDER REGION
483.	7 10	11	04	5.1	-5.41	35.81	10	63.56	4.7		TANZANIA
484.	7 10	11	03	26.6	1.04	126.07	33	89.69	5.2	4.5	MOLUCCA SEA
485.	7 12	01	10	11.1	-29.65	-68.52	42	68.80	4.5		SAN JUAN PROVINCE, ARGENTINA
486.	7 12	06	00	58.1	-7.33	128.52	138	82.82	4.5		KEPULAUAN BARAT DAYA, INDONESIA
487.	7 12	10	55	22.3	-50.70	29.47	10	19.01	4.2		SOUTH OF AFRICA
488.	7 13	23	04	53.8	-23.82	-66.51	198	73.56	4.6		JUJUY PROVINCE, ARGENTINA
489.	7 14	16	35	14.7	-8.20	156.98	18	91.82	5.5	5.6	SOLOMON ISLANDS
490.	7 15	00	44	41.8	-15.22	-173.46	33	92.76	4.7	4.4	TONGA
491.	7 15	15	02	7.0	-43.90	-16.00	10	37.65	5.0	4.5	SOUTHERN MID-ATLANTIC RIDGE
492.	7 17	02	20	33.8	48.52	153.26	148	142.46	5.3		KURIL ISLANDS
493.	7 17	07	10	36.7	-17.17	-178.91	527	89.76	4.9		FIJI REGION
494.	7 18	01	25	37.4	-29.34	-72.56	23	70.36	5.1		OFF THE COAST OF CENTRAL CHILE
495.	7 18	02	30	5.2	-34.50	-71.99	49	65.39	4.6		NEAR THE COAST OF CENTRAL CHILE
496.	7 18	21	53	12.8	-44.72	-79.75	10	58.12	5.2	4.5	OFF THE COAST OF SOUTHERN CHILE
497.	7 19	00	56	24.0	-23.15	-67.86	127	74.63	4.3		CHILE-ARGENTINA BORDER REGION
498.	7 19	01	40	19.3	-17.75	-178.86	600	89.21	4.7		FIJI REGION
499.	7 19	02	38	28.7	1.30	122.75	33	88.74	5.5	5.1	MINAHASA, SULAWESI, INDONESIA
500.	7 19	06	43	55.1	-56.62	-140.69	10	54.67	5.1	5.6	PACIFIC-ANTARCTIC RIDGE

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
501.	7 19	06	55	47.1	-33.31	-70.75	81	66.11	4.5		CHILE-ARGENTINA BORDER REGION
502.	7 19	08	25	45.0	-56.69	-141.19	10	54.60	4.9		PACIFIC-ANTARCTIC RIDGE
503.	7 19	10	46	57.3	1.57	66.85	10	72.85	5.3	4.7	CARLSBERG RIDGE
504.	7 19	16	35	21.5	-55.77	-27.49	33	31.91	4.5		SOUTH SANDWICH ISLANDS REGION
505.	7 21	10	55	1.9	-29.32	-178.56	190	78.05	4.5		KERMADEC ISLANDS, N.Z.
506.	7 22	02	02	36.4	-14.98	-176.75	33	92.34	5.2	4.8	FIJI REGION
507.	7 22	04	32	24.3	-30.51	-72.37	10	69.21	4.7		OFF THE COAST OF CENTRAL CHILE
508.	7 22	11	17	8.7	-7.48	127.86	117	82.45	4.7		KEPULAUAN BARAT DAYA, INDONESIA
509.	7 23	01	35	50.1	0.13	124.17	33	88.17	5.0	4.3	MINAHASA, SULAWESI, INDONESIA
510.	7 23	06	18	6.9	-16.03	167.80	168	87.62	5.0		VANUATU ISLANDS
511.	7 23	06	56	11.7	-0.16	122.72	145	87.38	4.4		SULAWESI, INDONESIA
512.	7 23	19	27	2.8	-4.37	123.33	33	83.70	4.8		BANDA SEA
513.	7 23	22	41	40.9	-55.86	-27.77	100	31.94	4.6		SOUTH SANDWICH ISLANDS REGION
514.	7 24	03	05	5.5	-9.29	118.62	29	77.45	5.8	5.4	SUMBAWA REGION, INDONESIA
515.	7 24	06	26	47.5	-16.23	-173.43	33	91.78	4.8		TONGA
516.	7 27	03	21	7.0	-5.28	145.39	33	90.71	5.2	4.6	EASTERN NEW GUINEA REGION, P.N.G.
517.	7 28	13	28	26.9	-49.23	120.83	10	42.23	4.7		WESTERN INDIAN-ANTARCTIC RIDGE
518.	7 28	19	01	19.3	-17.93	-178.34	580	89.14	5.0		FIJI REGION
519.	7 29	07	13	37.7	6.44	126.32	33	94.79	5.7	5.1	MINDANAO, PHILIPPINES
520.	7 29	07	26	9.7	-55.74	-26.87	33	31.71	5.5	4.7	SOUTH SANDWICH ISLANDS REGION
521.	7 29	11	52	2.2	-7.37	128.45	132	82.76	4.5		KEPULAUAN BARAT DAYA, INDONESIA
522.	7 29	23	40	7.9	-6.98	-76.82	61	92.66	5.2		NORTHERN PERU
523.	7 30	05	55	7.7	-57.89	-23.24	33	28.78	5.7	5.8	SOUTH SANDWICH ISLANDS REGION
524.	7 30	17	02	49.3	-55.79	-26.84	33	31.66	5.0	4.4	SOUTH SANDWICH ISLANDS REGION
525.	7 30	20	02	6.4	-6.50	130.31	103	84.23	5.4		BANDA SEA
526.	8 02	08	04	32.9	0.31	122.03	196	87.57	4.9		MINAHASA, SULAWESI, INDONESIA
527.	8 02	09	10	20.1	2.81	128.64	232	92.26	4.8		HALMAHERA, INDONESIA
528.	8 02	18	51	51.4	-28.03	-71.05	33	71.11	4.7		NEAR THE COAST OF CENTRAL CHILE
529.	8 02	20	06	5.0	-24.37	-69.24	81	73.94	4.3		NORTHERN CHILE
530.	8 02	23	11	39.1	29.28	138.97	426	120.34	5.5		IZU ISLANDS, JAPAN REGION
531.	8 04	06	17	59.4	-58.29	-26.00	100	29.46	4.8		SOUTH SANDWICH ISLANDS REGION
532.	8 04	09	50	25.2	-45.02	-80.73	10	58.09	5.5	4.9	OFF THE COAST OF SOUTHERN CHILE
533.	8 04	15	16	26.9	-35.46	-16.24	10	45.26	5.4	5.3	SOUTHERN MID-ATLANTIC RIDGE
534.	8 05	02	11	12.9	-23.86	-66.69	204	73.57	4.4		JUJUY PROVINCE, ARGENTINA
535.	8 05	05	57	15.2	-19.14	-69.05	107	78.75	4.5		NORTHERN CHILE
536.	8 05	08	52	49.1	-21.23	-179.28	629	85.75	4.8		FIJI REGION
537.	8 06	06	05	58.3	8.34	93.43	79	85.64	5.1		NICOBAR ISLANDS, INDIA REGION
538.	8 06	07	29	5.1	-6.64	106.00	107	75.50	4.9		JAVA, INDONESIA
539.	8 06	08	42	39.3	0.37	120.94	93	87.24	4.8		MINAHASA, SULAWESI, INDONESIA
540.	8 06	14	26	12.2	-5.36	-76.62	107	94.13	5.3		NORTHERN PERU
541.	8 06	18	51	32.4	-5.54	141.83	10	89.23	5.3	5.2	NEW GUINEA, P.N.G.
542.	8 07	04	50	6.7	-21.87	-176.58	174	85.69	5.4		FIJI REGION
543.	8 07	05	56	3.4	-29.32	61.01	10	41.64	4.7		SOUTHWEST INDIAN RIDGE
544.	8 07	23	59	14.5	7.85	-82.90	10	108.56	5.6	5.6	SOUTH OF PANAMA
545.	8 08	04	13	36.5	1.61	127.49	114	90.73	5.0		HALMAHERA, INDONESIA
546.	8 08	08	39	52.8	-20.52	-178.17	547	86.67	4.6		FIJI REGION
547.	8 09	11	44	14.6	-61.45	154.95	10	41.92	4.9		BALLENY ISLANDS REGION
548.	8 09	13	31	5.2	-16.31	-176.17	364	91.17	5.5		FIJI REGION
549.	8 10	15	56	2.0	13.65	39.81	10	82.45	5.2	5.2	ETHIOPIA
550.	8 11	05	06	32.2	-5.58	-71.88	568	92.36	4.8		AMAZONAS, BRAZIL

No.	Date	Origin time UTC			Geographic Coordinates		Depth	Epicentral distance	Magnitude		Region
		h	m	s	Latitude (deg)	Longitude (deg)	(km)	(deg)	mb	MS	
551.	8 11	12	09	13.9	-10.77	-74.68	33	88.42	5.0	4.3	CENTRAL PERU
552.	8 11	12	48	54.9	-54.24	-58.01	10	43.35	4.9	4.5	FALKLAND ISLANDS REGION
553.	8 11	13	14	33.7	-10.74	-74.67	33	88.44	4.4		CENTRAL PERU
554.	8 11	21	16	36.1	-21.54	-179.50	643	85.41	4.4		FIJI REGION
555.	8 11	22	47	19.4	-21.25	-67.14	184	76.15	4.2		CHILE-BOLIVIA BORDER REGION
556.	8 11	22	56	39.5	0.21	123.88	150	88.14	4.5		MINAHASA, SULAWESI, INDONESIA
557.	8 12	02	59	24.0	-19.51	169.04	112	84.62	5.6		VANUATU ISLANDS
558.	8 12	05	10	18.8	-22.28	-178.80	442	84.83	4.7		SOUTH OF THE FIJI ISLANDS
559.	8 13	06	05	37.6	-7.00	104.02	33	74.50	5.4	5.9	SUNDA STRAIT, INDONESIA
560.	8 13	20	30	31.7	-17.62	-178.90	537	89.33	4.7		FIJI REGION
561.	8 13	21	35	42.0	-19.74	169.38	226	84.49	5.1		VANUATU ISLANDS
562.	8 14	08	00	30.1	-21.86	-174.05	33	86.18	4.9		TONGA
563.	8 14	13	12	39.8	7.83	136.88	10	99.88	6.1	6.0	PALAU REGION
564.	8 14	19	12	43.2	-31.37	-177.80	33	76.21	5.0		KERMADEC ISLANDS REGION
565.	8 15	01	25	40.1	-19.96	-177.77	578	87.30	4.4		FIJI REGION
566.	8 15	05	30	26.2	-1.20	121.33	10	85.92	5.7	5.8	SULAWESI, INDONESIA
567.	8 15	06	03	53.2	-1.26	121.30	10	85.85	5.0	4.9	SULAWESI, INDONESIA
568.	8 15	12	18	26.1	-15.35	167.49	120	88.17	4.6		VANUATU ISLANDS
569.	8 16	00	27	53.3	-30.65	-178.21	55	76.83	5.0		KERMADEC ISLANDS, N.Z.
