New Zealand Department of Scientific and Industrial Research
GEOPHYSICS DIVISION

NEW ZEALAND

# SEISMOLOGICAL REPORT

# 1960

SEISMOLOGICAL OBSERVATORY BULLETIN
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SEISMOLOGICAL OBSERVATORY, WELLINGTON,
NEW ZEALAND

ALL measurement and interpretation of records is carried out at the central station in Wellington. Communications should therefore be addressed to:

The Superintendent,

Seismological Observatory,

P.O. Box 8005,

Wellington, New Zealand.



# NEW ZEALAND SEISMOLOGICAL REPORT 1960

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## INTRODUCTION

It is the aim of the New Zealand Seismological Reports not only to summarise the standard measurements carried out at the Seismological Observatory, Wellington, and its out-stations, but also to give an account of seismic activity in New Zealand in a form that is of use and interest to people other than professional seismologists. For this reason a descriptive account of the principal earthquakes, maps showing epicentres of deep and shallow shocks, and isoseismal maps of the more widely-felt ones have been included.

New Zealand data for 1961 and 1962 are now available at the Observatory, and standard readings have been forwarded to international data-centres. Reprints of research papers by members of the staff, and material that is not regularly included in this Report are issued as a series of S-Bulletins. The Observatory is prepared to consider additional agreements to exchange material of this kind with other organisations.

## SCIENTIFIC STAFF 1960

### WELLINGTON

Superintendent: R.C. Hayes (retired 1960 May)
F.F. Evison M.A.; B.Sc.(N.Z.); Ph.D.(Lond.); D.I.C.

Geophysicists: R.D. Adams M.A.; M.Sc.(N.Z.) Ph.D.(Cantab.);
J.H. Christie (nee LeFort) B.Sc.; G.A. Eiby M.Sc.;
M.G. Muir M.Sc.; A.A. Thomson M.Sc.

Technicians: M.A. Lowry; A.M. Maher;
R.C. Martindale (from April);
R.H. Orr (from April).

### APIA

Officer-in-charge: J.G. Keys

### SCOTT BASE

Observer: J.G. Taylor

### HALLETT

Observer: R.F. Brown

## PRINCIPAL N.Z. EARTHQUAKES IN 1960

The number of felt earthquakes reported to the Observatory in 1960 was 88, 55 of these being felt in the North Island only, 27 in the South Island only, and 6 in some part of both islands. Although this represents a decline of about 20 per cent from the number of shocks reported in 1959, it is fairly close to the average. The seismological interest of the shocks this year, however, is unusually high. Noteworthy seismic events included a remarkable sequence of deep earthquakes in Taranaki, the arrival of a tsunami (seismic sea-wave) generated by a Chilean earthquake, and the largest shallow shock since the Wairarapa earthquake of 1942 Jun. 24.

On 1960 Mar. 23, an earthquake of magnitude 6.2 occurred at a depth of nearly 600 km (370 miles) beneath an epicentre (60/58) a few miles north of Whangamomona. Four and a half minutes later, a second shock of the same magnitude originated at the same focus (epicentre 60/59). It is remarkable enough to find such large amounts of energy being released from a small volume of the Earth's interior within so short a space of time, but even more so to find a similar twin event taking place four days later from a focus almost vertically above it, at a depth of only 220 km (135 miles, Epicentres 60/62 and 60/63). These shocks were somewhat larger than the deep ones (magnitude 6.6 and 6.5 respectively), and were separated in time by less than a minute. The need to account for such happenings places a severe physical restriction upon theories purporting to explain the mechanism of earthquakes. These shocks have been discussed in a paper by R.D. Adams ("Source Characteristics of some New Zealand Earthquakes". N.Z.J. Geol. and Geophys. Vol 6, pp 209-20, 1963 May).

The deep focus earthquakes of Mar. 23 were the deepest so far recorded in the New Zealand region. Another unusual deep-focus earthquake occurred on the following day. This shock (Epicentre 60/61) had an epicentre in West Nelson, some 10 miles north of Riwaka, and a focal depth of 200 km, and lies unusually far south for an earthquake at this depth. The previous southern limit for an accurately placed shock with a focal depth of 200 km or more is 40°S, but several shocks with depths between 150 and 200 km have originated as far south as 41.5°S.

The great Chilean earthquake of 1960 May 23 calls for mention in a summary of New Zealand earthquakes because it generated a tsunami which affected coastal areas in all countries surrounding the Pacific. In New Zealand a wave high enough to cause minor damage reached the east coast of both islands, from Whangarei in the north to the mouth of Catlin's River in the south. It was most severe at Banks Peninsula and Port Ahuriri.

The shallow earthquake in the northern part of Fiordland on May 24 (Epicentre 60/108) had a magnitude of 7.0, and it must be reckoned fortunate that the shock was centred at sea, some 20 miles off a sparsely populated part of the coast. The felt area included most of the South Island (except Marlborough) and Stewart Island, but no reports were received from north of Cook Strait. A questionnaire was issued, and the observations have been plotted on an isoseismal map (in the pocket inside the back cover of this Report). The maximum intensity reported was MM6,

at several places near the southern end of Lake Wanaka, goods being thrown from shelves, and plaster cracked at Cardrona and Luggate. The lack of observers and buildings in the region between this area and the epicentre leaves the boundary of the MM 6 isoseismal very uncertain. Isolated cases of minor damage occurred throughout Otago and Southland, more than 80 claims being filed with the Earthquake and War Damage Commission. Because the shock occurred in the early hours of the morning, the boundary of the felt area appears to be marked by the MM 3 isoseismal, lesser intensities being insufficient to wake even light sleepers. This fact should be borne in mind in all attempts to allot magnitudes to pre-instrumental earthquakes on the basis of the radius of perceptibility. The widespread publicity given to the Chilean tsunami caused many observers to report unusual sea-conditions. There seems to be no reason to relate these to the New Zealand earthquake. Where the observations do not refer to the Chilean event, they seem to be descriptions merely of rough sea conditions, especially in Foveaux Strait. The main shock was preceded by a foreshock of magnitude 5.3 on Feb. 13 (Epicentre 60/88), and at least 12 other foreshocks took place between then and the main event on May 24. Aftershocks were numerous, continuing spasmodically until at least the end of September. More than 100 of them had magnitudes of 4 or greater.

On Feb. 3, a shallow earthquake of magnitude 6.4 occurred near East Cape (Epicentre 60/22), and was felt over the whole of the North Island, an isolated observation being received from as far north as Kaitaia. An isoseismal map is to be found in the back of the Report. Felt intensities close to the epicentre appear somewhat low (MM 5), and abnormal focal depth was suspected. Readings of PKP from Scandinavian stations exclude this possibility. The absence of large settlements may account for lack of observations suggesting a higher intensity. Only one insurance claim was filed.

Another shallow shock of magnitude 6.4 took place on Feb. 21 (Epicentre 60/37), for which an isoseismal map has again been prepared. The felt area extended from Waitara, Taumarunui and Dannevirke in the North Island to Fairlie and Franz Josef in the South. Minor damage was reported from Murchison and Kaikoura, where intensities reached MM 6. The surrounding observations indicate that the region of consistently high intensity lay to the east of Murchison and near Lake Rotoroa, and that the reports of MM 6 at Kaikoura and at Karamea on the opposite coast were probably the result of local ground peculiarities. An hour after the shock, water flowing from Lake Rotoroa was reported to be turbid. It was also observed that the water in a small bay between Kaikoura and Clarence Bridge was discoloured until the following morning, but the evidence linking this to the earthquake is slight. A noteworthy feature of this shock is the large number of observers, both men and women, who reported nausea. This appeared to be experienced at all intensities from MM 2 to MM 6, and is particularly surprising as the questionnaire issued makes no reference to an effect of this kind. The effect was sufficiently pronounced to call for special remark under the heading 'Further Comments'. The swaying of trees and power poles was also widely remarked upon. Taken together, these observations may indicate movements of rather longer period than normal. Neither this shock nor that on Feb. 3 was accompanied by appreciable foreshock or aftershock activity.

Several other deep shocks had magnitudes approaching those of the Taranaki sequence. That on Jan. 9, with a magnitude of 6.0 and a focal depth of 340 km (210 miles, Epicentre 60/5) was reported felt only from Gisborne, and that of Nov. 19 (Epicentre 60/329) at the lesser depth of 190 km (120 miles) does not appear to have been felt, although the epicentre was fairly close to Te Puke.

As usual, vigorous activity, both deep and shallow, to the northeastward from New Zealand has followed the trend of the Kermadec Trench. The numerous shallow shocks with magnitudes between 5½ and 6 centred near 32°S 178°W should probably be classified as a "swarm", which was most active on Jun. 27, when six shocks took place within half a degree of this position. Two previous shocks, on Jun. 15 (Epicentres 60/193 and 60/194),





with magnitudes of 6.0 and 6.1 are possibly related to this outburst. On Feb. 16 there was a deep shock (focal depth 200 km = 125 miles. Epicentre 60/34) in this general region, and further activity at depths from 400 - 500 km (250 - 300 miles) occurred on Aug. 6, Sep. 29, and Oct. 16 (Epicentres 60/233, 60/280, and 60/298). These shocks lie near the northeastern limit of satisfactory coverage by New Zealand stations alone, and the Observatory is grateful for information obtained from Australian records when studying shocks in this region. A similar dusting of shocks occurs about 36½°S 179°E, but the shocks are of smaller magnitude and less concentrated in time.

Attention must finally be drawn to two isolated shocks lying to the east of the country. The second of these, on Oct. 19 (Epicentre 60/302) lies on the northern flank of the Chatham Rise, along which earthquakes of small magnitude are not infrequent. The earlier shock, however, on Sep. 24 (Epicentre 60/277), with the relatively great magnitude of 5.8, is in deep water to the north of the Rise, a much less usual position.

## STATIONS OF THE NEW ZEALAND NETWORK

During 1960 there were no important changes in the recording network, except for the extension of automatic time-signal recording to Cobb River at the beginning of February. Site-testing for a station to replace New Plymouth, discontinued in 1959, was carried out, and a satisfactory place found at Tarata. However, the new station did not come into operation in 1960.

The network of stations under the control of the Seismological Observatory, Wellington, may be considered to consist of two parts; first, a set of short-period instruments distributed widely over the country, and intended to yield records of earthquakes originating within New Zealand; and secondly, teleseismic instruments to provide information about distant earthquakes, and the physical condition of the Earth. These functions interlock, and every seismograph gives some useful information in both fields.

With the present network, most earthquakes strong enough to be reported felt can be at least approximately located, but in certain districts, particularly the far south of the country, the origins cannot be placed with the highest accuracy. In the case of the larger shocks, some assistance can be obtained from Australian stations.

Instrumental constants, standard abbreviations of the station names (used in tabular sections of this Report), geographical positions, and similar information are listed below, in order of increasing southern latitude.

### APIA (AP)

Latitude: 13°48'.4 S
Longitude: 171°46'.5 W
Height above mean sea level: 2 metres, 6 ft
Geocentric direction cosines: a - 0.961 484
b - 0.138 980
c - 0.237 132

Lithological Foundation: Coral sand on volcanic rock.

| Instrument | Compt. | Period | Damping | Magnification | |
|---|---|---|---|---|---|
| Wood-Anderson | N | 0.80 sec | 15:1 | 2050 | Nominal |
| Wood-Anderson | E | 0.80 sec | 15:1 | 2050 | |



### AFIAMALU (AF)

Latitude: 13°54'.6 S
Longitude: 171°46'.6 W
Height above mean sea level: 706 metres, 2315 ft
Geocentric direction cosines: a - 0.961 070
b - 0.138 883
c - 0.238 862

Lithological Foundation: Basaltic lava flows.

| Instrument | Component | To | Tg | V |
|---|---|---|---|---|
| Benioff | Z | 1 sec | 0.2 sec | 72,000 |
| | | | 70 sec | 765 |
| | N | 1 sec | 70 sec | |

### SUVA (SU)

Latitude: 18°09' S
Longitude: 178°27' E
Height above mean sea level: 6 metres, 20 ft
Geocentric direction cosines: a - 0.950 515
b + 0.025 720
c - 0.309 613

Lithological Foundation: Hard, fine-grained calcareous marl.

| Instrument | Component | Period | Damping | Magnification | Date |
|---|---|---|---|---|---|
| Milne-Shaw | N | 12 sec | 20:1 | 250 | 12/57 |

### RAOUL (RL)

Latitude: 29°15'.1 S
Longitude: 177°55'.1 W
Height above mean sea level: 110 metres, 350 ft
Geocentric direction cosines: a - 0.873 304
b - 0.031 743
c - 0.486 140

Lithological Foundation: Volcanic rock.

| Instrument | Component | Period |
|---|---|---|
| Willmore | Z | To = 0.8 sec. Tg = 0.25 sec. |

### ONERAHI (ON)

Latitude: 35°46'.5 S
Longitude 174°21'.7 E
Height above mean sea level: 33 metres, 110 ft
Geocentric direction cosines: a - 0.809 249
b + 0.079 894
c - 0.582 008

Lithological Foundation: Basalt.

| Instrument | Component | Period | Damping | Magnification | Date |
|---|---|---|---|---|---|
| Wood-Anderson | E | 0.9 sec | 10:1 | 2,800 | to 22/8/59 |
| | | 1.2 | 23:1 | 2,800 | 22/8/59 |

AUCKLAND (AK)

Latitude: 36°51'.7 S
Longitude: 174°46'.7 E
Height above mean sea level: 76 metres, 250 ft
Geocentric direction cosine: a - 0.798 694
b + 0.072 992
c - 0.597 293

Lithological Foundations: Volcanic beds on Tertiary sandstone and mudstone.

| Instrument | Component | Period | Damping | Magnification | |
|---|---|---|---|---|---|
| Milne-Shaw | N | 10 sec | 20:1 | 150 | Nominal |

KAIMAIRO (KP)

Latitude: 37°55'.6 S
Longitude: 175°32'.3 E
Height above mean sea level: 61 metres, 200 ft.
Geocentric direction cosines: a - 0.788 405
b + 0.061 519
c - 0.612 072

Lithological Foundation: Greywacke

| Instrument | Component | Period | Damping | Magnification | Date |
|---|---|---|---|---|---|
| Willmore | Z | 0.8 sec. | Critical | | 8/59 |

TUAI (TU)

Latitude: 38°48'.4 S
Longitude: 177°09'.1 E
Height above mean sea level: 292 metres, 960 ft
Geocentric direction cosines: a - 0.780 359
b + 0.038 825
c - 0.624 126

Lithological Foundation: Thick Tertiary sandstone and mudstone.

| Instrument | Component | Period | Damping | Magnification | |
|---|---|---|---|---|---|
| Wood-Anderson | N | 0.8 sec | Critical | 1400 | Nominal |

TONGARIRO (TO)

Latitude: 39°12'.2 S
Longitude: 175°32'.3 E
Height above mean sea level: 1131 metres, 3710 ft
Geocentric direction cosines: a - 0.774 637
b + 0.060 444
c - 0.629 512

Lithological Foundation: Volcanic ash and lava on Tertiary sandstone and mudstone.

| Instrument | Component | Period | Damping | Magnification | |
|---|---|---|---|---|---|
| Jones | Z | 0.5 sec | 10:1 | 11,000 | Nominal |





BUNNYTHORPE (BT)

Latitude: 40°17'.0 S
Longitude: 175°38'.1 E
Height above mean sea level: 60 metres, 197 ft
Geocentric direction cosines: a - 0.762 783
b + 0.058 224
c - 0.644 028

Lithological Foundation: Gravels, silts and sands.

| Instrument | Component | Period | Damping | Magnification | |
|---|---|---|---|---|---|
| Imamura | NE(X) | 8 sec | 5:1 | 2 | Nominal |
| | NW(Y) | 8 | 5:1 | 2 | |
| | Z | 2 | 5:1 | 2 | |

COBB RIVER (CB)

Latitude: 41°05'.2 S
Longitude: 172°44'.0 E
Height above mean sea level: 213 metres, 700 ft
Geocentric direction cosines: a - 0.749 836
b + 0.095 613
c - 0.654 679

Lithological Foundation: Schist

| Instrument | Component | Period | Damping | Magnification | Date |
|---|---|---|---|---|---|
| Wood-Anderson | E | 0.8 sec | Critical | 2,800 | 2/60 |

WELLINGTON (WN)

Latitude: 41°17'.2 S
Longitude: 174°46'.0 E
Height above mean sea level: 122 metres, 400 ft
Geocentric direction cosines: a - 0.750 478
b + 0.068 739
c - 0.657 311

Lithological Foundation: Greywacke

| Instrument | Component | Period | Damping | Magnification |
|---|---|---|---|---|
| Milne-Shaw | N | 12 sec | 30:1 | 250 |
| Galitzin-Wilip | Z | To = 10.6<br>Tg = 10 | Critical | 600 |
| Wood-Anderson | n | 0.8 | Critical | 2,800 |

The station has also an Imamura strong-motion instrument.

KAIMATA (KM)

Latitude: 42°38'.4 S
Longitude: 171°24'.6 E
Height above mean sea level: 70 metres, 230 ft
Geocentric direction cosines: a - 0.730 977
b + 0.110 420
c - 0.673 410

Lithological Foundation: Moraine and alluvium over Tertiary sandstone and mudstone.

| Instrument | Component | Period | Damping | Magnification | Date |
|---|---|---|---|---|---|
| Wood-Anderson | NE(X) | 0.8 sec | Critical | 2,800 | 2/60 |

GEBBIES PASS (GP)

Latitude: 43°41'.7 S
Longitude: 172°38'.8 E
Height above mean sea level: 225 metres, 740 ft
Geocentric direction cosines: a - 0.719 385
b + 0.092 835
c - 0.688 380

Lithological Foundation: Rhyolite

| Instrument | Component | Period | Damping | Magnification | Date |
|---|---|---|---|---|---|
| Wood-Anderson | N | 0.8 | Critical | 2,800 | 9/57 |

ROXBURGH (RX)

Latitude: 45°28'.5 S
Longitude: 169°18'.9 E
Height above mean sea level: 106 metres, 345 ft
Geocentric direction cosines: a - 0.691 422
b + 0.130 458
c - 0.710 576

Lithological Foundation: Chlorite schist.

| Instrument | Component | Period | Damping | Magnification | Date |
|---|---|---|---|---|---|
| Galitzin | Z | To=Tg= 14 sec | Critical | 217 | 5/57 |
| | N | 24 sec | Critical | 323 | |
| | E | 24 sec | Critical | 305 | |

HALLETT (HT)

Latitude: 72°18'.8 S
Longitude: 170°12'.5 E
Height above mean sea level: 3 metres, 10 ft
Geocentric direction cosines: a - 0.301 224
b + 0.051 985
c - 0.952 135

Lithological Foundation: Frozen gravel spit.

| Instrument | Component | To | Tg | Magnification | |
|---|---|---|---|---|---|
| Press-Ewing | Z | 15 | 50 | 1,200 | |
| | N | 15 | 75 | 1,200 | |
| | E | 15 | 75 | 1,200 | |
| Willmore | Z | 1 | 2 | | Nominal |

SCOTT BASE (SB)

Latitude: 77°51'.0S
Longitude: 166°48'.0E
Height above mean sea level: 33 metres, 100 ft
Geocentric direction cosines: a - 0.206 204
b + 0.048 510
c - 0.977 306

Lithological Foundation: Frozen basaltic debris resting on lava flows.

| Instrument | Component | To | Tg | Magnification | |
|---|---|---|---|---|---|
| Benioff | Z | 1.0sec | 25sec | 1,000 | Nominal |
| | N | 1.0 | 10 | | |
| | E | 1.0 | 25 | | |
| | z | 1.0 | 0.2 | 100,000 | Nominal |
| | n | 1.0 | 0.2 | | |
| | e | 1.0 | 0.2 | | |





CHATEAU (CT)

This instrument is under the control of the Geophysical Survey, Geophysics Division, D.S.I.R., and is operated primarily for volcanological research. Seismograms are read by the Seismological Observatory, Wellington, and the readings of earthquakes used to supplement those of the Tongariro station.

Latitude: 39°12'.1 S
Longitude: 175°32'.6 E
Height above mean sea level: 1135 metres
Lithological Foundation: Volcanic ash and lava.

| Instrument | Component | To | Tg | Magnification |
|---|---|---|---|---|
| Willmore | Z | 1 sec | 0.25 sec | 25,000 |

## TIMING ARRANGEMENTS

Radio time-signals originating in the New Zealand Time Service of the DSIR are broadcast 15 times daily by station 2YA of the New Zealand Broadcasting Service. These signals are automatically impressed on the records at all stations within New Zealand, except Auckland, Bunnythorpe, and Wellington, by an arrangement that has been described by B.H. Olsson (N.Z. Journal of Science and Technology, Vol 37B pp 115-8, 1955 Sept.). At Wellington, the timing is derived directly from the Time Service, which is situated in the same building as the seismographs. At the other stations the operator records several signals a day by depressing a hand-key when the signal is heard. At Suva, Raoul Island, Apia, Afiamalu and the Antarctic stations similar methods are in use. The minute marks at the out-stations are provided either by an electric pendulum clock of the Synchronome type, a quartz crystal clock, or a marine chronometer fitted with electric contacts.

## STATION READINGS

The station readings are so arranged that data for the stations within New Zealand and for Suva are given in a single chronological list, and other stations are listed independently. This is partly a result of geographical affinity and partly one of administrative convenience. It is not possible to delay epicentre determination until records from the remoter stations reach Wellington.

All times are given in U.T.; that is, the civil time of the Greenwich meridian, beginning at midnight. New Zealand Standard Time is 12 hours ahead of U.T.

When the horizontal components at a recording station are not oriented north-and-south or east-and-west, the directions are designated X and Y, and the corresponding bearings listed with the station constants in the section 'Stations of the N.Z. Network'.

The small letters following the time of an 'impetus' phase indicate the direction of initial movement. u indicates an upwards ground movement, d a downwards one, n, s, e and w towards north, south, east, and west respectively; x and y are horizontal movements as explained above; f is a movement opposite to x, and j a movement opposite to y.

Amplitudes are given in microns (1 micron = $10^{-6}$ metre) and periods in seconds, except for the Antarctic Stations, Samoa, and Raoul Island, where the amplitudes are given in millimetres, read in the manner explained at the beginning of each section.

Magnitudes for local earthquakes are a mean of the indications of the Wood-Anderson stations of the network. For distant earthquakes, the values given are the unified magnitude m, determined at the station and from the wave opposite which the value appears, by the methods of Gutenberg and Richter, 1956 (Annali di Geofisica Vol 9, p.1). Both surface waves and body waves are used.

The accuracy of local earthquake epicentres is indicated by a letter in brackets following the attribution 'NZ'.

(A) epicentres are not in error by more than 5 miles, or 8 km.
(B) " " " " " " " " 10 " " 16 "
(C) " " " " " " " " 15 " " 24 "
(D) " " more uncertain.

The low accuracy of (D) epicentres generally results from the small magnitude of the shock, or from lack of recording stations in certain azimuths.

In indicating focal depth, a distinction is made between shallow earthquakes (S), whose records show clear crustal phases, and normal earthquakes (N), which probably originate near the base of the crust.

## NEW ZEALAND STATIONS AND SUVA

This section does not include readings of New Zealand earthquakes whose magnitudes are less than 5.0; but epicentres have been determined for all such shocks above magnitude 4.0, and for any smaller shocks that have been reported felt. These epicentres, focal depths, and origin times are listed in a separate section of the Report.

Throughout this section, the amplitudes given are those of the actual ground motion, not the deflection of the trace. They are expressed in microns.

| Date | Stn | Phase | | h m s | Az Tz | An Tn | Ae Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|
| JAN 1 | KP | P | Z | 04 24 21 | | | | | |
| | | e | Z | 51 | | | | | |
| | Epicentre: | | | 04 11 40 | 49N 153½E | | | USCGS | |
| 1 | KP | eP | Z | 04 29 03 | | | | | |
| | Epicentre: | | | 04 17 32 | 27½N 142E | | | USCGS | |
| 1 | KP | eP | Z | 06 07 52 | | | | | |
| | Epicentre: | | | 05 57 26 | 18½N 147E | | | USCGS | |
| 1 | KP | P | Z | 11 41 03 | | | | | |
| | CT | P | Z | 11 41 16 | | | | | |
| | WN | eP | N | 11 41 30 | | | | | |
| 1 | KP | P | Z | 12 06 17 | | | | | |
| 2 | CT | eP | Z | 05 19 36 | | | | | |
| | KP | P | Z | 05 19 37 | | | | | |
| | Epicentre: | | | 05 06 54 | Off coast of Sumatra | | | USCGS | |
| 2 | CT | P | Z | 08 39 40 | | | | | |
| | KP | P | Z | 08 39 43½ | | | | | |
| | Epicentre: | | | 08 27 14 | Sandwich Is. | | | USCGS | |
| 2 | KP | eP | Z | 12 34 39 | | | | | |
| | CT | e(P) | Z | 12 34 45 | | | | | |
| | RX | eS | E | 12 44 00 | | | 3 12 | | |
| | | eL | E | 54 | | | 4 22 | | |
| | | eL | N | 13 03 | | 4 25 | | | |
| | WN | eL | N | 13 05 | | | | | |
| | Epicentre: | | | 12 21 51 | W. of Bouvet I. | | | USCGS | |
| 2 | KP | eP | Z | 16 15 26 | | | | | |
| 2 | KP | eP | Z | 21 30 25 | | | | | |
| | Epicentre: | | | 21 22 51 | 58 152½E | | | USCGS | |
| 3 | KP | P | Z | 21 32 46 | | | | | |
| | Epicentre: | | | 21 20 13 | 45N 148E 150km | | | USCGS | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 4 | KP | eP | Z | 04 | 10 | 43 | | | | | | | |
| | Epicentre: | | | 03 | 57 | 03 | 26N | 90E | | | | USCGS | |
| 4 | KP | P | Z | 06 | 27 | 20 | | | | | | | |
| | | i | Z | | | 24 | | | | | | | |
| | | PcP | Z | | 29 | 27 | | | | | | | |
| | | ScP | Z | | 33 | 17 | | | | | | | |
| | CT | eP | Z | 06 | 27 | 27 | | | | | | | |
| | WN | e(P) | N | 06 | 27 | 45 | | | | | | | |
| | GP | eP | N | 06 | 27 | 45 | | | | | | | |
| | SU | eL | N | 06 | 33 | .0 | | | | | | | |
| | Epicentre: | | | 06 | 19 | 49 | 4½S | 153½E | | | | USCGS | |
| 4 | SU | e | N | 10 | 26 | .1 | | | | | | | |
| | KP | P | Z | 10 | 28 | 48½ | | | | | | | |
| | | e | Z | | 29 | 25 | | | | | | | |
| | | e | Z | | | 46 | | | | | | | |
| | CT | eP | Z | 10 | 29 | 03 | | | | | | | |
| | WN | eP | N | 10 | 29 | 19 | | | | | | | |
| | GP | eP | N | 10 | 29 | 46 | | | | | | | |
| 4 | KP | eP | Z | 12 | 00 | 29 | | | | | | | |
| | RX | eL | N | 12 | 01 | .0 | | | 2 | 25 | | | |
| | | L | NE | | 02 | .3 | | | 3 | 16 | 3 | 12 | |
| | | eL | Z | | 03 | .5 | 2 | 10 | | | | | |
| 4 | KP | P | Z | 13 | 46 | 10 | | | | | | | |
| | CT | P | Z | 13 | 46 | 14 | | | | | | | |
| | Epicentre: | | | 13 | 34 | 20 | 18N | 120½E | | | | USCGS | |
| 5 | KP | P | Z | 09 | 37 | 30½ | | | | | | | |
| | ON | e | E | 09 | 37 | 52 | | | | | | | |
| | Epicentre: | | | 09 | 32 | 07 | 15S | 173W | | | | USCGS | |
| 6 | SU | e(L) | N | 13 | 18 | .4 | | | 6 | 5 | | | |
| | RX | eL | NE | 13 | 27 | | | | 2 | 20 | 1 | 20 | |
| | | eL | Z | | 31 | | 2 | 16 | | | | | |
| | WN | eL | ZN | 13 | 33 | | 2 | 12 | 3 | 12 | | | |
| | Epicentre: | | | 13 | 11 | 00 | 10½S | 167E | | | | USCGS | |
| 7 | CT | eP | Z | 08 | 28 | 11 | | | | | | | |
| | | i | Z | | | 17 | | | | | | | |
| | KP | P | Z | 08 | 28 | 12 | | | | | | | |
| | | e | Z | | | 18 | | | | | | | |
| | Epicentre: | | | 08 | 15 | 21 | 6½N | 94E | | | | USCGS | |
| 7 | SU | e | N | 10 | 43 | 52 | | | | | | | |
| 7 | KP | P | Z | 10 | 56 | 26½ | | | | | | | |
| | | i | Z | | | 29 | | | | | | | |
| 7 | KP | eP | Z | 13 | 40 | 45 | | | | | | | |
| | | e | | | | 51 | | | | | | | |
| | CT | eP | Z | 13 | 40 | 50 | | | | | | | |
| | RX | eS | NE | 13 | 50 | 16 | | | | 1 | 12 | | |
| | | eL | N | 14 | 06 | | | | | 6 | 30 | | |
| | | eL | Z | | 10 | | 9 | 18 | | | | | |
| | | M | NE | | 14 | | | | | 7 | 18 | 6 | 18 |
| | WN | eL | ZN | 14 | 11 | | 4 | 20 | 14 | 18 | | | |
| | Epicentre: | | | 13 | 28 | 16 | Sandwich I. | | | | | USCGS | |
| 7 | SU | eP | N | 16 | 02 | 05 | | | | | | | |
| 7 | SU | eP | N | 17 | 23 | 00 | | | | | | | |
| | | iS | N | | 24 | 34 | | | | 7 | 5 | | |
| | | eL | N | | 25 | | | | | 37 | 5 | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 7 | KP | P | Z | 17 | 26 | 20 | | | | | | | |
| | CT | P | Z | 17 | 26 | 34 | | | | | | | |
| 8 | TO | eP | Z | 02 | 47 | 19 | | | | | | | |
| | KP | P | Z | 02 | 47 | 24 | | | | | | | |
| | Epicentre: | | | 02 | 35 | 00 | 58½S | 26W | | | | USCGS | |
| 8 | SU | eP | N | 07 | 46 | 25 | | | | 4 | 4 | | |
| | | i(S) | N | | | 52 | | | | 9 | 4 | | |
| | ON | P | E | 07 | 48 | 55 | | | | | | | |
| | KP | P | Z | 07 | 49 | 10 | | | | | | | |
| | GP | eP | N | 07 | 50 | 16 | | | | | | | |
| | RX | eL | E | 08 | 00 | | | | | | | 2 | 18 |
| | | eL | N | | 02 | | | | | 2 | 16 | | |
| | | eL | Z | | 03 | | 2 | 12 | | | | | |
| 8 | KP | e(P) | Z | 11 | 42 | 57 | | | | | | | |
| | Epicentre: | | | 11 | 29 | 18 | 55S | 27½W | | | | USCGS | |
| 8 | KP | P | Z | 13 | 09 | 35 | | | | | | | |
| 8 | KP | eP | Z | 14 | 58 | 30 | | | | | | | |
| | RX | eL | E | 15 | 20 | | | | | | | | |
| | WN | eL | N | 15 | 30 | | | | | | | | |
| | Epicentre: | | | 14 | 45 | 53 | 55½S | 27½W | | | | USCGS | |
| 9 | KP | P | Z | 02 | 01 | 51 | | | | | | | |
| 9 | KP | eP | Z | 04 | 18 | 47 | | | | | | | |
| 9 | ON | P | E | 04 | 23 | 04 | | | | | | | |
| | | S | E | | 24 | 23 | | | | | | | |
| | KP | P | Z | 04 | 23 | 13 | | | | | | | |
| | | e | Z | | | 39 | | | | | | | |
| | | e | Z | | 24 | 46 | | | | | | | |
| | CT | eP | Z | 04 | 23 | 24 | | | | | | | |
| | | i | Z | | | 28 | | | | | | | |
| | | S | Z | | 25 | 02 | | | | | | | |
| | WN | eP | N | 04 | 23 | 49 | | | | | | | |
| | | S | N | | 25 | 40 | | | | | | | |
| | GP | eP | N | 04 | 24 | 23 | | | | | | | |
| | | S | N | | 26 | 42 | | | | | | | |
| | TU | eS | N | 04 | 24 | (32) | | | | | | | |
| | CB | eS | E | 04 | 25 | 55 | | | | | | | |
| | KM | eS | X | 04 | 26 | (57) | | | | | | | |
| | Epicentre: | | | 04 | 21 | 21 | 32½S | 178¼W | 340 km | | | NZ(D) | 6.0NZ |
| 9 | KP | P | Z | 04 | 50 | 32 | | | | | | | |
| 9 | KP | eP | Z | 18 | 05 | 39 | | | | | | | |
| | RX | eL | ZNE | 18 | 16 | | 2 | 15 | 2 | 16 | 2 | 16 | |
| 9 | ON | eP | E | 15 | 24 | 03 | | | | | | | |
| | KP | eP | Z | 15 | 24 | 11 | | | | | | | |
| | WN | eS | N | 15 | 26 | 46 | | | | | | | |
| | GP | eS | N | 15 | 27 | 49 | | | | | | | |
| 9 | CB | ePKP | E | 07 | 42 | 30 | | | | | | | |
| | KP | PKP | Z | 07 | 42 | 31 | | | | | | | |
| | GP | PKP | N | 07 | 42 | 31 | | | | | | | |
| | WN | ePKP | N | 07 | 42 | 33 | | | | | | | |
| | Epicentre: | | | 07 | 23 | 50 | 36N | 69E | 150km | | | USCGS | |
| 9 | KP | eP | Z | 07 | 52 | 08 | | | | | | | |
| | | e | Z | | | 14 | | | | | | | |
| | Epicentre: | | | 07 | 41 | 57 | 1S | 124E | | | | USCGS | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 10 | KP | P | Z | 03 | 45 | 26 | | | | | | | |
| | | e | Z | | | 40 | | | | | | | |
| 10 | KP | P | Z | 13 | 00 | 54 | | | | | | | |
| 10 | KP | P | Z | 13 | 14 | 09 | | | | | | | |
| 11 | KP | P | Z | 02 | 39 | 40 | | | | | | | |
| | CT | P | Z | 02 | 39 | 45 | | | | | | | |
| | Epicentre: | | | 02 | 27 | 38 | 28½N | 131E | | | | USCGS | |
| 11 | KP | P | Z | 05 | 41 | 24½ | | | | | | | |
| | CT | eP | Z | 05 | 41 | 37 | | | | | | | |
| 11 | KP | eP | Z | 15 | 02 | 46 | | | | | | | |
| | | iPcP | Z | | 03 | 41 | d | | | | | | |
| | | PP | Z | | 04 | 31 | | | | | | | |
| | CT | eP | Z | 15 | 02 | 49 | | | | | | | |
| | | PcP | Z | | 03 | 43 | | | | | | | |
| | | ePP | Z | | 04 | 32 | | | | | | | |
| | GP | PcP | N | 15 | 03 | 42 | | | | | | | |
| | WN | PcP | N | 15 | 03 | 44 | | | | | | | |
| | Epicentre: | | | 14 | 53 | 29 | 9S | 127E | | | | USCGS | |
| 11 | KP | eP | Z | 17 | 29 | 48 | | | | | | | |
| 11 | ON | eP | E | 17 | 52 | 34 | | | | | | | |
| | | eS | E | | 54 | 36 | | | | | | | |
| | | eL | E | | 55 | 43 | | | | | | | |
| | KP | eP | Z | 17 | 52 | 42 | | | | | | | |
| | WN | eP | N | 17 | 53 | 29 | | | | | | | |
| | | S | N | | 55 | 52 | | | | | | | |
| | | L | N | | 58 | .4 | | | 7 | 15 | | | |
| | | eL | Z | | 58 | 32 | 3 | 12 | | | | | |
| | GP | eP | N | 17 | 54 | 00 | | | | | | | |
| | | eS | N | | 56 | 54 | | | | | | | |
| | AK | eL | N | 17 | 55½ | | | | | | | | |
| | | M | N | | 58 | | | | | | | | |
| | SU | eL | N | 17 | 57 | .5 | | | | | | | |
| | RX | eL | NE | 18 | 00 | 16 | | | 3 | 18 | 4 | 20 | 5.5 |
| | | eL | Z | | 03½ | | 4 | 12 | | | | | |
| | Epicentre: | | | 17 | 49 | 58 | 29S | 176W | | | | USCGS | |
| 11 | KP | P | Z | 23 | 02 | 47½ | | | | | | | |
| | | i | Z | | 57 | | | | | | | | |
| | Epicentre: | | | 22 | 54 | 03 | 28 | 140½E | | | | USCGS | |
| 12 | KP | eP | Z | 02 | 04 | 46 | | | | | | | |
| | | e | Z | | 57 | | | | | | | | |
| | Epicentre: | | | 01 | 52 | 37 | 23½N | 122E | | | | USCGS | |
| 12 | KP | eP | Z | 03 | 21 | 46 | | | | | | | |
| | RX | eL | N | 03 | 50 | | | | 2 | 20 | | | 5.9 |
| | Epicentre: | | | 03 | 09 | 10 | 55½S | 27W | | | | USCGS | |
| 12 | ON | eP | E | 07 | 57 | 18 | | | | | | | |
| | | eS | E | | 59 | 09 | | | | | | | |
| | AK | eP | N | 07 | 57 | 27 | | | | | | | |
| | | S | N | | 59 | 26 | | | | | | | |
| | KP | P | Z | 07 | 57 | 31 | | | | | | | |
| | | e | Z | | | 50 | | | | | | | |
| | | eS | Z | | 59 | 40 | | | | | | | |
| | WN | eP | N | 07 | 58 | 05 | | | | | | | |
| | | S | N | 08 | 00 | 33 | | | | | | | |
| | GP | e | N | 07 | 59 | 30 | | | | | | | |
| | | eS | N | 08 | 01 | 30 | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 12 | TU | eS | N | 07 | 59 | 39 | | | | | | | |
| | CB | eS | E | 08 | 00 | 46 | | | | | | | |
| | Epicentre: | | | 07 | 54 | 55 | 27½S | 178½W | 350 | km | | NZ(D) | 6.2 NZ |
| 12 | KP | eP | Z | 11 | 18 | 52 | | | | | | | |
| | | e | Z | | 19 | 03 | | | | | | | |
| 12 | SU | e(P) | N | 22 | 24 | 53 | | | 7 | 4 | | | |
| | ON | P | E | 22 | 27 | 24 | | | | | | | |
| | KP | eP | Z | 22 | 27 | 38 | | | | | | | |
| | CT | eP | Z | 22 | 27 | 51 | | | | | | | |
| 13 | KP | P | Z | 06 | 38 | 02 | | | | | | | |
| | CT | P | Z | 06 | 38 | 13 | | | | | | | |
| 13 | KP | iP | Z | 07 | 35 | 02½ | | | | | | | |
| | | e | Z | | | 28 | | | | | | | |
| | CT | P | Z | 07 | 35 | 08 | | | | | | | |
| | WN | eP | N | 07 | 35 | 13 | | | | | | | |
| | GP | eP | N | 07 | 35 | 17 | | | | | | | |
| | Epicentre: | | | 07 | 26 | 26 | 3½S | 140E | | | | USCGS | |
| 13 | WN | eP | ZN | 15 | 53 | 45 | 3 | 8 | | | | | |
| | | epP | Z | | 54 | 44 | 2 | 8 | | | | | |
| | | eiPP | ZN | | 57 | 38 | 8 | 9 | 4 | 7 | | | |
| | | SKKS | N | 16 | 04 | 15 | | | 5 | 7 | | | |
| | | e(ScS) | Z | | | 56 | 5 | 10 | | | | | |
| | | (SP) | N | | 05 | 30 | | | | | | | |
| | | (PS) | Z | | 06 | 16 | 7 | 10 | | | | | |
| | | SS | ZN | | 11 | 32 | 7 | 14 | 16 | 10 | | | |
| | | | Z | | 13 | 40 | 2 | 8 | | | | | |
| | | eSSS | N | | 15 | 05 | | | 9 | 20 | | | |
| | | eLq | N | | 20 | | | | 58 | 30 | | | |
| | | eLr | ZN | | 24 | | 32 | 20 | 16 | 19 | | | 6.5 |
| | | e(W2) | N | 17 | 32 | | | | 50 | 60 | | | |
| | CT | eP | Z | 15 | 53 | 49 | | | | | | | |
| | | e | Z | | 54 | 09 | | | | | | | |
| | | e | Z | | | 16 | | | | | | | |
| | KP | eP | Z | 15 | 53 | 50 | | | | | | | |
| | | PcP | Z | | 54 | 09 | | | | | | | |
| | | e(PP) | Z | | 57 | 49 | | | | | | | |
| | RX | eP | ZE | 15 | 53 | 56 | 5 | 10 | | | | | |
| | | ePP | ZNE | | 57 | 50 | 9 | 14 | 4 | 12 | 4 | 12 | |
| | | SKKS | NE | 16 | 04 | 20 | | | 12 | 14 | 21 | 14 | |
| | | e(SP) | NE | | 05 | 57 | | | 56 | 26 | 20 | 26 | |
| | | e(PS) | Z | | 06 | 34 | 22 | 15 | | | | | |
| | | e(SS) | NE | | 12 | 02 | | | 63 | 20 | 33 | 22 | |
| | | eLq | NE | | 21 | | | | 62 | 26 | 21 | 30 | |
| | | eLr | Z | | 24 | | 95 | 20 | | | | | |
| | GP | eSKKS | N | 16 | 04 | 15 | | | | | | | |
| | AK | SKKS | N | 16 | 04 | 24 | | | | | | | |
| | | (SP) | N | | 05 | 49 | | | | | | | |
| | | (SS) | N | | 12 | 34 | | | | | | | |
| | | eL | N | | 20 | .1 | | | | | | | |
| | ON | eSKKS | E | 16 | 04 | 27 | | | | | | | |
| | SU | eSKKS | N | 16 | 05 | 25 | | | | | | | |
| | Epicentre: | | | 15 | 40 | 34 | 16S | 72W | 200 | km | | USCGS | |
| 13 | KP | eP | Z | 16 | 42 | 40 | | | | | | | |
| | | e(pP) | Z | | | 50 | | | | | | | |
| | CT | eP | Z | 16 | 42 | 44 | | | | | | | |
| | | e(pP) | Z | | 43 | 00 | | | | | | | |
| | Epicentre: | | | 16 | 29 | 41 | 51½N | 180 | | | | USCGS | |
| 14 | KP | P | Z | 02 | 53 | 58 | | | | | | | |
| | | (pP) | Z | | 54 | 14 | | | | | | | |
| | Epicentre: | | | 02 | 41 | 24 | Northern Sumatra | | | | | USCGS | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 14 | KP | P | Z | 10 | 38 | 02 | | | | | | | | |
| | | (pP) | Z | | | 20 | | | | | | | | |
| | | e | Z | | 39 | 00 | | | | | | | | |
| | | Epicentre: | | 10 | 25 | 52 | 37N | 140E | | | | | USCGS | |
| ✳15 | KP | P | Z | 09 | 43 | 38 | | | | | | | | |
| | | epP | Z | | 44 | 17 | | | | | | | | |
| | RX | eS | N | 09 | 54 | 18 | | | 2 | 10 | | | | 6.2 |
| | | e | N | | 55 | 00 | | | 3 | 20 | | | | |
| | | eSS | N | 10 | 01 | 40 | | | 5 | 20 | | | | |
| | | eL | N | | 10 | | | | 6 | 28 | | | | |
| | | eL | Z | | 14 | | 24 | 28 | | | | | | |
| | WN | eS | N | 09 | 54 | 44 | | | 3 | 7 | | | | 6.5 |
| | | eL | N | 10 | 10.9 | | | | 11 | 20 | | | | |
| | | eL | Z | | 14.0 | | | | 14 | 20 | | | | |
| | | Epicentre: | | 09 | 30 | 24 | 15S | 75W | 150 | km | | | USCGS | |
| 15 | KP | P | Z | 23 | 49 | 10 | | | | | | | | |
| | CT | eP | Z | 23 | 49 | 14 | | | | | | | | |
| | | Epicentre: | | 23 | 38 | 50 | Northern | Celebes | | | | | USCGS | |
| 16 | RX | eS | ZN | 07 | 03 | 20 | | | 2 | 7 | | | | 5.4 |
| | | eL | ZN | | 07½ | | 6 | 20 | 3 | 20 | | | | |
| | | Epicentre: | | 06 | 59 | 00 | 59½S | 149½E | | | | | USCGS | |
| 16 | SU | iP | N | 12 | 32 | 22 | | | | | | | | |
| | ON | eP | E | 12 | 34 | 27 | | | | | | | | |
| | | eS | E | | 37 | 18 | | | | | | | | |
| | KP | P | Z | 12 | 34 | 38½ | | | | | | | | |
| | WN | eP | N | 12 | 35 | 08 | | | | | | | | |
| | | eS | | | 38 | 27 | | | | | | | | |
| | GP | eS | N | 12 | 39 | 12 | | | | | | | | |
| | | Epicentre: | | 12 | 30 | 56 | 20½S | 178W | 600 | km | | | USCGS | |
| 16 | SU | eP | N | 15 | 34 | 29 | | | 8 | 4 | | | | |
| | ON | e(P) | E | 15 | 36 | 22 | | | | | | | | |
| | KP | eP | Z | 15 | 36 | 41 | | | | | | | | |
| | | i | Z | | | 46 | | | | | | | | |
| | WN | eL | N | 15 | 45 | 00 | | | 3 | 12 | | | | |
| | | Epicentre: | | 15 | 32 | 56 | 22½S | 173½E | | | | | USCGS | |
| 16 | KP | eP | Z | 18 | 43 | 59 | | | | | | | | |
| | GP | eS | N | 18 | 44 | 43 | | | | | | | | |
| | | Epicentre: | | 18 | 38 | 40 | 13S | 167½E | 200 | km | | | USCGS | |
| 16 | KP | eP | Z | 19 | 27 | 03 | | | | | | | | |
| | WN | eS | N | 19 | 29 | 28 | | | | | | | | |
| | GP | eS | N | 19 | 30 | 35 | | | | | | | | |
| 16 | KP | P | Z | 21 | 47 | 59 | | | | | | | | |
| | | Epicentre: | | 21 | 41 | 44 | 10S | 161½E | | | | | USCGS | |
| 17 | KP | P | Z | 04 | 31 | 52 | | | | | | | | |
| | | Epicentre: | | 04 | 19 | 07 | 40½N | 142E | | | | | USCGS | |
| 17 | KP | iP | Z | 08 | 42 | 27 | | | | | | | | |
| | | S | Z | | | 45 | | | | | | | | |
| | CT | iP | Z | 08 | 42 | 28 | | | | | | | | |
| | WN | P | N | 08 | 42 | 48 | | | | | | | | |
| | | S | N | | 43 | 23 | | | | | | | | |
| | TU | S | N | 08 | 42 | 50 | | | | | | | | |
| | GP | eP | N | 08 | 43 | 21 | | | | | | | | |
| | | S | N | | 44 | 24 | | | | | | | | |
| | CB | S | E | 08 | 43 | 36 | | | | | | | | |
| | | Epicentre: | | 08 | 42 | 02 | 38.5S | 175.9E | 170 | km | | | NZ(C) | 5.1 NZ |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 18 | KP | P | Z | 00 | 19 | 38 | | | | | | | | | |
| | | Epicentre: | | 00 | 14 | 30 | | 16S | 174½W | 100 | km | | | USCGS | |
| 18 | KP | P | Z | 09 | 15 | 26 | | | | | | | | | |
| | CT | eP | Z | 09 | 15 | 31 | | | | | | | | | |
| | | Epicentre: | | 09 | 04 | 43 | | 5N | 126½E | | | | | USCGS | |
| 18 | KP | P | Z | 18 | 39 | 02 | | | | | | | | | |
| 19 | KP | P | Z | 02 | 30 | 09 | | | | | | | | | |
| | | pP | Z | | | 22 | | | | | | | | | |
| | | Epicentre: | | 02 | 16 | 52 | | 52N | 158E | | | | | USCGS | |
| 19 | SU | iP | N | 09 | 16 | 39 | | | | | | | | | |
| | | iS | N | | 17 | 55 | | | | | | | | | |
| | ON | P | E | 09 | 17 | 57 | | | | | | | | | |
| | | S | E | | 20 | 19 | | | | | | | | | |
| | KP | P | Z | 09 | 18 | 14 | d | | | | | | | | |
| | | S | Z | | 20 | 55 | | | | | | | | | |
| | TU | eP | N | 09 | 18 | 18 | | | | | | | | | |
| | | eS | N | | 20 | 52 | | | | | | | | | |
| | CT | P | Z | 09 | 18 | 26 | | | | | | | | | |
| | | eS | Z | | 21 | 06 | | | | | | | | | |
| | CB | eP | E | 09 | 18 | 43 | | | | | | | | | |
| | | S | E | | 21 | 43 | | | | | | | | | |
| | WN | iP | N | 09 | 18 | 46 | s | | | | | | | | |
| | | S | N | | 21 | 42 | | | | | | | | | |
| | GP | P | N | 09 | 19 | 10½ | | | | | | | | | |
| | | S | N | | 22 | 25 | | | | | | | | | |
| | | Epicentre: | | 09 | 15 | 04 | | 23S | 180 | 600 | km | | | USCGS | |
| 19 | ON | eP | E | 09 | 54 | 27 | | | | | | | | | |
| | WN | P | N | 09 | 54 | 33 | | | | | | | | | |
| | | S | N | | 57 | 16 | | | | | | | | | |
| | KP | P | Z | 09 | 54 | 36 | | | | | | | | | |
| | TU | eS | N | 09 | 56 | 09 | | | | | | | | | |
| | GP | eS | N | 09 | 58 | 19 | | | | | | | | | |
| 19 | KP | eP | Z | 19 | 31 | 53 | | | | | | | | | |
| | | i | Z | | | 55 | u | | | | | | | | |
| | CT | eP | Z | 19 | 32 | 03 | | | | | | | | | |
| | | i | Z | | | 04 | | | | | | | | | |
| | WN | P | N | 19 | 32 | 23 | | | | | | | | | |
| | | S | N | | 35 | 25 | | | | | | | | | |
| | GP | eP | N | 19 | 32 | 48 | | | | | | | | | |
| | | eS | N | | 36 | 04 | | | | | | | | | |
| | TU | eS | N | 19 | 34 | 35 | | | | | | | | | |
| 19 | SU | e | N | 23 | 25.9 | | | | | | 13 | 7 | | | |
| 20 | KP | P | Z | 02 | 54 | 13 | | | | | | | | | |
| | | e | Z | | 56 | 02 | | | | | | | | | |
| | SU | eP | N | 02 | 51.2 | | | | | | | | | | |
| | | Epicentre: | | 02 | 50 | 02 | | 17½S | 178W | 500 | km | | | USCGS | |
| 20 | TO | iP | Z | 03 | 44 | 44 | u | | | | | | | | |
| | KP | iP | Z | 03 | 44 | 44¼ | | | | | | | | | |
| | | S | Z | | 45 | 03 | | | | | | | | | |
| | CT | iP | Z | 03 | 44 | 44½ | | | | | | | | | |
| | TU | P | N | 03 | 44 | 48 | | | | | | | | | |
| | | S | N | | 45 | 07 | | | | | | | | | |
| | WN | P | N | 03 | 45 | 04 | | | | | | | | | |
| | | S | N | | | 37½ | | | | | | | | | |
| | CB | S | E | 03 | 45 | 50 | | | | | | | | | |
| | GP | eP | N | 03 | 45 | 39 | | | | | | | | | |
| | | S | N | | 46 | 38 | | | | | | | | | |
| | | Epicentre: | | 03 | 44 | 22 | | 38.6S | 175.7E | 150 | km | | | NZ(C) | 5.2 NZ |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 20 | SU | e | N | 11 | 39.5 | | | | | | | | | |
| 20 | KP | eP | Z | 20 | 03 | 44 | | | | | | | | |
| | | e | Z | | | 59 | | | | | | | | |
| | CT | eP | Z | 20 | 03 | 52 | | | | | | | | |
| | GP | eP | N | 20 | 04 | 12 | | | | | | | | |
| | Epicentre: | | | 19 | 56 | 14 | 4½S | 153½E | | | | | USCGS | |
| 21 | ON | eP | E | 10 | 47 | 27 | | | | | | | | |
| | | e | E | | | 51 | 37 | | | | | | | |
| | | eL | E | | | 54.1 | | | | | | | | |
| | KP | eP | Z | 10 | 47 | 44 | | | | | | | | |
| | | ? | Z | | | 50 | | | | | | | | |
| | AK | P | N | 10 | 47 | 46 | | | | | | | | |
| | | iS | N | | | 51 | 45 | | | | | | | |
| | | e | N | | | 54.8 | | | | | | | | |
| | CT | e | Z | 10 | 47 | 58 | | | | | | | | |
| | CB | eP | E | 10 | 48 | 23 | | | | | | | | |
| | GP | eP | N | 10 | 48 | 45 | | | | | | | | |
| | WN | (PP) | N | 10 | 49 | 11 | | | 6 | 5 | | | | |
| | | e(Lq) | N | | | 55½ | | | | | | | | |
| | | e(Lr) | Z | | | 57½ | 10 | 12 | | | | | | |
| | RX | e(Lq) | N | 10 | 57½ | | | | 7 | 25 | | | | |
| | | e(Lr) | ZE | | | 58 | 22 | 20 18 | | | 9 | 16 | | |
| | Epicentre: | | | 10 | 43 | 33 | 16S | 179½E | 600 | km | | | USCGS | |
| 21 | ON | eP | E | 17 | 48 | 43 | | | | | | | | |
| | KP | eP | Z | 17 | 48 | 56 | | | | | | | | |
| | TU | eP | N | 17 | 48 | 59 | | | | | | | | |
| | CT | eP | Z | 17 | 49 | 05 | | | | | | | | |
| | WN | eP | N | 17 | 49 | 24 | | | | | | | | |
| | CB | eP | E | 17 | 49 | 30 | | | | | | | | |
| | GP | eP | N | 17 | 49 | 49 | | | | | | | | |
| | Epicentre: | | | 17 | 43 | 46 | 15½S | 174W | 100 | km | | | USCGS | |
| 22 | KP | eP | Z | 02 | 27 | 12 | | | | | | | | |
| | Epicentre: | | | 02 | 14 | 11 | 42N | 142½E | | | | | USCGS | |
| 22 | KP | P | Z | 13 | 46 | 04 | | | | | | | | |
| | | e | Z | | | 21 | | | | | | | | |
| | GP | eP | N | 13 | 46 | 06 | | | | | | | | |
| | CT | P | Z | 13 | 46 | 07 | | | | | | | | |
| | | e | Z | | | 28 | | | | | | | | |
| | TO | eP | Z | 13 | 46 | 07 | | | | | | | | |
| | WN | e(P) | N | 13 | 46 | 10 | | | | | | | | |
| | Epicentre: | | | 13 | 35 | 54 | 0 | 125E | | | | | USCGS | |
| 23 | SU | e(P) | N | 04 | 50 | 16 | | | 3 | 3 | | | | |
| | | i | N | | | 51 | 01 | | 6 | 3 | | | | |
| | | S | N | | | 57 | 34 | | 6 | 5 | | | | |
| | CB | eP | E | 04 | 50 | 30 | | | | | | | | |
| | RX | eP | Z | 04 | 50 | 32 | | | | | | | | |
| | | eS | NE | | | 58.0 | | | 4 | 9 | 5 | 10 | | 6.4 |
| | | e(PS) | Z | | | 58.8 | | | | | | | | |
| | | e(SSS) | NE | 05 | 03 | | | | 17 | 20 | 8 | 20 | | |
| | | eLr | ZNE | | | 08 | | 19 23 | 11 | 24 | 10 | 23 | | |
| | KP | eiP | Z | 04 | 50 | 35 | | | | | | | | |
| | | e | Z | | | 52 | 41 | | | | | | | |
| | CT | eP | Z | 04 | 50 | 38 | | | | | | | | |
| | TO | eP | Z | 04 | 50 | 38 | | | | | | | | |
| | GP | eP | N | 04 | 50 | 41 | | | | | | | | |
| | WN | P | Z | 04 | 50 | 42 | 3 | 4 | | | | | | 6.7 |
| | | e | Z | | | 53 | 30 | 3 | 5 | | | | | |
| | | eS | N | | | 58 | 25 | | 12 | 6 | | | | |
| | | eLq | N | 05 | 04.9 | | | | | | | | | |
| | | eLr | ZN | | | 09 | | 11 18 | 4 | 23 | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 23 | AK | S | N | 04 | 58 | 11 | | | | | | | | |
| | | eLr | N | 05 | 08 | | | | | | | | | |
| | Epicentre: | | | 04 | 40 | 56 | 4S | 127½E | | | | | USCGS | |
| 23 | SU | P | N | 06 | 25 | 32 | | | | | 6 | 2 | | |
| | | iS | N | | | 26 | 38 | | | | 71 | 4 | | |
| | KP | eiP | Z | 06 | 28 | 39 | | | | | | | | |
| | TO | eP | Z | 06 | 28 | 47 | | | | | | | | |
| | | e? | Z | | | 32 | 39 | | | | | | | |
| | CT | eP | Z | 06 | 28 | 48 | | | | | | | | |
| | | e? | Z | | | 32 | 53 | | | | | | | |
| | | eS | Z | | | 33 | 08 | | | | | | | |
| | WN | eP | N | 06 | 29 | 08 | | | | | | | | |
| | | e? | N | | | 33 | 54 | | | | | | | |
| | TU | e | N | 06 | 32 | 30 | | | | | | | | |
| | CB | eS | E | 06 | 33 | 11 | | | | | | | | |
| | Epicentre: | | | 06 | 24 | 08 | 17S | 177W | 400 | km | | | USCGS | |
| 23 | SU | e(P) | N | 07 | 40 | 31 | | | | | 3 | 3 | | |
| | | S | N | | | 47 | 51 | | | | 4 | 6 | | |
| | CB | eP | E | 07 | 40 | 49 | | | | | | | | |
| | AK | eP | N | 07 | 40 | 50 | | | | | | | | |
| | | S | N | | | 48 | 24 | | | | | | | |
| | | eL | N | | | 54 | | | | | | | | |
| | KP | eP | Z | 07 | 40 | 53 | | | | | | | | |
| | | eScS | Z | | | 50 | 21 | | | | | | | |
| | CT | eP | Z | 07 | 40 | 57 | | | | | | | | |
| | | eScS | Z | | | 50 | 22 | | | | | | | |
| | TO | eP | Z | 07 | 40 | 57 | | | | | | | | |
| | | eScS | Z | | | 50 | 25 | | | | | | | |
| | WN | P | Z | 07 | 40 | 59 | 4 | 5 | | | | | | 6.7 |
| | | eS | N | | | 48 | 40 | | | | 4 | 5 | | 6.3 |
| | | e | N | | | 50 | 07 | | | | 4 | 8 | | |
| | | e(SS) | N | | | 52 | 10 | | | | 4 | 5 | | |
| | | eLq | N | | | 55 | | | | | | | | |
| | | eLr | ZN | 08 | 00 | | | 7 20 | | | 9 | 12 | | |
| | GP | eP | N | 07 | 41 | 01 | | | | | | | | |
| | RX | e? | NE | 07 | 41 | 03 | | | | | 2 | 7 | 4 | 7 |
| | | e(PP) | Z | | | 42 | 58 | 3 6 | | | | | | |
| | | eS | NE | | | 48 | 32 | | | | 3 | 18 | 5 | 22 |
| | | e(SSS) | NE | | | 53½ | | | | | 17 | 20 | 9 | 20 |
| | | e(Lr) | ZNE | | | 58 | | 15 20 | | | 14 | 13 | 9 | 14 |
| | TU | eP | N | 07 | 41 | 07 | | | | | | | | |
| | Epicentre: | | | 07 | 31 | 14 | 4S | 127½E | | | | | USCGS | |
| 23 | TU | eP | N | 13 | 14 | 48 | | | | | | | | |
| | | S | N | | | 15 | 47 | | | | | | | |
| | KP | P | Z | 13 | 14 | 50 | | | | | | | | |
| | | e | Z | | | 16 | 06 | | | | | | | |
| | CT | eP | Z | 13 | 14 | 59 | | | | | | | | |
| | | i | Z | | | 15 | 02 | | | | | | | |
| | | eS | Z | | | 16 | 10 | | | | | | | |
| | TO | eP | Z | 13 | 14 | 59 | | | | | | | | |
| | | i | Z | | | 15 | 02 | | | | | | | |
| | | eS | Z | | | 16 | 20 | | | | | | | |
| | WN | eP | N | 13 | 15 | 25 | | | | | | | | |
| | | S | N | | | 16 | 55 | | | | | | | |
| | CB | eP | E | 13 | 15 | 35 | | | | | | | | |
| | | S | E | | | 17 | 12 | | | | | | | |
| | GP | eP | N | 13 | 16 | 02 | | | | | | | | |
| | | S | N | | | 17 | 59 | | | | | | | |
| | Epicentre: | | | 13 | 13 | 29 | 34½S | 179½W | 220 | km | | | NZ(D) | 5.8 NZ |
| 23 | SU | e | N | 13 | 49.0 | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 23 | KP | eP | Z | 18 | 06 | 09 | | | | | | | | | |
| | CB | eP | E | 18 | 06 | 09 | | | | | | | | | |
| | CT | eP | Z | 18 | 06 | 13 | | | | | | | | | |
| | TO | eP | Z | 18 | 06 | 13 | | | | | | | | | |
| | GP | eP | N | 18 | 06 | 16 | | | | | | | | | |
| | WN | eP | Z | 18 | 06 | 19 | | | | | | | | | |
| | | e(SSS) | N | | 20 | 24 | | | | | | | | | |
| | | e(L) | Z | | 22 | | | 4 | 15 | | | | | | |
| | TU | eP | N | 18 | 06 | 22 | | | | | | | | | |
| | RX | e | Z | 18 | 06 | 25 | | 3 | 6 | | | | | | |
| | | e(S) | ZN | | 14 | | | | | | | | | | |
| | | e(SSS) | ZNE | | 19 | | | | | | | | | | |
| | AK | eS | N | 18 | 13.7 | | | | | | | | | | |
| | | e(SSS) | N | | 19.5 | | | | | | | | | | |
| | Epicentre: | | | 17 | 56 | 30 | | 4S | 127½E | | | | | USCGS | |
| 23 | KP | eP | Z | 22 | 04 | 37 | | | | | | | | | |
| | Epicentre: | | | 21 | 57 | 08 | | 5½S | 152E | | | | | USCGS | |
| 24 | KP | eP | Z | 01 | 16 | 41 | | | | | | | | | |
| 24 | SU | P | N | 04 | 22 | 31 | n | | | | | | | | |
| | ON | P | E | 04 | 26 | 30 | | | | | | | | | |
| | | eS | E | | 30 | 32 | | | | | | | | | |
| | | eL | E | | 33.0 | | | | | | | | | | |
| | KP | P | Z | 04 | 26 | 46 | | | | | | | | | |
| | | eL | Z | | 34 | | | | | | | | | | |
| | CT | P | Z | 04 | 26 | 58 | | | | | | | | | |
| | TO | eP | Z | 04 | 26 | 58 | | | | | | | | | |
| | WN | P | ZN | 04 | 27 | 22 | | 3 | 8 | | | | | | 6.0 |
| | | eL | N | | 34½ | | | | | 100 | 30 | | | | |
| | | eL | Z | | 35 | | | 61 | 16 | | | | | | |
| | | M | N | | 39 | | | | | 77 | 15 | | | | |
| | GP | eP | N | 04 | 27 | 41 | | | | | | | | | |
| | RX | eP | N | 04 | 28 | 08 | | | | | | | | | |
| | | ePP | N | | 29 | | | | | 3 | 18 | | | | |
| | | S | N | | 33 | | | | | 7 | 13 | | | | 6.0 |
| | | Lq | E | | 35½ | | | | | | | 19 | 30 | | |
| | | Lr | ZN | | 36½ | | | 42 | 30 | 34 | 30 | | | | |
| | | M1 | NE | | 39 | | | | | 22 | 19 | 74 | 20 | | |
| | | M2 | N | | 40 | | | | | 62 | 17 | | | | |
| | TU | eL | N | 04 | 34 | | | | | | | | | | |
| | Epicentre: | | | 04 | 21 | 42 | | 15½S | 179W | | | | | USCGS | |
| 24 | SU | e? | N | 09 | 19 | 27 | | | | | | | | | |
| | | S | N | | 20 | 41 | | | | 6 | 3 | | | | |
| | ON | P | E | 09 | 21 | 25 | | | | | | | | | |
| | TO | eP | Z | 09 | 21 | 50 | | | | | | | | | |
| | Epicentre: | | | 09 | 17 | 59 | | 20½S | 180 | 600 | km | | | USCGS | |
| 24 | KP | eP | Z | 12 | 24 | 29 | | | | | | | | | |
| | | e | Z | | 25 | 04 | | | | | | | | | |
| | TO | eP | Z | 12 | 24 | 35 | | | | | | | | | |
| | Epicentre: | | | 12 | 16 | 23 | | 4½S | 143½E | 100 | km | | | USCGS | |
| 24 | KP | P | Z | 17 | 02 | 04 | | | | | | | | | |
| | Epicentre: | | | 16 | 56 | 44 | | 14½S | 166½E | | | | | USCGS | |
| 25 | KP | P | Z | 11 | 02 | 05 | | | | | | | | | |
| 25 | SU | P | N | 16 | 30 | 22 | | | | 8 | 2 | | | | |
| | ON | P | E | 16 | 34 | 16 | | | | | | | | | |
| | | ePP | E | | | 59 | | | | | | | | | |
| | | eS | E | | 38 | 21 | | | | | | | | | |
| | | eL | E | | 40½ | | | | | | | | | | |
| | KP | P | Z | 16 | 34 | 35 | | | | | | | | | |
| | | ePP | Z | | 35 | 25 | | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 25 | CT | eP | Z | 16 | 34 | 50 | | | | | | | | | |
| | | e | Z | | 35 | 45 | | | | | | | | | |
| | GP | eP | N | 16 | 35 | 29 | | | | | | | | | |
| | RX | eS | N | 16 | 40 | 56 | | | | 20 | 14 | | | | 5.2 |
| | | eLq | E | | 43 | | | | | | | 5 | 30 | | |
| | | eLr | Z | | 45 | | | 12 | 21 | | | | | | |
| | | M | NE | | 46 | | | | | 7 | 20 | 8 | 20 | | |
| | WN | eLq | N | 16 | 41.4 | | | | | 11 | 20 | | | | 5.8 |
| | | eLr | Z | | 42.0 | | | 16 | 20 | | | | | | |
| | Epicentre: | | | 16 | 29 | 26 | | 16S | 179W | | | | | USCGS | |
| 25 | KP | P | Z | 16 | 49 | 00 | | | | | | | | | |
| 25 | SU | e | N | 17 | 01.0 | | | | | | | | | | |
| | KP | eP | Z | 17 | 04 | 08 | | | | | | | | | |
| 26 | KP | PKP | Z | 10 | 11 | 53 | | | | | | | | | |
| | | e | Z | | | 58 | | | | | | | | | |
| | CT | ePKP | Z | 10 | 11 | 54 | | | | | | | | | |
| | | e | Z | | | 58 | | | | | | | | | |
| | TO | e | Z | 10 | 11 | 59 | | | | | | | | | |
| | Epicentre: | | | 09 | 52 | 00 | | 39½N | 39½E | | | | | USCGS | |
| 26 | ON | P | E | 22 | 23 | 28 | | | | | | | | | |
| | KP | P | Z | 22 | 23 | 32 | | | | | | | | | |
| | | e | Z | | | 41 | | | | | | | | | |
| | | e | Z | | | 52 | | | | | | | | | |
| | TU | eP | N | 22 | 23 | 32 | | | | | | | | | |
| | | S | N | | 25 | 08 | | | | | | | | | |
| | CT | eP | Z | 22 | 23 | 39 | | | | | | | | | |
| | | e | Z | | | 52 | | | | | | | | | |
| | | e | Z | | 24 | 04 | | | | | | | | | |
| | | e(S) | Z | | 25 | 36 | | | | | | | | | |
| | SU | P | N | 22 | 24 | 45 | | | | | | 3 | 3 | | |
| | GP | eP | N | 22 | 24 | 53 | | | | | | | | | |
| | | eS | N | | 27 | 21 | | | | | | | | | |
| | WN | S | N | 22 | 26 | 16 | | | | | | | | | |
| | CB | eS | E | 22 | 26 | 33 | | | | | | | | | |
| | Epicentre: | | | 22 | 21 | 19 | | 30S | 178W | | | | | USCGS | |
| 27 | ON | eP | E | 10 | 09 | 46 | | | | | | | | | |
| | | S | E | | 11 | 14 | | | | | | | | | |
| | KP | P | Z | 10 | 09 | 56 | | | | | | | | | |
| | | S | Z | | 11 | 37 | | | | | | | | | |
| | TU | eP | N | 10 | 09 | 57 | | | | | | | | | |
| | | eS | N | | 11 | 31 | | | | | | | | | |
| | CT | eP | Z | 10 | 10 | 06 | | | | | | | | | |
| | | i | Z | | | 07½ | | | | | | | | | |
| | | eS | Z | | 11 | 48 | | | | | | | | | |
| | TO | eP | Z | 10 | 10 | 07 | | | | | | | | | |
| | | eS | Z | | 11 | 50 | | | | | | | | | |
| | WN | eP | N | 10 | 10 | 31 | | | | | | | | | |
| | | S | N | | 12 | 30 | | | | | | | | | |
| | GP | eP | N | 10 | 11 | 01 | | | | | | | | | |
| | | eS | N | | 13 | 28 | | | | | | | | | |
| | Epicentre: | | | 10 | 07 | 45 | | 31S | 177W | 500 | km | | | NZ(D) | 6.0 NZ |
| 28 | ON | eP | E | 01 | 45 | 54 | | | | | | | | | |
| | KP | eP | Z | 01 | 46 | 05 | | | | | | | | | |
| | | e | Z | | | 13 | | | | | | | | | |
| | CT | eP | Z | 01 | 46 | 22 | | | | | | | | | |
| | | e | Z | | | 25 | | | | | | | | | |
| | TO | e | Z | 01 | 46 | 25 | | | | | | | | | |
| | TU | eS | N | 01 | 48 | 08 | | | | | | | | | |
| | WN | eS | N | 01 | 49 | 17 | | | | | | | | | |
| | GP | eS | N | 01 | 50 | 20 | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 28 | ON | eP | E | 14 | 33 | 17 | | | | | | | |
| | KP | eP | Z | 14 | 33 | 25 | | | | | | | |
| | | e | Z | | 34 | 38 | | | | | | | |
| | CT | eP | Z | 14 | 33 | 55 | | | | | | | |
| | GP | eP | N | 14 | 34 | 46 | | | | | | | |
| | | eS | N | | 37 | 13 | | | | | | | |
| | TU | eS | N | 14 | 35 | 03 | | | | | | | |
| | WN | S | N | 14 | 36 | 12 | | | | | | | |
| 28 | KP | P | Z | 15 | 25 | 46 | | | | | | | |
| | CT | eP | Z | 15 | 25 | 56 | | | | | | | |
| 29 | CT | P | Z | 07 | 59 | 07 | | | | | | | |
| | KP | eP | Z | 07 | 59 | 10 | | | | | | | |
| | | e | Z | | | 21 | | | | | | | |
| | | e | Z | | | 36 | | | | | | | |
| 29 | KP | iP | Z | 08 | 18 | 38½ u | | | | | | | |
| | | pP | Z | | 19 | 07 | | | | | | | |
| | | PcP | Z | | 20 | 18 | | | | | | | |
| | | e(pPcP) | Z | | | 54 | | | | | | | |
| | CT | eiP | Z | 08 | 18 | 45 | | | | | | | |
| | | pP | Z | | 19 | 16 | | | | | | | |
| | | ePcP | Z | | 20 | 19 | | | | | | | |
| | TO | P | Z | 08 | 18 | 45 | | | | | | | |
| | | epP | Z | | | 16 | | | | | | | |
| | TU | e | N | 08 | 18 | 50 | | | | | | | |
| | GP | eP | N | 08 | 19 | 57 | | | | | | | |
| | | epP | N | | | 29 | | | | | | | |
| | RX | eL | NE | 08 | 28 | | | | 6 | 22 | | | 5.9 |
| | | eL | Z | | 29 | | 5 | 20 | | | | | |
| | Epicentre: | | | 08 | 10 | 18 | 4S | 142½E | | | | USCGS | |
| 30 | ON | P | E | 04 | 13 | 08 | | | | | | | |
| | | S | E | | 14 | 31 | | | | | | | |
| | AK | e(P) | N | 04 | 13 | 15 | | | | | | | |
| | | S | N | | 14 | 40 | | | | | | | |
| | KP | P | Z | 04 | 13 | 18 | | | | | | | |
| | | eS | Z | | 14 | 57 | | | | | | | |
| | TU | eP | N | 04 | 13 | 21 | | | | | | | |
| | | S | N | | 14 | 54 | | | | | | | |
| | TO | eP | Z | 04 | 13 | 28 | | | | | | | |
| | | e(S) | Z | | 15 | 15 | | | | | | | |
| | CT | P | Z | 04 | 13 | 29 | | | | | | | |
| | | eS | Z | | 15 | 08 | | | | | | | |
| | WN | eP | N | 04 | 13 | 53 | | | | | | | |
| | | eS | N | | 15 | 51 | | | | | | | |
| | CB | e | E | 04 | 13 | 56 | | | | | | | |
| | | eS | E | | 16 | 02 | | | | | | | |
| | SU | eP | N | 04 | 14 | 21 | | | 3 | 2 | | | |
| | | S | N | | 16 | 35 | | | 4 | 3 | | | |
| | GP | eP | N | 04 | 14 | 22 | | | | | | | |
| | | eS | N | | 16 | 48 | | | | | | | |
| | Epicentre: | | | 04 | 10 | 40 | Kermadec Is | | | | | USCGS | |
| 30 | ON | eP | E | 10 | 57 | 03 | | | | | | | |
| | KP | P | Z | 10 | 57 | 18½ | | | | | | | |
| | | e | Z | | | 26 | | | | | | | |
| | | e | Z | | | 38 | | | | | | | |
| | TU | eP | N | 10 | 57 | 21 | | | | | | | |
| | | eS | N | 11 | 00 | 42 | | | | | | | |
| | CT | P | Z | 10 | 57 | 27 | | | | | | | |
| | TO | eP | Z | 10 | 57 | 27 | | | | | | | |
| | WN | e(P) | N | 10 | 57 | 51 | | | | | | | |
| | | eS | N | 11 | 02 | 45 | | | | | | | |
| | GP | eP | N | 10 | 58 | 19 | | | | | | | |
| | | eS | N | 11 | 02 | 41 | | | | | | | |



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 30 | KP | eP | Z | 18 | 06 | 58 | | | | | | | |
| | Epicentre: | | | 17 | 56 | 05 | 21½N | 142½E | | | | USCGS | |
| 30 | KP | eP | Z | 18 | 49 | 01 | | | | | | | |
| | Epicentre: | | | 18 | 38 | 10 | 22N | 144E | | | | USCGS | |
| 30 | KP | eP | Z | 19 | 30 | 05 | | | | | | | |
| 31 | KP | P | Z | 04 | 08 | 38 | | | | | | | |
| | | epP | Z | | 09 | 24 | | | | | | | |
| | CT | P | Z | 04 | 08 | 49 | | | | | | | |
| | GP | P | N | 04 | 09 | 19 | | | | | | | |
| | Epicentre: | | | 04 | 03 | 11 | 12½S | 167½E | 200 km | | | USCGS | |
| 31 | KP | P | Z | 05 | 20 | 30 | | | | | | | |
| | | e | Z | | | 52 | | | | | | | |
| | RX | eSKS | E | 05 | 31 | 17 | | | | | 4 | 7 | |
| | | eSS | N | | 37 | 14 | | | 2 | 18 | | | |
| | Epicentre: | | | 05 | 08 | 18 | 33½N | 134½E | | | | USCGS | |
| 31 | SU | eP | N | 19 | 10 | 00 | | | 2 | 2 | | | |
| | ON | eP | E | 19 | 12 | 29 | | | | | | | |
| | | e | E | | 13 | 09 | | | | | | | |
| | KP | P | Z | 19 | 12 | 43 | | | | | | | |
| | Epicentre: | | | 19 | 07 | 23 | 16S | 172½W | | | | USCGS | |
| FEB 1 | CT | eP | Z | 02 | 53 | 33 | | | | | | | |
| | TO | e? | Z | 02 | 53 | 41 | | | | | | | |
| | | e? | Z | | | 53 | | | | | | | |
| | KP | eP | Z | 02 | 53 | 48 | | | | | | | |
| | Epicentre: | | | 02 | 41 | 37 | 35N | 140½E | | | | USCGS | |
| 1 | KP | ePKP? | Z | 12 | 19 | 57 | | | | | | | |
| | Epicentre: | | | 11 | 59 | 34 | 35N | 23½E | | | | USCGS | |
| 2 | ON | eP | E | 06 | 31 | 32 | | | | | | | |
| | TU | eP | N | 06 | 31 | 33 | | | | | | | |
| | | e | N | | | 38 | | | | | | | |
| | | e(S) | N | | 32 | 44 | | | | | | | |
| | | e | N | | | 51 | | | | | | | |
| | | e | N | | 33 | 10 | | | | | | | |
| | KP | P | Z | 06 | 31 | 35 | | | | | | | |
| | | e | Z | | | 40 | | | | | | | |
| | | e | Z | | | 48 | | | | | | | |
| | TO | P | Z | 06 | 31 | 46 | | | | | | | |
| | | e | Z | | | 50 | | | | | | | |
| | | e | Z | | | 56 | | | | | | | |
| | | e | Z | | 32 | 12 | | | | | | | |
| | | e | Z | | 33 | 54 | | | | | | | |
| | CT | P | Z | 06 | 31 | 46 | | | | | | | |
| | | e | Z | | 32 | 02 | | | | | | | |
| | WN | e(P) | N | 06 | 32 | 10 | | | | | | | |
| | | e | N | | | 53 | | | | | | | |
| | | eS | N | | 33 | 52 | | | | | | | |
| | | e | N | | 34 | 01 | | | | | | | |
| | | e | N | | | 24 | | | | | | | |
| | | e | N | | | 41 | | | | | | | |
| | | e? | N | | 44 | 44 | | | | | 3 | 4 | |
| | | e? | N | | 45 | 34 | | | | | 3 | 4 | |
| | CB | e(P) | E | 06 | 32 | 21 | | | | | | | |
| | | e | E | | | 39 | | | | | | | |
| | | e(S) | E | | 34 | 14 | | | | | | | |
| | KM | e(S) | X | 06 | 34 | 52 | | | | | | | |
| | | e | X | | 35 | 00 | | | | | | | |
| | RX | eL | ZNE | 06 | 38 | | | | | | | | |
| | | M | N | | 40 | | | | | | 3 | 17 | |
| | Epicentre: | | | 06 | 29 | 52 | 33½S | 179W | | | | USCGS | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 2 | KP | e(P) | Z | 09 | 25 | 52 | | | | | | | | |
| | Epicentre: | | | 09 | 12 | 52 | | 28½S 69W | | | | USCGS | | |
| 2 | KP | eP | Z | 23 | 50 | 13 | | | | | | | | |
| | | e | Z | | | 18 | | | | | | | | |
| | Epicentre: | | | 23 | 40 | 01 | | 2N 126E | | | | USCGS | | |
| 3 | TU | P | N | 02 | 21 | 31½ | n | | | | | | | |
| | | e(S) | N | | | 57 | | | | | | | | |
| | KP | iP | Z | 02 | 21 | 38½ | d | | | | | | | |
| | | e | Z | | | 32 | 12½ | | | | | | | |
| | TO | iP | Z | 02 | 21 | 47 | | | | | | | | |
| | CT | P | Z | 02 | 21 | 47 | | | | | | | | |
| | ON | iP | E | 02 | 21 | 58 | w | | | | | | | |
| | | S | E | | | 22 | 37 | | | | | | | |
| | WN | P | N | 02 | 22 | 09 | | | | | | | | |
| | | (P*) | N | | | 21 | | | | | | | | |
| | | S | N | | | 23 | 01 | | | | | | | |
| | | (S*) | N | | | 23 | 21½ | | | | | | | |
| | CB | P | E | 02 | 22 | 22 | | | | | | | | |
| | | (Pg) | E | | | 28½ | | | | | | | | |
| | | (P*) | E | | | 36½ | | | | | | | | |
| | | eS | E | | | 23 | 23 | | | | | | | |
| | | (S) | E | | | | 25½ | | | | | | | |
| | KM | eP | X | 02 | 22 | 45 | | | | | | | | |
| | | e | X | | | 23 | 17 | | | | | | | |
| | | S | X | | | 24 | 02 | | | | | | | |
| | GP | P | N | 02 | 22 | 47 | | | | | | | | |
| | | e(Pg) | N | | | 23 | 32½ | | | | | | | |
| | | S | N | | | 24 | 05 | | | | | | | |
| * | RX | e(P) | N | 02 | 23 | 32 | | | | 1 | 16 | | | |
| | | e | NE | | | 25 | | | | | | | | |
| | | (S*) | NE | | | 26 | 05 | | | | | | | |
| | | eLr | ZN | | | 27 | | | | 4 | 30 | | | |
| | Epicentre: | | | 02 | 21 | 05 | | 37.4S 178.3E | | N | | NZ(C) | | 6.4 NZ |
| | | | | | | | | Felt: All parts of North Island. Max. MM 5 in the East Cape area. | | | | | | |
| 3 | KP | P | Z | 11 | 58 | 20 | | | | | | | | |
| | CT | P | Z | 11 | 58 | 29 | d | | | | | | | |
| | GP | eP | N | 11 | 58 | 48 | | | | | | | | |
| | Epicentre: | | | 11 | 50 | 48 | | 5S 153E | | | | USCGS | | |
| 3 | KP | P | Z | 13 | 35 | 35 | | | | | | | | |
| | | e | Z | | | 43 | | | | | | | | |
| | CT | eP? | Z | 13 | 35 | 38 | | | | | | | | |
| | | e | Z | | | 56 | | | | | | | | |
| | RX | e | N | 13 | 52 | | | | | | | | | |
| | Epicentre: | | | 13 | 28 | 29 | | 7S 154½E | | h>N | | USCGS | | |
| 3 | KP | iP | Z | 13 | 46 | 31 | | | | | | | | |
| | | S | Z | | | 47 | 43 | | | | | | | |
| | TU | eP | N | 13 | 46 | 31 | | | | | | | | |
| | | S | N | | | 47 | 44 | | | | | | | |
| | | e(S) | N | | | 47 | | | | | | | | |
| | TO | eP | Z | 13 | 46 | 41 | | | | | | | | |
| | | e | Z | | | | 46½ | | | | | | | |
| | | S | Z | | | 48 | 05 | | | | | | | |
| | CT | P | Z | 13 | 46 | 41 | | | | | | | | |
| | | S | Z | | | 48 | 05 | | | | | | | |
| | WN | eP | N | 13 | 47 | 05 | | | | | | | | |
| | | S | N | | | 48 | 43½ | | | | | | | |
| | GP | eP | N | 13 | 47 | 38 | | | | | | | | |
| | | S | N | | | 49 | 42½ | | | | | | | |
| | CB | e(S) | E | 13 | 48 | 56 | | | | | | | | |
| | KM | e(S) | X | 13 | 49 | 33 | | | | | | | | |
| | Epicentre: | | | 13 | 44 | 56 | | 32.5S 178E | | 200 km | | NZ(D) | | 5.8 NZ |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 3 | ON | e? | E | 14 | 33 | 04 | | | | | | | | |
| | | e? | E | | | 20 | | | | | | | | |
| | KP | eP | Z | 14 | 33 | 32 | | | | | | | | |
| | TU | e | N | 14 | 33 | 37 | | | | | | | | |
| | TO | e | Z | 14 | 33 | 41 | | | | | | | | |
| | | e | Z | | | 47 | | | | | | | | |
| | CT | e(P) | Z | 14 | 33 | 45 | | | | | | | | |
| | | e | Z | | | 37 | 58 | | | | | | | |
| | | e | Z | | | 38 | 11 | | | | | | | |
| | WN | e | N | 14 | 34 | 11 | | | | | | | | |
| | CB | e(P) | E | 14 | 34 | 14 | | | | | | | | |
| | | eS | E | | | 38 | 47 | | | | | | | |
| | GP | eP | N | 14 | 34 | 37 | | | | | | | | |
| | | eS | N | | | 39 | 34 | | | | | | | |
| | SU | e | N | 14 | 35 | | | | | | | | | |
| | RX | eL | NE | 14 | 44 | | | | | | | | | |
| | | M | ZNE | | | 48 | | | | | | 3 | 15 | |
| | Epicentre: | | | 14 | 28 | 39 | | 19S | 173½W | | | | | USCGS |
| 3 | KP | e(P) | Z | 17 | 57 | 35 | | | | | | | | |
| | CT | e(P) | Z | 17 | 57 | 56 | | | | | | | | |
| | RX | eL | E | 18 | 06 | | | | | | | 1 | 20 | |
| | | eL | ZN | | | 10 | | | | | | 1 | 16 | |
| | Epicentre: | | | 17 | 53 | 03 | | 19½S | 169½E | | | | | USCGS |
| 4 | KP | iP | Z | 03 | 49 | 10 | u | | | | | | | |
| 4 | SU | e | N | 03 | 53 | 30 | | | | | | | | |
| | | e | N | | | 54 | 17 | | | | | | | |
| | | e | N | | | | 25 | | | | | | | |
| | ON | e(P) | E | 03 | 53 | 55 | | | | | | | | |
| | | e | E | | | 54 | 03 | | | | | | | |
| | | e | E | | | | 08 | | | | | | | |
| | | e | E | | | | 15 | | | | | | | |
| | | e(S) | E | | | 59 | 23 | | | | | | | |
| | | e | E | | | 00 | 08 | | | | | | | |
| | | eL | E | | | 02 | | | | | | | | |
| | KP | P | Z | 03 | 53 | 59 | u | | | | | | | |
| | | e | Z | | | 54 | 08 | | | | | | | |
| | | e | Z | | | | 15 | | | | | | | |
| | | e | Z | | | | 20 | | | | | | | |
| | CT | eP | Z | 03 | 54 | 08 | d | | | | | | | |
| | | e | Z | | | | 17 | | | | | | | |
| | | e | Z | | | | 24 | | | | | | | |
| | TO | eP? | Z | 03 | 54 | 09 | d | | | | | | | |
| | | e | Z | | | | 17 | | | | | | | |
| | | eL | Z | 04 | 05 | | | | | | | | | |
| | CB | eP | E | 03 | 54 | 11 | | | | | | | | |
| | | e | E | | | | 25 | | | | | | | |
| | | eS | E | 04 | 00 | 16 | | | | | | | | |
| | | e | E | | | | 45 | | | | | | | |
| | | e | E | | | 01 | 08 | | | | | | | |
| | | e(SS) | E | | | 03 | 16 | | | | | | | |
| | | eL | E | | | 04 | | | | | | | | |
| | WN | eP | Z | 03 | 54 | 16 | | | | | | | | |
| | | e | ZN | | | | 31 | | | 15 | 6 | | | |
| | | e(PPP) | ZN | | | 56 | 24 | | | | | | | |
| | | e(S) | N | 04 | 00 | 10 | | | | | | | | |
| | | e | N | | | 01 | 00 | | | | | 30 | 9 | |
| | | e | ZN | | | | 20 | | | | | 40 | 9 | |
| | | e(SS) | ZN | | | 03 | 35 | | | | | | | |
| | | eL | ZN | | | 06 | | | | 100 | 25 | | | |
| | TU | e(P) | N | 03 | 54 | 20 | | | | | | | | |
| | | e | N | | | 27 | | | | | | | | |
| | | e | N | | | | 38 | | | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 4 | | e(S) | N | 04 | 00 | 24 | | | | | | | | | |
| | | e | N | | | 59 | | | | | | | | | |
| | KM | e(P) | X | 03 | 54 | 26 | | | | | | | | | |
| | | eS | X | 04 | 00 | 21 | | | | | | | | | |
| | | e(L) | X | | 04 | | | | | | | | | | |
| | GP | eP | N | 03 | 54 | 28 | | | | | | | | | |
| | | e(S) | N | 04 | 00 | 44 | | | | | | | | | |
| | | eL | N | | 07 | | | | | | | | | | |
| | RX | eP | ZN | 03 | 54 | 30 | | | | | | | | | |
| | | e | ZN | | | 47 | | | | 5 | 13 | | | | |
| | | e | Z | | 56 | 28 | | | | | | | | | |
| | | eS? | N | 04 | 00 | 44 | | | | | | | | | |
| | | e | NE | | | 53 | | | | | | | | | |
| | | e | ZNE | | 01 | 30 | | | | 50 | 18 | | | | |
| | | e(SS) | ZNE | | 04 | 20 | | | | | | | | | |
| | | eL | NE | | 05 | | | | | 200 | 38 | | | | |
| | | eL | ZNE | | 07 | | | | | | | | | | |
| | | M | ZNE | | 08 | .5 | | 550 | 26 | 300 | 26 | 200 | 25 | | |
| | Epicentre: | | | 03 | 46 | 30 | | 4½S | 153½E | | | | | USCGS | |
| | 4 KP | eP | Z | 09 | 34 | 41 | | | | | | | | | |
| | | e | Z | | 35 | 05 | | | | | | | | | |
| | | i | Z | | | 07 | | | | | | | | | |
| | CT | e | Z | 09 | 35 | 16 | | | | | | | | | |
| | GP | e(P) | N | 09 | 35 | 19 | | | | | | | | | |
| | CB | e(P) | E | 09 | 35 | 20 | | | | | | | | | |
| | RX | e | N | 09 | 37 | 09 | | | | 1 | 12 | | | | |
| | | e(S) | N | | 41 | 38 | | | | 3 | 8 | | | | |
| | | e | NE | | 44 | 30 | | | | | | | | | |
| | | eL | NE | | 48 | | | | | 3 | 25 | | | | |
| | WN | e(S) | N | 09 | 41 | 40 | | | | 3 | 6 | | | | |
| | Epicentre: | | | 09 | 27 | 23 | | 5S | 154½E | 100 | km | | | USCGS | |
| | 4 KP | eP | Z | 11 | 09 | 06 | | | | | | | | | |
| | | e | Z | | | 18 | | | | | | | | | |
| | | e | Z | | | 39 | | | | | | | | | |
| | | e | Z | | 11 | 43 | | | | | | | | | |
| | Epicentre: | | | 11 | 01 | 18 | | 4½S | 153½E | | | | | USCGS | |
| | 4 KP | eP | Z | 17 | 02 | 50 | | | | | | | | | |
| | | e | Z | | | 56 | | | | | | | | | |
| | RX | e(S) | N | 17 | 13 | 45 | | | | | | | | | |
| | | eL | N | | 32 | | | | | | | | | | |
| | | eL | ZE | | 34 | | | | | | | | | | |
| | | M | NE | | 38 | | | | | 6 | 22 | 2 | 22 | | |
| | WN | eL | ZN | 17 | 40 | | | | | | | | | | |
| | | M | N | | 43 | | | | | 8 | 12 | | | | |
| | Epicentre: | | | 16 | 50 | 30 | | 39N | 143E | | | | | USCGS | |
| | 4 ON | eP | E | 20 | 42 | 09 | | | | | | | | | |
| | | e | E | | | 31 | | | | | | | | | |
| | KP | iP | Z | 20 | 42 | 22 | u | | | | | | | | |
| | TU | e(P) | N | 20 | 42 | 24 | | | | | | | | | |
| | | e | N | | 45 | 35 | | | | | | | | | |
| | TO | eP | Z | 20 | 42 | 31 | | | | | | | | | |
| | WN | eP | N | 20 | 42 | (52) | | | | | | | | | |
| | CB | eP? | E | 20 | 42 | 55 | | | | | | | | | |
| | | e(S) | E | | 46 | 34 | | | | | | | | | |
| | GP | eP | N | 20 | 43 | 16 | | | | | | | | | |
| | | eS | N | | 47 | 08 | | | | | | | | | |
| | Epicentre: | | | 20 | 38 | 20 | | 18½S | 178W | 600 | km | | | USCGS | |
| | 5 RX | eL | E | 02 | 35 | | | | | | | 1 | 20 | | |
| | Epicentre: | | | 02 | 02 | 14 | | 37S | 95½W | | | | | USCGS | |



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 5 | KP | P | Z | 05 | 47 | 14 | | | | | | | | | |
| | | e | Z | | | 37 | | | | | | | | | |
| | CT | eP | Z | 05 | 47 | 22 | | | | | | | | | |
| | | e | Z | | | 45 | | | | | | | | | |
| | | e | Z | | 48 | 13 | | | | | | | | | |
| | TO | e | Z | 05 | 47 | 45 | | | | | | | | | |
| | RX | eL | NE | 06 | 01 | | | | | | | | | | |
| | Epicentre: | | | 05 | 39 | 46 | | 4½S | 153½E | | | | | USCGS | |
| | 5 KP | eP | Z | 08 | 30 | 30 | | | | | | | | | |
| | 6 ON | eP | E | 01 | 32 | 29 | | | | | | | | | |
| | KP | iP | Z | 01 | 32 | 42 | d | | | | | | | | |
| | | e | Z | | | 52 | | | | | | | | | |
| | SU | e | N | 01 | 32 | 43 | | | | | | | | | |
| | 6 ON | e(P) | E | 02 | 04 | 43 | | | | | | | | | |
| | KP | eP | Z | 02 | 04 | 54 | | | | | | | | | |
| | | e | Z | | 05 | 03 | | | | | | | | | |
| | | e | Z | | 07 | 34 | | | | | | | | | |
| | SU | e(L) | N | 02 | 05 | | | | | | | | | | |
| | RX | eL | N | 02 | 19 | | | | | | | | | | |
| | 6 KP | e(P) | Z | 11 | 43 | 24 | | | | | | | | | |
| | | e | Z | | | 34 | | | | | | | | | |
| | 6 KP | P | Z | 11 | 48 | 05 | u | | | | | | | | |
| | | e | Z | | | 27 | | | | | | | | | |
| | | e | Z | | | 36 | | | | | | | | | |
| | 6 KP | eP | Z | 17 | 22 | 11 | | | | | | | | | |
| | | e | Z | | | 23 | | | | | | | | | |
| | TO | eP | Z | 17 | 22 | 11 | | | | | | | | | |
| | | e | Z | | | 25 | | | | | | | | | |
| | Epicentre: | | | 17 | 10 | 45 | | 6S | 104E | | | | | USCGS | |
| | 7 KP | e(P) | Z | 10 | 12 | 19 | | | | | | | | | |
| | CT | e? | Z | 10 | 12 | 46 | | | | | | | | | |
| | Epicentre: | | | 10 | 00 | 34 | | 17N | 145E | | | | | USCGS | |
| | 7 ON | P | E | 10 | 17 | 27 | | | | | | | | | |
| | CB | eP | E | 10 | 17 | 35 | | | | | | | | | |
| | KP | iP | Z | 10 | 17 | 38 | u | | | | | | | | |
| | | e | Z | | 18 | 06 | | | | | | | | | |
| | | e | Z | | 19 | 52 | | | | | | | | | |
| | TO | eP | Z | 10 | 17 | 41 | | | | | | | | | |
| | | e | Z | | 20 | 16 | | | | | | | | | |
| | CT | P | Z | 10 | 17 | 41 | u | | | | | | | | |
| | | e | Z | | 18 | 01 | | | | | | | | | |
| | | e | Z | | 20 | 16 | | | | | | | | | |
| | WN | P | N | 10 | 17 | 43 | | | | | | | | | |
| | Epicentre: | | | 10 | 07 | 50 | | 5N | 123E | 600 | km | | | USCGS | |
| | 7 SU | e? | N | 11 | 20 | 14 | | | | | | | | | |
| | | e | N | | | 34 | | | | | | | | | |
| | | e | N | | 21 | 03 | | | | | | | | | |
| | ON | P | E | 11 | 22 | 05 | | | | | | | | | |
| | KP | P | Z | 11 | 22 | 17 | | | | | | | | | |
| | | e | Z | | | 20 | | | | | | | | | |
| | | e | Z | | 24 | 59 | | | | | | | | | |
| | TU | e(P) | N | 11 | 22 | 19 | | | | | | | | | |
| | | e | N | | 26 | 45 | | | | | | | | | |
| | TO | eP | Z | 11 | 22 | 26 | | | | | | | | | |
| | CT | P | Z | 11 | 22 | 26 | | | | | | | | | |
| | | e | Z | | | 28 | | | | | | | | | |
| | CB | e(P) | E | 11 | 22 | 52 | | | | | | | | | |
| | | e | E | | 27 | 51 | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 7 | WN | e(L) | N | 11 | 33 | | | | | | | | | | |
| | RX | eL | ZNE | 11 | 36 | | | | | | | | | | |
| | M | N | | 38 | | | | | | 2 | 22 | | | | |
| | Epicentre: | | | 11 | 16 | 54 | | 15½S | 173½W | | | | | USCGS | |
| 8 | KP | e? | Z | 09 | 27 | 09 | | | | | | | | | |
| | | e | Z | | | 27 | | | | | | | | | |
| | | e | Z | | | 49 | | | | | | | | | |
| | CT | e | Z | 09 | 27 | 35 | | | | | | | | | |
| | Epicentre: | | | 09 | 19 | 45 | | 5S | 155E | 100 | km | | | USCGS | |
| 8 | RX | eP? | Z | 12 | 56 | 35 | | | | | | | | | |
| | | eS | E | 13 | 05 | 32 | | | | | | 5 | 18 | | |
| | | e(SP) | N | | | 55 | | | | 10 | 24 | | | | |
| | | eSS | NE | | 10 | 00 | | | | | | 4 | 16 | | |
| | | e | E | | 14 | | | | | | | | | | |
| | | eL | ZN | | 16 | | | | | | | | | | |
| | | M | ZN | | 18 | | | 11 | 21 | 6 | 21 | | | | |
| | WN | eP | Z | 12 | 56 | 47 | | 3 | 4 | | | | | | |
| | | e? | N | 13 | 05 | 55 | | | | | | | | | |
| | | eL | ZN | | 17 | | | 10 | 24 | 20 | 26 | | | | |
| | CB | e(P) | E | 12 | 56 | 49 | | | | | | | | | |
| | TO | eP | Z | 12 | 56 | 49 | | | | | | | | | |
| | | e | Z | | 57 | 04 | | | | | | | | | |
| | | eL | Z | 13 | 18 | | | | | | | | | | |
| | CT | eP | Z | 12 | 56 | 49 | | | | | | | | | |
| | | e | Z | | 57 | 04 | | | | | | | | | |
| | | e | Z | | | 17 | | | | | | | | | |
| | KP | P | Z | 12 | 56 | 57 | | | | | | | | | |
| | | e | Z | | 57 | 23 | | | | | | | | | |
| | Epicentre: | | | 12 | 45 | 34 | | 58S | 67W | | | | | USCGS | |
| 8 | KP | P | Z | 13 | 24 | 44 | | | | | | | | | |
| 9 | KP | P | Z | 02 | 03 | 17 | | | | | | | | | |
| 9 | KP | P? | Z | 03 | 07 | 02 | | | | | | | | | |
| | | e? | Z | | | 30 | | | | | | | | | |
| | CB | e | E | 03 | 07 | 16 | | | | | | | | | |
| | Epicentre: | | | 02 | 59 | 42 | | 5S | 155E | | | | | USCGS | |
| 9 | CB | e | E | 12 | 05 | 45 | | | | | | | | | |
| | KP | P | Z | 12 | 05 | 49 | u | | | | | | | | |
| | | e | Z | | 06 | 00 | | | | | | | | | |
| | TO | P | Z | 12 | 05 | 53 | | | | | | | | | |
| | RX | eS | N | 12 | 13 | 30 | | | | 1 | 20 | | | | |
| | | eSSS | N | | 18 | 34 | | | | 3 | 20 | | | | |
| | | eL | ZE | | 29 | | | | | | | | | | |
| | WN | e | N | 12 | 25 | | | | | | | | | | |
| | Epicentre: | | | 11 | 56 | 12 | | 4S | 128E | | | | | USCGS | |
| 9 | KP | eP | Z | 16 | 42 | 30 | | | | | | | | | |
| | | e | Z | | | 47 | | | | | | | | | |
| | TO | eP | Z | 16 | 42 | 38 | | | | | | | | | |
| | CB | e | E | 16 | 42 | 41 | | | | | | | | | |
| | Epicentre: | | | 16 | 34 | 45 | | 6S | 147E | | | | | USCGS | |
| 9 | SU | eP | N | 24 | 04 | 58 | | | | | | | | | |
| | | e | N | | 06 | 15 | | | | | | | | | |
| | | eL | N | | 23 | | | | | 4 | 22 | | | | |
| | ON | eP | E | 24 | 05 | 12 | | | | | | | | | |
| | | e | E | | | 30 | | | | | | | | | |
| | | e | E | | | 49 | | | | | | | | | |
| | | e | E | | 08 | 49 | | | | | | | | | |
| | | e? | E | | 15 | 17 | | | | | | | | | |
| | | eL | E | | 19 | | | | | | | | | | |
| | RX | eP? | ZE | 24 | 05 | 18 | | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 9 | | e | ZNE | | | 23 | | | | | | | | | |
| | | e | Z | | | 32 | | | | | | | | | |
| | | eS | ZNE | | 13 | 02 | | | | | | | | | |
| | | e | N | | 14 | 56 | | | | | | | | | |
| | | e(SSS) | ZNE | | 18 | 28 | | | | | | 65 | 21 | 18 | 21 |
| | | eLg | N | | 21 | | | | | | | | | | |
| | | e(Lr) | ZNE | | 24 | | | | | | | | | | |
| | | M | ZE | | 30 | | | | | | | 70 | 18 | 35 | 18 |
| | CB | P | E | 24 | 05 | 23 | | | | | | | | | |
| | | e | E | | | 35 | | | | | | | | | |
| | KP | iP | Z | 24 | 05 | 26 | u | | | | | | | | |
| | | e | Z | | 06 | 03 | | | | | | | | | |
| | | e | Z | | | 13 | | | | | | | | | |
| | GP | eP | N | 24 | 05 | 31 | | | | | | | | | |
| | KM | P | X | 24 | 05 | 31 | | | | | | | | | |
| | | e | X | | | 50 | | | | | | | | | |
| | TU | e(P) | N | 24 | 05 | 35 | | | | | | | | | |
| | WN | eP | N | 24 | 05 | 35 | | | | | | | | | |
| | | ePP | N | | 07 | 55 | | | | | | 5 | 5 | | |
| | | ePPP | N | | 09 | 09 | | | | | | | | | |
| | | eS | N | | 13 | 20 | | | | | | 8 | 9 | | |
| | | eL | N | | 20 | | | | | | | | | | |
| | | M | N | | 24 | | | | | | | 38 | 25 | | |
| | Epicentre: | | | 23 | 55 | 49 | | 4S | 128E | | | | | USCGS | |
| 10 | KP | eP | Z | 01 | 25 | 20 | | | | | | | | | |
| | Epicentre: | | | 01 | 15 | 44 | | 3½S | 128E | | | | | USCGS | |
| 10 | SU | e(P) | N | 01 | 33 | 00 | | | | | | | | | |
| | | iS | N | | | 55 | | | | | | 18 | 4 | | |
| | ON | e(P) | E | 01 | 35 | 46 | | | | | | | | | |
| | KP | P | Z | 01 | 35 | 58 | | | | | | | | | |
| 10 | KP | eP? | Z | 02 | 04 | 52 | | | | | | | | | |
| 10 | KP | eP | Z | 02 | 08 | 41 | | | | | | | | | |
| | Epicentre: | | | 01 | 59 | 05 | | 3½S | 128E | | | | | USCGS | |
| 10 | KP | P | Z | 15 | 52 | 17 | | | | | | | | | |
| | | e(PP) | Z | | | 38 | | | | | | | | | |
| | | e | Z | | | 53 | | | | | | | | | |
| | Epicentre: | | | 15 | 44 | 54 | | 4½S | 154½E | 100 | km | | | USCGS | |
| 10 | SU | e(P) | N | 23 | 22 | 12 | | | | | | | | | |
| | | e | N | | | 30 | | | | | | | | | |
| | | e(S) | N | | 24 | 30 | | | | | | | | | |
| | | eL | N | | 27 | 20 | | | | | | | | | |
| | ON | eP | E | 23 | 24 | 58 | | | | | | | | | |
| | KP | P | Z | 23 | 25 | 13 | u | | | | | | | | |
| | | e | Z | | | 23 | | | | | | | | | |
| | CB | eP | E | 23 | 25 | 49 | | | | | | | | | |
| | GP | e(P) | N | 23 | 26 | 19 | | | | | | | | | |
| | WN | e | N | 23 | 27 | 05 | | | | | | | | | |
| | | eL | N | | 33 | | | | | | | 3 | 5 | | |
| | RX | eL | ZNE | 23 | 35 | | | | | | | | | | |
| | | M | N | | 41 | | | | | | | 8 | 17 | | |
| | Epicentre: | | | 23 | 19 | 55 | | 15½S | 173W | | | | | USCGS | |
| 11 | ON | P | E | 04 | 02 | 09 | | | | | | | | | |
| | | S | E | | 04 | 22 | | | | | | | | | |
| | KP | eP | Z | 04 | 02 | 24 | | | | | | | | | |
| | | e | Z | | 05 | 04 | | | | | | | | | |
| | TU | e | N | 04 | 02 | 29 | | | | | | | | | |
| | | e | N | | 04 | 55 | | | | | | | | | |
| | | e(S) | N | | | 59 | | | | | | | | | |
| | TO | eP | Z | 04 | 02 | 36 | | | | | | | | | |
| | | e | Z | | 05 | 11 | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 11 | SU | P | N | 04 | 02 | 41 | | | | | | | | |
| | WN | eP | N | 04 | 02 | 57 | | | | | | | | |
| | | e | N | | 03 | 03 | | | | | | | | |
| | | e(S) | N | | 05 | 46 | | | | | | | | |
| | CB | eP | E | 04 | 03 | 00 | | | | | | | | |
| | | e | E | | | 02 | | | | | | | | |
| | | eS | E | | 05 | 54 | | | | | | | | |
| | KM | e(P) | X | 04 | 03 | 18 | | | | | | | | |
| | | e | X | | | 58 | | | | | | | | |
| | | eS | X | | 06 | 25 | | | | | | | | |
| | GP | eP | N | 04 | 03 | 23 | | | | | | | | |
| | | eS | N | | 06 | 34 | | | | | | | | |
| | Epicentre: | | | 03 | 58 | 39 | | 25S | 179W | | | | USCGS | |
| 11 | KP | P | Z | 04 | 32 | 13 | | | | | | | | |
| | | e | Z | | | 18 | | | | | | | | |
| | TO | P | Z | 04 | 32 | 24 | | | | | | | | |
| | WN | eP | N | 04 | 32 | 39 | | | | | | | | |
| | CB | e(P) | E | 04 | 32 | 39 | | | | | | | | |
| | GP | eP | N | 04 | 32 | 58 | | | | | | | | |
| | Epicentre: | | | 04 | 27 | 22 | | 14S | 170½E | 450 km | | | USCGS | |
| 11 | KP | P | Z | 05 | 51 | 12 | | | | | | | | |
| | TO | eP | Z | 05 | 51 | 24 | | | | | | | | |
| 11 | KP | P | Z | 07 | 32 | 00 | | | | | | | | |
| 11 | KP | P | Z | 08 | 36 | 10 | | | | | | | | |
| | | e | Z | | | 20 | | | | | | | | |
| | TO | P | Z | 08 | 36 | 19 | | | | | | | | |
| | CB | P | E | 08 | 36 | 23 | | | | | | | | |
| | | e? | E | | 40 | 05 | | | | | | | | |
| | GP | eP? | N | 08 | 36 | 39 | | | | | | | | |
| | Epicentre: | | | 08 | 28 | 58 | | 6S | 155E | 100 km | | | USCGS | |
| 11 | KP | P | Z | 10 | 43 | 25 | | | | | | | | |
| | | e | Z | | | 45 | | | | | | | | |
| 11 | TO | eP | Z | 13 | 06 | 27 | | | | | | | | |
| | CT | P | Z | 13 | 06 | 27 | u | | | | | | | |
| | CB | e(P) | E | 13 | 06 | 29 | | | | | | | | |
| | KP | eP | Z | 13 | 06 | 30 | | | | | | | | |
| | Epicentre: | | | 12 | 53 | 59 | | 34S | 70½W | 100 km | | | USCGS | |
| 11 | TU | eP? | N | 14 | 08 | 39 | | | | | | | | |
| | | e | N | | | 44½ | | | | | | | | |
| | | eS | N | | 09 | 20 | | | | | | | | |
| | KP | P | Z | 14 | 08 | 39½ | | | | | | | | |
| | | eS | Z | | 09 | 25 | | | | | | | | |
| | CT | P | Z | 14 | 08 | 51 | | | | | | | | |
| | | S | Z | | 09 | 50 | | | | | | | | |
| | TO | P | Z | 14 | 08 | 51½ | | | | | | | | |
| | | e | Z | | 09 | 02½ | | | | | | | | |
| | | S | Z | | | 50 | | | | | | | | |
| | WN | eP | N | 14 | 09 | 14½ | | | | | | | | |
| | | S | N | | 10 | 26 | | | | | | | | |
| | CB | e? | E | 14 | 09 | 52 | | | | | | | | |
| | | S | E | | 10 | 43 | | | | | | | | |
| | KM | S | X | 14 | 11 | 21½ | | | | | | | | |
| | GP | S | N | 14 | 11 | 29 | | | | | | | | |
| | Epicentre: | | | 14 | 07 | 40 | | 35.5S | 179.0E | N | | | NZ(D) | 5.1 NZ |
| 11 | KP | P | Z | 14 | 34 | 08 | u | | | | | | | |
| 11 | KP | P | Z | 21 | 01 | 59 | | | | | | | | |
| | TU | e(P) | N | 21 | 02 | 08 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 11 | CT | P | Z | 21 | 02 | 09 | | | | | | | | |
| | | e | Z | | | 24 | | | | | | | | |
| | GP | P | N | 21 | 02 | 41 | | | | | | | | |
| | WN | e(PPP) | N | 21 | 03 | 50 | | | | | 3 6 | | | |
| | | eScS | N | | 12 | 46 | | | | | 3 6 | | | |
| | RX | e | N | 21 | 08 | 22 | | | | | | | | |
| | | eL | N | | 12 | | | | | | | | | |
| | | M | ZNE | | 14 | | | | | | 4 20 | | | |
| | Epicentre: | | | 20 | 56 | 08 | | 11½S | 166½E | | | | USCGS | |
| 11 | SU | e(P) | N | 23 | 20 | 05 | | | | | | | | |
| | | e | N | | | 20 | | | | | | | | |
| | | e | N | | 21 | 50 | | | | | | | | |
| 12 | KP | eP | Z | 01 | 37 | 36 | | | | | | | | |
| | Epicentre: | | | 01 | 29 | 42 | | 4½S | 153½E | | | | USCGS | |
| 12 | TO | eP | Z | 08 | 57 | 37 | | | | | | | | |
| | KP | eP | Z | 08 | 58 | 00 | | | | | | | | |
| 12 | SU | e(P) | N | 20 | 59 | 31 | | | | | | | | |
| | | e | N | 21 | 02 | 17 | | | | | | | | |
| 12 | KP | P | Z | 23 | 22 | 45 | | | | | | | | |
| | RX | eL | N | 23 | 37 | | | | | | | | | |
| 12 | KP | eP | Z | 23 | 57 | 58 | | | | | | | | |
| 13 | CB | eP | E | 15 | 51 | 09 | | | | | | | | |
| | | e | E | | 53 | 02 | | | | | | | | |
| | KP | iP | Z | 15 | 51 | 10 | u | | | | | | | |
| | | e | Z | | | 43 | | | | | | | | |
| | | i | Z | | 52 | 07 | | | | | | | | |
| | KM | eP? | X | 15 | 51 | 11 | | | | | | | | |
| | | e | X | | | 14 | | | | | | | | |
| | | e | X | | 53 | 39 | | | | | | | | |
| | TO | eP | Z | 15 | 51 | 15 | | | | | | | | |
| | | e | Z | | | 30 | | | | | | | | |
| | | e? | Z | | 52 | 05 | | | | | | | | |
| | WN | P | ZN | 15 | 51 | 17 | | | | | | | | |
| | | i | N | | 52 | 51 | n | | | | | | | |
| | GP | eP | N | 15 | 51 | 19 | | | | | | | | |
| | | e | N | | 53 | 49 | | | | | | | | |
| | TU | eP | N | 15 | 51 | 21 | | | | | | | | |
| | | e | N | | 52 | 31 | | | | | | | | |
| | RX | e | N | 16 | 06 | 32 | | | | | 1 20 | | | |
| | Epicentre: | | | 15 | 41 | 04 | | 1½N | 127½E | | | | USCGS | |
| 14 | SU | e(S) | N | 12 | 56 | 05 | | | | | | | | |
| | KP | eP | Z | 12 | 56 | 19 | | | | | | | | |
| | | e | Z | | | 23 | | | | | | | | |
| | | e | Z | | 58 | 59 | | | | | | | | |
| | TU | eP | N | 12 | 56 | 24 | | | | | | | | |
| | | eS | N | | 58 | 58 | | | | | | | | |
| | TO | eP | Z | 12 | 56 | 30 | | | | | | | | |
| | | e | Z | | 59 | 19 | | | | | | | | |
| | WN | e(P) | N | 12 | 56 | 52 | | | | | | | | |
| | | eS | N | | 59 | 47 | | | | | | | | |
| | CB | eP | E | 12 | 56 | 54 | | | | | | | | |
| | | eS | E | | 59 | 50 | | | | | | | | |
| | GP | eP | N | 12 | 57 | 16 | | | | | | | | |
| | | eS | N | 13 | 00 | 30 | | | | | | | | |
| | Epicentre: | | | 12 | 53 | 08 | | 23½S | 179E | 500 km | | | USCGS | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 14 | ON | eP? | E | 15 | 42 | 10 | | | | | | | |
| | | e | E | | | 19 | | | | | | | |
| | | e | E | | | 56 | | | | | | | |
| | KP | P | Z | 15 | 42 | 20 | | | | | | | |
| | | e | Z | | | 31 | | | | | | | |
| | | e | Z | | | 38 | | | | | | | |
| | TU | e(P) | N | 15 | 42 | 27 | | | | | | | |
| | | eS | N | | | 44 | 11 | | | | | | |
| | SU | eP | N | 15 | 42 | 50 | | | | | | | |
| | | e | N | | | 43 | 00 | | | | | | |
| | | e | N | | | 44 | 05 | | | | | | |
| | TO | e | Z | 15 | 42 | 56 | | | | | | | |
| | WN | e | N | 15 | 43 | 08 | | | | | | | |
| | | eS | N | | | 45 | 17 | | | | | | |
| | | e | N | | | 48 | 54 | | | | | | |
| | GP | e(P) | N | 15 | 43 | 36 | | | | | | | |
| | | eS | N | | | 46 | 21 | | | | | | |
| | CB | eS | E | 15 | 45 | 39 | | | | | | | |
| | RX | eL | NE | 15 | 50 | | | | 1 | 18 | | | |
| | Epicentre: | | | 15 | 39 | 43 | 29S | 177W | | | | | USCGS |
| 14 | KP | P | Z | 16 | 45 | 46 | | | | | | | |
| 14 | KP | P | Z | 20 | 38 | 09 | | | | | | | |
| | | e | Z | | | 32 | | | | | | | |
| | TO | eP | Z | 20 | 38 | 40 | | | | | | | |
| | Epicentre: | | | 20 | 30 | 44 | 5S | 154½E | | | | | USCGS |
| 14 | KP | P | Z | 21 | 14 | 45 | | | | | | | |
| | | e | Z | | | 48 | | | | | | | |
| | Epicentre: | | | 21 | 04 | 36 | 18½N | 145½E | 200 km | | | | USCGS |
| 14 | KP | P | Z | 22 | 30 | 58 | | | | | | | |
| | Epicentre: | | | 22 | 17 | 54 | 54N | 171½W | | | | | USCGS |
| 15 | SU | e(P) | N | 05 | 18 | 02 | | | | | | | |
| | | S | N | | | 58 | | | | | | | |
| | | e | N | | 20 | 00 | | | | | | | |
| | ON | eP | E | 05 | 20 | 48 | | | | | | | |
| | KP | eP | Z | 05 | 21 | 01 | | | | | | | |
| | | i | Z | | | 02 | u | | | | | | |
| | TO | eP | Z | 05 | 21 | 13 | | | | | | | |
| | CB | e(P) | E | 05 | 21 | 31 | | | | | | | |
| | Epicentre: | | | 05 | 16 | 45 | 18S | 177½W | 350 km | | | | USCGS |
| 15 | KP | e? | Z | 07 | 11 | 47 | | | | | | | |
| | | e | Z | | 12 | 38 | | | | | | | |
| 15 | ON | e(P) | E | 22 | 21 | 00 | | | | | | | |
| | | e | E | | | 10 | | | | | | | |
| | KP | eP | Z | 22 | 21 | 05 | | | | | | | |
| | | e | Z | | | 20 | | | | | | | |
| | TU | e? | N | 22 | 21 | 25 | | | | | | | |
| | | e(S) | N | | 22 | 54 | | | | | | | |
| | TO | e? | Z | 22 | 21 | 47 | | | | | | | |
| | | e | Z | | 23 | 28 | | | | | | | |
| | WN | e | N | 22 | 24 | 02 | | | | | | | |
| | | e(S) | N | | | 06 | | | | | | | |
| | CB | eS | E | 22 | 24 | 25 | | | | | | | |
| | Epicentre: | | | 22 | 18 | 27 | 29½S | 176½W | | | | | USCGS |
| 16 | ON | e(P) | E | 01 | 11 | 59 | | | | | | | |
| | | e | E | | 12 | 44 | | | | | | | |
| | KP | eP | Z | 01 | 12 | 04 | | | | | | | |
| | | e | Z | | | 20 | | | | | | | |
| | | e | Z | | | 59 | | | | | | | |



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 16 | CB | e? | E | 01 | 12 | 24 | | | | | | | |
| | | e | E | | | 51 | | | | | | | |
| | | e(S) | E | | 15 | 26 | | | | | | | |
| | TU | eS | N | 01 | 13 | 58 | | | | | | | |
| | WN | e(S) | N | 01 | 15 | 04 | | | | | | | |
| | | e | N | | | 11 | | | | | | | |
| | RX | eL | NE | 01 | 21 | | | | | | | | |
| | Epicentre: | | | 01 | 09 | 29 | 29½S | 176½W | | | | | USCGS |
| 16 | KP | e(P) | Z | 03 | 18 | 34 | | | | | | | |
| | | e | Z | | | 48 | | | | | | | |
| | | i | Z | | 19 | 30 | | | | | | | |
| | | e | Z | | | 44 | | | | | | | |
| 16 | WN | eP? | N | 05 | 10 | 37 | | | | | | | |
| | KP | P | Z | 05 | 10 | 42 | | | | | | | |
| | CB | e | E | 05 | 10 | 53 | | | | | | | |
| | Epicentre: | | | 05 | 00 | 14 | 18½N | 146E | | | | | USCGS |
| 16 | ON | iP | E | 05 | 23 | 45 | e | | | | | | |
| | | e | E | | | 53 | | | | | | | |
| | KP | iP | Z | 05 | 23 | 52 | | | | | | | |
| | | e | Z | | 24 | 11 | | | | | | | |
| | | e | Z | | | 43 | | | | | | | |
| | TU | e(P) | N | 05 | 23 | 52 | | | | | | | |
| | | e | N | | 25 | 06 | | | | | | | |
| | | e(S) | N | | | 09 | | | | | | | |
| | WN | eP | N | 05 | 24 | 27 | | | | | | | |
| | | e | N | | | 29 | | | | | | | |
| | | e | N | | 26 | 12 | | | | | | | |
| | | S | N | | | 13 | | | | | | | |
| | CB | e(P) | E | 05 | 24 | 37 | | | | | | | |
| | | eS | E | | 26 | 27 | | | | | | | |
| | | e | E | | | 50 | | | | | | | |
| | Epicentre: | | | 05 | 22 | 13 | 32½S | 179W | 200 km | | | | NZ(D) 6.0 NZ |
| 16 | KP | eP? | Z | 10 | 42 | 28 | | | | | | | |
| | | e | Z | | | 31 | | | | | | | |
| | | e | Z | | 43 | 45 | | | | | | | |
| | | e | Z | | 44 | 54 | | | | | | | |
| | | e | Z | | 45 | 04 | | | | | | | |
| | Epicentre: | | | 10 | 35 | 22 | 6½S | 154½E | | | | | USCGS |
| 17 | KP | P | Z | 00 | 05 | 55 | | | | | | | |
| | | e | Z | | 06 | 08 | | | | | | | |
| | | e | Z | | | 24 | | | | | | | |
| | TO | P | Z | 00 | 06 | 07 | | | | | | | |
| | CB | e(P) | E | 00 | 06 | 36 | | | | | | | |
| | | e(S) | E | | 10 | 43 | | | | | | | |
| | KM | e(P) | X | 00 | 06 | 53 | | | | | | | |
| | Epicentre: | | | 00 | 01 | 28 | Tonga | | | | | | USCGS |
| 17 | TO | eP | Z | 12 | 42 | 17 | | | | | | | |
| | | e | Z | | 43 | 25 | | | | | | | |
| | KP | P | Z | 12 | 42 | 19 | | | | | | | |
| | RX | e | N | 12 | 51 | 06 | | | 1 | 14 | | | |
| | | e | N | | 55 | 12 | | | | | | | |
| | | eL | N | | 58 | | | | 3 | 30 | | | |
| | Epicentre: | | | 12 | 32 | 10 | 30S | 112½W | | | | | USCGS |
| 17 | KP | eP | Z | 16 | 40 | 32 | | | | | | | |
| | Epicentre: | | | 16 | 27 | 40 | 43½N | 145½E | | | | | USCGS |
| 17 | KP | P | Z | 16 | 57 | 56 | | | | | | | |
| | | e | Z | | 58 | 00 | | | | | | | |
| | TO | P | Z | 16 | 58 | 02 | | | | | | | |
| | Epicentre: | | | 16 | 49 | 42 | 5S | 142½E | | | | | USCGS |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 19 | RX | e(L) | NE | 11 | 07 | 56 | | | | | | | |
| 19 | SU | e | N | 12 | 28 | 57 | | | | | | | |
| | TU | e(S) | N | 12 | 30 | 58 | | | | | | | |
| | WN | e(S) | N | 12 | 32 | 03 | | | | | | | |
| | | e | N | | 41± | | | | | | | | |
| | GP | e? | N | 12 | 33 | 08 | | | | | | | |
| | RX | eL | NE | 12 | 37 | | | | | | | | |
| 20 | KP | e(P) | Z | 00 | 17 | 19 | | | | | | | |
| | | e | Z | | | 40 | | | | | | | |
| | | e | Z | | 18 | 41 | | | | | | | |
| | GP | e(P) | N | 00 | 18 | 33 | | | | | | | |
| | | e | N | | | 48 | | | | | | | |
| | | eS | N | | 21 | 34 | | | | | | | |
| | TU | e(S) | N | 00 | 19 | 24 | | | | | | | |
| | WN | e(S) | N | 00 | 20 | 30 | | | | | | | |
| | | e(L) | ZN | | 25 | | | | | | | | |
| | CB | e? | E | 00 | 20 | 46 | | | | | | | |
| | | e? | E | | | 57 | | | | | | | |
| | SU | e(L) | N | 00 | 21 | | | | | | | | |
| | RX | eL | NE | 00 | 25 | | | | | | 2 | 20 | |
| | | eL | ZNE | | 28 | | 3 | 12 | | | | | |
| 20 | KP | e(P) | Z | 06 | 09 | 53 | | | | | | | |
| | | e | Z | | 10 | 10 | | | | | | | |
| 20 | KP | P? | Z | 18 | 18 | 51 | | | | | | | |
| | | e | Z | | | 56 | | | | | | | |
| 21 | CB | iP | E | 00 | 47 | 18½ | e | | | | | | |
| | KM | iP | X | 00 | 47 | 20 | ne | | | | | | |
| | GP | iP | N | 00 | 47 | 22 | s | | | | | | |
| | | eS | N | | | 40 | | | | | | | |
| | WN | iP | ZN | 00 | 47 | 24 | ds | | | | | | |
| | | e | N | | | 40 | | | | | | | |
| | | e | N | | | 43 | | | | | | | |
| | | e(ScS) | N | 01 | 02 | 19 | | | | | | | |
| | RX | eP? | N | 00 | 47 | 58 | | | | | | | |
| | | e | N | | 48 | 04 | | | | | | | |
| | | e | ZE | | | 06 | | | | | | | |
| | | e | ZNE | | | 12 | | | | | | | |
| | | e | ZNE | | | 25 | | | | | | | |
| | | e(S) | ZN | | 49 | 00 | | | | | | | |
| | | M | ZNE | | 49½ | | | | | | | | |
| | TU | e(P) | N | 00 | 48 | 02 | | | | | | | |
| | | e | N | | | 09 | | | | | | | |
| | | e | N | | | 12 | | | | | | | |
| | | e | N | | | 22 | | | | | | | |
| | | e | N | | | 27 | | | | | | | |
| | | eS | N | | | 56 | | | | | | | |
| | | i(S*) | N | | 49 | 21 | | | | | | | |
| | KP | P | Z | 00 | 48 | 06½ | u | | | | | | |
| | | ePcP? | Z | | 55 | 11 | | | | | | | |
| | ON | P | E | 00 | 48 | 33 | w | | | | | | |
| | | eS | E | | 49 | 42 | | | | | | | |
| | SU | eP? | N | 00 | 52 | 12 | | | | | | | |
| | | e | N | | | 27 | | | | | | | |
| | | e? | N | | 55 | 45 | | | | | | | |
| | | e(S) | N | | 56 | 07 | | | | | | | |
| | Epicentre: | | | 00 | 46 | 58 | 42.2S 173.1E N | | | | NZ(B) | | 6.4± NZ |

Felt: New Plymouth to Timaru.
Max. MM 6 at Murchison and Kaikoura.



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 21 | SU | P | N | 09 | 40 | 54 | | | | | | | | |
| | | S | N | | 42 | 00 | | | | | | | | |
| | KP | P | Z | 09 | 43 | 11 | u | | | | | | | |
| | | e | Z | | | 54 | | | | | | | | |
| | | e | Z | | 44 | 39 | | | | | | | | |
| | | e | Z | | 46 | 17 | | | | | | | | |
| | TU | eP | N | 09 | 43 | 13 | | | | | | | | |
| | | eS | N | | 46 | 12 | | | | | | | | |
| | WN | eP | N | 09 | 43 | 39 | | | | | | | | |
| | | eS | N | | 47 | 09 | | | | | | | | |
| | CB | eP | E | 09 | 43 | 41 | | | | | | | | |
| | | eS | E | | 47 | 04 | | | | | | | | |
| | GP | eP | N | 09 | 44 | 04 | | | | | | | | |
| | | eS | N | | 47 | 43 | | | | | | | | |
| | Epicentre: | | | 09 | 39 | 26 | | 20S | 178½W | 600 km | | | | USCGS |
| 22 | SU | P | N | 00 | 55 | 57 | | | | | | | | |
| | | S | N | | 57 | 05 | | | | | | | | |
| | KP | P | Z | 00 | 58 | 15 | | | | | | | | |
| | TU | eP | N | 00 | 58 | 17 | | | | | | | | |
| | | eS | N | 01 | 01 | 15 | | | | | | | | |
| | WN | eP | ZN | 00 | 58 | 43 | | | | | | | | |
| | CB | eP | E | 00 | 58 | 46 | | | | | | | | |
| | | eS | E | 01 | 02 | 11 | | | | | | | | |
| | GP | P | N | 00 | 59 | 07 | | | | | | | | |
| | | eS | N | 01 | 02 | 46 | | | | | | | | |
| | | e | N | | 05 | 11 | | | | | | | | |
| | Epicentre: | | | 00 | 54 | 30 | | 20S | 178½W | 600 km | | | | USCGS |
| 22 | RX | eL | NE | 05 | 31 | | | | | | | | | |
| 22 | SU | e | N | 08 | 36 | 42 | | | | | | | | |
| | TU | eP | N | 08 | 37 | 52 | | | | | | | | |
| | | e | N | | 38 | 02 | | | | | | | | |
| | | eS? | N | | 40 | 48 | | | | | | | | |
| | Epicentre: | | | 08 | 34 | 11 | | 18S | 179½W | 600 km | | | | USCGS |
| 22 | RX | i? | E | 09 | 42 | 24 | | | | | | | | |
| | | e? | ZNE | | 47 | 50 | | | | | | | | |
| 23 | KP | e? | Z | 08 | 22 | 49 | | | | | | | | |
| | | e | Z | | | 56 | | | | | | | | |
| | Epicentre: | | | 08 | 10 | 28 | | 23½N | 121½E | | | | | USCGS |
| 23 | KP | P | Z | 09 | 35 | 50 | | | | | | | | |
| | Epicentre: | | | 09 | 23 | 37 | | 34½N | 139½E | 100 km | | | | USCGS |
| 23 | SU | P | N | 11 | 32 | 26 | | | | | | | | |
| | | e | N | | | 50 | | | | | | | | |
| | | e | N | | 33 | 30 | | | | | | | | |
| | KP | P | Z | 11 | 35 | 04 | | | | | | | | |
| | | e | Z | | 36 | 18 | | | | | | | | |
| | Epicentre: | | | 11 | 31 | 04 | | 19S | 178W | 500 km | | | | USCGS |
| 23 | KP | P | Z | 16 | 12 | 04 | u | | | | | | | |
| | | e | Z | | | 16 | | | | | | | | |
| | | e | Z | | 14 | 36 | | | | | | | | |
| | CB | eP | E | 16 | 12 | 17 | | | | | | | | |
| | TU | eP | N | 16 | 12 | 23 | | | | | | | | |
| | WN | e | N | 16 | 12 | 27 | | | | | | | | |
| | | eL | ZN | | 26 | | | | | | | | | |
| | GP | eP | N | 16 | 12 | 35 | | | | | | | | |
| | RX | eL | ZNE | 16 | 24 | | | | | | | | | |
| | | M | NE | | 28 | | | | | | | 4 | 19 | |
| | Epicentre: | | | 16 | 04 | 50 | | 6S | 154½E | | | | | USCGS |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 23 | RX | eL | NE | 19 | 01 | | | | | | | | | |
| 24 | KP | P | Z | 08 | 45 | 54 | | | | | | | | |
| | | e | Z | | 46 | 15 | | | | | | | | |
| | RX | eL | ZN | 08 | 56 | | | | | | | | | |
| | Epicentre: | | | 08 | 41 | 00 | | 17½S | 168E | | | | | USCGS |
| 24 | KP | ePKP | Z | 19 | 15 | 01 | | | | | | | | |
| | Epicentre: | | | 18 | 55 | 20 | | 38N | 41E | | | | | USCGS |
| 24 | SU | P | N | 21 | 42 | 30 | | | | | | | | |
| | | S | N | | 47 | 25 | | | | | | | | |
| | ON | eP? | E | 21 | 43 | 50 | | | | | | | | |
| | | e | E | | 44 | 01 | | | | | | | | |
| | | e | E | | | 14 | | | | | | | | |
| | | eS | E | | 49 | 02 | | | | | | | | |
| | | eL | E | | 56 | | | | | | | | | |
| | KP | P | Z | 21 | 44 | 02 | | | | | | | | |
| | | e | Z | | | 11 | | | | | | | | |
| | | e | Z | | | 23 | | | | | | | | |
| | | i | Z | | 46 | 33 | | | | | | | | |
| | | e | Z | | | 43 | | | | | | | | |
| | | e | Z | | 50 | 15 | | | | | | | | |
| | | e | Z | | | 35 | | | | | | | | |
| | | eL | Z | | 57 | | | | | | | | | |
| | CB | eP | E | 21 | 44 | 16 | | | | | | | | |
| | | S | E | | 50 | 01 | | | | | | | | |
| | TU | eP | N | 21 | 44 | 21 | | | | | | | | |
| | WN | e(P) | Z | 21 | 44 | 30 | | | | | | | | |
| | | e | Z | | | 36 | | | | | | | | |
| | | e | Z | | 45 | 54 | | 4 | 6 | 6 | 6 | | | |
| | | S | N | | 50 | 10 | | | | 7 | 5 | | | |
| | | e | Z | | 53 | 08 | | | | | | | | |
| | | eL | ZN | | 56 | | | 18 | 18 | | | | | |
| | | M | Z | 22 | 01 | | | 30 | 15 | | | | | |
| | KM | eP | X | 21 | 44 | 32 | | | | | | | | |
| | | e | X | | 50 | 19 | | | | | | | | |
| | | eL | X | | 57 | | | | | | | | | |
| | GP | P | N | 21 | 44 | 34 | | | | | | | | |
| | | eL | N | | 58 | | | | | | | | | |
| | RX | P | ZN | 21 | 44 | 50 | u | | | | | | | |
| | | e | ZN | | 46 | 19 | | | | | | | | |
| | | eS | N | | 50 | 40 | | | | 14 | 22 | | | |
| | | e | ZN | | 53 | 53 | | | | 10 | 17 | | | |
| | | eL | ZN | | 56 | | | | | | | | | |
| | | M | ZN | 22 | 00 | | | 70 | 19 | 70 | 19 | | | |
| | Epicentre: | | | 21 | 37 | 04 | | 7½S | 156E | | | | | USCGS |
| 25 | KP | P | Z | 01 | 34 | 47 | | | | | | | | |
| 25 | WN | eL? | N | 07 | 38 | | | | | | | | | |
| | | M | N | | 40 | | | | | 12 | 25 | | | |
| 25 | KP | eP | Z | 12 | 56 | 56 | | | | | | | | |
| | Epicentre: | | | 12 | 45 | 44 | | 11N | 124E | | | | | USCGS |
| 26 | KP | P | Z | 01 | 16 | 08 | u | | | | | | | |
| | Epicentre: | | | 01 | 06 | 23 | | 2½S | 128E | | | | | USCGS |
| 26 | KP | P | Z | 02 | 17 | 30 | u | | | | | | | |
| | | e | Z | | | 45 | | | | | | | | |
| | | e | Z | | 18 | 04 | | | | | | | | |
| | CT | eP? | Z | 02 | 17 | 37 | | | | | | | | |
| | | e | Z | | 18 | 11 | | | | | | | | |
| | TU | eP | N | 02 | 17 | 46 | | | | | | | | |
| | GP | e? | N | 02 | 18 | 07 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 26 | | e? | N | | | 52 | | | | | | | | |
| | RX | eL | NE | 02 | 40 | | | | | | | | | |
| | Epicentre: | | | 02 | 08 | 31 | | 1S | 138E | | | | | USCGS |
| 26 | CT | e(P) | Z | 05 | 30 | 49 | | | | | | | | |
| | KP | P | Z | 05 | 30 | 51 | | | | | | | | |
| 26 | SU | P | N | 06 | 34 | 40 | | | | | | | | |
| | | e | N | | | 55 | | | | | | | | |
| | | e | N | | 38 | 35 | | | | | | | | |
| | ON | eP? | E | 06 | 37 | 01 | | | | | | | | |
| | | e | E | | | 06 | | | | | | | | |
| | KP | eP | Z | 06 | 37 | 12 | | | | | | | | |
| | TU | eP | N | 06 | 37 | 17 | | | | | | | | |
| | | eS | N | | 40 | 46 | | | | | | | | |
| | CT | eP | Z | 06 | 37 | 23 | | | | | | | | |
| | | e | Z | | | 55 | | | | | | | | |
| | | e | Z | | 41 | 42 | | | | | | | | |
| | WN | e(P) | N | 06 | 37 | 50 | | | | | | | | |
| | | eL | ZN | | 45 | | | | | | | | | |
| | CB | eP | E | 06 | 37 | 58 | | | | | | | | |
| | | e | E | | 38 | 16 | | | | | | | | |
| | | e(S) | E | | 42 | 09 | | | | | | | | |
| | | e | E | | | 19 | | | | | | | | |
| | GP | e(P) | N | 06 | 38 | 16 | | | | | | | | |
| | | e(S) | N | | 42 | 51 | | | | | | | | |
| | KM | e(P) | X | 06 | 38 | 18 | | | | | | | | |
| | RX | eL | ZNE | 06 | 48 | | | | | | | | | |
| | Epicentre: | | | 06 | 32 | 36 | | 20S | 174W | | | | | USCGS |
| 26 | KP | eP | Z | 23 | 42 | 20 | | | | | | | | |
| | | e(PcP) | Z | | | 34 | | | | | | | | |
| | | i | Z | | 44 | 22 | d | | | | | | | |
| | | e(PP) | Z | | 45 | 53 | | | | | | | | |
| | WN | eL | Z | 24 | 16 | | | | | | | | | |
| | Epicentre: | | | 23 | 29 | 25 | | 51½N | 178W | | | | | USCGS |
| 27 | KP | e(P) | Z | 00 | 20 | 13 | | | | | | | | |
| | | e | Z | | | 21 | | | | | | | | |
| | Epicentre: | | | 00 | 07 | 10 | | 51½N | 178W | | | | | USCGS |
| 27 | KP | P | Z | 08 | 23 | 01 | | | | | | | | |
| | | e(PcP) | Z | | | 13 | | | | | | | | |
| | | e | Z | | | 35 | | | | | | | | |
| | CT | eP? | Z | 08 | 23 | 36 | | | | | | | | |
| | Epicentre: | | | 08 | 10 | 03 | | 51½N | 178E | | | | | USCGS |
| 27 | ON | P | E | 08 | 57 | 51 | | | | | | | | |
| | | e | E | | | 58 | | | | | | | | |
| | | e(S) | E | | 59 | 19 | | | | | | | | |
| | | eL | E | 09 | 00 | | | | | | | | | |
| | KP | P | Z | 08 | 58 | 09 | d | | | | | | | |
| | | i | Z | 09 | 00 | 32 | | | | | | | | |
| | TU | e(P) | N | 08 | 58 | 12 | | | | | | | | |
| | | e | N | | | 27 | | | | | | | | |
| | | e | N | 09 | 00 | 16 | | | | | | | | |
| | CT | iP | Z | 08 | 58 | 22 | | | | | | | | |
| | | e | Z | | | 26 | | | | | | | | |
| | WN | eP? | N | 08 | 58 | 51 | | | | | | | | |
| | | e | ZN | | 59 | 01 | | | | | | | | |
| | | e(S) | N | 09 | 02 | 17 | | | | | | | | |
| | | eL | Z | | 02 | 30 | | | | | | | | |
| | | e(ScS) | N | | 10 | 35 | | | | | | 20 | 8 | |
| | SU | e(P) | N | 08 | 58 | 55 | | | | | | | | |
| | | e | N | 09 | 00 | 05 | | | | | | | | |
| | | i(S) | N | | | 45 | | | | | | | | |
| | | e(L) | N | | 01 | 55 | | | | | | | | |

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| FEB 27 | | M | N | | 05 | | | | 70 8 | | | |
| | CB | e | E | 08 | 58 | 59 | | | | | | |
| | | e | E | 09 | 01 | 40 | | | | | | |
| | Epicentre: | | | 08 | 56 | 00 | | 30½S 179½W | | | USCGS | |
| | 27 KP | e(P) | Z | 09 | 16 | 56 | | | | | | |
| | | epP | Z | | 17 | 08 | | | | | | |
| | CT | P | Z | 09 | 16 | 58 | u | | | | | |
| | | epP | Z | | 17 | 09 | | | | | | |
| | Epicentre: | | | 09 | 05 | 25 | | 6½S 102½E | | | USCGS | |
| | 27 KP | P | Z | 10 | 01 | 45 | | | | | | |
| | | e | Z | | | 56 | | | | | | |
| | 27 KP | eP? | Z | 14 | 05 | 26 | | | | | | |
| | | e | Z | | | 30 | | | | | | |
| | | e | Z | | | 47 | | | | | | |
| | | e | Z | | 07 | 56 | | | | | | |
| | Epicentre: | | | 13 | 57 | 56 | | 7S 156½E 150 km | | | USCGS | |
| | 27 KP | P | Z | 23 | 16 | 20 | u | | | | | |
| | CT | eP | Z | 23 | 16 | 24 | | | | | | |
| | Epicentre: | | | 23 | 05 | 49 | | 2N 123E | | | USCGS | |
| | 28 KP | P | Z | 23 | 14 | 08 | u | | | | | |
| | | e | Z | | | 15 | | | | | | |
| | CT | P | Z | 23 | 14 | 16 | | | | | | |
| | | e | Z | | | 21 | | | | | | |
| | TU | e | N | 23 | 14 | 26 | | | | | | |
| | GP | e? | N | 23 | 14 | 27 | | | | | | |
| | WN | e | N | 23 | 14 | 30 | | | | | | |
| | | eL | ZN | | 34 | | | | | | | |
| | RX | eL | NE | 23 | 30 | | | | | | | |
| | Epicentre: | | | 23 | 05 | 39 | | 3S 142E | | | USCGS | |
| | 28 KP | P | Z | 24 | 00 | 54 | | | | | | |
| | | e | Z | | 01 | 01 | | | | | | |
| | Epicentre: | | | 23 | 52 | 27 | | 3S 142½E | | | USCGS | |
| | 29 KP | eP | Z | 05 | 34 | 12 | | | | | | |
| | | e | Z | | | 41 | | | | | | |
| | Epicentre: | | | 05 | 22 | 53 | | 14N 120E 150 km | | | USCGS | |
| | 29 CT | P | Z | 22 | 52 | 14 | | | | | | |
| | | e | Z | | | 24 | | | | | | |
| | RX | e | NE | 22 | 58 | 22 | | | | | | |
| | | eL | N | 23 | 01 | | | | | | | |
| | | eL | ZE | | 03 | | | | | | | |
| MAR 1 | ON | eP | E | 03 | 30 | 32 | | | | | | |
| | KP | P | Z | 03 | 30 | 44 | | | | | | |
| | CT | P | Z | 03 | 30 | 51 | | | | | | |
| | Epicentre: | | | 03 | 26 | 41 | | 18.5S 178W 600 km | | | USCGS | |
| | 1 KP | eP | Z | 08 | 11 | 20 | | | | | | |
| | | i | Z | | | 25 | | | | | | |
| | CT | P | Z | 08 | 11 | 36 | | | | | | |
| | | e | Z | | | 47 | | | | | | |
| | | e | Z | | 12 | 02 | | | | | | |
| | 1 KP | eP | Z | 20 | 03 | 18 | | | | | | |
| | CT | e | Z | 20 | 04.0 | | | | | | | |
| | WN | eL | ZN | 20 | 11 | | | | | | | |
| | RX | eL | NE | 20 | 13 | | | | | 4 20 | | |
| | | eL | Z | | 15 | | | 5 18 | | | | |
| | | M | NE | | 16 | | | | 4 15 | | | |
| | Epicentre: | | | 19 | 59 | 33 | | 22S 175W | | | USCGS | |



| Date | Stn | Phase | | h | m | s | | Az Tz | An Tn | Ae Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 3 | KP | eP | Z | 01 | 09 | 25 | | | | | | |
| | Epicentre: | | | 01 | 02 | 20 | | 7S 156E | | | USCGS | |
| | 3 TU | eP | N | 02 | 39 | 16 | | | | | | |
| | | eS | N | | 40 | 22 | | | | | | |
| | | e | N | | | 50 | | | | | | |
| | ON | P | E | 02 | 39 | 16 | | | | | | |
| | | e | E | | 41 | 35 | | | | | | |
| | KP | P | Z | 02 | 39 | 19 | | | | | | |
| | | e | Z | | | 30 | | | | | | |
| | CT | eP | Z | 02 | 39 | 32 | | | | | | |
| | WN | eS | N | 02 | 41 | 30 | | | | | | |
| | CB | e | E | 02 | 41.9 | | | | | | | |
| | GP | eS | N | 02 | 42 | 35 | | | | | | |
| | Epicentre: | | | 02 | 37 | 52 | | 34.0S 179.0W 100 km | | | NZ(C) | 5.2 NZ |
| | | | | | | | | Readings from Charters Towers included in data used for epicentre determination. | | | | |
| | 3 ON | eP | E | 04 | 11 | 15 | | | | | | |
| | KP | eP | Z | 04 | 11 | 29 | | | | | | |
| | | i | Z | | | 32 | | | | | | |
| | TU | eS | N | 04 | 14 | 03 | | | | | | |
| | WN | eS | N | 04 | 14 | 55 | | | | | | |
| | CB | eS | E | 04 | 15 | 02 | | | | | | |
| | GP | eS | N | 04 | 15 | 40 | | | | | | |
| | 3 ON | eP | E | 19 | 21 | 16 | | | | | | |
| | KP | P | Z | 19 | 21 | 35 | | | | | | |
| | WN | eP | N | 19 | 22 | 05 | | | | | | |
| | | eS | N | | 25 | 01 | | | | | | |
| | CB | eP | E | 19 | 22 | 08 | | | | | | |
| | | eS | E | | 25 | 09 | | | | | | |
| | GP | eP | N | 19 | 22 | 29 | | | | | | |
| | | eS | N | | 25 | 46 | | | | | | |
| | TU | eS | N | 19 | 24 | 11 | | | | | | |
| | 4 KP | P | Z | 02 | 28 | 52 | | | | | | |
| | Epicentre: | | | 02 | 15 | 56 | | 50.5N 177W | | | USCGS | |
| | 4 KP | iP | Z | 04 | 05 | 09 | u | | | | | |
| | | pP | Z | | | 43 | | | | | | |
| | RX | eSKS | NE | 04 | 15 | 38 | | | 2 10 | 2 10 | | |
| | Epicentre: | | | 03 | 53 | 00 | | 31N 129E 100 km | | | USCGS | |
| | 4 ON | eP | E | 13 | 21 | 47 | | | | | | |
| | KP | eP | Z | 13 | 22 | 01 | | | | | | |
| | TU | eS | N | 13 | 24 | 26 | | | | | | |
| | WN | eS | N | 13 | 25 | 14 | | | | | | |
| | 4 KP | PKP | Z | 16 | 45 | 06 | | | | | | |
| | Epicentre: | | | 16 | 25 | 25 | | 72N 1.5W | | | USCGS | |
| | 4 KP | eP | Z | 21 | 18 | 38 | | | | | | |
| | Epicentre: | | | 21 | 05 | 45 | | 7.5N 94E | | | USCGS | |
| | 5 KP | P | Z | 10 | 15 | 43 | | | | | | |
| | CT | eP | Z | 10 | 15 | 59 | | | | | | |
| | 5 KP | P | Z | 13 | 59 | 12 | | | | | | |
| | CB | eP | E | 13 | 59 | 13 | | | | | | |
| | | e | E | | | 26 | | | | | | |
| | TO | eP | Z | 13 | 59 | 16 | | | | | | |
| | | e | Z | | | 30 | | | | | | |
| | CT | eP | Z | 13 | 59 | 17 | | | | | | |
| | RX | eP | Z | 13 | 59 | 24 | | | | | | |
| | | eS | NE | 14 | 07 | 16 | | | 6 20 | 12 25 | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 5 | | e | Z | | 08 | 42 | 5 | 8 | | | | | |
| | | eSS | E | | 11 | 29 | | | | | 8 | 14 | |
| | | eLq | N | | 14 | | | | 26 | 30 | | | |
| | | eLr | Z | | 21 | | 11 | 26 | | | | | |
| | | M | NE | | 23 | | | | 20 | 20 | 26 | 20 | |
| | GP | eP | N | 13 | 59 | 25 | | | | | | | |
| | TU | e | N | 13 | 59 | 26 | | | | | | | |
| | WN | eP | ZN | 13 | 59 | 28 | 2 | 5 | | | | | |
| | | S | N | 14 | 07 | 23 | | | 5 | 6 | | | |
| | | e | Z | | 10 | 12 | 3 | 7 | | | | | |
| | | e | Z | | 13 | 19 | 2 | 8 | | | | | |
| | | Lq | N | | 14 | 09 | | | 75 | 40 | | | |
| | | eLr | Z | | 18.5 | | 21 | 20 | | | | | |
| | | M | N | | 24 | | | | 55 | 15 | | | |
| | ON | e | E | 13 | 59 | 30 | | | | | | | |
| | | e | E | 14 | 02 | 26 | | | | | | | |
| | KM | e | X | 13 | 59.4 | | | | | | | | |
| | Epicentre: | | | 13 | 49 | 16 | 1N | 129E | | | | | USCGS |
| 5 | KP | eP | Z | 15 | 59 | 50 | | | | | | | |
| | Epicentre: | | | 15 | 49 | 53 | 1N | 129E | | | | | USCGS |
| 5 | TU | eP | N | 20 | 52 | 58 | | | | | | | |
| | | eS | N | | 54 | 27 | | | | | | | |
| | KP | eP | Z | 20 | 53 | 07 | | | | | | | |
| | | e | Z | | | 17 | | | | | | | |
| | ON | eP | E | 20 | 53 | 08 | | | | | | | |
| | | e | E | | | 35 | | | | | | | |
| | CT | eP | Z | 20 | 53 | 25 | | | | | | | |
| | | e | Z | | | 32 | | | | | | | |
| | WN | eS | N | 20 | 55 | 35 | | | | | | | |
| | CB | eS | E | 20 | 55 | 56 | | | | | | | |
| | GP | eS | N | 20 | 56 | 43 | | | | | | | |
| 5 | TU | eP | N | 20 | 58 | 38 | | | | | | | |
| | | eS | N | 21 | 00 | 01 | | | | | | | |
| | KP | eP | Z | 20 | 58 | 39 | | | | | | | |
| | | e | Z | | | 53 | | | | | | | |
| | ON | eP | E | 20 | 58 | 41 | | | | | | | |
| | CT | eP | Z | 20 | 58 | 56 | | | | | | | |
| | | e | Z | | 59 | 12 | | | | | | | |
| | WN | eS | N | 21 | 01 | 11 | | | | | | | |
| | GP | eS | N | 21 | 02 | 16 | | | | | | | |
| 5 | KP | eP | Z | 21 | 25 | 43 | | | | | | | |
| | CT | eP | Z | 21 | 26 | 02 | | | | | | | |
| | WN | eS | N | 21 | 28 | 05 | | | | | | | |
| | GP | eS | N | 21 | 29 | 11 | | | | | | | |
| 5 | KP | P | Z | 02 | 32 | 03 | | | | | | | |
| | CT | eP | Z | 02 | 32 | 12 | | | | | | | |
| | AK | eL | N | 02 | 54 | | | | | | | | |
| | WN | eL | ZN | 02 | 55.6 | | 4 | 16 | 5 | 15 | | | |
| | Epicentre: | | | 02 | 22 | 06 | 1N | 129E | | | | | USCGS |
| 6 | WN | eL | N | 10 | 25.4 | | | | 3 | 10 | | | |
| 6 | KP | P | Z | 10 | 42 | 47 | | | | | | | |
| 7 | CB | e | E | 05 | 23 | 23 | | | | | | | |
| | KP | P | Z | 05 | 23 | 25 | | | | | | | |
| | | e | Z | | | 55 | | | | | | | |
| | | e | Z | | 24 | 10 | | | | | | | |
| | TO | eP | Z | 05 | 23 | 29 | | | | | | | |
| | | e | Z | | 24 | 10 | | | | | | | |
| | CT | P | Z | 05 | 23 | 30 | | | | | | | |



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 7 | | i | Z | 05 | 24 | 11 | | | | | | | | |
| | | e | Z | | | 53 | | | | | | | | |
| | GP | eP | N | 05 | 23 | 31 | | | | | | | | |
| | | e | N | | | 59 | | | | | | | | |
| | WN | eP | N | 05 | 23 | 31 | | | | | | | | |
| | TU | e | N | 05 | 23.6 | | | | | | | | | |
| | Epicentre: | | | 05 | 13 | 10 | | 1.5N | 125.5E | | | | | USCGS |
| 7 | KP | eP | Z | 09 | 44 | 27 | | | | | | | | |
| | | e | Z | | | 36 | | | | | | | | |
| | CT | P | Z | 09 | 44 | 39 | | | | | | | | |
| | | e | Z | | 45 | 19 | | | | | | | | |
| | TO | eP | Z | 09 | 44 | 39 | | | | | | | | |
| | GP | eP | N | 09 | 45 | 04 | | | | | | | | |
| | | e | N | | | 13 | | | | | | | | |
| | Epicentre: | | | 09 | 38 | 09 | | 10S | 160.5E | | | | | USCGS |
| 8 | KP | iP | Z | 04 | 04 | 46 | | | | | | | | |
| 8 | RX | eP | NE | 11 | 55 | 48 | | | | | | 7 | 5 | |
| | | eS | NE | | 59 | 50 | | | | | | 11 | 20 | 22 16 |
| | | eL | N | 12 | 00¾ | | | | | | | 11 | 22 | |
| | | eL | ZE | | 01 | | | 11 | 16 | | | | | 14 16 |
| | | M | NE | | 03 | | | | | | | 28 | 12 | 43 12 |
| | GP | eP? | N | 11 | 55 | 59 | | | | | | | | |
| | | eP | N | | 56 | 08 | | | | | | | | |
| | WN | P | ZN | 11 | 56 | 26 | | 5 | 4 | | | 5 | 4 | |
| | | eSS | N | 12 | 01 | 48 | | | | | | 6 | 10 | |
| | | eL | Z | 12 | 03 | | | 9 | 18 | | | | | |
| | | M | N | | 06 | | | | | | | 19 | 10 | |
| | TO | e | Z | 11 | 56 | 50 | | | | | | | | |
| | CT | P | Z | 11 | 56 | 45 | | | | | | | | |
| | | e | Z | | | 51 | | | | | | | | |
| | KP | eP | Z | 11 | 57 | 01 | | | | | | | | |
| | Epicentre: | | | 11 | 51 | 10 | | 65S | 179.5E | | | | | USCGS |
| 8 | AK | iP | N | 16 | 38 | 02 | s | | | | | | | |
| | | S | N | | 41 | 42 | | | | | | | | |
| | KP | iP | Z | 16 | 38 | 15 | u | | | | | | | |
| | | ScP | Z | | 45 | 18 | | | | | | | | |
| | | P'P' | Z | 17 | 11 | 57 | | | | | | | | |
| | TO | P | Z | 16 | 38 | 26 | u | | | | | | | |
| | | S | Z | | 42 | 20 | | | | | | | | |
| | | eScS | Z | | 49 | 19 | | | | | | | | |
| | | P'P' | Z | 17 | 11 | 53 | | | | | | | | |
| | TU | eiP | N | 16 | 38 | 26 | n | | | | | | | |
| | | S | N | | 42 | 15 | | | | | | | | |
| | | e | N | | | 42 | | | | | | | | |
| | | PcS | N | | 45 | 43 | | | | | | | | |
| | | ScS | N | | 49 | 06 | | | | | | | | |
| | CT | P | Z | 16 | 38 | 26½ | | | | | | | | |
| | | ScP | Z | | 45 | 21 | | | | | | | | |
| | | e(ScS) | Z | 16 | 49 | 18 | | | | | | | | |
| | | P'P' | Z | 17 | 11 | 53 | | | | | | | | |
| | CB | eP | E | 16 | 38 | 39 | | | | | | | | |
| | | i | E | | | 41 | | | | | | | | |
| | WN | iP | ZN | 16 | 38 | 41 | | | | | | 28 | 3 | |
| | | e | ZN | | 39 | 05 | | 170 | 5 | | | 77 | 7 | |
| | | iS | ZN | | 42 | 44 | | 82 | 5 | | | | | |
| | | eL | N | | 44 | | | | | | | | | |
| | Epicentre: | | | 16 | 33 | 38 | | 16.5S | 168.5E | 250 km | | | | USCGS 7-7¼ PAS |
| 8 | SU | P | N | 16 | 35 | 56 | | | | | | | | |
| | KM | P | X | 16 | 38 | 49 | | | | | | | | |
| | | eScS | X | | 49 | 17 | | | | | | | | |
| | GP | iP | N | 16 | 39 | 00 | | | | | | | | |
| | | epP | N | | | 53 | | | | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 8 | | PcP | N | | 42 | 20 | | | | | | | | |
| | | S | N | | 43 | 16 | | | | | | | | |
| | | PcS | N | | 45 | 56 | | | | | | | | |
| | | ScS | N | | 49 | 24 | | | | | | | | |
| | RX | iP! | ZNE | 16 | 39 | 12 | u | 30 | 6 | 22 | 6 | 6 | 7 | |
| | | pP | ZN | | 40 | 00 | | 16 | 6 | 14 | 6 | | | |
| | | PP | ZNE | | | 18 | | 24 | 8 | 34 | 11 | 20 | 6 | |
| | | 1S | ZNE | 16 | 43 | 40 | ne | 31 | 8 | 58 | 14 | 39 | 8 | |
| | | eSS | ZN | | 45 | 37 | | 40 | 16 | 60 | 15 | | | |
| | | eLq | E | | 46½ | | | | | | | 31 | 20 | |
| | | eLr | ZN | | 48½ | | | 35 | 15 | 47 | 15 | | | |
| | Epicentre: | | | 16 | 33 | 38 | | 16.5S 168.5E 250 km | | | | | | USCGS |
| | 8 KP | eP | Z | 18 | 32 | 12 | | | | | | | | |
| | | i | Z | | | 15 | | | | | | | | |
| | CT | eP | Z | 18 | 32 | 24 | | | | | | | | |
| | | eS | Z | | 35 | 09 | | | | | | | | |
| | TO | eP | Z | 18 | 32 | 24 | | | | | | | | |
| | | eS | Z | | 35 | 08 | | | | | | | | |
| | WN | eP | N | 18 | 32 | 46 | | | | | | | | |
| | CB | eP | E | 18 | 32 | 53 | | | | | | | | |
| | GP | eP | N | 18 | 33 | 16 | | | | | | | | |
| | TU | eS | N | 18 | 34 | 51 | | | | | | | | |
| | 8 KP | P | Z | 19 | 31 | 20 | | | | | | | | |
| | | i | Z | | | 23 | | | | | | | | |
| | CT | eP | Z | 19 | 31 | 31 | | | | | | | | |
| | | i | Z | | | 33 | | | | | | | | |
| | | eS | Z | | 34 | 07 | | | | | | | | |
| | TO | eP | Z | 19 | 31 | 31 | | | | | | | | |
| | | i | Z | | | 33 | | | | | | | | |
| | | eS | Z | | 34 | 15 | | | | | | | | |
| | WN | eP | N | 19 | 31 | 53 | | | | | | | | |
| | | eS | N | | 34 | 52 | | | | | | | | |
| | CB | eP | E | 19 | 31 | 57 | | | | | | | | |
| | KM | eP | X | 19 | 32 | 14 | | | | | | | | |
| | GP | eP | N | 19 | 32 | 18 | | | | | | | | |
| | TU | eS | N | 19 | 33 | 58 | | | | | | | | |
| | 9 KP | P | Z | 19 | 50 | 51 | | | | | | | | |
| | | PcP | Z | | 53 | 22 | | | | | | | | |
| | CT | eP | Z | 19 | 51 | 00 | | | | | | | | |
| | TO | eP | Z | 19 | 51 | 00 | | | | | | | | |
| | Epicentre: | | | 19 | 43 | 53 | | 7S 156.5E | | | | | | USCGS |
| | 10 KP | P | Z | 00 | 08 | 12 | | | | | | | | |
| | RX | e(L) | N | 00 | 44.2 | | | | | 4 | 14 | | | |
| | | eL | ZNE | | 48½ | | | 21 | 24 | 15 | 24 | 6 | 20 | |
| | WN | eL | N | 00 | 50½ | | | | | 16 | 25 | | | |
| | | M | ZN | | 55 | | | 9 | 18 | 9 | 12 | | | |
| | 9 Epicentre: | | | 23 | 54 | 20 | | 16S 72W 150 km | | | | | | USCGS |
| | 10 KP | P | Z | 02 | 34 | 20 | | | | | | | | |
| | | e | Z | | | 41 | | | | | | | | |
| | TO | eP | Z | 02 | 34 | 32 | | | | | | | | |
| | 10 ON | P | E | 05 | 02 | 03 | | | | | | | | |
| | | S | E | | 03 | 22 | | | | | | | | |
| | KP | P | Z | 05 | 02 | 14½ | u | | | | | | | |
| | TU | e(P) | N | 05 | 02 | 16 | | | | | | | | |
| | | e | N | | 03 | 37 | | | | | | | | |
| | | S | N | | | 43 | | | | | | | | |
| | TO | P | Z | 05 | 02 | 24 | | | | | | | | |
| | | S | Z | | 04 | 01 | | | | | | | | |
| | WN | eP | N | 05 | 02 | 46 | | | | | | | | |
| | | S | N | | 04 | 38 | | | | 5 | 2 | | | |



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 10 | GP | eP | N | 05 | 03 | 15 | | | | | | | |
| | | e | N | | | 17 | | | | | | | |
| | | e | N | | 05 | 31 | | | | | | | |
| | | S | N | | | 33 | | | | | | | |
| | AK | S | N | 05 | 03 | 34 | | | | | | | |
| | CB | eS | E | 05 | 04 | 49 | | | | | | | |
| | KM | eS | X | 05 | 05 | 21 | | | | | | | |
| | Epicentre: | | | 05 | 00 | 23 | 31.5S 179.5E 500 km | | | | | | USCGS |
| | 10 KP | eP | Z | 09 | 51 | 15 | | | | | | | |
| | TO | eP | Z | 09 | 51 | 26 | | | | | | | |
| | GP | eP | N | 09 | 51 | 51 | | | | | | | |
| | RX | eL | E | 10 | 01 | | | | | | 3 | 15 | |
| | | eL | N | | 02 | | | | 4 | 18 | | | |
| | WN | eL | ZN | 10 | 04 | | | | 6 | 18 | | | |
| | Epicentre: | | | 09 | 44 | 57 | 10S 161E | | | | | | USCGS |
| | 10 SU | e | N | 13 | 47 | | | | | | | | |
| | | eS | N | | 48 | 15 | | | | | | | |
| | ON | P | E | 13 | 49 | 37 | | | | | | | |
| | KP | P | Z | 13 | 49 | 48 | | | | | | | |
| | TU | e | N | 13 | 49 | 51 | | | | | | | |
| | TO | P | Z | 13 | 50 | 02 | | | | | | | |
| | WN | eP | N | 13 | 50 | 20 | | | | | | | |
| | | eL | ZN | | 59.1 | | 8 | 20 | 8 | 20 | | | |
| | CB | eP | E | 13 | 50 | 23 | | | | | | | |
| | KM | eP | X | 13 | 50 | 38 | | | | | | | |
| | GP | eP | N | 13 | 50 | 41 | | | | | | | |
| | RX | eLq | E | 14 | 00 | | | | | | 3 | 18 | |
| | | eLr | ZN | | 01½ | | 6 | 16 | 6 | 24 | | | |
| | Epicentre: | | | 13 | 44 | 25 | 15S 174W | | | | | | USCGS |
| | 10 KP | P | Z | 14 | 45 | 18 | | | | | | | |
| | | epP | Z | | | 40 | | | | | | | |
| | Epicentre: | | | 14 | 32 | 39 | 47N 152E 100 km | | | | | | USCGS |
| | 10 KP | P | Z | 19 | 23 | 51 | | | | | | | |
| | TO | eP | Z | 19 | 24 | 00 | | | | | | | |
| | 11 KP | eP | Z | 10 | 36 | 46 | | | | | | | |
| | 11 KP | eP | Z | 11 | 30 | 19 | | | | | | | |
| | Epicentre: | | | 11 | 26 | 20 | 17.5S 178.5W 600 km | | | | | | USCGS |
| | 11 KP | eP | Z | 13 | 16 | 02 | | | | | | | |
| | 11 KP | eP | Z | 13 | 21 | 21 | | | | | | | |
| | Epicentre: | | | 13 | 11 | 10 | 18.5N 145E 200 km | | | | | | USCGS |
| | 12 ON | eP | E | 01 | 32 | 27 | | | | | | | |
| | KP | eP | Z | 01 | 32 | 35 | | | | | | | |
| | | e | Z | | 33 | 12 | | | | | | | |
| | CT | eP | Z | 01 | 32 | 57 | | | | | | | |
| | TU | eS | N | 01 | 34 | 10 | | | | | | | |
| | Epicentre: | | | 01 | 30 | 15 | 29.5S 178W | | | | | | USCGS |
| | 12 KP | P | Z | 02 | 22 | 23 | | | | | | | |
| | | e | Z | | 23 | 23 | | | | | | | |
| | TO | P | Z | 02 | 22 | 31 | | | | | | | |
| | CT | P | Z | 02 | 22 | 32 | | | | | | | |
| | | e | Z | | 23 | 26 | | | | | | | |
| | CB | eP | E | 02 | 22 | 34 | | | | | | | |
| | TU | eP | N | 02 | 22 | 35 | | | | | | | |
| | Epicentre: | | | 02 | 14 | 56 | 4S 152½E 150 km | | | | | | USCGS |
| | 12 KP | P | Z | 16 | 30 | 25 | | | | | | | |
| | CT | P | Z | 16 | 30 | 35 | | | | | | | |

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| MAR 12 | KP | eP | Z | 20 | 38 | 03 | | | | | | | | |
| | | i | Z | | | 06 | | | | | | | | |
| | TO | eP | Z | 20 | 38 | 12 | | | | | | | | |
| | CT | eP | Z | 20 | 38 | 12 | | | | | | | | |
| | | ePP | Z | | 39 | 48 | | | | | | | | |
| | CB | eP | E | 20 | 38 | 16 | | | | | | | | |
| | TU | e(P) | N | 20 | 38 | 19 | | | | | | | | |
| | KM | eP | X | 20 | 38 | 22 | | | | | | | | |
| | SU | e? | N | 20 | 38 | 30 | | | | | | | | |
| | | S | N | | 41 | 20 | | | | | | | | |
| | GP | eP | N | 20 | 38 | 33 | | | | | | | | |
| | | e | N | | 39 | 09 | | | | | | | | |
| | WN | eP | Z | 20 | 38 | 33 | 4 | 3 | | | | | | |
| | | i | Z | | | 57 | 6 | 6 | | | | | | |
| | | PP | ZN | | 40 | 08 | 10 | 10 | 9 | 8 | | | | |
| | | e | Z | | 41 | 18 | 5 | 8 | | | | | | |
| | | S | N | | 44 | 27 | | | 10 | 8 | | | | |
| | | eSS | N | | 47 | 20 | | | 5 | 7 | | | | |
| | | eL | N | 20 | 49 | | | | 12 | 16 | | | | |
| | | eLr | Z | | 50½ | | 16 | 26 | | | | | | |
| | | M | N | | 54 | | | | 20 | 15 | | | | |
| | AK | S | N | 20 | 43 | 42 | | | | | | | | |
| | Epicentre: | | | 20 | 30 | 39 | 6S 152E | | | | | | USCGS | 6½ PAS |
| 12 | SU | e | N | 23 | 51 | 35 | | | | | | | | |
| 13 | KP | P | Z | 00 | 28 | 28 | | | | | | | | |
| | CT | P | Z | 00 | 28 | 38 | | | | | | | | |
| | TO | eP | Z | 00 | 28 | 37 | | | | | | | | |
| 13 | KP | P | Z | 12 | 41 | 02 | | | | | | | | |
| 14 | KP | P | Z | 01 | 05 | 53 | | | | | | | | |
| | Epicentre: | | | 00 | 52 | 57 | 42½N 143E | | | | | | USCGS | |
| 14 | KP | P | Z | 08 | 48 | 28 | | | | | | | | |
| 14 | KP | iP | Z | 23 | 41 | 57 | | | | | | | | |
| | | S | Z | | 42 | 14 | | | | | | | | |
| | CT | P | Z | 23 | 41 | 59½ | | | | | | | | |
| | | e(S) | Z | | | 25 | | | | | | | | |
| | TO | P | Z | 23 | 42 | 00 | | | | | | | | |
| | TU | P | N | 23 | 42 | 00½ | | | | | | | | |
| | | S | N | | | 19½ | | | | | | | | |
| | WN | eP | N | 23 | 42 | 21 | | | | | | | | |
| | | S | N | | | 57 | | | | | | | | |
| | GP | eP | N | 23 | 42 | 57 | | | | | | | | |
| | | S | N | | 43 | 58 | | | | | | | | |
| | CB | S | E | 23 | 43 | 12 | | | | | | | | |
| | KM | eS | X | 23 | 43 | 50 | | | | | | | | |
| | Epicentre: | | | 23 | 41 | 35 | 38.4S 176.0E 150 km | | | | | | NZ(C) | 5.0 NZ |
| 15 | KP | P | Z | 09 | 33 | 51 | | | | | | | | |
| | Epicentre: | | | 09 | 20 | 56 | 51N 174.5W | | | | | | USCGS | |
| 15 | SU | e | N | 10 | 13 | 30 | | | | | | | | |
| | KP | eP | Z | 10 | 13 | 35 | | | | | | | | |
| | AK | eL | N | 10 | 20 | | | | | | | | | |
| | Epicentre: | | | 10 | 08 | 58 | 20S 174W | | | | | | USCGS | |
| 15 | KP | P | Z | 19 | 12 | 30 | | | | | | | | |
| | CT | eP | Z | 19 | 12 | 47 | | | | | | | | |
| 15 | KP | P | Z | 19 | 35 | 29 | | | | | | | | |
| | CT | P | Z | 19 | 35 | 39 | | | | | | | | |
| | Epicentre: | | | 19 | 31 | 50 | 20.5S 179W 600 km | | | | | | USCGS | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 16 | CT | P | Z | 00 | 45 | 14 | | | | | | | | |
| | KP | P | Z | 00 | 45 | 20 | | | | | | | | |
| | Epicentre: | | | 00 | 33 | 05 | 59.5S 26W | | | | | | USCGS | |
| 16 | SU | eP | N | 17 | 41 | 33 | | | | | | | | |
| | | e | N | | 42 | 18 | | | | | | | | |
| | | eL | N | | 43.6 | | | | | | | | | |
| | ON | P | E | 17 | 44 | 27 | | | | | | | | |
| | AK | P | N | 17 | 44 | 31 | | | | | | | | |
| | | eL | N | | 51 | | | | | | | | | |
| | KP | eP | Z | 17 | 44 | 39 | | | | | | | | |
| | | i | Z | | | 42 | | | | | | | | |
| | CT | eP | Z | 17 | 44 | 51 | | | | | | | | |
| | WN | eL | ZN | 17 | 53.8 | | 7 | 13 | 9 | 20 | | | | |
| | Epicentre: | | | 17 | 39 | 16 | 15.5S 173.5W | | | | | | USCGS | |
| 16 | TU | P | N | 19 | 17 | 43 | | | | | | | | |
| | | S | N | | 18 | 47 | | | | | | | | |
| | KP | eP | Z | 19 | 17 | 47 | | | | | | | | |
| | | i | Z | | | 48½ | | | | | | | | |
| | ON | P | E | 19 | 17 | 49 | | | | | | | | |
| | | e | E | | 18 | 01 | | | | | | | | |
| | CT | P | Z | 19 | 17 | 59 | | | | | | | | |
| | AK | e | N | 19 | 18 | 10 | | | | | | | | |
| | GP | e | N | 19 | 19 | 17 | | | | | | | | |
| | | eS | N | | 21 | 00 | | | | | | | | |
| | WN | S | N | 19 | 19 | 55 | | | | | | | | |
| | CB | eS | E | 19 | 20 | 18 | | | | | | | | |
| | KM | eS | X | 19 | 20 | 56 | | | | | | | | |
| | Epicentre: | | | 19 | 16 | 20 | 34.5S 178.5W | | | | | | NZ(D) | 5.2 NZ |
| | Charters Towers, Brisbane, Adelaide, Mundaring and Melbourne readings also used for determination of epicentre. | | | | | | | | | | | | | |
| 16 | ON | eP | E | 21 | 47 | 12 | | | | | | | | |
| | KP | P | Z | 21 | 47 | 24½ | | | | | | | | |
| | | i | Z | | | 26 | | | | | | | | |
| | | i | Z | | | 33 | | | | | | | | |
| | CT | eP | Z | 21 | 47 | 35 | | | | | | | | |
| | CB | eP | E | 21 | 48 | 03 | | | | | | | | |
| 17 | ON | e(P) | E | 11 | 38 | 56 | | | | | | | | |
| | KP | eP | Z | 11 | 38 | 57 | | | | | | | | |
| | | e | Z | | 39 | 00 | | | | | | | | |
| | CT | eP | Z | 11 | 39 | 08 | | | | | | | | |
| | SU | e | N | 11 | 40 | | | | | | | | | |
| 17 | ON | eP | E | 14 | 29 | 00 | | | | | | | | |
| | TU | eP | N | 14 | 29 | 03 | | | | | | | | |
| | | eS | N | | 30 | 18 | | | | | | | | |
| | KP | eP | Z | 14 | 29 | 05 | | | | | | | | |
| | | e | Z | | | 11 | | | | | | | | |
| | CT | eP? | Z | 14 | 29 | 16 | | | | | | | | |
| | | e | Z | | | 21 | | | | | | | | |
| | WN | eS | N | 14 | 31 | 26 | | | | | | | | |
| 17 | ON | P | E | 15 | 16 | 42 | | | | | | | | |
| | KP | P | Z | 15 | 16 | 50 | | | | | | | | |
| | CT | P | Z | 15 | 17 | 01 | | | | | | | | |
| | TU | eS | N | 15 | 17 | 50 | | | | | | | | |
| | WN | eS | N | 15 | 18 | 55 | | | | | | | | |
| | CB | eS | E | 15 | 19 | 10 | | | | | | | | |
| | GP | eS | N | 15 | 19 | 57 | | | | | | | | |
| | Epicentre: | | | 15 | 15 | 32 | 31.1S 179.3E 250 km | | | | | | NZ(C) | 5.0 NZ |
| | Charters Towers readings also used for determination of epicentre. | | | | | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 18 | KP | P | Z | 12 | 24 | 05 | | | | | | | |
| | | e | Z | | | 18 | | | | | | | |
| | | epP | Z | | | 38 | | | | | | | |
| | CT | P | Z | 12 | 24 | 14 | | | | | | | |
| | GP | eP | N | 12 | 24 | 34 | | | | | | | |
| | Epicentre: | | | 12 | 16 | 51 | 4.5S | 152E | 150 km | | | | USCGS |
| 19 | KP | eP | Z | 09 | 31 | 03 | | | | | | | |
| | Epicentre: | | | 09 | 20 | 51 | 2.5N | 127E | | | | | USCGS |
| 19 | KP | eP | Z | 15 | 16 | 40 | | | | | | | |
| 19 | KP | P | Z | 19 | 24 | 24 | | | | | | | |
| | CB | eP | E | 19 | 24 | 26 | | | | | | | |
| | CT | P | Z | 19 | 24 | 31 | | | | | | | |
| | TU | eP | N | 19 | 24 | .6 | | | | | | | |
| | WN | e(P) | N | 19 | 24 | 37 | | | | | | | |
| | | eL | N | | | 38.5 | | | | | | | |
| | KM | e(P) | X | 19 | 24 | 39 | | | | | | | |
| * | RX | eL | NE | 19 | 36 | | | | 3 | 20 | 3 | 20 | |
| | Epicentre: | | | 19 | 15 | 37 | 3S | 138E | | | | | USCGS |
| 20 | KP | P | Z | 03 | 40 | 54 | | | | | | | |
| | CT | e | Z | 03 | 42 | 01 | | | | | | | |
| 20 | KP | P | Z | 07 | 38 | 08 | | | | | | | |
| | CT | P | Z | 07 | 38 | 08 | | | | | | | |
| | Epicentre: | | | 07 | 25 | 59 | 0.5N | 99E | | | | | USCGS |
| 20 | KP | eP | Z | 17 | 19 | 56 | | | | | | | |
| | | i | Z | | 20 | 04 | | | | | | | |
| | | i | Z | | | 15 | | | | | | | |
| | CT | eP | Z | 17 | 20 | 05 | | | | | | | |
| | | i | Z | | | 22 | | | | | | | |
| * | WN | P | N | 17 | 20 | 10 | | | 5 | 6 | | | |
| | | SKS | N | | 30 | 20 | | | | | | | |
| | | S | N | | | 33 | | | 45 | 20 | | | |
| | | PS | N | | 31 | 42 | | | 13 | 10 | | | |
| | | eSS | N | | 36 | .4 | | | 16 | 16 | | | |
| | | eL | N | | 43 | | | | | | | | |
| | | M | N | | 53 | | | | 97 | 22 | | | |
| | CB | e | E | 17 | 20 | 18 | | | | | | | |
| | | eS | E | | 30 | 31 | | | | | | | |
| | KM | e | X | 17 | 20 | 28 | | | | | | | |
| | | eS | X | | 30 | 42 | | | | | | | |
| | SU | S | N | 17 | 27 | 10 | | | | | | | |
| | | e | N | | 28 | .0 | | | | | | | |
| | | eLr | N | | 38 | .2 | | | | | | | |
| | Epicentre: | | | 17 | 07 | 30 | 40N | 143.5E | 60 km | | | | USCGS 7-7½ mB 7 PAS |
| 21 | KP | eP | Z | 00 | 47 | 16 | | | | | | | |
| | CT | eP | Z | 00 | 47 | 32 | | | | | | | |
| | Epicentre: | | | 00 | 34 | 50 | 39.5N | 143E | | | | | USCGS 6½ PAS |
| 21 | SU | eS | N | 01 | 53 | 13 | | | | | | | |
| | | eL | N | | 53 | .9 | | | | | | | |
| | ON | eP | E | 01 | 54 | 44 | | | | | | | |
| | KP | P | Z | 01 | 54 | 57 | | | | | | | |
| | | e | Z | | 55 | 16 | | | | | | | |
| | CT | eP | Z | 01 | 55 | 12 | | | | | | | |
| | WN | eL | N | 02 | 02½ | | | | | | | | |
| | | eL | Z | | 04 | | | | | | | | |
| | | M | ZN | | 08 | | 5 | 14 | 7 | 15 | | | |
| | Epicentre: | | | 01 | 49 | 42 | 16S | 173W | | | | | USCGS |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 21 | KP | P | Z | 09 | 30 | 49 | | | | | | | | |
| | Epicentre: | | | 09 | 18 | 22 | | 40N | 143E | | | | | USCGS |
| 21 | SU | eP | N | 11 | 42 | 35 | | | | | | | | |
| | | eS | N | | 44 | 16 | | | | | | | | |
| | ON | eP? | E | 11 | 45 | 17 | | | | | | | | |
| | | e(P) | E | | | 26 | | | | | | | | |
| | KP | P | Z | 11 | 45 | 31 | | | | | | | | |
| | | i | Z | | | 46 | | | | | | | | |
| | | i | Z | | 46 | 01 | | | | | | | | |
| | CT | e(P) | Z | 11 | 45 | 48 | | | | | | | | |
| | WN | eL | N | 11 | 53 | | | | | | | | | |
| | | eL | Z | | 54½ | | | | | | | | | |
| | KM | eP | X | 11 | 45 | .5 | | | | | | | | |
| | Epicentre: | | | 11 | 40 | 15 | | 16.5S | 172.5W | | | | | USCGS |
| 22 | RX | P | ZNE | 02 | 35 | 32 | un | 13 | 9 | 11 | 9 | 4 | 10 | |
| | | S | NE | | 38 | 54 | | | | 6 | 20 | 26 | 30 | |
| | | Lq | N | | 39 | 40 | | | | 53 | 20 | | | |
| | | eLr | Z | | 40 | | | 61 | 22 | | | | | |
| | GP | eP | N | 02 | 36 | 01 | | | | | | | | |
| | | e | N | | | 11 | | | | | | | | |
| | KM | e(P) | X | 02 | 36 | 10 | | | | | | | | |
| | CB | eP | E | 02 | 36 | 29 | | | | | | | | |
| | | e | E | | 37 | 04 | | | | | | | | |
| | | e | E | | 40 | 56 | | | | | | | | |
| | WN | iP | ZN | 02 | 36 | 33 | u | 5 | 4 | 3 | 4 | | | |
| | | e | Z | | 39 | 06 | | 3 | 8 | | | | | |
| | | S | ZN | | 41 | 03 | | 4 | 8 | 6 | 7 | | | |
| | | eL | ZN | | 42 | .7 | | 34 | 28 | 55 | 25 | | | |
| | | M | ZN | | 47 | | | 22 | 11 | 50 | 10 | | | |
| | CT | P | Z | 02 | 36 | 51 | | | | | | | | |
| | | e | Z | | 37 | 12 | | | | | | | | |
| | KP | P | Z | 02 | 37 | 01 | | | | | | | | |
| | Epicentre: | | | 02 | 31 | 17 | | 61.5S | 154E | | | | | USCGS |
| 22 | ON | eP | E | 12 | 30 | 05 | | | | | | | | |
| | KP | iP | Z | 12 | 30 | 12 | u | | | | | | | |
| | CT | eP | Z | 12 | 30 | 19 | | | | | | | | |
| | WN | e(P) | N | 12 | 30 | 38 | | | | | | | | |
| | GP | e | N | 12 | 31 | 05 | | | | | | | | |
| 22 | RX | eP | ZN | 13 | 52 | 55 | | 3 | 8 | 2 | 8 | | | |
| | | eL | N | | 57 | | | | | 3 | 22 | | | |
| | | eL | Z | | 57½ | | | | | 5 | 18 | | | |
| | CB | e | E | 13 | 53 | 46 | | | | | | | | |
| | GP | e | N | 13 | 53 | .3 | | | | | | | | |
| | KM | e | X | 13 | 53 | .5 | | | | | | | | |
| | CT | P | Z | 13 | 54 | 11 | | | | | | | | |
| | | e | Z | | | 27 | | | | | | | | |
| | KP | eP | Z | 13 | 54 | 22 | | | | | | | | |
| | WN | e | N | 13 | 58 | | | | | | | | | |
| | | eL | N | 14 | 02 | | | | | | | | | |
| | | M | N | | 04 | | | | | 5 | 10 | | | |
| | Epicentre: | | | 13 | 48 | 43 | | 60.5S | 153E | | | | | USCGS |
| 22 | CT | P | Z | 20 | 07 | 59 | | | | | | | | |
| | KP | P | Z | 20 | 08 | 04 | | | | | | | | |
| 23 | KP | P | Z | 00 | 35 | 50 | | | | | | | | |
| | CT | P | Z | 00 | 35 | 55 | | | | | | | | |
| | ON | e(P) | E | 00 | 36 | .0 | | | | | | | | |
| | WN | eP | ZN | 00 | 36 | 12 | | 6 | 6 | 5 | 6 | | | |
| | | eSKS | N | | 46 | 12 | | | | 3 | 5 | | | |
| | | S | N | | | 30 | | | | 11 | 12 | | | |
| | | eSS | N | | 52 | 10 | | | | 6 | 15 | | | |
| | | eLr | ZN | 01 | 07 | | | 25 | 22 | 20 | 20 | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 23 | SU | e? | N | 00 | 36 | 12 | | | | | | | | | |
| | | S | N | | 43 | 12 | | | | | | | | | |
| | | eLr | N | | 54 | .0 | | | | | | | | | |
| | RX | eP | ZN | 00 | 36 | 24 | | 3 | 5 | | | | | | |
| | | e | Z | | 37 | 01 | | 5 | 5 | | | | | | |
| | | S | NE | | 46 | 46 | | | | 6 | 14 | 7 | 14 | | |
| | | PS | N | | 47 | 56 | | | | 11 | 15 | | | | |
| | | eSS | N | | 52 | 48 | | | | 7 | 20 | | | | |
| | | eL | E | 01 | 02 | | | | | | | 7 | 22 | | |
| | | eL | N | | 04 | | | | | 15 | 22 | | | | |
| | | eL | Z | | 06 | | | 20 | 24 | | | | | | |
| | | M | NE | | 09 | | | | | 22 | 19 | 18 | 19 | | |
| | Epicentre: | | | 00 | 23 | 22 | | 39.5N 143E | | | | | | USCGS | 6½–7 PAS |
| | 23 CT | iP! | Z | 01 | 33 | 31½ | | | | | | | | | |
| | | e(S) | Z | | 34 | 29 | | | | | | | | | |
| | KP | iP! | Z | 01 | 33 | 32 | d | | | | | | | | |
| | TU | P | N | 01 | 33 | 35½ | | | | | | | | | |
| | | S | N | | 34 | 32 | | | | | | | | | |
| | WN | P | N | 01 | 33 | 37 | | | | | | | | | |
| | | e | N | | 34 | 31 | | | | | | | | | |
| | | S | N | | | 37 | | | | | | | | | |
| | ON | eP | E | 01 | 33 | 42 | | | | | | | | | |
| | | i | E | | | 43 | | | | | | | | | |
| | | S | E | | 34 | 47½ | | | | | | | | | |
| | KM | P | X | 01 | 33 | 49 | | | | | | | | | |
| | | S | X | | 34 | 57 | | | | | | | | | |
| | GP | P | N | 01 | 33 | 55 | | | | | | | | | |
| | | S | N | | 35 | 09 | | | | | | | | | |
| | RX | e | N | 01 | 35 | 49 | | | | | | | | | |
| | Epicentre: | | | 01 | 32 | 22 | | 39.1S 174.8E 590 km | | | | | | NZ(B) | 6¼ NZ |
| | | | | | | | | Charters Towers, Brisbane, Canberra, Pasadena, Afiamalu, Port Moresby, Adelaide, Mundaring, Uppsala, Kiruna, Skalstugan, and Goteborg readings also used for determination of epicentre. | | | | | | | |
| | 23 KP | P | Z | 01 | 38 | 08 | | | | | | | | | |
| | | e | Z | | | 37 | | | | | | | | | |
| | CT | iP! | Z | 01 | 38 | 08 | | | | | | | | | |
| | TU | eP | N | 01 | 38 | 11 | | | | | | | | | |
| | | eS | N | | 39 | 08 | | | | | | | | | |
| | WN | P | N | 01 | 38 | 14 | | | | | | | | | |
| | | e | N | | 39 | 09 | | | | | | | | | |
| | | S | N | | 39 | 13 | | | | | | | | | |
| | ON | P | E | 01 | 38 | 18½ | | | | | | | | | |
| | | i | E | | | 19¼ | | | | | | | | | |
| | | S | E | | 39 | 23 | | | | | | | | | |
| | KM | P | X | 01 | 38 | 26 | | | | | | | | | |
| | | S | X | | 39 | 36 | | | | | | | | | |
| | GP | P | N | 01 | 38 | 31½ | | | | | | | | | |
| | | S | N | | 39 | 47 | | | | | | | | | |
| | Epicentre: | | | 01 | 36 | 57 | | 39.1S 174.8E 590 km | | | | | | NZ(B) | 6.2 NZ |
| | | | | | | | | Charters Towers, Canberra, Afiamalu, Mundaring, Adelaide, Uppsala, Kiruna, and Goteborg readings also used for determination of epicentre. | | | | | | | |
| | 23 KP | eP | Z | 01 | 19 | 42 | | | | | | | | | |
| | CT | eP | Z | 01 | 19 | 46 | | | | | | | | | |
| | WN | eL | ZN | 01 | 51 | | | 6 | 18 | 6 | 15 | | | | |
| | Epicentre: | | | 01 | 07 | 15 | | 39.5N 143E | | | | | | USCGS | |
| | 23 KP | eP | Z | 22 | 35 | 01 | | | | | | | | | |
| | CT | e(P) | Z | 22 | 35 | 15 | | | | | | | | | |
| | Epicentre: | | | 22 | 22 | 36 | | 39.5N 143E | | | | | | USCGS | 6 PAS |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 24 | CB | iP | E | 05 | 21 | 48 | w | | | | | | | | |
| | | i | E | | | 58 | | | | | | | | | |
| | | S | E | | 22 | 09 | | | | | | | | | |
| | WN | eP | ZN | 05 | 21 | 55 | us | | | | | | | | |
| | | S | N | | 22 | 20 | | | | | | | | | |
| | KM | eP | X | 05 | 21 | 58 | | | | | | | | | |
| | | S | X | | 22 | 27 | | | | | | | | | |
| | CT | iP | Z | 05 | 22 | 05 | d | | | | | | | | |
| | TO | P | Z | 05 | 22 | 05 | | | | | | | | | |
| | | S | Z | | | 42 | | | | | | | | | |
| | GP | P | N | 05 | 22 | 07 | | | | | | | | | |
| | | S | N | | | 42 | | | | | | | | | |
| | KP | P | Z | 05 | 22 | 15 | | | | | | | | | |
| | | S | Z | | | 53 | | | | | | | | | |
| | TU | eP | N | 05 | 22 | 20 | | | | | | | | | |
| | | S | N | | 23 | 06 | | | | | | | | | |
| | ON | P | E | 05 | 22 | 38 | | | | | | | | | |
| | Epicentre: | | | 05 | 21 | 21 | | 40.9S 173.0E 200 km | | | | | | NZ(C) | 5.3 NZ |
| | | | | | | | | Charters Towers readings also used for determination of epicentre. | | | | | | | |
| | 24 KP | e(P) | Z | 06 | 07 | 13 | | | | | | | | | |
| | | e | Z | | | 33 | | | | | | | | | |
| | Epicentre: | | | 05 | 54 | 28 | | 47N 152.5E | | | | | | USCGS | |
| | 25 SU | eP | N | 02 | 30 | 10 | | | | | | | | | |
| | | S | N | | 31 | 12 | | | | | | | | | |
| | KP | P | Z | 02 | 33 | 00 | | | | | | | | | |
| | | e | Z | | 34 | 02 | | | | | | | | | |
| | Epicentre: | | | 02 | 28 | 56 | | 19S 177.5W 400 km | | | | | | USCGS | |
| | 26 KP | eP | Z | 18 | 35 | 45 | | | | | | | | | |
| | 26 KP | P | Z | 20 | 31 | 17 | | | | | | | | | |
| | 27 SU | P | N | 03 | 51 | 45 | | | | | | | | | |
| | | eS | N | | 54 | 05 | | | | | | | | | |
| | | i | N | | 55 | 05 | s | | | | | | | | |
| | ON | P | E | 03 | 53 | 42 | | | | | | | | | |
| | | eS | E | | 58 | 11 | | | | | | | | | |
| | KP | P | Z | 03 | 54 | 02 | u | | | | | | | | |
| | | e | Z | 04 | 01 | 19 | | | | | | | | | |
| | TU | eP | Z | 03 | 54 | 12 | | | | | | | | | |
| | CB | eP | E | 03 | 54 | 26 | | | | | | | | | |
| | | e(S) | E | | 59 | 18 | | | | | | | | | |
| * | WN | P | ZN | 03 | 54 | 30 | | 6 | 6 | | | 5 | 6 | | |
| | | PP | ZN | | 55 | 20 | | 6 | 6 | | | 8 | 6 | | |
| | | S | N | | 59 | 00 | | | | | | 5 | 5 | | |
| | | eL | N | 04 | 02 | .5 | | | | | | | | | |
| | | eL | Z | | 03 | ½ | | | | 13 | 18 | | | | |
| | | M | N | | 08 | | | | | | | 26 | 14 | | |
| | KM | P | X | 03 | 54 | 36 | | | | | | | | | |
| | GP | P | N | 03 | 54 | 45 | | | | | | | | | |
| | Epicentre: | | | 03 | 48 | 27 | | 13.5S 166E | | | | | | USCGS | 6¼ PAS |
| | 27 SU | iP | N | 09 | 01 | 10 | n | | | | | | | | |
| | | iS | N | | 03 | 40 | | | | | | | | | |
| | | e? | N | | 06 | 29 | | | | | | | | | |
| | ON | P | E | 09 | 03 | 15 | | | | | | | | | |
| | | S | E | | 07 | 44 | | | | | | | | | |
| | KP | eP | Z | 09 | 03 | 29 | | | | | | | | | |
| | | i | Z | | | 31 | | | | | | | | | |
| | | e | Z | | 10 | 42 | | | | | | | | | |
| | CT | P | Z | 09 | 03 | 40 | | | | | | | | | |
| | | e | Z | | | 51 | | | | | | | | | |
| | CB | eP | E | 09 | 03 | 54 | | | | | | | | | |
| | | eS | E | | 08 | 48 | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 27 | WN | P | ZN | 09 | 03 | 58 | 6 | 6 | | | | | | |
| | | PP | ZN | | 04 | 55 | 5 | 6 | 5 | 5 | | | | |
| | | S | N | | 08 | 53 | | | 6 | 8 | | | | |
| | | eL | ZN | | 12 | | 12 | 16 | 16 | 16 | | | | |
| | | M | N | | 17 | | | | 49 | 15 | | | | |
| | KM | eP | X | 09 | 04 | 09 | | | | | | | | |
| | GP | eP | N | 09 | 04 | 13 | | | | | | | | |
| | Epicentre: | | | 08 | 57 | 53 | 13.5S | 166.5E | | | | | USCGS | 6½ PAS |
| 27 | KP | eP | Z | 10 | 14 | 55 | | | | | | | | |
| | CT | P | Z | 10 | 15 | 11 | | | | | | | | |
| 27 | KP | eP | Z | 11 | 01 | 05 | | | | | | | | |
| 27 | ON | eP | E | 12 | 28 | 24 | | | | | | | | |
| | KP | P | Z | 12 | 28 | 38 | | | | | | | | |
| | | e | Z | | | 51 | | | | | | | | |
| | CT | eP | Z | 12 | 28 | 45 | | | | | | | | |
| | | i | Z | | | 51 | | | | | | | | |
| | Epicentre: | | | 12 | 23 | 10 | 14S | 165.5E | 150 | km | | | USCGS | |
| 27 | KP | eP | Z | 13 | 23 | 27 | | | | | | | | |
| 27 | ON | P | E | 17 | 26 | 48 | | | | | | | | |
| | KP | eP | Z | 17 | 26 | 54 | | | | | | | | |
| | TU | e? | N | 17 | 26 | 58 | | | | | | | | |
| | | S | N | | 28 | 32 | | | | | | | | |
| | CT | eP | Z | 17 | 27 | 13 | | | | | | | | |
| | GP | eP | N | 17 | 28 | 17 | | | | | | | | |
| | | S | N | | 30 | 43 | | | | | | | | |
| | WN | S | N | 17 | 29 | 38 | | | | | | | | |
| | CB | eS | E | 17 | 29 | 56 | | | | | | | | |
| | KM | eS | X | 17 | 30 | 38 | | | | | | | | |
| | Epicentre: | | | 17 | 24 | 41 | 30.5S | 178W | | | | | USCGS | |
| 27 | ON | eP | E | 19 | 40 | 40 | | | | | | | | |
| | KP | P | Z | 19 | 40 | 59 | | | | | | | | |
| | | i | Z | | 41 | 05 | | | | | | | | |
| | CT | P | Z | 19 | 41 | 10 | | | | | | | | |
| | Epicentre: | | | 19 | 35 | 25 | 13S | 166E | | | | | USCGS | |
| 27 | KP | eP | Z | 20 | 28 | 48 | | | | | | | | |
| | CT | eP | Z | 20 | 29 | 00 | | | | | | | | |
| | Epicentre: | | | 20 | 15 | 46 | 20N | 104.5W | | | | | USCGS | 5¾–6¼ PAS |
| 27 | KP | iP! | Z | 23 | 29 | 01½ | u | | | | | | | |
| | TU | eiP | N | 23 | 29 | 06 | | | | | | | | |
| | WN | iP | N | 23 | 29 | 10½ | s | | | | | | | |
| | CB | P | E | 23 | 29 | 14 | w | | | | | | | |
| | | S | E | | | 50 | | | | | | | | |
| | KM | P | X | 23 | 29 | 34 | | | | | | | | |
| | | S | X | | 30 | 25 | | | | | | | | |
| | ON | iP | E | 23 | 29 | 22 | w | | | | | | | |
| | | eS | E | | 30 | 04 | w | | | | | | | |
| | GP | P | N | 23 | 29 | 40½ | | | | | | | | |
| | | S | N | | 30 | 35½ | | | | | | | | |
| | TO | iP! | Z | 23 | 29 | 58½ | | | | | | | | |
| | RX | eP | N | 23 | 30 | 16 | | | | | | | | |
| | | iS | ZNE | | 31 | 36 | e | | | | | | | |
| | SU | iP | N | 23 | 32 | 50 | s | | | | | | | |
| | | e | N | | 34 | 50 | | | | | | | | |
| | Epicentre: | | | 23 | 28 | 28 | 39.05S | 174.95E | 220 | km | | | NZ(B) | 6.6 NZ |
| 27 | TU | eP | N | 23 | 30 | 25 | | | | | | | | |
| | | eS | N | | | 50 | | | | | | | | |
| | KP | eS | Z | 23 | 30 | 34 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 27 | CT | eS | Z | 23 | 30 | 35 | | | | | | | | |
| | WN | eP | N | 23 | 30 | 34 | | | | | | | | |
| | | eS | N | | 31 | 04 | | | | | | | | |
| | CB | eS | E | 23 | 31 | 10 | | | | | | | | |
| | KM | eS | X | 23 | 31 | 40 | | | | | | | | |
| | ON | e | E | 23 | 31 | 03 | | | | | | | | |
| | GP | eS | N | 23 | 31 | 55½ | | | | | | | | |
| | Epicentre: | | | 23 | 29 | 48 | 39.05S | 174.95E | 220 | km | | | NZ(D) | 6 NZ |
| 28 | SU | e | N | 06 | 39 | | | | | | | | | |
| | ON | P | E | 06 | 41 | 15 | | | | | | | | |
| | | eS | E | | 45 | 42 | | | | | | | | |
| | KP | P | Z | 06 | 41 | 34 | | | | | | | | |
| | CT | P | Z | 06 | 41 | 45½ | d | | | | | | | |
| | WN | eP | ZN | 06 | 42 | .1 | 4 | 7 | 4 | 6 | | | | |
| | GP | eP | N | 06 | 42 | 18 | | | | | | | | |
| | Epicentre: | | | 06 | 36 | 37 | 13.5S | 165E | 300 | km | | | USCGS | |
| 28 | ON | P | E | 06 | 44 | 50 | | | | | | | | |
| | KP | P | Z | 06 | 45 | 07 | | | | | | | | |
| | CT | eP | Z | 06 | 45 | 18 | | | | | | | | |
| | GP | eP | N | 06 | 45 | 50 | | | | | | | | |
| | RX | eL | E | 06 | 52 | | | | | | 6 | 18 | | |
| | | eL | ZN | | 54 | | | | 5 | 18 | | | | |
| | | M | NE | | 57 | | | | 6 | 15 | 15 | 14 | | |
| | WN | eL | N | 06 | 53 | | | | 8 | 15 | | | | |
| | Epicentre: | | | 06 | 39 | 32 | 13.5S | 166E | | | | | USCGS | |
| 28 | ON | P | E | 06 | 48 | 01 | | | | | | | | |
| | KP | P | Z | 06 | 48 | 20½ | | | | | | | | |
| | CT | P | Z | 06 | 48 | 31 | | | | | | | | |
| | WN | ePP | ZN | 06 | 40 | 35 | 11 | 6 | 4 | 6 | | | | |
| | GP | eP | N | 06 | 49 | 02 | | | | | | | | |
| | Epicentre: | | | 06 | 42 | 44 | 13.5S | 166E | | | | | USCGS | |
| 28 | KP | P | Z | 07 | 09 | 19 | | | | | | | | |
| | | e | Z | | | 25 | | | | | | | | |
| | CT | P | Z | 07 | 09 | 30 | | | | | | | | |
| | | i | Z | | | 37 | | | | | | | | |
| 28 | KP | P | Z | 07 | 51 | 41 | | | | | | | | |
| 28 | ON | eP | E | 08 | 01 | 15 | | | | | | | | |
| | KP | eiP | Z | 08 | 01 | 34 | d | | | | | | | |
| | CT | P | Z | 08 | 01 | 44 | d | | | | | | | |
| | GP | P | N | 08 | 02 | 16 | | | | | | | | |
| | Epicentre: | | | 07 | 55 | 59 | 13.5S | 166E | | | | | USCGS | |
| 28 | KP | P | Z | 08 | 51 | 20 | | | | | | | | |
| | CT | P | Z | 08 | 51 | 31 | | | | | | | | |
| 28 | ON | e(P) | E | 08 | 59 | 32 | | | | | | | | |
| | KP | P | Z | 08 | 59 | 49 | | | | | | | | |
| | CT | P | Z | 09 | 00 | 00 | | | | | | | | |
| 28 | KP | P | Z | 09 | 09 | 36 | | | | | | | | |
| | CT | P | Z | 09 | 09 | 48 | | | | | | | | |
| 28 | KP | P | Z | 09 | 15 | 57 | | | | | | | | |
| | CT | P | Z | 09 | 16 | 07 | | | | | | | | |
| 28 | KP | P | Z | 12 | 39 | 19 | | | | | | | | |
| | CT | e(P) | Z | 12 | 39 | 37 | | | | | | | | |
| 28 | ON | eP | E | 12 | 41 | 41 | | | | | | | | |
| | | S | E | | 44 | 31 | | | | | | | | |
| | KP | P | Z | 12 | 41 | 54 | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 28 | CT | P | Z | 12 | 42 | 05 | | | | | | | |
| | | eS | Z | | 45 | 12 | | | | | | | |
| | WN | eP | N | 12 | 42 | 26 | | | | | | | |
| | | e | N | | | 31 | | | | | | | |
| | | S | N | | 45 | 52 | | | | | | | |
| | CB | eP | E | 12 | 42 | 37 | | | | | | | |
| | | S | E | | 46 | 03 | | | | | | | |
| | KM | eP | X | 12 | 42 | 54 | | | | | | | |
| | | eS | X | | 46 | 37 | | | | | | | |
| | GP | eP | N | 12 | 42 | 55 | | | | | | | |
| | | eS | N | | 46 | 49 | | | | | | | |
| | TU | eS | N | 12 | 44 | 49 | | | | | | | |
| | Epicentre: | | | 12 | 37 | 50 | 23S | 176W | | | | USCGS | |
| 28 | WN | e(P) | N | 12 | 45 | 22 | | | | | | | |
| | | S | N | | 48 | 42 | | | | | | | |
| | CB | eP | E | 12 | 45 | 29 | | | | | | | |
| | | eS | E | | 48 | 54 | | | | | | | |
| | KM | eP | X | 12 | 45 | 44 | | | | | | | |
| | | eS | X | | 49 | 31 | | | | | | | |
| | TU | eS | N | 12 | 47 | 39 | | | | | | | |
| | CT | S | Z | 12 | 48 | 00 | | | | | | | |
| | GP | eS | N | 12 | 49 | 40 | | | | | | | |
| | Epicentre: | | | 12 | 40 | 40 | Tonga | | | | | NZ | |
| 29 | TU | eP | N | 00 | 12 | 19 | | | | | | | |
| | | S | N | | 13 | 28 | | | | | | | |
| | KP | eP | Z | 00 | 12 | 25 | | | | | | | |
| | | S | Z | | 13 | 42 | | | | | | | |
| | ON | eP | E | 00 | 12 | 33 | | | | | | | |
| | | e | E | | 13 | 05 | | | | | | | |
| | | (S) | E | | | 40 | | | | | | | |
| | CT | eP | Z | 00 | 12 | 35 | | | | | | | |
| | | S | Z | | 13 | 59 | | | | | | | |
| | WN | e | N | 00 | 13 | 05 | | | | | | | |
| | | S | N | | 14 | 38 | | | | | | | |
| | GP | e(P) | N | 00 | 13 | 40 | | | | | | | |
| | | S | N | | 15 | 43 | | | | | | | |
| | CB | S | E | 00 | 15 | (01) | | | | | | | |
| | KM | S | X | 00 | 15 | 40 | | | | | | | |
| | Epicentre: | | | 00 | 10 | 46 | 34.75S | 177W | N | | | NZ(D) | 5.7 NZ |
| 29 | SU | eP | N | 06 | 33 | 45 | | | | | | | |
| | | e(S) | N | | 36 | .0 | | | | | | | |
| | ON | P | E | 06 | 35 | 33 | | | | | | | |
| | | S | E | | 39 | 17 | | | | | | | |
| | | eL | E | | | 58 | | | | | | | |
| | AK | P | N | 06 | 35 | 42 | | | | | | | |
| | | S | N | | 39 | 42 | | | | | | | |
| | | eL | N | | 40 | 12 | | | | | | | |
| | | M | N | | 45 | | | | | | | | |
| | KP | P | Z | 06 | 35 | 56 | | | | | | | |
| | | eS | Z | | 40 | 07 | | | | | | | |
| | TU | eP | N | 06 | 36 | 10 | | | | | | | |
| | | e | N | | | 12 | | | | | | | |
| | | e | N | | | 27 | | | | | | | |
| | | eS | N | | 40 | 23 | | | | | | | |
| | | eL | N | | 42½ | | | | | | | | |
| | CT | P | Z | 06 | 36 | 10 | d | | | | | | |
| | | i! | Z | | | 12½ | d | | | | | | |
| | | i | Z | | | 27 | | | | | | | |
| | | eS | Z | | 40 | 29 | | | | | | | |
| | | eL | Z | | 46 | | | | | | | | |
| | CB | eP | E | 06 | 36 | 24 | | | | | | | |
| | | e | E | | 41 | 45 | | | | | | | |
| | | eL | E | | 42½ | | | | | | | | |
| * | WN | eP | ZN | 06 | 36 | 26 | | 22 | 5 | 27 | 6 | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 29 | | S | N | | 40 | 34 | | | | 15 | 10 | | | | |
| | | e | N | | | 52 | | | | 2 | 2 | | | | |
| | | eL | N | | 41 | 03 | | | | 65 | 16 | | | | |
| | | M | N | | 48 | | | | | 230 | 12 | | | | |
| | KM | eP | X | 06 | 36 | 32 | | | | | | | | | |
| | | e | X | | | 45 | | | | | | | | | |
| | | eS | X | | 41 | 17 | | | | | | | | | |
| | GP | eP | N | 06 | 36 | 44 | | | | | | | | | |
| | | eS | N | | 41 | 23 | | | | | | | | | |
| * | RX | eP | Z | 06 | 37 | 03 | | 9 | 2 | | | | | | |
| | | S | N | | 41 | 42 | | | | 32 | 10 | | | | |
| | | eL | E | | 42 | .1 | | | | | | 32 | 22 | | |
| | | $M_1$ | E | | 45 | | | | | | | 210 | 23 | | |
| | | eL | Z | | 46 | | | 110 | 20 | | | | | | |
| | | $M_2$ | E | | 49 | | | | | | | 285 | 15 | | |
| | Epicentre: | | | 06 | 30 | 54 | | 17S | 167E | | | | | USCGS | 6½–¾ PAS |
| 29 | KP | P | Z | 07 | 42 | 50 | | | | | | | | | |
| | CT | P | Z | 07 | 42 | 51 | | | | | | | | | |
| | | e | Z | | 43 | 00 | | | | | | | | | |
| | Epicentre: | | | 07 | 30 | 33 | | 0 | 98E | | | | | USCGS | |
| 29 | KP | eP | Z | 11 | 31 | 36 | | | | | | | | | |
| | SU | e? | N | 11 | 34 | 12 | | | | | | | | | |
| 29 | KP | eP | Z | 14 | 30 | 30 | | | | | | | | | |
| | Epicentre: | | | 14 | 25 | 26 | | 17S | 167.5E | | | | | USCGS | |
| 29 | KP | P | Z | 18 | 30 | 36 | | | | | | | | | |
| 29 | CT | eP | Z | 22 | 18 | 21 | | | | | | | | | |
| | | e | Z | | | 33 | | | | | | | | | |
| | KP | P | Z | 22 | 18 | 24 | | | | | | | | | |
| * | RX | eL | NE | 22 | 29 | | | | | 4 | 26 | 4 | 24 | | |
| | | M | NE | | 35 | | | | | 3 | 18 | 4 | 20 | | |
| | WN | eL | N | 22 | 32 | | | | | | | | | | |
| | Epicentre: | | | 22 | 10 | 20 | | 6S | 147E | | | | | USCGS | |
| 30 | KP | eP | Z | 09 | 43 | 07 | | | | | | | | | |
| | | i | Z | | | 19 | | | | | | | | | |
| | CT | eP | Z | 09 | 43 | 21 | | | | | | | | | |
| | | e | Z | | | 32 | | | | | | | | | |
| | Epicentre: | | | 09 | 38 | 08 | | 17S | 167.5E | | | | | USCGS | |
| 30 | KP | P | Z | 09 | 45 | 40 | | | | | | | | | |
| | | i | Z | | | 47 | | | | | | | | | |
| | CT | e | Z | 09 | 45 | 51 | | | | | | | | | |
| | | e | Z | | 46 | 02 | | | | | | | | | |
| 30 | SU | eP | N | 10 | 53 | 12 | | | | | | | | | |
| | | S | N | | 55 | 08 | | | | | | | | | |
| | ON | P | E | 10 | 55 | 03 | | | | | | | | | |
| | | e | E | | 56 | 39 | | | | | | | | | |
| | | S | E | | 59 | 30 | | | | | | | | | |
| | | eL | E | 11 | 03 | | | | | | | | | | |
| | KP | P | Z | 10 | 55 | 21 | d | | | | | | | | |
| | | e | Z | | 57 | 24 | | | | | | | | | |
| | | ePcP | Z | | 58 | 54 | | | | | | | | | |
| | TU | eP | N | 10 | 55 | 33 | | | | | | | | | |
| | CT | P | Z | 10 | 55 | 33 | u | | | | | | | | |
| | | ePP | Z | | 56 | 20 | | | | | | | | | |
| | CB | eP | E | 10 | 55 | 48 | | | | | | | | | |
| * | WN | eP | ZN | 10 | 55 | 50 | | 3 | 6 | 3 | 5 | | | | |
| | | PP | N | | 56 | 32 | | | | 6 | 8 | | | | |
| | | eL | ZN | 11 | 06 | | | 12 | 16 | 13 | 15 | | | | |
| | | M | N | | 11 | | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 30 | GP | eP | N | 10 | 56 | 05 | | | | | | | | | |
| | RX | S | N | 11 | 01 | 34 | | | | 4 | 12 | | | | |
| | | eL | NE | | 04 | | | | | | | | | | |
| | | M | NE | | 09 | | | | | 10 | 15 | 27 | 14 | | |
| | Epicentre: | | | 10 | 49 | 47 | | 13.5S 166E | | | | | | USCGS | 6 PAS |
| 30 | KP | P | Z | 11 | 04 | 27 | | | | | | | | | |
| 30 | KP | P | Z | 11 | 08 | 35 | | | | | | | | | |
| 30 | KP | P | Z | 13 | 50 | 07 | | | | | | | | | |
| 30 | SU | eP | N | 15 | 21 | 10 | | | | | | | | | |
| | | iS | N | | 22 | 35 | s | | | | | | | | |
| | ON | P | E | 15 | 22 | 44 | | | | | | | | | |
| | | e | E | | 23 | 13 | | | | | | | | | |
| | KP | P | Z | 15 | 23 | 12 | | | | | | | | | |
| | | e | Z | | 25 | 30 | | | | | | | | | |
| | TU | e | N | 15 | 23 | 27 | | | | | | | | | |
| | CT | iP | Z | 15 | 23 | 29½ | d | | | | | | | | |
| | | e | Z | | 25 | 01 | | | | | | | | | |
| | WN | iP | ZN | 15 | 23 | 53 | d | 7 | 6 | 11 | 8 | | | | |
| | | iS | N | | 27 | 28 | | | | 15 | 8 | | | | |
| | | iPcP | Z | | 27 | 55 | | 5 | 7 | | | | | | |
| | | eL | N | | 28½ | | | | | 22 | 25 | | | | |
| | | M | ZN | | 33 | | | 12 | 12 | 15 | 12 | | | | |
| | CB | P | E | 15 | 23 | 54 | | | | | | | | | |
| | | eS | E | | 29 | 20 | | | | | | | | | |
| | KM | eP | X | 15 | 24 | 09 | | | | | | | | | |
| | | e | X | | 23 | | | | | | | | | | |
| | | eS | X | | 27 | 57 | | | | | | | | | |
| | GP | eP | N | 15 | 24 | 19 | | | | | | | | | |
| | RX | eP | ZN | 15 | 24 | .7 | | | | | | | | | |
| | | S | NE | | 28 | 52 | | | | 14 | 12 | 7 | 12 | | |
| | | eLq | NE | | 33 | | | | | 10 | 24 | 13 | 16 | | |
| | | eL | Z | | 36 | | | 6 | 14 | | | | | | |
| | Epicentre: | | | 15 | 19 | 30 | | 22.5S 174E | | | | | | USCGS | |
| 31 | KP | iP | Z | 00 | 50 | 03 | u | | | | | | | | |
| | | e | Z | | | 40 | | | | | | | | | |
| | CT | P | Z | 00 | 50 | 09 | | | | | | | | | |
| | WN | eP | N | 00 | 50 | 18 | | | | | | | | | |
| | GP | eP | N | 00 | 50 | 26 | | | | | | | | | |
| | Epicentre: | | | 00 | 39 | 59 | | 18.5N 146E 250 km | | | | | | USCGS | |
| 31 | KP | P | Z | 17 | 36 | 29 | | | | | | | | | |
| | CT | eP | Z | 17 | 36 | 39 | | | | | | | | | |
| | GP | eP | N | 17 | 37 | 21 | | | | | | | | | |
| 31 | ON | eP | E | 18 | 14 | 07 | | | | | | | | | |
| | KP | P | Z | 18 | 14 | 23 | | | | | | | | | |
| | CT | P | Z | 18 | 14 | 34 | | | | | | | | | |
| | RX | eL | E | 18 | 29 | | | | | | | | | | |
| APR 1 | SU | e(P) | N | 02 | 56 | 35 | | | | | | | | | |
| | | e? | N | | 57 | 25 | | | | | | | | | |
| | | S | N | | | 46 | | | | 16 | 5 | | | | |
| | KP | P | Z | 02 | 58 | 25 | | | | | | | | | |
| | | e | Z | | | 32 | | | | | | | | | |
| | | e | Z | | 59 | 08 | | | | | | | | | |
| | TU | eP | N | 02 | 58 | 27 | | | | | | | | | |
| | | eS | N | 03 | 01 | 07 | | | | | | | | | |
| | CT | P | Z | 02 | 58 | 35 | | | | | | | | | |
| | | e | Z | | | 53 | | | | | | | | | |
| | | e | Z | 03 | 01 | 25 | | | | | | | | | |
| | | e | Z | | | 37 | | | | | | | | | |
| | WN | e(P) | N | 02 | 58 | 54 | | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR 1 | | eS | N | 03 | 02 | 00 | | | | | | | | | |
| | GP | eP | N | 02 | 59 | 19 | | | | | | | | | |
| | | e? | N | 03 | 02 | 58 | | | | | | | | | |
| | | e(S) | N | | 03 | 02 | | | | | | | | | |
| | Epicentre: | | | 02 | 55 | 04 | | 22S 179½W 650 km | | | | | | USCGS | |
| 1 | RX | eL | N | 16 | 02 | | | | | | | 1 | 18 | | |
| 1 | CT | P? | Z | 23 | 06 | 18 | | | | | | | | | |
| | KP | eP | Z | 23 | 06 | 43 | | | | | | | | | |
| | | e | Z | | | 49 | | | | | | | | | |
| | | e | Z | | 07 | 13 | | | | | | | | | |
| | Epicentre: | | | 23 | 02 | 31 | | 17½S 180 550 km | | | | | | USCGS | |
| 2 | KP | P | Z | 06 | 49 | 29 | | | | | | | | | |
| | Epicentre: | | | 06 | 39 | 08 | | 18½N 146E | | | | | | USCGS | |
| 2 | KP | eP | Z | 11 | 54 | 54 | | | | | | | | | |
| 2 | KP | eP | Z | 14 | 22 | 06 | | | | | | | | | |
| | Epicentre: | | | 14 | 14 | 42 | | 6S 152E | | | | | | USCGS | |
| 2 | WN | e | N | 15 | 13 | 13 | | | | | | | | | |
| | | e | N | | 14 | 54 | | | | | | | | | |
| | CT | e | Z | 15 | 13 | 20 | | | | | | | | | |
| | | i | Z | | 14 | 02 | d | | | | | | | | |
| | KP | iP | Z | 15 | 14 | 03 | d | | | | | | | | |
| | TU | P | N | 15 | 14 | 28 | | | | | | | | | |
| 2 | KP | e? | Z | 23 | 13 | 07 | | | | | | | | | |
| | | (P) | Z | 23 | 13 | 14 | | | | | | | | | |
| | CT | eP | Z | 23 | 13 | 15 | | | | | | | | | |
| | Epicentre: | | | 23 | 02 | 50 | | 11S 113E | | | | | | USCGS | |
| 3 | KP | P | Z | 05 | 21 | 15 | u | | | | | | | | |
| | | epP? | Z | | 23 | 09 | | | | | | | | | |
| | CT | eP | Z | 05 | 21 | 19 | | | | | | | | | |
| | Epicentre: | | | 05 | 10 | 32 | | 28N 139½E 550 km | | | | | | USCGS | |
| 3 | KP | eP | Z | 09 | 59 | 44 | | | | | | | | | |
| | CT | e | Z | 10 | 00 | 07 | | | | | | | | | |
| | GP | e? | N | 10 | 00 | 21 | | | | | | | | | |
| | Epicentre: | | | 09 | 52 | 05 | | 6S 148½E | | | | | | USCGS | |
| 4 | KP | P | Z | 04 | 34 | 03 | | | | | | | | | |
| | | e? | Z | | 35 | 40 | | | | | | | | | |
| | TU | e(P) | N | 04 | 34 | 05 | | | | | | | | | |
| | | eS | N | | 35 | 37 | | | | | | | | | |
| | | e | N | | | 41 | | | | | | | | | |
| | WN | eS | N | 04 | 36 | 36 | | | | | | | | | |
| | CB | e(S) | E | 04 | 36 | 59 | | | | | | | | | |
| | GP | eS | N | 04 | 37 | 33 | | | | | | | | | |
| 4 | SU | e | N | 08 | 00 | 57 | | | | | | | | | |
| | | e | N | | 01 | 10 | | | | | | 6 | 5 | | |
| | | e | N | | 02 | 37 | | | | | | | | | |
| | KP | P | Z | 08 | 02 | 23 | | | | | | | | | |
| | | e | Z | | | 44 | | | | | | | | | |
| | | e | Z | | | 54 | | | | | | | | | |
| | | PcP | Z | | 05 | 19 | | | | | | | | | |
| | TO | eP | Z | 08 | 02 | 33 | | | | | | | | | |
| | | e | Z | | | 56 | | | | | | | | | |
| | TU | e | N | 08 | 02 | 34 | | | | | | | | | |
| | GP | eP | N | 08 | 03 | 00 | | | | | | | | | |
| | WN | e(S) | N | 08 | 08 | 30 | | | | | | | | | |
| | | eL | N | | 13 | | | | | | | | | | |
| | RX | e | N | 08 | (11) | | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR 7 | | eS | N | | 04 | 03 | | | | | | | |
| | | eScS | N | | 11 | 24 | | | | | | | |
| | | e | N | | | 29 | | | | | | | |
| | CB | eP | E | 24 | 00 | 30 | | | | | | | |
| | | eS | E | | 04 | 16 | | | | | | | |
| | KM | eP? | X | 24 | 00 | 48 | | | | | | | |
| | | e | X | | | 49 | | | | | | | |
| | | e | X | | 01 | 01 | | | | | | | |
| | | e | X | | | 19 | | | | | | | |
| | | e(S) | X | | 04 | 43 | | | | | | | |
| | | e | X | | | 47 | | | | | | | |
| | | e | X | | | 58 | | | | | | | |
| | GP | P | N | 24 | 00 | 52 | | | | | | | |
| | | eS | N | | 04 | 54 | | | | | | | |
| | | e | N | | 05 | 01 | | | | | | | |
| | RX | eS | N | 24 | 05 | 39 | | | 1 | 20 | | | |
| | | e(SS) | E | | 08 | 12 | | | | | 2 | 30 | |
| | | e | NE | | 09 | 36 | | | | | 4 | 20 | |
| | | e(ScS) | E | | 11 | 49 | | | | | 4 | 11 | |
| | | M | N | | 13 | | | | 2 | 16 | | | |
| | Epicentre: | | | 23 | 55 | 54 | 21S | 177W | 200 | km | | | USCGS |
| 8 | KP | P | Z | 04 | 50 | 17 | | | | | | | |
| | | e | Z | | | 26 | | | | | | | |
| | | e | Z | | | 31 | | | | | | | |
| | TO | eP | Z | 04 | 50 | 31 | | | | | | | |
| | CT | eP | Z | 04 | 50 | 31 | | | | | | | |
| 8 | KP | eP | Z | 08 | 43 | 25 | | | | | | | |
| | | e | Z | | | 37 | | | | | | | |
| | | e | Z | | | 53 | | | | | | | |
| | | e | Z | | | 57 | | | | | | | |
| | | e | Z | | 45 | 23 | | | | | | | |
| | | i? | Z | | | 53 | | | | | | | |
| | | e | Z | | 46 | 10 | | | | | | | |
| | CB | eP | E | 08 | 43 | 32 | | | | | | | |
| | | e | E | | | 45 | | | | | | | |
| | TO | P | Z | 08 | 43 | 33 | | | | | | | |
| | CT | iP | Z | 08 | 43 | 33 | u | | | | | | |
| | | e | Z | | | 46 | | | | | | | |
| | | e | Z | | | 54 | | | | | | | |
| | | e | Z | | 44 | 02 | | | | | | | |
| | | e | Z | | 46 | 00 | | | | | | | |
| | KM | e | X | 08 | 43 | 46 | | | | | | | |
| | GP | e(P) | N | 08 | 43 | 47 | | | | | | | |
| | WN | eP? | N | 08 | 43 | 52 | | | | | | | |
| | Epicentre: | | | 08 | 35 | 37 | 6S | 147E | | | | | USCGS |
| 8 | KP | P | Z | 17 | 59 | 03 | | | | | | | |
| | | (S) | Z | 18 | 00 | 28 | | | | | | | |
| | CT | eP? | Z | 17 | 59 | 12 | | | | | | | |
| | | e | Z | 18 | 00 | 33 | | | | | | | |
| | WN | e(S) | N | 18 | 00 | 55 | | | | | | | |
| 9 | SU | e(P) | N | 05 | 16 | 20 | | | | | | | |
| | | e(S) | N | | | 56 | | | | | | | |
| 9 | KP | P | Z | 07 | 39 | 11 | | | | | | | |
| | CT | e(P) | Z | 07 | 39 | 18 | | | | | | | |
| 10 | RX | eL | ZNE | 10 | 51 | | | | | | 4 | 10 | |
| 10 | KP | eP | Z | 13 | 18 | 57 | | | | | | | |
| | Epicentre: | | | 13 | 07 | 30 | Bonin Is | | | | | | USCGS |
| 11 | KP | eP? | Z | 16 | 05 | 26 | | | | | | | |
| | | e? | Z | | | 37 | | | | | | | |
| | TO | e(P) | Z | 16 | 05 | 42 | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR 11 | Epicentre: | | | 16 | 00 | 26 | 17S | 167½E | | | | | USCGS |
| 12 | KP | P | Z | 21 | 53 | 42 | | | | | | | |
| | | e | Z | | 55 | 40 | | | | | | | |
| | Epicentre: | | | 21 | 46 | 02 | 3½S | 152E | | | | | USCGS |
| 13 | KP | PKP | Z | 08 | 17 | 17 | | | | | | | |
| 13 | RX | eL | ZNE | 13 | 31 | | | | | | | | |
| | | M | E | | 32 | | | | | | 1 | 18 | |
| | Epicentre: | | | 12 | 37 | 38 | 15½N | 92½W | | | | | USCGS |
| 13 | ON | eP | E | 13 | 58 | 36 | | | | | | | |
| | KP | eP | Z | 13 | 58 | 50 | | | | | | | |
| | | e | Z | | | 52 | | | | | | | |
| | | eS | Z | 14 | 01 | 31 | | | | | | | |
| | | e | Z | | | 38 | | | | | | | |
| | CT | eP | Z | 13 | 59 | 02 | | | | | | | |
| | | e(S) | Z | 14 | 01 | 50 | | | | | | | |
| | TO | e | Z | 13 | 59 | 04 | | | | | | | |
| | | e(S) | Z | 14 | 01 | 46 | | | | | | | |
| | WN | eP | N | 13 | 59 | 22 | | | | | | | |
| | | eS | N | 14 | 02 | 20 | | | | | | | |
| | KM | eP | X | 13 | 59 | 42 | | | | | | | |
| | | eS | X | 14 | 02 | 52 | | | | | | | |
| | GP | e(P) | N | 13 | 59 | 46 | | | | | | | |
| | | eS | N | 14 | 03 | 06 | | | | | | | |
| | | e | N | | | 20 | | | | | | | |
| | TU | eS | N | 14 | 01 | 30 | | | | | | | |
| 14 | KP | P | Z | 00 | 42 | 37 | | | | | | | |
| 14 | KP | eP | Z | 04 | 11 | 47 | | | | | | | |
| 14 | KP | eP | Z | 06 | 34 | 38 | | | | | | | |
| | Epicentre: | | | 06 | 24 | 30 | 8S | 118E | | | | | USCGS |
| 15 | KP | e? | Z | 03 | 35 | 38 | | | | | | | |
| | | e(P) | Z | | | 45 | | | | | | | |
| | CT | eP? | Z | 03 | 35 | 45 | | | | | | | |
| | | e | Z | | | 53 | | | | | | | |
| | WN | e(P) | Z | 03 | 35 | 46 | u | | 1 | 4 | | | |
| | | eS? | N | | 44 | 00 | | | | | | | |
| | | eL | ZN | | 53 | | | | | | | | |
| | | M | ZN | | 56 | | | | 9 | 19 | 7 | 17 | |
| | CB | e(P) | E | 03 | 35 | 57 | | | | | | | |
| | KM | e(P) | X | 03 | 36 | 11 | | | | | | | |
| | RX | eS | NE | 03 | 44 | 42 | | | | | | | |
| | | e | N | | 51 | 47 | | | | | | | |
| | | e | N | | 53 | 12 | | | | | | | |
| | | eL | ZE | | 54.5 | | | | | | | | |
| | | M | ZE | | 56 | | | | 10 | 24 | 5 | 24 | |
| | Epicentre: | | | 03 | 25 | 38 | 27S | 113W | | | | | USCGS |
| 15 | ON | P | E | 04 | 18 | 39 | | | | | | | |
| | | e | E | | | 54 | | | | | | | |
| | | eS | E | | 22 | 57 | | | | | | | |
| | KP | P | Z | 04 | 18 | 55 | | | | | | | |
| | TO | P | Z | 04 | 19 | 07 | | | | | | | |
| | CT | P | Z | 04 | 19 | 07 | | | | | | | |
| | | e | Z | | | 35 | | | | | | | |
| | | e? | Z | | 23 | 33 | | | | | | | |
| | KM | e(P) | X | 04 | 19 | 32 | | | | | | | |
| | GP | P | N | 04 | 19 | 40 | n | | | | | | |
| | Epicentre: | | | 04 | 13 | 25 | 13½S | 166E | | | | | USCGS |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR 15 | KP | eP | Z | 08 | 35 | 58 | | | | | | | | |
| | | e | Z | | 36 | 15 | | | | | | | | |
| | CT | eP? | Z | 08 | 36 | 23 | | | | | | | | |
| | | e(S) | Z | | 38 | 30 | | | | | | | | |
| | TU | e(S) | N | 08 | 38 | 06 | | | | | | | | |
| | WN | eS | N | 08 | 39 | 08 | | | | | | | | |
| | CB | e(S) | E | 08 | 39 | 28 | | | | | | | | |
| | KM | e | X | 08 | 40 | 07 | | | | | | | | |
| | GP | e | N | 08 | 40 | 16 | | | | | | | | |
| | | (S) | N | | | 18 | | | | | | | | |
| | Epicentre: | | | 08 | 33 | 08 | | 28S | 177W | | | | | USCGS |
| | 15 ON | eP? | E | 11 | 51 | 16 | | | | | | | | |
| | KP | iP | Z | 11 | 51 | 25 | u | | | | | | | |
| | | e | Z | | | 49 | | | | | | | | |
| | | e | Z | | 54 | 14 | | | | | | | | |
| | | e | Z | | | 39 | | | | | | | | |
| | | e? | Z | | 57 | 04 | | | | | | | | |
| | CT | P | Z | 11 | 51 | 29 | | | | | | | | |
| | | e | Z | | 54 | 54 | | | | | | | | |
| | CB | e(P) | E | 11 | 51 | 34 | | | | | | | | |
| | GP | e(P) | N | 11 | 51 | 44 | | | | | | | | |
| | Epicentre: | | | 11 | 39 | 01 | | 40½N | 142E | 150 km | | | | USCGS |
| | 15 KP | P | Z | 22 | 03 | 24 | | | | | | | | |
| | CT | eP | Z | 22 | 03 | 35 | | | | | | | | |
| | 15 SU | eP | N | 22 | 08 | 23 | | | | 30 | 5 | | | |
| | | e | N | | 09 | 05 | | | | 40 | 5 | | | |
| | | e | N | | 11 | 37 | | | | | | | | |
| | | M | N | | 13 | .5 | | | | 55 | 8 | | | |
| | ON | eP? | E | 22 | 10 | 23 | | | | | | | | |
| | | e | E | | | 25 | | | | | | | | |
| | | eS | E | | 14 | 39 | | | | | | | | |
| | KP | iP | Z | 22 | 10 | 41 | d | | | | | | | |
| | | e | Z | | | 46 | | | | | | | | |
| | | e | Z | | 11 | 56 | | | | | | | | |
| | | e(P) | Z | | 12 | 08 | | | | | | | | |
| | | e(P) | Z | | | 31 | | | | | | | | |
| | | e(P) | Z | | 13 | 04 | | | | | | | | |
| | | e(P) | Z | | | 41 | | | | | | | | |
| | CT | P | Z | 22 | 10 | 52 | d | | | | | | | |
| | | e? | Z | | 12 | 23 | | | | | | | | |
| | | e(P) | Z | | 13 | 12 | | | | | | | | |
| | | e(P) | Z | | | 53 | | | | | | | | |
| | TU | eP | N | 22 | 10 | 53 | | | | | | | | |
| | WN | P | Z | 22 | 11 | 06 | d | 6 | 6 | | | | | |
| | | e | ZN | | | 55 | | 7 | 6 | 8 | 5 | | | |
| | | e(S) | N | | 15 | 54 | | | | 5 | 10 | | | |
| | | e(L) | ZN | | 21 | 45 | | | | 12 | 15 | | | |
| | | M | N | | 26 | | | | | 22 | 13 | | | |
| | GP | eP | N | 22 | 11 | 21 | | | | | | | | |
| | | e | N | | | (26) | | | | | | | | |
| | RX | eP | ZN | 22 | 11 | 34 | | 3 | 8 | 2 | 10 | | | |
| | | eS | NE | | 16 | 48 | | | | 5 | 10 | 6 | 8 | |
| | | eL | E | | 19 | | | | | | | | | |
| | | eL | ZN | | 21 | | | | | | | | | |
| | | M | E | | 27 | | | | | | | 30 | 14 | |
| | Epicentre: | | | 22 | 05 | 06 | | 13½S | 166E | | | | | USCGS |
| | 15 KP | P | Z | 22 | 09 | 33 | d | | | | | | | |
| | CT | eP? | Z | 22 | 09 | 40 | | | | | | | | |
| | | e | Z | | | 43 | | | | | | | | |
| | 15 KP | eP | Z | 22 | 19 | 41 | | | | | | | | |
| | CT | eP | Z | 22 | 19 | 52 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR 15 | KP | P | Z | 22 | 52 | 45 | | | | | | | | |
| | | e | Z | | 53 | 02 | | | | | | | | |
| | CT | eP? | Z | 22 | 52 | 52 | | | | | | | | |
| | | e | Z | | | 57 | | | | | | | | |
| | 15 KP | P | Z | 23 | 45 | 40 | | | | | | | | |
| | 16 KP | P | Z | 01 | 20 | 30 | | | | | | | | |
| | 16 KP | eP | Z | 19 | 12 | 21 | | | | | | | | |
| | 17 SU | e | N | 15 | 41 | 38 | | | | | | | | |
| | | e | N | | | 53 | | | | | | | | |
| | | e(L) | N | | 43 | 35 | | | | | | | | |
| | | M | N | | 46 | | | | | | 60 | 7 | | |
| | KP | P? | Z | 15 | 43 | 41 | u | | | | | | | |
| | | i? | Z | | 44 | 22 | d | | | | | | | |
| | CT | eP? | Z | 15 | 44 | 38 | | | | | | | | |
| | WN | eL | ZN | 15 | 51 | | | | | | | | | |
| | | M | ZN | | 52 | | | | | | | 3 | 20 | |
| | RX | eL | N | 15 | 54 | | | | | | | | | |
| | | M | ZN | | 56 | | | | | | | 6 | 18 | |
| | Epicentre: | | | 15 | 40 | 02 | | 21S | 175½W | | | | | USCGS |
| | 17 SU | eP? | N | 21 | 51 | 05 | | | | | | | | |
| | | e | N | | | 13 | | | | | | | | |
| | | i | N | | 52 | 13 | | | | | | | | |
| | KP | P | Z | 21 | 53 | 16 | | | | | | | | |
| | | e | Z | | | 31 | | | | | | | | |
| | | e | Z | | 55 | 09 | | | | | | | | |
| | | e | Z | | | 20 | | | | | | | | |
| | CT | P | Z | 21 | 53 | 25 | | | | | | | | |
| | | e? | Z | | 54 | 14 | | | | | | | | |
| | TU | eS | N | 21 | 56 | 12 | | | | | | | | |
| | Epicentre: | | | 21 | 49 | 24 | | 20S | 180 | 500 km | | | | USCGS |
| | 18 KP | iP | Z | 08 | 18 | 01 | d | | | | | | | |
| | | e | Z | | 19 | 33 | | | | | | | | |
| | | e | Z | | | 37 | | | | | | | | |
| | TO | eP | Z | 08 | 18 | 07 | | | | | | | | |
| | CT | P | Z | 08 | 18 | 07 | d | | | | | | | |
| | | e | Z | | 19 | 43 | | | | | | | | |
| | Epicentre: | | | 08 | 07 | 07 | | 28N | 139½E | 450 km | | | | USCGS |
| | 18 KP | P | Z | 09 | 06 | 53 | | | | | | | | |
| | | e | Z | | 07 | 01 | | | | | | | | |
| | TO | eP | Z | 09 | 07 | 05 | | | | | | | | |
| | CT | P | Z | 09 | 07 | 05 | | | | | | | | |
| | Epicentre: | | | 09 | 01 | 20 | | 13½S | 166E | | | | | USCGS |
| | 18 SU | e? | N | 13 | 04 | 40 | | | | | | | | |
| | | e(L) | N | | 09 | | | | | | | | | |
| | KP | P | Z | 13 | 06 | 45 | | | | | | | | |
| | | e | Z | | | 50 | | | | | | | | |
| | | e | Z | | | 54 | | | | | | | | |
| | CT | P | Z | 13 | 06 | 59 | | | | | | | | |
| | Epicentre: | | | 13 | 01 | 12 | | 13½S | 166E | | | | | USCGS |
| | 18 KP | P | Z | 13 | 09 | 32 | | | | | | | | |
| | | e | Z | | 10 | 00 | | | | | | | | |
| | CT | P | Z | 13 | 09 | 43 | | | | | | | | |
| | 18 KP | P | Z | 17 | 00 | 02 | | | | | | | | |
| | | e | Z | | | 12 | | | | | | | | |
| | CT | eP | Z | 17 | 00 | 14 | | | | | | | | |
| | Epicentre: | | | 16 | 54 | 52 | | 16½S | 168E | | | | | USCGS |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR 19 | SU | e(P) | N | 09 | 24 | 36 | | | | 11 | 5 | | | |
| | | e | N | | 25 | 20 | | | | | | | | |
| | | e(L) | N | | 26 | 40 | | | | | | | | |
| | | i | N | | 27 | 43 | | | | | | | | |
| | KP | eP | Z | 09 | 27 | 10 | | | | | | | | |
| | | e | Z | | | 20 | | | | | | | | |
| | CT | eP | Z | 09 | 27 | 22 | | | | | | | | |
| | | e | Z | | 30 | 41 | | | | | | | | |
| | | e | Z | | 31 | 07 | | | | | | | | |
| | GP | e | N | 09 | 28 | 18 | | | | | | | | |
| | KM | e | X | 09 | 28 | 30 | | | | | | | | |
| | Epicentre: | | | 09 | 22 | 31 | | 20S | 173½W | | | | | USCGS |
| 19 | KP | eP | Z | 19 | 39 | 16 | | | | | | | | |
| | Epicentre: | | | 19 | 26 | 00 | | 51½N | 174W | | | | | USCGS |
| 19 | KP | eP | Z | 20 | 11 | 43 | | | | | | | | |
| | Epicentre: | | | 20 | 06 | 10 | | 13½S | 166E | | | | | USCGS |
| 19 | KP | iP | Z | 22 | 22 | 15 | u | | | | | | | |
| | CT | eP | Z | 22 | 22 | 25 | | | | | | | | |
| | Epicentre: | | | 22 | 16 | 42 | | 13½S | 166½E | | | | | USCGS |
| 19 | KP | P | Z | 22 | 50 | 13 | | | | | | | | |
| | CT | eP | Z | 22 | 50 | 23 | | | | | | | | |
| | Epicentre: | | | 22 | 44 | 39 | | 13½S | 166E | | | | | USCGS |
| 20 | KP | P | Z | 04 | 26 | 14 | | | | | | | | |
| 20 | KP | eP? | Z | 08 | 11 | 35 | | | | | | | | |
| | | e | Z | | | 38 | | | | | | | | |
| 20 | RX | eL | NE | 09 | 38 | | | | | | | | | |
| | | M | N | | 41 | | | | | 2 | 17 | | | |
| 20 | KP | eP | Z | 21 | 45 | 22 | | | | | | | | |
| | | e | Z | | | 38 | | | | | | | | |
| | CT | P? | Z | 21 | 45 | 32 | | | | | | | | |
| | | e | Z | | | 35 | | | | | | | | |
| | Epicentre: | | | 21 | 36 | 41 | | 2½S | 140E | | | | | USCGS |
| 21 | KP | P | Z | 02 | 28 | 26 | | | | | | | | |
| | | e | Z | | | 30 | | | | | | | | |
| | CT | eP | Z | 02 | 28 | 27 | | | | | | | | |
| | CB | e(P) | E | 02 | 28 | 41 | | | | | | | | |
| | WN | e | N | 02 | 28 | 42 | | | | 3 | 6 | | | |
| | RX | e(L) | ZE | 02 | 59 | | | | | | | | | |
| | Epicentre: | | | 02 | 16 | 29 | | 2½S | 110W | | | | | USCGS |
| 21 | CT | e? | Z | 13 | 07 | 48 | | | | | | | | |
| | | e? | Z | | 08 | 06 | | | | | | | | |
| | | e | Z | | | 18 | | | | | | | | |
| | KP | eP? | Z | 13 | 08 | 08 | | | | | | | | |
| | | e | Z | | | 12 | | | | | | | | |
| 21 | SU | e | N | 16 | 24 | 05 | | | | | | | | |
| | | e | N | | | 52 | | | | | | | | |
| | ON | e? | E | 16 | 26 | 16 | | | | | | | | |
| | | e | E | | | 31 | | | | | | | | |
| | KP | eP | Z | 16 | 26 | 26 | | | | | | | | |
| | | e | Z | | | 30 | | | | | | | | |
| | CT | eP | Z | 16 | 26 | 37 | | | | | | | | |
| | | e | Z | | 30 | 25 | | | | | | | | |
| | CB | e(P) | E | 16 | 27 | 11 | | | | | | | | |
| | | e(S) | E | | 31 | 13 | | | | | | | | |
| | | e | E | | | 28 | | | | | | | | |
| | KM | eP | X | 16 | 27 | 29 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR 21 | | e(S) | X | | 31 | 51 | | | | | | | | |
| | GP | eP | N | 16 | 27 | 31 | | | | | | | | |
| | | eS | N | | 31 | 59 | | | | | | | | |
| | RX | eL | NE | 16 | 38 | | | | | | | | | |
| | | M | N | | 40 | | | | | 2 | 17 | | | |
| | Epicentre: | | | 16 | 21 | 57 | | 20½S | 174W | | | | | USCGS |
| 21 | KP | P | Z | 23 | 08 | 04 | u | | | | | | | |
| | CT | e(P) | Z | 23 | 08 | 19 | | | | | | | | |
| 22 | ON | eP | E | 15 | 00 | 32 | | | | | | | | |
| | | e | E | | | 50 | | | | | | | | |
| | KP | eP | Z | 15 | 00 | 39 | | | | | | | | |
| | | e | Z | | | 50 | | | | | | | | |
| | | eS | Z | | 02 | 07 | | | | | | | | |
| | CT | eP? | Z | 15 | 00 | 49 | | | | | | | | |
| | | e? | Z | | | 57 | | | | | | | | |
| | | e | Z | | 01 | 09 | | | | | | | | |
| | | e | Z | | 02 | 49 | | | | | | | | |
| | | e | Z | | | 59 | | | | | | | | |
| | WN | eP? | N | 15 | 01 | 20 | | | | | | | | |
| | | e | N | | 02 | 18 | | | | | | | | |
| | | e | N | | 03 | 22 | | | | | | | | |
| | | e(S) | N | | | 25 | | | | | | | | |
| | GP | e(P) | N | 15 | 01 | 58 | | | | | | | | |
| | | eS | N | | 04 | 31 | | | | | | | | |
| | KM | e | X | 15 | 02 | 03 | | | | | | | | |
| | | e(S) | X | | 04 | 25 | | | | | | | | |
| | CB | eS | E | 15 | 03 | 44 | | | | | | | | |
| | Epicentre: | | | 14 | 58 | 16 | | 30½S | 177½W | | | | | USCGS |
| 22 | SU | iP | N | 20 | 28 | 15 | n | | | | | | | |
| | | i | N | | | 26 | | | | | | | | |
| | | (S) | N | | 29 | 05 | | | | | | | | |
| | ON | eP | E | 20 | 31 | 01 | | | | | | | | |
| | | e | E | | | 13 | | | | | | | | |
| | | e | E | | | 35 | | | | | | | | |
| | | eS | E | | 34 | 44 | | | | | | | | |
| | KP | P | Z | 20 | 31 | 13 | | | | | | | | |
| | | e | Z | | | 17 | | | | | | | | |
| | | e | Z | | | 54 | | | | | | | | |
| | CT | P | Z | 20 | 31 | 23 | | | | | | | | |
| | | e | Z | | | 30 | | | | | | | | |
| | | e | Z | | 35 | 39 | | | | | | | | |
| | WN | e(P) | N | 20 | 31 | 45 | | | | | | | | |
| | | e(S) | N | | 36 | 17 | | | | | | | | |
| | | ScS | N | | 42 | 18 | | | | | | | | |
| | CB | e(P) | E | 20 | 31 | 48 | | | | | | | | |
| | KM | eP | X | 20 | 32 | 05 | | | | | | | | |
| | | e | X | | | 42 | | | | | | | | |
| | | e(S) | X | | 36 | 48 | | | | | | | | |
| | GP | eP? | N | 20 | 32 | 07 | | | | | | | | |
| | | e | N | | | 17 | | | | | | | | |
| | | e | N | | | 47 | | | | | | | | |
| | | S | N | | 36 | 39 | | | | | | | | |
| | RX | eL | N | 20 | 37 | .5 | | | | | | | | |
| | | eScS | N | | 42 | 44 | | | | | | | | |
| | Epicentre: | | | 20 | 26 | 28 | | 17½S | 174½W | 200 | km | | | USCGS |
| 23 | KP | iP | Z | 12 | 13 | 46 | u | | | | | | | |
| | CT | P | Z | 12 | 13 | 57 | | | | | | | | |
| | Epicentre: | | | 12 | 09 | 00 | | 17S | 175W | 200 | km | | | USCGS |
| 23 | CT | e? | Z | 18 | 05 | 23 | | | | | | | | |
| | | e? | Z | | | 39 | | | | | | | | |
| | KP | P | Z | 18 | 05 | 29 | | | | | | | | |
| | | e | Z | | | 38 | | | | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
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| APR 23 | | e | Z | | 07 | 51 | | | | | | | | |
| | | e | Z | | 08 | 06 | | | | | | | | |
| | Epicentre: | | | 17 | 58 | 19 | | 6S | 154½E | | | | | USCGS |
| | 24 ON | eP | E | 03 | 32 | 00 | | | | | | | | |
| | | e | E | | | 31 | | | | | | | | |
| | | eS | E | | 39 | 47 | | | | | | | | |
| | CB | P | E | 03 | 32 | 00 | | | | | | | | |
| | | e | E | | 34 | 29 | | | | | | | | |
| | | S | E | | 39 | 45 | | | | | | | | |
| | | e | E | | 40 | 49 | | | | | | | | |
| | | e | E | | 41 | 06 | | | | | | | | |
| | GP | eP | N | 03 | 32 | 03 | | | | | | | | |
| | | eS | N | | 39 | 52 | | | | | | | | |
| | WN | P | ZN | 03 | 32 | 09 | d | 3 | 5 | | | | | |
| | | e(pP) | Z | | 34 | 12 | | | | | | | | |
| | | e | Z | | 35 | 08 | | | | | | | | |
| | | S | ZN | | 39 | 59 | | | | 20 | 5 | | | |
| | | e | N | | 40 | 52 | | | | | | | | |
| | KP | P | Z | 03 | 32 | 09 | | | | | | | | |
| | | e | Z | | | 26 | | | | | | | | |
| | | (PcP) | Z | | | 37 | | | | | | | | |
| | | e | Z | | 34 | 04 | | | | | | | | |
| | | e | Z | | | 07 | | | | | | | | |
| | | e(pP) | Z | | | 10 | | | | | | | | |
| | | e | Z | | 35 | 39 | | | | | | | | |
| | | eS | Z | | 40 | 04 | | | | | | | | |
| | | e | Z | | | 24 | | | | | | | | |
| | | e | Z | | 41 | 15 | | | | | | | | |
| | TO | P | Z | 03 | 32 | 10 | d | | | | | | | |
| | CT | P | Z | 03 | 32 | 10 | | | | | | | | |
| | | eS | Z | | 40 | 09 | | | | | | | | |
| | SU | P | N | 03 | 32 | 11 | | | | | | | | |
| | | e | N | | | 30 | | | | | | | | |
| | | eS | N | | 40 | 00 | | | | 14 | 5 | | | |
| | TU | eP | N | 03 | 32 | 17 | | | | | | | | |
| | | S | N | | 40 | 14 | | | | | | | | |
| | RX | e | ZE | 03 | 34 | 51 | | | | | | | | |
| | | e | Z | | 36 | 06 | | | | | | | | |
| | | iS | NE | | 39 | 32 | | | | 12 | 9 | 12 | 12 | |
| | | e | E | | 44 | | | | | | | | | |
| | | e | NE | | 47 | 16 | | | | 8 | 18 | | | |
| | Epicentre: | | | 03 | 22 | 23 | | 6S | 113½E | 600 | km | | | USCGS |
| | 24 KP | iPKP | Z | 12 | 33 | 42 | u | | | | | | | |
| | | e | Z | | 37 | 10 | | | | | | | | |
| | CT | e? | Z | 12 | 37 | 10 | | | | | | | | |
| | RX | eL | ZNE | 13 | 22 | | | | | 1 | 18 | | | |
| | Epicentre: | | | 12 | 14 | 26 | | 28N | 54½E | | | | | USCGS |
| | 24 KP | e? | Z | 18 | 06 | 42 | | | | | | | | |
| | | e? | Z | | | 46 | | | | | | | | |
| | | e | Z | | | 54 | | | | | | | | |
| | WN | eP | N | 18 | 07 | 28 | | | | | | | | |
| | | e | N | | 09 | 37 | | | | | | | | |
| | | eS | N | | | 39 | | | | | | | | |
| | TU | eS | N | 18 | 08 | 33 | | | | | | | | |
| | CT | eS? | Z | 18 | 08 | 36 | | | | | | | | |
| | CB | eS | E | 18 | 09 | 54 | | | | | | | | |
| | GP | eS | N | 18 | 10 | 42 | | | | | | | | |
| | Epicentre: | | | 18 | 04 | 05 | | 29S | 177W | | | | | USCGS |
| | | | | | | | | Felt: Raoul I. MM4. | | | | | | |
| | 25 KP | P | Z | 00 | 26 | 54 | | | | | | | | |
| | | e(PP) | Z | | 29 | 50 | | | | | | | | |
| | | e? | Z | | 30 | 06 | | | | | | | | |
| | Epicentre: | | | 00 | 14 | 17 | | 42N | 142E | | | | | USCGS |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR 25 | ON | P | E | 13 | 30 | 17 | | | | | | | | |
| | TU | eP | N | 13 | 30 | 17 | | | | | | | | |
| | | eS | N | | 31 | 13 | | | | | | | | |
| | | e | N | | | 37 | | | | | | | | |
| | KP | P | Z | 13 | 30 | 19 | | | | | | | | |
| | | e | Z | | | 36 | | | | | | | | |
| | | e | Z | | 31 | 33 | | | | | | | | |
| | CT | e(P) | Z | 13 | 30 | 32 | | | | | | | | |
| | | e | Z | | 32 | 06 | | | | | | | | |
| | WN | eP? | N | 13 | 30 | 54 | | | | | | | | |
| | | e | N | | | 57 | | | | | | | | |
| | | eS | N | | 32 | 22 | | | | | | | | |
| | GP | eP? | N | 13 | 31 | 32 | | | | | | | | |
| | | eS? | N | | 33 | 27 | | | | | | | | |
| | | e | N | | | 31 | | | | | | | | |
| | CB | e(S) | E | 13 | 32 | 43 | | | | | | | | |
| | | e | E | | 33 | 00 | | | | | | | | |
| | KM | e | X | 13 | 33 | 47 | | | | | | | | |
| | Epicentre: | | | 13 | 29 | 01 | | 34.5S | 180 | N | | | | NZ(D) 5.0 NZ |
| | | | | | | | | Using additional data from Charters Towers. | | | | | | |
| | 25 RX | eL | E | 17 | 25 | | | | | | | | | |
| | Epicentre: | | | 16 | 28 | 32 | | 38½N | 25E | | | | | |
| | 27 KP | P | Z | 11 | 12 | 23 | | | | | | | | |
| | TU | S | N | 11 | 17 | 54 | | | | | | | | |
| | Epicentre: | | | 11 | 05 | 48 | | 9S | 160E | | | | | USCGS |
| | 27 KP | P | Z | 17 | 19 | 42 | | | | | | | | |
| | | e | Z | | | 44 | | | | | | | | |
| | CB | P? | E | 17 | 20 | 06 | | | | | | | | |
| | RX | eL | NE | 17 | 31 | | | | | | | | | |
| | WN | eL | N | 17 | 43 | | | | | | | | | |
| | Epicentre: | | | 17 | 11 | 30 | | 3.5S | 146½E | | | | | USCGS |
| | 27 KP | eP? | Z | 22 | 53 | 54 | | | | | | | | |
| | 27 WN | eP | Z | 22 | 54 | 59 | | | | 2 | 6 | | | |
| | KP | P | Z | 22 | 55 | 40 | | | | | | | | |
| | | e | Z | | 56 | 02 | | | | | | | | |
| | CT | eP? | Z | 22 | 55 | 42 | | | | | | | | |
| | | i | Z | | | 45 | d | | | | | | | |
| | Epicentre: | | | 22 | 43 | 49 | | 18N | 120E | | | | | USCGS |
| | 28 CT | eP | Z | 02 | 22 | 22 | | | | | | | | |
| | KP | P | Z | 02 | 22 | 29 | | | | | | | | |
| | RX | eL | NE | 02 | 50 | | | | | | | | | |
| | | M | N | | 56 | | | | | | | 1 | 17 | |
| | Epicentre: | | | 02 | 10 | 14 | | 59½S | 26W | | | | | USCGS |
| | 28 KP | P | Z | 05 | 16 | 21 | | | | | | | | |
| | | e | Z | | | 24 | | | | | | | | |
| | CT | e(P) | Z | 05 | 16 | 31 | | | | | | | | |
| | RX | eL | NE | 05 | 30 | | | | | | | | | |
| | WN | eL | N | 05 | 36 | | | | | | | | | |
| | Epicentre: | | | 05 | 08 | 07 | | 3½S | 144½E | | | | | USCGS |
| | 28 KP | eP | Z | 14 | 16 | 47 | | | | | | | | |
| | 29 KP | iP? | Z | 01 | 54 | 48 | | | | | | | | |
| | 29 CT | P | Z | 02 | 28 | 01 | | | | | | | | |
| | KP | P | Z | 02 | 28 | 06 | | | | | | | | |
| | Epicentre: | | | 02 | 15 | 35 | | 56½S | 26W | | | | | USCGS |

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| APR 29 | CT | P | Z | 03 | 55 | 34 | | | | | | | |
| | KP | eP | Z | 03 | 55 | 39 | | | | | | | |
| | Epicentre: | | | 03 | 43 | 04 | 5½S | 25W | | | | | USCGS |
| 29 | KP | P | Z | 04 | 16 | 33 | | | | | | | |
| 29 | CT | eP | Z | 05 | 57 | 36 | | | | | | | |
| | | e | Z | | 58 | 01 | | | | | | | |
| | KP | P | Z | 05 | 57 | 41 | | | | | | | |
| | | e | Z | | 58 | 09 | | | | | | | |
| | Epicentre: | | | 05 | 45 | 14 | Sandwich I. | | | | | | USCGS |
| 29 | KP | eP? | Z | 08 | 52 | 03 | | | | | | | |
| 29 | KP | eP | Z | 09 | 26 | 34 | | | | | | | |
| | | e? | Z | | 29 | 34 | | | | | | | |
| | Epicentre: | | | 09 | 16 | 08 | 0 | 121½E | | | | | USCGS |
| 29 | KP | P | Z | 10 | 03 | 54 | | | | | | | |
| | | e | Z | | 04 | 33 | | | | | | | |
| | CT | eP? | Z | 10 | 03 | 58 | | | | | | | |
| | Epicentre: | | | 09 | 53 | 26 | 0 | 122E | | | | | USCGS |
| 29 | KP | eP | Z | 10 | 16 | 40 | | | | | | | |
| | CT | eP? | Z | 10 | 16 | 55 | | | | | | | |
| | RX | eL? | N | 10 | 32 | | | | | | | | |
| | Epicentre: | | | 10 | 06 | 14 | 0 | 122E | | | | | USCGS |
| 29 | KP | eP? | Z | 11 | 41 | 13 | | | | | | | |
| | | e | Z | | | 25 | | | | | | | |
| | Epicentre: | | | 11 | 30 | 47 | 0 | 122E | | | | | USCGS |
| 29 | KP | eP? | Z | 13 | 40 | 04 | | | | | | | |
| | | e | Z | | | 06 | | | | | | | |
| | | e | Z | | | 08 | | | | | | | |
| | | e(S) | Z | | 42 | 34 | | | | | | | |
| | ON | eP | E | 13 | 40 | 29 | | | | | | | |
| | | e | E | | 42 | 12 | | | | | | | |
| | CT | eP | Z | 13 | 40 | 46 | | | | | | | |
| | | e | Z | | | 48 | | | | | | | |
| | | e | Z | | | 51 | | | | | | | |
| | | e | Z | | 41 | 03 | | | | | | | |
| | | e | Z | | 42 | 31 | | | | | | | |
| | | e(S) | Z | | | 39 | | | | | | | |
| | WN | eP? | N | 13 | 41 | 13 | | | | | | | |
| | | e | N | | | 15 | | | | | | | |
| | | e | N | | | 38 | | | | | | | |
| | | e | N | | 43 | 11 | | | | | | | |
| | | e(S) | N | | | 14 | | | | | | | |
| | | e | N | | 44 | 15 | | | | | | | |
| | | e(L) | ZN | | | 58 | | | | | | | |
| | | PcS? | N | | 49 | 42 | | | | | | | |
| | CB | eP? | E | 13 | 41 | 23 | | | | | | | |
| | | e | E | | | 33 | | | | | | | |
| | | e | E | | 42 | 22 | | | | | | | |
| | | eS | E | | 43 | 34 | | | | | | | |
| | GP | e(P) | N | 13 | 41 | 53 | | | | | | | |
| | | e | N | | 42 | 04 | | | | | | | |
| | | eS | N | | 44 | 19 | | | | | | | |
| | KM | e(P) | X | 13 | 41 | 55 | | | | | | | |
| | | e | X | | 44 | 11 | | | | | | | |
| | | e(S) | X | | | 15 | | | | | | | |
| | TO | e | Z | 13 | 42 | 25 | | | | | | | |
| | RX | eL | NE | 13 | 46 | | | | | | | | |
| | | M | ZNE | | 49 | | | | 5 20 | | 4 20 | | 2 20 |
| | Epicentre: | | | 13 | 38 | 31 | 30S | 178½W | | | | | USCGS |



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| APR 29 | KP | P | Z | 13 | 43 | 44 | | | | | | | | |
| | | e | Z | | 44 | 09 | | | | | | | | |
| | RX | eL | E | 14 | 10 | | | | | | | 1 | 20 | |
| | Epicentre: | | | 13 | 33 | 17 | | 0 | 122E | | | | | USCGS |
| 29 | ON | eP | E | 14 | 48 | 56 | | | | | | | | |
| | | S | E | | 50 | 44 | | | | | | | | |
| | KP | P | Z | 14 | 49 | 11 | d | | | | | | | |
| | | e | Z | | 51 | 12 | | | | | | | | |
| | | e | Z | | | 20 | | | | | | | | |
| | | e | Z | | | 28 | | | | | | | | |
| | | e | Z | | | 38 | | | | | | | | |
| | CT | eP | Z | 14 | 49 | 22 | | | | | | | | |
| | | e | Z | | | 30 | | | | | | | | |
| | | e | Z | | 51 | 33 | | | | | | | | |
| | | e(S) | Z | | | 41 | | | | | | | | |
| | WN | eP? | N | 14 | 49 | 34 | | | | | | | | |
| | | e | N | | | 43 | | | | | | | | |
| | | eS | N | | 52 | 08 | | | | | | | | |
| | CB | eP? | E | 14 | 49 | 44 | | | | | | | | |
| | | e | E | | | 47 | | | | | | | | |
| | | S | E | | 52 | 14 | | | | | | | | |
| | KM | eP? | X | 14 | 50 | 04 | | | | | | | | |
| | | e | X | | | 06 | | | | | | | | |
| | | eS | X | | 52 | 44 | | | | | | | | |
| | GP | eP | N | 14 | 40 | 09 | | | | | | | | |
| | | e | N | | | 15 | | | | | | | | |
| | | eS | N | | 52 | 57 | | | | | | | | |
| | Epicentre: | | | 14 | 45 | 42 | | Kermadec Is | | | | | | USCGS |
| 29 | KP | eP? | Z | 15 | 42 | 35 | | | | | | | | |
| | CT | eP? | Z | 15 | 42 | 44 | | | | | | | | |
| 29 | KP | P | Z | 17 | 31 | 36 | | | | | | | | |
| 29 | KP | P | Z | 19 | 06 | 08 | | | | | | | | |
| | CT | e(P) | Z | 19 | 06 | 16 | | | | | | | | |
| | Epicentre: | | | 18 | 55 | 42 | | ½S | 121½E | | | | | USCGS |
| 29 | KP | P | Z | 19 | 23 | 24 | | | | | | | | |
| 29 | KP | P | Z | 19 | 42 | 38 | | | | | | | | |
| | | e | Z | | | 48 | | | | | | | | |
| | | e | Z | | 43 | 18 | | | | | | | | |
| | CT | eP | Z | 19 | 42 | 42 | | | | | | | | |
| | | e | Z | | | 47 | | | | | | | | |
| | ON | e | E | 19 | 42 | 43 | | | | | | | | |
| | CB | e(P) | E | 19 | 42 | 44 | | | | | | | | |
| * | WN | eP? | Z | 19 | 42 | 44 | | | | | | | | |
| | | e | Z | | | 51 | | | | | | | | |
| | | e? | Z | | 47 | 05 | | | | | | | | |
| | | eS | N | | 51 | 00 | | | | | | | | |
| | | eScS | N | | 52 | 31 | | | | | | | | |
| | | eL | N | 20 | 00 | | | | | | | | | |
| | | eL | Z | | 06 | | | | | | | | | |
| | | M | N | | 08 | | | | | | 6 | 20 | | |
| | | M | Z | | 10 | | | | 6 | 20 | | | | |
| | GP | e(P) | N | 19 | 42 | 46 | | | | | | | | |
| * | RX | ePPP | E | 19 | 46 | 44 | | | | | | | | |
| | | eS | ZNE | | 51 | 06 | | | | | | 3 | 27 | |
| | | e(L) | NE | | 59 | | | | | | | | | |
| | | eL | ZNE | 20 | 03 | | | | | | | | | |
| | | M | ZE | | 09 | | | | 7 | 20 | | | 6 | 20 |
| | Epicentre: | | | 19 | 32 | 12 | | 0 | 122E | | | | | USCGS |
| 29 | CT | eP? | Z | 20 | 54 | 51 | | | | | | | | |

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| APR 29 | | e | Z | | | 57 | | | | | | | | | |
| | KP | P | Z | 20 | 54 | 53 | | | | | | | | | |
| | GP | e? | N | 20 | 55 | 04 | | | | | | | | | |
| | | e | N | | | 17 | | | | | | | | | |
| | RX | eL | N | 21 | 11 | | | | | | | | | | |
| | | M | ZE | | | 20 | | | | | | 2 | 20 | | |
| | Epicentre: | | | 20 | 44 | 27 | | 0 | 121½E | | | | | USCGS | |
| 29 | KP | P | Z | 22 | 05 | 39 | | | | | | | | | |
| | CT | eP | Z | 22 | 05 | 50 | | | | | | | | | |
| 29 | KP | P | Z | 23 | 58 | 19 | | | | | | | | | |
| | CT | eP | Z | 23 | 58 | 31 | | | | | | | | | |
| | SU | e | N | 23 | 59 | | | | | | | | | | |
| | RX | eL | NE | 24 | 10 | | | | | | | | | | |
| | | M | NE | | | 12 | | | | | | 1 | 15 | | |
| 30 | KP | P | Z | 00 | 30 | 36 | d | | | | | | | | |
| | | e | Z | | | 43 | | | | | | | | | |
| | | e | Z | | 31 | 15 | | | | | | | | | |
| | CT | eP | Z | 00 | 30 | 40 | | | | | | | | | |
| | Epicentre: | | | 00 | 20 | 09 | | 0 | 122E | | | | | USCGS | |
| 30 | KP | P | Z | 01 | 18 | 42 | | | | | | | | | |
| 30 | CB | e? | E | 04 | 11 | 56 | | | | | | | | | |
| | | e | E | | 12 | 04 | | | | | | | | | |
| | KP | P | Z | 04 | 11 | 59 | | | | | | | | | |
| | | e | Z | | 12 | 12 | | | | | | | | | |
| | | e | Z | | | 47 | | | | | | | | | |
| | CT | eP | Z | 04 | 12 | 02 | | | | | | | | | |
| | | e | Z | | | 22 | | | | | | | | | |
| | WN | eP | N | 04 | 12 | 04 | | | | | | | | | |
| | | eL | N | | 31 | | | | | | | | | | |
| | | eL | Z | | 35 | | | | | | | | | | |
| | | M | ZN | | 40 | | | | 4 20 | | 3 18 | | | | |
| | TO | e | Z | 04 | 12 | 05 | | | | | | | | | |
| | GP | e? | N | 04 | 12 | 06 | | | | | | | | | |
| | RX | e(S) | E | 04 | 20 | 32 | | | | | | | | | |
| | | e(L) | NE | | 27 | 27 | | | | | 2 20 | | | | |
| | | M | ZE | | 38 | | | | 6 20 | | | 4 | 20 | | |
| | Epicentre: | | | 04 | 01 | 32 | | 0 | 122E | | | | | USCGS | |
| 30 | KP | e? | Z | 10 | 21 | 50 | | | | | | | | | |
| | | e? | Z | | | 54 | | | | | | | | | |
| | | e? | Z | | | 57 | | | | | | | | | |
| | | e | Z | | 22 | 02 | | | | | | | | | |
| | | e | Z | | | 07 | | | | | | | | | |
| | Epicentre: | | | 10 | 11 | 23 | | 0 | 121½E | | | | | USCGS | |
| 30 | ON | e? | E | 11 | 05 | 12 | | | | | | | | | |
| | | e | E | | | 14 | | | | | | | | | |
| | | e | E | | | 32 | | | | | | | | | |
| | KP | e? | Z | 11 | 05 | 12 | | | | | | | | | |
| | | (P) | Z | | | 25 | | | | | | | | | |
| | | e | Z | | | 33 | | | | | | | | | |
| | | e | Z | | | 50 | | | | | | | | | |
| | | e | Z | | 06 | 12 | | | | | | | | | |
| | CT | eP? | Z | 11 | 05 | 35 | | | | | | | | | |
| | | e | Z | | | 37 | | | | | | | | | |
| | CB | eP? | E | 11 | 06 | 04 | | | | | | | | | |
| | KM | eP | X | 11 | 06 | 19 | | | | | | | | | |
| | RX | eL | E | 11 | 21 | | | | | | | 1 | 15 | | |
| | Epicentre: | | | 11 | 00 | 05 | | 16S | 173W | | | | | USCGS | |
| 30 | KP | eP | Z | 14 | 23 | 45 | | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR 30 | | e | Z | | | 55 | | | | | | | | | |
| | CT | e(P) | Z | 14 | 24 | 04 | | | | | | | | | |
| | TO | e | Z | 14 | 24 | 05 | | | | | | | | | |
| | RX | eL | NE | 14 | 33 | | | | | | | | | | |
| | | M | ZN | | | 38 | | | | | | 4 | 20 | | |
| | WN | eL | ZN | 14 | 36 | | | | | | | | | | |
| | | M | N | | | 39 | | | | | | | | | |
| | | M | Z | | | 41 | | | | | | 2 | 15 | | |
| | Epicentre: | | | 14 | 17 | 04 | | 9S | 157E | | | | | USCGS | |
| 30 | KP | iP | Z | 17 | 07 | 24 | d | | | | | | | | |
| | | e | Z | | | 48 | | | | | | | | | |
| | CT | eP | Z | 17 | 07 | 33 | | | | | | | | | |
| 30 | KP | P | Z | 15 | 16 | 09 | u | | | | | | | | |
| | | i | Z | | | 12 | d | | | | | | | | |
| | | e | Z | | | 42 | | | | | | | | | |
| | | e | Z | | 18 | 47 | | | | | | | | | |
| | CT | eP | Z | 15 | 16 | 22 | | | | | | | | | |
| | | e | Z | | | 24 | | | | | | | | | |
| | | e(S) | Z | | 19 | 03 | | | | | | | | | |
| 30 | KP | P | Z | 21 | 46 | 52 | d | | | | | | | | |
| | | e | Z | | 47 | 11 | | | | | | | | | |
| 30 | ON | e | E | 22 | 18 | 46 | | | | | | | | | |
| | KM | e(P) | X | 22 | 18 | 51 | | | | | | | | | |
| | KP | iP | Z | 22 | 18 | 57 | d | | | | | | | | |
| | | e | Z | | 19 | 01 | | | | | | | | | |
| | | e(PcP) | Z | | | 42 | | | | | | | | | |
| | | i | Z | | | 45 | | | | | | | | | |
| | | e(pP) | Z | | 20 | 48 | | | | | | | | | |
| | | e | Z | | 21 | 01 | | | | | | | | | |
| | | iScP | Z | | 22 | 43 | d | | | | | | | | |
| | | e | Z | | 23 | 01 | | | | | | | | | |
| | CT | P | Z | 22 | 18 | 59 | d | | | | | | | | |
| | | ePcP | Z | | 19 | 46 | | | | | | | | | |
| | | e | Z | | | 52 | | | | | | | | | |
| | | eScP | Z | | 22 | 43 | | | | | | | | | |
| MAY 1 | KP | P | Z | 17 | 56 | 55 | | | | | | | | | |
| 2 | KP | eP | Z | 04 | 19 | 21 | | | | | | | | | |
| | GP | eP | N | 04 | 20 | 37 | | | | | | | | | |
| | | e | N | | 23 | 43 | | | | | | | | | |
| | | S | N | | | 47 | | | | | | | | | |
| | WN | eS | N | 04 | 22 | 41 | | | | | | | | | |
| | KM | eS | X | 04 | 23 | 41 | | | | | | | | | |
| | Epicentre: | | | 04 | 16 | 27 | | 28S | 176W | | | | | USCGS | |
| 2 | KP | eP | Z | 12 | 01 | 59 | | | | | | | | | |
| | Epicentre: | | | 11 | 51 | 34 | | 0 | 121½E | | | | | USCGS | |
| 2 | CB | eP | E | 12 | 20 | 32 | | | | | | | | | |
| | KP | P | Z | 12 | 20 | 38 | | | | | | | | | |
| | | e | Z | | 21 | 18 | | | | | | | | | |
| | TO | eP | Z | 12 | 20 | 41 | | | | | | | | | |
| | WN | eP | N | 12 | 20 | 42 | | | | | | | | | |
| | Epicentre: | | | 12 | 10 | 11 | | 0 | 121½E | | | | | USCGS | |
| 3 | KP | eP | Z | 07 | 59 | 46 | | | | | | | | | |
| | | e | Z | | | 49 | | | | | | | | | |
| | SU | S | N | 07 | 59 | 47 | | | | | | | | | |
| | TU | eS | N | 08 | 02 | 22 | | | | | | | | | |
| | WN | eS | N | 08 | 03 | 14 | | | | | | | | | |
| | KM | eS | X | 08 | 03 | 51 | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 3 | GP | eS | N | 08 | 03 | 55 | | | | | | | | |
| | | Epicentre: | | 07 | 55 | 54 | 24S | 179W | | | | | USCGS | |
| 3 | SU | S | N | 08 | 11 | 03 | | | | | | | | |
| | KP | eP | Z | 08 | 11 | 05 | | | | | | | | |
| | | e | Z | | | 08 | | | | | | | | |
| | | Epicentre: | | 08 | 07 | 08 | 24S | 179½W | | | | | USCGS | |
| 3 | KP | P | Z | 13 | 32 | 33 | | | | | | | | |
| | | Epicentre: | | 13 | 22 | 07 | 0 | 121½E | | | | | USCGS | |
| 3 | KP | P | Z | 22 | 34 | 25½ | | | | | | | | |
| | | e | Z | | | 52 | | | | | | | | |
| | | Epicentre: | | 22 | 22 | 41 | 32N | 140E | 150 | km | | | USCGS | |
| 4 | ON | eP | E | 00 | 01 | 16 | | | | | | | | |
| | | i | E | | | 17 | | | | | | | | |
| | KP | P | Z | 00 | 01 | 30 | | | | | | | | |
| | WN | eP | N | 00 | 01 | 57 | | | | | | | | |
| | GP | eP | N | 00 | 02 | 22 | | | | | | | | |
| | | Epicentre: | | 23 | 57 | 37 | 19½S | 178½W | 600 | km | | | USCGS | |
| 4 | SU | eL | N | 05 | 48 | .8 | | | | | | | | |
| 4 | KP | P | Z | 10 | 44 | 08 | | | | | | | | |
| 4 | SU | eP | N | 18 | 31 | 20 | | | | | | | | |
| | | eS | N | | | 32 | 35 | | | | | | | |
| | ON | eP | E | 18 | 33 | 25 | | | | | | | | |
| | AK | eP | N | 18 | 33 | 34 | | | | | | | | |
| | | eS | N | | | 36 | 50 | | | | | | | |
| | KP | eP | Z | 18 | 33 | 50 | | | | | | | | |
| | TU | eP | N | 18 | 34 | 05 | | | | | | | | |
| | CT | P | Z | 18 | 34 | 07 | | | | | | | | |
| | WN | P | ZN | 18 | 34 | 27 | | | | | | | | |
| | | S | N | | | 38 | 09 | | | 2 | 6 | | | |
| | CB | eP | E | 18 | 34 | 29 | | | | | | | | |
| | KM | e(P) | X | 18 | 34 | 48 | | | | | | | | |
| | GP | eP | N | 18 | 34 | 52 | | | | | | | | |
| | RX | eS | NE | 18 | 39 | 40 | | | | 3 | 10 | 2 | 12 | |
| | | eL | N | | | 41¾ | | | | 5 | 30 | | | |
| | | eL | ZE | | | 42 | | | | | | | | |
| | | Epicentre: | | 18 | 29 | 40 | 20S | 173E | | | | | USCGS | |
| 4 | KP | P | Z | 22 | 07 | 44 | | | | | | | | |
| | | e | Z | | | 08 | 12 | | | | | | | |
| | CT | eP | Z | 22 | 07 | 51 | | | | | | | | |
| 5 | KP | P | Z | 01 | 07 | 06½ | | | | | | | | |
| | | i | Z | | | 08 | | | | | | | | |
| | CT | eP | Z | 01 | 07 | 18 | | | | | | | | |
| | CB | eP | E | 01 | 07 | 41 | | | | | | | | |
| | WN | eP | N | 01 | 07 | 44 | | | | | | | | |
| | KM | eP | X | 01 | 07 | 58 | | | | | | | | |
| | GP | eP | N | 01 | 08 | 10 | | | | | | | | |
| 5 | KP | P | Z | 11 | 39 | 02 | | | | | | | | |
| | | e | Z | | | 16 | | | | | | | | |
| | | Epicentre: | | 11 | 26 | 00 | 52½N | 158½E | | | | | USCGS | |
| 5 | CT | eP | Z | 16 | 09 | 32 | | | | | | | | |
| | | e | Z | | | 58 | | | | | | | | |
| | KP | P | Z | 16 | 09 | 37 | | | | | | | | |
| | | e | Z | | | 10 | 03 | | | | | | | |
| | | Epicentre: | | 15 | 57 | 27 | 60S | 23½W | | | | | USCGS | |
| 6 | ON | P | E | 04 | 51 | 54 | | | | | | | | |
| | KP | P | Z | 04 | 52 | 09 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 6 | WN | eP | N | 04 | 52 | 44 | | | | | | | | |
| | | eS | N | | | 55 | 30 | | | | | | | |
| 7 | KP | P | Z | 07 | 49 | 48 | | | | | | | | |
| 8 | SU | eS | N | 05 | 13 | 09 | | | | | | | | |
| | KP | P | Z | 05 | 15 | 05 | | | | | | | | |
| | | Epicentre: | | 05 | 10 | 58 | 18½S | 178W | 450 | km | | | USCGS | |
| 8 | ON | P | E | 05 | 31 | 39 | | | | | | | | |
| | | eS | E | | | 33 | 16 | | | | | | | |
| | TU | eP | N | 05 | 31 | 45 | | | | | | | | |
| | | S | N | | | 33 | 19 | | | | | | | |
| | KP | P | Z | 05 | 31 | 46 | | | | | | | | |
| | | i | Z | | | 51 | | | | | | | | |
| | CT | eP | Z | 05 | 31 | 57 | | | | | | | | |
| | | eS | Z | | | 33 | 47 | | | | | | | |
| | WN | eP | N | 05 | 32 | 24 | | | | | | | | |
| | | S | N | | | 34 | 28 | | | | | | | |
| | GP | e(P) | N | 05 | 33 | 00 | | | | | | | | |
| | | eS | N | | | 35 | 32 | | | | | | | |
| | CB | S | E | 05 | 34 | 46 | | | | | | | | |
| | KM | eS | X | 05 | 35 | 22 | | | | | | | | |
| | | Epicentre: | | 05 | 29 | 32 | 31S | 178W | | | | | USCGS | |
| 9 | KP | P | Z | 02 | 57 | 00 | | | | | | | | |
| | | Epicentre: | | 02 | 46 | 08 | 5½N | 122E | | | | | USCGS | |
| 9 | CB | iP* | E | 03 | 43 | 21¾ | w | | | | | | | |
| | KM | eP* | X | 03 | 43 | 48 | | | | | | | | |
| | | e(Pg) | X | | | 51 | | | | | | | | |
| | | S* | X | | 44 | 11 | | | | | | | | |
| | WN | P* | N | 03 | 43 | 49 | n | | | | | | | |
| | | S* | N | | 44 | 12 | | | | | | | | |
| | GP | ePn | N | 03 | 44 | 00 | | | | | | | | |
| | | e | N | | | 01½ | | | | | | | | |
| | | iP* | N | | | 07 | | | | | | | | |
| | | e | N | | | 38 | | | | | | | | |
| | CT | Pn | Z | 03 | 44 | 05 | | | | | | | | |
| | KP | iPn | Z | 03 | 44 | 17 | u | | | | | | | |
| | TU | e(P) | N | 03 | 44 | 28 | | | | | | | | |
| | | eP* | N | | | 35 | | | | | | | | |
| | | eSn | N | | 45 | 32 | | | | | | | | |
| | ON | e | E | 03 | 44 | 46 | | | | | | | | |
| | | e | E | | 45 | 36 | | | | | | | | |
| | RX | e | NE | 03 | 46 | 03 | | | | | | | | |
| | | e | NE | | | 10 | | | | | | | | |
| | | e | Z | | | 20 | | | | | | | | |
| | | Epicentre: | | 03 | 43 | 18 | 41.1S | 172.6E | S | | | | NZ(B) | 5.1 NZ |
| | | | | | | | Canberra reading used for determination of epicentre. | | | | | | | |
| | | | | | | | Felt: Central New Zealand, especially Nelson Province. Max. MM 5 Farewell Spit. | | | | | | | |
| 9 | KP | P | Z | 05 | 43 | 18 | | | | | | | | |
| 10 | KP | eP | Z | 10 | 22 | 48 | | | | | | | | |
| | | Epicentre: | | 10 | 18 | 58 | 20S | 177½W | 500 | km | | | USCGS | |
| 10 | KP | eP | Z | 11 | 08 | 36 | | | | | | | | |
| | | Epicentre: | | 10 | 56 | 02 | 55½S | 26W | | | | | USCGS | |
| 11 | KP | P | Z | 18 | 45 | 25 | | | | | | | | |
| | | e(pP) | Z | | | 42 | | | | | | | | |
| | CT | eP | Z | 18 | 45 | 29 | | | | | | | | |
| | | (pP) | Z | | | 48 | | | | | | | | |
| | GP | e | N | 18 | 45 | 51 | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 11 | RX | eS | N | 18 | 53 | 18 | | | 2 | 10 | | | |
| | | SSS | NE | | 58 | 59 | | | 8 | 16 | 4 | 14 | |
| | | eLq | N | 19 | 02 | | | | 6 | 24 | | | |
| | | M | NE | | 06 | | | | 7 | 18 | 7 | 20 | |
| | | eL | Z | | 08 | | 15 | 20 | | | | | |
| | WN | eL | N | 18 | 56 | | | | 12 | 20 | | | |
| | | eL | Z | 19 | 06 | | | | | | | | |
| | Epicentre: | | | 18 | 36 | 00 | 3S | 131E | | | | | USCGS |
| 12 | KP | P | Z | 06 | 33 | 25 | | | | | | | |
| | CT | eP | Z | 06 | 33 | 26 | | | | | | | |
| | Epicentre: | | | 06 | 22 | 15 | 5½S | 105½E | 100 | km | | | USCGS |
| 13 | RX | eP* | ZNE | 01 | 36 | 12 | | | | | | | |
| | | (Sn) | ZNE | | | 32 | | | | | | | |
| | KM | e(P) | X | 01 | 36 | 35 | | | | | | | |
| | | eP* | X | | | 38 | | | | | | | |
| | | e | X | | | 44 | | | | | | | |
| | | e | X | | | 48 | | | | | | | |
| | | e | X | | | 53 | | | | | | | |
| | | S* | X | | 37 | 25 | | | | | | | |
| | GP | ePn | N | 01 | 36 | 38 | | | | | | | |
| | | e | N | | | 41 | | | | | | | |
| | | iP* | N | | | 46½ | | | | | | | |
| | | e | N | | | 58 | | | | | | | |
| | | S | N | | 37 | 41½ | | | | | | | |
| | CB | ePn | E | 01 | 36 | 55 | | | | | | | |
| | | e | E | | 37 | 01 | | | | | | | |
| | | eS* | E | | 38 | 12 | | | | | | | |
| | | i | E | | | 26 | | | | | | | |
| | WN | e | N | 01 | 37 | 20 | | | | | | | |
| | | eSn | N | | 38 | 16 | | | | | | | |
| | | e | N | | | 26 | | | | | | | |
| | | e | ZN | | 39 | 08 | | | | | | | |
| | CT | e(P) | Z | 01 | 37 | 34 | | | | | | | |
| | | i | Z | | | 49 | | | | | | | |
| | | i | Z | | 39 | 10 | | | | | | | |
| | | e | Z | | | 17 | | | | | | | |
| | | i | Z | | | 52 | | | | | | | |
| | KP | Pn | Z | 01 | 37 | 46 | | | | | | | |
| | | e | Z | | | 54 | | | | | | | |
| | | e(Sn) | Z | | 39 | 17 | | | | | | | |
| | ON | ePn | E | 01 | 38 | 05 | | | | | | | |
| | | e | E | | | 08 | | | | | | | |
| | | e(Sn) | E | | 39 | 46 | | | | | | | |
| | Epicentre: | | | 01 | 35 | 42 | 44.2S | 167.7E | (S) | | NZ | | 5.3 NZ |
| | | | | | | | Felt: Haast MM3, Milford Sd | | | | | | |
| | | | | | | | Additional readings from Canberra and Charters Towers used for determination of epicentre. | | | | | | |
| 13 | RX | P* | NE | 02 | 00 | 50 | | | | | | | |
| | | (Sn) | NE | | 01 | 08 | | | | | | | |
| | KM | ePn | X | 02 | 01 | 09 | | | | | | | |
| | | e | X | | | 21½ | | | | | | | |
| | | i | X | | | 39 | | | | | | | |
| | | S* | X | | 02 | 02 | | | | | | | |
| | CB | ePn | E | 02 | 01 | 31 | | | | | | | |
| | | e | E | | | 39 | | | | | | | |
| | | e | E | | 02 | 43 | | | | | | | |
| | | e | E | | 03 | 00 | | | | | | | |
| | WN | e | N | 02 | 01 | 54 | | | | | | | |
| | | e | N | | 03 | 44 | | | | | | | |
| | CT | eP | Z | 02 | 02 | 08 | | | | | | | |
| | | e | Z | | | 26 | | | | | | | |
| | | eSn | Z | | 03 | 41 | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 13 | GP | ePn | N | 02 | 01 | 14 | | | | | | | |
| | | e | N | | | 22 | | | | | | | |
| | | e | N | | | 31 | | | | | | | |
| | | S | N | | 03 | 19 | | | | | | | |
| | KP | ePn | Z | 02 | 02 | 22 | | | | | | | |
| | | e | Z | | | 30 | | | | | | | |
| | ON | ePn | E | 02 | 02 | 40 | | | | | | | |
| | | e | E | | | 46 | | | | | | | |
| | | eSn | E | | 04 | 26 | | | | | | | |
| | Epicentre: | | | 02 | 00 | 20 | 44.2S | 167.7E | | | | | NZ(C) 5.0 NZ |
| 13 | KP | eP | Z | 16 | 20 | 44 | | | | | | | |
| | SU | eL | N | 16 | 41 | | | | | | | | |
| | RX | eL | NE | 16 | 56 | | | | 3 | 22 | | | |
| | Epicentre: | | | 16 | 07 | 12 | 55N | 161½W | | | | | USCGS |
| 13 | ON | P | E | 20 | 48 | 07 | | | | | | | |
| | AK | P | N | 20 | 48 | 15 | | | | | | | |
| | | S | N | | 49 | 45 | | | | | | | |
| | | M | N | | 56 | | | | | | | | |
| | KP | eP | Z | 20 | 48 | 19 | | | | | | | |
| | | i | Z | | | 21 | | | | | | | |
| | | i | Z | | | 37 | | | | | | | |
| | TU | eP | N | 20 | 48 | 19 | | | | | | | |
| | CT | eP | Z | 20 | 48 | 31 | | | | | | | |
| | | e | Z | | | 40 | | | | | | | |
| | WN | e | N | 20 | 49 | 30 | | | | | | | |
| | | e | Z | | 51 | 30 | | | | | | | |
| | | e | ZN | | 52 | 09 | | | 3 | 4 | 19 | 17 | |
| | | eLr | Z | | 52 | 40 | | | 3 | 8 | | | |
| | KM | e | X | 20 | 49½ | | | | | | | | |
| | SU | eP | N | 20 | 50 | 04 | | | | | | | |
| | | S | N | | 53 | 11 | | | | | | | |
| | | eL | N | | | 40 | | | | | | | |
| | RX | eL | NE | | 20 | 54 | | | 6 | 22 | 4 | 18 | |
| | Epicentre: | | | 20 | 46 | 35 | 32½S | 179W | | | | | USCGS |
| 13 | KP | P | Z | 20 | 51 | 38 | | | | | | | |
| | TU | eP | N | 20 | 51 | 38 | | | | | | | |
| | CT | eP | Z | 20 | 51 | 55 | | | | | | | |
| | | e | Z | | 52 | 04 | | | | | | | |
| 13 | ON | eP | E | 20 | 53 | 09 | | | | | | | |
| | TU | eP | N | 20 | 53 | 13 | | | | | | | |
| | KP | P | Z | 20 | 53 | 14 | | | | | | | |
| | CT | P | Z | 20 | 53 | 29 | | | | | | | |
| 13 | KP | P | Z | 21 | 00 | 10 | | | | | | | |
| | TU | eP | N | 21 | 00 | 10 | | | | | | | |
| | CT | eP | Z | 21 | 00 | 22 | | | | | | | |
| 14 | SU | P | N | 19 | 52 | 43 | | | | | | | |
| | | S | N | | 53 | 07 | | | | | | | |
| | KP | P | Z | 19 | 56 | 49 | | | | | | | |
| | CT | eP | Z | 19 | 57 | 05 | | | | | | | |
| 16 | SU | L | N | 09 | 09 | .5 | | | | | | | |
| 17 | SU | S | N | 15 | 46 | 42 | | | | | | | |
| | KP | P | Z | 15 | 47 | 27 | | | | | | | |
| | | e | Z | | | 51 | | | | | | | |
| | ON | e | E | 15 | 47 | 32 | | | | | | | |
| | CT | eP | Z | 15 | 47 | 37 | | | | | | | |
| | | eS | Z | | 50 | 41 | | | | | | | |
| | TU | eS | N | 15 | 50 | 25 | | | | | | | |
| | WN | eS | N | 15 | 51 | 19 | | | | | | | |
| | CB | eS | E | 15 | 51 | 35 | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 17 | GP | eS | N | 15 | 52 | 20 | | | | | | | |
| | Epicentre: | | | 15 | 43 | 25 | Tonga region | | | | | USCGS | |
| 17 | ON | eP | E | 23 | 19 | 55 | | | | | | | |
| | | S | E | | 21 | 13 | | | | | | | |
| | KP | P | Z | 23 | 20 | 05 | | | | | | | |
| | | i | Z | | | 06½ | | | | | | | |
| | TU | eP | N | 23 | 20 | 07 | | | | | | | |
| | | S | N | | 21 | 31 | | | | | | | |
| | CT | eP | Z | 23 | 20 | 14½ | | | | | | | |
| | | i | Z | | | 16½ | | | | | | | |
| | | S | Z | | | 51 | | | | | | | |
| | WN | eP | N | 23 | 20 | 39 | | | | | | | |
| | | S | N | | 22 | 27 | | | | | | | |
| | CB | eS | E | 23 | 22 | 40 | | | | | | | |
| | KM | eS | X | 23 | 23 | 14 | | | | | | | |
| | GP | eS | N | 23 | 23 | 26 | | | | | | | |
| | Epicentre: | | | 23 | 18 | 18 | 32½S 179W | | N? | | | NZ(D) | 5.7 NZ |
| | | | | | | | Additional readings from Charters Towers used in determining epicentre. | | | | | | |
| 18 | KP | P | Z | 00 | 37 | 04 | | | | | | | |
| | CT | eP | Z | 00 | 37 | 13 | | | | | | | |
| 18 | KP | eP | Z | 06 | 47 | 09 | | | | | | | |
| | | e | Z | | | 21 | | | | | | | |
| | CT | eP | Z | 06 | 47 | 14 | | | | | | | |
| | WN | P? | Z | 06 | 47 | 32 | 2 | 5 | | | | | |
| | | eS | ZN | | 57 | 14 | 2 | 5 | | | | | |
| | | ePS | N | | 58 | 22 | | | 3 | 8 | | | |
| | | eSS | N | 07 | 02 | .6 | | | | | | | |
| | | eL | N | | 10 | | | | 1 | 20 | | | |
| | | eL | Z | | 15 | | | | | | | | |
| | RX | S | NE | 06 | 57 | 36 | | | 3 | 8 | 6 | 9 | |
| | | eLq | N | 07 | 03 | | | | 3 | 24 | | | |
| | Epicentre: | | | 06 | 35 | 09 | 29N 130E | | 100 km | | | USCGS | |
| 18 | KP | P | Z | 07 | 19 | 37 | | | | | | | |
| 18 | CT | eP | Z | 12 | 52 | 09 | | | | | | | |
| | KP | eP | Z | 12 | 52 | 18 | | | | | | | |
| | RX | eL | NE | 12 | 55 | | | | 3 | 18 | 2 | 18 | |
| | | eL | Z | | 56 | | 5 | 18 | | | | | |
| | WN | e | N | 12 | 57 | .2 | | | | | | | |
| | | e | Z | 13 | 00 | .8 | | | | | | | |
| 18 | CT | eP | Z | 18 | 19 | 14 | | | | | | | |
| | KP | eP | Z | 18 | 19 | 15 | | | | | | | |
| | | e | Z | | | 46 | | | | | | | |
| | Epicentre: | | | 18 | 08 | 45 | Celebes | | | | | USCGS | |
| 19 | KP | ePKP | Z | 02 | 25 | 37 | | | | | | | |
| | Epicentre: | | | 02 | 07 | 00 | 36N 71E | | 200 km | | | USCGS | |
| 19 | KP | eP | Z | 10 | 25 | 40 | | | | | | | |
| | RX | eS | NE | 10 | 35 | 42 | | | 2 | 12 | 3 | 10 | |
| | | eL | NE | | 49 | | | | 10 | 38 | 7 | 40 | |
| | WN | eS | N | 10 | 35 | .9 | | | | | | | |
| | | eL | N | | 51 | .9 | | | 6 | 45 | | | |
| | | eL | N | | 57 | | | | 6 | 15 | | | |
| | Epicentre: | | | 10 | 11 | 51 | 17S 66E | | | | | USCGS | |
| 20 | KP | P | Z | 00 | 31 | 44 | | | | | | | |
| | CT | P | Z | 00 | 31 | 51 | | | | | | | |
| | Epicentre: | | | 00 | 23 | 22 | 3½S 147½E | | | | | USCGS | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 20 | ON | eP | E | 11 | 14 | 49 | | | | | | | |
| | | e | E | | | 57 | | | | | | | |
| | | eL | E | | 17 | | | | | | | | |
| | AK | e(P) | N | 11 | 15 | 15 | | | | | | | |
| | | eL | N | | 17½ | | | | | | | | |
| | | M | N | | 20 | | | | | | | | |
| | KP | P | Z | 11 | 15 | 18 | | | | | | | |
| | CT | P | Z | 11 | 15 | 33 | | | | | | | |
| | | e | Z | | | 41 | | | | | | | |
| | TO | eP | Z | 11 | 15 | 34 | | | | | | | |
| | | e | Z | | | 41 | | | | | | | |
| | TU | e | N | 11 | 15 | 41 | | | | | | | |
| | CB | eP | E | 11 | 15 | 44 | | | | | | | |
| | WN | P | ZN | 11 | 15 | 57 | 22 | 7 | | 3 | 7 | | |
| | | eLq | N | | 19 | .5 | | | | 112 | 20 | | |
| | | eLr | Z | | 20 | | 150 | 15 | | | | | |
| | KM | eP | X | 11 | 16 | 02 | | | | | | | |
| | | eL | X | | 20 | | | | | | | | |
| | GP | eP | N | 11 | 16 | 20 | | | | | | | |
| | | eS | N | | 19 | 33 | | | | | | | |
| | | eL | N | | 23 | | | | | | | | |
| | RX | P | ZNE | 11 | 16 | 32 | 23 | 10 | | 28 | 11 | 10 | 9 |
| | | S | ZNE | | 19 | 51 | 17 | 10 | | 25 | 10 | 30 | 10 |
| | | L | NE | | 20½ | | | | | 110 | 25 | 140 | 24 |
| | | eL | Z | | 21 | | 70 | 22 | | | | | |
| | | M | NE | | 23 | | | | | >390 | 15 | >390 | 16 |
| | | M | Z | | 24½ | | 200 | 15 | | | | | |
| | Epicentre: | | | 11 | 12 | 31 | 28S 167½E | | | | | USCGS | |
| | | | | | | | Felt: Norfolk I. MM 5-6 | | | | | | |
| 20 | KP | P | Z | 12 | 12 | 07 | | | | | | | |
| | CT | eP | Z | 12 | 12 | 22 | | | | | | | |
| | Epicentre: | | | 12 | 09 | 19 | 28S 167½E | | | | | NZ | |
| | | | | | | | Additional readings from Charters Towers and Brisbane used in determination of epicentre. | | | | | | |
| 20 | KP | eP | Z | 17 | 45 | 12 | | | | | | | |
| | | e | Z | | | 17 | | | | | | | |
| | CT | eP | Z | 17 | 45 | 28 | | | | | | | |
| 21 | WN | P | ZN | 10 | 15 | 10 | 5 | 6 | | 3 | 7 | | |
| | | pP | ZN | | | 25 | 16 | 6 | | 17 | 12 | | |
| | | e | N | | 18 | 56 | | | | 17 | 12 | | |
| | | eS | N | | 25 | 09 | | | | 14 | 11 | | |
| | | e(PS) | Z | | | 30 | 9 | 12 | | | | | |
| | | e | N | | | 42 | | | | 17 | 20 | | |
| | | SS | N | | 31 | .1 | | | | 20 | 20 | | |
| | | eL | N | | 39 | .3 | | | | 25 | 20 | | |
| | | eL | Z | | 40 | | 44 | 18 | | | | | |
| | RX | P | ZNE | 10 | 15 | 10 | 20 | 11 | | 8 | 16 | 9 | 16 |
| | | ePP | Z | | 18 | 26 | 10 | 12 | | | | | |
| | | S | NE | | 25 | 06 | | | | 57 | 22 | 46 | 18 |
| | | eSS | NE | | 30 | .7 | | | | 72 | 22 | 58 | 20 |
| | | eL | NE | | 40 | | | | | 105 | 22 | 96 | 22 |
| | | eL | Z | | 40 | .5 | 225 | 24 | | | | | |
| | | M | NE | | 43 | | | | | 90 | 18 | 155 | 18 |
| | | M | Z | | 44 | | 290 | 18 | | | | | |
| | CT | eP | Z | 10 | 15 | 12 | | | | | | | |
| | | e | Z | | | 25 | | | | | | | |
| | | e | Z | | | 55 | | | | | | | |
| | | ePKKP | Z | | 33 | 15 | | | | | | | |
| | KP | P | Z | 10 | 15 | 15 | | | | | | | |
| | | e | Z | | | 25 | | | | | | | |
| | | e | Z | | | 55 | | | | | | | |
| | | ePKKP | Z | | 33 | 54 | | | | | | | |
| | | P'P' | Z | | 41 | 54 | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 21 | GP | e | N | 10 | 15 | 17 | | | | | | | |
| | CB | eP | E | 10 | 15 | 18 | | | | | | | |
| | | eS | E | | 25 | 16 | | | | | | | |
| | TU | e | N | 10 | 15 | .7 | | | | | | | |
| | KM | e | X | 10 | 15 | 43 | | | | | | | |
| | ON | e | E | 10 | 15 | .8 | | | | | | | |
| | Epicentre: | | | 10 | 02 | 50 | 37½S | 73½W | | | | | USCGS |
| 21 | CT | P | Z | 11 | 06 | 10 | | | | | | | |
| | | e | Z | | | 21 | | | | | | | |
| | KP | eP | Z | 11 | 06 | 15 | | | | | | | |
| | | i | Z | | | 27 | | | | | | | |
| | Epicentre: | | | 10 | 53 | 51 | 37½S | 72½W | | | | | USCGS |
| 21 | KP | eP | Z | 12 | 33 | 41 | | | | | | | |
| | | e | Z | | | 51 | | | | | | | |
| | Epicentre: | | | 12 | 21 | 16 | 37½S | 73W | | | | | USCGS |
| 21 | KP | eP? | Z | 13 | 12 | 21 | | | | | | | |
| | | i | Z | | | 31 | | | | | | | |
| | CT | e | Z | 13 | 12 | 25 | | | | | | | |
| | Epicentre: | | | 12 | 59 | 58 | 37½S | 72½W | | | | | USCGS |
| 21 | KP | P | Z | 15 | 19 | 46 | | | | | | | |
| | | i | Z | | | 54 | | | | | | | |
| | CT | P | Z | 15 | 20 | 01 | | | | | | | |
| 22 | ON | P | E | 01 | 00 | 17 | | | | | | | |
| | | e | E | | 02 | 09 | | | | | | | |
| | KP | P | Z | 01 | 00 | 45 | | | | | | | |
| | CT | P | Z | 01 | 01 | 00 | | | | | | | |
| | | eS | Z | | 03 | 23 | | | | | | | |
| | CB | eP | E | 01 | 01 | 12 | | | | | | | |
| | WN | P | ZN | 01 | 01 | 27 | | | | | | | |
| | | eL | N | | 06 | 36 | | | | | | | |
| | | M | N | | 10 | | | | 2 | 10 | | | |
| | KM | eP | X | 01 | 01 | 35 | | | | | | | |
| | GP | eP | N | 01 | 01 | 47 | | | | | | | |
| | RX | eL | NE | 01 | 06 | | | | 6 | 26 | 10 | 28 | |
| | | M | NE | | 07¾ | | | | 22 | 18 | 41 | 18 | |
| | | eL | Z | | 08½ | | 13 | 14 | | | | | |
| 22 | KP | P | Z | 06 | 14 | 08 | | | | | | | |
| 22 | CT | e(P) | Z | 08 | 23 | 15 | | | | | | | |
| | KP | e(P) | Z | 08 | 23 | 20 | | | | | | | |
| | Epicentre: | | | 08 | 10 | 53 | 37½S | 73W | | | | | USCGS |
| 22 | KP | eP? | Z | 10 | 42 | 59 | | | | | | | |
| | | e | Z | | 43 | 06 | | | | | | | |
| | WN | P | ZN | 10 | 43 | 00 | 7 | 6 | 2 | 6 | | | |
| | | e | Z | | 44 | 04 | 5 | 5 | | | | | |
| | | S | N | | 53 | 01 | | | 4 | 6 | | | |
| | CT | eP | Z | 10 | 43 | 02 | | | | | | | |
| | RX | S | NE | 10 | 52 | 58 | | | 5 | 10 | 9 | 10 | |
| | Epicentre: | | | 10 | 30 | 39 | 38S | 73½W | | | | | USCGS |
| 22 | CT | eP | Z | 10 | 45 | 04 | | | | | | | |
| | | i | Z | | | 13 | | | | | | | |
| | KP | P | Z | 10 | 45 | 08 | | | | | | | |
| | | i | Z | | | 17 | | | | | | | |
| | | P'P' | Z | 11 | 11 | 41 | | | | | | | |
| | CB | e(P) | E | 10 | 45 | 12 | | | | | | | |
| | RX | P | ZNE | 10 | 45 | 07 | un | 16 10 | 72 | 10 | 53 | 10 | |
| | | S | E | | 54 | 52 | | | | | 38 | 18 | |
| | | e | N | | 55 | 04 | | | 22 | 20 | | | |
| | | eSS | NE | 11 | 00 | .5 | | | 35 | 20 | 45 | 18 | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
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| MAY 22 | | eLq | NE | | 06 | | | | | 54 | 28 | 36 30 | |
| | | eLr | Z | | 10 | | 675 | 18 | | | | | |
| | | M | NE | | 13 | | | | | 84 | 19 | 120 19 | |
| | KM | eP | X | 10 | 45 | 22 | | | | | | | |
| | ON | eP | E | 10 | 45 | 30 | | | | | | | |
| | WN | P | ZN | 10 | 45 | 50 | 2 | 8 | | 4 | 6 | | |
| | | e | N | | 48 | 38 | | | | 4 | 6 | | |
| | | S | ZN | | 54 | 48 | | | | 5 | 18 | | |
| | | PS | N | | 56 | 16 | | | | 14 | 25 | | |
| | | eSS | N | 11 | 00 | 27 | | | | 10 | 18 | | |
| | | Lq | N | | 06 | .2 | | | | 30 | 35 | | |
| | | eL | ZN | 11 | 09 | | 44 | 18 | | 17 | 25 | | |
| | | M | N | | 12 | | | | | 19 | 20 | | |
| | | $M_2$ | N | | 16 | | | | | 13 | 15 | | |
| | AK | eS | N | 10 | 55 | 34 | | | | | | | |
| | | eL | N | 11 | 08 | | | | | | | | |
| | | M | N | | 13 | | | | | | | | |
| | Epicentre: | | | 10 | 32 | 43 | 37½S | 73W | | | | | USCGS |
| 22 | KP | eP | Z | 11 | 08 | 14 | | | | | | | |
| | CT | P | Z | 11 | 08 | 19 | | | | | | | |
| | Epicentre: | | | 10 | 56 | 59 | 19N | 121½E | 200 km | | | | USCGS |
| 22 | CT | eP | Z | 12 | 29 | 02 | | | | | | | |
| | | e | Z | | | 09 | | | | | | | |
| | KP | eP | Z | 12 | 29 | 07 | | | | | | | |
| | | e | Z | | | 11 | | | | | | | |
| | Epicentre: | | | 12 | 16 | 43 | 38S | 73W | | | | | USCGS |
| 22 | KP | eP | Z | 15 | 25 | 58 | | | | | | | |
| | CT | eP | Z | 15 | 26 | 24 | | | | | | | |
| | AK | eL | N | 15 | 30 | .5 | | | | | | | |
| | RX | eL | NE | 15 | 35 | | | | | | | | |
| 22 | CT | eP | Z | 19 | 08 | 12 | | | | | | | |
| | | e | Z | | | 25 | | | | | | | |
| | KP | eP | Z | 19 | 08 | 17 | | | | | | | |
| | | i | Z | | | 26 | | | | | | | |
| | WN | iP | ZN | 19 | 08 | 18 | 27 | 7 | | 12 | 8 | | |
| | | PP | Z | | 11 | 00 | 10 | 6 | | | | | |
| | | S | N | | 18 | 11 | | | | 36 | 10 | | |
| | | PS | N | | 19 | 35 | | | | 18 | 22 | | |
| | RX | P | ZNE | 19 | 08 | 20 | 26 | 8 | | 12 | 6 | 11 8 | |
| | | S | ZNE | | 18 | 08 | 24 | 16 | | 43 | 13 | 63 20 | |
| | KM | eP | X | 19 | 08 | 31 | | | | | | | |
| | CB | eP | E | 19 | 08 | 32 | | | | | | | |
| | | eS | E | | 18 | 18 | | | | | | | |
| | AK | e(P) | N | 19 | 08 | 33 | | | | | | | |
| | | S | N | | 18 | 47 | | | | | | | |
| | | PS | N | | 19 | 52 | | | | | | | |
| | | eL | N | | 31 | | | | | | | | |
| | TU | e | N | 19 | 08 | .5 | | | | | | | |
| | ON | e(P) | E | 19 | 08 | 52 | | | | | | | |
| | | S | E | | 18 | 47 | | | | | | | |
| | Epicentre: | | | 18 | 55 | 57 | 38S | 73½W | | | | | USCGS |
| 22 | CT | eP | Z | 19 | 22 | 53 | | | | | | | |
| | | e | Z | | | 58 | | | | | | | |
| | | e | Z | | 23 | 07 | | | | | | | |
| | | i | Z | | | 37 | | | | | | | |
| | KP | eP | Z | 19 | 22 | 55 | | | | | | | |
| | | e | Z | | 23 | 05 | | | | | | | |
| | | i | Z | | | 30 | | | | | | | |
| | WN | P | Z | 19 | 22 | 56 | | | | | | | |
| | RX | eP | Z | 19 | 23 | 01 | 30 | 15 | | | | | |
| | TU | e | N | 19 | 23 | .2 | | | | | | | |
| | CB | eP | E | 19 | 23 | .2 | | | | | | | |
| | KM | eP | X | 19 | 23 | .3 | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 22 | GP | e(P) | N | 19 | 23 | 30 | | | | | | | | |
| | | e(S) | N | | 32 | 42 | | | | | | | | |
| | Epicentre: | | | 19 | 10 | 47 | 38S | 73½W | | | | | USCGS | |
| | 22 ON | e(P) | E | 19 | 23 | 44 | | | | | | | | |
| | WN | P | N | 19 | 23 | 44 | | | 44 | 12 | | | | |
| | RX | P | E | 19 | 23 | 44 | | | | | | | | |
| | AK | e(P) | N | 19 | 23 | 52 | | | | | | | | |
| | | eS | N | | 34.0 | | | | | | | | | |
| | | Lq | N | | 45 | | | | | | | | | |
| | GP | e | N | 19 | 24 | 08 | | | | | | | | |
| | | S | N | | 33 | 25 | | | | | | | | |
| | CB | eS | E | 19 | 33 | 50 | | | | | | | | |
| | Epicentre: | | | 19 | 11 | 20 | 38S | 73½W | | | | | USCGS | |
| | 22 CT | P | Z | 20 | 28 | 53 | | | | | | | | |
| | KP | P | Z | 20 | 28 | 58 | | | | | | | | |
| | 22 ON | eP | E | 21 | 05 | 23 | | | | | | | | |
| | KP | P | Z | 21 | 05 | 39 | | | | | | | | |
| | CT | eP | Z | 21 | 05 | 55 | | | | | | | | |
| | | e | Z | | 06 | 05 | | | | | | | | |
| | 22 CT | eP | Z | 22 | 19 | 40 | | | | | | | | |
| | KP | eP | Z | 22 | 19 | 42 | | | | | | | | |
| | 22 CT | eP | Z | 22 | 26 | 19 | | | | | | | | |
| | KP | P | Z | 22 | 26 | 23 | | | | | | | | |
| | 22 CT | eP | Z | 23 | 41.6 | | | | | | | | | |
| | Epicentre: | | | 23 | 29 | 18 | 39½S | 72W | | | | | USCGS | |
| | 23 ON | P | E | 00 | 31 | 10 | | | | | | | | |
| | KP | eP | Z | 00 | 31 | 23 | | | | | | | | |
| | CT | eP | Z | 00 | 31 | 39 | | | | | | | | |
| | | e | Z | | | 50 | | | | | | | | |
| | WN | eL | ZN | 00 | 37.1 | | | | 51 | 20 | | | | |
| | RX | eL | N | 00 | 38 | 08 | | | 10 | 20 | | | | |
| | | eL | E | | 39.2 | | | | | | 15 | 30 | | |
| | | M | NE | | 40 | | | | 22 | 18 | 19 | 16 | | |
| | | eL | Z | | 41 | | 19 | 20 | | | | | | |
| | 23 TU | P* | N | 01 | 02 | 01 | | | | | | | | |
| | | e | N | | | 08 | | | | | | | | |
| | | eS* | N | | | 17½ | | | | | | | | |
| | | e | N | | | 22 | | | | | | | | |
| | KP | iPn | Z | 01 | 02 | 15 | | | | | | | | |
| | | e | Z | | | 24 | | | | | | | | |
| | | e | Z | | | 31 | | | | | | | | |
| | CT | Pn | Z | 01 | 02 | 17½ | | | | | | | | |
| | | e | Z | | | 26 | | | | | | | | |
| | | i | Z | | | 30½ | | | | | | | | |
| | TO | P | Z | 01 | 02 | 19 | | | | | | | | |
| | | i | Z | | | 30½ | | | | | | | | |
| | WN | ePn | N | 01 | 02 | 40 | | | | | | | | |
| | | e | N | | | 48 | | | | | | | | |
| | | Sn | N | | 03 | 26 | | | | | | | | |
| | ON | eP | E | 01 | 02 | 40 | | | | | | | | |
| | | e | E | | 04 | 07 | | | | | | | | |
| | CB | ePn | E | 01 | 02 | 54 | | | | | | | | |
| | | eP* | E | | 03 | 09 | | | | | | | | |
| | | Sn | E | | | 51 | | | | | | | | |
| | KM | e? | X | 01 | 03 | 18 | | | | | | | | |
| | | e | X | | | 33 | | | | | | | | |
| | | Sn | X | | 04 | 30 | | | | | | | | |
| | GP | ePn | N | 01 | 03 | 17 | | | | | | | | |
| | | e | N | | | 30 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 23 | | e | N | | 04 | 30½ | | | | | | | | |
| | | Sn | N | | | 32 | | | | | | | | |
| | Epicentre: | | | 01 | 01 | 40 | 38.3S | 178.3E | S | | | | NZ(B) | 5.6 NZ |
| | Felt: Gisborne, Opotiki region. Maximum Tokomaru Bay MM 4. Additional readings from Brisbane and Charters Towers used to determine epicentre. | | | | | | | | | | | | | |
| | 23 CT | eP | Z | 01 | 47 | 01 | | | | | | | | |
| | KP | eP | Z | 01 | 47 | 06 | | | | | | | | |
| | Epicentre: | | | 01 | 34 | 53 | 39½S | 74W | | | | | USCGS | |
| | 23 KP | eP | Z | 02 | 58 | 35 | | | | | | | | |
| | WN | eL | ZN | 03 | 23 | | | | | | | | | |
| | RX | eL | ZNE | 03 | 23 | | 110 | 20 | 34 | 16 | 40 | 18 | | |
| | Epicentre: | | | 02 | 46 | 30 | 41½S | 73½W | | | | | USCGS | |
| | 23 CT | P | Z | 03 | 08 | 08 | | | | | | | | |
| | KP | P | Z | 03 | 08 | 12 | | | | | | | | |
| | Epicentre: | | | 02 | 56 | 17 | 43S | 75½W | | | | | USCGS | |
| | 23 CT | eP | Z | 05 | 25 | 51 | | | | | | | | |
| | | e | Z | | 26 | 03 | | | | | | | | |
| | KP | P | Z | 05 | 25 | 55 | | | | | | | | |
| | | e | Z | | 26 | 06 | | | | | | | | |
| | RX | eL | ZNE | 05 | 51 | | 13 | 20 | 5 | 22 | 7 | 19 | | |
| | WN | eL | ZN | 05 | 52 | | 7 | 20 | | | | | | |
| | Epicentre: | | | 05 | 13 | 35 | 38S | 73½W | | | | | USCGS | |
| | 23 CT | eP | Z | 07 | 20 | 52 | | | | | | | | |
| | KP | eP | Z | 07 | 20 | 57 | | | | | | | | |
| | RX | eL | ZNE | 07 | 44 | | 6 | 18 | 5 | 18 | 4 | 19 | | |
| | Epicentre: | | | 07 | 09 | 17 | 48S | 77W | | | | | USCGS | |
| | 23 KP | eP | Z | 08 | 25 | 20 | | | | | | | | |
| | Epicentre: | | | 08 | 13 | 15 | 40½S | 75½W | | | | | USCGS | |
| | 23 CT | P | Z | 10 | 04 | 45 | | | | | | | | |
| | KP | P | Z | 10 | 04 | 49 | | | | | | | | |
| | RX | eL | ZE | 10 | 31 | | | | | | | | | |
| | Epicentre: | | | 09 | 52 | 20 | 37½S | 73W | | | | | USCGS | |
| | 23 CT | P | Z | 10 | 49 | 52 | | | | | | | | |
| | KP | P | Z | 10 | 49 | 57 | | | | | | | | |
| | WN | eL | ZN | 11 | 13 | | | | | | | | | |
| | RX | eL | ZNE | 11 | 14 | | 9 | 17 | 4 | 18 | 3 | 20 | | |
| | Epicentre: | | | 10 | 37 | 59 | 43½S | 73½W | | | | | USCGS | |
| | 23 CT | eP | Z | 14 | 13 | 30 | | | | | | | | |
| | KP | P | Z | 14 | 13 | 34 | | | | | | | | |
| | | i | Z | | | 41 | | | | | | | | |
| | Epicentre: | | | 14 | 01 | 50 | Near coast of Chile | | | | | | USCGS | |
| | 24 KP | P | Z | 06 | 39 | 18 | | | | | | | | |
| | 24 RX | i(P*) | ZNE | 14 | 47 | 07 | use | | | | | | | |
| | KM | Pn | X | 14 | 47 | 26 | | | | | | | | |
| | | eP* | X | | | 32 | | | | | | | | |
| | | e | X | | | 43 | | | | | | | | |
| | GP | Pn | N | 14 | 47 | 31 | | | | | | | | |
| | | e | N | | | 36 | | | | | | | | |
| | | eP* | N | | | 41 | | | | | | | | |
| | | e | N | | | 56 | | | | | | | | |
| | | eSn | N | | 48 | 14 | | | | | | | | |
| | WN | ePn | ZN | 14 | 48 | 05 | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 24 | | e | N | | | 08 | | | | | | | |
| | | P* | N | | | 22 | | | | | | | |
| | | e | N | | | 55 | | | | | | | |
| | KP | Pn | Z | 14 | 48 | 40 | | | | | | | |
| | | e | Z | | | 51 | | | | | | | |
| | TU | ePn | N | 14 | 48 | 46 | | | | | | | |
| | | e | N | | | 56 | | | | | | | |
| | | eP* | N | | 49 | 14 | | | | | | | |
| | | e | N | | 50 | 43 | | | | | | | |
| | Epicentre: | | | 14 | 46 | 37 | 44.2S | 167.7E | S | | NZ(B) | | 7.0 M |
| | | | | | | | Additional readings from Riverview, Melbourne, Brisbane, Charters Towers, Scott, Byrd, South Pole, Canberra, Port Nelson and D'Urville used to determine epicentre. | | | | | | |
| 24 | RX | e | N | 16 | 16 | 04 | | | | | | | |
| | | e(S*) | N | | | 12 | | | | | | | |
| | KM | e(S*) | X | 16 | 17 | 01 | | | | | | | |
| | KP | e? | Z | 16 | 17 | 28 | | | | | | | |
| | Epicentre: | | | 16 | 15 | 18 | 44.2S | 167.7E | S | | NZ(D) | | 5.0 M |
| 24 | RX | Pn | ZN | 20 | 24 | 42 | | | | | | | |
| | | S* | ZN | | 25 | 09 | | | | | | | |
| | KM | ePn | X | 20 | 25 | 01 | | | | | | | |
| | | e | X | | | 06 | | | | | | | |
| | | iP* | X | | | 08½ | | | | | | | |
| | | i | X | | | 12 | | | | | | | |
| | | S* | X | | | 52 | | | | | | | |
| | GP | ePn | N | 20 | 25 | 08 | | | | | | | |
| | | e | N | | | 10 | | | | | | | |
| | | eP* | N | | | 19 | | | | | | | |
| | | i | N | | | 27 | | | | | | | |
| | | e | N | | 26 | 01 | | | | | | | |
| | | iS* | N | | | 12 | | | | | | | |
| | CB | ePn | E | 20 | 25 | 24 | | | | | | | |
| | | e | E | | | 27 | | | | | | | |
| | | iSn | E | | 26 | 19 | | | | | | | |
| | | iS* | E | | | 49 | | | | | | | |
| | WN | ePn | N | 20 | 25 | 40 | | | | | | | |
| | | e | N | | | 42 | | | | | | | |
| | | eP* | N | | 26 | 04 | | | | | | | |
| | | Sn | N | | | 40 | | | | | | | |
| | | eS* | N | | 27 | 29 | | | | | | | |
| | KP | ePn | Z | 20 | 26 | [illegible] | | | | | | | |
| | | e | Z | | | 17 | | | | | | | |
| | | e | Z | | | 26 | | | | | | | |
| | ON | ePn | E | 20 | 26 | 34 | | | | | | | |
| | | eSn | E | | 28 | 18 | | | | | | | |
| | | e | E | | 29 | 38 | | | | | | | |
| | Epicentre: | | | 20 | 24 | 15 | 44.15S | 167.95E | S | | NZ(B) | | 5.6 M |
| | | | | | | | Felt: Haast MM 4. Additional readings from Brisbane, Charters Towers, Canberra, Melbourne, Adelaide and Riverview used to determine epicentre. | | | | | | |
| 24 | RX | P* | ZNE | 22 | 35 | 31 | | | | | | | |
| | | (SN) | ZNE | | | 50 | | | | | | | |
| | GP | e | N | 22 | 35 | 58 | | | | | | | |
| | | eP* | N | | 36 | 05 | | | | | | | |
| | | i | N | | | 13 | | | | | | | |
| | | S* | N | | | 52 | | | | | | | |
| | KM | eP* | X | 22 | 35 | 59 | | | | | | | |
| | | i | X | | 36 | 02 | | | | | | | |
| | | S* | X | | | 41 | | | | | | | |
| | CB | ePn | E | 22 | 36 | 13 | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 24 | | e | E | | | 19 | | | | | | | |
| | | S | E | | 37 | 14 | | | | | | | |
| | | e | E | | | 39 | | | | | | | |
| | WN | eP | N | 22 | 36 | 31 | | | | | | | |
| | | e | N | | | 38 | | | | | | | |
| | | S | N | | 37 | 42 | | | | | | | |
| | KP | ePn | Z | 22 | 37 | 03 | | | | | | | |
| | | e | Z | | | 06 | | | | | | | |
| | | e | Z | | | 20 | | | | | | | |
| | | eSn | Z | | 38 | 37 | | | | | | | |
| | ON | ePn | E | 22 | 37 | 25 | | | | | | | |
| | | (Sn) | E | | 39 | 06 | | | | | | | |
| | Epicentre: | | | 22 | 35 | 00 | 44.2S | 167.7E | S | | NZ(C) | | 5.3 NZ |
| 24 | RX | P* | ZNE | 22 | 47 | 47 | | | | | | | |
| | | (Sn) | ZNE | | 48 | 06 | | | | | | | |
| | KM | e(P) | X | 22 | 48 | 08 | | | | | | | |
| | | iP* | X | | | 15 | | | | | | | |
| | | e | X | | | 19 | | | | | | | |
| | | iS* | X | | 49 | 00 | | | | | | | |
| | GP | ePn | N | 22 | 48 | 11 | | | | | | | |
| | | iP* | N | | | 21 | | | | | | | |
| | | e | N | | | 26½ | | | | | | | |
| | | eSn | N | | | 52 | | | | | | | |
| | | S | N | | 49 | 12 | | | | | | | |
| | CB | ePn | E | 22 | 48 | 29 | | | | | | | |
| | | i | E | | | 31 | | | | | | | |
| | | eSn | E | | 49 | 27 | | | | | | | |
| | | e | E | | | 30 | | | | | | | |
| | | e | E | | | 53 | | | | | | | |
| | WN | e(P) | N | 22 | 48 | 48 | | | | | | | |
| | | (S) | N | | 50 | 05 | | | | | | | |
| | | e | N | | | 41 | | | | | | | |
| | KP | Pn | Z | 22 | 49 | 21 | | | | | | | |
| | | i | Z | | | 39 | | | | | | | |
| | | eSn | Z | | 50 | 56 | | | | | | | |
| | | i | Z | | 51 | 07 | | | | | | | |
| | ON | ePn | E | 22 | 49 | 42 | | | | | | | |
| | | eSn | E | | 51 | 29 | | | | | | | |
| | TU | e | N | 22 | 49 | 46 | | | | | | | |
| | Epicentre: | | | 22 | 47 | 16 | 44.2S | 167.7E | S | | NZ(C) | | 5.4 NZ |
| 25 | RX | e(P) | N | 03 | 45 | 05 | | | | | | | |
| | | (Sn) | ZNE | | | 22 | | | | | | | |
| | | e | Z | | | 34 | | | | | | | |
| | GP | e(P) | N | 03 | 45 | 30 | | | | | | | |
| | | eP* | N | | | 38 | | | | | | | |
| | | e | N | | | 50 | | | | | | | |
| | | S | N | | 46 | 21 | | | | | | | |
| | KM | eP* | X | 03 | 45 | 32 | | | | | | | |
| | | e | X | | | 35 | | | | | | | |
| | | eS | X | | 46 | 20 | | | | | | | |
| | CB | ePn | E | 03 | 45 | 45 | | | | | | | |
| | | e | E | | | 50 | | | | | | | |
| | | Sn | E | | 46 | 38 | | | | | | | |
| | | e | E | | 47 | 10 | | | | | | | |
| | WN | e | N | 03 | 46 | 07 | | | | | | | |
| | | e(Sn) | N | | 47 | 04 | | | | | | | |
| | | e | N | | | 15 | | | | | | | |
| | KP | ePn | Z | 03 | 46 | 38 | | | | | | | |
| | Epicentre: | | | 03 | 44 | 33 | 44.2S | 167.7E | S | | NZ(C) | | 5.0 NZ |
| 25 | RX | P* | ZNE | 04 | 00 | 23 | d | | | | | | |
| | | (Sn) | ZNE | | | 40 | | | | | | | |
| | KM | ePn | X | 04 | 00 | 46 | | | | | | | |
| | | iP* | X | | | 51½ | | | | | | | |
| | | e | X | | | 54 | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 25 | | eS* | X | | 01 | 35 | | | | | | | |
| | GP | e(P) | N | 04 | 00 | 50 | | | | | | | |
| | | eP* | N | | | 55 | | | | | | | |
| | | e | N | | 01 | 01 | | | | | | | |
| | | i | N | | | 04 | | | | | | | |
| | | S* | N | | | 46 | | | | | | | |
| | CB | ePn | E | 04 | 01 | 05 | | | | | | | |
| | | e | E | | | 09 | | | | | | | |
| | | Sn | E | | | 59 | | | | | | | |
| | | e | E | | 02 | 32 | | | | | | | |
| | WN | eP | N | 04 | 01 | 26 | | | | | | | |
| | | Sn | N | | 02 | 27 | | | | | | | |
| | | i | N | | | 37 | | | | | | | |
| | | e | N | | 03 | 11 | | | | | | | |
| | KP | ePn | Z | 04 | 01 | 57 | | | | | | | |
| | | i | Z | | 02 | 04 | | | | | | | |
| | TU | e | N | 04 | 02 | 13 | | | | | | | |
| | ON | e(P) | E | 04 | 02 | 20 | | | | | | | |
| | | eSn | E | | 03 | 59 | | | | | | | |
| | Epicentre: | | | | 03 | 59 | 52 | | | | | | |
| | | | | | | | 44.2S | 167.7E | S | | | NZ(C) | 5.6 NZ |
| | | | | | | | Additional readings from Canberra, Riverview, Melbourne and Brisbane used to determine epicentre. | | | | | | |
| 25 | CB | eP | E | 08 | 46.5 | | | | | | | | |
| | WN | P | Z | 08 | 46 | 14 | | | 4 | 6 | | | |
| | | eS | ZN | | 56 | 23 | | | 4 | 8 | | | |
| | | eL | ZN | 09 | 10 | | | | 9 | 16 | 4 | 8 | |
| | CT | eP | Z | 08 | 46 | 15 | | | | | | | |
| | | e | Z | | | 23 | | | | | | | |
| | GP | eP | N | 08 | 46 | 20 | | | | | | | |
| | KP | eP | Z | 08 | 46 | 24 | | | | | | | |
| | | i | Z | | | 27 | | | | | | | |
| | KM | eP | X | 08 | 46 | 35 | | | | | | | |
| | SU | e(P) | N | 08 | 47 | 43 | | | | | | | |
| | | ePS | N | | 59 | 33 | | | | | | | |
| | | SS | N | 09 | 04 | 19 | | | | | | | |
| | | eL | N | | 15.0 | | | | | | | | |
| | RX | S | NE | 08 | 56 | 00 | | | | | 19 | 30 | 11 22 |
| | | eSS | E | 09 | 00 | 50 | | | | | | | 5 16 |
| | | PKKP | Z | | 05 | 10 | | | 6 | 9 | | | |
| | | eSSS | NE | | 05 | 26 | | | | | 19 | 40 | |
| | | eL | ZNE | | 10 | | | | 13 | 18 | 5 | 20 | 5 18 |
| | Epicentre: | | | | 08 | 34 | 33 | | 45S | 76W | | | USCGS |
| 25 | KP | eP | Z | 10 | 16 | 08 | | | | | | | |
| | ON | e? | E | 10 | 16 | 18 | | | | | | | |
| | | e | E | | | 30 | | | | | | | |
| | CT | eP | Z | 10 | 16 | 21 | | | | | | | |
| | TU | e(P) | N | 10 | 16 | 28 | | | | | | | |
| | | eL | N | | 19.1 | | | | | | | | |
| | | M | N | | 20.5 | | | | | | | | |
| | WN | eP | N | 10 | 16 | 58 | | | | | | | |
| | | eS | N | | 19 | 12 | | | | | | | |
| | | eL | N | | 20.5 | | | | | | 2 | 16 | |
| | | eL | Z | | 21.2 | | | | 10 | 17 | | | |
| | GP | eP | N | 10 | 17 | 24 | | | | | | | |
| | | eS | N | | 20 | 17 | | | | | | | |
| | TU | eS | N | 10 | 18.0 | | | | | | | | |
| 25 | KP | P | Z | 13 | 48 | 25 | | | | | | | |
| | Epicentre: | | | | 13 | 38 | 28 | | 1N | 129½E | | | USCGS |
| 25 | KP | eP | Z | 14 | 37 | 39 | | | | | | | |
| | Epicentre: | | | | 14 | 27 | 38 | | 1N | 128½E | | | USCGS |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 25 | SU | iS | N | 15 | 02 | 02 | | | | | | | |
| | ON | P | E | 15 | 02 | 24 | | | | | | | |
| | KP | iP | Z | 15 | 02 | 38 | u | | | | | | |
| | CT | P | Z | 15 | 02 | 46 | | | | | | | |
| | | i | Z | | | 50 | | | | | | | |
| | | eS | Z | | 05 | 42 | | | | | | | |
| | WN | P | N | 15 | 03 | 09 | | | | | | | |
| | | S | N | | 06 | 06 | | | | | | | |
| | TU | eS | N | 15 | 05 | 25 | | | | | | | |
| | CB | eS | E | 15 | 06 | 15 | | | | | | | |
| | Epicentre: | | | 14 | 59 | 12 | 22S | 179½W | 600 km | | | | USCGS |
| 25 | ON | eP | E | 15 | 08 | 25 | | | | | | | |
| | KP | P | Z | 15 | 08 | 38 | | | | | | | |
| | CT | eP | Z | 15 | 08 | 46 | | | | | | | |
| | WN | P | N | 15 | 09 | 10 | | | | | | | |
| | | S | N | | 12 | 12 | | | | | | | |
| | CB | eS | E | 15 | 12 | 27 | | | | | | | |
| 25 | SU | eL | N | 17 | 15 | | | | | | | | |
| 25 | CT | eP | Z | 19 | 33 | 49 | | | | | | | |
| | KP | eP | Z | 19 | 33 | 55 | | | | | | | |
| | Epicentre: | | | 19 | 21 | 48 | 40S | 75½W | | | | | USCGS |
| 26 | KP | PKP | Z | 05 | 30 | 30 | | | | | | | |
| | | e | Z | | 31 | 00 | | | | | | | |
| | | e | Z | | | 09 | | | | | | | |
| | Epicentre: | | | 05 | 10 | 05 | 40N | 20E | | | | | USCGS |
| 27 | RX | iP* | ZNE | 00 | 23 | 03 | d | | | | | | |
| | | Sn | ZNE | | | 22 | dws | | | | | | |
| | | iS* | ZN | | | 28 | us | | | | | | |
| | KM | e(Pn) | X | 00 | 23 | 23 | | | | | | | |
| | | eP* | X | | | 28 | | | | | | | |
| | | e | X | | | 34 | | | | | | | |
| | | S* | X | | 24 | 12 | | | | | | | |
| | GP | ePn | N | 00 | 23 | 27 | | | | | | | |
| | | i | N | | | 29 | | | | | | | |
| | | eP* | N | | | 36 | | | | | | | |
| | | S* | N | | 24 | 25 | | | | | | | |
| | CB | ePn | E | 00 | 23 | 45 | | | | | | | |
| | | i | E | | | 50 | | | | | | | |
| | | eSn | E | | 24 | 37 | | | | | | | |
| | | e | E | | | 44 | | | | | | | |
| | WN | e | N | 00 | 24 | 04 | | | | | | | |
| | | e | N | | | 08 | | | | | | | |
| | | e(Sn) | N | | 25 | 13 | | | | | | | |
| | | e | N | | | 24 | | | | | | | |
| | TU | e | N | 00 | 24.7 | | | | | | | | |
| | | e | N | | 25 | 00 | | | | | | | |
| | CT | e(P) | Z | 00 | 24 | 27 | | | | | | | |
| | | i | Z | | | 30 | | | | | | | |
| | | i | Z | | | 37 | | | | | | | |
| | | eSn | Z | | 25 | 54 | | | | | | | |
| | KP | ePn | Z | 00 | 24 | 37 | | | | | | | |
| | | e | Z | | | 41 | | | | | | | |
| | | i | Z | | | 51 | | | | | | | |
| | | e | Z | | 25 | 47 | | | | | | | |
| | ON | ePn? | E | 00 | 24 | 57 | | | | | | | |
| | | e | E | | 25 | 10 | | | | | | | |
| | | eSn | E | | 26 | 46 | | | | | | | |
| | | e | E | | 28 | 47 | | | | | | | |
| | Epicentre: | | | 00 | 22 | 31 | 44.2S | 167.7E | S | | | NZ(C) | 5.5 NZ |
| | | | | | | | Felt: Wanaka and Cromwell Max. MM 3 Additional readings from Canberra, Charters Towers and Kiruna used to determine epicentre. | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 27 | RX | eS | NE | 00 | 34 | 49 | | | 2 | 10 | 2 | 10 | | |
| | | eL | NE | | 37 | | | | 2 | 14 | 2 | 12 | | |
| | WN | eL | ZN | 00 | 35 | | | | | | | | | |
| | Epicentre: | | | 00 | 25 | 03 | 22S | 172E | | | | | USCGS | |
| 27 | CT | P | Z | 03 | 29 | 18 | | | | | | | | |
| | KP | P | Z | 03 | 29 | 23 | | | | | | | | |
| | Epicentre: | | | 03 | 17 | 21 | 41S | 76W | | | | | USCGS | |
| 27 | KP | P | Z | 04 | 45 | 37 | | | | | | | | |
| | CT | eP | Z | 04 | 45 | 45 | | | | | | | | |
| 27 | KP | P | Z | 06 | 33 | 39 | | | | | | | | |
| 27 | KP | eP | Z | 20 | 17 | 10 | | | | | | | | |
| | | ePP | Z | | 19 | 22 | | | | | | | | |
| | CT | eP | Z | 20 | 17 | 20 | | | | | | | | |
| | | e | Z | | | 28 | | | | | | | | |
| 27 | RX | eL | NE | 20 | 30 | | | | 1 | 20 | 2 | 18 | | |
| | | eL | Z | | 33 | | 3 | 18 | | | | | | |
| | Epicentre: | | | 20 | 10 | 00 | 5½S | 153E | 150 km | | | | USCGS | |
| 27 | CT | eP | Z | 23 | 18 | 34 | | | | | | | | |
| | KP | P | Z | 23 | 18 | 41 | | | | | | | | |
| | RX | eS | N | 23 | 28 | 30 | | | 1 | 20 | | | | |
| | | eL | N | | 37 | | | | 2 | 24 | | | | |
| | | eL | ZE | | 41 | | 5 | 21 | | | 2 | 20 | | |
| | Epicentre: | | | 23 | 06 | 55 | 45S | 77W | | | | | USCGS | |
| 28 | CT | eP | Z | 03 | 18 | 01 | | | | | | | | |
| | KP | P | Z | 03 | 18 | 07 | | | | | | | | |
| | RX | eL | ZN | 03 | 43 | | | | | | | | | |
| | Epicentre: | | | 03 | 05 | 53 | 39½S | 74½W | | | | | USCGS | |
| 28 | KP | eP | Z | 11 | 18 | 03 | | | | | | | | |
| | CT | e(P) | Z | 11 | 18 | 06 | | | | | | | | |
| | RX | eL | ZNE | 11 | 43 | | | | 5 | 20 | 2 | 20 | 3 | 18 |
| | Epicentre: | | | 11 | 05 | 40 | 38S | 73W | | | | | USCGS | |
| 28 | KP | P | Z | 14 | 10 | 34 | | | | | | | | |
| | CT | P | Z | 14 | 10 | 49 | | | | | | | | |
| 29 | CB | eP | E | 07 | 51 | .9 | | | | | | | | |
| | CT | P | Z | 07 | 51 | 47 | | | | | | | | |
| | | i | Z | | | 57 | | | | | | | | |
| | KP | eP | Z | 07 | 51 | 50 | | | | | | | | |
| | | i | Z | | 52 | 01 | | | | | | | | |
| | RX | eP | Z | 07 | 51 | 50 | 2 | 8 | | | | | | |
| | | eS | NE | 08 | 01 | 42 | | | 2 | 10 | 3 | 14 | | |
| | | ePS | N | | 03 | 06 | | | 8 | 30 | | | | |
| | | eLq | N | | 13 | | | | 3 | 30 | | | | |
| | | eLr | ZE | | 16 | | 9 | 22 | | | 3 | 24 | | |
| | | M | NE | | 20 | | | | 5 | 19 | 8 | 19 | | |
| | WN | P | Z | 07 | 51 | 51 | 2 | 8 | | | | | | |
| | | S | N | 08 | 01 | 55 | | | 2 | 7 | | | | |
| | | eL | ZN | | 16 | .5 | 3 | 18 | 2 | 20 | | | | |
| | SU | eL | N | 08 | 22 | ½ | | | | | | | | |
| | Epicentre: | | | 07 | 39 | 29 | 38S | 72½W | | | | | USCGS | |
| 29 | KP | P | Z | 21 | 35 | 48 | | | | | | | | |
| | RX | eL | N | 21 | 55 | ½ | | | | | | | | |
| | | eL | Z | 22 | 00 | | | | | | | | | |
| | Epicentre: | | | 21 | 23 | 54 | Near Coast of Chile | | | | | | USCGS | |
| 30 | ON | e(P) | E | 08 | 31 | 27 | | | | | | | | |
| | | e | E | | 32 | 17 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 30 | KP | eP | Z | 08 | 31 | 30 | | | | | | | | | |
| | | e | Z | | | 39 | | | | | | | | | |
| | | e | Z | | 32 | 25 | | | | | | | | | |
| | TU | e | N | 08 | 31 | 37 | | | | | | | | | |
| | | S | N | | 32 | 52 | | | | | | | | | |
| | CT | eP | Z | 08 | 31 | 51 | | | | | | | | | |
| | | i | Z | | 32 | 00 | | | | | | | | | |
| | | eS | Z | | 33 | 26 | | | | | | | | | |
| | WN | eS | N | 08 | 33 | 59 | | | | | | | | | |
| | GP | eS | N | 08 | 35 | 07 | | | | | | | | | |
| | SU | eL | N | 08 | 36 | .3 | | | | | | | | | |
| | RX | eL | N | 08 | 38 | | | | | | | | | | |
| | Epicentre: | | | 08 | 29 | 27 | | 32S | 177½W | | | | | USCGS | |
| 31 | CT | P | Z | 02 | 52 | 03 | | | | | | | | | |
| | KP | P | Z | 02 | 52 | 07 | | | | | | | | | |
| | RX | eL | NE | 03 | 15 | | | | | | | | | | |
| | Epicentre: | | | 02 | 40 | 00 | | 39½S | 75W | | | | | USCGS | |
| 31 | SU | e | N | 04 | 55 | 26 | | | | | | | | | |
| | | e | N | | 57 | 15 | | | | | | | | | |
| | KP | P | Z | 04 | 57 | 12 | | | | | | | | | |
| | CT | eP | Z | 04 | 57 | 27 | | | | | | | | | |
| | | e | Z | | | 41 | | | | | | | | | |
| | Epicentre: | | | 04 | 52 | 28 | | 18S | 168½E | | | | | USCGS | |
| 31 | KP | ePKP | Z | 11 | 21 | 21 | | | | | | | | | |
| | | e | Z | | | 34 | | | | | | | | | |
| | CT | PKP | Z | 11 | 21 | 21 | | | | | | | | | |
| | Epicentre: | | | 11 | 02 | 20 | | 18N | 62W | | | | | USCGS | |
| 31 | KP | P | Z | 11 | 47 | 42 | | | | | | | | | |
| 31 | SU | eP | N | 13 | 16 | .0 | | | | | | | | | |
| | | e | N | | 22 | .0 | | | | | | | | | |
| | KP | iP | Z | 13 | 18 | 02 | u | | | | | | | | |
| | | PcP | Z | | 20 | 30½ | u | | | | | | | | |
| | | e | Z | | | 46 | | | | | | | | | |
| | CT | iP | Z | 13 | 18 | 11 | u | | | | | | | | |
| | GP | P | N | 13 | 18 | 33 | | | | | | | | | |
| | RX | eL | N | 13 | 31 | | | | | | | | | | |
| | Epicentre: | | | 13 | 11 | 02 | | 7½S | 156E | | | | | USCGS | |
| 31 | KP | P | Z | 18 | 38 | 46 | | | | | | | | | |
| 31 | GP | P | N | 21 | 10 | 37 | | | | | | | | | |
| | KP | P | Z | 21 | 10 | 43 | | | | | | | | | |
| | CT | P | Z | 21 | 10 | 44 | | | | | | | | | |
| | Epicentre: | | | 21 | 00 | 40 | | 5½S | 109½E | 600 km | | | | USCGS | |
| JUN 1 | SU | eL | N | 05 | 42 | | | | | | | | | | |
| | | M | N | | 53 | | | | | | | 2 | 20 | | |
| | RX | eL | ZN | 05 | 42 | | | | | | | | | | |
| | Epicentre: | | | 05 | 02 | 56 | | 38S | 73W | | | | | USCGS | |
| 1 | CT | eP? | Z | 21 | 24 | 48 | | | | | | | | | |
| | | e? | Z | | | 58 | | | | | | | | | |
| | KP | eP | Z | 21 | 24 | 54 | | | | | | | | | |
| | Epicentre: | | | 21 | 12 | 50 | | 42S | 74W | | | | | USCGS | |
| 2 | KP | eP | Z | 02 | 02 | 36 | | | | | | | | | |
| | CT | eP? | Z | 02 | 02 | 40 | | | | | | | | | |
| | Epicentre: | | | 01 | 51 | 58 | | Philippine Is | | | | | | USCGS | |
| 2 | RX | P | ZNE | 03 | 55 | 16 | dn | | | | | | | | |
| | | S | ZNE | | | 37 | | | | | | | | | |
| | | M | ZNE | | | 44 | | 11 | 10 | 50 | 11 | 30 | 10 | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 2 | KM | eP | X | 03 | 55 | 35 | | | | | | | | |
| | | e | X | | | 38 | | | | | | | | |
| | | e | X | | | 49 | | | | | | | | |
| | | e | X | | | 55 | | | | | | | | |
| | | e(S*) | X | | 56 | 34 | | | | | | | | |
| | GP | eP | N | 03 | 55 | 41 | | | | | | | | |
| | | eP* | N | | | 51 | | | | | | | | |
| | | e | N | | | 57 | | | | | | | | |
| | | e(S) | N | | 56 | 20 | | | | | | | | |
| | | e(S*) | N | | | 45 | | | | | | | | |
| | | i(Sg) | N | | | 55 | | | | | | | | |
| | CB | eP | E | 03 | 55 | 57 | | | | | | | | |
| | | e(P*) | E | | 56 | 06 | | | | | | | | |
| | | e(Pg) | E | | | 20 | | | | | | | | |
| | | eS | E | | | 53 | | | | | | | | |
| | | e | E | | 57 | 06 | | | | | | | | |
| | | e(S*) | E | | | 08 | | | | | | | | |
| | | e | E | | | 26 | | | | | | | | |
| | | e(Sg) | E | | | 31 | | | | | | | | |
| | | e | E | | 58 | 10 | | | | | | | | |
| | WN | e(P) | N | 03 | 56 | 17 | | | | | | | | |
| | | e(P*) | N | | | 35 | | | | | | | | |
| | | e | N | | | 51 | | | | | | | | |
| | | e(S) | N | | 57 | 31 | | | | | | | | |
| | | e | N | | | 39 | | | | | | | | |
| | | e(Sg) | N | | 58 | 06 | | | | | | | | |
| | | e | N | | | 14 | | | | | | | | |
| | CT | iP | Z | 03 | 56 | 39 | u | | | | | | | |
| | | e | Z | | | 46 | | | | | | | | |
| | | eP* | Z | | | 58 | | | | | | | | |
| | | e | Z | | 57 | 23 | | | | | | | | |
| | | e(S) | Z | | 58 | 12 | | | | | | | | |
| | | e(S*) | Z | | 59 | 05 | | | | | | | | |
| | KP | eP | Z | 03 | 56 | 49 | | | | | | | | |
| | | e | Z | | | 58 | | | | | | | | |
| | | e(P*) | Z | | 57 | 09 | | | | | | | | |
| | | e(S) | Z | | 58 | 21 | | | | | | | | |
| | | e | Z | | | 27 | | | | | | | | |
| | ON | eP | E | 03 | 57 | 07 | | | | | | | | |
| | | e | E | | | 09 | | | | | | | | |
| | | e? | E | | | 20 | | | | | | | | |
| | | e(P*) | E | | | 34 | | | | | | | | |
| | | e? | E | | 58 | 49 | | | | | | | | |
| | | eS | E | | | 52 | | | | | | | | |
| | TU | e | N | 03 | 57 | 08 | | | | | | | | |
| | | e | N | | | 36 | | | | | | | | |
| | | e | N | | 58 | 43 | | | | | | | | |
| | | e | N | | 59 | 13 | | | | | | | | |
| | | e | N | 04 | 00 | 12 | | | | | | | | |
| | Epicentre: | | | 03 | 54 | 48 | | 44.3S | 168.0E | S | | NZ(C) | 5.3 E | |
| | | | | | | | | Brisbane readings included in data used to determine epicentre. | | | | | | |
| 2 | GP | e(P) | N | 06 | 09 | 36 | | | | | | | | |
| | CT | iP | Z | 06 | 09 | 45 | d | | | | | | | |
| | KP | eP | Z | 06 | 09 | 50 | | | | | | | | |
| | | e | Z | | | 56 | | | | | | | | |
| | | e | Z | | 10 | 05 | | | | | | | | |
| | CB | e(P) | E | 06 | 09 | 57 | | | | | | | | |
| | SU | e(P) | N | 06 | 10 | 57 | | | | | | | | |
| | | eL | N | | | 42 | | | | 2 | 20 | | | |
| | RX | e(S) | N | 06 | 19 | 04 | | | | | | | | |
| | | eL | N | | | 29 | | | | | | | | |
| | | eL | ZNE | | | 34 | | | | | | | | |
| | | M | ZNE | | | 36 | | | | 3 | 18 | | | |
| | Epicentre: | | | 05 | 58 | 03 | | 46½S | 74W | | | USCGS | 6¾ | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 2 | SU | eP | N | 07 | 20 | 57 | | | | | | | | |
| | | eS | N | | 21 | 54 | | | | | | | | |
| | ON | eP? | E | 07 | 23 | 29 | | | | | | | | |
| | | e | E | | | 31 | | | | | | | | |
| | | e | E | | | 39 | | | | | | | | |
| | KP | eP | Z | 07 | 23 | 39 | | | | | | | | |
| | | e | Z | | | 46 | | | | | | | | |
| | | e | Z | | | 58 | | | | | | | | |
| | CT | iP? | Z | 02 | 24 | 00 | d | | | | | | | |
| | Epicentre: | | | 07 | 19 | 10 | | 19S | 175W | 150 km | | | | USCGS |
| 2 | SU | eP | N | 07 | 53 | 18 | | | | 2 | 15 | | | |
| | | eS | N | | 58 | 05 | | | | 12 | 12 | | | |
| | | eScS? | N | 08 | 04 | 05 | | | | | | | | |
| | KP | e(P) | Z | 07 | 54 | 42 | | | | | | | | |
| | | e | Z | | | 45 | | | | | | | | |
| | | i | Z | | 55 | 09 | | | | | | | | |
| | | e | Z | | | 56 | | | | | | | | |
| | | ePcP | Z | | 56 | 51 | | | | | | | | |
| | CT | eP | Z | 07 | 54 | 50 | | | | | | | | |
| | | e | Z | | 55 | 43 | | | | | | | | |
| | TO | e(P) | Z | 07 | 54 | 52 | | | | | | | | |
| | GP | e | N | 07 | 55 | 16 | | | | | | | | |
| | RX | e | N | 07 | 55 | 30 | | | | | | | | |
| | | e(S) | N | 08 | 01 | 15 | | | | 7 | 20 | | | |
| | | e(SSS) | NE | | 05 | 00 | | | | | | | | |
| | | eL | ZNE | | 08 | | | | | | | | | |
| | | M | N | | 12 | | | | | 16 | 18 | | | |
| | | M | ZNE | | 16 | | | | | 13 | 15 | 18 | 15 | |
| | WN | e | N | 07 | 57 | 06 | | | | | | | | |
| | | e | Z | | | 10 | | | | | | | | |
| | | e(S) | N | 08 | 01 | 14 | | | | | | | | |
| | | e | N | | 04 | 35 | | | | | | | | |
| | | eL | ZN | | 08 | | | | | | | | | |
| | | M | ZN | | 10 | | | 22 | 20 | 23 | 20 | | | |
| | ON | L | E | 08 | 07 | | | | | | | | | |
| | Epicentre: | | | 07 | 47 | 11 | | 5½S | 151½E | | | | | USCGS 6¼-6¾ |
| 2 | KP | P | Z | 08 | 18 | 08 | | | | | | | | |
| | | e | Z | | | 28 | | | | | | | | |
| | TU | e(P) | N | 08 | 18 | 13 | | | | | | | | |
| | TO | eP | Z | 08 | 18 | 19 | | | | | | | | |
| | CT | iP | Z | 08 | 18 | 19 | d | | | | | | | |
| | WN | e? | N | 08 | 20 | 35 | | | | | | | | |
| 2 | KP | eP? | Z | 08 | 48 | 16 | | | | | | | | |
| | Epicentre: | | | 08 | 36 | 10 | | 40S | 74W | | | | | USCGS |
| 2 | ON | eP | E | 09 | 15 | 41 | | | | | | | | |
| | KP | eP | Z | 09 | 15 | 52 | | | | | | | | |
| | | e | Z | | 16 | 03 | | | | | | | | |
| | TU | eP | N | 09 | 15 | 54 | | | | | | | | |
| | | eS | N | | 17 | 25 | | | | | | | | |
| | TO | P | Z | 09 | 16 | 03 | | | | | | | | |
| | | e | Z | | 17 | 44 | | | | | | | | |
| | CT | P | Z | 09 | 16 | 03 | | | | | | | | |
| | | e | Z | | 17 | 43 | | | | | | | | |
| | | e | Z | | | 51 | | | | | | | | |
| | WN | eP | N | 09 | 16 | 26 | | | | | | | | |
| | | e | N | | 18 | 04 | | | | | | | | |
| | | S | N | | | 24 | | | | | | | | |
| | GP | S | N | 09 | 19 | 23 | | | | | | | | |
| | Epicentre: | | | 09 | 13 | 54 | | 32S | 179W | | | | | |
| 2 | KP | e(P) | Z | 13 | 42 | 48 | | | | | | | | |
| | WN | e? | N | 13 | 43 | 49 | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 2 | KM | eP | X | 03 | 55 | 35 | | | | | | | |
| | | e | X | | | 38 | | | | | | | |
| | | e | X | | | 49 | | | | | | | |
| | | e | X | | | 55 | | | | | | | |
| | | e(S*) | X | | 56 | 34 | | | | | | | |
| | GP | eP | N | 03 | 55 | 41 | | | | | | | |
| | | eP* | N | | | 51 | | | | | | | |
| | | e | N | | | 57 | | | | | | | |
| | | e(S) | N | | 56 | 20 | | | | | | | |
| | | e(S*) | N | | | 45 | | | | | | | |
| | | i(Sg) | N | | | 55 | | | | | | | |
| | CB | eP | E | 03 | 55 | 57 | | | | | | | |
| | | e(P*) | E | | 56 | 06 | | | | | | | |
| | | e(Pg) | E | | | 20 | | | | | | | |
| | | eS | E | | | 53 | | | | | | | |
| | | e | E | | 57 | 06 | | | | | | | |
| | | e(S*) | E | | | 08 | | | | | | | |
| | | e | E | | | 26 | | | | | | | |
| | | e(Sg) | E | | | 31 | | | | | | | |
| | | e | E | | 58 | 10 | | | | | | | |
| | WN | e(P) | N | 03 | 56 | 17 | | | | | | | |
| | | e(P*) | N | | | 35 | | | | | | | |
| | | e | N | | | 51 | | | | | | | |
| | | e(S) | N | | 57 | 31 | | | | | | | |
| | | e | N | | | 39 | | | | | | | |
| | | e(Sg) | N | | 58 | 06 | | | | | | | |
| | | e | N | | | 14 | | | | | | | |
| | CT | iP | Z | 03 | 56 | 39 | | | | | | | u |
| | | e | Z | | | 46 | | | | | | | |
| | | eP* | Z | | | 58 | | | | | | | |
| | | e | Z | | 57 | 23 | | | | | | | |
| | | e(S) | Z | | 58 | 12 | | | | | | | |
| | | e(S*) | Z | | 59 | 05 | | | | | | | |
| | KP | eP | Z | 03 | 56 | 49 | | | | | | | |
| | | e | Z | | | 58 | | | | | | | |
| | | e(P*) | Z | | 57 | 09 | | | | | | | |
| | | e(S) | Z | | 58 | 21 | | | | | | | |
| | | e | Z | | | 27 | | | | | | | |
| | ON | eP | E | 03 | 57 | 07 | | | | | | | |
| | | e | E | | | 09 | | | | | | | |
| | | e? | E | | | 20 | | | | | | | |
| | | e(P*) | E | | | 34 | | | | | | | |
| | | e? | E | | 58 | 49 | | | | | | | |
| | | eS | E | | | 52 | | | | | | | |
| | TU | e | N | 03 | 57 | 08 | | | | | | | |
| | | e | N | | | 36 | | | | | | | |
| | | e | N | | 58 | 43 | | | | | | | |
| | | e | N | | 59 | 13 | | | | | | | |
| | | e | N | 04 | 00 | 12 | | | | | | | |
| | Epicentre: | | | 03 | 54 | 48 | 44.3S | 168.0E | S | | NZ(C) | | 5.3 ML |
| | | | | | | | Brisbane readings included in data used to determine epicentre. | | | | | | |
| 2 | GP | e(P) | N | 06 | 09 | 36 | | | | | | | |
| | CT | iP | Z | 06 | 09 | 45 | | | | | | | d |
| | KP | eP | Z | 06 | 09 | 50 | | | | | | | |
| | | e | Z | | | 56 | | | | | | | |
| | | e | Z | | 10 | 05 | | | | | | | |
| | CB | e(P) | E | 06 | 09 | 57 | | | | | | | |
| | SU | e(P) | N | 06 | 10 | 57 | | | | | | | |
| | | eL | N | | 42 | | | | 2 | 20 | | | |
| | RX | e(S) | N | 06 | 19 | 04 | | | | | | | |
| | | eL | N | | 29 | | | | | | | | |
| | | eL | ZNE | | 34 | | | | | | | | |
| | | M | ZNE | | 36 | | | | 3 | 18 | | | |
| | Epicentre: | | | 05 | 58 | 03 | 46½S | 74W | | | USCGS | | 6¾ |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 2 | SU | eP | N | 07 | 20 | 57 | | | | | | | |
| | | eS | N | | 21 | 54 | | | | | | | |
| | ON | eP? | E | 07 | 23 | 29 | | | | | | | |
| | | e | E | | | 31 | | | | | | | |
| | | e | E | | | 39 | | | | | | | |
| | KP | eP | Z | 07 | 23 | 39 | | | | | | | |
| | | e | Z | | | 46 | | | | | | | |
| | | e | Z | | | 58 | | | | | | | |
| | CT | iP? | Z | 02 | 24 | 00 | | | | | | | d |
| | Epicentre: | | | 07 | 19 | 10 | 19S | 175W | 150 | km | | USCGS | |
| 2 | SU | eP | N | 07 | 53 | 18 | | | 2 | 15 | | | |
| | | eS | N | | 58 | 05 | | | 12 | 12 | | | |
| | | eScS? | N | 08 | 04 | 05 | | | | | | | |
| | KP | e(P) | Z | 07 | 54 | 42 | | | | | | | |
| | | e | Z | | | 45 | | | | | | | |
| | | i | Z | | 55 | 09 | | | | | | | |
| | | e | Z | | | 56 | | | | | | | |
| | | ePcP | Z | | 56 | 51 | | | | | | | |
| | CT | eP | Z | 07 | 54 | 50 | | | | | | | |
| | | e | Z | | 55 | 43 | | | | | | | |
| | TO | e(P) | Z | 07 | 54 | 52 | | | | | | | |
| | GP | e | N | 07 | 55 | 16 | | | | | | | |
| | RX | e | N | 07 | 55 | 30 | | | | | | | |
| | | e(S) | N | 08 | 01 | 15 | | | 7 | 20 | | | |
| | | e(SSS) | NE | | 05 | 00 | | | | | | | |
| | | eL | ZNE | | 08 | | | | | | | | |
| | | M | N | | 12 | | | | 16 | 18 | | | |
| | | M | ZNE | | 16 | | | | 13 | 15 | 18 | 15 | |
| | WN | e | N | 07 | 57 | 06 | | | | | | | |
| | | e | Z | | | 10 | | | | | | | |
| | | e(S) | N | 08 | 01 | 14 | | | | | | | |
| | | e | N | | 04 | 35 | | | | | | | |
| | | eL | ZN | | 08 | | | | | | | | |
| | | M | ZN | | 10 | | 22 | 20 | 23 | 20 | | | |
| | ON | L | E | 08 | 07 | | | | | | | | |
| | Epicentre: | | | 07 | 47 | 11 | 5½S | 151½E | | | | USCGS | 6½-6¾ |
| 2 | KP | P | Z | 08 | 18 | 08 | | | | | | | |
| | | e | Z | | | 28 | | | | | | | |
| | TU | e(P) | N | 08 | 18 | 13 | | | | | | | |
| | TO | eP | Z | 08 | 18 | 19 | | | | | | | |
| | CT | iP | Z | 08 | 18 | 19 | | | | | | | d |
| | WN | e? | N | 08 | 20 | 35 | | | | | | | |
| 2 | KP | eP? | Z | 08 | 48 | 16 | | | | | | | |
| | Epicentre: | | | 08 | 36 | 10 | 40S | 74W | | | | USCGS | |
| 2 | ON | eP | E | 09 | 15 | 41 | | | | | | | |
| | KP | eP | Z | 09 | 15 | 52 | | | | | | | |
| | | e | Z | | 16 | 03 | | | | | | | |
| | TU | eP | N | 09 | 15 | 54 | | | | | | | |
| | | eS | N | | 17 | 25 | | | | | | | |
| | TO | P | Z | 09 | 16 | 03 | | | | | | | |
| | | e | Z | | 17 | 44 | | | | | | | |
| | CT | P | Z | 09 | 16 | 03 | | | | | | | |
| | | e | Z | | 17 | 43 | | | | | | | |
| | | e | Z | | | 51 | | | | | | | |
| | WN | eP | N | 09 | 16 | 26 | | | | | | | |
| | | e | N | | 18 | 04 | | | | | | | |
| | | S | N | | | 24 | | | | | | | |
| | GP | S | N | 09 | 19 | 23 | | | | | | | |
| | Epicentre: | | | 09 | 13 | 54 | 32S | 179W | | | | | |
| 2 | KP | e(P) | Z | 13 | 42 | 48 | | | | | | | |
| | WN | e? | N | 13 | 43 | 49 | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 2 | SU | iP | N | 19 | 00 | 30 n | | | | | | | |
| | | iS | N | | 01 | 39 n | | | 13 | 6 | | | |
| | KP | P | Z | 19 | 02 | 49 | | | | | | | |
| | | e | Z | | 03 | 03 | | | | | | | |
| | | e | Z | | | 32 | | | | | | | |
| | | e(pP) | Z | | 04 | 47 | | | | | | | |
| | | i? | Z | | 12 | 13 | | | | | | | |
| | CT | P | Z | 19 | 02 | 59 | | | | | | | |
| | | e | Z | | 05 | 46 | | | | | | | |
| | | e(S) | Z | | 06 | 08 | | | | | | | |
| | WN | eP? | N | 19 | 03 | 17 | | | | | | | |
| | CB | e(P) | E | 19 | 03 | 22 | | | | | | | |
| | | eS | E | | 06 | 49 | | | | | | | |
| | GP | eP | N | 19 | 03 | 43 | | | | | | | |
| | | e(S) | N | | 07 | 37 | | | | | | | |
| | TU | eS | N | 19 | 05 | 48 | | | | | | | |
| | Epicentre: | | | 18 | 59 | 05 | 20½S | 178½W | 550 km | | | | USCGS |
| 2 | SU | S | N | 19 | 51 | (01) | | | 3 | 5 | | | |
| | KP | P | Z | 19 | 52 | 13 | | | | | | | |
| | CT | eP | Z | 19 | 52 | 23 | | | | | | | |
| | GP | eP | N | 19 | 53 | 08 | | | | | | | |
| | Epicentre: | | | 19 | 48 | 29 | 20½S | 178W | 550 km | | | | USCGS |
| 2 | KP | P | Z | 23 | 27 | 31 | | | | | | | |
| | | e | Z | | | 44 | | | | | | | |
| | CT | e(P) | Z | 23 | 27 | 39 | | | | | | | |
| 3 | ON | e(P) | E | 03 | 24 | 57 | | | | | | | |
| | KP | e(P) | Z | 03 | 25 | 02 | | | | | | | |
| | CT | eP? | Z | 03 | 25 | 12 | | | | | | | |
| | | e | Z | | | 18 | | | | | | | |
| | | e | Z | | | 24 | | | | | | | |
| | | e(S) | Z | | 27 | 23 | | | | | | | |
| | WN | eP? | N | 03 | 25 | 55 | | | | | | | |
| | | S | N | | 28 | 06 | | | | | | | |
| | GP | e(P) | N | 03 | 26 | 22 | | | | | | | |
| | | e | N | | 29 | 10 | | | | | | | |
| | | S | N | | | 15 | | | | | | | |
| | TU | eS | N | 03 | 26 | 59 | | | | | | | |
| | CB | eS | E | 03 | 28 | 24 | | | | | | | |
| | Epicentre: | | | 03 | 22.7 | | Kermadec Is | | | | | | 5.8 m |
| 3 | KP | eP | Z | 07 | 45 | 44 | | | | | | | |
| | | e | Z | | 47 | 56 | | | | | | | |
| | Epicentre: | | | 07 | 38 | 14 | 5½S | 151E | | | | | USCGS |
| 3 | KP | P | Z | 10 | 00 | 47 | | | | | | | |
| | CT | eP? | Z | 10 | 00 | 56 | | | | | | | |
| 3 | RX | P | ZNE | 10 | 32 | 37 | | | | | | | |
| | | e | N | | | 50 | | | | | | | |
| | | S | ZNE | | | 59 | | | | | | | |
| | | M | NE | | 33 | 00 | | | 24 | 10 | 10 | 10 | |
| | KM | e(P*) | X | 10 | 32 | 59 | | | | | | | |
| | | e | X | | 33 | 07 | | | | | | | |
| | | i | X | | | 12 | | | | | | | |
| | | e(S) | X | | | (30) | | | | | | | |
| | | iS* | X | | | 55 | | | | | | | |
| | GP | eP | N | 10 | 33 | 02 | | | | | | | |
| | | e | N | | | 11 | | | | | | | |
| | | e | N | | | 18 | | | | | | | |
| | | e | N | 10 | 33 | 23 | | | | | | | |
| | | e | N | | | 28 | | | | | | | |
| | | e(S*) | N | | 34 | 08 | | | | | | | |
| | CB | eP | E | 10 | 33 | 19 | | | | | | | |
| | | e | E | | | 28 | | | | | | | |
| | | eP* | E | | | 33 | | | | | | | |