570.	8 16	02	10	20.9	-28.49	-67.30	137	69.48	4.5		LA RIOJA PROVINCE, ARGENTINA
571.	8 16	03	29	19.3	-34.87	-67.91	20	63.78	4.8		MENDOZA PROVINCE, ARGENTINA
572.	8 16	05	29	46.2	-30.73	-178.05	33	76.78	4.6		KERMADEC ISLANDS, N.Z.
573.	8 16	10	49	30.2	-7.08	129.50	99	83.40	4.8		KEPULAUAN BABAR, INDONESIA
574.	8 16	16	17	58.7	-21.02	168.61	33	83.07	5.3	4.9	LOYALTY ISLANDS
575.	8 17	06	07	11.9	-33.91	-70.10	118	65.36	4.4		CHILE-ARGENTINA BORDER REGION
576.	8 17	08	21	30.0	-37.97	176.69	171	68.72	5.0		NORTH ISLAND OF NEW ZEALAND
577.	8 17	16	32	15.7	-31.20	-177.69	33	76.39	4.9		KERMADEC ISLANDS REGION
578.	8 18	02	41	48.7	-5.52	149.70	149	91.96	5.2		NEW BRITAIN REGION, P.N.G.
579.	8 18	09	43	9.7	-22.27	171.77	88	82.68	4.7		SOUTHEAST OF THE LOYALTY ISLANDS
580.	8 18	16	49	0.7	-31.28	-178.33	53	76.20	5.2		KERMADEC ISLANDS REGION
581.	8 19	07	44	7.2	-7.75	118.70	33	78.91	4.5		FLORES SEA
582.	8 19	11	01	1.1	-21.70	-179.51	580	85.25	6.7		FIJI REGION
583.	8 19	11	08	24.3	-23.88	178.50	675	82.70	7.0		SOUTH OF THE FIJI ISLANDS
584.	8 19	11	23	6.2	-23.90	178.38	677	82.66	6.1		SOUTH OF THE FIJI ISLANDS
585.	8 19	11	45	29.4	-21.89	-179.45	600	85.07	6.1		FIJI REGION
586.	8 19	12	13	1.7	-21.85	-179.44	588	85.12	4.4		FIJI REGION
587.	8 19	12	52	4.1	-24.87	178.57	692	81.76	5.6		SOUTH OF THE FIJI ISLANDS
588.	8 19	13	11	57.0	-23.84	178.19	729	82.68			SOUTH OF THE FIJI ISLANDS
589.	8 19	13	30	42.5	-7.07	129.11	157	83.27	5.2		KEPULAUAN BABAR, INDONESIA
590.	8 19	15	09	11.9	-24.13	178.82	600	82.53	4.3		SOUTH OF THE FIJI ISLANDS
591.	8 19	19	20	35.2	-23.96	178.35	717	82.60			SOUTH OF THE FIJI ISLANDS
592.	8 20	01	14	35.6	-32.72	-178.80	52	74.71	5.0		SOUTH OF THE KERMADEC ISLANDS
593.	8 20	01	44	56.4	-21.89	-179.42	600	85.08	4.8		FIJI REGION
594.	8 20	11	24	45.3	-21.67	-179.33	608	85.31	4.7		FIJI REGION
595.	8 20	13	11	47.5	-22.29	-179.89	600	84.59	4.7		SOUTH OF THE FIJI ISLANDS
596.	8 21	03	34	15.4	-25.99	179.79	500	80.95	4.3		SOUTH OF THE FIJI ISLANDS
597.	8 21	04	09	11.2	-23.52	179.84	600	83.34	4.2		SOUTH OF THE FIJI ISLANDS
598.	8 21	12	09	13.9	-20.98	168.73	33	83.14	5.2	4.8	LOYALTY ISLANOS
599.	8 21	17	11	14.4	51.48	-178.35	33	154.90	5.1		ANDREANOF ISLANDS, ALEUTIAN IS., ALASKA
600.	8 21	19	53	28.0	-6.51	129.99	155	84.11	4.7		BANDA SEA

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
601.	8 22	07	03	21.3	-17.89	-178.88	600	89.07	4.4		FIJI REGION
602.	8 22	09	38	59.3	54.94	164.39	33	151.71	5.3		KOMANDORSKIYE OSTROVA, RUSSIA REGION
603.	8 22	11	19	41.2	-21.16	-178.27	500	86.03	4.6		FIJI REGION
604.	8 22	15	10	46.8	-33.92	179.04	300	73.11	4.2		SOUTH OF THE KERMADEC ISLANDS
605.	8 22	15	43	35.6	-6.07	130.61	126	84.75	5.4		BANDA SEA
606.	8 22	23	58	9.5	-21.10	-179.10	619	85.91	5.2		FIJI REGION
607.	8 23	13	11	38.7	-20.90	-110.85	10	87.83	4.7		SOUTHERN EAST PACIFIC RISE
608.	8 23	17	00	10.4	-21.39	179.70	600	85.38	4.4		SOUTH OF THE FIJI ISLANDS
609.	8 23	17	52	41.4	-30.54	-177.78	33	77.02	5.2		KERMADEC ISLANDS, N.Z.
610.	8 23	18	16	1.2	-55.51	-26.18	33	31.65	5.1		SOUTH SANDWICH ISLANDS REGION
611.	8 24	02	14	20.2	14.57	56.33	10	84.21	4.8	4.2	OWEN FRACTURE ZONE REGION
612.	8 24	02	53	46.2	-30.39	-177.73	33	77.18	4.9		KERMADEC ISLANDS, N.Z.
613.	8 24	14	48	39.7	-17.90	-178.64	572	89.11	4.6		FIJI REGION
614.	8 24	18	40	53.4	43.11	146.12	43	135.26	5.9	5.8	KURIL ISLANDS
615.	8 24	20	21	29.7	-3.28	135.80	33	89.19	5.5	5.5	IRIAN JAYA, INDONESIA
616.	8 25	03	52	32.3	-26.43	-176.37	33	81.29	5.2	5.0	SOUTH OF THE FIJI ISLANDS
617.	8 25	04	42	11.5	-20.54	-178.41	554	86.60	5.4		FIJI REGION
618.	8 25	04	59	26.1	-26.60	-176.23	33	81.15	4.9		SOUTH OF THE FIJI ISLANDS
619.	8 25	05	57	33.9	-21.04	168.60	35	83.04	5.3	4.7	LOYALTY ISLANDS
620.	8 25	06	17	34.1	-41.86	88.54	10	37.16	4.7		SOUTHEAST INDIAN RIDGE
621.	8 25	06	20	9.2	-41.75	88.34	10	37.20	4.8		SOUTHEAST INDIAN RIDGE
622.	8 25	17	35	9.8	-23.86	-66.54	199	73.53	4.5		JUJUY PROVINCE, ARGENTINA
623.	8 26	00	33	42.4	-29.66	-179.23	500	77.59	3.9		KERMADEC ISLANDS REGION
624.	8 26	13	57	51.7	-55.23	-128.64	10	55.77	4.7	4.8	PACIFIC-ANTARCTIC RIDGE
625.	8 26	14	55	13.9	-6.75	105.71	63	75.30	5.6		SUNDA STRAIT, INDONESIA
626.	8 26	17	36	44.7	-6.40	113.41	33	78.28	5.4	5.2	JAVA, INDONESIA
627.	8 26	19	14	24.1	-21.90	-179.51	600	85.06	4.9		FIJI REGION
628.	8 26	23	03	1.8	-17.80	-71.35	33	80.75	4.9	4.4	NEAR THE COAST OF PERU
629.	8 27	03	10	42.3	-56.11	-27.51	100	31.65	5.0		SOUTH SANDWICH ISLANDS REGION
630.	8 27	06	48	13.8	-55.70	-25.93	33	31.41	4.9		SOUTH SANDWICH ISLANDS REGION
631.	8 27	10	36	32.4	-21.75	-179.42	600	85.22	4.9		FIJI REGION
632.	8 28	10	00	54.7	-55.92	-27.84	112	31.92	5.0		SOUTH SANDWICH ISLANDS REGION
633.	8 28	13	27	57.2	-23.79	179.95	600	83.10	4.2		SOUTH OF THE FIJI ISLANDS
634.	8 28	17	30	59.5	6.49	126.52	95	94.91	5.0		MINDANAO, PHILIPPINES
635.	8 28	21	09	40.3	-56.20	-142.72	10	55.08	4.7		PACIFIC-ANTARCTIC RIDGE
636.	8 29	02	28	17.5	-21.24	-68.37	116	76.56	5.2		CHILE-BOLIVIA BORDER REGION
637.	8 29	04	38	13.4	-24.03	179.91	574	82.86	4.4		SOUTH OF THE FIJI ISLANDS
638.	8 29	05	36	54.0	-3.36	145.77	33	92.63	5.2	5.7	NEAR NORTH COAST OF NEW GUINEA, P.N.G.