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 3 | | e | E | | 34 | 00 | | | | | | | |
| | | eS | E | | | 14 | | | | | | | |
| | | eS* | E | | | 27 | | | | | | | |
| | | e | E | | | 48 | | | | | | | |
| | | e | E | | 35 | 10 | | | | | | | |
| | WN | eP | N | 10 | 33 | 35 | | | | | | | |
| | | e | N | | | 38 | | | | | | | |
| | | e(P*) | N | | | 46 | | | | | | | |
| | | e | N | | | 55 | | | | | | | |
| | | eS | N | | 34 | 42 | | | | | | | |
| | | e | N | | 35 | 28 | | | | | | | |
| | CT | P | Z | 10 | 33 | 59 | | | | | | | |
| | | e(P*) | Z | | 34 | 14 | | | | | | | |
| | | e | Z | | 35 | 36 | | | | | | | |
| | KP | eP | Z | 10 | 34 | 10 | | | | | | | |
| | | e | Z | | | 12 | | | | | | | |
| | | e | Z | | | 19 | | | | | | | |
| | | e | Z | | | 25 | | | | | | | |
| | | e | Z | | 35 | 58 | | | | | | | |
| | | e | Z | | 37 | 17 | | | | | | | |
| | | e | Z | | | 25 | | | | | | | |
| | TU | e | N | 10 | 34 | 27 | | | | | | | |
| | | e | N | | | 48 | | | | | | | |
| | | e | N | | 36 | 07 | | | | | | | |
| | | e | N | | | 16 | | | | | | | |
| | ON | P | E | 10 | 34 | 27 | | | | | | | |
| | | eP* | E | | | 55 | | | | | | | |
| | | S | E | | 36 | 13 | | | | | | | |
| | | e | E | | | 19 | | | | | | | |
| | Epicentre: | | | 10 | 32 | 08 | 44.1S | 168.2E | S | | NZ(C) | | 5.3 NZ |
| | | | | | | | Felt: Milford Sound, Haast MM 3-4 Additional readings from Brisbane and Charters Towers used to determine epicentre. | | | | | | |
| 3 | SU | P | N | 13 | 16 | (01) | | | | | | | |
| | | eS | N | | 17 | 05 | | | 25 | 5 | | | |
| | KP | P | Z | 13 | 18 | 42 | | | | | | | |
| | | e | Z | | 19 | 17 | | | | | | | |
| | CT | P | Z | 13 | 18 | 50 | | | | | | | |
| | | e | Z | | 19 | 01 | | | | | | | |
| | | (sP) | Z | | 21 | 25 d | | | | | | | |
| | WN | eP | N | 13 | 19 | 10 | | | | | | | |
| | | esP | N | | 21 | 34 | | | | | | | |
| | CB | eP | E | 13 | 19 | 15 | | | | | | | |
| | KM | eP | X | 13 | 19 | (29) | | | | | | | |
| | | e | X | | | 39 | | | | | | | |
| | GP | eP | N | 13 | 19 | 34 | | | | | | | |
| | | e | N | | | 42 | | | | | | | |
| | | e | N | | | 46 | | | | | | | |
| | Epicentre: | | | 13 | 14 | 38 | 17½S | 179½W | 600 km | | | | USCGS 6 |
| 3 | SU | P | N | 13 | 25 | (02) | | | | | | | |
| | | S | N | | 26 | 06 | | | 50 | 5 | | | |
| | KP | eP | Z | 13 | 27 | 41 | | | | | | | |
| | | e | Z | | 28 | 52 | | | | | | | |
| | | e | Z | | 29 | 10 | | | | | | | |
| | | e | Z | | 30 | 25 | | | | | | | |
| | | e | Z | | 31 | 13 | | | | | | | |
| | | e | Z | | 32 | 18 | | | | | | | |
| | | e | Z | | | 36 | | | | | | | |
| | | e(PcS) | Z | | 34 | 05 | | | | | | | |
| | CT | e(P) | Z | 13 | 27 | 51 | | | | | | | |
| | | e | Z | | 28 | 00 | | | | | | | |
| | | e | Z | | 29 | 17 | | | | | | | |
| | WN | eP? | N | 13 | 28 | 11 | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 3 | | e | N | | | 12 | | | | | | | | |
| | CB | eP? | E | 13 | 28 | 15 | | | | | | | | |
| | | e | E | | | 16 | | | | | | | | |
| | | eS | E | | | 31 | 49 | | | | | | | |
| | KM | eP | X | 13 | 28 | (29) | | | | | | | | |
| | | e | X | | | 41 | | | | | | | | |
| | GP | P | N | 13 | 28 | 34 | | | | | | | | |
| | | e | N | | | 42 | | | | | | | | |
| | | e | N | | | 47 | | | | | | | | |
| | | e | N | | | 29 | 00 | | | | | | | |
| | | eS | N | | | 32 | 26 | | | | | | | |
| | Epicentre: | | | 13 | 23 | 37 | 17½S | 179W | 600 | km | | | USCGS | 6 |
| 3 | RX | P | ZNE | 13 | 43 | 48 | | | | | | | | |
| | | 1S | NE | | | 44 | 09 | sw | | | | | | |
| | | i | NE | | | | 15 | ne | | | | | | |
| | | M | ZNE | | | | 15 | 65 | 8 | 130 | 10 | 120 | 8 | |
| | KM | e(P) | X | 13 | 44 | 12 | | | | | | | | |
| | | e | X | | | 14 | | | | | | | | |
| | | eP* | X | | | 20 | | | | | | | | |
| | | e | X | | | 23 | | | | | | | | |
| | | eS* | X | | | 45 | 04 | | | | | | | |
| | GP | eP | N | 13 | 44 | 14 | | | | | | | | |
| | | e | N | | | 28 | | | | | | | | |
| | | e | N | | | 34 | | | | | | | | |
| | | e | N | | | 49 | | | | | | | | |
| | | e(S*) | N | | | 45 | 13 | | | | | | | |
| | CB | eP | E | 13 | 44 | 29 | | | | | | | | |
| | | e | E | | | 33 | | | | | | | | |
| | | e | E | | | 38 | | | | | | | | |
| | | e | E | | | 45 | 13 | | | | | | | |
| | | e | E | | | 25 | | | | | | | | |
| | | e | E | | | 29 | | | | | | | | |
| | | e(L) | E | | | 46.7 | | | | | | | | |
| | WN | eP | N | 13 | 44 | 50 | | | | | | | | |
| | | e | N | | | 56 | | | | | | | | |
| | | e | N | | | 45 | 56 | | | | | | | |
| | | e(S) | N | | | 46 | 03 | | | | | | | |
| | | e | N | | | | 10 | | | | | | | |
| | | e | ZN | | | | 39 | | | | | | | |
| | | e | N | | | 48 | 13 | | | | | | | |
| | CT | eP | Z | 13 | 45 | 09 | | | | | | | | |
| | | e | Z | | | 18 | | | | | | | | |
| | | e | Z | | | 46 | 48 | | | | | | | |
| | | e | Z | | | 47 | 07 | | | | | | | |
| | KP | eP | Z | 13 | 45 | 20 | | | | | | | | |
| | | e | Z | | | 22 | | | | | | | | |
| | | e | Z | | | 26 | | | | | | | | |
| | | e(S) | Z | | | 47 | 11 | | | | | | | |
| | | e | Z | | | 48 | 23 | | | | | | | |
| | TU | e | N | 13 | 45 | 39 | | | | | | | | |
| | | e | N | | | 51 | | | | | | | | |
| | | e | N | | | 47 | 02 | | | | | | | |
| | Epicentre: | | | 13 | 43 | 17 | 44.2S | 167.8E | S | | NZ(D) | | | 5.3 NZ |
| | | | | | | | Additional readings from Brisbane and Charters Towers used in determining epicentre. | | | | | | | |
| 3 | SU | e(L) | N | 14 | 03 | | | | 3 | 13 | | | | |
| 3 | KP | P | Z | 16 | 30 | 34 | | | | | | | | |
| | | e | Z | | | 51 | | | | | | | | |
| | | e | Z | | | 31 | 04 | | | | | | | |
| | | e | Z | | | 35 | 03 | | | | | | | |
| | CT | e | Z | 16 | 34 | 58 | | | | | | | | |
| | Epicentre: | | | 16 | 18 | 04 | 41½N | 141½E | 100 | km | | | USCGS | |



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 3 | KP | P | Z | 16 | 58 | 27 | | | | | | | | |
| 3 | KP | P | Z | 18 | 29 | 37 | | | | | | | | |
| | Epicentre: | | | 18 | 17 | 36 | 42½S | 75W | | | | | USCGS | |
| 4 | KP | P | Z | 02 | 26 | 09 | | | | | | | | |
| 4 | KP | e | Z | 03 | 15 | 18 | | | | | | | | |
| 4 | CT | e? | Z | 06 | 26 | 06 | | | | | | | | |
| | | e | Z | | | 23 | | | | | | | | |
| | KP | e? | Z | 06 | 26 | 17 | | | | | | | | |
| | | e | Z | | | 38 | | | | | | | | |
| | RX | eL | E | 06 | 26 | 40 | | | | | | 2 | 15 | |
| | WN | e(L) | N | 06 | 32 | | | | | | | | | |
| 4 | KP | P | Z | 10 | 25 | 18 | | | | | | | | |
| | | e | Z | | | 30 | | | | | | | | |
| | CT | eP | Z | 10 | 25 | 25 | | | | | | | | |
| | Epicentre: | | | 10 | 14 | 11 | 24N | 143E | | | | | USCGS | |
| 5 | CT | eP | Z | 05 | 35 | 16 | | | | | | | | |
| | KP | e? | Z | 05 | 35 | 39 | | | | | | | | |
| | | e | Z | | | 48 | | | | | | | | |
| | | e | Z | | | 36 | 03 | | | | | | | |
| | KM | e | X | 05 | 37 | 53 | | | | | | | | |
| | RX | e | E | 05 | 38 | 30 | | | | | | | | |
| | | eL | N | | | 39 | | | | | 2 | 20 | | |
| | | eL | NE | | | 40 | | | | | | 8 | 12 | |
| | WN | e(L) | N | 05 | 43 | | | | | | | | | |
| | Epicentre: | | | 05 | 29 | 37 | 65S | 178E | | | | | USCGS | |
| 5 | TU | eP | N | 19 | 32 | 29 | | | | | | | | |
| | | e | N | | | 34 | | | | | | | | |
| | | eS | N | | | 33 | 53 | | | | | | | |
| | KP | P | Z | 19 | 32 | 30 | | | | | | | | |
| | | e | Z | | | 42 | | | | | | | | |
| | | e | Z | | | 33 | 42 | | | | | | | |
| | WN | eP? | N | 19 | 32 | 49 | | | | | | | | |
| | | e | N | | | 51 | | | | | | | | |
| | | S | N | | | 35 | 02 | | | | | | | |
| | | eL | N | | | 38 | | | | | 11 | 15 | | |
| | CT | P? | Z | 19 | 32 | 50 | | | | | | | | |
| | | e | Z | | | 33 | 01 | | | | | | | |
| | | e | Z | | | 11 | | | | | | | | |
| | | eS | Z | | | 34 | 24 | | | | | | | |
| | SU | e | N | 19 | 34 | 19 | | | | | | | | |
| | | e(S) | N | | | 36 | 05 | | | | 5 | 7 | | |
| | | eL | N | | | 38 | | | | | | | | |
| | | M | N | | | 40 | | | | | 30 | 14 | | |
| | CB | eS | E | 19 | 35 | 22 | | | | | | | | |
| | GP | S | N | 19 | 36 | 08 | | | | | | | | |
| | RX | eL | NE | 19 | 39 | | | | | | 4 | 20 | 4 | 20 |
| | | M | ZNE | | | 41 | | | | | 8 | 16 | 4 | 19 |
| | Epicentre: | | | 19 | 30 | 30 | 31½S | 177W | | | | | USCGS | |
| 6 | SU | eL | N | 01 | 56 | | | | | | | | | |
| | | M | N | | | 59 | | | | | 4 | 20 | | |
| | RX | eL | N | 02 | 08 | | | | | | | | | |
| | | M | N | | | 12 | | | | | 2 | 20 | | |
| | Epicentre: | | | 01 | 17 | 48 | 41N | 125W | | | | | USCGS | 5½–5¾ |
| 6 | RX | iP | ZNE | 06 | 07 | 23 | u | | 7 | 9 | | | | |
| | | e | ZNE | | 08 | 06 | | | 28 | 12 | 11 | 13 | 9 | 13 |
| | | e(PPP) | ZE | | 11 | 04 | | | 12 | 12 | | | | |
| | | eS | NE | | 16 | 52 | | | | | | | | |
| | | e | N | | 17 | 32 | | | | | | | | |
| | | e | NE | | 18 | 04 | | | | | 160 | 30 | | |

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| | | e | E | | 20 | | | | | | | 50 | 20 | |
| JUN 6 | | e | E | | 22 | | | | | | | 45 | 16 | |
| | | eLq | NE | | 26.5 | | | | | | | | | |
| | | eLr | Z | | 29 | | | | | 160 | 20 | | | |
| | | M | N | | 34 | | | | | | | 130 | 16 | |
| | | M | E | | 39 | | | | | 120 | 15 | 120 | 15 | |
| | | M | ZNE | | 44 | | | 240 | 15 | | | | | |
| | GP | e(P) | N | 06 | 07 | 25 | | | | | | | | |
| | | e | N | | | 40 | | | | | | | | |
| | | e(S) | N | | 17 | 25 | | | | | | | | |
| | | e | N | | | 56 | | | | | | | | |
| | | e | N | | 22 | | | | | | | | | |
| | | eLq | N | | 27 | | | | | | | | | |
| | | eLr | N | | 29 | | | | | | | | | |
| | WN | P | Z | 06 | 07 | 26 | | | | | | | | |
| | | e | N | | 08 | 06 | | | | | | | | |
| | | e | Z | 06 | 08 | 13 | | | | | | | | |
| | | S | N | | 17 | 26 | | | | | | | | |
| | | e | N | | | 50 | | | | | | | | |
| | | eLq | N | | 27.0 | | | | | | | | | |
| | | eLr | ZN | | 29.5 | | | | | | | | | |
| | | M | ZN | | 31 | | | 180 | 23 | 250 | 25 | | | |
| | | M | ZN | | 35 | | | 170 | 16 | 230 | 18 | | | |
| | CT | (P) | Z | 06 | 07 | 30 | d | | | | | | | |
| | | i | Z | | | 34 | d | | | | | | | |
| | | e | Z | | 08 | 08 | | | | | | | | |
| | | eL | Z | | 31 | | | | | | | | | |
| | CB | eP | E | 06 | 07 | 35 | | | | | | | | |
| | | e | E | | | 49 | | | | | | | | |
| | | e | E | | 08 | 16 | | | | | | | | |
| | | e | E | | 11 | 00 | | | | | | | | |
| | | eS | E | | 17 | 16 | | | | | | | | |
| | | e | E | | | 38 | | | | | | | | |
| | | e | E | | 18 | 21 | | | | | | | | |
| | | eLq | E | | 27 | | | | | | | | | |
| | KP | eP | Z | 06 | 07 | 36 | | | | | | | | |
| | | e | Z | | | 38 | | | | | | | | |
| | | e | Z | | 08 | 03 | | | | | | | | |
| | | e | Z | | | 10 | | | | | | | | |
| | | e | Z | | 10 | 39 | | | | | | | | |
| | | e | Z | | | 52 | | | | | | | | |
| | | eL | Z | | 31 | | | | | | | | | |
| | TU | e? | N | 06 | 07 | 45 | | | | | | | | |
| | | e | N | | 08 | 03 | | | | | | | | |
| | | e | N | | | 15 | | | | | | | | |
| | | e? | N | | 17 | 00 | | | | | | | | |
| | | eL | N | | 27 | | | | | | | | | |
| | KM | e? | X | 06 | 07 | 48 | | | | | | | | |
| | | e | X | | 08 | 18 | | | | | | | | |
| | | e | X | | 17 | 37 | | | | | | | | |
| | | eLq | X | | 27 | | | | | | | | | |
| | SU | eP | N | 06 | 08 | 47 | | | | 4 | 8 | | | |
| | | e | N | | 09 | 30 | | | | | | | | |
| | | e | N | | | 40 | | | | 20 | 7 | | | |
| | | e | N | | 10 | 30 | | | | | | | | |
| | | e(S) | N | | 20 | 10 | | | | | | | | |
| | | e(SS) | N | | 25 | 17 | | | | | | | | |
| | | eL | N | | 36 | | | | | | | | | |
| | | eL | N | | 39 | | | | | | | | | |
| | | e | N | | 39 | 55 | | | | 80 | 10 | | | |
| | | M | N | | 47 | | | | | 90 | 15 | | | |
| | | M | N | 07 | 01 | | | | | 80 | 15 | | | |
| | ON | e? | E | 06 | 19.0 | | | | | | | | | |
| | | iL | E | | 28 | 42 | | | | | | | | |
| | Epicentre: | | | 05 | 55 | 44 | | 45½S | 73½W | | | | | USCGS 6¾-7 |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 6 | RX | eL | NE | 09 | 44 | | | | | | | 3 | 12 | |
| 6 | KP | e? | Z | 23 | 16 | 48 | | | | | | | | |
| | | e | Z | | 17 | 06 | | | | | | | | |
| 6 | SU | iS | N | 23 | 33 | 07 | s | | | | | 6 | 5 | |
| | KP | eP | Z | 23 | 33 | 16 | | | | | | | | |
| | | e | Z | | | 20 | | | | | | | | |
| | | e | Z | | | 34 | | | | | | | | |
| | | e | Z | | 34 | 13 | | | | | | | | |
| | CB | e(P) | E | 23 | 33 | 53 | | | | | | | | |
| | | eS | E | | 36 | 52 | | | | | | | | |
| | KM | e(P) | X | 23 | 34 | 09 | | | | | | | | |
| | | eS | X | | 37 | 21 | | | | | | | | |
| | GP | eP | N | 23 | 34 | 15 | | | | | | | | |
| | | e? | N | | 37 | 25 | | | | | | | | |
| | | e(S) | N | | | 29 | | | | | | | | |
| | TU | eS | N | 23 | 35 | 57 | | | | | | | | |
| | WN | e(S) | N | 23 | 36 | 23 | | | | | | | | |
| | | e | N | | | 47 | | | | | | | | |
| | Epicentre: | | | 23 | 30 | 08 | | 23½S | 180 | 600 km | | | | USCGS |
| 7 | KP | e(P) | Z | 05 | 34 | 47 | | | | | | | | |
| | Epicentre: | | | 05 | 22 | 34 | | 40½S | 72W | | | | | USCGS |
| 7 | KP | eP | Z | 05 | 36 | 29 | | | | | | | | |
| | Epicentre: | | | 05 | 25 | 11 | | 17S | 98E | | | | | USCGS |
| 7 | KP | i? | Z | 07 | 05 | 07 | | | | | | | | |
| | | (P) | Z | | | 16 | | | | | | | | |
| | Epicentre: | | | 07 | 00 | 17 | | 16S | 174½W | 150 km | | | | USCGS |
| 7 | KP | P | Z | 08 | 55 | 41 | | | | | | | | |
| 7 | KP | eP | Z | 10 | 50 | 05 | | | | | | | | |
| 7 | KP | eP | Z | 11 | 07 | 01 | | | | | | | | |
| 7 | KP | P | Z | 13 | 08 | 01 | | | | | | | | |
| | | e | Z | | | 10 | | | | | | | | |
| | | e | Z | | | 24 | | | | | | | | |
| | Epicentre: | | | 12 | 55 | 51 | | Chile | | | | | | USCGS |
| 7 | KP | P | Z | 13 | 10 | 23 | | | | | | | | |
| | Epicentre: | | | 12 | 57 | 15 | | 53N | 158½E | | | | | USCGS |
| 7 | SU | e | N | 13 | 29 | 25 | | | | | | | | |
| | | iS | N | | 30 | 25 | n | | | | | 20 | 6 | |
| | ON | e(P) | E | 13 | 31 | 28 | | | | | | | | |
| | KP | eP | Z | 13 | 31 | 39 | | | | | | | | |
| | | i | Z | | | 43 | | | | | | | | |
| | | i | Z | | | 47 | | | | | | | | |
| | | e | Z | | 33 | 00 | | | | | | | | |
| | WN | e(P) | N | 13 | 32 | 09 | | | | | | | | |
| | | e(S) | N | | 35 | 43 | | | | | | | | |
| | CB | e(P) | E | 13 | 32 | 15 | | | | | | | | |
| | KM | e(P) | X | 13 | 32 | 36 | | | | | | | | |
| | GP | eP | N | 13 | 32 | 36 | | | | | | | | |
| | | eS | N | | 36 | 34 | | | | | | | | |
| | TU | e(S) | N | 13 | 35 | 08 | | | | | | | | |
| | Epicentre: | | | 13 | 27 | 49 | | 20S | 177½W | 500 km | | | | USCGS |
| 7 | KP | P | Z | 14 | 14 | 14 | | | | | | | | |
| 8 | KP | P | Z | 05 | 20 | 08 | | | | | | | | |
| | | i | Z | | | 50 | | | | | | | | |
| | Epicentre: | | | 05 | 10 | 25 | | 3½S | 127E | | | | | USCGS |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 8 | SU | e | N | 09 | 39 | 33 | | | | | | | | |
| | | S | N | | | 53 | | | | | | | | |
| | KP | e? | Z | 09 | 43 | 33 | | | | | | | | |
| | | i | Z | | | 40 | | | | | | | | |
| 9 | KP | e? | Z | 05 | 15 | 23 | | | | | | | | |
| | Epicentre: | | | 05 | 05 | 01 | 9S | 112½E | 350 | km | | | USCGS | |
| 9 | SU | e(P) | N | 11 | 26 | 32 | | | | | | | | |
| | | i | N | | | 38 | | | | | | | | |
| | | eS | N | | 28 | 28 | | | | | | | | |
| | | M | N | | 32 | | | | 110 | 10 | | | | |
| | ON | eP | E | 11 | 28 | 20 | | | | | | | | |
| | | e | E | | | 23 | | | | | | | | |
| | | e | E | | | 44 | | | | | | | | |
| | | e(S) | E | | 31 | 52 | | | | | | | | |
| | KP | eP | Z | 11 | 28 | 38 | | | | | | | | |
| | | e? | Z | | 37 | 24 | | | | | | | | |
| | TU | eP | N | 11 | 28 | 58 | | | | | | | | |
| | WN | P | ZN | 11 | 29 | 11 | 5 | 4 | | | | | | |
| | | e | Z | | | 20 | 7 | 6 | | | | | | |
| | | S | ZN | | 33 | 22 | | | 9 | 4 | | | | |
| | | eL | N | | 34 | | | | | | | | | |
| | | e | N | | 34 | 21 | | | | | | | | |
| | | e | N | | 35 | 08 | | | 10 | 7 | | | | |
| | | eL | ZN | | 36 | | | | | | | | | |
| | | M | N | | 39 | | 24 | 19 | 30 | 15 | | | | |
| | KM | e | X | 11 | 29 | 21 | | | | | | | | |
| | | e | X | | | 33 | | | | | | | | |
| | | e(S) | X | | 33 | 47 | | | | | | | | |
| | GP | eP | N | 11 | 29 | 27 | | | | | | | | |
| | RX | eP | N | 11 | 29 | 50 | | | 2 | 18 | | | | |
| | | eS | NE | | 34 | 09 | | | 9 | 20 | | | | |
| | | eL | E | | 36 | | | | | | 17 | 25 | | |
| | | eL | ZN | | 38 | | | | | | | | | |
| | | M | ZN | | 39 | | 23 | 20 | 25 | 23 | | | | |
| | Epicentre: | | | 11 | 23 | 51 | 18S | 169E | | | | | USCGS | 5¾-6 |
| 10 | SU | e | N | 09 | 10 | 25 | | | | | | | | |
| | KP | P | Z | 09 | 13 | 23 | | | | | | | | |
| | | e? | Z | | 14 | 37 | | | | | | | | |
| | Epicentre: | | | 09 | 08 | 02 | 15½S | 174W | | | | | USCGS | |
| 10 | SU | e | N | 11 | 33 | 12 | | | | | | | | |
| | | M | N | | 35 | | | | 12 | 8 | | | | |
| | KP | eP | Z | 11 | 36 | 33 | | | | | | | | |
| 10 | KP | P | Z | 12 | 08 | 12 | u | | | | | | | |
| | | e? | Z | | 12 | 32 | | | | | | | | |
| | Epicentre: | | | 11 | 59 | 06 | 6½S | 131E | | | | | USCGS | |
| 10 | SU | eP | N | 21 | 14 | 05 | | | | | | | | |
| | | e | N | | 15 | 02 | | | | | | | | |
| | | M | N | | 17 | | | | 200 | 11 | | | | |
| | ON | eP? | E | 21 | 17 | 17 | | | | | | | | |
| | | e | E | | | 24 | | | | | | | | |
| | | eS | E | | 21 | 27 | | | | | | | | |
| | | eL | E | | 23 | | | | | | | | | |
| | KP | eP | Z | 21 | 17 | 23 | | | | | | | | |
| | | e | Z | | 18 | 16 | | | | | | | | |
| | WN | eL | ZN | 21 | 26 | | | | | | | | | |
| | RX | eL | NE | 21 | 27 | | | | | | | | | |
| | | eL | ZNE | | 31 | | | | | | | | | |
| | | M | E | | 33 | | | | | | 22 | 13 | | |
| | Epicentre: | | | 21 | 12 | 05 | 15½S | 174W | | | | | USCGS | 5½ |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 11 | KP | eP | Z | 00 | 47 | 56 | | | | | | | | | |
| | Epicentre: | | | 00 | 34 | 48 | | 21S | 64½W | 300 | km | | | USCGS | |
| 11 | SU | eP | N | 15 | 19 | 50 | | | | | | | | | |
| | | e | N | | 20 | 13 | | | | | | | | | |
| | | e | N | | 24 | 30 | | | | | | | | | |
| | | e(S) | N | | | 57 | | | | | | | | | |
| | | e | N | | 25 | 52 | | | | | 80 | 11 | | | |
| | KP | P | Z | 15 | 21 | 05 | u | | | | | | | | |
| | | e | Z | | | 08 | | | | | | | | | |
| | | e | Z | | | 23 | | | | | | | | | |
| | | e | Z | | | 33 | | | | | | | | | |
| | | e(PPP) | Z | | 22 | 20 | | | | | | | | | |
| | | ePcP | Z | | 23 | 39 | | | | | | | | | |
| | | e(L) | Z | | 31 | | | | | | | | | | |
| | WN | P | ZN | 15 | 21 | 25 | | 15 | 5 | 10 | 6 | | | | |
| | | ePP | ZN | | 22 | 54 | | | | | | | | | |
| | | eS | N | | 27 | 10 | | | | | 15 | 7 | | | |
| | | e(SS) | ZN | | 30 | | | | | | | | | | |
| | | eL | ZN | | 32 | | | | | | | | | | |
| | | M | N | | 36 | | | | | | 200 | 15 | | | |
| | TU | e(P) | N | 15 | 21 | 26 | | | | | | | | | |
| | | e | N | | 22 | 50 | | | | | | | | | |
| | | e | N | | 29 | 49 | | | | | | | | | |
| | KM | eP | X | 15 | 21 | 26 | | | | | | | | | |
| | | e | X | | | 32 | | | | | | | | | |
| | | e | X | | | 55 | | | | | | | | | |
| | | eS | X | | 27 | 13 | | | | | | | | | |
| | | e(L) | X | | 30 | | | | | | | | | | |
| | GP | eP | N | 15 | 21 | 32 | | | | | | | | | |
| | | e | N | | | 36 | | | | | | | | | |
| | RX | P | ZN | 15 | 21 | 38 | dn | 12 | 7 | | | | | | |
| | | PP | ZN | | 23 | 07 | | | | | | | | | |
| | | S | E | 15 | 27 | 38 | | | | | | | 25 | 18 | |
| | | (SS) | NE | | 30 | 38 | | | | | | | | | |
| | | eL | ZNE | | 32½ | | | | | | | | | | |
| | | M | NE | | 36 | | | | | | 65 | 16 | 60 | 18 | |
| | Epicentre: | | | 15 | 14 | 07 | | 9S | 152½E | | | | | USCGS | 6 |
| 11 | SU | e? | N | 16 | 43 | 30 | | | | | | | | | |
| | | e | N | | | 40 | | | | | | | | | |
| | | e | N | | 47 | 24 | | | | | | | | | |
| | | e(S) | N | | 48 | 30 | | | | | 85 | 10 | | | |
| | KP | P | Z | 16 | 44 | 37 | | | | | | | | | |
| | | e | Z | | | 39 | | | | | | | | | |
| | | e | Z | | 45 | 17 | | | | | | | | | |
| | | e | Z | | | 37 | | | | | | | | | |
| | | e(PPP) | Z | | | 58 | | | | | | | | | |
| | | ePcP | Z | | 47 | 13 | | | | | | | | | |
| | | e | Z | | 51 | 56 | | | | | | | | | |
| | WN | P | ZN | 16 | 44 | 54 | d | | | | 5 | 7 | | | |
| | | PP | ZN | | 46 | 26 | | | | | 10 | 6 | | | |
| | | S | N | | 50 | 52 | | | | | 12 | 6 | | | |
| | | SS | N | | 53 | 28 | | | | | | | | | |
| | | eL | ZN | | 57 | | | | | | | | | | |
| | | M | N | 17 | 00 | | | | | | 200 | 15 | | | |
| | KM | eP | X | 16 | 44 | 55 | | | | | | | | | |
| | | e | X | | | 34 | | | | | | | | | |
| | | eS | X | | 50 | 42 | | | | | | | | | |
| | | e(L) | X | | 53 | | | | | | | | | | |
| | TU | e(P) | N | 16 | 44 | 56 | | | | | | | | | |
| | | e | N | | 53 | 09 | | | | | | | | | |
| | GP | eP | N | 16 | 45 | 04 | | | | | | | | | |
| | RX | eP | Z | 16 | 45 | 08 | | | | | | | | | |
| | | ePP | Z | | 46 | 40 | | | | | | | | | |
| | | e(S) | N | | 51 | 02 | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 11 | | e | E | | | 16 | | | | | | | | | |
| | | e(SS) | NE | | 54 | 06 | | | | | | | | | |
| | | eL | ZNE | | 56 | | | | | | | | | | |
| | Epicentre: | | | 16 | 37 | 40 | | 9½S | 152½E | | | | | USCGS | |
| | 11 KP | P | Z | 17 | 14 | 51 | u | | | | | | | | |
| | | e | Z | | | 57 | | | | | | | | | |
| | | e(PcP) | Z | | 17 | 21 | | | | | | | | | |
| | | e | Z | | | 27 | | | | | | | | | |
| | GP | e(P) | N | 17 | 15 | 20 | | | | | | | | | |
| | Epicentre: | | | 17 | 07 | 52 | | D'Entrecasteaux I. | | | | | | USCGS | |
| | 12 SU | P | N | 03 | 58 | 12 | | | | | | | | | |
| | | S | N | | 59 | 28 | | | | 20 | 5 | | | | |
| | ON | iP | E | 03 | 59 | 45 | e | | | | | | | | |
| | | iS | E | 04 | 02 | 16 | w | | | | | | | | |
| | KP | P | Z | 04 | 00 | 00 | u | | | | | | | | |
| | | e(S) | Z | | 02 | 47 | | | | | | | | | |
| | | e | Z | | 03 | 41 | | | | | | | | | |
| | | e | Z | | 06 | 53 | | | | | | | | | |
| | TU | eP | N | 04 | 00 | 03 | | | | | | | | | |
| | | e | N | | 02 | 44 | | | | | | | | | |
| | | (S) | N | | | 46 | | | | | | | | | |
| | | eScS | N | | 10 | 43 | | | | | | | | | |
| | WN | eP | N | 04 | 00 | 32 | n | | | | | | | | |
| | | e | N | | | 37 | | | | | | | | | |
| | | e | N | | | 54 | | | | | | | | | |
| | | e | N | | 03 | 34 | | | | | | | | | |
| | | (S) | N | | | 37 | | | | | | | | | |
| | KM | eP | X | 04 | 00 | 50 | | | | | | | | | |
| | | eS | X | | 04 | 05 | | | | | | | | | |
| | | e | X | | | 15 | | | | | | | | | |
| | GP | P | N | 04 | 00 | 56 | | | | | | | | | |
| | | S | N | | 04 | 15 | | | | | | | | | |
| | | e | N | | | 30 | | | | | | | | | |
| | | e | N | | | 35 | | | | | | | | | |
| | Epicentre: | | | 03 | 56 | 44 | | 22½S | 179E | 600 km | | | | USCGS | |
| | 12 ON | P | E | 07 | 00 | 05 | e | | | | | | | | |
| | | e | E | | | 30 | | | | | | | | | |
| | | S | E | | 01 | 30 | | | | | | | | | |
| | KP | P | Z | 07 | 00 | 14 | d | | | | | | | | |
| | TU | eP? | N | 07 | 00 | 16 | | | | | | | | | |
| | | e | N | | | 30 | | | | | | | | | |
| | | eS | N | | 01 | 47 | | | | | | | | | |
| | | e | N | | 02 | 09 | | | | | | | | | |
| | WN | (P) | N | 07 | 00 | 51 | | | | | | | | | |
| | | e | N | | 02 | 51 | | | | | | | | | |
| | | eS | N | | | 53 | | | | | | | | | |
| | SU | e | N | 07 | 01 | 10 | | | | | | | | | |
| | | e | N | | | 34 | | | | | | | | | |
| | | S | N | | 03 | 30 | | | | | | | | | |
| | GP | eP | N | 07 | 01 | 26 | | | | | | | | | |
| | | e | N | | 03 | 54 | | | | | | | | | |
| | | eS | N | | | 56 | | | | | | | | | |
| | KM | e(P) | X | 07 | 01 | 38 | | | | | | | | | |
| | | eS | X | | 03 | 46 | | | | | | | | | |
| | | e | X | | | 54 | | | | | | | | | |
| | Epicentre: | | | 06 | 58 | 12 | | 29½S | 179W | 250 km | | | | USCGS | |
| | 12 KP | eP | Z | 07 | 30 | 31 | | | | | | | | | |
| | WN | e | ZN | 07 | 31 | 29 | | | | | | | | | |
| | | eS | N | | 39 | 16 | | | | | | | | | |
| | | eL | N | | 47 | | | | | | | | | | |
| | | eL | ZN | | 50 | | | | | | | | | | |
| | | M | ZN | | 52 | | | | | 15 | 18 | 7 | 20 | | |



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| JUN 12 | RX | eS | ZNE | 07 | 39 | 38 | | | | | 3 | 20 | 7 | 22 | |
| | | eSS | E | | 43 | .8 | | | | | | | | | |
| | | e(L) | N | | 47 | | | | | | | | | | |
| | | eL | ZNE | | 50 | .5 | | | | | | | | | |
| | | M | ZE | | 52 | | | | | 15 | 20 | | 8 | 20 | |
| | SU | eS | N | 07 | 41 | 10 | | | | | | | | | |
| | | eL | N | | 50 | 27 | | | | | | | | | |
| | Epicentre: | | | 07 | 19 | 43 | | 36S | 98W | | | | | USCGS | 6½ |
| | 12 KP | P | Z | 15 | 16 | 49 | | | | | | | | | |
| | Epicentre: | | | 15 | 04 | 57 | | Chile | | | | | | USCGS | |
| | 12 ON | e | E | 15 | 19 | 49 | | | | | | | | | |
| | | e | E | | 22 | 13 | | | | | | | | | |
| | SU | eL | N | 15 | 20 | 00 | | | | | 7 | 10 | | | |
| | KP | P | Z | 15 | 20 | 15 | | | | | | | | | |
| | | e | Z | | | 24 | | | | | | | | | |
| | TU | e? | N | 15 | 20 | 30 | | | | | | | | | |
| | | e | N | | | 43 | | | | | | | | | |
| | WN | P | N | 15 | 20 | 51 | | | | | | | | | |
| | KM | e(P) | X | 15 | 21 | 05 | | | | | | | | | |
| | GP | e(P) | N | 15 | 21 | 14 | | | | | | | | | |
| | Epicentre: | | | 15 | 16 | 20 | | 22½S | 172E | | | | | USCGS | |
| | 13 KP | e | Z | 05 | 58 | 52 | | | | | | | | | |
| | RX | eS | N | 06 | 08 | 38 | | | | | 3 | 28 | | | |
| | | eL | NE | | 22 | | | | | | | | | | |
| | | M | N | | 24 | | | | | | 2 | 19 | | | |
| | WN | e | N | 06 | 09 | 24 | | | | | | | | | |
| | | eL | ZN | | 21 | | | | | | | | | | |
| | | M | Z | | 25 | | | | 2 17 | | | | | | |
| | Epicentre: | | | 05 | 47 | 05 | | 44½S | 76½W | | | | | USCGS | |
| | 13 ON | e(P) | E | 03 | 23 | 05 | | | | | | | | | |
| | KP | P | Z | 03 | 23 | 17 | | | | | | | | | |
| | | e | Z | | | 24 | | | | | | | | | |
| | 14 KP | e | Z | 03 | 06 | 04 | | | | | | | | | |
| | | e | Z | | | 23 | | | | | | | | | |
| | RX | eL | NE | 03 | 32 | | | | | | | | | | |
| | Epicentre: | | | 02 | 54 | 13 | | 43S | 73W | | | | | USCGS | |
| | 14 KP | eP? | Z | 23 | 45 | 06 | | | | | | | | | |
| | | e | Z | | | 08 | | | | | | | | | |
| | CT | eP | Z | 23 | 45 | 17 | | | | | | | | | |
| | WN | eP | Z | 23 | 45 | 31 | | | | | | | | | |
| | | eL | N | | 55 | | | | | | | | | | |
| | | eL | Z | | 57 | | | | | | | | | | |
| | | M | N | 24 | 00 | | | | | | 5 | 17 | | | |
| | RX | eL | NE | 23 | 54 | | | | | | | | | | |
| | | eL | E | | 58 | | | | | | | | | | |
| | | M | NE | 24 | 01 | | | | | | 3 | 14 | 2 | 14 | |
| | Epicentre: | | | 23 | 38 | 13 | | 9S | 152½E | | | | | USCGS | |
| | 15 ON | e? | E | 02 | 11 | 07 | | | | | | | | | |
| | | e | E | | | 26 | | | | | | | | | |
| | | e | E | | | 39 | | | | | | | | | |
| | | e | E | | | 47 | | | | | | | | | |
| | KP | P | Z | 02 | 11 | 09 | | | | | | | | | |
| | | e | Z | | | 29 | | | | | | | | | |
| | | e | Z | | 12 | 21 | | | | | | | | | |
| | TU | e(P) | N | 02 | 11 | 12 | | | | | | | | | |
| | | e(S) | N | | | 59 | | | | | | | | | |
| | WN | S | N | 02 | 13 | 08 | | | | | | | | | |
| | KM | S | X | 02 | 14 | 08 | | | | | | | | | |
| | GP | S | N | 02 | 14 | 12 | | | | | | | | | |

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| JUN 15 | RX | eL | N | 02 | 18 | | | | | | 1 18 | | | | |
| | Epicentre: | | | 02 | 10 | 11 | | 35½S | 179E | N | | | | NZ(D) | 5.0 NZ |
| | 15 KP | P | Z | 02 | 53 | 21 | | | | | | | | | |
| | | i | Z | | | 23 | | | | | | | | | |
| | | e | Z | | | 29 | | | | | | | | | |
| | 15 KP | eP | Z | 02 | 57 | 06 | | | | | | | | | |
| | | i | Z | | | 08 | u | | | | | | | | |
| | TU | eP | N | 02 | 57 | 24 | | | | | | | | | |
| | WN | eP | N | 02 | 57 | 36 | | | | | | | | | |
| | KM | eP | X | 02 | 58 | 00 | | | | | | | | | |
| | GP | eP | N | 02 | 58 | 01 | | | | | | | | | |
| | 15 KP | eP | Z | 04 | 41 | 41 | | | | | | | | | |
| | | e | Z | | | 42 | 55 | | | | | | | | |
| | 15 CT | e(P) | Z | 09 | 52 | 12 | | | | | | | | | |
| | KP | P | Z | 09 | 52 | 16 | | | | | | | | | |
| | RX | e(L) | N | 10 | 15 | | | | | | | | | | |
| | 15 KP | P | Z | 10 | 15 | 00 | | | | | | | | | |
| | 15 KP | P | Z | 13 | 55 | 44 | | | | | | | | | |
| | 15 KP | P | Z | 15 | 49 | 19 | u | | | | | | | | |
| | | e | Z | | | 31 | | | | | | | | | |
| | | e | Z | | 50 | 00 | | | | | | | | | |
| | RX | eL | ZN | 16 | 20 | | | | | | 2 25 | | | | |
| | WN | eL | ZN | 16 | 21 | | | | | | | | | | |
| | Epicentre: | | | 15 | 36 | 51 | | 41N | 142½E | | | | | USCGS | |
| | 15 KP | P | Z | 16 | 55 | 55 | | | | | | | | | |
| | 15 ON | eP | E | 22 | 51 | 33 | | | | | | | | | |
| | | e | E | | | 42 | | | | | | | | | |
| | | e | E | | 52 | 01 | | | | | | | | | |
| | | eL | E | | 54 | .5 | | | | | | | | | |
| | TU | eP | N | 22 | 51 | 34 | | | | | | | | | |
| | | e | N | | 52 | 59 | | | | | | | | | |
| | | eS | N | | 53 | 01 | | | | | | | | | |
| | | e | N | | | 43 | | | | | | | | | |
| | KP | eP | Z | 22 | 51 | 36 | | | | | | | | | |
| | | e | Z | | | 44 | | | | | | | | | |
| | | e | Z | | 53 | 09 | | | | | | | | | |
| | | e | Z | | | 36 | | | | | | | | | |
| | | e | Z | | 54 | 17 | | | | | | | | | |
| | CT | e | Z | 22 | 51 | 59 | | | | | | | | | |
| | | e | Z | | 52 | 19 | | | | | | | | | |
| | | e | Z | | 53 | 33 | | | | | | | | | |
| | | e | Z | | 55 | 16 | | | | | | | | | |
| | GP | e? | N | 22 | 52 | 53 | | | | | | | | | |
| | | e | N | | 53 | 08 | | | | | | | | | |
| | | eS | N | | 55 | 13 | | | | | | | | | |
| | SU | e? | N | 22 | 52 | 55 | | | | | | | | | |
| | | e | N | | 54 | 05 | | | | | | | | | |
| | | eL | N | | 47 | | | | | | | | | | |
| | | M | N | 22 | 59 | | | | | | 30 12 | | | | |
| | KM | e | X | 22 | 52 | 59 | | | | | | | | | |
| | | eS | X | | 55 | 07 | | | | | | | | | |
| | WN | S | N | 22 | 54 | 08 | | | | | | | | | |
| | | eL | ZN | | 56 | .7 | | | | | | | | | |
| | RX | eL | NE | 22 | 58 | | | | | | 5 20 | | 5 20 | | |
| | Epicentre: | | | 22 | 49 | 41 | | 32.6S | 177.3W | N | | | | NZ(D) | 6.0 NZ |

Additional readings from Brisbane and Charters Towers used to determine epicentre.



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 15 | ON | eP | E | 23 | 33 | 16 | | | | | | | | | |
| | | i | E | | | 21 | w | | | | | | | | |
| | | eL | E | | 35 | .5 | | | | | | | | | |
| | TU | eP | N | 23 | 33 | 17 | | | | | | | | | |
| | | e | N | | | 32 | | | | | | | | | |
| | | eS | N | | 34 | 43 | | | | | | | | | |
| | | e | N | | 35 | 24 | | | | | | | | | |
| | KP | eP | Z | 23 | 33 | 20 | | | | | | | | | |
| | | e | Z | | | 22 | | | | | | | | | |
| | | e(S) | Z | | 34 | 51 | | | | | | | | | |
| | | e | Z | | 35 | 09 | | | | | | | | | |
| | | eL | Z | | 36 | | | | | | | | | | |
| | CT | e | Z | 23 | 33 | 42 | | | | | | | | | |
| | | e | Z | | | 52 | | | | | | | | | |
| | | e | Z | | 35 | 13 | | | | | | | | | |
| | | e | Z | | 37 | 35 | | | | | | | | | |
| | WN | eP? | N | 23 | 33 | 58 | | | | | | | | | |
| | | e | N | | 35 | 51 | | | | | | | | | |
| | | eS | N | | | 54 | | | | | | | | | |
| | | eL | N | | 38 | 30 | | | | | | | | | |
| | GP | eP | N | 23 | 34 | 36 | | | | | | | | | |
| | | e | N | | | 59 | | | | | | | | | |
| | | e(S) | N | | 36 | 56 | | | | | | | | | |
| | | e | N | | 37 | 00 | | | | | | | | | |
| | KM | e | X | 23 | 34 | 43 | | | | | | | | | |
| | | eS | X | | 36 | 51 | | | | | | | | | |
| | | e | X | | 37 | 05 | | | | | | | | | |
| | SU | e(P) | N | 23 | 34 | 55 | | | | | | | | | |
| | | e | N | | 35 | 49 | | | | | | | | | |
| | | (L) | N | | 38 | 23 | | | | | | | | | |
| | | M | N | | 40 | | | | | | 100 12 | | | | |
| | RX | L | ZNE | 23 | 40 | 08 | | | | | 20 21 | | 20 22 | | |
| | | M | E | | 43 | | | | | | | | 30 17 | | |
| | | M | N | | 44 | | | | | | 35 15 | | | | |
| | Epicentre: | | | 23 | 31 | 26 | | 32.7S | 177.3W | N | | | | NZ(C) | 6.1 NZ |

Additional readings from Brisbane and Charters Towers used to determine epicentre.

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 KP | P | Z | 03 | 34 | 31 | | | | | | | | | | |
| | i | Z | | | 43 | d | | | | | | | | | |
| RX | e(SS) | NE | 03 | 46 | 52 | | | | | | | | | | |
| Epicentre: | | | 03 | 24 | 42 | | 12N | 143½E | 150 km | | | | | USCGS | |
| 16 KP | eP | Z | 06 | 49 | 41 | | | | | | | | | | |
| Epicentre: | | | 06 | 37 | 48 | | 12½N | 125E | | | | | | USCGS | |
| 16 ON | $eP_1$ | E | 09 | 04 | 06 | | Two superimposed shocks | | | | | | | | |
| | $eS_1$ | E | | | 43 | | | | | | | | | | |
| | e | E | | | 55 | | | | | | | | | | |
| | $eP_2$ | E | | 06 | 05 | | | | | | | | | | |
| | e | E | | | 10 | | | | | | | | | | |
| | $eS_2$ | E | | | 43 | | | | | | | | | | |
| | e(L) | E | | 07 | 28 | | | | | | | | | | |
| KP | $P_1$ | Z | 09 | 04 | 07 | u | | | | | | | | | |
| | e | Z | | | 14 | | | | | | | | | | |
| | e | Z | | | 23 | | | | | | | | | | |
| | $eP_2$ | Z | | 06 | 06 | | | | | | | | | | |
| | e | Z | | | 22 | | | | | | | | | | |
| | e | Z | | 08 | 53 | | | | | | | | | | |
| TU | $eP_1$ | N | 09 | 04 | 10 | | | | | | | | | | |
| | $eS_1$ | N | | | 56 | | | | | | | | | | |
| | $P_2$ | N | | 06 | 09 | | | | | | | | | | |
| | $eS_2$ | N | | | 54 | | | | | | | | | | |
| CT | $eP_1$ | Z | 09 | 04 | 25 | | | | | | | | | | |
| | e | Z | | | 29 | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 16 | | $iP_2$ | Z | 09 | 06 | 22 | u | | | | | | | | |
| | | e | Z | | | 46 | | | | | | | | | |
| | WN | e? | N | 09 | 05 | 08 | | | | | | | | | |
| | | $eS_1$ | N | | 06 | 02 | | | | | | | | | |
| | | e | N | | | 04 | | | | | | | | | |
| | | e | N | | | 29 | | | | | | | | | |
| | | e | N | | 07 | 15 | | | | | | | | | |
| | | $eS_2$ | N | | 08 | 01 | | | | | | | | | |
| | | e | N | | | 29 | | | | | | | | | |
| | GP | e? | N | 09 | 06 | 03 | | | | | | | | | |
| | | $eS_1$ | N | | 07 | 09 | | | | | | | | | |
| | | e | N | | | 19 | | | | | | | | | |
| | | $e(P_2)$ | N | | | 44 | | | | | | | | | |
| | | $eS_2$ | N | | 09 | 07 | | | | | | | | | |
| | | e | N | | | 23 | | | | | | | | | |
| | KM | e | X | 09 | 06 | 05 | | | | | | | | | |
| | | e | X | | | 36 | | | | | | | | | |
| | | $eS_1$ | X | | 07 | 05 | | | | | | | | | |
| | | $e(P_2)$ | X | | | 40 | | | | | | | | | |
| | | $eS_2$ | X | | 09 | 02 | | | | | | | | | |
| | SU | e | N | 09 | 09 | 39 | | | | | | | | | |
| | | e(S) | N | | 12 | 50 | | | | | | | | | |
| | RX | eL | ZNE | 09 | 12 | | | | | 3 | 18 | | | | |
| | Epicentre: | | 1 | 09 | 03 | 10 | | 35.2S | 178.8E | N | | | | NZ(D) | 4.9 NZ |
| | | | 2 | 09 | 05 | 10 | | 35.3S | 178.7E | N | | | | NZ(D) | 5.1 NZ |
| | | | | | | | | Additional readings from Brisbane and Charters Towers used to determine epicentre. | | | | | | | |
| 16 | KP | eP | Z | 10 | 05 | 20 | | | | | | | | | |
| | | e | Z | | | 34 | | | | | | | | | |
| | Epicentre: | | | 09 | 55 | 28 | | 11½N | 144E | | | | | USCGS | |
| 16 | RX | eL | ZNE | 11 | 10 | | | | | 1 | 18 | | | | |
| | Epicentre: | | | 10 | 20 | 04 | | 2S | 69E | | | | | USCGS | |
| 17 | SU | e | N | 02 | 46 | 17 | | | | | | | | | |
| | | M | N | | 47 | | | | | 9 | 8 | | | | |
| | ON | P | E | 02 | 48 | 50 | | | | | | | | | |
| | | S | E | | 52 | 05 | | | | | | | | | |
| | KP | P | Z | 02 | 49 | 03 | | | | | | | | | |
| 17 | SU | e | N | 05 | 05 | 04 | | | | | | | | | |
| | | e | N | | | 24 | | | | | | | | | |
| | ON | eP | E | 05 | 06 | 25 | | | | | | | | | |
| | KP | P | Z | 05 | 06 | 37 | u | | | | | | | | |
| | WN | eP | N | 05 | 07 | 05 | | | | | | | | | |
| | Epicentre: | | | 05 | 02 | 34 | | 18S | 178W | 600 km | | | | USCGS | |
| 17 | KP | P | Z | 07 | 28 | 07 | | | | | | | | | |
| 17 | KP | P | Z | 10 | 40 | 29 | | | | | | | | | |
| 17 | SU | i(P) | N | 14 | 47 | 49 | s | | | | | | | | |
| | | e(S) | N | | 49 | 36 | | | | 6 | 5 | | | | |
| | KP | P | Z | 14 | 48 | 23 | | | | | | | | | |
| | | e | Z | | 49 | 08 | | | | | | | | | |
| | | e | Z | | 50 | 43 | | | | | | | | | |
| | CT | e(P) | Z | 14 | 50 | 54 | | | | | | | | | |
| | | e | Z | | 51 | 02 | | | | | | | | | |
| | WN | eS | N | 14 | 51 | 37 | | | | | | | | | |
| | GP | eS | N | 14 | 52 | 34 | | | | | | | | | |
| | | e | N | | | 39 | | | | | | | | | |
| 17 | WN | eL | N | 16 | 26 | | | | | | | | | | |
| | KP | P | Z | 16 | 48 | 33 | | | | | | | | | |



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 17 | | e | Z | | | 41 | | | | | | | | | |
| | | e | Z | | | 46 | | | | | | | | | |
| | SU | eL | N | 17 | 10 | | | | | | | | | | |
| | RX | eL | NE | 17 | 26 | | | | | | | | | | |
| | Epicentre: | | | 16 | 35 | 32 | | 52½N | 173½W | | | | | USCGS | 6¼ |
| 17 | KP | eP | Z | 17 | 57 | 59 | | | | | | | | | |
| 18 | ON | e? | E | 02 | 34 | 51 | | | | | | | | | |
| | KP | e(P) | Z | 02 | 34 | 54 | | | | | | | | | |
| | SU | e | N | 02 | 35 | 50 | | | | | | | | | |
| | | e | N | | 36 | 10 | | | | | | | | | |
| | | eL | N | | 39 | | | | | | | | | | |
| | | M | N | | 41 | | | | | | | 20 | 13 | | |
| | GP | e? | N | 02 | 36 | 23 | | | | | | | | | |
| | | e(S) | N | | 38 | 44 | | | | | | | | | |
| | WN | e(S) | N | 02 | 37 | 35 | | | | | | | | | |
| | | e | N | | 39 | 37 | | | | | | | | | |
| | | e(L) | N | | 41 | | | | | | | | | | |
| | RX | eL | NE | 02 | 42 | | | | | | | | | | |
| | | eL | Z | | 44 | | | | | | | | | | |
| | | M | ZN | | 45 | | | 4 | 16 | | | 4 | 16 | | |
| 18 | KP | e? | Z | 22 | 43 | 18 | | | | | | | | | |
| | SU | e | N | 22 | 43 | 45 | | | | | | | | | |
| | | L | N | | 47.5 | | | | | | | | | | |
| | | M | N | | 48 | | | | | | | 8 | 15 | | |
| | TU | e | N | 22 | 45 | 29 | | | | | | | | | |
| | WN | eL | ZN | 22 | 50 | | | | | | | | | | |
| | RX | eL | NE | 22 | 52 | | | | | | | | | | |
| 18 | KP | eP? | Z | 23 | 44 | 07 | | | | | | | | | |
| | CT | P? | Z | 23 | 44 | 22 | | | | | | | | | |
| | Epicentre: | | | 23 | 32 | 39 | | Sumatra | | | | | | USCGS | |
| 19 | KP | P | Z | 08 | 37 | 45 | | | | | | | | | |
| 19 | SU | iP | N | 12 | 23 | 09 | s | | | | | | | | |
| | | iS | N | | 24 | 10 | s | | | | | | | | |
| | ON | iP | E | 12 | 26 | 09 | w | | | | | | | | |
| | KP | iP | Z | 12 | 26 | 24 | u | | | | | | | | |
| | | e | Z | | 27 | 00 | | | | | | | | | |
| | | e | Z | | | 29 | | | | | | | | | |
| | | e | Z | | | 37 | | | | | | | | | |
| | TU | eP | N | 12 | 26 | 27 | | | | | | | | | |
| | | eS | N | | 30 | 14 | | | | | | | | | |
| | CT | eP? | Z | 12 | 26 | 41 | | | | | | | | | |
| | | i | Z | | 29 | 50 | | | | | | | | | |
| | WN | eP | N | 12 | 26 | 52 | | | | | | | | | |
| | GP | P | N | 12 | 27 | 16 | | | | | | | | | |
| | TO | i | Z | 12 | 29 | 50 | | | | | | | | | |
| | Epicentre: | | | 12 | 21 | 53 | | 15S | 178½W | 500 km | | | | USCGS | |
| 19 | KP | eP | Z | 17 | 28 | 58 | | | | | | | | | |
| | Epicentre: | | | 17 | 17 | 25 | | 38N | 142½E | | | | | USCGS | |
| 20 | WN | P | Z | 02 | 13 | 17 | | 15 | 7 | | | | | | |
| | | e | N | | | 22 | | | | | | | | | |
| | | e(PP) | ZN | | 16 | 24 | | | | | | | | | |
| | | e | N | | 18 | 49 | | | | | | | | | |
| | | eS | ZN | | 23 | 17 | | | | | | | | | |
| | | e | N | | 24 | 45 | | | | | | | | | |
| | | SS | ZN | | 28 | 48 | | | | | | 26 | 20 | | |
| | | Lq | N | | 34 | | | | | | | | | | |
| | | Lr | ZN | | 38 | | | | | | | | | | |
| | | M | ZN | | 46 | | | 35 | 16 | | | 35 | 17 | | |

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| JUN 20 | RX | eP | ZN | 02 | 13 | 22 | | | | | | | | | |
| | | iS | NE | | 23 | 20 | sw | | | | | | | | |
| | | e | NE | | 24 | 40 | | | | | | | | | |
| | | SS | NE | | 28 | 5 | | | | | | 30 | 20 | | |
| | | eLq | NE | | 34 | 6 | | | | | | | | | |
| | | eLr | ZNE | | 38 | | | | | | | | | | |
| | | M | ZNE | | 41 | | | 110 | 19 | 35 | 18 | 55 | 18 | | |
| | TO | eP | Z | 02 | 13 | 26 | | | | | | | | | |
| | CT | eP | Z | 02 | 13 | 26 | | | | | | | | | |
| | | ePcP | Z | | | 33 | | | | | | | | | |
| | CB | e(P) | E | 02 | 13 | 29 | | | | | | | | | |
| | | S | E | | 23 | 27 | | | | | | | | | |
| | KP | eP | Z | 02 | 13 | 30 | | | | | | | | | |
| | | iPcP | Z | | | 37 | u | | | | | | | | |
| | | e | Z | | 14 | 28 | | | | | | | | | |
| | | ePP | Z | | 16 | 40 | | | | | | | | | |
| | KM | e | X | 02 | 13 | 31 | | | | | | | | | |
| | | eS | X | | 23 | 30 | | | | | | | | | |
| | SU | P | N | 02 | 14 | 30 | s | | | | | | | | |
| | | e(PP) | N | | 18 | 03 | | | | | | | | | |
| | | PPP | N | | 20 | 10 | | | | | | | | | |
| | | iSKS | N | | 24 | 55 | s | | | | | | | | |
| | | e(S) | N | | 25 | 40 | | | | | | | | | |
| | | eSS | N | | 32 | | | | | | | | | | |
| | | eL | N | | 44 | | | | | | | | | | |
| | | M | N | | 51 | | | | | 55 | 18 | | | | |
| | ON | e | E | 02 | 24 | 00 | | | | | | | | | |
| | | eL | E | | 41 | | | | | | | | | | |
| | GP | eL | N | 02 | 38 | | | | | | | | | | |
| | Epicentre: | | | 02 | 01 | 08 | | 38S | 73½W | | | | | USCGS | 7-7½ |
| 20 | WN | P | ZN | 13 | 11 | 47 | | | | | | | | | |
| | | S | N | | 21 | 45 | | | | | | | | | |
| | | e | N | | 22 | 01 | | | | | | | | | |
| | | SS | ZN | | 27 | 18 | | | | | | | | | |
| | | eLq | N | | 33 | | | | | | | | | | |
| | | Lr | ZN | | 37 | | | | | | | | | | |
| | | M | ZN | | 38 | | | | 20 | 19 | 25 | 20 | | | |
| | CT | P | Z | 13 | 11 | 53 | | | | | | | | | |
| | | e | Z | | 12 | 02 | u | | | | | | | | |
| | | i | Z | | | 25 | u | | | | | | | | |
| | RX | eP | ZNE | 13 | 11 | 53 | | | | | | | | | |
| | | iS | NE | | 21 | 44 | w | | | | | | | | |
| | | e | N | | 22 | 55 | | | | | | | | | |
| | | eSS | NE | | 26 | 9 | | | | | | | | | |
| | | eLq | NE | | 32 | 7 | | | | | | | | | |
| | | eLr | ZNE | | 36 | | | | | | | | | | |
| | | M | E | | 37 | | | | | | | | | | |
| | | M | ZN | | 38 | | | | 60 | 21 | 30 | 21 | | | |
| | KP | P | Z | 13 | 11 | 56 | | | | | | | | | |
| | | e | Z | | 12 | 06 | | | | | | | | | |
| | | ePP | Z | | 15 | 08 | | | | | | | | | |
| | CB | eP | E | 13 | 11 | 57 | | | | | | | | | |
| | | S | E | | 21 | 53 | | | | | | | | | |
| | TO | e | Z | 13 | 12 | 02 | | | | | | | | | |
| | | e | Z | | | 25 | | | | | | | | | |
| | KM | e | X | 13 | 12 | 11 | | | | | | | | | |
| | | eS | X | | 21 | 55 | | | | | | | | | |
| | SU | P | N | 13 | 13 | 00 | | | | | | | | | |
| | | ePP | N | | 16 | 22 | | | | | | | | | |
| | | SKS | N | | 23 | 21 | | | | | | | | | |
| | | e | N | | | 55 | | | | | | | | | |
| | | SS | N | | 30 | 25 | | | | | | | | | |
| | | eL | N | | 42 | | | | | | | | | | |
| | | M | N | | 51 | | | | | | | | | | |
| | ON | e | E | 13 | 22 | 26 | | | | | | | | | |



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| JUN 20 | | eL | E | | 39 | | | | | | | | | | |
| | GP | eL | N | 13 | 36 | | | | | | | | | | |
| | Epicentre: | | | 12 | 59 | 40 | | 39½S | 73W | | | | | USCGS | 6¾-7 |
| 20 | KP | eP | Z | 14 | 35 | 35 | | | | | | | | | |
| | Epicentre: | | | 14 | 23 | 30 | | Chile | | | | | | USCGS | |
| 20 | CT | eP | Z | 17 | 11 | 55 | | | | | | | | | |
| | KP | eP | Z | 17 | 11 | 58 | | | | | | | | | |
| | RX | eL | E | 17 | 39 | | | | | | | | | | |
| | Epicentre: | | | 16 | 59 | 35 | | 38½S | 74W | | | | | USCGS | |
| 20 | KP | eP? | Z | 23 | 09 | 07 | | | | | | | | | |
| | Epicentre: | | | 22 | 56 | 49 | | 36½N | 139½E | | | | | USCGS | |
| 20 | KP | eP | Z | 14 | 35 | 35 | | | | | | | | | |
| | Epicentre: | | | 14 | 23 | 30 | | Chile | | | | | | USCGS | |
| 20 | CT | eP | Z | 17 | 11 | 55 | | | | | | | | | |
| | KP | eP | Z | 17 | 11 | 58 | | | | | | | | | |
| | RX | eL | E | 17 | 39 | | | | | | | | | | |
| | Epicentre: | | | 16 | 59 | 35 | | 38½S | 74W | | | | | USCGS | |
| 20 | KP | eP? | Z | 23 | 09 | 07 | | | | | | | | | |
| | Epicentre: | | | 22 | 56 | 49 | | 36½N | 139½E | | | | | USCGS | |
| 21 | RX | eL | ZNE | 09 | 15 | | | | | | | | | | |
| | Epicentre: | | | 08 | 34 | 39 | | 4½S | 105W | | | | | USCGS | |
| 21 | KP | P | Z | 12 | 53 | 50 | | | | | | | | | |
| | Epicentre: | | | 12 | 43 | 31 | | 3N | 126½E | | | | | USCGS | |
| 21 | SU | iS | N | 18 | 11 | 35 | n | | | | | | | | |
| | KP | eP | Z | 18 | 31 | 21 | | | | | | | | | |
| | | epP | Z | | 14 | 21 | | | | | | | | | |
| | Epicentre: | | | 18 | 09 | 19 | | 19S | 178W | 400 | km | | | USCGS | |
| 21 | KP | eP? | Z | 21 | 46 | 00 | | | | | | | | | |
| | | e | Z | | | 02 | | | | | | | | | |
| | RX | eL | ZNE | 22 | 14 | | | | | | | | | | |
| | | M | ZN | | 18 | | | | | | | 2 | 17 | | |
| | Epicentre: | | | 21 | 33 | 45 | | 61S | 21W | | | | | USCGS | |
| 22 | KP | e? | Z | 02 | 28 | 15 | | | | | | | | | |
| | | e | Z | | 29 | 47 | | | | | | | | | |
| | | e | Z | | 30 | 27 | | | | | | | | | |
| | ON | e | E | 02 | 29 | 38 | | | | | | | | | |
| | TU | eS | N | 02 | 31 | 27 | | | | | | | | | |
| | WN | S | N | 02 | 32 | 31 | | | | | | | | | |
| | Epicentre: | | | 02 | 27 | 22 | | Kermadec Is | | | | | | USCGS | |
| 22 | RX | eL | ZN | 03 | 07 | | | | | | | 3 | 20 | | |
| | WN | eL | N | 03 | 12 | | | | | | | | | | |
| | Epicentre: | | | 02 | 58 | 24 | | 62S | 156½E | | | | | USCGS | |
| 22 | KP | P | Z | 06 | 52 | 25 | | | | | | | | | |
| | | e | Z | | | 47 | | | | | | | | | |
| | Epicentre: | | | 06 | 40 | 10 | | Chile | | | | | | USCGS | |
| 22 | KP | P? | Z | 08 | 23 | 44 | | | | | | | | | |
| | Epicentre: | | | 08 | 11 | 50 | | Chile | | | | | | USCGS | |
| 22 | ON | P | E | 17 | 35 | 19 | | | | | | | | | |
| | | S | E | | 36 | 15 | | | | | | | | | |
| | KP | P | Z | 17 | 35 | 26 | | | | | | | | | |
| | | i | Z | | 36 | 35 | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | | Az Tz | An Tn | Ae Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 22 | TU | e | N | 17 | 35 | 31 | | | | | | |
| | | eS | N | | 36 | 25 | | | | | | |
| | | e | N | | | 39 | | | | | | |
| | CT | P | Z | 17 | 35 | 38 | | | | | | |
| | | eS | Z | | 36 | 52 | | | | | | |
| | WN | eP | N | 17 | 36 | 02 | | | | | | |
| | | e | N | | 37 | 30 | | | | | | |
| | | eS | N | | | 32 | | | | | | |
| | GP | P | N | 17 | 36 | 38 | | | | | | |
| | | e | N | | 38 | 33 | | | | | | |
| | | S | N | | | 37 | | | | | | |
| | CB | eS | E | 17 | 37 | 51 | | | | | | |
| | KM | eS | X | 17 | 38 | 28 | | | | | | |
| | Epicentre: | | | 17 | 34 | 05 | | 34.0S 180 | N? | | NZ(D) | 5.5 NZ |
| 22 | KP | P | Z | 20 | 25 | 35 | | | | | | |
| | Epicentre: | | | 20 | 13 | 18 | | 38½S 73½W | | | USCGS | |
| 22 | KP | eP | Z | 23 | 41 | 47 | | | | | | |
| | Epicentre: | | | 23 | 28 | 50 | | 52N 173W | | | USCGS | |
| 23 | CB | eP | E | 12 | 17 | 28 | | | | | | |
| | KP | P | Z | 12 | 17 | 33 | | | | | | |
| | | e | Z | | | 46 | | | | | | |
| | | e | Z | | 18 | 16 | | | | | | |
| | | e | Z | | | 41 | | | | | | |
| | KM | e(P) | X | 12 | 17 | 35 | | | | | | |
| | GP | e(P) | N | 12 | 17 | 36 | | | | | | |
| | WN | P | N | 12 | 17 | 37 | | | | | | |
| | CT | P? | Z | 12 | 17 | 37 | d | | | | | |
| | | i | Z | | | 38 | u | | | | | |
| | RX | eL | N | 12 | 36 | | | | | | | |
| | | M | ZNE | | 40 | | | | | | | |
| | Epicentre: | | | 12 | 08 | 13 | | 7S 127½E | | | USCGS | |
| 24 | SU | iP | N | 15 | 30 | 21 | n | | | | | |
| | | e(L) | N | | 32 | 15 | | | | | | |
| | KP | eP | Z | 15 | 32 | 37 | | | | | | |
| | GP | e? | N | 15 | 33 | 07 | | | | | | |
| | WN | eL | ZN | 15 | 40 | | | | | | | |
| | RX | eL | ZNE | 15 | 41 | | | | | | | |
| | | M | ZN | | 42 | | | | 4 18 | | | |
| | Epicentre: | | | 15 | 28 | 09 | | 19S 169E | | | | |
| | | | | | | | | Additional readings from Brisbane and Charters Towers used to determine epicentre. | | | | |
| 24 | ON | e? | E | 22 | 36 | 58 | | | | | | |
| | | e | E | | 37 | 04 | | | | | | |
| | KP | eP? | Z | 22 | 37 | 03 | | | | | | |
| | | e | Z | | | 11 | | | | | | |
| | | e | Z | | | 34 | | | | | | |
| | SU | e | N | 22 | 38 | 20 | | | | | | |
| | | eL | N | | 42 | | | | 3 15 | | | |
| | KM | eP | X | 22 | 38 | 24 | | | | | | |
| | | eS | X | | 40 | 59 | | | | | | |
| | GP | eP? | N | 22 | 38 | 24 | | | | | | |
| | | e | N | | | 30 | | | | | | |
| | | eS | N | | 41 | 00 | | | | | | |
| | | e | N | | | 04 | | | | | | |
| | TU | eS | N | 22 | 38 | 44 | | | | | | |
| | | e | N | | 39 | 44 | | | | | | |
| | WN | eS | N | 22 | 39 | 53 | | | | | | |
| | | e | N | | 40 | 02 | | | | | | |
| | CB | eS | E | 22 | 40 | 18 | | | | | | |
| | RX | eL | N | 22 | 46 | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az Tz | An Tn | Ae Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 24 | Epicentre: | | | 22 | 35.1 | | | 30S 177½W 200 km | | | NZ(D) | 5.6 NZ |
| | | | | | | | | Additional readings from Brisbane, Charters Towers and Spring Valley used to determine epicentre. | | | | |
| 25 | KP | P | Z | 00 | 10 | 49 | | | | | | |
| | Epicentre: | | | 00 | 00 | 38 | | 8S 118E | | | USCGS | |
| 25 | ON | eP | E | 02 | 04 | 57 | | | | | | |
| | | e | E | | 05 | 09 | | | | | | |
| | | e | E | | | 15 | | | | | | |
| | | e | E | | | 32 | | | | | | |
| | KP | eP | Z | 02 | 04 | 57 | | | | | | |
| | | e | Z | | 05 | 04 | | | | | | |
| | | e | Z | | | 21 | | | | | | |
| | | i | Z | | 12 | 02 | u | | | | | |
| | TU | eP | N | 02 | 05 | 01 | | | | | | |
| | | e | N | | | 27 | | | | | | |
| | | e | N | | | 37 | | | | | | |
| | | eS | N | | 06 | 38 | | | | | | |
| | | e | N | | 07 | 30 | | | | | | |
| | CT | e? | Z | 02 | 05 | 10 | | | | | | |
| | | e? | Z | | | 19 | | | | | | |
| | | e | Z | | | 32 | | | | | | |
| | | eS | Z | | 07 | 15 | | | | | | |
| | TO | e | Z | 02 | 05 | 31 | | | | | | |
| | | eS | Z | | 07 | 15 | | | | | | |
| | WN | e? | N | 02 | 05 | 36 | | | | | | |
| | | e | N | | | 44 | | | | | | |
| | | eS | N | | 07 | 47 | | | | | | |
| | | e? | N | | 11 | 30 | | | | | | |
| | | e? | N | | 14 | 20 | | | | | | |
| | SU | eP | N | 02 | 05 | 38 | | | | | | |
| | | e | N | | | 46 | | | | | | |
| | | i | N | | 07 | 38 | | | | | | |
| | | i | N | | 08 | 29 | | | | | | |
| | | eL | N | | 09 | | | | | | | |
| | | M | N | | 10 | | | | 25 15 | | | |
| | CB | e | E | 02 | 06 | 16 | | | | | | |
| | | eS | E | | 08 | 06 | | | | | | |
| | GP | eP? | N | 02 | 06 | 16 | | | | | | |
| | | e | N | | | 24 | | | | | | |
| | | eS | N | | 08 | 53 | | | | | | |
| | | e | N | | 09 | 06 | | | | | | |
| | KM | e(P) | X | 02 | 06 | 18 | | | | | | |
| | | eS | X | | 08 | 47 | | | | | | |
| | | e | X | | 09 | 14 | | | | | | |
| | RX | eL | NE | 02 | 12 | | | | | | | |
| | Epicentre: | | | 02 | 03.0 | | | 30.2S 177.7W 200 km | | | NZ(D) | 5.9 NZ |
| | | | | | | | | Additional readings from Pasadena, Apia, Hallett, Spring Valley, Brisbane, Charters Towers used to determine epicentre. | | | | |
| | | | | | | | | Felt: Raoul I. MM 3-4. | | | | |
| 25 | KP | P | Z | 06 | 26 | 52 | | | | | | |
| 25 | ON | eP | E | 13 | 00 | 42 | | | | | | |
| | KP | eP | Z | 13 | 00 | 47 | | | | | | |
| | | e | Z | | | 54 | | | | | | |
| | GP | eP | N | 13 | 02 | 11 | | | | | | |
| | | eS | N | | 04 | 40 | | | | | | |
| | TU | e | N | 13 | 02 | 26 | | | | | | |
| | WN | e | N | 13 | 03 | 33 | | | | | | |
| | | e | N | | | 35 | | | | | | |
| | Epicentre: | | | 12 | 59.0 | | | Kermadec Is | | | | 5.3 NZ |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 25 | ON | $eP_1$ | E | 14 | 43 | 26 | Two superimposed shocks | | | | | | |
| | | e | E | | | 28 | | | | | | | |
| | | $eP_2$ | E | | 44 | 07 | | | | | | | |
| | | e | E | | | 20 | | | | | | | |
| | | e | E | | | 49 | | | | | | | |
| | | eL | E | | 46 | | | | | | | | |
| | KP | $eP_1$ | Z | 14 | 43 | 27 | | | | | | | |
| | | e | Z | | | 47 | | | | | | | |
| | | $eP_2$ | Z | | 44 | 10 | | | | | | | |
| | | e | Z | | | 20 | | | | | | | |
| | | e | Z | | | 30 | | | | | | | |
| | | eL | Z | | 47 | .2 | | | | | | | |
| | TU | $eP_1$ | N | 14 | 43 | 32 | | | | | | | |
| | | $eP_2$ | N | | 44 | 13 | | | | | | | |
| | | e | N | | | 35 | | | | | | | |
| | | e | N | | | 54 | | | | | | | |
| | | $eS_1$ | N | | 45 | 04 | | | | | | | |
| | | $eS_2$ | N | | | 52 | | | | | | | |
| | | i | N | | | 54 | | | | | | | |
| | | e | N | | | 58 | | | | | | | |
| | CT | $eP_1$ | Z | 14 | 43 | 54 | | | | | | | |
| | | $eP_2$ | Z | | 44 | 37 | | | | | | | |
| | | $eS_2$ | Z | | 46 | 23 | | | | | | | |
| | | e | Z | | | 32 | | | | | | | |
| | | e | Z | | | 44 | | | | | | | |
| | TO | $eP_2$ | Z | 14 | 44 | 37 | | | | | | | |
| | | $eS_2$ | Z | | 46 | 27 | | | | | | | |
| | | e | Z | | | 50 | | | | | | | |
| | WN | e | N | 14 | 44 | 46 | | | | | | | |
| | | $eP_2$ | N | | | 57 | | | | | | | |
| | | e | N | | 45 | 03 | | | | | | | |
| | | $eS_1$ | N | | 46 | 19 | | | | | | | |
| | | $eS_2$ | N | | | 59 | | | | | | | |
| | | i | N | | 47 | 02 | | | | | | | |
| | SU | $eP_2$ | N | 14 | 44 | 52 | | | | | | | |
| | | e | N | | | 57 | | | | | | | |
| | | e | N | | 45 | 24 | | | | | | | |
| | | e | N | | | 53 | | | | | | | |
| | | eL | N | | 47 | .4 | | | | | | | |
| | | M | N | | 49 | | | | 140 | 15 | | | |
| | GP | $eP_1$ | N | 14 | 44 | 54 | | | | | | | |
| | | $eP_2$ | N | | 45 | 33 | | | | | | | |
| | | $eS_1$ | N | | 47 | 26 | | | | | | | |
| | | e | N | | | 36 | | | | | | | |
| | | e | N | | | 48 | | | | | | | |
| | | $eS_2$ | N | | 48 | 06 | | | | | | | |
| | | e | N | | | 14 | | | | | | | |
| | | e | N | | | 27 | | | | | | | |
| | CB | $eP_2$ | E | 14 | 45 | 10 | | | | | | | |
| | | $eS_1$? | E | | 46 | 43 | | | | | | | |
| | | e | E | | 47 | 19 | | | | | | | |
| | | e | E | | | 24 | | | | | | | |
| | | e($S_2$) | E | | | 26 | | | | | | | |
| | RX | $eP_2$ | N | 14 | 46 | 05 | | | | | | | |
| | | eL | NE | | 50 | .2 | | | | | | | |
| | | eL | Z | | 51 | | | | | | | | |
| | | M | E | | 52 | | | | 35 | 21 | | | |
| | | M | ZN | | 53 | | 45 | 18 | 45 | 21 | | | |
| | Epicentres: | | 1 | 14 | 41 | 40 | 30½S | 177½W | 200 km | | NZ(D) | | 6.0 NZ |
| | | | 2 | 14 | 42 | 20 | 30½S | 177½W | 200 km | | NZ(D) | | 6.6 NZ |
| | | | | | | | Additional readings from Brisbane and Charters Towers used to determine epicentre. | | | | | | |
| | | | | | | | Felt: Raoul I. MM 4-5. | | | | | | |
| 25 | TU | eS | N | 14 | 49 | 50 | | | | | | | |
| | WN | eS | N | 14 | 50 | 58 | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | eS | N | 14 | 52 | 04 | | | | | | | | |
| JUN 25 | GP | Epicentre: | | 14 | 46 | .4 | | Kermadec Is | | | | | | 5.4 NZ |
| | | | | | | | | Felt: Raoul Island MM 2. | | | | | | |
| 25 | ON | e(P) | E | 15 | 01 | 14 | | | | | | | | |
| | KP | e(P) | Z | 15 | 01 | 18 | | | | | | | | |
| | | e | Z | | | 33 | | | | | | | | |
| | | e | Z | | 02 | 08 | | | | | | | | |
| | TU | e | N | 15 | 01 | 27 | | | | | | | | |
| | | e(S) | N | | 02 | 58 | | | | | | | | |
| | | e | N | | 03 | 01 | | | | | | | | |
| | CT | eP | Z | 15 | 01 | 44 | | | | | | | | |
| | | e | Z | | 03 | 27 | | | | | | | | |
| | | e | Z | | | 33 | | | | | | | | |
| | WN | e | N | 15 | 02 | 28 | | | | | | | | |
| | | e | N | | 04 | 03 | | | | | | | | |
| | | eS | N | | | 06 | | | | | | | | |
| | GP | eP | N | 15 | 02 | 43 | | | | | | | | |
| | | eS | N | | 05 | 13 | | | | | | | | |
| | TO | e | Z | 15 | 03 | 30 | | | | | | | | |
| | CB | e(S) | E | 15 | 04 | 26 | | | | | | | | |
| | | e | E | | | 39 | | | | | | | | |
| | | Epicentre: | | 14 | 59 | .5 | | 30S 177W 200 km ± | | | | NZ(D) | | 5.8 NZ |
| | | | | | | | | Additional readings from Brisbane and Charters Towers used to determine epicentre. | | | | | | |
| 25 | KP | e? | Z | 19 | 48 | 11 | | | | | | | | |
| | | i? | Z | | | 16 | d | | | | | | | |
| | | i(P) | Z | | | 23 | u | | | | | | | |
| | | i(pP) | Z | | | 49 | u | | | | | | | |
| | CT | e(P) | Z | 19 | 48 | 21 | | | | | | | | |
| | | e | Z | | | 47 | d | | | | | | | |
| | | Epicentre: | | 19 | 35 | 27 | | 28S 68W 100 km | | | | USCGS | | |
| 26 | KP | P | Z | 04 | 18 | 23 | | | | | | | | |
| 26 | KP | e? | Z | 06 | 28 | 45 | | | | | | | | |
| | SU | e | N | 06 | 35 | 08 | | | | | | | | |
| | | e | N | | | 50 | | | | | | | | |
| 26 | KP | P | Z | 14 | 39 | 46 | | | | | | | | |
| 26 | ON | eP | E | 20 | 14 | 41 | | | | | | | | |
| | | e | E | | 15 | 59 | | | | | | | | |
| | KP | P | Z | 20 | 14 | 51 | | | | | | | | |
| | | e | Z | | 16 | 32 | | | | | | | | |
| | TU | e? | N | 20 | 14 | 53 | | | | | | | | |
| | | e | N | | | 59 | | | | | | | | |
| | | e(S) | N | | 16 | 13 | | | | | | | | |
| | | e | N | | | 18 | | | | | | | | |
| | CT | P | Z | 20 | 15 | 02 | | | | | | | | |
| | | e | Z | | 16 | 23 | | | | | | | | |
| | | e | Z | | | 33 | | | | | | | | |
| | | e | Z | | | 40 | | | | | | | | |
| | TO | P | Z | 20 | 15 | 02 | | | | | | | | |
| | | eS | Z | | 16 | 31 | | | | | | | | |
| | | e | Z | | | 40 | | | | | | | | |
| | GP | e(P) | N | 20 | 16 | 00 | | | | | | | | |
| | | S | N | | 18 | 10 | | | | | | | | |
| | WN | S | N | 20 | 17 | 16 | | | | | | | | |
| | CB | eS | E | 20 | 17 | 25 | | | | | | | | |
| | KM | e | X | 20 | 18 | 01 | | | | | | | | |
| | | e(S) | X | | | 05 | | | | | | | | |
| | | Epicentre: | | 20 | 13 | 07 | | 33S 179W N? | | | | NZ(D) | | 5.7 NZ |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 27 | KP | e? | Z | 16 | 48 | 38 | | | | | | | |
| | | e | Z | | | 43 | | | | | | | |
| | CT | eP? | Z | 16 | 48 | 52 | | | | | | | |
| | | e | Z | | 49 | 15 | | | | | | | |
| | | e | Z | | | 25 | | | | | | | |
| | | e(S) | Z | | 50 | 26 | | | | | | | |
| | | e | Z | | | 37 | | | | | | | |
| | TU | eS | N | 16 | 49 | 59 | | | | | | | |
| | WN | eS | N | 16 | 51 | 09 | | | | | | | |
| | CB | e(S) | E | 16 | 51 | 32 | | | | | | | |
| | GP | eS | N | 16 | 52 | 14 | | | | | | | |
| | KM | e | X | 16 | 52 | 15 | | | | | | | |
| | Epicentre: | | | 16 | 46 | .7 | Kermadec Is | | | | | | 5.1 NZ |
| 27 | TU | eP | N | 16 | 52 | 14 | | | | | | | |
| | | e | N | | | 53 | | | | | | | |
| | | S | N | | 53 | 40 | | | | | | | |
| | KP | P | Z | 16 | 52 | 15 | | | | | | | |
| | | e | Z | | | 19 | | | | | | | |
| | ON | eP | E | 16 | 52 | 17 | | | | | | | |
| | | e | E | | | 32 | | | | | | | |
| | | i | E | | | 49 | | | | | | | |
| | | eL | E | | 54 | .5 | | | | | | | |
| | CT | eP | Z | 16 | 52 | 33 | | | | | | | |
| | | e | Z | | | 39 | | | | | | | |
| | | e | Z | | | 52 | | | | | | | |
| | | i | Z | | 53 | 01 | | | | | | | |
| | | e | Z | | 54 | 08 | | | | | | | |
| | | eS | Z | | | 12 | | | | | | | |
| | | e | Z | | | 14 | | | | | | | |
| | TO | eP | Z | 16 | 52 | 33 | | | | | | | |
| | | e | Z | | | 40 | | | | | | | |
| | | e | Z | | 54 | 05 | | | | | | | |
| | | eS | Z | | | 11 | | | | | | | |
| | WN | e(P) | N | 16 | 52 | 57 | | | | | | | |
| | | e | N | | 53 | 08 | | | | | | | |
| | | e | N | | 54 | 47 | | | | | | | |
| | | S | N | | | 52 | | | | | | | |
| | CB | e | E | 16 | 53 | 22 | | | | | | | |
| | | e | E | | 55 | 08 | | | | | | | |
| | | eS | E | | | 11 | | | | | | | |
| | GP | e(P) | N | 16 | 53 | 36 | | | | | | | |
| | | e | N | | 55 | 53 | | | | | | | |
| | | e(S) | N | | | 56 | | | | | | | |
| | | i | N | | 56 | 01 | | | | | | | |
| | KM | e | X | 16 | 53 | 39 | | | | | | | |
| | | eS | X | | 55 | 48 | | | | | | | |
| | | e | X | | 56 | 09 | | | | | | | |
| | SU | eP | N | 16 | 53 | 50 | | | | | | | |
| | | e | N | | 54 | 13 | | | | | | | |
| | | e | N | | 55 | 03 | | | | | | | |
| | | e(S) | N | | 56 | 40 | | | | | | | |
| | | L | N | | 57 | 40 | | | | | | | |
| | | M | N | | 59 | | | 80 | 16 | | | | |
| | RX | e(L) | N | 16 | 57 | .6 | | | | | | | |
| | | eL | NE | | 59 | | | | | | 8 | 23 | |
| | | eL | Z | 17 | 00 | | | | | | | | |
| | | M | Z | | 01 | | | 20 | 18 | | | | |
| | Epicentre: | | | 16 | 50 | 26 | 32½S 178W N | | | | NZ(D) | | 5.9 NZ |
| 27 | TU | eS | N | 16 | 55 | 39 | | | | | | | |
| | CT | eS | Z | 16 | 56 | 18 | | | | | | | |

Additional readings from Brisbane, Charters Towers, Pasadena, Spring Valley, Melbourne, Riverview, Afiamalu, Hallett, and Scott used to determine epicentre.



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 27 | WN | e | N | 16 | 56 | 48 | | | | | | | |
| | | S | N | | | 52 | | | | | | | |
| | CB | eS | E | 16 | 57 | 16 | | | | | | | |
| | KM | eS | X | 16 | 57 | 53 | | | | | | | |
| | GP | eS | N | 16 | 57 | 57 | | | | | | | |
| | Epicentre: | | | 16 | 52 | .4 | Kermadec Is | | | | | | 5.5 NZ |
| 27 | ON | eP | E | 17 | 00 | 37 | | | | | | | |
| | | e | E | | 01 | 08 | | | | | | | |
| | TU | eP | N | 17 | 00 | 37 | | | | | | | |
| | | e | N | | | 56 | | | | | | | |
| | | eS | N | | 01 | 59 | | | | | | | |
| | KP | P | Z | 17 | 00 | 39 | | | | | | | |
| | | e | Z | | | 44 | | | | | | | |
| | CT | P | Z | 17 | 00 | 51 | | | | | | | |
| | | e | Z | | 01 | 13 | | | | | | | |
| | | e | Z | | | 23 | | | | | | | |
| | | e | Z | | | 36 | | | | | | | |
| | | e(S) | Z | | 02 | 19 | | | | | | | |
| | | e | Z | | | 28 | | | | | | | |
| | TO | e | Z | 17 | 01 | 01 | | | | | | | |
| | | eS | Z | | 02 | 26 | | | | | | | |
| | CB | e | E | 17 | 01 | 42 | | | | | | | |
| | | e | E | | 03 | 15 | | | | | | | |
| | | eS | E | | | 29 | | | | | | | |
| | GP | e | N | 17 | 01 | 56 | | | | | | | |
| | | e | N | | 04 | 12 | | | | | | | |
| | | eS | N | | | 17 | | | | | | | |
| | KM | e | X | 17 | 02 | 04 | | | | | | | |
| | | e | X | | | 14 | | | | | | | |
| | | e(S) | X | | 04 | 05 | | | | | | | |
| | | e | X | | | 11 | | | | | | | |
| | WN | eS | N | 17 | 03 | 06 | | | | | | | |
| | Epicentre: | | | 16 | 58 | 51 | 32S 179W N? | | | | NZ(D) | | 5.6 NZ |
| 27 | KP | e? | Z | 17 | 36 | 02 | | | | | | | |
| | | e | Z | | | 15 | | | | | | | |
| | ON | eP | E | 17 | 36 | 04 | | | | | | | |
| | | e | E | | | 10 | | | | | | | |
| | CT | e? | Z | 17 | 36 | 25 | | | | | | | |
| | | e | Z | | | 39 | | | | | | | |
| | | e | Z | | 37 | 01 | | | | | | | |
| | | eS | Z | | 38 | 22 | | | | | | | |
| | | e | Z | | | 53 | | | | | | | |
| | WN | e? | N | 17 | 37 | 05 | | | | | | | |
| | | e | N | | 38 | 56 | | | | | | | |
| | | eS | N | | | 58 | | | | | | | |
| | KM | e | X | 17 | 37 | 30 | | | | | | | |
| | | eS | X | | 39 | 56 | | | | | | | |
| | GP | e? | N | 17 | 37 | 37 | | | | | | | |
| | | e | N | | 40 | 03 | | | | | | | |
| | | eS | N | | | 07 | | | | | | | |
| | TU | eS | N | 17 | 37 | 50 | | | | | | | |
| | TO | e | Z | 17 | 38 | 19 | | | | | | | |
| | | e(S) | Z | | | 23 | | | | | | | |
| | CB | eS | E | 17 | 39 | 18 | | | | | | | |
| | Epicentre: | | | 17 | 33 | 56 | 31½S 178W | | | | NZ(D) | | 5.5 NZ |
| 27 | ON | e(P) | E | 18 | 05 | 30 | | | | | | | |
| | | e | E | | | 42 | | | | | | | |
| | KP | P | Z | 18 | 05 | 33 | | | | | | | |

Additional readings from Charters Towers and Afiamalu used to determine epicentre.

Additional readings from Spring Valley, Brisbane, Melbourne, Charters Towers, Mirny and Byrd used to determine epicentre.

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 27 | | e | Z | | 06 | 03 | | | | | | | | |
| | | i | Z | | | 18 | d | | | | | | | |
| | TU | e? | N | 18 | 05 | 35 | | | | | | | | |
| | | eS | N | | 06 | 51 | | | | | | | | |
| | CT | e? | Z | 18 | 05 | 42 | | | | | | | | |
| | | e | Z | | | 46 | | | | | | | | |
| | | e | Z | | | 58 | | | | | | | | |
| | | iS | Z | | 07 | 19 | d | | | | | | | |
| | | e | Z | | | 24 | | | | | | | | |
| | TO | e | Z | 18 | 05 | 50 | | | | | | | | |
| | | e | Z | | | 56 | | | | | | | | |
| | | eS | Z | | 07 | 21 | | | | | | | | |
| | | e | Z | | | 46 | | | | | | | | |
| | KM | e? | X | 18 | 06 | 46 | | | | | | | | |
| | | e | X | | | 59 | | | | | | | | |
| | | eS | X | | 08 | 59 | | | | | | | | |
| | GP | e | N | 18 | 06 | 50 | | | | | | | | |
| | | e | N | | 07 | 09 | | | | | | | | |
| | | eS | N | 18 | 09 | 05 | | | | | | | | |
| | WN | e | N | 18 | 07 | 59 | | | | | | | | |
| | | eS | N | | 08 | 02 | | | | | | | | |
| | CB | e | E | 18 | 08 | 21 | | | | | | | | |
| | | eS | E | | | 25 | | | | | | | | |
| | SU | eL | N | 18 | 11 | | | | | | | | | |
| | | M | N | | 12 | | | | | 4 | 15 | | | |
| | RX | eL | N | 18 | 14 | | | | | | | | | |
| | Epicentre: | | | 18 | 03.6 | | | 328 | 178W | N? | | | NZ(D) | 5.6 NZ |
| | | | | | | | | Additional readings from Brisbane, Charters Towers, Afiamalu and Melbourne used to determine epicentre. | | | | | | |
| 27 | ON | e? | E | 19 | 13 | 10 | | | | | | | | |
| | | e | E | | | 19 | | | | | | | | |
| | KP | iP | Z | 19 | 13 | 23 | d | | | | | | | |
| 28 | KP | iP | Z | 01 | 08 | 15 | u | | | | | | | |
| | | e | Z | | | 17 | | | | | | | | |
| | | e | Z | | 09 | 33 | | | | | | | | |
| | GP | eP | N | 01 | 08 | 54 | | | | | | | | |
| | | e | N | | 10 | 29 | | | | | | | | |
| | | e | N | | 13 | 44 | | | | | | | | |
| 28 | KP | iP | Z | 08 | 31 | 28 | u | | | | | | | |
| | | e | Z | | | 32 | | | | | | | | |
| | CT | eP | Z | 08 | 31 | 34 | u | | | | | | | |
| | | e | Z | | | 52 | | | | | | | | |
| 28 | CT | e | Z | 15 | 42 | 33 | | | | | | | | |
| | KP | eP | Z | 15 | 42 | 38 | | | | | | | | |
| 28 | SU | eP | N | 16 | 09 | 12 | | | | | | | | |
| | | e | N | | | 42 | | | | | | | | |
| | | i | N | | 11 | 08 | | | | | | | | |
| | KP | eP | Z | 16 | 11 | 15 | | | | | | | | |
| | WN | e? | N | 16 | 11 | 44 | | | | | | | | |
| | | e(S) | N | | 14 | 50 | | | | | | | | |
| | GP | e? | N | 16 | 12 | 09 | | | | | | | | |
| | | e(S) | N | | 15 | 36 | | | | | | | | |
| | KM | e(S) | X | 16 | 15 | 22 | | | | | | | | |
| | Epicentre: | | | 16 | 07.9 | | | 21.7S | 179.8W | 550 km | ± | | NZ(D) | |
| | | | | | | | | Additional readings from Brisbane, Charters Towers, Spring Valley, and Apia used to determine epicentre. | | | | | | |
| 28 | KP | eP | Z | 22 | 12 | 50 | | | | | | | | |
| 29 | CT | eP | Z | 02 | 09 | 11 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 29 | | i | Z | | | 23 | u | | | | | | | |
| | | e | Z | | 10 | 02 | | | | | | | | |
| | KP | eP? | Z | 02 | 09 | 15 | | | | | | | | |
| | | e? | Z | | | 19 | | | | | | | | |
| | | e | Z | | | 20 | | | | | | | | |
| | | e | Z | | | 50 | | | | | | | | |
| | RX | e | N | 02 | 19.5 | | | | | | 1 | 25 | | |
| | | eL | ZNE | | 34 | | | | | | | | | |
| | | M | N | | 36 | | | | | | 3 | 18 | | |
| | WN | eL | ZN | 02 | 32 | | | | | | | | | |
| | | M | ZN | | 34 | | | | 3 | 20 | 4 | 20 | | |
| | SU | eL | N | 02 | 47 | | | | | | | | | |
| | Epicentre: | | | 01 | 57 | 14 | | Chile | | | | | | USCGS |
| 29 | TU | e? | N | 04 | 31 | 22 | | | | | | | | |
| | | e | N | | | 30 | | | | | | | | |
| | | e | N | | | 40 | | | | | | | | |
| | | e | N | | | 50 | | | | | | | | |
| | | e | N | | 33 | 18 | | | | | | | | |
| | | i | N | | | 22 | | | | | | | | |
| | | e | N | | | 26 | | | | | | | | |
| | | e | N | | 34 | 09 | | | | | | | | |
| | KP | eP | Z | 04 | 31 | 33 | | | | | | | | |
| | | e | Z | | | 38 | | | | | | | | |
| | | e | Z | | | 46 | | | | | | | | |
| | | e | Z | | 32 | 16 | | | | | | | | |
| | | e | Z | | 33 | 33 | | | | | | | | |
| | CT | eP | Z | 04 | 31 | 48 | | | | | | | | |
| | | e | Z | | 32 | 03 | | | | | | | | |
| | | e | Z | | | 06 | | | | | | | | |
| | | i | Z | | | 38 | d | | | | | | | |
| | | e | Z | | 33 | 45 | | | | | | | | |
| | | e | Z | | 34 | 22 | | | | | | | | |
| | SU | P | N | 04 | 32 | 20 | | | | | | | | |
| | | e | N | | | 30 | | | | | | | | |
| | | e | N | | 35 | 39 | | | | | | | | |
| | | M | N | | 37 | | | | | | 30 | 15 | | |
| | WN | e | N | 04 | 32 | 28 | | | | | | | | |
| | | S | N | | 34 | 27 | | | | | | | | |
| | CB | e | E | 04 | 32 | 37 | | | | | | | | |
| | | eS | E | | 34 | 46 | | | | | | | | |
| | | e | E | | | 50 | | | | | | | | |
| | KM | e? | X | 04 | 32 | 53 | | | | | | | | |
| | | e | X | | 33 | 02 | | | | | | | | |
| | | e(S) | X | | 35 | 30 | | | | | | | | |
| | | e | X | | | 59 | | | | | | | | |
| | GP | eP | N | 04 | 32 | 56 | | | | | | | | |
| | | e | N | | | 59 | | | | | | | | |
| | | e(S) | N | | 35 | 30 | | | | | | | | |
| | | i | N | | | 40 | | | | | | | | |
| | RX | eL | NE | 04 | 38 | | | | | | | 7 | 22 | |
| | | eL | Z | | 40 | | | | | | | | | |
| | Epicentre: | | | 04 | 29 | 12 | | 30S | 177½W | | | | | USCGS |
| 29 | KP | eP | Z | 05 | 25 | 58 | | | | | | | | |
| | Epicentre: | | | 05 | 14 | 56 | | 30N | 139E | 500 km | | | | USCGS |
| 29 | WN | eL | Z | 10 | 16 | | | | 2 | 20 | | | | |
| | RX | eL | ZNE | 10 | 16 | | | | | | | | | |
| 29 | KP | P | Z | 17 | 05 | 42 | | | | | | | | |
| 30 | KP | iP | Z | 09 | 42 | 05 | | | | | | | | |
| | TU | e | N | 09 | 42 | 10 | | | | | | | | |
| | | e | N | | | 18 | | | | | | | | |
| | | S | N | | | 33 | | | | | | | | |
| | CT | iP | Z | 09 | 42 | 13 | u | | | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 30 | | i | Z | | | 16 | | | | | | | | | |
| | | e | Z | | | 42 | | | | | | | | | |
| | | e | Z | | | 46 | | | | | | | | | |
| | TO | iP | Z | 09 | 42 | 13 | | | | | | | | | |
| | | e | Z | | | 45 | | | | | | | | | |
| | ON | eP | E | 09 | 42 | 21 | | | | | | | | | |
| | WN | P | N | 09 | 42 | 34 | | | | | | | | | |
| | | S | N | | 43 | 19 | | | | | | | | | |
| | CB | e | E | 09 | 42 | 56 | | | | | | | | | |
| | | S | E | | 43 | 33 | | | | | | | | | |
| | KM | eP | X | 09 | 43 | 07 | | | | | | | | | |
| | | e | X | | 44 | 19 | | | | | | | | | |
| | | iS | X | | | 22 | | | | | | | | | |
| | GP | eP | N | 09 | 43 | 09 | | | | | | | | | |
| | | e | N | | | 20 | | | | | | | | | |
| | | eS | N | | | 22 | | | | | | | | | |
| | Epicentre: | | | 09 | 41 | 32 | | 37.7S | 176.7E | 240 km | | | | NZ(C) | 5.0 NZ |
| 30 | ON | e | E | 09 | 55 | 52 | | | | | | | | | |
| | KP | iP | Z | 09 | 55 | 56 | u | | | | | | | | |
| | | i | Z | | 58 | 34 | | | | | | | | | |
| | CT | e(P) | Z | 09 | 56 | 06 | | | | | | | | | |
| | TO | eP | Z | 09 | 56 | 06 | | | | | | | | | |
| | WN | P | N | 09 | 56 | 24 | | | | | | | | | |
| | KM | e? | X | 09 | 56 | 43 | | | | | | | | | |
| | | e | X | | | 55 | | | | | | | | | |
| | GP | eP | N | 09 | 56 | 49 | | | | | | | | | |
| | Epicentre: | | | 09 | 51.8 | | | Fiji region. | | | | | | | |
| JUL 1 | KP | P | Z | 10 | 16 | 09 | | | | | | | | | |
| | CT | P | Z | 10 | 16 | 23 | | | | | | | | | |
| | | e | Z | | | 39 | | | | | | | | | |
| | Epicentre: | | | 10 | 10 | 10 | | 10½S | 165½E | | | | | USCGS | |
| 1 | KP | P | Z | 17 | 50 | 29 | | | | | | | | | |
| | | pP | Z | | | 44 | | | | | | | | | |
| | Epicentre: | | | 17 | 40 | 38 | | 11½N | 142½E | 60 km | | | | USCGS | |
| 1 | KP | P | Z | 17 | 59 | 33 | | | | | | | | | |
| 2 | KP | eP | Z | 04 | 42 | 29 | | | | | | | | | |
| | | e | Z | | | 43 | | | | | | | | | |
| | Epicentre: | | | 04 | 29 | 30 | | 51½N | 173½W | | | | | USCGS | |
| 2 | KP | eP | Z | 09 | 09 | 55 | | | | | | | | | |
| | Epicentre: | | | 08 | 58 | 05 | | 45½S | 73½W | | | | | USCGS | |
| 2 | KP | iP | Z | 12 | 08 | 13 | u | | | | | | | | |
| | | e | Z | | | 39 | | | | | | | | | |
| | CT | iP | Z | 12 | 08 | 04 | u | | | | | | | | |
| | | e | Z | | | 30 | | | | | | | | | |
| | RX | eL | N | 12 | 34 | | | | | 6 | 36 | | | | |
| | Epicentre: | | | 11 | 55 | 41 | | 56S | 27W | | | | | USCGS | |
| 2 | KP | eP | Z | 22 | 06 | 19 | | | | | | | | | |
| | Epicentre: | | | 21 | 53 | 22 | | 51½N | 175½W | | | | | USCGS | |
| 3 | KP | eP | Z | 03 | 32.3 | | | | | | | | | | |
| | Epicentre: | | | 03 | 19 | 19 | | 52N | 174W | | | | | USCGS | |
| 3 | KP | eP | Z | 07 | 29 | 27 | | | | | | | | | |
| | Epicentre: | | | 07 | 16 | 14 | | 52N | 173½W | | | | | USCGS | |
| 3 | KP | iP! | Z | 13 | 29 | 01½ | d | | | | | | | | |
| | CT | iP | Z | 13 | 29 | 01½ | | | | | | | | | |
| | | eS | Z | | | 26½ | | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUL 3 | TU | P | N | 13 | 29 | 06 | | | | | | | | | |
| | | S | N | | | 33 | | | | | | | | | |
| | WN | P | N | 13 | 29 | 15½ | | | | | | | | | |
| | | S | N | | | 54 | | | | | | | | | |
| | ON | P | E | 13 | 29 | 19 | | | | | | | | | |
| | | i | E | | | 20 | | | | | | | | | |
| | | eS | E | | | 59½ | | | | | | | | | |
| | CB | P | E | 13 | 29 | 19 | | | | | | | | | |
| | | S | E | | 30 | 01 | | | | | | | | | |
| | KM | eP | X | 13 | 29 | 38 | | | | | | | | | |
| | | i | X | | | 39½ | | | | | | | | | |
| | | S | X | | 30 | 34½ | | | | | | | | | |
| | GP | P | N | 13 | 29 | (46) | | | | | | | | | |
| | | S | N | | 30 | (49) | | | | | | | | | |
| | Epicentre: | | | 13 | 28 | 06 | | 38.7S | 175.2E | 260 km | | | | NZ(B) | 5.5 NZ |
| 3 | ON | e(P) | E | 20 | 33 | 5 | | | | | | | | | |
| | KP | iP | Z | 20 | 33 | 38 | d | | | | | | | | |
| | CT | P | Z | 20 | 33 | 42 | | | | | | | | | |
| | RX | SKS | N | 20 | 44 | 49 | | | | | 5 | 10 | | | |
| | | S | NE | | 45 | 32 | | | | | 5 | 12 | 4 | 10 | 6.8 |
| | | PS | N | | 46 | 54 | | | | | 5 | 11 | | | |
| | | eSS | N | | 51 | 58 | | | | | 3 | 20 | | | |
| | | eL | N | 21 | 05 | | | | | | 11 | 26 | | | |
| | | eL | E | | 07 | | | | | | | | 5 | 26 | |
| | CB | eP | E | 20 | 33 | 53 | | | | | | | | | |
| | WN | P | Z | 20 | 33 | 56 | | | | | | | | | 6.8 |
| | | iSKS | N | | 44 | 19 | | | | | | | | | |
| | | S | N | | 47 | | | | | | | | | | 6.2 |
| | | eL | ZN | 21 | 06 | | | | | | | | | | 6.4 |
| | SU | iS | N | 20 | 40 | 54 | | | | | 27 | 15 | | | |
| | Epicentre: | | | 20 | 20 | 46 | | 50½N | 177W | | | | | USCGS | 6½ BER |
| 3 | KP | P | Z | 21 | 43 | 43 | | | | | | | | | |
| | CT | eP | Z | 21 | 43 | 50 | | | | | | | | | |
| | | e | Z | | 44 | 05 | | | | | | | | | |
| 3 | KP | P | Z | 23 | 05 | 16 | | | | | | | | | |
| | Epicentre: | | | 22 | 52 | 24 | | 50½N | 177W | | | | | USCGS | |
| 4 | KP | eP | Z | 02 | 42 | 46 | | | | | | | | | |
| 4 | SU | eS | N | 04 | 51 | 29 | | | | | 4 | 10 | | | |
| | | PS | N | | 52 | 10 | | | | | 10 | 10 | | | |
| | | eSS | N | | 56 | 42 | | | | | 7 | 10 | | | |
| | | eL | N | 05 | 06.1 | | | | | | 51 | 23 | | | |
| | RX | ePS | N | 04 | 57 | 09 | | | | | 2 | 18 | | | |
| | | ePPS | N | | 58 | 12 | | | | | | | | | |
| | | eSS | N | 05 | 03 | 14 | | | | | | | | | |
| | | eL | ZNE | | 20¾ | | | 17 | 25 | 12 | 25 | | | | |
| | | M | NE | | 30 | | | | | 5 | 20 | 8 | 18 | | |
| | AK | eSS | N | 05 | 01 | 13 | | | | | | | | | |
| | | eL | N | | 16 | | | | | | | | | | |
| | WN | eL | ZN | 05 | 17½ | | | 10 | 18 | 11 | 20 | | | | |
| | Epicentre: | | | 04 | 28 | 33 | | 52N | 131½W | | | | | USCGS | 6½–¾ PAS |
| 4 | KP | iP | Z | 07 | 46 | 02 | d | | | | | | | | |
| | | e | Z | | | 17 | | | | | | | | | |
| 4 | SU | eL | N | 13 | 48 | | | | | | | | | | |
| | Epicentre: | | | 13 | 10 | 05 | | 52N | 131W | | | | | USCGS | |
| 8 | KP | P | Z | 13 | 03 | 31 | | | | | | | | | |
| | | pP | Z | | | 48 | | | | | | | | | |
| | CT | P | Z | 13 | 03 | 36 | | | | | | | | | |
| | | pP | Z | | | 54 | | | | | | | | | |
| | Epicentre: | | | 12 | 51 | 21 | | 31N | 130½E | | | | | USCGS | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUL 8 | SU | eP | N | 14 | 50 | 46 | | | | | | | | |
| | | S | N | | 51 | 17 | | | | | | | | |
| 8 | KP | e(P) | Z | 14 | 54 | 23 | | | | | | | | |
| | Epicentre: | | | 14 | 44 | 40 | 7S | 129E | | | | | USCGS | |
| 8 | KP | eP | Z | 15 | 28 | 46 | | | | | | | | |
| | Epicentre: | | | 15 | 23 | 19 | 14S | 168E | | | | | USCGS | |
| 9 | KP | eP | Z | 04 | 15 | 53 | | | | | | | | |
| 9 | KP | P | Z | 15 | 57 | 51 | | | | | | | | |
| 9 | KP | eP | Z | 18 | 00 | 04 | | | | | | | | |
| 10 | KP | P | Z | 00 | 17 | 37 | | | | | | | | |
| | CT | P | Z | 00 | 17 | 38 | | | | | | | | |
| | | ePP | Z | | 20 | 37 | | | | | | | | |
| | KM | eP | X | 00 | 17 | 38 | | | 5 | 8 | | | | 6.5 |
| | WN | S | N | 00 | 27 | 39 | 6 | 22 | 14 | 22 | | | | 6.4 |
| | | eL | ZN | | 50 | | | | | | | | | |
| | GP | eP | N | 00 | 17 | 40 | | | 4 | 20 | | | | |
| | RX | S | NE | 00 | 27 | 06 | | | 4 | 20 | | | | |
| | | eSS | NE | | 32 | 00 | | | 6 | 26 | | | | |
| | | eL | N | | 40 | | | | | | | | | |
| | | eL | Z | | 49 | | 16 | 20 | | | | | | |
| | | M | NE | | 52 | | | | 4 | 20 | 12 | 20 | | |
| | Epicentre: | | | 00 | 05 | 18 | 0 | 98E | | | | | USCGS | |
| 10 | SU | eL | N | 06 | 47 | | | | | | | | | |
| 10 | ON | P | E | 07 | 49 | 38 | | | | | | | | |
| | KP | P | Z | 07 | 49 | 51 | | | | | | | | |
| | KM | eP | X | 07 | 50 | 42 | | | | | | | | |
| | GP | eP | N | 07 | 50 | 53 | | | | | | | | |
| 10 | ON | eP | E | 11 | 24 | 15 | | | | | | | | |
| | KP | P | Z | 11 | 24 | 27 | | | | | | | | |
| | CT | P | Z | 11 | 24 | 40 | | | | | | | | |
| 10 | RX | eS | NE | 20 | 32.5 | | | | 3 | 18 | 4 | 14 | | 5.7 |
| | Epicentre: | | | 20 | 22 | 51 | 53½S | 134E | | | | | USCGS | |
| 11 | RX | eL | NE | 07 | 42¼ | | | | 4 | 15 | 5 | 15 | | |
| | | eL | Z | | 44 | | | | | | | | | |
| | WN | eL | ZN | 07 | 45 | | | | | | | | | |
| | Epicentre: | | | 07 | 33 | 32 | 54S | 140½E | | | | | USCGS | |
| 11 | SU | eP | N | 11 | 57 | 33 | | | 12 | 6 | | | | |
| | | eL | N | | 59 | 45 | | | 45 | 15 | | | | |
| | ON | eP | E | 12 | 00 | 21 | | | | | | | | |
| | | S | E | | 04 | 36 | | | | | | | | |
| | | e | E | | 05 | 06 | | | | | | | | |
| | | eL | E | | 08.0 | | | | | | | | | |
| | KP | eP | Z | 12 | 00 | 32 | | | | | | | | |
| | | i | Z | | | 36 | d | | | | | | | |
| | | eS | Z | | 05 | 01 | | | | | | | | |
| | TU | e(P) | N | 12 | 00 | 40 | | | | | | | | |
| | CT | eP | Z | 12 | 00 | 41 | | | | | | | | |
| | | i | Z | | | 48 | | | | | | | | |
| | | eS | Z | | 05 | 23 | | | | | | | | |
| | WN | eP | N | 12 | 01 | 09 | | | | | | | | |
| | | S | ZN | | 05 | 55 | | | | | | | | |
| | CB | eP | E | 12 | 01 | 13 | | | | | | | | |
| | | eS | E | | 06 | 03 | | | | | | | | |
| | KM | eP | X | 12 | 01 | 29 | | | | | | | | |
| | | e | X | | 06 | 30 | | | | | | | | |
| | | eS | X | | | 45 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUL 11 | GP | eP | N | 12 | 01 | 35 | | | | | | | | | |
| | | e | N | | 42 | | | | | | | | | | |
| | | eS | N | | 06 | 55 | | | | | | | | | |
| | RX | eL | NE | 12 | 12 | | | | | 6 | 18 | | 5 18 | | 5.8 |
| | | eL | Z | | 13 | | | 7 | 18 | | | | | | |
| | Epicentre: | | | 11 | 55 | 10 | | 16S | 172W | | | | | USCGS | 6 PAS |
| 11 | KP | P | Z | 13 | 49 | 50 | | | | | | | | | |
| 12 | KP | P | Z | 05 | 01 | 35 | | | | | | | | | |
| 12 | KP | eP | Z | 17 | 12 | 56 | | | | | | | | | |
| | Epicentre: | | | 17 | 00 | 25 | | 41N | 142E | | | | | USCGS | |
| 13 | SU | iP | N | 06 | 22 | 21 | n | | | | | | | | |
| 13 | CT | eP | Z | 08 | 08 | 49 | | | | | | | | | |
| | | i | Z | | | 59 | | | | | | | | | |
| | KP | eP | Z | 08 | 08 | 52 | | | | | | | | | |
| | | e | Z | | | 59 | | | | | | | | | |
| | | e | Z | | 09 | 30 | | | | | | | | | |
| | RX | eS | N | 08 | 18 | 26 | | | | | 3 | 20 | | | 6.0 |
| | | eSS | N | | 23 | 04 | | | | | 2 | 22 | | | 6.2 |
| | | eL | E | | 35 | | | | | | | | 4 | 24 | |
| | | eL | ZN | | 37 | | | 12 | 28 | | 8 | 28 | | | |
| | | M | NE | | 40 | | | | | | 8 | 21 | 5 | 22 | |
| | WN | eSKS | N | 08 | 19 | 04 | | | | | 4 | 15 | | | |
| | | eL | ZN | | 37 | | | 6 | 17 | | 9 | 17 | | | |
| | SU | eL | N | 08 | 47 | | | | | | | | | | |
| | Epicentre: | | | 07 | 55 | 54 | | 53½S | 1½E | | | | | USCGS | 6 PAS |
| 13 | KP | ePKP | Z | 10 | 41 | 05 | | | | | | | | | |
| | Epicentre: | | | 10 | 20 | 50 | | Greece | | | | | | USCGS | |
| 13 | KP | P | Z | 10 | 59 | 07 | | | | | | | | | |
| 13 | KP | PKP | Z | 13 | 21 | 34 | | | | | | | | | |
| | Epicentre: | | | 13 | 01 | 00 | | 41N | 23½E | | | | | | |
| 13 | KP | P | Z | 14 | 34 | 02 | | | | | | | | | |
| | CT | P | Z | 14 | 34 | 13 | | | | | | | | | |
| | SU | eL | N | 14 | 36 | | | | | | 3 | 8 | | | |
| | Epicentre: | | | 14 | 28 | 44 | | 15S | 168½E | | | | | USCGS | |
| 13 | KP | P | Z | 15 | 08 | 46 | | | | | | | | | |
| 13 | KP | P | Z | 17 | 07 | 14 | | | | | | | | | |
| | | e | Z | | 10 | 28 | | | | | | | | | |
| | CT | eP | Z | 17 | 07 | 22 | | | | | | | | | |
| | | eS | Z | | 10 | 42 | | | | | | | | | |
| | WN | eP | N | 17 | 07 | 48 | | | | | | | | | |
| | | eS | N | | 11 | 20 | | | | | | | | | |
| | TU | eS | N | 17 | 10 | 19 | | | | | | | | | |
| | CB | eS | E | 17 | 11 | 34 | | | | | | | | | |
| | KM | eS | X | 17 | 12 | 06 | | | | | | | | | |
| | GP | eS | N | 17 | 12 | 17 | | | | | | | | | |
| 14 | KP | P | Z | 01 | 10 | 51 | | | | | | | | | |
| 14 | KP | P | Z | 10 | 37 | 20 | | | | | | | | | |
| | | i | Z | | | 41 | | | | | | | | | |
| | CT | eP | Z | 10 | 37 | 25 | | | | | | | | | |
| | | e | Z | | | 44 | | | | | | | | | |
| | RX | eL | N | 10 | 53 | 32 | | | | | 3 | 16 | | | |
| | Epicentre: | | | 10 | 26 | 58 | | 5N | 127½E | | | | | USCGS | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUL 14 | KP | eP | Z | 10 | 48 | 13½ | | | | | | | | |
| | | i | Z | | | 15½ | | | | | | | | |
| | CT | eP | Z | 10 | 48 | 25 | | | | | | | | |
| | | e | Z | | | 39 | | | | | | | | |
| | | eS | Z | | 51 | 10 | | | | | | | | |
| | CB | eP | E | 10 | 48 | 47 | | | | | | | | |
| | | eS | E | | 51 | 46 | | | | | | | | |
| | KM | eP | X | | 49 | 04 | | | | | | | | |
| | | S | X | | 52 | 21 | | | | | | | | |
| | GP | eP | N | 10 | 49 | 10 | | | | | | | | |
| | TU | eS | N | 10 | 50 | 55 | | | | | | | | |
| | WN | eS | N | 10 | 51 | 38 | | | | | | | | |
| | Epicentre: | | | 10 | 45 | 02 | | 23½S 180 600 km | | | | | | USCGS |
| 14 | KP | eP | Z | 17 | 18 | 40 | | | | | | | | |
| 16 | KP | P | Z | 17 | 28 | 10 | | | | | | | | |
| | Epicentre: | | | 17 | 17 | 44 | | 21½N 143E 300 km | | | | | | USCGS |
| 18 | KP | eP | Z | 01 | 06 | 45 | | | | | | | | |
| | Epicentre: | | | 00 | 53 | 54 | | Nicobar Is | | | | | | USCGS |
| 18 | KP | P | Z | 01 | 50 | 46 | | | | | | | | |
| | | i | Z | | 51 | 02 | | | | | | | | |
| | | eS | Z | | 56 | 46 | | | | | | | | |
| | ON | eP | E | 01 | 50 | 47 | | | | | | | | |
| | CT | eP | Z | 01 | 50 | 54 | | | | | | | | |
| | GP | eP | N | 01 | 51 | .2 | | | | | | | | |
| | SU | eS | N | 01 | 54 | 11 | | | | 2 | 6 | | | |
| | | eL | N | | 56 | .5 | | | | 18 | 22 | | | |
| | WN | e | N | 01 | 56 | 38 | | | | 3 | 6 | | | |
| | | eL | N | 02 | 00 | .5 | | | | 8 | 24 | | | |
| | | eL | ZN | | 02 | .8 | | 11 | 18 | 8 | 20 | | | |
| | RX | eS | NE | 01 | 57 | 36 | | | | 7 | 24 | 4 | 11 | 6.1 |
| | | eSS | N | 02 | 01 | 12 | | | | | | | | |
| | | eL | ZNE | | 04 | .0 | | 10 | 26 | 7 | 28 | 7 | 26 | |
| | | M | ZNE | 02 | 08 | | | 16 | 20 | 15 | 19 | 6 | 20 | |
| | Epicentre: | | | 01 | 43 | 29 | | 4½S 151E 200 km | | | | | | USCGS |
| 18 | SU | e | N | 07 | 50 | 20 | | | | | | | | |
| | | L | N | | 51 | 30 | | | | | | | | |
| | ON | eP | E | 07 | 51 | 41 | | | | | | | | |
| | KP | P | Z | 07 | 51 | 54 | | | | | | | | |
| | CT | eP | Z | 07 | 52 | 03 | | | | | | | | |
| | | i | Z | | | 06 | | | | | | | | |
| | GP | eP | N | 07 | 52 | 49 | | | | | | | | |
| | | e | N | | 57 | 36 | | | | | | | | |
| | | eS | N | | | 48 | | | | | | | | |
| | Epicentre: | | | 07 | 46 | 53 | | 17S 174½W | | | | | | USCGS |
| 18 | KP | eP | Z | 10 | 30 | 29 | | | | | | | | |
| 18 | KP | eP | Z | 15 | 26 | 32 | | | | | | | | |
| 20 | KP | P | Z | 02 | 45 | 25 | | | | | | | | |
| 20 | KP | P | Z | 09 | 43 | 31 | | | | | | | | |
| | Epicentre: | | | 09 | 30 | 38 | | 49N 157½E | | | | | | USCGS |
| 20 | SU | iP | N | 21 | 01 | 10 | n | | | | | | | |
| | ON | eP | E | 21 | 03 | 04 | | | | | | | | |
| | KP | P | Z | 21 | 03 | 27 | | | | | | | | |
| | TU | eP | N | 21 | 03 | 40 | | | | | | | | |
| | WN | eP | ZN | 21 | 04 | 02 | | 7 | 2 | | | | | 6.8 |
| | | eS | N | | 08 | 00 | | | | 8 | 6 | | | 6.2 |
| | | eL | N | | 09 | 40 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUL 20 | | eL | ZN | | 10 | 12 | | 19 | 15 | 26 | 15 | | | |
| | CB | eP | E | 21 | 04 | 02 | | | | | | | | |
| | KM | eP | X | 21 | 04 | 15 | | | | | | | | |
| | GP | eP | N | 21 | 04 | 23 | | | | | | | | |
| | RX | e(S) | N | 21 | 09 | 12 | | | | 7 | 12 | | | |
| | | eL | Z | | 13 | | | 22 | 22 | | | | | |
| | Epicentre: | | | 20 | 59 | 25 | | 20½S 169E 200 km | | | | | | USCGS |
| 20 | SU | L | N | 22 | 32 | 02 | | | | 8 | 7 | | | |
| | KP | P | Z | 22 | 32 | 09 | | | | | | | | |
| 21 | SU | L | N | 00 | 14 | 45 | | | | 28 | 10 | | | |
| | KP | P | Z | 00 | 15 | 05 | | | | | | | | |
| 23 | KP | P | Z | 02 | 40 | 06 | | | | | | | | |
| | ON | e | E | 02 | 40 | .2 | | | | | | | | |
| | SU | eL | N | 02 | 44 | | | | | 11 | 12 | | | |
| 23 | KP | P | Z | 05 | 48 | 21 | | | | | | | | |
| 23 | ON | P | E | 07 | 34 | 57 | | | | | | | | |
| | | S | E | | 37 | 38 | | | | | | | | |
| | KP | P | Z | 07 | 35 | 11 | | | | | | | | |
| | TU | eS | N | 07 | 38 | 06 | | | | | | | | |
| | Epicentre: | | | 07 | 31 | 38 | | 21½S 179½W 600 km | | | | | | USCGS |
| 23 | SU | eL | N | 12 | 49 | | | | | | | | | |
| | WN | eL | N | 12 | 51 | | | | | | | | | |
| | RX | eL | N | 12 | 55 | | | | | | | | | |
| 24 | KP | P | Z | 02 | 24 | 11 | | | | | | | | |
| 25 | KP | P | Z | 01 | 37 | 26 | | | | | | | | |
| 25 | SU | eS | N | 04 | 02 | 25 | | | | 5 | 10 | | | |
| | | eL | N | | 20 | | | | | 11 | 20 | | | |
| | WN | e(SS) | N | 04 | 12 | 41 | | | | 4 | 6 | | | 6.6 |
| | | eL | ZN | | 24 | .5 | | 6 | 19 | 22 | 23 | | | |
| | RX | eSKS | N | 04 | 05 | 38 | | | | 2 | 14 | | | 6.3 |
| | | eS | NE | | 06 | 44 | | | | 3 | 14 | 3 | 14 | 6.8 |
| | | e | NE | | 20 | 32 | | | | 3 | 12 | 4 | 12 | |
| | | eL | N | | 23 | .5 | | | | 6 | 33 | | | |
| | | eL | ZNE | | 25 | .3 | | 13 | 20 | 5 | 20 | 6 | 20 | |
| | Epicentre: | | | 03 | 41 | 05 | | 55N 163E | | | | | | USCGS 6½ PAS |
| 25 | KP | P | Z | 05 | 37 | 45 | | | | | | | | |
| 25 | KP | P | Z | 10 | 31 | 15 | | | | | | | | |
| | Epicentre: | | | 10 | 27 | 00 | | 17½S 178W 500 km | | | | | | USCGS |
| 25 | KP | eP | Z | 11 | 25 | 02 | | | | | | | | |
| | | i | Z | | | 05 | | | | | | | | |
| | | pP | Z | | | 37 | | | | | | | | |
| | WN | eP | Z | 11 | 25 | 56 | | 3 | 6 | | | | | 6.9 |
| | | ePP | Z | | 29 | 10 | | 3 | 4 | | | | | 7.1 |
| | | iSKS | ZN | | 35 | 34 | | 2 | 5 | 14 | 12 | | | 7.1 |
| | | iS | N | | 36 | 20 | | | | 18 | 11 | | | |
| | | ePS | N | | 38 | 06 | | | | 18 | 20 | | | |
| | | Lq | N | | 56 | .3 | | | | 45 | 40 | | | |
| | | eLr | ZN | | 59 | .4 | | | | 12 | 21 | | | |
| | RX | ePP | ZN | 11 | 29 | 36 | | 4 | 9 | 2 | 10 | | | |
| | | iSKS | NE | | 35 | 58 | s | | | 15 | 14 | 8 | 9 | |
| | | S | NE | | 36 | 58 | | | | 15 | 16 | 14 | 11 | |
| | | eSS | NE | | 43 | 48 | | | | 7 | 16 | 7 | 18 | |
| | CB | eS | E | 11 | 36 | 20 | | | | | | | | |
| | Epicentre: | | | 11 | 12 | 00 | | 54N 159E 100 km | | | | | | USCGS 7 PAS |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUL 25 | KP | P | Z | 18 | 03 | 17 | | | | | | | | | |
| 27 | KP | eP | Z | 04 | 09 | 36 | | | | | | | | | |
| | | i | Z | | | 38 | | | | | | | | | |
| | | e | Z | | | 51 | | | | | | | | | |
| | Epicentre: | | | 03 | 57 | 26.4 | | 59.4S | | 25.1E | 65 km | | | USCGS | |
| 27 | KP | eiP | Z | 10 | 16 | 39 | u | | | | | | | | |
| | RX | eS | N | 10 | 26 | 34 | | | | 4 | 24 | | | | 6.1 |
| | | eL | N | | | 36 | | | | 4 | 30 | | | | 6.1 |
| | | eL | ZNE | | | 40 | | 6 | 20 | 4 | 20 | 4 | 20 | | |
| | Epicentre: | | | 10 | 04 | 53.0 | | 44.7S | | 75.1W | 25 km | | | USCGS | 6¼-½PAS |
| 27 | KP | eP | Z | 13 | 42 | 17 | | | | | | | | | |
| | TU | eS | N | 13 | 43 | 48 | | | | | | | | | |
| | WN | S | N | 13 | 44 | 55 | | | | | | | | | |
| | CB | eS | E | 13 | 45 | 15 | | | | | | | | | |
| 27 | KP | P | Z | 14 | 17 | 37 | | | | | | | | | |
| | | e | Z | | 18 | 13 | | | | | | | | | |
| | Epicentre: | | | 14 | 10 | 06.6 | | 5.5S | | 147.3E | 205 km | | | USCGS | |
| 27 | KP | P | Z | 18 | 22 | 52 | | | | | | | | | |
| 27 | KP | eP | Z | 21 | 03 | 47 | | | | | | | | | |
| | Epicentre: | | | 21 | 01 | 06.9 | | 28.7S | | 176.7W | 68 km | | | USCGS | |
| 28 | KP | eP | Z | 01 | 22 | 55 | | | | | | | | | |
| | WN | eS | N | 01 | 25 | 51 | | | | | | | | | |
| 28 | KP | P | Z | 06 | 46 | 20 | | | | | | | | | |
| 28 | KP | eP | Z | 08 | 08 | 58 | | | | | | | | | |
| 28 | ON | eP | E | 10 | 41 | 10 | | | | | | | | | |
| | KP | P | Z | 10 | 41 | 29 | | | | | | | | | |
| | | e | Z | | | 36 | | | | | | | | | |
| | WN | eP | N | 10 | 41 | 56 | | | | | | | | | |
| | GP | eP | N | 10 | 42 | 12 | | | | | | | | | |
| 29 | ON | P | E | 00 | 28 | 09 | | | | | | | | | |
| | | i | E | | | 22 | | | | | | | | | |
| | | eS | E | | 31 | 16 | | | | | | | | | |
| | AK | iP | N | 00 | 28 | 10 | s | | | | | | | | |
| | | i | N | | | 19 | | | | | | | | | |
| | | S | N | | 31 | 44 | | | | | | | | | |
| | | e | N | | 37 | 12 | | | | | | | | | |
| | KP | P | Z | 00 | 28 | 30 | | | | | | | | | |
| | | PcP | Z | | 32 | 58 | | | | | | | | | |
| | | e | Z | | 41 | 23 | | | | | | | | | |
| | TU | eP | N | 00 | 28 | 45 | | | | | | | | | |
| | | eS | N | | 32 | 32 | | | | | | | | | |
| | TO | eP | Z | 00 | 28 | 46 | | | | | | | | | |
| | CT | P | Z | 00 | 28 | 46 | | | | | | | | | |
| | | i | Z | | | 58 | | | | | | | | | |
| | | S | Z | | 32 | 42 | | | | | | | | | |
| | | ePcP | Z | | 33 | 17 | | | | | | | | | |
| | CB | eP | E | 00 | 29 | 05 | | | | | | | | | |
| | | eS | E | | 33 | 01 | | | | | | | | | |
| | WN | iP | ZN | 00 | 29 | 06 | | 19 | 5 | 14 | 5 | | | | 6.8 |
| | | S | ZN | | 33 | 10 | | 16 | 10 | 18 | 5 | | | | 6.8 |
| | | eL | ZN | | 36 | | | 20 | 12 | 26 | 14 | | | | 6.8 |
| | KM | eP | X | 00 | 29 | 15 | | | | | | | | | |
| | | eS | X | | 33 | 32 | | | | | | | | | |
| | GP | eP | N | 00 | 29 | 26 | | | | | | | | | |
| | RX | eP | ZN | 00 | 29 | 42 | | 9 | 6 | 7 | 6 | | | | 6.6 |
| | | iS | NE | | 34 | 18 | | | | 18 | 18 | 6 | 12 | | 6.6 |