639.	8 29	06	24	3.1	-21.78	-68.27	111	76.03			CHILE-BOLIVIA BORDER REGION
640.	8 29	11	19	9.8	6.29	124.24	482	93.90	4.6		MINDANAO, PHILIPPINES
641.	8 30	03	43	48.1	-24.21	179.70	600	82.64	4.3		SOUTH OF THE FIJI ISLANDS
642.	8 30	05	07	32.6	-20.82	-173.91	33	87.22	5.1		TONGA
643.	8 30	05	58	21.0	44.48	149.08	31	137.51	5.7		KURIL ISLANDS
644.	8 30	06	19	2.6	-20.96	168.70	33	83.15	5.2		LOYALTY ISLANDS
645.	8 30	21	57	29.8	-23.60	-66.56	185	73.77	5.0		JUJUY PROVINCE, ARGENTINA
646.	8 30	22	39	3.4	-56.01	-26.61	33	31.41	4.7		SOUTH SANDWICH ISLANDS REGION
647.	8 31	02	33	8.3	-25.97	-70.13	62	72.73	4.5		NEAR THE COAST OF NORTHERN CHILE
648.	8 31	05	11	4.2	-29.72	-179.31	427	77.52	4.2		KERMADEC ISLANDS REGION
649.	8 31	06	48	33.1	-17.43	-174.68	127	90.37	5.2		TONGA
650.	8 31	09	24	7.4	-30.77	-179.77	358	76.40	4.9		KERMADEC ISLANDS REGION

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
651.	8 31	11	22	31.0	-6.16	130.66	77	84.67	4.9		BANDA SEA
652.	8 31	13	16	27.6	-32.53	-177.49	33	75.15	4.9		SOUTH OF THE KERMADEC ISLANDS
653.	8 31	14	51	1.7	-18.12	-175.28	259	89.59	4.9		TONGA
654.	8 31	16	20	17.2	-33.76	56.59	10	36.58	4.8		SOUTHWEST INDIAN RIDGE
655.	8 31	22	52	33.1	-9.74	34.31	10	59.31	4.9		TANZANIA
656.	8 31	23	47	33.9	-2.91	129.69	33	87.34	4.7		SERAM, INDONESIA
657.	9 01	03	11	S0.3	-27.92	65.81	10	43.90			INDIAN OCEAN TRIPLE JUNCTION
6S8.	9 01	04	11	33.4	-31.71	-179.23	300	7S.60	4.4		KERMADEC ISLANDS REGION
659.	9 01	09	10	23.9	-15.08	167.28	119	88.38	4.7		VANUATU ISLANDS
660.	9 01	12	41	49.0	-31.38	179.97	400	75.76	4.8		KERMADEC ISLANDS REGION
661.	9 01	15	13	37.3	-23.38	179.08	600	83.31	4.4		SOUTH OF THE FIJI ISLANDS
662.	9 01	17	14	59.8	14.28	51.95	10	83.54	5.2	5.8	GULF OF ADEN
663.	9 01	21	28	4.S	-3.1S	143.10	33	91.90	5.4	S.1	NEAR NORTH COAST OF NEW GUINEA, P.N.G.
664.	9 03	20	29	33.4	-15.29	167.47	117	88.23	4.8		VANUATU ISLANDS
665.	9 04	03	45	15.5	-53.75	-134.68	10	57.48	5.0		PACIFIC-ANTARCTIC RIDGE
666.	9 04	06	55	17.0	-4.91	153.85	96	93.91	4.9		NEW IRELAND REGION, P.N.G.
667.	9 04	08	06	32.1	-23.86	-179.86	S23	83.08	5.1		SOUTH OF THE FIJI ISLANDS
668.	9 04	14	34	15.4	-0.82	147.77	10	95.69	5.8	S.1	ADMIRALTY ISLANDS REG., P.N.G.
669.	9 0S	02	41	5.2	-22.48	171.50	124	82.41	4.8		SOUTHEAST OF THE LOYALTY ISLANDS
670.	9 0S	03	38	39.0	58.18	-151.45	47	168.10	5.0	4.6	KODIAK ISLAND REGION, ALASKA
671.	9 0S	12	08	42.8	-41.74	87.18	10	36.81	4.8		SOUTHEAST INDIAN RIDGE
672.	9 0S	21	35	35.6	-34.03	-179.01	33	73.40	5.0		SOUTH OF THE KERMADEC ISLANDS
673.	9 06	11	10	4.2	-29.42	-68.23	41	68.92			SAN JUAN PROVINCE, ARGENTINA
674.	9 06	21	25	11.0	-16.36	-173.36	33	91.67	4.9		TONGA
675.	9 07	02	00	1.0	-28.89	-178.49	230	78.49	4.8		KERMADEC ISLANDS REGION
676.	9 07	02	30	51.7	-6.14	146.22	119	90.20	S.3		EASTERN NEW GUINEA REGION, P.N.G.
677.	9 07	08	14	19.6	-20.28	-176.04	210	87.34	5.5		FIJI REGION
678.	9 07	10	40	26.7	-24.85	179.92	503	82.07	4.9		SOUTH OF THE FIJI ISLANDS
679.	9 07	11	34	13.6	-20.22	168.91	33	83.91	4.8		LOYALTY ISLANDS
680.	9 07	18	08	36.7	-57.92	-24.99	33	29.38	5.1	4.8	SOUTH SANDWICH ISLANDS REGION
681.	9 07	21	36	18.0	-19.27	169.47	232	84.97	4.7		VANUATU ISLANDS
682.	9 08	03	36	41.5	-30.11	60.93	10	40.85	5.4	5.3	SOUTHWEST INDIAN RIDGE
683.	9 08	04	19	18.6	-16.84	-174.02	33	91.08	4.6		TONGA
684.	9 08	12	14	4.9	-22.07	-179.54	S95	84.88	4.9		SOUTH OF THE FIJI ISLANDS
685.	9 08	13	15	55.7	-22.84	178.93	619	83.81	5.2		SOUTH OF THE FIJI ISLANDS
686.	9 08	14	57	45.1	-37.75	176.85	2	68.96	5.1		NORTH ISLAND OF NEW ZEALAND
687.	9 08	17	28	29.6	5.85	124.70	33	93.66	4.8		MINDANAO, PHILIPPINES
688.	9 08	18	44	23.7	-3.30	142.95	13	91.70	6.5	7.8	NEAR NORTH COAST OF NEW GUINEA, P.N.G.
689.	9 08	21	0S	34.3	-3.39	143.79	10	91.92	5.1		NEAR NORTH COAST OF NEW GUINEA, P.N.G.
690.	9 08	21	18	10.9	-3.30	143.31	10	91.83	S.1		NEAR NORTH COAST OF NEW GUINEA, P.N.G.
691.	9 08	22	07	49.7	-3.34	143.41	10	91.82	5.1		NEAR NORTH COAST OF NEW GUINEA, P.N.G.
692.	9 08	23	03	45.2	-1.23	-14.63	10	76.68	5.3	4.9	NORTH OF ASCENSION ISLAND
693.	9 09	01	17	14.3	0.34	122.10	183	87.62	4.5		MINAHASA, SULAWESI, INDONESIA
694.	9 09	03	13	55.6	-3.11	143.23	10	91.98	5.0		NEAR NORTH COAST OF NEW GUINEA, P.N.G.
695.	9 09	04	14	46.0	-56.14	-27.37	100	31.58	4.3		SOUTH SANDWICH ISLANDS REGION
696.	9 09	0S	46	10.9	-3.10	143.24	10	91.99	5.2	4.5	NEAR NORTH COAST OF NEW GUINEA, P.N.G.
697.	9 09	08	04	57.3	-22.29	179.16	614	84.39	4.7		SOUTH OF THE FIJI ISLANDS
698.	9 09	13	22	19.7	-7.28	145.93	183	89.03	4.6		NEAR SOUTH COAST OF NEW GUINEA, P.N.G.
699.	9 10	02	33	12.4	-21.45	168.67	33	82.67	5.0		LOYALTY ISLANDS
700.	9 10	04	38	12.1	1.3S	122.91	4S	88.85	4.8		MINAHASA, SULAWESI, INDONESIA

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
701.	9 10	12	25	8.6	1.78	126.49	33	90.53	5.2	4.4	MOLUCCA SEA
702.	9 10	15	41	8.5	-7.00	129.69	108	83.55	4.8		BANDA SEA
703.	9 10	19	55	26.2	-33.43	-178.66	33	74.04	4.7		SOUTH OF THE KERMADEC ISLANDS
704.	9 10	20	54	39.7	-3.63	144.06	10	91.79	5.2	4.6	NEAR NORTH COAST OF NEW GUINEA, P.N.G.
705.	9 11	14	08	46.3	-12.65	166.40	33	90.44	5.2	4.8	SANTA CRUZ ISLANDS
706.	9 11	14	22	0.0	-33.89	-179.28	141	73.48	4.7		SOUTH OF THE KERMADEC ISLANDS
707.	9 11	19	48	1.7	-3.63	144.02	10	91.77	5.2	4.9	NEAR NORTH COAST OF NEW GUINEA, P.N.G.
708.	9 12	23	10	23.7	-16.94	-70.00	154	81.11	4.5		PERU-BOLIVIA BORDER REGION
709.	9 13	00	58	38.6	-19.85	-178.49	600	87.25	4.3		FIJI REGION
710.	9 13	17	37	54.8	-24.20	178.82	600	82.47	4.3		SOUTH OF THE FIJI ISLANDS
711.	9 13	22	28	29.4	13.04	93.07	21	90.01	6.2	6.7	ANDAMAN ISLANDS, INDIA REGION
712.	9 13	23	14	7.7	12.95	93.11	33	89.94	5.1		ANDAMAN ISLANDS, INDIA REGION
713.	9 13	23	44	46.3	13.04	93.19	33	90.04	4.6		ANDAMAN ISLANDS, INDIA REGION
714.	9 14	01	01	36.9	13.09	93.19	33	90.09	4.3		ANDAMAN ISLANDS, INDIA REGION
715.	9 14	02	06	57.7	-5.48	133.86	47	86.46	4.8		KEPULAUAN KAI, INDONESIA
716.	9 14	08	41	43.1	-7.17	-74.76	149	91.82	4.4		NORTHERN PERU
717.	9 14	17	13	8.4	-8.73	124.01	101	79.91	4.8		KEPULAUAN ALOR, INDONESIA
718.	9 14	19	58	36.9	13.06	93.16	33	90.05	5.7	5.6	ANDAMAN ISLANDS, INDIA REGION
719.	9 14	22	12	36.6	13.05	93.18	33	90.05	5.0	4.3	ANDAMAN ISLANDS, INDIA REGION
720.	9 15	08	39	32.7	44.83	129.92	586	131.07	5.8		HEILONGJIANG, CHINA
721.	9 15	18	56	55.6	-55.96	-124.33	10	54.78	4.9		SOUTHERN EAST PACIFIC RISE
722.	9 15	19	52	5.2	-21.63	-179.49	600	85.32	4.2		FIJI REGION
723.	9 15	21	53	50.4	-22.81	-66.39	211	74.45	4.5		JUJUY PROVINCE, ARGENTINA
724.	9 15	23	21	35.0	-21.66	-179.57	650	85.27	4.2		FIJI REGION
725.	9 16	02	25	31.4	-28.21	-68.99	91	70.28			LA RIOJA PROVINCE, ARGENTINA
726.	9 16	05	21	39.6	-33.85	-178.94	33	73.58			SOUTH OF THE KERMADEC ISLANDS
727.	9 16	13	23	0.9	-3.31	142.68	10	91.60	5.9	5.9	NEAR NORTH COAST OF NEW GUINEA, P.N.G.
728.	9 16	18	54	58.3	-3.18	126.34	33	85.88	5.1		BURU, INDONESIA
729.	9 16	22	35	6.7	-16.48	-72.45	74	82.34	5.1		NEAR THE COAST OF PERU
730.	9 17	05	31	39.9	-3.29	142.74	10	91.64	5.1	4.6	NEAR NORTH COAST OF NEW GUINEA, P.N.G.
731.	9 17	07	52	19.2	-22.30	171.37	10	82.55	5.0		SOUTHEAST OF THE LOYALTY ISLANDS
732.	9 17	11	20	23.3	-3.28	142.77	10	91.66	5.7	5.9	NEAR NORTH COAST OF NEW GUINEA, P.N.G.
733.	9 18	12	01	36.3	13.11	93.17	33	90.11	5.4	5.1	ANDAMAN ISLANDS, INDIA REGION
734.	9 18	12	21	52.9	-6.78	129.49	139	83.68	4.6		BANDA SEA
735.	9 18	17	36	55.5	-21.02	-179.07	600	86.00	4.0		FIJI REGION
736.	9 18	19	06	56.6	-22.47	172.89	10	82.76	5.6	5.3	SOUTHEAST OF THE LOYALTY ISLANDS
737.	9 18	19	32	8.5	-34.08	-70.39	118	65.29			CHILE-ARGENTINA BORDER REGION
738.	9 18	23	58	32.5	-20.81	-178.74	611	86.27	4.7		FIJI REGION
739.	9 19	07	31	35.1	-56.45	-26.63	33	31.08	4.6		SOUTH SANDWICH ISLANDS REGION
740.	9 19	11	22	29.6	-36.89	-95.26	10	69.28	5.1	4.5	WEST CHILE RISE
741.	9 20	03	36	58.1	13.09	93.17	33	90.09	4.7		ANDAMAN ISLANDS, INDIA REGION
742.	9 20	13	33	41.6	-1.74	134.01	10	89.98	5.7	5.9	NEAR THE NORTH COAST OF IRIAN JAYA
743.	9 20	15	04	49.2	-33.11	-178.68	33	74.35	5.1		SOUTH OF THE KERMADEC ISLANDS
744.	9 20	15	43	35.4	-1.68	134.23	10	90.11	5.9	6.4	NEAR THE NORTH COAST OF IRIAN JAYA
745.	9 20	21	45	6.0	-21.70	170.57	88	82.92	4.9		SOUTHEAST OF THE LOYALTY ISLANDS
746.	9 21	05	03	21.6	-55.59	-124.97	10	55.20	4.9	5.0	SOUTHERN EAST PACIFIC RISE
747.	9 21	19	41	34.3	-53.86	8.31	10	20.94	4.6		BOUVET ISLAND REGION
748.	9 21	21	13	35.0	-23.89	-179.90	511	83.04	4.7		SOUTH OF THE FIJI ISLANDS
749.	9 21	23	08	57.7	-12.52	167.00	212	90.74	4.8		SANTA CRUZ ISLANDS
750.	9 22	01	23	34.1	-32.71	-178.54	35	74.77	4.6		SOUTH OF THE KERMADEC ISLANDS

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
751.	9 22	11	20	30.3	-18.77	-68.34	132	78.86	4.5		CHILE-BOLIVIA BORDER REGION
752.	9 22	12	59	9.4	-21.24	-67.31	33	76.22	4.6		CHILE-BOLIVIA BORDER REGION
753.	9 22	18	01	8.5	-33.36	-178.50	33	74.14	4.8		SOUTH OF THE KERMADEC ISLANDS
754.	9 22	18	40	8.2	-33.26	-178.52	33	74.24	5.0		SOUTH OF THE KERMADEC ISLANDS
755.	9 22	21	06	45.9	-15.33	-173.57	58	92.64	4.2		TONGA
756.	9 22	22	13	45.2	-22.27	170.44	10	82.35	5.1	5.2	SOUTHEAST OF THE LOYALTY ISLANDS
757.	9 23	00	22	37.9	-24.76	179.88	498	82.16	4.8		SOUTH OF THE FIJI ISLANDS
758.	9 23	07	26	2.3	-32.42	-178.30	33	75.10	5.2		SOUTH OF THE KERMADEC ISLANDS
759.	9 23	22	07	45.2	-27.20	-176.63	33	80.49	5.0	5.1	KERMADEC ISLANDS REGION
760.	9 24	02	26	29.5	-10.58	161.15	10	90.87	5.5	5.3	SOLOMON ISLANDS
761.	9 24	03	57	22.2	-31.52	-69.20	120	67.28	6.2		SAN JUAN PROVINCE, ARGENTINA
762.	9 24	04	13	11.6	-10.54	161.20	10	90.93	5.5	6.2	SOLOMON ISLANDS
763.	9 24	05	01	10.5	-16.12	-173.85	113	91.81	4.8		TONGA
764.	9 24	09	00	45.2	49.21	155.36	49	143.80	5.4	4.5	KURIL ISLANDS
765.	9 24	13	31	57.3	-32.38	179.46	391	74.69	4.7		SOUTH OF THE KERMADEC ISLANDS
766.	9 24	22	54	21.4	-10.57	161.11	10	90.88	5.7	6.3	SOLOMON ISLANDS
767.	9 24	23	01	28.6	-10.65	161.21	19	90.83	5.7	6.5	SOLOMON ISLANDS
768.	9 25	02	14	28.3	-20.74	-179.25	637	86.23	4.4		FIJI REGION
769.	9 25	20	56	21.4	-5.98	129.15	224	84.30	4.0		BANDA SEA
770.	9 26	09	42	39.5	-37.19	-95.26	10	68.99	4.7		SOUTHEAST OF EASTER ISLAND
771.	9 26	12	55	29.7	-19.65	-12.01	10	58.49	5.3	5.4	SOUTHERN MID-ATLANTIC RIDGE
772.	9 26	13	34	31.7	-19.57	-11.89	10	58.52	4.5		SOUTHERN MID-ATLANTIC RIDGE
773.	9 26	16	01	0.1	-7.07	126.73	400	82.42	4.2		KEPULAUAN BARATDAYA, INDONESIA
774.	9 26	19	06	46.7	-31.33	-178.83	214	76.05	4.2		KERMADEC ISLANDS REGION
775.	9 27	01	40	51.3	-8.31	122.05	42	79.59	5.3		FLORES REGION, INDONESIA
776.	9 27	14	10	18.9	-6.34	131.05	33	84.65	4.7		KEPULAUAN TANIMBAR REGION, INDONESIA
777.	9 29	03	34	43.9	-6.28	146.38	121	90.12	5.4		EASTERN NEW GUINEA REGION, P.N.G.