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUL 29 | | eL | N | | 36 | | | | | | 15 | 30 | | | 6.2 |
| | | eL | Z | | 38 | | | 24 | 22 | | | | | | 6.2 |
| | | M | NE | | 38½ | | | | | | 37 | 20 | 45 | 16 | |
| | Epicentre: | | | 00 | 24 | 06 | | 19½S | | 170½E | | | | USCGS | 6½-¾ PAS |
| 29 | ON | eP | E | 01 | 54 | 21 | | | | | | | | | |
| | | e | E | | | 33 | | | | | | | | | |
| | KP | P | Z | 01 | 54 | 47 | | | | | | | | | |
| | CT | eP | Z | 01 | 55 | 02 | | | | | | | | | |
| | GP | eP | N | 01 | 55 | 42 | | | | | | | | | |
| 29 | KP | eP | Z | 09 | 32 | 47 | | | | | | | | | |
| 29 | ON | eP | E | 13 | 29 | 37 | | | | | | | | | |
| | KP | eP | Z | 13 | 29 | 54 | | | | | | | | | |
| | CT | eP | Z | 13 | 30 | 09 | | | | | | | | | |
| | RX | eL | N | 13 | 39 | | | | | | 2 | 20 | | | |
| 29 | KP | ePKP | Z | 14 | 52 | 39 | | | | | | | | | |
| | Epicentre: | | | 14 | 33 | 46.1 | | 31.7N | | 67.0E | 64 km | | | USCGS | |
| 29 | KP | eP | Z | 15 | 32 | 27 | | | | | | | | | |
| | CT | eP | Z | 15 | 32 | 43 | | | | | | | | | |
| | RX | eL | N | 15 | 42 | | | | | | | | | | |
| 29 | ON | eP | E | 17 | 44 | 05 | | | | | | | | | |
| | KP | eP | Z | 17 | 44 | 05 | | | | | | | | | |
| | | e | Z | | | 10 | | | | | | | | | |
| | CT | eP | Z | 17 | 44 | 11 | | | | | | | | | |
| | | pP | Z | | | 28 | | | | | | | | | |
| | | ePP | Z | | 47 | 23 | | | | | | | | | |
| | | epPP | Z | | | 43 | | | | | | | | | |
| | WN | P | ZN | 17 | 44 | 36 | | 6 | 6 | | 3 | 5 | | | 6.9 |
| | | ePP | ZN | | 47 | 38 | | 4 | 10 | | | | | | 7.0 |
| | | eSKS | ZN | | 54 | 30 | | 2 | 5 | | 3 | 7 | | | 6.8 |
| | | eS | N | | | 52 | | | | | 16 | 17 | | | 6.8 |
| | | SS | N | 18 | 00 | 29 | | | | | | | | | |
| | | eL | N | | 07 | | | | | | | | | | |
| | | eL | ZN | 18 | 11 | 24 | | 25 | 22 | | 24 | 22 | | | |
| | RX | eP | ZN | 17 | 44 | 44 | | | | | | | | | 6.8 |
| | | i | ZN | | | 54 | | 5 | 9 | | 3 | 16 | | | 6.6 |
| | | SKS | ZNE | | 55 | 00 | | 4 | 15 | | 4 | 16 | 3 | 15 | 6.5 |
| | | S | N | | | 24 | | | | | 14 | 28 | | | 6.7 |
| | | SS | N | 18 | 01 | 09 | | | | | 6 | 22 | | | |
| | | eSSS | N | | 04 | 40 | | | | | 6 | 26 | | | |
| | | eL | NE | | 13½ | | | | | | 23 | 38 | 17 | 30 | |
| | | eL | Z | | 14 | | | 57 | 31 | | | | | | |
| | | M | | | 18 | | | | | | 32 | 24 | 18 | 22 | |
| | Epicentre: | | | 17 | 31 | 39.5 | | 40.1N | | 142.3E | 50 km | | | USCGS | 6¾ PAS |
| 29 | KP | P | Z | 21 | 59 | 25 | | | | | | | | | |
| 30 | KP | iP | Z | 06 | 26 | 32 | | | | | | | | | |
| 30 | KP | P | Z | 19 | 28 | 58 | | | | | | | | | |
| | GP | eP | N | 19 | 29 | 53 | | | | | | | | | |
| 31 | KP | eP | Z | 03 | 03 | 13 | | | | | | | | | |
| | | pP | Z | | | 20 | | | | | | | | | |
| | | ePP | Z | | 04 | 58 | | | | | | | | | |
| | | ScP | Z | | 09 | 33 | | | | | | | | | |
| | TO | eP | Z | 03 | 03 | 27 | | | | | | | | | |
| | KM | eP | X | 03 | 03 | 36½ | | | | | | | | | |
| | | eS | X | | 09 | 45 | | | | | | | | | |
| | WN | P | ZN | 03 | 03 | 38 | | | | | 2 | 5 | | | 7.0 |
| | | PcP | ZN | | 05 | 35 | | 10 | 7 | | 9 | 9 | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUL 31 | | S | ZN | | 09 | 40 | 8 | 10 | 17 | 7 | | | | |
| | | (SSS) | ZN | | 13 | 18 | 19 | 16 | 14 | 10 | | | | |
| | | eLq | N | | 14 | | | | 70 | 26 | | | | |
| | | eLr | ZN | | 16 | .0 | 47 | 19 | 35 | 20 | | | | |
| | GP | eP | N | 03 | 03 | 40 | | | | | | | | |
| | RX | eP | ZNE | 03 | 03 | 58 | 3 | 7 | 3 | 15 | | | | 6.1 |
| | | ePP | N | | 05 | 22 | | | 3 | 10 | | | | 6.2 |
| | | S | ZNE | | 10 | 04 | 9 | 10 | 29 | 20 | 22 | 14 | | 6.7 |
| | | L | ZNE | | 13 | .5 | 24 | 20 | 26 | 23 | 28 | 23 | | |
| | | M | NE | | 17 | ½ | | | 25 | 22 | 21 | 22 | | 6.3 |
| | Epicentre: | | | 02 | 55 | 46.2 | 5.6S | | 150.0E | | 25 km | | USCGS | |
| 31 | ON | eP | E | 04 | 29 | 46 | | | | | | | | |
| | KP | eP | Z | 04 | 29 | 51 | | | | | | | | |
| 31 | KP | eP | Z | 07 | 12 | 01 | | | | | | | | |
| | RX | eS | NE | 07 | 18 | 50 | | | 2 | 16 | 2 | 12 | | 5.7 |
| | | eL | NE | | 22 | .2 | | | | | | | | |
| | | M | | | 26 | | | | 2 | 22 | | | | 5.6 |
| | WN | eL | N | 07 | 22 | | | | | | | | | |
| | | eL | ZN | | 25 | | | | 3 | 12 | | | | |
| | Epicentre: | | | 07 | 04 | 37.1 | 6.0S | | 150.0E | | 93 km | | USCGS | |
| 31 | KP | P | Z | 09 | 27 | 02 | | | | | | | | |
| | Epicentre: | | | 09 | 17 | 57.4 | 6.5S | | 129.6E | | 83 km | | USCGS | |
| 31 | KP | P | Z | 13 | 01 | 42 | | | | | | | | |
| 31 | WN | eP? | Z | 15 | 06 | 36 | 2 | 6 | | | | | | |
| | | eL | Z | | 30 | | | | | | | | | |
| | KP | P | Z | 15 | 06 | 45 | | | | | | | | |
| | Epicentre: | | | 14 | 55 | 03.3 | 43.6S | | 74.3W | | 97 km | | USCGS | |
| 31 | TU | P | N | 15 | 50 | 48 | | | | | | | | |
| | | S | N | | 51 | 14 | | | | | | | | |
| | KP | iP | Z | 15 | 50 | 50 | u | | | | | | | |
| | | i | Z | | 51 | 16 | | | | | | | | |
| | | i | Z | | | 23 | | | | | | | | |
| | TO | P | Z | | 50 | 58¾ | | | | | | | | |
| | ON | P | E | 15 | 51 | 00 | | | | | | | | |
| | WN | P | N | 15 | 51 | 22 | | | | | | | | |
| | | S | N | | 52 | 16½ | | | | | | | | |
| | GP | eP | N | 15 | 51 | 58 | | | | | | | | |
| | | S | N | | 53 | 19 | | | | | | | | |
| | KM | e | X | 15 | 52 | 05 | | | | | | | | |
| | | S | X | | 53 | 12 | | | | | | | | |
| | Epicentre: | | | 15 | 50 | 13 | 37.1S | | 177.1E | | 240 km | | NZ(B) | 5.6 NZ |
| | | | | | | | Additional readings from Brisbane and Charters Towers used to determine epicentre. | | | | | | | |
| 31 | KP | eP | Z | 18 | 54 | 13 | | | | | | | | |
| | Epicentre: | | | 18 | 46 | 13.9 | 2.8S | | 148.2E | | 13 km | | USCGS | |
| AUG 1 | KP | ePKP | Z | 02 | 39 | 56 | | | | | | | | |
| | Epicentre: | | | 02 | 20 | 52.4 | 27.9N | | 54.2E | | 110 km | | USCGS | |
| 1 | KP | P | Z | 16 | 36 | 21 | | | | | | | | |
| | Epicentre: | | | 16 | 28 | 55.0 | 4.8S | | 152.6E | | 77 km | | USCGS | |
| 1 | KP | eP | Z | 22 | 07 | 52 | | | | | | | | |
| | | e | Z | | | 54 | | | | | | | | |
| | | e | Z | | 08 | 03 | | | | | | | | |
| | | e | Z | | | 25 | | | | | | | | |
| | Epicentre: | | | 21 | 56 | 24.2 | 27.7N | | 142.5E | | 28 km | | USCGS | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG 2 | ON | P | E | 03 | 28 | 44 | | | | | | | | | |
| | KP | P | Z | 03 | 28 | 50 | | | | | | | | | |
| | | e | Z | | | 54 | | | | | | | | | |
| | CT | e(P) | Z | 03 | 29 | 05 | | | | | | | | | |
| | | e(S) | Z | | 30 | 33 | | | | | | | | | |
| | TU | eS | N | 03 | 30 | 09 | | | | | | | | | |
| | WN | eS | N | 03 | 31 | 14 | | | | | | | | | |
| | CB | eS | E | 03 | 31 | 30 | | | | | | | | | |
| | KM | eS | X | 03 | 32 | 07 | | | | | | | | | |
| | GP | eS | N | 03 | 32 | 17 | | | | | | | | | |
| | Epicentre: | | | 03 | 00 | 00 | Kermadec region. | | | | | | | | |
| 2 | SU | P | N | 05 | 09 | 18 | s | | | | | | | | |
| | | eS | N | | 11 | 00 | | | | | | | | | |
| | ON | eP | E | 05 | 10 | 36 | e | | | | | | | | |
| | | e? | E | | 13 | 05 | | | | | | | | | |
| | | eS | E | | | 15 | | | | | | | | | |
| | | e | E | | 14 | 23 | | | | | | | | | |
| | KP | iP | Z | 05 | 11 | 05 | d | | | | | | | | |
| | | e | Z | | | 22 | | | | | | | | | |
| | | S | Z | | 14 | 16 | | | | | | | | | |
| | TU | P | N | 05 | 11 | 21 | n | | | | | | | | |
| | | e | N | | 14 | 24 | | | | | | | | | |
| | | e(S) | N | | | 35 | | | | | | | | | |
| | | e | N | | | 53 | | | | | | | | | |
| | | eScS | N | | 23 | 02 | | | | | | | | | |
| | CT | iP | Z | 05 | 11 | 21 | d | | | | | | | | |
| | | e | Z | | | 39 | | | | | | | | | |
| | TO | iP | Z | 05 | 11 | 21 | d | | | | | | | | |
| | | e | Z | | | 38 | | | | | | | | | |
| | CB | P | E | 05 | 11 | 39 | | | | | | | | | |
| | | e | E | | | 45 | | | | | | | | | |
| | | eS | E | | 15 | 13 | | | | | | | | | |
| | WN | P | ZN | 05 | 11 | 42 | d | | | | | | | | |
| | | e | N | | | 50 | | | | | | | | | |
| | | e | N | | 12 | 35 | | | | | | | | | |
| | | iS | ZN | | 15 | 25 | s | | | | | 35 | 5 | | |
| | | iL | N | | 17 | 15 | | | | | | | | | |
| | | eScS | N | | 23 | 10 | | | | | | | | | |
| | KM | iP | X | 05 | 11 | 54 | ne | | | | | | | | |
| | | e | X | | 12 | 35 | | | | | | | | | |
| | | eS | X | | 16 | 05 | | | | | | | | | |
| | GP | eP | N | 05 | 12 | 04 | | | | | | | | | |
| | | e | N | | | 31 | | | | | | | | | |
| | | eS | N | | 16 | 02 | | | | | | | | | |
| | RX | eP | ZN | 05 | 12 | 25 | | 8 | 5 | | | | | | |
| | | S | NE | | 16 | 32 | s | | | | | | | | |
| | | e | E | | 17 | 06 | | | | | | 30 | 15 | 35 10 | |
| | | eL | N | | 19 | | | | | | | | | | |
| | Epicentre: | | | 05 | 07 | 22.1 | 22.2S | | 171.5E | | 108 km | | USCGS | | 6½-6¾ |
| 2 | KP | eP | Z | 06 | 27 | 42 | | | | | | | | | |
| | | e | Z | | | 50 | | | | | | | | | |
| | Epicentre: | | | 06 | 14 | 47.1 | 51.5N | | 178.3W | | 34 km | | USCGS | | |
| 2 | ON | eP | E | 09 | 32 | 55 | | | | | | | | | |
| | | e(S) | E | | 35 | 11 | | | | | | | | | |
| | | eL | E | | 36 | | | | | | | | | | |
| | KP | eP | Z | 09 | 33 | 02 | | | | | | | | | |
| | | e | Z | | | 19 | | | | | | | | | |
| | | S | Z | | 35 | 10 | | | | | | | | | |
| | SU | eP | N | 09 | 33 | 08 | | | | | | | | | |
| | | eL | N | | 37 | | | | | | | 40 | 13 | | |
| | TU | e | N | 09 | 33 | 09 | | | | | | | | | |
| | | S | N | | 35 | 06 | | | | | | | | | |
| | CT | eP? | Z | 09 | 33 | 14 | | | | | | | | | |
| | | e | Z | | | 19 | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az Tz | An Tn | Ae Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|
| AUG 2 | | i | Z | | | 35 | | | | |
| | | S | Z | | 35 | 40 | | | | |
| | WN | eP | N | 09 | 33 | 56 | | | | |
| | | e | N | | 34 | 02 | | | | |
| | | eS | N | | 36 | 15 | | | | |
| | | eL | N | | 39 | | | | | |
| | CB | eP | E | 09 | 34 | 08 | | | | |
| | | eS | E | | 36 | 33 | | | | |
| | | e | E | | | 44 | | | | |
| | KM | eP? | X | 09 | 34 | 21 | | | | |
| | | e(S) | X | | 37 | 18 | | | | |
| | | e | X | | | 26 | | | | |
| | GP | eP | N | 09 | 34 | 22 | | | | |
| | | S | N | | 37 | 24 | | | | |
| | RX | eL | NE | 09 | 40 | .5 | | 3 20 | 5 20 | |
| | Epicentre: | | | 09 | 30 | 26.5 | 28.2S | 176.6W | 61 km | USCGS |
| 2 | KP | eP | Z | 10 | 00 | 22 | | | | |
| | ON | e | E | 10 | 00 | 34 | | | | |
| | CT | e(P) | Z | 10 | 00 | 46 | | | | |
| | | e(S) | Z | | 03 | 01 | | | | |
| | TU | eS | N | 10 | 02 | 32 | | | | |
| | WN | eS | N | 10 | 03 | 35 | | | | |
| | GP | eS | N | 10 | 04 | 44 | | | | |
| | Epicentre: | | | 09 | 57 | .9 | Kermadec region. | | | |
| 2 | KP | e(P) | Z | 10 | 08 | 55 | | | | |
| | | e | Z | | 09 | 09 | | | | |
| | | e | Z | | 11 | 20 | | | | |
| | ON | eP | E | 10 | 08 | 57 | | | | |
| | | e | E | | 09 | 12 | | | | |
| | CT | eP | Z | 10 | 09 | 12 | | | | |
| | | e | Z | | | 35 | | | | |
| | | e | Z | | | 44 | | | | |
| | | e | Z | | 10 | 36 | | | | |
| | | (S) | Z | | 11 | 23 | | | | |
| | | e | Z | | | 34 | | | | |
| | GP | e(P) | N | 10 | 10 | 20 | | | | |
| | | S | N | | 13 | 12 | | | | |
| | TU | eS | N | 10 | 11 | 04 | | | | |
| | WN | eS | N | 10 | 12 | 07 | | | | |
| | CB | eS | E | 10 | 12 | 24 | | | | |
| | SU | eL | N | 10 | 13 | | | 9 10 | | |
| | KM | eS | X | 10 | 13 | 05 | | | | |
| | Epicentre: | | | 10 | 06 | 25.3 | 28.4S | 176.8W | 92 km | USCGS |
| 2 | ON | e | E | 10 | 40 | 41 | | | | |
| | KP | eP | Z | 10 | 40 | 41 | | | | |
| | | e | Z | | | 56 | | | | |
| | CT | e | Z | 10 | 41 | 09 | | | | |
| | TU | eS | N | 10 | 42 | 44 | | | | |
| | | e | N | | | 50 | | | | |
| | WN | eS | N | 10 | 43 | 52 | | | | |
| | CB | eS | E | 10 | 44 | 10 | | | | |
| | GP | e | N | 10 | 45 | 05 | | | | |
| | Epicentre: | | | 10 | 38 | .1 | Kermadec region. | | | |
| 2 | ON | e | E | 10 | 42 | 55 | | | | |
| | KP | e | Z | 10 | 43 | 02 | | | | |
| | CT | e? | Z | 10 | 43 | 10 | | | | |
| | | e | Z | | | 21 | | | | |
| | | e(S) | Z | | 45 | 34 | | | | |
| | TU | eS | N | 10 | 44 | 58 | | | | |
| | WN | eS | N | 10 | 46 | 07 | | | | |
| | CB | eS | E | 10 | 46 | 25 | | | | |
| | GP | eS | N | 10 | 47 | 10 | | | | |
| | Epicentre: | | | 10 | 40 | .3 | Kermadec region. | | | |



| Date | Stn | Phase | | h | m | s | Az Tz | An Tn | Ae Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|
| AUG 2 | ON | eP | E | 13 | 35 | 26 | | | | |
| | KP | P | Z | 13 | 35 | 48 | | | | |
| | | e | Z | | | 55 | | | | |
| | CT | e | Z | 13 | 36 | 02 | | | | |
| | CB | eP | E | 13 | 36 | 17 | | | | |
| 2 | KP | e(P) | Z | 13 | 54 | 31 | | | | |
| | Epicentre: | | | 13 | 42 | 28.2 | 4.5S | 104.7W | 93 km | USCGS |
| 3 | RX | eL | N | 02 | 09 | | | 1 17 | | |
| 3 | RX | eL | N | 03 | 43 | | | 1 17 | | |
| | WN | e | N | 03 | 47 | | | | | |
| 3 | KP | P | Z | 19 | 20 | 12 | | | | |
| 4 | TU | P | N | 01 | 15 | 28½ | | | | |
| | | e | N | | | 43 | | | | |
| | | S | N | | | 49 | | | | |
| | | e | N | | | 50½ | | | | |
| | KP | iP | Z | 01 | 15 | 31 | n | | | |
| | | S | Z | | | 49 | | | | |
| | | e | Z | | 21 | 14½ | | | | |
| | TO | P | Z | 01 | 15 | 40 | | | | |
| | | e(S) | Z | | 16 | 19 | | | | |
| | CT | iP | Z | 01 | 15 | 41 | d | | | |
| | | e(S) | Z | | 16 | 14 | | | | |
| | | (S) | Z | | | 22 | | | | |
| | ON | P | E | 01 | 15 | 49½ | | | | |
| | | (S) | E | | 16 | 29 | | | | |
| | | e | E | | 21 | 07½ | | | | |
| | CB | eP | E | 01 | 16 | 16 | | | | |
| | | e | E | | | 32 | | | | |
| | | e | E | | | 34 | | | | |
| | | S | E | | 17 | 19 | | | | |
| | GP | eP | N | 01 | 16 | 44 | | | | |
| | | S | N | | 18 | 02 | | | | |
| | WN | eS | N | 01 | 17 | | | | | |
| | KM | eS | X | 01 | 17 | 58 | | | | |
| | Epicentre: | | | 01 | 15 | 01 | 37.4S | 177.7E | 100 km | NZ(D) 5.0 NZ |
| | | | | | | | Additional reading from Charters Towers used to determine epicentre. | | | |
| 4 | SU | eP | N | 07 | 46 | 05 | | | | |
| | | S | N | | 55 | 04 | | | | |
| | | eL | N | 08 | 07 | | | | | |
| | KP | P | Z | 07 | 47 | 44 | | | | |
| | | e | Z | | 48 | 44 | | | | |
| | RX | eSKS | N | 07 | 58 | 54 | | | 5 15 | |
| | | eS | NE | | 59 | 42 | | | | |
| | | eSP | N | 08 | 01 | 02 | | | | |
| | | eSS | N | | 06 | 20 | | | | |
| | | eSSS | N | | 10 | | | | | |
| | | eL | N | | 20 | | | | | |
| | | eL | ZN | | 23 | | | | 9 25 | |
| | | M | ZE | | 26 | | | 11 20 | 6 20 | |
| | | M | N | | 31 | | | | 8 19 | |
| | WN | eL | N | 08 | 20 | | | | | |
| | | M | N | | 32 | | | | 9 20 | |
| | Epicentre: | | | 07 | 34 | 53.8 | 51.4N | 179.4E | 83 km | USCGS 6¼ |
| 4 | KP | eP | Z | 14 | 18 | 33 | | | | |
| | Epicentre: | | | 14 | 05 | 28.2 | 51.3N | 178.8E | 59 km | USCGS |
| 5 | KP | e(P) | Z | 01 | 11 | 43 | | | | |

| Date | Stn | Phase | | h | m | s | Az Tz | An Tn | Ae Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG 5 | KP | P | Z | 16 | 19 | 29 | | | | | |
| | Epicentre: | | | 16 | 06 | 33.4 | 50.1N 156.8E | 42 km | | USCGS | |
| 5 | KP | eP | Z | 22 | 40 | 30 | | | | | |
| | RX | eL | N | 23 | 23 | | | 1 18 | | | |
| | Epicentre: | | | 22 | 27 | 34.2 | 51.0N 178.7E | 15 km | | USCGS | |
| 6 | KP | P | Z | 03 | 16 | 39 | | | | | |
| | Epicentre: | | | 03 | 05 | 56.4 | 27.9N 139.0E | 583 km | | USCGS | |
| 6 | ON | P | E | 13 | 56 | 37 | | | | | |
| | | S | E | | 57 | 49 | | | | | |
| | KP | P | Z | 13 | 56 | 46 | | | | | |
| | TU | P | N | 13 | 56 | 48 | | | | | |
| | | S | N | | 58 | 06½ | | | | | |
| | TO | eP | Z | 13 | 56 | 58 | | | | | |
| | | eS? | Z | | 58 | 24 | | | | | |
| | | e? | Z | | | 45 | | | | | |
| | WN | P | N | 13 | 57 | 20 | | | | | |
| | | S | N | | 59 | 03½ | | | | | |
| | CB | eP | E | 13 | 57 | 26 | | | | | |
| | | eS | E | | 59 | 17 | | | | | |
| | KM | eP? | X | 13 | 57 | 47 | | | | | |
| | | e(P) | X | | | 49 | | | | | |
| | | eS | X | | 59 | 52 | | | | | |
| | GP | eP | N | 13 | 57 | 53 | | | | | |
| | | S | N | 14 | 00 | 01 | | | | | |
| | Epicentre: | | | 13 | 55 | 06 | 32.7S 179.7W | 400 km | | NZ(C) | 5.7 ML |
| | Additional reading from Charters Towers used to determine epicentre. | | | | | | | | | | |
| 6 | KP | eP | Z | 15 | 01 | 40 | | | | | |
| | Epicentre: | | | 14 | 49 | 44.9 | 42.4S 74.8W | 35 km | | USCGS | |
| 7 | RX | e(P) | ZNE | 08 | 55 | 06 | | | | | |
| | | S | ZNE | | | 28 | | | | | |
| | KM | eP | X | 08 | 55 | (28) | | | | | |
| | | P* | X | | | 40 | | | | | |
| | | S* | X | | 56 | 15 | | | | | |
| | GP | eP | N | 08 | 55 | 35 | | | | | |
| | | eP* | N | | | 47 | | | | | |
| | | (S) | N | | 56 | 21 | | | | | |
| | | S* | N | | | 36 | | | | | |
| | CB | eP | E | 08 | 55 | 49 | | | | | |
| | | e | E | | | 57 | | | | | |
| | | eS | E | | 56 | 46½ | | | | | |
| | | e | E | | | 50½ | | | | | |
| | CT | P | Z | 08 | 56 | 29 | | | | | |
| | KP | eP | Z | 08 | 56 | 41 | | | | | |
| | | e | Z | | | 47 | | | | | |
| | | (S) | Z | | 58 | 12 | | | | | |
| | TU | e? | N | 08 | 56 | 53½ | | | | | |
| | | e | N | | | 55½ | | | | | |
| | | e | N | | 58 | 43 | | | | | |
| | ON | eP | E | 08 | 56 | 59 | | | | | |
| | | eS | E | | 58 | 45 | | | | | |
| | | e | E | | 59 | 23½ | | | | | |
| | WN | S | N | 08 | 57 | 19 | | | | | |
| | | L | Z | | 58 | 08 | | | | | |
| | | L | N | | | 25 | | | | | |
| | Epicentre: | | | 08 | 54 | 37 | 44.1S 167.7E | S | | NZ(D) | 5.5 ML |
| | Felt: Jackson Bay MM 3. | | | | | | | | | | |
| 9 | WN | ePS | N | 08 | 05 | 44 | | | | | |
| | | eLr | ZN | | 24 | | | | | | |
| | | M | ZN | | 27 | | 7 23 | 8 24 | | | |



| Date | Stn | Phase | | h | m | s | Az Tz | An Tn | Ae Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG 9 | RX | ePS | N | 08 | 06 | 50 | | | | | |
| | | e | N | | 08 | 50 | | | | | |
| | | eSS | N | | 12 | 28 | | | | | |
| | | eL | N | | 26 | | | | | | |
| | | eL | Z | | 28 | | | | | | |
| | | M | ZNE | | 32 | | 6 20 | 5 20 | | | |
| | Epicentre: | | | 07 | 39 | 22.6 | 40.0N 126.6W | 25 km | | USCGS | 6 |
| 9 | ON | eP? | E | 16 | 49 | 44 | | | | | |
| | | e | E | | | 49 | | | | | |
| | | eL | E | | 53 | | | | | | |
| | KP | P | Z | 16 | 49 | 58 | | | | | |
| | | e | Z | | 50 | 08 | | | | | |
| | | e | Z | | | 39 | | | | | |
| | | eL | Z | | 55 | | | | | | |
| | TU | e | N | 16 | 50 | 24 | | | | | |
| | | eS | N | | 52 | 46 | | | | | |
| | | eL | N | | 55 | | | | | | |
| | WN | eP | N | 16 | 50 | 35 | | | | | |
| | | e | N | | 51 | 15 | | | | | |
| | | eS | N | | 53 | 44 | | | | | |
| | | e | N | | 54 | 02 | | | | | |
| | | eL | ZN | | 55 | | | | | | |
| | | M | N | 17 | 00 | | | 50 12 | | | |
| | CB | e | E | 16 | 51 | 00 | | | | | |
| | | e | E | | | 09 | | | | | |
| | | e(S) | E | | 54 | 05 | | | | | |
| | | eL | E | | 55 | | | | | | |
| | GP | e(P) | N | 16 | 51 | 07 | | | | | |
| | | e | N | | | 10 | | | | | |
| | | eS | N | | 54 | 50 | | | | | |
| | | eL | N | | 57 | | | | | | |
| | KM | e? | X | 16 | 51 | 15 | | | | | |
| | | e | X | | | 36 | | | | | |
| | RX | e(P) | N | 16 | 51 | 31 | | | | | |
| | | eL | N | | 56 | | | | | | |
| | | eL | ZN | | 58.5 | | | | | | |
| | | M | E | 17 | 00 | | | | | | |
| | | M | ZN | | 02 | | 65 16 | 50 16 | | | |
| | Epicentre: | | | 16 | 46 | 37.7 | 24.5S 177.1W | 186 km | | USCGS | 6¼ |
| 9 | KP | P | Z | 23 | 42 | 34 | | | | | |
| | | e | Z | | 43 | 35 | | | | | |
| | TU | eP | N | 23 | 42 | 46 | | | | | |
| | CB | eP | E | 23 | 43 | 00 | | | | | |
| | GP | eP | N | 23 | 43 | 17 | | | | | |
| | RX | eL | N | 23 | 52 | | | | | | |
| | | eL | ZE | | 55 | | | | | | |
| | | M | ZNE | | 56 | | 5 20 | 2 20 | 4 20 | | |
| | WN | eL | ZN | 23 | 54 | | 8 20 | 8 20 | | | |
| | Epicentre: | | | 23 | 36 | 51.5 | 11.5S 166.3E | 80 km | | USCGS | |
| 11 | KP | P | Z | 02 | 49 | 49 | | | | | |
| | | epP | Z | | 50 | 22 | | | | | |
| | Epicentre: | | | 02 | 36 | 56.5 | 52.2N 176.2W | 97 km | | USCGS | |
| 11 | KP | eP | Z | 03 | 03 | 40 | | | | | |
| | | e | Z | | | 49 | | | | | |
| | | e | Z | | 05 | 20 | | | | | |
| | CT | (P) | Z | 03 | 04 | 01 d | | | | | |
| | RX | e(L) | N | 03 | 18.5 | | | 2 22 | | | |
| | | eL | N | | 24 | | | | | | |
| | Epicentre: | | | 02 | 53 | 16.3 | 0.0 | 121.6E | 46 km | USCGS | |
| 11 | KP | eP | Z | 05 | 01 | 11 | | | | | |
| | | e | Z | | 03 | 47 | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG 11 | CT | P | Z | 05 | 01 | 17 | | | | | | | | | |
| | | Epicentre: | | 04 | 50 | 33.9 | | 8.8N | 126.1E | 79 | km | | | USCGS | |
| | 11 SU | eL | N | 09 | 31 | | | | | | | | | | |
| | 11 SU | eL | N | 21 | 57 | | | | | | | | | | |
| | 12 SU | eL | N | 00 | 12 | | | | | | | | | | |
| | | M | N | | 15 | | | | | 10 | 8 | | | | |
| | RX | eL | ZNE | 00 | 22 | | | | | | | | | | |
| | 12 SU | eL | N | 03 | 13 | | | | | | | | | | |
| | | M | N | | 15 | | | | | 3 | 8 | | | | |
| | 12 KP | eP? | Z | 10 | 09 | 39 | | | | | | | | | |
| | RX | eL | N | 10 | 22 | | | | | | | | | | |
| | 12 KP | eP | Z | 13 | 24 | 42 | | | | | | | | | |
| | | e | Z | | | 50 | | | | | | | | | |
| | | Epicentre: | | 13 | 12 | 34.3 | | 36.1N | 141.4E | 95 | km | | | USCGS | |
| | 13 KP | e(P) | Z | 04 | 25 | 18 | | | | | | | | | |
| | RX | eL | N | 04 | 36 | 30 | | | | 2 | 28 | | | | |
| | | eL | ZNE | | 40 | | | | | 1 | 20 | | | | |
| | 13 KP | iP | Z | 07 | 23 | 31 | u | | | | | | | | |
| | | e | Z | | | 39 | | | | | | | | | |
| | ON | eP? | E | 07 | 23 | 34 | | | | | | | | | |
| | CT | eP | Z | 07 | 23 | 36 | | | | | | | | | |
| | | e | Z | | | 44 | | | | | | | | | |
| | | e | Z | | | 49 | | | | | | | | | |
| | TU | e | N | 07 | 23 | 39 | | | | | | | | | |
| | SU | eL | N | 07 | 42 | | | | | | | | | | |
| | RX | eL | NE | 07 | 54 | | | | | | | | | | |
| | | M | N | | 56 | | | | | 2 | 25 | | | | |
| | | eL | Z | | 58 | | | | | | | | | | |
| | | Epicentre: | | 07 | 11 | 05.5 | | 40.6N | 142.0E | 60 | km | | | USCGS | |
| | 13 GP | P | N | 14 | 26 | 46 | | | | | | | | | |
| | RX | iP | ZNE | 14 | 26 | 50 | d | 10 | 8 | 3 | 10 | 5 | 8 | | |
| | | ePP | Z | | 29 | 42 | | | | | | | | | |
| | | eS | N | | 36 | 36 | | | | 4 | 14 | | | | |
| | | e | NE | | 38.2 | | | | | | | | | | |
| | | eSS | ZN | | 41.5 | | | | | | | | | | |
| | | eLq | N | | 48 | | | | | | | | | | |
| | | eLr | ZE | | 51 | | | | | | | | | | |
| | | M | ZE | | 55 | | | 30 | 17 | | | 18 | 17 | | |
| | | M | N | | 58 | | | | | 18 | 16 | | | | |
| | WN | iP | ZN | 14 | 26 | 50 | d | | | | | | | | |
| | | ePP | Z | | 29 | 44 | | | | | | | | | |
| | | e(S) | N | | 37 | 00 | | | | | | | | | |
| | | eSS | N | | 41 | 17 | | | | | | | | | |
| | | Lq | N | | 48 | | | | | | | | | | |
| | | Lr | ZN | | 51 | | | | | | | | | | |
| | | M | ZN | | 53 | | | 12 | 19 | 11 | 19 | | | | |
| | | M | ZN | | 59 | | | 13 | 15 | 16 | 15 | | | | |
| | TU | e(P) | N | 14 | 26 | 55 | | | | | | | | | |
| | CT | iP | Z | 14 | 26 | 55 | d | | | | | | | | |
| | | ePP | Z | | 29 | 53 | | | | | | | | | |
| | CB | eP | E | 14 | 26 | 56 | | | | | | | | | |
| | | ePP | E | | 29 | 59 | | | | | | | | | |
| | KP | iP | Z | 14 | 26 | 59 | d | | | | | | | | |
| | | e | Z | | 27 | 14 | | | | | | | | | |
| | | PP | Z | | 30 | 01 | | | | | | | | | |
| | KM | eP | X | 14 | 27 | 01 | | | | | | | | | |
| | ON | e | E | 14 | 27 | 14 | | | | | | | | | |
| | SU | P | N | 14 | 27 | 58 | n | | | 7 | 8 | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG 13 | | e(PS) | N | | 39 | 34 | | | | | | | | | |
| | | eL | N | | 52 | | | | | | | | | | |
| | | M | N | 15 | 08 | | | | | | | 12 | 17 | | |
| | | Epicentre: | | 14 | 14 | 57.7 | | 39.7S | 74.8W | 61 | km | | | USCGS | |
| | 13 SU | eL | N | 23 | 28 | | | | | | | 5 | 9 | | |
| | RX | eL | N | 23 | 38 | | | | | | | | | | |
| | 14 KP | P | Z | 14 | 48 | 30 | | | | | | | | | |
| | | Epicentre: | | 14 | 41 | 04.2 | | 7.2S | 146.2E | 200 | km | | | USCGS | |
| | 14 KP | iP | Z | 22 | 59 | 08 | u | | | | | | | | |
| | | Epicentre: | | 22 | 46 | 07.6 | | 23.5S | 66.4W | 245 | km | | | USCGS | |
| | 15 RX | eLq | N | 07 | 36 | | | | | | | | | | |
| | | eLr | ZNE | | 43 | | | | | | | 1 | 20 | | |
| | | Epicentre: | | 06 | 58 | 56.4 | | 13.4S | 65.8E | 15 | km | | | USCGS | |
| | 15 KP | eP | Z | 07 | 59 | 12 | | | | | | | | | |
| | 15 RX | eL | N | 15 | 18 | | | | | | | 1 | 20 | | |
| | | Epicentre: | | 14 | 33 | 38.4 | | 13.5S | 67.0E | 25 | km | | | USCGS | |
| | 16 KP | eP | Z | 22 | 36 | 59 | | | | | | | | | |
| | RX | eL | ZNE | 22 | 57 | | | | | | | | | | |
| | | Epicentre: | | 22 | 27 | 52.7 | | 7.6S | 128.8E | 63 | km | | | USCGS | |
| | 17 KP | P | Z | 05 | 41 | 47 | | | | | | | | | |
| | 17 KP | P | Z | 18 | 17 | 24 | | | | | | | | | |
| | | Epicentre: | | 18 | 08 | 35.6 | | 1.7S | 138.6E | 45 | km | | | USCGS | |
| | 18 KP | P | Z | 22 | 49 | 30 | | | | | | | | | |
| | SU | e(L) | N | 22 | 49 | 53 | | | | | | | | | |
| | RX | eL | ZNE | 23 | 01 | | | | | | | 2 | 21 | | |
| | | Epicentre: | | 22 | 43 | 46.4 | | 11.4S | 166.2E | 62 | km | | | USCGS | |
| | 19 ON | P | E | 12 | 07 | 26 | | | | | | | | | |
| | KP | P | Z | 12 | 07 | 37 | | | | | | | | | |
| | 19 KP | P | Z | 12 | 52 | 31 | | | | | | | | | |
| | | e | Z | | 54 | 03 | | | | | | | | | |
| | | Epicentre: | | 12 | 41 | 31.4 | | 27.0N | 140.1E | 283 | km | | | USCGS | |
| | 20 TU | eP | N | 10 | 06 | 28 | | | | | | | | | |
| | | e | N | | | 44 | | | | | | | | | |
| | | S | N | | 07 | 45 | | | | | | | | | |
| | | e | N | | 08 | 21 | | | | | | | | | |
| | KP | eP | Z | 10 | 06 | 30 | | | | | | | | | |
| | | e | Z | | | 40 | | | | | | | | | |
| | | e | Z | | | 58 | | | | | | | | | |
| | ON | eP | E | 10 | 06 | 33 | | | | | | | | | |
| | | e | E | | | 39 | | | | | | | | | |
| | | e | E | | 07 | 41 | | | | | | | | | |
| | TO | e? | Z | 10 | 06 | 54 | | | | | | | | | |
| | | e | Z | | 07 | 02 | | | | | | | | | |
| | | eS | Z | | 08 | 12 | | | | | | | | | |
| | | e | Z | | | 48 | | | | | | | | | |
| | WN | S | N | 10 | 08 | 54 | | | | | | | | | |
| | | eL | ZN | | 11 | | | | | | | | | | |
| | CB | eS | E | 10 | 09 | 17 | | | | | | | | | |
| | GP | S | N | 10 | 09 | 58 | | | | | | | | | |
| | SU | eL | N | 10 | 13 | | | | | | | | | | |
| | RX | eL | NE | 10 | 13 | | | | | | | | | | |
| | | eL | Z | | 15 | | | | | | | | | | |
| | | Epicentre: | | 10 | 04 | 48 | | 34.0S | 177.0W | 160 | km | | | NZ(D) | 5.2 NZ |

Additional reading from Charters Towers used to determine epicentre.

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG 20 | RX | e | N | 20 | 40 | 52 | | | | | 4 26 | | | | |
| | | e(Lq) | E | | | 52 | | | | | | | | | |
| | | Lr | ZN | | | 56 | | | | | | | | | |
| | | M | ZN | 21 | 00 | | | | 6 22 | | 4 22 | | | | |
| | WN | eSS | N | 20 | 41 | 46 | | | | | 7 30 | | | | |
| | | eLq | N | | | 52 | | | | | | | | | |
| | | eLr | N | | | 56 | | | | | | | | | |
| | | M | N | 21 | 00 | | | | | | 9 25 | | | | |
| | SU | eL | N | 21 | 07 | | | | | | | | | | |
| | | M | N | | | 11 | | | | | 4 22 | | | | |
| | Epicentre: | | | 20 | 08 | 39.0 | | 35.6S | 15.4W | 37 km | | | | | USCGS |
| | 20 RX | eL | ZNE | 22 | 27 | | | | | | | | | | |
| | | M | E | | | 29 | | | | | | 3 | 10 | | |
| | WN | e | Z | 22 | 31 | 48 | | | | | | | | | |
| | | e | N | | | 32 | 05 | | | | | | | | |
| | | e | Z | | | 33 | 08 | | | | | | | | |
| | KP | P | Z | 22 | 33 | 04 | | | | | | | | | |
| | | e | Z | | | | 20 | | | | | | | | |
| | | e | Z | | | | 32 | | | | | | | | |
| | Epicentre: | | | 22 | 22 | 44.6 | | 0.5S | 122.0E | 59 km | | | | | USCGS |
| | 21 SU | eL | N | 00 | 22 | | | | | | | | | | |
| | | M | N | | | 24 | | | | | 11 8 | | | | |
| | KP | P | Z | 00 | 26 | 13 | d | | | | | | | | |
| | | e | Z | | | 45 | | | | | | | | | |
| | CB | e(P) | E | 00 | 26 | 17 | | | | | | | | | |
| | TO | eP | Z | 00 | 26 | 19 | | | | | | | | | |
| | GP | eP | N | 00 | 26 | 29 | | | | | | | | | |
| | KM | e | X | 00 | 27 | 14 | | | | | | | | | |
| | WN | e(S) | N | 00 | 33 | 40 | | | | | | | | | |
| | | e(L) | Z | | | 36 | | | | | | | | | |
| | RX | e(L) | NE | 00 | 34 | | | | | | | | | | |
| | Epicentre: | | | 00 | 18 | 01.5 | | 4.3S | 143.3E | 39 km | | | | | USCGS |
| | 21 KP | eP | Z | 00 | 32 | 16 | | | | | | | | | |
| | 21 KP | P | Z | 01 | 06 | 48 | u | | | | | | | | |
| | | epP | Z | | 07 | 18 | | | | | | | | | |
| | | iPcP | Z | | 08 | 49 | d | | | | | | | | |
| | | ePcS | Z | | 12 | 26 | | | | | | | | | |
| | TO | eP | Z | 01 | 06 | 56 | | | | | | | | | |
| | CB | eP | E | 01 | 06 | 57 | | | | | | | | | |
| | KM | eP | X | 01 | 07 | 02 | | | | | | | | | |
| | WN | e(P) | N | 01 | 07 | 08 | | | | | | | | | |
| | | e(PcS) | N | | 13 | 13 | | | | | | | | | |
| | GP | eP | N | 01 | 07 | 11 | | | | | | | | | |
| | Epicentre: | | | 00 | 59 | 25.2 | | 5.5S | 149.5E | 177 km | | | | | USCGS |
| | 21 CB | eP | E | 12 | 59 | 47 | | | | | | | | | |
| | KP | P | Z | 12 | 59 | 49 | | | | | | | | | |
| | | e | Z | 13 | 00 | 25 | | | | | | | | | |
| | | e(pP) | Z | | | 41 | | | | | | | | | |
| | TO | eP | Z | 12 | 59 | 53 | | | | | | | | | |
| | WN | eP | N | 12 | 59 | 55 | | | | | | | | | |
| | | eS | N | 13 | 08 | 15 | | | | | | | | | |
| | | esS | N | | 09 | 30 | | | | | | | | | |
| | GP | eP | N | 12 | 59 | 57 | | | | | | | | | |
| | KM | e(P) | X | 12 | 59 | 58 | | | | | | | | | |
| | TU | e(P) | N | 13 | 00 | 02 | | | | | | | | | |
| | RX | eS | N | 13 | 08 | 11 | | | | | | | | | |
| | | e(SS) | N | | 15 | | | | | | | | | | |
| | Epicentre: | | | 12 | 49 | 37.6 | | 4.9N | 125.1E | 211 km | | | | | USCGS |
| | 21 KP | P | Z | 16 | 31 | 05 | | | | | | | | | |
| | | i | Z | | 32 | 25 | | | | | | | | | |
| | SU | eL | N | 16 | 36 | | | | | | | | | | |
| | | M | N | | 37 | | | | | | 100 10 | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG 21 | KP | P | Z | 17 | 15 | 39 | | | | | | | | | |
| | Epicentre: | | | 17 | 05 | 23.5 | | 7.2N | 127.8E | 200 km | | | | | USCGS |
| | 21 SU | e(L) | N | 17 | 22 | 21 | | | | | | | | | |
| | | e(L) | N | | 23 | 20 | | | | | | | | | |
| | | M | N | | 25 | | | | | | | 80 | 10 | | |
| | KP | eP | Z | 17 | 26 | 11 | | | | | | | | | |
| | WN | eS | N | 17 | 32 | 25 | | | | | | | | | |
| | | eL | N | | 34 | | | | | | | | | | |
| | ON | eL | E | 17 | 33 | | | | | | | | | | |
| | RX | eL | E | 17 | 34 | | | | | | | | | | |
| | | eL | ZN | | 37 | | | | | | | | | | |
| | Epicentre: | | | 17 | 20 | 54.9 | | 15.3S | 176.0W | 24 km | | | | | USCGS |
| | 22 TU | P | N | 20 | 48 | 16 | | | | | | | | | |
| | | e | N | | | 26½ | | | | | | | | | |
| | | S | N | | 49 | 09½ | | | | | | | | | |
| | KP | P | Z | 20 | 48 | 24 | | | | | | | | | |
| | | e | Z | | | 39 | | | | | | | | | |
| | | S | Z | | 49 | 15 | | | | | | | | | |
| | ON | P | E | 20 | 48 | 29½ | | | | | | | | | |
| | | e | E | | | 38 | | | | | | | | | |
| | TO | eP | Z | 20 | 48 | 34 | | | | | | | | | |
| | | e | Z | | | 47½ | | | | | | | | | |
| | | S | Z | | 49 | 37 | | | | | | | | | |
| | WN | eP | N | 20 | 48 | 44 | | | | | | | | | |
| | | S | N | | 50 | 18 | | | | | | | | | |
| | CB | e | E | 20 | 49 | 41 | | | | | | | | | |
| | | S | E | | 50 | 40 | | | | | | | | | |
| | KM | eP | X | 20 | 49 | 57½ | | | | | | | | | |
| | | eS | X | | 51 | 19½ | | | | | | | | | |
| | GP | S | N | 20 | 51 | 23 | | | | | | | | | |
| | Epicentre: | | | 20 | 47 | 12 | | 35.8S | 179.4W | 100 km | | | | | NZ(D) 5.5 NZ |
| | Additional readings from Brisbane and Charters Towers used to determine epicentre. | | | | | | | | | | | | | | |
| | 23 KP | P | Z | 13 | 12 | 08 | | | | | | | | | |
| | 23 ON | eP | E | 19 | 13 | 00 | | | | | | | | | |
| | | S | E | | 14 | 16½ | | | | | | | | | |
| | KP | eP | Z | 19 | 13 | 09 | | | | | | | | | |
| | | e | Z | | | 11½ | | | | | | | | | |
| | | e(S) | Z | | 14 | 23 | | | | | | | | | |
| | | S | Z | | 14 | 37 | | | | | | | | | |
| | TU | P | N | 19 | 13 | 12 | | | | | | | | | |
| | | S | N | | 14 | 34 | | | | | | | | | |
| | TO | e? | Z | 19 | 13 | 19 | | | | | | | | | |
| | | P | Z | | | 21 | | | | | | | | | |
| | | S | Z | | 14 | 58 | | | | | | | | | |
| | WN | eP | N | 19 | 13 | 41 | | | | | | | | | |
| | | S | N | | 15 | 33½ | | | | | | | | | |
| | CB | eP | E | 19 | 13 | 51 | | | | | | | | | |
| | | S | E | | 15 | 45½ | | | | | | | | | |
| | KM | eP | X | 19 | 14 | 14½ | | | | | | | | | |
| | | S | X | | 16 | 21½ | | | | | | | | | |
| | GP | eP | N | 19 | 14 | 16 | | | | | | | | | |
| | | S | N | | 16 | 29½ | | | | | | | | | |
| | Epicentre: | | | 19 | 11 | 20 | | 33S | 178W | N? | | | | | NZ(D) 5.7 NZ |
| | 23 SU | eL | N | 21 | 18 | | | | | | | | | | |
| | | M | N | | 20 | | | | | | | 6 | 8 | | |
| | 23 SU | eL | N | 21 | 33 | | | | | | | | | | |
| | | M | N | | 35 | | | | | | | 25 | 7 | | |
| | 23 SU | e? | N | 22 | 45 | 50 | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG 23 | | i | N | | 46 | 18 | n | | | | | | | | |
| | | L | N | | 47 | 54 | | | | | | | | | |
| | | M | N | | 51 | | | | | 220 | 7 | | | | |
| | ON | eP | E | 22 | 49 | 40 | | | | | | | | | |
| | | e | E | | 50 | 05 | | | | | | | | | |
| | | e(S) | E | | 54 | 38 | | | | | | | | | |
| | | eL | E | | 56 | .5 | | | | | | | | | |
| | KP | P | Z | 22 | 50 | 07 | | | | | | | | | |
| | WN | eL | ZN | 22 | 57 | | | | | | | | | | |
| | RX | eL | NE | 22 | 59 | | | | | | | | | | |
| | | M | E | 23 | 02 | | | | | | | 23 | 18 | | |
| | Epicentre: | | | 22 | 44 | 51.5 | | 14.5S | 176.4W | 56 | km | | | USCGS | 6 |
| 24 | RX | eL | N | 02 | 41 | | | | | | | | | | |
| | WN | M | N | 02 | 45 | | | | | 2 | 20 | | | | |
| | Epicentre: | | | 01 | 44 | 09.9 | | 56.3N | 163.8E | 25 | km | | | USCGS | |
| 24 | SU | eL | N | 04 | 04 | | | | | | | | | | |
| 24 | KP | eP | Z | 04 | 34 | 18 | | | | | | | | | |
| | Epicentre: | | | 04 | 26 | 55.4 | | 6.2S | 150.4E | 66 | km | | | USCGS | |
| 24 | SU | e(P) | N | 05 | 51 | 00 | | | | | | | | | |
| | | e(S) | N | | 52 | 30 | | | | | | | | | |
| | | eL | N | | 53 | .5 | | | | 40 | 15 | | | | |
| | ON | eP | E | 05 | 53 | (32) | | | | | | | | | |
| | KP | eP | Z | 05 | 53 | 41 | | | | | | | | | |
| | | e | Z | | 54 | 44 | | | | | | | | | |
| | TU | eP | N | 05 | 53 | 43 | | | | | | | | | |
| | | eS | N | | 57 | 30 | | | | | | | | | |
| | TO | e(P) | Z | 05 | 53 | 52 | | | | | | | | | |
| | WN | e | N | 05 | 54 | 19 | | | | | | | | | |
| | | e | N | | 58 | 32 | | | | | | | | | |
| | | eL | ZN | 06 | 01 | | | | | | | | | | |
| | CB | eP | E | 05 | 54 | 23 | | | | | | | | | |
| | | eS | E | | 58 | 46 | | | | | | | | | |
| | KM | eP | X | 05 | 54 | 41 | | | | | | | | | |
| | | e | X | | | 50 | | | | | | | | | |
| | | eS | X | | 59 | 30 | | | | | | | | | |
| | GP | eP | N | 05 | 54 | 41 | | | | | | | | | |
| | | e | N | | | 47 | | | | | | | | | |
| | | eS | N | | 59 | 23 | | | | | | | | | |
| | RX | eL | NE | 06 | 03 | | | | | | | | | | |
| | | eL | Z | | 06 | | | | | 6 | 15 | | | | |
| | Epicentre: | | | 05 | 49 | 01.1 | | 19.0S | 174.1W | 42 | km | | | USCGS | |
| 24 | SU | eL | N | 22 | 21 | | | | | | | | | | |
| | RX | eL | ZN | 22 | 34 | | | | | 2 | 20 | | | | |
| 25 | SU | eL | N | 01 | 51 | | | | | | | | | | |
| | | M | N | | 54 | | | | | 15 | 8 | | | | |
| | KP | iP? | Z | 01 | 55 | 10 | u | | | | | | | | |
| 25 | CB | iP | E | 03 | 41 | 17½ | e | | | | | | | | |
| | | S | E | | | (27) | | | | | | | | | |
| | KM | iP | X | 03 | 41 | 25 | ne | | | | | | | | |
| | | S | X | | | 42 | | | | | | | | | |
| | WN | P | N | 03 | 41 | 27½ | | | | | | | | | |
| | | e | N | | | 30½ | | | | | | | | | |
| | | S | N | | | 45½ | | | | | | | | | |
| | GP | iP | N | 03 | 41 | 31 | n | | | | | | | | |
| | | S | N | | | 52 | | | | | | | | | |
| | TO | P | Z | 03 | 41 | 53 | | | | | | | | | |
| | | (S) | Z | | 42 | 35 | | | | | | | | | |
| | KP | iP | Z | 03 | 42 | 08½ | u | | | | | | | | |
| | | (S) | Z | | | 49 | | | | | | | | | |
| | RX | e | N | 03 | 42 | 16 | | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | e | ZNE | | | 38 | | | | | | | | | |
| AUG 25 | | (S) | NE | | | 54 | | | | | | | | | |
| | | e | Z | | 43 | 20 | | | | | | | | | |
| | | e | N | | | 44 | | | | | | | | | |
| | ON | eP | E | 03 | 42 | 34 | | | | | | | | | |
| | | e | E | | 43 | 36 | | | | | | | | | |
| | Epicentre: | | | 03 | 41 | 03 | | 41.9S | 172.95E | N | | | | NZ(B) | 5.2 NZ |
| | Felt: Nelson, Marlborough, and parts of Wellington, Taranaki and Westland. Max. Murchison MM 5. | | | | | | | | | | | | | | |
| 25 | KP | eP? | Z | 17 | 54 | 59 | | | | | | | | | |
| | | e | Z | | 55 | 04 | | | | | | | | | |
| | | e | Z | | | 11 | | | | | | | | | |
| | RX | eL | N | 18 | 35 | | | | | | | | | | |
| | WN | eL | N | 18 | 36 | | | | | | | | | | |
| | Epicentre: | | | 17 | 41 | 59 | | 52.7N | 169.6W | 38 | km | | | USCGS | |
| 25 | KP | P | Z | 19 | 44 | 45 | | | | | | | | | |
| 25 | KP | eP | Z | 23 | 11 | 54 | | | | | | | | | |
| | Epicentre: | | | 23 | 02 | 26.5 | | 37.8S | 73.5W | 109 | km | | | USCGS | |
| 26 | SU | e(S) | N | 18 | 32 | 10 | | | | | | | | | |
| | | eL | N | | 34 | | | | | | | | | | |
| | ON | eP? | E | 18 | 32 | 28 | | | | | | | | | |
| | | e | E | | | 38 | | | | | | | | | |
| | KP | P | Z | 18 | 32 | 48 | d | | | | | | | | |
| | TO | eP | Z | 18 | 32 | 59 | | | | | | | | | |
| | CB | eP | E | 18 | 33 | 14 | | | | | | | | | |
| | KM | eP? | X | 18 | 33 | 22 | | | | | | | | | |
| | | e | X | | | 40 | | | | | | | | | |
| | TU | e | N | 18 | 33 | 28 | | | | | | | | | |
| | GP | eP | N | 18 | 33 | 30 | | | | | | | | | |
| | | e | N | | | 47 | | | | | | | | | |
| | RX | eL | NE | 18 | 43 | | | | | | | | | | |
| | | eL | Z | | 49 | | | | | | | | | | |
| | WN | eL | N | 18 | 44 | | | | | | | | | | |
| | Epicentre: | | | 18 | 27 | 18.2 | | 13.5S | 165.9E | 56 | km | | | USCGS | |
| 26 | RX | (P) | ZE | 20 | 19 | 54 | | | | | | | | | |
| | | S | ZNE | | 20 | 12 | | | | | | | | | |
| | GP | e(P) | N | 20 | 20 | 27 | | | | | | | | | |
| | | e | N | | | 29 | | | | | | | | | |
| | | e | N | | | 56 | | | | | | | | | |
| | | (S) | N | | 21 | 07 | | | | | | | | | |
| | KM | P | X | 20 | 20 | 27 | | | | | | | | | |
| | | e | X | | 21 | 01 | | | | | | | | | |
| | | S | X | | | 08 | | | | | | | | | |
| | CB | P | E | 20 | 20 | 49 | | | | | | | | | |
| | | S | E | | 21 | 49 | | | | | | | | | |
| | WN | P | N | 20 | 21 | 04½ | | | | | | | | | |
| | | S | N | | 22 | 11 | | | | | | | | | |
| | CT | P | Z | 20 | 21 | 30 | | | | | | | | | |
| | | (S) | Z | | 22 | 59 | | | | | | | | | |
| | TO | eP | Z | 20 | 21 | 30 | | | | | | | | | |
| | | e? | Z | | 23 | 23 | | | | | | | | | |
| | KP | P | Z | 20 | 21 | 40½ | | | | | | | | | |
| | | e | Z | | 22 | 07 | | | | | | | | | |
| | | e | Z | | | 41 | | | | | | | | | |
| | Epicentre: | | | 20 | 19 | 34 | | 44.2S | 167.2E | N? | | | | NZ(D) | 5.3 NZ |
| | Additional readings from Charters Towers, Spring Valley and Melbourne used to determine epicentre. Felt: Otago and Southland. Max. Manapouri and Mossburn, MM 4. | | | | | | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG 27 | KP | P | Z | 12 | 54 | 45 | | | | | | | | | |
| | | i | Z | | | 48 | d | | | | | | | | |
| | WN | e? | N | 12 | 55 | 20 | | | | | | | | | |
| | | e? | N | | 58 | 14 | | | | | | | | | |
| | | e(S) | N | | | 20 | | | | | | | | | |
| | KM | e | X | 12 | 55 | 39 | | | | | | | | | |
| | | e(S) | X | | 58 | 52 | | | | | | | | | |
| | GP | eP | N | 12 | 55 | 41 | | | | | | | | | |
| | | e | N | | 58 | 59 | | | | | | | | | |
| | | e(S) | N | | 59 | 08 | | | | | | | | | |
| | TU | eS | N | 12 | 57 | 27 | | | | | | | | | |
| | Epicentre: | | | 12 | 50 | 54.0 | | 22.4S | 179.1W | 155 km | | | | USCGS | |
| 27 | KP | eP | Z | 18 | 28 | 54 | | | | | | | | | |
| | Epicentre: | | | 18 | 16 | 16 | | 49.9N | 153.7E | 220 km | | | | USCGS | |
| 27 | KP | P | Z | 19 | 32 | 56 | | | | | | | | | |
| 28 | KP | e(P) | Z | 00 | 27 | 32 | | | | | | | | | |
| | WN | e(P) | N | 00 | 28 | 06 | | | | | | | | | |
| | | eS | N | | 31 | 25 | | | | | | | | | |
| | KM | e(P) | X | 00 | 28 | 36 | | | | | | | | | |
| | | eS | X | | 32 | 14 | | | | | | | | | |
| | GP | eP | N | 00 | 28 | 38 | | | | | | | | | |
| | | eS | N | | 32 | 23 | | | | | | | | | |
| | TU | eS | N | 00 | 30 | 20 | | | | | | | | | |
| | Epicentre: | | | 00 | 23 | 57 | | Near 23S | 175W | 300 km ? | | | | USCGS | |
| 28 | KP | P | Z | 03 | 21 | 44 | | | | | | | | | |
| 30 | KP | eP | Z | 06 | 55 | 38 | | | | | | | | | |
| | RX | eL | N | 07 | 14 | | | | | | | | | | |
| | Epicentre: | | | 06 | 45 | 16.4 | | 20.9S | 113.7W | 40 km | | | | USCGS | |
| 30 | KP | P | Z | 10 | 15 | 27 | | | | | | | | | |
| | Epicentre: | | | 10 | 11 | 26.2 | | 3.5S | 134.2E | 31 km | | | | USCGS | |
| 30 | ON | e(P) | E | 19 | 09 | 40 | | | | | | | | | |
| | KP | eP | Z | 10 | 09 | 59 | | | | | | | | | |
| | | i | Z | | 10 | 03 | | | | | | | | | |
| | | e | Z | | | 28 | | | | | | | | | |
| | | e | Z | | 12 | 36 | | | | | | | | | |
| | CB | eP | E | 19 | 10 | 36 | | | | | | | | | |
| | | eS | E | | 13 | 31 | | | | | | | | | |
| | KM | eP | X | 19 | 10 | 52 | | | | | | | | | |
| | | e(S) | X | | 13 | 53 | | | | | | | | | |
| | GP | eP | N | 19 | 10 | 58 | | | | | | | | | |
| | | eS | N | | 14 | 09 | | | | | | | | | |
| | TU | eS | N | 19 | 12 | 34 | | | | | | | | | |
| | Epicentre: | | | 19 | 06 | 55 | | 24S | 180 | 400 km ? | | | | USCGS | |
| 31 | KP | P | Z | 05 | 49 | 10 | | | | | | | | | |
| 31 | KP | eP | Z | 07 | 26 | 36 | | | | | | | | | |
| | Epicentre: | | | 07 | 16 | 10.4 | | 20.9S | 114.1W | 25 km | | | | USCGS | |
| 31 | KP | P | Z | 17 | 32 | 44 | | | | | | | | | |
| | Epicentre: | | | 17 | 21 | 55.1 | | 13.7N | 120.1E | 22 km | | | | USCGS | |
| 31 | KP | PKP | Z | 22 | 31 | 38 | u | | | | | | | | |
| | Epicentre: | | | 22 | 11 | 53.9 | | 39.1N | 36.3E | 44 km | | | | USCGS | |
| 31 | KP | eP | Z | 23 | 54 | 53 | u | | | | | | | | |
| | | i | Z | | | 57 | | | | | | | | | |
| SEP 1 | SU | eP | N | 07 | 37 | 04 | | | | 6 | 5 | | | | |
| | | e(S) | N | | 39 | 22 | | | | 10 | 5 | | | | |



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | eL | N | | | 45 | | | | | 40 | 13 | | | |
| SEP 1 | ON | eP | E | 07 | 37 | 31 | | | | | | | | | |
| | | e | E | | | 41 | | | | | | | | | |
| | | eL | E | | 40 | 35 | | | | | | | | | |
| | KP | eP | Z | 07 | 37 | 35 | | | | | | | | | |
| | | e | Z | | | 56 | | | | | | | | | |
| | WN | eP | N | 07 | 38 | 25 | | | | | | | | | |
| | | S | N | | 40 | 59 | | | | | | | | | |
| | | e | N | | 42 | 35 | | | | | | | | | |
| | | eL | N | | 42 | .6 | | | | | 8 | 20 | | | |
| | | eL | ZN | | 44 | | | | 9 | 16 | 26 | 20 | | | |
| | TU | eS | N | 07 | 39 | 51 | | | | | | | | | |
| | KM | eS | X | 07 | 41 | 55 | | | | | | | | | |
| | GP | eS | N | 07 | 42 | 00 | | | | | | | | | |
| | | e | N | | | 08 | | | | | | | | | |
| | RX | eL | NE | 07 | 45½ | | | | | | 3 | 20 | 8 | 19 | |
| | | eL | Z | | 48 | | | | 10 | 16 | | | | | |
| | Epicentre: | | | 07 | 35 | 21.9 | | 27.6S | 176.9W | | 500 km | | | USCGS | |
| 1 | SU | iP | N | 09 | 30 | 59 | | | | | 18 | 5 | | | |
| | | e(S) | N | | 33 | 12 | | | | | 25 | 10 | | | |
| | | eL | N | | 33 | .9 | | | | | 100 | 10 | | | |
| | ON | eP | E | 09 | 32 | 59 | | | | | | | | | |
| | | eS | E | | 36 | 43 | | | | | | | | | |
| | | eL | E | | 38 | | | | | | | | | | |
| | KP | P | Z | 09 | 33 | 17 | | | | | | | | | |
| | | ePKKP | Z | | 58 | 47 | | | | | | | | | |
| | TU | e | N | 09 | 33 | .5 | | | | | | | | | |
| | CT | P | Z | 09 | 33 | 30 | | | | | | | | | |
| | WN | S | ZN | 09 | 38 | 38 | | | 6 | 8 | 17 | 17 | | | |
| | | eL | ZN | | 41 | .3 | | | 18 | 20 | 19 | 20 | | | |
| | | M | N | | 44 | | | | | | 35 | 14 | | | |
| | RX | S | NE | 09 | 39 | 10 | | | | | 4 | 10 | 6 | 10 | |
| | | SS | N | | 40 | 50 | | | | | 7 | 16 | | | |
| | | L | E | | 41 | 34 | | | | | | | 12 | 26 | |
| | | eL | N | | 42¾ | | | | | | 16 | 25 | | | |
| | | M | ZNE | | 46 | | | | 37 | 16 | 31 | 18 | 28 | 15 | |
| | Epicentre: | | | 09 | 28 | 19.5 | | 16.8S | 167.6E | | 63 km | | | USCGS | |
| 1 | SU | eP | N | 10 | 37 | 51 | | | | | 15 | 5 | | | |
| | | eL | N | | 39 | .9 | | | | | 86 | 8 | | | |
| | ON | eP? | E | 10 | 39 | 41 | | | | | | | | | |
| | | e | E | | | 58 | | | | | | | | | |
| | | S | E | | 43 | 28 | | | | | | | | | |
| | | eL | E | | 46 | 25 | | | | | | | | | |
| | KP | P | Z | 10 | 40 | 02 | | | | | | | | | |
| | TU | e | Z | 10 | 40 | .2 | | | | | | | | | |
| | CT | P | Z | 10 | 40 | 16 | | | | | | | | | |
| | WN | eS | ZN | 10 | 45 | 25 | | | | | 8 | 10 | | | |
| | | eL | ZN | | 48 | .5 | | | | | 14 | 20 | | | |
| | | M | N | | 51 | | | | | | 29 | 16 | | | |
| | RX | eS | NE | 10 | 46 | .0 | | | | | | | 5 | 10 | |
| | | eL | N | | 48 | | | | | | 5 | 30 | | | |
| | | eL | E | | 50 | | | | | | | | 12 | 16 | |
| | | eL | Z | | 52 | | | | 31 | 18 | | | | | |
| | | M | NE | | 53 | | | | | | 25 | 14 | 18 | 14 | |
| | Epicentre: | | | 10 | 35 | 01.1 | | 16.5S | 167.6E | | 27 km | | | USCGS | |
| 1 | SU | e | N | 11 | 18 | 00 | | | | | 7 | 5 | | | |
| | | eS | N | | 19 | 23 | | | | | 10 | 8 | | | |
| | | eL | N | | 20 | .2 | | | | | 28 | 10 | | | |
| | ON | eP? | E | 11 | 19 | 41 | | | | | | | | | |
| | KP | P | Z | 11 | 19 | 58 | | | | | | | | | |
| | | ePP | Z | | 20 | 49 | | | | | | | | | |
| | | ePKKP | Z | | 46 | 38 | | | | | | | | | |
| | CT | eP | Z | 11 | 20 | 12 | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 1 | WN | eL | ZN | 11 | 29 | | 14 | 17 | 21 | 20 | | | |
| | RX | eL | NE | 11 | 31½ | | | | 10 | 16 | 10 | 18 | |
| | | eL | Z | | 33 | | 8 | 14 | | | | | |
| | Epicentre: | | | 11 | 14 | 59.6 | 16.6S | | 167.4E | | 35 km | | USCGS |
| 1 | KP | eP | Z | 12 | 00 | 54 | | | | | | | |
| | | e | Z | | 01 | 07 | | | | | | | |
| | | i | Z | | | 20 | | | | | | | |
| | ON | eP? | E | 12 | 00 | 55 | | | | | | | |
| | TU | eS | N | 12 | 03 | 10 | | | | | | | |
| | SU | eL | N | 12 | 03.3 | | | | | | | | |
| | WN | eS | N | 12 | 04 | 17 | | | | | | | |
| | GP | eS | N | 12 | 05 | 24 | | | | | | | |
| | Epicentre: | | | 11 | 57 | 59.3 | 27.7S | | 176.2W | | 92 km | | USCGS |
| 1 | SU | eP | N | 18 | 42 | 02 | | | 19 | 18 | | | |
| | | e | N | | 42.7 | | | | | | | | |
| | | eL | N | | 43.0 | | | | 130± | 5± | | | |
| | ON | P | E | 18 | 45 | 58 | | | | | | | |
| | | i | E | | 46 | 05 | | | | | | | |
| | KP | P | Z | 18 | 46 | 15 | | | | | | | |
| | CT | eP | Z | 18 | 46 | 25 | | | | | | | |
| | WN | eL | N | 18 | 57 | | | | 7 | 15 | | | |
| | RX | eL | ZNE | 19 | 01 | | 5 | 12 | 4 | 14 | 3 | 20 | |
| | Epicentre: | | | 18 | 41 | 16.2 | 15.8S | | 179.2E | | 33 km | | USCGS |
| 1 | SU | iP | N | 20 | 02 | 48 n | | | 98 | 16± | | | |
| | | e(L) | N | | 03.7 | | | | 330 | 10± | | | |
| | ON | eP | E | 20 | 06 | 41 | | | | | | | |
| | | i | E | | | 48 | | | | | | | |
| | | eS | E | | 10 | 36 | | | | | | | |
| | KP | P | Z | 20 | 07 | 00 | | | | | | | |
| | | i | Z | | | 04 | | | | | | | |
| | CT | P | Z | 20 | 07 | 14 | | | | | | | |
| | WN | eL | N | 20 | 14.5 | | | | 25 | 25 | | | |
| | | eL | ZN | | 16.6 | | 19 | 16 | 47 | 20 | | | |
| | RX | eL | NE | 20 | 18 | | | | 8 | 16 | 10 | 16 | |
| | | eL | Z | | 19½ | | 15 | 13 | | | | | |
| | Epicentre: | | | 20 | 02 | 12.8 | 16.1S | | 179.6W | | 183 km | | USCGS |
| 2 | SU | eP | N | 10 | 55 | 01 | | | | | | | |
| | ON | P | E | 10 | 56 | 58 | | | | | | | |
| | KP | eiP | Z | 10 | 57 | 18 u | | | | | | | |
| | TU | eP | N | 10 | 57 | 29 | | | | | | | |
| | CT | P | Z | 10 | 57 | 30 | | | | | | | |
| | CB | eP | E | 10 | 57 | 43 | | | | | | | |
| | WN | e(P) | N | 10 | 57 | 45 | | | | | | | |
| | GP | P | N | 10 | 58 | 02 | | | | | | | |
| | Epicentre: | | | 10 | 52 | 18.2 | 15.2S | | 167.4E | | 163 km | | USCGS |
| 2 | KP | P | Z | 15 | 08 | 01 | | | | | | | |
| 2 | KP | P | Z | 18 | 45 | 08 | | | | | | | |
| | Epicentre: | | | 18 | 32 | 18.9 | 31.9S | | 68.9W | | 25 km | | USCGS |
| 2 | KP | eP | Z | 22 | 15 | 48 | | | | | | | |
| | SU | eS | N | 22 | 23 | 13 | | | 4 | 5 | | | |
| | | e(Lr) | N | | 35 | 38 | | | 10 | 23± | | | |
| | RX | eL | N | 22 | 50 | | | | 5 | 24 | | | |
| | | eL | Z | | 51 | | | | | | | | |
| | | M | NE | | 57 | | | | 3 | 20 | 4 | 20 | |
| | Epicentre: | | | 22 | 02 | 48.9 | 52.0N | | 171.4W | | 49 km | | USCGS 5¾-6 PAS |
| 3 | KP | P | Z | 02 | 19 | 52 | | | | | | | |
| | TU | P | N | 02 | 19 | 54 | | | | | | | |
| | | S | N | | 20 | 24½ | | | | | | | |
| | CT | iP | Z | 02 | 19 | 58½ | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 3 | ON | P | E | 02 | 20 | 00 | | | | | | | |
| | | e | E | | | 51 | | | | | | | |
| | WN | P | N | 02 | 20 | 20 | | | | | | | |
| | | S | N | | 21 | 13 | | | | | | | |
| | KM | eP | X | 02 | 20 | 51 | | | | | | | |
| | | S | X | | 22 | 02½ | | | | | | | |
| | GP | P | N | 02 | 20 | 54 | | | | | | | |
| | | S | N | | 22 | 12 | | | | | | | |
| | Epicentre: | | | 02 | 19 | 14 | 37.3S | | 176.4E | | 265 km | | NZ(C) 5.2 NZ |
| | Additional reading from Charters Towers used to determine epicentre. | | | | | | | | | | | | |
| 3 | KP | P | Z | 05 | 45 | 57 | | | | | | | |
| | WN | e(P) | N | 05 | 46 | 35 | | | | | | | |
| | | eL | N | | 52.8 | | | | | | | | |
| | | eL | ZN | | 53.3 | | 9 | 20 | 18 | 20 | | | |
| | GP | eP | N | 05 | 47 | 05 | | | | | | | |
| | KM | e(P) | X | 05 | 47 | 07 | | | | | | | |
| | TU | eS | N | 05 | 49 | 17 | | | | | | | |
| | RX | Lq | NE | 05 | 55 | | | | 2 | 26 | 4 | 26 | |
| | | eLr | Z | | 57.4 | | 6 | 16 | | | | | |
| | | M | ZNE | | 59 | | 9 | 16 | 7 | 16 | 7 | 16 | |
| | Epicentre: | | | 05 | 41 | 39.9 | 20.9S | | 174.4W | | 61 km | | USCGS |
| 3 | KP | P | Z | 07 | 51 | 08 | | | | | | | |
| | CT | eP | Z | 07 | 51 | 22 | | | | | | | |
| | Epicentre: | | | 07 | 46 | 53.5 | 19.0S | | 169.1E | | 212 km | | USCGS |
| 3 | ON | P | E | 12 | 47 | 47 | | | | | | | |
| | | S | E | | 52 | 49 | | | | | | | |
| | | e | E | | 53 | 47 | | | | | | | |
| | | ScS | E | | 57 | 25 | | | | | | | |
| | KP | eiP | Z | 12 | 48 | 05 u | | | | | | | |
| | | PcP | Z | | 50 | 17 | | | | | | | |
| | | ScP | Z | | 53 | 23 | | | | | | | |
| | | eScS | Z | | 57 | 44 | | | | | | | |
| | CT | iP | Z | 12 | 48 | 15½ | | | | | | | |
| | | ScP | Z | | 53 | 27 | | | | | | | |
| | TO | eP | Z | 12 | 48 | 16 | | | | | | | |
| | | ePcP | Z | | 50 | 22 | | | | | | | |
| | | eScP | Z | | 53 | 28 | | | | | | | |
| | TU | P | N | 12 | 48 | 18 | | | | | | | |
| | | S | N | | 53 | 39 | | | | | | | |
| | | eScS | N | | 57 | 36 | | | | | | | |
| | WN | P | ZN | 12 | 48 | 22 | 3 | 7 | | | | | |
| | | S | ZN | | 53 | 52 | 2 | 8 | 7 | 10 | | | |
| | | sS | N | | 56 | 20 | | | 4 | 10 | | | |
| | | M | N | 13 | 04 | | | | 10 | 18 | | | |
| | KM | P | X | 12 | 48 | 26 | | | | | | | |
| | | e | X | | 53 | 34 | | | | | | | |
| | | eS | X | | | 50 | | | | | | | |
| | | eScS | X | | 57 | 36 | | | | | | | |
| | GP | iP | N | 12 | 48 | 34 s | | | | | | | |
| | | pP | N | | 49 | 55 | | | | | | | |
| | | ScP | N | | 53 | 38 | | | | | | | |
| | RX | eP | Z | 12 | 48 | 42 | 2 | 2 | | | | | |
| | | eScP | Z | | 53 | 43 | 2 | 2 | | | | | |
| | | S | NE | | 54 | 22 | | | 4 | 18 | 5 | 14 | |
| | | SS | NE | | 57 | 22 | | | 5 | 18 | 4 | 16 | |
| | Epicentre: | | | 12 | 41 | 34.9 | 6.1S | | 154.5E | | 457 km | | USCGS 6¼-¾ PAS |
| 3 | RX | eP | ZNE | 13 | 40 | 28 | | | | | | | |
| | | e(Sn) | ZN | | | 49 | | | | | | | |
| | | S* | ZN | | | 51 | | | | | | | |
| | KM | eP* | X | 13 | 40 | 57 | | | | | | | |
| | | e | X | | 41 | 00 | | | | | | | |
| | | S* | X | | | 41 | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 3 | GP | e | N | 13 | 41 | 09 | | | | | | | | |
| | | eSn | N | | | 37 | | | | | | | | |
| | WN | ePn | N | 13 | 41 | 28 | | | | | | | | |
| | | e | N | | | 51 | | | | | | | | |
| | | eSn | N | | 42 | 36 | | | | | | | | |
| | CT | e(P) | Z | 13 | 41 | 49 | | | | | | | | |
| | | e | Z | | | 58 | | | | | | | | |
| | KP | eP | Z | 13 | 42 | 01 | | | | | | | | |
| | | e | Z | | | 08 | | | | | | | | |
| | | e(Sn) | Z | | 43 | 46 | | | | | | | | |
| | ON | ePn | E | 13 | 42 | 18 | | | | | | | | |
| | | e | E | | | 25 | | | | | | | | |
| | | e(S) | E | | 44 | 00 | | | | | | | | |
| | Epicentre: | | | 13 | 39 | 58 | 44.2S | 167.7E | S | | | | NZ(C) | 5.0 MZ |
| 3 | KP | P | Z | 14 | 14 | 06 | | | | | | | | |
| | ON | e(P) | E | 14 | 14 | 16 | | | | | | | | |
| | CT | eP | Z | 14 | 14 | 28 | | | | | | | | |
| 3 | ON | P | E | 15 | 20 | 55 | | | | | | | | |
| | KP | e1P | Z | 15 | 21 | 08 | | | | | | | | |
| | | e | Z | | | 30 | | | | | | | | |
| | CT | P | Z | 15 | 21 | 18 | | | | | | | | |
| | WN | P | N | 15 | 21 | 37 | | | | | | | | |
| | GP | eP | N | 15 | 22 | 01 | | | | | | | | |
| | Epicentre: | | | 15 | 17 | 28.4 | 20.1S | 178.6W | 645 km | | | | USCGS | |
| 3 | TU | P | N | 15 | 48 | 18 | | | | | | | | |
| | | S | N | | 49 | 13 | | | | | | | | |
| | KP | P | Z | 15 | 48 | 22 | | | | | | | | |
| | | i | Z | | | 37 | | | | | | | | |
| | | eT | Z | | 53 | 17 | | | | | | | | |
| | ON | P | E | 15 | 48 | 26 | | | | | | | | |
| | | i | E | | | 38 | | | | | | | | |
| | | eL | E | | 50 | 54 | | | | | | | | |
| | CT | eP | Z | 15 | 48 | 33 | | | | | | | | |
| | | i | Z | | | 49 | | | | | | | | |
| | TO | eP | Z | 15 | 48 | 34 | | | | | | | | |
| | | e | Z | | | 48 | | | | | | | | |
| | | e | Z | | 50 | 16 | | | | | | | | |
| | WN | eP? | N | 15 | 49 | 10 | | | | | | | | |
| | | e | N | | | 31 | | | | | | | | |
| | | S | N | | 50 | 24 | | | | | | | | |
| | | e | ZN | | 51 | 14 | | | | | | | | |
| | | eL | ZN | | 52 | 10 | | | | | | | | |
| | GP | eP? | N | 15 | 49 | 43 | | | | | | | | |
| | | eS | N | | 51 | 28 | | | | | | | | |
| | KM | eS | X | 15 | 51 | 25 | | | | | | | | |
| | | e | X | | 52 | 12 | | | | | | | | |
| | RX | eL | NE | 15 | 54 | 7 | | | | | | | | |
| | | eL | Z | | 56 | .8 | | | | | | | | |
| | Epicentre: | | | 15 | 47 | 07 | 35½S | 179¼W | N | | | | NZ(D) | 5.3 MZ |
| 3 | KP | P | Z | 17 | 40 | 17 | | | | | | | | |
| | ON | eP | E | 17 | 40 | 23 | | | | | | | | |
| | CT | eP | Z | 17 | 40 | 41 | | | | | | | | |
| 3 | KP | eP | Z | 23 | 59 | 05 | | | | | | | | |
| | SU | eS | N | 00 | 06 | 26 | | | 40 | 9 | | | | |
| | | eL | N | | 17 | .8 | | | | | | | | |
| | RX | S | NE | 00 | 10 | 38 | | | 2 | 7 | 2 | 7 | | 6.8 |
| | | eL | ZNE | | 31 | | | | 3 | 20 | 2 | 20 | | 6.1 |
| | Epicentre: | | | 23 | 46 | 23.9 | 44.6N | 149.1E | 27 km | | | | USCGS | 6¼ PAS |
| 4 | KP | P | Z | 02 | 43 | 02 | | | | | | | | |
| | SU | e | N | 02 | 44 | 15 | | | 5 | 7 | | | | |
| | Epicentre: | | | 02 | 39 | 03.6 | 21.5S | 170.4E | 60 km | | | | USCGS | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 4 | KP | eP | Z | 04 | 58 | 17 | | | | | | | | |
| | | e | Z | | | 39 | | | | | | | | |
| | WN | e | N | 05 | 00 | 19 | | | | | | | | |
| 4 | SU | eL | N | 07 | 01 | .8 | | | | 14 | 9 | | | |
| 4 | TU | eP | N | 21 | 06 | 41 | | | | | | | | |
| | | eS | N | | 07 | 40 | | | | | | | | |
| | KP | eP | Z | 21 | 06 | 46 | | | | | | | | |
| | CT | eP | Z | 21 | 07 | | | | | | | | | |
| | WN | eS | N | 21 | 08 | 46 | | | | | | | | |
| | GP | eS | N | 21 | 09 | 50 | | | | | | | | |
| | RX | eL | NE | 21 | 13 | | | | | | | | | |
| | Epicentre: | | | 21 | 05 | 24 | 35½S | 178½W | N | | | | NZ(D) | 5.0 NZ |
| | Additional readings from Charters Towers used in determination of epicentre. | | | | | | | | | | | | | |
| 5 | SU | eL | N | 05 | 55 | .0 | | | | 14 | 12 | | | |
| 5 | KP | eP | Z | 07 | 30 | 12 | | | | | | | | |
| | | i | Z | | | 15 | | | | | | | | |
| | GP | eP | N | 07 | 31 | 22 | | | | | | | | |
| | | eS | N | | 33 | 47 | | | | | | | | |
| | TU | eS | N | 07 | 31 | 41 | | | | | | | | |
| | WN | eS | N | 07 | 32 | 45 | | | | | | | | |
| | CB | eS | E | 07 | 33 | 03 | | | | | | | | |
| | KM | eS | X | 07 | 33 | 37 | | | | | | | | |
| 5 | KP | P | Z | 11 | 45 | 55 | | | | | | | | |
| | WN | eS | N | 11 | 47 | 58 | | | | | | | | |
| | GP | eS | N | 11 | 49 | 02 | | | | | | | | |
| 6 | TU | P | N | 09 | 59 | 42½ | | | | | | | | |
| | | S | N | 10 | 00 | 43 | | | | | | | | |
| | | e | N | | 01 | 31 | | | | | | | | |
| | KP | eP | Z | 09 | 59 | 47½ | | | | | | | | |
| | | i | Z | | | 52 | | | | | | | | |
| | ON | eP | E | 09 | 59 | 53 | | | | | | | | |
| | | i | E | 10 | 00 | 09 | | | | | | | | |
| | TO | eP | Z | 09 | 59 | 58 | | | | | | | | |
| | | e | Z | 10 | 00 | 12 | | | | | | | | |
| | | e | Z | | 01 | 17 | | | | | | | | |
| | WN | S | N | 10 | 01 | 53 | | | | | | | | |
| | | eL | ZN | | 04 | | | | | | | | | |
| | CB | eS | E | 10 | 02 | 14 | | | | | | | | |
| | KM | eS | X | 10 | 02 | 52 | | | | | | | | |
| | GP | eS | N | 10 | 02 | 57 | | | | | | | | |
| | RX | eL | NE | 10 | 06 | | | | | | | | | |
| | | eL | Z | | 08 | | | | | | | | | |
| | Epicentre: | | | 09 | 58 | 24 | 35½S | 178¼W | N | | | | NZ(D) | 5.3 NZ |
| 6 | SU | eL | N | 10 | 07 | .5 | | | | 5 | 12 | | | |
| 6 | TU | P | N | 11 | 16 | 02 | | | | | | | | |
| | | S | N | | | 35 | | | | | | | | |
| | KP | P | Z | 11 | 16 | 07 | | | | | | | | |
| | | i | Z | | | 09 | | | | | | | | |
| | TO | eP | Z | 11 | 16 | 18 | | | | | | | | |
| | | i | Z | | | 22 | | | | | | | | |
| | ON | P | E | 11 | 16 | 21 | | | | | | | | |
| | WN | eP | N | 11 | 16 | 43 | | | | | | | | |
| | | e | N | | | 46 | | | | | | | | |
| | | S | N | | 17 | 45 | | | | | | | | |
| | CB | e(P) | E | 11 | 16 | 59 | | | | | | | | |
| | | e | E | | 17 | 10 | | | | | | | | |
| | | eS | E | | 18 | 10 | | | | | | | | |
| | GP | e(P) | N | 11 | 17 | 20 | | | | | | | | |
| | | S | N | | 18 | 48 | | | | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 6 | KM | eP? | X | 11 | 17 | 26 | | | | | | | | | |
| | | eS | X | | 18 | 47 | | | | | | | | | |
| | RX | eL | ZN | 11 | 22 | | | | | | | | | | |
| | Epicentre: | | | 11 | 15 | 19 | | 37.0S | 179.4E | S | | | | NZ(C) | 5.3 NZ |
| 6 | SU | iP | N | 14 | 05 | 10 | s | | | 5 | 5 | | | | |
| | | e | N | | 07 | 45 | | | | 19 | 12 | | | | |
| | KP | iP | Z | 14 | 07 | 11 | d | | | | | | | | |
| | | e | Z | | | 23 | | | | | | | | | |
| | TO | eP | Z | 14 | 07 | 25 | | | | | | | | | |
| | TU | eP | N | 14 | 07 | 25 | | | | | | | | | |
| | CB | eP | E | 14 | 07 | 39 | | | | | | | | | |
| * | WN | eP | N | 14 | 07 | 45 | | | | | | | | | |
| | | e | N | | 11 | 46 | | | | | | | | | |
| | | L | ZN | | 13 | | | 16 20 | | 12 | 20 | | | | 5.8 |
| | KM | e(P) | X | 14 | 08 | .0 | | | | | | | | | |
| | GP | P | N | 14 | 08 | 03 | | | | | | | | | |
| * | RX | eS | NE | 14 | 12 | 56 | | | | 2 | 10 | | | | 5.5 |
| | | eL | NE | 14 | 15 | | | | | 4 | 28 | 3 | 20 | | 5.6 |
| | | M | NE | 14 | 16 | .5 | | | | 4 | 22 | 5 | 20 | | |
| | | eL | Z | | 17 | | | 7 18 | | | | | | | |
| | Epicentre: | | | 14 | 03 | 01.8 | | 20.4S | 169.4E | 35 | km | | | USCGS | 6¼-½ PAS |
| 7 | KP | eP | Z | 11 | 57 | 48 | | | | | | | | | |
| | Epicentre: | | | 11 | 44 | 56.6 | | 44.3N | 149.1E | 89 | km | | | USCGS | |
| 8 | KP | P | Z | 11 | 18 | 10 | | | | | | | | | |
| | TO | eP | Z | 11 | 18 | 17 | | | | | | | | | |
| | SU | eS | N | 11 | 25 | 16 | | | | 6 | 6 | | | | |
| | Epicentre: | | | 11 | 07 | 40.8 | | 6.2N | 126.2E | 47 | km | | | USCGS | |
| 8 | KP | eP | Z | 12 | 36 | 52 | | | | | | | | | |
| | SU | eP | N | 12 | 32 | 32 | | | | | | | | | |
| | Epicentre: | | | | | | | Fiji region. | | | | | | | |
| | | | | | | | | Felt: Throughout Viti Levu. | | | | | | | |
| | | | | | | | | Max. on south coast, MM 4. | | | | | | | |
| 9 | KP | P | Z | 16 | 38 | 59 | | | | | | | | | |
| | Epicentre: | | | 16 | 19 | 15.9 | | 71.5N | 2.4W | 23 | km | | | USCGS | |
| 9 | KP | P | Z | 20 | 24 | 16 | | | | | | | | | |
| | Epicentre: | | | 20 | 04 | 32.7 | | 71.7N | 1.3W | 23 | km | | | USCGS | |
| 10 | CB | eP | E | 10 | 54 | 31 | | | | | | | | | |
| | CT | eP | Z | 10 | 54 | 31½ | | | | | | | | | |
| | KM | eP | X | 10 | 54 | 33 | | | | | | | | | |
| | KP | iP | Z | 10 | 54 | 33½ | u | | | | | | | | |
| | TO | (P) | Z | 10 | 54 | 37 | | | | | | | | | |
| | GP | P | N | 10 | 54 | 39 | | | | | | | | | |
| | SU | eS | N | 11 | 01 | 26 | | | | 4 | 5 | | | | |
| | | e? | N | | 02 | 55 | | | | 4 | 6± | | | | |
| | Epicentre: | | | 10 | 44 | 51.2 | | 4.0N | 122.6E | 629 | km | | | USCGS | |
| 10 | SU | e(S) | N | 14 | 11 | 35 | | | | 2 | 5 | | | | |
| | | e(SS) | N | | | 48 | | | | 4 | 6 | | | | |
| | | e(L) | N | | 13 | 55 | | | | 7 | 10 | | | | |
| | Epicentre: | | | 14 | 04 | 31.9 | | 11.2S | 163.1E | 48 | km | | | USCGS | |
| 11 | TU | eP | N | 10 | 53 | 12 | | | | | | | | | |
| | | eS | N | | 54 | 17 | | | | | | | | | |
| | | e | N | | 55 | 25 | | | | | | | | | |
| | KP | P | Z | 10 | 53 | 16 | | | | | | | | | |
| | CT | e(P) | Z | 10 | 53 | 39 | | | | | | | | | |
| | TO | e(S) | Z | 10 | 54 | 26 | | | | | | | | | |
| | KM | e | X | 10 | 56 | 29 | | | | | | | | | |
| | GP | e | N | 10 | 56 | 34 | | | | | | | | | |
| | | e | N | | 57 | 41 | | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 11 | RX | eL | NE | 11 | 00 | | | | | | | | | | |
| | | eL | Z | | 01 | | | | | | | | | | |
| | | M | NE | | 02 | | | | | | | | | | |
| | Epicentre: | | | 10 | 51 | 48 | | 3.5S | 178W | N | | | | NZ(D) | 5.2 NZ |
| 11 | SU | e(L) | N | 11 | 00 | 52 | | | | 7 | 14 | | | | |
| 12 | CT | eP | Z | 12 | 29 | 17 | | | | | | | | | |
| | KP | P | Z | 12 | 29 | 20 | | | | | | | | | |
| | TO | e(P) | Z | 12 | 29 | 25 | | | | | | | | | |
| | Epicentre: | | | 12 | 17 | 08.1 | | 27.3N | 128.4E | 48 | km | | | USCGS | 6½-¾ PAS |
| 12 | KM | eP | X | 16 | 11 | 15 | | | | | | | | | |
| | GP | eP | N | 16 | 11 | 23 | | | | | | | | | |
| | WN | P | N | 16 | 11 | 27 | | | | | | | | | |
| | KP | iP | Z | 16 | 11 | 27 | | | | | | | | | |
| | | PcP | Z | | 12 | 02 | | | | | | | | | |
| | TO | eP | Z | 16 | 11 | 28 | | | | | | | | | |
| | CT | iP | Z | 16 | 11 | 28 | | | | | | | | | |
| | Epicentre: | | | 16 | 02 | 05.8 | | 7.0S | 117.0E | 611 | km | | | USCGS | |
| 13 | KP | pP | Z | 03 | 21 | 21 | | | | | | | | | |
| | Epicentre: | | | 03 | 09 | 09.7 | | 27.0N | 140.2E | 439 | km | | | USCGS | |
| 14 | KP | P | Z | 00 | 46 | 01 | | | | | | | | | |
| | CT | eP | Z | 00 | 46 | 05 | | | | | | | | | |
| | TO | P | Z | 00 | 46 | 06 | | | | | | | | | |
| 14 | TU | eP | N | 01 | 52 | 37 | | | | | | | | | |
| | | eS | N | | 53 | 45 | | | | | | | | | |
| | | e | N | | 54 | 12 | | | | | | | | | |
| | ON | eP | E | 01 | 52 | 38 | | | | | | | | | |
| | KP | P | Z | 01 | 52 | 40 | | | | | | | | | |
| | CT | eP | Z | 01 | 52 | 51 | | | | | | | | | |
| 14 | KP | P | Z | 04 | 00 | 52 | | | | | | | | | |
| 14 | CT | P | Z | 05 | 07 | 22 | | | | | | | | | |
| | TO | eP | Z | 05 | 07 | 23 | | | | | | | | | |
| | KP | P | Z | 05 | 07 | 26 | u | | | | | | | | |
| | ON | eP | E | 05 | 07 | 38 | | | | | | | | | |
| | WN | eL | ZN | 05 | 25 | | | 11 20 | | 13 | 20 | | | | 6.3 |
| | RX | eL | NE | 05 | 26 | | | | | 3 | 20 | 3 | 20 | | 5.9 |
| | | eL | Z | | 28 | | | 7 20 | | | | | | | |
| | Epicentre: | | | 04 | 57 | 12.5 | | 31.1S | 106.0W | 40 | km | | | USCGS | |
| 14 | KP | eP | Z | 16 | 06 | 05 | | | | | | | | | |
| | Epicentre: | | | 15 | 59 | 01.7 | | 6.5S | 155.1E | 100 | km | | | USCGS | |
| 14 | KP | eP | Z | 16 | 28 | 19 | | | | | | | | | |
| | Epicentre: | | | 16 | 24 | 12.8 | | 17.5S | 178.9W | 562 | km | | | USCGS | |
| 14 | SU | i(P) | N | 23 | 20 | 42 | | | | 15 | 7± | | | | |
| | | eL | N | | 22 | 21 | | | | 55 | 13 | | | | |
| | KP | P | Z | 23 | 23 | 02 | | | | | | | | | |
| | CT | P | Z | 23 | 23 | 13 | | | | | | | | | |
| | CB | eP | E | 23 | 23 | 46 | | | | | | | | | |
| | GP | eP | N | 23 | 24 | 07 | | | | | | | | | |
| | RX | eL | NE | 23 | 32 | | | | | 2 | 20 | 5 | 18 | | |
| | | eL | Z | | 34 | | | | | | | | | | |
| | | M | | | 36 | | | 12 18 | | 6 | 18 | 7 | 18 | | |
| | Epicentre: | | | 23 | 18 | 35.1 | | 20.9S | 174.1W | 25 | km | | | USCGS | |
| 15 | SU | e(L) | N | 03 | 36 | 11 | | | | 21 | 7 | | | | |
| | KP | P | Z | 03 | 36 | 16 | | | | | | | | | |
| | TO | eP | Z | 03 | 36 | 28 | | | | | | | | | |
| | CT | P | Z | 03 | 36 | 29 | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 15 | RX | eL | NE | 03 | 46½ | | | | | | | | | |
| | | M | ZNE | | 49½ | | 6 | 14 | 6 | 13 | 4 | 14 | | |
| | | Epicentre: | | 03 | 31 | 17.5 | 16.5S | 167.3E | 69 | km | | | USCGS | |
| | 15 SU | eL | N | 05 | 14 | 40 | | | 11 | 8 | | | | |
| | 15 KP | P | Z | 18 | 08 | 00 | | | | | | | | |
| | | e | Z | | 09 | 54 | | | | | | | | |
| | TO | eP | Z | 18 | 08 | 06 | | | | | | | | |
| | CT | P | Z | 18 | 08 | 06 | | | | | | | | |
| | | Epicentre: | | 17 | 57 | 42.7 | 21.4N | 142.9E | 361 | km | | | USCGS | |
| | 16 KP | P | Z | 13 | 57 | 41 | | | | | | | | |
| | CT | eP | Z | 13 | 57 | 49 | | | | | | | | |
| | | e | Z | 14 | 00 | 37 | | | | | | | | |
| | 17 SU | eL | N | 07 | 17 | 40 | | | 10 | 7 | | | | |
| | KP | P | Z | 07 | 17 | 46 | | | | | | | | |
| | CT | eP | Z | 07 | 18 | 01 | | | | | | | | |
| | | Epicentre: | | 07 | 12 | 48.1 | 17.4S | 167.4E | 23 | km | | | USCGS | |
| | 17 KP | P | Z | 08 | 05 | 44 | | | | | | | | |
| | | Epicentre: | | 07 | 52 | 50.8 | 49.3N | 155.4E | 35 | km | | | USCGS | |
| | 17 KP | P | Z | 08 | 18 | 23 | | | | | | | | |
| | SU | eS | N | 08 | 25 | 55 | | | 6 | 6 | | | | |
| | | eL | N | | 37.5 | | | | 7± | 22± | | | | |
| | WN | eL | N | 08 | 36 | | | | | | | | | 6.4 |
| | | eL | ZN | | 49 | | 8 | 20 | 9 | 20 | | | | |
| | RX | eL | N | 08 | 51 | | | | 2 | 26 | | | | |
| | | Epicentre: | | 08 | 05 | 29.5 | 49.4N | 155.2E | 28 | km | | | USCGS | 6 PAS |
| | 17 ON | eP | E | 13 | 05 | 36 | | | | | | | | |
| | KP | P | Z | 13 | 05 | 53 u | | | | | | | | |
| | | i | Z | | 06 | 03 | | | | | | | | |
| | | iPcP | Z | | 08 | 14 | | | | | | | | |
| | TO | P | Z | 13 | 06 | 04 | | | | | | | | |
| | CT | P | Z | 13 | 06 | 04 | | | | | | | | |
| | WN | eP | N | 13 | 06 | 17 | | | | | | | | |
| | KM | eP | X | 13 | 06 | 17 | | | | | | | | |
| | GP | eP | N | 13 | 06 | 24 | | | | | | | | |
| | | Epicentre: | | 12 | 58 | 56.4 | 6.3S | 154.4E | 134 | km | | | USCGS | |
| | 17 KP | eP | Z | 16 | 02 | 05 | | | | | | | | |
| | | i | Z | | | 12 u | | | | | | | | |
| | | i | Z | | | 17 u | | | | | | | | |
| | CT | eP | Z | 16 | 02 | 13 | | | | | | | | |
| | | Epicentre: | | 15 | 54 | 38.1 | 6.3S | 148.8E | 79 | km | | | USCGS | |
| | 17 SU | iP | N | 19 | 58 | 07 | | | 47 | 7+ | | | | |
| | | eL | N | | 59.8 | | | | 125 | 13 | | | | |
| | ON | eP | E | 20 | 00 | 22 | | | | | | | | |
| | KP | eP | Z | 20 | 00 | 34 | | | | | | | | |
| | CT | eP | Z | 20 | 00 | 44 | | | | | | | | |
| | | e | Z | | | 49 | | | | | | | | |
| | TO | eP | Z | 20 | 00 | 49 | | | | | | | | |
| | WN | eP | N | 20 | 01 | 07 | | | | | | | | |
| | | eS | N | | 04 | 58 | | | | | | | | |
| | | eL | ZN | | 06.7 | | 10 | 17 | 23 | 17 | | | | |
| | KM | eP | X | 20 | 01 | 37 | | | | | | | | |
| | RX | eL | NE | 20 | 09 | | | | 6 | 28 | 11 | 30 | | |
| | | M1 | NE | | 11 | | | | 5 | 20 | 11 | 20 | | |
| | | eL | Z | | 12 | | | | | | | | | |
| | | M2 | ZNE | | 13.7 | | 21 | 16 | 19 | 16 | 14 | 16 | | |
| | | Epicentre: | | 19 | 56 | 11.1 | 20.9S | 174.5W | 28 | km | | | USCGS | 6 PAS |
| | 18 ON | P | E | 09 | 49 | 21 | | | | | | | | |
| | CB | eP | E | 09 | 49 | 29 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 18 | KM | eP | X | 09 | 49 | 33 | | | | | | | | |
| | CT | P | Z | 09 | 49 | 37 | | | | | | | | |
| | | ePcP | Z | | 50 | 15 | | | | | | | | |
| | | ScP | Z | | 54 | 27 | | | | | | | | |
| | TO | P | Z | 09 | 49 | 37 | | | | | | | | |
| | | e | Z | | 50 | 16 | | | | | | | | |
| | | eScP | Z | | 54 | 36 | | | | | | | | |
| | GP | eP | N | 09 | 49 | 38 | | | | | | | | |
| | WN | eP | N | 09 | 49 | 39 | | | | | | | | |
| | | eL | ZN | 10 | 03 | | | | | | | | | |
| | TU | eP | N | 09 | 49 | 45 | | | | | | | | |
| | SU | e(L) | N | 10 | 00.0 | | | | | | | | | |
| | RX | eL | NE | 10 | 01½ | | | | | | 3 | 18 | | |
| | | Epicentre: | | 09 | 40 | 28.3 | 6.8S | 129.2E | 83 | km | | | USCGS | |
| | 19 KP | eP | Z | 03 | 51 | 17 | | | | | | | | |
| | | Epicentre: | | 03 | 39 | 40.9 | 15.6N | 120.0E | 97 | km | | | USCGS | |
| | 19 KP | iP | Z | 12 | 42 | 18 | | | | | | | | |
| | | eS | Z | | | 49 | | | | | | | | |
| | TU | P | N | 12 | 42 | 22 | | | | | | | | |
| | | S | N | | | 53½ | | | | | | | | |
| | CT | iP | Z | 12 | 42 | 22½ | | | | | | | | |
| | | S | Z | | | 57 | | | | | | | | |
| | TO | iP | Z | 12 | 42 | 22½ u | | | | | | | | |
| | | e | Z | | | 55 | | | | | | | | |
| | ON | eP | E | 12 | 42 | 28 | | | | | | | | |
| | | S | E | | 43 | 08 | | | | | | | | |
| | WN | P | N | 12 | 42 | 42 | | | | | | | | |
| | | S | N | | 43 | 31 | | | | | | | | |
| | CB | eP | E | 12 | 42 | 46 | | | | | | | | |
| | | S | E | | 43 | 40 | | | | | | | | |
| | KM | eP | X | 12 | 43 | 07 | | | | | | | | |
| | | S | X | | 44 | 15 | | | | | | | | |
| | GP | eP | N | 12 | 43 | 12 | | | | | | | | |
| | | S | N | | 44 | 26 | | | | | | | | |
| | | Epicentre: | | 12 | 41 | 37 | 37.6S | 176.2E | 310 | km | | | NZ(B) | 5.4 NZ |
| | | | | | | | Additional readings from Charters Towers used in determination of epicentre. | | | | | | | |
| | 19 RX | eSS | NE | 19 | 36 | 40 | | | | | 1 | 20 | 2 20 | |
| | | eL | ZNE | | 53 | | | | | | 2 | 20 | | |
| | | M | ZNE | 20 | 02 | | 7 | 20 | | | 2 | 20 | 4 20 | |
| | WN | eL | N | 19 | 55 | | | | | | 7 | 20 | | |
| | | Epicentre: | | 19 | 01 | 25.4 | 6.9N | 77.5W | 66 | km | | | USCGS | |
| | 20 ON | eP | E | 00 | 43 | 54 | | | | | | | | |
| | | e | E | | 44 | 12 | | | | | | | | |
| | KP | eP | Z | 00 | 44 | 02 | | | | | | | | |
| | WN | eS | N | 00 | 45 | 55 | | | | | | | | |
| | SU | e(L) | N | 00 | 48 | 38 | | | | | 8 | 12 | | |
| | | Epicentre: | | 00 | 42 | 22.0 | 29.8S | 177.9W | 493 | km | | | USCGS | |
| | 20 KP | iP | Z | 03 | 05 | 41 | | | | | | | | |
| | TU | iP | N | 03 | 05 | 41½ n | | | | | | | | |
| | | S | N | | 06 | 06 | | | | | | | | |
| | CT | iP | Z | 03 | 05 | 48 | | | | | | | | |
| | | (S) | Z | | 06 | 22 | | | | | | | | |
| | TO | iP | Z | 03 | 05 | 48 u | | | | | | | | |
| | ON | iP | E | 03 | 05 | 53 e | | | | | | | | |
| | | e | E | | 06 | 28 | | | | | | | | |
| | WN | P | N | 03 | 06 | 11 | | | | | | | | |
| | | S | N | | 07 | 02 | | | | | | | | |
| | GP | eP | N | 03 | 06 | 47 | | | | | | | | |
| | | S | N | | 08 | 03 | | | | | | | | |
| | KM | e(P) | X | 03 | 06 | 53 | | | | | | | | |
| | | eS | X | | 07 | 54 | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 20 | CB | S | E | 03 | 07 | 17½ | | | | | | | | |
| | | Epicentre: | | 03 | 05 | 09 | 37.5S | 176.8E | 210 km | | | | NZ(B) | 5.9 M |
| | ON | eP | E | 03 | 37 | 59 | | | | | | | | |
| | | eL | E | | 40 | 15 | | | | | | | | |
| | SU | eP | N | 03 | 38 | 14 | | | 4 | 4± | | | | |
| | | eL | N | | 40.2 | | | | 5 | 12 | | | | |
| | KP | P | Z | 03 | 38 | 14 | | | | | | | | |
| | | e | Z | | | 26 | | | | | | | | |
| | CT | eP | Z | 03 | 38 | 32 | | | | | | | | |
| | TO | eP | Z | 03 | 38 | 32 | | | | | | | | |
| | TU | eP | N | 03 | 40 | 14 | | | | | | | | |
| | WN | eL | N | 03 | 42½ | | | | | | | | | |
| | | M | ZN | | 46½ | | 11 | 12 | 21 | 12 | | | | |
| | GP | eS | N | 03 | 42 | 27 | | | | | | | | |
| | RX | eL | NE | 03 | 46 | | | | 6 | 20 | 9 | 16 | | |
| | | Epicentre: | | 03 | 35 | 34.6 | 28.2S | 177.9W | 47 km | | | | USCGS | |
| 21 | KP | eP | Z | 07 | 27 | 47 | | | | | | | | |
| | | e | Z | | | 56 | | | | | | | | |
| | SU | eL | N | 07 | 30.5 | | | | 7 | 13 | | | | |
| | WN | eL | N | 08 | 03 | | | | | | | | | |
| | RX | eL | NE | 08 | 04 | | | | | | | | | |
| | | Epicentre: | | 07 | 25 | 26.5 | 27.9S | 177.8W | 249 km | | | | USCGS | |
| 21 | KP | eP | Z | 07 | 56 | 05 | | | | | | | | |
| 21 | SU | eL | N | 07 | 58.6 | | | | 7 | 12 | | | | |
| 21 | SU | e | N | 10 | 17 | 09 | | | | | | | | |
| 21 | KP | P | Z | 16 | 20 | 04 | | | | | | | | |
| | | Epicentre: | | 16 | 08 | 14.7 | 26.5N | 124.8E | 207 km | | | | USCGS | |
| 22 | SU | e? | N | 09 | 33 | 52 | | | 3 | 4 | | | | |
| | | e(SKKS)N | | | 44 | 10 | | | 3 | 8 | | | | |
| | | eL | N | 10 | 20.1 | | | | 9 | 18 | | | | |
| | RX | eSKKS | NE | 09 | 45 | 08 | | | 3 | 14 | | | | |
| | | eLg | N | 10 | 04 | | | | 3 | 20 | | | | |
| | | M | NE | | 20 | | | | 5 | 20 | 3 | 20 | | |
| | WN | eL | ZN | 10 | 07 | | 8 | 20 | 16 | 20 | | | | |
| | | Epicentre: | | 09 | 05 | 36.8 | 3.3S | 29.3E | 28 km | | | | USCGS | 6½-¼ MJ |
| 22 | SU | iP | N | 22 | 21 | 19 | | | | | | | | |
| | | eS | N | | | 43 | | | | | | | | |
| | KP | P | Z | 22 | 25 | 42 | | | | | | | | |
| | CT | P | Z | 22 | 25 | 54 | | | | | | | | |
| | | Epicentre: | | 22 | 20 | 49 | Fiji Region. Felt: Nambouwala. | | | | | | | |
| 23 | KP | eP | Z | 01 | 24 | 02 | | | | | | | | |
| | CT | eP | Z | 01 | 24 | 06 | | | | | | | | |
| | SU | eL | N | | 24.1 | | | | 7 | 8± | | | | |
| | | Epicentre: | | 01 | 18 | 58.6 | 13.3S | 166.5E | 322 km | | | | USCGS | |
| 23 | KP | eP | Z | 06 | 15 | 50 | | | | | | | | |
| | CT | eS | Z | 06 | 17 | 52 | | | | | | | | |
| | WN | eS | N | 06 | 19 | 29 | | | | | | | | |
| | GP | eS | N | 06 | 20 | 29 | | | | | | | | |
| | | Epicentre: | | 06 | 12 | 57.1 | 27.2S | 179.9W | 329 km | | | | USCGS | |
| 23 | ON | eP | E | 14 | 52 | 32 | | | | | | | | |
| | KP | eP | Z | 14 | 52 | 33 | | | | | | | | |
| | | e | Z | | | 41 | | | | | | | | |
| 23 | ON | eP | E | 15 | 58 | 43 | | | | | | | | |
| | KP | P | Z | 15 | 58 | 58 | | | | | | | | |
| | | i | Z | | 59 | 01 | | | | | | | | |



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 23 | | eS | Z | 16 | 01 | 35 | | | | | | | | |
| | | PcP | Z | | 03 | 28 | | | | | | | | |
| | CT | P | Z | 15 | 59 | 10 | | | | | | | | |
| | | eS | Z | 16 | 01 | 56 | | | | | | | | |
| | WN | eP | N | 15 | 59 | 30 | | | | | | | | |
| | | eS | N | 16 | 02 | 30 | | | | | | | | |
| | GP | eP | N | 15 | 59 | 56 | | | | | | | | |
| | | eS | N | 16 | 03 | 15 | | | | | | | | |
| | | Epicentre: | | 15 | 55 | 46.2 | 23.7S | 179.5W | 473 km | | | | USCGS | |
| 23 | SU | eL | N | 16 | 18.8 | | | | | 5 | 6 | | | |
| 23 | SU | iP | N | 23 | 04 | 22 n | | | | | | | | |
| | KP | eP | Z | 23 | 06 | 34 | | | | | | | | |
| | WN | L | ZN | 23 | 14 | | | 7 15 | | 12 15 | | | | |
| | RX | eL | NE | 23 | 15½ | | | | | 3 22 | | 6 24 | | |
| | | M | NE | | 17 | | | | | 5 18 | | 9 20 | | |
| | | eL | Z | | 18 | | | 5 14 | | | | | | |
| | | Epicentre: | | 23 | 02 | 24.3 | 22.2S | 174.8W | 39 km | | | | USCGS | |
| 24 | TU | P | N | 11 | 07 | 33½ | | | | | | | | |
| | | S | N | | 08 | 17 | | | | | | | | |
| | CT | P | Z | 11 | 07 | 46½ | | | | | | | | |
| | | eS | Z | | 08 | 45 | | | | | | | | |
| | WN | eP | Z | 11 | 07 | 48 | | | | | | | | |
| | | S | Z | | 08 | 48 | | | | | | | | |
| | KP | P | Z | 11 | 07 | 54 | | | | | | | | |
| | CB | P | E | 11 | 08 | 11 | | | | | | | | |
| | | S | E | | 09 | 25 | | | | | | | | |
| | GP | P | N | 11 | 08 | 15 | | | | | | | | |
| | | e | N | | | 20 | | | | | | | | |
| | | S | N | | 09 | 34 | | | | | | | | |
| | ON | eP | E | 11 | 08 | 26 | | | | | | | | |
| | | e(S) | E | | 09 | 47 | | | | | | | | |
| | KM | eP | X | 11 | 08 | 27 | | | | | | | | |
| | | S | X | | 09 | 50 | | | | | | | | |
| | RX | eL | NE | 11 | 11 | | | | | | | | | |
| | | eL | Z | | 13 | | | | | | | | | |
| | | Epicentre: | | 11 | 06 | 31 | 41.3S | 178.4W | N | | | | NZ(C) | 5.8 NZ |
| 24 | KP | eP | Z | 13 | 57 | 12 | | | | | | | | |
| | SU | eL | N | 14 | 20 | | | | | 15 | 6± | | | |
| | | Epicentre: | | 13 | 51 | 32.2 | 12.4S | 166.7E | 39 km | | | | USCGS | |
| 25 | SU | e(L) | N | 15 | 42 | | | | | 9 | 9± | | | |
| | ON | eP? | E | 15 | 44 | 06 | | | | | | | | |
| | KP | iP | Z | 15 | 44 | 18 | | | | | | | | |
| | TO | eP | Z | 15 | 44 | 29 | | | | | | | | |
| | CT | eP | Z | 15 | 44 | 29 | | | | | | | | |
| | TU | eP? | N | 15 | 44 | 30 | | | | | | | | |
| | | e? | N | | 48 | 30 | | | | | | | | |
| | WN | eP | N | 15 | 44 | 54 | | | | | | | | |
| | | eS | N | | 49 | 26 | | | | | | | | |
| | CB | eP | E | 15 | 45 | 01 | | | | | | | | |
| | | eS | E | | 49 | 32 | | | | | | | | |
| | KM | eP | X | 15 | 45 | 18 | | | | | | | | |
| | GP | eP | N | 15 | 45 | 24 | | | | | | | | |
| | | eS | N | | 50 | 13 | | | | | | | | |
| | RX | e(L) | NE | 15 | 55 | | | | | | 2 | 17 | | |
| | | e(L) | Z | | 56½ | | | 1 18 | | | | | | |
| | | Epicentre: | | 15 | 39 | 27.4 | 17.3S | 173.4W | 132 km | | | | USCGS | |
| 25 | KP | iP | Z | 17 | 40 | 36 u | | | | | | | | |
| | TO | eP | Z | 17 | 40 | 43 | | | | | | | | |
| | CT | iP | Z | 17 | 40 | 43 (u) | | | | | | | | |
| | WN | eP | N | 17 | 40 | 51 | | | | | | | | |
| | | Epicentre: | | 17 | 30 | 18.4 | 19.5N | 145.6E | 95 km | | | | USCGS | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 26 | CT | eP | Z | 00 | 45 | 06 | | | | | | | | |
| | | e | Z | | | 40½ | | | | | | | | |
| | TO | eP | Z | 00 | 45 | 08 | | | | | | | | |
| | | e | Z | | | 39 | | | | | | | | |
| | KP | eP | Z | 00 | 45 | 12 | | | | | | | | |
| | | e | Z | | | 43 | | | | | | | | |
| | Epicentre: | | | 00 | 32 | 05.0 | 27.4S | | 68.2W | | 25 km | | USCGS | |
| | 26 KP | eP | Z | 11 | 48 | 40 | | | | | | | | |
| | Epicentre: | | | 11 | 36 | 21.7 | 32.4N | | 131.7E | | 15 km | | USCGS | |
| | 26 KP | eP | Z | 15 | 26 | 22 | | | | | | | | |
| | RX | eL | N | 16 | 00 | | | | | | | | | |
| | Epicentre: | | | 15 | 13 | 25.8 | 51.6N | | 172.2W | | 44 km | | USCGS | |
| | 26 TU | e(P) | N | 17 | 06 | 04 | | | | | | | | |
| | | eS | N | | | 51 | | | | | | | | |
| | KP | P | Z | 17 | 06 | 10 | | | | | | | | |
| | | i | Z | | | 16 | | | | | | | | |
| | | eS | Z | | 07 | 03 | | | | | | | | |
| | CT | P | Z | 17 | 06 | 18 | | | | | | | | |
| | TO | P | Z | 17 | 06 | 18 | | | | | | | | |
| | | e(S) | Z | | 07 | 19 | | | | | | | | |
| | ON | eP | E | 17 | 06 | 22 | | | | | | | | |
| | WN | eS | N | 17 | 08 | 01 | | | | | | | | |
| | | e | N | | | 54 | | | | | | | | |
| | CB | S | E | 17 | 08 | 26 | | | | | | | | |
| | KM | eS | X | 17 | 09 | 04 | | | | | | | | |
| | GP | S | N | 17 | 09 | 06 | | | | | | | | |
| | Epicentre: | | | 17 | 05 | 02 | 36.5S | | 179.1W | | N | | NZ(C) | 5.0 E |
| | Additional reading from Charters Towers used to determine epicentre. | | | | | | | | | | | | | |
| | 26 KP | eP | Z | 21 | 15 | 31 | | | | | | | | |
| | Epicentre: | | | 21 | 10 | 13.6 | 15.6S | | 173.4W | | 25 km | | USCGS | |
| | 27 KP | P | Z | 06 | 04 | 17 | | | | | | | | |
| | | pP | Z | | | 38 | | | | | | | | |
| | Epicentre: | | | 05 | 51 | 26.9 | 51.5N | | 177.8E | | 102 km | | USCGS | |
| | 27 KP | eP | Z | 07 | 27 | 05 | | | | | | | | |
| | CT | eP | Z | 07 | 27 | 10 | | | | | | | | |
| | TO | eP | Z | 07 | 27 | 10 | | | | | | | | |
| | GP | eP | N | 07 | 27 | 27 | | | | | | | | |
| | Epicentre: | | | 07 | 17 | 55.1 | 00.9S | | 134.5E | | 107 km | | USCGS | |
| | 27 KP | eP | Z | 18 | 45 | 43 | | | | | | | | |
| | | epP | Z | | 46 | 08 | | | | | | | | |
| | TO | eP | Z | 18 | 45 | 50 | | | | | | | | |
| | CT | eP | Z | 18 | 45 | 50 | | | | | | | | |
| | | e | Z | | 46 | 03 | | | | | | | | |
| | Epicentre: | | | 18 | 35 | 52.2 | 14.4N | | 145.8E | | 109 km | | USCGS | |
| | 28 CT | P | Z | 09 | 15 | 23 | | | | | | | | |
| | KP | P | Z | 09 | 15 | 32 | | | | | | | | |
| | 28 KP | eP | Z | 17 | 38 | 52 | | | | | | | | |
| | Epicentre: | | | 17 | 34 | 58.8 | 18.0S | | 178.8W | | 705 km | | USCGS | |
| | 29 KP | eP | Z | 09 | 30 | 17½ | | | | | | | | |
| | | i | Z | | | 19 | | | | | | | | |
| | | eS | Z | | 31 | 47 | | | | | | | | |
| | TU | eP | N | 09 | 30 | 19 | | | | | | | | |
| | | S | N | | 31 | 45 | | | | | | | | |
| | CT | P | Z | 09 | 30 | 28 | | | | | | | | |
| | | S | Z | | 31 | 59 | | | | | | | | |
| | WN | eP | N | 09 | 30 | 51 | | | | | | | | |
| | | S | N | | 32 | 41 | | | | | | | | |



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 29 | ON | S | E | 09 | 31 | 26 | | | | | | | | | |
| | CB | eS | E | 09 | 32 | 52 | | | | | | | | | |
| | KM | eS | X | 09 | 33 | 31 | | | | | | | | | |
| | GP | eS | N | 09 | 33 | 38 | | | | | | | | | |
| | Epicentre: | | | 09 | 28 | 29 | | 32.0S | | 179.8W | | 500 km | | NZ(C) | 6.0 NZ |
| | Additional readings from Charters Towers and Afiamalu used in determination of epicentre. | | | | | | | | | | | | | | |
| | 29 ON | eP | E | 11 | 28 | 33 | | | | | | | | | |
| | KP | P | Z | 11 | 28 | 43 | | | | | | | | | |
| | | i | Z | | | 44½ | | | | | | | | | |
| | | ScP | Z | | 32 | 39 | | | | | | | | | |
| | | PcS | Z | | 33 | 15 | | | | | | | | | |
| | | ScS | Z | | 38 | 07 | | | | | | | | | |
| | CT | eP | Z | 11 | 28 | 50 | | | | | | | | | |
| | | i | Z | | | 51½ | | | | | | | | | |
| | | ScP | Z | | 32 | 45 | | | | | | | | | |
| | TU | e | N | 11 | 28 | 54 | | | | | | | | | |
| | | eS | N | | 36 | 57 | | | | | | | | | |
| | | eScS | N | | 38 | 09 | | | | | | | | | |
| | CB | eP | E | 11 | 28 | 56 | | | | | | | | | |
| | WN | eP | ZN | 11 | 28 | 59 | | 4 | 6 | | | | | | 6.2 |
| | | S | ZN | | 37 | 13 | | 5 | 16 | | 7 | 10 | | | 6.1 |
| | GP | P | N | 11 | 29 | 09 | | | | | | | | | |
| | | eS | N | | 37 | 28 | | | | | | | | | |
| | | eScS | N | | 38 | 31 | | | | | | | | | |
| | SU | iS | N | 11 | 33 | 47 | n | | | | 8 | 7 | | | |
| | | e | N | | 34 | 53 | | | | | 5 | 5 | | | |
| | | eL | N | | 39 | .6 | | | | | 16 | 15 | | | |
| | RX | S | N | 11 | 37 | 34 | | | | | 3 | 9 | | | 5.8 |
| | | ScS | N | | 38 | 40 | | | | | 4 | 10 | | | |
| | | sS | N | | 40 | 46 | | | | | | | | | |
| | Epicentre: | | | 11 | 18 | 52.9 | | 18.9N | | 144.7E | | 469 km | | USCGS | 6¼–½ PAS |
| | 30 RX | e(S) | NE | 12 | 34 | 32 | | | | | 2 | 10 | 2 | 12 | |
| | | eL | N | | 35½ | | | | | | 2 | 20 | | | |
| | | eL | ZE | | 37 | | | 3 | 10 | | | | 2 | 9 | |
| | | M | NE | | 38½ | | | | | | 3 | 10 | 5 | 9 | |
| OCT 1 | KP | P | Z | 11 | 51 | 24 | u | | | | | | | | |
| | | epP | Z | | | 38 | | | | | | | | | |
| | CT | eP | Z | 11 | 51 | 32 | | | | | | | | | |
| | | epP | Z | | | 48 | | | | | | | | | |
| | Epicentre: | | | 11 | 44 | 03.6 | | 4.7S | | 153.3E | | 90 km | | USCGS | |
| | 1 ON | e(P) | E | 16 | 23 | 48 | | | | | | | | | |
| | KP | eP | Z | 16 | 23 | 51 | | | | | | | | | |
| | CT | eP | Z | 16 | 23 | 58 | | | | | | | | | |
| | SU | eS | N | 16 | 31 | 50 | | | | | | | | | |
| | | eL | N | | 43 | | | | | | 12 | 25 | | | |
| | WN | e(SKS) | N | 16 | 34 | 40 | | | | | | | | | |
| | | eL | ZN | | 54 | | | | | | 8 | 22 | | | |
| | | M | ZN | 17 | 04 | | | 2 | 19 | | 4 | 18 | | | |
| | RX | eSKS | N | 16 | 35 | 12 | | | | | | | | | |
| | | ePPS | N | | 37 | 42 | | | | | | | | | |
| | | eSS | N | | 42 | 56 | | | | | | | | | |
| | | eSSS | N | | 46 | | | | | | | | | | |
| | | eL | N | | 56 | | | | | | | | | | |
| | | eL | ZE | | 58 | | | | | | | | | | |
| | | M | N | 17 | 00 | | | | | | 6 | 24 | | | |
| | Epicentre: | | | 16 | 10 | 56.9 | | 52.2N | | 172.6W | | 41 km | | USCGS | 6–6½ |
| | 2 KP | eP | Z | 00 | 02 | 31 | | | | | | | | | |
| | CT | eP | Z | 00 | 02 | 42 | | | | | | | | | |
| | GP | e(P) | N | 00 | 03 | 08 | | | | | | | | | |
| | Epicentre: | | | 23 | 56 | 32.3 | | 10.5S | | 161.2E | | 148 km | | USCGS | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 2 | TO | P | Z | 04 | 49 | 46 | | | | | | | | |
| | CT | iP | Z | 04 | 49 | 47 | d | | | | | | | |
| | | e | Z | | | 56 | | | | | | | | |
| | | e | Z | | 50 | 13 | | | | | | | | |
| | KP | iP | Z | 04 | 49 | 52 | d | | | | | | | |
| | | e | Z | | 50 | 01 | | | | | | | | |
| | RX | eL | N | 05 | 20 | | | | | | | | | |
| | Epicentre: | | | 04 | 37 | 49.7 | | 61.0S | 23.3W | 77 km | | | | USCGS |
| 2 | WN | eL | ZN | 07 | 43 | | | | | | | | | |
| | RX | eL | NE | 07 | 44 | | | | | | | | | |
| 2 | KP | P | Z | 10 | 24 | 38 | | | | | | | | |
| | TO | eP | Z | 10 | 24 | 50 | | | | | | | | |
| | CT | P | Z | 10 | 24 | 50 | | | | | | | | |
| | GP | e(P) | N | 10 | 25 | 22 | | | | | | | | |
| | Epicentre: | | | 10 | 18 | 55.8 | | 11.3S | 165.7E | 100 km | | | | USCGS |
| 2 | CT | e(P) | Z | 12 | 04 | 45 | | | | | | | | |
| | | e | Z | | 05 | 11 | | | | | | | | |
| | KP | e(P) | Z | 12 | 04 | 49 | | | | | | | | |
| | WN | S | N | 12 | 13 | 42 | | | | | | | | |
| | | eLq | N | | 23 | | | | | | | | | |
| | | eLr | ZN | | 25 | | | | | | | | | |
| | | M | Z | | 30 | | | | 6 18 | | | | | |
| | RX | eS | N | 12 | 13 | 56 | | | | | | | | |
| | | e | NE | | 14 | 30 | | | | | | | | |
| | | eLq | N | | 23 | | | | | | | | | |
| | | eLr | ZE | | 26 | | | | | | | | | |
| | | M | ZNE | | 30 | | | | 4 18 | | 2 16 | | 4 18 | |
| | Epicentre: | | | 11 | 53 | 44.1 | | 38.7S | 91.5W | 84 km | | | | USCGS |
| 2 | KP | P | Z | 16 | 42 | 20 | | | | | | | | |
| | CT | e(P) | Z | 16 | 42 | 24 | | | | | | | | |
| | Epicentre: | | | 16 | 32 | 06.1 | | 3.1N | 127.7E | 31 km | | | | USCGS |
| 2 | KP | eP | Z | 18 | 21 | 25 | | | | | | | | |
| | | e | Z | | | 42 | | | | | | | | |
| | CT | eP | Z | 18 | 21 | 25 | | | | | | | | |
| | | e | Z | | | 43 | | | | | | | | |
| | TO | e | Z | 18 | 21 | 43 | | | | | | | | |
| | Epicentre: | | | 18 | 08 | 12.4 | | 18.6N | 94.9E | 104 km | | | | USCGS |
| 2 | SU | eL | N | 20 | 15 | | | | | | | | | |
| | | M | N | | 17 | | | | | 8 10 | | | | |
| | WN | eL | ZN | 20 | 27 | | | | | | | | | |
| | RX | eL | ZN | 20 | 30 | | | | | 2 18 | | | | |
| 3 | KP | P? | Z | 02 | 42 | 58 | u | | | | | | | |
| 3 | CT | iP | Z | 05 | 22 | 40 | u | | | | | | | |
| | KM | eP | X | 05 | 22 | 42 | | | | | | | | |
| | KP | P | Z | 05 | 22 | 44 | | | | | | | | |
| | | e | Z | | | 55 | | | | | | | | |
| | CB | eP | E | 05 | 22 | 45 | | | | | | | | |
| | RX | eL | N | 05 | 54 | | | | | | | | | |
| | Epicentre: | | | 05 | 10 | 37.3 | | 38.7S | 75.3W | 43 km | | | | USCGS |
| 3 | KP | P | Z | 10 | 20 | 53 | | | | | | | | |
| | | e | Z | | 21 | 21 | | | | | | | | |
| | Epicentre: | | | 10 | 12 | 07.8 | | 3.3S | 137.8E | 29 km | | | | USCGS |
| 3 | KP | eP | Z | 17 | 18 | 09 | | | | | | | | |
| | | e | Z | | | 20 | | | | | | | | |
| | WN | eL | ZN | 17 | 34 | | | | | | | | | |
| | RX | eL | N | 17 | 36 | | | | | | | | | |
| | | eL | ZN | | 40 | | | | | 1 13 | | | | |
| | Epicentre: | | | 17 | 10 | 56.2 | | 8.1S | 152.8E | 100 km | | | | USCGS |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 3 | CT | eP | Z | 20 | 02 | 15 | | | | | | | | |
| | | e | Z | | | 26 | | | | | | | | |
| | KP | eP | Z | 20 | 02 | 18 | | | | | | | | |
| | | e | Z | | | 27 | | | | | | | | |
| | RX | e(L) | N | 20 | 19 | | | | | | | | | |
| | | eL | ZE | | 26 | | | | | | | | | |
| | | M | ZNE | | 32 | | | | | | 2 19 | | 2 20 | |
| | WN | eL | Z | 20 | 30 | | | | | | | | | |
| | Epicentre: | | | 19 | 50 | 48.8 | | 5.7S | 103.0E | 51 km | | | | USCGS |
| 3 | SU | e(L) | N | 22 | 14 | | | | | | | | | |
| | TU | e | N | 22 | 14 | 26 | | | | | | | | |
| | WN | eL | ZN | 22 | 20 | | | | | | | | | |
| | RX | eL | NE | 22 | 23 | | | | | | | | 2 16 | |
| | Epicentre: | | | 22 | 10 | 52.5 | | 22.6S | 172.3E | 243 km | | | | USCGS |
| 4 | KP | eP | Z | 09 | 57 | 13 | | | | | | | | |
| | | e | Z | | 58 | 05 | | | | | | | | |
| | SU | eL | N | 10 | 02 | | | | | | | | | |
| | WN | S | N | 10 | 04 | 20 | | | | | | | | |
| | | e | N | | 07 | | | | | | | | | |
| | | eL | N | | 11 | | | | | | | | | |
| | | M | ZN | | 13 | | | | | | 6 16 | | | |
| | RX | eS | N | 10 | 05 | 02 | | | | | | | | |
| | | eL | NE | | 08 | | | | | | | | | |
| | | eL | Z | | 11 | | | | | | | | | |
| | Epicentre: | | | 09 | 51 | 16.1 | | 7.5S | 155.3E | 134 km | | | | USCGS |
| 6 | ON | P | E | 06 | 10 | 34 | | | | | | | | |
| | | e | E | | 11 | 02 | | | | | | | | |
| | | e | E | | 12 | 27 | | | | | | | | |
| | KP | iP | Z | 06 | 10 | 49 | u | | | | | | | |
| | TU | e(P) | N | 06 | 10 | 52 | | | | | | | | |
| | | eS | N | | 12 | 54 | | | | | | | | |
| | TO | eP | Z | 06 | 11 | 00 | u | | | | | | | |
| | CT | P | Z | 06 | 11 | 00 | u | | | | | | | |
| | | e | Z | | 13 | 13 | | | | | | | | |
| | | e | Z | | | 17 | | | | | | | | |
| | WN | eP | N | 06 | 11 | 23 | | | | | | | | |
| | | eS | N | | 13 | 49 | | | | | | | | |
| | | e | N | | | 58 | | | | | | | | |
| | CB | eP | E | 06 | 11 | 27 | | | | | | | | |
| | | eS | E | | 14 | 00 | | | | | | | | |
| | KM | e(P) | X | 06 | 11 | 44 | | | | | | | | |
| | | eS | X | | 14 | 29 | | | | | | | | |
| | GP | eP? | N | 06 | 11 | 49 | | | | | | | | |
| | | e | N | | | 54 | | | | | | | | |
| | | eS | N | | 14 | 43 | | | | | | | | |
| | Epicentre: | | | 06 | 08 | 18.8 | | 27.3S | 179.8E | 506 km | | | | USCGS |
| 6 | WN | eL | ZN | 13 | 56 | | | | | | | | | |
| | RX | eL | N | 13 | 56 | | | | | | | | | |
| | | eL | NE | | 57½ | | | | | | 4 15 | | | |
| | | eL | Z | | 59 | | | | | | | | | |
| 6 | KP | P | Z | 16 | 28 | 44 | | | | | | | | |
| | Epicentre: | | | 16 | 16 | 37.6 | | 38.3S | 74.9W | 53 km | | | | USCGS |
| 6 | KP | P | Z | 19 | 00 | 23 | | | | | | | | |
| 7 | KP | iP | Z | 11 | 12 | 50 | u | | | | | | | |
| 7 | SU | eP | N | 15 | 27 | 03 | | | | | | | | |
| | | e | N | | | 35 | | | | | | | | |
| | ON | eP | E | 15 | 27 | 15 | | | | | | | | |
| | | e | E | | | 36 | | | | | | | | |
| | | e | E | | 29 | 09 | | | | | | | | |
| | | e | E | | 34 | 13 | | | | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 7 | | e | E | | | 38 | | | | | | | | | |
| | CB | eP | E | 15 | 27 | 23 | | | | | | | | | |
| | | e | E | | | 50 | | | | | | | | | |
| | | eS | E | | | 34 | 32 | | | | | | | | |
| | KM | eP | X | 15 | 27 | 26 | | | | | | | | | |
| | | epP | X | | | 43 | | | | | | | | | |
| | | eS | X | | | 34 | 33 | | | | | | | | |
| | RX | eP | ZNE | 15 | 27 | 26 | | | | | | | | | |
| | | epP | Z | | | 44 | | | | | | | | | |
| | | eS | E | | | 34 | 24 | | | | | | | | |
| | | e | NE | | | 36 | | | | | | 16 | 18 | | |
| | | e(SSS) | NE | | | 39 | | | | 75 | 20 | | | | |
| | | eLq | N | | | 41 | | | | | | | | | |
| | | eLr | ZE | | | 44 | | | | | | | | | |
| | | M | ZE | | | 48 | | 100 | 20 | | | 65 | 20 | | |
| | KP | iP | Z | 15 | 27 | 26 | d | | | | | | | | |
| | | e | Z | | | 35 | 08 | | | | | | | | |
| | TO | eP | Z | 15 | 27 | 30 | | | | | | | | | |
| | | e | Z | | | 28 | 22 | | | | | | | | |
| | | e | Z | | | 30 | 05 | | | | | | | | |
| | | e | Z | | | 32 | 44 | | | | | | | | |
| | WN | P | ZN | 15 | 27 | 33 | | 14 | 6 | | | | | | |
| | | epP | Z | | | 52 | | | | | | | | | |
| | | e | N | | | 28 | 02 | | | | | | | | |
| | | eS | N | | | 34 | 45 | | | | | | | | |
| | | e | N | | | 49 | | | | 18 | 7 | | | | |
| | | e | N | | | 35 | 15 | | | | | | | | |
| | | e | ZN | 15 | 39 | | | | | | | | | | |
| | | eLq | N | | | 40 | | | | 350 | 42 | | | | |
| | | eLr | Z | | | 44 | | | | | | | | | |
| | | M | Z | | | 49 | | 120 | 21 | | | | | | |
| | TU | eP | N | 15 | 27 | 38 | | | | | | | | | |
| | | eS | N | | | 34 | 54 | | | | | | | | |
| | Epicentre: | | | 15 | 18 | 30.8 | | 7.4S | 130.7E | 45 | km | | | USCGS | 6½-7 |
| 7 | SU | eL | N | 20 | 28 | | | | | | | | | | |
| | WN | eL | Z | 20 | 30 | | | 4 | 20 | | | | | | |
| | RX | eL | ZNE | 20 | 33 | | | 4 | 19 | 7 | 19 | 6 | 19 | | |
| | Epicentre: | | | 20 | 01 | 32.6 | | 20.4S | 113.7W | 203 | km | | | USCGS | 5½-5½ |
| 8 | KP | eP | Z | 03 | 02 | 41 | | | | | | | | | |
| | TU | e(P) | N | 03 | 02 | 51 | | | | | | | | | |
| 8 | SU | P | N | 06 | 03 | 39 | | | | | | | | | |
| | | e | N | | | 08 | | | | | | | | | |
| | ON | P | E | 06 | 04 | 46 | | | | | | | | | |
| | | e | E | | | 05 | 51 | | | | | | | | |
| | KP | iP | Z | 06 | 04 | 55 | u | | | | | | | | |
| | | e | Z | | | 05 | 31 | | | | | | | | |
| | | epP | Z | | | 07 | 09 | | | | | | | | |
| | | e | Z | | | 08 | 15 | | | | | | | | |
| | | e | Z | | | 11 | 00 | | | | | | | | |
| | | eSKS | Z | | | 14 | 32 | | | | | | | | |
| | | eS | Z | | | 15 | 01 | | | | | | | | |
| | TO | eP | Z | 06 | 04 | 58 | | | | | | | | | |
| | | epP | Z | | | 07 | 14 | | | | | | | | |
| | | e | Z | | | 08 | 35 | | | | | | | | |
| | | eS | Z | | | 15 | 00 | | | | | | | | |
| | TU | eP | N | 06 | 05 | 00 | | | | | | | | | |
| | | eSKS | N | | | 14 | 27 | | | | | | | | |
| | | eS | N | | | 15 | 04 | | | | | | | | |
| | CB | eP | E | 06 | 05 | 02 | | | | | | | | | |
| | | epP | E | | | 07 | 19 | | | | | | | | |
| | | eSKS | E | | | 14 | 27 | | | | | | | | |
| | | eS | E | | | 15 | 03 | | | | | | | | |
| | WN | P | ZN | 06 | 05 | 04 | u | 5 | 4 | | | | | | |
| | | epP | Z | | | 07 | 23 | | | | | | | | |
| | | PP | ZN | | | 08 | 20 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 8 | | e | N | | | 48 | | | | | | | | | |
| | | eSKS | N | | 14 | 30 | | | | | | | | | |
| | | iS | N | | 15 | 10 | | | | | | 15 | 9 | | |
| | KM | eP | X | 06 | 05 | 07 | | | | | | | | | |
| | | e | X | | | 24 | | | | | | | | | |
| | | eSKS | X | | 14 | 35 | | | | | | | | | |
| | GP | eP | N | 06 | 05 | 11 | | | | | | | | | |
| | | e(pP) | N | | 07 | 25 | | | | | | | | | |
| | | e | N | | 08 | 54 | | | | | | | | | |
| | | eSKS | N | | 14 | 43 | | | | | | | | | |
| | | eS | N | | 15 | 26 | | | | | | | | | |
| | RX | P | ZN | 06 | 05 | 12 | | | | | | | | | |
| | | pP | ZN | | 07 | 30 | | | | | | | | | |
| | | ePP | ZNE | | 08 | 23 | | | | | | | | | |
| | | SKS | NE | | 14 | 46 | | | | | | 6 | 9 | 8 | 9 |
| | | eS | NE | | 15 | 26 | | | | | | 8 | 12 | 7 | 12 |
| | | e | NE | | 18 | 54 | | | | | | | | | |
| | | e(SS) | NE | | 20 | 26 | | | | | | | | | |
| | | eSSS | NE | | 25 | 20 | | | | | | 7 | 25 | | |
| | Epicentre: | | | 05 | 53 | 01.1 | | 40.0N | 129.7E | 608 | km | | | USCGS | 6½ |
| 8 | KP | eP | Z | 20 | 52 | 57 | | | | | | | | | |
| | TO | eP | Z | 20 | 52 | 58 | | | | | | | | | |
| | CT | P | Z | 20 | 52 | 58 | | | | | | | | | |
| | RX | eL | N | 21 | 27 | | | | | | | | | | |
| | | eL | E | 21 | 29 | | | | | | | | | | |
| | | M | NE | | 34 | | | | | | | 2 | 17 | 2 | 18 |
| | WN | eL | ZN | 21 | 32 | | | | | | | | | | |
| | Epicentre: | | | 20 | 40 | 06.6 | | 7.9N | 92.9E | 84 | km | | | USCGS | |
| 9 | KP | P? | Z | 01 | 47 | 08 | | | | | | | | | |
| | CT | P | Z | 01 | 47 | 16 | | | | | | | | | |
| 9 | ON | eP | E | 03 | 47 | 08 | | | | | | | | | |
| | | e | E | | 51 | 08 | | | | | | | | | |
| | | e | E | | | 41 | | | | | | | | | |
| | KP | iP | Z | 03 | 47 | 22 | u | | | | | | | | |
| | | e | Z | | 51 | 01 | | | | | | | | | |
| | CT | eP | Z | 03 | 47 | 31 | | | | | | | | | |
| | | e | Z | | | 43 | | | | | | | | | |
| | | e | Z | | 51 | 23 | | | | | | | | | |
| | | e | Z | | | 34 | | | | | | | | | |
| | TO | P | Z | 03 | 47 | 32 | | | | | | | | | |
| | | e | Z | | 51 | 34 | | | | | | | | | |
| | WN | eP | N | 03 | 47 | 53 | | | | | | | | | |
| | | e | N | | 51 | 04 | | | | | | | | | |
| | CB | eP | E | 03 | 47 | 55 | | | | | | | | | |
| | | e | E | | 51 | 00 | | | | | | | | | |
| | GP | eP | N | 03 | 48 | 17 | | | | | | | | | |
| | | e | N | | 51 | 53 | | | | | | | | | |
| 9 | SU | eL | N | 04 | 51 | | | | | | | | | | |
| | RX | eL | NE | 05 | 00 | | | | | | | | | 1 | 18 |
| 9 | ON | eP | E | 09 | 12 | 52 | | | | | | | | | |
| | KP | iP | Z | 09 | 13 | 04 | u | | | | | | | | |
| | | e | Z | | | 35 | | | | | | | | | |
| | | e | Z | | | 53 | | | | | | | | | |
| | | e | Z | | 15 | 17 | | | | | | | | | |
| | WN | P | Z | 09 | 13 | 07 | | | | | | | | | |
| | | ePP | Z | | 16 | 42 | | | | | | | | | |
| | | ePS | Z | | 24 | 58 | | | | | | | | | |
| | | eL | Z | | 45 | | | | | | | | | | |
| | TO | P | Z | 09 | 13 | 09 | u | | | | | | | | |
| | | e | Z | | 16 | 15 | | | | | | | | | |
| | | e | Z | | | 33 | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 9 | CB | eP | E | 09 | 13 | 14 | | | | | | | | |
| | GP | eP | N | 09 | 13 | 25 | | | | | | | | |
| | | ePP | N | | 16 | 35 | | | | | | | | |
| | RX | ePS | NE | 09 | 23 | 45 | | | | | | | | |
| | | eL | NE | | 37 | | | | | | | | | |
| | SU | eL | N | 09 | 32 | | | | | | | | | |
| | Epicentre: | | | 09 | 00 | 42.0 | 40.8N | 141.2E | 155 km | | | | USCGS | 6-6¼ |
| 9 | KP | P | Z | 09 | 48 | 13 | | | | | | | | |
| 9 | SU | (P) | N | 09 | 53 | 20 | | | | | | | | |
| | | e | N | | 54 | 20 | | | | | | | | |
| | | e | N | | 55 | 25 | | | | | | | | |
| | ON | eP | E | 09 | 56 | 19 | | | | | | | | |
| | | e | E | | 57 | 07 | | | | | | | | |
| | KP | P | Z | 09 | 56 | 31 | | | | | | | | |
| | TO | eP | Z | 09 | 56 | 40 | | | | | | | | |
| | CB | eP | E | 09 | 57 | 05 | | | | | | | | |
| | KM | eP | X | 09 | 57 | 19 | | | | | | | | |
| | GP | eP | N | 09 | 57 | 28 | | | | | | | | |
| | Epicentre: | | | 09 | 51 | 19.1 | 15.1S | 174.0W | 129 km | | | | USCGS | |
| 9 | KP | P | Z | 10 | 07 | 05 | | | | | | | | |
| | CT | e(P) | Z | 10 | 07 | 20 | | | | | | | | |
| 9 | KP | P | Z | 13 | 19 | 15 | | | | | | | | |
| | Epicentre: | | | 13 | 07 | 16.6 | 40.2N | 129.9E | 35 km | | | | USCGS | 6¼-6¾ |
| 9 | ON | e(P) | E | 15 | 13 | 08 | | | | | | | | |
| | KP | eP | Z | 15 | 13 | 11 | | | | | | | | |
| | | e | Z | | | 35 | | | | | | | | |
| 9 | KP | eP | Z | 15 | 32 | 09 | | | | | | | | |
| | CT | e(P) | Z | 15 | 32 | 39 | | | | | | | | |
| 10 | KP | P | Z | 15 | 04 | 26 | | | | | | | | |
| | RX | eL | ZNE | 15 | 08 | | | | | | | | | |
| | WN | eL | N | 15 | 10 | | | | | | | | | |
| | | eL | Z | | 12 | | | | | | | | | |
| 11 | RX | eL | N | 05 | 08 | | | | | | | | | |
| | Epicentre: | | | 04 | 46 | 00.6 | 12.5S | 166.4E | 25 km | | | | USCGS | |
| 12 | SU | eL | N | 09 | 15 | | | | | | | | | |
| | ON | eP | E | 09 | 16 | 27 | | | | | | | | |
| | | e | E | | 27 | 47 | | | | | | | | |
| | CT | e? | Z | 09 | 16 | 34 | | | | | | | | |
| | | e | Z | | | 48 | | | | | | | | |
| | KP | eP | Z | 09 | 16 | 40 | | | | | | | | |
| | RX | eL | N | 09 | 29 | | | | | | | | | |
| | Epicentre: | | | 09 | 11 | 16.4 | 15.1S | 173.2W | 25 km | | | | USCGS | |
| 12 | KP | eP | Z | 18 | 37 | 02 | | | | | | | | |
| | | e | Z | | | 18 | | | | | | | | |
| | CT | eP | Z | 18 | 37 | 11 | | | | | | | | |
| | Epicentre: | | | 18 | 29 | 35.1 | 6.1S | 148.6E | 119 km | | | | USCGS | |
| 13 | SU | e(P) | N | 15 | 05 | 25 | | | | | | | | |
| | | e | N | | 06 | 25 | | | | | | | | |
| | | S | N | | 13 | 40 | | | | 7 | 6 | | | |
| | | e | N | | 14 | 15 | | | | | | | | |
| | | eSS | N | | 19 | | | | | | | | | |
| | | eL | N | | 26 | | | | | | | | | |
| | | M | N | | 35 | | | | | 18 | 20 | | | |
| | KP | eP | Z | 15 | 05 | 48 | | | | | | | | |
| | | e | Z | | 06 | 06 | | | | | | | | |
| | RX | eSKS | N | 15 | 16 | 54 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 13 | | eS | NE | | 18 | 00 | | | | | | | | |
| | | eSP | N | | 19 | 26 | | | | | | | | |
| | | eSS | N | | 24 | 44 | | | | | | | | |
| | | eSSS | N | | 29 | | | | | | | | | |
| | | eLr | ZNE | | 40 | | | | | | | | | |
| | | M | N | | 41 | | | | | 10 | 29 | | | |
| | | M | N | | 48 | | | | | 7 | 20 | | | |
| | Epicentre: | | | 14 | 52 | 34.7 | 54.8N | 161.2E | 35 km | | | | USCGS | 6¼-6¾ |
| 13 | KP | eP | Z | 18 | 47 | 49 | | | | | | | | |
| | | e(pP) | Z | | 48 | 26 | | | | | | | | |
| | | e | Z | | | 31 | | | | | | | | |
| | | e | Z | | 50 | 37 | | | | | | | | |
| | TO | eP | Z | 18 | 47 | 58 | | | | | | | | |
| | Epicentre: | | | 18 | 40 | 30.3 | 3.8S | 152.4E | 213 km | | | | USCGS | |
| 14 | KP | eP | Z | 01 | 09 | 02 | | | | | | | | |
| | Epicentre: | | | 00 | 58 | 05.0 | 10.1N | 125.8E | 17 km | | | | USCGS | |
| 14 | TO | eP | Z | 12 | 27 | 49 | | | | | | | | |
| | CT | eP | Z | 12 | 27 | 50 | | | | | | | | |
| | KP | eP | Z | 12 | 27 | 52 | | | | | | | | |
| | Epicentre: | | | 12 | 16 | 30.5 | 4.7S | 103.1E | 159 km | | | | USCGS | |
| 14 | KP | P | Z | 15 | 39 | 05 | | | | | | | | |
| | Epicentre: | | | 15 | 28 | 39 | 4.8N | 125.5E | 36 km | | | | USCGS | |
| 14 | RX | eL | ZNE | 18 | 26 | | | | | | | | | |
| | | M | NE | | 29 | | | | | 1 | 18 | 2 | 18 | |
| | WN | eL | N | 18 | 28 | | | | | | | | | |
| | Epicentre: | | | 17 | 48 | 28.5 | 37.9S | 74.7W | 25 km | | | | USCGS | 5¼-5½ |
| 14 | SU | eP? | N | 21 | 30 | 15 | | | | | | | | |
| | | e | N | | | 20 | | | | | | | | |
| | | e | N | | 31 | 00 | | | | | | | | |
| | | S | N | | 39 | 50 | | | | 45 | 23 | | | |
| | | SS | N | | 44 | 19 | | | | | | | | |
| | | eL | N | | 51 | | | | | | | | | |
| | | M | N | | 59 | | | | | 30 | 17 | | | |
| | KP | eP | Z | 21 | 32 | 07 | | | | | | | | |
| | | i | Z | | | 14 | | | | | | | | |
| | | i | Z | | | 22 | | | | | | | | |
| | CT | eP? | Z | 21 | 32 | 13 | | | | | | | | |
| | | e | Z | | | 18 | | | | | | | | |
| | TO | eP | Z | 21 | 32 | 14 | | | | | | | | |
| | RX | e(PP) | N | 21 | 36 | 40 | | | | | | | | |
| | | eSKS | N | | 43 | 24 | | | | | | | | |
| | | eS | E | | 44 | 20 | | | | | | | | |
| | | eSP | N | | 45 | 44 | | | | 5 | 20 | | | |
| | | eSS | N | | 51 | | | | | | | | | |
| | | eSSS | N | | 55 | | | | | | | | | |
| | | eLr | ZN | 22 | 04 | | | | | | | | | |
| | | M | ZN | | 14 | | | | 16 | 19 | 12 | 19 | | |
| | WN | eSKS | N | 21 | 43 | 20 | | | | | | | | |
| | | e(S) | N | | | 50 | | | | | | | | |
| | | eL | ZN | 22 | 03 | | | | | | | | | |
| | | M | ZN | | 12 | | | | 11 | 19 | 30 | 19 | | |
| | Epicentre: | | | 21 | 19 | 11.4 | 51.7N | 172.1W | 50 km | | | | USCGS | 6½ |
| 14 | RX | eL | N | 23 | 30 | | | | | | | | | |
| | WN | eL | N | 23 | 43 | | | | | | | | | |
| 15 | WN | eL | N | 03 | 12 | | | | | | | | | |
| | RX | eL | NE | 03 | 13 | | | | | | | | | |
| | Epicentre: | | | 02 | 53 | 42.5 | 11.0S | 162.5E | 139 km | | | | USCGS | |
| 15 | KP | eP | Z | 11 | 41 | 55 | | | | | | | | |
| | Epicentre: | | | 11 | 30 | 02.1 | 23.1N | 123.4E | 60 km | | | | USCGS | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 15 | KP | eP | Z | 12 | 18 | 24 | | | | | | | |
| | Epicentre: | | | 12 | 12 | 03.0 | 7.7S | 157.5E | 366 km | | | USCGS | |
| 16 | SU | e | N | 04 | 56 | 20 | | | | | | | |
| | ON | P | E | 04 | 56 | 58 | | | | | | | |
| | | e | E | | | 24 | | | | | | | |
| | KP | P | Z | 04 | 57 | 12 | u | | | | | | |
| | | e | Z | | | 45 | | | | | | | |
| | | e | Z | | 06 | 48 | | | | | | | |
| | | e | Z | | 07 | 30 | | | | | | | |
| | TU | e(P) | N | 04 | 57 | 17 | | | | | | | |
| | | eS | N | | 59 | 59 | | | | | | | |
| | WN | eP | N | 04 | 57 | 44 | | | | | | | |
| | | e(S) | N | 05 | 00 | 52 | | | | | | | |
| | | e | N | | 08 | 32 | | | | | | | |
| | CB | eP | E | 04 | 57 | 47 | | | | | | | |
| | | eS | E | 05 | 00 | 49 | | | | | | | |
| | KM | eP | X | 04 | 58 | 02 | | | | | | | |
| | | e | X | | | 10 | | | | | | | |
| | GP | eP | N | 04 | 58 | 07 | | | | | | | |
| | | e | N | | | 12 | | | | | | | |
| | Epicentre: | | | 04 | 53 | 59.2 | 22.9S | 179.3E | 565 km | | | USCGS | |
| 16 | ON | P | E | 07 | 17 | 45 | | | | | | | |
| | | S | E | | 19 | 06 | | | | | | | |
| | KP | P | Z | 07 | 17 | 55 | | | | | | | |
| | | e | Z | | 19 | 29 | | | | | | | |
| | TU | eP | N | 07 | 17 | 57 | | | | | | | |
| | | e | N | | 19 | 20 | | | | | | | |
| | | e(S) | N | | | 26 | | | | | | | |
| | | e | N | | | 36 | | | | | | | |
| | TO | eP | Z | 07 | 18 | 06 | | | | | | | |
| | | e | Z | | 19 | 50 | | | | | | | |
| | WN | e(S) | N | 07 | 20 | 22 | | | | | | | |
| | | e | N | | | 26 | | | | | | | |
| | CB | eS | E | 07 | 20 | 30 | | | | | | | |
| | GP | eS | N | 07 | 21 | 17 | | | | | | | |
| | Epicentre: | | | 07 | 16 | 00 | 31½S | 179½W | 400 km | | | NZ(D) | 5½ NZ |
| | Using additional data from Brisbane, Charters Towers, Apia and Scott. | | | | | | | | | | | | |
| 16 | KP | iP | Z | 13 | 28 | 19 | d | | | | | | |
| | | e(P*) | Z | | | 25 | | | | | | | |
| | | e | Z | | 29 | 00 | | | | | | | |
| | | e | Z | | 39 | 42 | | | | | | | |
| | | e | Z | | 41 | 04 | | | | | | | |
| | TU | eP | N | 13 | 28 | 23 | | | | | | | |
| | | e(P*) | N | | | 27½ | | | | | | | |
| | | S | N | | | 52 | | | | | | | |
| | | e | N | | | 56 | | | | | | | |
| | | e | N | | | 57½ | | | | | | | |
| | ON | iP | E | 13 | 28 | 29 | w | | | | | | |
| | | e | E | | | 57 | | | | | | | |
| | | S | E | | 29 | 02 | | | | | | | |
| | | eS* | E | | 29 | 13 | | | | | | | |
| | TO | P | Z | 13 | 28 | 35 | d | | | | | | |
| | | i | Z | | | 36½ | u | | | | | | |
| | WN | eP | N | 13 | 29 | 04 | | | | | | | |
| | | e | N | | | 11 | | | | | | | |
| | | S | N | | 30 | 00 | | | | | | | |
| | CB | eP | E | 13 | 29 | 13½ | | | | | | | |
| | | e | E | | | 23 | | | | | | | |
| | | e(S) | E | | 30 | 21 | | | | | | | |
| | | e | E | | 31 | 38 | | | | | | | |
| | KM | e(P) | X | 13 | 29 | 39 | | | | | | | |
| | | e | X | | | 49 | | | | | | | |
| | | e | X | | 30 | 00 | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 16 | | e | X | | | 22 | | | | | | | |
| | | e | X | | | 37 | | | | | | | |
| | | e(S) | X | | 31 | 05 | | | | | | | |
| | GP | eP | N | 13 | 29 | 39½ | | | | | | | |
| | | e | N | | | 48½ | | | | | | | |
| | | P* | N | | 30 | 05 | | | | | | | |
| | | eS | N | | 31 | 09 | | | | | | | |
| | RX | eL | ZNE | 13 | 33½ | | | | | | | | |
| | | M | NE | | 35 | | | | | | | | |
| | SU | e(L) | N | 13 | 37 | | | | | | | | |
| | Epicentre: | | | 13 | 27 | 48 | | | | 3 18 | | 8 12 | |
| | | | | | | | 36.7S | 177.4E | S | | | NZ(C) | 5.1 NZ |
| | Using additional data from Brisbane and Charters Towers. | | | | | | | | | | | | |
| 16 | SU | e(P) | N | 17 | 59 | 20 | | | | | | | |
| | | S | N | | | 50 | | | | | | | |
| | KP | eP | Z | 18 | 03 | 27 | | | | | | | |
| | | e | Z | | | 34 | | | | | | | |
| 16 | KP | P | Z | 19 | 48 | 18 | d | | | | | | |
| 17 | RX | eL | ZNE | 07 | 35 | | | | | | | | |
| | WN | eL | ZN | 07 | 39 | | | | | | | | |
| 17 | ON | P | E | 10 | 05 | 51 | | | | | | | |
| | | iS | E | | 06 | 38 | e | | | | | | |
| | KP | iP | Z | 10 | 05 | 55 | u | | | | | | |
| | | (S) | Z | | 06 | 26 | | | | | | | |
| | TU | eP | N | 10 | 05 | 55 | | | | | | | |
| | | e | N | | 06 | 38½ | | | | | | | |
| | | e(S) | N | | | 42 | | | | | | | |
| | | S | N | | | 43 | | | | | | | |
| | CT | P | Z | 10 | 06 | 05 | | | | | | | |
| | TO | P | Z | 10 | 06 | 05½ | | | | | | | |
| | | S | Z | | 07 | 03½ | | | | | | | |
| | WN | eP | N | 10 | 06 | 29 | | | | | | | |
| | | S | N | | 07 | 43½ | | | | | | | |
| | CB | eP? | E | 10 | 06 | 38 | | | | | | | |
| | | e(S) | E | | 07 | 58 | | | | | | | |
| | KM | eP | X | 10 | 07 | (02) | | | | | | | |
| | | eS | X | | 08 | (37½) | | | | | | | |
| | GP | eP | N | 10 | 07 | 05 | | | | | | | |
| | | S | N | | 08 | 46½ | | | | | | | |
| | Epicentre: | | | 10 | 04 | 52 | 35.2S | 178.8E | 225 km | | | NZ(D) | 5.4 NZ |
| | Using additional data from Brisbane. | | | | | | | | | | | | |
| 17 | KP | P | Z | 13 | 47 | 44 | | | | | | | |
| | Epicentre: | | | 13 | 36 | 35.5 | 39.6S | 88.5W | 60 km | | | USCGS | |
| 17 | KP | P | Z | 13 | 58 | 15 | | | | | | | |
| | Epicentre: | | | 13 | 45 | 25.8 | 21.4S | 71.2W | 100 km | | | USCGS | |
| 17 | SU | e(S) | N | 22 | 35 | 45 | | | | | | | |
| | KP | P | Z | 22 | 37 | 33 | | | | | | | |
| | | e | Z | | 38 | 03 | | | | | | | |
| | CT | eP | Z | 22 | 37 | 43 | | | | | | | |
| | Epicentre: | | | 22 | 33 | 32.3 | 18.8S | 177.6W | 491 km | | | USCGS | |
| 17 | KP | eP? | Z | 22 | 43 | 06 | | | | | | | |
| | | e | Z | | | 21 | | | | | | | |
| | | e | Z | | | 44 | | | | | | | |
| | | e | Z | | 44 | 02 | | | | | | | |
| | CT | e | Z | 22 | 43 | 27 | | | | | | | |
| | | e | Z | | 44 | 21 | | | | | | | |
| 17 | WN | eL | Z | 23 | 06 | | | | | | | | |
| | RX | eL | ZNE | 23 | 08 | | | | | | | | |

| Date | Stn | Phase | | h m s | Az Tz | An Tn | Ae Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|
| OCT 17 | | M | E | 14 | | | 2 16 | | |
| 18 | ON | P | E | 00 03 27 | | | | | |
| | | S | E | 05 31 | | | | | |
| | | e | E | 06 07 | | | | | |
| | | e | E | 30 | | | | | |
| | KP | P | Z | 00 03 43 | | | | | |
| | | e | Z | 06 07 | | | | | |
| | | e | Z | 07 17 | | | | | |
| | TO | P | Z | 00 03 53 | | | | | |
| | CT | eP | Z | 00 03(54) | | | | | |
| | | e | Z | 06(17) | | | | | |
| | | e | Z | (23) | | | | | |
| | WN | P | N | 00 04 16 | | | | | |
| | | eS | N | 06 57 | | | | | |
| | CB | eP | E | 00 04 17 | | | | | |
| | | eS | E | 06 56 | | | | | |
| | SU | e(S) | N | 00 04 26 | | | | | |
| | KM | eP | X | 00 04 33 | | | | | |
| | | eS | X | 07 28 | | | | | |
| | GP | eP? | N | 00 04 34 | | | | | |
| | | e | N | 39 | | | | | |
| | | e? | N | 07 24 | | | | | |
| | | e(S) | N | 35 | | | | | |
| | | e | N | 44 | | | | | |
| | Epicentre: | | | 00 00 56.7 | 25.3S | 178.4E | 636 km | USCGS | |
| 18 | KP | eP | Z | 00 34 50 | | | | | |
| | Epicentre: | | | 00 21 47.2 | 52.5N | 170.2W | 33 km | USCGS | 5 |
| 18 | KP | eP | Z | 10 57 19 | | | | | |
| | | e | Z | 22 | | | | | |
| | CT | eP | Z | 10 57(32) | | | | | |
| | CB | eP | E | 10 58 01 | | | | | |
| | KM | eP | X | 10 58 18 | | | | | |
| | GP | e(P) | N | 10 58 24 | | | | | |
| | Epicentre: | | | 10 52 36.6 | 18.7S | 173.3W | 90 km | USCGS | |
| 19 | WN | P | N | 00 17 50 | | | | | |
| | | S | N | 18 15½ | | | | | |
| | TO | iP | Z | 00 18 08½ | u | | | | |
| | | S | Z | 43 | | | | | |
| | TU | P | N | 00 18 09 | | | | | |
| | | S | N | 48 | | | | | |
| | | e | N | 51 | | | | | |
| | CB | P | E | 00 18 09½ | | | | | |
| | | S | E | 50½ | | | | | |
| | GP | eP | N | 00 18 09½ | | | | | |
| | | S | N | 47 | | | | | |
| | KM | eP | X | 00 18 20 | | | | | |
| | | S | X | 19 08 | | | | | |
| | KP | P | Z | 00 18 24 | | | | | |
| | | e | Z | 32 | | | | | |
| | | e | Z | 19 04 | | | | | |
| | | S | Z | 15 | | | | | |
| | | e(S*) | Z | 36 | | | | | |
| | ON | P | E | 00 18 58½ | | | | | |
| | | S | E | 20 16 | | | | | |
| | Epicentre: | | | 00 17 18 | 42.3S | 176.9E | N | NZ(C) | 5 NL |
| 19 | ON | eP | E | 07 12 27 | | | | | |
| | KP | iP | Z | 07 12 41 | u | | | | |
| | TO | eP | Z | 07 12(52) | | | | | |
| | | e | Z | 13 10 | | | | | |
| | WN | eP | N | 07 13 10 | | | | | |
| | GP | e(P) | N | 07 13 36 | | | | | |
| | Epicentre: | | | 07 09 12.7 | 20.0S | 179.9W | 608 km | USCGS | |



| Date | Stn | Phase | | h m s | Az Tz | An Tn | Ae Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|
| OCT 19 | RX | eS | N | 10 45 25 | | | | | |
| | | eSS | N | 48.4 | | | | | |
| | WN | eL | ZN | 10 51 | | | | | |
| | Epicentre: | | | 10 32 02.3 | 55.1S | 129.9W | 100 km | USCGS | |
| 20 | SU | P | N | 11 09 30 | s | | | | |
| | | e | N | 52 | | | | | |
| | | e | N | 10 18 | | | | | |
| | | e(S) | N | 12 35 | | | | | |
| | | M | N | 15 | | | 35 10 | | |
| | ON | eP | E | 11 11 36 | | | | | |
| | | eS | E | 16 14 | | | | | |
| | KP | eP | Z | 11 11 52 | d | | | | |
| | | e | Z | 12 33 | | | | | |
| | | e | Z | 56 | | | | | |
| | | i | Z | 15 05 | d | | | | |
| | TO | eP | Z | 11 12 02 | | | | | |
| | | eS | Z | 17 09 | | | | | |
| | TU | eP | N | 11 12 03 | | | | | |
| | | e | N | 21 | | | | | |
| | | eS | N | 17 03 | | | | | |
| | CB | e(P) | E | 11 12 15 | | | | | |
| | WN | eP | Z | 11 12 16 | | | | | |
| | | e | ZN | 13 19 | | | | | |
| | | S | N | 17 32 | | | 4 3 | | |
| | | L | N | 25 | | | 12 15 | | |
| | GP | eP | N | 11 12 32 | | | | | |
| | RX | e(P) | Z | 11 12 44 | | | | | |
| | | eS | N | 18 24 | | | | | |
| | | eL | N | 22 | | | | | |
| | | M | ZNE | 59 | | 10 14 | 10 14 | 12 15 | |
| | Epicentre: | | | 11 05 58.3 | 11.0S | 164.9E | 40 km | USCGS | 6 |
| 20 | KP | eP | Z | 15 13 28 | | | | | |
| | | e | Z | 53 | | | | | |
| | | e? | Z | 15 30 | | | | | |
| 20 | SU | eP | N | 22 43 11 | | | | | |
| | | e | N | 44 19 | | | | | |
| | KP | eP? | Z | 22 46 55 | | | | | |
| 21 | KP | eP | Z | 06 34 28 | | | | | |
| | | e | Z | 35 27 | | | | | |
| | Epicentre: | | | 06 25 20.5 | 6.9S | 127.6E | 134 km | USCGS | |
| 21 | KP | eP | Z | 08 13 04 | | | | | |
| 22 | KP | P | Z | 07 37 50 | | | | | |
| 22 | SU | eP | N | 08 26 11 | | | | | |
| | | e | N | 27 50 | | | | | |
| | | S | N | 29 44 | | | | | |
| | ON | eP? | E | 08 27 50 | | | | | |
| | | e | E | 53 | | | | | |
| | | e | E | 28 01 | | | | | |
| | KP | iP | Z | 08 28 08 | u | | | | |
| | | e | Z | 22 | | | | | |
| | | e | Z | 29 | | | | | |
| | | e | Z | 29 05 | | | | | |
| | | e | Z | 31 21 | | | | | |
| | | eS | Z | 32 44 | | | | | |
| | | e(ScP) | Z | 34 42 | | | | | |
| | | e(PcS) | Z | 35 13 | | | | | |
| | TO | iP | Z | 08 28 18 | u | | | | |
| | | e | Z | 38 | | | | | |
| | CT | iP | Z | 08 28 18 | u | | | | |
| | | e | Z | 24 | | | | | |
| | | e | Z | 38 | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 22 | | e | Z | | 31 | 08 | | | | | | | | | |
| | TU | eP | N | 08 | 28 | 20 | | | | | | | | | |
| | | e | N | | | 58 | | | | | | | | | |
| | | e | N | | 29 | 33 | | | | | | | | | |
| | WN | iP | Z | 08 | 28 | 31 | u | 8 | 5 | | | | | | |
| | | e | N | | 29 | 40 | | | | | | | | | |
| | | e | Z | | | 47 | | | | | | | | | |
| | | eS | N | | 34 | 05 | | | | | | | | | |
| | | eL | N | | 37 | | | | | | | | | | |
| | | eL | ZN | | 38 | | | | | | | | | | |
| | | M | N | | 42 | | | | | 16 | 15 | | | | |
| | KM | eP | X | 08 | 28 | 33 | | | | | | | | | |
| | | e | X | | 29 | 52 | | | | | | | | | |
| | GP | P | N | 08 | 28 | 45 | s | | | | | | | | |
| | | e | N | | 29 | 03 | | | | | | | | | |
| | | e | N | | 30 | 20 | | | | | | | | | |
| | RX | eP | ZN | 08 | 28 | 52 | | 4 | 4 | | | | | | |
| | | e | ZN | | 30 | 24 | | | | | | | | | |
| | | eS | N | | 34 | 36 | | | | | | | | | |
| | | e | N | | | 46 | | | | | | | | | |
| | | e | N | | 37 | 04 | | | | | | | | | |
| | | eL | N | | 38½ | | | | | | | | | | |
| | | eL | ZE | | 39 | | | | | | | | | | |
| | | M | N | 08 | 40 | | | | | 20 | 21 | | | | |
| | Epicentre: | | | 08 | 22 | 00.9 | | 10.3S | 161.2E | 93 | km | | | USCGS | 6½-7 |
| 22 | KP | P | Z | 22 | 30 | 16 | | | | | | | | | |
| | | e | Z | | | 48 | | | | | | | | | |
| | | e | Z | | | 54 | | | | | | | | | |
| | CT | P | Z | 22 | 30 | 24 | | | | | | | | | |
| | | e | Z | | | 39 | | | | | | | | | |
| | | e | Z | | 31 | 05 | | | | | | | | | |
| | TO | P | Z | 22 | 30 | 24 | d | | | | | | | | |
| | Epicentre: | | | 22 | 22 | 19.8 | | 4.6S | 144.3E | 170 | km | | | USCGS | |
| 23 | KP | P | Z | 15 | 45 | 16 | | | | | | | | | |
| | | e | Z | | | 31 | | | | | | | | | |
| | TO | P | Z | 15 | 45 | 26 | | | | | | | | | |
| | CT | P | Z | 15 | 45 | (26) | | | | | | | | | |
| | | e | Z | | | (38) | | | | | | | | | |
| 24 | SU | eP | N | 05 | 14 | 55 | | | | | | | | | |
| | | e | N | | 16 | 35 | | | | | | | | | |
| | | e(S) | N | | | 55 | | | | | | | | | |
| | ON | eP | E | 05 | 16 | 51 | | | | | | | | | |
| | | e | E | | 17 | 15 | | | | | | | | | |
| | | e | E | | | 37 | | | | | | | | | |
| | KP | iP | Z | 05 | 17 | 10 | u | | | | | | | | |
| | TU | e(P) | N | 05 | 17 | 21 | | | | | | | | | |
| | TO | eP | Z | 05 | 17 | (23) | | | | | | | | | |
| | GP | eP | N | 05 | 17 | 54 | | | | | | | | | |
| | RX | e(S) | N | 05 | 23.5 | | | | | | | | | | |
| | | e(L) | NE | | 27 | | | | | | | | | | |
| | Epicentre: | | | 05 | 12 | 04.4 | | 15.0S | 167.4E | 145 | km | | | USCGS | |
| 24 | KP | eP | Z | 17 | 16 | 35 | | | | | | | | | |
| | WN | eS | N | 17 | 23 | 01 | | | | | | | | | |
| | | eL | N | | 27 | | | | | | | | | | |
| | | M | ZN | | 34 | | | | | 4 | 17 | | | | |
| | RX | eS | NE | 17 | 23 | 25 | | | | | | | | | |
| | | eL | NE | | 27 | | | | | | | | | | |
| | | eL | N | | 30 | | | | | | | | | | |
| | Epicentre: | | | 17 | 09 | 14.4 | | 6.0S | 150.0E | 122 | km | | | USCGS | |
| 25 | KP | P | Z | 01 | 10 | 50 | | | | | | | | | |
| | CB | e | E | 01 | 11 | 33 | | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 25 | KM | e(P) | X | 01 | 11 | 48 | | | | | | | | | |
| | Epicentre: | | | 01 | 06 | 20.6 | | 20.0S | 174.6W | 64 | km | | | USCGS | |
| 25 | KP | eP | Z | 09 | 43 | 45 | | | | | | | | | |
| | Epicentre: | | | 09 | 36 | 47.9 | | 6.5S | 155.3E | 100 | km | | | USCGS | |
| 25 | KP | e(P) | Z | 12 | 26 | 48 | | | | | | | | | |
| | Epicentre: | | | 12 | 14 | 47.5 | | 43.5S | 74.6W | 32 | km | | | USCGS | |
| 25 | KP | P | Z | 18 | 31 | 08 | | | | | | | | | |
| | TO | eP | Z | 18 | 31 | 22 | | | | | | | | | |
| | GP | e(P) | N | 18 | 31 | 56 | | | | | | | | | |
| | Epicentre: | | | 18 | 26 | 27.1 | | 18.1S | 167.8E | 100 | km | | | USCGS | |
| 25 | KP | P | Z | 22 | 05 | 47 | | | | | | | | | |
| | Epicentre: | | | 22 | 01 | 33.8 | | 19.3S | 175.8W | 254 | km | | | USCGS | |
| 26 | WN | eL? | ZN | 01 | 40 | | | | | | | | | | |
| 26 | KP | eP? | Z | 11 | 35 | 37 | | | | | | | | | |
| | Epicentre: | | | 11 | 25 | 49.5 | | 7.9S | 121.4E | 25 | km | | | USCGS | |
| 26 | SU | eS | N | 14 | 05 | 15 | | | | | | | | | |
| | KP | e(P) | Z | 14 | 09 | 05 | | | | | | | | | |
| 26 | KP | e(P) | Z | 16 | 49 | 36 | | | | | | | | | |
| | Epicentre: | | | 16 | 36 | 14.9 | | 23.6S | 70.2W | 50 | km | | | USCGS | |
| 26 | KP | eP | Z | 17 | 38 | 34 | | | | | | | | | |
| | | e | Z | | 39 | 42 | | | | | | | | | |
| | TO | eP | Z | 17 | 38 | 54 | | | | | | | | | |
| | Epicentre: | | | 17 | 34 | 29.8 | | 17.8S | 178.6W | 589 | km | | | USCGS | |
| 26 | KP | eP | Z | 20 | 01 | 46 | | | | | | | | | |
| | Epicentre: | | | 19 | 51 | 59.4 | | 2.0S | 125.9E | 86 | km | | | USCGS | |
| 27 | KP | P | Z | 00 | 30 | 00 | | | | | | | | | |
| | TO | e | Z | 00 | 30 | 02 | | | | | | | | | |
| | Epicentre: | | | 00 | 16 | 44.2 | | 23.7S | 70.2W | 39 | km | | | USCGS | |
| 27 | KP | P | Z | 00 | 39 | 32 | | | | | | | | | |
| | Epicentre: | | | 00 | 26 | 06 | | 23.2S | 69.7W | 19 | km | | | USCGS | |
| 27 | KP | e(P) | Z | 03 | 23 | 48 | | | | | | | | | |
| | Epicentre: | | | 03 | 17 | 46.1 | | 10.3S | 161.5E | 116 | km | | | USCGS | |
| 27 | KP | P | Z | 11 | 23 | 57 | | | | | | | | | |
| 27 | GP | eP | N | 15 | 48 | 53 | | | | | | | | | |
| | | eS | N | | 50 | 23 | | | | | | | | | |
| | KM | e(P) | X | 15 | 49 | 04 | | | | | | | | | |
| | | e | X | | | 32 | | | | | | | | | |
| | | eS | X | | 50 | 35 | | | | | | | | | |
| | RX | e(S) | NE | 15 | 49 | 14 | | | | | | | | | |
| | | e(L) | NE | | | 45 | | | | | | | | | |
| | CB | eP | E | 15 | 49 | 21½ | | | | | | | | | |
| | | S | E | | 51 | 14 | | | | | | | | | |
| | WN | e(L) | N | 15 | 53 | 15 | | | | | | | | | |
| | Epicentre: | | | 15 | 46 | 55 | | 49S | 164E | N | | | | NZ(D) | 5.3 NZ |
| | | | | | | | | Using additional data from Canberra and Charters Towers. | | | | | | | |
| 27 | KP | eP | Z | 19 | 49 | 59 | | | | | | | | | |
| | | e | Z | | 50 | 10 | | | | | | | | | |
| | TO | eP | Z | 19 | 50 | 09 | | | | | | | | | |
| | Epicentre: | | | 19 | 42 | 58.7 | | 6.3S | 154.7E | 118 | km | | | USCGS | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 27 | SU | iP | N | 22 | 29 | 44 | s | | | | | | | |
| | | S | N | | 30 | 40 | | | | | | | | |
| | ON | P | E | 22 | 32 | 40 | | | | | | | | |
| | KP | eP | Z | 22 | 32 | 51 | | | | | | | | |
| | | i | Z | | | 53 | u | | | | | | | |
| | | e(pP) | Z | | 33 | 46 | | | | | | | | |
| | TO | P | Z | 22 | 33 | 00 | | | | | | | | |
| | CT | eP | Z | 22 | 33 | (01) | | | | | | | | |
| | WN | eP | N | 22 | 33 | 21 | | | | | | | | |
| | CB | eP | E | 22 | 33 | 25 | | | | | | | | |
| | Epicentre: | | | 22 | 27 | 55.1 | | 15.2S | | 175.0W | | 253 km | | USCGS |
| 28 | SU | e(P) | N | 02 | 29 | 58 | | | | | | | | |
| | | e(S) | N | | 30 | 12 | | | | | | | | |
| | KP | eP | Z | 02 | 34 | 08 | | | | | | | | |
| | | e | Z | | | 13 | | | | | | | | |
| | | e | Z | | | 18 | | | | | | | | |
| | TO | eP | Z | 02 | 34 | 21 | | | | | | | | |
| | CT | eP | Z | 02 | 34 | (21) | | | | | | | | |
| 28 | KP | ePKP | Z | 04 | 38 | 23 | | | | | | | | |
| | | e | Z | | | 34 | | | | | | | | |
| | | e | Z | | | 59 | | | | | | | | |
| | TO | ePKP | Z | 04 | 38 | 23 | | | | | | | | |
| | CT | PKP | Z | 04 | 38 | (25) | | | | | | | | |
| | | e | Z | | | (34) | | | | | | | | |
| | ON | e? | E | 04 | 39 | 36 | | | | | | | | |
| | Epicentre: | | | 04 | 18 | 41.9 | | 71.3N | | 8.6W | | 70 km | | USCGS |
| 28 | KP | ePKP | Z | 08 | 06 | 20 | | | | | | | | |
| | CT | ePKP | Z | 08 | 06 | (25) | | | | | | | | |
| | Epicentre: | | | 07 | 46 | 38.5 | | 71.3N | | 8.4W | | 61 km | | USCGS |
| 28 | KP | eP | Z | 13 | 05 | 05 | | | | | | | | |
| | | e | Z | | | 15 | | | | | | | | |
| | | i | Z | 13 | 06 | 42 | d | | | | | | | |
| | | e | Z | | 07 | 10 | | | | | | | | |
| | TO | eP? | Z | 13 | 05 | 07 | | | | | | | | |
| | | e | Z | | | 12 | | | | | | | | |
| | | e | Z | | 06 | 52 | | | | | | | | |
| | CT | e | Z | 13 | 05 | (12) | | | | | | | | |
| | | e | Z | | | (52) | | | | | | | | |
| | Epicentre: | | | 12 | 57 | 13.2 | | 5.7S | | 146.4E | | 55 km | | USCGS |
| 28 | TO | P | Z | 13 | 26 | 11 | | | | | | | | |
| | CT | P | Z | 13 | 26 | (11) | | | | | | | | |
| | KP | P | Z | 13 | 26 | 20 | | | | | | | | |
| 28 | SU | eP? | N | 13 | 29 | 12 | | | | | | | | |
| | | e | N | | | 29 | | | | | | | | |
| | | S | N | | 38 | 52 | | | | | | | | |
| | | L | N | | | 51 | | | | | | | | |
| | ON | eP | E | 13 | 31 | 03 | | | | | | | | |
| | | e | E | | 32 | 49 | | | | | | | | |
| | KP | iP | Z | 13 | 31 | 11 | u | | | | | | | |
| | | e(pP) | Z | | | 37 | | | | | | | | |
| | | e | Z | | | 52 | | | | | | | | |
| | | ePP | Z | | 34 | 46 | | | | | | | | |
| | TO | eP | Z | 13 | 31 | 14 | | | | | | | | |
| | | ePP | Z | | 34 | 51 | | | | | | | | |
| | CT | eP | Z | 13 | 31 | (14) | | | | | | | | |
| | | ePP | Z | | 34 | (50) | | | | | | | | |
| | WN | eP | Z | 13 | 31 | 25 | | | | | | | | |
| | | ePP | Z | | 35 | 34 | | | | | | | | |
| | | eSKS | N | | 41 | 40 | | | | | | | | |
| | | eS | N | | 42 | 26 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | eL | ZN | 14 | 02 | | | | | | | | | |
| OCT 28 | CB | eP | E | 13 | 31 | 25 | | | | | | | | |
| | | e | E | | | 54 | | | | | | | | |
| | | eSKS | E | | 42 | 23 | | | | | | | | |
| | RX | ePP | Z | 13 | 35 | 37 | | | | | | | | |
| | | eSKS | NE | | 42 | 07 | | | | | | | | |
| | | eS | NE | | 43 | 03 | | | | | | | | |
| | | eSS | NE | | 49 | .7 | | | | | | | | |
| | | eL | NE | 14 | 04 | | | | | | | | | |
| | AK | eSKS | N | 13 | 41 | 25 | | | | | | | | |
| | | eS | N | | | 50 | | | | | | | | |
| | | eL | N | | 59 | .8 | | | | | | | | |
| | Epicentre: | | | 13 | 18 | 14.3 | | 52.0N | | 157.4E | | 96 km | | USCGS |
| 28 | KP | eP | Z | 22 | 41 | 26 | | | | | | | | |
| | TO | eP | Z | 22 | 41 | 44 | | | | | | | | |
| | SU | eL | N | 23 | 00 | | | | | | | 1 | 20 | |
| | RX | eL | NE | 23 | 10 | | | | | | | | | |
| | Epicentre: | | | 22 | 29 | 26.6 | | 34.4N | | 141.1E | | 96 km | | USCGS |
| 29 | SU | eP | N | 09 | 39 | 51 | | | | | | | | |
| | | eS | N | | 41 | 30 | | | | | | | | |
| | ON | eP | E | 09 | 42 | 44 | | | | | | | | |
| | KP | eP | Z | 09 | 42 | 55 | | | | | | | | |
| | | e | Z | | 47 | 19 | | | | | | | | |
| | TU | eP? | N | 09 | 42 | 59 | | | | | | | | |
| | CT | eP | Z | 09 | 43 | (06) | | | | | | | | |
| | TO | eP | Z | 09 | 43 | 07 | | | | | | | | |
| | WN | eP | N | 09 | 43 | 25 | | | | | | | | |
| | | e | N | | | 48 | | | | | | | | |
| | | eL | N | | 52 | | | | | | | | | |
| | CB | eP | E | 09 | 43 | 35 | | | | | | | | |
| | | eS | E | | 48 | 16 | | | | | | | | |
| | KM | eP? | X | 09 | 43 | 46 | | | | | | | | |
| | | e | X | | | 50 | | | | | | | | |
| | | e | X | | 44 | 37 | | | | | | | | |
| | GP | eP? | N | 09 | 43 | 55 | | | | | | | | |
| | | e | N | | | 58 | | | | | | | | |
| | | e | N | | 49 | 15 | | | | | | | | |
| | RX | eL | E | 09 | 53 | | | | | | | | | |
| | | M | ZN | | 56 | | | | | | | 3 | 22 | |
| | Epicentre: | | | 09 | 37 | 41.6 | | 15.8S | | 172.9W | | 99 km | | USCGS | 5½–5¾ |
| 29 | KP | P | Z | 21 | 54 | 41 | | | | | | | | |
| | CT | P | Z | 21 | 54 | (48) | | | | | | | | |
| | Epicentre: | | | 21 | 44 | 37.2 | | 12.0N | | 140.9E | | 25 km | | USCGS |
| 30 | KP | P | Z | 10 | 34 | 07 | u | | | | | | | |
| | TO | eP | Z | 10 | 34 | 17 | | | | | | | | |
| | CT | eP | Z | 10 | 34 | (17) | | | | | | | | |
| | | e | Z | | | (26) | | | | | | | | |
| 30 | TO | eP | Z | 12 | 27 | 45 | | | | | | | | |
| | CT | eP | Z | 12 | 27 | (45) | | | | | | | | |
| | | e | Z | | 28 | (45) | | | | | | | | |
| | KP | P | Z | 12 | 27 | 47 | | | | | | | | |
| | WN | e(S) | N | 12 | 38 | 49 | | | | | | 3 | 10 | |
| | | eL | ZN | | 57 | | | | | | | | | |
| | | M | ZN | 13 | 08 | | | | | | | 5 | 14 | |
| | RX | e(S) | NE | 12 | 38 | 53 | | | | | | | | |
| | | e | N | | 42 | .5 | | | | | | | | |
| | | eSS | NE | | 45 | | | | | | | | | |
| | | eLq | N | | 54 | | | | | | | | | |
| | | eLr | ZE | | 58 | | | | | | | | | |
| | | M | E | 13 | 10 | | | | | | | | | |
| | SU | eL | N | 13 | 02 | | | | | | | | | |
| | Epicentre: | | | 12 | 14 | 36.1 | | 23.3S | | 70.3W | | 76 km | | USCGS | 6¾ |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 30 | KP | eP? | Z | 16 | 00 | 26 | | | | | | | | |
| | | e | Z | | | 43 | | | | | | | | |
| | TO | eP | Z | 16 | 00 | 54 | | | | | | | | |
| | CT | eP | Z | 16 | 00 | (56) | | | | | | | | |
| | Epicentre: | | | 15 | 50 | 50.4 | 1.0S | 127E | 32 km | | | | USCGS | |
| 30 | RX | e | N | 16 | 15 | | | | | | | | | |
| | | e(L) | N | | | 24 | | | | | | | | |
| | | eL | ZNE | | | 30 | | | | | | | | |
| 30 | TO | eP | Z | 21 | 46 | 04 | | | | | | | | |
| | | e | Z | | | 40 | | | | | | | | |
| | CT | P | Z | 21 | 46 | (05) d | | | | | | | | |
| | | e | Z | | | (31) | | | | | | | | |
| | | e | Z | | | (42) | | | | | | | | |
| | KP | iP | Z | 21 | 46 | 06 d | | | | | | | | |
| | | e | Z | | | 33 | | | | | | | | |
| | CB | eP | E | 21 | 46 | 09 | | | | | | | | |
| | RX | e | NE | 21 | 59 | | | | | | | | | |
| | Epicentre: | | | 21 | 32 | 47.7 | 22.8S | 68.0W | 60 km | | | | USCGS | 6¾ |
| NOV 1 | GP | eP | N | 08 | 57 | 56 | | | | | | | | |
| | RX | eP | Z | 08 | 57 | 58 | 4 | 7 | | | | | | 6.7 |
| | | eS | NE | 09 | 08 | 08 | | | 2 | 9 | 5 | 9 | | 6.7 |
| | | eLq | N | | | 19 | | | 12 | 32 | | | | |
| | | eLr | ZE | | | 23 | 16 | 20 | | | 6 | 20 | | |
| | | M | ZNE | | | 26 | 25 | 18 | 9 | 20 | 13 | 18 | | |
| | WN | P | ZN | 08 | 58 | 00 | 6 | 6 | 3 | 8 | | | | 6.9 |
| | | S | N | 09 | 08 | 07 | | | 6 | 10 | | | | 6.6 |
| | | e | N | 09 | 16 | 28 | | | 13 | 30 | | | | |
| | | SS | N | | | 17 25 | | | 16 | 23 | | | | |
| | | Lq | N | | | 19 | | | 102 | 38 | | | | |
| | | Lr | ZN | | | 22 | 7 | 20 | 18 | 20 | | | | |
| | CB | eP | E | 08 | 58 | 06 | | | | | | | | |
| | KP | P | Z | 08 | 58 | 07 | | | | | | | | |
| | | ePP | Z | 09 | 01 | 12 | | | | | | | | |
| | | PKKP | Z | | | 16 52 | | | | | | | | |
| | | P'P' | Z | | | 24 58 | | | | | | | | |
| | KM | eP | X | 08 | 58 | 15 | | | | | | | | |
| | AK | e(P) | N | 08 | 58 | 16 | | | | | | | | |
| | | S | N | 09 | 08 | 25 | | | | | | | | |
| | | eLq | N | | | 20 | | | | | | | | |
| | TO | P | Z | 09 | 58 | 01½ | | | | | | | | |
| | | i | Z | | | 10 | | | | | | | | |
| | ON | P | E | 09 | 58 | 27 | | | | | | | | |
| | Epicentre: | | | 08 | 46 | 01.9 | 38.4S | 74.4W | 97 km | | | | USCGS | 7¼-½ PAS |
| 1 | TO | eP | Z | 10 | 35 | 28 | | | | | | | | |
| | KP | eP | Z | 10 | 35 | 31 | | | | | | | | |
| | Epicentre: | | | 10 | 23 | 57.2 | 5.5S | 102.4E | 43 km | | | | USCGS | |
| 1 | KP | P | Z | 12 | 41 | 38 | | | | | | | | |
| | Epicentre: | | | 12 | 29 | 31.6 | 38.5S | 75.0W | 64 km | | | | USCGS | 5-5¼ PAL |
| 1 | KP | P | Z | 19 | 19 | 08 | | | | | | | | |
| | Epicentre: | | | 19 | 06 | 22.7 | 50.1N | 153.9E | 162 km | | | | USCGS | |
| 1 | KP | eP? | Z | 00 | 00 | 33 | | | | | | | | |
| | | e | Z | | | 48 | | | | | | | | |
| | Epicentre: | | | 23 | 58 | 09.2 | 30.2S | 177.7W | 43 km | | | | USCGS | |
| 2 | AK | iP | N | 17 | 20 | 36 n | | | | | | | | |
| | | S | N | | | 25 24 | | | | | | | | |
| | | L | N | | | 34 | | | | | | | | |
| | KP | P | Z | 17 | 20 | 45 d | | | | | | | | |
| | | PcP | Z | | | 23 58 | | | | | | | | |
| | TO | P | Z | 17 | 20 | 55 d | | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV 2 | | i | Z | | 21 | 00 | | | | | | | | |
| | | eS | Z | | 26 | 00 | | | | | | | | |
| | CB | eP | E | 17 | 21 | 06 | | | | | | | | |
| | KM | e(P) | X | 17 | 21 | 09 | | | | | | | | |
| | WN | iP | ZN | 17 | 21 | 10 | 15 | 10 | 10 | 10 | | | | 6.9 |
| | | PP | ZN | | 22 | 10 | 15 | 8 | 22 | 10 | | | | 6.7 |
| | | S | ZN | | 26 | 24 | 9 | 8 | 19 | 8 | | | | 6.8 |
| | | L | ZN | | 30 | | 60 | 16 | 91 | 15 | | | | |
| | GP | P | N | 17 | 21 | 26 | | | | | | | | |
| | RX | P | ZNE | 17 | 21 | 38 | 9 | 9 | 7 | 9 | | | | 6.7 |
| | | PP | N | | 23 | 00 | | | 6 | 10 | | | | 6.7 |
| | | S | NE | | | 12 | | | 11 | 8 | 13 | 10 | | 6.7 |
| | | eLq | N | | 32 | | | | 21 | 30 | | | | |
| | | eLr | ZE | | 35½ | | 24 | 16 | | | 38 | 16 | | |
| | | M | ZNE | | 41 | | 73 | 14 | 57 | 14 | 38 | 14 | | |
| | Epicentre: | | | 17 | 14 | 49.3 | 10.9S | 164.9E | 25 km | | | | USCGS | |
| 2 | KP | eP | Z | 18 | 20 | 46 | | | | | | | | |
| | TO | eP | Z | 18 | 20 | 47 | | | | | | | | |
| | Epicentre: | | | 18 | 09 | 48.8 | 44.8S | 80.2E | 23 km | | | | USCGS | |
| 3 | AK | eL | N | 02 | 51 | | | | | | | | | |
| | WN | eL | N | 02 | 53 | | | | | 2 | 15 | | | |
| | RX | eL | NE | 02 | 56 | | | | | 3 | 18 | 7 | 18 | 5.7 |
| | | eL | Z | | 56 | | 5 | 18 | | | | | | |
| | Epicentre: | | | 02 | 42 | 54.5 | 22.1S | 175.1W | 25 km | | | | USCGS | 5½ PAL |
| 3 | KP | eP | Z | 17 | 35 | 30 | | | | | | | | |
| | Epicentre: | | | 17 | 30 | 29.9 | 16.9S | 176.5W | 25 km | | | | USCGS | |
| 4 | KP | P | Z | 07 | 53 | 56 | | | | | | | | |
| | | e | Z | | 54 | 22 | | | | | | | | |
| 4 | KP | P | Z | 11 | 43 | 50 | | | | | | | | |
| | Epicentre: | | | 11 | 40 | 11.1 | 20.5S | 178.4W | 638 km | | | | USCGS | |
| 4 | KP | eP | Z | 14 | 28 | 03 | | | | | | | | |
| | Epicentre: | | | 14 | 18 | 08.1 | 1.1S | 126.5E | 25 km | | | | USCGS | |
| 4 | KP | P | Z | 18 | 28 | 16 | | | | | | | | |
| 5 | KP | eP | Z | 01 | 03 | 38 | | | | | | | | |
| | | e | Z | | | 52 | | | | | | | | |
| | Epicentre: | | | 00 | 51 | 36.7 | 30.5N | 130.9E | 25 km | | | | USCGS | |
| 5 | KP | eP | Z | 16 | 55 | 41 | | | | | | | | |
| | | i | Z | | | 46 | | | | | | | | |
| | | eS | Z | | 57 | 06 | | | | | | | | |
| | TU | e(P) | N | 16 | 55 | 47 | | | | | | | | |
| | | S | N | | 57 | 02 | | | | | | | | |
| | TO | eP? | Z | 16 | 55 | 53 | | | | | | | | |
| | | e | Z | | | 56 | | | | | | | | |
| | | eS | Z | | 57 | 20 | | | | | | | | |
| | WN | eP | N | 16 | 56 | 18 | | | | | | | | |
| | | S | N | | 58 | 05 | | | | | | | | |
| | GP | eP | N | 16 | 56 | 52 | | | | | | | | |
| | | S | N | | 59 | 04 | | | | | | | | |
| | CB | eS | E | 16 | 58 | 17 | | | | | | | | |
| | KM | eS | X | 16 | 58 | 54 | | | | | | | | |
| | Epicentre: | | | 16 | 53 | 59 | 32¾S | 179W | 400 km | | | | NZ(D) | 5.7 NZ |
| 6 | KP | P | Z | 04 | 51 | 24 | | | | | | | | |
| | | epP | Z | | | 34 | | | | | | | | |
| | SU | S | N | 04 | 59 | 20 | | | | 9 | 8 | | | |
| | | eL | N | 05 | 11 | | | | | 6 | 20 | | | |
| | WN | S | N | 05 | 02 | 52 | | | | 3 | 10 | | | 6.7 |
| | | e | ZN | | 10 | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV 6 | | eL | ZN | | | 23.2 | | 6 | 20 | 11 | 20 | | | |
| | RX | eL | NE | 05 | 25 | | | | | 3 | 22 | | | |
| | | Epicentre: | | 04 | 38 | 16.7 | 55.0N | | 159.8E | 32 | km | | USCGS | 6.4 6.7 6½ Rus |
| 6 | ON | P | E | 06 | 16 | 54 | | | | | | | | |
| | | i | E | | 17 | 18 | | | | | | | | |
| | | eL | E | | 19 | | | | | | | | | |
| | TU | eP | N | 06 | 16 | 56 | | | | | | | | |
| | | S | N | | 18 | 27 | | | | | | | | |
| | TO | eP | Z | 06 | 17 | 12 | | | | | | | | |
| | | e | Z | | | 37 | | | | | | | | |
| | | S | Z | | 19 | 00 | | | | | | | | |
| | | eL | Z | | 21 | .0 | | | | | | | | |
| | AK | e | N | 06 | 17 | 14 | | | | | | | | |
| | | S | N | | 18 | 42 | | | | | | | | |
| | | L | N | | 19¼ | | | | | | | | | |
| | WN | e(P) | N | 06 | 17 | 38 | | | | | | | | |
| | | e | N | | 18 | 17 | | | | 5 | 12 | | | |
| | | e | Z | | 18 | 17 | 2 | 8 | | | | | | |
| | | S | ZN | | 19 | 40 | 3 | 10 | | 6 | 10 | | | |
| | | L | ZN | | 20 | .5 | 76 | 16 | | 102 | 15 | | | 6.0 |
| | CB | e(P) | E | 06 | 17 | 53 | | | | | | | | |
| | | S | E | | 20 | 02 | | | | | | | | |
| | KP | eP | Z | 06 | 17 | 57 | | | | | | | | |
| | | e | Z | | 18 | 01 | | | | | | | | |
| | | eL | Z | | 20 | .0 | | | | | | | | |
| | SU | eP | N | 06 | 18 | 03 | | | | 11 | 10 | | | |
| | | eL | N | | 21 | 20 | | | | 15 | 10 | | | |
| | | M | N | | | | | | | 150 | 12 | | | |
| | KM | eP | X | 06 | 18 | 14 | | | | | | | | |
| | | eS | X | | 20 | 37 | | | | | | | | |
| | GP | eP | N | 06 | 18 | 17 | | | | | | | | |
| | | S | N | | 20 | 45 | | | | | | | | |
| | RX | eP | Z | 06 | 18 | 54 | 2 | 10 | | | | | | |
| | | eP | N | | 18 | 54 | | | | 4 | 7 | | | 5.6 6.0 |
| | | e | E | | 22 | .5 | | | | | | 7 | 11 | |
| | | Lq | E | | 23 | .5 | | | | | | 35 | 28 | |
| | | eL | N | | 24 | | | | | 27 | 22 | | | |
| | | M | ZNE | | 27 | | 57 | 17 | | 46 | 17 | 23 | 17 | |
| | | Epicentre: | | 06 | 15 | 05.7 | 31.0S | | 177.7W | 184 | km | | USCGS | |
| 6 | ON | eP | E | 10 | 19 | 33 | | | | | | | | |
| | KP | eP | Z | 10 | 19 | 44 | | | | | | | | |
| | CT | eP | Z | 10 | 20 | 00 | | | | | | | | |
| | | e | Z | | | 10 | | | | | | | | |
| | TU | eS | N | 10 | 21 | 10 | | | | | | | | |
| | AK | eL | N | 10 | 22 | | | | | | | | | |
| | WN | eS | N | 10 | 22 | 17 | | | | | | | | |
| | | eL | N | | 25 | | | | | | | | | |
| | GP | eS | N | 10 | 23 | 28 | | | | | | | | |
| | SU | eL | N | 10 | 25 | | | | | | | | | |
| 6 | ON | e(P) | E | 15 | 09 | 48 | | | | | | | | |
| | KP | eP | Z | 15 | 09 | 50 | | | | | | | | |
| | CT | e(P) | Z | 15 | 10 | 19 | | | | | | | | |
| | | e(S) | Z | | 11 | 46 | | | | | | | | |
| | WN | eP | N | 15 | 10 | 22 | | | | | | | | |
| | | eS | N | | 12 | 27 | | | | | | | | |
| | | eL | ZN | | 15 | .2 | 6 | 20 | | 4 | 15 | | | |
| | GP | eP | N | 15 | 11 | 29 | | | | | | | | |
| | | eS | N | | 13 | 34 | | | | | | | | |
| | AK | eL | N | 15 | 11 | .6 | | | | | | | | |
| | SU | eL | N | 15 | 14½ | | | | | 5 | 12 | | | |
| | RX | eL | N | 15 | 17 | | | | | | | | | |
| 6 | KP | eP | Z | 22 | 23 | 11 | | | | | | | | |
| | | pP | Z | | | 26 | | | | | | | | |
| | SU | eL | N | 22 | 43 | | | | | 11 | 25 | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV 6 | | Epicentre: | | 22 | 10 | 06.4 | 52.7N | | 168.0W | 42 | km | | USCGS | 5½ PAL |
| 7 | KP | eP | Z | 13 | 35 | 20 | | | | | | | | |
| | | Epicentre: | | 13 | 23 | 05.1 | 32.2N | | 131.5E | 25 | km | | USCGS | |
| 7 | SU | S | N | 16 | 34 | 44 | | | | 4 | 5 | | | |
| | | eL | N | | 37 | | | | | 8 | 10 | | | |
| | | eL | N | 16 | 43 | | | | | 4 | 15 | | | |
| | WN | eL | N | 16 | 45 | | | | | | | | | |
| | RX | eL | NE | 16 | 45 | | | | | | | | | |
| | | Epicentre: | | 16 | 26 | 43.0 | 10.7S | | 163.0E | 25 | km | | USCGS | |
| 7 | KP | eP? | Z | 23 | 58 | 48 | | | | | | | | |
| | | e | Z | | 59 | 07 | | | | | | | | |
| | TO | e | Z | 23 | 59 | 15 | | | | | | | | |
| | TU | S | N | 00 | 00 | 18 | | | | | | | | |
| | WN | S | N | 00 | 01 | 25 | | | | | | | | |
| | | eL | N | | 02 | | | | | 7 | 16 | | | |
| | | eL | Z | | 04 | | | | 7 | 20 | | | | |
| | CB | eS | E | 00 | 01 | 45 | | | | | | | | |
| | GP | eS | N | 00 | 02 | 29 | | | | | | | | |
| | SU | eL | N | 00 | 04 | | | | | 9 | 14 | | | |
| | RX | eL | N | 00 | 05½ | | | | | | | | | |
| | | eL | E | | 06 | | | | | | | | | |
| | | eL | ZN | | 08 | | | | 4 | 15 | 3 | 15 | | |
| | | Epicentre: | | 23 | 56 | 32.2 | 30.6S | | 177.5W | 25 | km | | USCGS | |
| 8 | KP | eP | Z | 00 | 35 | 26 | | | | | | | | |
| | TU | eS | N | 00 | 37 | 03 | | | | | | | | |
| | WN | eS | N | 00 | 38 | 10 | | | | | | | | |
| | GP | eS | N | 00 | 39 | 16 | | | | | | | | |
| | | Epicentre: | | 00 | 33 | 18.2 | 31.3S | | 177.4W | 25 | km | | USCGS | |
| 8 | KP | e | Z | 02 | 46 | 11 | | | | | | | | |
| | TU | eS | N | 02 | 47 | 30 | | | | | | | | |
| | WN | eS | N | 02 | 48 | 39 | | | | | | | | |
| | GP | eS | N | 02 | 49 | 44 | | | | | | | | |
| | | Epicentre: | | 02 | 43 | 38.1 | 29.8S | | 176.9W | 25 | km | | USCGS | |
| 8 | KP | eP | Z | 11 | 02 | 04 | | | | | | | | |
| | TU | eS | N | 11 | 03 | 26 | | | | | | | | |
| | AK | eL | N | 11 | 03½ | | | | | | | | | |
| | WN | S | N | 11 | 04 | 32 | | | | | | | | |
| | | eL | N | | 07 | | | | | 4 | 18 | | | |
| | | eL | Z | | 15 | | | | 3 | 16 | | | | |
| | CB | eS | E | 11 | 04 | 55 | | | | | | | | |
| | KM | eS | X | 11 | 05 | 34 | | | | | | | | |
| | GP | S | N | 11 | 05 | 38 | | | | | | | | |
| | SU | eL | N | 11 | 07 | | | | | 6 | 12 | | | |
| | RX | eL | ZNE | 11 | 09 | | | | | | | | | |
| | | Epicentre: | | 10 | 59 | 43.5 | 31.1S | | 177.6W | 18 | km | | USCGS | |
| 8 | KP | eP | Z | 19 | 52 | 38 | | | | | | | | |
| | | Epicentre: | | 19 | 47 | 49.5 | 18.4S | | 168.3E | 25 | km | | USCGS | |
| 9 | RX | eP | ZN | 03 | 29 | 33 | | | 5 | 4 | | | | 6.9 |
| | | ePP | ZN | | 32 | 16 | | | 4 | 17 | 2 | 16 | | |
| | | S | N | | 39 | 02 | | | | | 8 | 16 | 3 14 | 6.5 |
| | | PS | N | | 44 | | | | | | 9 | 16 | | |
| | | eSS | E | | 43 | 58 | | | | | | | 3 20 | |
| | | eL | NE | | 48 | | | | | | 3 | 15 | 8 27 | |
| | | eL | Z | | 51 | | | | | | | | | |
| | | M | NE | | 59 | | | | | | 7 | 18 | 7 16 | |
| | WN | eP | ZN | 03 | 29 | 51 | | | 5 | 4 | | | | 7.0 |
| | | S | N | | 39 | 43 | | | | | | | | |
| | | SS | N | | 44 | 50 | | | | | 10 | 20 | | |
| | | eL | ZN | | 57 | | | | | | 20 | 18 | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV 9 | TO | P | Z | 03 | 30 | 03 | | | | | | | |
| | KP | P | Z | 03 | 30 | 07 | | | | | | | |
| | | i | Z | | | 20 | | | | | | | |
| | Epicentre: | | | 03 | 17 | 58.5 | 60.7S | 24.8W | 37 km | | | USCGS | 6¼ PAS |
| 9 | RX | eL | ZNE | 11 | 25 | | | | 2 | 30 | | | |
| | WN | eL | N | 11 | 27 | | | | | | | | |
| | Epicentre: | | | 10 | 43 | 43.1 | 32.7N | 103.4E | 47 km | | | USCGS | 6¼ PAS |
| 9 | KP | eP | Z | 19 | 34 | 51 | | | | | | | |
| | GP | e | N | 19 | 36 | 03 | | | | | | | |
| | | eS | N | | | 38 34 | | | | | | | |
| | TU | S | N | 19 | 36 | 20 | | | | | | | |
| | TO | eS | Z | 19 | 36 | 41 | | | | | | | |
| | WN | S | N | 19 | 37 | 28 | | | | | | | |
| | | eL | ZN | | | 40 | | | 7 | 15 | | | |
| | CB | eS | E | 19 | 37 | 48 | | | | | | | |
| | KM | eS | X | 19 | 38 | 26 | | | | | | | |
| | SU | eL | N | 19 | 40 | | | | 9 | 15 | | | |
| | | M | N | | | 41.5 | | | 18 | 12 | | | |
| | RX | eL | NE | 19 | 41 | 7 | | | 2 | 22 | | | |
| | | eL | Z | | | 43.5 | 4 | 16 | | | | | |
| | | M | NE | | | 44 | | | 3 | 16 | 2 | 13 | |
| | Epicentre: | | | 19 | 32 | 39.0 | 30.7S | 177.1W | 68 km | | | USCGS | |
| 9 | KP | P | Z | 20 | 19 | 30 | | | | | | | |
| | TO | e(P) | Z | 20 | 19 | 39 | | | | | | | |
| | RX | S | NE | 20 | 30 | 40 | | | 3 | 11 | | | |
| | | ePS | ZNE | | 31 | 45 | | | 3 | 10 | | | 6.4 |
| | | eSS | N | | 36 | 7 | | | 1 | 18 | | | |
| | | eL | ZNE | | | 50 | 6 | 24 | 2 | 22 | 3 | 25 | |
| | WN | eL | ZN | 20 | 48 | | 9 | 16 | 10 | 15 | | | |
| | SU | eL | N | 20 | 53 | | | | | | | | |
| | Epicentre: | | | 20 | 06 | 16.2 | 23.2S | 70.6W | 52 km | | | USCGS | |
| 10 | SU | e(P) | N | 14 | 52 | 52 | | | 2 | 2 | | | |
| | | i | N | | 53 | 45 | | | 9 | 5 | | | |
| | | S | N | | 59 | 22 | | | 9 | 10 | | | |
| | | eL | N | 15 | 03 | | | | 24 | 15 | | | |
| | KP | iP | Z | 14 | 53 | 29 u | | | | | | | |
| | AK | eP | N | 14 | 53 | 5 | | | | | | | |
| | | eS | N | 15 | 00 | 05 | | | | | | | |
| | CB | eP | E | 14 | 53 | 32 | | | | | | | |
| | TO | iP | Z | 14 | 53 | 35 u | | | | | | | |
| | WN | P | ZN | 14 | 53 | 40 u | 5 | 5 | | | | | |
| | | eS | N | 15 | 00 | 40 | | | 6 | 8 | | | 6.7 |
| | | eS | Z | | 00 | 40 | 5 | 8 | | | | | 6.5 |
| | | eLr | ZN | | 09 | | 12 | 18 | 12 | 18 | | | |
| | TU | e(P) | N | 14 | 53 | 41 | | | | | | | |
| | RX | P | Z | 14 | 53 | 42 | 3 | 6 | | | | | |
| | | P | NE | | 53 | 42 | | | 2 | 6 | 3 | 5 | 6.4 |
| | | e | E | | 57 | 02 | | | | | 2 | 7 | 6.6 |
| | | S | NE | 15 | 00 | 47 | | | 6 | 14 | 7 | 10 | 6.5 |
| | | e | N | | 06 | 0 | | | 5 | 16 | | | |
| | | eL | NE | | 08 | ½ | | | | | 6 | 36 | |
| | | eL | Z | | 12 | | 9 | 20 | | | | | |
| | KM | e(P) | X | 14 | 53 | 44 | | | | | | | |
| | GP | eP | N | 14 | 53 | 44 | | | | | | | |
| | Epicentre: | | | 14 | 44 | 47.3 | 2.6S | 139.4E | 25 km | | | USCGS | 6½ PAS |
| 10 | SU | eP | N | 16 | 32 | 03 | | | | | | | |
| | | S | N | | 33 | 34 | | | 20 | 10 | | | |
| | KP | P | Z | 16 | 33 | 44 | | | | | | | |
| | TU | e | N | 16 | 34 | 0 | | | | | | | |
| | TO | P | Z | 16 | 34 | 20 | | | | | | | |
| | CB | eP | E | 16 | 34 | 23 | | | | | | | |
| | WN | e(P) | ZN | 16 | 34 | 24 | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | eL | ZN | | 39 | | | | | | | | |
| NOV 10 | KM | eP | X | 16 | 34 | 39 | | | | | | | |
| | GP | eP | N | 16 | 34 | 52 | | | | | | | |
| | AK | e(L) | N | 16 | 37 | | | | | | | | |
| | RX | eL | ZNE | 16 | 42 | | | | | | 3 | 14 | |
| | Epicentre: | | | 16 | 30 | 16.2 | 22.0S | 171.6E | 128 km | | | USCGS | |
| 11 | KP | ePKP | Z | 05 | 52 | 09 | | | | | | | |
| | Epicentre: | | | 05 | 31 | 34.1 | 39.5S | 21.1E | 39 km | | | USCGS | |
| 11 | KP | P | Z | 06 | 18 | 24 | | | | | | | |
| | Epicentre: | | | 06 | 14 | 42.0 | 19.6S | 179.1W | 707 km | | | USCGS | |
| 11 | KP | eP | Z | 13 | 37 | 06 | | | | | | | |
| 12 | KP | eP | Z | 06 | 25 | 42 | | | | | | | |
| | Epicentre: | | | 06 | 21 | 35.8 | 17.3S | 178.9W | 576 km | | | USCGS | |
| 12 | KP | eP | Z | 06 | 29 | 05 | | | | | | | |
| 12 | KP | eP | Z | 06 | 33 | 24 | | | | | | | |
| | | e | Z | | 34 | 04 | | | | | | | |
| 12 | KP | eP | Z | 11 | 00 | 20 | | | | | | | |
| | Epicentre: | | | 10 | 53 | 26.9 | 6.8S | 157.0E | 75 km | | | USCGS | |
| 13 | CB | eP | E | 06 | 47 | 02 | | | | | | | |
| | KP | eP | Z | 06 | 47 | 05 | | | | | | | |
| | | ePP | Z | | 49 | 19 | | | | | | | |
| | GP | P | N | 06 | 47 | 13 | | | | | | | |
| | TU | e | N | 06 | 47 | 14 | | | | | | | |
| | WN | e | Z | 06 | 47 | 55 | 2 | 6 | | | | | |
| | | eL | ZN | 07 | 02 | 0 | | | | | | | |
| | SU | eS | N | 06 | 53 | 49 | | | | | | | |
| | | eL | N | 07 | 00 | ½ | | | | | 2 | 20 | |
| | RX | eS | NE | 06 | 55 | 06 | | | | | 2 | 22 | 5.5 |
| | | eL | NE | 07 | 01 | | | | | | 12 | 22 | |
| | AK | eS | N | 06 | 55 | 35 | | | | | | | |
| | | eL | N | 07 | 01 | 50 | | | | | | | |
| | Epicentre: | | | 06 | 37 | 05.7 | 1.4N | 127.2E | 59 km | | | USCGS | |
| 13 | SU | e | N | 09 | 32 | 0 | | | | | | | |
| | | S | N | | 41 | 02 | | | | | 35 | 10 | |
| | | e | N | | | 30 | | | | | 160 | 25 | |
| | | eSS | N | | 43 | 13 | | | | | 29 | 16 | |
| | | eL | N | | 52 | ¼ | | | | | 125 | 25 | |
| | KP | eP | Z | 09 | 33 | 33 | | | | | | | |
| | | ePKKP | Z | | 50 | 30 | | | | | | | |
| | RX | eP | N | 09 | 34 | 5 | | | | | 2 | 7 | 6.8 |
| | | ePP | N | | 38 | 5 | | | | | 3 | 12 | 6.6 |
| | | SKS | NE | | 44 | 47 | | | | | 23 | 12 | |
| | | PS | ZN | | 46 | 58 | 8 | 14 | | | 23 | 20 | |
| | | eSS | N | | 51 | 58 | | | | | 23 | 24 | |
| | | SSS | N | | 55 | 57 | | | | | 10 | 16 | |
| | | eL | ZN | 10 | 06 | | 73 | 38 | | | 32 | 27 | |
| | | $M_1$ | N | | 08 | | | | | | 42 | 24 | |
| | | $M_2$ | NE | | 15 | | | | | | 28 | 20 | |
| | AK | SKS | N | 09 | 43 | 51 | | | | | | | |
| | | eSS | N | | 49 | 50 | | | | | | | |
| | | eL | N | 10 | 01 | | | | | | | | |
| | WN | SKS | ZN | 09 | 44 | 14 | | | | | | | |
| | | eS | N | | 46 | 00 | | | | | 20 | 19 | |
| | | eS | Z | | 46 | 00 | | | | | | | 7.0 |
| | | ePS | N | | 48 | 11 | 6 | 12 | | | | | |
| | | eSSS | N | | 54 | 32 | | | | | 8 | 12 | |
| | | eL | N | 10 | 00 | 00 | | | | | 8 | 16 | |
| | | eL | ZN | | 03 | | | | | | 13 | 14 | |
| | Epicentre: | | | 09 | 20 | 36.8 | 36 | 22 | 63 | 21 | | | |
| | | | | | | | 51.1N | 168.8W | 65 km | | | USCGS | 7 PAS |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV 13 | KP | P | Z | 10 | 45 | 05 | | | | | | | |
| 13 | KP | P | Z | 19 | 24 | 10 | | | | | | | |
| | | i | Z | | | 31 | | | | | | | |
| | TU | eP | N | 19 | 24 | 12 | | | | | | | |
| | | e | N | | | 24 | | | | | | | |
| | | e | N | | 25 | 15 | | | | | | | |
| | AK | eL | N | 19 | 25 | | | | | | | | |
| | CB | e(P) | E | 19 | 25 | 04 | | | | | | | |
| | GP | e | N | 19 | 25 | 50 | | | | | | | |
| | | eS | N | | 27 | 10 | | | | | | | |
| | | e | N | | | 31 | | | | | | | |
| | WN | S | N | 19 | 26 | 03 | | | | | | | |
| | | e | N | | | 26 | | | | | | | |
| | Epicentre: | | | 19 | 23 | 02 | 35S | 179E | S | | | NZ(D) | 5.0 M |
| | | | | | | | Additional data from Brisbane and Charters Towers used for determination of epicentre. | | | | | | |
| 14 | ON | P | E | 09 | 35 | 09 | | | | | | | |
| | KP | P | Z | 09 | 35 | 09 | | | | | | | |
| | TU | eP | N | 09 | 35 | 12 | | | | | | | |
| | | eS | N | | | 54 | | | | | | | |
| | TO | P | Z | 09 | 35 | 25 | | | | | | | |
| | CT | P | Z | 09 | 35 | 25 | | | | | | | |
| | AK | L | N | 09 | 35 | 50 | | | | | | | |
| | WN | e(P) | N | 09 | 35 | 58 | | | | | | | |
| | | S | N | | 37 | 02 | | | | | | | |
| | | eL | ZN | | 38½ | | | 6 9 | | 6 10 | | | |
| | CB | P | E | 09 | 36 | 05 | | | | | | | |
| | GP | eP | N | 09 | 36 | 29 | | | | | | | |
| | | S | N | | 38 | 10 | | | | | | | |
| | KM | eP | X | 09 | 36 | 30 | | | | | | | |
| | RX | eL | N | 09 | 41 | | | | | | | | |
| | Epicentre: | | | 09 | 34 | 18 | 35.5S | 178.6E | N | | | NZ(C) | 5.0 M |
| | | | | | | | Additional data from Brisbane and Charters Towers used to determine epicentre. | | | | | | |
| 14 | ON | P | E | 09 | 43 | 13 | | | | | | | |
| | | e | E | | | 31 | | | | | | | |
| | KP | P | Z | 09 | 43 | 13 | | | | | | | |
| | TU | eP | N | 09 | 43 | 15 | | | | | | | |
| | | e | N | | | 58 | | | | | | | |
| | TO | P | Z | 09 | 43 | 28 | | | | | | | |
| | CT | P | Z | 09 | 43 | 28½ | | | | | | | |
| | AK | L | N | 09 | 44 | 00 | | | | | | | |
| | CB | e | E | 09 | 44 | 08 | | | | | | | |
| | | e(S) | E | | 45 | 26 | | | | | | | |
| | WN | S | N | 09 | 45 | 06 | | | | | | | |
| | | eL | N | | 47 | | | | | 6 10 | | | |
| | GP | S | N | 09 | 46 | 13 | | | | | | | |
| | RX | eL | N | 09 | 49½ | | | | | | | | |
| | Epicentre: | | | 09 | 42 | 22 | 35.5S | 178.6E | N | | | NZ(C) | 4.8 M |
| | | | | | | | Additional reading from Charters Towers used to determine epicentre. | | | | | | |
| 14 | KP | P | Z | 17 | 57 | 10 | | | | | | | |
| | GP | eP | N | 17 | 58 | 04 | | | | | | | |
| | Epicentre: | | | 17 | 53 | 24.6 | 20.5S | 177.7W | 536 km | | | USCGS | |
| 15 | KP | eP | Z | 02 | 34 | 57 | | | | | | | |
| | RX | eL | N | 02 | 53 | | | | | | | | |
| | Epicentre: | | | 02 | 29 | 04.5 | 11.5S | 166.2E | 25 km | | | USCGS | |
| 15 | RX | eS | NE | 06 | 33 | 09 | | | | 6 14 | | 7 10 | 6.1 |
| | | eSS | E | | 34 | 06 | | | | | | 6 20 | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | eL | ZE | | | 35.8 | | 7 9 | | | | 9 12 | |
| NOV 15 | | eL | N | | | 37.0 | | | | 10 10 | | | |
| | WN | e | N | 06 | 33 | 29 | | | | 4 10 | | | |
| | | eL | N | | | 35 25 | | | | 9 15 | | | |
| | | M | N | | | 38 | | | | 13 11 | | | |
| | AK | eL | N | 06 | 37 | | | | | | | | |
| | SU | eL | N | 06 | 45 | | | | | 9 20 | | | |
| | Epicentre: | | | 06 | 23 | 27.5 | 62.5S | 161.7W | 46 km | | | USCGS | 5½-¾ PAL |
| 15 | KP | P | Z | 21 | 40 | 59½ | | | | | | | |
| | | i | Z | | 41 | 00 u | | | | | | | |
| | ON | P | E | 21 | 41 | | | | | | | | |
| | TU | eP | N | 21 | 41 | 05 | | | | | | | |
| | TO | P | Z | 21 | 41 | 15 | | | | | | | |
| | CT | P | Z | 21 | 41 | 15 | | | | | | | |
| | CB | eP | E | 21 | 41 | 53 | | | | | | | |
| | WN | e | N | 21 | 42 | 00 | | | | | | | |
| | | S | N | | | 53 | | | | | | | |
| | | eL | N | | 43.5 | | | | | 10 12 | | | |
| | GP | eS | N | 21 | 43 | 56 | | | | | | | |
| | SU | e | N | 21 | 44.5 | | | | | | | | |
| | | e | N | | 47.5 | | | | | 7 10 | | | |
| | RX | eL | NE | 21 | 46½ | | | | | 4 26 | | 7 18 | |
| | | eL | Z | | 47½ | | | 9 20 | | | | | |
| | Epicentre: | | | 21 | 40 | 15 | 35.6S | 177.6E | N | | | NZ(C) | 4.8 NZ |
| 16 | WN | eL | ZN | 01 | 16 | | | | | 3 10 | | | |
| | RX | eL | NE | 01 | 16 | | | | | | | | |
| 16 | KP | P | Z | 01 | 26 | 16½ | | | | | | | |
| | | i | Z | | | 18 | | | | | | | |
| | | e | Z | | 28 | 53 | | | | | | | |
| | TO | eP | Z | 01 | 26 | 28 | | | | | | | |
| | | eS | Z | | 29 | 10 | | | | | | | |
| | CT | P | Z | 01 | 26 | 28 | | | | | | | |
| | | i | Z | | | 31 | | | | | | | |
| | | eS | Z | | 29 | 05 | | | | | | | |
| | WN | P | N | 01 | 26 | 50 | | | | | | | |
| | | eS | N | | 29 | 38 | | | | | | | |
| | CB | eP | E | 01 | 26 | 52 | | | | | | | |
| | | S | E | | 29 | 47 | | | | | | | |
| | KM | eP | X | 01 | 27 | 09 | | | | | | | |
| | | S | X | | 30 | 11 | | | | | | | |
| | SU | eP | N | 01 | 24 | 53 | | | | 11 2 | | | |
| | | S | N | | 26 | 12 | | | | | | | |
| | Epicentre: | | | 01 | 23 | 11.1 | 23.7S | 179.3E | 552 km | | | USCGS | |
| 16 | KP | P | Z | 03 | 13 | 31 | | | | | | | |
| | TO | eP | Z | 03 | 13 | 42 | | | | | | | |
| | CT | P | Z | 03 | 13 | 42 | | | | | | | |
| | | eS | Z | | 14 | 56 | | | | | | | |
| | TU | S | N | 03 | 14 | 31 | | | | | | | |
| | GP | eP | N | 03 | 14 | 42 | | | | | | | |
| | | eS | N | | 16 | 38 | | | | | | | |
| | WN | S | N | 03 | 15 | 34 | | | | | | | |
| | CB | eS | E | 03 | 15 | 48 | | | | | | | |
| | Epicentre: | | | 03 | 12 | 06 | 34½S | 180 | 400 km | | | NZ(D) | 5.5 NZ |
| | | | | | | | Additional reading from Charters Towers used to determine epicentre. | | | | | | |
| 17 | KP | eP | Z | 04 | 10 | 11 | | | | | | | |
| | SU | eP | N | 04 | 11 | 19 | | | | 3 2 | | | |
| | | i | N | | | 58 | | | | 5 5 | | | |
| | | eL | N | | 15 | | | | | 20 13 | | | |
| | TU | eS | N | 04 | 11 | 40 | | | | | | | |
| | WN | eS | N | 04 | 12 | 50 | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV 17 | | eL | N | | 16 | | | | | | | | | |
| | CB | eS | E | 04 | 13 | 10 | | | | | | | | |
| | GP | eS | N | 04 | 13 | 50 | | | | | | | | |
| | RX | eL | NE | 04 | 17 | | | | | 2 22 | | 3 22 | | |
| | | eL | Z | | 19 | | | 5 16 | | | | | | |
| | Epicentre: | | | 04 | 08 | 03.1 | 30.8S | 177.7W | 71 km | | | | USCGS | |
| 19 | ON | P | E | 06 | 18 | | | | | | | | | |
| | KP | iP | Z | 06 | 18 | 24½ u | | | | | | | | |
| | TU | eP | N | 06 | 18 | 27 | | | | | | | | |
| | | e | N | | | 30 | | | | | | | | |
| | | S | N | | | 51 | | | | | | | | |
| | TO | P | Z | 06 | 18 | 32 u | | | | | | | | |
| | CT | P | Z | 06 | 18 | 32½ u | | | | | | | | |
| | WN | P | N | 06 | 18 | 56 | | | | | | | | |
| | | S | N | | 19 | 41 | | | | | | | | |
| | CB | eP | E | 06 | 19 | 04 | | | | | | | | |
| | | S | E | | | 56 | | | | | | | | |
| | KM | eP | X | 06 | 19 | 29 | | | | | | | | |
| | | S | X | | 20 | 32 | | | | | | | | |
| | GP | eP | N | 06 | 19 | 30 | | | | | | | | |
| | | S | N | | 20 | 42 | | | | | | | | |
| | Epicentre: | | | 06 | 17 | 57 | 37.8S | 176.5E | 190 km | | | | NZ(B) | 5.7 ML |
| 19 | KP | eP | Z | 07 | 09 | 01 | | | | | | | | |
| | Epicentre: | | | 07 | 04 | 58.1 | 17.6S | 179.0W | 594 km | | | | USCGS | |
| 20 | WN | eP | Z | 22 | 15½ | | | 4 16 | | | | | | |
| | | eP | N | 22 | 15½ | | | | | | | | | 6.7 |
| | | ePP | Z | | 19 | 40 | | 6 20 | | | | | | |
| | | eS | N | | 28 | 29 | | | | 16 22 | | | | 6.8 |
| | | eS | Z | | 28 | 29 | | 16 22 | | | | | | 6.8 |
| | | eL | ZN | | 46 | | | 135 21 | | 69 20 | | | | |
| | RX | eSKS | E | 22 | 26 | 09 | | | | | | 8 22 | | |
| | | e | E | | 34 | 10 | | | | | | 10 20 | | |
| | | eL | ZNE | | 48½ | | | 45 20 | | 25 20 | | 31 20 | | |
| | SU | ePS | N | 22 | 28 | 23 | | | | 19 20 | | | | |
| | | L | N | | 48 | | | | | 46 25 | | | | |
| | Epicentre: | | | 22 | 01 | 59.9 | 6.8S | 80.7W | 93 km | | | | USCGS | 6¾ PAS |
| 21 | KP | P | Z | 04 | 36 | 15 | | | | | | | | |
| | | PcP | Z | | 38 | 08 | | | | | | | | |
| | CT | P | Z | 04 | 36 | 23 | | | | | | | | |
| | TO | eP | Z | 04 | 36 | 24 | | | | | | | | |
| | CB | eP | E | 04 | 36 | 25 | | | | | | | | |
| | GP | eP | N | 04 | 36 | 43 | | | | | | | | |
| | Epicentre: | | | 04 | 29 | 04.7 | 3.4S | 152.3E | 371 km | | | | USCGS | |
| 22 | SU | P | N | 03 | 33 | 56 | | | | 21 7 | | | | |
| | | eL | N | | 35 | 40 | | | | 110 14 | | | | |
| | KP | eP | Z | 03 | 36 | 38 | | | | | | | | |
| | | i | Z | | | 51 | | | | | | | | |
| | | e | Z | | 37 | 06 | | | | | | | | |
| | TO | eP | Z | 03 | 36 | 53 | | | | | | | | |
| | CB | eP | E | 03 | 37 | 24 | | | | | | | | |
| | GP | eP | N | 03 | 37 | 43 | | | | | | | | |
| | | eS | N | | 42 | 25 | | | | | | | | |
| | KM | e(P) | X | 03 | 37 | 48 | | | | | | | | |
| | WN | eL | ZN | 03 | 43 | | | 6 12 | | 14 12 | | | | |
| | RX | eL | ZNE | 03 | 47 | | | 11 20 | | 5 20 | | 6 20 | | 5.7 |
| | | M | ZNE | | 51 | | | 26 18 | | 18 15 | | 9 16 | | |
| | Epicentre: | | | 03 | 31 | 54.3 | 19.2S | 173.1W | 25 km | | | | USCGS | |
| 22 | KP | eP | Z | 03 | 50 | 07 | | | | | | | | |
| | Epicentre: | | | 03 | 45 | 20.8 | 19.7S | 172.6W | 70 km | | | | USCGS | |
| 22 | KP | P | Z | 04 | 07 | 41 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV 22 | RX | eL | ZN | 06 | 59 | | | | | 14 25 | | | | |
| | WN | eL | N | 07 | 02.5 | | | | | 12 25 | | | | |
| | Epicentre: | | | 06 | 21 | 45.0 | 35.9S | 52.3E | 21 km | | | | USCGS | 6¾ PAS |
| 22 | CT | P | Z | 12 | 40 | 51 | | | | | | | | |
| | KP | eP | Z | 12 | 40 | 54 | | | | | | | | |
| | RX | eS | N | 12 | 50 | 34 | | | | 3 12 | | | | 5.9 |
| | | eL | NE | 13 | 06 | | | | | | | | | |
| | WN | eL | N | 13 | 10 | | | | | | | | | |
| | Epicentre: | | | 12 | 28 | 58.4 | 40.0S | 74.3W | 107 km | | | | USCGS | 6½ PAS |
| 23 | KP | P | Z | 01 | 31 | 49 | | | | | | | | |
| | CT | P | Z | 01 | 31 | 57 | | | | | | | | |
| | Epicentre: | | | 01 | 24 | 30.1 | 5.0S | 153.3E | 79 km | | | | USCGS | |
| 23 | KP | iP | Z | 04 | 18 | 18 u | | | | | | | | |
| | | iPcP | Z | | 20 | 22 | | | | | | | | |
| | | e(pPcP) | Z | | 22 | 02 | | | | | | | | |
| | | e | Z | | 23 | 34 | | | | | | | | |
| | CT | P | Z | 04 | 18 | 21½ | | | | | | | | |
| | TO | P | Z | 04 | 18 | 22 | | | | | | | | |
| | TU | e | N | 04 | 18 | 25 | | | | | | | | |
| | CB | P | E | 04 | 18 | 26 | | | | | | | | |
| | WN | eP | N | 04 | 18 | 34 | | | | | | | | |
| | KM | eP | X | 04 | 18 | 35 | | | | | | | | |
| | GP | P | N | 04 | 18 | 42 | | | | | | | | |
| | SU | e | N | 04 | 21 | .0 | | | | | | | | |
| | Epicentre: | | | 04 | 11 | 34.7 | 4.9S | 153.8E | 516 km | | | | USCGS | |
| 23 | KP | eP | Z | 09 | 49 | 38 | | | | | | | | |
| | Epicentre: | | | 09 | 42 | 50.6 | 10.3S | 152.3E | 70 km | | | | USCGS | |
| 23 | SU | P | N | 14 | 15 | 22 | | | | | | | | |
| | | S | N | | 17 | .1 | | | | | | | | |
| | ON | eP | E | 14 | 15 | 48 | | | | | | | | |
| | | L | E | | 18 | 35 | | | | | | | | |
| | KP | eP | Z | 14 | 15 | 56 | | | | | | | | |
| | | e | Z | | 16 | 00 | | | | | | | | |
| | | i | Z | | | 06 | | | | | | | | |
| | | eL | Z | | 21 | | | | | | | | | |
| | TO | eP | Z | 14 | 16 | 09 | | | | | | | | |
| | | e | Z | | | 30 | | | | | | | | |
| | TU | e | N | 14 | 16 | 10 | | | | | | | | |
| | | eS | N | | 18 | 37 | | | | | | | | |
| | CT | eP | Z | 14 | 16 | 10 | | | | | | | | |
| | | e | Z | | 17 | | | | | | | | | |
| | WN | eP | N | 14 | 16 | 25 | | | | 39 25 | | | | 6.3 |
| | | e | ZN | | 37 | | | 7 24 | | | | | | |
| | | e(S) | N | | 19 | 40 | | | | 8 8 | | | | 5.8 |
| | | eL | ZN | | 20 | | | 130 10 | | 220 20 | | | | 6.5 |
| | CB | eP | E | 14 | 16 | .8 | | | | | | | | |
| | | eS | E | | 20 | 03 | | | | | | | | |
| | | eL | E | | 21 | .5 | | | | | | | | |
| | KM | e(P) | X | 14 | 17 | 08 | | | | | | | | |
| | | eS | X | | 20 | 49 | | | | | | | | |
| | GP | eP | N | 14 | 17 | 09 | | | | | | | | |
| | | eS | N | | 20 | 45 | | | | | | | | |
| | RX | eP | Z | 14 | 17 | 34 | | 10 30 | | | | | | 5.9 |
| | | eP | NE | | 17 | 34 | | | | 9 30 | | | | 6.0 |
| | | eL | NE | | 22 | 54 | | | | 33 22 | | 165 35 | | 6.7 |
| | | eL | Z | | 24 | .8 | | 80 25 | | | | | | |
| | | M | NE | | 25½ | | | | | 230 20 | | 220 20 | | |
| | Epicentre: | | | 14 | 12 | 21.1 | 24.2S | 176.1W | 28 km | | | | USCGS | 6¾ PAS |
| 23 | CB | eP | E | 17 | 02 | 28 | | | | | | | | |
| | KP | P | Z | 17 | 02 | 28 | | | | | | | | |
| | | pP | Z | | 03 | 05 | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV 23 | TO | eP | Z | 17 | 02 | 32 | | | | | | | | |
| | CT | P | Z | 17 | 02 | 33 | | | | | | | | |
| | WN | eP | N | 17 | 02 | 36 | | | | | | | | |
| | GP | eP | N | 17 | 02 | 36 | | | | | | | | |
| | Epicentre: | | | 16 | 52 | 12.9 | 4.6N | | 125.8E | | 143 km | | USCGS | |
| 23 | KP | eP | Z | 17 | 32 | 34 | | | | | | | | |
| | CT | eP | Z | 17 | 32 | 45 | | | | | | | | |
| | Epicentre: | | | 17 | 29 | 08.5 | 24.5S | | 176.4W | | 171 km | | USCGS | |
| 23 | ON | eP | E | 18 | 00 | 10 | | | | | | | | |
| | KP | eP | Z | 18 | 00 | 15 | | | | | | | | |
| | CT | eP | Z | 18 | 00 | 28 | | | | | | | | |
| | | e | Z | | | 39 | | | | | | | | |
| * | WN | P | N | 18 | 00 | 49 | | | | | | | | |
| | | S | N | | 03 | 58 | | | | | | | | |
| | | eL | ZN | | 05.0 | | 14 | 20 | 23 | 20 | | | | |
| | GP | eP | N | 18 | 01 | 24 | | | | | | | | |
| | | S | N | | 05 | 01 | | | | | | | | |
| | CB | eS | E | 18 | 04 | 17 | | | | | | | | |
| | KM | eS | X | 18 | 04 | 57 | | | | | | | | |
| | RX | eL | NE | 18 | 08 | | | | | 7 | 30 | 9 | 30 | |
| * | | $M_1$ | E | | 09.5 | | | | | | | 13 | 20 | |
| | | eL | Z | | 10½ | | 20 | 17 | | | | | | |
| | | $M_2$ | NE | | 11.5 | | | | | 16 | 18 | 11 | 16 | |
| | Epicentre: | | | 17 | 56 | 38.0 | 24.0S | | 176.3W | | 51 km | | USCGS | |
| 23 | KP | eP | Z | 20 | 14 | 53 | | | | | | | | |
| | SU | eL | N | 20 | 15.5 | | | | | 12 | 16 | | | |
| | Epicentre: | | | 20 | 11 | 03.2 | 24.1S | | 175.7W | | 25 km | | USCGS | |
| 23 | SU | iS | N | 21 | 17 | 05 | | | | 3 | 2 | | | |
| | KP | P | Z | 21 | 17 | 51 | | | | | | | | |
| | CT | eP | Z | 21 | 18 | 02 | | | | | | | | |
| | WN | eS | N | 21 | 21 | 32 | | | | | | | | |
| | Epicentre: | | | 21 | 14 | 29.2 | 22.1S | | 179.5W | | 631 km | | USCGS | |
| 24 | KP | eP | Z | 04 | 57 | 37 | | | | | | | | |
| | | e | Z | | | 51 | | | | | | | | |
| | CT | P | Z | 04 | 57 | 45 | | | | | | | | |
| | | e | Z | | 58 | 00 | | | | | | | | |
| | | i | Z | | | 05 | | | | | | | | |
| | TO | eP | Z | 04 | 57 | 47 | | | | | | | | |
| | | e | Z | | 58 | 00 | | | | | | | | |
| | CB | eP | E | 04 | 57 | 49 | | | | | | | | |
| | | e | E | | 58 | 05 | | | | | | | | |
| | WN | eP | N | 04 | 58 | 03 | | | | | | | | |
| | | ePcP | ZN | 05 | 00 | 00 | 3 | 8 | | 4 | 9 | | | |
| | | ScP | Z | | 03 | 38 | 2 | 6 | | | | | | |
| | | S | N | | 04 | 03 | | | | 6 | 10 | | | 6.4 |
| | | (SSS) | N | | 07 | 28 | | | | | | | | |
| | | eLr | ZN | | 09.6 | | 15 | 23 | | 14 | 22 | | | |
| | GP | eP | N | 04 | 58 | 07 | | | | | | | | |
| | SU | e | N | 05 | 02 | 30 | | | | 13 | 10 | | | |
| | Epicentre: | | | 04 | 50 | 15.8 | 4.6S | | 153.0E | | 87 km | | USCGS | 6½ PAS |
| 24 | SU | iP | N | 06 | 54 | 42 | | | | | | | | |
| | KP | eP | Z | 06 | 56 | 14 | | | | | | | | |
| | | e | Z | | | 21 | | | | | | | | |
| | | eL | Z | 07 | 01½ | | | | | | | | | |
| | TU | e | N | 06 | 56 | 23 | | | | | | | | |
| | | eS | N | | 59 | 01 | | | | | | | | |
| | | eL | N | 07 | 00.5 | | | | | | | | | |
| | CT | eP | Z | 06 | 56 | 25 | | | | | | | | |
| | | e | Z | | | 32 | | | | | | | | |
| | | eL | Z | 07 | 00.6 | | | | | | | | | |
| | TO | eP | Z | 06 | 56 | 28 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | e | Z | | | 34 | | | | | | | | |
| NOV 24 | | eL | Z | 07 | 00.5 | | | | | | | | | |
| | WN | eP | N | 06 | 56 | 45 | | | | | 70 | 30 | | 6.5 |
| | | | Z | | | 48 | 11 | 20 | | | | | | |
| | | e | N | | | 52 | | | | | | | | |
| | | ei | ZN | | 57 | 37 | 42 | 26 | 135 | 28 | | | | |
| | | eS | N | 07 | 00 | 03 | | | | | | | | |
| | | eL | ZN | | 01 | 00 | 1080 | 20 | 870 | 17 | | | | 6.8 |
| | CB | eP | E | 06 | 57 | 03 | | | | | | | | |
| | | eS | E | 07 | 00 | 20 | | | | | | | | |
| | | eL | E | 07 | 01 | | | | | | | | | |
| | GP | eP | N | 06 | 57 | 23 | | | | | | | | |
| | | eS | N | 07 | 01 | 08 | | | | | | | | |
| | | eL | N | | 03 | | | | | | | | | |
| | Epicentre: | | | 06 | 52 | 41.1 | 24.2S | | 176.1W | | 23 km | | USCGS | 7 PAS |
| 24 | CT | eP | Z | 08 | 20 | 38 | | | | | | | | |
| | Epicentre: | | | 08 | 16 | 43.7 | 24.4S | | 176.3W | | 25 km | | USCGS | |
| 24 | CT | eP | Z | 08 | 30 | 07 | | | | | | | | |
| | Epicentre: | | | 08 | 26 | 14.4 | 24.5S | | 175.9W | | 25 km | | USCGS | |
| 26 | KP | P | Z | 07 | 49 | 11 | | | | | | | | |
| | Epicentre: | | | 07 | 37 | 02.2 | 36.6N | | 141.0E | | 100 km | | USCGS | |
| 26 | RX | eL | NE | 18 | 29 | | | | | | 3 | 16 | 3 16 | |
| | | eL | Z | | 30½ | | | | | | | | | |
| | WN | eL | ZN | 18 | 31 | | | | | | | | | |
| | Epicentre: | | | 18 | 20 | 22.9 | 53.9S | | 141.5E | | 25 km | | USCGS | |
| 26 | ON | eP | E | 21 | 39 | 09 | | | | | | | | |
| | KP | eP | Z | 21 | 39 | 15 | | | | | | | | |
| | SU | L | N | 21 | 39 | 50 | | | | | 8 | 12 | | |
| | Epicentre: | | | 21 | 35 | 36.6 | 24.3S | | 175.5W | | 20 km | | USCGS | |
| 27 | KP | eP | Z | 07 | 22 | 12 | | | | | | | | |
| | | eS | Z | | 24 | 54 | | | | | | | | |
| | CT | eP | Z | 07 | 22 | 24 | | | | | | | | |
| | | eS | Z | | 25 | 04 | | | | | | | | |
| | Epicentre: | | | 07 | 19 | 00.3 | 23.3S | | 179.7W | | 552 km | | USCGS | |
| 27 | KP | P | Z | 13 | 17 | 54 | | | | | | | | |
| | CT | P | Z | 13 | 18 | 02 | | | | | | | | |
| | | pP | Z | | | 21 | | | | | | | | |
| | Epicentre: | | | 13 | 10 | 11.0 | 5.6S | | 146.4E | | 100 km | | USCGS | |
| 27 | KP | P | Z | 15 | 29 | 45 | | | | | | | | |
| | | pP | Z | | 30 | 11 | | | | | | | | |
| | CT | eP | Z | 15 | 29 | 50 | | | | | | | | |
| | Epicentre: | | | 15 | 17 | 15.2 | 42.8N | | 143.3E | | 122 km | | USCGS | |
| 27 | GP | eL | N | 19 | 01 | 46 | | | | | | | | |
| | RX | eL | NE | 19 | 02.6 | | | | | | 3 | 16 | 6 15 | |
| | | eL | Z | | 03.3 | | 3 | 14 | | | | | | |
| | CT | eP | Z | 19 | 03 | 04 | | | | | | | | |
| | KP | eP | Z | 19 | 03 | 15 | | | | | | | | |
| | WN | eL | N | 19 | 06.8 | | | | | | 3 | 10 | | |
| | AK | eL | N | 19 | 09 | | | | | | | | | |
| 27 | GP | eP | N | 20 | 52 | 25 | | | | | | | | |
| | RX | eL | NE | 20 | 53.3 | | | | | | 3 | 16 | 6 16 | |
| | | eL | Z | | 54.0 | | 3 | 14 | | | | | | |
| | WN | eL | N | 20 | 58 | | | | | | 3 | 12 | | |
| 27 | KP | eP | Z | 21 | 36 | 52 | | | | | | | | |
| | RX | eL | ZNE | 22 | 03 | | | | | | | | | |
| | Epicentre: | | | 21 | 24 | 32.8 | 37.3S | | 72.5W | | 100 km | | USCGS | 5½-½ PAS |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV 29 | KP | eP | Z | 07 | 17 | 12 | | | | | | | |
| | | eS | Z | | 19 | 42 | | | | | | | |
| | CT | eP | Z | 07 | 17 | 24 | | | | | | | |
| | | eS | Z | | 19 | 57 | | | | | | | |
| | | i | Z | | 20 | 05 | | | | | | | |
| | TU | eS | N | 07 | 19 | 44 | | | | | | | |
| | ON | S | E | 07 | 19 | 06 | | | | | | | |
| | | i | E | | | 10 | | | | | | | |
| | | e | E | | | 36 | | | | | | | |
| | TO | eS | Z | 07 | 19 | 58 | | | | | | | |
| | | e | Z | | 20 | 10 | | | | | | | |
| | WN | eS | N | 07 | 20 | 21 | | | | | | | |
| | | e | N | | | 38 | | | | | | | |
| | CB | eS | E | 07 | 20 | 41 | | | | | | | |
| | KM | eS | X | 07 | 21 | 09 | | | | | | | |
| | GP | S | N | 07 | 21 | 21 | | | | | | | |
| | Epicentre: | | | 07 | 14 | 26.0 | 24.9S | | 180 | 620 km | | USCGS | |
| 29 | TO | eP | Z | 09 | 43 | 39 | | | | | | | |
| | CT | P | Z | 09 | 43 | 39 | | | | | | | |
| | KP | P | Z | 09 | 43 | 44 | | | | | | | |
| | Epicentre: | | | 09 | 32 | 01.5 | 44.0S | | 74.9W | 86 km | | USCGS | 5¼ PAL |
| 29 | KP | eP | Z | 14 | 18 | 53 | | | | | | | |
| | | epP | Z | | 19 | 19 | | | | | | | |
| | CT | eP | Z | 14 | 19 | 00 | | | | | | | |
| | Epicentre: | | | 14 | 07 | 02.2 | 26.5N | | 73.3W | 147 km | | USCGS | |
| DEC 1 | KP | eP | Z | 08 | 52 | 20 | | | | | | | |
| | Epicentre: | | | 08 | 42 | 26.5 | 32.3S | | 113.1W | 25 km | | USCGS | |
| 1 | KP | eP | Z | 09 | 47 | 26 | | | | | | | |
| | | e | Z | | | 58 | | | | | | | |
| | TO | eP | Z | 09 | 48 | 00 | | | | | | | |
| | CT | eP | Z | 09 | 48 | 01 | | | | | | | |
| | Epicentre: | | | 09 | 38 | 16.7 | 6.9S | | 128.9E | 32 km | | USCGS | |
| 1 | KP | eP | Z | 10 | 19 | 32 | | | | | | | |
| | | e | Z | | | 50 | | | | | | | |
| | | e | Z | | | 59 | | | | | | | |
| | | e | Z | | 20 | 11 | | | | | | | |
| | | e | Z | | 21 | 27 | | | | | | | |
| | CB | P | E | 10 | 19 | 39 | | | | | | | |
| | CT | P | Z | 10 | 19 | 40 | | | | | | | |
| | TO | eP | Z | 10 | 19 | 40 | | | | | | | |
| | | e | Z | | 20 | 09 | | | | | | | |
| | WN | eL | Z | 10 | 50 | | | | | | | | |
| | | M | Z | | 52 | | | 6 16 | | | | | |
| | RX | eL | NE | 10 | 52 | | | | | | | | |
| | | M | E | | 53 | | | | | | 7 20 | | |
| | | eL | Z | | 54 | | | | | | | | |
| | | M | ZN | | 56 | | | 9 16 | | 7 17 | | | |
| | Epicentre: | | | 10 | 11 | 44.6 | 5.7S | | 145.9E | 45 km | | USCGS | |
| 1 | SU | eL | N | 21 | 28 | | | | | | | | |
| | RX | eL | N | 21 | 40 | | | 6 20 | | | | | |
| | | M | N | | 51 | | | | | 2 18 | | | |
| | Epicentre: | | | 20 | 49 | 45.4 | 48.8N | | 129.3W | 15 km | | USCGS | |
| 2 | KP | P | Z | 04 | 44 | 45 | | | | | | | |
| | | e | Z | | | 54 | | | | | | | |
| | TO | eP | Z | 04 | 44 | 52 | | | | | | | |
| | CT | iP | Z | 04 | 44 | 52 | u | | | | | | |
| | | e | Z | | 45 | 01 | | | | | | | |
| | CB | e(P) | E | 04 | 44 | 59 | | | | | | | |
| | WN | eL | Z | 04 | 58 | | | | | | | | |
| | RX | eL | ZNE | 04 | 59 | | | | | | | | |
| | | M | N | 05 | 01 | | | | | 20 18 | | | |
| | Epicentre: | | | 04 | 37 | 28.2 | 6.6S | | 152.5E | 33 km | | USCGS | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 2 | KP | eP | Z | 06 | 28 | 50 | | | | | | | |
| | | e | Z | | | 52 | | | | | | | |
| | | e | Z | | 29 | 41 | | | | | | | |
| 2 | TO | eP | Z | 09 | 23 | 52 | | | | | | | |
| | | e | Z | | 24 | 00 | | | | | | | |
| | | e | Z | | | 11 | | | | | | | |
| | | e | Z | | 25 | 31 | | | | | | | |
| | CT | P | Z | 09 | 23 | 52 | | | | | | | |
| | | e | Z | | 24 | 00 | | | | | | | |
| | | e | Z | | | 08 | | | | | | | |
| | KP | eP | Z | 09 | 23 | 53 | | | | | | | |
| | | e | Z | | | 58 | | | | | | | |
| | | e | Z | | 24 | 02 | | | | | | | |
| | | e | Z | | | 11 | | | | | | | |
| | WN | eP | Z | 09 | 24 | 04 | | | | | | | |
| | | e | Z | | | 19 | | 9 8 | | | | | |
| | | e? | Z | | | 58 | | | | | | | |
| | | eSKS | N | | 34 | 20 | | | | | | | |
| | | e(S) | N | | 35 | 27 | | | | | | | |
| | | e(SP) | Z | | | 52 | | | | | | | |
| | | eLq | N | | 49 | | | | | | | | |
| | | eLr | N | | 53 | | | | | | | | |
| | | M | ZN | | 56 | | | 75 20 | | 26 22 | | | |
| | CB | e(P) | E | 09 | 24 | 06 | | | | | | | |
| | | e | E | | | 16 | | | | | | | |
| | RX | P | ZNE | 09 | 24 | 12 | u | | | | | | |
| | | e | Z | | 25 | 28 | | | | | | | |
| | | e | N | | 28 | 22 | | | | | | | |
| | | eSKS | NE | | 34 | 28 | | | | 12 33 | | | |
| | | e(S) | NE | | 36.5 | | | | | | | | |
| | | e | N | | 47 | 36 | | | | | | | |
| | | eLq | N | | 49 | | | | | | | | |
| | | e | E | | 49 | 48 | | | | | | | |
| | | eLr | ZNE | | 54 | | | | | | | | |
| | | M | ZE | | 57 | | | 40 19 | | | | 25 19 | |
| | ON | e | E | 09 | 24 | 14 | | | | | | | |
| | | eL | E | | 55 | | | | | | | | |
| | KM | e | X | 09 | 24 | 31 | | | | | | | |
| | SU | e(SKS) | N | 09 | 35 | 22 | | | | | | | |
| | | e | N | | | 57 | | | | | | | |
| | | eSP | N | | 37 | 45 | | | | | | | |
| | | eSS | N | | 43.0 | | | | | | | | |
| | | eLq | N | | 53.0 | | | | | | | | |
| | | eLr | N | | 57 | 28 | | | | | | | |
| | | M | N | 10 | 04 | | | | | 5 16 | | | |
| | Epicentre: | | | 09 | 10 | 41.0 | 24.5S | | 69.9W | 37 km | | USCGS | |
| 2 | ON | eP | E | 09 | 18 | 58 | | | | | | | |
| | KP | eP | Z | 09 | 19 | 05 | | | | | | | |
| | | e | Z | | | 14 | | | | | | | |
| | | e | Z | | | 28 | | | | | | | |
| | | e | Z | | | 35 | | | | | | | |
| | TO | eP | Z | 09 | 19 | 16 | | | | | | | |
| | | e | Z | | 20 | 25 | | | | | | | |
| | | e | Z | | | 36 | | | | | | | |
| | CT | P | Z | 09 | 19 | 16 | | | | | | | |
| | | e(S) | Z | | 20 | 30 | | | | | | | |
| | | e | Z | | | 33 | | | | | | | |
| | WN | eP | N | 09 | 19 | 41 | | | | | | | |
| | | eS | N | | 21 | 11 | | | | | | | |
| | TU | eS | N | 09 | 20 | 04 | | | | | | | |
| | GP | e(P) | N | 09 | 20 | 18 | | | | | | | |
| | | eS | N | | 22 | 13 | | | | | | | |
| | CB | eS | E | 09 | 21 | 28 | | | | | | | |
| | KM | e(S) | X | 09 | 22 | 07 | | | | | | | |
| | Epicentre: | | | 09 | 17 | 45 | 34½S | | 180 | N | | NZ(D) | 5.1 NZ |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 2 | WN | eP | Z | 09 | 50 | 44 | 6 | 6 | | | | | |
| | CT | eP | Z | 09 | 50 | 45 | | | | | | | |
| | | e | Z | | | 55 | | | | | | | |
| | TO | eP | Z | 09 | 50 | 46 | | | | | | | |
| | | e | Z | | | 56 | | | | | | | |
| | KP | eP | Z | 09 | 50 | 49 | | | | | | | |
| | | e | Z | | | 55 | | | | | | | |
| | | e | Z | | 51 | 09 | | | | | | | |
| | CB | eP | E | 09 | 50 | 59 | | | | | | | |
| | Epicentre: | | | 09 | 37 | 38.6 | 24.3S | 69.8W | 64 km | | | | USCGS |
| 2 | KP | P | Z | 17 | 55 | 04 | | | | | | | |
| | | epP | Z | | | 20 | | | | | | | |
| | CT | P | Z | 17 | 55 | 09 | | | | | | | |
| | Epicentre: | | | 17 | 43 | 18.2 | 25.7N | 129.2E | 81 km | | | | USCGS |
| 2 | KP | PKP | Z | 19 | 50 | 56 | | | | | | | |
| | | e? | Z | | 51 | 45 | | | | | | | |
| | CT | P | Z | 19 | 51 | 35 | | | | | | | |
| | TO | eP | Z | 19 | 51 | 35 | | | | | | | |
| | Epicentre: | | | 19 | 31 | 26.2 | 38.5N | 40.3E | 127 km | | | | USCGS |
| 3 | CT | eP? | Z | 02 | 33 | 35 | | | | | | | |
| | | e | Z | | | 39 | | | | | | | |
| | TO | e | Z | 02 | 33 | 40 | | | | | | | |
| | SU | eL | N | 02 | 37 | | | | | | | | |
| 3 | KP | e(PKP) | Z | 04 | 42 | 32 | | | | | | | |
| | | e | Z | | | 36 | | | | | | | |
| | TO | ePKP | Z | 04 | 42 | 43 | | | | | | | |
| | CT | ePKP | Z | 04 | 42 | 44 | | | | | | | |
| * | WN | e(PKP) | Z | 04 | 43 | 00 | | | | | | | |
| | | ePS | Z | | | 52 | | | | | | | |
| | | eSS | Z | 05 | 03 | | | | | | | | |
| | | eLr | Z | | | 17 | | | | | | | |
| | | M | ZN | | | 25 | 8 | 22 | 7 | 20 | | | |
| | SU | e(SKS) | N | 04 | 48 | 02 | | | | | | | |
| | | eL | N | 05 | 04 | 15 | | | | | | | |
| | | eL | N | | | 11 | | | | | | | |
| * | RX | e | N | 04 | 49 | 08 | | | | | | | |
| | | ePS | ZNE | | | 52 | 12 | | | | | | |
| | | eSS | E | | | 58 | | | | | | | |
| | | e(L) | N | 05 | 08 | | | | | | | | |
| | | eL | ZE | | | 19 | | | | | | | |
| | | M | N | | | 24 | | | 5 | 20 | | | |
| | | M | E | | | 33 | | | | | 5 | 22 | |
| | Epicentre: | | | 04 | 24 | 17.5 | 42.8N | 104.5E | 45 km | | | | USCGS |
| 3 | KP | P | Z | 07 | 20 | 37 | | | | | | | |
| | | e | Z | | 21 | 20 | | | | | | | |
| | CT | eP | Z | 07 | 20 | 40 | | | | | | | |
| | Epicentre: | | | 07 | 07 | 42.7 | 52.5N | 177.3W | 79 km | | | | USCGS |
| 3 | CT | e(P) | Z | 09 | 24 | 24 | | | | | | | |
| | Epicentre: | | | 09 | 12 | 19.0 | 21.1N | 121.1E | 35 km | | | | USCGS |
| 3 | SU | eL | N | 14 | 07 | | | | | | | | |
| | CT | e? | Z | 14 | 08 | 31 | | | | | | | |
| | RX | eL | NE | 14 | 14 | | | | | | 2 | 20 | |
| | | eL | ZNE | | 18 | | | | | | | | |
| 4 | CT | eP? | Z | 13 | 35 | 35 | | | | | | | |
| | Epicentre: | | | 13 | 27 | 48.5 | 5.3S | 148.8E | 43 km | | | | USCGS |
| 4 | CT | eP? | Z | 15 | 57 | 59 | | | | | | | |
| | | e | Z | | 58 | 20 | | | | | | | |
| | Epicentre: | | | 15 | 47 | 23.0 | 1.1N | 120.6E | 46 km | | | | USCGS |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 4 | CT | e(P) | Z | 16 | 32 | 34 | | | | | | | |
| | Epicentre: | | | 16 | 20 | 36.1 | 32.5N | 141.6E | 106 km | | | | USCGS |
| 4 | SU | e | N | 23 | 57 | 08 | | | | | | | |
| | | e(S) | N | | | 29 | | | | | | | |
| | | e | N | | 58 | 20 | | | | | | | |
| | ON | P | E | 23 | 58 | 59 | | | | | | | |
| | | eS | E | 24 | 01 | 39 | | | | | | | |
| | | e | E | | 02 | 12 | | | | | | | |
| | | e | E | | 08 | 50 | | | | | | | |
| | KP | iP | Z | 23 | 59 | 03 | u | | | | | | |
| | | e | Z | 24 | 01 | 24 | | | | | | | |
| | | e | Z | | | 34 | | | | | | | |
| | | e? | Z | | 03 | 07 | | | | | | | |
| | | e? | Z | | | 11 | | | | | | | |
| | | e | Z | | 06 | 36 | | | | | | | |
| | CT | P? | Z | 23 | 59 | 17 | | | | | | | |
| | | e | Z | | | 21 | | | | | | | |
| | TO | (P) | Z | 23 | 59 | 21 | | | | | | | |
| | | e | Z | 24 | 02 | 28 | | | | | | | |
| | WN | eP | N | 23 | 59 | 41 | | | | | | | |
| | | eS | N | 24 | 02 | 50 | | | | | | | |
| | CB | eP | E | 23 | 59 | 44 | | | | | | | |
| | | eS | E | 24 | 02 | 56 | | | | | | | |
| | | e | E | | 03 | 27 | | | | | | | |
| | GP | eP | N | 24 | 00 | 05 | | | | | | | |
| | | e | N | | 02 | 09 | | | | | | | |
| | | eS | N | | 03 | 33 | | | | | | | |
| | | e? | N | | 05 | 37 | | | | | | | |
| | KM | e | X | 24 | 00 | 07 | | | | | | | |
| | | e? | X | | 01 | 07 | | | | | | | |
| | | eS | X | | 03 | 21 | | | | | | | |
| | TU | eS | N | 24 | 02 | 00 | | | | | | | |
| | Epicentre: | | | 23 | 55 | 39.3 | 21.2S | 179.0W | 633 km | | | | USCGS |
| 5 | SU | e(S) | N | 21 | 36 | 20 | | | | | | | |
| | | M | N | | 37½ | | | | | | 15 | 7 | |
| 6 | SU | eL | N | 03 | 38 | | | | | | | | |
| | | M | N | | 40 | | | | | | 12 | 10 | |
| | RX | eL | NE | 03 | 46 | | | | | | 1 | 15 | |
| | | eL | Z | | 49 | | | | | | | | |
| 6 | TO | eP | Z | 09 | 09 | 31 | | | | | | | |
| | | e | Z | | | 45 | | | | | | | |
| | KP | eP | Z | 09 | 09 | 35 | | | | | | | |
| | | e | Z | | | 48 | | | | | | | |
| | | e | Z | | | 54 | | | | | | | |
| | CB | e(P) | E | 09 | 09 | 36 | | | | | | | |
| | CT | e | Z | 09 | 09 | 45 | | | | | | | |
| * | RX | e(SKS) | E | 09 | 20 | 02 | | | | | | | |
| | | e(S) | E | | | 48 | | | | | | | |
| | | e(SP) | NE | | 22 | 20 | | | | | | | |
| | | eSS | N | | 27 | .3 | | | | | | | |
| | | e(L) | N | | 35 | | | | | | | | |
| | | eL | ZNE | | 40 | | | | | | | 3 | 19 |
| | WN | eL | ZN | 09 | 40 | | | | | | | | |
| * | SU | eL | N | 09 | 44 | | | | | | 5 | 20 | |
| | Epicentre: | | | 08 | 56 | 07.6 | 21.4S | 69.0W | 25 km | | | | USCGS |
| 6 | SU | eP? | N | 12 | 20 | 05 | | | | | | | |
| | | e | N | | | 12 | | | | | | | |
| | KP | iP | Z | 12 | 21 | 18 | u | | | | | | |
| | TO | P | Z | 12 | 21 | 27 | | | | | | | |
| | WN | eP | N | 12 | 21 | 47 | | | | | | | |
| | CB | eP | E | 12 | 21 | 51 | | | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 6 | GP | e(P) | N | 12 | 22 | 11 | | | | | | | | |
| | Epicentre: | | | 12 | 17 | 38.7 | | 20.5S | | 178.8W | | 616 km | | USCGS |
| 6 | KP | eP | Z | 18 | 30 | 35 | | | | | | | | |
| | | e | Z | | | 51 | | | | | | | | |
| | Epicentre: | | | 18 | 19 | 33.6 | | 11.5N | | 125.5E | | 25 km | | USCGS |
| 7 | TU | eP | N | 03 | 00 | 30 | | | | | | | | |
| | | e | N | | | 42 | | | | | | | | |
| | | eS | N | | 01 | 14 | | | | | | | | |
| | | e | N | | | 20 | | | | | | | | |
| | | e(Sg) | N | | | 39 | | | | | | | | |
| | | e | N | | 02 | 10 | | | | | | | | |
| | KP | P | Z | 03 | 00 | 36 | | | | | | | | |
| | | e(P*) | Z | | | 47 | | | | | | | | |
| | | e | Z | | 01 | 54 | | | | | | | | |
| | TO | e(P) | Z | 03 | 00 | 45 | | | | | | | | |
| | | e | Z | | | 49 | | | | | | | | |
| | | e | Z | | | 59 | | | | | | | | |
| | | eS | Z | | 01 | 45 | | | | | | | | |
| | | e | Z | | 02 | 06 | | | | | | | | |
| | CT | eP | Z | 03 | 00 | 47 | | | | | | | | |
| | | e | Z | | | 57 | | | | | | | | |
| | | e? | Z | | 03 | 47 | | | | | | | | |
| | ON | eP | E | 03 | 00 | 49 | | | | | | | | |
| | | e(Pg) | E | | 01 | 15 | | | | | | | | |
| | CB | e(P) | E | 03 | 01 | 19 | | | | | | | | |
| | | e | E | | | 23 | | | | | | | | |
| | | e | E | | | 49 | | | | | | | | |
| | | e | E | | 02 | 25 | | | | | | | | |
| | | e | E | | | 41 | | | | | | | | |
| | | eS | E | | | 49 | | | | | | | | |
| | | e | E | | | 58 | | | | | | | | |
| | WN | e | N | 03 | 01 | 27 | | | | | | | | |
| | | e | N | | | 52 | | | | | | | | |
| | | e(S) | N | | 02 | 26 | | | | | | | | |
| | | e | N | | | 42 | | | | | | | | |
| | | e(Sg) | N | | 03 | 39 | | | | | | | | |
| | GP | e | N | 03 | 01 | 49 | | | | | | | | |
| | | e | N | | | 59 | | | | | | | | |
| | | e | N | | 02 | 03 | | | | | | | | |
| | | eS | N | | 03 | 29 | | | | | | | | |
| | KM | e | X | 03 | 01 | 54 | | | | | | | | |
| | | eS | X | | 03 | 27 | | | | | | | | |
| | RX | eL | ZNE | 03 | 07 | | | | | | | | | |
| | SU | eL | N | 03 | 09 | | | | | | | | | |
| | Epicentre: | | | 02 | 59 | 30 | | 36.6S | | 179.2W | | N | | NZ(D) 5.2 NZ |
| 7 | KP | P | Z | 10 | 05 | 38 | | | | | | | | |
| | | e | Z | | | 49 | | | | | | | | |
| | | e | Z | | | 57 | | | | | | | | |
| | CT | eP | Z | 10 | 05 | 52 | | | | | | | | |
| | | e | Z | | | 58 | | | | | | | | |
| | TO | e | Z | 10 | 05 | 56 | | | | | | | | |
| | ON | e | E | 10 | 06 | 18 | | | | | | | | |
| 7 | KP | P | Z | 16 | 29 | 37 | u | | | | | | | |
| | | e(PcS) | Z | | 33 | 37 | | | | | | | | |
| | CT | eP | Z | 16 | 29 | 40 | | | | | | | | |
| | | e | Z | | 33 | 53 | | | | | | | | |
| | | e | Z | | | 58 | | | | | | | | |
| | Epicentre: | | | 16 | 19 | 09.2 | | 1.2N | | 121.8E | | 40 km | | USCGS |
| 8 | TU | eP | N | 01 | 02 | 09 | | | | | | | | |
| | | e | N | | | 16 | | | | | | | | |
| | | e | N | | | 28 | | | | | | | | |
| | | S | N | | | 52 | | | | | | | | |
| | | e | N | | | 57 | | | | | | | | |
| | | e | N | | 03 | 36 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 8 | KP | P | Z | 01 | 02 | 16 | u | | | | | | | |
| | | e | Z | | | 18 | | | | | | | | |
| | | e(P*) | Z | | | 27 | | | | | | | | |
| | | i | Z | | | 41 | | | | | | | | |
| | ON | eP? | E | 01 | 02 | 25 | | | | | | | | |
| | | e | E | | | 29 | | | | | | | | |
| | | e | E | | | 34 | | | | | | | | |
| | | e(Pg) | E | | | 54 | | | | | | | | |
| | | S | E | | 03 | 36 | | | | | | | | |
| | TO | eP | Z | 01 | 02 | 26 | | | | | | | | |
| | | e | Z | | | 49 | | | | | | | | |
| | | e | Z | | | 57 | | | | | | | | |
| | | S | Z | | 03 | 25 | | | | | | | | |
| | CT | P? | Z | 01 | 02 | 26 | | | | | | | | |
| | | e | Z | | | 27 | | | | | | | | |
| | | e | Z | | | 48 | | | | | | | | |
| | | (S) | Z | | 03 | 19 | | | | | | | | |
| | | e | Z | | | 21 | | | | | | | | |
| | WN | e | N | 01 | 02 | 55 | | | | | | | | |
| | | e | N | | 03 | 34 | | | | | | | | |
| | | eS | N | | 04 | 03 | | | | | | | | |
| | CB | e | E | 01 | 03 | 08 | | | | | | | | |
| | | e | E | | | 29 | | | | | | | | |
| | | e | E | | | 37 | | | | | | | | |
| | | eS | E | | 04 | 28 | | | | | | | | |
| | | e | E | | | 38 | | | | | | | | |
| | GP | e | N | 01 | 03 | 28 | | | | | | | | |
| | | e | N | | | 41 | | | | | | | | |
| | | e(S) | N | | 05 | 07 | | | | | | | | |
| | | e | N | | | 09 | | | | | | | | |
| | KM | e | X | 01 | 03 | 46 | | | | | | | | |
| | | eS | X | | 05 | 06 | | | | | | | | |
| | RX | eL | NE | 01 | 08 | | | | | | | | | |
| | | eL | Z | | 10 | | | | | | | | | |
| | SU | eL | N | 01 | 11 | | | | | | | | | |
| | Epicentre: | | | 01 | 01 | 10 | | 36.8S | | 179.0W | | N | | NZ(D) 5.2 NZ |
| 8 | SU | P | N | 01 | 25 | 45 | | | | | | | | |
| | | e | N | | 26 | 50 | | | | | | | | |
| | ON | P | E | 01 | 27 | 27 | w | | | | | | | |
| | | e | E | | | 47 | | | | | | | | |
| | | S | E | | 30 | 05 | | | | | | | | |
| | KP | iP | Z | 01 | 27 | 40 | u | | | | | | | |
| | | eS | Z | | 30 | 33 | | | | | | | | |
| | TU | e | N | 01 | 27 | 43 | | | | | | | | |
| | | eS | N | | 30 | 34 | | | | | | | | |
| | TO | P | Z | 01 | 27 | 49 | | | | | | | | |
| | | (S) | Z | | 30 | 50 | | | | | | | | |
| | | e | Z | | 31 | 05 | | | | | | | | |
| | CT | P | Z | 01 | 27 | 49 | u | | | | | | | |
| | | e | Z | | | 51 | | | | | | | | |
| | | e | Z | | | 55 | | | | | | | | |
| | | e | Z | | 28 | 09 | | | | | | | | |
| | | e | Z | | 30 | 53 | | | | | | | | |
| | WN | eP | N | 01 | 28 | 10 | | | | | | | | |
| | | eS | N | | 31 | 26 | | | | | | | | |
| | CB | P | E | 01 | 28 | 13 | | | | | | | | |
| | | eS | E | | 31 | 22 | | | | | | | | |
| | | e? | E | | 36 | 33 | | | | | | | | |
| | KM | eP | X | 01 | 28 | (29) | | | | | | | | |
| | | eS | X | | 31 | 54 | | | | | | | | |
| | GP | eP | N | 01 | 28 | 34 | | | | | | | | |
| | | eS | N | | 31 | 59 | | | | | | | | |
| | | e | N | | 32 | 16 | | | | | | | | |
| | | e | N | | 35 | 30 | | | | | | | | |
| | Epicentre: | | | 01 | 24 | 18.9 | | 21.8S | | 179.4W | | 685 km | | USCGS |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 8 | KP | P | Z | 10 | 11 | 40 | | | | | | | |
| | Epicentre: | | | 10 | 00 | 59.7 | 7.8N | 127.2E | 25 | km | | | USCGS |
| 8 | TO | eP | Z | 11 | 32 | 43 | | | | | | | |
| | | epP | Z | | 33 | 15 | | | | | | | |
| | CT | P | Z | 11 | 32 | 43 | | | | | | | |
| | | pP | Z | | 33 | 15 | | | | | | | |
| | KP | P | Z | 11 | 32 | 46 | | | | | | | |
| | | epP | Z | | 33 | 19 | | | | | | | |
| | Epicentre: | | | 11 | 20 | 07.8 | 31.6S | 68.9W | 140 | km | | | USCGS |
| 8 | ON | eP | E | 14 | 34 | 36 | | | | | | | |
| | | e | E | | | 38 | | | | | | | |
| | | e | E | | 35 | 09 | | | | | | | |
| | KP | eP | Z | 14 | 34 | 53 | | | | | | | |
| | | e | Z | | 35 | 01 | | | | | | | |
| | | e | Z | | | 13 | | | | | | | |
| | | e | Z | | 36 | 03 | | | | | | | |
| | TU | e | N | 14 | 34 | 58 | | | | | | | |
| | | eS | N | | 36 | 27 | | | | | | | |
| | TO | eP | Z | 14 | 35 | 03 | | | | | | | |
| | | e(S) | Z | | 36 | 52 | | | | | | | |
| | | e | Z | | | 57 | | | | | | | |
| | | e | Z | | 37 | 17 | | | | | | | |
| | CT | e? | Z | 14 | 35 | 06 | | | | | | | |
| | | e | Z | | | 11 | | | | | | | |
| | | e | Z | | | 24 | | | | | | | |
| | | e(S) | Z | | 36 | 48 | | | | | | | |
| | | e | Z | | | 59 | | | | | | | |
| | WN | e? | N | 14 | 35 | 33 | | | | | | | |
| | | e | N | | | 40 | | | | | | | |
| | | eS | N | | 37 | 35 | | | | | | | |
| | KM | e | X | 14 | 36 | 15 | | | | | | | |
| | | eS | X | | 38 | 31 | | | | | | | |
| | CB | eS | E | 14 | 37 | 53 | | | | | | | |
| | | e | E | | 38 | 27 | | | | | | | |
| | Epicentre: | | | 14 | 32 | 45.8 | 30.2S | 178.2W | 70 | km | | | USCGS |
| 8 | KP | P | Z | 15 | 49 | 29 | | | | | | | |
| | CT | eP | Z | 15 | 49 | 35 | | | | | | | |
| 8 | KP | eP | Z | 19 | 23 | 02 | | | | | | | |
| | | e | Z | | | 09 | | | | | | | |
| | CT | eP | Z | 19 | 23 | 14 | | | | | | | |
| | Epicentre: | | | 19 | 12 | 11.0 | 9.8N | 125.5E | 77 | km | | | USCGS |
| 9 | SU | e | N | 00 | 38 | 00 | | | | | | | |
| | KP | P | Z | 00 | 40 | 34 | | | | | | | |
| | TO | P | Z | 00 | 40 | 46 | | | | | | | |
| | | e | Z | | 44 | 13 | | | | | | | |
| | | e | Z | | | 20 | | | | | | | |
| | WN | e | N | 00 | 41 | 09 | | | | | | | |
| | | e | N | | 44 | 55 | | | | | | | |
| | | eS | N | | 45 | 03 | | | | | | | |
| | CB | eP | E | 00 | 41 | 15 | | | | | | | |
| | | eS | E | | 45 | 07 | | | | | | | |
| | KM | eP | X | 00 | 41 | 32 | | | | | | | |
| | | eS | X | | 45 | 41 | | | | | | | |
| | GP | eP | N | 00 | 41 | 36 | | | | | | | |
| | | e(S) | N | | 45 | 41 | | | | | | | |
| | | e | N | | | 51 | | | | | | | |
| | TU | eS | N | 00 | 44 | 00 | | | | | | | |
| | Epicentre: | | | 00 | 36 | 18.2 | 20.4S | 176.2W | 137 | km | | | USCGS |
| 10 | KP | eP | Z | 06 | 41 | 30 | | | | | | | |
| | CT | eP | Z | 06 | 42 | 02 | | | | | | | |
| | | e | Z | | | 09 | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Epicentre: | | | 06 | 29 | 33.1 | 19.0N | 119.5E | 60 | km | | | USCGS |
| DEC 10 | SU | e | N | 13 | 34 | 47 | | | | | | | |
| | | e | N | | 36 | 05 | | | | | | | |
| | | eL | N | | 36½ | | | | | | | | |
| | ON | eP | E | 13 | 37 | 32 | | | | | | | |
| | | e | E | | | 34 | | | | | | | |
| | | e | E | | | 44 | | | | | | | |
| | | eL | E | | 47 | | | | | | | | |
| | KP | P | Z | 13 | 37 | 45 | | | | | | | |
| | | e | Z | | 42 | 49 | | | | | | | |
| | TO | eP | Z | 13 | 37 | 57 | | | | | | | |
| | WN | eP? | N | 13 | 38 | 18 | | | | | | | |
| | | eL | Z | | 48 | | | | | | | | |
| | CB | eP | E | 13 | 38 | 22 | | | | | | | |
| | KM | eP | X | 13 | 38 | 42 | | | | | | | |
| | GP | e(P) | N | 13 | 38 | 45 | | | | | | | |
| | RX | eL | NE | 13 | 48 | | | | | | | | |
| | | eL | Z | | 50 | | | | | | | | |
| | Epicentre: | | | 13 | 32 | 18.3 | 15.0S | 172.3W | 25 | km | | | USCGS |
| 10 | ON | eP | E | 14 | 04 | 55 | | | | | | | |
| | CB | eP | E | 14 | 05 | 04 | | | | | | | |
| | KP | P | Z | 14 | 05 | 06 | | | | | | | |
| | | e | Z | | | 47 | | | | | | | |
| | TO | eP | Z | 14 | 05 | 08 | | | | | | | |
| | KM | eP | X | 14 | 05 | 08 | | | | | | | |
| | WN | eP | N | 14 | 05 | 12 | | | | | | | |
| | GP | eP | N | 14 | 05 | 12 | | | | | | | |
| | Epicentre: | | | 13 | 55 | 16.5 | 1.4N | 124.3E | 292 | km | | | USCGS |
| 10 | SU | P | N | 17 | 00 | 10 | | | | | | | |
| | | e(S) | N | | | 30 | | | | | | | |
| | KP | P | Z | 17 | 04 | 31 | | | | | | | |
| | TO | eP | Z | 17 | 04 | 45 | | | | | | | |
| 11 | SU | eP | N | 00 | 02 | 55 | | | | | | | |
| | | e(S) | N | | 04 | 30 | | | | | | | |
| | ON | eP | E | 00 | 04 | 21 | | | | | | | |
| | | e(S) | E | | 06 | 43 | | | | | | | |
| | KP | P | Z | 00 | 04 | 48 | | | | | | | |
| | | e | Z | | 06 | 27 | | | | | | | |
| | | e | Z | | 08 | 00 | | | | | | | |
| | TU | eP | N | 00 | 05 | 03 | | | | | | | |
| | | eS | N | | 08 | 19 | | | | | | | |
| | CT | eP? | Z | 00 | 05 | 05 | | | | | | | |
| | | i | Z | | | 06 | u | | | | | | |
| | CB | eP | E | 00 | 05 | 23 | | | | | | | |
| | WN | eP | Z | 00 | 05 | 24 | | | | | | | |
| | | e | N | | | 30 | | | | | | | |
| | | e | Z | | | 43 | | | | | | | |
| | | e | N | | 08 | 51 | | | | | | | |
| | | e(S) | ZN | | 09 | 05 | | | | | 10 | 4 | |
| | | e(L) | Z | | 11 | | | | | | | | |
| | KM | P | X | 00 | 05 | 37 | | | | | | | |
| | | e(S) | X | | 09 | 57 | | | | | | | |
| | GP | eP | N | 00 | 05 | 48 | | | | | | | |
| | | e(S) | N | | 09 | 43 | | | | | | | |
| | RX | P | ZN | 00 | 06 | 08 | n | | | | | | |
| | | e | Z | | | 33 | | | | | | | |
| | | e | N | | 07 | 02 | | | | | | | |
| | | S | NE | | 10 | 16 | sw | | | | | | |
| | | e(L) | N | | 12½ | | | | | | | | |
| | Epicentre: | | | 00 | 01 | 10.4 | 22.1S | 171.4E | 144 | km | | | USCGS |
| 11 | KP | eP | Z | 03 | 28 | 15 | | | | | | | |
| | GP | eP? | N | 03 | 28 | 24 | | | | | | | |
| | WN | e | Z | 03 | 28 | 58 | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 11 | RX | e | N | 03 | 43 | 38 | | | | | | | |
| | | e | N | | 49 | | | | | | | | |
| | | eL | ZNE | | 56 | | | | | | | | |
| | Epicentre: | | | 03 | 18 | 10.9 | 1.6N | 126.4E | 52 km | | | | USCGS |
| | 11 SU | e(L) | N | 04 | 44 | | | | | | | | |
| | RX | eL | N | 04 | 52 | | | | | | | | |
| | 11 ON | eP | E | 14 | 23 | 18 | | | | | | | |
| | KP | eP | Z | 14 | 23 | 25 | | | | | | | |
| | | e | Z | | 24 | 03 | | | | | | | |
| | GP | e? | N | 14 | 24 | 44 | | | | | | | |
| | | eS | N | | 27 | 00 | | | | | | | |
| | TU | eS | N | 14 | 24 | 46 | | | | | | | |
| | TO | e | Z | 14 | 25 | 19 | | | | | | | |
| | WN | eS | N | 14 | 25 | 54 | | | | | | | |
| | CB | eS | E | 14 | 26 | 15 | | | | | | | |
| | KM | eS | X | 14 | 26 | 54 | | | | | | | |
| | 11 SU | eP | N | 18 | 55 | 50 | | | 8 | 5 | | | |
| | | e(S) | N | | 57 | 54 | | | | | | | |
| | | M | N | 19 | 00 | | | | 60 | 10 | | | |
| | ON | eP | E | 18 | 57 | (52) | | | | | | | |
| | | eS | E | 19 | 01 | 46 | | | | | | | |
| | | eL | E | | 04 | | | | | | | | |
| | KP | iP | Z | 18 | 58 | 10 | u | | | | | | |
| | | e | Z | 19 | 05 | 39 | | | | | | | |
| | TO | eP? | Z | 18 | 58 | 19 | | | | | | | |
| | | e | Z | | | 23 | | | | | | | |
| | TU | eP | N | 18 | 58 | 21 | | | | | | | |
| | | e | N | | 59 | 01 | | | | | | | |
| | CT | e | Z | 18 | 58 | 22 | | | | | | | |
| | CB | eP | E | 18 | 58 | 34 | | | | | | | |
| | | e(S) | E | 19 | 03 | 17 | | | | | | | |
| | WN | eP | ZN | 18 | 58 | 36 | | | 2 | 8 | | | |
| | | e | N | | | 42 | | | | | | | |
| | | eS | ZN | 19 | 03 | 39 | | | 12 | 15 | | | |
| | | eL | ZN | | 08 | | | | | | | | |
| | KM | e(P) | X | 18 | 58 | 48 | | | | | | | |
| | GP | eP | N | 18 | 58 | 54 | | | | | | | |
| | RX | eP | ZN | 18 | 59 | 07 | | | | | | | |
| | | e | ZN | 19 | 00 | 08 | | | | | | | |
| | | eS | NE | | 04 | 02 | | | 11 | 20 | | | |
| | | eL | E | | 06 | | | | | | | | |
| | | M | E | | 10 | | | | | | 20 | 17 | |
| | Epicentre: | | | 18 | 53 | 09.2 | 15.7S | 166.9E | 133 km | | | | USCGS |
| | 11 RX | eL | ZNE | 21 | 18½ | | | | | | | | |
| | WN | eL | N | 21 | 23 | | | | | | | | |
| | 12 ON | eP | E | 04 | 24 | 01 | | | | | | | |
| | KP | eP | Z | 04 | 24 | 18 | | | | | | | |
| | | e | Z | | | 36 | | | | | | | |
| | CT | e? | Z | 04 | 24 | 24 | | | | | | | |
| | | e? | Z | | | 30 | | | | | | | |
| | TO | eP | Z | 04 | 24 | 29 | | | | | | | |
| | SU | e(S) | N | 04 | 24 | 58 | | | 5 | 18 | | | |
| | | e | N | | 28 | 15 | | | 3 | 10 | | | |
| | CB | eP? | E | 04 | 25 | 02 | | | | | | | |
| | GP | e(P) | N | 04 | 25 | 03 | | | | | | | |
| | RX | eL | NE | 04 | 36 | | | | | | | | |
| | | M | E | | 38 | | | | | | 2 | 17 | |
| | | eL | ZN | | 41 | | | | | | | | |
| | WN | e(L) | ZN | 04 | 38 | | | | | | | | |
| | Epicentre: | | | 04 | 18 | 40.5 | 10.5S | 164.8E | 198 km | | | | USCGS |
| | 12 ON | eP? | E | 10 | 06 | 23 | | | | | | | |
| | | e? | E | | | 46 | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 12 | KP | P | Z | 10 | 06 | 37 | | | | | | | |
| | TO | eP | Z | 10 | 06 | 51 | | | | | | | |
| | | e | Z | | 09 | 09 | | | | | | | |
| | | e | Z | | | 17 | | | | | | | |
| | CT | eP | Z | 10 | 06 | 52 | | | | | | | |
| | CB | eP | E | 10 | 07 | 01 | | | | | | | |
| | | e | E | | | 05 | | | | | | | |
| | WN | e(P) | N | 10 | 07 | 12 | | | | | | | |
| | | eS? | N | | 10 | 26 | | | | | | | |
| | | e | N | | 11 | 57 | | | | | | | |
| | | eL | Z | | 12 | | | | 3 | 14 | | | |
| | KM | e(P) | X | 10 | 07 | 23 | | | | | | | |
| | GP | e(P) | N | 10 | 07 | 39 | | | | | | | |
| | RX | eL | NE | 10 | 12 | | | | | | | | |
| | | M | NE | | 14 | | | | | | | 15 | 15 |
| | SU | e? | N | 10 | 13 | 25 | | | | | | | |
| | | e | N | | 16 | | | | | | | | |
| | Epicentre: | | | 10 | 04 | 02.0 | 28.8S | 167.6E | 54 km | | | | USCGS |
| | | | | | | | Felt: Norfolk I. MM 4. | | | | | | |
| | 13 KP | eP | Z | 02 | 29 | 31 | | | | | | | |
| | 13 RX | e(P) | ZNE | 07 | 38 | 20 | s | | | | | | |
| | | e | Z | | 39 | 30 | | | | | | | |
| | | e | ZNE | | 39 | .9 | | | | | | | |
| | GP | eP | N | 07 | 38 | 58 | | | | | | | |
| | | e | N | | 39 | 03 | | | | | | | |
| | | e | N | | | 10 | | | | | | | |
| | | e(S) | N | 07 | 41 | 08 | | | | | | | |
| | | eL | N | | 41 | .4 | | | | | | | |
| | | e | N | | | 52 | | | | | | | |
| | | M | N | | 42 | | | | | | | | |
| | KM | e(P) | X | 07 | 39 | 09 | | | | | | | |
| | | e | X | | | 16 | | | | | | | |
| | | e | X | | | 48 | | | | | | | |
| | | e(S) | X | | 41 | 18 | | | | | | | |
| | | L | X | | 42 | .9 | | | | | | | |
| | | M | X | | 43 | .2 | | | | | | | |
| | | M | X | | 43 | .6 | | | | | | | |
| | CB | e(P) | E | 07 | 39 | 31 | | | | | | | |
| | | e | E | | | 37 | | | | | | | |
| | | e | E | | | 45 | | | | | | | |
| | | e(S) | E | | 41 | 52 | | | | | | | |
| | | e | E | | 42 | 01 | | | | | | | |
| | | eL | E | | 42 | .2 | | | | | | | |
| | | e | E | | 42 | 29 | | | | | | | |
| | | M | E | | 44 | | | | | | | | |
| | | e | E | | 52 | 02 | | | | | | | |
| | WN | P | ZN | 07 | 39 | 41.3 | ds | | | | | | |
| | | e | N | | | 56 | | | | | | | |
| | | e(S) | N | | 42 | 16 | | | | | | | |
| | | e | N | | | 25 | | | | | | | |
| | | e | N | | | 29 | | | | | | | |
| | | e | N | | | 36 | | | | | | | |
| | | e | N | | 43 | 37 | | | | | | | |
| | | eL | N | | 44 | 09 | | | | | | | |
| | | e | N | | | 33 | | | | | | | |
| | TO | eP | Z | 07 | 40 | 06.1 | | | | | | | |
| | | e | Z | | | 20 | | | | | | | |
| | | e | Z | | 43 | 24 | | | | | | | |
| | | e | Z | | | 55 | | | | | | | |
| | | eL | Z | | 44 | .5 | | | | | | | |
| | | M | Z | | 46 | | | | | | | | |
| | CT | eP? | Z | 07 | 40 | 06.3 | | | | | | | |
| | | i | Z | | | 07.0 | u | | | | | | |
| | | e | Z | | | 21 | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 13 | | e | Z | | 43 | 23 | | | | | | | |
| | | eL | Z | | 45 | | | | | | | | |
| | | M | Z | | 46 | | | | | | | | |
| | TU | e? | N | 07 | 40 | 16 | | | | | | | |
| | | e | N | | | 27 | | | | | | | |
| | | e | N | | | 33 | | | | | | | |
| | | e | N | | 41 | 05 | | | | | | | |
| | | e(S) | N | | 43 | 31 | | | | | | | |
| | | e | N | | | 39 | | | | | | | |
| | | e | N | | | 45 | | | | | | | |
| | | eL | N | | 44 | .6 | | | | | | | |
| | | M | N | | 47 | | | | | | | | |
| | KP | eP? | Z | 07 | 40 | 17 | | | | | | | |
| | | e | Z | | | 21 | | | | | | | |
| | | e | Z | | | 38 | | | | | | | |
| | | e | Z | | 43 | 43 | | | | | | | |
| | | e | Z | | 44 | 10 | | | | | | | |
| | | eL | Z | | 46 | | | | | | | | |
| | ON | eP? | E | 07 | 40 | 38 | | | | | | | |
| | | e | E | | | 42.4 | w | | | | | | |
| | | e | E | | | 55 | | | | | | | |
| | | i | E | | 44 | 33 | e | | | | | | |
| | | eL | E | | 45 | .4 | | | | | | | |
| | | M | E | | 48 | | | | | | | | |
| | SU | e | N | 07 | 43 | 45 | | | | | | | |
| | | e | N | | 45 | 00 | | | | | | | |
| | | e | N | | 52 | 05 | | | | | | | |
| | | eL | N | | 53 | 20 | | | | | | | |
| | | M | N | | 59 | | | | | | | | |
| | Epicentre: | | | 07 | 36 | 13.8 | 52.1S | 160.9E | 29 km | | USCGS | | |
| | | | | | | | Felt: | Campbell I. MM 2-3. Not felt Macquarie I. | | | | | |
| 13 | KP | eP | Z | 08 | 49 | 04 | | | | | | | |
| 13 | SU | e(S) | N | 09 | 04 | 57 | | | | | | | |
| | KP | eP | Z | 09 | 07 | 07 | | | | | | | |
| | | e | Z | | 09 | 04 | | | | | | | |
| | | e | Z | | 10 | 08 | | | | | | | |
| | | e | Z | | | 35 | | | | | | | |
| | CT | eP | Z | 09 | 07 | 16 | | | | | | | |
| | | e | Z | | | 20 | | | | | | | |
| | | e | Z | | 10 | 35 | | | | | | | |
| | | e | Z | | | 42 | | | | | | | |
| | TO | eP | Z | 09 | 07 | 17 | | | | | | | |
| | | e | Z | | 10 | 33 | | | | | | | |
| | | e | Z | | | 47 | | | | | | | |
| | WN | eP | N | 09 | 07 | 42 | | | | | | | |
| | | eS | N | | 11 | 15 | | | | | | | |
| | | e | N | | | 23 | | | | | | | |
| | | e | N | | | 31 | | | | | | | |
| | CB | e(P) | E | 09 | 07 | 52 | | | | | | | |
| | | eS | E | | 11 | 31 | | | | | | | |
| | KM | P | X | 09 | 08 | 11 | | | | | | | |
| | | eS | X | | 12 | 05 | | | | | | | |
| | GP | eP | N | 09 | 08 | 13 | | | | | | | |
| | | eS | N | | 12 | 17 | | | | | | | |
| | TU | eS | N | 09 | 10 | 13 | | | | | | | |
| | Epicentre: | | | 09 | 03 | 09.2 | 21.8S | 175.5W | 84 km | | USCGS | | |
| | | | | | | | Felt: | Nukualofa, Tonga. 'light'. | | | | | |
| 13 | KP | P | Z | 10 | 16 | 50 | | | | | | | |
| | | e | Z | | 17 | 37 | | | | | | | |
| | CT | eP | Z | 10 | 16 | 59 | | | | | | | |
| | | e | Z | | 17 | 41 | | | | | | | |
| | TO | eP | Z | 10 | 17 | 00 | | | | | | | |
| | | e | Z | | | 42 | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 13 | CB | e(P) | E | 10 | 17 | 07 | | | | | | | |
| | Epicentre: | | | 10 | 05 | 24.3 | 27.7N | 142.4E | 28 km | | USCGS | | |
| 14 | ON | e(P) | E | 00 | 26 | 30 | | | | | | | |
| | KP | eP | Z | 00 | 26 | 46 | | | | | | | |
| | TO | eP | Z | 00 | 26 | 57 | | | | | | | |
| | CT | eP | Z | 00 | 26 | 58 | | | | | | | |
| | WN | eL | ZN | 00 | 38 | | | | | | | | |
| | RX | eL | NE | 00 | 39 | | | | | | | | |
| | | eL | Z | | 42 | | | | | | | | |
| | Epicentre: | | | 00 | 20 | 52.7 | 10.7S | 165.3E | 51 km | | USCGS | | |
| 14 | SU | e? | N | 01 | 01 | 03 | | | | | | | |
| | | e | N | | | 20 | | | | | | | |
| | | e(S) | N | | 03 | 45 | | | | | | | |
| | ON | eP | E | 01 | 03 | 03 | | | | | | | |
| | | e | E | | | 24 | | | | | | | |
| | KP | eP | Z | 01 | 03 | 17 | | | | | | | |
| | | i | Z | | | 19 | u | | | | | | |
| | | e | Z | 01 | 05 | 03 | | | | | | | |
| | | e | Z | | 06 | 31 | | | | | | | |
| | | e | Z | | 10 | 13 | | | | | | | |
| | TO | eP? | Z | 01 | 03 | 26 | | | | | | | |
| | | e | Z | | | 29 | | | | | | | |
| | CT | eP? | Z | 01 | 03 | 28 | | | | | | | |
| | | e | Z | | | 29 | u | | | | | | |
| | TU | e(P) | N | 01 | 03 | 29 | | | | | | | |
| | | eS | N | | 08 | 24 | | | | | | | |
| | CB | e | E | 01 | 03 | 41 | | | | | | | |
| | WN | e(P) | ZN | 01 | 03 | 44 | | | | | | | |
| | | S | ZN | | 08 | 51 | | | | | | | |
| | | e(ScS) | N | | 14 | 17 | | | | | | | |
| | GP | eP | N | 01 | 03 | 59 | | | | | | | |
| | | eS | N | | 09 | 21 | | | | | | | |
| | RX | eS | E | 01 | 09 | 47 | | | | | | | |
| | | eL | ZNE | | 15 | | | | | | | | |
| | | M | E | | 17 | | | | | | 21 | 17 | |
| | Epicentre: | | | 00 | 57 | 25.0 | 10.8S | 165.4E | 65 km | | USCGS | | |
| 14 | CT | iP | Z | 03 | 39 | 09½ | | | | | | | |
| | | e | Z | | | 31 | | | | | | | |
| | TO | P | Z | 03 | 39 | 10 | | | | | | | |
| | | e | Z | | | 32 | | | | | | | |
| | | e | Z | | | 36 | | | | | | | |
| | | e | Z | | | 40 | | | | | | | |
| | CB | iP | E | 03 | 39 | 10 | w | | | | | | |
| | | eS | E | | | 37 | | | | | | | |
| | | e | E | | | 42 | | | | | | | |
| | WN | eP | N | 03 | 39 | 11 | | | | | | | |
| | | e | N | | | 22 | | | | | | | |
| | | eS | N | | | 38 | | | | | | | |
| | | e | N | | | 48 | | | | | | | |
| | KP | iP | Z | 03 | 39 | 17 | | | | | | | |
| | | e | Z | | | 24 | | | | | | | |
| | | e | Z | | | 30 | | | | | | | |
| | | e | Z | | 40 | 17 | | | | | | | |
| | TU | eP | N | 03 | 39 | 22 | | | | | | | |
| | | eS | N | | | 57 | | | | | | | |
| | KM | eP | X | 03 | 39 | 29 | | | | | | | |
| | | e | X | | | 37 | | | | | | | |
| | | e(S) | X | | 40 | 06 | | | | | | | |
| | GP | P | N | 03 | 39 | 34 | | | | | | | |
| | | e | N | | 40 | 18 | | | | | | | |
| | | e(S) | N | | | 19 | | | | | | | |
| | | e | N | | | 20 | | | | | | | |
| | Epicentre: | | | 03 | 38 | 35 | 39.8S | 173.8E | 200 km | | NZ(C) | | 5.1 NZ |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 14 | ON | eP | E | 08 | 14 | 58 | | | | | | | |
| | | e | E | | 15 | 08 | | | | | | | |
| | | e | E | | | 23 | | | | | | | |
| | | e | E | | 16 | 02 | | | | | | | |
| | | e | E | | | 39 | | | | | | | |
| | KP | eP? | Z | 08 | 15 | 02 | | | | | | | |
| | | i | Z | | | 03½ | | | | | | | |
| | | e | Z | | | 10 | | | | | | | |
| | | e | Z | | | 21 | | | | | | | |
| | | e | Z | | | 36 | | | | | | | |
| | | e | Z | | 16 | 08 | | | | | | | |
| | TU | e(P) | N | 08 | 15 | 02 | | | | | | | |
| | | e | N | | | 14 | | | | | | | |
| | | e | N | | 16 | 11 | | | | | | | |
| | | (S) | N | | | 14 | | | | | | | |
| | | e | N | | | 36 | | | | | | | |
| | CT | iP | Z | 08 | 15 | 14 | | | | | | | u |
| | | e | Z | | | 19 | | | | | | | |
| | | eS | Z | | 16 | 40 | | | | | | | |
| | TO | eP | Z | 08 | 15 | 14 | | | | | | | |
| | | e | Z | | | 21 | | | | | | | |
| | | e | Z | | | 27 | | | | | | | |
| | | e | Z | | | 53 | | | | | | | |
| | | e | Z | | 16 | 39 | | | | | | | |
| | | e | Z | | | 43 | | | | | | | |
| | | e | Z | | | 47 | | | | | | | |
| | WN | e? | N | 08 | 15 | 40 | | | | | | | |
| | | e? | N | | | 42 | | | | | | | |
| | | e | N | | | 58 | | | | | | | |
| | | e | N | | 17 | 17 | | | | | | | |
| | | eS | N | | | 19 | | | | | | | |
| | CB | e | E | 08 | 16 | 19 | | | | | | | |
| | | e | E | | | 24 | | | | | | | |
| | | e | E | | | 57 | | | | | | | |
| | | eS | E | | 17 | 38 | | | | | | | |
| | GP | e | N | 08 | 16 | 19 | | | | | | | |
| | | e | N | | | 35 | | | | | | | |
| | | eS | N | | 18 | 23 | | | | | | | |
| | KM | e | X | 08 | 16 | 30 | | | | | | | |
| | | e | X | | 17 | 01 | | | | | | | |
| | | e | X | | 18 | 15 | | | | | | | |
| | | e(S) | X | | | 18 | | | | | | | |
| | | e | X | | | 26 | | | | | | | |
| | Epicentre: | | | 08 | 13.4 | | | | | | | | |

33S 178½W N NZ(D) 5.8 mB
Additional readings from Brisbane, Spring Valley, Rabaul, Uppsala and Hallett used to determine epicentre.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | RX | e | N | 14 | 25 | 24 | | | | | | | |
| | | e | N | | | 31 | | | | | | | |
| | | e | ZN | | | 38 | | | | | | | |
| | | eL | NE | | 27 | | | | | | | | |
| | | M | E | | 28 | | | | 38 | 13 | | | |
| | | eL | Z | | 28 | | | | | | | | |
| | GP | eP | N | 14 | 26 | 04 | | | | | | | |
| | KM | e | X | 14 | 26 | 31 | | | | | | | |
| | | e | X | | 27 | 56 | | | | | | | |
| | CB | eP | E | 14 | 26 | 34 | | | | | | | |
| | | eL | E | | 30 | | | | | | | | |
| | WN | eP | ZN | 14 | 26 | 45 | | | | | | | |
| | | eS | N | | 29 | 29 | | | | | | | |
| | | eL | N | | 31 | | | | | | | | |
| | | M | ZN | | 32 | | | | 23 | 12 | | | |
| | CT | P | Z | 14 | 27 | 10 | | | | | | | |
| | | e | Z | | 28 | 18 | | | | | | | |
| | TO | eP | Z | 14 | 27 | 10 | | | | | | | |
| | KP | eP | Z | 14 | 27 | 25 | | | | | | | |
| | TU | e | N | 14 | 27 | 28 | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 14 | ON | eP? | E | 14 | 27 | 46 | | | | | | | |
| | | e | E | | | 54 | | | | | | | |
| | SU | eL | N | 14 | 45 | | | | | | | | |
| | Epicentre: | | | 14 | 23 | 25.7 | 51.9S | 160.7E | 77 km | | | USCGS | |
| 15 | SU | eP | N | 00 | 01 | 05 | | | | | | | |
| | | e | N | | | 58 | | | | | | | |
| | | eS | N | | 08 | 40 | | | | | | | |
| | | e(L) | N | | 18 | | | | | | | | |
| | ON | P | E | 00 | 01 | 26 | | | | | | | |
| | | e | E | | 02 | 14 | | | | | | | |
| | CB | eP | E | 00 | 01 | 37 | | | | | | | |
| | | e | E | | | 53 | | | | | | | |
| | | e | E | | 02 | 20 | | | | | | | |
| | | eScS | E | | 11 | 20 | | | | | | | |
| | KP | P | Z | 00 | 01 | 38 | | | | | | | |
| | | e | Z | | 03 | 16 | | | | | | | |
| | RX | e(P) | Z | 00 | 01 | 40 | | | | | | | |
| | | e | ZN | | | 43 | | | | | | | u |
| | | e | Z | | 02 | 11 | | | | | | | |
| | | ePP | NE | | 05½ | | | | | | | | |
| | | S | NE | | 09 | 53 | | | | | | | s |
| | | eScS | NE | | 11 | 25 | | | | | | | s |
| | | eSSS | NE | | 17 | | | | | | | | |
| | | e(L) | N | | 22 | | | | | | | | |
| | KM | eP? | X | 00 | 01 | 42 | | | | | | | |
| | | e | X | | | 47 | | | | | | | |
| | | e | X | | 03 | 58 | | | | | | | |
| | CT | iP | Z | 00 | 01 | 42 | | | | | | | |
| | TO | P | Z | 00 | 01 | 42 | | | | | | | |
| | | e | Z | | | 57 | | | | | | | |
| | WN | iP | ZN | 00 | 01 | 45 | | | | | | | |
| | | e | ZN | | | 49 | | | | | | | |
| | | e | Z | | 02 | 16 | | | | | | | |
| | | e? | N | | 05 | 25 | | | | | | | |
| | | e | N | | 06 | 09 | | | | | | | |
| | | eS | N | | 09 | 55 | | | | | 3 | 8 | |
| | | iScS | N | | 11 | 28 | | | | | 4 | 5 | s |
| | | e | N | | | 55 | | | | | | | |
| | | e(L) | N | | 19 | | | | | | | | |
| | | eL | Z | | 22 | | | | | | | | |
| | | M | Z | | 29 | | | | 10 | 20 | | | |
| | GP | eP | N | 00 | 01 | 46 | | | | | | | n |
| | | e | N | | 02 | 14 | | | | | | | |
| | TU | e(P) | N | 00 | 01 | 50 | | | | | | | |
| | Epicentre: | | | 23 | 51 | 28.6 | 2.9N | 126.5E | 77 km | | | USCGS | |
| 15 | CT | eP | Z | 00 | 30 | 56 | | | | | | | |
| | | e | Z | | 31 | 07 | | | | | | | |
| | TO | eP | Z | 00 | 30 | 57 | | | | | | | |
| | KP | eP | Z | 00 | 30 | 58 | | | | | | | |
| | | e | Z | | 31 | 21 | | | | | | | |
| 15 | KP | P | Z | 16 | 21 | 34 | | | | | | | |
| | | e | Z | | 22 | 02 | | | | | | | |
| | CT | eP | Z | 16 | 21 | 43 | | | | | | | |
| | | e | Z | | 22 | 29 | | | | | | | |
| | TO | eP | Z | 16 | 21 | 44 | | | | | | | |
| 15 | SU | e | N | 18 | 35 | 02 | | | | | | | |
| | | e(S) | N | | 36 | 03 | | | | | | | |
| | ON | eP | E | 18 | 37 | 30 | | | | | | | |
| | KP | P | Z | 18 | 37 | 41 | | | | | | | |
| | | e | Z | | | 44 | | | | | | | |
| | | e | Z | | 39 | 05 | | | | | | | |
| | | e | Z | | | 51 | | | | | | | |
| | CT | e? | Z | 18 | 37 | 52 | | | | | | | |
| | Epicentre: | | | 18 | 33 | 45.9 | 18.1S | 178.5W | 702 km | | | USCGS | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 15 | SU | e(L) | N | 22 | 02 | | | | | | | | |
| 16 | KP | eP | Z | 05 | 17 | 12 | | | | | | | |
| | | e | Z | | | 30 | | | | | | | |
| | CT | e | Z | 05 | 17 | 37 | | | | | | | |
| | Epicentre: | | | 05 | 08 | 50.6 | 4.2S | 139.9E | 194 km | | | USCGS | |
| 16 | SU | eP | N | 08 | 52 | 45 | | | | | | | |
| | | e(S) | N | | | 53 10 | | | | | | | |
| | ON | e(P) | E | 08 | 56 | 53 | | | | | | | |
| | | e | E | | | 57 07 | | | | | | | |
| | KP | eP | Z | 08 | 57 | 10 | | | | | | | |
| | | e | Z | | | 42 | | | | | | | |
| | CT | eP? | Z | 08 | 57 | 20 | | | | | | | |
| | | i | Z | | | 24 | | | | | | | |
| | TO | eP | Z | 08 | 57 | 22 | | | | | | | |
| | | e | Z | | | 45 | | | | | | | |
| | WN | eL | Z | 09 | 06 | | | | | | | | |
| | RX | e(L) | NE | 09 | 06 | | | | | | | | |
| | | eL | NE | | | 08 | | | | | | | |
| | Epicentre: | | | 08 | 52 | 17.3 | 16.3S | 178.0E | 44 km | | | USCGS | |
| 16 | ON | eP | E | 10 | 17 | 43 | | | | | | | |
| | | e | E | | | 54 | | | | | | | |
| | | eS | E | | | 20 00 | | | | | | | |
| | KP | P | Z | 10 | 17 | 57 | | | | | | | |
| | | e | Z | | | 18 03 | | | | | | | |
| | | e | Z | | | 20 41 | | | | | | | |
| | TO | eP | Z | 10 | 18 | 10 | | | | | | | |
| | | e | Z | | | 12 | | | | | | | |
| | | e(S) | Z | | | 20 57 | | | | | | | |
| | CT | eP | Z | 10 | 18 | 10 | | | | | | | |
| | | e(S) | Z | | | 20 46 | | | | | | | |
| | | e | Z | | | 52 | | | | | | | |
| | WN | e(P) | N | 10 | 18 | 31 | | | | | | | |
| | | e(S) | N | | | 21 27 | | | | | | | |
| | | e | N | | | 31 | | | | | | | |
| | CB | eP | E | 10 | 18 | 35 | | | | | | | |
| | | eS | E | | | 21 34 | | | | | | | |
| | GP | eP | N | 10 | 18 | 56 | | | | | | | |
| | | e(S) | N | | | 22 12 | | | | | | | |
| | TU | eS | N | 10 | 20 | 36 | | | | | | | |
| | Epicentre: | | | 10 | 14 | 47 | 24S | 180 | 450 km | | | NZ(D) | |
| | | | | | | | Additional readings from Brisbane and Apia used to determine epicentre. | | | | | | |
| 17 | RX | eL | NE | 02 | 16½ | | | | 3 | 18 | | | |
| | | eL | Z | | 17½ | | | | | | | | |
| 17 | KP | eP | Z | 02 | 17 | 14 | | | | | | | |
| | Epicentre: | | | 02 | 04 | 35.4 | 50.6N | 175.3W | 92 km | | | USCGS | |
| 17 | KP | eP | Z | 06 | 45 | 27 | | | | | | | |
| 17 | CB | eP | E | 10 | 47 | 32 | | | | | | | |
| | KM | eP | X | 10 | 47 | (33) | | | | | | | |
| | ON | eP | E | 10 | 47 | 35 | | | | | | | |
| | GP | P | N | 10 | 47 | 37 | | | | | | | |
| | WN | P | ZN | 10 | 47 | 41 | | | | | | | |
| | CT | P | Z | 10 | 47 | 43 | | | | | | | |
| | KP | iP | Z | 10 | 47 | 43 | | | | | | | |
| | | e | Z | | | 50 15 | | | | | | | |
| | | e | Z | | | 44 | | | | | | | |
| | TO | P | Z | 10 | 47 | 44 | | | | | | | |
| | RX | eSS | N | 11 | 03 | | | | | | | | |
| | | e(L) | N | | | 08 | | | | | | | |
| | Epicentre: | | | 10 | 37 | 14.1 | 6.4S | 109.3E | 295 km | | | USCGS | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 17 | SU | e | N | 12 | 00 | 40 | | | | | | | |
| | | eL | N | | 01 | | | | | | | | |
| | | M | N | | 04 | | | | 20 | 6 | | | |
| | KP | e? | Z | 12 | 04 | 13 | | | | | | | |
| | | e | Z | | | 18 | | | | | | | |
| 17 | KP | P | Z | 12 | 14 | 21 | | | | | | | |
| | CT | eP? | Z | 12 | 14 | 35 | | | | | | | |
| 17 | KP | eP | Z | 13 | 35 | 11 | | | | | | | |
| | Epicentre: | | | 13 | 25 | 09.1 | 11.1N | 141.3E | 23 km | | | USCGS | |
| 17 | KP | P | Z | 16 | 06 | 20 | | | | | | | |
| 17 | SU | e | N | 16 | 07 | 22 | | | | | | | |
| | | e(S) | N | | 08 | 44 | | | | | | | |
| | KP | eP | Z | 16 | 09 | 22 | | | | | | | |
| | | e | Z | | | 26 | | | | | | | |
| | TO | eP | Z | 16 | 09 | 43 | | | | | | | |
| | CT | eP | Z | 16 | 09 | 43 | | | | | | | |
| | ON | e? | E | 16 | 09 | 51 | | | | | | | |
| | | e | E | | 10 | 00 | | | | | | | |
| | WN | eL | ZN | 16 | 17 | | | | | | | | |
| | RX | eL | NE | 16 | 18 | | | | | | | | |
| | Epicentre: | | | 16 | 06 | 04.7 | 22.3S | 172.4E | 245 km | | | USCGS | |
| 17 | KP | P | Z | 17 | 19 | 18 | | | | | | | |
| | | e | Z | | 20 | 34 | | | | | | | |
| | ON | P | E | 17 | 19 | 21 | | | | | | | |
| | CT | eP? | Z | 17 | 19 | 29 | | | | | | | |
| | | e | Z | | | 40 | | | | | | | |
| | | e | Z | | 20 | 58 | | | | | | | |
| | TO | e | Z | 17 | 19 | 38 | | | | | | | |
| | | e | Z | | 20 | 58 | | | | | | | |
| 17 | KP | eP | Z | 18 | 12 | 47 | | | | | | | |
| 17 | SU | eL | N | 20 | 53 | | | | | | | | |
| | KP | P | Z | 20 | 54 | 25 | | | | | | | |
| | | e | Z | | | 34 | | | | | | | |
| | CT | eP | Z | 20 | 54 | 43 | | | | | | | |
| | RX | eL | ZN | 21 | 07 | | | | | | | | |
| 18 | CT | e? | Z | 03 | 20 | 30 | | | | | | | |
| | | e | Z | | 21 | 02 | | | | | | | |
| | KP | eP? | Z | 03 | 20 | 47 | | | | | | | |
| | | e | Z | | | 51 | | | | | | | |
| | | e | Z | | 21 | 01 | | | | | | | |
| | TO | e | Z | 03 | 21 | 03 | | | | | | | |
| | SU | eL | N | 03 | 22 | | | | | | | | |
| | RX | eL | N | 03 | 32 | | | | | | | | |
| 18 | SU | eS | N | 05 | 14 | 16 | | | | | | | |
| | ON | eP | E | 05 | 16 | 13 | | | | | | | |
| | | e | E | | | 37 | | | | | | | |
| | KP | P | Z | 05 | 16 | 32 | u | | | | | | |
| | | e | Z | | | 56 | | | | | | | |
| | CT | P | Z | 05 | 16 | 43 | | | | | | | |
| | | e | Z | | 17 | 08 | | | | | | | |
| | TO | e | Z | 05 | 17 | 12 | | | | | | | |
| | Epicentre: | | | 05 | 11 | 21.9 | 14.8S | 167.6E | 93 km | | | USCGS | |
| 18 | KP | P | Z | 18 | 31 | 28 | | | | | | | |
| | | e | Z | | | 31 | | | | | | | |
| | CT | eP | Z | 18 | 31 | 35 | | | | | | | |
| | TO | eP | Z | 18 | 31 | 36 | | | | | | | |
| | KM | e(P) | X | 18 | 31 | 50 | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 18 | RX | eL | N | 18 | 50 | | | | | | | | | |
| | Epicentre: | | | 18 | 20 | 43.3 | 8.5N | | 125.9E | | 36 km | | USCGS | |
| 18 | SU | eL | N | 20 | 49 | | | | | | | | | |
| 18 | KP | e(P) | Z | 21 | 02 | 11 | | | | | | | | |
| | Epicentre: | | | 20 | 54 | 34.4 | 5.4S | | 152.7E | | 62 km | | USCGS | |
| 19 | SU | e | N | 07 | 02 | 17 | | | | | | | | |
| | | eL | N | | 04 | 28 | | | | | | | | |
| | ON | eP | E | 07 | 03 | 45 | | | | | | | | |
| | KP | P | Z | 07 | 03 | 58 | | | | | | | | |
| | | e | Z | | 04 | 04 | | | | | | | | |
| | | e? | Z | | 08 | 54 | | | | | | | | |
| | CT | e? | Z | 07 | 04 | 13 | | | | | | | | |
| | RX | eL | N | 07 | 14 | | | | | | | | | |
| | Epicentre: | | | 06 | 59 | 52.2 | 21.0S | | 169.4E | | 25 km | | USCGS | |
| 19 | KP | eP | Z | 09 | 44 | 56 | | | | | | | | |
| | CT | e? | Z | 09 | 45 | 13 | | | | | | | | |
| 19 | KP | eP | Z | 13 | 06 | 01 | | | | | | | | |
| | | e | Z | | | 55 | | | | | | | | |
| | Epicentre: | | | 13 | 00 | 09.8 | 10.7S | | 166.9E | | 96 km | | USCGS | |
| 19 | KP | eP | Z | 13 | 35 | 15 | | | | | | | | |
| | | e | Z | | | 23 | | | | | | | | |
| | CT | e? | Z | 13 | 35 | 23 | | | | | | | | |
| | Epicentre: | | | 13 | 22 | 01.3 | 24.3S | | 69.6W | | 17 km | | USCGS | |
| 19 | KP | P | Z | 17 | 59 | 56 | | | | | | | | |
| 19 | KP | eP | Z | 10 | 09 | 36 | | | | | | | | |
| | Epicentre: | | | 18 | 59 | 40.8 | 11.3N | | 141.2E | | 77 km | | USCGS | |
| 19 | KP | eP | Z | 22 | 04 | 41 | | | | | | | | |
| | SU | e | N | 22 | 19 | 40 | | | | | | | | |
| | | eL | N | | 21 | | | | | | | | | |
| | RX | eL | NE | 22 | 32 | | | | | | | | | |
| | Epicentre: | | | 22 | 13 | 58.8 | 12.6S | | 166.8E | | 66 km | | USCGS | |
| 20 | KP | P | Z | 11 | 45 | 36 | | | | | | | | |
| | TO | eP | Z | 11 | 45 | 45 | | | | | | | | |
| | CT | eP | Z | 11 | 45 | 46 | | | | | | | | |
| | WN | eP | N | 11 | 46 | 04 | | | | | | | | |
| | GP | eP | N | 11 | 46 | 29 | | | | | | | | |
| | Epicentre: | | | 11 | 42 | 04.9 | 21.1S | | 179.1W | | 662 km | | USCGS | |
| 20 | KP | eP | Z | 21 | 51 | 22 | | | | | | | | |
| | CT | eP? | Z | 21 | 51 | 39 | | | | | | | | |
| | | e | Z | | | 42 | | | | | | | | |
| | TO | e | Z | 21 | 51 | 42 | | | | | | | | |
| | RX | eL | ZNE | 22 | 12 | | | | | 2 18 | | | | |
| 20 | KP | eP | Z | 22 | 27 | 27 | | | | | | | | |
| | Epicentre: | | | 22 | 20 | 03.7 | 4.3S | | 152.1E | | 154 km | | USCGS | |
| 21 | CT | P | Z | 00 | 06 | 29 | | | | | | | | |
| | Epicentre: | | | 23 | 55 | 07.0 | 3.8S | | 103.1E | | 164 km | | USCGS | |
| 21 | SU | e | N | 06 | 03 | 30 | | | | | | | | |
| | | eS | N | | | 50 | | | | | | | | |
| | KP | eP | Z | 06 | 07 | 23 | | | | | | | | |
| | CT | eP | Z | 06 | 07 | 36 | | | | | | | | |
| 21 | KP | eP | Z | 18 | 37 | 22 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 21 | KP | eP | Z | 21 | 03 | 46 | | | | | | | | |
| | CT | eP | Z | 21 | 03 | 52 | | | | | | | | |
| | Epicentre: | | | 20 | 53 | 51.8 | 11.2N | | 141.3E | | 72 km | | USCGS | |
| 21 | SU | e(S) | N | 21 | 09 | 03 | | | | | | | | |
| | KP | eP | Z | 21 | 13 | 16 | | | | | | | | |
| 21 | RX | eP | ZN | 22 | 33 | 58 | | | | | | | | |
| | | eL | ZN | | 38 | | | | | 12 23 | | | | |
| | GP | e(P) | N | 22 | 34 | 29 | | | | | | | | |
| | WN | eP? | Z | 22 | 34 | 51 | | | | | | | | |
| | | e | Z | | 35 | 11 | | | | | | | | |
| | | eS | N | | 39 | 05 | | | | | | | | |
| | | eL | ZN | | 41 | | | | | | | | | |
| | TO | eP | Z | 22 | 35 | 14 | | | | | | | | |
| | CT | P | Z | 22 | 35 | 14 | | | | | | | | |
| | | e | Z | | | 30 | | | | | | | | |
| | | e | Z | | | 41 | | | | | | | | |
| | KP | eP | Z | 22 | 35 | 23 | | | | | | | | |
| | | e | Z | | | 25 | | | | | | | | |
| | ON | eL | E | 22 | 45 | | | | | | | | | |
| | SU | eL | N | 22 | 53 | | | | | | | | | |
| | Epicentre: | | | 22 | 29 | 54.9 | 62.5S | | 167.1E | | 29 km | | USCGS | |
| 21 | KP | eP | Z | 22 | 45 | 53 | | | | | | | | |
| | | e | Z | | | 57 | | | | | | | | |
| | | e | Z | | 46 | 44 | | | | | | | | |
| | CT | eP | Z | 22 | 46 | 10 | | | | | | | | |
| 21 | KP | P? | Z | 23 | 21 | 50 | | | | | | | | |
| 22 | KP | P | Z | 01 | 25 | 22 | | | | | | | | |
| | TO | eP | Z | 01 | 25 | (33) | | | | | | | | |
| | | e? | Z | | 26 | 29 | | | | | | | | |
| | CT | eP | Z | 01 | 25 | 33 | | | | | | | | |
| | GP | eP | N | 01 | 26 | 05 | | | | | | | | |
| 22 | TO | eP | Z | 02 | 04 | 11 | | | | | | | | |
| | | e | Z | | | 19 | | | | | | | | |
| | | e | Z | | | 24 | | | | | | | | |
| | CT | eP | Z | 02 | 04 | 11 | | | | | | | | |
| | | e | Z | | | 15 | | | | | | | | |
| | | e | Z | | | 18 | | | | | | | | |
| | KP | eP | Z | 02 | 04 | 20 | | | | | | | | |
| | | e | Z | | | 34 | | | | | | | | |
| 22 | ON | iP | E | 02 | 27 | 25 | | | | | | | e | |
| | | e | E | | 28 | 59 | | | | | | | | |
| | | e | E | | 29 | 07 | | | | | | | | |
| | KP | iP | Z | 02 | 27 | 33 | | | | | | | | |
| | | i | Z | | | 35 | | | | | | | | |
| | TO | eP | Z | 02 | 27 | 42 | | | | | | | | |
| | | e | Z | | | 45 | | | | | | | | |
| | | e | Z | | 29 | 21 | | | | | | | | |
| | | e | Z | | | 42 | | | | | | | | |
| | CT | eP | Z | 02 | 27 | 43 | | | | | | | | |
| | | e | Z | | | 45 | | | | | | | | |
| | | e(S) | Z | | 29 | 32 | | | | | | | | |
| | | e | Z | | | 41 | | | | | | | | |
| | WN | e(P) | N | 02 | 28 | 09 | | | | | | | | |
| | | e | N | | 30 | 17 | | | | | | | | |
| | | S | N | | | 19 | | | | | | | | |
| | SU | P | N | 02 | 28 | 15 | | | | | | | | |
| | | e | N | | 29 | 08 | | | | | | | | |
| | | S | N | | 30 | 29 | | | | | | | | |
| | | e | N | | 31 | 49 | | | | | | | | |
| | CB | eP | E | 02 | 28 | 18 | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 22 | | e | E | | 30 | 29 | | | | | | | |
| | | S | E | | | 33 | | | | | | | |
| | GP | eP | N | 02 | 28 | 37 | | | | | | | |
| | | e | N | | | 42 | | | | | | | |
| | | e | N | | 31 | 14 | | | | | | | |
| | | e(S) | N | | | 18 | | | | | | | |
| | KM | eP | X | 02 | 28 | 42 | | | | | | | |
| | | eS | X | | 31 | 06 | | | | | | | |
| | | e | X | | | 14 | | | | | | | |
| | Epicentre: | | | 02 | 25 | 29.3 | 29.8S | | 179.6W | | 379 km | | USCGS |
| 22 | KP | eP? | Z | 03 | 15 | 15 | | | | | | | |
| | | e | Z | | | 20 | | | | | | | |
| | CT | eP? | Z | 03 | 15 | 17 | | | | | | | |
| | | e | Z | | | 20 | | | | | | | |
| | TO | e | Z | 03 | 15 | 20 | | | | | | | |
| | Epicentre: | | | 03 | 02 | 29.2 | 9.8N | | 94.2E | | 60 km | | USCGS |
| 22 | TO | eP | Z | 03 | 50 | 56 | | | | | | | |
| | | e | Z | | 51 | 05 | | | | | | | |
| | CT | eP | Z | 03 | 50 | 56 | | | | | | | |
| | | e | Z | | 51 | 26 | | | | | | | |
| | KP | eP? | Z | 03 | 52 | 10 | | | | | | | |
| | | e? | Z | | | 53 | | | | | | | |
| 22 | KP | eP? | Z | 03 | 58 | 40 | | | | | | | |
| 22 | TO | P | Z | 04 | 33 | 39 | | | | | | | |
| | KP | P | Z | 04 | 33 | 49 | | | | | | | |
| 22 | TO | eP | Z | 04 | 47 | 16 | | | | | | | |
| | CT | P | Z | 04 | 47 | 16 | | | | | | | |
| | KP | P | Z | 04 | 47 | 26 | | | | | | | |
| 22 | TO | eP | Z | 04 | 51 | 50 | | | | | | | |
| | | e | Z | | | 56 | | | | | | | |
| | CT | eP | Z | 04 | 51 | 51 | | | | | | | |
| | KP | P | Z | 04 | 52 | 01 | | | | | | | |
| | | e | Z | | | 21 | | | | | | | |
| | GP | e? | N | 04 | 53 | 46 | | | | | | | |
| 22 | CT | e | Z | 05 | 21 | 12 | | | | | | | |
| | | e | Z | | | 56 | | | | | | | |
| | KP | eP | Z | 05 | 21 | 36 | | | | | | | |
| | | e | Z | | | 40 | | | | | | | |
| 22 | ON | e(P) | E | 06 | 33 | 32 | | | | | | | |
| | | e | E | | | 40 | | | | | | | |
| | | e | E | | | 46 | | | | | | | |
| | KP | eP | Z | 06 | 33 | 34 | | | | | | | |
| | | e | Z | | | 38 | | | | | | | |
| | | e | Z | | | 42 | | | | | | | |
| | | e | Z | | 34 | 05 | | | | | | | |
| | | e | Z | | 38 | 02 | | | | | | | |
| | | e | Z | | 41 | 31 | | | | | | | |
| | | e | Z | | | 46 | | | | | | | |
| | TO | eP | Z | 06 | 33 | 45 | | | | | | | |
| | | e | Z | | | 48 | | | | | | | |
| | | eS | Z | | 35 | 28 | | | | | | | |
| | CT | eP? | Z | 06 | 33 | 46 | | | | | | | |
| | | e | Z | | | 49 | | | | | | | |
| | | e | Z | | 34 | 04 | | | | | | | |
| | | eS | Z | | 35 | 27 | | | | | | | |
| | WN | e | N | 06 | 34 | 15 | | | | | | | |
| | | S | N | | 36 | 16 | | | | | | | |
| | CB | e | E | 06 | 34 | 29 | | | | | | | |
| | | e? | E | | 35 | 04 | | | | | | | |



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| DEC 22 | | eS | E | | 36 | 38 | | | | | | | |
| | SU | eP | N | 06 | 34 | 35 | | | | | | | |
| | | e | N | | 37 | 11 | | | | | | | |
| | | eL | N | | 37½ | | | | | | | | |
| | GP | eP? | N | 06 | 34 | 45 | | | | | | | |
| | | e | N | | | 48 | | | | | | | |
| | | e | N | | | 52 | | | | | | | |
| | | e | N | | 35 | 16 | | | | | | | |
| | | eS | N | | 37 | 21 | | | | | | | |
| | KM | eP? | X | 06 | 34 | 52 | | | | | | | |
| | | e | X | | | 55 | | | | | | | |
| | | eS | X | | 37 | 16 | | | | | | | |
| | RX | eL | NE | 06 | 39 | | | | | | | | |
| | | eL | Z | | 41 | | | | | | | | |
| | | M | ZN | | 43 | | | 5 | 20 | | 8 | 20 | |
| | Epicentre: | | | 06 | 31 | 21.5 | 30.8S | | 177.1W | | 46 km | | USCGS |
| 22 | SU | e | N | 10 | 05 | 39 | | | | | | | |
| | | eS | N | | 06 | 06 | | | | | | | |
| | KP | e(P) | Z | 10 | 09 | 42 | | | | | | | |
| 22 | CT | P | Z | 11 | 01 | 50 | | | | | | | |
| | | i | Z | | | 51 | | | | | | | |
| | | e | Z | | 02 | 12 | | | | | | | |
| | TO | eP | Z | 11 | 01 | 51 | | | | | | | |
| | KP | eP | Z | 11 | 02 | 06 | | | | | | | |
| 22 | KP | eP | Z | 12 | 34 | 12 | | | | | | | |
| | | e | Z | | | 25 | | | | | | | |
| | Epicentre: | | | 12 | 21 | 33.0 | 30.5S | | 71.5W | | 110 km | | USCGS |
| 22 | SU | e | N | 14 | 14 | 48 | | | | | | | |
| | | M | N | | 21 | | | | | | 60 | 10 | |
| | ON | eP? | E | 14 | 14 | 56 | | | | | | | |
| | | e | E | | 15 | 06 | | | | | | | |
| | | e | E | | | 14 | | | | | | | |
| | | eL | E | | 18 | | | | | | | | |
| | KP | eP | Z | 14 | 15 | 00 | | | | | | | |
| | | e | Z | | | 10 | | | | | | | |
| | | e | Z | | | 26 | | | | | | | |
| | TO | eP | Z | 14 | 15 | 16 | | | | | | | |
| | | e(S) | Z | | 17 | 44 | | | | | | | |
| | CT | e | Z | 14 | 15 | 21 | | | | | | | |
| | | e | Z | | | 33 | | | | | | | |
| | | e | Z | | 17 | 40 | | | | | | | |
| | | e | Z | | | 54 | | | | | | | |
| | WN | e | N | 14 | 15 | 42 | | | | | | | |
| | | eS | N | | 18 | 19 | | | | | | | |
| | | eL | N | | 20 | | | | | | | | |
| | CB | e | E | 14 | 16 | 10 | | | | | | | |
| | | eS | E | | 18 | 39 | | | | | | | |
| | KM | e | X | 14 | 16 | 22 | | | | | | | |
| | | e(S) | X | | 19 | 15 | | | | | | | |
| | | e | X | | | 24 | | | | | | | |
| | GP | eP | N | 14 | 16 | 23 | | | | | | | |
| | | eS | N | | 19(21) | | | | | | | | |
| | RX | eL | NE | 14 | 23 | | | | | | | | |
| | | M | NE | | 24 | | | | | | 5 | 22 | 7 20 |
| | Epicentre: | | | 14 | 12 | 18.7 | 27.8S | | 176.1W | | 60 km | | USCGS |
| 22 | KP | eP | Z | 14 | 40 | 51 | | | | | | | |
| | | e | Z | | 41 | 22 | | | | | | | |
| | Epicentre: | | | 14 | 27 | 40.3 | 53.7N | | 168.1W | | 57 km | | USCGS |
| 22 | SU | e(P) | N | 21 | 07 | 42 | | | | | | | |
| | | eS | N | | 11 | 25 | | | | | | | |
| | | e | N | | 14 | | | | | | | | |

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| DEC 22 | ON | eP | E | 21 | 08 | 48 | | | | | | | | | |
| | | e | E | | | 59 | | | | | | | | | |
| | | e | E | | 10 | 18 | | | | | | | | | |
| | KP | iP | Z | 21 | 09 | 05 | u | | | | | | | | |
| | | e | Z | | 10 | 22 | | | | | | | | | |
| | | e? | Z | | 11 | 21 | | | | | | | | | |
| | | e | Z | | | 23 | | | | | | | | | |
| | TO | P | Z | 21 | 09 | 14 | u | | | | | | | | |
| | | e | Z | | 10 | 32 | | | | | | | | | |
| | CT | iP | Z | 21 | 09 | 14 | u | | | | | | | | |
| | | e | Z | | | 17 | | | | | | | | | |
| | | e | Z | | 10 | 32 | | | | | | | | | |
| | | e | Z | | 14 | 33 | | | | | | | | | |
| | CB | eP | E | 21 | 09 | 18 | | | | | | | | | |
| | | eS | E | | 14 | 35 | | | | | | | | | |
| | KM | e(P) | X | 21 | 09 | 25 | | | | | | | | | |
| | | eS | X | | 14 | 46 | | | | | | | | | |
| | GP | P | N | 21 | 09 | 34 | s | | | | | | | | |
| | | e | N | | 11 | 01 | | | | | | | | | |
| | WN | e | N | 21 | 13 | 00 | | | | | | | | | |
| | | iS | N | | 14 | 45 | n | | | | 7 | | 6 | | |
| | RX | e(S) | N | 21 | 15 | 18 | | | | | | | | | |
| | | e | NE | | 17 | 42 | | | | | | | | | |
| | | eL | NE | | 22 | | | | | | | | | | |
| | | M | N | | 23 | | | | | | 4 | | 20 | | |
| | Epicentre: | | | 21 | 02 | 41.1 | | 6.8S | | 155.3E | | 469 km | | USCGS | |
| | 23 KP | eP | Z | 03 | 48 | 46 | | | | | | | | | |
| | 23 SU | e(S) | N | 05 | 57 | 35 | | | | | | | | | |
| | 23 CB | eP | E | 09 | 53 | 11 | | | | | | | | | |
| | KP | eP | Z | 09 | 53 | 18 | | | | | | | | | |
| | | e | Z | | | 20 | | | | | | | | | |
| | | e | Z | | 56 | 06 | | | | | | | | | |
| | TO | P | Z | 09 | 53 | 20 | | | | | | | | | |
| | | e | Z | | | 48 | | | | | | | | | |
| | CT | P | Z | 09 | 53 | 20 | u | | | | | | | | |
| | | e | Z | | | 27 | | | | | | | | | |
| | | e | Z | | | 37 | | | | | | | | | |
| | Epicentre: | | | 09 | 41 | 48.4 | | 3.3S | | 101.9E | | 134 km | | USCGS | |
| | 23 KP | P | Z | 10 | 02 | 27 | | | | | | | | | |
| | CT | eP | Z | 10 | 02 | 38 | | | | | | | | | |
| | | e | Z | | 03 | 58 | | | | | | | | | |
| | ON | eP | E | 10 | 02 | 39 | | | | | | | | | |
| | GP | e(S) | N | 10 | 05 | 20 | | | | | | | | | |
| | 23 KP | P | Z | 10 | 58 | 40 | | | | | | | | | |
| | | e | Z | | | 44 | | | | | | | | | |
| | TO | eP | Z | 10 | 58 | 48 | | | | | | | | | |
| | CT | eP | Z | 10 | 58 | 49 | | | | | | | | | |
| | 23 KP | eP | Z | 15 | 57 | 44 | | | | | | | | | |
| | Epicentre: | | | 15 | 47 | 04.9 | | 8.8N | | 125.7E | | 120 km | | USCGS | |
| | 23 KP | eP | Z | 16 | 20 | 17 | | | | | | | | | |
| | TO | eP | Z | 16 | 20 | 33 | | | | | | | | | |
| | CT | eP | Z | 16 | 20 | 33 | | | | | | | | | |
| | Epicentre: | | | 16 | 14 | 22.0 | | 10.6S | | 164.3E | | 82 km | | USCGS | |
| | 23 ON | eP | E | 19 | 09 | 26 | | | | | | | | | |
| | | e | E | | | 49 | | | | | | | | | |
| | KP | eP | Z | 19 | 09 | 26 | | | | | | | | | |
| | | e | Z | | | 45 | | | | | | | | | |
| | SU | e(P) | N | 19 | 09 | 35 | | | | | | | | | |
| | | e(L) | N | | 13 | | | | | | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 23 | CT | e(P) | Z | 19 | 09 | 47 | | | | | | | | | |
| | | e | Z | | 10 | 04 | | | | | | | | | |
| | | e | Z | | 12 | 20 | | | | | | | | | |
| | TO | e | Z | 19 | 09 | 50 | | | | | | | | | |
| | | e | Z | | 12 | 11 | | | | | | | | | |
| | WN | e | N | 19 | 10 | 28 | | | | | | | | | |
| | | eS | N | | 12 | 43 | | | | | | | | | |
| | GP | e(P) | N | 19 | 10 | 50 | | | | | | | | | |
| | | e | N | | 11 | 03 | | | | | | | | | |
| | | e(S) | N | | 13 | 48 | | | | | | | | | |
| | | e | N | | | 55 | | | | | | | | | |
| | CB | eS | E | 19 | 13 | 03 | | | | | | | | | |
| | KM | e? | X | 19 | 14 | 15 | | | | | | | | | |
| | RX | e(L) | NE | 19 | 18 | | | | | | | | 2 | 20 | |
| | Epicentre: | | | 19 | 07 | 06.1 | | 27.8S | | 177.2W | | 261 km | | USCGS | |
| | 23 KP | eP? | Z | 19 | 42 | 18 | | | | | | | | | |
| | | e | Z | | | 27 | | | | | | | | | |
| | CT | eP? | Z | 19 | 42 | 30 | | | | | | | | | |
| | Epicentre: | | | 19 | 30 | 41.6 | | 15.6N | | 121.7E | | 49 km | | USCGS | |
| | 24 TO | e? | Z | 16 | 47 | 28 | | | | | | | | | |
| | CT | e? | Z | 16 | 47 | 35 | | | | | | | | | |
| | GP | e? | N | 16 | 47 | 40 | | | | | | | | | |
| | KP | eP | Z | 16 | 47 | 47 | | | | | | | | | |
| | Epicentre: | | | 16 | 42 | 14.7 | | 38.4S | | 143.6E | | 77 km | | USCGS | |
| | 24 SU | eL | N | 21 | 10 | | | | | | | | | | |
| | 25 KP | e(P) | Z | 05 | 32 | 25 | | | | | | | | | |
| | Epicentre: | | | 05 | 21 | 03.1 | | 29.0N | | 142.8E | | 25 km | | USCGS | |
| | 26 SU | e(S) | N | 00 | 58 | 11 | | | | | | | | | |
| | | e | N | | | 28 | | | | | | | | | |
| | | eL | N | | 59 | 40 | | | | | | | | | |
| | | M | N | 01 | 03 | | | | | | | | 85 | 8 | |
| | ON | eP | E | 00 | 59 | 33 | | | | | | | | | |
| | | e | E | | | 42 | | | | | | | | | |
| | | e | E | | 01 | 00 | | | | | | | | | |
| | | eL | E | | 03 | | | | | | | | | | |
| | KP | eP? | Z | 00 | 59 | 46 | | | | | | | | | |
| | | e | Z | | | 53 | | | | | | | | | |
| | | e | Z | 01 | 00 | 00 | | | | | | | | | |
| | TO | eP? | Z | 01 | 00 | 03 | | | | | | | | | |
| | | e | Z | | | 14 | | | | | | | | | |
| | CT | eP? | Z | 01 | 00 | 03 | | | | | | | | | |
| | | e? | Z | | | 10 | | | | | | | | | |
| | | e | Z | | | 14 | | | | | | | | | |
| | | e | Z | | | 18 | | | | | | | | | |
| | KM | e | X | 01 | 01 | 37 | | | | | | | | | |
| | TU | e(S) | N | 01 | 03 | 00 | | | | | | | | | |
| | WN | e(S) | N | 01 | 03 | 40 | | | | | | | | | |
| | | eL | ZN | | 06 | | | | | | | | | | |
| | | M | ZN | | 07 | | | | | | 12 | | 19 | | |
| | GP | e(S) | N | 01 | 04 | 42 | | | | | | | 11 | 19 | |
| | RX | eL | ZNE | 01 | 08 | | | | | | | | | | |
| | | M | N | | 10 | | | | | | | | 10 | 16 | |
| | Epicentre: | | | 00 | 56 | 16.6 | | 23.7S | | 176.9W | | 59 km | | USCGS | |
| | 26 KP | iP | Z | 01 | 56 | 55 | | | | | | | | | |
| | TO | P | Z | 01 | 57 | 00 | | | | | | | | | |
| | CT | P | Z | 01 | 57 | 00 | | | | | | | | | |
| | Epicentre: | | | 01 | 44 | 48.7 | | 33.8N | | 136.2E | | 109 km | | USCGS | |
| | 26 GP | eP | N | 04 | 44 | 29 | | | | | | | | | |
| | KM | eP | X | 04 | 44 | 38 | | | | | | | | | |
| | WN | e? | N | 04 | 44 | 39 | | | | | | | | | |
| | | e | ZN | | | 43 | | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 26 | | S | N | | 54 | 35 | | | 4 | 4 | | | | |
| | CB | eP | E | 04 | 44 | 44 | | | | | | | | |
| | TO | P | Z | 04 | 44 | 50 | | | | | | | | |
| | | e | Z | | 55 | 03 | | | | | | | | |
| | CT | P | Z | 04 | 44 | 50 | | | | | | | | |
| | | e | Z | | 55 | 00 | | | | | | | | |
| | | e | Z | | | 03 | | | | | | | | |
| | KP | P | Z | 04 | 44 | 56 | | | | | | | | |
| | TU | eP | N | 04 | 44 | 57 | | | | | | | | |
| | ON | P | E | 04 | 45 | 12 | | | | | | | | |
| | | e | E | | | 39 | | | | | | | | |
| | RX | eS | NE | 04 | 54 | 00 | | | | | | | | |
| | | eL | N | 05 | 14 | | | | 2 | 19 | | | | |
| | Epicentre: | | | 04 | 32 | 30.1 | 57.4S | 26.2W | 25 | km | | | | USCGS |
| 26 | RX | eL | NE | 09 | 27 | | | | | | 3 | 15 | | |
| | | eL | Z | | 28 | | | | | | | | | |
| 26 | RX | e | ZN | 13 | 44 | 35 | | | | | | | | |
| | | e | N | | 45 | 19 | | | | | | | | |
| | | e(S) | NE | | | 35 | | | | | | | | |
| | | e | Z | | | 40 | | | | | | | | |
| | | eL | NE | | | 48 | | | 14 | 19 | | | | |
| | | eL | Z | | 46 | 20 | | | | | | | | |
| | GP | eP | N | 13 | 45 | 15 | | | | | | | | |
| | | e | N | | 46 | 52 | | | | | | | | |
| | | eS | N | | | 55 | | | | | | | | |
| | KM | eP? | X | 13 | 45 | 22 | | | | | | | | |
| | | e | X | | | 26 | | | | | | | | |
| | | e | X | | | 33 | | | | | | | | |
| | | eS | X | | 47 | 04 | | | | | | | | |
| | CB | eP? | E | 13 | 45 | 45 | | | | | | | | |
| | | e | E | | | 50 | | | | | | | | |
| | | e | E | | | 55 | | | | | | | | |
| | | eS | E | | 47 | 39 | | | | | | | | |
| | TO | eP | Z | 13 | 46 | 23 | | | | | | | | |
| | KP | eP | Z | 13 | 46 | 34 | | | | | | | | |
| | | e | Z | | | 43 | | | | | | | | |
| | ON | eP | E | 13 | 46 | 55 | | | | | | | | |
| | TU | e | N | 13 | 47 | 00 | | | | | | | | |
| | WN | eL | ZN | 13 | 50 | | | | | | | | | |
| | Epicentre: | | | 13 | 43 | 12.9 | 49.4S | 164.3E | 37 | km | | | | USCGS |
| 27 | RX | eL | N | 11 | 25 | | | | | | | | | |
| | | M | N | | 30 | | | | 1 | 20 | | | | |
| | | M | N | | 35 | | | | 1 | 19 | | | | |
| | Epicentre: | | | 10 | 35 | 28.0 | 41.3N | 124.9W | 30 | km | | | | USCGS |
| 28 | KP | eP | Z | 02 | 01 | 44 | | | | | | | | |
| 28 | SU | eL | N | 09 | 26 | | | | | | | | | |
| | | M | N | | 27 | | | | 20 | 10 | | | | |
| | KP | e? | Z | 09 | 27 | 53 | | | | | | | | |
| | | e | Z | | 28 | 02 | | | | | | | | |
| | RX | eL | NE | 09 | 41 | | | | | | | | | |
| 28 | KP | e? | Z | 18 | 11 | 51 | | | | | | | | |
| | | e | Z | | | 58 | | | | | | | | |
| 29 | SU | eP | N | 06 | 03 | 55 | | | | | | | | |
| | | e | N | | 05 | 20 | | | | | | | | |
| | | M | N | | 09 | | | | 150 | 7 | | | | |
| | ON | e(P) | E | 06 | 06 | 40 | | | | | | | | |
| | | eL | E | | 14 | | | | | | | | | |
| | KP | eP? | Z | 06 | 06 | 52 | | | | | | | | |
| | | e | Z | | | 57 | | | | | | | | |
| | | e | Z | | 07 | 34 | | | | | | | | |
| | WN | eP? | ZN | 06 | 07 | 26 | | | | | | | | |



| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 29 | | e | Z | | | 28 | | | | | | | | |
| | | e | N | | 08 | 10 | | | | | | | | |
| | | eS | N | | 12 | 20 | | | | | 4 | 5 | | |
| | | eL | ZN | | 15 | | | | | | | | | |
| | RX | e(S) | N | 06 | 13 | 18 | | | | | | | | |
| | | eL | NE | | 16 | | | | | | | | | |
| | | eL | Z | | 18 | | | | | | | | | |
| | Epicentre: | | | 06 | 02 | 13.9 | 18.4S | 174.7W | 104 | km | | | | USCGS |
| 29 | RX | e(P) | Z | 10 | 48 | 11 | | | | | | | | |
| | | eS | E | | 57 | 52 | | | | | | | 3 | 25 |
| | | i | N | | 58 | 20 | n | | | | 7 | 30 | | |
| | | eSS | E | 11 | 02 | 32 | | | | | | | 2 | 16 |
| | | eLq | N | | 07½ | | | | | | | | | |
| | | eLr | ZNE | | 10 | | | | | | | | | |
| | | M | ZNE | | 12 | | | | | | | | | |
| | | | | | | | | 7 20 | | 3 20 | | 3 20 | | |
| | TO | eP | Z | 10 | 48 | 19 | | | | | | | | |
| | CT | eP | Z | 10 | 48 | 19 | | | | | | | | |
| | CB | eP? | E | 10 | 48 | 20 | | | | | | | | |
| | | e | E | | | 23 | | | | | | | | |
| | KP | P | Z | 10 | 48 | 24 | | | | | | | | |
| | | e | Z | | | 38 | | | | | | | | |
| | KM | e | X | 10 | 48 | 44 | | | | | | | | |
| | WN | eL | ZN | 11 | 11 | | | | | | | | | |
| | | M | ZN | | 12 | | | | | | | | | |
| | | | | | | | | 4 22 | | 7 22 | | | | |
| | SU | eL | N | 11 | 17 | | | | | | | | | |
| | Epicentre: | | | 10 | 36 | 40.0 | 44.8S | 75.6W | 30 | km | | | | USCGS |
| 29 | KP | eP | Z | 13 | 50 | 23 | | | | | | | | |
| | | e | Z | 13 | 50 | 35 | | | | | | | | |
| | | e | Z | | 52 | 18 | | | | | | | | |
| | CB | P | E | 13 | 50 | 30 | | | | | | | | |
| | CT | P | Z | 13 | 50 | 31 | | | | | | | | |
| | TO | P | Z | 13 | 50 | 31 | | | | | | | | |
| | | e | Z | | 55 | | | | | | | | | |
| | KM | e(P) | X | 13 | 50 | 40 | | | | | | | | |
| | GP | eP? | N | 13 | 50 | 45 | | | | | | | | |
| | | e | N | | 48 | | | | | | | | | |
| | Epicentre: | | | 13 | 42 | 34.6 | 5.5S | 146.1E | 57 | km | | | | USCGS |
| 29 | RX | eL | NE | 21 | 54 | | | | | | | | 1 | 14 |
| 30 | KP | e? | Z | 04 | 54 | 23 | | | | | | | | |
| | | e | Z | | 55 | 45 | | | | | | | | |
| 30 | SU | e(L) | N | 15 | 50 | 26 | | | | | 5 | 10 | | |
| | | eL | N | 16 | 01 | | | | | | | | | |
| | | M | N | | 02 | | | | | | 12 | 10 | | |
| | RX | eL | N | 16 | 16 | | | | | | 1 | 17 | | |
| 30 | KP | eP? | Z | 17 | 09 | 27 | | | | | | | | |
| 31 | KP | e? | Z | 00 | 10 | 23 | | | | | | | | |
| | | e | Z | | | 33 | | | | | | | | |
| | | e? | Z | | 12 | 37 | | | | | | | | |
| | CT | e? | Z | 00 | 10 | 45 | | | | | | | | |
| | | e | Z | | | 56 | | | | | | | | |
| | GP | e? | N | 00 | 11 | 36 | | | | | | | | |
| | | eS | N | | 14 | 15 | | | | | | | | |
| | TU | eS | N | 00 | 12 | 04 | | | | | | | | |
| | WN | eS | N | 00 | 13 | 13 | | | | | | | | |
| | CB | e(S) | E | 00 | 13 | 48 | | | | | | | | |
| | Epicentre: | | | 00 | 08 | 12.1 | 29.9S | 177.9W | 70 | km | | | | USCGS |
| 31 | CB | eP | E | 16 | 15 | 25 | | | | | | | | |
| | KP | eP | Z | 16 | 15 | 26 | | | | | | | | |
| | | e | Z | | | 55 | | | | | | | | |

| Date | Stn | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te | Mag. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 31 | GP | e(P) | N | 16 | 15 | 36 | | | | | | | |
| | Epicentre: | | | 16 | 05 | 22.1 | 7.8S | 120.1E | 25 km | | | | USCGS |
| 31 | WN | P | Z | 18 | 19 | 42 | | | | | | | |
| | | e | N | | 20 | 00 | | | | | | | |
| | GP | e(P) | N | 18 | 19 | 42 | | | | | | | |
| | CT | P | Z | 18 | 19 | 48 | | | | | | | |
| | TO | eP | Z | 18 | 19 | 48 | | | | | | | |
| | KP | eP | Z | 18 | 19 | 52 | | | | | | | |
| | RX | eSS | E | 18 | 34.1 | | | | | | | | |
| | | e(L) | N | | 40 | | | | | | | | |
| | Epicentre: | | | 18 | 08 | 12.3 | 43.9S | 75.0W | 92 km | | | | USCGS |
| 31 | KP | e? | Z | 20 | 08 | 06 | | | | | | | |
| | CT | eP | Z | 20 | 08 | 17 | | | | | | | |
| | | e? | Z | | | 56 | | | | | | | |
| | Epicentre: | | | 19 | 59 | 08.3 | 6.6S | 129.1E | 112 km | | | | USCGS |
| 31 | KP | P | Z | 21 | 13 | 22 | | | | | | | |
| | CT | eP | Z | 21 | 13 | 30 | | | | | | | |
| | KM | e | X | 21 | 13 | 42 | | | | | | | |
| | GP | eP | N | 21 | 13 | 49 | | | | | | | |
| | Epicentre: | | | 21 | 06 | 01.7 | 5.0S | 151.4E | 138 km | | | | USCGS |
| 31 | KP | eP | Z | 21 | 23 | 39 | | | | | | | |
| | | e | Z | | | 41 | | | | | | | |
| | TO | e | Z | 21 | 23 | 52 | | | | | | | |
| | | e | Z | | 25 | 39 | | | | | | | |
| | CT | e? | Z | 21 | 23 | 53 | | | | | | | |
| | TU | eS | N | 21 | 25 | 20 | | | | | | | |
| | | e | N | | | 24 | | | | | | | |
| | CB | eS | E | 21 | 26 | 34 | | | | | | | |
| | KM | eS | X | 21 | 27 | 16 | | | | | | | |
| | GP | eS | N | 21 | 27 | 20 | | | | | | | |
| | Epicentre: | | | 21 | 21.5± | | Kermadec region | | | | | | NZ |

## AFIAMALU AND APIA

Readings from the station at Apia are given only during those periods when Afiamalu was not operating. Amplitudes given are in millimetres, measured directly from the photographic paper records.