778.	9 29	09	44	28.2	-33.41	-109.45	10	75.36	5.1	4.7	SOUTHERN EAST PACIFIC RISE
779.	9 29	23	16	12.8	-24.19	-66.80	192	73.31	4.8		SALTA PROVINCE, ARGENTINA
780.	9 30	12	50	8.9	4.12	125.74	175	92.43	4.5		KEPULAUAN SANGIHE, INDONESIA
781.	9 30	13	05	58.4	-35.23	-70.84	96	64.36	5.4		CHILE-ARGENTINA BORDER REGION
782.	10 01	04	32	10.6	-10.80	161.24	10	90.69	5.3	5.4	SOLOMON ISLANDS
783.	10 01	07	19	45.2	-7.29	128.67	126	82.92	4.6		KEPULAUAN BARAT DAYA, INDONESIA
784.	10 01	08	46	55.8	-10.94	161.21	10	90.55	5.7	5.5	SOLOMON ISLANDS
785.	10 01	18	23	4.5	-17.47	167.88	33	86.26	4.9		VANUATU ISLANDS
786.	10 01	22	12	51.8	-21.28	-68.40	110	76.54	4.7		CHILE-BOLIVIA BORDER REGION
787.	10 02	01	38	24.6	-22.34	171.19	33	82.47	5.2	4.6	SOUTHEAST OF THE LOYALTY ISLANDS
788.	10 02	07	19	47.9	-34.64	-179.92	77	72.62	4.8		SOUTH OF THE KERMADEC ISLANDS
789.	10 02	17	15	36.7	-35.18	178.72	311	71.83	4.4		OFF EAST COAST OF THE NORTH ISLAND, N.Z.
790.	10 02	19	34	25.8	-18.95	-175.26	209	88.78	4.7		TONGA
791.	10 03	04	26	6.8	-10.99	161.45	10	90.58	5.6	5.6	SOLOMON ISLANDS
792.	10 03	15	56	41.1	54.56	161.52	54	150.37	5.2		NEAR THE EAST COAST OF KAMCHATKA, RUSSIA
793.	10 03	19	05	10.6	-7.53	115.66	316	78.03	6.0		BALI SEA
794.	10 03	19	56	2.1	-5.12	130.78	45	85.68	4.9		BANDA SEA
795.	10 04	12	37	16.3	-57.35	-26.29	151	30.27	5.1		SOUTH SANDWICH ISLANDS REGION
796.	10 04	14	16	14.4	53.35	-168.79	102	159.50	5.1		FOX ISLANDS, ALEUTIAN ISLANDS, ALASKA
797.	10 04	19	05	48.7	-20.99	-179.02	621	86.04	6.1		FIJI REGION
798.	10 05	19	45	3.7	-23.64	179.81	586	83.22	4.7		SOUTH OF THE FIJI ISLANDS
799.	10 06	11	21	38.1	-28.71	-71.21	27	70.52	5.3	4.8	NEAR THE COAST OF CENTRAL CHILE
800.	10 06	15	46	33.0	-8.20	118.34	10	78.36	5.8	6.0	SUMBAWA REGION, INDONESIA

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
801.	10 06	16	27	0.6	-8.17	118.34	10	78.38	5.1		SUMBAWA REGION, INDONESIA
802.	10 07	17	32	19.2	2.39	126.84	33	91.23	5.3		MOLUCCA SEA
803.	10 07	19	00	31.9	-18.71	169.29	246	85.46	5.4		VANUATU ISLANDS
804.	10 08	01	23	58.8	-42.04	88.38	10	36.95	5.3	5.7	SOUTHEAST INDIAN RIDGE
805.	10 08	15	25	59.7	-22.63	-67.95	128	75.14	4.6		CHILE-BOLIVIA BORDER REGION
806.	10 09	10	54	48.1	-22.36	171.47	75	82.52	4.8		SOUTHEAST OF THE LOYALTY ISLANDS
807.	10 09	11	26	15.5	-30.66	179.97	432	76.46	4.1		KERMADEC ISLANDS REGION
808.	10 09	12	29	37.7	-18.93	-69.02	113	78.93	4.4		NORTHERN CHILE
809.	10 09	19	52	55.8	9.18	126.17	79	97.27	5.1		MINDANAO, PHILIPPINES
810.	10 10	05	45	39.5	-18.09	-178.43	591	88.98	5.0		FIJI REGION
811.	10 10	10	50	20.5	-1.76	134.30	10	90.06	6.5	7.7	NEAR THE NORTH COAST OF IRIAN JAYA
812.	10 10	12	28	25.8	-1.51	133.97	10	90.18	6.2	6.7	IRIAN JAYA, INDONESIA
813.	10 10	13	52	26.0	7.29	127.11	10	95.86	5.0		PHILIPPINE ISLANDS REGION
814.	10 10	14	17	19.9	-22.33	-177.93	300	84.96	4.5		SOUTH OF THE FIJI ISLANDS
815.	10 10	18	33	37.5	-1.49	134.14	10	90.26	5.4	5.5	NEAR THE NORTH COAST OF IRIAN JAYA
816.	10 10	21	19	58.5	-1.48	134.11	10	90.26	5.8	5.7	NEAR THE NORTH COAST OF IRIAN JAYA
817.	10 11	00	00	38.1	-1.60	134.09	10	90.14	5.2		NEAR THE NORTH COAST OF IRIAN JAYA
818.	10 11	09	33	59.3	-16.65	-172.70	33	91.51	4.8		SAMOA ISLANDS REGION
819.	10 11	13	48	50.3	-62.62	-161.27	10	47.82	4.5		PACIFIC-ANTARCTIC RIDGE
820.	10 11	15	16	24.1	-16.62	-172.81	33	91.52	5.0		SAMOA ISLANDS REGION
821.	10 11	16	55	56.1	-3.56	134.88	10	88.60	5.1	4.6	IRIAN JAYA, INDONESIA
822.	10 11	18	48	12.9	-22.85	-179.79	600	84.08	4.5		SOUTH OF THE FIJI ISLANDS
823.	10 11	19	21	6.8	-22.37	169.67	134	82.05	4.6		SOUTHEAST OF THE LOYALTY ISLANDS
824.	10 11	19	41	52.6	0.30	12.76	161	71.54	4.7		HALMAHERA, INDONESIA
825.	10 11	22	03	15.0	-3.12	143.21	10	91.96	5.2	4.5	NEAR NORTH COAST OF NEW GUINEA, P.N.G.
826.	10 12	07	49	49.4	-24.01	179.27	533	82.75	4.9		SOUTH OF THE FIJI ISLANDS
827.	10 12	10	59	33.7	37.75	142.62	31	129.28	5.5	5.1	OFF THE EAST COAST OF HONSHU, JAPAN
828.	10 12	14	48	36.1	-58.86	-14.20	33	24.83	5.0		EAST OF THE SOUTH SANDWICH ISLANDS
829.	10 12	20	09	11.4	-8.30	-71.74	534	89.77	6.5		ACRE, BRAZIL
830.	10 13	20	55	7.4	-14.60	-175.42	10	92.99	5.8	6.0	SAMOA ISLANDS REGION
831.	10 13	23	52	32.2	-32.54	-71.63	33	67.09	4.6		NEAR THE COAST OF CENTRAL CHILE
832.	10 14	14	12	43.7	41.17	142.25	61	132.17	5.9		HOKKAIDO, JAPAN REGION
833.	10 14	17	43	54.1	-26.20	179.29	552	80.63	4.3		SOUTH OF THE FIJI ISLANDS
834.	10 15	10	43	55.2	-17.91	-178.57	576	89.12	4.9		FIJI REGION
835.	10 15	10	56	16.5	-8.55	123.38	110	79.84	5.0		FLORES REGION, INDONESIA
836.	10 15	19	31	56.2	-55.60	-144.00	10	55.67	4.4		PACIFIC-ANTARCTIC RIDGE
837.	10 15	23	35	1.2	-57.89	-25.16	33	29.46	4.6		SOUTH SANDWICH ISLANDS REGION
838.	10 15	23	50	28.9	-14.17	-72.74	87	84.60	5.0		CENTRAL PERU
839.	10 16	01	31	15.1	21.18	93.53	41	97.88	5.1		MYANMAR
840.	10 16	08	37	4.0	3.70	126.62	73	92.36	5.4		KEPULAUAN TALAUD, INDONESIA
841.	10 16	10	12	21.4	51.95	157.32	102	146.77	6.1		NEAR THE EAST COAST OF KAMCHATKA, RUSSIA
842.	10 16	10	57	44.6	-27.66	179.21	533	79.20	4.4		KERMADEC ISLANDS REGION
843.	10 16	11	21	18.9	-25.98	-177.18	118	81.57	4.8		SOUTH OF THE FIJI ISLANDS
844.	10 16	14	13	12.7	-15.68	-173.05	33	92.39	5.7	5.7	TONGA
845.	10 17	01	53	3.4	-49.94	163.39	10	54.38	5.1		AUCKLAND ISLANDS, N.Z.
846.	10 17	04	23	55.9	-19.84	-178.40	628	87.28	5.5		FIJI REGION
847.	10 17	05	22	2.7	13.03	93.10	33	90.01	4.9		ANDAMAN ISLANDS, INDIA REGION
848.	10 17	17	52	44.1	-3.60	140.23	33	90.47	5.6	6.2	IRIAN JAYA, INDONESIA
849.	10 17	18	14	17.2	-3.56	140.09	33	90.46	5.1		IRIAN JAYA, INDONESIA
850.	10 18	08	10	30.9	-8.19	118.40	33	78.39	4.9		SUMBAWA REGION, INDONESIA

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
851.	10 18	11	16	48.3	-57.19	-142.75	10	54.10	5.1	5.7	PACIFIC-ANTARCTIC RIDGE
852.	10 18	11	33	51.0	-39.06	-92.24	10	66.52	4.9	5.2	SOUTHEAST OF EASTER ISLAND
853.	10 18	22	27	25.6	-24.72	-70.69	33	74.08	4.5		NEAR THE COAST OF NORTHERN CHILE
854.	10 19	00	43	56.4	-3.67	140.31	33	90.44	5.3	5.9	IRIAN JAYA, INDONESIA
855.	10 19	04	36	4.1	-15.30	-70.46	203	82.80	4.7		SOUTHERN PERU
856.	10 19	08	06	19.2	-52.18	159.69	10	51.41	5.0	4.6	MACQUARIE ISLAND REGION
857.	10 19	18	24	22.5	-18.49	-174.62	131	89.36	5.1		TONGA
858.	10 20	01	34	49.1	52.93	160.25	47	148.62	5.3	4.5	OFF THE EAST COAST OF KAMCHATKA, RUSSIA
859.	10 20	08	18	53.9	-56.46	158.55	10	47.23	5.1	4.5	MACQUARIE ISLAND REGION
860.	10 21	12	15	22.7	-7.37	107.36	66	75.28	4.9		JAVA, INDONESIA
861.	10 22	06	38	48.1	-43.98	39.02	10	25.10	5.2	4.8	PRINCE EDWARD ISLANDS REGION
862.	10 22	11	39	4.2	-20.63	-178.39	549	86.51	5.5		FIJI REGION
863.	10 22	18	08	46.6	-19.26	-177.81	600	87.97	4.0		FIJI REGION
864.	10 22	18	55	2.2	-60.25	-18.06	33	25.22	4.7		EAST OF THE SOUTH SANDWICH ISLANDS
865.	10 23	02	02	49.7	-20.58	-178.44	577	86.56	4.5		FIJI REGION
866.	10 23	07	37	30.8	-32.20	-109.51	10	76.55	5.1	5.1	SOUTHERN EAST PACIFIC RISE
867.	10 23	11	27	19.4	63.51	-147.91	4	173.71	6.0	6.7	CENTRAL ALASKA
868.	10 23	15	01	7.4	-29.31	-69.38	125	69.39	4.6		CHILE-ARGENTINA BORDER REGION
869.	10 23	19	15	13.0	-30.97	-179.82	361	76.20	5.0		KERMADEC ISLANDS REGION
870.	10 24	03	34	26.7	48.26	154.38	33	142.65	5.6	5.0	KURIL ISLANDS
871.	10 24	06	08	37.9	-1.88	29.00	11	67.39	5.9	6.3	LAC KIVU REGION, DEM. REP. OF THE CONGO
872.	10 24	07	12	18.4	-1.82	28.98	10	67.45	5.3	5.5	LAC KIVU REGION, DEM. REP. OF THE CONGO
873.	10 24	08	08	2.3	-18.15	-177.82	500	89.05	4.6		FIJI REGION
874.	10 24	10	09	30.3	-8.43	-74.36	150	90.51	4.7		CENTRAL PERU
875.	10 24	13	02	5.1	-37.45	-94.35	10	68.54	4.4		WEST CHILE RISE
876.	10 24	14	46	52.6	-5.43	150.38	160	92.27	4.8		NEW BRITAIN REGION, P.N.G.
877.	10 24	21	53	43.1	6.03	94.42	65	83.74	6.2		NICOBAR ISLANDS, INDIA REGION
878.	10 25	11	48	58.9	-20.91	-68.23	109	76.83	4.5		CHILE-BOLIVIA BORDER REGION
879.	10 25	14	40	51.6	30.56	130.00	125	118.31	5.3		KYUSHU, JAPAN
880.	10 25	20	38	55.1	13.06	93.23	33	90.07	4.5		ANDAMAN ISLANDS, INDIA REGION
881.	10 26	14	08	36.5	-34.17	178.63	400	72.79	4.3		SOUTH OF THE KERMADEC ISLANDS
882.	10 26	14	58	11.0	-24.24	-66.76	173	73.24	4.4		SALTA PROVINCE, ARGENTINA
883.	10 26	16	20	51.0	-20.43	-178.30	546	86.73	4.8		FIJI REGION
884.	10 26	18	54	53.5	3.92	128.77	33	93.33	4.7		NORTH OF HALMAHERA, INDONESIA
885.	10 28	00	40	59.1	-40.66	176.45	33	66.08	4.9		NORTH ISLAND OF NEW ZEALAND
886.	10 28	02	38	32.5	-33.90	-178.79	33	73.56	5.0	4.9	SOUTH OF THE KERMADEC ISLANDS
887.	10 28	05	49	19.8	-6.87	104.27	33	74.70	4.8		SUNDA STRAIT, INDONESIA
888.	10 28	13	15	5.6	-15.90	179.38	33	90.61	5.0	5.1	FIJI
889.	10 28	14	36	31.8	-27.17	-178.07	230	80.24	4.6		KERMADEC ISLANDS REGION
890.	10 29	02	39	42.9	-15.80	-69.57	198	82.03	4.7		PERU-BOLIVIA BORDER REGION
891.	10 29	03	56	50.5	-24.55	-179.87	500	82.41	4.6		SOUTH OF THE FIJI ISLANDS
892.	10 30	03	50	27.1	-7.95	-74.41	158	90.97	4.8		NORTHERN PERU
893.	10 30	12	24	46.6	-19.81	-68.67	119	77.99	4.6		CHILE-BOLIVIA BORDER REGION
894.	10 30	14	43	5.6	-17.61	-174.18	87	90.30	5.3		TONGA
895.	10 30	16	26	34.1	-25.32	-175.64	10	82.51	5.8	5.3	SOUTH OF TONGA
896.	10 31	12	06	40.8	-15.59	-70.69	33	82.60	4.7		SOUTHERN PERU
897.	10 31	16	19	51.8	-27.13	-176.55	33	80.57	4.9		KERMADEC ISLANDS REGION
898.	10 31	20	36	54.1	-40.10	-74.72	33	61.01	5.3	4.6	OFF THE COAST OF SOUTHERN CHILE
899.	10 31	21	22	32.0	1.30	123.16	40	88.89	4.8		MINAHASA, SULAWESI, INDONESIA
900.	11 01	05	04	0.4	-14.38	-76.20	22	85.51	5.3	4.8	NEAR THE COAST OF PERU

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
901.	11 01	08	15	59.4	-14.50	-76.18	33	85.39	4.8		NEAR THE COAST OF PERU
902.	11 01	13	42	17.6	-19.62	169.45	300	84.63	5.2		VANUATU ISLANDS
903.	11 02	00	00	56.0	-26.35	179.46	500	80.53	4.9		SOUTH OF THE FIJI ISLANDS
904.	11 02	01	26	10.7	2.82	96.09	30	81.20	6.2	7.6	SIMEULUE, INDONESIA
905.	11 02	02	42	56.4	-7.37	128.91	134	82.93	5.3		KEPULAUAN BARAT DAYA, INDONESIA
906.	11 02	04	47	42.2	12.70	92.86	33	89.63	5.8	5.5	ANDAMAN ISLANDS, INDIA REGION
907.	11 02	06	11	52.6	-24.09	-66.75	181	73.39	4.6		SALTA PROVINCE, ARGENTINA
908.	11 02	09	46	46.7	2.95	96.39	27	81.42	5.9	6.4	SIMEULUE, INDONESIA
909.	11 02	09	54	57.0	-10.41	-78.26	68	89.90	4.9		NEAR THE COAST OF PERU
910.	11 02	15	51	29.4	-36.50	179.33	94	70.68	4.7		OFF EAST COAST OF THE NORTH ISLAND, N.Z.
911.	11 02	22	29	36.3	-18.33	-177.90	521	88.85	4.7		FIJI REGION
912.	11 03	02	56	38.1	-38.83	175.80	114	67.71	4.9		NORTH ISLAND OF NEW ZEALAND
913.	11 03	03	37	42.0	38.89	141.98	39	130.06	5.7	6.1	NEAR THE EAST COAST OF HONSHU, JAPAN
914.	11 03	09	37	11.7	-14.84	167.43	119	88.64	4.8		VANUATU ISLANDS
915.	11 03	14	24	15.8	-15.07	-178.05	400	91.98	4.3		FIJI REGION
916.	11 03	22	12	41.0	63.52	-147.44	5	173.80	7.0	8.5	CENTRAL ALASKA
917.	11 04	03	19	18.3	-5.53	36.04	10	63.44	5.5	5.5	TANZANIA
918.	11 04	08	25	54.5	-5.78	36.08	10	63.18	4.9	4.4	TANZANIA
919.	11 05	02	10	21.5	-20.48	-176.82	320	86.99	4.4		FIJI REGION
920.	11 05	08	47	26.1	49.07	142.30	597	139.02	5.2		SAKHALIN, RUSSIA
921.	11 05	22	21	31.1	-20.39	-177.90	542	86.85	4.8		FIJI REGION
922.	11 06	03	15	41.2	-42.63	124.97	10	49.39	4.7		SOUTH OF AUSTRALIA
923.	11 06	03	27	18.4	-20.40	-173.86	33	87.64	4.8		TONGA
924.	11 06	13	20	41.8	-29.89	-178.20	227	77.56	4.5		KERMADEC ISLANDS, N.Z.