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 2 | AF | P | Z | 19 | 36 | 58 | | | | | |
| | | S | Z | | 37 | 20 | | | | | |
| 2 | AF | P | Z | 21 | 24 | 22 | | | | | |
| | | S | Z | | 25 | 13 | | | | | |
| 2 | AF | (P) | Z | 21 | 30 | 05 | | | | | |
| 3 | AF | iP | Z | 10 | 26 | 44 | u | | | | |
| | | S | Z | | 27 | 30 | | | | | |
| 3 | AF | iP | Z | 20 | 06 | 47 | u | | | | |
| | | iS | Z | | 07 | 08 | | | | | |
| 4 | AF | iP | Z | 04 | 08 | 29 | d? | 0.9 | 1 | | |
| | | S? | Z | | 10 | 05 | | | | | |
| 4 | AF | P | Z | 10 | 26 | 46 | | 0.9 | 1 | | |
| | | S | Z | | 28 | 14 | | 0.9 | 1 | | |
| 4 | AF | iP | Z | 11 | 55 | 47 | u | 1.0 | 1 | | |
| | | i(S) | Z | | 56 | 12 | | 4 | 1 | | |
| 5 | AF | iP | Z | 02 | 49 | 39 | u | 1.0 | 1 | | |
| | | iS | Z | | 50 | 03 | | 1.5 | 1 | | |
| | | T | Z | | 51 | 55 | | 4.7 | 3 | | |
| 5 | AF | iP | Z | 09 | 32 | 42 | u | 9 | 1 | | |
| | | iS | Z | | 33 | 02 | | 32± | 1 | | |
| 6 | AF | iP | Z | 19 | 54 | 24 | d | | | | |
| | | i | Z | | | 28 | d | | | | |
| | | iS | Z | | 55 | 46 | | | | | |
| 7 | AF | iP | Z | 10 | 52 | 01 | d | 0.8 | 1 | | |
| | | iS | Z | | | (32) | | 2 | 1 | | |
| | | T | Z | | 54 | 30 | | 2.8 | 2 | | |
| 7 | AF | eL | Z | 14 | 21 | .0 | | 1 | 20 | | |
| 8 | AF | iP | Z | 07 | 45 | 01 | u | 0.8 | 1 | | |
| | | iS | Z | | | (42) | | 2.7 | 2 | | |
| | | T | Z | | 48 | 57 | | 17 | 3 | | |
| 8 | AF | i(P) | Z | 13 | 08 | 10 | d | | | | |
| | | iS | Z | | 09 | 56 | d? | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 9 | AF | P | Z | 00 | 40 | 25 | | | | | |
| | | iS | Z | | 41 | 20 | | 0.6 | 1 | | |
| 9 | AF | iP | Z | 01 | 59 | 06 | d | 1.1 | 1 | | |
| | | iS | Z | 02 | 00 | 16 | | 1.0 | 1 | | |
| 9 | AF | iP | Z | 04 | 25 | 02 | d | | | | |
| | | S | Z | | 28 | 16 | | | | | |
| 9 | AF | iP | Z | 04 | 47 | 58 | u | | | | |
| | | iS | Z | | 49 | 27 | d | | | | |
| 9 | AF | i(PKP) | Z | 07 | 42 | 00 | d | | | | |
| 9 | AF | iP | Z | 18 | 02 | 39 | u | | | | |
| | | iS | Z | | 04 | 00 | | | | | |
| | | e(L) | Z | | 04.3 | | | 1.5 | 8 | | |
| | | eT | Z | | 10 | 19 | | | | | |
| 12 | AF | iP | Z | 07 | 58 | 16 | d | 1.8 | 1 | | |
| | | iS | Z | 08 | 00 | 52 | u? | 0.9 | 1 | | |
| 12 | AF | iP | Z | 11 | 14 | 20 | d | 1.1 | 1 | | |
| | | iS | Z | | | 50 | | 3 | 1 | | |
| 12 | AF | i(P) | Z | 22 | 23 | 28 | d | | | | |
| | | iP | Z | | | 30 | | 1.1 | 2 | | |
| | | iS | Z | | 24 | 11 | | 3 | 4 | | |
| | | iT | Z | | 27 | 08 | | 12.9 | 4 | | |
| 13 | AF | P | Z | 07 | 35 | 11 | | | | | |
| 13 | AF | P | Z | 15 | 53 | 41 | | | | | |
| | | (pP) | Z | | 54 | 15 | | | | | |
| | | e | Z | | 57 | 07 | | | | | |
| | | PP | Z | | 58 | 00 | | 2 | 7 | | |
| | | S | Z | 16 | 04 | 14 | | 1.6 | 14 | | |
| | | SP | Z | | 05 | 59 | | 2.7 | 12 | | |
| | | PS | Z | | 06 | 12 | | 10.5 | 21 | | |
| | | SS | Z | | 11 | 34 | | 3 | 12 | | |
| | | (sSS) | Z | | 13.3 | | | 2 | 14 | | |
| | | eL | Z | | 18.4 | | | 2.5 | 25 | | |
| | | L | Z | | 22.6 | | | 5 | 35 | | |
| 15 | AF | eP | Z | 09 | 43 | 27 | | | | | |
| | | (S) | Z | | 54 | 15 | | 1.6 | 8 | | |
| | | i(sS) | Z | | 55 | 19 | u? | 1.6 | 4 | | |
| | | SS | Z | 10 | 00 | 55 | | 1.2 | 21 | | |
| | | Lr | Z | | 12.7 | | | 3.5 | 18 | | |
| 16 | AF | iP | Z | 12 | 33 | 02 | d | 0.7 | 1 | | |
| | | iS | Z | | 34 | 40 | u | 5.5 | 2 | | |
| 16 | AF | P | Z | 15 | 36 | 55 | | | | | |
| 16 | AF | iP | Z | 18 | 43 | 11 | d | | | | |
| 16 | AF | P | Z | 21 | 01 | 21 | | | | | |
| 16 | AF | P | Z | 21 | 47 | 27 | | | | | |
| | | eL | Z | | 54.6 | | | 1.5 | 20 | | |
| 16 | AF | iP | Z | 22 | 28 | 18 | d | 0.6 | 1 | | |
| | | iS | Z | | | 41 | | 2 | 1 | | |
| 18 | AP | P | NE | 00 | 15 | 22 | | | | | |
| | | iS | NE | | | 53 | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 19 | AP | P | NE | 09 | 17 | 48 | | | | | |
| | | S | NE | | 19 | 55 | | | | | |
| 20 | AF | P | Z | 02 | 51 | 39 | | | | | |
| | | S | Z | | 53 | 00 | | | | | |
| 20 | AF | iP | Z | 04 | 54 | 32 | u | | | | |
| | | iS | Z | | | 58 | | | | | |
| 21 | AF | iP | Z | 10 | 44 | 33 | d | | | | |
| | | S | Z | | 45 | 33 | | | | | |
| 21 | AF | iP | Z | 17 | 44 | 34 | u | | | | |
| 22 | AF | iP | Z | 11 | 54 | 01 | d | | | | |
| | | iS | Z | | | 42 | | | | | |
| 23 | AF | P | Z | 04 | 51 | 13 | | | | | |
| 23 | AF | iP | Z | 06 | 25 | 44 | d | | | | |
| | | iS | Z | | 26 | 57 | | | | | |
| 23 | AF | P | Z | 07 | 41 | 33 | | | | | |
| 23 | AF | iP | Z | 09 | 38 | 48 | d | | | | |
| | | iS | Z | | 39 | (08) | | | | | |
| | | T | Z | | 41 | (08) | | | | | |
| 23 | AF | iP | Z | 15 | 35 | 10 | d | | | | |
| 23 | AF | P | Z | 18 | 06 | 46 | | | | | |
| 23 | AF | P | Z | 20 | 36 | 47 | | | | | |
| | | iS | Z | | 37 | 09 | | | | | |
| | | T | Z | | 38 | 36 | | | | | |
| 24 | AF | iP | Z | 04 | 23 | 38 | d | | | | |
| | | L | Z | | 25.4 | | | | | | |
| | | M | Z | | 26.5 | | | | | | |
| 24 | AF | iP | Z | 07 | 15 | 07 | d | | | | |
| | | iS | Z | | | 56 | | | | | |
| 24 | AF | iP | Z | 09 | 20 | 21 | u | | | | |
| | | S | Z | | 22 | 12 | | | | | |
| 25 | AF | iP | Z | 07 | 28 | 00 | u | | | | |
| | | iS | Z | | | 22 | | | | | |
| 25 | AF | iP | Z | 10 | 59 | 31 | u | | | | |
| | | S | Z | 11 | 00 | 37 | | | | | |
| 25 | AF | P | Z | 16 | 31 | 24 | | | | | |
| | | eL | Z | | 33.5 | | | | | | |
| | | M | Z | | 39 | | | | | | |
| 25 | AF | iP | Z | 23 | 46 | 39 | u | | | | |
| | | iS | Z | | 47 | 05 | | | | | |
| 26 | AF | iP | Z | 04 | 11 | 27 | u | | | | |
| | | S | Z | | 13 | 02 | | | | | |
| 26 | AF | P | Z | 06 | 08 | 02 | | | | | |
| | | S | Z | | 09 | 03 | | | | | |
| 26 | AF | (P) | Z | 22 | 25 | 26 | | | | | |
| | | i | Z | | | 29 | | | | | |
| | | S | Z | | 28 | 25 | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN 27 | AF | iP | Z | 10 | 11 | 46 | d | | | | |
| | | S | Z | | 15 | 00 | | | | | |
| 27 | AF | iP | Z | 18 | 26 | 25 | d | | | | |
| | | S | Z | | 27 | 16 | | | | | |
| 28 | AF | iP | Z | 02 | 15 | 50 | u | | | | |
| | | iS | Z | | | 10 | | | | | |
| 28 | AF | P | Z | 08 | 03 | 31 | u | | | | |
| 28 | AF | P | Z | 15 | 24 | 09 | | | | | |
| | | iS | Z | | 25 | 46 | d | | | | |
| 29 | AF | iP | ZN | 04 | 05 | 52 | d? | 0.6 | 1 | | |
| | | iS | ZN | | 06 | 16 | | 2.7 | 1 | 2.1 | 1 |
| 29 | AF | P? | Z | 16 | 09 | 35 | | | | | |
| | | (P) | Z | | | 38 | | | | | |
| | | S | ZN | | 11 | 07 | | 0.6 | 1 | 0.8 | 1 |
| 29 | AF | eP | ZN | 21 | 21 | 00 | | 0.5 | 1 | 0.7 | 1 |
| | | S | ZN | | | 28 | | 1.3 | 1 | 1 | 1 |
| | | T | ZN | | 22 | 50 | | 1 | 4 | 1 | 2 |
| 30 | AF | iP | Z | 03 | 43 | 45 | u | 0.5 | 1 | | |
| | | iS | ZN | | 44 | 05 | | 1.8 | 1 | 1.1 | 1 |
| 30 | AF | iP | ZN | 04 | 15 | 13 | d | 1.1 | 1 | 0.8 | 1 |
| | | S | ZN | | 18 | 26 | | 0.5 | 1 | 0.5 | 1 |
| 30 | AF | P | Z | 10 | 54 | 22 | | 0.7 | 1 | | |
| | | S | ZN | | 55 | 53 | | 1.2 | 1 | 1.6 | 1 |
| 31 | AF | P | Z | 04 | 07 | 43 | | | | | |
| | | i | Z | | 08 | 37 | u | | | | |
| 31 | AF | iP | ZN | 19 | 04 | 01 | u | 0.6 | 1 | 1 | 1 |
| | | iS | ZN | | | 21 | | 0.6 | 1 | 1.5 | 1 |
| 31 | AF | iP | ZN | 19 | 08 | 03 | u | 7.2 | 1 | | |
| | | iS | ZN | | | (30) | | 18.5 | 1 | | |
| 31 | AF | iP | Z | 22 | 26 | 19 | d | | | | |
| | | iS | Z | | 28 | 07 | d? | | | | |
| | | T | Z | | 36 | 40 | | | | | |
| FEB 1 | AF | i(P) | Z | 07 | 42 | 13 | | | | | |
| 2 | AF | P | ZN | 06 | 34 | 35 | | 0.6 | 1 | 0.5 | 1 |
| | | S | ZN | | 38 | 12 | | 0.5 | 1 | 0.5 | 1 |
| 2 | AF | P | Z | 06 | 53 | 55 | | | | | |
| | | S | ZN | | 55 | 18 | | 0.6 | 1 | 0.5 | 1 |
| 3 | AF | P | ZN | 02 | 26 | 30 | | | | | |
| | | i | ZN | | | 41 | | | | 1.1 | 1 |
| | | S | ZN | | 30 | 53 | | | | | |
| 3 | AF | P | Z | 02 | 51 | 28 | | | | | |
| | | (P) | ZN | | 52 | 25 | | | | 0.5 | 1 |
| | | S | ZN | | | 58 | | | | 0.9 | 1 |
| 3 | AF | P | ZN | 10 | 45 | 08 | | | | | |
| 3 | AF | P | Z | 13 | 35 | 10 | | | | | |
| 3 | AF | P | Z | 13 | 49 | 08 | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 3 | AF | iP | ZN | 14 | 29 | 55 | u | 3 | 8 | | |
| | | iS | ZN | | 34 | 30 | d | 4.5 | 8 | | |
| 3 | AF | eP? | Z | 17 | 57 | 35 | | | | | |
| 4 | AF | P | ZN | 03 | 53 | 31 | | | | 0.7 | 1 |
| | | PP | ZN | | 54 | 20 | | | | 1.2 | 2 |
| | | S | N | | 58 | 56 | | | | 2.5 | 28 |
| | | L | N | 04 | (02) | | | | | 7± | 14 |
| 4 | AF | iP | Z | 07 | 38 | 17 | u | 1.4 | 1 | | |
| | | iS | Z | | | 41 | | 3.5 | 1 | | |
| 4 | AF | P | Z | 17 | 01 | 35 | | 0.7 | 2 | | |
| | | eL | Z | | 22 | .0 | | 1.3 | 20 | | |
| 4 | AF | iP | Z | 20 | 40 | 14 | d | 1.5 | 1 | | |
| | | S | Z | | 41 | 43 | | 1.3 | 2 | | |
| 4 | AF | P | Z | 21 | 08 | 56 | | | | | |
| 5 | AF | P? | Z | 05 | 47 | 03 | | | | | |
| 5 | AF | P | ZN | 06 | 31 | 14 | | | | | |
| | | S | ZN | | 32 | 38 | | 0.6 | 1 | 0.5 | 1 |
| 5 | AF | iP | ZN | 08 | 25 | 33 | u | 5.7 | 1 | 0.9 | 1 |
| | | iS | ZN | | | 49 | s? | 15.5 | 1 | 8.5 | 1 |
| 6 | AF | iP | ZN | 01 | 31 | 19 | d | | | | |
| | | S | ZN | | 33 | 08 | | | | | |
| 6 | AF | (P) | ZN | 02 | 00 | 56 | | 1.8 | 1 | 0.6 | 1 |
| | | (S) | ZN | | 01 | 46 | | 1.2 | 1 | 1.0 | 1 |
| 6 | AF | S | ZN | 02 | 05 | 08 | | 3.6 | 1 | 3.5 | 1 |
| 6 | AF | iP | ZN | 17 | 23 | 15 | | | | | |
| 6 | AF | iP | Z | 23 | 27 | 45 | u | | | | |
| | | (S) | Z | | 29 | 04 | | | | | |
| 7 | AF | eiP | Z | 10 | 17 | 56 | du | | | | |
| 7 | AF | iP! | Z | 11 | 17 | 31 | u | | | | |
| 7 | AF | iP | Z | 20 | 49 | 05 | u | | | | |
| | | S | Z | | | 26 | | | | | |
| 8 | AF | iP | ZN | 03 | 06 | 14 | d | | | | |
| | | S | ZN | | 08 | 28 | | | | | |
| 8 | AF | P | Z | 12 | 58 | 22 | | | | | |
| | | eS | N | 13 | (09) | | | | | | |
| | | eL | ZN | | 24 | | | | | 1 | 28 |
| 8 | AF | iP | ZN | 18 | 46 | 23 | d | 1.5 | 1 | 0.7 | 1 |
| | | iS | ZN | | | 45 | | 3 | 1 | 3.0 | 1 |
| | | iT | ZN | | 48 | (45) | | 7 | 5 | 3.3 | 3 |
| 9 | AF | iP | ZN | 02 | 58 | 10 | u | 1.4 | 1 | 0.5 | 1 |
| | | iS | ZN | | | 41 | u?s | 1.9 | 1 | 1.5 | 1 |
| 9 | AF | iP | ZN | 03 | 06 | 24 | | 0.6 | 1 | 0.4 | 1 |
| | | iS | ZN | | | 59 | | 2.3 | 1 | 1.3 | 1 |
| 9 | AF | P | ZN | 05 | 55 | 44 | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 9 | AF | i | Z | | 56 | 17 | | | | | |
| | | S | ZN | | 57 | 10 | | | | | |
| 9 | AF | P | ZN | 16 | 42 | 32 | | | | | |
| 10 | AF | P | Z | 00 | 06 | 03 | | 4.7 | 7 | | |
| | | (pP) | ZN | | | 17 | | 8.5 | 9 | 1.0 | 5 |
| | | e(PPP) | Z | | 10 | 08 | | 3.4 | 10 | | |
| | | S | ZN | | 14 | 28 | | 3.4 | 11 | 1.5 | 13 |
| | | eL | ZN | | 21 | | | 7 | 20 | 2.5 | 15 |
| 10 | AF | iP | ZN | 01 | 33 | 05.5 | | 2.3 | 2 | 0.9 | 2 |
| | | S | ZN | | 34 | 18 | | | | 0.9 | 3 |
| 11 | AF | iP | ZN | 21 | 01 | 05 | d | | | 1 | 2 |
| | | S | ZN | | 05 | 11 | | | | 1.2 | 14 |
| 12 | AF | P | ZN | 01 | 20 | 48 | | | | | |
| | | iS | ZN | | 21 | 15 | | 1.6 | 2 | 0.9 | 2 |
| | | T | ZN | | 23 | 17 | | 2.6 | 3 | 1 | 2 |
| 12 | AF | iP | ZN | 04 | 13 | 26 | u | | | | |
| | | S | ZN | | 14 | 52 | | | | | |
| 12 | AF | iP | ZN | 05 | 33 | 46 | | | | | |
| | | S | ZN | | 35 | 20.5 | | | | | |
| 12 | AF | iP | ZN | 13 | 57 | 47 | u | | | | |
| | | (S) | ZN | | 58 | 13 | | 1.7 | 2 | 1.4 | 2 |
| | | T | ZN | 14 | 00 | 19 | | 2.5 | 4 | 1.4 | 3 |
| 12 | AF | iP | ZN | 23 | 18 | 00 | u | 3 | 1 | 1 | 1 |
| | | (S) | ZN | | | 13 | | 14.5 | 1 | 6 | 2 |
| | | T | ZN | | 20.1 | | | 52 | 2 | 20± | 4 |
| 13 | AF | iP | ZN | 10 | 09 | 20 | d | | | | |
| | | S | ZN | | 10 | 09 | | | | | |
| 13 | AF | iP | ZN | 20 | 25 | 56 | d | 1.2 | 1 | 0.6 | 1 |
| | | S | ZN | | 26 | 25 | | 2 | 1 | 1.2 | 1 |
| | | T | ZN | | 28 | 23 | | 4 | 2 | 2.5 | 3 |
| 14 | AF | P | ZN | 12 | 55 | 58 | | | | | |
| | | e(S) | ZN | | 58 | 11 | | | | | |
| 14 | AF | P | ZN | 15 | 44 | 06 | | | | | |
| | | (S) | ZN | | 46 | 51 | | | | | |
| 15 | AP | P | N | 05 | 18 | 28½ | | | | | |
| | | S | N | | 19 | 48 | | | | | |
| 16 | AP | e(P) | N | 01 | 13 | 13 | | | | | |
| 17 | AP | eP | N | 00 | 03 | 19 | | | | | |
| | | eS | N | | 04 | 30 | | | | | |
| 18 | AP | P | N | 15 | 31 | 26 | | | | | |
| | | S | N | | | 47 | | | | | |
| 18 | AP | eP | N | 21 | 05 | 10 | | | | | |
| | | eS | N | | | 38 | | | | | |
| 21 | AP | eP | N | 09 | 41 | 34 | | | | | |
| | | eS | N | | 43 | 14 | | | | | |
| 22 | AP | eP | N | 00 | 56 | 40 | | | | | |
| | | S | N | | 58 | 18 | | | | | |
| 22 | AF | e(P) | Z | 05 | 23 | 40 | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 22 | AF | e(S) | Z | | 26 | 23 | | | | | |
| 22 | AF | iP | ZN | 05 | 49 | 59 | | | | | |
| | | S | ZN | | 50 | 29 | | | | | |
| | | e | ZN | | 53 | 01 | | | | | |
| 22 | AF | iP | ZN | 08 | 36 | 09 | d | | | | |
| | | S | ZN | | 37 | 49 | | | | | |
| 22 | AF | iP | ZN | 08 | 54 | 59 | u | 2.6 | 1 | 0.8 | 1 |
| | | iS | ZN | | 55 | 18 | | 4.8 | 1 | 2.3 | 1 |
| 22 | AF | iP | ZN | 12 | 14 | 35 | | | | | |
| | | (S) | ZN | | 15 | 18 | | | | | |
| | | e(T) | ZN | | 18 | | | | | | |
| 22 | AF | iP | ZN | 19 | 54 | 49 | u | 0.6 | 1 | 0.3 | 1 |
| | | iS | ZN | | 55 | 07 | | 1.7 | 1 | 1 | 1 |
| 22 | AF | iP | ZN | 21 | 19 | 23 | | | | | |
| | | iS | ZN | | | 53 | | 2.5 | 1 | 1.3 | 1 |
| 23 | AF | iP | ZN | 11 | 32 | 59 | | 2.2 | 1 | 0.9 | 1 |
| | | iS | ZN | | 34 | 28 | | 3.7 | 2 | 2.1 | 1 |
| 23 | AF | P | Z | 16 | 11 | 37 | | 0.6 | 1 | | |
| | | e(SS) | ZN | | 20 | 20 | | 1.5 | 6 | 0.8 | 5 |
| | | L | ZN | | 22.1 | | | 3.7 | 20 | 1.2 | 15 |
| 24 | AF | (P) | ZN | 05 | 15 | 14 | | | | | |
| 24 | AF | eP | Z | 06 | 59 | 33 | | | | | |
| | | (S) | ZN | 07 | 00 | 20 | | | | | |
| | | e | ZN | | 03 | 11 | | | | | |
| 24 | AF | e(P) | Z | 08 | 45 | 37 | | | | | |
| | | e | ZN | | | 46 | | | | | |
| 24 | AF | P | Z | 17 | 18 | 48 | | 0.8 | 1 | 0.6 | 1 |
| | | e | Z | | 20 | 32 | | | | | |
| | | S | ZN | | | 46 | | 1 | 1 | 0.8 | 1 |
| | | e | ZN | | 22 | 24 | | | | | |
| 24 | AF | iP | Z | 21 | 43 | 37 | u? | 5.8 | 3 | 1.2 | 2 |
| | | PcP | ZN | | 46 | 20 | | 1.7 | 3 | 1 | 5 |
| | | S | ZN | | 48 | 52 | | 2.1 | 8 | 1.3 | 5 |
| | | e(Lq) | ZN | | 50.7 | | | | | 2.3 | 16 |
| | | Lr | Z | | 52.9 | | | 7.8 | 18 | | |
| | | (PKKP) | Z | 22 | 04 | 08 | | 3.1 | 7 | | |
| 25 | AF | iP | ZN | 14 | 37 | 03 | | 1.6 | 1 | 0.8 | 1 |
| | | iS | ZN | | | 26 | | 2 | 1 | 1.5 | 1 |
| 26 | AF | iP | ZN | 01 | 10 | 34 | | | | | |
| | | S | ZN | | 11 | 16 | | | | | |
| 26 | AF | iP | Z | 01 | 16 | 44 | u | 0.7 | 2 | | |
| 26 | AF | eP | Z | 02 | 17 | 35 | | | | | |
| 26 | AF | iP | ZN | 06 | 34 | 07 | d | 4.1 | 2 | 1.7 | 2 |
| | | iS | ZN | | 35 | 13 | | 6 | 3 | 4.2 | 2 |
| | | L | ZN | | 35.9 | | | 15 | 10 | 5.7 | 8 |
| | | T | ZN | | 40 | 22 | | 17 | 8 | 6.5 | 6 |
| 26 | AF | iP | ZN | 23 | 42 | 22 | d | | | | |
| | | e | ZN | | 43 | 52 | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tn | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 27 | AP | eP | N | 04 | 30 | 55 | | | | | |
| | | eS | N | | 31 | 17 | | | | | |
| 27 | AP | P | N | 09 | 57 | 17 | | | | | |
| | | S | N | | | 45 | | | | | |
| 27 | AP | eP | N | 14 | 50 | 02 | | | | | |
| | | S | N | | | 33 | | | | | |
| 27 | AP | eP | N | 19 | 10 | 45 | | | | | |
| | | S | N | | 11 | 09 | | | | | |
| 28 | AP | eP | N | 01 | 18 | 15 | | | | | |
| | | S | N | | | 50 | | | | | |
| 28 | AP | eP | N | 08 | 57 | 14 | | | | | |
| | | eS | N | | | 35 | | | | | |
| 28 | AP | e(P) | N | 08 | 59 | 23 | | | | | |
| | | eS | N | | | 53 | | | | | |
| 29 | AP | P | N | 02 | 27 | 37 | | | | | |
| | | S | N | | | 57 | | | | | |
| 29 | AF | P | ZN | 10 | 22 | 19 | | | | | |
| | | (S) | ZN | | 23 | 22 | | | | | |
| 29 | AF | P | ZN | 23 | 05 | 33 | | | | | |
| | | S | ZN | | 07 | 11 | | | | | |
| MAR 1 | AF | iP | Z | 03 | 28 | 38 | d | 2.1 | 1 | | |
| | | S | Z | | 30 | 08 | | 1.6 | 1 | | |
| 1 | AF | iP | Z | 05 | 08 | 34 | | 1.2 | 1 | | |
| | | iS | Z | | | 54 | | 2.1 | 1 | | |
| 1 | AF | P | Z | 08 | 11 | 53 | | | | | |
| 1 | AF | P | Z | 19 | 27 | 35 | | | | | |
| | | S | Z | | 28 | 12 | | | | | |
| 1 | AF | P | Z | 20 | 01 | 36 | | 1.4 | 1 | | |
| | | S | Z | | 03 | 02 | | 2.1 | 1 | | |
| | | L | Z | | 03.9 | | | 3 | 8 | | |
| 2 | AF | P | ZN | 07 | 10 | 17 | | 0.8 | 2 | | |
| 2 | AF | P | ZN | 18 | 05 | 11 | | | | | |
| | | S | ZN | | | 35 | | | | | |
| | | eT | ZN | | 07.5 | | | | | | |
| 3 | AF | P | Z | 01 | 08 | 20 | | | | | |
| 3 | AF | iP | Z | 01 | 47 | 06 | d | 2 | 1 | | |
| | | iS | Z | | | 30 | | 3.1 | 1 | | |
| 3 | AP | eP | N | 09 | 35 | 55 | | | | | |
| | | S | N | | 36 | 26 | | | | | |
| 3 | AP | eS | N | 19 | 23 | 28 | | | | | |
| 3 | AP | P | N | 20 | 31 | 03 | | | | | |
| | | S | N | | | 20 | | | | | |
| 4 | AP | eP | N | 01 | 25 | 59 | | | | | |
| | | S | N | | 26 | 20 | | | | | |
| 4 | AF | P | ZN | 04 | 04 | 17 | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 4 | AF | PcP | Z | | | 50 | | | | | |
| | | e | Z | | 15 | 58 | | | | | |
| 4 | AF | P | ZN | 08 | 53 | 57 | | | | | |
| | | S | ZN | | 54 | 27 | | | | | |
| 5 | AF | P | Z | 13 | 59 | 31 | u | 2.6 | 3 | 1 | 4 |
| | | eS | ZN | | 07.7 | | | | | 0.8 | 20 |
| | | eSS | N | | 11.7 | | | | | 1.2 | 16 |
| | | Lq | N | | 14.8 | | | | | 2.2 | 28 |
| | | Lr | Z | | 15.4 | | | 8.1 | 20 | | |
| 5 | AF | iP | Z | 15 | 23 | 11 | d? | | | | |
| | | e | Z | | 24 | 46 | | | | | |
| 5 | AF | eS | ZN | 20 | 55 | 35 | | | | | |
| 5 | AF | eS | ZN | 21 | 01 | 13 | | | | | |
| 6 | AF | P | Z | 02 | 32 | 26 | | 1.6 | 6 | | |
| 6 | AF | eP | Z | 02 | 53 | 34 | | | | | |
| | | S | ZN | | 54 | 46 | | | | | |
| 6 | AF | iP | ZN | 06 | 42 | 57 | u | 0.6 | 1 | | |
| | | S | ZN | | 43 | 30 | | 1 | 1 | 1.2 | 1 |
| 6 | AF | iP | ZN | 08 | 08 | 36 | d | 1.2 | 1 | 0.6 | 1 |
| | | iS | ZN | | 09 | 10 | | 2.5 | 1 | 2 | 1 |
| | | eT | ZN | | 12.6 | | | | | | |
| 6 | AF | iP | ZN | 14 | 43 | 14 | u | | | | |
| | | iS | ZN | | | 40 | | | | | |
| 7 | AF | eP | ZN | 01 | 54 | 48 | | | | | |
| | | iS | ZN | | 55 | 08 | | | | | |
| 7 | AF | iP | ZN | 05 | 23 | 49 | u | 0.7 | 1 | | |
| 7 | AF | P | ZN | 22 | 25 | 55 | | | | | |
| | | S | ZN | | 26 | 22 | | | | | |
| 8 | AF | iP | ZN | 00 | 05 | 14 | u | 1.3 | 1 | 0.6 | 1 |
| | | (S) | ZN | | 06 | 25 | | | | 0.6 | 2 |
| 8 | AF | P | ZN | 04 | 02 | 12 | u? | 0.8 | 2 | 0.9 | 1 |
| | | S | ZN | | 03 | 25 | | 1.2 | 1 | 1.1 | 1 |
| 8 | AF | iP | Z | 06 | 41 | 53 | u | 1.1 | 1 | 0.7 | 1 |
| | | iS | Z | | 42 | 30 | | 3 | 1 | 1.9 | 1 |
| 8 | AF | e(P) | Z | 12 | 00 | 23 | | | | | |
| 8 | AF | iP | Z | 16 | 37 | 44 | d? | | | | |
| | | i | Z | | | 46 | un | 25 | 4 | 5 | 4 |
| | | PP | ZN | | 38 | 26 | | 19.5 | 4 | 4.7 | 3 |
| | | iS | ZN | | 41 | 16 | s? | 14 | 11 | 6.5 | 6 |
| | | SS | ZN | | | 58 | | 21.5 | 18 | 7.3 | 11 |
| | | (PcP) | Z | | | 58 | | | | | |
| | | (ScP) | Z | | 45 | 13 | | | | | |
| | | eL | ZN | | 45.7 | | | 10.5 | 10 | 3.4 | 13 |
| 8 | AF | P | ZN | 18 | 31 | 53 | | 1 | 1 | 0.6 | 1 |
| | | S | ZN | | 34 | 06 | | | | 0.5 | 1 |
| 8 | AF | P | ZN | 19 | 31 | 01 | | 2.5 | 1 | 1 | 1 |
| | | eS | ZN | | 33 | 14 | | 0.8 | 1 | 1 | 1 |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 10 | AF | iP | ZN | 05 | 04 | 19 | u? | 1.5 | 1 | 0.9 | 1 | |
| | | e | Z | | 07 | 24 | | | | | | |
| | | S | ZN | | | 32 | | 2.1 | 1 | 1.7 | 1 | |
| 10 | AF | P | Z | 09 | 50 | 44 | | | | | | |
| | | PP | Z | | 51 | 46 | | | | | | |
| | | S | Z | | 54 | 56 | | 2.8 | 4 | | | |
| | | (SS) | Z | | 55 | 46 | | | | | | |
| | | e(Lq) | N | | 57 | .0 | | | | | | |
| | | eScP? | Z | | 57 | 04 | | | | | | |
| | | eLr | Z | | 57 | .7 | | 3.1 | 20 | | | |
| 10 | AF | iP | ZN | 13 | 44 | 59 | ds? | 21± | 1 | 33± | 1 | Felt Apia MM 4. |
| 10 | AF | P | ZN | 13 | 58 | 00 | | | | | | |
| | | iS | ZN | | | 20 | | 4 | 1 | 2.5 | 1 | |
| 10 | AF | iP | ZN | 14 | 04 | 26 | u | 0.6 | 1 | 0.9 | 1 | |
| | | iS | ZN | | | 46 | | 2.8 | 1 | 2.5 | 1 | |
| 10 | AF | P | ZN | 14 | 43 | 47 | | | | | | |
| 11 | AF | P | ZN | 01 | 39 | 45 | | 0.7 | 1 | | | |
| | | eS | ZN | | 40 | 57 | | 0.8 | 1 | | | |
| | | eT | ZN | | 46 | 49 | | 0.8 | 1 | | | |
| 11 | AF | (P) | Z | 05 | 25 | 26 | | | | | | |
| 11 | AF | eP | ZN | 11 | 28 | 14 | | 1.4 | 1 | 0.8 | 1 | |
| | | eS | ZN | | 29 | 40 | | 0.9 | 1 | 0.9 | 1 | |
| 12 | AF | P | ZN | 04 | 35 | 29 | | 1.5 | 1 | 0.8 | 1 | |
| | | S | ZN | | | 54 | | 2.5 | 1 | 1.8 | 2 | |
| | | T | ZN | | 37 | 40 | | 4.2 | 6 | 2 | 4 | |
| 12 | AF | iP | Z | 05 | 53 | 23 | u | 1.2 | 1 | 0.8 | 1 | |
| | | S | Z | | 54 | 36 | | 0.8 | 1 | 0.8 | 1 | |
| 12 | AF | iP | Z | 06 | 19 | 38 | d | 1 | 1 | 0.7 | 1 | |
| | | S | Z | | 20 | 32 | | 0.8 | 1 | 0.6 | 1 | |
| 12 | AF | (PKP) | ZN | 12 | 13 | 54 | | | | | | |
| 12 | AF | P | ZN | 16 | 29 | 14 | | | | | | |
| | | S | ZN | | 31 | 15 | | | | | | |
| 12 | AF | P | ZN | 20 | 37 | 45 | | 2.5 | 4 | 0.7 | 1 | |
| | | eS | ZN | | 43 | 26 | | 3 | 5 | | | |
| | | eL | ZN | | 46 | | | 4 | 20 | 1.6 | 16 | |
| 13 | AF | iP | Z | 12 | 37 | 36 | d? | 1.1 | 1 | 0.9 | 1 | |
| | | iS | Z | | 38 | 27 | | 3.9 | 1 | 2.9 | 1 | |
| 15 | AF | iP | ZN | 10 | 10 | 31 | | 1.2 | 1 | 0.8 | 1 | |
| | | e | Z | | | 44 | | | | | | |
| | | (Pg) | Z | | 11 | 00 | | | | | | |
| | | S | ZN | | | 46 | | 1.5 | 1 | 1.4 | 2 | |
| | | L | ZN | | 16 | .7 | | 7.5 | 8 | 6.6 | 5 | |
| 15 | AF | P | Z | 19 | 34 | 04 | | | | | | |
| | | S | ZN | | 35 | 47 | | 1 | 1 | 1 | 1 | |
| 16 | AF | P | ZN | 15 | 28 | 15 | | 0.7 | 1 | | | |
| | | S | ZN | | | 37 | | 1.3 | 1 | 0.8 | 1 | |
| 16 | AF | eP | ZN | 17 | 23 | 23 | | | | | | |
| | | S | ZN | | 24 | 12 | | 1.1 | 1 | 0.6 | 1 | |
| | | eT | ZN | | 26 | 15 | | | | 0.9 | 3 | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 16 | AF | iP! | ZN | 17 | 39 | 47 | ds | 25± | 3 | 10.6 | 3 |
| | | S | ZN | | 40 | 08 | | | | | |
| 16 | AF | P | ZN | 19 | 21 | 16 | | | | | |
| 16 | AF | iP | ZN | 21 | 43 | 13 | d? | 1.4 | 1 | 1 | 1 |
| | | S | ZN | | | 47 | | 8 | 1 | 7.5 | 1 |
| 17 | AF | iP | ZN | 11 | 34 | 00 | ds | 28 | 2 | 4.6 | 1 |
| | | iS | ZN | | | 18 | s? | 40½± | 1 | 39½ | 1 |
| 17 | AF | iP | ZN | 14 | 02 | 24 | d | | | | |
| | | (S) | Z | | 03 | 12 | | | | | |
| 19 | AP | e(P) | N | 16 | 58 | 15 | | | | | |
| | | e(S) | N | | 59 | 51 | | | | | |
| 19 | AP | e(P) | N | 17 | 20 | 47 | | | | | |
| | | S | N | | 21 | 17 | | | | | |
| 19 | AP | eP | N | 17 | 54 | 18 | | | | | |
| | | eS | N | | | 40 | | | | | |
| 21 | AP | eP | N | 01 | 50 | 25 | | | | | |
| | | i | N | | | 27 | | | | | |
| | | S | N | | | 52 | | | | | |
| 21 | AP | eP | N | 02 | 22 | 14 | | | | | |
| | | S | N | | | 46 | | | | | |
| 21 | AP | eP | N | 10 | 15 | 18 | | | | | |
| | | eS | N | | | 48 | | | | | |
| 21 | AP | P | N | 11 | 16 | 22 | | | | | |
| | | e | N | | | 27 | | | | | |
| | | S | N | | | 42 | | | | | |
| 21 | AP | eP | N | 11 | 40 | 57 | | | | | |
| | | S | N | | 41 | 25 | | | | | |
| | | i | N | | | 28 | | | | | |
| 21 | AP | e(P) | N | 11 | 56 | 24 | | | | | |
| | | S | N | | 57 | 04 | | | | | |
| 22 | AP | eP | N | 02 | 47 | 29 | | | | | |
| | | S | N | | | 51 | | | | | |
| 22 | AF | iP | ZN | 12 | 26 | 57 | u | 2 | 1 | 0.5 | 1 |
| | | iS | ZN | | 28 | 00 | | 1.1 | 2 | 0.6 | 1 |
| 22 | AF | P | ZN | 13 | 59 | 56 | us | 3 | 1 | 1.2 | 1 |
| | | S | ZN | 14 | 00 | 14 | | 14± | 1 | 8.2 | 1 |
| 22 | AF | (P) | Z | 23 | 19 | 37 | | | | | |
| | | (S) | ZN | | 21 | 35 | | | | | |
| 23 | AF | iP | ZN | 00 | 34 | 28 | d? | 3 | 8 | | |
| | | e(PPP) | Z | | 38 | 55 | | 2.5 | 6 | | |
| | | S | ZN | | 43 | 28 | | 2.3 | 6 | 3 | 17 |
| | | ScS | ZN | | 44 | 31 | | 3.6 | 6 | 1.5 | 8 |
| | | eSS | ZN | | 47 | 49 | | 2.3 | 15 | | |
| | | eSSS | Z | | 50 | 36 | | 2.3 | 8 | | |
| | | e(Lq) | ZN | | 53 | .2 | | 2.5 | 13 | 2 | 13 |
| | | Lr | ZN | | 54 | .0 | | 3.5 | 25 | | |
| | | M | ZN | | 59 | | | 11 | 20 | 3.5 | 20 |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 23 | AF | iP | ZN | 01 | 17 | 46 | u | 0.5 | 1 | 0.8 | 1 |
| | | iS | ZN | | 18 | 16 | | 1.3 | 1 | 0.8 | 1 |
| 23 | AF | iP | ZN | 01 | 37 | 21 | d | 0.6 | 1 | | |
| | | (S) | Z | | 41 | 30 | | | | | |
| 23 | AF | iP | ZN | 01 | 41 | 57 | d | 0.6 | 1 | | |
| 24 | AF | i(P) | Z | 12 | 05 | 41 | u | | | | |
| | | S | ZN | | 07 | 22 | | 0.7 | 1 | 0.6 | 1 |
| 24 | AF | iP | ZN | 16 | 39 | 40 | u | 2 | 1 | | |
| | | S | ZN | | | 57 | | 8.5 | 1 | | |
| 24 | AF | iP | ZN | 18 | 58 | 35 | d | 1.5 | 1 | | |
| | | S | ZN | | 59 | 04 | | 3 | 1 | | |
| 24 | AF | iP | Z | 20 | 00 | 51 | d | | | | |
| | | (S) | ZN | | 02 | 40 | | 0.5 | 1 | | |
| 24 | AF | iP | ZN | 20 | 05 | 07 | u | 1.2 | 1 | 0.7 | 1 |
| | | iS | ZN | | | 27 | | 4.5 | 1 | 2.6 | 1 |
| 25 | AF | iP | Z | 02 | 30 | 47 | u?n? | 5.5 | 1 | 1.7 | 1 |
| | | S | Z | | 32 | 09 | | 3 | 1 | 2 | 1 |
| 25 | AF | P | Z | 03 | 00 | 09 | | | | | |
| | | S | ZN | | 01 | 23 | | | | 0.6 | 1 |
| 25 | AF | iP | ZN | 10 | 05 | 52 | d? | 0.6 | 1 | | |
| | | S | ZN | | 06 | 16 | | 1.9 | 1 | 1.1 | 1 |
| 26 | AF | iP | ZN | 09 | 12 | 52 | d? | 0.5 | 1 | | |
| | | iS | ZN | | 14 | 30 | u? | | | | |
| 26 | AF | P | Z | 14 | 35 | 14 | | | | | |
| 26 | AF | iP | Z | 15 | 04 | 34 | d? | 0.6 | 1 | | |
| | | S | Z | | 06 | 01 | | | | | |
| 26 | AF | iP | ZN | 18 | 32 | 47 | d? | 0.8 | 1 | 0.5 | 1 |
| | | eS | ZN | | 34 | 04 | | 1.1 | 1 | 0.7 | 1 |
| | | eT | ZN | | 39 | 34 | | 1.1 | 1 | 0.7 | 1 |
| 27 | AF | iP | ZN | 03 | 53 | 20 | d? | 5.5 | 6 | | |
| | | e | ZN | | | 38 | | 5 | 6 | 1.7 | 3 |
| | | (PP) | ZN | | | 58 | | 8.3 | 6 | 3 | 5 |
| | | eS | ZN | | 57 | 22 | | 4.2 | 14 | 1.5 | 8 |
| | | eLg | N | | 57.7 | | | | | 1.3 | 14 |
| | | Lr | ZN | | 59.2 | | | 4.5 | 15 | 2.6 | 20 |
| | | ScP | ZN | 04 | 01 | 12 | | 3 | 5 | 1.5 | 6 |
| 27 | AF | iP | ZN | 09 | 02 | 52 | u | 6 | 7 | 1 | 2 |
| | | (PP) | ZN | | 03 | 24 | | | | 1.5 | 5 |
| | | (PPP) | Z | | | 34 | | 8.1 | 7 | | |
| | | e | ZN | | 04 | 12 | | 4.1 | 13 | 1.5 | 8 |
| | | eS | Z | | 06 | 48 | | 7.6 | 8 | | |
| | | eLg | N | | 07.4 | | | | | 2.2 | 20 |
| | | Lr | ZN | | 08.5 | | | 12 | 27 | 3.5 | 20 |
| 27 | AF | P? | Z | 17 | 28 | 43 | | | | | |
| | | iP | ZN | | | 50 | d | 0.8 | 1 | | |
| | | S | ZN | | 31 | 46 | | 0.6 | 1 | | |
| 27 | AF | P | ZN | 19 | 40 | 20 | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAR 27 | AF | iP | ZN | 23 | 33 | 48 | d | 1.8 | 1 | 1 | 1 |
| | | pP | ZN | | 34 | 41 | | 1.7 | 1 | 1 | 1 |
| | | eS | ZN | | 38 | 47 | | 0.6 | 1 | 0.6 | 1 |
| 28 | AF | eP | ZN | 04 | 04 | 56 | | | | | |
| | | (S) | ZN | | 07 | 37 | | | | | |
| 28 | AF | iP | ZN | 06 | 40 | 49 | d | 4 | 6 | | |
| | | e(S) | N | | 45.5 | | | | | 0.8 | 4 |
| | | eL | N | | 47.0 | | | | | 1 | 16 |
| 28 | AF | e(P) | Z | 06 | 44 | 31 | | | | | |
| 28 | AF | P | Z | 06 | 47 | 37 | | | | | |
| 28 | AF | P | ZN | 12 | 34 | 26 | | 5 | 1 | 1.1 | 1 |
| | | iS | ZN | | | 47 | u?n? | 15.5 | 1 | 12.8 | 1 |
| 28 | AF | iP | ZN | 12 | 40 | 25 | u? | 4.2 | 1 | 2.3 | 1 |
| | | S | ZN | | 42 | 01 | | 8.5± | 1 | 9.7 | 1 |
| | | T | Z | | 44 | 50 | | | | | |
| 29 | AF | P | ZN | 00 | 15 | 33 | | 0.6 | 1 | | |
| | | S | ZN | | 18 | 59 | | 0.7 | 1 | | |
| 29 | AF | eP | Z | 03 | 47 | 52 | | | | | |
| | | i | ZN | | | 55 | | 0.6 | 1 | 0.6 | 1 |
| | | S | ZN | | 48 | 32 | | 1.6 | 1 | 1.3 | 1 |
| | | eT | ZN | | 50 | 23 | | | | | |
| 29 | AF | P | Z | 06 | 35 | 36 | | | | | |
| | | i | ZN | | | 40 | d | 18.5 | 3 | 2.6 | 3 |
| | | e | Z | | 38 | 36 | | 4.9 | 6 | | |
| | | eS | ZN | | 39 | 38 | | 4.3 | 6 | 1.8 | 6 |
| | | PcP | Z | | | 47 | | | | | |
| | | Lg | N | | 39.8 | | | | | 19.5 | 25 |
| | | Lr | Z | | 40.1 | | | 17.5 | 20 | | |
| 29 | AF | P? | Z | 14 | 29 | 44 | | | | | |
| 29 | AF | P | Z | 16 | 29 | 47 | | | | | |
| | | (S) | ZN | | 31 | 04 | | | | | |
| 29 | AF | e(P) | ZN | 22 | 18 | 03 | | 1 | 2 | | |
| | | e(S) | ZN | | 26 | 03 | | 1.5 | 3 | | |
| 30 | AF | P? | Z | 09 | 41 | 54 | | | | | |
| 30 | AF | P | ZN | 10 | 54 | 43 | | 2.9 | 5 | | |
| | | e(S) | ZN | | 58 | 58 | | 3 | 6 | 1.5 | 7 |
| | | L | ZN | 11 | 00.4 | | | 5.3 | 26 | 1.8 | 15 |
| 30 | AF | P | ZN | 15 | 23 | 25 | | 2.2 | 2 | 0.7 | 2 |
| | | e(S) | ZN | | 26 | 47 | | 0.8 | 1 | | |
| | | eL | ZN | | 26.8 | | | 2.5 | 13 | 1.7 | 15 |
| 31 | AF | P | Z | 00 | 26 | 20 | | | | | |
| | | i | ZN | | | 22 | u | 2.6 | 1 | 1.5 | 2 |
| | | S | ZN | | | 43 | | 14.4 | 1 | 10.1 | 1 |
| | | T | ZN | | 28 | 23 | | 19.5 | 3 | 11.2 | 3 |
| 31 | AF | eiP | ZN | 03 | 41 | 45 | du | 4.7 | 1 | 1.8 | 1 |
| | | S | ZN | | 42 | 13 | | 15.9 | 1 | 10 | 1 |
| | | T | ZN | | 43 | 42 | | 21 | 2 | 14.3 | 2 |
| 31 | AF | iP | ZN | 16 | 12 | 40 | u | 3 | 1 | 1.3 | 1 |
| | | S | ZN | | | 57 | | 6 | 1 | 3.5 | 1 |
| | | T | ZN | | 14 | 27 | | 7 | 3 | 4.2 | 3 |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR 1 | AF | P | ZN | 02 | 57 | 03 | | 1.3 | 1 | 0.7 | 1 |
| | | S | ZN | | 59 | 32 | | 1.2 | 1 | 0.9 | 1 |
| 1 | AF | iP | ZN | 15 | 49 | 26 | u | 0.5 | 1 | 0.5 | 1 |
| | | S | ZN | | | 46 | | 2.5 | 1 | 1.3 | 1 |
| 1 | AF | iP | ZN | 17 | 30 | 49 | u | 0.5 | 1 | | |
| | | S | ZN | | 31 | 30 | | 1 | 1 | 0.8 | 1 |
| 1 | AF | iP | ZN | 21 | 19 | 21 | d | 0.5 | 1 | | |
| | | S | ZN | | | 40 | | 1 | 1 | 1.2 | 1 |
| 1 | AF | (P) | Z | 23 | 04 | 56 | | | | | |
| | | iP | ZN | | 05 | 02 | | 1.4 | 1 | 0.5 | 1 |
| | | S | ZN | | 06 | 02 | | 0.6 | 1 | 0.5 | 1 |
| 2 | AF | iP | ZN | 04 | 36 | 37 | u | | | | |
| | | S | ZN | | 37 | 33 | | | | | |
| 2 | AF | P | ZN | 05 | 12 | 30 | | | | | |
| | | S | ZN | | 14 | 23 | | | | | |
| 2 | AF | iP | ZN | 11 | 50 | 11 | u | 3.3 | 1 | 1.5 | 1 |
| | | iS | ZN | | | 44 | | 10 | 1 | 7.3 | 1 |
| 2 | AF | (P) | ZN | 14 | 48 | 44 | | 0.7 | 1 | 0.5 | 1 |
| | | (S) | ZN | | 49 | 57 | | 0.8 | 1 | 0.8 | 2 |
| | | (T) | ZN | | 55 | .6 | | 0.8 | 1 | 0.6 | 1 |
| 2 | AF | iP | ZN | 15 | 36 | 04 | u | 1.9 | 1 | 1 | 1 |
| | | S | ZN | | | 24 | | 5.9 | 1 | 1 | 3 |
| 2 | AF | iP | ZN | 21 | 09 | 51 | us | 4 | 1 | 2.6 | 1 |
| | | S | ZN | | | 11 | | 10 | 1 | 7.5 | 1 |
| 4 | AF | iP | ZN | 06 | 16 | 31 | d | 1 | 1 | 0.6 | 1 |
| | | iS | ZN | | | 51 | | 4 | 1 | 3 | 1 |
| 4 | AF | iP | ZN | 08 | 01 | 47 | u | 1.7 | 3 | 0.7 | 2 |
| | | eS | ZN | | 06 | 18 | | | | 0.9 | 15 |
| 4 | AF | eP | Z | 12 | 52 | 46 | | | | | |
| 4 | AF | iP | ZN | 21 | 59 | 15 | u? | 2.2 | 1 | 1 | 1 |
| | | iS | ZN | | | 40 | | 4.1 | 1 | 4.1 | 1 |
| | | eT | ZN | | 01 | 30 | | 5.1 | 2 | 2.6 | 3 |
| 5 | AF | iP | ZN | 02 | 17 | 31 | u? | 1.2 | 1 | 0.6 | 1 |
| | | S | ZN | | | 54 | | 3 | 1 | 2.5 | 1 |
| | | eT | ZN | | 19 | 44 | | 4 | 3 | 2.6 | 2 |
| 5 | AF | iP | ZN | 14 | 43 | 51 | u | 0.5 | 1 | | |
| 6 | AF | P | ZN | 12 | 53 | 40 | | | | | |
| | | S | ZN | | 55 | 13 | | 1 | 1 | 1.1 | 1 |
| 6 | AF | P | ZN | 13 | 01 | 26 | | | | 0.7 | 2 |
| | | (S) | ZN | | 03 | 53 | | | | | |
| 6 | AF | e(P) | ZN | 13 | 58 | 44 | | | | | |
| | | e(S) | ZN | 14 | 01 | 17 | | | | | |
| 7 | AF | iP | ZN | 03 | 08 | 00 | d | 1.3 | 1 | 0.7 | 1 |
| | | S | ZN | | 09 | 49 | | | | 1 | 2 |
| 7 | AF | iP | ZN | 13 | 50 | 14 | u? | | | 5.8 | 1 |
| | | S | ZN | | 52 | 28 | | | | 6.3 | 1 |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR 7 | AF | iP | ZN | 21 | 22 | 01 | u | | | 1.5 | 1 |
| | | iS | ZN | | | 35 | s | | | 7 | 1 |
| 7 | AF | P | ZN | 23 | 57 | 54 | | | | 2.9 | 1 |
| | | (S) | ZN | | 59 | 15 | | | | | |
| | | S | ZN | | | 32 | | | | 17 | 1 |
| 8 | AP | eP | N | 14 | 59 | 20 | | | | | |
| | | S | N | 15 | 00 | 01 | | | | | |
| 8 | AP | e(P) | N | 17 | 57 | 57 | | | | | |
| | | e | N | | 58 | 22 | | | | | |
| | | e(S) | N | | 59 | 51 | | | | | |
| 9 | AF | iP | ZN | 07 | 35 | 06 | u | 1.7 | 1 | 0.9 | 1 |
| | | iS | ZN | | | 43 | | 15.5 | 1 | 9 | 1 |
| 9 | AF | iP | ZN | 19 | 29 | 32 | u | 0.9 | 1 | | |
| | | S | ZN | | 30 | 27 | | 1.6 | 1 | 1 | 1 |
| 10 | AF | PKP? | Z | 22 | 25 | 22 | | | | | |
| 11 | AF | iP | Z | 01 | 48 | 36 | d | | | | |
| | | S | Z | | 50 | 23 | | | | | |
| 13 | AP | e(P) | N | 08 | 15 | 38 | | | | | |
| | | eS | N | | 17 | 14 | | | | | |
| 13 | AP | eP | N | 13 | 58 | 24 | | | | | |
| | | eS | N | 14 | 00 | 32 | | | | | |
| 14 | AP | eP | N | 00 | 38 | 10 | | | | | |
| | | eS | N | | | 43 | | | | | |
| 14 | AF | iP | ZN | 03 | 54 | 14 | u | | | | |
| | | S | ZN | | 55 | 49 | | | | | |
| 15 | AF | P | Z | 03 | 35 | 21 | | 1.6 | 5 | | |
| | | S | Z | | 43 | 21 | | 1.6 | 5 | | |
| | | eL | N | | 49 | .7 | | | | 1.5 | 10 |
| | | eL | Z | | 50 | .6 | | 3 | 20 | | |
| 15 | AF | P | ZN | 04 | 18 | 19 | | 0.9 | 1 | 0.5 | 1 |
| 15 | AF | P | ZN | 08 | 36 | 49 | | | | | |
| | | S | ZN | | 39 | 20 | | | | | |
| 15 | AF | iP | Z | 11 | 50 | 00 | u | 1.8 | 4 | | |
| 15 | AF | iP | Z | 22 | 10 | 00 | d | 7.5 | 6 | 2.0 | 5 |
| | | i | Z | | | 04 | d | | | | |
| | | S | ZN | | 14 | 21 | | 4.5 | 13 | 1.4 | 15 |
| | | SS | ZN | | 15 | 18 | | 5.2 | 8 | 1.4 | 10 |
| | | L | Z | | 15 | .7 | | 4.6 | 20 | | |
| | | L | N | | 16 | .3 | | | | 1.5 | 15 |
| 16 | AF | (P) | Z | 08 | 09 | 15 | | | | | |
| 17 | AF | iP | Z | 15 | 08 | 15 | d | 0.8 | 1 | | |
| 17 | AF | iP? | Z | 15 | 41 | 54 | | | | | |
| | | iP | ZN | | 42 | 07 | | 1.2 | 6 | | |
| | | e(L) | ZN | | 44 | .3 | | 6.2 | 8 | 1.5 | 15 |
| 17 | AF | iP | ZN | 16 | 22 | 41 | u | | | | |
| | | S | ZN | | 25 | 27 | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR 17 | AF | eP | ZN | 17 | 07 | 03 | | | | | |
| | | eS | ZN | | 08 | 30 | | | | | |
| 17 | AF | iP | ZN | 21 | 51 | 46 | d | 1.2 | 1 | 0.5 | 1 |
| | | S | ZN | | 53 | 28 | | 2.5 | 1 | 1.6 | 1 |
| 19 | AF | eP | Z | 06 | 18 | 10 | | | | | |
| | | e(S) | Z | | 19 | 23 | | | | | |
| 19 | AF | P | ZN | 09 | 24 | 07 | | 0.8 | 1 | 0.6 | 1 |
| | | S | ZN | | | 59 | | 1.6 | 3 | 0.8 | 4 |
| | | L | ZN | | 25 | 5 | | 6.3 | 8 | 2.5 | 8 |
| 19 | AF | eP? | Z | 09 | 29 | 19 | | | | | |
| | | (P) | ZN | | 30 | 20 | | | | 1.4 | 1 |
| | | (S) | ZN | | | 29 | | 11.2 | 7 | 4.1 | 5 |
| | | L | ZN | | 31 | 4 | | 26.5 | 6 | 10.7 | 6 |
| 19 | AF | (P) | Z | 22 | 49 | 33 | | | | | |
| 20 | AF | eP | Z | 16 | 45 | 47 | | | | | |
| | | eS | ZN | | 47 | 57 | | | | | |
| 21 | AF | P | ZN | 16 | 23 | 38 | | 1.3 | 1 | 0.7 | 1 |
| | | S | ZN | | 24 | 53 | | 2.1 | 1 | 1.3 | 1 |
| | | T | ZN | | 30 | 22 | | 1.3 | 2 | 0.6 | 1 |
| 21 | AF | iP | ZN | 20 | 05 | 59 | u | | | | |
| | | S | ZN | | 06 | 53 | | 1.1 | 1 | 0.6 | 1 |
| 22 | AF | iP | ZN | 20 | 27 | 36 | u | 24 | 1 | 8.1 | 1 |
| | | iS | ZN | | 28 | 24 | | | | | |
| 23 | AF | iP | ZN | 12 | 10 | 10 | d | 1.5 | 1 | 1 | 1 |
| | | iS | ZN | | | 58 | | 4 | 1 | 3 | 1 |
| 23 | AF | iP | ZN | 21 | 25 | 36 | u | 1.5 | 1 | 0.6 | 1 |
| | | iS | ZN | | | 56 | | 6.7 | 1 | 5.6 | 1 |
| 23 | AF | iP | Z | 22 | 30 | 46 | u | 0.6 | 1 | | |
| | | S | Z | | 31 | 06 | | 1.3 | 1 | 1.1 | 1 |
| 24 | AF | iP | ZN | 03 | 33 | 07 | d | 12.5 | 1 | 1.5 | 1 |
| | | pP | Z | | 35 | 10 | | 2 | 1 | | |
| | | S | ZN | | 41 | 56 | | | | 1.5 | 5 |
| 24 | AF | eP? | Z | 17 | 09 | 23 | | | | | |
| | | e(S) | Z | | 12 | 14 | | | | | |
| 26 | AP | P | N | 06 | 36 | 44 | | | | | |
| | | S | N | | 37 | 20 | | | | | |
| 26 | AP | eP | N | 13 | 25 | 38 | | | | | |
| | | eS | N | | 26 | 08 | | | | | |
| 27 | AP | eP | N | 13 | 26 | 46 | | | | | |
| | | S | N | | 27 | 32 | | | | | |
| 27 | AP | P | N | 20 | 16 | 50 | | | | | |
| | | S | N | | 17 | 11 | | | | | |
| 28 | AP | eP? | N | 00 | 12 | 20 | | | | | |
| | | e(P) | N | | | 26 | | | | | |
| | | eS | N | | 13 | 20 | | | | | |
| 28 | AP | eP | N | 07 | 29 | 00 | | | | | |
| | | S | N | | | 50 | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR 28 | AP | P | N | 16 | 01 | 50 | | | | | |
| | | S | N | | 02 | 10 | | | | | |
| 28 | AP | eP | N | 16 | 23 | 04 | | | | | |
| | | eS | N | | | 23 | | | | | |
| 29 | AF | iP | ZN | 02 | 05 | 40 | d | 1 | 1 | 0.5 | 1 |
| | | S | ZN | | 06 | 59 | | | | 0.5 | 1 |
| 29 | AF | iP | ZN | 04 | 14 | 20 | d? | 1.1 | 1 | | |
| | | S | ZN | | 15 | 50 | | | | | |
| 29 | AF | (P) | Z | 10 | 04 | 28 | | | | | |
| 29 | AF | P | ZN | 10 | 46 | 00 | | | | | |
| | | S | ZN | | | 51 | | | | | |
| 29 | AF | iP | ZN | 11 | 41 | 32 | | 0.7 | 1 | | |
| | | S | ZN | | 42 | 39 | | 0.8 | 1 | | |
| 29 | AF | P | ZN | 13 | 42 | 38 | | | | | |
| | | S | ZN | | 46 | 05 | | | | | |
| 29 | AF | P | ZN | 13 | 44 | 18 | | 1.2 | 2 | | |
| 29 | AF | P | ZN | 14 | 49 | 03 | | 1.2 | 1 | | |
| | | S | ZN | | 51 | 46 | | | | | |
| 29 | AF | P | ZN | 19 | 43 | 14 | | 1.6 | 2 | | |
| 29 | AF | P | ZN | 20 | 55 | 27 | | 0.7 | 1 | | |
| 29 | AF | P | Z | 23 | 57 | 41 | | | | | |
| 30 | AF | P | ZN | 04 | 12 | 33 | | | | | |
| 30 | AF | P | ZN | 11 | 00 | 43 | | | | | |
| | | i(Pg) | ZN | | | 56 | | 7.3 | 1 | 3 | 1 |
| | | i | N | | 01 | 03 | | | | 5.7 | 1 |
| | | S | N | | | 10 | | | | 14 | 1 |
| | | i | Z | | | 22 | | 22.5 | 1 | | |
| 30 | AF | eP | Z | 14 | 23 | 43 | | | | | |
| 30 | AF | eP | Z | 15 | 15 | 57 | | | | | |
| | | eS | ZN | | 18 | 14 | | | | | |
| 30 | AF | iP | ZN | 22 | 19 | 14 | d? | 1.6 | 2 | 0.6 | 1 |
| | | pP | Z | | 21 | 43 | | | | | |
| MAY 2 | AF | e(P) | ZN | 04 | 19 | 48 | | 0.6 | 1 | | |
| | | (S) | ZN | | 22 | 15 | | 0.7 | 1 | 0.8 | 1 |
| 2 | AF | P | Z | 04 | 37 | 21 | | 0.8 | 1 | | |
| | | S | Z | | 39 | 09 | | 0.8 | 1 | | |
| 2 | AF | P | ZN | 12 | 21 | 13 | | 1.3 | 2 | | |
| 2 | AF | iP | ZN | 17 | 53 | 27 | d | 1 | 1 | 0.7 | 1 |
| | | S | ZN | | 55 | 06 | | 0.6 | 1 | 0.5 | 1 |
| 2 | AF | iP | ZN | 18 | 59 | 37 | u | 1.1 | 1 | 0.7 | 1 |
| | | iS | ZN | | | 55 | | 4.6 | 1 | 3.1 | 1 |
| 2 | AF | P | ZN | 20 | 35 | 22 | | | | | |
| | | S | ZN | | 38 | 00 | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 3 | AF | P | ZN | 07 | 59 | 32 | | | | | |
| | | S | ZN | 08 | 01 | 41 | | | | | |
| 3 | AF | P | ZN | 08 | 10 | 49 | | 1 | 1 | | |
| | | S | ZN | | 13 | 00 | | 1 | 1 | 0.6 | 1 |
| 3 | AF | iP | ZN | 12 | 38 | 40 | d | 0.5 | 1 | | |
| | | S | ZN | | 39 | 06 | | 1.2 | 1 | 0.7 | 1 |
| 3 | AF | P | Z | 13 | 33 | 23 | | | | | |
| 3 | AF | P | Z | 22 | 33 | 11 | | | | | |
| 3 | AF | iP | ZN | 23 | 59 | 42 | u | 3.3 | 1 | 1.3 | 1 |
| | | iS | ZN | 00 | 01 | 18 | | 2.2 | 1 | 1.8 | 1 |
| 4 | AF | iP | ZN | 15 | 39 | 06 | u | 1 | 1 | 0.5 | 1 |
| | | iS | ZN | | | 27 | | 1.6 | 1 | 1 | 1 |
| 4 | AF | P | Z | 18 | 33 | 25 | | 0.9 | 1 | | |
| | | (PP) | Z | | | 40 | | | | | |
| | | L | ZN | | 36.4 | | | 2.2 | 15 | | |
| 5 | AF | P | ZN | 01 | 06 | 05 | | 0.9 | 1 | 0.6 | 1 |
| | | S | ZN | | 08 | 02 | | 0.5 | 1 | 0.6 | 1 |
| 5 | AP | eP | N | 20 | 11 | 17 | | | | | |
| | | S | N | | | 38 | | | | | |
| 7 | AP | eP | N | 10 | 00 | 25 | | | | | |
| | | S | N | | | 52 | | | | | |
| 7 | AP | eP | N | 22 | 26 | 33 | | | | | |
| | | S | N | | | 56 | | | | | |
| 8 | AP | eP | N | 05 | 12 | 45 | | | | | |
| | | eS | N | | 14 | 01 | | | | | |
| 8 | AP | P | N | 09 | 56 | 03 | | | | | |
| | | S | N | | | 23 | | | | | |
| 8 | AP | eP | N | 11 | 06 | 39 | | | | | |
| | | S | N | | 07 | 04 | | | | | |
| 8 | AP | P | N | 20 | 27 | 24 | | | | | |
| | | S | N | | | 50 | | | | | |
| 8 | AP | eS | N | 21 | 00 | 53 | | | | | |
| 9 | AP | P | N | 03 | 39 | 13 | | | | | |
| | | S | N | | | 44 | | | | | |
| 9 | AF | P | Z | 09 | 06 | 05 | | 0.6 | 1 | | |
| 10 | AF | iP | Z | 10 | 21 | 02 | d | | | | |
| | | S | ZN | | 22 | 36 | | | | 0.7 | 1 |
| | | i | Z | | | 40 | | | | | |
| 10 | AF | iP | ZN | 17 | 03 | 57 | d | | | 0.5 | 1 |
| | | S | ZN | | 04 | 21 | | | | 1.2 | 1 |
| 11 | AF | iP | ZN | 09 | 16 | 10 | | 0.8 | 1 | | |
| | | iS | ZN | | | 35 | | 2.1 | 1 | 1.3 | 1 |
| 11 | AF | P | ZN | 18 | 45 | 54 | | | | | |
| | | e(S) | ZN | | 53.8 | | | | | | |
| | | e(SS) | N | | 57.7 | | | | | | |
| | | eL | ZN | | 59.0 | | | | | | |
| | | M | Z | 19 | 13 | | | 1.9 | 16 | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 12 | AF | P | ZN | 13 | 35 | 03 | | | | | |
| | | S | ZN | | | 46 | | 1.3 | 1 | 1 | 1 |
| 12 | AF | iP | ZN | 16 | 14 | 45 | d | 0.5 | 1 | | |
| | | S | ZN | | 16 | 05 | | 0.6 | 1 | 0.7 | 1 |
| 12 | AF | P | Z | 22 | 45 | 51 | | 1 | 1 | | |
| 13 | AF | iP | Z | 00 | 46 | 30 | u | 0.6 | 1 | 0.8 | 1 |
| | | S | Z | | 47 | 01 | | 1.5 | 1 | 1.1 | 1 |
| 13 | AF | P | ZN | 16 | 18 | 30 | | 2.1 | 4 | 2 | 20 |
| | | L | ZN | | 38.5 | | | 2 | 20 | 1.2 | 20 |
| 13 | AF | P | Z | 23 | 43 | 13 | | 0.6 | 1 | | |
| | | (S) | Z | | 44 | 53 | | | | | |
| 14 | AF | iP | Z | 02 | 20 | 16 | u | | | | |
| | | iS | Z | | | 40 | | | | 3.6 | 1 |
| 14 | AF | iP | ZN | 18 | 27 | 42 | u | 1.8 | 1 | 1 | 1 |
| | | S | ZN | | 28 | 02 | | 8± | 1 | 6 | 1 |
| 14 | AF | iP | Z | 23 | 16 | 25 | u | 3 | 1 | 2 | 1 |
| | | iS | Z | | 17 | 00 | | 3.5 | 1 | 2.6 | 1 |
| 15 | AF | iP | ZN | 21 | 06 | 40 | u | | | | |
| | | S | ZN | | | 58 | | | | | |
| 15 | AF | eP? | Z | 21 | 47(56) | | | | | | |
| 17 | AF | iP | Z | 15 | 46 | 06 | d? | | | | |
| | | i | ZN | | | 09 | | 0.5 | 1 | | |
| | | S | ZN | | 47 | 47 | | 1.4 | 1 | 1.1 | 1 |
| 18 | AF | iP | ZN | 00 | 21 | 01 | u | 9½± | 1 | 4 | 1 |
| | | iS | ZN | | | 30 | | 13± | 1 | 9 | 1 |
| 18 | AF | P | ZN | 00 | 34 | 04 | | 1.6 | 1 | 0.8 | 1 |
| | | S | ZN | | 35 | 08 | | 2.6 | 1 | 1.8 | 1 |
| 18 | AF | P | Z | 06 | 46 | 22 | | | | | |
| | | e(S) | N | | 55 | | | | | | |
| | | eL | ZN | 07 | 07.5 | | | 2.5 | 20 | 1.5 | 20 |
| 20 | AF | P | ZN | 11 | 17 | 50 | | 4 | 5 | 2.0 | 3 |
| | | PP | Z | | 18 | 34 | | 6 | 4 | | |
| | | S | ZN | | 22 | 06 | | 6.5 | 18 | 1.8 | 10 |
| | | Lg | N | | 23.0 | | | | | 2.9 | 26 |
| | | (SS) | Z | | 23 | 05 | | 2.5 | 10 | | |
| | | Lr | ZN | | 23.9 | | | 14.3 | 25 | 4.3 | 24 |
| 20 | AF | P | Z | 14 | 25 | 37 | | 0.6 | 1 | | |
| 21 | AF | eiP | ZN | 06 | 11 | 03 | d | 1 | 1 | 0.7 | 1 |
| | | S | ZN | | 12 | 42 | | 1.4 | 1 | 1.7 | 1 |
| 21 | AF | P | ZN | 08 | 31 | 21 | | 0.6 | 1 | | |
| | | (S) | ZN | | 33 | 18 | | 0.5 | 1 | | |
| 21 | AF | P | Z | 10 | 15 | 52 | | 2.8 | 6 | | |
| | | PcP | ZN | | 16 | 02 | | 8.5 | 6 | 1.9 | 4 |
| | | PP | ZN | | 18 | 57 | | 3.5 | 10 | 1.4 | 13 |
| | | PPP | Z | | 21 | 08 | | 4.1 | 13 | | |
| | | SKS | ZN | | 26 | 10 | | 4 | 11 | | |
| | | S | ZN | | | 30 | | 8.4 | 12 | 5.2 | 28 |
| | | PS | ZN | | 27 | 10 | | 10.5 | 16 | 5.5 | 20 |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 21 | AF | PPS | ZN | | 28 | 12 | | 7 | 14 | 6 | 24 |
| | | e | ZN | | 32.3 | | | 8.5 | 18 | 2.3 | 14 |
| | | SS | ZN | | 33 | 00 | | 15.5 | 18 | 3.9 | 22 |
| | | e | ZN | | 34 | 02 | | 7.2 | 18 | | |
| | | eLq | N | | 39.1 | | | | | | |
| | | L | ZN | | 39.9 | | | 8 | 20 | | |
| | | L | N | | 40.3 | | | | | 3 | 20 |
| | | Lr | ZN | | 43.5 | | | 65 | 27 | 18.5 | 25 |
| | | M | ZN | | 46.5 | | | 100± | 20 | 30 | 19 |
| 21 | AF | P | ZN | 15 | 20 | 08 | | 0.8 | 1 | 0.7 | 1 |
| 22 | AF | P | ZN | 01 | 03 | 22 | | 0.6 | 1 | | |
| | | eL | ZN | | 09.8 | | | | | | |
| 22 | AF | eP? | Z | 06 | 11 | 54 | | | | | |
| | | (S) | ZN | | 13 | 23 | | 0.7 | 1 | | |
| 22 | AF | P | Z | 10 | 43 | 43 | | 3 | 8 | | |
| | | PP | Z | | 47 | 04 | | 2.5 | 8 | | |
| | | SKS | Z | | 53 | 38 | | 2 | 6 | | |
| | | S | ZN | | 54.0 | | | 2.2 | 6 | 1.2 | 8 |
| | | (PS) | Z | | 55 | 18 | | 2.2 | 8 | | |
| | | eSS | ZN | 11 | 01 | 30 | | 2.6 | 10 | | |
| | | eLr | ZN | | 11.6 | | | 3.3 | 23 | | |
| 22 | AF | iP | ZN | 10 | 45 | 51 | u | 7.4 | 6 | 1.4 | 5 |
| | | PP | Z | | 49 | 06 | | 2.9 | 7 | | |
| | | (SKS) | Z | | 55 | 48 | | 2 | 6 | | |
| | | S | ZN | | 56 | 06 | | 5 | 23 | 3.6 | 25 |
| | | PS | ZN | | 57 | 22 | | 8.9 | 22 | 3 | 25 |
| | | SS | ZN | 11 | 02 | 18 | | 8.5 | 23 | 2.6 | 21 |
| | | SSS | ZN | | 05 | 13 | | 3 | 23 | | |
| | | Lq | ZN | | 09.0 | | | 4 | 22 | 2.2 | 28 |
| | | Lr | ZN | | 13.5 | | | 28 | 26 | 10 | 22 |
| 22 | AF | (P) | Z | 12 | 31 | 35 | | | | | |
| 22 | AF | iP | ZN | 14 | 01 | 16 | d | | | | |
| | | S | ZN | | 02 | 00 | | | | | |
| 22 | AF | P | Z | 15 | 25 | 26 | | | | | |
| | | S | Z | | 27 | 30 | | | | | |
| 22 | AF | P | ZN | 19 | 00 | 13 | | 0.8 | 1 | | |
| | | S | ZN | | | 34 | | 3.3 | 1 | 1.7 | 1 |
| 22 | AF | P | Z | 19 | 08 | 54 | | 2.3 | 4 | | |
| | | PcP | ZN | | 09 | 02 | | 10.6 | 8 | 1.2 | 4 |
| | | PP | ZN | | 12 | 13 | | 4.1 | 15 | 1.1 | 13 |
| | | SKS | ZN | | 19 | 12 | | 3.5 | 11 | | |
| | | S | ZN | | | 40 | | 9.1 | 28 | 6.6 | 28 |
| | | PS | ZN | | 20 | 41 | | 15 | 25 | 4.1 | 30 |
| | | PPS | ZN | | 21.5 | | | 13.5 | 20 | 9 | 25 |
| | | L | N | | 35.5 | | | | | 45 | 37 |
| | | M | ZN | | 38 | | | 10½± | 17 | 8½± | 20 |
| 22 | AF | P | Z | 19 | 23 | 39 | | 5.3 | 6 | | |
| | | PcP | ZN | | 24 | 05 | | 20.5 | 10 | 3.0 | 4 |
| | | (PP) | N | | 27 | 03 | | | | 6.8 | 4 |
| | | (PPP) | N | | 28 | 02 | | | | 4.5 | 5 |
| | | (S) | N | | 34 | 44 | | | | 11 | 30 |
| 23 | AF | P | ZN | 00 | 30 | 39 | | | | | |
| | | S | ZN | | 32 | 42 | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 23 | AF | eL | N | 00 | 33.3 | | | | | 1.5 | 25 |
| | | L | ZN | | 34.8 | | | 10.5 | 11 | 3.5 | 11 |
| 23 | AF | eL | ZN | 03 | 26.8 | | | 2.7 | 20 | 1 | 20 |
| 23 | AF | eL | ZN | 05 | 54.2 | | | 3.3 | 20 | 1 | 20 |
| 23 | AF | P | Z | 07 | 21 | 51 | | 1.5 | 3 | | |
| | | eL | ZN | | 47.5 | | | 2.0 | 18 | 1.2 | 20 |
| 23 | AF | P? | Z | 10 | 49 | 59 | | | | | |
| | | (P) | Z | | 50 | 42 | | 0.6 | 2 | | |
| | | eL | ZN | 11 | 17.8 | | | 2.5 | 18 | 1 | 18 |
| 24 | AF | iP | ZN | 14 | 53 | 30 | d? | 2.3 | 3 | 1.3 | 2 |
| | | (PPP) | ZN | | 55 | 28 | | 2.5 | 4 | 1.3 | 6 |
| | | i | Z | | 58 | 04 | | 2.2 | 5 | | |
| | | eS | ZN | | 59 | 05 | | 2.6 | 30 | 1.3 | 26 |
| | | SS | Z | 15 | 01 | 23 | | 2 | 18 | | |
| | | eLq | N | | 01.8 | | | | | 1.6 | 30 |
| | | Lr | ZN | | 03.5 | | | 17.5 | 28 | 8 | 26 |
| 25 | AF | P | ZN | 08 | 47 | 20 | | 2.7 | 5 | | |
| | | eS | ZN | | 57 | 48 | | 3 | 18 | 2.1 | 40 |
| | | eSS | ZN | | 03 | 02 | | 3 | 23 | 1.2 | 30 |
| | | eLq | N | | 09.7 | | | | | 1.2 | 35 |
| | | Lr | ZN | | 13.0 | | | 5.8 | 32 | 2.5 | 33 |
| 25 | AF | P | ZN | 09 | 30 | 52 | | 1.4 | 1 | | |
| | | S | ZN | | 32 | 30 | | | | | |
| 25 | AF | P | Z | 10 | 17 | 07 | | | | | |
| | | S | ZN | | 19 | 56 | | | | | |
| | | eL | ZN | | 20.8 | | | 2.6 | 8 | 1.4 | 8 |
| 25 | AF | eL | ZN | 10 | 34.2 | | | 4.5 | 8 | 2.3 | 8 |
| 25 | AF | iP | ZN | 13 | 17 | 18 | u | 1.5 | 1 | 0.8 | 1 |
| | | S | ZN | | | 43 | | 6 | 1 | 6.5 | 1 |
| 25 | AF | iP | ZN | 15 | 01 | 44 | u | 2 | 2 | 0.8 | 2 |
| | | S | ZN | | 03 | 40 | | 4.7 | 1 | 3 | 1 |
| 25 | AF | P | ZN | 15 | 07 | 46 | | 0.8 | 1 | | |
| | | S | ZN | | 09 | 42 | | 0.8 | 1 | 1 | 1 |
| 25 | AF | iP | ZN | 17 | 12 | 04 | d | 2 | 1 | 1.4 | 1 |
| | | e(S) | ZN | | 14 | 45 | | | | | |
| | | i | ZN | | | 48 | | 1.5 | 1 | 1.1 | 1 |
| 25 | AF | P | ZN | 17 | 38 | 16 | | 1.3 | 1 | | |
| | | e(S) | ZN | | 40 | 56 | | | | | |
| | | i | ZN | | | 04 | | 0.7 | 1 | | |
| 26 | AF | PKP | ZN | 05 | 30 | 05 | | 1.4 | 2 | | |
| 26 | AF | iP | ZN | 05 | 37 | 31 | u | 1.2 | 1 | | |
| 26 | AF | iP | ZN | 06 | 49 | 43 | u | 0.8 | 1 | | |
| | | (S) | ZN | | 50 | 06 | | 1.2 | 1 | 1.5 | 1 |
| 28 | AF | P | ZN | 01 | 45 | 31 | | 0.8 | 1 | | |
| | | S | ZN | | 46 | 31 | | 1.7 | 1 | 1.4 | 1 |
| 28 | AF | iP | ZN | 03 | 31 | 12 | | | | | |
| | | iS | ZN | | | 50 | | 1.2 | 1 | 1 | 1 |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 28 | AF | iP | Z | 10 | 47 | 31 | d? | | | | |
| | | iS | ZN | | 48 | 26 | d | | | | |
| 29 | AF | eL | ZN | 08 | 20.0 | | | 3.6 | 18 | 1.2 | 20 |
| 29 | AF | P | Z | 12 | 08 | 06 | | | | | |
| | | S | ZN | | | 56 | | | | 0.7 | 1 |
| 29 | AF | iP | ZN | 23 | 33 | 20 | | | | 1.2 | 1 |
| | | iS | ZN | | | 42 | | | | 3 | 1 |
| 30 | AF | eP | Z | 06 | 36 | 55 | | | | | |
| | | eS | ZN | | 37 | 51 | | | | | |
| 30 | AF | P | ZN | 08 | 33 | 46 | | | | | |
| 31 | AF | P | ZN | 04 | 57 | 04 | | | | | |
| 31 | AF | iP | ZN | 13 | 17 | 35 | u | | | | |
| | | PP | Z | | 18 | 33 | | | | | |
| | | eL | Z | | 26 | | | 1 | 20 | | |
| 31 | AF | iP | ZN | 19 | 02 | 00 | u? | 1.1 | 1 | 0.7 | 1 |
| | | iS | ZN | | | 22 | | 3.3 | 1 | 2.3 | 1 |
| 31 | AF | iP | Z | 21 | 11 | 40 | d? | | | | |
| JUN 1 | AF | P | ZN | 00 | 42 | 48 | | | | | |
| | | S | ZN | | 43 | 07 | | 1.7 | 1 | 1.2 | 1 |
| 1 | AF | eL | Z | 05 | 44.2 | | | 1 | 20 | | |
| 1 | AF | P | ZN | 23 | 32 | 33 | | 0.6 | 1 | | |
| 2 | AF | eL | ZN | 06 | 37.3 | | | 1.4 | 20 | | |
| 2 | AF | eP | ZN | 07 | 20 | 38 | | 1.1 | 1 | 0.7 | 1 |
| | | eS | ZN | | 21 | 41 | | 3.3 | 1 | 2.4 | 1 |
| 2 | AF | P | ZN | 07 | 54 | 28 | | 1.0 | 2 | | |
| | | ePP | Z | | 56 | 10 | | 1.5 | 4 | | |
| | | S | ZN | 08 | 00 | 12 | | 2.3 | 16 | 0.9 | 10 |
| | | eSS | ZN | | 02 | 54 | | 2.0 | 15 | | |
| | | e(Lq) | ZN | | 04.5 | | | 1.8 | 23 | 1.5 | 25 |
| | | Lr | Z | | 06.8 | | | 3.5 | 20 | 1.3 | 18 |
| 2 | AF | iP | ZN | 08 | 14 | 42 | u | 3.1 | 1 | 1.5 | 1 |
| | | S | ZN | | 15 | 35 | | 5± | 1 | 3.5 | 1 |
| 2 | AF | iP | ZN | 19 | 01 | 14 | u | 3.5 | 1 | 1.2 | 1 |
| | | iS | ZN | | 02 | 53 | n | 5.5 | 1 | 4.5 | 1 |
| 2 | AF | iP | ZN | 19 | 50 | 36 | u | 1.3 | 1 | 0.9 | 1 |
| | | S | ZN | | 52(20) | | | 0.8 | 1 | 1 | 1 |
| 3 | AF | P | Z | 03 | 26 | 06 | | | | | |
| | | S | ZN | | 28 | 46 | | | | 0.6 | 1 |
| 3 | AF | iP | ZN | 13 | 16 | 14 | ds | 4 | 1 | 1.4 | 1 |
| | | S | ZN | | 18 | 24 | | 0.9 | 1 | 1 | 2 |
| | | e | N | | | 33 | | | | | |
| 3 | AF | iP | ZN | 13 | 35 | 43 | ds | 9.1 | 1 | 4.7 | 1 |
| | | S | ZN | | 27 | 20 | | 2.2 | 1 | 2 | 1 |
| 3 | AF | P | Z | 19 | 59 | 19 | | | | | |
| | | S | ZN | 20 | 00 | 01 | | 0.8 | 1 | 0.7 | 1 |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 3 | AF | iP | ZN | 21 | 57 | 48 | u? | | | | |
| | | S | ZN | | 59 | 25 | | | | | |
| 4 | AF | P | Z | 02 | 24 | 09 | | | | | |
| | | S | ZN | | 25 | 38 | | | | 0.9 | 1 |
| 5 | AF | P | ZN | 19 | 35 | 01 | | | | 1.5 | 3 |
| | | eS | ZN | | 38 | 38 | | | | 1.3 | 13 |
| | | eL | ZN | | 40.4 | | | | | | |
| | | eL | N | | 43.1 | | | | | 1 | 13 |
| | | eL | Z | | 44.0 | | | | | 1.8 | 12 |
| 5 | AF | iP | ZN | 21 | 39 | 28 | | | | | |
| | | S | ZN | | 41 | 17 | | | | | |
| 6 | AF | iP | ZN | 00 | 51 | 15 | u | | | 2.7 | 1 |
| | | iS | ZN | | | 36 | s? | | | | |
| 6 | AF | eP | Z | 01 | 29 | 04 | | | | | |
| | | PcP | ZN | | | 11 | | | | 1.2 | 2 |
| | | eL | N | | 48.1 | | | | | | |
| | | eL | Z | | 49.7 | | | | | 1.8 | 20 |
| 6 | AF | iP | ZN | 06 | 08 | 30 | u | | | 3.5 | 4 |
| | | e | ZN | | 09 | 22 | | | | 12.5 | 8 |
| | | PP | ZN | | 12 | 28 | | | | 4 | 10 |
| | | e | N | | 19.1 | | | | | | |
| | | S | ZN | | 19 | 35 | | | | 7.5 | 20 |
| | | PS | ZN | | | 55 | | | | 7 | 29 |
| | | SS | ZN | | 24.4 | | | | | 5 | 20 |
| | | Lq | ZN | | 31.0 | | | | | 3.5 | 17 |
| | | Lr | ZN | | 34.8 | | | | | 62± | 20 |
| 6 | AF | iP | ZN | 23 | 32 | 50 | u | | | 0.8 | 1 |
| | | S | ZN | | 35 | 00 | | | | 2.3 | 1 |
| 7 | AF | iP | ZN | 07 | 01 | 15 | d | | | 2.9 | 1 |
| | | S | ZN | | | 53 | | | | 12.5 | 1 |
| 7 | AF | P | ZN | 10 | 46 | 14 | | | | | |
| | | S | ZN | | | 55 | | | | | |
| 7 | AF | iP | ZN | 13 | 29 | 52 | d | | | 3.5 | 1 |
| | | iS | ZN | | 31 | 26 | n? | | | 6.6 | 1 |
| 7 | AF | P | ZN | 16 | 44 | 52 | | | | 0.9 | 1 |
| | | S | ZN | | 46 | 41 | | | | 0.8 | 1 |
| 8 | AF | iP | ZN | 00 | 32 | 40 | u | | | 0.9 | 1 |
| | | S | ZN | | 33 | 16 | | | | 2 | 1 |
| 8 | AF | iP | ZN | 19 | 02 | 36 | u | | | 2.3 | 1 |
| | | iS | ZN | | 03 | 11 | s | | | 20± | 1 |
| 9 | AF | iP | ZN | 11 | 28 | 31 | d | | | 3.6 | 4 |
| | | PP | Z | | | 42 | | | | 6.6 | 3 |
| | | (Lq) | ZN | | 32 | 29 | | | | 2 | 22 |
| | | Lr | Z | | 34.7 | | | | | 9.5 | 20 |
| 10 | AF | iP | ZN | 09 | 08 | 54 | ds | | | 10.8 | 1 |
| | | S | ZN | | 09 | 19 | | | | 60± | 1 |
| 10 | AF | iP | ZN | 21 | 12 | 44 | | | | 7 | 1 |
| | | L | ZN | | 13.0 | | | | | | |
| 11 | AF | eP? | Z | 00 | 49 | 03 | | | | | |

| Date | Stn | Phase | | h m s | | Az Tz | An Tn |
|---|---|---|---|---|---|---|---|
| JUN 11 | AF | iP | ZN | 15 21 07 | | 7.5 5 | 1.2 2 |
| | | PP | ZN | 22 34 | | 4.0 6 | 1.3 4 |
| | | S | ZN | 26 44 | | 5.2 15 | 2.0 15 |
| | | (SS) | Z | 28 15 | | 2.4 16 | |
| | | Lq | N | 29.2 | | | 3.3 36 |
| | | Lr | Z | 30.7 | | 9.8 26 | |
| | 11 AF | iP | Z | 16 44 37 | d | 4.6 4 | 1.2 4 |
| | | PP | Z | 45 57 | | 4 6 | 1.0 4 |
| | | S | ZN | 50 15 | | 8.5 18 | 2.0 12 |
| | | SS | Z | 51 55 | | 3.5 14 | |
| | | Lq | N | 52.5 | | | 5.5 30 |
| | | Lr | Z | 53.0 | | 8.5 18 | |
| | 11 AF | eP | ZN | 17 14 46 | | | |
| | 12 AF | iP | Z | 03 13 44 | u | | |
| | 12 AF | iP | ZN | 03 59 19 | u | 2 1 | 1.2 1 |
| | | iS | ZN | 04 01 24 | | 2 1 | 2.1 1 |
| | 12 AF | i(P) | Z | 04 06 58 | u | | |
| | 12 AF | P | ZN | 07 02 08 | | 0.8 1 | 0.8 1 |
| | | S | ZN | 05 16 | | 0.8 1 | 0.8 1 |
| | 12 AF | P | Z | 07 30 47 | | 1.2 3 | |
| | | eS | N | 39 40 | | | 1.5 20 |
| | | eLq | ZN | 48.0 | | | 1 20 |
| | | eLr | ZN | 50.7 | | 2.2 25 | |
| | 12 AF | eP | Z | 15 20 36 | | 0.6 1 | |
| | 13 AF | eP | ZN | 03 21 52 | | 0.8 1 | 0.6 1 |
| | | S | ZN | 23 34 | | 0.6 1 | 0.8 1 |
| | 13 AF | eP | Z | 05 59 51 | | | |
| | | eL | ZN | 06 25.7 | | 1.2 20 | |
| | 14 AF | iP | Z | 09 00 07 | u | 0.6 1 | |
| | | S | ZN | 01 44 | | 0.6 1 | 0.6 1 |
| | 14 AF | i(P) | Z | 11 32 26 | d | | |
| | 14 AF | P | Z | 23 45 09 | | 0.9 2 | |
| | 15 AF | (P) | ZN | 02 58 28 | | 0.8 1 | 0.8 1 |
| | 15 AF | P | Z | 14 07 07 | | | |
| | 15 AF | e(P) | Z | 14 08 39 | | | |
| | | S | ZN | 09 19 | | 0.7 1 | 0.7 1 |
| | 15 AF | eL | ZN | 16 08.0 | | 1 20 | |
| | 15 AF | P | ZN | 22 54 01 | | 2 3 | 0.9 2 |
| | | eS | ZN | 57 26 | | 1.4 12 | 0.8 8 |
| | | eL | N | 59.2 | | | 1.2 13 |
| | | eL | Z | 59.6 | | 2.9 12 | |
| | 15 AF | P | ZN | 23 35 44 | | | |
| | | i | ZN | 48 | | 4.5 2 | 2 1 |
| | | PP | Z | 36 10 | | 4.3 2 | |
| | | S | ZN | 39 08 | | 1.5 2 | 1 1 |
| | | (L) | ZN | 39.4 | | 4 13 | 2 10 |
| | 16 AF | P | Z | 09 10 24 | | 0.5 1 | |



| Date | Stn | Phase | | h m s | | Az Tz | An Tn |
|---|---|---|---|---|---|---|---|
| JUN 16 | AF | eP | ZN | 14 34 13 | | | |
| | | (S) | ZN | 35 44 | | | |
| 17 | AF | iP | ZN | 02 46 51 | d | 3.2 1 | 1 1 |
| | | S | ZN | 48 28 | | | |
| 17 | AF | iP | ZN | 05 04 27 | u? | | 0.8 1 |
| | | S | ZN | 05 56 | | | 2.6 1 |
| 17 | AF | eiP | ZN | 07 24 16 | du | 3.3 1 | 1.5 1 |
| | | S | ZN | 59 | | 6.5 1 | 4.6 1 |
| 17 | AF | P | ZN | 14 48 48 | | 2.8 1 | 1.6 1 |
| | | S | ZN | 51 12 | | 4 1 | 3 1 |
| 17 | AF | iP | ZN | 15 49 01 | u? | | |
| | | S | ZN | 42 | | 1 1 | 0.6 1 |
| 17 | AF | e(P) | Z | 16 21 19 | | | |
| 17 | AF | P? | Z | 16 46 30 | | | |
| 17 | AF | P | Z | 17 13 28 | | | |
| | | S | ZN | 14 05 | | 1.1 1 | 1 1 |
| 18 | AF | P | Z | 02 36 45 | | | |
| | | e(S) | Z | 39 10 | | | |
| | | eL | ZN | 41.2 | | 3 8 | |
| 18 | AF | eiP | ZN | 15 01 28 | du | 0.9 1 | |
| | | S | ZN | 48 | | 1.1 1 | 0.9 1 |
| 18 | AF | P | ZN | 19 51 04 | | | |
| | | S | ZN | 52 37 | | 0.6 1 | 0.7 1 |
| 18 | AF | P | Z | 22 44 09 | | | |
| | | e | Z | 46 09 | | | |
| | | (S) | Z | 47 04 | | | |
| 19 | AF | iP | ZN | 12 23 34 | s | 8 1 | 2 1 |
| | | S | ZN | 24 56 | | | 0.9 1 |
| 20 | AF | iP | Z | 02 14 08 | d? | 6 8 | |
| | | PP | Z | 17 29 | | 3 25 | |
| | | S | ZN | 24 34 | | | 2.5 25 |
| | | eSS | N | 29 57 | | | 1.5 20 |
| | | eSSS | N | 33 33 | | | 1.3 16 |
| | | eLq | N | 37.0 | | | 1.5 23 |
| | | Lr | ZN | 41.5 | | 14.5 21 | 4.8 22 |
| | | M | ZN | 45 | | 16.5 18 | 4.8 18 |
| 20 | AF | P | Z | 13 12 40 | | 4.1 6 | |
| | | eS | ZN | 22 54 | | 2.7 22 | 1.2 23 |
| | | eSS | ZN | 28 32 | | 2.7 20 | 1 25 |
| | | e(SSS) | Z | 31.8 | | | |
| | | eLq | Z | 35.2 | | 1.5 25 | |
| | | eLq | N | 35.8 | | | |
| | | Lr | ZN | 40.0 | | 7 23 | 2.2 23 |
| | | M | ZN | 44 | | 14 18 | 3.5 18 |
| 20 | AF | iP | ZN | 17 42 42 | u | 1 1 | |
| | | S | ZN | 44 06 | | | |
| 21 | AF | P | Z | 12 54 05 | | 0.8 1 | |
| 21 | AF | iP | ZN | 18 11 13 | u | 1.5 1 | 0.7 1 |
| | | S | ZN | 12 38 | | 1.2 1 | 1.1 1 |

| Date | Stn | Phase | | h m s | | Az Tz | An Tn |
|---|---|---|---|---|---|---|---|
| JUN 21 | AF | P | Z | 23 15 44 | | | |
| | | e(S) | Z | 18 02 | | | |
| 23 | AF | iP | ZN | 04 12 40 | u | 0.8 1 | 0.7 1 |
| | | S | ZN | 13 04 | | 1.9 1 | 1.2 1 |
| 23 | AF | P | Z | 12 18 22 | | | |
| 23 | AF | iP | ZN | 12 18 26 | d | 0.9 1 | 0.6 1 |
| | | S | ZN | 48 | | 1.6 1 | 1.3 1 |
| 23 | AF | iP | ZN | 14 14 11 | u | 0.6 1 | |
| | | S | ZN | 39 | | 0.8 1 | 0.9 1 |
| 24 | AP | e(P) | N | 05 27 08 | | | |
| | | e(S) | N | 52 | | | |
| 24 | AP | P | N | 15 20 36 | | | |
| | | S | N | 54 | | | |
| 24 | AP | eP? | N | 15 32 37 | | | |
| 25 | AP | eP | N | 02 06 38 | | | |
| | | eS | N | 09 34 | | | |
| 25 | AF | P | ZN | 06 23 35 | | | |
| | | S | ZN | 24 32 | | | 1 1 |
| 25 | AF | P | ZN | 14 45 04 | | | |
| | | S | ZN | 48 04 | | | |
| | | eL | ZN | 49.0 | | 3.6 13 | 1.5 20 |
| 25 | AF | P | ZN | 14 45 47 | | 2.8 2 | 1.3 2 |
| | | S | ZN | 48 47 | | 1.2 1 | 1.3 2 |
| | | L | ZN | 49.5 | | 5 30 | 1.8 30 |
| 25 | AF | P | Z | 15 22 48 | | 1 1 | 0.7 1 |
| | | (S) | Z | 25 19 | | 1 1 | 0.7 1 |
| 26 | AF | iP | ZN | 08 49 11 | d | 1.6 1 | 1 1 |
| | | S | ZN | 30 | | 4 1 | 3 1 |
| 26 | AF | P | Z | 15 57 46 | | 1.3 1 | |
| | | S | ZN | 58 06 | | 3 1 | 1.5 1 |
| | | (T) | ZN | 59 43 | | 4 1 | 3 1 |
| 26 | AF | iP | ZN | 19 10 18 | d?s | 5.2 1 | 2 1 |
| | | iS | ZN | 38 | s? | 15.5 1 | 9.7 1 |
| 27 | AF | iP | ZN | 08 51 25 | u | | |
| | | S | ZN | 52 02 | | | |
| 27 | AF | iP | ZN | 16 54 56 | d | 1.5 1 | |
| | | e(S) | N | 58 18 | | | |
| | | S | ZN | 28 | | | |
| | | eL | ZN | 58.5 | | 2.5 12 | 1.2 12 |
| | | M | ZN | 17 04 | | 2.7 13 | 1.5 13 |
| 27 | AF | P | ZN | 17 03 18 | | | |
| | | (S) | Z | 07 03 | | | |
| 27 | AF | iP | Z | 18 08 10 | d? | | |
| 27 | AF | iP | Z | 19 11 28 | | | |
| 28 | AF | P | Z | 01 09 16 | | | |
| | | S | ZN | 11 25 | | 0.9 1 | 0.7 1 |



| Date | Stn | Phase | | h m s | | Az Tz | An Tn | |
|---|---|---|---|---|---|---|---|---|
| JUN 28 | AF | P | Z | 05 58 20 | | | | |
| | | S | ZN | 59 08 | | | | |
| 28 | AF | P | ZN | 16 10 22 | | 0.9 1 | | |
| | | S | ZN | 12 14 | | 1.2 1 | 1.3 1 | |
| 29 | AF | eL | ZN | 02 36.8 | | 1.8 20 | 0.8 20 | |
| 29 | AF | (P) | ZN | 04 33 02 | | | | |
| | | e | ZN | 10 | | 1.5 2 | 0.8 1 | |
| | | (S) | ZN | 35 53 | | 1.3 1 | 0.8 1 | |
| | | L | ZN | 36.4 | | 2.5 20 | 1.3 20 | |
| 30 | AF | P | ZN | 03 54 27 | | 0.8 1 | | |
| | | S | ZN | 54 | | 1.4 1 | 1 1 | |
| 30 | AF | iP | ZN | 05 42 10 | d | 1.3 1 | 1 1 | |
| | | S | ZN | 40 | | 9 1 | 7.6 1 | |
| 30 | AF | P | ZN | 09 53 40 | | 1.2 1 | 0.6 1 | |
| | | S | ZN | 55 07 | | 1.2 1 | 1.2 1 | |
| JUL 1 | AF | P | ZN | 09 30 29 | | | | |
| | | S | ZN | 46 | | 2.7 1 | 2.1 1 | |
| 1 | AF | iP | ZN | 17 54 59 | dn | | 2.6 1 | Felt Apia MM2 |
| | | S | ZN | 55 26 | | | 22.6 1 | |
| 1 | AF | iP | Z | 20 44 30 | d? | | | |
| | | S | ZN | 46 07 | | | | |
| 2 | AF | P | ZN | 07 57 24 | | 1 1 | 0.7 1 | |
| | | eS | ZN | (42) | | 1.3 1 | 1.1 1 | |
| 3 | AP | eP | N | 02 28 39 | | | | |
| | | S | N | 29 14 | | | | |
| 3 | AP | P | N | 18 11 59 | | | | |
| | | S | N | 12 34 | | | | |
| 3 | AP | e(P) | N | 23 57 27 | | | | |
| | | e(S) | N | 58 16 | | | | |
| 4 | AP | iP | N | 01 22 36 | s? | | | |
| | | S | N | 56 | | | | |
| 5 | AF | iP | ZN | 03 07 58 | d | 1.3 1 | 0.7 1 | |
| | | S | ZN | 08 15 | | 1.3 1 | 1.3 1 | |
| 5 | AF | iP | ZN | 10 56 28 | u | 6.3 1 | 1.8 1 | |
| | | S | ZN | 49 | | 9.5± 1 | 7.7 1 | |
| 5 | AF | iP | Z | 11 43 16 | | | | |
| | | iS | ZN | 59 | n | 1.2 1 | 1 1 | |
| 6 | AP | eP? | N | 07 59 15 | | | | |
| | | eS | N | 08 00 06 | | | | |
| 7 | AP | eP | N | 11 30 52 | | | | |
| | | eS | N | 31 12 | | | | |
| 7 | AP | eP | N | 18 49 13 | | | | |
| | | iS | N | 34 | s? | | | |
| 8 | AF | eP | Z | 13 02 36 | | | | |
| 8 | AF | P | ZN | 15 28 07 | | | | |

| Date | Stn | Phase | | h m s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|
| JUL 8 | AF | (P) | Z | 16 51 25 | | | | | |
| 8 | AF | P | ZN | 19 26 26 | | | | | |
| | | (S) | ZN | 29 26 | | | | | |
| 9 | AF | P | ZN | 15 53 11 | | 0.7 | 1 | 0.8 | 1 |
| | | S | ZN | 40 | | 4.5 | 1 | 3 | 1 |
| | | eT | ZN | 55 49 | | 1 | 1 | 1 | 1 |
| 10 | AF | iP | ZN | 01 47 42 | u | 2.6 | 1 | | |
| | | S | ZN | 48 17 | | 1.1 | 1 | 2.1 | 1 |
| | | T | ZN | 50 | | 2.1 | 1 | 1 | 1 |
| 10 | AF | P | ZN | 07 45 00 | | 4 | 1 | 3 | 1 |
| | | S | ZN | 45 28 | | 7.2 | 1 | 5 | 1 |
| | | L | ZN | 46.1 | | 9 | 3 | 5.3 | 4 |
| 10 | AF | iP | ZN | 19 40 18 | us | | | 1.4 | 1 |
| | | S | ZN | 37 | | | | 3.1 | 1 |
| 11 | AF | iP | ZN | 04 28 13 | d | 2 | 1 | 1 | 1 |
| | | S | ZN | 46 | | 1 | 1 | 1.3 | 1 |
| 11 | AF | iP | ZN | 11 55 46 | ds | 39± | 1 | 15.3 | 1 |
| | | S | ZN | 56(11) | | 168± | 1 | 110± | 1 |
| 11 | AF | P | ZN | 14 10 36 | | 0.8 | 1 | 1.1 | 1 |
| | | S | ZN | 11 00 | | 2.2 | 1 | 1.5 | 2 |
| | | T | ZN | 12 47 | | 4.2 | 2 | 2.6 | 2 |
| 13 | AF | eL | ZN | 08 48.2 | | 1.5 | 20 | 1 | 20 |
| 13 | AF | PKP | Z | 13 20 56 | | | | | |
| 13 | AF | P | ZN | 15 09 13 | | | | | |
| 13 | AF | P | ZN | 15 22 51 | | 1 | 1 | | |
| | | S | ZN | 24 44 | | 0.9 | 1 | | |
| 13 | AF | P | Z | 17 05 17 | | | | | |
| | | i | ZN | 19 | | 1.3 | 1 | 1 | 1 |
| | | S | ZN | 06 47 | | 1 | 1 | 1 | 1 |
| 13 | AF | iP | ZN | 19 46 57 | u | 1.2 | 1 | 0.8 | 1 |
| 14 | AF | P | ZN | 10 37 50 | | | | | |
| 14 | AF | P | ZN | 10 47 37 | | | | | |
| | | S | ZN | 49 45 | | 1.4 | 1 | 1 | 1 |
| 14 | AF | iP | ZN | 10 56 02 | u | 1.9 | 2 | 0.8 | 1 |
| 15 | AF | e(PKP) | Z | 05 21 30 | | | | | |
| 15 | AF | e | Z | 14 38 59 | | | | | |
| 15 | AF | e | Z | 20 26 46 | | | | | |
| 16 | AF | iP | ZN | 01 40 53 | ds | 6.1 | 1 | 2.6 | 1 |
| | | S | ZN | 41 40 | | 3 | 1 | 2.5 | 1 |
| 16 | AF | iP | Z | 17 27 03 | | | | | |
| 16 | AF | P | Z | 21 31 41 | | | | | |
| 18 | AF | eP | Z | 01 50 07 | | 0.9 | 1 | | |
| | | e(S) | Z | 55 | | | | | |
| | | eL | ZN | 57 | | 2.5 | 20 | 1 | 20 |



| Date | Stn | Phase | | h m s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|
| JUL 18 | AF | iP | ZN | 07 47 54 | d | 5.3 | 1 | 3.0 | 1 |
| | | S | ZN | 48 42 | | 12 | 1 | 6.6 | 1 |
| 18 | AF | iP | ZN | 08 03 26 | d | 1.2 | 1 | 0.6 | 1 |
| | | S | ZN | 44 | | 4 | 1 | 3.5 | 1 |
| 18 | AF | iP | ZN | 09 59 58 | u | 2.5 | 1 | 1 | 1 |
| | | S | ZN | 10 00 19 | | 3.5 | 1 | 2.1 | 1 |
| 19 | AF | iP | ZN | 00 11 15 | d | 2 | 1 | 1.6 | 1 |
| | | S | ZN | 39 | | 5 | 1 | 3.1 | 1 |
| 20 | AF | iP | ZN | 02 42 12 | | 2.4 | 1 | 1.5 | 1 |
| | | S | ZN | 43 10 | | 8 | 1 | 6.5 | 1 |
| 20 | AF | P | Z | 02 48(44) | | 2.5 | 1 | | |
| | | S | ZN | 49 04 | | 4 | 1 | 3.6 | 1 |
| 20 | AF | iP | ZN | 10 57 20 | d | 3 | 1 | 1.4 | 1 |
| | | S | ZN | 38 | | 5.5 | 1 | 5.5 | 1 |
| | | T | ZN | 59 04 | | 4.3 | 2 | 2.7 | 2 |
| 20 | AF | iP | Z | 13 53 11 | d | 0.5 | 1 | | |
| 20 | AF | P | ZN | 21 03 25 | | 1.5 | 3 | | |
| | | i | ZN | 32 | d | 5.1 | 3 | 1.1 | 2 |
| | | (PP) | ZN | 56 | | 3.3 | 5 | 1.2 | 3 |
| | | e | Z | 04 45 | | 3.3 | 5 | | |
| | | eS | ZN | 06.7 | | 1.8 | 8 | 1.5 | 7 |
| | | L | ZN | 08.2 | | 10.1 | 22 | 2.5 | 13 |
| 22 | AF | iP | ZN | 03 41 46 | u | 0.8 | 2 | | |
| 22 | AF | iP | Z | 21 22 31 | d? | | | | |
| 23 | AF | eL | ZN | 02 57.6 | | 1.6 | 8 | 1 | 8 |
| 23 | AF | P | ZN | 05 45 20 | d? | | | 0.8 | 1 |
| | | iS | ZN | 46 34 | s | | | 1.4 | 1 |
| | | T | ZN | 51 48 | | | | 1.5 | 5 |
| 23 | AF | iP | ZN | 07 34 04 | u | 2 | 1 | 1 | 1 |
| | | iS | ZN | 35 54 | d?n | 2.1 | 2 | 2.6 | 2 |
| 24 | AF | eL | ZN | 10 22.3 | | | | | |
| 25 | AF | iP | ZN | 01 37 35 | u | | | | |
| | | e(S) | Z | 39 55 | | | | | |
| 25 | AF | eP? | Z | 03 51 48 | | 1 | 7 | | |
| | | ePP | ZN | 56 10 | | | | | |
| | | eS | ZN | 04 02 06 | | | | | |
| | | eL | N | 13.8 | | | | 1.5 | 20 |
| 25 | AF | P | N | 10 29 10 | | | | 2.0 | 1 |
| 25 | AF | P | N | 11 23 17 | | | | 1 | 2 |
| | | PcP | N | 46 | | | | 1.3 | 4 |
| | | ePP | N | 25 32 | | | | 1 | 2 |
| | | S | N | 32 26 | | | | 2.5 | 17 |
| | | L | N | 41 | | | | 2.5 | 20 |
| 26 | AF | P | ZN | 07 59 40 | | | | | |
| | | (S) | ZN | 47 | | | | | |
| 27 | AF | P | Z | 07 41 44 | | | | | |
| | | (S) | ZN | 42 55 | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JUL 27 | AF | iP | ZN | 10 | 45 | 04 | | 1 | 1 | | |
| | | iS | ZN | | | 28 | | 2.5 | 1 | 1.5 | 1 |
| 27 | AF | eL | ZN | 10 | 45.9 | | | | | 1.5 | 20 |
| 27 | AF | P | ZN | 18 | 21 | 08 | | | | | |
| | | i(S) | Z | | 22 | 43 | | | | | |
| | | S | ZN | | | 46 | | 1 | 1 | 0.8 | 1 |
| 27 | AF | P | Z | 21 | 04 | 35 | | 0.6 | 1 | | |
| | | S | Z | | 07 | 28 | | | | | |
| 27 | AF | P | Z | 22 | 53 | 34 | | | | | |
| 28 | AF | P | Z | 01 | 22 | 42 | | | | | |
| 28 | AF | e(P) | Z | 06 | 44 | 57 | | | | | |
| | | e(S) | Z | | 46 | 45 | | | | | |
| 28 | AF | e(P) | Z | 08 | 06 | 30 | | | | | |
| | | e(S) | Z | | 07 | 46 | | | | | |
| 28 | AF | eP | ZN | 09 | 05 | 56 | | | | | |
| | | eS | ZN | | 07 | 52 | | | | | |
| 28 | AF | P | ZN | 10 | 40 | 05 | | | | | |
| 29 | AF | iP | ZN | 00 | 28 | 26 | u? | 7 | 6 | 1.5 | 5 |
| | | i | ZN | | | 34 | | 14.1 | 5 | 2.5 | 5 |
| | | S | ZN | | 32 | 00 | | 6 | 8 | 2.6 | 7 |
| | | L | ZN | | 33.3 | | | 19 | 20 | 5 | 15 |
| 29 | AF | P | ZN | 01 | 54 | 47 | | 1 | 1 | | |
| 29 | AF | iP | Z | 13 | 29 | 47 | u? | 1.1 | 1 | | |
| 29 | AF | eP | ZN | 17 | 42 | 57 | | 1 | 1 | | |
| | | i | ZN | | 43 | 00 | | 3.9 | 5 | 1.5 | 3 |
| | | PP | Z | | 45 | 03 | | 2.5 | 5 | | |
| | | eS | ZN | | 51 | 50 | | 2.5 | 17 | 2 | 30 |
| | | eSS | Z | | 56 | 10 | | 2 | 30 | | |
| | | Lq | ZN | | 59.7 | | | 2 | 30 | 1 | 25 |
| | | (PKKP) | Z | 18 | 01 | 48 | | | | | |
| | | Lr | ZN | | 02.7 | | | 10 | 21 | 4 | 22 |
| 29 | AF | eP | Z | 21 | 58 | 10 | | | | | |
| 30 | AF | iP | ZN | 00 | 55 | 05 | d? | 2 | 1 | 1 | 1 |
| | | S | ZN | | | 24 | | 6 | 1 | 3.9 | 1 |
| 30 | AF | P | ZN | 06 | 22 | 06 | | 1.2 | 1 | 0.6 | 1 |
| | | S | ZN | | | 40 | | 1.5 | 1 | 1.6 | 1 |
| | | T | ZN | | 25 | 06 | | 2 | 1 | 1.7 | 1 |
| 30 | AF | iP | ZN | 19 | 24 | 26 | un | 10.5 | 1 | 5.7 | 1 |
| | | iS | ZN | | | 51 | n | 24± | 1 | 24 | 1 |
| 31 | AF | P | Z | 03 | 03 | 03 | | | | | |
| | | i | Z | | | 11 | d | 4.6 | 2 | 0.8 | 1 |
| | | PP | Z | | 05 | 09 | | 4.5 | 4 | | |
| | | eS | ZN | | 09 | 04 | | 5 | 7 | 1 | 8 |
| | | Lq | ZN | | 11.9 | | | 3.9 | 16 | 5.5 | 25 |
| | | Lr | Z | | 13.2 | | | 11 | 20 | | |
| 31 | AF | eP | Z | 07 | 11 | 46 | | | | | |
| | | e(Lq) | N | | 20.7 | | | | | 1 | 20 |
| 31 | AF | iP | Z | 09 | 27 | 45 | u | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JUL 31 | AF | eP | ZN | 21 | 08 | 39 | | 0.7 | 1 | 0.6 | 1 |
| | | S | ZN | | 09 | 29 | | 1.1 | 1 | 1.3 | 1 |
| AUG 1 | AF | iP | ZN | 22 | 32 | 02 | u | 3.5 | 1 | 1.8 | 1 |
| | | S | ZN | | | 23 | | 17± | 1 | 15½± | 1 |
| 2 | AF | iP | ZN | 05 | 11 | 29 | d | | | 1.5 | 3 |
| | | eS | ZN | | 14 | 51 | | | | | |
| | | L | N | | 15.2 | | | | | 4.5 | 15 |
| 2 | AF | iP | ZN | 09 | 33 | 53 | d | 2.5 | 5 | 1 | 2 |
| | | eS | N | | 36 | 04 | | | | | |
| | | (S) | ZN | | | 19 | | | | 0.6 | 1 |
| | | eL | ZN | | 39.5 | | | 2 | 15 | 1.7 | 12 |
| 2 | AF | P? | Z | 10 | 10 | 05 | | | | | |
| 2 | AF | P? | Z | 13 | 35 | 36 | | | | | |
| 3 | AF | iP | ZN | 00 | 50 | 09 | u | 0.6 | 1 | | |
| | | S | ZN | | | 29 | | 1.3 | 1 | 1.3 | 1 |
| 3 | AF | P | Z | 05 | 45 | 58 | | | | | |
| 3 | AF | P | Z | 15 | 57 | 13 | | | | | |
| | | e(S) | Z | | 58 | 05 | | | | | |
| 4 | AF | P | Z | 07 | 45 | 37 | | | | | |
| | | S | ZN | | 54 | 18 | | 2 | 18 | 2 | 18 |
| | | L | ZN | 08 | 04.2 | | | 3.5 | 20 | 2.2 | 20 |
| 4 | AF | P | ZN | 12 | 59 | 44 | | | | | |
| | | S | ZN | 13 | 01 | 35 | | | | 0.8 | 1 |
| 4 | AF | P | Z | 13 | 22 | 51 | | | | | |
| 4 | AF | P | ZN | 16 | 04 | 53 | | | | | |
| | | (S) | N | | 05 | 47 | | | | 1 | 3 |
| 5 | AF | iP | ZN | 09 | 31 | 29 | d | 1 | 1 | 0.8 | 1 |
| | | S | ZN | | 32 | 05 | | 1.5 | 1 | 1.5 | 1 |
| | | T | ZN | | 34 | 20 | | 0.6 | 1 | 0.6 | 1 |
| 5 | AF | eL | ZN | 23 | 02 | | | | | | |
| 6 | AF | P | Z | 04 | 40 | 12 | | | | | |
| | | S | ZN | | 41 | 52 | | | | 0.6 | 1 |
| 6 | AF | P | ZN | 07 | 33 | 09 | | 0.5 | 1 | | |
| | | S | ZN | | | 33 | | 1.5 | 1 | 1.5 | 1 |
| 6 | AF | P | ZN | 09 | 33 | 55 | | 0.6 | 1 | | |
| | | S | ZN | | 34 | 20 | | 0.8 | 1 | 1 | 1 |
| | | T | ZN | | 36 | 19 | | 0.8 | 1 | | |
| 6 | AF | P | ZN | 13 | 59 | 16 | | | | | |
| | | e(S) | Z | 14 | 03 | 47 | | | | | |
| 6 | AF | iP | ZN | 14 | 36 | 37 | u | 0.8 | 1 | | |
| | | S | ZN | | | 57 | | 0.8 | 1 | 0.8 | 1 |
| 6 | AF | eP? | Z | 14 | 59 | 34 | | | | | |
| 7 | AF | iP | ZN | 19 | 48 | 55 | u | | | | |
| | | S | ZN | | 49 | 18 | | 1.4 | 1 | 1.3 | 1 |
| 8 | AF | iP | ZN | 08 | 40 | 21 | d | 0.6 | 1 | | |
| | | i(S) | ZN | | 41 | 43 | d | 0.6 | 1 | | |

| Date | Stn | Phase | | h m s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|
| AUG 8 | AF | e? | Z | 19 51 46 | | | | | |
| 9 | AF | iP | Z | 07 43 43 | u | | | | |
| 9 | AF | eS | ZN | 07 59 26 | | | | | |
| | | eL | ZN | 08 09.8 | | | | | |
| 9 | AF | eP | Z | 16 48 59 | | 1 | 1 | | |
| | | i | ZN | 49 09 | | 1.6 | 1 | 0.7 | 1 |
| | | eS | ZN | 51 00 | | 1.4 | 1 | 1.3 | 1 |
| | | Lq | N | 51.3 | | | | 1.5 | 20 |
| | | L | Z | 51.7 | | 5.6 | 20 | | |
| | | L | Z | 53.1 | | 18.5 | 12 | | |
| | | M | ZN | 54 | | 18.5 | 10 | 8 | 11 |
| | | eT | ZN | 17 00 | | | | | |
| 9 | AF | iP | ZN | 23 41 42 | d? | 2.5 | 5 | 0.8 | 1 |
| | | i | Z | 53 | | | | | |
| | | e(Lq) | ZN | 45.7 | | 2 | 15 | 1 | 20 |
| | | Lr | Z | 47.1 | | 3.5 | 18 | | |
| 10 | AF | P | ZN | 05 59 01 | | | | | |
| | | S | ZN | 06 00 52 | | 0.6 | 1 | 0.8 | 1 |
| 11 | AF | P | ZN | 00 17 15 | | 0.7 | 1 | | |
| | | S | ZN | 18 44 | | | | | |
| 11 | AF | iP | ZN | 02 46 43 | u | 2½ | 1 | 1.6 | 1 |
| | | S | ZN | 47 04 | | | | 9 | 1 |
| 11 | AF | iP | ZN | 20 20 15 | u | 8± | 1 | 3.2 | 1 |
| | | S | ZN | 38 | | | | 12 | 1 |
| 11 | AF | iP | ZN | 21 43 49 | d? | 0.7 | 1 | 0.7 | 1 |
| | | S | ZN | 45 00 | | 1 | 1 | 1 | 1 |
| | | eL | ZN | 45.7 | | 1.6 | 3 | 0.8 | 5 |
| | | eT | ZN | 50 08 | | 1 | 1 | 1 | 1 |
| 12 | AF | eP | Z | 00 11.5 | | | | | |
| | | eL | ZN | 16.2 | | 1 | 10 | | |
| 12 | AF | P? | Z | 13 23 30 | | | | | |
| 12 | AF | iP | Z | 16 31 52 | u | | | | |
| 12 | AF | eP | Z | 23 23 40 | | | | | |
| 13 | AF | P | ZN | 07 22 05 | | | | | |
| | | eL | N | 42.2 | | | | | |
| 13 | AF | P | ZN | 14 27 38 | | 4 | 8 | | |
| | | eS | N | 38 21 | | | | 1 | 15 |
| | | PS | ZN | 39 13 | | 2 | 10 | 1 | 20 |
| | | eSS | ZN | 43 41 | | 1.4 | 14 | 1.2 | 20 |
| | | eLq | ZN | 50.8 | | | | 2 | 25 |
| | | eLr | ZN | 53.7 | | 4.8 | 20 | 1.6 | 17 |
| 13 | AF | iP | ZN | 15 20 13 | d? | 1 | 1 | | |
| | | S | ZN | 21 01 | | 1.5 | 1 | 1.3 | 1 |
| 13 | AF | iP | ZN | 23 04 57 | u | | | | |
| | | S | ZN | 05 18 | | 1 | 1 | 1.2 | 1 |
| 15 | AF | P | ZN | 06 24 18 | | | | | |
| | | S | Z | 25 47 | | | | | |
| 16 | AF | P? | Z | 02 58 44 | | | | | |



| Date | Stn | Phase | | h m s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|
| AUG 16 | AF | iP | Z | 05 34 55 | d | | | | |
| | | S | Z | 35 20 | | | | | |
| 17 | AF | iP | Z | 02 32 37 | u | 0.8 | 1 | | |
| | | S | Z | 55 | | 1.1 | 1 | | |
| 17 | AF | iP | ZN | 14 15 42 | u | 1.3 | 1 | 0.8 | 1 |
| | | S | ZN | 16 01 | | 3 | 1 | 2.6 | 1 |
| 17 | AF | iP | ZN | 19 30 21 | d? | 2.3 | 1 | 1.1 | 1 |
| | | S | ZN | 45 | | 10± | 1 | 8 | 1 |
| 18 | AF | P | Z | 22 48 37 | | 1.5 | 4 | | |
| | | eS | ZN | 53 49 | | | | | |
| | | L | Z | 54.6 | | 1 | 18 | | |
| 19 | AF | P | Z | 12 04 56 | | | | | |
| | | S | ZN | 06 07 | | | | | |
| 19 | AF | iP | Z | 15 47 02 | d | | | | |
| 20 | AF | iP | ZN | 16 57 15 | d | | | | |
| | | S | ZN | 33 | | 1.7 | 1 | 2.3 | 1 |
| 20 | AF | P | ZN | 17 43 36 | | | | | |
| | | S | ZN | 44 09 | | 1 | 1 | 0.7 | 1 |
| 20 | AF | eL | ZN | 21 06.5 | | 1 | 20 | | |
| 20 | AF | P | ZN | 22 33 47 | | 0.6 | 2 | | |
| 21 | AF | iP | Z | 00 00 22 | u | | | | |
| | | S | ZN | 01 05 | | 0.8 | 1 | 0.8 | 1 |
| 21 | AF | iP | ZN | 00 19 21 | d | | | 2.1 | 1 |
| | | S | ZN | 57 | | | | 5.5 | 1 |
| | | L | N | 20.3 | | | | 5.5 | 8 |
| | | T | ZN | 22 27 | | | | 1.6 | 1 |
| 21 | AF | P | Z | 00 26 55 | | 1.5 | 3 | | |
| 21 | AF | P | ZN | 01 06 38 | | | | | |
| 21 | AF | P | ZN | 13 00 02 | | | | | |
| 21 | AF | P | ZN | 16 33 52 | | | | | |
| | | L | ZN | 35.0 | | 2 | 5 | 0.8 | 8 |
| | | T | Z | 38 00 | | | | | |
| 21 | AF | iP | ZN | 17 21 57 | d | 2.5 | 1 | 1 | 1 |
| | | S | ZN | 22 46 | | 1.5 | 1 | 1.4 | 1 |
| | | L | ZN | 23.0 | | 6.5 | 20 | 4.5 | 10 |
| | | M | ZN | 24.5 | | 10 | 7 | 10 | 7 |
| | | T | Z | 26 | | | | | |
| 22 | AF | iP | ZN | 20 52 03 | u? | | | | |
| | | eS | ZN | 55 58 | | | | | |
| 23 | AF | P | Z | 01 00 51 | | | | | |
| | | S | ZN | 01 59 | | | | 0.7 | 1 |
| 23 | AF | iP | ZN | 07 38 24 | u | | | 0.8 | 1 |
| | | S | ZN | 44 | | | | 4.1 | 1 |
| 23 | AF | iP | Z | 13 10 30 | d | | | | |
| | | S | ZN | 12 07 | | | | 1 | 1 |
| 23 | AF | P | Z | 19 15 26 | | | | | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG 23 | AF | e | Z | | 17 | 30 | | | | | |
| | | e(S) | Z | | 18 | 26 | | | | | |
| 23 | AF | iP | ZN | 21 | 30 | 31 | d | 1 | 1 | | |
| | | S | ZN | | 31 | 22 | | 1 | 1 | 1.2 | 1 |
| | | L | N | | 31 | .7 | | | | 3 | 8 |
| | | L | Z | | 31 | .9 | | 4 | 5 | | |
| | | T | Z | | 34 | 28 | | | | | |
| 23 | AF | iP | ZN | 22 | 45 | 50 | d | | | 2.8 | 1 |
| | | S | ZN | | 46 | 35 | | | | 29± | 1 |
| | | T | Z | | 49 | .5 | | | | | |
| 24 | AF | iP | ZN | 05 | 50 | 22 | u? | | | 1.2 | 1 |
| | | S | ZN | | 51 | 25 | | | | 3.5 | 1 |
| | | L | N | | 51 | .9 | | | | 4.1 | 10 |
| | | T | ZN | | 56 | 00 | | | | 1.5 | 1 |
| 24 | AF | P | ZN | 11 | 58 | 52 | | | | | |
| | | S | ZN | | 59 | 36 | | 1.5 | 1 | 0.9 | 1 |
| 24 | AF | iP | ZN | 12 | 06 | 47 | d | | | | |
| | | S | ZN | | 07 | 21 | | 0.7 | 1 | 1.3 | 1 |
| 24 | AF | P | ZN | 13 | 45 | 26 | | | | | |
| | | S | ZN | | 46 | 09 | | 1.1 | 1 | 1.2 | 1 |
| 24 | AF | P | ZN | 14 | 45 | 00 | | | | | |
| | | S | ZN | | | 27 | | | | | |
| | | T | ZN | | 47 | 21 | | | | 3.6 | 3 |
| 24 | AF | iP | Z | 22 | 19 | 19 | d? | | | | |
| | | S | ZN | | 20 | 39 | | | | | |
| 25 | AF | P | ZN | 01 | 49 | 12 | | 2 | 3 | | |
| | | (S) | ZN | | 50 | 01 | | | | | |
| | | L | ZN | | 50 | .1 | | 2.2 | 5 | 1.7 | 6 |
| 25 | AF | iP | ZN | 09 | 01 | 21 | d | | | 1.1 | 1 |
| | | S | ZN | | | 44 | | | | 4 | 1 |
| 26 | AF | iP | Z | 17 | 28 | 27 | u | 1 | 2 | | |
| | | (S) | ZN | | 30 | 05 | | | | | |
| 26 | AF | P | ZN | 18 | 32 | 14 | | 2 | 3 | 1 | 2 |
| | | S | Z | | 36 | 06 | | 0.8 | 2 | | |
| | | eL | ZN | | 36 | .4 | | 1.6 | 20 | | |
| 26 | AF | P | ZN | 19 | 59 | 46 | | 0.7 | 1 | | |
| 27 | AF | iP | Z | 12 | 54 | 09 | | 0.6 | 1 | | |
| | | S | ZN | | 56 | 18 | | 0.8 | 1 | 0.6 | 1 |
| 27 | AF | iP | ZN | 19 | 33 | 00 | u | 0.8 | 2 | | |
| | | PP | Z | | 35 | 08 | | | | | |
| 28 | AF | P | ZN | 00 | 26 | 11 | | 0.8 | 1 | | |
| | | S | ZN | | 27 | 52 | | 1.3 | 1 | 1.2 | 1 |
| 28 | AF | iP | ZN | 07 | 34 | 12 | d | | | | |
| | | S | ZN | | | 32 | | 2.2 | 1 | 2 | 1 |
| 28 | AF | iP | ZN | 07 | 36 | 53 | d | 2.7 | 1 | 1.8 | 1 |
| | | S | ZN | | 37 | 09 | | 9½± | 1 | 5.8 | 1 |
| 29 | AF | P | Z | 12 | 24 | 15 | | | | | |
| | | S | ZN | | 25 | 35 | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG 29 | AF | P | Z | 23 | 23 | 48 | | | | | |
| 30 | AF | P | Z | 06 | 55 | 00 | | | | | |
| | | eS | Z | 07 | 03 | 16 | | | | | |
| 30 | AF | eP | Z | 07 | 15 | 41 | | | | | |
| | | S | Z | | 16 | 56 | | | | | |
| 30 | AF | iP | ZN | 08 | 08 | 33 | u | 2 | 1 | 1 | 1 |
| | | S | ZN | | | 53 | | 5.5 | 1 | 5.2 | 1 |
| 30 | AF | iP | ZN | 19 | 09 | 45 | u | 1.1 | 1 | 0.7 | 1 |
| | | S | ZN | | 11 | 58 | | 0.6 | 1 | 0.8 | 1 |
| 31 | AF | P | Z | 05 | 38 | 52 | | | | | |
| | | S | ZN | | 40 | 26 | | | | | |
| 31 | AF | P? | Z | 07 | 25 | 56 | | | | | |
| 31 | AF | P | Z | 13 | 44 | 32 | | | | | |
| | | (S) | ZN | | 46 | 15 | | | | | |
| 31 | AF | P | Z | 23 | 53 | 54 | | | | | |
| | | e(S) | ZN | | 55 | 53 | | | | | |
| SEP 1 | AF | P | ZN | 07 | 37 | 46 | | 1.3 | 2 | 0.7 | 1 |
| | | S | ZN | | 39 | 22 | | 1.1 | 2 | 0.8 | 2 |
| | | L | ZN | | 41 | .7 | | 4.2 | 9 | 2 | 9 |
| 1 | AF | P | ZN | 09 | 32 | 53 | | 3.7 | 3 | 1.1 | 3 |
| | | eS | ZN | | 37 | 00 | | 3.3 | 10 | 1.3 | 5 |
| | | L | ZN | | 38 | .0 | | 5.6 | 16 | 1.7 | 13 |
| 1 | AF | eP | ZN | 10 | 33 | 27 | | 0.5 | 1 | | |
| | | eS | ZN | | 35 | 51 | | 0.4 | 1 | | |
| 1 | AF | P | ZN | 10 | 39 | 39 | | 3 | 3 | 1.2 | 3 |
| | | S | ZN | | 43 | 44 | | 2.2 | 11 | 0.8 | 15 |
| | | L | ZN | | 44 | .8 | | 4.5 | 12 | 1.5 | 10 |
| 1 | AF | P | ZN | 11 | 19 | 37 | | 1.3 | 3 | 0.7 | 2 |
| | | eL | ZN | | 25 | .0 | | 2 | 10 | | |
| 1 | AF | P | ZN | 12 | 01 | 04 | | 0.6 | 1 | 0.7 | 1 |
| | | S | ZN | | 03 | 26 | | 0.5 | 1 | 0.6 | 1 |
| 1 | AF | P | ZN | 15 | 48 | 43 | | 0.5 | 2 | | |
| | | eS | N | | 58 | 03 | | | | | |
| | | eL | ZN | 16 | 10 | .0 | | 1.6 | 20 | 1 | 20 |
| 1 | AF | P | ZN | 18 | 43 | 03 | | 0.4 | 1 | 0.5 | 1 |
| | | (PP) | Z | | | 19 | | 1 | 2 | | |
| | | eL | ZN | | 44 | .5 | | 3.5 | 8 | 2.5 | 10 |
| 1 | AF | eP | ZN | 20 | 03 | 43 | | | | | |
| | | i | ZN | | | 47 | | 1.3 | 2 | 0.7 | 1 |
| | | e(S) | ZN | | 04 | 44 | | 1.8 | 5 | 1 | 3 |
| | | e | Z | | 05 | 00 | | 2 | 5 | | |
| | | Lq | N | | 05 | .0 | | | | 8.5 | 10 |
| | | Lr | Z | | 05 | .4 | | 11.5 | 8 | | |
| 2 | AF | iP | ZN | 10 | 56 | 46 | u | 0.9 | 2 | | |
| 2 | AF | P | Z | 22 | 13 | 38 | | | | | |
| | | eS | ZN | | 22 | .2 | | 1.5 | 8 | 1 | 15 |
| | | eL | ZN | | 32 | .2 | | 1.5 | 20 | 1 | 20 |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 3 | AF | iP | ZN | 05 | 43 | 24 | d | 1.3 | 1 | 0.9 | 1 |
| | | S | ZN | | 44 | 46 | | 1.6 | 1 | 1.3 | 1 |
| | | L | ZN | | 45 | .3 | | 4.8 | 10 | 1.5 | 10 |
| | | T | ZN | | 50 | 57 | | | | 1 | 1 |
| 3 | AF | iP | ZN | 07 | 05 | 07 | u | 1.7 | 1 | 0.8 | 1 |
| | | iS | ZN | | | 37 | s | 5.7 | 1 | 3.5 | 1 |
| 3 | AF | e(P) | Z | 07 | 50 | 59 | | | | | |
| 3 | AF | P | ZN | 12 | 47 | 41 | | 1.2 | 1 | | |
| | | pP | ZN | | 49 | (08) | | 1.5 | 3 | | |
| | | (sP) | Z | | 50 | 04 | | 2.7 | 5 | | |
| | | eS | ZN | | 52 | .7 | | 1.5 | 12 | | |
| | | ScP | Z | | 53 | 19 | | | | | |
| | | eL | ZN | | 55 | | | 1.6 | 20 | 1.1 | 18 |
| 3 | AF | e(S) | Z | 13 | 49 | 46 | | | | | |
| 3 | AF | iP | ZN | 15 | 06 | 26 | u | 2.5 | 1 | 1.5 | 1 |
| | | S | ZN | | | 52 | | 6 | 1 | 4.5 | 1 |
| | | T | ZN | | 08 | .6 | | 5 | 1 | 3.2 | 1 |
| 3 | AF | P | ZN | 15 | 19 | 39 | | 0.7 | 1 | | |
| | | S | ZN | | 21 | 20 | | 1.5 | 1 | 1.6 | 1 |
| 3 | AF | P | Z | 15 | 51 | 58 | | 1 | 1 | | |
| 4 | AF | eS | ZN | 00 | 06 | .4 | | | | | |
| | | eL | ZN | | 17 | .5 | | 1.8 | 20 | 1 | 20 |
| 5 | AF | P | ZN | 05 | 53 | 12 | | 0.6 | 1 | | |
| | | S | ZN | | 54 | 29 | | 0.8 | 1 | 0.9 | 1 |
| | | eL | ZN | | 55 | .4 | | 3½ | 6 | 2 | 5 |
| | | eT | Z | 06 | 00 | .2 | | | | | |
| 5 | AF | P | ZN | 07 | 32 | 16 | | | | | |
| | | S | ZN | | 35 | 32 | | | | | |
| 6 | AF | P | Z | 10 | 03 | 11 | | | | | |
| 6 | AF | (S) | Z | 11 | 23 | 25 | | | | | |
| 6 | AF | iP | Z | 14 | 07 | 23 | d | 3 | 1 | | |
| | | eL | Z | | 11 | .7 | | 1.5 | 20 | | |
| 6 | AF | (P) | ZN | 23 | 39 | 01 | | 0.9 | 1 | | |
| 8 | AF | iP | ZN | 01 | 00 | 36 | d | 0.7 | 1 | 0.7 | 1 |
| | | S | ZN | | 01 | 32 | | 0.8 | 1 | 0.8 | 1 |
| 8 | AF | iP | ZN | 04 | 51 | 30 | u | | | | |
| | | S | ZN | | 52 | 10 | | 1 | 1 | 0.8 | 1 |
| 8 | AF | iP | ZN | 08 | 21 | 21 | d | 0.5 | 1 | | |
| | | S | ZN | | | 55 | | 1.4 | 1 | 1.4 | 1 |
| 8 | AF | P | Z | 11 | 18 | 20 | | 0.8 | 1 | | |
| | | eS | Z | | 26 | 45 | | | | | |
| 8 | AF | P | ZN | 16 | 07 | 26 | | | | | |
| | | S | ZN | | | 59 | | 0.8 | 1 | 0.8 | 1 |
| 9 | AF | P | Z | 08 | 27 | 42 | | | | | |
| 9 | AF | P | ZN | 10 | 24 | 40 | | | | | |
| | | S | ZN | | 26 | 53 | | | | | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 10 | AF | iP | ZN | 00 | 54 | 01 | u? | 1.2 | 1 | 0.8 | 1 |
| | | S | ZN | | | 28 | | 5.5 | 1 | 4 | 1 |
| | | eT | ZN | | 56 | .3 | | 3 | 1 | 2.5 | 1 |
| 10 | AF | eiP | ZN | 07 | 11 | 42 | d | 0.7 | 1 | 0.6 | 1 |
| | | S | ZN | | 12 | 38 | | 0.8 | 1 | 0.8 | 1 |
| 10 | AF | iP | ZN | 10 | 54 | 52 | u | 3.2 | 3 | 0.7 | 1 |
| 10 | AF | eP | Z | 12 | 13 | 38 | | | | | |
| | | eS | ZN | | 14 | 35 | | 0.7 | 1 | 0.6 | 1 |
| 10 | AF | P | Z | 14 | 09 | 53 | | 1.1 | 2 | | |
| | | (PcP) | Z | | 13 | 22 | | | | | |
| | | eS | N | | 15 | .0 | | | | | |
| | | eL | ZN | | 17 | .0 | | 1.5 | 17 | 1 | 15 |
| | | (ScP) | Z | | 17 | 53 | | | | | |
| 11 | AF | iP | ZN | 02 | 04 | 50 | u | 1.6 | 1 | 1.1 | 1 |
| | | iS | ZN | | 05 | 08 | d?s? | 5 | 1 | 2 | 1 |
| 11 | AF | P | ZN | 10 | 56 | 26 | | 0.6 | 1 | | |
| 12 | AF | P | ZN | 12 | 28 | 27 | | 1.5 | 5 | | |
| 12 | AF | P | Z | 16 | 12 | 23 | | 0.5 | 1 | | |
| 12 | AF | iP | ZN | 19 | 38 | 52 | d | 2 | 1 | 1.1 | 1 |
| | | S | ZN | | 39 | 22 | | 5 | 1 | 4.5 | 1 |
| 12 | AF | (P) | ZN | 19 | 41 | 18 | | 3.5 | 2 | 2.2 | 2 |
| | | S | ZN | | | 40 | | 7 | 1 | 4.5 | 1 |
| 13 | AF | iP | ZN | 13 | 23 | 48 | d? | 0.6 | 1 | | |
| | | S | ZN | | 24 | 04 | | 2.5 | 1 | 1.6 | 1 |
| 13 | AF | iP | ZN | 19 | 49 | 31 | u | | | | |
| | | (S) | ZN | | 51 | 05 | | | | | |
| 13 | AF | iP | ZN | 22 | 02 | 26 | u | 0.6 | 1 | | |
| | | S | ZN | | | 48 | | 1.8 | 1 | 1.4 | 1 |
| 14 | AF | eP? | Z | 00 | 45 | 50 | | | | | |
| 14 | AF | iP | ZN | 16 | 26 | 07 | d | 1.5 | 2 | | |
| 14 | AF | iP | ZN | 23 | 20 | 24 | d | 2 | 1 | 0.8 | 1 |
| | | e | ZN | | 21 | 45 | | | | | |
| | | S | ZN | | | 50 | | 2 | 1 | 2.3 | 1 |
| | | eL | ZN | | 22 | .3 | | 5 | 8 | 2.2 | 7 |
| | | T | ZN | | 27 | 53 | | 1.6 | 1 | 1.1 | 1 |
| 15 | AF | P | Z | 03 | 35 | 54 | | | | | |
| 15 | AF | (P) | Z | 11 | 43 | 12 | | | | | |
| | | (S) | Z | | | 46 | | | | | |
| 15 | AF | iP | ZN | 18 | 06 | 54 | d | 0.8 | 1 | | |
| 16 | AF | iP | ZN | 04 | 28 | 45 | u | 0.7 | 1 | 0.9 | 1 |
| | | S | ZN | | 29 | 20 | | 1 | 1 | 1.1 | 1 |
| 16 | AF | iP | Z | 21 | 34 | 16 | d | | | | |
| | | S | ZN | | | 38 | | 1.3 | 1 | 0.8 | 1 |
| 17 | AF | eL | Z | 08 | 24 | .1 | | 1 | 20 | | |
| 17 | AF | eP | Z | 08 | 16 | 38 | | | | | |

| Date | Stn | Phase | | h m s | | Az Tz | An Tn |
|---|---|---|---|---|---|---|---|
| SEP 17 | | L | ZN | 36.9 | | 1.5 20 | 1 20 |
| 17 | AF | P | ZN | 11 35 43 | | | |
| | | S | ZN | 36 57 | | 0.9 1 | 0.6 1 |
| | | T | ZN | 42 51 | | | |
| 17 | AF | iP | Z | 13 05 25 | d | 0.6 1 | |
| 17 | AF | iP | Z | 16 02 02 | u | | |
| 17 | AF | eP | Z | 16 30 05 | | | |
| | | e(S) | Z | 31 57 | | | |
| 17 | AF | P | ZN | 19 57 52 | | 2.8 3 | 0.8 1 |
| | | S | ZN | 59 11 | | 2.8 2 | 3.2 2 |
| | | eL | ZN | 59.7 | | 12.3 8 | 4 10 |
| | | T | ZN | 20 05.3 | | 16.5 6 | 6 8 |
| 18 | AF | iP | ZN | 09 50 18 | d | 2.2 3 | |
| 19 | AF | eL | Z | 19 45.8 | | 1.3 20 | |
| 20 | AF | P | Z | 03 10 11 | | | |
| 20 | AF | iP | ZN | 03 39 00 | u | 0.8 1 | |
| | | (S) | ZN | 41 51 | | | |
| | | eL | ZN | 42.9 | | 4.5 11 | 1.5 15 |
| 20 | AF | iP | Z | 04 01 51 | u | 1 1 | 0.7 1 |
| | | S | Z | 02 13 | | 2.5 1 | 2 1 |
| 20 | AF | iP | Z | 20 07 24 | u? | 0.6 1 | |
| 20 | AF | iP | ZN | 21 42 00 | d | 1.9 1 | 0.9 1 |
| | | S | ZN | 41 | | 0.7 1 | |
| | | i | Z | 43 45 | | 0.6 1 | |
| 21 | AF | P | Z | 07 28 33 | | | |
| | | eL | ZN | 33.8 | | 1.2 10 | |
| 21 | AF | iP | ZN | 08 04 19 | u | 2.3 1 | 1.1 1 |
| | | S | ZN | 05 00 | | 5.8 1 | 5.5 2 |
| 22 | AF | eP | Z | 06 00 02 | | | |
| 22 | AF | ($PKP_1$) | Z | 09 24 38 | | | |
| | | $PKP_2$ | Z | 25 40 | | 1 3 | |
| | | eL | Z | 10 18.0 | | | |
| 22 | AF | $PKP_1$ | Z | 09 34 01 | | 0.5 1 | |
| | | $PKP_2$ | Z | 58 | | 1.8 8 | |
| | | PP | Z | 38 41 | | 1.5 8 | |
| | | $eL_Q$ | N | 26.2 | | | 0.7 20 |
| | | Lr | Z | 29.6 | | 2 20 | |
| 22 | AF | iP | ZN | 21 18 41 | un | 4.5 1 | 2.1 1 |
| | | iS | ZN | 19 02 | s? | 6.5 1 | 4 1 |
| 23 | AF | P | Z | 01 23 24 | | | |
| 23 | AF | iP | ZN | 06 14 59 | d | 1.3 1 | 0.7 1 |
| | | S | ZN | 16 56 | | 0.6 1 | |
| 23 | AF | iP | Z | 14 21 54 | d? | | |
| | | (S) | Z | 23 28 | | | |



| Date | Stn | Phase | | h m s | | Az Tz | An Tn |
|---|---|---|---|---|---|---|---|
| SEP 23 | AF | P | ZN | 15 58 33 | | 0.6 1 | |
| | | S | ZN | 16 00 39 | | 0.9 1 | |
| 23 | AF | iP | Z | 23 04 31 | u? | 0.6 1 | |
| | | (S) | Z | 06 00 | | | |
| | | e | ZN | 06 06 | | 1.1 1 | 1.2 1 |
| | | L | ZN | 07.0 | | 8.8 8 | 3.5 10 |
| | | T | ZN | 12 45 | | | |
| 24 | AF | P | ZN | 11 12 32 | | 1.1 1 | 0.7 1 |
| | | (PcP) | Z | 15 34 | | | |
| 24 | AF | P | ZN | 13 56 21 | | | |
| 24 | AF | iP | ZN | 14 17 35 | d? | 1.3 1 | 0.8 1 |
| | | S | ZN | 18 15 | | 2 1 | 1.3 1 |
| | | L | ZN | 18.5 | | 3 13 | 3.2 13 |
| 25 | AF | P | ZN | 02 38 39 | | 1.1 1 | 1 1 |
| | | S | ZN | 39 08 | | 3.3 1 | 3.5 2 |
| | | T | ZN | 41 04 | | 6 2 | 4.7 3 |
| 25 | AF | iP | Z | 15 40 17 | d? | | |
| | | i | Z | 21 | d? | 1 1 | |
| | | i | ZN | 33 | | 1.4 1 | 1.2 1 |
| | | S | ZN | 41 04 | | 6 1 | 4.7 1 |
| | | T | ZN | 44.2 | | 8 1 | 5.2 1 |
| 25 | AF | eP | ZN | 17 48 49 | | 0.6 1 | |
| | | eS | ZN | 49 38 | | 0.8 1 | |
| 26 | AF | P | Z | 11 28 30 | | 0.5 1 | |
| 26 | AF | P? | Z | 15 24 08 | | | |
| 26 | AF | iP | ZN | 17 32 27 | d | 1.7 1 | 1 1 |
| | | S | ZN | 54 | | 2.8 1 | 2.6 1 |
| | | T | ZN | 34 58 | | 4.3 3 | 2.6 4 |
| 26 | AF | iP | ZN | 21 10 53 | d | 3.7 1 | 2 1 |
| | | S | ZN | 11 23 | | 1 | 14.5 1 |
| 26 | AF | iP | ZN | 21 19 27 | u | 0.5 1 | |
| | | S | ZN | 20 21 | | 1 1 | 1.1 1 |
| 27 | AF | P | Z | 18 44 40 | | 0.5 1 | |
| 28 | AF | iP | ZN | 07 06 54 | u | 1 1 | 0.8 1 |
| | | iS | ZN | 07 14 | s | 2 1 | 1.8 1 |
| 28 | AF | P | ZN | 17 07 29 | | 0.7 1 | |
| | | (S) | ZN | 51 | | 1.5 1 | 1.3 1 |
| | | (T) | ZN | 08 13 | | 4.1 1 | 3.7 1 |
| 28 | AF | iP | ZN | 17 36 45 | d | 1.2 1 | 0.8 1 |
| | | S | ZN | 38 16 | | | 0.8 3 |
| 29 | AF | P | ZN | 09 32 27 | | 0.5 1 | |
| | | (S) | Z | 35 50 | | | |
| 29 | AF | P | ZN | 11 27 39 | | 2.1 1 | 0.8 1 |
| | | PcP | ZN | 28 41 | | 1.2 2 | 0.7 1 |
| | | pP | ZN | 29 08 | | 1.2 2 | 0.8 1 |
| | | ScP | Z | 31 55 | | 1.7 3 | |
| | | S | ZN | 34 40 | | 2.5 9 | 1.8 13 |
| | | sS | ZN | 37.8 | | | 1 4 |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 29 | | SS | ZN | | 41.0 | | | | | 1.3 | 15 |
| | | e | ZN | | 45 | | | 1.8 | 9 | 1 | 10 |
| 30 | AF | iP | ZN | 01 | 39 | 32 | d | 0.5 | 1 | | |
| | | S | ZN | | 40 | 47 | | 0.7 | 1 | 0.8 | 1 |
| | | eL | N | | 41.4 | | | | | 1 | 5 |
| | | L | Z | | 42.1 | | | 2.5 | 9 | | |
| | | T | ZN | | 47 | 00 | | 3 | 7 | 1.3 | 5 |
| OCT 1 | AF | iP | ZN | 06 | 50 | 28 | u | 1.3 | 1 | 0.8 | 1 |
| 1 | AF | P | ZN | 16 | 21 | 40 | | 2 | 5 | 0.8 | 1 |
| | | eS | ZN | | 30.6 | | | 1 | 7 | 0.8 | 25 |
| | | eL | ZN | | 40.0 | | | 1.5 | 25 | 0.8 | 25 |
| | | P'SKS | Z | | 58 | 02 | | 2 | 5 | | |
| 2 | AF | eL | ZN | 12 | 27.5 | | | 1.3 | 20 | 1 | 7 |
| 2 | AF | iP | ZN | 20 | 11 | 37 | d | 1 | 1 | 0.7 | 1 |
| | | (S) | ZN | | 12 | 13 | | 1 | 1 | 0.8 | 1 |
| | | eL | ZN | | 12.5 | | | 5½ | 8 | 2.7 | 8 |
| | | T | ZN | | 13.9 | | | 14 | 5 | | |
| 3 | AF | iP | Z | 20 | 03 | 06 | u | 0.9 | 1 | | |
| 4 | AF | iP | Z | 09 | 57 | 37 | u | 0.8 | 1 | | |
| | | eS | N | 10 | 02 | 47 | | | | 0.9 | 5 |
| | | eL | ZN | | 06.8 | | | 1.8 | 17 | 1 | 15 |
| 4 | AF | iP | ZN | 19 | 22 | 26 | d | 1.2 | 1 | 0.8 | 1 |
| | | S | ZN | | | 52 | | 1.5 | 1 | 1.5 | 1 |
| 5 | AF | iP | ZN | 21 | 09 | 40 | u? | 1.5 | 1 | 0.8 | 1 |
| | | S | ZN | | 11 | 02 | | 1 | 1 | 0.8 | 1 |
| 6 | AF | P | ZN | 06 | 11 | 27 | | 1.2 | 1 | 0.7 | 1 |
| | | S | ZN | | 13 | 59 | | 0.8 | 1 | 0.7 | 1 |
| 6 | AF | P | ZN | 09 | 27 | 03 | | 1.5 | 1 | 0.7 | 1 |
| | | S | ZN | | | 30 | | 2 | 1 | 1.8 | 2 |
| | | T | ZN | | 29.5 | | | 4.5 | 3 | 2.6 | 3 |
| 7 | AF | iP | ZN | 11 | 11 | 24 | u | 0.8 | 1 | 0.7 | 1 |
| | | S | ZN | | 13 | 09 | | 1.2 | 1 | 1 | 1 |
| 7 | AF | iP | ZN | 14 | 18 | 24 | u | 5.2 | 1 | 2.3 | 1 |
| | | iS | ZN | | | 45 | n? | 19½± | 1 | 15 | 1 |
| 7 | AF | iP | Z | 15 | 28 | 12 | u | 11.3 | 2 | 2.2 | 1 |
| | | PP | Z | | 30 | 38 | | 4.6 | 5 | | |
| | | (PPP) | Z | | 31 | 58 | | 2.6 | 5 | | |
| | | S | ZN | | 36 | 07 | | 3.1 | 10 | 1.2 | 8 |
| | | SP | ZN | | | 38 | | 3.4 | 10 | 1.5 | 12 |
| | | ScS | ZN | | 38 | 04 | | 2.5 | 6 | 1.5 | 7 |
| | | e | ZN | | | 45 | | 2 | 16 | 1.7 | 15 |
| | | SS | ZN | | 39 | 57 | | 3 | 17 | 1.5 | 15 |
| | | Lq | ZN | | 42.5 | | | 3 | 20 | 2 | 26 |
| | | Lr | Z | | 45.8 | | | 7 | 30 | | |
| | | P'P' | Z | | 58 | 17 | | | | | |
| 7 | AF | eL? | N | 20 | 24.7 | | | | | | |
| 7 | AF | iP | ZN | 23 | 45 | 37 | un | 8 | 1 | 2.6 | 3 |
| | | S | ZN | | 46 | 00 | | 22 | 1 | 15 | 1 |
| 8 | AF | P | ZN | 00 | 19 | 59 | | 1.6 | 1 | 0.7 | 1 |
| | | S | ZN | | 20 | 41 | | 5.2 | 1 | 2.6 | 1 |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 8 | AF | iP | ZN | 06 | 03 | 52 | u | | | 2.9 | 1 |
| | | pP | ZN | | 06 | 01 | | | | 1.4 | 3 |
| | | eS | N | | 12.9 | | | | | 1 | 15 |
| | | esS | N | | 15.8 | | | | | | |
| | | SS | N | | 17.5 | | | | | 1.5 | 20 |
| | | e | N | | 23.5 | | | | | 1 | 20 |
| | | e | N | | 33.8 | | | | | 1.3 | 15 |
| 8 | AF | P | ZN | 09 | 18 | 02 | | | | | |
| | | S | ZN | | 19 | 03 | | | | 0.8 | 1 |
| 8 | AF | P | Z | 17 | 38 | 41 | | | | | |
| | | eL | N | | 48.8 | | | | | 0.8 | 10 |
| 9 | AF | iP | Z | 03 | 46 | 30 | d | | | | |
| | | iS | ZN | | 48 | 32 | u? | | | | |
| 9 | AF | iP | ZN | 04 | 22 | 31 | u? | | | 0.8 | 1 |
| | | iS | ZN | | | 52 | s | | | 2.6 | 1 |
| 9 | AF | iP | ZN | 09 | 11 | 41 | u | 1.9 | 3 | 0.7 | 1 |
| | | eS | N | | 21 | 40 | | | | 0.8 | 8 |
| 9 | AF | iP | ZN | 09 | 51 | 56 | un | | | | |
| 9 | AF | iP | ZN | 10 | 02 | 26 | d | 2.7 | 1 | 1.4 | 1 |
| | | L | ZN | | 02.9 | | | 3.3 | 5 | 1.5 | 10 |
| | | T | ZN | | 05 | | | 3.4 | 4 | 2.5 | 5 |
| 10 | AF | iP | ZN | 01 | 25 | 10 | us | 4 | 1 | 2.2 | 1 |
| | | iS | ZN | | | 30 | s | 16.5 | 1 | 12 | 1 |
| 10 | AF | iP | ZN | 04 | 17 | 08 | u | 1.1 | 1 | 0.9 | 1 |
| | | iS | ZN | | | 27 | n? | 6.5 | 1 | 4.5 | 1 |
| 11 | AF | i(P) | ZN | 20 | 51 | 25 | u | 0.6 | 1 | | |
| | | S | ZN | | 53 | 11 | | 0.8 | 1 | 0.9 | 1 |
| 11 | AF | iP | ZN | 21 | 41 | 14 | u | 0.8 | 1 | | |
| | | S | ZN | | | 30 | | 1.8 | 1 | 1.5 | 1 |
| 12 | AF | iP | ZN | 09 | 11 | 48 | un | 27 | 1 | 13.5 | 1 |
| | | S | ZN | | 12 | 08 | | 35± | 1 | 28½± | 1 |
| 12 | AF | iP | ZN | 10 | 44 | 53 | un | 6.5 | 1 | 2.7 | 1 |
| | | S | ZN | | 45 | 11 | | 9.5 | 1 | 5.8 | 1 |
| 12 | AF | iP | Z | 18 | 37 | 00 | u | 0.8 | 1 | | |
| 13 | AF | P | ZN | 15 | 03 | 58 | | 1.7 | 8 | | |
| | | S | ZN | | 13 | 21 | | 1.5 | 20 | 1 | 15 |
| | | eSS | Z | | 17.2 | | | 1 | 15 | | |
| | | L | ZN | | 25.0 | | | 3 | 25 | 1.6 | 20 |
| 14 | AF | P | ZN | 11 | 42 | 22 | | | | | |
| | | S | ZN | | | 53 | | 0.8 | 1 | 0.6 | 1 |
| 14 | AF | eL | Z | 18 | 30 | | | 1 | 20 | | |
| 14 | AF | iP | ZN | 19 | 24 | 38 | u | 1.8 | 1 | 1 | 1 |
| | | S | ZN | | 25 | 00 | | 1.7 | 1 | 1.2 | 1 |
| 14 | AF | iP | ZN | 21 | 29 | 53 | d | 4 | 4 | 1.3 | 5 |
| | | (PcP) | Z | | 30 | 04 | | 3.2 | 3 | | |
| | | (PP) | Z | | 31 | 58 | | 1.5 | 3 | | |
| | | ePP | Z | | 32.2 | | | 1 | 12 | | |
| | | S | ZN | | 38 | 43 | | 2 | 18 | 2 | 21 |

| Date | Stn | Phase | | h m s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|
| OCT 14 | AF | SS | ZN | 43.2 | | 1.5 | 15 | | |
| | | L | ZN | 48.2 | | 2 | 30 | 1.3 | 20 |
| | | M | ZN | 58 | | 4 | 20 | 2 | 20 |
| | | P'P' | Z | 58 44 | | | | | |
| 16 | AF | iP | Z | 04 56 42 | u? | | | | |
| | | S | ZN | 58 52 | | | | | |
| 16 | AF | iP | Z | 07 20 02 | | | | | |
| | | S? | Z | 23 31 | | | | | |
| 16 | AF | P | ZN | 10 00 23 | | 0.7 | 1 | | |
| | | S | ZN | 53 | | 2.8 | 1 | 1.7 | 1 |
| | | eT | ZN | 02 51 | | 1.1 | 1 | 0.8 | 1 |
| 16 | AF | P | Z | 13 33 12 | | | | | |
| 17 | AF | P? | Z | 10 11 17 | | | | | |
| 17 | AF | P | ZN | 22 35 22 | | 0.6 | 1 | | |
| | | S | ZN | 36 47 | | 1.2 | 1 | 1 | 1 |
| 17 | AF | iP | ZN | 22 49 49 | u | 1.6 | 1 | 0.9 | 1 |
| | | iS | ZN | 50 17 | s | 8.6 | 1 | 5 | 1 |
| 18 | AF | P | ZN | 00 04 04 | | 1.2 | 1 | | |
| | | eS | Z | 06 35 | | | | | |
| 18 | AF | iP | Z | 10 53 46 | | | | | |
| | | e(P) | ZN | 49 | | 0.9 | 1 | 0.8 | 1 |
| | | S | ZN | 54 41 | | 3.2 | 1 | 1.8 | 1 |
| 19 | AF | iP | ZN | 07 11 31 | u? | 0.7 | 1 | | |
| | | iS | ZN | 13 20 | d? | 1 | 1 | 1 | 1 |
| 19 | AF | iP | ZN | 13 32 09 | d | | | | |
| | | S | ZN | 57 | | | | | |
| 20 | AF | iP | ZN | 11 11 01 | d | 5.1 | 6 | 1.1 | 3 |
| | | eS | ZN | 15 21 | | 2.7 | 20 | 1.5 | 18 |
| | | L | ZN | 16.7 | | 4.7 | 15 | 2 | 15 |
| 21 | AF | P | ZN | 11 07 42 | | 0.5 | 1 | | |
| | | S | ZN | 08 20 | | 1.3 | 1 | 1.8 | 1 |
| 22 | AF | iP | ZN | 03 20 08 | dn | 4.7 | 1 | 2.1 | 1 |
| | | S | ZN | 25 | | 10 | 1 | 12 | 1 |
| 22 | AF | L | ZN | 08(35) | | 3 | 20 | 1.3 | 15 |
| 23 | AF | P | ZN | 01 29 50 | | 0.6 | 1 | | |
| | | S | ZN | 31 26 | | | | | |
| 24 | AF | P | ZN | 05 16 30 | | | | | |
| 24 | AF | iP | ZN | 08 18 39 | u? | | | | |
| | | S | ZN | 19 31 | | 0.8 | 1 | 0.8 | 1 |
| 24 | AF | iP | ZN | 14 42 54 | u | 6.1 | 1 | 3 | 1 |
| | | S | ZN | 43 05 | | 16 | 1 | 12.3 | 2 |
| 24 | AF | iP | ZN | 19 50 00 | u? | 0.6 | 1 | | |
| | | (S) | Z | 52 36 | | | | | |
| 25 | AF | iP | ZN | 01 07 57 | d? | 1.5 | 1 | 0.8 | 1 |
| | | S | ZN | 09 09 | | 1.4 | 1 | 1.1 | 1 |
| | | e(T) | Z | 13 14 | | | | | |



| Date | Stn | Phase | | h m s | | Az | Tz | An | Tn | |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT 25 | AF | P? | Z | 18 30 50 | | | | | | |
| 25 | AF | P | Z | 22 03 10 | | | | | | |
| | | S | ZN | 04 14 | | 0.5 | 1 | 0.6 | 1 | |
| 26 | AF | P | Z | 04 51 40 | | | | | | |
| | | S | ZN | 52 54 | | | | 0.8 | 1 | |
| 26 | AF | P | ZN | 17 36 24 | | 0.6 | 1 | 0.6 | 1 | |
| | | S | ZN | 37 58 | | 0.5 | 1 | 0.7 | 1 | |
| 26 | AF | iP | ZN | 23 44 32 | u? | | | | | |
| | | iS | ZN | 45 19 | u? | 0.6 | 1 | 0.8 | 1 | |
| 27 | AF | P | Z | 15 00 03 | | | | | | |
| 27 | AF | S | Z | 19 54 56 | | | | | | |
| 27 | AF | iP | ZN | 21 01 49 | u | 1 | 1 | | | |
| | | S | ZN | 02 14 | | 1.3 | 1 | 1 | 1 | |
| 27 | AF | iP | ZN | 22 28 55 | ds | | | | | |
| 29 | AF | iP | ZN | 09 38 13 | ds? | 34½± | 1 | 18½ | 1 | Felt Apia: |
| | | S | ZN | (39) | | 128± | 1 | 109± | 1 | MM 4. |
| 30 | AF | iP | ZN | 01 07 51 | u | | | | | |
| | | S | ZN | 08 12 | | 1 | 1 | 1 | 1 | |
| 30 | AF | iP | ZN | 10 23 44 | u? | 3 | 1 | 1.5 | 1 | |
| | | S | ZN | 24 29 | | 2.2 | 1 | 2 | 1 | |
| 30 | AF | iP | ZN | 10 32 15 | u | | | | | |
| | | S | ZN | 33 48 | | | | 0.7 | 1 | |
| 30 | AF | P | Z | 16 01 19 | | | | | | |
| 30 | AF | P? | Z | 21 46 22 | | | | | | |
| 31 | AF | P | ZN | 07 11 26 | u? | 0.5 | 1 | | | |
| | | S | ZN | 12 13 | | 0.8 | 1 | 0.6 | 1 | |
| 31 | AF | P | ZN | 09 12 03 | | 0.6 | 1 | | | |
| | | S | ZN | 51 | | 0.8 | 1 | 1 | 1 | |
| 31 | AF | iP | ZN | 23 15(01) | u | | | 0.8 | 1 | |
| | | S | ZN | (21) | | | | 2 | 1 | |
| NOV 2 | AP | eP | N | 05 57 25 | | | | | | |
| | | eS | N | 50 | | | | | | |
| 2 | AP | eP | N | 12 21 08 | | | | | | |
| | | (S) | N | 28 | | | | | | |
| 2 | AP | eP | N | 17 19 54 | | | | | | |
| | | eS | N | 23 31 | | | | | | |
| | | eL | N | 24.8 | | | | | | |
| 3 | AF | P | ZN | 02 44 59 | | 0.8 | 1 | 0.7 | 1 | |
| | | S | ZN | 46 36 | | 1 | 1 | 1 | 1 | |
| | | L | ZN | 47.5 | | 6.7 | 9 | 2.7 | 9 | |
| | | T | ZN | 53.5 | | 10.2 | 8 | 4.1 | 7 | |
| 3 | AF | P | ZN | 17 31 56 | | 0.7 | 1 | | | |
| | | L | ZN | 33.0 | | 1.3 | 10 | 1.5 | 13 | |
| | | e(S) | Z | 33 31 | | | | | | |

| Date | Stn | Phase | | h m s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|
| NOV 3 | AF | L | ZN | 17 38.5 | | 1.8 | 10 | 1.5 | 11 |
| 4 | AF | P | Z | 10 28 58 | | | | | |
| | | S | ZN | 30 33 | | | | | |
| 4 | AF | P | ZN | 11 42 24 | | | | | |
| | | S | ZN | 44 10 | | | | | |
| 4 | AF | P? | Z | 14 28 32 | | | | | |
| 4 | AF | iP | ZN | 21 40 00 | u | | | | |
| | | iS | ZN | 44 | u?s? | 1.6 | 1 | 1.2 | 1 |
| 5 | AF | PKP | Z | 20 40 54 | | 0.7 | 2 | | |
| 6 | AF | P | Z | 04 49 56 | | 0.7 | 1 | | |
| | | eS | Z | 59.0 | | 1.2 | 20 | | |
| | | L | Z | 05 11.0 | | 1.7 | 20 | | |
| 6 | AF | P | Z | 22 21 12 | | | | | |
| | | eS | Z | 30 00 | | | | | |
| | | eL | ZN | 40.1 | | 1.1 | 20 | | |
| | | e | Z | 55 06 | | 0.6 | 2 | | |
| 7 | AF | eP | Z | 16 32 09 | | 1.2 | 3 | | |
| | | e | Z | 38 | | | | | |
| 7 | AF | iP | Z | 21 02 49 | u | 1.4 | 1 | | |
| | | S | Z | 03 25 | | 3.5 | 1 | | |
| 8 | AF | P | Z | 00 00 43 | | 0.6 | 1 | | |
| | | S | Z | 03 52 | | 0.5 | 1 | | |
| | | L | Z | 09 51 | | 3 | 5 | | |
| 8 | AF | P | Z | 00 37 34 | | | | | |
| 8 | AF | iP | Z | 09 32 04 | u | 1.5 | 1 | | |
| | | S | Z | 22 | | 5.5 | 1 | | |
| 8 | AF | eP | Z | 11 03 53 | | 0.5 | 1 | | |
| | | eS | Z | 06 58 | | 0.5 | 1 | | |
| 8 | AF | P | Z | 19 52 18 | | | | | |
| 9 | AF | eL | ZN | 04 04.6 | | 1.6 | 20 | 1 | 20 |
| 9 | AF | eP | Z | 10 25 38 | | | | | |
| | | eS | Z | 27 00 | | 0.6 | 1 | | |
| 9 | AF | P | Z | 10 57 00 | | 0.8 | 4 | | |
| | | eL | Z | 11 30.5 | | 0.8 | 20 | | |
| 9 | AF | P | ZN | 13 22 17 | | 1 | 1 | | |
| | | S | ZN | 39 | | 20.8 | 1 | | |
| 9 | AF | eP | Z | 17 35 50 | | 0.5 | 1 | | |
| | | eS | ZN | 37 23 | | 0.7 | 1 | 0.6 | 1 |
| 9 | AF | eP | Z | 19 36 46 | | 1 | 3 | | |
| | | eS | Z | 39 48 | | | | | |
| | | eL | Z | 40.6 | | 1.8 | 10 | | |
| 9 | AF | eS | Z | 20 31.6 | | 1.2 | 8 | | |
| | | eSS | ZN | 37 28 | | 1.5 | 15 | | |
| | | L | ZN | 50.3 | | 2 | 20 | | |
| 10 | AF | eP | Z | 11 46 23 | | | | | |
| | | eS | Z | 47 40 | | | | | |