925.	11 06	23	15	54.0	-20.83	-70.12	80	77.52	4.7		NEAR THE COAST OF NORTHERN CHILE
926.	11 07	12	18	41.8	-41.12	-75.04	33	60.15	4.8		OFF THE COAST OF SOUTHERN CHILE
927.	11 07	15	14	6.7	51.20	179.33	33	153.90	5.8	6.4	RAT ISLANDS, ALEUTIAN ISLANDS, ALASKA
928.	11 08	08	27	47.9	-6.40	129.08	200	83.89	4.8		BANDA SEA
929.	11 08	17	34	52.4	63.48	-148.26	6	173.61	5.5	4.6	CENTRAL ALASKA
930.	11 09	03	56	35.1	-30.68	-179.12	347	76.62	4.8		KERMADEC ISLANDS REGION
931.	11 09	05	29	25.9	-2.62	68.01	10	68.97	5.5	5.1	CARLSBERG RIDGE
932.	11 09	06	05	58.3	-48.15	-75.51	33	53.82	5.1	4.8	SOUTHERN CHILE
933.	11 09	19	56	53.0	2.30	128.70	33	91.81	5.3	4.7	HALMAHERA, INDONESIA
934.	11 10	06	44	44.1	-20.14	-178.03	550	87.07	4.5		FIJI REGION
935.	11 10	10	54	7.6	-16.60	-72.96	46	82.39	5.2	4.8	NEAR THE COAST OF PERU
936.	11 10	11	04	13.5	-21.24	-68.07	106	76.47	4.4		CHILE-BOLIVIA BORDER REGION
937.	11 10	21	54	1.4	17.21	93.76	32	94.17	5.2		BAY OF BENGAL
938.	11 11	01	27	15.2	-31.70	-71.77	44	67.92	4.8		NEAR THE COAST OF CENTRAL CHILE
939.	11 11	01	37	29.9	-4.86	132.24	33	86.45	5.2		NEAR THE SOUTH COAST OF IRIAN JAYA
940.	11 11	07	30	41.2	-8.65	119.27	33	78.28	5.2	4.7	FLORES REGION, INDONESIA
941.	11 11	09	19	35.6	-8.50	116.83	97	77.54	4.9		LOMBOK REGION, INDONESIA
942.	11 11	16	39	2.3	-23.31	-179.90	540	83.60	5.4		SOUTH OF THE FIJI ISLANDS
943.	11 12	01	33	15.5	-9.46	122.82	33	78.80	5.0		SAVU SEA
944.	11 12	01	46	48.9	-56.55	-27.54	120	31.32	6.0		SOUTH SANDWICH ISLANDS REGION
945.	11 12	03	16	1.8	-3.27	138.15	33	90.04	4.9		IRIAN JAYA, INDONESIA
946.	11 12	10	09	15.7	-6.37	130.52	33	84.43	4.7		BANDA SEA
947.	11 12	12	33	7.8	-32.32	-178.25	33	75.20	5.0		SOUTH OF THE KERMADEC ISLANDS
948.	11 12	13	06	39.0	-20.16	-68.76	110	77.70	5.1		CHILE-BOLIVIA BORDER REGION
949.	11 13	01	17	9.4	-15.10	167.31	132	88.36	4.9		VANUATU ISLANDS
950.	11 13	03	07	24.2	-26.80	-70.91	33	72.21	4.4		NEAR THE COAST OF NORTHERN CHILE

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
951.	11 13	03	24	37.7	-21.05	-178.84	568	86.02	4.7		FIJI REGION
952.	11 13	08	29	9.7	-20.67	-178.95	600	86.36	4.5		FIJI REGION
953.	11 13	15	53	9.1	3.01	96.09	39	81.37	5.2	5.5	NORTHERN SUMATRA, INDONESIA
954.	11 13	22	31	14.8	-27.67	-178.58	315	79.64	4.5		KERMADEC ISLANDS REGION
955.	11 13	22	44	52.5	-30.32	-178.28	200	77.13	4.5		KERMADEC ISLANDS, N.Z.
956.	11 14	11	05	20.5	-17.78	-178.78	554	89.20	4.9		FIJI REGION
957.	11 14	15	30	29.0	-55.65	-35.64	10	34.86	5.1	4.5	SOUTH GEORGIA ISLAND REGION
958.	11 15	05	37	20.7	-25.35	179.26	600	81.45	4.3		SOUTH OF THE FIJI ISLANDS
959.	11 15	13	05	36.9	-55.72	-35.78	10	34.85	5.8	5.5	SOUTH GEORGIA ISLAND REGION
960.	11 15	19	58	31.7	-56.05	-36.40	10	34.80	6.1	6.6	SOUTH GEORGIA ISLAND REGION
961.	11 15	21	26	11.9	-55.83	-36.04	10	34.86	4.7		SOUTH GEORGIA ISLAND REGION
962.	11 15	21	56	4.6	-3.14	84.95	10	72.33	5.1		SOUTH INDIAN OCEAN
963.	11 16	06	40	44.4	-26.13	-178.05	336	81.25	4.2		SOUTH OF THE FIJIISLANDS
964.	11 16	10	16	26.5	-55.78	-35.19	10	34.61	5.4	4.8	SOUTH GEORGIA ISLAND REGION
965.	11 16	12	06	25.1	50.38	156.56	96	145.20	5.4		KURIL ISLANDS
966.	11 16	20	23	37.7	-26.45	178.06	662	80.12	4.7		SOUTH OF THE FIJI ISLANDS
967.	11 16	20	44	49.8	-26.40	178.20	633	80.21	5.0		SOUTH OF THE FIJI ISLANDS
968.	11 17	02	58	37.4	-23.53	-175.61	10	84.26	5.4	5.4	TONGA REGION
969.	11 17	04	53	48.4	47.95	146.42	470	139.52	5.8		NORTHWEST OF THE KURIL ISLANDS
970.	11 18	08	47	31.9	-23.00	-66.54	182	74.33	4.9		JUJUY PROVINCE, ARGENTINA
971.	11 18	15	03	51.3	-15.42	167.60	135	88.14	4.7		VANUATUISLANDS
972.	11 18	22	51	56.4	-4.21	102.18	33	76.50	5.5	5.2	SOUTHERN SUMATRA, INDONESIA
973.	11 19	04	14	20.1	-29.93	-69.04	128	68.71	4.8		CHILE-ARGENTINA BORDER REGION
974.	11 23	01	05	0.6	-25.30	-177.30	100	82.20	5.1		SOUTH OF THE FIJI ISLANDS
975.	11 23	13	33	31.9	-21.32	-68.64	101	76.58	4.8		CHILE-BOLIVIA BORDER REGION
976.	11 23	14	48	41.6	-27.78	-177.09	33	79.83	5.0		KERMADEC ISLANDS REGION
977.	11 24	12	47	52.8	-55.65	-35.54	10	34.82	4.8		SOUTH GEORGIA ISLAND REGION
978.	11 25	17	47	52.8	-23.69	-175.74	43	84.08	4.8		TONGA REGION
979.	11 25	18	35	5.8	-24.87	179.55	500	81.97	4.5		SOUTH OF THE FIJI ISLANDS
980.	11 26	22	46	13.8	-21.09	-178.81	536	85.98	5.1		FIJI REGION
981.	11 26	23	06	17.7	-21.10	-178.77	551	85.99	4.8		FIJI REGION
982.	11 26	23	44	8.8	-28.05	-66.67	180	69.69	4.6		CATAMARCA PROVINCE, ARGENTINA
983.	11 27	01	55	57.7	-3.21	142.12	39	91.50	5.4	5.2	NEAR NORTH COAST OF NEW GUINEA, P.N.G.
984.	11 27	06	02	28.5	-20.41	-178.67	617	86.67	4.6		FIJI REGION
985.	11 27	15	50	4.4	-55.83	-27.40	33	31.83	5.0		SOUTH SANDWICH ISLANDS REGION
986.	11 27	16	43	17.5	-14.49	167.83	33	89.09	5.6	5.8	VANUATU ISLANDS
987.	11 27	17	56	0.7	-16.43	-72.90	33	82.54	4.9		NEAR THE COAST OF PERU
988.	11 29	06	18	10.1	-28.88	-63.07	601	67.73	5.4		SANTIAGO DEL ESTERO PROVINCE, ARGENTINA
989.	11 29	20	04	47.8	-5.65	104.04	33	75.76	5.2	4.5	SOUTHERN SUMATRA, INDONESIA
990.	11 30	08	28	15.3	-32.80	-179.05	33	74.58	4.9		SOUTH OF THE KERMADEC ISLANDS
991.	11 30	08	44	49.4	-20.85	-179.21	658	86.14	4.3		FIJI REGION
992.	11 30	08	50	55.0	-32.86	-179.26	162	74.48	5.1		SOUTH OF THE KERMADEC ISLANDS
993.	11 30	21	50	39.1	-15.24	-172.44	33	92.93	5.1	5.3	SAMOA ISLANDS REGION
994.	12 01	02	27	55.1	-35.15	179.98	33	72.11	5.6	5.7	OFF EAST COAST OF THE NORTH ISLAND, N.Z.
995.	12 01	02	46	54.1	-10.68	-78.88	27	89.83	5.3		NEAR TIIE COAST OF PERU
996.	12 01	02	53	51.4	-20.51	-178.87	600	86.53	4.1		FIJI REGION
997.	12 01	03	28	08.7	-20.15	-69.66	73	78.01	4.4		NORTHERN CHILE
998.	12 01	07	56	01.2	-16.08	-172.97	33	92.01	5.3	5.5	SAMOAISLANDS REGION
999.	12 01	12	25	46.1	-28.33	-177.54	87	79.21	4.3		KERMADEC ISLANDSREGION
1000.	12 01	14	37	23.0	-11.24	117.26	19	75.16	5.6	5.1	SOUTH OF SUMBAWA, INDONESIA

No.	Date	Origin time UTC h	m	s	Geographic Coordinates Latitude (deg)	Longitude (deg)	Depth (km)	Epicentral distance (deg)	Magnitude mb	MS	Region
1001.	12 01	19	44	46.2	-23.18	178.88	600	83.47	4.7		SOUTH OF THE FIJI ISLANDS
1002.	12 01	21	08	16.7	-20.67	-178.59	600	86.43	4.6		FIJI REGION
1003.	12 01	23	00	42.5	-38.71	176.01	115	67.87	4.9		NORTH ISLAND OF NEW ZEALAND
1004.	12 02	01	25	29.9	-30.59	-71.16	44	68.76	5.1		NEAR THE COAST OF CENTRAL CHILE
1005.	12 02	02	00	34.9	-26.13	70.82	10	46.72	5.3	4.8	INDIAN OCEAN TRIPLE JUNCTION
1006.	12 02	13	42	10.3	1.51	126.39	10	90.25	5.7	5.6	MOLUCCA SEA
1007.	12 02	18	28	14.8	-7.61	127.47	125	82.18	4.8		KEPULAUAN BARAT DAYA, INDONESIA
1008.	12 03	06	38	34.6	-31.57	-69.13	112	67.22	4.7		SAN JUAN PROVINCE, ARGENTINA
1009.	12 03	20	13	54.7	-17.82	-178.82	568	89.15	5.3		FIJI REGION
1010.	12 03	21	36	29.2	-18.06	-178.54	600	88.98	4.5		FIJI REGION
1011.	12 04	11	30	53.7	19.38	94.51	54	96.44	5.6		MYANMAR
1012.	12 04	15	30	42.4	-54.61	-118.84	10	55.68	4.7		SOUTHERN EAST PACIFIC RISE
1013.	12 04	16	19	15.1	-5.28	145.60	96	90.79	5.2		EASTERN NEW GUINEA REGION, P.N.G.
1014.	12 04	21	03	03.3	-30.06	-67.60	30	68.13	5.1	4.5	SAN JUAN PROVINCE, ARGENTINA
1015.	12 05	13	45	36.4	-16.35	167.86	198	87.32	4.5		VANUATU ISLANDS
1016.	12 05	17	28	06.8	-19.02	-174.80	126	88.80	5.2		TONGA
1017.	12 06	13	04	27.3	-17.34	-172.34	33	90.90	4.9		TONGA REGION
1018.	12 06	21	51	11.5	-12.44	166.70	160	90.73	4.4		SANTA CRUZ ISLANDS
1019.	12 06	22	17	17.6	-27.28	-176.23	33	80.49	5.0		KERMADEC ISLANDS REGION
1020.	12 07	05	59	36.4	-40.76	174.90	56	65.66	4.9		COOK STRAIT, N.Z.
1021.	12 07	06	22	41.0	-7.51	127.65	149	82.35	5.1		KEPULAUAN BARAT DAYA, INDONESIA
1022.	12 07	17	04	15.8	0.25	122.22	195	87.58	4.7		MINAHASA, SULAWESI, INDONESIA
1023.	12 07	19	08	40.3	-16.25	-73.99	33	83.06	4.6		NEAR THE COAST OF PERU
1024.	12 08	06	33	15.3	-37.50	177.18	143	69.27	4.6		OFF EAST COAST OF THE NORTH ISLAND, N.Z.
1025.	12 09	14	46	18.1	-21.84	-68.19	96	75.95	4.6		CHILE-BOLIVIA BORDER REGION
1026.	12 10	01	28	33.6	-50.03	-114.12	10	59.70	5.3	5.7	SOUTHERN EAST PACIFIC RISE
1027.	12 10	04	27	54.6	-24.14	179.24	531	82.62	5.5		SOUTH OF THE FIJI ISLANDS
1028.	12 11	03	49	40.1	-3.81	135.12	10	88.46	5.8	6.0	IRIAN JAYA, INDONESIA
1029.	12 11	10	00	31.1	-3.74	135.23	10	88.56	5.6	5.7	IRIAN JAYA, INDONESIA
1030.	12 11	12	26	39.9	0.07	123.30	157	87.80	5.3		MINAHASA, SULAWESI, INDONESIA
1031.	12 12	04	03	15.9	-31.80	-67.30	126	66.42	5.1		SAN JUAN PROVINCE, ARGENTINA
1032.	12 12	08	30	42.7	-4.79	153.28	34	93.84	5.9	6.7	NEW IRELAND REGION, P.N.G.
1033.	12 12	22	44	05.3	-41.85	-83.56	10	61.78	5.6	4.7	WEST CHILE RISE
1034.	12 13	16	31	11.9	-15.60	-71.94	12	83.00	5.1	5.0	SOUTHERN PERU
1035.	12 13	19	25	35.5	-22.27	-68.54	110	75.67	5.3		NORTHERN CHILE
1036.	12 14	01	17	45.7	-23.09	-66.65	195	74.28	4.7		JUJUY PROVINCE, ARGENTINA
1037.	12 15	09	25	16.5	-30.99	-179.12	400	76.32	4.1		KERMADEC ISLANDS REGION
1038.	12 15	13	35	31.0	-52.59	-118.30	10	57.62	4.6		SOUTHERN EAST PACIFIC RISE
1039.	12 16	09	46	32.1	-26.78	-107.21	10	81.45	5.0	4.7	EASTER ISLAND REGION
1040.	12 16	12	37	58.6	-5.11	151.03	129	92.79	5.0		NEW BRITAIN REGION, P.N.G.
1041.	12 16	16	13	31.6	-16.21	-174.14	116	91.67	5.2		TONGA
1042.	12 17	04	32	53.0	-56.95	-24.83	10	30.05	5.4	6.3	SOUTH SANDWICH ISLANDS REGION
1043.	12 17	16	09	12.2	-7.00	125.41	493	82.01	5.4		KEPULAUAN BARAT DAYA, INDONESIA
1044.	12 18	14	12	21.7	-57.09	-24.98	10	30.00	5.5	6.0	SOUTH SANDWICH ISLANDS REGION
1045.	12 20	14	14	42.0	-3.08	147.94	33	93.64	5.8	6.4	BISMARCK SEA
1046.	12 21	07	32	54.7	-38.49	-72.13	76	61.74	4.5		CENTRAL CHILE
1047.	12 22	14	10	02.6	-52.68	12.74	10	20.65	4.8		SOUTHWEST OF AFRICA
1048.	12 23	02	50	38.2	-1.72	34.97	10	67.24	4.9	4.5	LAKE VICTORIA REGION, KENYA-TANZANIA
1049.	12 25	08	54	25.2	-17.75	-178.90	568	89.21	4.9		FIJI REGION
1050.	12 25	21	07	45.8	-30.66	-178.47	200	76.77	4.6		KERMADEC ISLANDS, N.Z.

No.	Date	Origin time UTC			Geographic Coordinates		Depth	Epicentral distance	Magnitude		Region
		h	m	s	Latitude (deg)	Longitude (deg)	(km)	(deg)	mb	MS	
1051.	12 26	09	59	34.3	-25.03	179.26	623	81.76	4.5		SOUTH OF THE FIJI ISLANDS
1052.	12 26	22	20	20.5	-31.23	-68.57	112	67.35	5.2		SAN JUAN PROVINCE, ARGENTINA
1053.	12 27	13	28	36.3	4.11	97.72	139	82.92	5.7		NORTHERN SUMATRA, INDONESIA
1054.	12 27	20	15	52.4	-27.90	-66.44	176	69.75	4.4		CATAMARCA PROVINCE, ARGENTINA
1055.	12 28	03	20	43.6	-18.25	-178.53	627	88.80	5.1		FIJI REGION
1056.	12 28	10	49	54.4	-7.42	128.14	100	82.61	5.2		KEPULAUAN BARAT DAYA, INDONESIA
1057.	12 28	19	46	19.6	-52.70	11.63	10	20.95	4.7	4.1	SOUTHWEST OF AFRICA
1058.	12 29	06	56	28.2	-3.80	141.24	47	90.64	5.3	4.8	NEW GUINEA, P.N.G.
1059.	12 29	19	16	21.9	-12.82	168.73	600	90.93	4.9		SANTA CRUZ ISLANDS REGION