| Date | Stn | Phase | | h m s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|
| NOV 10 | AF | iP | ZN | 14 53 41 | u | 3.8 | 3 | 1 | 1 |
| | | (pP) | Z | 58 | | 3.6 | 3 | 1 | 2 |
| | | S | ZN | 15 00 49 | | 2.1 | 15 | 1.0 | 15 |
| | | (sS) | ZN | 01 35 | | 2 | 12 | 1.5 | 12 |
| | | (Lq) | ZN | 04.4 | | 1.6 | 17 | 1.1 | 25 |
| | | Lr | ZN | 08.0 | | 2.2 | 42 | 1.1 | 25 |
| | | $P_2'P_2'$ | Z | 25 33 | | 0.7 | 1 | | |
| 10 | AF | P | Z | 16 34 12 | | 0.5 | 1 | | |
| 11 | AF | ePKP? | Z | 05 51 34 | | | | | |
| 11 | AF | iP | Z | 06 16 57 | d | | | | |
| | | i | ZN | 58 | d | 1.5 | 1 | 0.5 | 1 |
| | | S | ZN | 18 40 | | 0.5 | 1 | 0.5 | 1 |
| 11 | AF | iP | ZN | 13 32 30 | un | 2.1 | 1 | 4.7 | 1 |
| | | iS | ZN | 53 | d? | 15 | 1 | 16 | 1 |
| 12 | AF | iP | ZN | 06 23 30 | d | 0.9 | 1 | | |
| | | S | Z | 25 07 | | | | | |
| 12 | AF | (P) | Z | 19 47 41 | | | | | |
| | | (S) | Z | 49 13 | | | | | |
| 13 | AF | P | Z | 06 47 27 | u | 2.5 | 3 | | |
| | | eS | ZN | 55.9 | | | | | |
| | | eL | ZN | 07 03.5 | | 1.5 | 20 | 0.8 | 20 |
| 13 | AF | P | ZN | 09 31 15 | d? | 4.8 | 6 | 2.3 | 4 |
| | | S | ZN | 39 26 | | 2.3 | 8 | 7.5 | 10 |
| | | PS | ZN | 55 | | 10.5 | 17 | 8 | 24 |
| | | SS | ZN | 43 11 | | 2.5 | 15 | 2 | 11 |
| | | eSSS | Z | 46.3 | | 3 | 8 | | |
| | | e(Lq) | N | 47.7 | | | | 2 | 20 |
| | | Lr | ZN | 49.5 | | 13 | 33 | 6 | 32 |
| | | P'P' | Z | 10 00 12 | | | | | |
| 13 | AF | iP | ZN | 10 40 48 | u? | 6½± | 1 | 3 | 1 |
| | | S | ZN | 41 19 | | 7 | 1 | 7 | 1 |
| 13 | AF | iP | ZN | 17 10 17 | u | 0.6 | 1 | 0.6 | 1 |
| | | iS | ZN | 12 03 | d | 0.5 | 1 | 0.6 | 1 |
| 14 | AF | iP | Z | 17 55 35 | u | 3.8 | 1 | 1.7 | 1 |
| | | iS | Z | 57 13 | s | 3 | 1 | 2 | 1 |
| 15 | AF | eL | ZN | 06 45.6 | | 1.7 | 20 | 1.2 | 20 |
| 16 | AF | P | ZN | 01 26 03 | | 3.9 | 1 | 1.3 | 1 |
| | | S | ZN | 28 19 | | 0.9 | 1 | 1.2 | 1 |
| 16 | AF | P | ZN | 01 41 24 | | 0.6 | 1 | | |
| | | S | ZN | 42 08 | | 1.3 | 1 | 1.1 | 1 |
| 17 | AF | iP | Z | 04 12 03 | d? | 2.2 | 3 | | |
| | | S | Z | 15 07 | | | | | |
| 17 | AF | P | Z | 13 50 06 | | 0.8 | 1 | | |
| | | S | Z | 52 20 | | 1 | 1 | | |
| 17 | AF | iP | Z | 21 03 22 | d | 0.9 | 1 | | |
| | | S | Z | 04 13 | | 0.8 | 1 | | |
| 19 | AF | P | ZN | 07 06 49 | u? | 2 | 1 | | |
| | | S | ZN | 08 20 | | 0.6 | 1 | 0.7 | 1 |

| Date | Stn | Phase | | h m s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|
| NOV 19 | AF | P | ZN | 18 10 49 | | 0.6 | 1 | 0.6 | 1 |
| | | iS | ZN | 11 22 | s | 4± | 1 | 3.5 | 1 |
| 22 | AP | eP | N | 03 33 17 | | | | | |
| | | e(S) | N | 34 17 | | | | | |
| 22 | AP | eP | N | 03 46 45 | | | | | |
| | | eS | N | 47 39 | | | | | |
| 22 | AP | (P) | N | 04 04 37½ | | | | | |
| | | (S) | N | 05 37½ | | | | | |
| 23 | AP | eP | N | 14 15 00 | | | | | |
| | | eS | N | 17 00 | | | | | |
| | | eL | N | 17.5 | | | | | |
| 23 | AP | eP | N | 17 31 33 | | | | | |
| | | eS | N | 33 28 | | | | | |
| 23 | AP | eP | N | 17 59 14 | | | | | |
| | | eS | N | 18 01 09 | | | | | |
| | | eL | N | 03.7 | | | | | |
| 23 | AP | eP | N | 20 13 | | | | | |
| | | eS | N | 15.5 | | | | | |
| 23 | AP | eP | N | 21 16 41 | | | | | |
| | | eS | N | 18 24 | | | | | |
| 24 | AF | iP | Z | 06 55 18 | d | | | | |
| 24 | AF | P | Z | 08 19 24 | | | | | |
| | | S | Z | 21 25 | | | | | |
| 24 | AF | P | Z | 08 28 55 | | | | | |
| | | S | Z | 30 54 | | | | | |
| 24 | AF | P | Z | 09 30 49 | | 0.5 | 1 | | |
| | | S | Z | 32 50 | | | | | |
| 24 | AF | P | Z | 20 07 19 | | 0.4 | 1 | | |
| | | S | Z | 09 18 | | 0.5 | 1 | | |
| 25 | AF | P | Z | 22 05 02 | | | | | |
| 26 | AF | P | Z | 08 02 06 | | | | | |
| | | S | ZN | 03 42 | | | | | |
| 26 | AF | P | ZN | 14 37 37 | | 0.9 | 1 | 0.7 | 1 |
| | | S | ZN | 39 37 | | | | 0.7 | 1 |
| 26 | AF | P | Z | 21 38 16 | | | | | |
| | | i | ZN | 21 | d | 0.6 | 1 | | |
| | | S | ZN | 40 08 | | | | | |
| | | eL | ZN | 41.5 | | 1 | 10 | | |
| 27 | AF | (P) | ZN | 02 03 02 | | 0.4 | 1 | | |
| 27 | AF | iP | ZN | 07 21 39 | d? | 0.6 | 1 | | |
| | | S | ZN | 23 44 | | 0.6 | 1 | 0.6 | 1 |
| 27 | AF | iP | ZN | 19 28 59 | | | | | |
| | | S | ZN | 29 32 | | 1.2 | 1 | 1 | 1 |
| 27 | AF | e(P) | Z | 22 03 24 | | | | | |
| | | e(S) | Z | 05 16 | | | | | |
| 27 | AF | P | ZN | 22 08 57 | | 0.5 | 1 | | |



| Date | Stn | Phase | | h m s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|
| NOV 27 | AF | S | ZN | 10 45 | | | | | |
| 28 | AF | P | ZN | 09 04 43 | | 0.3 | 1 | | |
| | | S | ZN | 06 41 | | | | | |
| 28 | AF | P | ZN | 14 07 53 | | 0.6 | 1 | | |
| 28 | AF | iP | ZN | 21 06 22 | u? | 0.8 | 2 | 0.6 | 1 |
| | | S | ZN | 08 20 | | 1.6 | 1 | | |
| | | T | Z | 17 55 | | | | | |
| 29 | AF | eP | ZN | 07 17 13 | | | | | |
| | | eS | ZN | 19 32 | | | | | |
| 29 | AF | L | ZN | 10 10.6 | | 1.5 | 20 | | |
| 29 | AF | iP | ZN | 19 16 46 | un? | 4.5 | 1 | 2.1 | 1 |
| | | S | ZN | 17 00 | | 8.5 | 1 | 7.7 | 1 |
| 30 | AF | P | ZN | 04 04 50 | | 0.6 | 1 | | |
| | | S | ZN | 06 54 | | 0.6 | 1 | | |
| DEC 1 | AF | P | ZN | 01 14 10 | | 0.6 | 1 | | |
| | | S | ZN | 37 | | 1 | 1 | 1.1 | 1 |
| 1 | AF | P | ZN | 01 31 25 | | 1.4 | 1 | 1.1 | 1 |
| | | S | ZN | 32 01 | | 2.6 | 1 | 2.6 | 1 |
| 1 | AF | P | ZN | 03 01 42 | | 0.5 | 1 | | |
| | | S | ZN | 03 33 | | 0.5 | 1 | | |
| 1 | AF | P | ZN | 08 56 56 | | | | | |
| | | S | ZN | 58 44 | | | | | |
| 1 | AF | P | Z | 09 48 13 | | | | | |
| 1 | AF | iP | ZN | 10 19 35 | d | 1.7 | 1 | 0.8 | 1 |
| 1 | AF | P | ZN | 10 43 05 | | 0.6 | 1 | 0.6 | 1 |
| | | S | ZN | 45 07 | | 0.9 | 1 | 0.8 | 1 |
| | | eLq | N | 45.9 | | | | | |
| | | Lr | ZN | 46.4 | | 3.8 | 10 | 1.3 | 10 |
| | | T | ZN | 54 39 | | 5.6 | 10 | 2.5 | 10 |
| 1 | AF | eL | N | 21 21.6 | | | | | |
| | | eL | Z | 25.7 | | | | | |
| 2 | AF | P | Z | 04 44 37 | | | | | |
| 2 | AF | eP | ZN | 06 23 31 | | 1.1 | 1 | 0.8 | 1 |
| | | S | ZN | 24 10 | | 2 | 1 | 1.1 | 1 |
| | | T | ZN | 26 40 | | 2 | 1 | 1 | 1 |
| 2 | AF | P | ZN | 09 24 20 | | 0.8 | 1 | 0.5 | 1 |
| | | (PcP) | Z | 35 | | 2.6 | 10 | | |
| | | e | Z | 25 42 | | 2 | 10 | | |
| | | PP | Z | 27 56 | | 1.8 | 10 | | |
| | | eS | ZN | 34 46 | | 1.7 | 16 | 0.8 | 20 |
| | | PS | ZN | 36 45 | | 2.2 | 16 | 1.5 | 32 |
| | | SS | ZN | 41 13 | | 4.5 | 34 | 1.5 | 35 |
| | | e(SSS) | Z | 44 06 | | 1.5 | 18 | | |
| | | Lq | ZN | 49.2 | | 3 | 40 | 1.3 | 40 |
| | | Lr | ZN | 54.1 | | | | | |
| | | M | ZN | 58 | | 21 | 18 | 3 | 18 |
| 3 | AF | iP | ZN | 03 44 33 | d | 1.6 | 1 | 0.6 | 1 |
| | | S | ZN | 58 | | 4 | 2 | 3.5 | 2 |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 3 | AF | P | ZN | 04 | 38 | 10 | | 1.3 | 4 | 1 | 3 | |
| | | (PP) | Z | | 42 | 15 | | | | | | |
| | | eL | ZN | 05 | 01.7 | | | | | | | |
| | | M | ZN | | 07 | | | 1.5 | 25 | 1.5 | 25 | |
| 3 | AF | P | ZN | 14 | 18 | 18 | | 0.5 | 1 | | | |
| | | S | ZN | | 19 | 31 | | 0.6 | 1 | 0.8 | 1 | |
| 4 | AF | iP | ZN | 04 | 12 | 16 | u | 1.8 | 1 | 1.5 | 1 | |
| | | S | ZN | | | 43 | | 2.3 | 1 | 1.6 | 1 | |
| 4 | AF | iP | ZN | 12 | 18 | 52 | un | 6 | 1 | 3.3 | 1 | |
| | | S | ZN | | 19 | 11 | | 8 | 1 | 4.8 | 1 | |
| 4 | AF | P | ZN | 15 | 58 | 23 | | 1.1 | 3 | | | |
| 4 | AF | iP | ZN | 23 | 57 | 58 | d | 0.5 | 1 | 0.5 | 1 | |
| | | S | ZN | | 59 | 47 | | 1 | 1 | 1.5 | 1 | |
| 5 | AF | P | Z | 00 | 02 | 38 | | 0.6 | 1 | | | |
| | | (S) | Z | | 04 | 53 | | | | | | |
| 5 | AF | iP | ZN | 14 | 29 | 00 | un | 7 | 1 | 3.4 | 1 | |
| | | S | ZN | | | 15 | | 8.5 | 1 | 10.1 | 1 | |
| 5 | AF | (PKP) | Z | 21 | 41 | 41 | | | | | | |
| 6 | AF | P | ZN | 03 | 36 | 53 | | 0.7 | 1 | 0.5 | 1 | |
| | | S | ZN | | 38 | 55 | | 0.5 | 1 | 0.8 | 1 | |
| 6 | AF | P | Z | 09 | 09 | 40 | | 1 | 3 | | | |
| | | eL | ZN | | 40.2 | | | 1 | 20 | | | |
| 6 | AF | iP | ZN | 12 | 19 | 54 | u | 0.8 | 1 | | | |
| | | S | ZN | | 21 | 40 | | 1 | 1 | 0.7 | 1 | |
| 6 | AF | P | Z | 21 | 46 | 51 | | | | | | |
| 7 | AF | iP | ZN | 01 | 29 | 00 | d | 1.2 | 1 | 0.7 | 1 | |
| | | (S) | Z | | | 36 | | | | | | |
| 7 | AF | P | ZN | 03 | 04 | 36 | | 1.2 | 1 | 0.5 | 1 | |
| | | e(S) | ZN | | 08 | 57 | | | | | | |
| 7 | AF | e(P) | Z | 07 | 37 | 28 | | | | | | |
| | | e(S) | Z | | 39 | 00 | | | | | | |
| 7 | AF | P | ZN | 16 | 32 | 14 | | 0.4 | 1 | | | |
| 8 | AF | P | ZN | 01 | 06 | 15 | | | | | | |
| | | (pP) | ZN | | | 24 | | 0.8 | 1 | 0.6 | 1 | |
| 8 | AF | iP | ZN | 01 | 26 | 37 | u | 4 | 1 | 1.6 | 1 | |
| | | S | ZN | | 28 | 30 | | 3.5 | 1 | 3 | 1 | |
| 8 | AF | P | ZN | 02 | 23 | 51 | | 1.2 | 1 | 1.1 | 1 | |
| | | S | ZN | | 24 | 19 | | 3 | 1 | 3 | 1 | |
| | | T | ZN | | 26.2 | | | 2.5 | 1 | 1.6 | 1 | |
| 8 | AF | iP | ZN | 07 | 56 | 47 | d | 0.3 | 1 | | | |
| | | S | ZN | | 58 | 47 | | 0.4 | 1 | 0.5 | 1 | |
| 8 | AF | e(P) | Z | 14 | 36 | 44 | | | | | | |
| | | e(S) | Z | | 39 | 56 | | | | | | |
| 8 | AF | iP | ZN | 15 | 07 | 53 | u | 0.7 | 1 | 0.6 | 1 | |
| | | S | ZN | | 08 | 13 | | 1.5 | 1 | 1.3 | 1 | |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 9 | AF | iP | ZN | 10 | 49 | 44 | u | 2.5 | 1 | 1.1 | 1 | |
| | | S | ZN | | 50 | 04 | | 5.5 | 1 | 4.5 | 1 | |
| 9 | AF | P | Z | 16 | 37 | 54 | | | | | | |
| | | (S) | Z | | 38 | 46 | | | | | | |
| 10 | AF | iP | ZN | 07 | 02 | 42 | u | 0.8 | 1 | 0.5 | 1 | |
| | | S | ZN | | | 52 | | | | 4.5 | 1 | |
| 10 | AF | iP | ZN | 13 | 32 | 40 | un | | | 8 | 1 | Felt Apia: |
| | | (S) | ZN | | | 56 | | | | 70± | 1 | MM 3. |
| 10 | AF | iP | ZN | 14 | 05 | 33 | d? | 0.8 | 1 | 0.6 | 1 | |
| 10 | AF | iP | ZN | 22 | 23 | 30 | d? | 0.4 | 1 | 0.5 | 1 | |
| | | S | ZN | | 25 | 14 | | 0.5 | 1 | 0.6 | 1 | |
| 10 | AF | iP | ZN | 23 | 46 | 55 | un | 4.5 | 1 | 2.7 | 1 | |
| | | S | ZN | | 47 | 14 | | 12 | 1 | 7.3 | 1 | |
| 11 | AF | P | ZN | 00 | 05 | 15 | | 1.1 | 2 | 0.8 | 1 | |
| | | eL | ZN | | 08.7 | | | 1.8 | 15 | 1.5 | 24 | |
| 11 | AF | P | ZN | 03 | 28 | 45 | | 0.5 | 1 | | | |
| 11 | AF | P | Z | 04 | 40 | 22 | | 0.5 | 1 | | | |
| | | (S) | Z | | 42 | 24 | | | | | | |
| 11 | AF | iP | ZN | 21 | 53 | 31 | d? | 0.7 | 1 | 0.5 | 1 | |
| | | (S) | ZN | | 55 | 47 | | 0.6 | 1 | 0.6 | 1 | |
| 12 | AF | P | ZN | 10 | 09 | 16 | | 0.6 | 1 | 0.5 | 1 | |
| 13 | AF | P | ZN | 07 | 44 | 23 | | 1.2 | 1 | 0.5 | 1 | |
| | | (pP) | ZN | | | 40 | | 5.1 | 5 | 1.5 | 4 | |
| | | PP | ZN | | 46 | 24 | | 7.0 | 8 | 2 | 4 | |
| | | (PPP) | ZN | | 47 | 37 | | 7.2 | 6 | 2.1 | 3 | |
| | | S | ZN | | 51 | 13 | | 8 | 13 | 2.5 | 22 | |
| | | e | Z | | 53.1 | | | 7 | 10 | | | |
| | | Lq | ZN | | 54.4 | | | 10.5 | 23 | 7.5 | 32 | |
| | | Lr | ZN | | 57.4 | | | 16.5 | 27 | | | |
| | | M | ZN | | 58 | | | 28.5 | 26 | 15.5 | 22 | |
| 13 | AF | iP | ZN | 09 | 05 | 09 | d? | 0.4 | 1 | 1.9 | 1 | |
| | | S | ZN | | 06 | 41 | | 1 | 1 | 2.5 | 1 | |
| 13 | AF | (P) | Z | 10 | 16 | 49 | | | | | | |
| 13 | AF | eP | Z | 18 | 56 | 15 | | | | | | |
| | | e(S) | Z | | 57 | 47 | | | | | | |
| 14 | AF | eP | ZN | 00 | 25 | 49 | | | | | | |
| 14 | AF | P | ZN | 01 | 02 | 23 | | 2.5 | 6 | 0.8 | 2 | |
| | | S | ZN | | 06 | 19 | | 1.2 | 3 | 0.8 | 4 | |
| | | L | ZN | | 06.6 | | | 6.5 | 19 | 2 | 15 | |
| 14 | AF | (P) | Z | 07 | 03 | 22 | | | | | | |
| | | (S) | ZN | | 04 | 58 | | | | | | |
| 14 | AF | eP | Z | 08 | 17 | 56 | | | | | | |
| | | eS | ZN | | 21 | 28 | | | | | | |
| 14 | AF | (P) | Z | 14 | 31 | 55 | | | | | | |
| 15 | AF | iP | ZN | 00 | 01 | 56 | d? | 11.5 | 1 | 2.3 | 1 | |
| | | PP | ZN | | 03 | 43 | | 2 | 5 | 1.2 | 5 | |

| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 15 | AF | eS | ZN | | | 10.4 | | 2.3 | 9 | | |
| | | e(ScS) | N | | | 11.9 | | | | 1 | 15 |
| | | eLq | ZN | | | 18.2 | | | | 1 | 36 |
| | | Lr | ZN | | | 21.2 | | 3 | 43 | 1 | 30 |
| | | PKKP | Z | | | 23 48 | | | | | |
| 15 | AF | iP | ZN | 16 | 17 | 01 | un | | | 3.6 | 1 |
| | | S | ZN | | | 26 | | | | 12.5 | 1 |
| 15 | AF | iP | ZN | 16 | 27 | 22 | u | | | 0.8 | 1 |
| | | S | ZN | | | 47 | | | | 2 | 1 |
| 15 | AF | iP | ZN | 18 | 35 | 33 | u | | | 0.5 | 1 |
| | | S | ZN | | | 37 05 | | | | 1 | 5 |
| 16 | AF | P | ZN | 08 | 54 | 43 | | 0.9 | 1 | 0.6 | 1 |
| | | S | Z | | | 56 52 | | | | | |
| 16 | AF | P | ZN | 10 | 17 | 39 | | 0.5 | 1 | | |
| | | S | ZN | | | 19 50 | | 1 | 1 | 0.8 | 1 |
| 16 | AF | i(P) | Z | 20 | 32 | 37 | u | | | | |
| | | e(S) | ZN | | | 34 10 | | | | 0.6 | 1 |
| 17 | AF | iP | ZN | 06 | 43 | 39 | u? | | | | |
| | | S | ZN | | | 45 11 | | 0.6 | 1 | 0.8 | 1 |
| 17 | AF | iP | ZN | 10 | 48 | 45 | d | 4.6 | 2 | 0.5 | 1 |
| 17 | AF | (P) | Z | 12 | 00 | 20 | | | | | |
| | | L | ZN | | | 01.5 | | 2.6 | 8 | 1.7 | 10 |
| 17 | AF | P | ZN | 12 | 10 | 18 | | 1.3 | 1 | 0.8 | 1 |
| | | S | ZN | | | 58 | | 1.2 | 1 | 1 | 1 |
| | | T | ZN | | | 13 51 | | 0.8 | 1 | 0.8 | 1 |
| 17 | AF | P | ZN | 16 | 02 | 54 | | | | | |
| | | S | ZN | | | 03 46 | | 1.2 | 1 | 0.9 | 1 |
| 17 | AF | iP | ZN | 20 | 49 | 28 | ds? | 12 | 1 | 5 | 1 |
| | | S | ZN | | | 46 | | 49± | 1 | 71± | 1 |
| 18 | AF | P | Z | 05 | 15 | 58 | | | | | |
| 18 | AF | P | ZN | 17 | 02 | 58 | | | | | |
| | | S | ZN | | | 03 50 | | 0.6 | 1 | 0.5 | 1 |
| 19 | AF | iP | ZN | 04 | 05 | 04 | u | 0.5 | 1 | 0.5 | 1 |
| | | S | ZN | | | 45 | | | | 0.6 | 1 |
| 19 | AF | P | ZN | 07 | 04 | 20 | | 0.8 | 1 | 0.7 | 1 |
| 19 | AF | eP | Z | 09 | 45 | 14 | | | | | |
| 19 | AF | P | Z | 22 | 18 | 58 | | 0.5 | 1 | | |
| | | eL | ZN | | | 25.2 | | 2.1 | 15 | | |
| 20 | AF | iP | Z | 10 | 17 | 58 | d? | | | | |
| 20 | AF | iP | ZN | 11 | 40 | 54 | un? | 3 | 1 | 1.2 | 1 |
| | | iS | ZN | | | 41 19 | n? | 4 | 1 | 4 | 1 |
| 20 | AF | P | ZN | 11 | 44 | 25 | | 1.1 | 1 | 0.6 | 1 |
| | | S | ZN | | | 46 14 | | 0.7 | 1 | 1 | 1 |
| 20 | AF | iP | ZN | 21 | 32 | 06 | d | 0.8 | 1 | 0.5 | 1 |



| Date | Stn | Phase | | h | m | s | | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DEC 21 | AF | P | ZN | 22 | 39 | 01 | | | | | |
| | | S | ZN | | | 46 22 | | 0.6 | 1 | | |
| 22 | AF | iP | ZN | 01 | 42 | 30 | u | 3 | 1 | 1.1 | 1 |
| | | S | ZN | | | 50 | | 8.5 | 1 | 5.5 | 1 |
| 22 | AF | P | Z | 02 | 29 | 12 | | | | | |
| | | e | Z | | | 32 16 | | | | | |
| | | iS | ZN | | | 18 | n | 0.8 | 1 | 1 | 1 |
| | | L | Z | | | 32.5 | | 2 | 6 | | |
| 22 | AF | P | ZN | 06 | 35 | 26 | | 5.8 | 3 | 1.8 | 3 |
| | | S | ZN | | | 38 34 | | 1.5 | 1 | 1.3 | 2 |
| | | eL | ZN | | | 38.7 | | 2 | 13 | 1.5 | 10 |
| 22 | AF | P | ZN | 14 | 15 | 38 | | 1.1 | 1 | 0.6 | 1 |
| | | S | ZN | | | 18 16 | | 0.5 | 1 | 0.6 | 1 |
| | | eL | ZN | | | 18.8 | | 4 | 10 | 1.6 | 12 |
| 22 | AF | eP | ZN | 14 | 29 | 18 | | 0.5 | 1 | | |
| | | S | ZN | | | 30 40 | | 0.7 | 1 | 0.6 | 1 |
| | | L | ZN | | | 31.8 | | 8.4 | 7 | 2.6 | 8 |
| 22 | AF | P | ZN | 21 | 08 | 40 | | 1.5 | 2 | 0.6 | 1 |
| | | pP | ZN | | | 09 58 | | 1.5 | 3 | 0.6 | 1 |
| 24 | AF | P | ZN | 07 | 25 | 56 | | 0.7 | 1 | 0.5 | 1 |
| | | S | ZN | | | 26 17 | | 1.1 | 1 | 1.1 | 1 |
| 24 | AF | iP | ZN | 21 | 05 | 41 | ds | | | 3.8 | 2 |
| | | S | ZN | | | 56 | | | | 21½ | 1 |
| 24 | AF | (P) | Z | 21 | 50 | 15 | | | | | |
| | | (S) | ZN | | | 51 24 | | 0.3 | 1 | 0.5 | 1 |
| 24 | AF | (P) | ZN | 23 | 20 | 19 | | 0.5 | 1 | 0.5 | 1 |
| | | (S) | ZN | | | 22 39 | | 0.5 | 1 | 0.6 | 1 |
| 25 | AF | eP | Z | 05 | 55 | 00 | | | | | |
| 25 | AF | P | ZN | 08 | 51 | 57 | | | | 1.1 | 1 |
| | | S | ZN | | | 52 31 | | | | 5.4 | 1 |
| 25 | AF | eiP | ZN | 15 | 58 | 11 | d | 0.5 | 1 | 0.5 | 1 |
| | | S | ZN | | | 52 | | 1.5 | 1 | 1.1 | 1 |
| 26 | AF | iP | ZN | 00 | 58 | 51 | u? | 1.7 | 3 | 0.8 | 1 |
| | | S | ZN | 01 | 00 | 53 | | | | 1 | 1 |
| | | eL | N | | | 01.5 | | | | 2 | 10 |
| | | L | Z | | | 02.9 | | 8 | 10 | | |
| 26 | AF | P | Z | 01 | 55 | 47 | | 0.6 | 1 | | |
| 26 | AF | (P) | Z | 14 | 33 | 25 | | | | | |
| | | (S) | Z | | | 35 15 | | | | | |
| 27 | AF | P | ZN | 19 | 42 | 36 | | 0.6 | 1 | 0.7 | 1 |
| | | S | ZN | | | 43 03 | | 3.5 | 1 | 2.9 | 1 |
| | | T | ZN | | | 44.7 | | 2.5 | 1 | 1.6 | 1 |
| 28 | AF | iP | Z | 01 | 59 | 37 | d? | 0.5 | 1 | | |
| | | S | ZN | 02 | 01 | 13 | | | | | |
| 28 | AF | P | ZN | 09 | 23 | 36 | | 0.8 | 1 | 0.8 | 1 |
| | | L | N | | | 24.2 | | | | 2.5 | 13 |
| | | L | Z | | | 24.6 | | 3.2 | 9 | | |
| | | T | ZN | | | 26 56 | | 0.6 | 1 | 0.8 | 1 |

| Date | Stn | Phase | | h m s | Az | Tz | An | Tn |
|---|---|---|---|---|---|---|---|---|
| DEC 28 | AF | (P) | ZN | 22 22 08 | | | | |
| | | S | ZN | 24 16 | 0.5 | 1 | 0.6 | 1 |
| 29 | AP | eP | N | 06 03 22 | | | | |
| | | eS | N | 04 17 | | | | |
| | | eL | N | 05.7 | | | | |
| 29 | AP | P | N | 17 45 43 | | | | |
| | | S | N | 46 15 | | | | |
| 29 | AP | eP | N | 19 24 43 | | | | |
| | | S | N | 25 03 | | | | |
| 30 | AP | e(P) | N | 08 00 41 | | | | |
| | | e(S) | N | 02 51 | | | | |
| 30 | AP | P | N | 17 04 41 | | | | |
| | | S | N | 05 02 | | | | |
| 31 | AP | eP | N | 00 12.05 | | | | |
| 31 | AP | P | N | 12 55 09 | | | | |
| | | S | N | 37 | | | | |

## RAOUL ISLAND

Trace amplitudes given in the column Az are in millimetres, measured on the screen of a viewer magnifying the original 35 mm film record by a factor of 8. Records are available only for the first three months of the year, owing to a failure of the recorder gearing.

| Date | Phase | h m s | Az |
|---|---|---|---|
| JAN 13 | e | 07 37 46½ | |
| | e | 57½ | 2.1 |
| 14 | e | 15 31 56½ | 5 |
| 16 | P | 12 33 03 | |
| | (S) | 34 40 | |
| | e | 46½ | 3 |
| 16 | e | 15 35 | 1.6 |
| 16 | P | 19 25 55 | |
| | S | 26 31½ | 3.5 |
| 17 | P | 14 50 15½ | |
| | S | 46½ | 10 |
| 18 | e(S) | 00 17 37 | 1.5 |
| 19 | iP | 09 16 47½ | |
| | S | 18 11 | 11 |
| 19 | P | 09 52 40 | |

| Date | Phase | h m s | Az |
|---|---|---|---|
| JAN 19 | S | 56 | 21 |
| 21 | P | 10 17 19 | 5.5 |
| 21 | e(S) | 10 46 00 | 1.5 |
| 22 | P | 06 28 57 | |
| | S | 29 16 | 5.0 |
| 24 | (S) | 04 25 02 | 2.5 |
| 24 | P | 09 20 08½ | |
| | S | 21 50 | 1.5 |
| 25 | e(S) | 11 03 | 1.3 |
| 25 | e(S) | 16 34 56½ | 1.5 |
| 26 | eP? | 04 11 32 | |
| | e? | 13 14½ | |
| | e(S) | 32½ | 1.4 |
| 26 | e(P) | 06 08 02½ | |



| Date | Phase | h m s | Az |
|---|---|---|---|
| JAN 26 | P | 09 26 15 | |
| | S | 27½ | 9 |
| 26 | P | 17 43 51½ | |
| | S | 44 23½ | 2.5 |
| 26 | P | 22 21 48½ | |
| | i | 51½ | |
| | S | 22(05½) | large |
| 28 | P | 01 43 39 | |
| | i | 45 | |
| | S | 57 | (70±) |
| 30 | P | 04 12 22½ | |
| | S | 13 11½ | 7.5 |
| FEB 2 | P | 06 30 57½ | |
| | S | 31 43 | 21 |
| 2 | P | 22 28 11 | |
| | S | 23½ | 11 |
| 3 | P | 02 23 16½ | |
| | S | 24 48½ | 3.2 |
| 4 | P | 00 21 27½ | |
| | S | 43½ | 11 |
| 10 | e? | 01 36 44½ | 1.2 |
| 15 | eS | 05 21 13½ | 2 |
| 15 | iP | 18 42 35½ | |
| | (S) | (47½) | 14± |
| 15 | P | 22 18 49½ | 68± |
| 16 | iP | 01 09 51½ | 70± |
| 16 | P | 05 23 19½ | |
| | S | 56½ | 16½ |
| 17 | P? | 00 03 48½ | |
| | S | 05 27½ | 2.1 |
| 17 | iP | 10 00 43½ | 60± |
| 17 | P | 16 44 37 | |
| | S | 45 45 | 25½ |
| 19 | P | 12 26 33½ | |
| | S | 58 | 5 |
| 20 | P | 00 14 54 | |
| | S | 15 24 | 9.5 |
| 20 | eS | 06 10 45 | 1.6 |
| 21 | (P) | 09 41 35 | |
| | S | 43 19½ | 1.5 |
| 22 | iP | 00 49 14 | |
| | S | 37½ | 12 |
| 22 | P | 00 57 32 | |
| | S | 58 17½ | 2.5 |

| Date | Phase | h m s | Az |
|---|---|---|---|
| FEB 22 | iP | 05 20 56 | large |
| 22 | e(S) | 08 39 47 | 1.0 |
| 22 | P | 12 08 52 | |
| | (S) | 59½ | 11.5 |
| 22 | iP | 20 40 09½ | |
| | S | 28½ | 8 |
| 22 | S | 20 42 07½ | 10 |
| 22 | iP | 23 18 37 | 8.5 |
| 24 | eP | 14 56(04) | 6 |
| 24 | P | 17 17(30) | |
| | S | 18(18) | 4 |
| 27 | iP | 08 56(53) | 28± |
| MAR 8 | iP | 16 37 26½ | |
| | S | 40(46) | 30± 4 |
| 8 | (S) | 18 31 44 | 5.5 |
| 8 | P | 19 29 46½ | 6 |
| | S | 31 | 11± |
| 10 | P | 05 01 31 | |
| | (S) | 02 16 | |
| | e | 27 | 9.5 |
| 10 | e | 13 47 56½ | 1.9 |
| | e | 50 32 | 2.1 |
| 12 | iP | 01 30 38½ | |
| | (S) | (45½) | 48± |
| 15 | iP | 03 50 48 | |
| | (S) | 51(05) | large |
| 15 | P | 10 11 19½ | |
| | S | 13 06½ | 1.4 |
| 15 | P | 15 16 24½ | |
| | S | 54 | 3.5 |
| 15 | P | 19 13 06½ | |
| | e | 20 | |
| | (S) | 27½ | 7± |
| 15 | P | 19 25 39 | |
| | S | 26 00½ | 6.5 |
| 15 | e(S) | 19 35 35½ | 0.7 |
| 15 | P | 21 37 03 | |
| | (S) | 18½ | 5.1 |
| 16 | e | 17 45 11 | 0.7 |
| 16 | e | 19 17(30) | 1.3 |
| 20 | P | 03 54 37½ | |
| | S | 55 17½ | 10 |

| Date | Phase | h m s | Az | Date | Phase | h m s | Az |
|---|---|---|---|---|---|---|---|
| MAR 23 | P | 14 50 29 | | MAR 28 | eP | 12(39)44 | |
| | S | 42 | 25± | | S | (40)56½ | 5 |
| 26 | e | 20 28 | | 28 | S | 12(43)48 | 5 |
| 27 | P | 17(25)10½ | large | 29 | e | 00(11)49½ | |
| | | | | | e | (12)42½ | 5 |
| 27 | e(P) | 23(30)08 | | | | | |
| | S | 50 | 12 | | | | |

## SCOTT BASE

The amplitudes quoted in this section are in millimetres, measured on the screen of a viewer enlarging the original 35 mm. film by a factor of 8.

Instrumental troubles caused intermittent operation or complete loss of records over the following periods. Jan 16-31, Feb 9-24, Feb 25-Mar 8, Mar 11-May 1.

| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| JAN 1 | eP? | ZN | 09 06 23 | | | | | | |
| | i | E | 07 05.5e | | | | | | |
| 2 | iP | Z | 03 33 39 u | | | | | | |
| 2 | eP | ZE | 12 30 23 | | | | | | |
| | eSS | E | 39.5 | | | | | 8 | 23 |
| | eLr | E | 45 37 | | | | | 6 | 15 |
| 3 | e(PKKP)Z | | 11 07 48 | | | | | | |
| 4 | eP? | Z | 04 09 07 | | | | | | |
| | e | Z | 10 | | | | | | |
| 4 | eP | Z | 06 31 24 | | | | | | |
| 4 | eP? | Z | 16 02 33 | | | | | | |
| 5 | eP | Z | 06 49 05 | | | | | | |
| 6 | iP | Z | 20 28 04 d | | | | | | |
| 7 | eiP | ZN | 02 43 09 d | | | | | | |
| | e | Z | 18 | | | | | | |
| | eS | Z | 44 55 | | | | | | |
| 7 | iP | Z | 11 01 36 u | | | | | | |
| 7 | iP? | ZN | 11 37 50.5d | | | | | | |
| 7 | eP | Z | 13 36 41 | | | | | | |
| | i | Z | 45 u | | | | | | |
| | e(PcP) | Z | 37 52 | | | | | | |



| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| JAN 7 | eS | E | 43 37 | | | | | | |
| | eLq | E | 47.5 | | | | | | |
| | eLr | E | 53 | | | | | 4 | 17 |
| 7 | iP | Z | 14 44 32 u | | | | | | |
| | i(ScS) | Z | 54 27 u | | | | | | |
| 7 | eP | Z | 17 30 45 | | | | | | |
| 7 | eP | Z | 21 53 40 | | | | | | |
| 9 | eP | Z | 04 29 31 | | | | | | |
| | iPcP | Z | 30 57.5u | | | | | | |
| 9 | ePKP | Z | 07 42 31.5 | | | | | | |
| | i | Z | 40.5d | | | | | | |
| | e(PKKP) | Z | 54 13.5 | | | | | | |
| 9 | e? | Z | 11 08 21 | | | | | | |
| 10 | eP | Z | 05 28 55 | | | | | | |
| 10 | e? | Z | 07 32 09 | | | | | | |
| 10 | e? | ZN | 09 11 55 | | | | | | |
| 11 | eP | ZNE | 00 34 06 | | | | | | |
| 13 | eP | ZN | 15 52 32 | | | | | | |
| | ePcP | Z | 56 | | | | | | |
| | ePP | ZN | 55 42 | | | | | | |
| | eS | ZN | 16 02 35 | | | | | | |
| | eScS | ZN | 03 11 | | | | | | |
| | eSS | N | 52 | | | | | | |
| 14 | eP | Z | 13 32 14 | | | | | | |
| | S | Z | 20 | | | | | | |
| 14 | eP | Z | 19 05 32 | | | | | | |
| 14 | e? | Z | 23 56 45 | | | | | | |
| 15 | eP | ZE | 09 42 29 | | | | | | |
| | ePcP | E | 48 | | | | | | |
| | eS | E | 52 41 | | | | | | |
| | eL | E | 10 05 | | | | | 12 | 20 |
| 29 | e | Z | 07 55 07 | | | | | | |
| | e | Z | 57 17 | | | | | | |
| 29 | e | E | 08 22 07 | | | | | | |
| FEB 4 | eP | NE | 03 58 21 | | | | | | |
| 4 | eL? | E | 16 39 00 | | | | | | |
| 5 | eP? | E | 01 55 30 | | | | | | |
| 8 | eS | E | 12 59 44 | | | | | 3 | 3 |
| | eL | E | 13 07 00 | | | | | 8 | 20 |
| 24 | e | E | 09 48 37 | | | | | | |
| MAR 1 | e? | | 12 29 49 | | | | | | |
| 5 | e | | 14 01 38 | | | | | | |

| Date | Phase | | h m s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| MAR 8 | eP | Z | 11 54 14 | | | | | | | |
| | eL | Z | 57.5 | | | | | | | |
| 8 | iP! | ZN | 16 43 30 | nd | | | | | | |
| | ePcP | Z | 44 25 | | | | | | | |
| | iS | ZN | 51 30 | u | | | | | | |
| | P'P' | Z | 17 12 38 | | | | | | | |
| | i? | Z | 13 53 | u | | | | | | |
| 10 | eP | N | 00 06 41 | | | | | | | |
| 10 | e | ZN | 00 44 25 | | | | | | | |
| | e(L) | ZNE | 50.5 | | | | | | | |
| 10 | ePKS | N | 14 55 00 | | | | | | | |
| 17 | e? | N | 12 32 24 | | | | | | | |
| 22 | eP | Z | 02 35 19 | | | | | | | |
| 25 | eP? | Z | 16 58 53 | | | | | | | |
| | eS? | E | 59 23 | | | | | | | |
| 27 | eP | NE | 03 59 13 | | | | | | | |
| 27 | eP? | NE | 08 09 41 | | | | | | | |
| 29 | eP | NE | 06 41 19 | | | | | | | |
| | ePcP | E | 42 32 | | | | | | | |
| | eL | ZE | 56 | | 8 | 15 | | | 3 | 15 |
| APR 5 | eP | NE | 07 33 15 | | | | | | | |
| 6 | e? | NE | 13 56 11 | | | | | | | |
| 7 | eP | NE | 13 56 11 | | | | | | | |
| 8 | e(P) | N | 12 49 20 | | | | | | | |
| | e(S) | N | 54 | | | | | | | |
| 9 | eP? | NE | 09 09 44 | | | | | | | |
| 10 | e? | NE | 05 06 50 | | | | | | | |
| 11 | e? | N | 07 39 10 | | | | | | | |
| 12 | e? | NE | 12 50 34 | | | | | | | |
| 13 | e? | NE | 10 24 08 | | | | | | | |
| 15 | eP | N | 03 36 04 | | | | | | | |
| 15 | e | NE | 04 24 06 | | | | | | | |
| 15 | e | N | 08 42 14 | | | | | | | |
| 15 | e | NE | 22 15 46 | | | | | | | |
| 16 | e? | N | 16 45 04 | | | | | | | |
| 19 | eP | NE | 09 32 24 | | | | | | | |
| 20 | e? | N | 12 39 30 | | | | | | | |
| 20 | ePKP | NE | 19 45 08 | | | | | | | |
| 21 | e? | NE | 18 25 11 | | | | | | | |



| Date | Phase | | h m s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| APR 24 | P | ZNE | 03 33 22 | | | | | | | |
| | ePP | ZNE | 35 36 | | | | | | | |
| | eS | ZNE | 42 22 | | | | | | | |
| 27 | e? | NE | 02 56 01 | | | | | | | |
| 27 | e? | NE | 04 07 56 | | | | | | | |
| 28 | e? | NE | 06 09 01 | | | | | | | |
| 29 | iP | NE | 13 45 40 | w | | | | | | |
| 29 | eP | NE | 19 44 34 | | | | | | | |
| | e(PcP) | E | 56 | | | | | | | |
| | e | NE | 45 34 | | | | | | | |
| 29 | iP | NE | 20 56 48 | w | | | | | | |
| MAY 1 | e? | N | 06 54 35 | | | | | | | |
| 2 | eP | NE | 09 05 55 | | | | | | | |
| 2 | eP | E | 12 04 04 | | | | | | | |
| 2 | eP? | NE | 12 22 32 | e | | | | | | |
| 2 | eP | N | 16 39 00 | | | | | | | |
| 2 | eP | N | 17 41 00 | | | | | | | |
| 2 | eP | N | 18 29 01 | | | | | | | |
| 2 | eP | NE | 19 01 43 | | | | | | | |
| 3 | e? | E | 00 40 50 | | | | | | | |
| | e? | E | 00 47 43 | | | | | | | |
| 3 | e? | E | 07 07 00 | | | | | | | |
| 3 | e? | E | 08 05 25 | | | | | | | |
| 3 | e? | E | 08 55 49 | | | | | | | |
| 3 | e? | E | 10 57 05 | | | | | | | |
| 3 | e? | E | 11 00 27 | | | | | | | |
| 3 | e? | E | 12 14 45 | | | | | | | |
| 3 | eP | E | 13 34 32 | | | | | | | |
| 3 | e? | E | 14 40 31 | | | | | | | |
| | e? | E | 14 47 17 | | | | | | | |
| | e? | E | 14 47 25 | | | | | | | |
| | e? | E | 15 58 25 | | | | | | | |
| 4 | eP | | 00 06 45 | | | | | | | |
| 4 | e? | | 00 37 20 | | | | | | | |
| 4 | eP | | 04 13 00 | | | | | | | |
| 4 | eP | ZNE | 18 39 08 | | | | | | | |
| 5 | eP | NE | 16 06 03 | | | | | | | |
| 6 | eP | E | 06 31 05 | | | | | | | |

| Date | Phase | | h m s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| MAY 6 | e | E | 17 23 20 | | | | | | | |
| 6 | e? | E | 17 56 32 | | | | | | | |
| 7 | e? | E | 18 50 44 | | | | | | | |
| 8 | eP | E | 05 38 12 | | | | | | | |
| 8 | e(P) | E | 07 20 28 | | | | | | | |
| | e(S) | E | 21 06 | | | | | | | |
| 10 | eP | E | 10 29 38 | | | | | | | |
| 10 | eP | NE | 11 04 32 | | | | | | | |
| 11 | e | E | 10 41 49 | | | | | | | |
| 11 | e | E | 11 25 36 | | | | | | | |
| | e? | E | 11 39 02 | | | | | | | |
| 11 | e? | E | 11 54 15 | | | | | | | |
| 11 | e? | E | 15 26 57 | | | | | | | |
| 11 | eP | NE | 18 47 56 | | | | | | | |
| | eS | E | 58 02 | | | | | | | |
| 11 | e? | NE | 20 28 05 | | | | | | | |
| 12 | e? | E | 00 13 14 | | | | | | | |
| | | | 43 | | | | | | | |
| 12 | eP | NE | 06 34 11 | | | | | | | |
| 12 | e(P) | NE | 08 55 17 | | | | | | | |
| 12 | e? | NE | 11 04 20 | | | | | | | |
| 12 | e(PP) | NE | 12 24 22 | | | | | | | |
| | e? | NE | 25 18 | | | | | | | |
| 12 | eP? | NE | 14 18 10 | | | | | | | |
| | e? | | 27 | | | | | | | |
| 13 | eP? | N | 14 37 05 | | | | | | | |
| 15 | eP? | E | 02 17 53 | | | | | | | |
| 15 | P? | E | 03 23 45 | | | | | | | |
| 15 | P | E | 04 14 57 | | | | | | | |
| 15 | P? | E | 05 33 03 | | | | | | | |
| 16 | e(PKP) | E | 05 08 36 | | | | | | | |
| 16 | e | E | 10 15 37 | | | | | | | |
| 16 | e? | | 11 49 11 | | | | | | | |
| 17 | e? | E | 04 04 29 | | | | | | | |
| 17 | e? | E | 05 18 09 | | | | | | | |
| 18 | i(P) | NE | 12 50 34 | e | | | | | | |
| | e(S) | NE | 55 22 | | | | | | | |
| | e(L) | NE | 56 15 | | | | 3 | 9 | | |



| Date | Phase | | h m s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| MAY 19 | eP | E | 10 23 48 | | | | | | | |
| | ePcP | E | 24 06 | | | | | | | |
| | e? | E | 30 28 | | | | | | | |
| | eS | E | 33.5 | | | | | | | |
| | eL | NE | 56 | | | | | | | |
| 20 | e(P) | E | 11 07 44 | | | | | | | |
| 20 | iP | E | 11 21 26 | e | | | | | | |
| | e? | E | 30 | | | | | | | |
| | e(PPP) | E | 24 06 | | | | | | | |
| | ePcS | E | 26 06 | | | | | | | |
| | e(S) | E | 28 24 | | | | | | | |
| | eS | NE | 28 42 | | | | | | | |
| | eScS | NE | 30 00 | | | | | | | |
| | eSS | NE | 31.5 | | | | | | | |
| | eSSS | NE | 33.5 | | | | | | | |
| | eL | NE | 36 | | | | | | 10 | 15 |
| 21 | iP | ZNE | 10 13 04 | | | | | | | |
| | eS | ZNE | 21 06 | | | | | | | |
| | eL | NE | 42 55 | | | | 30+ | 15 | 30+ | 15 |
| 21 | eP | ZNE | 13 10 12 | | | | | | | |
| 22 | iP | ZNE | 10 40 35 | | | | | | | |
| | eS | ZNE | 48 54 | | | | | | | |
| | eL | ZN | 55 00 | | 20+ | 15 | 20+ | 15 | | |
| 22 | eP | ZNE | 10 42 57 | | | | | | | |
| | eS | ZNE | 50 56 | | | | | | | |
| | eL | ZN | 55 00 | | 20+ | 15 | | | | |
| 22 | eP | ZNE | 19 06 02 | | | | | | | |
| | eS | ZNE | 14 10 | | | | | | | |
| | eL | ZNE | 20 | | 50+ | 15 | 120+ | 15 | 50+ | 15 |
| 22 | eP | ZNE | 19 20 46 | | | | | | | |
| | e? | N | 21 04 | | | | | | | |
| | ePcP | N | 16 | | | | | | | |
| | eL | ZNE | 35 | | 50+ | 15 | 120+ | 15 | 50+ | 15 |
| 23 | e? | ZNE | 00 20 50 | | | | | | | |
| 23 | eP | ZNE | 00 35 36 | | | | | | | |
| 23 | eP | ZNE | 01 01 25 | | | | | | | |
| 23 | e? | ZNE | 01 28 45 | | | | | | | |
| 23 | eP | ZNE | 03 05 49 | | | | | | | |
| 23 | eP | ZNE | 05 23 42 | | | | | | | |
| 23 | e? | ZNE | 05 40 40 | | | | | | | |
| 23 | eP | ZNE | 07 18 14 | | | | | | | |
| 23 | e | ZNE | 10 47 36 | | | | | | | |
| 23 | e | ZNE | 14 11 03 | | | | | | | |
| 24 | eP | E | 14 53 15 | | | | | | | |
| | e? | E | 28 | | | | | | | |
| | eS | N | 58 42 | | | | | | | |
| | e(Lq) | NE | 15 01 00 | | | | | | | |
| | eLr | NE | 03 00 | | | | 50+ | 14 | 50+ | 12 |

| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| MAY 24 | e | E | 20 41 17 | | | | | | |
| | eL | NE | 57 00 | | | | | | |
| 25 | eP? | E | 01 07 40 | | | | | | |
| 25 | eP | NE | 08 43 49 | | | | | | |
| | eL | NE | 59.5 | | | | | | |
| 25 | eP? | NE | 10 21 39 | | | | | | |
| 25 | eP | NE | 13 50 51 | | | | | | |
| 25 | e? | NE | 14 44 18 | | | | | | |
| 25 | P? | NE | 15 59 36 | | | | | | |
| 25 | eP | E | 19 31 40 | | | | | | |
| 25 | e(P) | E | 21 33 09 | | | | | | |
| | e(S) | E | 33 30 | | | | | | |
| 25 | e(P) | E | 21 50 03 | | | | | | |
| | e | E | 50 22 | | | | | | |
| | e | E | 50 34 | | | | | | |
| 26 | eP | Z | 00 10 50 | | | | | | |
| 26 | eP | Z | 01 20 15 | | | | | | |
| 26 | eP | Z | 01 38 53 | | | | | | |
| 26 | e? | Z | 03 11 33 | | | | | | |
| 26 | ePKP | Z | 05 29 42 | | | | | | |
| 26 | e? | Z | 09 35 55 | | | | | | |
| 26 | eP | Z | 12 04 17 | | | | | | |
| 26 | eP | Z | 17 12 56 | | | | | | |
| 26 | eP | Z | 19 26 27 | | | | | | |
| 26 | P | Z | 19 43 52 | | | | | | |
| 27 | iP | ZE | 00 35 45 u | | | | | | |
| 27 | e | ZE | 03 27 04 | | | | | | |
| 27 | P | ZE | 20 21 19 | | | | | | |
| 27 | P | ZE | 23 16 04 | | | | | | |
| 28 | e? | ZE | 03 09 50 | | | | | | |
| 28 | iP | ZE | 03 15 47 d | | | | | | |
| 28 | P | ZE | 06 15 12 | | | | | | |
| 28 | eP | ZE | 10 53 52 | | | | | | |
| 28 | e? | ZE | 11 10 36 | | | | | | |
| 28 | eP | ZE | 11 15 41 | | | | | | |
| 28 | eP | ZE | 11 49 03 | | | | | | |
| 28 | i(P) | ZE | 14 16 42 u | | | | | | |



| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| MAY 29 | eP | ZE | 07 49 34 | | | | | | |
| | eS | E | 57 42 | | | | | | |
| 29 | e? | ZE | 08 19 11 | | | | | | |
| 29 | eP | ZE | 08 44 14 | | | | | | |
| | e? | ZE | 25 | | | | | | |
| 29 | eP | ZE | 14 15 29 | | | | | | |
| | e? | ZE | 38 | | | | | | |
| 29 | eP | ZE | 20 09 54 | | | | | | |
| 29 | eP | ZE | 21 33 19 | | | | | | |
| 29 | eP | ZE | 21 49 44 | | | | | | |
| 31 | iP | ZE | 02 49 50 dw | | | | | | |
| | eL | NE | 03 07 | | | | | | |
| 31 | e? | ZE | 03 19 33 | | | | | | |
| 31 | ePKP | ZE | 11 21 02 | | | | | | |
| 31 | eP | ZE | 13 22 23 | | | | | | |
| 31 | eP | ZE | 16 29 31 | | | | | | |
| 31 | P | ZE | 21 11 42.5 | | | | | | |
| JUN 1 | P? | ZNE | 01 39 10 | | | | | | |
| 1 | eP | Z | 05 13 02 | | | | | | |
| 1 | eP? | ZNE | 10 54 11 | | | | | | |
| 1 | P | ZE | 13 08 34 | | | | | | |
| 1 | P | ZE | 21 22 27 | | | | | | |
| 2 | eiP | ZNE | 06 07 07 d | | | | | | |
| 2 | P | ZNE | 07 58 43 | | | | | | |
| 2 | iP | ZE | 08 45 57 u | | | | | | |
| 2 | eP | ZE | 13 40 16 | | | | | | |
| 2 | iP | ZE | 19 08 11 u | | | | | | |
| | iPcP | ZE | 09 59 u | | | | | | |
| 3 | e? | E | 04 37 43 | | | | | | |
| | i? | E | 47 | | | | | | |
| 3 | e? | E | 06 02 38 | | | | | | |
| 3 | eP | E | 13 17 01 | | | | | | |
| | eS? | E | 19 05 | | | | | | |
| 3 | eP | E | 18 27 12 | | | | | | |
| 3 | e? | E | 19 59 40 | | | | | | |
| 3 | e? | E | 20 05 11 | | | | | | |
| 3 | e | E | 21 05 28 | | | | | | |

| Date | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 3 | eP | E | 21 | 58 | 36 | | | | | | | |
| 4 | eP | E | 03 | 12 | 50 | | | | | | | |
| 4 | e? | E | 05 | 13 | 21 | | | | | | | |
| 4 | eP | E | 06 | 27 | 24 | | | | | | | |
| 4 | eP | E | 09 | 45 | 29 | | | | | | | |
| 4 | e? | E | 11 | 32 | 15 | | | | | | | |
| 4 | eP | E | 11 | 42 | 23 | | | | | | | |
| 5 | eP | Z | 05 | 32 | 52 | | | | | | | |
| 5 | e? | Z | 13 | 42 | 15 | | | | | | | |
| 5 | eP | Z | 20 | 37 | 11 | | | | | | | |
| 6 | iP | ZNE | 06 | 04 | 53 | u | 14 | 2 | | | | |
| | eS | N | | 11 | 44 | | | | | | | |
| | e(SS) | Z | | 15 | 14 | | | | | | | |
| | eL | ZNE | | 19 | 00 | | 30 | 15 | 100+ | 18 | 100+ | 15 |
| 6 | e? | Z | 09 | 36 | 47 | | | | | | | |
| 6 | e? | Z | 12 | 47 | 46 | | | | | | | |
| 6 | eP | Z | 17 | 24 | 44 | | | | | | | |
| 7 | eP | ZE | 05 | 32 | 19 | | | | | | | |
| 7 | iP | ZE | 11 | 02 | 58 | u | | | | | | |
| 7 | iP | ZE | 13 | 05 | 43 | u | | | | | | |
| 7 | P | ZE | 14 | 11 | 41 | | | | | | | |
| 7 | e? | ZE | 14 | 49 | 58 | | | | | | | |
| 8 | eP | ZE | 05 | 22 | 41 | | | | | | | |
| 8 | e | ZE | 10 | 49 | 04 | | | | | | | |
| 8 | ePKP | ZE | 16 | 39 | 13 | | | | | | | |
| 8 | eP | ZE | 21 | 50 | 55 | | | | | | | |
| 9 | eP | ZE | 11 | 34 | 02 | | | | | | | |
| 9 | e? | Z | 12 | 48 | 16 | | | | | | | |
| 9 | ePKP | ZE | 18 | 07 | 13 | | | | | | | |
| 10 | eP | ZE | 09 | 18 | 35 | | | | | | | |
| 10 | eP | ZE | 11 | 41 | 58 | | | | | | | |
| 10 | eP | ZE | 14 | 39 | 53 | | | | | | | |
| 10 | eP | ZE | 21 | 22 | 35 | | | | | | | |
| 11 | iP | ZE | 00 | 46 | 13 | d | | | | | | |
| 11 | iP | ZNE | 15 | 25 | 16 | u | | | | | | |
| | S | E | | 34 | 35 | e? | | | | | | |
| | eL | NE | | 44 | | | | | | | | |



| Date | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN 11 | P? | ZE | 15 | 53 | 31 | | | | | | | |
| 11 | P | Z | 16 | 48 | 48 | | | | | | | |
| | ePcP | Z | | 50 | 15 | | | | | | | |
| 11 | eP | ZE | 17 | 17 | 05 | | | | | | | |
| | e(PP) | ZE | | 19 | 08 | | | | | | | |
| | S | E | | 25 | 58 | | | | | | | |
| 12 | eP | ZE | 04 | 05 | 29 | | | | | | | |
| 12 | e? | ZE | 04 | 07 | 26 | | | | | | | |
| 12 | eP | Z | 07 | 06 | 30 | | | | | | | |
| 12 | eP | Z | 07 | 29 | 31 | | | | | | | |
| 12 | eP | ZE | 07 | 48 | 36 | | | | | | | |
| 12 | eiP | ZE | 15 | 14 | 05 | u | | | | | | |
| 12 | eP | Z | 15 | 26 | 02 | | | | | | | |
| 13 | eP | ZE | 05 | 56 | 18 | | | | | | | |
| 13 | iP | ZE | 23 | 41 | 21 | u | | | | | | |
| 14 | eP | ZE | 03 | 03 | 45 | | | | | | | |
| 15 | iP | ZE | 23 | 39 | 50 | u | | | | | | |
| | e? | E | | 45 | 51 | | | | | | | |
| | eL | E | | 50 | | | | | | | | |
| 15 | e? | ZE | 23 | 58 | 11 | | | | | | | |
| 16 | e? | ZE | 04 | 08 | 47 | | | | | | | |
| 16 | iP | ZE | 09 | 13 | 10 | u | | | | | | |
| 16 | eP | ZE | 10 | 33 | 10 | | | | | | | |
| 17 | eP | ZE | 05 | 11 | 51 | | | | | | | |
| 17 | ePKP | ZE | 16 | 54 | 45 | | | | | | | |
| | ePKS | ZE | | 58 | 05 | | | | | | | |
| | ePKKS | ZE | 17 | 07 | 24 | | | | | | | |
| 17 | eP | ZE | 17 | 53 | 39 | | | | | | | |
| 18 | eP | ZE | 02 | 41 | 13 | | | | | | | |
| 18 | e | ZE | 03 | 30 | 19 | | | | | | | |
| 18 | eP | ZE | 05 | 32 | 19 | | | | | | | |
| 19 | eP | ZE | 02 | 49 | 26 | | | | | | | |
| 19 | eP | ZE | 05 | 34 | 51 | | | | | | | |
| 19 | eP | ZE | 12 | 31 | 37 | | | | | | | |
| 19 | e? | E | 13 | 45 | 13 | | | | | | | |
| 19 | e? | E | 14 | 08 | 20 | | | | | | | |
| 19 | eSS? | E | 17 | 51 | 04 | | | | | | | |

| Date | Phase | | h m s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| JUL 11 | eP | ZNE | 16 32 00 | | | | | | | |
| 13 | iP | ZN | 08 04 35 | | | | | | | |
| | ePP | ZN | 06 35 | | 4 | 5 | 7 | 5 | | |
| | ePPP | N | 07 35 | | | | | | | |
| | ePcS | ZN | 09 43 | | | | | | | |
| | S | ZN | 11 46 | | | | 22 | 10 | | |
| | eL | ZN | 21½ | | | | | | | |
| | M | | 25 | | | | 10 | 24 | | |
| 13 | eP | ZN | 13 38(42) | | | | | | | |
| | iP | ZN | 14 39 13 | d? | | | | | | |
| | iP | ZN | 17 12 46 | | | | | | | |
| 14 | iP | ZNE | 10 39 39 | | | | | | | |
| | eSKS | NE | 50.0 | | | | | | | |
| | iP | ZNE | 10 53 46 | u | | | | | | |
| 15 | eiP | ZN | 05 14 40 | ud | | | | | | |
| | eP | ZN | 08 16 43 | | | | | | | |
| | e(S) | Z | 17 40 | | 7 | 1 | | | | |
| 16 | iP | ZNE | 04 56 09 | u | | | | | | |
| | PKP | Z | 21 39 13 | | | | | | | |
| | i | | 16 | | | | | | | |
| | PKP | ZE | 22 22 30 | | | | | | | |
| 17 | eP | ZE | 02 26 46 | | | | | | | |
| | P | Z | 02 28 20 | | | | | | | |
| | eP | Z | 19 55 49 | | | | | | | |
| | iP | ZNE | 20 02 52 | | | | | | | |
| 18 | eP | Z | 01 07 14 | | | | | | | |
| | e | Z | 21 | | | | | | | |
| 18 | eP | ZNE | 01 54 45 | | | | | | | |
| | eS | N | 02 04.2 | | | | | 3 | 10 | |
| | iP | ZNE | 07 57 09 | d | | | | | | |
| | ePcP | Z | 57 50 | | | | | | | |
| | eP | Z | 19 03 39 | | | | | | | |
| 19 | eiP | ZNE | 04 32 04 | d,u | | | | | | |
| | P | Z | 11 23 48 | | | | | | | |
| | eiP | Z | 18 42 33 | d,u | | | | | | |
| 20 | eiPKP | ZNE | 09 49 43 | u?d | | | | | | |
| | ePP | Z | 52 15 | | | | | | | |
| | eSKP | Z | 53 09 | | | | | | | |
| | eiP | ZNE | 21 09 01 | u,d | | | | | | |
| | e(PcP) | Z | 35 | | | | | | | |
| | PPcP | Z | 10 27 | | | | | | | |
| | PP | Z | 11 17 | | | | | | | |



| Date | Phase | | h m s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| JUL 20 | eScP | Z | 13 15 | | | | | | | |
| | ePScP | Z | 14 21 | | | | | | | |
| | eSPcS | E | 15 11 | | | | | | | |
| | eS | N | 17 09 | | | | | | | |
| | e(SS) | N | 17.8 | | | | | | | |
| | eP'P' | Z | 38 49 | | | | | | | |
| | eP | ZNE | 21 48 29 | | | | | | | |
| | eP | Z | 22 37 43 | | | | | | | |
| 21 | eP | Z | 08 06 55 | | | | | | | |
| 21 | eP | ZNE | 08 25 15 | | | | | | | |
| | eS | Z | 27 40 | | | | | | | |
| 23 | iP | ZNE | 07 40 33 | u | | | | | | |
| | ePP? | Z | 42 27 | | | | | | | |
| | P | ZNE | 22 05 01 | | | | | | | |
| 24 | eP | Z | 10 41 11 | | | | | | | |
| | eP | Z | 10 47 21 | | | | | | | |
| | eP | Z | 23 24 08 | | | | | | | |
| 25 | ePKP | Z | 04 00 27 | | | | | | | |
| | eP | ZNE | 04 13 09 | | | | | | | |
| | eL | ZNE | 24 | | | | | | | |
| | M | | 28 | | | | 3 | 10 | 4 | 15 |
| | ePKP | ZNE | 11 31 03 | | | | 17 | 2½ | | |
| | ePPKP | Z | 39 | | | | 13 | 2½ | | |
| | ePP | ZN | 33 23 | | | | 8 | 2½ | | |
| | ePPP | Z | 51 | | | | | | | |
| | iSKP | Z | 34 15 | | | | 25 | 1½ | | |
| | PKS | ZNE | 25 | | | | 20 | 1½ | | |
| | eSKS | N | 38.1 | | | | | | | |
| | eSKKS | N | 40.1 | | | | | | | |
| | e(SKSP) | N | 43.2 | | | | | | | |
| | iSKP | Z | 15 52 48 | | | | | | | |
| | iP | Z | 18 08 52 | | | | | | | |
| | eP | ZNE | 21 48 34 | | | | | | | |
| 26 | eP | Z | 19 39 45 | | | | | | | |
| | eL | NE | 45.4 | | | | | | | |
| | M | NE | 46 | | | | | | 2 | 10 |
| | eP | Z | 22 03 14 | | | | | | | |
| | eL | NE | 15 | | | | | | | |
| 27 | eiP | ZNE | 04 05 19 | d,u | | | | | | |
| | eP | ZE | 09 08 25 | | | | | | | |
| | eiP | ZNE | 10 14 04 | ud,w | 7 | 5 | | | | |
| | ePP | Z | 16 00 | | | | | | | |
| | eScP | Z | 19 21 | | | | | | | |

| Date | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUL 27 | eS | NE | | | 21.6 | | | | 2½ | 8 | 2½ | 8 |
| | e(ScS) | N | | | 23.9 | | | | | | | |
| | eL | NE | | | 29.7 | | | | | | | |
| | M | | | | 33 | | | | 3 | 15 | | |
| | eP | Z | 13 | 37 | 25 | | | | | | | |
| | eP | Z | 14 | 21 | 20 | | | | | | | |
| | iP | Z | 18 | 28 | 18 | | | | | | | |
| | P | ZE | 21 | 09 | 57 | | | | | | | |
| 28 | eP | Z | 01 | 28 | 41 | | | | | | | |
| | eP | Z | 06 | 41 | 48 | | | | | | | |
| | eP | ZNE | 10 | 46 | 30 | | | | | | | |
| | eP | Z | 23 | 09 | 14 | | | | | | | |
| 29 | eP | Z | 00 | 34 | 03 | | | | | | | |
| | i | ZNE | | | 06 | | | | | | | |
| | i(PP) | Z | | | 18 | | 3 | 6 | | | | |
| | ePP | ZN | | | 36.3 | | | | | | | |
| | ePPP | ZN | | | 37.6 | | 2½ | 5 | | | | |
| | e(ScP) | ZN | | | 38 | 35 | | | | | | |
| | eS | NE | | | 42 | 08 | | | 2 | 5 | 3 | 6 |
| | eSP | Z | | | 42.7 | | 3 | 5 | | | | |
| | eScS | ZE | | | 44.3 | | 2 | 5 | | | | |
| | eLq | E | | | 49 | | | | | | 1 | 27 |
| | eLr | ZN | | | 52 | | 1 | 22 | 1½ | 20 | | |
| | M | E | | | 59 | | | | | | 2 | 14 |
| | M | ZN | 01 | 02 | | | 2 | 12 | | | | |
| | iP | ZNE | 02 | 00 | 22 | u | | | | | | |
| | P | ZN | 02 | 18 | 18 | | | | | | | |
| | eP | ZE | 05 | 25 | 55 | | | | | | | |
| | P | ZNE | 13 | 35 | 27 | | | | | | | |
| | eP | ZNE | 15 | 27 | 03 | | | | | | | |
| | eP | ZNE | 15 | 38 | 00 | | | | | | | |
| | eP | Z | 16 | 02 | 25 | | | | | | | |
| | ePKP | ZNE | 17 | 50 | 25 | | | | | | | |
| | ePP | ZN | | | 51 | 48 | | | | | | |



| Date | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUL 29 | ePKKP | Z | 18 | 00 | 07 | | | | | | | |
| | eSP | ZN | | | 01.5 | | | | | | | |
| | eSS | NE | | | 08 | | | | | 13 | | |
| | eL | ZNE | | | | | | 32 | | 32 | | 30 |
| 29 | eP | Z | 23 | 08 | 45 | | | | | | | |
| 30 | P | Z | 05 | 54 | 44 | | | | | | | |
| | eP | Z | 06 | 13 | 43 | | | | | | | |
| 31 | eP | Z | 03 | 07 | 10 | | | | | | | |
| | i | ZNE | | | 20 | d | | | | | | |
| | ePP | Z | | | 09 | 09 | | | | | | |
| | ePcS | N | | | 11 | 44 | | | | | | |
| | S | ZNE | | | 16 | 41 | | | | 12 | 8 | 13 9 |
| | e(ScS) | NE | | | 17 | 18 | | | | 17 | 7 | 7 8 |
| | eSS | ZN | | | 20.4 | | | | | | | |
| | eSSS | NE | | | 25 | | | | | 4 | 17 | |
| | eLq | E | | | 30 | | | | | | | |
| | eLr | N | | | 32½ | | | | | | | |
| | M | | | | 38 | | | | | 2½ | 17 | 1½ 17 |
| | eP | Z | 07 | 16 | 05 | | | | | | | |
| | P | ZE | 13 | 07 | 18 | | | | | | | |
| | iP | ZNE | 15 | 04 | 14 | u | | | | | | |
| | eS | N | | | 13.8 | | | | | | | |
| | eL | N | | | 21 | | | | | | | |
| | M | | | | 27 | | | | | 1½ | 12 | |
| | eP | ZE | 18 | 58 | 00 | | | | | | | |
| AUG 1 | ePKP | Z | 02 | 39 | 39 | | | | | | | |
| | eiP | ZE | 20 | 22 | 30 | d,u | | | | | | |
| 2 | iP | ZNE | 05 | 16 | 53 | u | 25 | 2 | | | | |
| | PP | Z | | | 17 | 12 | 12 | 2 | | | | |
| | ePP | Z | | | 19 | 00 | | | | | | |
| | ePPP | ZN | | | 20 | 18 | | | | | | |
| | ePcS | Z | | | 21 | 41 | | | | | | |
| | iS | ZNE | | | 24 | 35 | n | | | 6 | 6 | |
| | ScS | ZN | | | 26.5 | | | | | | | |

| Date | Phase | | h m s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| AUG 2 | eLr | N | 41 | | | | 2 | 16 | | |
| | P | ZNE | 09 39 20 | | | | | | | |
| | iPP | Z | 29 | | 15 | 1 | | | | |
| | eS | ZN | 47.6 | | | | | | | |
| | eP | ZNE | 10 15 13 | | | | | | | |
| | P | Z | 21 | | | | | | | |
| | eP | Z | 13 41 10 | | | | | | | |
| 3 | eP | ZE | 03 35.8 | | | | | | | |
| | e(S) | E | 40 36 | | | | | | | |
| | eL | E | 46 | | | | | | | |
| 4 | ePKP | ZNE | 07 53 56 | | | | | | | |
| | SKP | ZN | 57 14 | | | | | | | |
| | eSKKS | N | 08 03 19 | | | | | | | |
| | eP | ZE | 11 25 41 | | | | | | | |
| 5 | eiP | Z | 14 47 43 | | | | | | | |
| | ePKP | Z | 16 25 37 | | | | | | | |
| 6 | eP | Z | 04 47 20 | | | | | | | |
| 6 | P | ZNE | 14 59 13 | | | | | | | |
| | (PP) | Z | 41 | | | | | | | |
| 7 | eP | Z | 16 27 26 | | | | | | | |
| 9 | iP | ZNE | 04 18 11 | u | | | | | | |
| | eP | ZNE | 06 21 49 | | | | | | | |
| | eP | ZNE | 16 55 45 | | | | | | | |
| | eS | ZN | 17 03.6 | | | | 3 | 7 | | |
| | eL | ZN | 11.6 | | 1 | 25 | | | | |
| | iP | ZNE | 23 47 36 | d | | | | | | |
| | PP | Z | 46 | | | | | | | |
| 10 | eP | ZE | 03 06 07 | | | | | | | |
| | eP | ZNE | 04 59.2 | | | | | | | |
| | iP | Z | 06 05 38 | u | | | | | | |
| | eP | ZE | 10 36 16 | | | | | | | |
| 11 | eP | ZNE | 03 05 33 | | | | | | | |
| | iP | ZNE | 05 03 24 | d,w | | | | | | |
| 12 | eP | Z | 00 18 12 | | | | | | | |



| Date | Phase | | h m s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| AUG 12 | eP | Z | 10 08.1 | | | | | | | |
| | eL | E | | | | | | | 1 | 32 |
| | eP | ZNE | 22 46(12) | | | | | | | |
| 13 | iP? | ZNE | 14 24 40 | u,n | 17 | 6 | 4 | 7 | 5 | 6 |
| | PcP | NE | 25 57 | | | | | | | |
| | ePP | Z | 26 40 | | | | | | | |
| | ePPP | Z | 27 58 | | | | | | | |
| | eS | ZNE | 32 35 | | 2 | 6 | 3 | 6 | 4 | 7 |
| | eSS | E | 36 25 | | | | | | | |
| | eLq | N | 39.1 | | | | | | | |
| | eLr | ZNE | 41.5 | | | 30 | | | | |
| | M | | 47 | | 6 | 17 | 12 | 15 | 10 | 17 |
| 14 | P | Z | 14 52 07 | | | | | | | |
| | iP | ZNE | 22 57 19 | | | | | | | |
| 15 | eP | ZNE | 07 11 07 | | | | | | | |
| | eP | ZE | 14 45 44 | | | | | | | |
| | eP | Z | 19 31 58 | | | | | | | |
| 16 | eiP | ZNE | 02 59 19 | d,u | | | | | | |
| | eP | Z | 22 39 19 | | | | | | | |
| 17 | iP | ZNE | 03 40 37 | | | | | | | |
| | eP | Z | 09 46 05 | | | | | | | |
| | P | ZN | 11 36 30 | | | | | | | |
| | P | ZN | 18 20 30 | | | | | | | |
| 18 | iP | ZNE | 22 54 32 | d? | | | | | | |
| 19 | eP | Z | 12 06 32 | | | | | | | |
| | PKP | Z | 17 22 50 | | | | | | | |
| 20 | P | ZE | 10 13 08 | | | | | | | |
| | P | ZNE | 20 19 30 | | | | | | | |
| | eS | N | 29.1 | | | | | | | |
| | eP | ZNE | 21 30 45 | | | | | | | |
| | iP | ZNE | 22 23 26 | u | | | | | | |
| | eL | E | 28.5 | | | | | | | |
| | M | E | 29.8 | | | | | | | |
| | iP | ZE | 22 34 59 | | | | | | | |
| 21 | iP | ZNE | 13 01 58 | u | | | | | | |
| | eS | NE | 12 16 | | | | | | | |
| | eP | ZNE | 17 17 58 | | | | | | | |

| Date | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG 21 | eP | ZNE | 17 | 31 | 26 | | | | | | | |
| 23 | eP | ZNE | 22 | 55 | 23 | | | | | | | |
| | PcP | Z | | 56 | 15 | | | | | | | |
| | PP | Z | | 57 | 19 | | | | | | | |
| 24 | ePKP | Z | 02 | 03 | (37) | | | | | | | |
| | eP | ZNE | 05 | 59 | 04 | | | | | | | |
| 24 | eP | ZN | 22 | 24 | 33 | | | | | | | |
| | eL | N | | 32 | | | | | 1½ | 24 | | |
| 25 | P | Z | 01 | 08 | 11 | | | | | | | |
| | eP | Z | 03 | 48 | 19 | | | | | | | |
| | eP | Z | 06 | 19 | 12 | | | | | | | |
| | eP | ZN | 07 | 07 | 54 | | | | | | | |
| | eP | ZN | 15 | 06 | 19 | | | | | | | |
| | eP | ZNE | 23 | 12 | 10 | | | | | | | |
| 26 | eP. | ZNE | 00 | 24 | (02) | | | | | | | |
| | iP | ZNE | 18 | 37 | 52 | | | | | | | |
| | PP | Z | | | 57 | | | | | | | |
| | (PcP) | E | | 38 | 32 | | | | | | | |
| | eP | Z | 20 | 54 | 40 | | | | | | | |
| 27 | iP | ZNE | 13 | 00 | 18 | u | | | | | | |
| | PP | Z | | 01 | 10 | | | | | | | |
| | ePKP | Z | 18 | 35 | (02) | | | | | | | |
| | ePPKP | Z | | | 43 | | | | | | | |
| | eP | Z | 22 | 07 | 11 | | | | | | | |
| 28 | iP | Z | 00 | 33 | 16 | d | | | | | | |
| | iP | Z | 20 | 06 | 00 | | | | | | | |
| 30 | iP | Z | 03 | 23 | 58 | u | | | | | | |
| | eP | ZNE | 06 | 56 | 10 | | | | | | | |
| | iP | ZE | 10 | 23 | 15 | u | | | | | | |
| | eP | Z | 19 | 15 | 37 | | | | | | | |
| SEP 1 | P | ZNE | 07 | 43 | 43 | | | | | | | |
| | PP | Z | | 45 | 27 | | | | | | | |
| | eiP | ZNE | 09 | 38 | 34 | | | | | | | |
| | ePP | N | | 40 | 20 | | | | 2 | 6 | | |
| | eS | NE | | 46 | 56 | | | | 2 | 10 | 4 | 8 |
| | eScS | E | | 48 | .5 | | | | | | 2 | 8 |
| | eL | N | 10 | 00 | | | | | 2 | 15 | | |
| | M | | 10 | 08 | | | 1 | 15 | 3 | 15 | | |



| Date | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP 1 | eP | ZE | 10 | 45 | 21 | | | | | | | |
| | eS | E | | 53 | 47 | | | | | | 2 | 8 |
| | eScS | E | | 55 | 17 | | | | | | 1 | 8 |
| | eL | N | 11 | 07 | | | | | | | | |
| | M | | | 15 | | | 1 | 14 | 3 | 15 | | |
| | eP | ZE | 11 | 25 | 16 | | | | | | | |
| | eP | Z | 12 | 07 | (00) | | | | | | | |
| | ePKP | ZNE | 15 | 56 | 37 | | | | | | | |
| | eSKP | Z | 16 | 00 | 07 | | | | | | | |
| | eL | | 17 | 01 | | | | | | | | |
| 1 | iP | ZNE | 18 | 51 | 38 | d | | | | | | |
| | P | ZNE | 20 | 12 | 24 | u? | | | | | | |
| 2 | iP! | ZNE | 11 | 02 | 30 | d,n,e | | | | | | |
| | eP | Z | 18 | 43 | 06 | | | | | | | |
| | ePKP | ZNE | 22 | 21 | 57 | | | | | | | |
| | eSKP | Z | | 25 | 15 | | | | | | | |
| | ePKS | N | | 25 | 31 | | | | 3 | 7 | | |
| 3 | P | ZNE | 05 | 51 | 28 | d | | | | | | |
| | eP | ZNE | 07 | 56 | 34 | u | | | | | | |
| | ePP | Z | | 57 | 11 | d? | | | | | | |
| | iP | ZNE | 12 | 52 | 16 | d,w | | | | | | |
| | (PP) | Z | | 53 | 46 | | | | | | | |
| | ePPP | E | | 57 | 33 | | | | | | | |
| | eS | ZNE | 13 | 01 | 06 | | 1 | 7 | 8 | 7 | 5 | 7 |
| | eSKS | NE | | | 43 | | | | 11 | 7 | 3 | 7 |
| | eSS | NE | | 03 | 55 | | | | | | 2 | 7 |
| | eSSS | E | | 08 | 26 | | | | | | 2 | 9 |
| | eP'P' | Z | | 19 | 54 | | | | | | | |
| | iP | ZNE | 15 | 26 | 28 | d | | | | | | |
| | eP | ZNE | 15 | 55 | 18 | | | | | | | |
| | eP | Z | 20 | 47 | 45 | | | | | | | |
| 4 | ePKP | Z | 00 | 05 | 20 | | | | | | | |
| | eP | Z | 02 | 48 | 44 | | | | | | | |
| 5 | eP | Z | 06 | 01 | 26 | | | | | | | |
| | eP | ZNE | 09 | 48 | 27 | | | | | | | |
| | eP | Z | 12 | 14 | 20 | | | | | | | |
| 6 | eP | Z | 10 | 06 | 47 | | | | | | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| SEP | 6 | eP | Z | 11 23 08 | | | | | | |
| | | iP! | ZNE | 14 12 45 | d?nw | | | | | |
| | 7 | eP | ZNE | 01 28 23 | | | | | | |
| | | eS | N | 37 14 | | | | | | |
| | | eScS | NE | 38 24 | | | | | | |
| | | eP'P' | Z | 56.9 | | | | | | |
| | | eP | ZE | 04 02 13 | | | | | | |
| | 8 | iP | ZNE | 11 20 23 | d | | | | | |
| | | eSKS | N | 30 56 | | | | | | |
| | | e(S) | N | 31 39 | | | | | | |
| | | PKP | Z | 14 51 09 | u? | | | | | |
| | | ePP | Z | 53 11 | | | | | | |
| | 9 | PKP | Z | 10 24 04 | | | | | | |
| | | P | ZNE | 17 56 37 | | | | | | |
| | 10 | iP | ZNE | 10 56 29 | d | | | | | |
| | | PP | Z | 58 34 | | | | | | |
| | | ePP | Z | 59 47 | | | | | | |
| | | eSKS | ZNE | 11 06 10 | | | | 7 6 | 2 | 6 |
| | | e(SP) | Z | 06 58 | | | | | | |
| | | eSS | N | 09 23 | | | | | | |
| | 10 | eP | Z | 14 12 51 | | | | | | |
| | | eP? | Z | 14 15 23 | | | | | | |
| | | e | Z | 34 | | | | | | |
| | 11 | eP | Z | 08 05 47 | | | | | | |
| | | eP | Z | 09 54 24 | | | | | | |
| | | eP | Z | 11 00(01) | | | | | | |
| | 12 | e1P | ZNE | 16 12 52 | u? | | | | | |
| | 13 | eP | Z | 00 53 05 | | | | | | |
| | 14 | eP | Z | 05 06 46 | | | | | 14 | |
| | | eL | N | 25.1 | | | | 2 13 | | |
| | | M | | | | | | | | |
| | | iP | ZNE | 23 27 29 | d | | | | | |
| | 15 | P | Z | 03 41 31 | d? | | | | | |
| | 16 | eP | Z | 06 20 15 | | | | | | |
| | | eP | ZE | 21 40 05 | | | | | | |
| | 17 | ePKP | Z | 08 24 32 | | | | | | |
| | | e | Z | 46 | | | | | | |
| | | ePP | Z | 26 44 | | | 1 | 6 | | |



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|---|---|---|---|---|---|---|---|---|---|---|
| SEP | 17 | ePPP | Z | 29 04 | | | | | | |
| | | eP | Z | 13 10 08 | | | | | | |
| | | eP | ZE | 16 06(02) | | | | | | |
| | 17 | P | ZNE | 20 06 03 | | | | | | |
| | | eS | NE | 14 07 | | | | | | 10 |
| | | eScS | E | 15.9 | | | | | | |
| | | eLq | E | 22 | | | | | | |
| | | eLr | ZN | 27 | | | | | | |
| | 18 | iP | ZNE | 09 51 56 | u | | | | | |
| | | (PcP) | Z | 52 32 | | | | | | |
| | | e(PcS) | E | 55 14 | | | | | | |
| | | eS | N | 01 11 | | | | 1 6 | | |
| | 19 | P | Z | 02 13 37 | | | | | | |
| | | eP | Z | 16 56.6 | | | | | | |
| | | ePP | Z | 19 19 27 | | | | | | |
| | 20 | P | ZNE | 03 12 33 | u? | | | | | |
| | | ePP | Z | 13 14 | | | | | | |
| | | ePcP | Z | 14 26 | | | | | | |
| | | eP | ZNE | 03 44 28 | | | | | | |
| | 21 | eP | Z | 07 34 05 | | | | | | |
| | 22 | eP | Z | 05 51.6 | | | | | | |
| | | ePP | Z | 55 28 | | | | | | |
| | | ePS | ZE | 09 32 13 | | | | | | |
| | | eL | NE | 53 | | | | | | |
| | | M | N | 57 | | | | 2 23 | | |
| | | M | E | 10 10 | | | | | | 3 18 |
| | 23 | e1P | Z | 16 04 34 | ud | | | | | |
| | | eP | Z | 23 12 09 | | | | | | |
| | | e(PP) | Z | 23 | | | | | | |
| | | e(PcP) | Z | 31 | | | | | | |
| | | eP | Z | 23 27 37 | | | | | | |
| | 24 | eP | ZE | 11 13 48 | | | | | | |
| | | iP | ZNE | 14 02 15 | d | | | | | |
| | | eP | Z | 14 11 30 | | | | | | |
| | | eP | Z | 14 27(18) | | | | | | |
| | 25 | iP | ZE | 15 49 33 | d? | | | | | |
| | 26 | eP | ZNE | 00 43 18 | | | | | | |

| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| SEP 26 | iP | ZNE | 17 10 19 | u? | | | | | |
| | eP | ZE | 21 20 43 | | | | | | |
| 27 | eP | Z | 02 23(06) | | | | | | |
| 29 | eiP | ZNE | 06 39 57 | u,u | | | | | |
| | eP | ZNE | 11 31 44 | | | | | | |
| | ePP | Z | 33 27 | | | | | | |
| | ePP | Z | 35 39 | | | | | | |
| | eiSKS | ZNE | 41 43 | s,n,e,w | | 3 | 7 | | |
| | e(P ) | ZNE | 43.9 | | | | | | |
| | ePKKP | Z | 48 19 | | | | | | |
| | eP'P' | Z | 56 12 | | | | | | |
| | eP | Z | 22 23(00) | | | | | | |
| 30 | eP | Z | 01 47 33 | | | | | | |
| | eP | Z | 03 28 08 | | | | | | |
| | eP | ZE | 07 46 38 | | | | | | |
| | P | ZNE | 12 28 58 | | | | | | |
| | eS | N | 32.5 | | | 1 | 10 | | |
| | eL | N | 34.2 | | | | | | |
| | M | N | 36½ | | | 2 | 11 | | |
| | eP | Z | 14 54 45 | | | | | | |
| | eP | Z | 21 15(17) | | | | | | |
| OCT 1 | eP | ZE | 11 55 30 | | | | | | |
| | e(PP) | Z | 49 | | | | | | |
| | ePKP | ZNE | 16 30 04 | | | | | | |
| | ePPKP | Z | 18 | | | | | | |
| | ePP | ZN | 32 17 | | | | | | |
| | SKP | ZN | 33 25 | | | | | | |
| | e(PKKP) | Z | 42.1 | | | | | | |
| 2 | eP | Z | 00 07 15 | | | | | | |
| | eiP | ZNE | 04 45 30 | u,d | | | | | |
| | ePP | Z | 41 | | | | | | |
| | ePP | Z | 47 14 | | | | | | |
| | P | ZNE | 07 17 40 | | | | | | |
| | P | Z | 10 29 39 | | | | | | |
| 2 | eP | ZNE | 12 03 08 | | | | | | |
| | eP | Z | 16 44 36 | | | | | | |
| 3 | eP | ZNE | 05 20 27 | u? | | | | | |



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|---|---|---|---|---|---|---|---|---|---|
| OCT 3 | eP | ZE | 10 23 55 | | | | | | |
| | eP | ZNE | 17 22 03 | | | | | | |
| | eP | ZNE | 20 02 50 | | | | | | |
| | eiP | ZNE | 22 20 04 | u,d | | | | | |
| 4 | eP | ZNE | 04 43 55 | | | | | | |
| | P | ZNE | 10 02 24 | | | | | | |
| 5 | eiP | Z | 21 17 28 | d,u | | | | | |
| 6 | iP | Z | 06 16 36 | d | | | | | |
| | eP | Z | 13 49.1 | | | | | | |
| | eL | NE | 55.1 | | | 1 | 21 | 1 | 21 |
| | M | N | 57 | | | 1 | 12 | | |
| | eiP | ZN | 16 26 30 | u,d | | | | | |
| | $ePKP_1$ | Z | 20 15 36 | | | | | | |
| | $ePKP_2$ | Z | 16 15 | | | | | | |
| 7 | eP | Z | 11 18 11 | | | | | | |
| 7 | eiP | ZNE | 15 29 56 | du | 7 6 | 3 | 6 | 3 | 6 |
| | eS | NE | 39(17) | | | 12 | 6 | 15 | 10 |
| | eScS | NE | 40.0 | | | 8 | 7 | 5 | 8 |
| | eSS | N | 44.2 | | | 5 | 8 | | |
| | eLq | N | 51 00 | | | 5 | 9 | | |
| | eLr | ZE | 54 | | | | | 3 | 25 |
| | eP'P' | ZNE | 57 31 | | | | | | |
| | M | ZNE | 16 01 | | 5 18 | 4 | 18 | 4 | 18 |
| | SKPP' | ZN | 01 13 | | | | | | |
| | eP'P'P' | ZN | 17 11 | | | | | | |
| | eSKPP'P' | Z | 20 51 | | | | | | |
| | P | ZNE | 20 12 14 | | | | | | |
| 8 | eiPKP | ZE | 06 10 46 | d | | | | | |
| | PP | ZNE | 12 22 | | | 1 | 3 | | |
| | eSKP | Z | 13 27 | | | | | | |
| | ePPP | NE | 15 19 | | | 2 | 7 | 1 | 8 |
| | eS | N | 19 22 | | | 2 | 7 | | |
| | eSP | N | 21 10 | | | 5 | 7 | | |
| | eSS | N | 23 20 | | | 1 | 9 | | |
| | eSS | NE | 28 02 | | | 4 | 11 | 1 | 8 |
| | eSSS | NE | 31.6 | | | 3 | 10 | 2 | 11 |
| | eP | Z | 17 41 43 | | | | | | |
| | iP | Z | 20 53 23 | u | | | | | |
| | eS | E | 21 04 07 | | | | | | |

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| OCT 9 | ePKP | ZE | 09 19 18 | | | | | | | |
| | iP | ZE | 10 01 41 | d | | | | | | |
| | ePP | Z | 02 18 | | | | | | | |
| 10 | eiP | ZNE | 15 03 48 | d,u | | | | | | |
| | eL | NE | 09.1 | | | | | 12 | | |
| | M | | 10 | | | | 2 | 10 | 2 | 10 |
| | eP | Z | 18 56 02 | | | | | | | |
| 11 | P | Z | 04 56 45 | u? | | | | | | |
| | eP | ZE | 18 38 22 | | | | | | | |
| 12 | eP | ZNE | 09 21 49 | | | | | | | |
| | P | ZNE | 18 40 54 | | | | | | | |
| | eP | Z | 21 11 43 | | | | | | | |
| 13 | ePKP | Z | 02 40 41 | | | | | | | |
| | e | Z | 46 | | | | | | | |
| | eP | Z | 06 09 04 | | | | | | | |
| | e | Z | 15 11 36 | | | | | | | |
| | ePKP | ZNE | 46 | | 2 | 3 | | | | |
| | eSKP | ZNE | 15 13 | | 3 | 7 | 2 | 7 | | |
| | ePKKP | Z | 21 14 | | | | | | | |
| | eSP | Z | 23.7 | | | | | | | |
| | eSS | E | 32.1 | | | | | | | |
| | eLr | ZNE | 57 | | | 25 | | 25 | | |
| | M | E | 16 00 | | | | | | 1 | 22 |
| | M | ZN | 14 | | 1 | 18 | | | | |
| | eP | Z | 16 56 10 | | | | | | | |
| | eP | ZNE | 18 51 51 | | | | | | | |
| | ePP | Z | 52 34 | | | | | | | |
| 14 | eP | Z | 01 06 27 | | | | | | | |
| | eP | Z | 01 11.2 | | | | | | | |
| | eP | ZN | 12 28 28 | | | | | | | |
| | ePKP? | Z | 13 31 25 | | | | | | | |
| | iP | ZN | 15 41 16 | d | | | | | | |
| | eP | ZN | 17 58 28 | | | | | | | |
| | ePKP | ZN | 21 38 17 | | 1 | 4 | | | | |
| | ePP | ZN | 40 32 | | 2 | 5 | | | | |
| | SKP | ZN | 41 42 | | 2 | 6 | 2 | 6 | | |
| | eSP | ZN | 50.5 | | | | | | | |



| Date | Phase | | h m s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT 14 | eLr | ZN | 22 26 | | | 20 | | | | |
| | M | | 28 | | 1 | 18 | 1 | 18 | | |
| | $ePKP_1$ | Z | 23 15 33 | d | | | | | | |
| | $e(PPKP_1)$ | Z | 41 | | | | | | | |
| 15 | eP | ZN | 03 04 23 | | | | | | | |
| 16 | iP | ZN | 05 02 44 | d | | | | | | |
| | eP | Z | 13 35 36 | | | | | | | |
| | eP | Z | 18 08 58 | | | | | | | |
| 17 | eP | ZNE | 07 29 40 | | | | | | | |
| | eL | NE | 33 | | | | | | | |
| | iP | ZNE | 13 46 00 | u | | | | | | |
| 17 | ePKP | Z | 18 24 46 | | | | | | | |
| | iP | Z | 22 42 53 | d | | | | | | |
| 18 | iP | Z | 00 09 19 | u | | | | | | |
| | ePcP | Z | 10 17 | | | | | | | |
| | eP | Z | 14 12 10 | | | | | | | |
| 19 | iP | ZNE | 07 18 04 | | | | | | | |
| | eP | ZE | 10 38.3 | | | | | | | |
| 20 | iP | ZNE | 11 16 50 | u,s,e | | | | | | |
| 22 | iP | ZNE | 08 32 54 | | | | | | | |
| | eS | NE | 41.8 | | 2 | 7 | 2 | 10 | | |
| | eLr | NE | 53 | | 1 | 35 | | 30 | | |
| | M | | 09 01 | | 1 | 15 | 1 | 15 | | |
| 24 | iP! | ZNE | 05 22 20 | d,n | | | | | | |
| | eP | ZNE | 17 20 33 | | | | | | | |
| 25 | eP? | Z | 01 15 13 | | | | | | | |
| | i | Z | 15 | d? | | | | | | |
| | P | Z | 09 48 04 | | | | | | | |
| | P | Z | 12 24(18) | | | | | | | |
| | P | Z | 18 36 28 | d? | | | | | | |
| 25 | iP | Z | 22 11 13 | u | | | | | | |
| 27 | iP | Z | 14 58 47 | u | | | | | | |
| | iP | NE | 22 38 03 | s?w? | | | | | | |
| 28 | $ePKP_2$ | Z | 04 40 17 | | | | | | | |
| | ePP | Z | 44 19 | | | | | | | |

| Date | Phase | | h m s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT 28 | iP | Z | 11 25 25 | d | | | | | | |
| | iPKP | ZNE | 13 37 15 | u | | | | | | |
| | PPKP | Z | 42 | | | | | | | |
| | ePP | ZN | 39 29 | | | | 1 | 5 | | |
| | eSKP | ZN | 40 25 | | | | 1 | 6 | | |
| | ePKS | N | 42 | | | | | | | |
| | eSKKS | N | 46.2 | | | | 2 | 7 | | |
| | eSP | ZN | 49.7 | | | | 2 | 8 | | |
| | eSKKP | ZNE | 50.1 | | | | | | | |
| | eSS | N | 56 48 | | | | 2 | 6 | | |
| | ePP | Z | 22 48(56) | | | | | | | |
| 29 | iP | ZNE | 09 48 05 | d | | | | | | |
| | ePP | N | 25 | | | | | | | |
| | $iPKP_1$ | Z | 13 46 00 | | | | | | | |
| 30 | $ePKP_1$ | Z | 08 52 26 | | | | | | | |
| | eP | Z | 09 02.8 | | | | | | | |
| | eP | Z | 12 26 07 | | | | | | | |
| | i | ZNE | 10 | | | | | | | |
| | eS | E | 35 43 | | | | | | 1 | 8 |
| | eP'P' | Z | 53 32 | | | | | | | |
| | eL | ZE | 55 | | | | | | | |
| | M | | 13 02 | | 1 | 15 | | | 2 | 15 |
| | P | Z | 13 23 26 | | | | | | | |
| | eP | ZNE | 16 03 00 | | | | | | | |
| | iP | ZNE | 21 44 24 | u | | | | | | |
| | eP'P' | Z | 22 11 44 | | | | | | | |
| NOV 1 | P | Z | 06 28(35) | | | | | | | |
| | iP | ZNE | 08 55 52 | u | 5 | 4 | 3 | 4 | 2 | 5 |
| | eS | NE | 09 04.0 | | | | 3 | 10 | 3 | 9 |
| | eScS | E | 06.0 | | | | | | | |
| | eSS | E | 08.2 | | | | | | | |
| | e(SSS) | N | 09.4 | | | | 2 | 10 | | |
| | Lq | NE | 10 43 | | | | 3 | 17 | 2 | 17 |
| | eLr | ZNE | 12.4 | | 1 | 22 | 4 | 22 | 3 | 14 |
| | M | | 16.5 | | 3 | 15 | 9 | 13 | 3 | 14 |
| | eP'P' | Z | 25 04 | | | | | | | |
| | iP'P' | ZNE | 36 | | | | | | | |
| | P | Z | 10 36 18 | u? | | | | | | |
| | iP | Z | 12 39 24 | d | | | | | | |
| | iPcP | Z | 40 30 | d | | | | | | |



| Date | Phase | | h m s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV 1 | eS | ZN | 47 46 | | | | | | | |
| | eLq | N | 54.3 | | | | | | | |
| | eLr | N | 56.3 | | | | | | | |
| | M | | 13 00 | | | | | 2 15 | | |
| 2 | iP! | ZNE | 17 25 43 | d?s,e | | | | 5 9 | 1 | 2 |
| | eS | NE | 34 42 | | | | | 3 10 | 2 | 8 |
| | eSS | N | 38 23 | | | | | 2 9 | | |
| | eL | ZNE | 46 | | | | | | | |
| | M | | 50 | | | | | 3 18 | 2 | 18 |
| | eP'P' | ZNE | 54 06 | | | | | | | |
| | iP | ZNE | 18 18 12 | u | | | | | | |
| | eS | E | 25.1 | | | | | | | |
| | eL | N | 35 | | | | | 2 14 | | |
| 4 | eP | ZE | 14 30 17 | | | | | | | |
| | eP | ZNE | 14 47 45 | | | | | | | |
| | eP | ZE | 18 25 46 | | | | | | | |
| 5 | eP | Z | 05 35 49 | | | | | | | |
| | eP | ZE | 15 02 40 | | | | | | | |
| | eP | ZE | 17 01 58 | | | | | | | |
| | ePKP | ZE | 20 40(18) | | | | | | | |
| | ePP | Z | 43 10 | | | | | | | |
| 6 | iP | ZNE | 06 23 26 | d | | | | | | |
| | eS | NE | 30.4 | | | | | 2 11 | 3 | 12 |
| | eLq | E | 33.2 | | | | | | | |
| | eLr | ZNE | 36 | | | | | | 2 | 18 |
| | M | | 45 | | | | | 4 15 | 2 | 17 |
| | eP | ZE | 10 26 03 | | | | | | | |
| | eP | Z | 15 16 11 | | | | | | | |
| | ePKP | Z | 22 29 16 | | | | | | | |
| | iSKP | ZE | 32 38 | d | | | | | | |
| 7 | eP | Z | 03 46 04 | | | | | | | |
| | eP? | Z | 16 37 49 | | | | | | | |
| | e | ZN | 59 | | | | | | | |
| | P | Z | 22 28 09 | | | | | | | |
| 8 | eP | Z | 00 05 10 | | | | | | | |
| | eP | Z | 00 41 49 | | | | | | | |
| | P | Z | 02 52 23 | | | | | | | |
| | ePKP | Z | 04 47 15 | | | | | | | |

| Date | | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | 8 | P | Z | 11 | 08 | 21 | | | | | | | |
| | | eP | Z | 19 | 57 | 52 | | | | | | | |
| | | eP | Z | 20 | 39 | 58 | | | | | | | |
| | 9 | P | Z | 01 | 29 | 14 | d | | | | | | |
| | | ePP | Z | | | 49 | | | | | | | |
| | | iP | ZNE | 03 | 25 | 45 | u | | | 3 | 8 | | |
| | | e(PcP) | Z | | | 27.4 | | | | | | | |
| | | eS | NE | | | 32.1 | | | | 11 | 10 | 3 | 8 |
| | | eLq | NE | | | 35.0 | | | | | | 12 | 21 |
| | | eLr | NE | | | 38.4 | | | | 4 | 18 | | 20 |
| | | M | | | | 43 | | | | 9 | 15 | 6 | 15 |
| | | ePKP | Z | 11 | 02 | 28 | | | | | | | |
| | | ePP | Z | | | 03.5 | | | | | | | |
| | | eP | ZNE | 11 | 59 | 12 | | | | | | | |
| | | P | Z | 17 | 43 | 17 | | | | | | | |
| | | P | ZNE | 19 | 41 | 13 | u | | | | | | |
| | | eP | ZNE | 20 | 17 | 51 | | | | | | | |
| | | eS | NE | | | 27 25 | | | | 2 | 6 | 2 | |
| | | eL | ZNE | | | 40 | | | | | | | |
| | | M | | | | 50 | | 2 | 17 | 2 | 15 | 2 | 16 |
| | 10 | iP! | ZNE | 14 | 56 | 38 | d,n,w | | | 2 | 3 | | |
| | | eS | NE | 15 | 06 | 18 | | | | 3 | 9 | 6 | 7 |
| | | eLq | N | | | 16 | | | | | | | |
| | | eLr | N | | | 21 | | | | | | | |
| | | eP'P' | Z | | | 23.8 | | | | | | | |
| | | M | | | | 27 | | | | 3 | 23 | | |
| | | eP | ZNE | 15 | 07 | 59 | | | | | | | |
| | 10 | iP | ZNE | 16 | 39 | 39 | u | | | | | | |
| | | ePP | Z | | | 40 09 | | | | | | | |
| | 11 | P | Z | 06 | 11 | 41 | | | | | | | |
| | 12 | eP | Z | 08 | 05 | 41 | | | | | | | |
| | 13 | iP | ZNE | 06 | 49 | 22 | d | | | | | | |
| | | eS | NE | | | 59 23 | | | | 3 | 8 | 2 | 8 |
| | | M | | 07 | 30 | | | | | | | | |
| | | e | Z | 09 | 39 | 29 | | | | | | | |
| | | ePKP | ZNE | | | 41 | | | | | | | |
| | | ePP | N | | | 42.0 | | | | | | | |
| | | iSKP | ZNE | | | 43 05 | d | 5 | 9 | 5 | 8 | | |
| | | e(PKS) | Z | | | 14 | | | | | | | |
| | | eSKS | N | | | 46.9 | | | | 4 | 7 | | |



| Date | | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | 13 | e(SKKS) | ZN | | | 48.7 | | | | | 4 | 7 | |
| | | eSP | Z | | | 51 33 | | | | | | | |
| | | eSKKS | ZN | | | 56.1 | | 2 | 7 | | 3 | 9 | |
| | | eSS | N | | | 59 15 | | | | | | | |
| | | eSSS | N | 10 | 03 | 8 | | | | | 2 | 18 | |
| | | eLr | ZN | | | 19 | | | | | | | |
| | | M | | | | 31 | | 6 | 15 | | 6 | 18 | |
| | 14 | eP | ZE | 02 | 13 | 43 | | | | | | | |
| | | eL | NE | | | 22.1 | | | | | 1 | 15 | 1 15 |
| | | eP | ZE | 04 | 22 | 43 | | | | | | | |
| | | eP | ZE | 12 | 47 | 1 | | | | | | | |
| | | P | Z | 18 | 04 | 15 | | | | | | | |
| | 15 | eP | ZNE | 01 | 07 | 2 | | | | | | | |
| | | eP | ZNE | 06 | 27 | 39 | | 8 | 7 | | 5 | 7 | 3 7 |
| | | eS | NE | | | 31 19 | | | | | 8 | 9 | 4 |
| | | eL | ZNE | | | 32.1 | | 5 | 20 | | 6 | 20 | 8 20 |
| | | M | ZN | | | 35.5 | | 6 | 12 | | 13 | 10 | |
| | | eP | ZE | 09 | 17 | 49 | | | | | | | |
| | | eP | ZE | 17 | 02 | 26 | | | | | | | |
| | | eP | Z | 21 | 48 | 07 | | | | | | | |
| | 16 | iP | ZE | 01 | 31 | 52 | u | | | | | | |
| | | ePKP | ZE | 23 | 18 | 49 | | | | | | | |
| | 17 | eP | Z | 01 | 38 | 39 | | | | | | | |
| | | eP | ZNE | 04 | 16 | 34 | | | | | | | |
| | | iP | ZNE | 05 | 25 | 21 | u | | | | | | |
| | | eP | ZNE | 21 | 29 | 10 | | | | | | | |
| | | eS | NE | | | 34.5 | | | | | | | |
| | | eL | ZNE | | | 37 | | | | | | 22 | |
| | | M | | | | 41 | | 1 | 12 | | 5 | 12 | 1 13 |
| | 18 | eP | Z | 12 | 54 | 13 | | | | | | | |
| | 19 | eP | Z | 06 | 25 | 23 | | | | | | | |
| | | P | Z | 07 | 14 | 19 | | | | | | | |
| | | eP | ZE | 12 | 29 | 35 | | | | | | | |
| | 20 | eP | ZNE | 22 | 14 | 45 | | | | | | | |
| | | eSKS | NE | | | 25.4 | | | | | 6 | 24 | 4 22 |
| | | eSS | NE | | | 31.8 | | | | | | | 3 24 |
| | | eLq | N | | | 38.5 | | | | | 3 | 20 | |
| | | eLr | ZE | | | 42 | | | | | | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | 20 | M | ZNE | 47 | 7 | 20 | 5 | 20 | 13 | 20 |
| | | M | N | 55 | | | 9 | 15 | | |
| | 21 | eiP | Z | 04 40 11 u d | | | | | | |
| | | SKP | Z | 19 06 28 | | | | | | |
| | 22 | eP | ZNE | 03 42 01 | | | | | | |
| | | eS | NE | 50 17 | | | | | 1 | 6 |
| | | eL | ZNE | 04 00 | | | | | 1 | 11 |
| | | eP | Z | 03 55.3 | | | | | | |
| | | P | ZNE | 06 31 53 | | | | | | |
| | | eS | ZNE | 40 13 | | | 2 | 6 | 1 | 7 |
| | | eL | ZNE | 53 | | | | | | |
| | | M | | 07 00 | 1 | 16 | 2 | 16 | 2 | 16 |
| | | eP'P' | Z | 01 16 | | | | | | |
| | | P | ZNE | 12 38 35 | 3 | 4 | | | | |
| | | ePP | Z | 40 54 | | | | | | |
| | | eS | ZNE | 46 28 | | | 2 | 11 | | |
| | | eLq | N | 53 | | | | | | |
| | | eLr | ZNE | 58 | | | | | | |
| | | M | | 13 08 | 1 | 15 | | | 2 | 14 |
| | | eP'P' | Z | 08 16 | | | | | | |
| | | eP | Z | 13 54 12 | | | | | | |
| | | eP | ZNE | 16 04 37 | | | | | | |
| | 23 | eP | ZE | 01 35 58 | | | | | | |
| | | eiP | ZNE | 04 22 18 | | | | | | |
| | | eP | ZNE | 14 21 48 | | | | | | |
| | | i | ZNE | 55 | 14 | | 3 | 4 | | |
| | | iS | ZNE | 29 39 n | 6 | 6 | 20 | 12 | 4 | 17 |
| | | eSS | ZN | 33.0 | 3 | 20 | 7 | 22 | | |
| | | eLq | E | 35 | | | | | | |
| | | M | E | 37 | | | | | 11 | 17 |
| | | eLr | ZN | 37 | | | | | | |
| | | M | ZN | 47 | 7 | 13 | 13 | 13 | | |
| | | eP'P' | Z | 52 08 | | | | | | |
| | | eP | ZNE | 17 04 39 | | | | | | |
| | | eP | ZNE | 17 38 19 | | | | | | |
| | | iP | ZNE | 18 06 04 d | 2 | 3 | | | | |
| | | eS | N | 13.6 | | | | | | |
| | | eP | ZN | 18 43 08 | | | | | | |
| | | iP | ZNE | 20 20 34 d | | | | | | |
| | | P | Z | 21 23 17 | | | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | 24 | eP | ZNE | 05 01 44 | | | | | | |
| | | eS | ZNE | 11 14 | | | 4 | 7 | 3 | 6 |
| | | eiP | ZNE | 07 02 10 u d | 20 | | 3 | | 2 | 3 |
| | | ePP | Z | 03.9 | | | | | | |
| | | ePPP | Z | 04.9 | | | | | | |
| | | eS | ZNE | 09.8 | 5 | 10 | 25 | 27 | 12 | 18 |
| | | eScS | E | 12 20 | | | | | 6 | 6 |
| | | eSS | ZNE | 13.5 | 9 | 22 | 15 | 18 | 4 | 17 |
| | | eLq | E | 15.2 | | | | | 8 | 28 |
| | | M | E | 17 | | | | | 19 | 17 |
| | | eLr | ZN | 17.3 | | | | | | |
| | | M | ZN | 28 | 18 | 15 | 25 | 15 | | |
| | | eP'P' | Z | 32 21 | | | | | | |
| | | eP | Z | 07 39 56 | | | | | | |
| | | eP | ZN | 07 42 17 | | | | | | |
| | | P | ZNE | 08 26 14 | | | | | | |
| | | P | ZNE | 08 35 42 | | | | | | |
| | | eP | Z | 09 37 40 | | | | | | |
| | | eP | Z | 22 40 44 | | | | | | |
| | 26 | eP | ZE | 18 25 58 | | | | | | |
| | | eS | ZN | 30.7 | | | | | | |
| | | eL | ZNE | 34.4 | | | | | 2 | 13 |
| | 28 | eP | Z | 21 13 10 | | | | | 2 | 15 |
| DEC | 2 | eP | NE | 09 22 18 | | | | | | |
| | | eS | NE | 31 44 | | | | | 8 | 12 |
| | | eSS | NE | 37.0 | | | | | 4 | 6 |
| | | eLq | N | 41.1 | | | | | 3 | 13 |
| | | eLr | NE | 43.6 | | | | | 6 | 16 |
| | | M | | 57 | | | | | | |
| | | eP | NE | 09 49 05 | | | | | | |
| | | eS | NE | 58 30 | | | | | 2 | 23 |
| | | M | | 10 21 | | | | | 2 | 23 |
| | 3 | iPKP | Z | 04 43 20 u | | | | | 7 | 16 |
| | | iPKP | Z | 07 26 46 u? | | | | | 10 | 17 |
| | | iSKP | Z | 29 52 u | | | | | | |
| | 4 | iP | Z | 15 59 46 d | | | | | | |
| | 6 | eP | Z | 03 43 47 | | | | | | |
| | | iP | ZN | 09 07 58 d | | | | | | |
| | | (pP) | ZN | 08 13 | | | | | | |
| | | P'P' | Z | 35 18 | | | | | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| DEC | 6 | iP | Z | 12 26 39 d | | | | | | |
| | 8 | P | Z | 11 30 42 | | | | | | |
| | | P | Z | 14 41 20 | | | | | | |
| | 9 | P | Z | 00 46 05 | | | | | | |
| | 10 | eP | Z | 13 42 52 | | | | | | |
| | | eP | Z | 14 07 12 | | | | | | |
| | 11 | iP | Z | 00 10 37 u | | | | | | |
| | | eP | Z | 03 30 30 | | | | | | |
| | | iP | ZN | 19 03 22 d | | | | | | |
| | 12 | P | Z | 04 29 17 | | | | | | |
| | | iP | ZN | 09 39 29 u? | | | | | | |
| | | eP | Z | 10 12 49 | | | | | | |
| | | i | Z | 53 | | | | | | |
| | | eP | ZN | 12 47 04 | | | | | | |
| | 13 | eP | ZN | 07 41 46 | | | | | | |
| | | PP | ZN | 42 19 | | | | | | |
| | | eL | ZN | 49 | | | | | | |
| | | iP | Z | 09 12 45 u? | | | | | | |
| | 14 | eP | Z | 00 31 43 | | | | | | |
| | | P | ZN | 01 08 15 | | | | | | |
| | | eP | ZN | 14 28 55 | | | | | | |
| | | eL | ZN | 36.4 | 3 | 15 | 3 | 13 | | |
| | 15 | eS | N | 00 14.1 | | | 8 | 11 | | |
| | 17 | iP | ZNE | 10 48 39 u e | | | | | | |
| | | ePKP | Z | 13 33 56 | | | | | | |
| | | eP | Z | 16 15 17 | | | | | | |
| | 18 | eP | Z | 05 21 41 | | | | | | |
| | 19 | eP | Z | 07 09 38 | | | | | | |
| | | P | ZE | 13 10 58 | | | | | | |
| | | eP | Z | 13 33 34 | | | | | | |
| | | eP | ZE | 22 24 38 | | | | | | |
| | | eP | ZE | 22 57 10 | | | | | | |
| | 21 | eP | ZN | 22 33 29 | | | | | | |
| | | eS | Z | 36 | 5 | 16 | | | | |
| | 22 | eiP | Z | 02 33 39 d u | | | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| DEC | 22 | eP | Z | 03 59 25 | | | | | | |
| | | P | Z | 06 39 58 | | | | | | |
| | | eP | Z | 12 32 09 | | | | | | |
| | | eP | Z | 14 21.4 | | | | | | |
| | | eP | Z | 19 18.6 | | | | | | |
| | | iP | ZN | 21 13 17 u? | | | | | | |
| | | pP | | 14 48 | | | | | | |
| | 23 | P | Z | 09 53 56 | | | | | | |
| | | eP | Z | 19 15 45 | | | | | | |
| | 26 | iP | ZN | 04 40 46 u? | | | | | | |
| | | ePcP | Z | 42 34 | | | | | | |
| | | iScP | Z | 46 08 u | | | | | | |
| | 29 | eP | ZN | 06 12 17 | | | | | | |
| | | eS | N | 20.6 | | | | | | |
| | | eP | ZN | 10 45 48 | | | | | | |
| | | eL | N | 11 01 | | | | 1 | 15 | |
| | | eP | Z | 13 54 01 | | | | | | |
| | | iP | ZN | 19 13 36 u | | | | | | |
| | | (PcP) | Z | 53 | | | | | | |
| | 30 | P | Z | 00 35 45 | | | | | | |
| | | P | ZNE | 01 01 47 | | | | | | |
| | | eP | Z | 05 41.2 | | | | | | |
| | | P | Z | 11 15 47 | | | | | | |
| | 31 | P | ZNE | 18 17 22 | | | | | | |

## HALLETT STATION

The amplitudes given on this section of the report are in millimetres, read directly from the photographic paper records.

| DATE | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| JAN | 2 | eL | ZN | 00 50.1 | | | 2 | 13 | 2 | 15 |
| | 2 | iP | Z | 03 33 52 d | | | | | | |
| | 2 | eL | ZNE | 05 48 21 | 1 | 23 | | | | |
| | 2 | eL | ZNE | 09 00 | 1 | 15 | | | | |
| | 2 | eL | ZNE | 11 23.0 | | | 2 | 16 | 1 | 15 |
| | | M | ZNE | 26 | 3 | 10 | 4 | 10 | 4 | 10 |

| DATE | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| JAN | 2 | P | Z | 12 31 07 | | | | | | |
| | | i | Z | 19 | | | | | | |
| | | S | NE | 38 23 | | | 2½ | 17 | 7½ | 23 |
| | | ScS | E | 41 01 | | | | | 3 | 15 |
| | | SS | E | 42 10 | | | | | 25 | 27 |
| | | eLq | E | 44 | | | | | 12 | 75 |
| | | eL | ZNE | 48 | 5 | 25 | 7 | 15 | 32 | 70 |
| | | M | ZN | 52 | 20 | 20 | 10 | 17 | | |
| | 3 | PKP | Z | 20 38 38 | | | | | | |
| | 4 | P | Z | 06 30 51 | | | | | | |
| | | eL | ZNE | 07 05 | | | | | | |
| | | M | ZNE | 07 21 37 | 8 | 18 | 2 | 18 | 4 | 18 |
| | 4 | eL | NE | 11 58.0 | | | 5 | 20 | 2½ | 20 |
| | | eL | Z | 59.0 | 4½ | 15 | | | | |
| | 4 | eP | Z | 15 18 45 | | | | | | |
| | | eL | ZE | 48¾ | 2 | 22 | | | 1 | 22 |
| | 5 | eL | ZNE | 02 53 | 1 | 25 | | | 2 | 25 |
| | 5 | eL | ZNE | 05 08 | 1 | 25 | | | | |
| | 5 | eL | Z | 05 49 | | | | | | |
| | | M | Z | 56 | 1 | 15 | | | | |
| | 5 | eL | Z | 06 46 | 1 | 25 | | | | |
| | 5 | e(P) | Z | 09 42 03 | | | | | | |
| | | eL | Z | 59 | 1 | 25 | | | | |
| | 6 | eL | ZE | 13 40 | | | | | | |
| | | M | ZNE | 44 | 1 | 20 | 1 | 20 | 1 | 15 |
| | 7 | eLr | ZE | 09 58 | 1 | 25 | | | 1 | 23 |
| | 7 | eP | Z | 13 37 26 | | | | | | |
| | | S | E | 44 48 | | | | | 4 | 15 |
| | | eScS | E | 47 32 | | | | | 3 | 13 |
| | | eSSS | E | 48 25 | | | | | 2 | 15 |
| | | eL | ZNE | 49 28 | 8 | 15 | | | 22 | 25 |
| | | LM | ZNE | 58 | 14 | 15 | 14 | 15 | 36 | 18 |
| | 7 | eP | Z | 14 45 12 | | | | | | |
| | 7 | e | ZN | 17 39 14 | | | | | | |
| | | eLr | ZN | 48 | 3 | 25 | 2 | 25 | | |
| | 8 | eL | ZN | 00 00.5 | 1 | 30 | | | 1 | 32 |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| JAN | 8 | eP | Z | 00 44 35 | | | | | | |
| | | e | Z | 45 09 | | | | | | |
| | | (L) | E | 49 29 | | | | | 3 | 30 |
| | | e(L) | Z | 50 28 | | | | | | |
| | | eL | E | 54½ | | | | | 2 | 15 |
| | 8 | P | | 02 44 50 u | | | | | | |
| | | eL | Z | 03 00 | | | | | | |
| | 8 | eP | Z | 07 53 46 | | | | | | |
| | | eL | Z | 08 10 | | | | | | |
| | 8 | eP | Z | 11 38 30 | | | | | | |
| | | eL | ZNE | 51 | | | | | | |
| | | LM | ZNE | 12 03.5 | 5 | 15 | 3 | 15 | 4 | 15 |
| | 8 | eP | Z | 14 55 06 | | | | | | |
| | | eLq | E | 15 07 24 | | | | | 10 | 27 |
| | | eLr | ZN | 10 | | | | | | |
| | | LM | ZN | 22 | 11 | 16 | 7 | 16 | | |
| | 8 | eP | Z | 21 54 12 | | | | | | |
| | | eL | ZE | 22 11 | | | | | 1 | 20 |
| | 9 | PKP | Z | 07 42 45 | | | | | | |
| | 9 | eL | ZE | 18 28 | 1 | 15 | | | | |
| | 10 | eL | Z | 05 49 | | | | | | |
| | 11 | eS | | 18 04 53 | | | | | 4 | 15 |
| | | eL | NE | 09.5 | | | 3 | 20 | 3 | 15 |
| | | eLr | Z | 11 20 | 4 | 20 | | | | |
| | 11 | eL | ZNE | 23 30 | 1 | 12 | | | | |
| | 12 | eS | NE | 03 25 45 | | | 2 | 10 | | |
| | | eL | ZNE | 31 50 | | | | | 6 | 27 |
| | | LM | ZN | 43.5 | 9 | 17 | 7 | 15 | | |
| | 12 | e | Z | 09 26 | | | | | | |
| | 12 | eL | ZNE | 22 51.7 | 1 | 15 | | | | |
| | 13 | iP | Z | 07 37 49 u | | | | | | |
| | | eL | ZNE | 08 02 | | | | | | |
| | 13 | iP | ZNE | 15 52 44.5 uwn | 25 | 16 | 13 | 16 | 7 | 16 |
| | | e | Z | 53 08 | | | | | | |

| DATE | | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN | 13 | e(PP) | Z | | 54 | 20 | | | | | | | |
| | | eS | ZNE | 16 | 02 | 28 | | | | | | | |
| | | ePKKP | Z | | 11 | 13 | | | | | | | |
| | | e(PKPPKP) | Z | | 18 | 12 | | | | | | | |
| | 13 | ePKP | Z | 16 | 48 | 38 | | | | | | | |
| | 14 | eL | ZNE | 07 | 53 | | | | | | | | |
| | 15 | iP | ZNE | 09 | 42 | 39.5 | uw | 10 | 14 | | | | |
| | | iPcP | ZN | | 43 | 14 | u | 5 | 18 | | | | |
| | | e(pPcP) | | | | 37 | | | | | | | |
| | | ePP | ZN | | 45 | 49 | | | | | | | |
| | | iS | ZNE | | 53 | 00 | sw | | | | | | |
| | | ePS | N | | | 36 | | | | | | | |
| | | ePPS | NE | | 54 | 22 | | | | | | | |
| | | eSS | ZNE | | 58 | 30 | | | | | | | |
| | | eSSS | Z | 10 | 01 | 45 | | | | | | | |
| | | Lq | N | | 04 | 45 | | | | 20 | 50 | | |
| | | e(PcPPKP) | Z | | 05 | 07 | | | | | | | |
| | | Lr | ZNE | | 08 | 16 | | 55 | 20 | 22 | 20 | 44 | 20 |
| | 16 | iP | Z | 07 | 02 | 42 | u | | | | | | |
| | | eS | NE | | 05 | 36 | | | | | | | |
| | | eL | ZNE | | 06 | 00 | | 10 | 15 | 7 | 15 | 11 | 15 |
| | 16 | eL | ZNE | 15 | 59.5 | | | | | | | | |
| | 16 | eL | Z | 22 | 11.0 | | | | | | | | |
| | 17 | eL | ZE | 03 | 36.5 | | | 4 | 20 | | | 4 | 20 |
| | 19 | eP? | Z | 09 | 24 | 50 | | | | | | | |
| | | eS | ZN | | 29 | 37 | | | | | | | |
| | | e(sS) | E | | 32 | 45 | | | | | | | |
| | 21 | eL | E | 11 | 06.5 | | | | | | | | |
| | | eL | ZN | | 08 | | | 11 | 18 | 9 | 18 | | |
| | 23 | eP | Z | 04 | 52 | 34 | | | | | | | |
| | | eS | E | 05 | 02 | 00 | | | | | | | |
| | | eScS | N | | 02 | 38 | | | | | | | |



| Date | | Phase | | h | m | s | | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN | 23 | eSS | ZN | | 06 | 44 | | | | | | | |
| | | eSSS | Z | | 10 | 08 | | | | | | | |
| | | Lq | N | | 11 | 00 | | | | | | | |
| | | eLr | ZNE | | 15.5 | | | | | | | | |
| | 23 | eS | E | 07 | 52 | 18 | | | | | | | |
| | | ScS | N | | 52 | 50 | | | | | | | |
| | | eSS | N | | 57 | 05 | | | | | | | |
| | | eSSS? | N | | 59 | 52 | | | | | | | |
| | | eLG? | N | 08 | 02 | 40 | | | | | | | |
| | | eL | NE | | 06 | | | | | | | | |
| | 23 | eLq | N | | 27.5 | | | | | | | | |
| | | eLr | ZN | | 31 | 50 | | | | | | | |
| | 24 | S | ZNE | 04 | 39 | 36 | | | | | | | |
| | | eSS | N | | 42 | 31 | | | | | | | |
| | | eL | NE | | 46 | 25 | | | | | | | |
| | 25 | eL | ZE | 16 | 56 | 27 | | 17 | 18 | | | | |
| | 26 | eL | ZN | 22 | 41 | | | | | | | | |
| | 27 | e | NE | 21 | 03 | 55 | | | | | | | |
| | 29 | eS | ZN | 08 | 03 | 27 | s? | | | | | | |
| | | e(ScS) | E | | 04 | 21 | | | | | | | |
| | | eSS | N | | 07 | 18 | | | | | | | |
| | | eSSS | Z | | 09 | 47 | | | | | | | |
| | | eL | Z | | 11.5 | | | | | | | | |
| | 30 | eL | Z | 20 | 24½ | | | | | | | | |
| | 31 | eSKS | E | 05 | 32 | 26 | | | | | | | |
| | | PS | ZN | | 36 | 46 | se | | | 3 | 16 | 3 | 18 |
| | | SS | ZNE | | 42 | 36 | s | | | 5 | 18 | 3 | 20 |
| | | eSSS | E | | 46 | 01 | | | | | | | |
| | | eL | Z | 06 | 00.5 | | | | | | | | |
| | 31 | PPP? | Z | 19 | 20 | 44 | | | | | | | |
| | | eL | Z | | 33 | 44 | | | | | | | |

| Date | | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB | 1 | eL | Z | 07 | 48 | 00 | | | | | | |
| | 1 | eL | Z | 13 | 21 | .5 | | | | | | |
| | 2 | eL | ZNE | 06 | 48 | .5 | | | | | | |
| | 3 | eL | ZNE | 02 | 38 | 00 | 4 | 20 | 5 | 20 | | |
| | 3 | eL | ZNE | 14 | 53 | | 4 | 18 | | | | |
| | 4 | iP | ZNE | 03 | 57 | 34 us | 9 | 12 | | | | |
| | | iS | NE | 04 | 06 | 39 a | | | 25 | 16 | | |
| | | eScS | Z | | 07 | 15 | | | | | | |
| | | eSS | ZN | | 11 | 12 | | | | | | |
| | | L | Z | | 15 | | | | | | | |
| | 4 | eL | ZNE | 17 | 33 | 20 | 28 | 15 | 26 | 18 | 56 | 15 |
| | 7 | eP | Z | 11 | 26 | 47 | | | | | | |
| | | e(SSS) | Z | | 41 | 36 | | | | | | |
| | | eL | Z | | 43 | 27 | | | | | | |
| | 8 | P | ZNE | 12 | 54 | 08 | | | | | | |
| | | iS | NE | 13 | 00 | 24 sw | | | 18 | 28 | | |
| | | e(sS) | Z | | | 59 | | | | | | |
| | | eScS | ZNE | | 03 | 33 | | | | | | |
| | | eL | ZNE | | 06 | .5 | 40 | 22 | 49 | 22 | 54 | 22 |
| | 10 | P | ZNE | 00 | 07 | 26 | | | | | | |
| FEB | 11 - 18 | | Heavy microseisms and instrument adjustments over this period. | | | | | | | | | |
| | 19 | (e) | Z | 11 | 10 | 25 | | | | | | |
| | | eL | Z | | 37 | | | | | | | |
| | 21 | eSS | Z | 00 | 58 | 32 | | | | | | |
| | | eL | ZE | 01 | 01 | 00 | 11 | 20 | 8 | 20 | 11 | 20 |
| | 23 | eL | ZNE | 19 | 07 | | | | | | | |
| | 24 | eiP | ZN | 21 | 48 | 00 us | 7 | 12 | | | | |
| | | ePP | Z | | 50 | 44 | | | | | | |
| | | ePPP? | Z | | 52 | 10 | | | | | | |
| | | iS | ZNE | | 56 | 36 ds | 7 | 15 | | | | |
| | | eSKS | Z | | 57 | 36 | | | | | | |



| Date | | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB | 24 | iSS | ZNE | 22 | 00 | 55 u | 8 | 25 | | | 8 | 24 |
| | | iSSS | Z | | 04 | 17 d | 14 | 25 | | | | |
| | | Lr | ZNE | | 07 | 36 | 28 | 20 | 17 | 20 | 12 | 18 |
| | 25 | eL | ZNE | 00 | 11 | | | | | | | |
| | 26 | eP | Z | 02 | 20 | 15 | | | | | | |
| | | eLr | ZN | | 44 | 00 | 13 | 18 | 10 | 18 | | |
| | 26 | eLr | Z | 06 | 59 | 00 | | | | | | |
| | 27 | eLr | Z | 00 | 27 | 50 | | | | | | |
| | 27 | eS | ZNE | 09 | 10 | 26 | | | | | | |
| | | iLq | NE | | 13 | 41 w | | | 8 | 30 | 25 | 30 |
| | | Lr | ZN | | 15 | .5 | 15 | 18 | 10 | 15 | | |
| | 27 | | ZE | 17 | 43 | | | | | | | |
| | 28 | e(L) | NE | 07 | 32 | 55 | | | 4 | 14 | | |
| | 28 | eLq? | E | 23 | 36 | 44 | | | | | | |
| | | eLr | ZE | | 41 | .5 | 3 | 18 | | | 4 | 18 |
| | 29 | eL | ZNE | 22 | 56 | 00 | 10 | 15 | 19 | 15 | 14 | 12 |
| MAR | 1 | SSS | ZNE | 00 | 26 | 20 | 2 | 36 | 3 | 30 | | |
| | | Lr | ZNE | | 45 | | 6 | 20 | 5 | 20 | 9 | 20 |
| | 1 | eL | ZN | 08 | 32 | .5 | 2 | 20 | 2 | 20 | | |
| | 1 | eP | ZN | 20 | 08 | 46 | | | | | | |
| | | S | ZNE | | 16 | 10 | | | 2 | 20 | 2 | 20 |
| | | eL | ZNE | | 22 | | 2 | 20 | 2 | 20 | 3 | 20 |
| | 2 | eL? | ZE | 01 | 01 | | 1 | 15 | | | | |
| | 3 | S | ZE | 11 | 42 | 15 | | | | | 3 | 15 |
| | | SS | E | | 45 | 40 | | | | | 5 | 15 |
| | | L | ZNE | | 51 | | 2 | 16 | 2 | 15 | 9 | 18 |
| | 5 | P | Z | 14 | 01 | 26 | 5 | 25 | | | | |
| | | PP | Z | | 03 | 40 | 8 | 15 | | | | |
| | | PPP | Z | | 05 | 45 | 6 | 15 | | | | |
| | | iS | ZNE | | 11 | 12 w | 11 | 21 | 3 | 10 | 20 | 25 |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| MAR | 5 | PPS | ZN | 12 00 | 12 | 32 | | | | |
| | | SS | ZNE | 16 45 | 9 | 40 | 13 | 30 | | |
| | | SSS | ZNE | 19 56 | 19 | 36 | 9 | 20 | | |
| | | Lq | NE | 21.5 | | | | | 45+ | 25 |
| | | Lr | | 26.75 | 116M | 20 | | | | |
| | 5 | (PP) | Z | 16 05 51 | 5 | 15 | | | | |
| | | (SS) | Z | 18 30 | 7 | 27 | | | | |
| | | L | Z | 24 | 8 | 20 | | | | |
| | 6 | eL | ZNE | 03 03.6 | 10 | 17 | 6 | 15 | | |
| | 6 | L | ZNE | 10 18 | 14 | 17 | 8 | 15 | 10 | 13 |
| | 8 | iP | ZNE | 11 52 59 usw? | 18 | 20 | 26 | 20 | 28 | 18 |
| | | L | ZNE | 54.2 | | | | | | |
| | 8 | iP | ZN | 16 42 53 zus | 28 | 22 | 14 | 20 | | |
| | | iPP | ZN | 43 43 zus | 23 | 20 | 13 | 20 | | |
| | | iS | ZNE | 50 14 u? | 53± | 17 | 120± | 18 | | |
| | 10 | S | N | 00 16 56 | | | 3 | 34 | | |
| | | sS | N | 17 28 | | | 8 | 18 | | |
| | | SS | N | 22 56 | | | 4 | 20 | | |
| | | eL | ZNE | 29.5 | 4 | 20 | 4 | 20 | 7 | 20 |
| | 10 | iP | Z | 00 43 30 zd? | 6 | 20 | 7 | 27 | 8 | 20 |
| | | L | ZNE | 45.8 | 60+ | 20 | 80+ | 20 | 80+ | 20 |
| | 10 | eL | ZN | 10 14.2 | 3M | 18 | 2M | 18 | | |
| | 10 | P | ZNE | 14 02 28 | 3 | 12 | 4 | 15 | 2 | 20 |
| | | (S) | ZNE | 09 02 | 3 | 20 | 2 | 20 | 3 | 20 |
| | | Lr | ZNE | 18.3 | 3 | 20 | 3 | 20 | 4 | 20 |
| | 10 | (P) | Z | 14 06 30 | 3 | 30 | | | | |
| | | L | ZN | 11 | 5M | 25 | 4 | 28 | | |
| | 11 | L | NE | 22 02.2 | | | 3 | 15 | 6 | 13 |
| | 15 | eSSS? | N | 10 31 43 | | | | | | |
| | | L | N | 35 30 | | | | | | |
| | 15 | e? | Z | 11 04 13 | | | | | | |
| | 15 | e? | Z | 11 27 58 | | | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Tn |
|---|---|---|---|---|---|---|---|---|---|---|
| MAR | 16 | S | NE | 17 57 20 | | | 3 | 18 | 6 | 14 |
| | | eSS? | NE | 18 03 20 | | | | | | |
| | | Lq | N | 06.2 | | | 4 | 20 | | |
| | | Lr | NE | 09.5 | | | 9 | 18 | | |
| | 19 | L | ZNE | 04 09.3 | 7 | 19 | 5 | 17 | 5 | 14 |
| | 19 | P | Z | 19 27 05 | 2 | 10 | | | | |
| | | ScS | Z | 37 18 | 2 | 14 | | | | |
| | | (Lq) | E | 46 | | | | | 3 | 18 |
| | | Lr | ZNE | 50.3 | 9 | 20 | 6 | 20 | 6 | 20 |
| | 20 | eP | Z | 17 22 31 | 2 | 18 | | | | |
| | | iPP | ZN | 27 00 u? | | | | | | |
| | | i(PPP) | Z | 28 50 u? | | | | | | |
| | | (PKS) | NE | 29 06 | | | | | | |
| | | iSKS | ZNE | 32 58 n | | | | | | |
| | | SKKS | ZNE | 34 07 | | | | | | |
| | | i(S) | ZNE | 55 e? | | | | | | |
| | | iPS | ZNE | 36 40 u?n? | | | | | | |
| | | L | ZNE | (MAX) | 92± | 20 | 59± | 20 | 47± | 27 |
| | 21 | PS? | Z | 01 03 42 | 1 | 15 | | | | |
| | | SS? | ZNE | 10 12 | 1 | 20 | | | | |
| | | eLr | ZNE | 18.3 | 2 | 20 | 1 | 20 | 1 | 20 |
| | 21 | P? | Z | 01 58 29 | 1 | 20 | | | | |
| | | S | NE | 02 07 31 | | | 3 | 24 | 3 | 13 |
| | | ScS? | E | 09 33 | | | | | 2 | 20 |
| | | (SSS) | NE | 13 13 | | | | | 2 | 20 |
| | | L | ZNE | 14.9 | 4 | 20 | 3 | 20 | 3 | 20 |
| | 21 | eLr | Z | 10 13.0 | 2 | 20 | | | | |
| | 21 | eL | ZN | 10 57.5 | 1 | 20 | 2 | 15 | | |
| | 21 | P | Z | 11 49 06 | | | | | | |
| | | S | NE | 58 08 | | | | | 2 | 20 |
| | | SSS | NE | 12 04 00 | | | | | 1 | 20 |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| MAR | 21 | Lq | E | 05.5 | | | | | 2 | 18 |
| | | Lr | ZNE | 09.5 | 3 | 18 | 2 | 18 | 2 | 18 |
| | 21 | eL | | 20 39 | | | | | | |
| | 22 | iP | ZNE | 02 34 21 zds? | 4 | 15 | 5 | 27 | 3 | 17 |
| | | (Lq) | NE | 36 36 | | | 17 | 46 | 12 | 36 |
| | | Lr | ZNE | 37.2 | 85± | 20 | 51± | 20 | 80± | 16 |
| | 22 | iP | Z | 13 52 04 zd | | | | | | |
| | | (S) | NE | 54 38 | | | 3 | 16 | 5 | 16 |
| | | Lr | ZNE | 54.9 | 21 | 12 | 11 | 14 | 27 | 15 |
| | 23 | P? | Z | 00 39 35 | | | | | | |
| | | PP | Z | 43 00 | 4 | 15 | | | | |
| | | (PPP) | N | 45 15 | | | | | | |
| | | SKS | ZNE | 49 00 | 3 | 10 | 3 | 12 | 2 | 10 |
| | | e | NE | 50 00 | | | 3 | 17 | 3 | 15 |
| | | SKKS | NE | 00 50 49 | 4 | 10 | 4 | 17 | 7 | 17 |
| | | PS | ZNE | 52 30 | 8 | 15 | 7 | 20 | 7 | 20 |
| | | SS | ZNE | 58 49 | 6 | 15 | 10 | 27 | 8 | 33 |
| | | Lq | NE | 01 11.2 | | | 7 | 53 | 9 | 45 |
| | | Lr | ZNE | 18.0 | 13 | 25 | 10 | 25 | 9 | 20 |
| | 27 | iP | ZN | 03 58 30 d | 7 | 12 | 3 | 10 | | |
| | | S | ZNE | 04 06 46 | | | 5 | 8 | 7 | 12 |
| | | e(SS) | NE | 10 15 | | | | | | |
| | | Lq | E | 15.2 | | | | | 8 | 20 |
| | | Lr | ZN | 18.2 | 11 | 17 | 9 | 15 | | |
| | 27 | P | Z | 09 08 04 | 11 | 12 | | | | |
| | | S | ZNE | 16 16 | 11 | 13 | 8 | 15 | 7 | 12 |
| | | ScS | ZE | 18 10 | 4 | 6 | | | 4 | 8 |
| | | SS | ZNE | 20 32 | 9 | 10 | 8 | 15 | | |
| | | Lq | E | 22.2 | | | | | 20 | 22 |
| | | Lr | ZN | 26.2 | 28M | 16 | 17M | 15 | | |
| | 28 | L | ZE | 01 01.5 | 7 | 15 | | | 7 | 20 |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| MAR | 28 | P? | Z | 06 46 04 | | | | | | |
| | | eL | ZNE | 07 03 | 8 | 17 | | | 7 | 17 |
| | 29 | e? | Z | 00 27 09 | | | | | | |
| | | eL | Z | 30.7 | 3 | 20 | | | | |
| | 29 | eP? | Z | 04 08 45 | | | | | | |
| | | (Lq) | E | 10.2 | | | | | 8 | 15 |
| | | Lr | ZN | 10.6 | 6 | 20 | 6 | 15 | | |
| | 29 | (S) | ZNE | 06 29 00 | | | 7 | 11 | | |
| | | Lq | NE | 29.7 | | | 29 | 20 | 24 | 15 |
| | | Lr | Z | 30.0 | 12 | 20 | | | | |
| | 29 | P | ZN | 06 40 36 | 8 | 9 | 3 | 6 | | |
| | | PcP | ZNE | 41 13 | 11 | 10 | 5 | 7 | 5 | 9 |
| | | S | ZNE | 48 17 | 17 | 12 | 20 | 16 | 29 | 25 |
| | | ScS | ZNE | 50 30 | 8 | 17 | 10 | 20 | 16 | 14 |
| | | SS | ZNE | 52 10 | 14 | 24 | 11 | 30 | 28 | 26 |
| | | Lq | ZNE | 54.1 | 23 | 30 | 20 | 30 | 108± | 24 |
| | | Lr | ZNE | 57.4 | 92+ | 20± | 58+ | 25 | 89± | 20± |
| | 29 | S | NE | 22 30 12 | | | 4M | 10 | 4 | 16 |
| | | SS? | N | 34 56 | | | | | | |
| | | (SSS) | ZE | 38 24 | 4 | 23 | | | 4 | 18 |
| | | Lq | NE | 39.3 | | | 2 | 26 | 3 | 20 |
| | | Lr | ZNE | 42.2 | 7 | 20 | 5 | 20 | 4 | 20 |
| | 30 | iP | Z | 10 59 49 u? | 6 | 8 | | | | |
| | | S | ZNE | 11 08 10 | 3 | 9 | 3 | 10 | 5 | 10 |
| | | Lq | E | 15 | | | | | 7M | 20 |
| | | Lr | ZNE | 18.2 | 10M | 12 | 6M | 15 | 8M | 17 |
| APR | 2 | P? | Z | 09 42 19 | | | | | | |
| | 2 | eL | Z | 15 15 | | | | | | |
| | 2 | P? | Z | 17 12 59 | | | | | | |
| | 3 | (S) | ZE | 10 35 36 | 2 | 15 | | | 6 | 29 |
| | | L | ZE | 41.8 | 2 | 15 | | | 5 | 15 |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| APR | 4 | eL | ZNE | 04 56.7 | | | | | 1 | 18 |
| | 4 | iP | ZN | 08 06 33 d | | | | | | |
| | | PcP | Z | 58 | 1 | 12 | | | | |
| | | S | ZNE | 15 30 | 1 | 12 | 2 | 14 | 3 | 14 |
| | | Lq | NE | 08 22.9 | | | 2 | 32 | 2 | 28 |
| | | Lr | Z | 25.4 | 2 | 40 | | | | |
| | 4 | P | Z | 12 56 27 | | | | | | |
| | | PcP | Z | 40 | | | | | | |
| | | eL | ZNE | 18.5 | | | | | | |
| | 5 | P | Z | 07 26 17 | 1 | 18 | | | | |
| | | iS | ZNE | 33 11 w? | 2 | 20 | 8 | 22 | 5 | 25 |
| | | iSS | ZNE | 36 42 | 3 | 16 | 4 | 17 | 22 | 28 |
| | | L | ZNE | 39.1 | 5 | 48 | 4 | 42 | 15 | 17 |
| | 5 | iP | Z | 12 44 49 u | | | | | | |
| | | PcP? | Z | 46 22 | | | | | | |
| | | S | ZNE | 51 43 | 1 | 22 | 3 | 21 | 1 | 20 |
| | | SS | ZNE | 55 12 | 2 | 18 | 2 | 14 | 3 | 28 |
| | | L | ZNE | 58.4 | 3 | 48 | 2 | 50 | 3 | 17 |
| | 5 | P? | Z | 17 51 43 | | | | | | |
| | 6 | P | Z | 02 17 19 | | | | | | |
| | | PcP | Z | 48 | | | | | | |
| | 7 | P | Z | 13 55 29 | | | | | | |
| | | S | ZNE | 14 02 02 | | | | 4 17 | 3 | 20 |
| | | sS | ZNE | 04 56 | | | | 3 15 | 3 | 25 |
| | | sSS | E | 08 27 | | | | | 4 | 22 |
| | 8 | S | NE | 00 11 58 | | | | | | |
| | | i | Z | 12 07 u | | | | 8 20 | 8 | 16 |
| | | (sSS) | E | 17 47 | | | | | 5 | 19 |
| | 10 | P | ZN | 10 42 54 | | | | | | |
| | | (Lq) | E | 44 20 | | | | | 7 | 15 |
| | | (Lr) | ZN | 48 | 11½ | 20 | 8 | 17 | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| APR | 12 | (S) | N | 23 23 12 | | | 1 | 16 | | |
| | | Lq | N | 30.2 | | | 3 | 14 | | |
| | | Lr | ZE | 31.6 | 2 | 20 | | | 2 | 20 |
| | 13 | (P) | Z | 10 29 49 | | | | | | |
| | | (L) | NE | 31 23 | | | 1 | 15 | 2 | 15 |
| | 13 | L | ZE | 13 12.1 | 2 | 24 | | | 2 | 20 |
| | 13 | L | ZNE | 13 31.8 | 2 | 18 | 1 | 20 | 2 | 20 |
| | 13 | P | Z | 14 03 45 | | | | | | |
| | | L | ZNE | 15.3 | 2 | 20 | 2 | 20 | 2 | 20 |
| | 15 | (P) | Z | 03 06 36 | | | | | | |
| | 15 | P | Z | 03 35 52 | | | | | | |
| | | S | ZN | 44 08 | 2 | 10 | 5 | 17 | | |
| | | PS | E | 42 | | | | | 3 | 21 |
| | | SS | NE | 48 16 | | | 2 | 12 | 2 | 19 |
| | | Lq | N | 51.0 | | | 24 | 21 | | |
| | | Lr | ZE | 51.3 | 12 | 20 | | | 11 | 17 |
| | 15 | P | Z | 04 23 13 | | | | | | |
| | 15 | P | ZNE | 22 15 08 | 6 | 11 | 3 | 12 | 2 | 9 |
| | | PcP | ZN | 38 | 6 | 12 | 3 | 13 | | |
| | | S | ZNE | 23 12 | 3 | 10 | 5 | 12 | 10 | 12 |
| | | SS | ZNE | 27 28 | 3 | 10 | 5 | 14 | 4 | 15 |
| | | Lq | E | 30.5 | | | | | 8 | 24 |
| | | Lr | ZNE | 33.1 | 10 | 20 | 9 | 18 | 11 | 17 |
| | 17 | eP? | Z | 04 13 42 | | | | | | |
| | 17 | P | Z | 14 59 21 | | | | | | |
| | 17 | (S) | ZN | 15 56 55 | | | 2 | 22 | | |
| | | L | ZNE | 16 04 | 2 | 20 | 2 | 20 | | |
| | 18 | e | ZE | 07 10 47 | 3 | 20 | | | 2 | 16 |
| | 19 | e | Z | 02 15 23 | | | | | | |
| | 19 | P | Z | 09 31 55 | | | | | | |
| | | S | NE | 39 34 | | | 3 | 13 | 2 | 10 |

| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| APR 19 | Lq | E | 45.6 | | | | | 2 | 16 |
| | Lr | ZN | 52.4 | 2 | 18 | 2 | 18 | | |
| 21 | eP | Z | 02 28 55 | | | | | | |
| 21 | eL | ZNE | 16 49.8 | 2 | 16 | | | | |
| 22 | (P) | Z | 07 56 23 | | | | | | |
| 22 | (P) | Z | 09 30(01) | | | | | | |
| 22 | P | ZN | 20 36 35 | 3 | 10 | 2 | 9 | | |
| | S | ZNE | 43 27 | 2 | 18 | 3 | 22 | 7 | 15 |
| | L | NE | 49.7 | | | 2 | 20 | 6 | 20 |
| 24 | iP | ZE | 03 33 10 u? | 2 | 7 | | | | |
| | pP | ZNE | 35 14 | 4 | 7 | 1 | 8 | 3 | 8 |
| | PP | ZNE | 36 05 | 6 | 17 | 2 | 8 | 4 | 19 |
| | PPP | ZNE | 38 04 | 3 | 15 | 2 | 8 | 4 | 15 |
| | iS | ZNE | 41 53 dne | 19 | 16 | 10 | 14 | 474 | 18 |
| | sS | ZNE | 03 45 40 | 5 | 16 | 6 | 14 | 9 | 23 |
| | SS | ZNE | 46 52 | 9 | 20 | 12 | 18 | 21 | 20 |
| | sSS | ZNE | 50 21 | 8 | 15 | 5 | 15 | 10 | 18 |
| | (PKKP) | ZE | 53 23 | 13 | 27 | | | 8 | 21 |
| | P'P' | Z | 04 00 20 | | | | | | |
| 24 | (P) | Z | 09 59 45 | | | | | | |
| 24 | iPKP | Z | 12 33 30 | | | | | | |
| | e(PPS) | ZE | 46 47 | 1 | 18 | | | | |
| | e | ZE | 13 00 21 | 2 | 30 | | | | |
| | Lq | N | 10.8 | | | 2 | 30 | | |
| | Lr | ZNE | 13.5 | 8 | 20 | 5 | 20 | 7 | 20 |
| 25 | L | ZNE | 17 20.4 | 2 | 20 | 2 | 18 | | |
| 25 | L | ZN | 23 07.3 | 2 | 20 | 1 | 20 | | |
| 26 | e? | Z | 13 59 21 | | | | | | |
| | (P) | Z | 14 08 15 | | | | | | |
| 27 | L | ZNE | 17 45 | 2 | 35 | 1 | 42 | | |



| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| APR 28 | iP | Z | 02 18 53 d? | | | | | | |
| | S | N | 25 55 | | | 3 | 25 | | |
| | SS | E | 30 00 | | | | | 3 | 23 |
| | eL | NE | 34.5 | | | 3 | 20 | 2 | 20 |
| 28 | eL | NE | 05 43 | | | 3 | 20 | 1 | 20 |
| 28 | e(P) | Z | 11 03 35 | | | | | | |
| | (S) | NE | 05 10 | | | 2 | 15 | 1 | 15 |
| 29 | eS | ZN | 02 31 40 | | | 1 | 8 | | |
| | e | E | 32 36 | | | | | 1 | 12 |
| | (ScS) | E | 34 13 | | | | | 1 | 5 |
| | SS | E | 02 35 15 | | | | | 1 | 6 |
| | SSS | ZE | 36 10 | | | | | 2 | 13 |
| | L | ZNE | 37.3 | 2 | 15 | 2 | 20 | 2 | 20 |
| 29 | eL | ZNE | 04 15.8 | 1 | 20 | 1 | 20 | | |
| 29 | eL | ZNE | 09 20.3 | 1 | 20 | | | | |
| 29 | L | Z | 10 44.7 | 1 | 35 | | | | |
| 29 | eP | ZE | 13 45 20 | | | | | | |
| | PcP | ZNE | 46 18 | 1 | 10 | | | | |
| | S | ZNE | 52 40 | 1 | 18 | 2 | 12 | 1 | 12 |
| | SS | ZNE | 56 12 | 2 | 23 | 2 | 12 | 2 | 20 |
| | L | ZNE | 57.8 | 3 | 20 | 2 | 20 | | |
| 29 | L | ZNE | 14 10.9 | 3 | 35 | | | | |
| 29 | P | ZNE | 19 44 18 | | | | | | |
| | PcP | Z | 27 | 2 | 10 | | | | |
| | S | ZNE | 54 29 | 2 | 20 | 3 | 16 | 3 | 24 |
| | SS | ZNE | 59 15 | 3 | 30 | 3 | 30 | 3 | 32 |
| | Lq | NE | 20 04.3 | | | 8 | 38 | 6 | 35 |
| | Lr | Z | 09.5 | 10 | 30 | | | | |
| 29 | L | ZNE | 21 22.4 | 3 | 30 | 2 | 30 | 3 | 42 |
| 30 | P | ZE | 04 13 42 | 2 | 12 | | | 1 | 8 |
| | (PPP) | Z | 18 30 | 2 | 12 | | | | |

| Date | | Phase | | h m s | Az Tz | An Tn | Ae Te |
|---|---|---|---|---|---|---|---|
| APR | 30 | S | ZNE | 23 30 | 2 19 | 3 14 | 2 22 |
| | | SS | ZNE | 28 38 | 2 40 | 2 18 | 2 30 |
| | | Lq | NE | 36.5 | | 4 35 | 4 38 |
| | | Lr | Z | 38.8 | 6 31 | | |
| | 30 | eL | ZNE | 11 27.2 | 1 20 | 1 20 | |
| | 30 | L | ZNE | 14 46.1 | 2 17 | 2 18 | |
| | 30 | iP | Z | 22 20 35 u | | | |
| | | ScS? | Z | 29 16 | | | |
| MAY | 2 | P | Z | 04 24 57 | | | |
| | 2 | P? | Z | 11 00 55 | | | |
| | 2 | eP | Z | 12 03 39 | | | |
| | 2 | P | Z | 12 22 17 | | | |
| | | PcP | Z | 58 | | | |
| | | eS | NE | 32.5 | | | 2 23 |
| | | SS | ZNE | 37 25 | 1 36 | 1 32 | |
| | | L | ZNE | 47.5 | 5 38 | 3 40 | 5 42 |
| | 3 | P | Z | 13 35 11 | | | |
| | | L | ZNE | 14 00 | 3 40 | | |
| | 4 | iP | Z | 00 06 09 d | | | |
| | 4 | P | Z | 18 38 53 | | | |
| | | S | ZNE | 46 23 | 2 12 | 4 25 | |
| | | Lq | E | 52.0 | | | 3 20 |
| | | Lr | ZN | 54.5 | 8 20 | 7 20 | |
| | 5 | iP | Z | 16 06 04 u | | | |
| | 9 | P | Z | 02 58 42 | | | |
| | | eL | ZNE | 03 58.8 | 1 20 | | |
| | 9 | eL | ZE | 07 41 | 1 20 | | |
| | 9 | iP | Z | 09 10 17 u | | | |
| | 9 | e | Z | 15 36 37 | | | |
| | 9 | P | Z | 20 25 57 | | | |



| Date | | Phase | | h m s | Az Tz | An Tn | Ae Te |
|---|---|---|---|---|---|---|---|
| MAY | 9 | S | NE | 36 37 | | 1 15 | 1 16 |
| | | L | ZE | 53.5 | 2 20 | | 2 20 |
| | 10 | P | Z | 10 27 31 | | | |
| | 10 | P | Z | 11 05 13 | | | |
| | | eL | ZNE | 20.4 | 1 45 | | |
| | 10 | P | Z | 18 03 39 | | | |
| | | L | ZNE | 06.4 | 3 13 | 2 16 | 4 12 |
| | 11 | eL | ZNE | 17 23.4 | 1 25 | | |
| | 11 | iP | Z | 18 47 36 d | 3 12 | 1 10 | 1 8 |
| | | S | Z | 57 04 | 4 17 | 5 17 | 8 20 |
| | | Lq | N | 19 08.4 | | 10 20 | 9 23 |
| | | Lr | Z | 11.8 | 21 20 | | |
| | 12 | (PKP) | Z | 22 50 48 | 2 9 | | |
| | | (SKS) | E | 57 18 | | | 1 8 |
| | | PS | ZNE | 23 00 10 | 1 20 | | 2 14 |
| | | SS | ZNE | 05 32 | 1 18 | 2 15 | |
| | | Lq | N | 15.4 | | 6 35 | |
| | | Lr | ZE | 18.5 | 6 25 | | 5 25 |
| | 13 | eL | ZNE | 00(00) | 1 20 | | |
| | 13 | L | ZNE | 01(49.4) | 2 20 | | |
| | 13 | eL | ZNE | 07(58) | 1 18 | 1 15 | |
| | 13 | L | ZE | 10(50.5) | 1 20 | | 1 20 |
| | 13 | L | ZNE | 16 19.1 | 2 17 | 3 20 | 2 18 |
| | 13 | PKS | ZNE | 16 29(54) | 1 10 | 1 12 | |
| | | PS | Z | 38(32) | 2 10 | | |
| | | PPPa | Z | 43(03) | 2 25 | | |
| | | L | ZNE | 17 05.8 | 9 20 | 4 20 | 3 20 |
| | 13 | P | Z | 20 54(16) | 1 11 | | |
| | | (PP) | ZNE | 56(12) | 1 10 | 1 8 | 1 10 |
| | | S | ZNE | 21 00(30) | 1 10 | 2 14 | 1 8 |

| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| MAY 13 | SS | ZN | 03(40) | 2 | 15 | | | | |
| | Lq | E | 03.9 | | | | | 3 | 29 |
| | Lr | ZN | 05.3 | 8 | 23 | 4 | 20 | | |
| 15 | L | Z | 03 33.7 | 1 | 20 | | | | |
| 15 | L | Z | 05 21.2 | 1 | 20 | | | | |
| 17 | e? | Z | 06 50(32) | | | | | | |
| 18 | P | Z | 06 49 27 | 3 | 10 | | | | |
| | PKP | Z | 53 37 | 2 | 13 | | | | |
| | SKS | ZN | 59 55 | 2 | 30 | 2 | 10 | 2 | 20 |
| | PS | ZN | 07 02 50 | 4 | 22 | 3 | 16 | 3 | 20 |
| | SS | ZN | 08 25 | 4 | 40 | 6 | 26 | 5 | 30 |
| | e | ZN | 11 20 | 3 | 27 | 4 | 25 | 3 | 31 |
| | Lq | N | 20.7 | | | 4 | 57 | 5 | 43 |
| | Lr | ZN | 24.4 | 22 | 20 | 13 | 20 | 8 | 22 |
| 18 | P | ZNE | 12 49 19 | 3 | 20 | 4 | 22 | 1 | 8 |
| | S | E | 51 20 | | | | | 12 | 16 |
| | L | ZN | 51.6 | 19 | 20 | 11 | 20 | | |
| 19 | eL | Z | 03 13.5 | | | | | | |
| 19 | eP | Z | 10 07 15 | | | | | | |
| | eS | ZNE | 15 13 | 1 | 23 | 1 | 12 | 2 | 20 |
| | Lq | ZNE | 21.1 | 1 | 20 | 2 | 18 | | |
| | Lr | ZE | 23.5 | 4 | 20 | | | 3 | 20 |
| 19 | eP | Z | 10 23 53 | | | | | | |
| | (PcP) | Z | 24 14 | | | | | | |
| | e | Z | 27 | | | | | | |
| | S | ZNE | 33 40 | 3 | 12 | 5 | 38 | 5 | 54 |
| | SS | ZNE | 38 48 | 3 | 20 | 6 | 45 | 5 | 20 |
| | Lq | N | 41.4 | | | 30 | 60 | | |
| | Lr | ZE | 45 | 15 | 43 | | | 20 | 22 |
| 19 | eL | Z | 22 47 | 1 | 20 | | | | |
| 20 | P | Z | 00 34 45 | | | | | | |



| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| MAY 20 | eL | ZNE | (58) | 2 | 20 | 1 | 20 | 1 | 20 |
| 20 | iP | ZNE | 11 20 40 d | 8 | 10 | 5 | 10 | 2 | 8 |
| | PP | ZNE | 22 29 | | | 2 | 11 | 3 | 8 |
| | PcP | Z | 33 | 4 | 13 | | | | |
| | iS | ZNE | 27 21 e?n? | 19 | 22 | 34½ | 22 | 21 | 21 |
| | Lq | E | 30.7 | | | | | | |
| | Lr | ZN | 31.2 | 8¼ | 22 | 6 | 25 | 8 | 22 |
| 21 | SKS? | Z | 07 08 59 | | | | | | |
| | L | Z | 08 06 | | | | | | |
| 21 | iP | ZNE | 10 13 11 ds? | | | 12 | 12 | | |
| | (PcP) | Z | 17 | | | | | | |
| | iS | ZNE | 21 28 sw? | | | | | | |
| 21 | iP | Z | 10 33 04 d | | | | | | |
| 21 | (P) | Z | 10 42 21 | | | | | | |
| 21 | iP | Z | 11 04 17 d | | | | | | |
| 21 | P | Z | 11 58 27 | | | | | | |
| 21 | (P) | Z | 12 31 43 | | | | | | |
| | (PcP) | Z | 52 | | | | | | |
| 21 | P | Z | 12 57 11 | | | | | | |
| 21 | iP | Z | 13 10 22 u | | | | | | |
| | (PcP) | Z | 31 | | | | | | |
| | (P'P') | Z | 39 35 | | | | | | |
| 21 | P | Z | 13 17 11 | | | | | | |
| 21 | eP | Z | 14 09 39 | | | | | | |
| 21 | P | Z | 14 42 21 | | | | | | |
| 21 | P | Z | 15 19 13 | | | | | | |
| 21 | L | ZNE | 19 37.4 | 2 | 20 | 1 | 20 | 2 | 20 |
| 21 | L | ZNE | 22 33.5 | 2 | 20 | 1 | 20 | 1 | 20 |
| 22 | P | Z | 01 06 20 | | | | | | |
| | eS | NE | 12 55 | | | | | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| MAY | 22 | Lq | E | 16.4 | | | | | 7 | 38 |
| | | Lr | N | 19.1 | | | 3 | 25 | | |
| | 22 | P | Z | 03 56 56 | | | | | | |
| | | eS | NE | 04 05 22 | | | | | | |
| | | L | ZNE | 16.5 | 4 | 20 | 2 | 20 | 2 | 20 |
| | 22 | P | Z | 06 11 54 | | | | | | |
| | | S | ZNE | 20 20 | 1 | 10 | 2 | 14 | 2 | 17 |
| | | L | ZNE | 31.5 | 5 | 16 | 3 | 22 | 4 | 16 |
| | 22 | P | Z | 07 46 23 | | | | | | |
| | | (PcP) | Z | 31 | | | | | | |
| | | eL | ZNE | 08 07.3 | 1 | 20 | | | | |
| | 22 | P | Z | 08 21 14 | | | | | | |
| | | (PcP) | Z | 22 | | | | | | |
| | | ePPP? | N | 24 45 | | | | | | |
| | | eS | ZNE | 29 38 | 1 | 18 | | | | |
| | | eL | ZNE | 39.6 | 4 | 18 | 2 | 20 | 3 | 17 |
| | 22 | iP | Z | 10 40 58 d | | | | | | |
| | | i(PcP) | ZNE | 41 07 d? | 9 | 12 | 2 | 13 | 5 | 11 |
| | | S | ZNE | 49 25 | 12 | 19 | 13 | 21 | 19 | 21 |
| | 22 | iP | ZNE | 10 43 04 nw | | | 11 | 22 | 18 | 23 |
| | | P'P' | Z | 11 12 22 | | | | | | |
| | 22 | P | Z | 12 27 02 | | | | | | |
| | | (PcP) | Z | 14 | | | | | | |
| | 22 | eP | Z | 13 14 07 | | | | | | |
| | 22 | P | Z | 17 22 55 | | | | | | |
| | 22 | iP | ZNE | 19 06 18 dnw | | | | | | |
| | | iS | ZNE | 14 38 dnw | | | | | | |
| | 22 | P | Z | 19 20 51 | | | | | | |
| | | (PcP) | Z | 57 | | | | | | |
| | 22 | P | Z | 22 17 23 | | | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| MAY | 22 | P | Z | 22 24 19 | | | | | | |
| | 22 | P | Z | 22 25 42 | | | | | | |
| | 22 | P | Z | 22 31 11 | | | | | | |
| | 22 | P | Z | 22 58 27 | | | | | | |
| | 22 | P | Z | 22 59 41 | | | | | | |
| | 22 | P | Z | 23 03 04 | | | | | | |
| | 22 | P | Z | 23 14 33 | | | | | | |
| | 22 | P | Z | 23 17 06 | | | | | | |
| | 22 | P | Z | 23 22 42 | | | | | | |
| | 22 | P | Z | 23 34 31 | | | | | | |
| | 22 | P | Z | 23 39 42 | | | | | | |
| | 22 | P | Z | 23 42 29 | | | | | | |
| | 22 | P | Z | 23 44 50 | | | | | | |
| | 22 | P | Z | 23 48 21 | | | | | | |
| | 23 | P | Z | 00 05 41 | | | | | | |
| | 23 | iP | Z | 00 06 10 d | | | | | | |
| | 23 | P | Z | 00 17 33 | | | | | | |
| | 23 | P | Z | 00 19 57 | | | | | | |
| | 23 | P | Z | 00 26 18 | | | | | | |
| | 23 | P | Z | 00 35 59 | | | | | | |
| | 23 | P | Z | 00 51 53 | | | | | | |
| | 23 | P | Z | 01 01 46 | | | | | | |
| | 23 | P | Z | 01 04 05 | | | | | | |
| | 23 | iP | Z | 01 11 57 d | | | | | | |
| | 23 | P | Z | 01 33 10 | | | | | | |
| | 23 | P | Z | 01 45 04 | | | | | | |
| | 23 | P | Z | 01 54 17 | | | | | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| MAY | 23 | P | Z | 02 06 09 | | | | | | |
| | 23 | P | Z | 02 36 07 | | | | | | |
| | 23 | P | Z | 02 47 25 | | | | | | |
| | 23 | iP | Z | 02 50 07 d | | | | | | |
| | 23 | P | Z | 02 53 54 | | | | | | |
| | 23 | iP | Z | 02 56 27 d | | | | | | |
| | 23 | P | Z | 03 06 01 | | | | | | |
| | 23 | P | Z | 04 37 13 | | | | | | |
| | 23 | P | Z | 05 23 55 d | | | | | | |
| | 23 | P | Z | 05 57 17 | | | | | | |
| | 23 | P | Z | 06 18 29 | | | | | | |
| | 23 | P | Z | 06 28 09 | | | | | | |
| | 23 | P | Z | 06 35 42 | | | | | | |
| | 23 | P | Z | 06 56 05 | | | | | | |
| | 23 | P | Z | 07 18 27 | | | | | | |
| | 23 | P | Z | 08 23 17 | | | | | | |
| | 23 | P | Z | 09 36 10 | | | | | | |
| | 23 | P | Z | 10 02 45 | | | | | | |
| | | (PcP) | Z | 51 | | | | | | |
| | 23 | P | Z | 10 47 42 | | | | | | |
| | 23 | P | Z | 11 32 29 | | | | | | |
| | 23 | P | Z | 12 12 50 | | | | | | |
| | 23 | P | Z | 14 09 49 | | | | | | |
| | 23 | P | Z | 14 11 24 | | | | | | |
| | 23 | P | Z | 15 54 39 | | | | | | |
| | 23 | P | Z | 19 19 13 | | | | | | |
| | 23 | P | Z | 21 17 36 | | | | | | |
| | 24 | P? | Z | 14 52 34 | | | | | | |
| | | iP | ZNE | 46 d | 8 | 10 | 6 | 9 | 2 | 6 |
| | | PP | ZNE | 54 05 | 14 | 23 | 20 | 27 | 4 | 8 |
| | | PcP | ZNE | 56 10 | 14 | 25 | 15 | 24 | 10 | 11 |
| | | S | ZNE | 14 57.5 | 4 | 28 | 4 | 28 | | |
| | | Lq | E | 58.6 | | | | | 13 | 32 |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| MAY | 24 | Lr | ZN | 59.2 | 13± | 23 | 13± | 28 | | |
| | 24 | eL | E | 20 36.6 | | | | | 4 | 18 |
| | | eL | ZN | 37.8 | 3 | 18 | 2 | 14 | | |
| | 24 | P | ZNE | 20 41 37 | 3 | 12 | | | 2 | 10 |
| | | e | NE | 45 23 | | | | | | |
| | | S | ZNE | 48 50 | 3 | 18 | 5 | 25 | 7 | 20 |
| | | (SS) | NE | 52 46 | | | 3 | 15 | | |
| | | Lq | N | 53.8 | | | 9 | 17 | | |
| | | Lr | ZE | 55.7 | 14 | 20 | | | 12 | 18 |
| | 25 | L | Z | 00 45.1 | 2 | 20 | | | | |
| | 25 | P | Z | 02 44 27 | | | | | | |
| | | eS | N | 48 38 | | | | | | |
| | | Lq | E | 49.7 | | | | | 9 | 20 |
| | | Lr | ZN | 50.7 | 9 | 20 | 5 | 20 | | |
| | 25 | eL | ZNE | 03 48.1 | 2 | 15 | | | 2 | 13 |
| | 25 | eL | E | 04 12.7 | | | | | 4 | 20 |
| | | L | ZN | 13.7 | 3 | 20 | 2 | 15 | | |
| | 25 | P | Z | 04 53 33 | | | | | | |
| | | S | ZNE | 05 01 08 | 2 | 12 | 3 | 25 | 3 | 21 |
| | | Lq | NE | 07.2 | | | 3 | 16 | 5 | 14 |
| | | Lr | Z | 09.0 | 4 | 15 | | | | |
| | 25 | iP | ZNE | 08 44 06 u | 7 | 10 | 3 | 8 | 5 | 11 |
| | | (PcP) | Z | 13 | | | | | | |
| | | e | Z | 22 | | | | | | |
| | | S | ZNE | 52 00 | 12 | 33 | 13 | 33 | 34 | 32 |
| | | SS | ZNE | 08 55 56 | 7 | 22 | 7 | 18 | 5 | 13 |
| | | Lq | N | 56.6 | | | 10 | 70 | | |
| | | e | Z | 57 06 | 11 | 11 | | | | |
| | | Lq | E | 58.6 | | | | | 14 | 48 |
| | | Lr | Z | 09 00.5 | 17 | 20 | | | | |
| | | P'P' | Z | 14 04 | | | | | | |

| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| MAY 25 | P | Z | 10 09 51 | | | | | | |
| 25 | P | Z | 10 21 51 | | | | | | |
| 25 | e? | Z | 12 24 55 | | | | | | |
| 25 | P | Z | 12 55 33 | | | | | | |
| 25 | P | Z | 13 50 27 | | | | | | |
| | PcP | Z | 33 | | | | | | |
| | ePP | Z | 53 36 | | | | | | |
| | S | ZE | 14 00 12 | 1 | 18 | | | | |
| | SSS | ZN | 09 07 | 1 | 24 | | | | |
| | eL | Z | 14.6 | 4 | 17 | | | | |
| | L | NE | 17.6 | | | 2 | 20 | 4 | 20 |
| 25 | e? | Z | 14 32 49 | | | | | | |
| 25 | P | Z | 14 39 46 | | | | | | |
| | eL | ZNE | 15 06.3 | | | | | | |
| 25 | iP | Z | 15 01 59 u | | | | | | |
| 25 | eP | Z | 15 07 26 | | | | | | |
| 25 | eP | Z | 15 13 21 | | | | | | |
| 25 | P | Z | 15 58 26 | | | | | | |
| | Lq | E | 16 00.8 | | | | | 4 | 13 |
| | Lr | ZN | 01.1 | 4 | 18 | 3 | 18 | | |
| 25 | P? | Z | 17 37 07 | | | | | | |
| 25 | iP | Z | 18 30 07 u | | | | | | |
| | e(L) | Z | 33.5 | 1 | 22 | | | | |
| 25 | P | Z | 19 31 53 | | | | | | |
| | eL | ZNE | 52.7 | 1 | 17 | | | 1 | 15 |
| 25 | e? | Z | 21 00 42 | | | | | | |
| 25 | e | Z | 21 14 32 | | | | | | |
| | eL | Z | 33.8 | | | | | | |
| 25 | P | Z | 22 19 10 | | | | | | |
| | eL | Z | 40.7 | | | | | | |



| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| MAY 26 | P | Z | 00 11 10 | | | | | | |
| 26 | eP? | Z | 01 20 34 | | | | | | |
| 26 | eL | ZNE | 01 36.5 | 2 | 17 | | | 2 | 17 |
| 26 | P? | Z | 01 39 12 | | | | | | |
| 26 | P | Z | 01 45 11 | | | | | | |
| 26 | PKP | Z | 05 29 49 | | | | | | |
| | PKS | Z | 33 19 | | | | | | |
| | eL | Z | 06 01 | | | | | | |
| | M | ZNE | 33 | 5 | 20 | 2 | 20 | 2 | 20 |
| 26 | (P) | Z | 06 52 46 | | | | | | |
| 26 | P | Z | 07 54 20 | | | | | | |
| 26 | (S) | NE | 09 26 24 | | | | | 2 | 13 |
| | eL | ZNE | 33.9 | 4 | 18 | 2 | 18 | 4 | 18 |
| 26 | (P) | Z | 10 10 09 | | | | | | |
| | e | Z | 18 | | | | | | |
| 26 | P? | Z | 11 19 13 | | | | | | |
| 26 | P | Z | 12 04 37 | | | | | | |
| | eL | ZNE | 26.2 | 1 | 15 | | | 2 | 18 |
| 26 | P | Z | 12 30 29 | | | | | | |
| 26 | P | Z | 15 16 20 | | | | | | |
| | L | ZNE | 38 | 1 | 15 | | | 2 | 15 |
| 26 | P | Z | 15 18 32 | | | | | | |
| 26 | P | Z | 15 46 37 | | | | | | |
| 26 | P | Z | 17 13 09 | | | | | | |
| 26 | eP? | Z | 17 23 37 | | | | | | |
| | i | Z | 24 13(d) | | | | | | |
| | i | Z | 28(u) | | | | | | |
| | eL | Z | 30 | | | | | | |
| 26 | P | Z | 18 17 48 | | | | | | |

| Date | | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | 27 | P | Z | 17 | 28 | 46 | | | | | | |
| | 27 | P | Z | 18 | 35 | 17 | | | | | | |
| | 27 | P? | Z | 18 | 43 | 12 | | | | | | |
| | 27 | P | Z | 20 | 20 | 46 | | | | | | |
| | | (ScS) | Z | | 33 | 30 | | | | | | |
| | | e? | Z | | 37 | 43 | | | | | | |
| | | eL | ZNE | | 41 | | 1 | 20 | | | | |
| | 27 | P | Z | 21 | 01 | 34 | | | | | | |
| | 27 | eiP | ZE | 23 | 16 | 22 | 2 | 16 | | | 2 | 12 |
| | | S | ZE | | 24 | 11 | 2 | 11 | | | 5 | 25 |
| | | Lq | E | | 30.2 | | | | | | 6 | 20 |
| | | Lr | Z | | 32.3 | | 5 | 20 | | | | |
| | 27 | P | Z | 23 | 23 | 55 | | | | | | |
| | 27 | P? | Z | 23 | 24 | 48 | | | | | | |
| | | P | Z | | | 55 | | | | | | |
| | 27 | (P) | Z | 23 | 29 | 53 | | | | | | |
| | | e | Z | | 30 | 08 | | | | | | |
| | 28 | P | Z | 01 | 36 | 17 | | | | | | |
| | 28 | eP | Z | 01 | 55 | 13 | | | | | | |
| | 28 | iP | Z | 03 | 16 | 03 u | | | | | | |
| | | eL | ZNE | | 34.5 | | 4 | 18 | 2 | 18 | 4 | 20 |
| | 28 | P? | Z | 04 | 08 | 35 | | | | | | |
| | 28 | P? | Z | 06 | 15 | 31 | | | | | | |
| | 28 | P? | Z | 06 | 20 | 15 | | | | | | |
| | 28 | iP | Z | 10 | 54 | 08 u | | | | | | |
| | 28 | e(L) | ZNE | 11 | 13.5 | | 1 | 30 | | | 1 | 30 |
| | 28 | P | ZNE | 11 | 16 | 01 | 2 | 13 | 1 | 14 | 2 | 8 |
| | | S | ZNE | | 24 | 27 | 2 | 18 | 2 | 27 | 4 | 12 |
| | | SS | ZNE | | 28 | 49 | | | 2 | 28 | 2 | 16 |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| MAY | 28 | Lq | NE | 31.5 | | | 4 | 45 | | |
| | | Lr | ZNE | 34.8 | 6 | 26 | 4 | 22 | 5 | 28 |
| | 28 | P | Z | 11 49 21 | | | | | | |
| | 28 | P | Z | 14 15 58 | | | | | | |
| | 28 | P | Z | 16 01 42 | | | | | | |
| | 28 | P? | Z | 22 23 04 | | | | | | |
| | 29 | P | Z | 01 38 33 | | | | | | |
| | 29 | eiP | Z | 02 01 30 | | | | | | |
| | 29 | P? | Z | 02 42 27 | | | | | | |
| | 29 | P | Z | 03 43 36 | | | | | | |
| | 29 | P | Z | 05 22 03 | | | | | | |
| | 29 | P | Z | 05 36 55 | | | | | | |
| | 29 | iP | ZNE | 07 49 51 d | 5 | 17 | 2 | 12 | 3 | 15 |
| | | S | ZNE | 58 16 | 4 | 21 | 5 | 32 | 8 | 32 |
| | | SS | ZNE | 08 02 22 | 5 | 33 | 4 | 30 | 4 | 26 |
| | | Lq | NE | 05.5 | | | 9 | 46 | 5 | 42 |
| | | Lr | ZNE | 08.5 | 15 | 25 | 8 | 25 | 10 | 25 |
| | | P'P' | Z | 18 50 | | | | | | |
| | 29 | P | Z | 08 44 42 | | | | | | |
| | | L | ZNE | 09 03.5 | 4 | 20 | 2 | 25 | 3 | 37 |
| | 29 | P | Z | 10 27 27 | | | | | | |
| | 29 | P | Z | 11 04 57 | | | | | | |
| | 29 | iP | Z | 13 36 13 d | | | | | | |
| | 29 | iP | Z | 14 15 46 u | | | | | | |
| | | (PcP) | Z | 55 | | | | | | |
| | | L | ZNE | 34.7 | 2 | 20 | 1 | 20 | 2 | 20 |
| | | PKKS | Z | 39 50 | | | | | | |
| | | P'P' | Z | 45 09 | | | | | | |
| | 29 | P | Z | 20 09 35 | | | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| MAY | 29 | P | ZNE | 21 33 38 | 2 | 10 | 1 | 15 | 2 | 7 |
| | | S | ZNE | 41 30 | 1 | 10 | 2 | 13 | 3 | 16 |
| | | SS | ZN | 45 20 | 1 | 23 | 3 | 18 | | |
| | | L | ZNE | 48.1 | 6 | 18 | 3 | 18 | 6 | 17 |
| | | P'P'? | Z | 22 03 | | | | | | |
| | 29 | P | Z | 21 50 01 | | | | | | |
| | | (PcP) | Z | 13 | | | | | | |
| | 29 | P | Z | 21 57 06 | | | | | | |
| | 29 | e | Z | 23 29 | | | | | | |
| | 30 | P | Z | 02 31 35 | | | | | | |
| | 30 | (P) | Z | 04 57 03 | | | | | | |
| | 30 | P | Z | 05 46 43 | | | | | | |
| | 30 | iP | Z | 07 10 40 u | | | | | | |
| | | e(L) | Z | 27 | | | | | | |
| | 30 | eP | Z | 08 37 18 | | | | | | |
| | | Lq | NE | 47.1 | | | 1 | 20 | 1 | 17 |
| | | Lr | Z | 49.4 | 2 | 18 | | | | |
| | 30 | P | Z | 09 55 30 | | | | | | |
| | 30 | P? | Z | 12 51 52 | | | | | | |
| | 30 | P | Z | 17 56 53 | | | | | | |
| | | L | ZNE | 18 19.3 | 1 | 20 | | | 1 | 24 |
| | 31 | P? | Z | 01 34 55 | | | | | | |
| | 31 | (P) | Z | 02 14 52 | | | | | | |
| | | i | Z | 54 | | | | | | |
| | 31 | iP | ZNE | 02 50 06 u | 4 | 8 | 1 | 10 | 3 | 8 |
| | | S | ZNE | 58 22 | 2 | 10 | 1 | 12 | 5 | 29 |
| | | eLq | NE | 03 05.2 | | | 6 | 18 | 10 | 18 |
| | | Lr | Z | 07.1 | 8 | 18 | | | | |
| | | P'P' | Z | 19 19 | | | | | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| MAY | 31 | PKP | Z | 11 22 12 | 2 | 26 | | | | |
| | | PS | ZNE | 32 09 | | | | | | |
| | | ePPS | ZNE | 33 29 | | | | | 3 | 22 |
| | | eSS | Z | 39 20 | 2 | 28 | | | | |
| | | Lq | NE | 52.4 | | | 3 | 52 | | |
| | | Lr | ZNE | 12 00.8 | 6 | 20 | 3 | 20 | 5 | 20 |
| | 31 | iP | Z | 13 21 50 | | | | | | |
| | | L | ZNE | 41.5 | 3 | 20 | 2 | 28 | | |
| | | PKKP | Z | 42 57 | | | | | | |
| | 31 | L | Z | 13 48 | 2 | 20 | | | | |
| | 31 | eL | ZNE | 16 47.7 | 2 | 20 | | | 2 | 18 |
| JUN | 1 | P | Z | 05 13 18 | | | | | | |
| | | L | ZNE | 32.1 | 6 | 28 | 3 | 20 | 6 | 16 |
| | 1 | P? | Z | 10 02 38 | | | | | | |
| | 1 | P | Z | 10 46 26 | | | | | | |
| | 1 | P | Z | 10 46 26 | | | | | | |
| | 1 | P | Z | 13 08 51 | | | | | | |
| | 1 | P | Z | 21 22 53 | | | | | | |
| | | L | ZNE | 44.5 | 4 | 16 | 2 | 16 | 4 | 17 |
| | 1 | P | Z | 23 34 39 | | | | | | |
| | 2 | P | ZNE | 06 07 27 | 3 | 17 | 1 | 12 | 2 | 15 |
| | | S | ZNE | 15 05 | 4 | 31 | 6 | 35 | 10 | 25 |
| | | SS | ZNE | 18 53 | 4 | 24 | 2 | 18 | 4 | 23 |
| | | e(SSS) | Z | 21 18 | 3 | 18 | | | | |
| | | Lq | N | 21.9 | | | 5 | 17 | | |
| | | Lr | ZE | 22.8 | 11 | 18 | 8 | 15 | 11 | 16 |
| | 2 | P | ZNE | 07 58 12 | 5 | 16 | 3 | 18 | 2 | 10 |
| | | S | ZNE | 08 07 09 | 8 | 15 | 11 | 35 | 8 | 22 |
| | | SS | ZNE | 11 22 | 9 | 32 | 5 | 30 | 4 | 12 |
| | | SSS | ZN | 14 54 | 7 | 23 | 2 | 22 | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| JUN | 2 | Lq | E | 15.3 | | | | | 7 | 20 |
| | | Lr | ZN | 18.6 | 20 | 20 | 12 | 20 | | |
| | 2 | P | Z | 08 46 15 | | | | | | |
| | | (PcP) | Z | 25 | | | | | | |
| | 2 | eP? | Z | 13 40 36 | | | | | | |
| | | eL | ZNE | 58.5 | 1 | 20 | | | | |
| | 2 | P | Z | 17 01 26 | | | | | | |
| | 2 | P | Z | 18 24 09 | | | | | | |
| | 2 | iP | Z | 19 07 31 d | | | | | | |
| | | sP | Z | 08 58 | | | | | | |
| | | PcP | Z | 09 05 | | | | | | |
| | 2 | P | Z | 21 41 15 | | | | | | |
| | 2 | P | Z | 21 41 47 | | | | | | |
| | | eL | ZNE | 22 01.5 | 1 | 20 | 1 | 15 | 2 | 17 |
| | 2 | eL | ZNE | 22 43.8 | 1 | 18 | | | | |
| | 2 | P | Z | 23 29 53 | | | | | | |
| | 3 | P | Z | 03 30 35 | | | | | | |
| | 3 | P | Z | 07 49 14 | | | | | | |
| | | e(L) | Z | 08 14 | 1 | 10 | | | | |
| | 3 | e(P) | Z | 10 39 32 | | | | | | |
| | 3 | e? | Z | 11 52 16 | | | | | | |
| | 3 | iP | Z | 13 23 19 u | | | | | | |
| | 3 | P | Z | 13 32 19 | | | | | | |
| | | (pP) | Z | 34 16 | | | | | | |
| | | (S) | ZNE | 39 20 | 2 | 10 | 1 | 10 | 2 | 20 |
| | | (sS) | ZNE | 43 06 | 1 | 17 | 2 | 20 | 2 | 20 |
| | | (sScS) | ZNE | 46 40 | 1 | 26 | | | | |
| | 3 | L | ZNE | 13 56.5 | 4 | 20 | 3 | 20 | 4 | 15 |
| | 3 | P | Z | 18 27 27 | | | | | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| JUN | 3 | eL | ZNE | 46 | 2 | 18 | 2 | 17 | 3 | 17 |
| | 3 | P | Z | 20 05 44 | | | | | | |
| | | eL | ZE | 27.8 | 1 | 20 | | | | |
| | 3 | (P) | Z | 21 53 54 | | | | | | |
| | 3 | P | Z | 21 58 49 | | | | | | |
| | | (PcP) | Z | 58 | | | | | | |
| | | L | ZNE | 22 21.1 | 1 | 20 | | | 1 | 20 |
| | 4 | e | E | 02 40.5 | | | | | | |
| | 4 | iP | Z | 03 13 08 | | | | | | |
| | | S | E | 20 37 | | | | | | |
| | | (SS) | Z | 24 10 | | | | | | |
| | | L | ZNE | 33.1 | 1 | 17 | 1 | 20 | 2 | 15 |
| | 4 | P | Z | 06 26 30 | | | | | | |
| | | L | ZNE | 30.5 | 2 | 16 | 2 | 15 | 3 | 22 |
| | 4 | e? | Z | 08 29 35 | | | | | | |
| | 4 | P | Z | 09 45 46 | | | | | | |
| | 4 | e? | Z | 10 18 52 | | | | | | |
| | | i? | Z | 57 | | | | | | |
| | 4 | P | Z | 11 33 09 | | | | | | |
| | 4 | PKP | Z | 11 25 06 | | | | | | |
| | | eL | ZE | 12 04 | | | | | | |
| | 4 | e(P) | Z | 11 42 41 | | | | | | |
| | | e | Z | 50 | | | | | | |
| | 5 | P | ZNE | 05 31 36 | | | 4 | 20 | 3 | 19 |
| | | (Lq) | E | 33.0 | | | | | 30 | 12 |
| | | Lr | ZN | 33.1 | 15 | 20 | 21 | 15 | | |
| | 5 | iP | Z | 06 18 38 u | | | | | | |
| | 5 | iP | Z | 13 40 59 u | | | | | | |
| | | eL | ZNE | 42.7 | | | | | | |
| | 5 | P | Z | 19 38 29 | | | | | | |
| | | S | NE | 44 43 | | | 3 | 8 | 3 | 12 |
| | | Lq | NE | 48.1 | | | 6 | 20 | 7 | 16 |
| | | Lr | Z | 49.5 | 8 | 20 | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| JUN | 5 | iP | Z | 20 38 29 d | | | | | | |
| | | (PcP) | Z | 37 | | | | | | |
| | 6 | PKP | Z | 01 36 55 | | | | | | |
| | | e(PS) | E | 48 50 | | | | | | |
| | | (PSPS) | NE | 55 42 | | | | | 3 | 16 |
| | | L | ZNE | 02 14.0 | 8 | 20 | 3 | 20 | 6 | 20 |
| | 6 | P | ZE | 06 05 12 | | | | | | |
| | | i(PcP) | ZNE | 16 dw | | | | | | |
| | 6 | S | ZNE | 06 13 31 | | | | | | |
| | | P'P' | Z | 35 38 | | | | | | |
| | 6 | P | Z | 06 54 30 | | | | | | |
| | 6 | P | Z | 07 04 28 | | | | | | |
| | 6 | P | Z | 08 04 52 | | | | | | |
| | 6 | e? | Z | 08 26 35 | | | | | | |
| | 6 | e? | Z | 09 02 09 | | | | | | |
| | 6 | P | Z | 09 35 33 | | | | | | |
| | 6 | iP | Z | 09 59 33 u | | | | | | |
| | 6 | e? | Z | 12 09 33 | | | | | | |
| | | i? | Z | 41 | | | | | | |
| | 6 | e | Z | 13 51 53 | | | | | | |
| | 6 | P | Z | 17 25 04 | | | | | | |
| | | S | NE | 33 11 | | | | | | |
| | | eLq | NE | 39.1 | | | | | 3 | 20 |
| | | Lr | Z | 41.1 | 4 | 20 | | | | |
| | 7 | P | Z | 02 27 56 | | | | | | |
| | 7 | P | Z | 03 44 20 | | | | | | |
| | 7 | iP | Z | 05 32 38 u | | | | | | |
| | | L | ZNE | 50.4 | 2 | 20 | | | 3 | 18 |
| | 7 | P | Z | 05 36 23 | | | | | | |

| Date | Phase | | h m s | Az Tz | An Tn | Ae Te |
|---|---|---|---|---|---|---|
| JUN 7 | P | Z | 07 09 50 | | | |
| 7 | iP | Z | 11 03 37 d | | | |
| 7 | P | Z | 13 05 58 | | | |
| | e | N | 22.3 | | | |
| | L | ZNE | 23.7 | 3 20 | 2 20 | 3 18 |
| 7 | P | Z | 13 36 22 | | | |
| 7 | P | Z | 14 12(00) | | | |
| | e(S) | NE | 20 28 | | | |
| | L | ZNE | 29.1 | 2 20 | | 2 20 |
| 7 | eL | ZNE | 16 27.3 | | | |
| 7 | e | Z | 19 21 24 | | | |
| 8 | P | Z | 05 22 50 | | | |
| 8 | eP | Z | 07 22 18 | | | |
| 8 | P | Z | 09 41 06 | | | |
| 8 | PKP | Z | 16 39 20 | | | |
| | eL | Z | 17 41.5 | | | |
| 8 | P | Z | 21 51 15 | | | |
| | L | ZNE | 22 07.3 | 2 20 | | 2 20 |
| 9 | (PKP) | Z | 02 59 40 | | | |
| 9 | P | Z | 05 16 15 | | | |
| 9 | P | Z | 06 29 18 | | | |
| 9 | P? | Z | 10 15 13 | | | |
| 9 | P | ZNE | 11 33 22 | 4 13 | 2 16 | |
| | S | ZNE | 41 00 | 3 15 | 7 20 | 7 18 |
| | ScS | E | 43 22 | | | 5 20 |
| | SS | ZNE | 44 41 | 3 16 | | 4 20 |
| | Lq | ZNE | 47.1 | 5 20 | 4 22 | 15 28 |
| | Lr | ZNE | 49.5 | 14 22 | 10 22 | 22 19 |
| 9 | eP | Z | 12 35 18 | | | |



| Date | Phase | | h m s | Az Tz | An Tn | Ae Te |
|---|---|---|---|---|---|---|
| JUN 9 | e(L) | E | 15 44.4 | | | |
| | L | ZN | 50.2 | 1 20 | | |
| 9 | PKP | Z | 18 07 20 | | | |
| | eL | Z | 19 07.4 | | | |
| 10 | i | Z | 07 20 44 | | | |
| 10 | P | Z | 09 17 56 | | | |
| 10 | eL | ZNE | 11 58.6 | | | |
| 10 | e(P) | Z | 12 10 | | | |
| 10 | iP | Z | 14 40 09 d? | | | |
| | S | ZNE | 48 34 | | 1 15 | 1 15 |
| | L | ZNE | 59.5 | 3 20 | 2 20 | 3 20 |
| 10 | P | ZN | 21 21 58 | 2 10 | | |
| | S | ZNE | 30 07 | 3 12 | 5 21 | 7 12 |
| | SS | ZNE | 34 11 | 2 16 | 2 20 | 3 13 |
| | eL | ZNE | 37.2 | 7 20 | 5 20 | 9 16 |
| 11 | e? | Z | 00 03 22 | | | |
| 11 | iP | ZNE | 00 46 28 u | | | |
| | iS | ZNE | 56 07 s? | 1 17 | 4 16 | 3 20 |
| | (sS) | ZNE | 57 35 | 1 20 | | 2 18 |
| | SS | NE | 01 01 23 | | 2 27 | 3 22 |
| | Lq | NE | 08.1 | | 4 40 | 3 30 |
| | eLr | ZNE | 11.8 | | | |
| 11 | eP | Z | 04 07 46 | | | |
| 11 | e? | Z | 09 55 25 | | | |
| 11 | P | Z | 13 35 56 | | | |
| 11 | eiP | ZNE | 15 24 43 | 22 14 | 9 15 | 7 12 |
| | iS | ZNE | 33 30 w | 25 21 | 150 32 | 63 35 |
| | SS | ZNE | 37 28 | 23 27 | 64 25 | 70 23 |
| | SSS | ZN | 39 48 | 14 24 | 38 48 | |
| | Lq | NE | 40.5 | | 64 36 | 100 32 |
| | Lr | Z | 43.5 | 87 20 | | |
| | P'P' | Z | 53 38 | | | |

| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| JUN 11 | P | Z | 17 18 28 | | | | | | |
| 11 | P | Z | 17 44 48 | | | | | | |
| 11 | e? | Z | 17 49 33 | | | | | | |
| 11 | P | Z | 18 31 27 | | | | | | |
| 11 | P | Z | 21 05 30 | | | | | | |
| 11 | P? | Z | 23 11 14 | | | | | | |
| 12 | P | Z | 00 13 22 | | | | | | |
| 12 | P | Z | 04 04 50 | | | | | | |
| 12 | e(P) | Z | 07 05 46 | | | | | | |
| 12 | P | Z | 07 10 56 | | | | | | |
| 12 | P | ZE | 07 29 23 | 2 | 21 | | | | |
| | S | ZNE | 37 19 | 12 | 23 | 7 | 24 | 30 | 28 |
| | SS | ZNE | 41 12 | 7 | 26 | 5 | 26 | 9 | 21 |
| | Lq | ZNE | 43.1 | 7 | 30 | 16 | 38 | 9 | 30 |
| | Lr | ZE | 45.7 | 46 | 30 | | | 46 | 30 |
| | e? | Z | 59 38 | | | | | | |
| 12 | P | Z | 07 48 41 | | | | | | |
| | Lr | ZE | 08 05.0 | 5 | 20 | | | 6 | 20 |
| 12 | iP | Z | 15 14 25 d | | | | | | |
| | e(L) | ZE | (30) | | | | | | |
| 12 | P | Z | 15 25 20 | | | | | | |
| 12 | eP | Z | 21 13 58 | | | | | | |
| | eL | ZE | 34.7 | 1 | 20 | | | 1 | 20 |
| 13 | P | Z | 00 42 06 | | | | | | |
| | eL | ZE | 01 04 | | | | | | |
| 13 | eP? | Z | 02 11 11 | | | | | | |
| 13 | iP | ZNE | 05 56 36 u | 2 | 13 | | | 1 | 8 |
| | S | ZNE | 06 04 21 | 2 | 19 | 4 | 20 | 7 | 25 |
| | SS | ZNE | 08 00 | 1 | 21 | 1 | 21 | 2 | 14 |
| | Lq | NE | 10.3 | | | 3 | 20 | 2 | 16 |



| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| JUN 13 | Lr | ZE | 12.4 | 5 | 24 | | | 5 | 22 |
| 13 | e? | Z | 16 08 05 | | | | | | |
| 13 | iP | Z | 23 41 40 d | | | | | | |
| 14 | P | Z | 03 04 03 | | | | | | |
| | (PcP) | Z | 12 | | | | | | |
| | eL | ZNE | 21.7 | | | | | | |
| 14 | P | Z | 11 56 17 | | | | | | |
| 14 | e? | Z | 19 07 42 | | | | | | |
| 14 | P | Z | 19 32 30 | | | | | | |
| 14 | P | Z | 23 48 47 | | | | | | |
| | eS | ZNE | 57 50 | | | | | | |
| | eSS | E | 24 01 20 | | | | | | |
| | Lq | E | 05.1 | | | | | 1 | 20 |
| | Lr | ZN | 07.6 | 1 | 20 | | | | |
| 15 | P? | Z | 00 35 22 | | | | | | |
| 15 | P | Z | 08 14 33 | | | | | | |
| 15 | P | Z | 09 50 01 | | | | | | |
| | eL | ZNE | 10 05.7 | 1 | 20 | 1 | 18 | 2 | 16 |
| 15 | P | Z | 11 27 49 | | | | | | |
| | eS | NE | 36 11 | | | | | | |
| | eL | ZNE | 46 | 1 | 18 | 1 | 20 | 2 | 16 |
| 15 | e(PKP) | Z | 15 56 28 | | | | | | |
| | ePKKP | Z | 16 06 05 | 1 | 15 | | | | |
| | e(SS) | E | 12 22 | | | | | | |
| | e | E | 16 10 | | | | | | |
| | eL | ZNE | 30.5 | 2 | 30 | 1 | 30 | | |
| 15 | e? | Z | 17 13 57 | | | | | | |
| | eL | ZE | 45 | 1 | 30 | | | | |
| 15 | e? | Z | 19 19 13 | | | | | | |
| 15 | P | Z | 19 42 57 | | | | | | |

| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| JUN 15 | iP | ZN | 22 57 25 d | 1 | 10 | | | | |
| | S | NE | 03 43 | | | 2 | 11 | 5 | 15 |
| | Lq | NE | 06.6 | | | 6 | 17 | 8 | 14 |
| | Lr | Z | 09.4 | 8 | 17 | | | | |
| 15 | P | Z | 23 02 24 | | | | | | |
| 15 | P | ZNE | 23 39 09 | 4 | 12 | | | | |
| | S | ZNE | 45 26 | 5 | 13 | 5 | 12 | 15 | 16 |
| | Lq | NE | 48.4 | | | 22 | 20 | 31 | 12 |
| | Lr | Z | 50.4 | 55 | 20 | | | | |
| 16 | e | Z | 03 14 07 | | | | | | |
| | eL | NE | 30.7 | | | 2 | 20 | 2 | 18 |
| 16 | e? | Z | 03 34 56 | | | | | | |
| 16 | P | Z | 03 37 16 | | | | | | |
| 16 | P | Z | 04 13 03 | | | | | | |
| 16 | P | Z | 04 44 50 | | | | | | |
| 16 | P? | Z | 06 47 49 | | | | | | |
| 16 | P | Z | 06 51 00 | | | | | | |
| 16 | P | Z | 09 12 23 | | | | | | |
| | eS | E | 18 22 | | | | | | |
| | eL | NE | 21.1 | | | 2 | 30 | 3 | 18 |
| 16 | P | Z | 10 08 07 | | | | | | |
| 16 | P | Z | 10 35 18 | | | | | | |
| | eL | NE | 11 03.6 | | | 2 | 20 | 3 | 18 |
| 16 | e(P) | Z | 11 47 40 | | | | | | |
| 16 | P? | Z | 12 53 26 | | | | | | |
| 16 | P | Z | 17 22 13 | | | | | | |
| | S | E | 27 44 | | | | | 1 | 16 |
| | eL | NE | 30.5 | | | 1 | 20 | 2 | 20 |
| 16 | P | Z | 21 33 40 | | | | | | |
| | S | E | 39 12 | | | | | 1 | 17 |
| | eL | NE | 45.1 | | | 1 | 20 | 2 | 20 |
| 17 | P | Z | 00 29 17 | | | | | | |
| 17 | iP | Z | 05 11 12 u | | | | | | |
| 17 | P | Z | 11 00 54 | | | | | | |
| 17 | (PKP) | Z | 16 54 47 | | | | | | |
| | e | Z | 17 06 37 | 1 | 14 | | | | |
| | eL | ZN | 32.7 | 2 | 20 | 1 | 20 | | |
| 17 | L | ZNE | 20 38.1 | 1 | 13 | 2 | 16 | 3 | 15 |
| 18 | eP | Z | 02 40 32 | | | | | | |
| | S | ZNE | 47 02 | | | 2 | 15 | 2 | 16 |
| | (ScS) | ZNE | 50 38 | 2 | 16 | 1 | 15 | 2 | 17 |
| | (Lq) | NE | 51.6 | | | 2 | 17 | 4 | 17 |
| | Lr | ZN | 52.6 | 5 | 20 | 3 | 20 | | |



| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| JUN 18 | eL | ZNE | 23 03 | 2 | 20 | | | | |
| 19 | P | Z | 02 49 46 | | | | | | |
| | eL | Z | 03 08.6 | | | | | | |
| 19 | P | Z | 05 35 08 | | | | | | |
| 19 | P | Z | 09 54 03 | | | | | | |
| 19 | iP | Z | 10 27 18 d | | | | | | |
| 19 | P | Z | 12 30 59 | | | | | | |
| 19 | P? | Z | 18 04 23 | | | | | | |
| 19 | P | Z | 21 53 17 | | | | | | |
| | L | Z | 22 15.2 | 3 | 18 | | | | |
| 20 | iP | ZNE | 02 11 27 d | 21+ | 15 | 8 | 13 | 14 | 13 |
| | (PcP) | Z | 31 | | | | | | |
| | S | ZNE | 19 45 | 25+ | 30 | 59 | 16 | | |
| | SS | ZNE | 23 55 | 28+ | 26 | 28 | 29 | 32 | 19 |
| | Lq | NE | 26.9 | | | | | | |
| | Lr | ZNE | 30 | | | | | | |
| | eP'P' | Z | 40 28 | | | | | | |
| 20 | iP | ZNE | 13 09 53 d | 9 | 16 | 6 | 15 | 9 | 10 |
| | (PcP) | Z | 10 04 | | | | | | |
| | S | ZNE | 18 09 | 18 | 19 | 26 | 24 | 41 | 25 |
| | SS | ZNE | 22 16 | 19 | 32 | 13 | 32 | 18 | 28 |
| | Lq | NE | 25.1 | | | 43 | 28 | 30 | 30 |
| | Lr | ZNE | 27.5 | 115± | 20 | 50 | 17 | 69 | 20 |
| | P'P' | Z | 39 06 | | | | | | |
| 20 | P | Z | 13 34 20 | | | | | | |
| 20 | P | Z | 14 33 28 | | | | | | |
| 20 | P | Z | 17 09 52 | | | | | | |
| | (PcP) | Z | 58 | | | | | | |
| | eL | ZNE | 30 | 3 | 20 | 1 | 20 | 2 | 20 |
| 21 | P | Z | 06 43 17 | | | | | | |
| 21 | eP | Z | 08 47 20 | | | | | | |
| | eL | Z | 09 16.5 | | | | | | |
| 21 | P? | Z | 10 00 55 | | | | | | |
| 21 | P | Z | 12 55 50 | | | | | | |
| 21 | (P) | Z | 13 57 14 | | | | | | |
| 21 | P | Z | 18 18 07 | | | | | | |
| 21 | iP | ZNE | 21 42 22 d | 2 | 8 | 1 | 8 | | |
| | S | ZNE | 49 15 | | | 4 | 20 | 3 | 20 |
| | (SS) | ZN | 52 45 | 2 | 16 | 3 | 13 | | |
| | Lq | ZE | 52.5 | 3 | 19 | | | 15 | 26 |
| | Lr | ZNE | 56.1 | 3 | 15 | 6 | 20 | 12 | 17 |
| 22 | eP? | Z | 02 35 23 | | | | | | |
| 22 | P | ZNE | 03 01 11 | 1 | 18 | 2 | 18 | | |
| | L | ZNE | 03.5 | 11 | 22 | 10 | 20 | 17± | 12 |
| 22 | P? | Z | 04 30 04 | | | | | | |
| | PcP? | Z | 11 | | | | | | |
| 22 | iP | Z | 06 50 22 u | | | | | | |
| | eL | ZNE | 07 09 | 2 | 20 | 1 | 30 | 1 | 20 |

| Date | Phase | | h m s | Az | Tn | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| JUN 22 | P | Z | 08 21 26 | | | | | | |
| | eL | Z | 42 | | | | | | |
| 22 | eP | Z | 09 07 50 | | | | | | |
| | eL | ZNE | 27.6 | 2 | 20 | 1 | 20 | 2 | 22 |
| 22 | e? | Z | 17 03 17 | | | | | | |
| | eL | ZNE | 09.8 | 1 | 20 | | | | |
| 22 | iP | Z | 20 23 35 u | | | | | | |
| | eL | ZNE | 42.7 | 2 | 20 | | | | |
| 22 | P | Z | 21 57 10 | | | | | | |
| | eL | ZN | 22 19.6 | 1 | 20 | | | | |
| 22 | P | Z | 23 57 27 | | | | | | |
| | L | ZNE | 59.4 | 1 | 22 | 1 | 20 | | |
| 23 | P | Z | 00 02 51 | | | | | | |
| | L | ZNE | 04.9 | 1 | 19 | 1 | 15 | 1 | 13 |
| 23 | P | Z | 12 19 27 | | | | | | |
| | eL | Z | 47.2 | 1 | 20 | | | | |
| 24 | e | Z | 02 19 05 | | | | | | |
| 24 | eS | ZNE | 15 48 13 | 1 | 15 | 1 | 15 | 1 | 15 |
| | L | ZNE | 52.5 | 3 | 20 | 2 | 20 | 2 | 20 |
| 24 | eL | ZE | 18 28 | | | | | | |
| 24 | e(S) | E | 22 49 13 | | | | | 1 | 10 |
| | eL | NE | 52.8 | 1 | 20 | | | 1 | 15 |
| 25 | e(L) | Z | 01 00.8 | | | | | | |
| 25 | P | ZNE | 02 10 40 | 1 | 13 | | | | |
| | S | ZNE | 17 05 | 2 | 15 | 4 | 16 | 4 | 16 |
| | Lq | ZE | 20.4 | 2 | 20 | | | 5 | 26 |
| | Lr | ZN | 22.8 | 5 | 18 | 3 | 20 | | |
| 25 | eP? | Z | 07 25 39 | | | | | | |
| 25 | iP | Z | 14 49 49 d | 5 | 20 | 3 | 16 | | |
| | e | Z | 57 | | | | | | |
| | iS | ZNE | 56 17 se | 12 | 22 | 19 | 20 | 16 | 21 |
| | Lq | ZNE | 59.6 | 14 | 25 | 8 | 38 | 35 | 36 |
| | Lr | ZN | 15 01.3 | 31 | 18 | 18 | 19 | | |
| 25 | iP | ZNE | 19 46 46 u | | | | | | |
| | (S) | N | 56 03 | | | 1 | 15 | | |
| 26 | P | Z | 06 26 30 | | | | | | |
| | eL | ZE | 43.2 | 1 | 17 | | | 1 | 18 |
| 26 | P? | Z | 15 42 09 | | | | | | |
| 26 | P | Z | 16 59 46 | | | | | | |
| | eL | ZE | 17 23.4 | 2 | 20 | | | | |
| 27 | eP? | Z | 03 21 29 | | | | | | |
| 27 | P | Z | 16 58 07 | 2 | 10 | | | | |
| | S | NE | 17 04 22 | | | | | 5 | 13 |
| | e(SS) | Z | 06 45 | 4 | 12 | | | | |
| | Lq | E | 07.4 | | | | | 8 | 15 |
| | Lr | ZN | 09.3 | 13 | 20 | 7 | 20 | | |



| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| JUN 27 | eP? | Z | 18 11 20 | | | | | | |
| 28 | P | Z | 01 12 47 | | | | | | |
| 28 | P? | Z | 01 41 51 | | | | | | |
| | i? | Z | 56 | | | | | | |
| 28 | P? | Z | 14 23 54 | | | | | | |
| 28 | P? | Z | 15 22 13 | | | | | | |
| 28 | P | ZNE | 15 38 59 | 1 | 10 | | | | |
| | S | NE | 46 07 | | | 2 | 20 | 1 | 8 |
| | eL | ZNE | 16 00.6 | 3 | 18 | 3 | 16 | 2 | 18 |
| 28 | P | Z | 16 16 01 | | | | | | |
| 29 | iP | Z | 01 28 15 d | | | | | | |
| 29 | P | Z | 02 07 02 | | | | | | |
| | S | ZNE | 15 00 | | | 3 | 25 | 4 | 32 |
| | Lq | NE | 21.4 | | | 3 | 27 | 3 | 23 |
| | Lr | ZNE | 24.2 | 7 | 20 | 4 | 21 | 4 | 20 |
| 29 | P | ZNE | 04 37 15 | 3 | 13 | 2 | 14 | 1 | 9 |
| | S | ZNE | 43 43 | 4 | 15 | 7 | 13 | 7 | 18 |
| | L | ZNE | 47.1 | 11 | 18 | 6 | 19 | 8 | 28 |
| 29 | P | Z | 09 54 37 | | | | | | |
| | S | ZNE | 10 02 36 | 3 | 20 | | | 4 | 22 |
| | e(Lq) | N | 08.5 | | | 3 | 20 | | |
| | Lr | ZE | 10.9 | 9 | 29 | | | 6 | 28 |
| 29 | e(L) | ZN | 18 18 | 2 | 20 | | | | |
| 30 | P | Z | 10 00 33 | | | | | | |
| 30 | P | Z | 11 56 19 | | | | | | |
| 30 | P | Z | 15 50 15 | | | | | | |
| 30 | ePKP? | Z | 20 17 51 | | | | | | |
| 30 | P | Z | 23 21 10 | | | | | | |
| JUL 1 | ePKP | Z | 08 18 29 | | | | | | |
| 2 | P | Z | 09 07 30 | | | | | | |
| | e | Z | 36 | | | | | | |
| | eS | E | 15 13 | | | | | | |
| | eLr | ZNE | 23.1 | 1 | 24 | | | | |
| | eL | ZNE | 28.1 | 1 | 18 | | | | |
| 2 | iP | ZNE | 12 04 47 d | | | | | | |
| | PP | Z | 06 40 | | | | | | |
| | PPP | Z | 07 52 | | | | | | |
| | iScP | Z | 09 46 d | | | | | | |
| | S | NE | 12 02 | | | 3 | 25 | 3 | 28 |
| | ScS | E | 14 27 | | | | | | |
| | iSS | E | 15 45 e | | | | | 2 | 18 |
| | eLq | ZE | 17.0 | 4 | 18 | | | 6 | 30 |
| | eLr | ZNE | 20.2 | 10 | 45 | 10 | 45 | 4 | 38 |
| 2 | iPKP | Z | 22 12 20 u | | | | | | |
| 3 | iPKP | Z | 20 39 43 u | | | | | | |
| | eSKS | N | 46 44 | | | 3 | 12 | | |

| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| JUL 3 | PS | ZN | 51 17 | 4 | 14 | 3 | 12 | | |
| | PPS | ZN | 52.6 | | | 3 | 27 | | |
| | e(P'P') | Z | 56.8 | | | | | | |
| | SS | E | 57 54 | | | | | 5 | 33 |
| | i(SKKS) | ZN | 58 33 s | 6 | 27 | 12 | 28 | | |
| | SSS | N | 21 02 10 | | | 3 | 16 | | |
| | eLr | ZNE | 17.0 | 4 | 35 | 3 | 35 | | |
| | M | | 21 | 7 | 23 | 4 | 25 | | |
| | eLr2 | ZN | 22 14 | 4 | 40 | 3 | 45 | | |
| 3 | PKP | Z | 23 11 22 | | | | | | |
| 4 | PKP | Z | 04 47 48 | | | | | | |
| | PP | Z | 50.1 | | | | | | |
| | SKP | ZNE | 51 16 | 3 | 9 | 2 | 9 | 2 | 9 |
| | SKKS | Z | 57.0 | | | | | | |
| | PPS | Z | 05 01.9 | | | | | | |
| | SS | ZNE | 07 40 | 5 | 25 | 9 | 35 | 10 | 30 |
| | SSS | N | 12 43 | | | 5 | 25 | | |
| | eLq | NE | 22.3 | | | 6 | 45 | 6 | 50 |
| | Lr | ZNE | 28.2 | 35 | 35 | 21 | 35 | 19 | 35 |
| | eLr2 | ZE | 06 20 | 5 | 35 | | | | |
| 4 | eLr | ZNE | 14 09.6 | 3 | 35 | 2 | 35 | 2 | 30 |
| 4 | eP | Z | 14 25 36 | | | | | | |
| 4 | iP | ZE | 21 39 06 u | | | | | | |
| | (S) | Z | 46.5 | | | | | | |
| | eLr | ZNE | 56.0 | 2 | 28 | | | | |
| 5 | eP | Z | 03 55 27 | | | | | | |
| 5 | PKP? | Z | 05 26 56 | | | | | | |
| 5 | iP | Z | 05 55 42 d | | | | | | |
| | S | NE | 06 04.1 | | | | | | |
| | ScS | N | 05 29 | | | | | | |
| | eL | NE | 15.7 | | | 3 | 18 | 3 | 20 |
| 5 | P | Z | 08 16 45 | | | | | | |
| | i(pP) | Z | 54 u | | | | | | |
| | PcS | Z | 20 20 | | | | | | |
| | (ScP) | Z | 34 | | | | | | |
| 5 | eP | Z | 20 51 24 | | | | | | |
| 5 | P | Z | 21 27 17 | | | | | | |
| 6 | eiPKP | Z | 05 35 28 | | | | | | |
| 6 | eP | Z | 07 16.6 | | | | | | |
| | eS | ZNE | 25.0 | | | 3 | 28 | 3 | 28 |
| | eL | ZNE | 34 | 5 | 20 | 4 | 18 | 5 | 18 |
| 6 | P | Z | 14 54 56 | | | | | | |
| | S | Z | 15 05 07 | | | | | | |
| 6 | eP | Z | 20 48 52 | | | | | | |
| | eS | Z | 57 14 | | | | | | |
| 6 | eP | Z | 23 28 42 | | | | | | |
| 6 | iP | Z | 23 46 59 u | | | | | | |
| 7 | eL | N | 08 40.1 | | | | | | |
| 7 | eL | N | 09 07.0 | | | | | | |



| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| JUL 7 | iP | Z | 15 57 03 u | | | | | | |
| | eL | Z | 16 17.6 | 1 | 16 | | | | |
| 7 | eP | Z | 16 55 03 | | | | | | |
| | eS | ZE | 17 03 07 | 1 | 20 | | | | |
| | eLq | N | 09.5 | | | 2 | 15 | | |
| | eLr | ZE | 11.0 | 2 | 30 | | | 2 | 22 |
| 7 | eiP | Z | 17 48 09 | | | | | | |
| | e | Z | 51.0 | | | | | | |
| | eL | Z | 18 11.1 | | | | | | |
| 7 | eP | Z | 18 25 41 | | | | | | |
| 7 | iP | Z | 21 51 15 d | | | | | | |
| | eS | Z | 59 15 | | | | | | |
| 7 | eP | Z | 23 18 28 | | | | | | |
| 8 | eP | Z | 13 05 43 | | | | | | |
| 8 | eP | Z | 15 13 16 | | | | | | |
| 8 | iP | Z | 15 33 15 d | | | | | | |
| 9 | eiP | Z | 17 56 36 | | | | | | |
| | e(SS) | E | 18 09.0 | | | | | | |
| | eL | NE | 19.5 | | | | | 2 | 18 |
| 10 | eP? | Z | 00 18 00 | | | | | | |
| | i | ZE | 08 | | | | | | |
| | PP | ZE | 21 23 | | | | | | |
| | eSKS | ZNE | 28 23 | | | | | 13 | 20 |
| | eSS | NE | 34 10 | | | | | 9 | 26 |
| | eL | E | 45 | | | | | 5 | 33 |
| | M | E | 49 | | | | | 14 | 23 |
| 10 | eP | Z | 20 28 06 | | | | | | |
| | eS | ZNE | 32 18 | | | | | | |
| | eL | E | 33.0 | | | | | | |
| | eL | N | 33.5 | | | | | 2 | 14 |
| 11 | iP | Z | 07 08 45 u | | | | | | |
| | eS | Z | 15 24 | | | | | | |
| | eLr | Z | 29 20 | | | | | | |
| 11 | P | Z | 07 38 30 | | | | | | |
| | S | ZNE | 42 42 | | | | | | |
| | eL | ZE | 44 | 4 | 14 | | | 4 | 14 |
| | ScP | Z | 45 36 | | | | | | |
| | eL | N | 47 | | | | | 3 | 12 |
| 11 | iP | Z | 08 17 10 d | | | | | | |
| | eL | ZNE | 38 | 1 | 16 | | | | |
| 11 | iP | ZN | 12 05 02 u | | | | | | |
| | PcP | Z | 55 | | | | | | |
| | S | ZNE | 13 02 | 2 | 15 | 3 | 15 | 2 | 10 |
| | Lq | E | 19.5 | | | | | 5 | 20 |
| | eLr | ZN | 21.9 | 2 | 28 | | | | |
| | M | | 30 | 5 | 16 | 4 | 18 | | |
| | P'P' | Z | 35 19 | | | | | | |
| 11 | eP | Z | 16 32 16 | | | | | | |
| | eS | E | 40.1 | | | | | | |
| | eL | ZNE | 48.5 | 1 | 40 | | | | |

| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| JUL 13 | iP | ZN | 08 05 22 d | | | | | | |
| | PcP | ZN | 06 25 | | | | | | |
| | PP | ZN | 07 25 | | | | | | |
| | S | ZNE | 13 00 | 21 | 15 | | | 14 | 15 |
| | SS | E | 17 | | | | | 6 | 20 |
| | eLr | ZNE | 21 | 20 | 50 | 16 | 45 | 15 | 50 |
| | M | ZNE | 26.5 | 48 | 25 | 35 | 20 | 18 | 18 |
| 13 | eiPKP | Z | 13 20 37 ud | | | | | | |
| 13 | eP | Z | 13 38 49 | | | | | | |
| 13 | iP | Z | 14 38 35 u | | | | | | |
| 13 | iP | Z | 17 12 06 d | | | | | | |
| 13 | iP | Z | 21 57 52 d | | | | | | |
| 14 | eiP | ZE | 10 39 21 d | | | | | | |
| | S | NE | 49 31 | | | | | | |
| | (SKS) | ZE | 50 00 | | | | | | |
| | eLq | E | 11 02 | | | | | 3 | 50 |
| | eLr | ZN | 07 | 2 | 40 | | | | |
| | M | ZN | 14 | 4 | 20 | 2 | 20 | | |
| 14 | eiP | Z | 10 53 03 ud | | | | | | |
| 14 | eLr | ZN | 19 40 | | | | | | |
| 15 | P | Z | 05 15 00 | | | | | | |
| 15 | eP | Z | 05 43 50 | | | | | | |
| | (S) | ZE | 48 28 u | 2 | 30 | | | 2 | 25 |
| | M | | 53 | 4 | 19 | 2 | 16 | 3 | 16 |
| 16 | iP | Z | 04 56 24 d | | | | | | |
| 16 | eL | Z | 08 47.5 | | | | | | |
| 17 | P | Z | 02 28 04 | | | | | | |
| 17 | eL | Z | 04 56.5 | | | | | | |
| 17 | eL | ZE | 06 19.5 | 1 | 25 | | | | |
| 17 | iP | Z | 20 03 33 u | | | | | | |
| | eL | Z | 24 | | | | | | |
| 18 | eP | Z | 01 07 14 | | | | | | |
| 18 | eP | ZN | 01 54 15 | | | | | | |
| | eS | ZNE | 02 03 12 | 4 | 15 | 4 | 22 | 4 | 15 |
| | eSS | ZNE | 07 44 | 5 | 27 | 5 | 30 | 4 | 25 |
| | eSSS | Z | 11.0 | 3 | 38 | | | | |
| | e(PKKP) | ZN | 12.5 | 5 | 25 | 3 | 30 | | |
| | eLr | ZNE | 15.3 | 4 | 30 | | | | |
| | e(SKKP) | ZN | 17.1 | 7 | 20 | 5 | 25 | | |
| | e(SKKS) | ZNE | 21.5 | 6 | 18 | | | | |
| | eP'P' | Z | 22 33 | | | | | | |
| 18 | eP | Z | 06 38 42 | | | | | | |
| 18 | eiP | Z | 07 56 30 du | | | | | | |
| | ePcP | Z | 57 29 | | | | | | |
| | ePP | Z | 58 33 | | | | | | |
| | eL | Z | 08 12.0 | 1 | 30 | | | | |



| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| JUL 18 | eP | Z | 19 03.8 | | | | | | |
| | eLr | ZNE | 34.5 | | | | | | |
| 19 | eiP | Z | 04 32 12 du | | | | | | |
| | eLr | ZE | 05 00.5 | | | | | | |
| 19 | iP | Z | 11 24 07 u | | | | | | |
| 19 | eiP | Z | 18 42 11 du | | | | | | |
| 20 | PKP | Z | 09 49 33 | | | | | | |
| | eLr | Z | 10 29.5 | | | | | | |
| 20 | eiP | ZN | 21 08 21 ud | | | | | | |
| | eS | ZNE | 15 50 | | | | | | |
| | eSS | N | 20.5 | | | | | | |
| | eLq | E | 21.3 | | | | | | |
| | G | NE | 22.0 | | | | | 4 | 30 |
| | eLr | ZN | 24.5 | 5 | 26 | | | 3 | 26 |
| | M | ZN | 28 | 10 | 20 | | | 7 | 20 |
| 20 | eP | Z | 21 48 41 | | | | | | |
| | eS | E | 57 51 | | | | | | |
| | eLq | N | 22 04.3 | | | | | | |
| | eLr | ZE | 08.0 | | | | | | |
| | M | ZE | 10 | | | | | | |
| 21 | iP | Z | 08 07 11 d | | | | | | |
| 21 | iP! | ZN | 08 23 57 u | | | | | | |
| | eS | ZNE | 25(56) | | | | | | |
| 23 | eL | Z | 00 39.7 | | | | | | |
| 23 | e(S) | Z | 02 59.7 | | | | | | |
| | eL | ZN | 03 12.7 | | | | | | |
| 23 | eL | Z | 06 10.5 | | | | | | |
| 23 | eiP | Z | 07 39 54 | | | | | | |
| | eP'P' | Z | 08 09 17 | | | | | | |
| 23 | eL | ZN | 13 02.5 | | | | | | |
| 24 | e(SS) | ZN | 10 28.4 | | | | | | |
| | eLq | E | 42.5 | | | | | | |
| | eLr | ZN | 50.5 | | | | | | |
| 24 | eP | Z | 10 41 29 | | | | | | |
| 24 | eiP | Z | 10 47 38 ud | | | | | | |
| 24 | eP | Z | 23 24 26 | | | | | | |
| | eL | Z | 47 | | | | | | |
| 25 | ePKP | Z | 04 00.6 | | | | | | |
| | ePP | ZN | 02 18 | | | | | | |
| | ePS | ZNE | 12 28 | | | | | | |
| | eLq | E | 34 | | | | | | |
| | eLr | ZN | 42 | | | | | | |
| 25 | eP | Z | 04 13 09 | | | | | | |
| | e(S) | ZNE | 18.1 | | | | | | |
| | eLq | N | 19.3 | | | | | | |

| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| JUL 25 | eLr | ZE | 20.1 | | | | | | |
| | M | ZNE | 22 | 34 | 12 | 55 | 15 | 35 | 15 |
| 25 | eP | Z | 11 28 11 | | | | | | |
| | iPKP | Z | 30 53 u | | | | | | |
| | pPKP | Z | 31 29 | 3 | 10 | | | | |
| | iPP | ZNE | 32 50 us | 12 | 15 | 5 | 15 | 2 | 10 |
| | iSKS | N | 37 45 s | | | 7 | 18 | | |
| | iSKKS | N | 39 31 s | | | 10 | 18 | | |
| | e | E | 40 49 | | | | | 4 | 18 |
| | e | Z | 42 | | | | | | |
| | SP | ZNE | 42 44 | 20 | 18 | 10 | 18 | 5 | 15 |
| | e | Z | 44.0 | | | | | | |
| | iSS | NE | 49 50 w | | | 8 | 25 | 22 | 25 |
| | (sSS) | N | 50 18 | | | 22 | 20 | | |
| | SSS | ZE | 54.5 | 15 | 25 | | | 15 | 20 |
| | eLq | E | 12(02) | | | | | 10 | 70 |
| | M | E | 05 | | | | | 22 | 25 |
| | eLr | ZN | 10 | | | | | | |
| 25 | M | ZN | 12 12 | | | | | | |
| | eLq2 | E | 47 | | | | | | |
| | eLr2 | Z | 13 00 | | | | | | |
| 25 | ePKP | Z | 15 46 35 | | | | | | |
| 25 | eP | Z | 21 48 05 | | | | | | |
| | eS | Z | 58 14 | | | | | | |
| | eL | ZNE | 22 09.5 | 2 | 25 | | | | |
| 26 | iP | Z | 01 18 43 | | | | | | |
| 26 | ePKP | Z | 04 14 06 | | | | | | |
| | ePP | Z | 18 12 | | | | | | |
| 26 | eP | Z | 19 38 35 | | | | | | |
| | eS | N | 40.0 | | | 6 | 12 | | |
| 26 | eS | ZNE | 22 08 15 | | | | | | |
| | eL | N | 09 15 | | | 7 | 18 | | |
| | eL | ZE | 09.8 | 3 | 12 | | | 5 | 12 |
| 26 | eP | Z | 22 51.4 | | | | | | |
| | e | | 55 22 | | | | | | |
| 27 | P | Z | 04 06 02 | | | | | | |
| | e(SS) | Z | 17 08 | | | | | | |
| | eL | Z | 23 | | | | | | |
| 27 | eP | Z | 09 08 19 | | | | | | |
| | eS | Z | 18.0 | | | | | | |
| | eLr | ZE | 32 | | | | | | |
| | M | Z | 35 | 2 | 25 | | | | |
| 27 | eiP | ZNE | 10 14 22 use | 9 | 12 | 2 | 10 | 6 | 10 |
| | PP | ZE | 16 25 | | | | | | |
| | PPP | Z | 17 27 | | | | | | |
| | PcS | E | 19 20 | | | | | | |
| | S | ZNE | 22 14 | | | 5 | 10 | 7 | 22 |
| | ScS | N | 24.3 | | | 4 | 12 | | |
| | SS | N | 25.9 | | | 3 | 15 | | |
| | eLq | N | 28 08 | | | | | | |
| | eLr | ZE | 30.3 | 8 | 23 | | | 4 | 25 |
| | M | | 36 | 23 | 18 | 7 | 18 | 17 | 18 |
| | eP'P' | Z | 44.4 | | | | | | |



| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| JUL 27 | eP | Z | 13 36 36 | | | | | | |
| 27 | P | Z | 14 20 51 | | | | | | |
| 27 | P | Z | 21 09 15 | | | | | | |
| 28 | e | Z | 05 34 54 | | | | | | |
| | i | Z | 35 01 | | | | | | |
| 28 | iP | Z | 10 45 54 u | | | | | | |
| 29 | eiP | ZE | 00 33 24 u | 8 | 10 | | | | |
| | PcP | Z | 34 22 | | | | | | |
| | PP | Z | 35 01 | | | | | | |
| | (S) | Z | 40 43 | | | | | | |
| | S | E | 57 | | | | | 7 | 16 |
| | M | | 49 | 20 | 25 | 22 | 28 | 30 | 25 |
| 29 | eiP | Z | 01 59 41 ud | | | | | | |
| 29 | eP | Z | 11 26 56 | | | | | | |
| | eL | ZE | 50 | | | | | | |
| 29 | eP | Z | 13 34 38 | | | | | | |
| | eL | ZE | 48.5 | | | | | | |
| 29 | ePKP | Z | 14 52 45 | | | | | | |
| 29 | eiP | Z | 15 27 45 ud | | | | | | |
| | e(S) | Z | 33.7 | | | | | | |
| | eL | ZE | 36.4 | | | | | | |
| | M | | 40 | 2 | 20 | | | | |
| 29 | P | Z | 15 37 20 | | | | | | |
| | eL | ZNE | (44) | | | | | | |
| | M | Z | 47 | 2 | 22 | | | | |
| 29 | P | Z | 16 03 08 | | | | | | |
| | eL | ZN | 21.2 | | | | | | |
| | M | | 24 | 2 | 18 | | | | |
| 29 | P | Z | 17 46 34 | 2 | 20 | | | | |
| | ePKP | Z | 50 15 | | | | | | |
| | e | ZE | 50.7 | | | | | | |
| | ePP | ZNE | 51 28 | 6 | 16 | 3 | 16 | 2 | 15 |
| | ePPP | Z | 53 50 | | | | | | |
| | eSKS | ZN | 57.0 | 3 | 20 | 4 | 35 | | |
| | eSKKS | E | 59 00 | | | | | | |
| | PS | ZNE | 18 00 48 | 17 | 28 | | | 7 | 22 |
| | SS | ZNE | 07.0 | 5 | 35 | 20 | 35 | 12 | 42 |
| | SSS | NE | 11 00 | | | | | | |
| | eLq(G) | E | 19.5 | | | | | 15 | 47 |
| | e | Z | 22.4 | 16 | 30 | | | | |
| | M | E | 24.5 | | | | | 8 | 40 |
| | eLr | ZN | 24.5 | 10 | 35 | | | | |
| | M | ZN | 27.5 | 30 | 30 | 25 | 28 | | |
| | eLq2 | NE | 19 16.0 | | | | | 7 | 50 |
| | eLr2 | ZN | 29 | 3 | 55 | | | | |
| | M | ZN | 41 | | | 10 | 26 | 7 | 26 |
| 29 | eP | Z | 22 51 08 | | | | | | |
| 30 | eL | Z | 02 49.5 | | | | | | |
| 30 | eL | Z | 06 10.0 | | | | | | |
| 30 | eiP | Z | 06 13 55 ud | | | | | | |

| Date | | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUL | 30 | eL | Z | 15 | 15 | | | | | | | |
| | 30 | iP | Z | 20 | 05 | 09 d | | | | | | |
| | 31 | eP | ZNE | 03 | 06 | 40 | 17 | 20 | 7 | 22 | 5 | 22 |
| | | i | Z | | | 48 | | | | | | |
| | | PPP | N | | 11 | .3 | | | | | | |
| | | eS | ZNE | | 15 | .6 | 45 | 25 | | | | |
| | | eSS | ZNE | | 20 | .0 | 45 | 35 | 30 | 30 | 20 | 35 |
| | | eSSS | ZE | | 23 | .5 | 35 | 35 | | | 25 | 30 |
| | | eL | ZNE | | (25) | | | | | | | |
| | | M | | | 30 | | 45 | 22 | 40 | 28 | 25 | 35 |
| | | eP'P' | Z | | 34 | 54 | | | | | | |
| | | eLr2 | ZN | 05 | 19 | .6 | 3 | 35 | | | | |
| | | M | | | 28 | | 7 | 28 | | | | |
| | 31 | eP | Z | 07 | 15 | 34 | | | | | | |
| | | eS | ZNE | | 24 | 21 | 3 | 16 | 2 | 20 | 3 | 15 |
| | | eSS | ZNE | | 28 | .9 | 3 | 28 | | | | |
| | | eSSS | Z | | 32 | .3 | | | | | | |
| | | eL | ZNE | | 36 | | 2 | 30 | 1 | 25 | | |
| | | M | | | 41 | | 3 | 22 | 2 | 20 | | |
| | 31 | iP | ZNE | 15 | 04 | 32 ue | 3 | 12 | | | | |
| | | (pP) | Z | | | 56 | | | | | | |
| | | ePcP | Z | | 05 | 30 | | | | | | |
| | | ePP | Z | | 06 | 32 | | | | | | |
| | | eS | NE | 15 | 12 | .4 | | | | | 2 | 25 |
| | | eLq | N | | 18 | .9 | | | 2 | 15 | | |
| | | eLr | ZE | | 20 | .5 | 2 | 20 | | | | |
| | 31 | eiP | Z | 18 | 57 | 31 du | | | | | | |
| | | ePcP | Z | | | 53 | | | | | | |
| | | eLr | ZNE | 19 | 18 | .5 | 1 | 35 | | | | |
| | | M | Z | | 22 | | 1 | 20 | | | | |
| | 31 | eL | E | 23 | 32 | | | | | | | |
| AUG | 1 | PKP | Z | 02 | 39 | 45 | | | | | | |
| | | eL | ZNE | 03 | 20 | | | | | | | |
| | | M | | | 27 | | 3 | 20 | 1 | 20 | 2 | 20 |
| | 1 | eiP | Z | 20 | 22 | 46 du | | | | | | |
| | | eL | ZN | | 41 | .7 | 1 | 22 | | | | |
| | 2 | iP | ZNE | 05 | 16 | 11 un | 4 | 20 | 2 | 20 | | |
| | | PcP | Z | | 17 | 26 | | | | | | |
| | | PP | ZN | | 18 | 11 | 4 | 15 | | | | |
| | | ScP | Z | | 21 | 17 | | | | | | |
| | | eS | ZNE | | 23 | .2 | | | 15 | 20 | | |
| | | esS? | E | | 23 | .9 | | | | | 8 | 15 |
| | | SS | E | | 26 | .5 | | | | | | |
| | | eLq | E | | 28 | .0 | | | | | 15 | 45 |
| | | eLr | ZN | | 31 | .0 | | | | | | |
| | | M | | | 32 | | 30 | 28 | 20 | 32 | 15 | 20 |
| | 2 | PKP | Z | 06 | 33 | 45 | | | | | | |
| | 2 | iP | ZN | 09 | 38 | 37 d | | | | | | |
| | | (PP) | Z | | 40 | .5 | | | | | | |
| | | eS | ZNE | | 45 | .3 | 3 | 15 | 3 | 20 | 5 | 14 |
| | | SS | ZE | | 48 | 40 | 3 | 18 | | | 5 | 20 |
| | | eLq | E | | 49 | .8 | | | | | 5 | 15 |
| | | eLr | ZN | | 51 | .6 | 5 | 20 | | | | |
| | | M | | 10 | 10 | | 7 | 15 | 4 | 15 | 4 | 15 |
| | 2 | P | Z | 10 | 14 | 30 | | | | | | |



| Date | | Phase | | h | m | s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG | 2 | eiP | Z | 13 | 40 | 30 ud | | | | | | |
| | | e(S) | Z | | 49 | 20 | | | | | | |
| | 2 | eP | Z | 13 | 54 | 55 | | | | | | |
| | | eLr | Z | 14 | 18 | | | | | | | |
| | | M | ZE | | 23 | | | 1 | 25 | | | |
| | 2 | eP? | Z | 18 | 40 | 44 | | | | | | |
| | | eL | N | | 45 | .1 | | | | | | |
| | | eL | ZE | | 46 | .6 | | 2 | 20 | | | |
| | 2 | eP | Z | 18 | 47 | 23 | | | | | | |
| | 2 | eP | Z | 18 | 59 | .5 | | | | | | |
| | | eL | ZNE | 19 | 03 | .8 | | | | | | |
| | | eL | Z | | 05 | .0 | | 2 | 20 | | | |
| | 3 | iP | Z | 01 | 23 | 36 d | | | | | | |
| | | e(PP) | Z | | 25 | 24 | | | | | | |
| | | eL | ZE | | 41 | .9 | | 1 | 22 | | | |
| | 3 | eP | Z | 02 | 00 | 40 | | | | | | |
| | | eLq | ZNE | | 04 | .9 | | | | 3 | 20 | 3 20 |
| | | eLr | Z | | 06 | .0 | | 4 | 20 | | | |
| | 3 | eP | Z | 03 | 35 | 27 | | | | | | |
| | | eL | ZNE | | 39 | 42 | | 4 | 20 | 4 | 18 | 3 15 |
| | 3 | eiP | Z | 19 | 18 | 14 | | | | | | |
| | | eL | Z | | 40 | | | | | | | |
| | 4 | eP | Z | 07 | 50 | 20 | | | | | | |
| | | ePKP | Z | | 53 | 45 | | | | | | |
| | | ePP | ZN | | 55 | 31 | | | | | | |
| | | ePKS | Z | | 56 | .5 | | | | | | |
| | | ePPP | Z | | 58 | 26 | | | | | | |
| | | SKS | NE | 08 | 00 | 48 | | | | 2 | 18 | |
| | | SKKS | N | | 02 | 24 | | | | 3 | 18 | |
| | | ePS | N | | 05 | .0 | | | | | | |
| | | ePPS | Z | | 06 | .9 | | | | | | |
| | | eSS | ZNE | | 12 | .3 | | | | 8 | 35 | 6 25 |
| | | G | E | | 26 | .6 | | | | | | 12 32 |
| | | eLr | ZN | | 31 | .1 | | | | | | |
| | | M | | | 39 | | | 15 | 20 | 7 | 20 | 4 20 |
| | | G2 | E | 09 | 14 | | | | | | | |
| | 4 | eiP | Z | 11 | 25 | 57 ud | | | | | | |
| | 5 | eL | Z | 01 | 32 | .0 | | | | | | |
| | 5 | P | Z | 04 | 38 | 21 | | | | | | |
| | | e | Z | | | 50 | | | | | | |
| | | S | Z | | 39 | 00 | | | | | | |
| | 5 | P | Z | 05 | 01 | 02 | | | | | | |
| | | eL | NE | | 04 | 15 | | | | 1 | 15 | 1 15 |
| | | eL | Z | | | 50 | | 1 | 15 | | | |
| | 5 | eL | ZNE | 23 | 25 | .4 | | | | | | |
| | | M | | | 32 | | | 2 | 20 | 1 | 15 | |
| | 6 | eiP | Z | 14 | 59 | 30 ud | | | | | | |
| | | eLq | N | 15 | 15 | .0 | | | | 1 | 20 | |
| | | eLr | ZE | | 16 | .2 | | 1 | 28 | | | |
| | 7 | eL | ZNE | 09 | 08 | .0 | | 1 | 28 | | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| AUG | 7 | eL | Z | 10 03.1 | | | | | | |
| | 8 | eLr | ZE | 13 23.8 | 1 | 30 | | | | |
| | 9 | iP | Z | 04 18 28 u | | | | | | |
| | 9 | eiP | Z | 06 22 02 ud | | | | | | |
| | | eLr | ZE | 47.8 | 1 | 20 | | | | |
| | 9 | ePS | ZNE | 08 09.6 | | | 2 | 18 | 4 | 18 |
| | | SS | ZNE | 16.4 | | | 5 | 25 | 5 | 35 |
| | | e(SSS) | E | 20.5 | | | | | | |
| | | eLq | NE | 29.5 | | | | | | |
| | | eLr | ZNE | 34.5 | | | | | | |
| | | M | | 36 | 15 | 28 | 8 | 28 | 10 | 25 |
| | 9 | eP | ZN | 16 55 07 | 4 | 10 | | | | |
| | | S | ZNE | 17 02.2 | | | 16 | 18 | 20 | 15 |
| | | eLq | ZE | 06.5 | | | | | | |
| | | eLr | ZNE | 08.5 | | | | | | |
| | | M | | 10 | 25 | 35 | 22 | 35 | 25 | 25 |
| | 9 | iP | Z | 23 46 59 d | | | | | | |
| | | eS | N | 55.6 | | | | | | |
| | | e(SS) | Z | 59.7 | | | | | | |
| | | eLq | E | 00 02.5 | | | | | 3 | 40 |
| | | eLr | ZNE | 06 | | | | | | |
| | | M | | 10 | 3 | 20 | 2 | 20 | | |
| | 10 | eL | NE | 06 02.5 | | | 1 | 12 | | |
| | 10 | eL | NE | 06 23.5 | | | 1 | 12 | | |
| | 10 | eL | N | 07 20 | | | | | | |
| | 10 | eL | N | 07 36 | | | 1 | 12 | | |
| | 11 | eP | Z | 03 05 18 | | | | | | |
| | | eS | E | 15 25 | | | | | | |
| | | e(SSS) | Z | 24 30 | | | | | | |
| | | eLr | ZNE | 31.1 | 2 | 40 | | | 2 | 40 |
| | 11 | iP | ZE | 05 03 08 d | | | | | | |
| | | eS | ZNE | 13.5 | | | | | | |
| | | eLq | E | 27.2 | | | | | | |
| | | eLr | ZNE | 32.5 | | | | | | |
| | | M | | 37 | 2 | 28 | | | | |
| | 11 | eP | Z | 22 28 03 | | | | | | |
| | 12 | e(S) | N | 10 17.7 | | | | | | |
| | | eL | ZNE | 20.0 | | | | | | |
| | | M | | 22.5 | 8 | 20 | 4 | 20 | 5 | 20 |
| | 13 | e(S) | NE | 04 29 20 | | | | | 4 | 12 |
| | | e | N | 32.7 | | | | | | |
| | | eLq | N | 34.2 | | | 3 | 25 | | |
| | | eLr | ZE | 35.4 | 3 | 40 | | | 3 | 30 |
| | | M | | 38 | 7 | 18 | | | 5 | 18 |
| | 13 | iP | ZNE | 14 24 57 une | 40 | 12 | 10 | 10 | 23 | 10 |
| | | PP | ZE | 27.1 | 16 | 10 | | | | |
| | | PPP | Z | 28.5 | | | | | | |
| | | PcS | E | 29 17 | | | | | 9 | 10 |
| | | S | ZNE | 33.3 | | | 8 | 15 | 20 | 18 |
| | | e | Z | 38 54 | | | | | | |
| | | eLq | NE | 39.5 | | | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| AUG | 13 | eLr | ZNE | 42 | | | | | | |
| | | M | | 47 | 145 | 18 | 55 | 18 | 65 | 18 |
| | | e | Z | 54 15 | | | | | | |
| | | P'P' | Z | 54 36 | | | | | | |
| | 15 | eP | Z | 07 11.3 | | | | | | |
| | | S | NE | 21.5 | | | 1 | 25 | | |
| | | SS | ZNE | 26.8 | 1 | 20 | 2 | 20 | 1 | 15 |
| | | SSS | Z | 29.9 | | | | | | |
| | | eLq | NE | 32.8 | | | 2 | 45 | | |
| | | M | N | 37 | | | 3 | 25 | | |
| | | eLr | Z | 37.7 | | | | | | |
| | | M | Z | 44 | 4 | 20 | | | | |
| | 15 | eP | Z | 14 45 56 | | | | | | |
| | | SS | ZNE | 15 01 32 | | | | | | |
| | | eLq | NE | 09.4 | | | 2 | 40 | 1 | 25 |
| | | eLr | Z | 12.5 | | | | | | |
| | 16 | eiP | Z | 02 59 31 du | | | | | | |
| | | (PcP) | Z | 55 | | | | | | |
| | | (pP) | Z | 03 00 08 | | | | | | |
| | 16 | P | Z | 08 24 28 | | | | | | |
| | 16 | eP | Z | 10 44 14 | | | | | | |
| | 16 | e(S) | E | 15 06.6 | | | | | | |
| | | eL | E | 14.2 | | | | | | |
| | 16 | iP | Z | 22 38 58 u | | | | | | |
| | 16 | e(S) | E | 23 05.1 | | | | | | |
| | | eL | N | 08.1 | | | 1 | 18 | | |
| | 17 | eP | Z | 03 39 19 | | | | | | |
| | | i | ZN | 20 d | | | 1 | 20 | | |
| | | eL | NE | 40.9 | | | 4 | 15 | 4 | 15 |
| | 17 | P | Z | 09 46 34 | | | | | | |
| | 17 | eiP | Z | 11 37 01 du | | | | | | |
| | 17 | eiP | Z | 18 20 06 du | | | | | | |
| | 18 | iP | Z | 22 53 55 d | | | | | | |
| | | eLq | E | 23 09.8 | | | | | | |
| | | eLr | ZN | 14.8 | 1 | 20 | 1 | 20 | | |
| | 19 | eiP | Z | 08 23 35 du | | | | | | |
| | 19 | P | Z | 12 07 14 | | | | | | |
| | 19 | PKP | Z | 17 22 41 | | | | | | |
| | | eLr | Z | 18 05 | | | | | | |
| | 20 | eP | Z | 10 12.4 | | | | | | |
| | | eLq | E | 21.9 | | | | | | |
| | | eLr | ZN | 24.2 | | | | | | |
| | | M | | 29 | 1 | 15 | 1 | 15 | | |
| | 20 | eP | ZNE | 20 20 07 | | | | | | |
| | | S | ZE | 29 35 | | | | | 7 | 35 |
| | | ScS | N | 30 08 | | | 10 | 46 | | |
| | | SS | ZE | 34.0 | 2 | 35 | | | 4 | 32 |
| | | Lq | ZE | 37 32 | | | | | | |
| | | M | E | 40 | | | | | 22 | 50 |

| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| AUG 20 | eLr | ZN | 40 | | | | | | |
| | M | ZN | | 15 | 40 | 10 | 45 | | |
| 20 | eP | Z | 21 31 18 | | | | | | |
| | (ScS) | N | 41.5 | | | | | | |
| | (SS) | N | 45.2 | | | | | | |
| | eLq | ZNE | 49.0 | | | | | | |
| | M | E | 51.5 | | | | | 4 | 45 |
| | eLr | ZNE | 52.5 | 2 | 40 | 2 | 40 | | |
| 20 | eP | Z | 22 22 09 | | | | | | |
| | eLq | ZE | 24 25 | | | | | | |
| | eLr | ZN | 41 | | | | | | |
| | M | | 25 | 8 | 18 | 7 | 15 | 7 | 12 |
| 20 | iP | Z | 22 34 44 d | | | | | | |
| | ePcP? | Z | 35 08 | | | | | | |
| | eLr | ZNE | 23 00.5 | 2 | 45 | | | 2 | 45 |
| 21 | eiP | Z | 00 29 11 ud | | | | | | |
| | PcP | Z | 39 | | | | | | |
| | e(S) | E | 38 17 | | | | | | |
| | eLq | ZE | 45.9 | | | | | | |
| | eLr | Z | 51.5 | 1 | 30 | | | | |
| 21 | P | Z | 01 10 11 | | | | | | |
| | (PcP) | Z | 44 | | | | | | |
| | e(S) | Z | 19.0 | | | | | | |
| | eL | Z | 27.0 | | | | | | |
| 21 | iP | Z | 13 01 41 u | | | | | | |
| | pP | Z | 02 25 | | | | | | |
| | S | NE | 11 40 | | | 2 | 10 | 2 | 10 |
| | sS | ZE | 13 00 | | | | | 2 | 10 |
| | eLr | Z | 30.5 | | | | | | |
| 21 | P | Z | 17 17 40 | | | | | | |
| 21 | eP | Z | 17 30 48 | | | | | | |
| | eS | ZNE | 39.0 | | | 1 | 20 | | |
| | eLq | E | 45 | | | | | | |
| | eLr | ZN | 47.5 | 3 | 38 | 2 | 32 | | |
| 23 | eLr | E | 10(05) | | | | | | |
| 23 | eP | ZNE | 22 54 45 | | | | | | |
| | ePcP | Z | 55.5 | | | | | | |
| | ePP | Z | 57.0 | | | | | | |
| | iS | E | 23 02 55 e | | | | | | |
| | S | ZN | 03 10 | 3 | 15 | 8 | 20 | | |
| | ScS | NE | 04.8 | | | | | | |
| | SS | E | 07.0 | | | | | | |
| | eLq | NE | 09.2 | | | | | 13 | 25 |
| | eLr | ZN | 11.5 | 15 | 35 | 12 | 28 | | |
| 24 | eL | ZNE | 01 37.5 | 1 | 22 | | | | |
| 24 | ePKP | Z | 02 03 23 | | | | | | |
| | eSS | Z | 23.5 | | | | | | |
| | eLr | ZNE | 45 | 1 | 28 | | | | |
| 24 | P | Z | 04 37 47 | | | | | | |
| 24 | eiP | ZN | 05 58 25 du | | | | | | |
| | S | NE | 06 06 06 | | | 3 | 16 | 4 | 18 |



| Date | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|
| AUG 24 | eLr | NE | 14.5 | | | 2 | 25 | 3 | 22 |
| | M | | 22 | | | 4 | 18 | 4 | 18 |
| | P'P' | Z | 28 51 | | | | | | |
| 24 | eP | Z | 22 24 13 | | | | | | |
| | e(S) | N | 29 10 | | | 2 | 20 | | |
| | eL | NE | 30 18 | | | 7 | 20 | 5 | 12 |
| 25 | P | Z | 03 47 30 | | | | | | |
| 25 | P | Z | 06 19 21 | | | | | | |
| | eL | NE | 40 | | | | | | |
| 25 | eiP | Z | 15 06 37 | | | | | | |
| | eL | NE | 27 | | | | | | |
| 25 | eSS | NE | 18 20.1 | | | 2 | 22 | | |
| | eLr | NE | 45.5 | | | 1 | 20 | | |
| 25 | eP | Z | 22 37.2 | | | | | | |
| 25 | P | Z | 23 12 37 | | | | | | |
| | (pP) | Z | 47 | | | | | | |
| | PcP | Z | 13 21 | | | | | | |
| | eS | NE | 21.0 | | | | | | |
| | eSS? | E | 25.0 | | | | | 1 | 18 |
| | eLr | ZNE | 32.0 | 2 | 18 | 2 | 20 | 2 | 20 |
| 26 | eP | Z | 00 24 25 | | | | | | |
| | (pP) | Z | 30 | | | | | | |
| | PcP | Z | 25 08 | | | | | | |
| | eS | ZE | 32 48 | | | | | | |
| | eSS | ZE | 36.8 | | | | | | |
| | eLq | ZE | 43.6 | 3 | 20 | | | 3 | 22 |
| 26 | eP? | Z | 11 03 15 | | | | | | |
| 26 | e(S) | E | 15 28.2 | | | | | | |
| | eL | ZNE | 29.2 | | | | | | |
| | M | | 30.5 | 3 | 15 | 7 | 18 | 3 | 12 |
| 26 | eP? | Z | 17 59 59 | | | | | | |
| 26 | eiP | Z | 18 37 15 ud | | | | | | |
| | eS | ZNE | 45.5 | | | 1 | 15 | | |
| | eLq | E | 54 | | | | | 2 | 22 |
| | eLr | ZN | 57.5 | | | | | | |
| | M | ZN | 59 | 4 | 20 | 2 | 20 | | |
| 26 | eP | Z | 22 16 02 | | | | | | |
| | eL | ZNE | 18.0 | 2 | 15 | | | | |
| 27 | eiP | Z | 12 59 37 ud | | | | | | |
| 27 | ePKP | Z | 18 34 49 | | | | | | |
| 28 | eP | Z | 03 17 27 | | | | | | |
| 30 | eP | Z | 06 56 02 | | | | | | |
| | eS | ZE | 07 05.0 | | | | | 3 | 20 |
| | eLq | N | 13 | | | | | | |
| | eLr | ZE | 16.1 | 3 | 28 | 3 | 28 | | |
| | M | | 18 | 4 | 18 | 4 | 20 | | |
| 31 | eiP | Z | 05 45 38 du | | | | | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| AUG | 31 | eP | Z | 07 27 00 | | | | | | |
| | | eS | ZE | 35.9 | | | | | 2 | 20 |
| | | eLr | ZNE | 47 | 2 | 30 | | | 2 | 28 |
| | 31 | eP | Z | 11 37 30 | | | | | | |
| | | eL | ZE | 57.9 | 1 | 18 | | | | |
| | 31 | eP | Z | 17 35 07 | | | | | | |
| SEP | 1 | eP | ZN | 07 43(01) | | | | | | |
| | | S | ZNE | 49.9 | 1 | 15 | 3 | 18 | 5 | 15 |
| | | eLq | ZE | 53 | | | | | | |
| | | eLr | ZN | 57 | | | | | | |
| | | M | | 08 01 | 6 | 20 | 5 | 18 | 3 | 16 |
| | 1 | eiP | ZN | 09 37 57 ud | | | | | | |
| | | iS | NE | 45 49 e | | | 2 | 10 | 15 | 15 |
| | | ScS | E | 47.8 | | | | | 5 | 12 |
| | | SS | E | 49.7 | | | | | 4 | 16 |
| | | eLq | E | 52.4 | | | | | | |
| | | eLr | ZN | 54 | 4 | 30 | 4 | 40 | | |
| | | M | E | 10 00 | | | | | 8 | 15 |
| | | M | ZN | 07 | 10 | 15 | 8 | 15 | | |
| | 1 | eP | Z | 10 44 41 | | | | | | |
| | | iS | NE | 52 32 e | | | | | 10 | 15 |
| | | ScS | E | 54.5 | | | | | 6 | 15 |
| | | SS | E | 56.3 | | | | | 4 | 15 |
| | | eLq | E | 58.5 | | | | | 5 | 32 |
| | | eLr | ZN | 11 02 | 3 | 32 | 3 | 30 | | |
| | | M | E | 07 | | | | | 7 | 15 |
| | | M | ZN | 14 | 10 | 16 | 8 | 15 | | |
| | 1 | eP | Z | 11 24 38 | | | | | | |
| | | S | E | 32.4 | | | | | 3 | 15 |
| | | ScS | E | 34.5 | | | | | 2 | 15 |
| | | M | E | 46 | | | | | 2 | 15 |
| | | M | ZN | 53 | 3 | 15 | 2 | 15 | | |
| | 1 | ePKP | Z | 15 56 26 | | | | | | |
| | | ePP | Z | 58 45 | | | | | | |
| | | SKP | ZN | 59 50 | 3 | 10 | | | | |
| | | ePPP | Z | 16 01 38 | 1 | 10 | | | | |
| | | SS | NE | 16 | | | | | 3 | 25 |
| | | SSS | ZNE | 21.2 | 2 | 18 | 2 | 18 | 2 | 20 |
| | | eLr | ZN | 37.5 | 4 | 24 | 3 | 28 | | |
| | | M | | 49 | 5 | 20 | 3 | 18 | 2 | 18 |
| | 1 | iP | Z | 18 51 00 | | | | | | |
| | | eLq | E | 19 05.5 | | | | | 1 | 25 |
| | | eLr | ZN | 09 | | | | | | |
| | 1 | eP | Z | 20 11 46 | | | | | | |
| | | eS | ZNE | 19 43 | | | 2 | 20 | 2 | 15 |
| | | eLq | NE | 25.6 | | | 2 | 30 | 7 | 30 |
| | | eLr | ZN | 29.5 | 3 | 26 | | | | |
| | | M | | 33 | 5 | 18 | 3 | 18 | | |
| | 2 | eL | Z | 04 04.5 | | | | | | |
| | 2 | eL | Z | 08 08.7 | | | | | | |
| | 2 | iP! | Z | 11 01 51 d | | | | | | |
| | 2 | ePKP? | Z | 14 05.4 | | | | | | |
| | | ePS | Z | 16.1 | | | | | | |
| | | eLr | ZE | 39.4 | 1 | 45 | | | | |
| | | M | | 48 | 2 | 20 | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| SEP | 2 | eiP | Z | 18 43 23 ud | | | | | | |
| | | ei(PcP) | Z | 53 du | | | | | | |
| | 2 | ePKP | Z | 22 21 46 | | | | | | |
| | | ePP | Z | 23 41 | | | | | | |
| | | ePS | Z | 33.5 | | | | | | |
| | | e(PPS) | ZN | 35 | | | | | | |
| | | SS | ZNE | 40.4 | | | 3 | 30 | 4 | 30 |
| | | eLr | ZNE | 23 00.5 | | | | | | |
| | | M | | 06 | 5 | 22 | 4 | 20 | 1 | 20 |
| | | eLr2 | ZN | 58.5 | 2 | 25 | | | | |
| | | M | | 00 03 | 3 | 20 | 2 | 22 | | |
| | 3 | eP | Z | 05 50 47 | | | | | | |
| | | PP | Z | 53.0 | | | | | | |
| | | iS | ZNE | 58 19 w | | | 2 | 15 | 3 | 18 |
| | | eLq | E | 06 04.1 | | | | | 2 | 16 |
| | | eLr | ZNE | 06 | | | | | | |
| | | M | | 14 | 3 | 16 | 3 | 18 | 2 | 15 |
| | 3 | eiP | Z | 07 55 54 ud | | | | | | |
| | 3 | iP! | ZNE | 12 51 43 | 3 | 15 | | | | |
| | | pP | ZN | 53 10 | 4 | 18 | | | | |
| | | pPP | Z | 55 30 | 2 | 10 | | | | |
| | | iS | ZNE | 13 00 06 nw | 8 | 15 | 6 | 20 | 10 | 12 |
| | | sS | ZNE | 03.2 | 5 | 15 | 9 | 25 | | |
| | | esSS | ZNE | 07 | 5 | 30 | 5 | 25 | | |
| | | G | ZNE | 10.1 | 9 | 30 | 3 | 20 | 6 | 24 |
| | | eLr | ZN | 15.5 | | | | | | |
| | | eP'P' | Z | 19 50 | | | | | | |
| | | M | | 21 | 6 | 16 | 4 | 16 | | |
| | 3 | eiP | Z | 15 25 50 du | | | | | | |
| | 3 | eP | Z | 15 54 26 | | | | | | |
| | | eS | ZNE | 16 00.5 | | | | | | |
| | | eLq | E | 03.1 | | | | | 2 | 15 |
| | | eLr | ZN | 04.8 | | | | | | |
| | | M | | 08 | 2 | 16 | 2 | 16 | 2 | 15 |
| | 3 | eP | Z | 20 47 27 d | | | | | | |
| | | eS | ZE | 52.6 | | | | | | |
| | | eLr | ZNE | 55.6 | 4 | 28 | 2 | 25 | 4 | 26 |
| | 4 | ePP | ZN | 00 06 42 | 1 | 12 | | | | |
| | | eSKKS | E | 14 25 | | | | | 2 | 25 |
| | | PS | ZNE | 16.1 | 3 | 18 | 3 | 20 | 2 | 18 |
| | | (PPS) | Z | 17.7 | | | | | | |
| | | SS | ZNE | 22 44 | 2 | 22 | 5 | 24 | 2 | 20 |
| | | eLr | ZNE | 41 | 2 | 32 | 2 | 35 | 1 | 30 |
| | 4 | eL | Z | 06 32 | | | | | | |
| | 4 | eS? | Z | 21 17.8 | | | | | | |
| | | eLr | ZNE | 23 | | | | | | |
| | | M | | 20 | 1 | 18 | | | | |
| | 5 | eL | ZNE | 06 17.6 | 1 | 20 | 1 | 20 | | |
| | 5 | eP | Z | 09 48 12 | | | | | | |
| | | S | E | 53 32 | | | | | | |
| | | eLr | ZNE | 57.2 | 2 | 25 | | | 2 | 22 |
| | 5 | eS? | N | 12 18 30 | | | | | | |
| | | eL | ZNE | 19.1 | | | 5 | 20 | 2 | 18 |
| | 5 | eL | ZNE | 12 31.0 | | | 3 | 15 | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| SEP | 6 | eL | ZNE | 10 14.6 | | | | | | |
| | | M | | 25 | 2 | 15 | 2 | 15 | | |
| | 6 | iP | Z | 14 12 05 | | | | | | |
| | | eLq | E | 25 45 | | | | | | |
| | | eLr | ZN | 28.0 | 4 | 25 | 4 | 28 | | |
| | 7 | eP | Z | 01 28 57 | | | | | | |
| | | i | Z | 59 d | | | | | | |
| | | ePP | Z | 31 56 | | | | | | |
| | | eLr | ZNE | 51.3 | 3 | 45 | | | | |
| | 7 | eP | Z | 04 01 55 | | | | | | |
| | | eL | Z | 30 | | | | | | |
| | 8 | iP | ZN | 11 20 07 d | | | | | | |
| | | ePP | Z | 23 21 | | | | | | |
| | | S | NE | 30 26 | | | | | 3 | 10 |
| | | (ScS) | NE | 30 55 | | | 3 | 15 | | |
| | | (PPS) | ZN | 31 40 | | | | | | |
| | | eLr | ZNE | 48.4 | 4 | 45 | | | | |
| | 9 | e(S) | E | 04 10.2 | | | | | | |
| | | eL | N | 10.6 | | | 2 | 20 | | |
| | | eL | ZE | 11.5 | 2 | 15 | | | | |
| | 9 | eP | Z | 08 45 10 | | | | | | |
| | 9 | PKP | Z | 10 24 05 u | | | | | | |
| | 9 | eiP | Z | 17 56 55 ud | | | | | | |
| | | eL | ZE | 18 01 | | | | | | |
| | 10 | eL | Z | 01 30 | | | | | | |
| | 10 | iP | Z | 10 56 13 d | | | | | | |
| | | pP | ZE | 58 17 | | | | | | |
| | | PP | Z | 59 28 | | | | | | |
| | | iS | ZNE | 11 05 39 ne | | | | | 7 | 15 |
| | | esS | NE | 09.5 | | | | | 3 | 20 |
| | | eSS | E | 11.3 | | | | | 3 | 20 |
| | | esSS | NE | 14 40 | | | 3 | 18 | 2 | 15 |
| | | (G) | ZNE | 18 10 | 4 | 32 | 2 | 22 | 2 | 20 |
| | | eLr | Z | 24.5 | 2 | 35 | | | | |
| | | M | | 30 | 3 | 22 | 2 | 20 | | |
| | 10 | eP? | Z | 14 13 10 | | | | | | |
| | | e | Z | 14 46 | | | | | | |
| | | eL | Z | 33.0 | 2 | 35 | | | | |
| | | eL | ZNE | 36.5 | 2 | 20 | | | | |
| | | M | | 41 | 3 | 17 | 2 | 17 | 1 | 17 |
| | 11 | eiP | Z | 08 06 06 ud | | | | | | |
| | 11 | eP | Z | 10 59 12 | | | | | | |
| | | eLr | ZNE | 11 10.6 | 1 | 20 | | | | |
| | 12 | ePP | Z | 12 35.4 | | | | | | |
| | | eLr | ZN | 13 07.5 | | | 2 | 25 | | |
| | 12 | iP | Z | 16 12 39 u | | | | | | |
| | 13 | eP | Z | 00 53 15 | | | | | | |
| | | eL | ZNE | 01 12 | | | | | | |
| | 14 | eP | Z | 00 47 45 | | | | | | |
| | | eL | Z | 01 26 | | | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| SEP | 14 | eiP | Z | 05 06 43 du | | | | | | |
| | | iS | N | 14 30 n | | | | 4 | 16 | |
| | | eS | ZE | 40 | 2 | 20 | | | 4 | 28 |
| | | ScS | N | 16 36 | | | | 2 | 14 | |
| | | SS | E | 18 43 | | | | | 2 | 9 |
| | | eLq | ZNE | 20.1 | | | | 8 | 35 | |
| | | eLr | ZE | 23 | 3 | 25 | | | | |
| | | M | | 24.5 | 7 | 20 | | | 6 | 20 |
| | 14 | eP | Z | 16 09 55 | | | | | | |
| | 14 | P | Z | 23 27 50 d | | | | | | |
| | | S | ZNE | 35 20 | | | | 2 | 16 | 3 | 18 |
| | | ScS | E | 37 41 | | | | | | |
| | | eLq | E | 41 | | | | | | 3 | 17 |
| | | eLr | ZN | 45.6 | | | | | | |
| | | M | | 47 | 4 | 20 | 3 | 20 | 2 | 18 |
| | 15 | P | Z | 03 40 52 d | | | | | | |
| | | eS | Z | 48.6 | | | | | | |
| | | eLr | ZNE | 57.5 | 1 | 30 | | | | |
| | | M | | 04 03 | 2 | 18 | 1 | 20 | 1 | 18 |
| | 15 | eL | Z | 05 38.6 | 1 | 20 | | | | |
| | 15 | eP | Z | 18 10 32 | | | | | | |
| | | (pP) | Z | 12 20 | | | | | | |
| | 16 | eP | Z | 06 19 38 | | | | | | |
| | | eL | E | 24 | | | | | 1 | 15 |
| | 17 | eP | Z | 07 22.4 | | | | | | |
| | | eLr | ZNE | 39 | | | | | | |
| | | M | | 45 | 1 | 16 | | | 1 | 18 |
| | 17 | ePP | Z | 08 13 22 | | | | | | |
| | | ePS | Z | 23 13 | | | | | | |
| | | eSS | ZN | 30 40 | 1 | 30 | 1 | 32 | | |
| | | eLq | ZE | 42.5 | | | | | | |
| | | eLr | ZN | 49 | 2 | 42 | | | | |
| | | M | | 53 | 3 | 25 | 2 | 25 | | |
| | 17 | PKP | Z | 08 24 22 d | | | | | | |
| | | ePP | Z | 26 06 | | | | | | |
| | | ePPP | Z | 28 46 | | | | | | |
| | | PS | ZE | 35 43 | 2 | 18 | | | | |
| | | SS | ZN | 43 10 | 2 | 30 | 4 | 32 | | |
| | | SSS | N | 47 22 | | | 2 | 30 | | |
| | | eLq | E | 56.6 | | | | | 2 | 38 |
| | | eLr | ZNE | 09 02 | 3 | 32 | 2 | 32 | 2 | 35 |
| | | M | | 05 | 6 | 24 | 4 | 24 | 2 | 24 |
| | | eLr2 | Z | 59 | | | | | | |
| | | M | | 10 11 | 2 | 22 | 1 | 22 | | |
| | 17 | eiP | Z | 13 09 36 du | | | | | | |
| | | eS? | E | 18.7 | | | | | | |
| | | eLq | Z | 26.5 | | | | | | |
| | | eLr | Z | 30.0 | 1 | 28 | | | | |
| | 17 | eP | Z | 15 23 15 | | | | | | |
| | | eLq | E | 42 | | | | | | |
| | | eLr | ZN | 43.5 | 1 | 30 | | | | |
| | | M | | 48 | 1 | 20 | | | | |
| | 17 | eP | Z | 16 05 26 | | | | | | |
| | | eLr | Z | 29 | | | | | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| SEP | 17 | eP | ZNE | 20 05(21) | | | | | | |
| | | PP | ZN | 07.6 | 2 | 16 | | | | |
| | | S | ZNE | 12 55 | | | 5 | 15 | 7 | 18 |
| | | ScS | E | 15 06 | | | | | 4 | 15 |
| | | Lq | E | 17.7 | | | | | 4 | 28 |
| | | M | E | 19 | | | | | 5 | 15 |
| | | Lr | ZNE | 23 | 8 | 20 | 5 | 20 | 5 | 20 |
| | | M | | 29 | 10 | 18 | 7 | 18 | | |
| | 18 | eiP | ZN | 09 51 35 ud | | | | | | |
| | | ePcP | Z | 52 16 | | | | | | |
| | | PP | Z | 53.0 | | | | | | |
| | | iS | ZNE | 10 00 30 use | 2 | 16 | 3 | 15 | | |
| | | ScS | ZE | 01 16 | | | | | 4 | 15 |
| | | e(SS) | N | 04.9 | | | | | | |
| | | e | ZNE | 06.1 | 1 | 20 | 2 | 20 | 2 | 18 |
| | | Lq | E | 09 24 | | | | | 2 | 18 |
| | | eLr | ZN | 15.5 | | | | | | |
| | | eP'1P'1 | Z | 19 33 | | | | | | |
| | | eP'2P'2 | Z | 41 | | | | | | |
| | | eP'PKS | Z | 22 57 | | | | | | |
| | | M | | 23 | 4 | 18 | 2 | 16 | | |
| | 19 | iP | Z | 02 13 52 | | | | | | |
| | 19 | eP | Z | 03 52 52 | | | | | | |
| | | ePP | ZNE | 56.6 | | | | | | |
| | | S | NE | 04 04 09 | | | 3 | 12 | | |
| | | PS | E | 05.4 | | | | | 2 | 20 |
| | | SS | N | 10 27 | | | 2 | 14 | | |
| | | eLr | N | 22 | | | 2 | 40 | | |
| | 19 | eP | Z | 04 12 11 | | | | | | |
| | 19 | eL | NE | 08 27 | | | 1 | 12 | 1 | 11 |
| | 19 | eP | Z | 16 55 55 | | | | | | |
| | 19 | eP | Z | 19 16.2 | | | | | | |
| | | e(PKP) | Z | 19.1 | | | | | | |
| | | PP | ZE | 19.6 | | | | | | |
| | | SKS | E | 26.0 | | | | | | |
| | | PS | ZNE | 28.8 | 4 | 20 | | | 4 | 22 |
| | | SS | N | 34.4 | | | 3 | 20 | | |
| | | SKKP | ZE | 34 50 | 2 | 22 | | | 4 | 20 |
| | | SKKS | Z | 38 22 | 3 | 20 | | | | |
| | | Lr | ZNE | 49 | 9 | 30 | 3 | 25 | 8 | 30 |
| | | M | | 54 | 15 | 20 | 5 | 20 | 13 | 20 |
| | 20 | eP | Z | 00 49 37 | | | | | | |
| | | eS | E | 56 10 | | | | | | |
| | | eLq | E | 01 00.2 | | | | | 1 | 12 |
| | | eLr | ZN | 03.1 | 1 | 20 | | | | |
| | 20 | eP | Z | 03 11 45 | | | | | | |
| | 20 | P | Z | 03 43 48 | | | | | | |
| | | (PcP) | Z | 45 44 | | | | | | |
| | | S | ZNE | 50 26 | | | 2 | 15 | 2 | 20 |
| | | (SS) | E | 53.8 | | | | | 4 | 22 |
| | | eLq | ZNE | 54 20 | | | 3 | 28 | 7 | 30 |
| | | eLr | ZNE | (57) | | | | | | |
| | | M | | 04 01 | 5 | 19 | 4 | 18 | | |
| | 20 | eL | ZNE | 06 26 | | | | | | |
| | | M | | 29 | 1 | 20 | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| SEP | 22 | SS | NE | 06 11 00 | | | | | | |
| | | eLr | ZNE | 25.5 | 2 | 40 | 2 | 35 | 2 | 35 |
| | | M | | 35.5 | 8 | 19 | 4 | 19 | 7 | 19 |
| | 22 | eP | Z | 09 19.5 | | | | | | |
| | | SKKS | E | 31 15 | | | | | | |
| | | PS | ZNE | 32.5 | 3 | 20 | 3 | 28 | 3 | 25 |
| | | SS | ZNE | 38.2 | 4 | 25 | 5 | 28 | 5 | 28 |
| | | eLr | ZNE | 52.3 | 7 | 50 | 7 | 45 | | |
| | | M | | 10 03 | 33 | 18 | 16 | 20 | 32 | 18 |
| | 22 | eP | Z | 09 28 50 | | | | | | |
| | | PS | ZN | 42 | 4 | 18 | 4 | 20 | | |
| | 23 | eL | Z | 04 58 10 | 1 | 15 | | | | |
| | 23 | eP | Z | 16 03 52 | | | | | | |
| | 23 | P | Z | 21 30 55 | | | | | | |
| | 23 | eLr | ZNE | 23 26.5 | | | | | | |
| | | M | | 29 | 6 | 20 | 4 | 18 | 2 | 20 |
| | 23 | eiP | Z | 23 27 54 ud | | | | | | |
| | 24 | eP | Z | 09 25 27 | | | | | | |
| | | eL | Z | 47.4 | | | | | | |
| | | M | | 52 | 1 | 18 | | | | |
| | 24 | P | Z | 11 13 00 | | | | | | |
| | | eS | Z | 18 30 | 1 | 15 | | | | |
| | | eLq | E | 20 10 | | | | | 1 | 22 |
| | | eLr | ZN | 21 30 | 1 | 18 | | | | |
| | | M | NE | 22 | | | 1 | 12 | 2 | 12 |
| | 24 | iP | Z | 14 01 38 d | | | | | | |
| | | i | Z | 50 | | | | | | |
| | 24 | eP | Z | 14 11.5 | | | | | | |
| | 24 | eP? | Z | 14 26.7 | | | | | | |
| | | eS | Z | 35 | | | | | | |
| | | eLq | E | 41 15 | | | | | 1 | 20 |
| | | eLr | ZE | 43.2 | 1 | 30 | | | | |
| | 25 | eP | Z | 15 48 55 | | | | | | |
| | | ePcS | Z | 53 50 | | | | | | |
| | | eS | ZNE | 56.8 | | | | | | |
| | | eScS | Z | 58.2 | | | | | | |
| | | eLr | ZNE | 16 04.9 | 1 | 25 | | | | |
| | 26 | eiP | Z | 00 43 35 du | | | | | | |
| | 26 | eiP | Z | 17 10 30 ud | | | | | | |
| | 27 | eiP | Z | 02 23 20 ud | | | | | | |
| | | eLr | ZNE | 40.5 | 1 | 25 | | | | |
| | | M | | 45 | 2 | 18 | | | | |
| | 27 | P | Z | 03 44 39 | | | | | | |
| | | (S) | ZNE | 48 48 | 2 | 15 | | | | |
| | | eL | ZNE | 49 35 | 3 | 20 | 2 | 18 | | |
| | 27 | eL | NE | 04 17 12 | | | | | | |
| | 27 | eL | NE | 04 36 | | | | | | |
| | | M | | 38 | | | 1 | 25 | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| SEP | 27 | eLr | ZNE | 07 56.5 | 1 | 25 | | | | |
| | | M | | 08 01 | 2 | 18 | | | | |
| | 28 | eL | ZE | 02 48.5 | | | | | | |
| | 28 | P | Z | 17 43 31 | | | | | | |
| | 29 | eP | Z | 03 17 13 | | | | | | |
| | | e(S) | ZE | 19 40 | | | | | | |
| | | eL(q) | N | 20 05 | | | 5 | 18 | | |
| | | eL | ZE | 10 | 2 | 20 | | | 4 | 18 |
| | 29 | iP | Z | 06 40 12 | | | | | | |
| | | pP | Z | 40.8 | | | | | | |
| | | PP | Z | 43 20 | | | | | | |
| | | S | ZNE | 50 20 | | | | | | |
| | | (sS) | E | 51 04 | | | | | | |
| | | SS | Z | 55.7 | | | | | | |
| | 29 | eP | Z | 11 31 22 | | | | | | |
| | | i | ZNE | 24 u | | | | | | |
| | | epP | ZNE | 33 05 | | | | | | |
| | | ePP | ZN | 35 13 | | | | | | |
| | | SKS | NE | 41 15 | | | | | 5 | 12 |
| | | (SKKS) | E | 30 | | | | | | |
| | | (S) | E | 53 | | | | | 5 | 10 |
| | | SP | NE | 43.1 | | | 5 | 16 | 5 | 20 |
| | | (PS) | E | 43.9 | | | | | 5 | 10 |
| | | sS | E | 44 35 | | | | | 6 | 16 |
| | | SS | NE | 11 48 20 | | | 7 | 20 | 5 | 20 |
| | | SSS | E | 52.0 | | | | | 5 | 15 |
| | | SKKS | E | 55 15 | | | | | 4 | 18 |
| | | G | NE | 58 00 | | | 5 | 40 | 8 | 35 |
| | | eLr | N | 12 02.5 | | | | | | |
| | 29 | eLr | E | 19 45.5 | | | | | | |
| | 29 | eiP | Z | 22 23 17 ud | | | | | | |
| | 30 | eP | Z | 01 46 55 | | | | | | |
| | | eLr | NE | 02 03.2 | | | | | | |
| | 30 | P | ZNE | 03 26 50 | | | | | | |
| | | eL | N | 28 44 | | | 3 | 20 | | |
| | | eL | E | 29.0 | | | | | 2 | 15 |
| | 30 | eLr | NE | 07(35) | | | | | | |
| | | M | | 46 | | | | | 1 | 15 |
| | 30 | eP | Z | 07 46 56 | | | | | | |
| | | eLr | NE | 08 09 | | | | | 1 | 18 |
| | 30 | eP | Z | 12 28 06 | | | | | | |
| | | e | Z | 12 | | | | | | |
| | | e(S) | E | 30.5 | | | | | | |
| | | L | NE | 31 00 | | | 8 | 18 | 7 | 18 |
| | 30 | P | Z | 21 14 42 | | | | | | |
| OCT | 1 | eP? | Z | 06 39 13 | | | | | | |
| | 1 | P | Z | 09 40 52 | | | | | | |
| | 1 | eP | Z | 11 55 01 | | | | | | |
| | | ePcP | Z | 18 | | | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | 1 | ePKP | Z | 16 29 52 | | | | | | |
| | | PP | Z | 31 40 | | | | | | |
| | | e(SKKS) | Z | 39 39 | | | | | | |
| | | ePPS | Z | 43 09 | 1 | 20 | | | | |
| | | SS | ZNE | 49.1 | 2 | 35 | 8 | 30 | 3 | 30 |
| | | eLr | ZNE | 17 07.4 | 4 | 35 | 4 | 35 | 2 | 30 |
| | | M | | 20 | 4 | 20 | 2 | 20 | | |
| | | eLr2 | ZN | 18 02.5 | 2 | 55 | 2 | 50 | | |
| | 2 | eiP | Z | 00 06 41 | | | | | | |
| | 2 | eiP | Z | 04 46(13) ud | 2 | 10 | | | | |
| | | ePP | Z | 48.0 | 1 | 12 | | | | |
| | | eS | Z | 53(17) | 3 | 10 | | | | |
| | | e(SS) | ZE | 56(40) | 2 | 15 | | | 3 | 25 |
| | | eLr | Z | 05 00 | 1 | 35 | | | | |
| | | M | E | 04 | | | | | 3 | 15 |
| | | M | Z | 11 | 3 | 16 | | | | |
| | 2 | eP | Z | 07(17.5) | | | | | | |
| | | eS | ZE | (26) | | | | | | |
| | | eL | ZE | (33) | | | | | | |
| | | M | | (35) | 5 | 22 | | | 3 | 20 |
| | 2 | P | Z | 10 29(20) | | | | | | |
| | 2 | P | Z | 12 03 17 | | | | | | |
| | | S | ZE | 11 10 | 7 | 20 | | | 10 | 20 |
| | | eSS | ZE | 14.9 | | | | | 3 | 16 |
| | | eLq | ZE | 17.0 | | | | | 3 | 25 |
| | | eLr | ZE | 19.0 | 27 | 25 | | | 21 | 28 |
| | | M | | 28.0 | 31 | 16 | | | 22 | 16 |
| | 2 | eL | Z | 18 57.5 | | | | | | |
| | 2 | eL | ZE | 20 40.5 | | | | | | |
| | | M | | 44 | 2 | 20 | | | | |
| | 3 | eLr | ZNE | 01 52.3 | 1 | 20 | | | | |
| | 3 | iP | ZE | 05 20 45 u | | | | | | |
| | | e(pP) | Z | 55 | | | | | | |
| | | S | N | 29 09 | | | | | | |
| | | eScS | N | 30 42 | | | | | | |
| | | eLr | ZNE | 39.5 | | | | | | |
| | | M | | 43 | 3 | 18 | 1 | 18 | 2 | 18 |
| | 3 | eP | Z | 10 23 30 | | | | | | |
| | | eLr | Z | 47.5 | | | | | | |
| | | M | | 52 | 1 | 20 | | | | |
| | 3 | eP? | Z | 17 21 31 | | | | | | |
| | | e | Z | 40 | | | | | | |
| | | eLr | ZNE | 43.4 | | | | | | |
| | | M | | 51 | 1 | 15 | | | | |
| | 3 | eP | Z | 20 02 45 | | | | | | |
| | | (PcP) | Z | 55 | | | | | | |
| | | S | ZNE | 12 36 | | | | | 1 | 12 |
| | | ScS | E | 13 23 | | | | | 1 | 7 |
| | | eLr | ZNE | 27.3 | | | | | | |
| | | M | | 30 | 4 | 23 | 1 | 24 | 3 | 23 |
| | 3 | eLr | ZNE | 22 34.5 | | | | | | |
| | | M | | 37 | 2 | 18 | 1 | 19 | | |
| | 4 | eP | Z | 04 42 47 | | | | | | |
| | | eL | ZNE | 45 34 | 2 | 13 | | | 2 | 15 |
| | 4 | P | Z | 10 01 50 | | | | | | |
| | | S | ZNE | 10 38 | 2 | 12 | 1 | 10 | 3 | 10 |
| | | eLq | E | 19 35 | | | | | | |
| | | eLr | ZNE | 21.5 | 3 | 33 | | | | |
| | | M | | 29 | 4 | 18 | 2 | 15 | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | 6 | eL | Z | 02 33.5 | | | | | | |
| | | M | | 38 | 1 | 18 | | | | |
| | 6 | eP | Z | 06 15 53 | | | | | | |
| | | e(pP) | Z | 17 56 | | | | | | |
| | 6 | eP | ZE | 13 48 38 | | | | | | |
| | | eL | ZNE | 53.0 | 2 | 20 | 3 | 25 | 2 | 25 |
| | | M | N | 54 | | | 10 | 17 | | |
| | | M | ZE | 55.8 | 6 | 15 | | | 4 | 12 |
| | 6 | eL | E | 15 43.7 | | | | | 1 | 18 |
| | 6 | eiP | Z | 16 26 46 ud | | | | | | |
| | | eLr | ZNE | 46.5 | 1 | 18 | | | | |
| | | eP'P' | Z | 56 13 | | | | | | |
| | 6 | ePKP1 | Z | 20 15 39 | | | | | | |
| | | PKP2 | Z | 16 34 u | | | | | | |
| | | PP | Z | 20 21 | | | | | | |
| | | eLq? | Z | 21 05 15 | | | | | | |
| | | eLr | ZNE | 13 20 | 1 | 45 | | | | |
| | | M | | 25 | 2 | 20 | 1 | 20 | 1 | 20 |
| | 7 | ePKP2 | Z | 03 36 25 | | | | | | |
| | | eLr | Z | 04 38 | | | | | | |
| | | M | | 44 | 1 | 20 | | | | |
| | 7 | P | Z | 11 17 33 | | | | | | |
| | 7 | iP | ZNE | 15 29 34 u | | | | | | |
| | | iPP | Z | 32 08 | | | | | | |
| | | i(pPP) | Z | 25 | | | | | | |
| | | iS | ZNE | 38 38 sw | 55 | 16 | 53 | 16 | 75 | 20 |
| | | iScS | Z | 39 30 d | | | | | | |
| | | eSS | ZNE | 42.8 | 50 | 45 | 45 | 30 | 40 | 45 |
| | | eSSS | Z | 46(.5) | 97 | 20 | | | | |
| | | eLq | NE | 46.8 | | | | | | |
| | | M | NE | 50 | | | 80 | 40 | 85 | 40 |
| | | eLr | ZN | 51 | | | | | | |
| | | P'P' | Z | 57 46 | | | | | | |
| | | M | ZN | 58 | 135 | 18 | 62 | 18 | | |
| | | eP'P'P' | Z | 16 17.2 | | | | | | |
| | | eL | NE | 43 | | | 5 | 90 | 4 | 90 |
| | | eLr2 | ZNE | 17 34 | | | | | | |
| | | M | E | 40 | | | | | 3 | 40 |
| | | M | ZN | 46 | 6 | 30 | 3 | 30 | | |
| | | eLr3 | Z | 18 43 | | | | | | |
| | | M | Z | 47 | 1 | 25 | | | | |
| | 7 | iP | Z | 20 12 05 u | | | | | | |
| | | iS | ZNE | 21 00 s | 2 | 20 | | | 3 | 20 |
| | | eLr | ZNE | 32.0 | 6 | 25 | | | 6 | 25 |
| | | M | | 35 | 6 | 17 | | | 4 | 16 |
| | 8 | PS | Z | 02 19 40 | | | | | | |
| | | SS | ZE | 25.7 | | | | | | |
| | | eSSS | Z | 29.5 | | | | | | |
| | | eLr | ZE | 42 | | | | | | |
| | | M | | 46 | 1 | 16 | | | 1 | 15 |
| | 8 | P | Z | 06 06 56 u | 2 | 18 | | | | |
| | | epP | Z | 09.0 | 1 | 18 | | | | |
| | | sP | Z | 10 10 d | 2 | 18 | | | | |
| | | ePKP | Z | 40 | | | | | | |
| | | ePP | ZN | 11 50 | | | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | 8 | i | ZN | 55 | 12 | 18 | 5 | 12 | | |
| | | pPP | ZNE | 13 50 | 7 | 15 | | | | |
| | | SPP | ZNE | 14 55 | 14 | 15 | 5 | 12 | 5 | 12 |
| | | (SKS) | N | 16 13 | | | | | | |
| | | S | NE | 18 45 | | | 6 | 20 | 8 | 20 |
| | | SP | ZNE | 20.5 | 7 | 18 | | | | |
| | | PS | ZNE | 21 35 | 11 | 12 | | | 5 | 20 |
| | | sS | ZNE | 22 50 | 12 | 20 | | | 11 | 25 |
| | | SKKP | NE | 24 35 | | | 23 | 25 | 23 | 25 |
| | | PKKS | ZNE | 25.5 | 15 | 22 | 12 | 20 | 10 | 20 |
| | | SS | ZNE | 27 12 | 12 | 20 | 7 | 40 | 15 | 25 |
| | | e(SKKKS) | ZNE | 30.7 | 6 | 12 | 14 | 20 | 14 | 16 |
| | | e | Z | 32.0 | 14 | 32 | | | | |
| | | e(P'PKS) | ZNE | 34.7 | | | 13 | 30 | | |
| | 8 | eL | Z | 09 42.5 | | | | | | |
| | | M | | 46 | 1 | 18 | | | | |
| | 8 | eL | Z | 12 31.6 | | | | | | |
| | | M | | 41.5 | 1 | 18 | | | | |
| | 8 | eL | ZNE | 16 26.5 | 1 | 20 | | | | |
| | 8 | eP | Z | 17 40 56 | | | | | | |
| | | ePcP | Z | 43.1 | | | | | | |
| | | eS | ZE | 46 40 | 1 | 15 | | | 2 | 15 |
| | | eLq | NE | 49.2 | | | 1 | 12 | 7 | 15 |
| | | eLr | ZNE | 50.9 | 2 | 30 | 2 | 30 | | |
| | | M | | 53 | 7 | 20 | 3 | 20 | 4 | 20 |
| | 8 | eLq | E | 19 37.8 | | | | | 1 | 12 |
| | | eLr | ZN | 39.(4) | 2 | 22 | 1 | 20 | | |
| | 8 | iP | Z | 20 53 20 u | | | | | | |
| | | pP | Z | 40 | | | | | | |
| | | e(PS) | N | 21 05 05 | | | 1 | 10 | | |
| | | eSS | E | 11.3 | | | | | 2 | 22 |
| | | eLr | ZNE | 24.7 | 4 | 25 | | | 4 | 25 |
| | | M | N | 35 | | | 4 | 18 | | |
| | | M | ZE | 41 | 8 | 16 | | | 5 | 16 |
| | 9 | eP | Z | 04 54 58 | | | | | | |
| | | eL | Z | 05 11.5 | 1 | 18 | | | | |
| | 9 | ePKP | Z | 09 19 11 | | | | | | |
| | | PP | Z | 20 03 | | | | | | |
| | | SKS | N | 25 48 | | | | | | |
| | | eiPS | ZNE | 29 40 du | 6 | 15 | | | | |
| | | eSS | NE | 36.3 | | | 4 | 25 | | |
| | | Lq | E | 49.3 | | | | | | |
| | | e(Lr) | ZN | 55.9 | 2 | 40 | | | | |
| | | M | Z | 58 | 5 | 20 | | | | |
| | 9 | iP | Z | 10 01 04 d | | | | | | |
| | 10 | eP | ZNE | 15 02 39 | | | | | | |
| | | S | E | 04 45 | | | | | | |
| | | eL | NE | 05.1 | | | 9 | 15 | 12 | 10 |
| | 10 | eL | NE | 17 32 | | | | | | |
| | 10 | eL | NE | 18 57 40 | | | 1 | 15 | 1 | 15 |
| | 11 | P | Z | 04 56 08 | | | | | | |
| | 12 | eL | ZE | 02 40.0 | 2 | 25 | | | 2 | 25 |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | 12 | P | Z | 09 21 11 | | | | | | |
| | | ePcP | Z | 22 07 | | | | | | |
| | | S | ZN | 29 15 | 1 | 15 | 1 | 12 | | |
| | | eLr | ZN | 38.7 | 1 | 30 | | | | |
| | 12 | eiP | Z | 18 40 24 du | | | | | | |
| | 13 | ePKP | Z | 02 40 50 | | | | | | |
| | | ei | Z | 53 du | | | | | | |
| | | e | Z | 41 34 | | | | | | |
| | | e | Z | 38 | | | | | | |
| | 13 | eP | Z | 06 09 31 | | | | | | |
| | | e(SS) | ZE | 21 | | | | | | |
| | | eL | ZE | 32 | 1 | 20 | | | | |
| | 13 | ePKP | Z | 15 11 35 | | | | | | |
| | | ei | Z | 39 | | | | | | |
| | | PP | ZN | 13 38 | 2 | 13 | 2 | 15 | | |
| | | eSKS | N | 18.6 | | | | | | |
| | | SKKS | N | 20 30 | | | | | | |
| | | PS | ZNE | 23 46 | 4 | 22 | 2 | 22 | | |
| | | ePPS | ZN | 25.1 | | | 3 | 15 | | |
| | | eSS | ZNE | 30.8 | 5 | 35 | 8 | 40 | 6 | 30 |
| | | e | N | 39 | | | 3 | 30 | | |
| | | eLq | ZNE | 45.3 | 2 | 25 | 4 | 50 | 10 | 50 |
| | | eLr | ZNE | 52 | 7 | 35 | 5 | 30 | | |
| | | M | | 57 | 16 | 22 | 10 | 22 | 6 | 22 |
| | 13 | eiP | Z | 18 51 20 ud | | | | | | |
| | | pP | Z | 52 03 | | | | | | |
| | | ei | Z | 10 | | | | | | |
| | 14 | eP | Z | 01 10 58 | | | | | | |
| | 14 | iP | Z | 15 40 59 d | | | | | | |
| | 14 | P | Z | 17 58 46 | | | | | | |
| | | e | Z | 53 | | | | | | |
| | | eS | NE | 18 07.1 | | | | | | |
| | | eLq | N | 14.6 | | | | | | |
| | | eLr | ZNE | 17.2 | | | | | | |
| | | M | ZN | 22 | 4 | 16 | 3 | 16 | | |
| | | M | E | 26 | | | | | 5 | 16 |
| | 14 | PKP | Z | 21 38 07 | | | | | | |
| | | ePP | ZN | 39.9 | 4 | 20 | | | | |
| | | e(SKKS) | N | 47.0 | | | | | | |
| | | ePKKP | Z | 47 56 | | | | | | |
| | | eSP | ZNE | 50.2 | | | 3 | 20 | | |
| | | ePPS | ZN | 51.4 | 4 | 20 | 3 | 15 | | |
| | | eSS | ZNE | 57 00 | 7 | 35 | 25 | 25 | 13 | 25 |
| | | eLr | ZNE | 22 15.2 | 7 | 35 | 5 | 35 | | |
| | | M | | 28 | 15 | 20 | 9 | 20 | 6 | 20 |
| | 14 | ePKP1 | | 23 15 40 | | | | | | |
| | | e(PKP2) | | 16 27 | | | | | | |
| | 15 | eP | Z | 03 03 48 | | | | | | |
| | | eLr | Z | 22.5 | | | | | | |
| | 16 | eSS | ZE | 10 08.6 | | | | | 2 | 15 |
| | | eLr | ZE | 25 | | | | | | |
| | | M | | 28 | 1 | 20 | | | 1 | 20 |
| | 16 | eP | Z | 13 34(51) | | | | | | |
| | | eLq | E | 42(43) | | | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | 16 | eLr | ZN | 44.5 | 2 | 25 | 2 | 25 | | |
| | | M | E | 45 | | | | | 4 | 25 |
| | | M | ZN | 50 | 2 | 18 | | | | |
| | 17 | iP | ZNE | 07 28 20 u | | | | | | |
| | | eL | ZNE | 30.2 | 12 | 20 | 7 | 20 | 5 | 15 |
| | 17 | eiP | Z | 13 46 09 ud | | | | | | |
| | | eLr | ZE | 14 02.5 | 1 | 25 | | | 1 | 22 |
| | 17 | ePP | Z | 16 03.3 | | | | | | |
| | | e(PKP) | Z | 03 31 | | | | | | |
| | | PS | Z | 12 38 | | | | | | |
| | | eLr | ZE | 33.3 | | | | | | |
| | | M | | 36 | 1 | 20 | | | 1 | 20 |
| | 17 | e(SP) | ZE | 22 43.2 | | | | | | |
| | | eSS | ZE | 49 20 | 1 | 22 | | | 2 | 17 |
| | | esSS | ZE | 50.9 | 1 | 22 | | | 2 | 17 |
| | | eLr | ZE | 23 05.3 | | | | | | |
| | | M | | 13 | 1 | 15 | | | 1 | 17 |
| | 18 | eLr | Z | 01 20 | | | | | | |
| | | M | | 28 | 1 | 20 | | | | |
| | 18 | eL | Z | 05 30.5 | | | | | | |
| | 18 | eiP | Z | 14 10 52 u | | | | | | |
| | | eL | ZNE | 12.6 | 2 | 18 | 2 | 15 | 2 | 15 |
| | 19 | P | Z | 07 17 25 | | | | | | |
| | | epP | Z | 18 57 | | | | | | |
| | 19 | eP | Z | 10 38 05 | | | | | | |
| | | e(S) | E | 43.2 | | | | | | |
| | | eL | ZNE | 44.4 | | | | | | |
| | | M | | 45.5 | 6 | 12 | 11 | 16 | 7 | 12 |
| | 20 | iP | ZN | 11 16 12 u | | | | | | |
| | | eS | N | 25.1 | | | | | | |
| | | eSS | N | 29.0 | | | | | | |
| | | eLq | E | 32 | | | | | | |
| | | eLr | ZN | 34 | | | | | | |
| | | eP'P'? | Z | 45.5 | | | | | | |
| | | M | | 53 | 7 | 15 | 4 | 15 | 5 | 15 |
| | 22 | eiP | ZNE | 08 32 16 u?d | | | | | | |
| | | eS | ZNE | 40.7 | 4 | 20 | 3 | 20 | 7 | 15 |
| | | eSS | NE | 45.0 | | | | | 3 | 20 |
| | | eLq | ZNE | 47.9 | | | | | 21 | 45 |
| | | eLr | ZN | 50.7 | 24 | 35 | 17 | 35 | 7 | 35 |
| | | P'P' | Z | 09 01 24 | | | | | | |
| | | eLr2 | Z | 10 44 | | | | | | |
| | | M | | 56 | 1 | 22 | | | | |
| | 23 | eL | Z | 07 45 | | | | | | |
| | 24 | eL | ZNE | 04 44 | | | | | | |
| | | M | | 56 | 1 | 20 | | | 1 | 20 |
| | 24 | eiP | ZNE | 05 21 41 d | 2 | 7 | | | | |
| | | PcP | Z | 22 27 | | | | | | |
| | | eScP | Z | 26.7 | | | | | | |
| | | eS | ZE | 29 31 | | | | | 1 | 15 |
| | | eScS | NE | 30 20 | | | | | | |
| | | eLq | ZE | 36.4 | | | | | 2 | 25 |
| | | eLr | Z | 39.1 | 1 | 30 | | | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | 24 | ePKP? | Z | 06 05 40 | | | | | | |
| | 24 | eL | ZNE | 10 39.5 | | | | | | |
| | | M | | 42 | | | | | 1 | 20 |
| | 24 | P | Z | 17 20 08 d | | | | | | |
| | | S | ZNE | 28 55 | 1 | 15 | | | 1 | 20 |
| | | eSS | E | 33 36 | | | | | | |
| | | eLr | ZNE | 40.8 | 2 | 30 | | | | |
| | | M | | 45 | 2 | 20 | 1 | 20 | | |
| | 25 | eS | E | 12 32 20 | | | | | | |
| | | eLr | ZNE | 41.2 | 1 | 25 | | | | |
| | | M | | 47 | 2 | 18 | 1 | 18 | 1 | 18 |
| | 25 | P | Z | 18 35 48 d | | | | | | |
| | 27 | eLr | ZE | 06 09.4 | | | | | | |
| | | M | | 15 | 2 | 15 | | | 2 | 15 |
| | 27 | eL | Z | 15 57.4 | | | | | | |
| | 27 | eP | Z | 19 53 40 | | | | | | |
| | 27 | iP | Z | 22 37 24 u | | | | | | |
| | | eS | ZNE | 45.1 | | | | | | |
| | 28 | ePKP2 | Z | 04 40 44 | | | | | | |
| | | ePP | Z | 44.6 | | | | | | |
| | | e(PcPP') | Z | 47.7 | | | | | | |
| | | e(SKSP) | Z | 55 20 | | | | | | |
| | | eSS | NE | 05 06.5 | | | | | 3 | 22 |
| | | eSSP | ZN | 07.9 | 1 | 30 | | | | |
| | | e | ZN | 09.0 | 2 | 21 | 4 | 28 | | |
| | | eSSS | ZNE | 13.(9) | 1 | 22 | | | | |
| | | eLq | E | 32.(5) | | | | | 2 | 45 |
| | | eLr | ZNE | 43.(2) | 1 | 50 | | | | |
| | | M | | 54 | 4 | 20 | 1 | 20 | 2 | 20 |
| | 28 | P | Z | 11 25 05 | | | | | | |
| | 28 | ePKP | Z | 13 37 03 | | | | | | |
| | | epPKP | Z | 31 | | | | | | |
| | | PP | ZNE | 38 48 | | | 1 | 15 | | |
| | | SKS | N | 43 53 | | | 2 | 12 | | |
| | | eSKKS | N | 45 31 | | | 2 | 16 | | |
| | | eSS | NE | 55.6 | | | 5 | 20 | 7 | 20 |
| | | eLq | E | 14 10.2 | | | | | 5 | 40 |
| | | eLr | NE | 15.5 | | | 6 | 45 | | |
| | | eLq2 | E | 57 | | | | | 2 | 50 |
| | | eLr2 | ZN | 15 11.5 | | | 3 | 50 | | |
| | 28 | eP | Z | 22 43.8 | | | | | | |
| | | ePP | Z | 48 28 | 1 | 20 | | | | |
| | | e(SKS) | Z | 54.(5) | | | | | | |
| | | e(PS) | Z | 57 47 | 1 | 16 | | | | |
| | | eSS | NE | 23 03 42 | | | | | | |
| | | e(sSS) | ZNE | 04 19 | 2 | 18 | 4 | 23 | 2 | 18 |
| | | eLr | ZNE | (21) | | | | | | |
| | | M | | 30 | 2 | 20 | 1 | 20 | 1 | 20 |
| | 29 | eLr | ZE | 02 21.5 | | | | | | |
| | | M | | 30 | 1 | 20 | | | | |
| | 29 | eLr | ZNE | 05 17 | | | | | | |
| | | M | | 26 | 1 | 20 | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | 29 | eP | ZN | 09 47 26 | 2 | 10 | | | | |
| | | eS | NE | 55.4 | | | 3 | 28 | | |
| | | e(ScS) | E | 57 45 | | | | | | |
| | | e(Lq) | ZNE | 10 01 43 | 3 | 20 | | | | |
| | | eLr | ZN | 03.5 | 4 | 30 | 3 | 30 | | |
| | 30 | eP | Z | 09 02.6 | | | | | | |
| | | e(SS) | N | 08 24 | | | | | | |
| | | eL | N | 08.8 | | | 5 | 22 | | |
| | | eL | E | 09.4 | | | | | | |
| | | M | N | 11 | | | 6 | 11 | | |
| | | M | E | 12 | | | | | 5 | 10 |
| | 30 | eP | ZNE | 12 26 17 | | | | | | |
| | | iS | NE | 36 04 ws | | | 8 | 18 | 8 | 18 |
| | | eSS | NE | 41.0 | | | | | 3 | 20 |
| | | eL | NE | (47) | | | | | | |
| | | M | | 13 03 | | | 10 | 15 | 13 | 15 |
| | 30 | P | Z | 13 23 40 u | | | | | | |
| | 30 | eP | Z | 16 02 38 | | | | | | |
| | | eS | NE | 12.3 | | | | | | |
| | | M | | 35 | | | 1 | 20 | 1 | 22 |
| | 30 | iP | NE | 21 44 39 w | | | | | | |
| | | e(PP) | NE | 47.3 | | | | | | |
| | | eS | NE | 54.3 | | | | | | |
| | | eSS | E | 59.5 | | | | | | |
| | 31 | eL | NE | 14 22(18) | | | | | | |
| | | | | | | | 1 | 17 | | |
| NOV | 1 | eP | Z | 06 29 01 | | | | | | |
| | | eLr | Z | 07 02.0 | 1 | 40 | | | | |
| | 1 | iP | ZNE | 08 56 08 use | | | | | | |
| | | eS | ZNE | 09 04.5 | 7 | 20 | 17 | 30 | 20 | 35 |
| | | eLq | NE | 11.5 | | | | | | |
| | | M | N | 14 | | | 21 | 18 | | |
| | | eLr | ZNE | 14 | | | | | | |
| | | M | ZE | 19 | 50 | 17 | 21 | 16 | 32 | 16 |
| | | eP'P' | Z | 25 08 | | | | | | |
| | 1 | eP | Z | 10 36 12 | | | | | | |
| | 1 | iP | Z | 12 39 40 d? | | | | | | |
| | | eS | NE | 48.1 | | | 1 | 10 | | |
| | | eSS | Z | 52.3 | | | | | | |
| | | eLq | NE | 55.0 | | | 3 | 30 | 3 | 25 |
| | | eLr | ZNE | 58.1 | 3 | 22 | | | | |
| | | M | | 13 02 | | | | | | |
| | 2 | iP | ZNE | 17 25 05 un | 23 | 11 | 11 | 14 | | |
| | | eS | E | 33.3 | | | | | 7 | 11 |
| | | eScS | E | 35.1 | | | | | 11 | 10 |
| | | eLq | E | 40.9 | | | | | 15 | 30 |
| | | eLr | ZN | 43 | 10 | 40 | 8 | 40 | | |
| | | M | | 48 | 50 | 20 | 30 | 20 | 23 | 18 |
| | | eP'P' | Z | 54.4 | | | | | | |
| | 2 | eP | Z | 18 18 28 | | | | | | |
| | | eLq | N | 30.9 | | | | | | |
| | 3 | eP | Z | 02 52 00 | | | | | | |
| | | eS | NE | 59.4 | | | | | | |
| | | eLq | E | 03 03.7 | | | | | 3 | 10 |
| | | eLr | ZNE | 06.5 | | | | | | |
| | | M | | 10 | 6 | 20 | 4 | 20 | 2 | 20 |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | 4 | P | Z | 18 26 03 | | | | | | |
| | 5 | ePKP | Z | 20 40 22 | | | | | | |
| | | eLr | ZNE | 21 31 | | | | | | |
| | | M | | 50 | 3 | 16 | | | | |
| | 6 | eP? | Z | 04 23 16 | | | | | | |
| | | eS? | Z | 53 | | | | | | |
| | 6 | PKP | Z | 04 57 15 | | | | | | |
| | | ePP | ZN | 59 15 | 2 | 10 | | | | |
| | | ePS | ZN | 05 09.2 | 2 | 14 | | | | |
| | | ePPS | Z | 10.7 | 2 | 14 | | | | |
| | | eSS | ZNE | 16.7 | 2 | 30 | 3 | 30 | | |
| | | Lq | E | 30.3 | | | | | 3 | 50 |
| | | eLr | ZNE | 36 | | | | | | |
| | | M | | 40 | 7 | 25 | 4 | 25 | 2 | 25 |
| | 6 | e(Lq) | E | 10 35.1 | | | | | | |
| | | eLr | ZN | 38.0 | | | | | | |
| | | M | | 40 | 2 | 20 | | | | |
| | 6 | e(Lq) | E | 15 26.5 | | | | | | |
| | | eLr | ZN | 27.5 | | | | | | |
| | | M | | 33 | 3 | 17 | 2 | 18 | | |
| | 6 | ePP | Z | 22 31 13 | | | | | | |
| | | ePS | Z | 40.7 | | | | | | |
| | | eSS | ZNE | 48.0 | 1 | 20 | 2 | 20 | 2 | 25 |
| | | eLr | ZNE | 23 07.5 | | | | | | |
| | | M | | 23 | 6 | 17 | 4 | 17 | 2 | 16 |
| | 7 | eL | ZN | 16 40.8 | 1 | 20 | 1 | 15 | | |
| | 7 | eLr | ZN | 16 55.7 | | | | | | |
| | | M | | 17 01 | 1 | 16 | | | | |
| | 8 | eP | Z | 00 04 28 | | | | | | |
| | | eLq | E | 14.3 | | | | | 2 | 14 |
| | | eLr | ZN | 16.2 | | | | | | |
| | | M | | 19 | 3 | 20 | | | | |
| | 8 | eLr | ZN | 03 03.5 | | | | | | |
| | | M | | 18 | 1 | 15 | | | | |
| | 8 | eLr | Z | 05 34.5 | | | | | | |
| | 8 | eLr | Z | 06 21.5 | | | | | | |
| | | M | | 38 | 1 | 15 | | | | |
| | 8 | eP | Z | 11 07 37 | | | | | | |
| | | eS | NE | 14.0 | | | | | 2 | 15 |
| | | eLq | E | 17.4 | | | | | 2 | 16 |
| | | eLr | ZN | 19.1 | | | | | | |
| | | M | | 28 | 3 | 16 | 1 | 15 | | |
| | 8 | eLr | Z | 12 34.3 | | | | | | |
| | | M | | 42 | 1 | 15 | | | | |
| | 8 | eLr | Z | 14 37.8 | | | | | | |
| | 8 | eP | Z | 19 57 13 | | | | | | |
| | 8 | eL | Z | 22 16.9 | | | | | | |
| | 9 | eiP | Z | 01 29 29 d? | | | | | | |
| | | epP | Z | 30 05 | | | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | 9 | iP | ZNE | 03 26 27 use | 13 | 19 | 7 | 18 | | |
| | | iPP | ZNE | 28 21 d | 17 | 18 | 13 | 18 | | |
| | | iS | ZNE | 33 24 sw | 30 | 20 | 43 | 35 | 15 | 35 |
| | | e(SS) | ZNE | 36.9 | 18 | 16 | 20 | 16 | | |
| | | eLr | ZN | 40 | 35 | 40 | 34 | 40 | | |
| | | M | E | 44 | | | | | 45 | 14 |
| | | M | ZN | 53 | 70 | 16 | 40 | 14 | | |
| | 9 | e(PP) | Z | 11 03 07 | | | | | | |
| | | ePS | ZE | 12 50 | | | | | | |
| | | eSS | ZNE | 19.1 | | | | | 3 | 30 |
| | | eLq | NE | 32.2 | | | 3 | 35 | | |
| | | M | NE | 37 | | | 3 | 35 | 3 | 35 |
| | | eLr | Z | 38.5 | | | | | | |
| | | M | | 47 | 7 | 22 | 2 | 20 | 4 | 22 |
| | 9 | eP | Z | 19 40 29 | | | | | | |
| | | e(pP) | Z | 48 | | | | | | |
| | | ePcP | Z | 42.8 | | | | | | |
| | | eS | NE | 46.9 | | | | | 2 | 15 |
| | | eLq | E | 50.2 | | | | | 2 | 12 |
| | | eLr | ZN | 52 | | | | | | |
| | | M | | 56 | 4 | 20 | 2 | 20 | | |
| | 9 | P | ZE | 20 18 05 | | | | | | |
| | | S | NE | 27 50 | 3 | 16 | | | 9 | 17 |
| | | eSS | ZE | 32.6 | | | | | 6 | 17 |
| | | eLq | N | 38.5 | | | 3 | 18 | | |
| | | eLr | ZE | 41 | | | | | | |
| | | M | | 55 | 30 | 15 | 10 | 15 | 22 | 15 |
| | 10 | eLr | Z | 06 36 | | | | | | |
| | 10 | iP | ZNE | 14 56 13 d | 9 | 15 | 3 | 15 | 3 | 15 |
| | | S | ZNE | 15 05 30 | 6 | 15 | 15 | 20 | 16 | 25 |
| | | eSSS | ZE | 13.7 | 11 | 18 | | | | |
| | | eLq | E | 17 | | | | | 18 | 35 |
| | | eLr | ZN | 18.5 | 23 | 48 | | | | |
| | | M | | 26 | 65 | 20 | 33 | 20 | | |
| | 10 | iP | Z | 15 06 41 d | | | | | | |
| | 10 | eP | Z | 16 39(03) | | | | | | |
| | | eLr | ZN | 53.5 | | | | | | |
| | | M | | 55 | 3 | 20 | 1 | 20 | | |
| | 11 | ePKP | Z | 05 51 03 | | | | | | |
| | | eLr | Z | 06 51 | | | | | | |
| | 11 | eP | Z | 06 11 44 | | | | | | |
| | | eL | Z | 28 | 1 | 25 | | | | |
| | 12 | eLr | Z | 08 24 | | | | | | |
| | | M | | 28 | 1 | 15 | | | | |
| | 12 | eL | Z | 09 09 | 1 | 15 | | | | |
| | 13 | P | ZNE | 06 49 04 dse | 4 | 15 | | | | |
| | | S | ZNE | 58 50 n | 5 | 15 | | | 7 | 18 |
| | | eSS | ZN | 07 07.3 | 4 | 20 | | | | |
| | | eLq | E | 12 | | | | | | |
| | | eLr | ZN | 14 | | | | | | |
| | | M | | 26 | 10 | 15 | 5 | 15 | 3 | 15 |
| | 13 | P | Z | 09 36 27 u | 1 | 17 | | | | |
| | | eiPKP | ZNE | 39 32 ud | 4 | 10 | | | | |
| | | PP | ZNE | 41 20 | 12 | 15 | 4 | 15 | 2 | 15 |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | 13 | SKS | ZNE | 46 37 | 9 | 15 | 8 | 16 | 3 | 20 |
| | | eSKKS | NE | 48.2 | | | 6 | 20 | 4 | 13 |
| | | ePKKP | Z | 49 18 | | | | | | |
| | | ePS | ZN | 51.4 | 19 | 20 | 9 | 15 | | |
| | | eScSP' | ZNE | 55.0 | | | 16 | 30 | 6 | 30 |
| | | eSKKS | Z | 56.7 | 17 | 15 | | | | |
| | | eSS | ZNE | 58.4 | | | 92 | 24 | 48 | 23 |
| | | eSSS | ZE | 10 02.8 | | | | | | |
| | | eLq | E | 12.3 | | | | | 14 | 40 |
| | | eLr | ZN | 17.0 | 30 | 40 | 20 | 35 | | |
| | | M | | 32 | 92 | 17 | 55 | 16 | 32 | 18 |
| | | eLr2 | ZN | 11 13 | | | | | | |
| | | M | | 17 | 22 | 38 | 12 | 38 | | |
| | 13 | ePKP | Z | 21 04 54 | | | | | | |
| | 13 | e(L) | E | 21 38.1 | | | | | 1 | 15 |
| | | eL | ZN | 39.5 | 2 | 20 | | | | |
| | 14 | eP | Z | 01 25 24 | | | | | | |
| | | eL | ZN | 30 50 | 1 | 15 | | | | |
| | 14 | eP | Z | 02 13 07 | | | | | 2 | 15 |
| | | eS | ZNE | 17 20 | | | | | 3 | 15 |
| | | e(Lq) | E | 18.3 | | | | | | |
| | | eLr | ZN | 18.6 | 2 | 20 | | | | |
| | | M | | 20 | 5 | 15 | 2 | 14 | 4 | 10 |
| | 14 | eP | Z | 04 22 09 | | | | | | |
| | | eS | ZN | 26.1 | | | | | 1 | 18 |
| | | e(Lq) | E | 26.5 | | | | | | |
| | | eLr | ZN | 27.3 | | | | | | |
| | | M | | 29 | 2 | 15 | 1 | 14 | | |
| | 14 | e(Lq) | E | 09 50 | | | | | 1 | 15 |
| | | eLr | ZNE | 53.1 | 1 | 15 | | | | |
| | 14 | SS | ZE | 20 33 27 | | | | | 2 | 18 |
| | | eLr | ZE | 51 | | | | | | |
| | 15 | eP | Z | 01 06.4 | | | | | | |
| | | e(S) | ZNE | 09.1 | | | | | | |
| | | eL | ZNE | 09.3 | 3 | 15 | 3 | 10 | 4 | 15 |
| | 15 | eLr | ZNE | 03 04.8 | 1 | 15 | | | 1 | 15 |
| | 15 | P | ZNE | 06 26 49 dsw | 3 | 20 | 2 | 20 | 5 | 25 |
| | | eL | NE | 28.9 | | | | | | |
| | | eL | ZNE | 29.4 | | | | | | |
| | | M | N | 30 | | | 55 | 14 | | |
| | | M | ZE | 31 | 75 | 15 | | | | |
| | 15 | eL | Z | 11 45 | | | | | | |
| | 15 | eL | ZNE | 17 04.6 | 1 | 20 | | | | |
| | 15 | eP | Z | 21 47 22 | | | | | 3 | 15 |
| | | eLq | E | 55.8 | | | | | 2 | 15 |
| | | eLr | ZNE | 59.0 | 2 | 20 | 2 | 20 | | |
| | 16 | P | Z | 01 31 12 | | | | | | |
| | 16 | e(L) | E | 16 41.2 | | | | | | |
| | | eL | ZNE | 43.8 | 2 | 18 | | | | |
| | 16 | ePKP | Z | 23 18(30) | | | | | | |
| | 17 | iP | Z | 01 38(57) u? | | | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | 17 | eLr | ZE | 57.(3) | | | | | | |
| | | M | | 02 02 | 1 | 15 | | | | |
| | 17 | eP | Z | 04 15(48) | | | | | | |
| | | e(pP) | Z | 16(09) | | | | | | |
| | | eS | E | 22.(2) | | | | | 2 | 12 |
| | | e(SS) | E | 25.(6) | | | | | 3 | 15 |
| | | eLq | E | 26.(5) | | | | | | |
| | | eLr | ZN | 28 | | | | | | |
| | | M | | 31 | 6 | 18 | 2 | 18 | | |
| | 17 | iP | Z | 05 25(39) u | | | | | | |
| | 17 | eLr | Z | 20 43.(7) | | | | | | |
| | | M | | 50 | 1 | 19 | | | | |
| | 17 | eP | ZE | 21 29(08) | | | | | | |
| | | ePP | ZE | 30(10) | | | | | | |
| | | eS | NE | 34(22) | | | | | | |
| | | Lq | N | 35(38) | | | | | 4 | 20 |
| | | eLr | ZE | 36 | | | | | | |
| | | M | N | 38 | | | 11 | 13 | | |
| | 18 | P | Z | 12 54(29) | | | | | | |
| | | pP | Z | (56) u | | | | | | |
| | 19 | eP | Z | 12(30) | | | | | | |
| | 20 | e(L) | NE | 13 37 06 | | | 1 | 15 | 1 | 15 |
| | 20 | e(L) | ZNE | 13 57 48 | | | 1 | 15 | 1 | 15 |
| | 20 | eP | ZNE | 22 14 49 | | | 2 | 16 | 6 | 16 |
| | | S | ZNE | 25 40 | | | 46 | 22 | 53 | 20 |
| | | eSS | N | 31.2 | | | 27 | 21 | | |
| | | eLq | N | 38.(3) | | | 48 | 24 | | |
| | | eLr | ZE | 44 | | | | | | |
| | | M | | 46 | 190 | 19 | 45 | 19 | | |
| | 21 | eP | Z | 04 34 40 | | | | | | |
| | | eLr | ZNE | 05 04 | 1 | 20 | | | 1 | 20 |
| | 21 | eiP | Z | 04 39 37 u | | | | | | |
| | 22 | eLr | ZE | 03 12.(6) | | | | | | |
| | | M | | 15 | 1 | 20 | | | 1 | 20 |
| | 22 | eP | ZNE | 03 41(17) | | | | | | |
| | | S | ZNE | 48.(8) | | | | | | |
| | | eLq | E | 54 | | | | | | |
| | | eLr | ZN | 56 | 3 | 20 | | | | |
| | | M | | 04 01 | 8 | 18 | 6 | 18 | 6 | 18 |
| | 22 | eP | ZNE | 06 32(17) | 3 | 7 | | | | |
| | | S | ZNE | 41(01) w | 5 | 12 | | | 8 | 22 |
| | | eSS | ZN | 45 | 3 | 20 | | | | |
| | | eSSS | NE | 47.(8) | | | 3 | 15 | | |
| | | eLq | E | 49 | | | | | | |
| | | eLr | ZNE | 51 | 7 | 50 | | | | |
| | | M | | 56 | 30 | 20 | 15 | 20 | 30 | 20 |
| | | eP'P' | Z | 07 01(15) | | | | | | |
| | 22 | iP | ZNE | 12 40(09) ue | 5 | 12 | | | | |
| | | pP | Z | (30) | | | | | | |
| | | S | ZNE | 48(15) | | | 6 | 12 | 5 | 30 |
| | | eSS | E | 52.(5) | | | | | | |
| | | eLq | NE | 54 | | | | | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | 22 | eLr | ZE | 57 | | | | | | |
| | | M | | 13 04 | 9 | 18 | 5 | 17 | 11 | 17 |
| | | eP'1P'1 | Z | 09(22) | | | | | | |
| | | P'2P'2 | Z | (59) | | | | | | |
| | 23 | eP | Z | 04 22.0 | | | | | | |
| | 23 | eP | ZNE | 14(21) | | | | | | |
| | | eS | ZNE | (27) | 75 | 20 | | | 85 | 18 |
| | | eLq | E | (32) | | | | | | |
| | | eLr | ZNE | (35) | 110 | 35 | | | | |
| | 23 | P | Z | 18(05) | | | | | | |
| | | eS | ZNE | (12) | 5 | 16 | 12 | 18 | 6 | 20 |
| | | eLr | ZNE | (18) | 9 | 35 | 7 | 35 | | |
| | 24 | P | Z | 05(01) | | | | | | |
| | | S | ZNE | (10) | 10 | 3 | | | | |
| | | SS | ZN | (14) | 5 | 35 | 5 | 30 | | |
| | | e | ZN | (19) | 7 | 30 | | | | |
| | | eLq | ZN | (22) | 9 | 32 | 6 | 30 | | |
| | 24 | eiP | ZNE | 07(01) unw | | | | | | |
| | | eS | ZNE | (08) | | | | | | |
| | | eP'P' | Z | (31) | | | | | | |
| | 24 | P | Z | 08 25(31) | | | | | | |
| | 24 | P | Z | 08 35(01) | | | | | | |
| | 24 | P | Z | 09 36(59) | | | | | | |
| | 26 | iP | Z | 12 29 19 u | | | | | | |
| | 26 | eL | Z | 14 58 | | | | | | |
| | 26 | eL | ZE | 16 07 | | | | | | |
| | 26 | eP | Z | 18 25 20 | | | | | | |
| | | eS | ZNE | 29 39 | 2 | 12 | 3 | 20 | 3 | 15 |
| | | e(Lq) | E | 30.4 | | | | | | |
| | | e(Lr) | ZN | 31 00 | 3 | 20 | 2 | 20 | | |
| | | M | | 32 | 7 | 15 | 4 | 15 | 5 | 12 |
| | 26 | P | Z | 21 44 25 | | | | | | |
| | 27 | eL | Z | 07 24 | | | | | | |
| | | M | | 27 | | | | | | |
| | 27 | eL | Z | 15 45 | | | | | | |
| | 27 | eP | Z | 19 04 08 | | | | | | |
| | | e(S) | ZNE | 08 19 | | | | | | |
| | | M | | 10 | 2 | 20 | 1 | 15 | 1 | 12 |
| | 27 | eP | Z | 20 54 45 | | | | | | |
| | | e(S) | ZNE | 59.0 | | | | | | |
| | | M | | 21 01 | 2 | 15 | 1 | 15 | 1 | 10 |
| | 27 | eP | Z | 21 34 50 | | | | | | |
| | | eS | E | 43 18 | | | | | | |
| | | e(Lq) | N | 53.1 | | | | | | |
| | | eLr | ZE | 54.4 | | | | | | |
| | | M | | 58 | 3 | 20 | 2 | 17 | 2 | 17 |
| | 28 | eLr | ZNE | 21 08.2 | | | | | | |
| | | M | N | 09 | | | | 1 | 15 | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | 28 | M | ZE | 11 | 2 | 20 | | | 2 | 20 |
| | | eLq2 | N | 29 | | | 1 | 15 | | |
| | | eLr2 | ZE | 31 | 1 | 20 | | | 1 | 20 |
| | 29 | eP | ZNE | 09 41 31 u | 2 | 10 | | | | |
| | | ePPP | E | 45 09 | | | | | 2 | 7 |
| | | eS | ZNE | 49 19 | | | 3 | 11 | 3 | 25 |
| | | eLr | ZNE | 57 | | | | | | |
| | | M | | 10 04 | 3 | 15 | 2 | 15 | 4 | 15 |
| | 29 | eP | Z | 14 50 34 | | | | | | |
| | | eL | NE | 53.0 | | | | | | |
| | | M | | 53.9 | | | 11 | 16 | 10 | 15 |
| | 29 | eP | Z | 19 29 43 | | | | | | |
| | 30 | eP | Z | 00 17 44 | | | | | | |
| | | eL | E | 19.3 | | | | | | |
| | | eL | N | 19.7 | | | | | | |
| | | M | | 20 | | | 2 | 14 | 2 | 10 |
| DEC | 1 | S | ZE | 09 00 10 | | | | | 1 | 20 |
| | | eLq | N | 07.2 | | | 1 | 12 | | |
| | | Lr | ZE | 08 22 | 1 | 25 | | | 1 | 25 |
| | | M | | 11 | 2 | 18 | | | 2 | 18 |
| | 1 | eP | Z | 09 49.8 | | | | | | |
| | | eLr | Z | 10 14 | | | | | | |
| | 1 | eP | Z | 10 22 44 | | | | | | |
| | 1 | eP | ZE | 10 49(12) | | | | | | |
| | | S | ZNE | 56 20 w | 1 | 20 | 3 | 18 | 5 | 20 |
| | | e(SS) | E | 11 00 | | | | | 2 | 15 |
| | | e(Lq) | E | 01 | | | | | 3 | 18 |
| | | eLr | ZN | 02.5 | | | | | | |
| | | M | | 11 | 5 | 16 | 3 | 16 | 3 | 16 |
| | 1 | eP | Z | 13 51 13 | | | | | | |
| | | e(L) | NE | 52 45 | | | 1 | 12 | 1 | 12 |
| | | e(L) | Z | 53 15 | 1 | 15 | | | | |
| | 1 | ePKP | Z | 21 08 57 | | | | | | |
| | | eSS | ZNE | 28.4 | | | | | 1 | 25 |
| | | eSSS | ZNE | 33.3 | 1 | 20 | | | | |
| | | eLq | NE | 42.7 | | | 2 | 45 | 3 | 45 |
| | | eLr | ZNE | 48.5 | 2 | 26 | | | | |
| | | M | | 22 05 | 6 | 16 | 2 | 16 | 4 | 16 |
| | 2 | eiP | Z | 04 48 18 d | | | | | | |
| | | eLq | E | 05 06.1 | | | | | | |
| | | eLr | ZN | 08.5 | | | | | | |
| | | M | | 16 | 2 | 18 | 1 | 17 | | |
| | 2 | eiP | ZNE | 09 22 24 du | | | 5 | 15 | 13 | 15 |
| | | ipP | Z | 32 | | | | | | |
| | | e | N | 24.0 | | | 4 | 13 | | |
| | | eS | NE | 32 02 | | | 27 | 30 | 45 | 40 |
| | | eSS | NE | 37.0 | | | 10 | 40 | 35 | 40 |
| | | eSSS | N | 40.5 | | | 10 | 80 | | |
| | | eLq | NE | 42.5 | | | 28 | 50 | 20 | 50 |
| | | eLr | E | 47 | | | | | 26 | 24 |
| | | M | E | 49 | | | | | 73 | 20 |
| | | eLq2 | NE | 11 11 | | | | | | |
| | | M | NE | 17 | | | 7 | 65 | 7 | 65 |
| | 2 | eiP | Z | 09 49 18 d | | | | | | |
| | | eP'P' | Z | 10 16 40 | | | | | | |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| DEC | 2 | eP | Z | 19 49 49 | | | | | | |
| | | eS | E | 56 55 | | | | | | |
| | | eSS | Z | 20 00 36 | 1 | 17 | | | | |
| | | eLr | ZE | 04 | | | | | | |
| | | M | | 08 | 3 | 20 | | | 2 | 20 |
| | 2 | e(SS) | Z | 22 57.1 | | | | | | |
| | | eLr | ZE | 23 05.3 | | | | | | |
| | | M | | 18 | 1 | 15 | | | 1 | 15 |
| | 3 | PKP | Z | 04 43 14 d | | | | | | |
| | | ePP | ZNE | 44 58 | | | 1 | 12 | 2 | 15 |
| | | eSKP | E | 46 27 | | | | | 2 | 11 |
| | | ePPP | NE | 47.6 | | | 1 | 10 | | |
| | | eSKS | NE | 50.1 | | | | | | |
| | | e(SKKS) | NE | 52.0 | | | | | 3 | 18 |
| | | e(PKKP) | NE | 53.0 | | | 2 | 15 | 2 | 15 |
| | | ePKKS | E | 56 40 | | | | | 4 | 20 |
| | | e(SKKS) | E | 59.8 | | | | | 2 | 15 |
| | | eSS | NE | 05 01 38 | | | 5 | 20 | 4 | 25 |
| | | eSSS | N | 06 35 | | | 4 | 20 | | |
| | | eLq | NE | 16 | | | | | | |
| | | M | NE | 19 | | | 5 | 50 | 5 | 50 |
| | | M | E | 30 | | | | | 14 | 25 |
| | | eLq2 | NE | 06 04 | | | 3 | 80 | | |
| | 3 | eiPKP | Z | 07 26 34 u?d | | | | | | |
| | 4 | iP | Z | 15 59 30 d | | | | | | |
| | | eLr | ZNE | 16 25.5 | | | | | | |
| | | M | | 29 | 2 | 28 | | | 1 | 28 |
| | 5 | P | Z | 00 03 55 d | | | | | | |
| | 5 | ePKP? | Z | 21 41 15 | | | | | | |
| | 6 | eP | Z | 03 43 04 | | | | | | |
| | 6 | iP | ZE | 09 08 10 d | 5 | 16 | | | | |
| | | i(pP) | Z | 24 | | | | | | |
| | | i | Z | 09 16 d | | | | | | |
| | | iS | ZNE | 18 05 w | 4 | 25 | | | | |
| | | eSS | ZNE | 23.0 | 3 | 35 | | | 4 | 35 |
| | | eLq | N | 28.8 | | | | | | |
| | | eLr | ZE | 32 | | | | | | |
| | | M | | 34 | 7 | 25 | | | 6 | 30 |
| | | eP'P' | Z | 35.1 | | | | | | |
| | 6 | P | Z | 12 26 00 | | | | | | |
| | 6 | eLr | ZE | 22 14.5 | 2 | 22 | | | | |
| | 8 | eP | Z | 01 08 20 | | | | | | |
| | | e(Lq) | E | 19 | | | | | | |
| | | eLr | Z | 20.5 | | | | | | |
| | | M | | 24 | 4 | 18 | | | | |
| | 8 | iP | Z | 01 32 25 d | | | | | | |
| | 8 | iP | Z | 11 30 58 u? | | | | | | |
| | | pP | Z | 31 30 | | | | | | |
| | 8 | eP | Z | 19 25 00 | | | | | | |
| | 9 | eP | Z | 15 09 54 | | | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| DEC | 9 | eL | ZNE | 16 09.6 | | | | | | |
| | | M | | 15 | 1 | 15 | | | | |
| | 10 | eP | Z | 13 42 17 | | | | | | |
| | | eS | E | 50 29 | | | | | 2 | 15 |
| | | eLq | E | 56.0 | | | | | 1 | 25 |
| | | eLr | N | 14 03.5 | | | | | | |
| | | M | | 08 | | | 1 | 18 | 1 | 18 |
| | 10 | P | Z | 14 06 53 u | | | | | | |
| | 10 | eL | E | 15 30.0 | | | | | 1 | 15 |
| | 11 | P | Z | 00 09 55 | | | | | | |
| | | S | NE | 17 01 | | | 3 | 20 | | |
| | | e(sS) | E | 38 | | | | | 4 | 15 |
| | | eSS | E | 20 17 | | | | | 2 | 18 |
| | | eLq | E | 22.1 | | | | | 3 | 22 |
| | | M | E | 27 | | | | | 8 | 18 |
| | 11 | eP | ZE | 03 30 13 | | | | | | |
| | | eS | E | 40.4 | | | | | | |
| | | eL | ZNE | 56 | | | | | | |
| | | M | | 04 08 | 3 | 20 | 1 | 20 | 2 | 20 |
| | 11 | iP | ZN | 19 02 44 d? | 5 | 18 | 3 | 14 | | |
| | | iS | NE | 10 41 e | | | 6 | 16 | 5 | 12 |
| | | eSS | ZNE | 14.3 | 4 | 25 | | | 3 | 25 |
| | | eLq | E | 17.0 | | | | | 6 | 40 |
| | | eLr | ZNE | (19) | | | | | | |
| | | M | E | 24 | | | | | 14 | 18 |
| | | M | ZN | 29 | 9 | 16 | 6 | 16 | | |
| | 11 | eL | ZNE | 21 23.5 | 2 | 22 | 1 | 16 | 1 | 16 |
| | 12 | P | Z | 04 28 39 | | | | | | |
| | | eL | ZNE | 48 | | | | | | |
| | | M | | 53 | 2 | 18 | 1 | 18 | 1 | 18 |
| | 12 | eiP | Z | 09 38 12 | | | | | | |
| | | e(L) | ZNE | 39.9 | 3 | 17 | 2 | 16 | 3 | 12 |
| | 12 | eP? | Z | 10 12 03 | | | | | | |
| | | i | | 08 | | | | | | |
| | | eL | E | 22.5 | | | | | | |
| | | eLr | ZN | 23.5 | | | | | | |
| | | M | | 28 | 1 | 17 | | | 2 | 16 |
| | 13 | P | ZNE | 07 40 55 ds | | | | | | |
| | | e(PP) | Z | 41 26 | | | | | | |
| | | eLr2 | Z | 10 18 | | | | | | |
| | | M | Z | 22 | 8 | 35 | | | | |
| | 13 | iP | Z | 09 12 05 u? | | | | | | |
| | 14 | eP | Z | 00 31 08 | | | | | | |
| | | eLr | Z | 53 | | | | | | |
| | | M | | 56 | 2 | 16 | | | | |
| | 14 | eP | Z | 01 07 38 | | | | | | |
| | | ePcP | Z | 08 09 | 2 | 13 | | | | |
| | | S | ZE | 16 04 e | 2 | 16 | | | 5 | 17 |
| | | eScS | E | 17.0 | | | | | | |
| | | eSS | E | 20.0 | | | | | 3 | 20 |
| | | eLq | E | 23.4 | | | | | 4 | 40 |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| DEC | 14 | eLr | ZN | 26 | | | | | | |
| | | M | E | 31 | | | | | 11 | 16 |
| | | M | ZN | 33 | 10 | 18 | 7 | 18 | | |
| | 14 | eP? | Z | 08 21 06 | | | | | | |
| | 14 | P | ZN | 14 28 04 d? | 6 | 10 | 4 | 10 | | |
| | | e(S) | ZNE | 32 00 | | | | | | |
| | | eLr | ZN | 55 | 19 | 20 | 10 | 20 | | |
| | | M | E | 35 | | | | | | |
| | 15 | P | Z | 00 03 34 | | | | | | |
| | | iS | ZNE | 13 32 sw | 5 | 14 | 19 | 18 | 30 | 18 |
| | | eSS | NE | 18.6 | | | 7 | 20 | 13 | 18 |
| | | eSSS | N | 22 | | | 5 | 30 | | |
| | | eLq | NE | 24.2 | | | | | | |
| | | M | | 27 | | | 13 | 60 | 10 | 60 |
| | | eLr | | 30 | | | | | | |
| | | M | | 33 | 15 | 30 | 7 | 28 | 9 | 30 |
| | | M | | 40 | 16 | 18 | 7 | 20 | | |
| | 16 | eLq | E | 09 16.2 | | | | | | |
| | | eLr | ZN | 18.5 | | | | | | |
| | | M | | 24 | 1 | 18 | | | | |
| | 16 | ePKP | Z | 18 41 22 | | | | | | |
| | 17 | eP | Z | 02 17 51 | | | | | | |
| | | eS | ZNE | 22.0 | | | | | | |
| | | eL | ZNE | 22.9 | 3 | 16 | 2 | 18 | 1 | 15 |
| | 17 | eP? | Z | 05 26 28 | | | | | | |
| | | e | Z | 39 | | | | | | |
| | | e(L) | ZNE | 29.3 | 3 | 22 | | | | |
| | | M | | 31 | 4 | 11 | 3 | 11 | 5 | 11 |
| | 17 | iP | ZNE | 10 48 30 u | | | | | | |
| | | pP | Z | 49 38 | | | | | | |
| | | PP | Z | 51 18 | | | | | | |
| | | S | ZE | 57 47 | 2 | 13 | | | | |
| | | esS | Z | 59 47 | | | | | | |
| | | eSS | Z | 11 02.6 | 1 | 25 | | | | |
| | | eSSS | Z | 06.3 | 1 | 25 | | | | |
| | | e(Lr) | Z | 15 | 1 | 25 | | | | |
| | 17 | eLr | ZNE | 16 29.5 | | | | | | |
| | | M | | 36 | 3 | 18 | 2 | 18 | 1 | 18 |
| | 17 | ePKP | Z | 18 25 19 | | | | | | |
| | 17 | eL | Z | 21 15.7 | 1 | 22 | | | | |
| | | M | | 23 | 1 | 16 | | | | |
| | 18 | P | Z | 05 21 03 | | | | | | |
| | 18 | eP | Z | 18 33.4 | | | | | | |
| | | eS | ZNE | 44.0 | | | | | | |
| | | eLr | ZN | 19 02.5 | | | | | | |
| | | M | | 14 | 2 | 20 | 1 | 20 | | |
| | 19 | eP | Z | 07 08 57 | | | | | | |
| | 19 | P | Z | 13 10 21 u? | | | | | | |
| | 19 | eP | Z | 13 33 48 | | | | | | |
| | 19 | P | Z | 22 24(01) | | | | | | |
| | | eLr | ZE | 45 | | | | | | |



| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| DEC | 19 | M | | 47 | 2 | 20 | | | | |
| | 19 | P | Z | 22 56 30 | | | | | | |
| | 20 | P | Z | 11 50 19 | | | | | | |
| | 20 | e(S) | Z | 22 16 45 | | | | | | |
| | | eL | ZNE | 17.5 | | | | | | |
| | | M | | 18 | 3 | 18 | 2 | 16 | | |
| | 21 | eL | Z | 21 43 | 2 | 20 | | | | |
| | 21 | iP | Z | 22 32 13 u? | 11 | 20 | | | | |
| | | eS | ZE | 34(08) | 125 | 15 | | | | |
| | 22 | eL | Z | 03 49 | | | | | | |
| | | M | | 58 | 2 | 18 | | | | |
| | 22 | eP | Z | 03 59 35 | | | | | | |
| | 22 | eP | Z | 06 39 13 | 1 | 18 | | | | |
| | | e(PcP) | Z | 41.0 | 2 | 12 | | | | |
| | | S | ZNE | 45 34 | 4 | 17 | 6 | 17 | 5 | 16 |
| | | eSS | ZNE | 48 55 | 4 | 20 | | | | |
| | | eLq | E | 49.7 | | | | | 4 | 18 |
| | | eLr | ZN | 50.3 | 7 | 25 | 4 | 28 | | |
| | | M | ZN | 54 | 8 | 20 | 5 | 18 | | |
| | 22 | eP | Z | 14 20.7 | | | | | | |
| | | eS | NE | 27(20) | | | 5 | 16 | 6 | 16 |
| | | eLq | E | 31.5 | | | | | 4 | 18 |
| | | eLr | ZN | 33 | | | | | | |
| | | M | ZN | 36 | 8 | 20 | 6 | 20 | | |
| | 22 | P | Z | 21 12 44 | | | | | | |
| | | e(PcP) | Z | 13 07 | | | | | | |
| | | pP | | 14 14 | | | | | | |
| | | iS | NE | 21 00 ne | | | 5 | 28 | 6 | 15 |
| | | eScS | E | 22.0 | | | | | | |
| | | isS | NE | 23 44 sw | | | 6 | 20 | 14 | 15 |
| | | eSS | E | 24.9 | | | | | | |
| | | eSSS | NE | 28.0 | | | 4 | 20 | | |
| | | e(Lr) | N | 36.0 | | | 3 | 20 | | |
| | 23 | P | Z | 09 53 49 | | | | | | |
| | 23 | eLr | ZNE | 19 28 | 3 | 20 | | | | |
| | | M | | 48 | 3 | 15 | 3 | 15 | 2 | 15 |
| | 26 | eP | Z | 01 05 05 | | | | | | |
| | | S | ZNE | 12 05 | 3 | 20 | 6 | 18 | 2 | 18 |
| | | eLq | E | 16.4 | | | | | | |
| | | eLr | ZN | 18.6 | 6 | 30 | 5 | 30 | | |
| | | M | | 25 | 6 | 19 | 5 | 18 | | |
| | 26 | PKP? | Z | 02 03 13 | | | | | | |
| | 26 | iP | ZN | 04 41 26 | 3 | 20 | 2 | 20 | | |
| | | ePcP | Z | 42 45 | | | | | | |
| | | ePP | ZN | 43 22 | 3 | 12 | 2 | 12 | | |
| | | iScP | Z | 46 30 | | | | | | |
| | | iS | NE | 48 33 e | | | 2 | 20 | | |
| | | ScS | NE | 51 08 | | | | | 4 | 5 |
| | | eSS | ZNE | 51.8 | | | | | | |
| | | eLq | E | 53 | | | | | 4 | 28 |
| | | eLr | ZN | 56 | 6 | 50 | 5 | 50 | | |
| | | M | | 05 06 | 4 | 16 | 8 | 16 | 3 | 18 |

| Date | | Phase | | h m s | Az | Tz | An | Tn | Ae | Te |
|---|---|---|---|---|---|---|---|---|---|---|
| DEC | 26 | eL | ZNE | 06 27.5 | | | | | | |
| | | M | | 29 | 3 | 18 | 2 | 18 | 2 | 20 |
| | 26 | eL | NE | 09 32.3 | | | | | | |
| | | M | | 34 | | | 2 | 20 | | |
| | 26 | eP | Z | 14 48 18 | | | | | | |
| | | e(S) | N | 52 46 | | | | | | |
| | | eLr | ZNE | 53.6 | 4 | 20 | 3 | 25 | 3 | 10 |
| | 27 | eLr | NE | 11 33 | | | | | | |
| | | M | | 37 | | | 2 | 18 | 3 | 19 |
| | 27 | eP | Z | 18 22 16 | | | | | | |
| | | (pP) | Z | 43 | | | | | | |
| | | eS | Z | 33 | | | | | | |
| | | eLr | ZN | 50 | | | | | | |
| | | M | | 53 | 1 | 17 | | | | |
| | 28 | eL | ZN | 09 49.4 | | | | | | |
| | | M | | 56 | 1 | 18 | | | | |
| | 29 | P | ZNE | 06 11 35 | 3 | 8 | | | | |
| | | eS | ZNE | 19 22 | | | 3 | 25 | 2 | 11 |
| | | ScS | E | 21 30 | | | | | 3 | 9 |
| | | eLq | E | 24.8 | | | | | 2 | 30 |
| | | eLr | ZN | 27 | 3 | 30 | | | | |
| | | M | | 33 | 3 | 18 | 2 | 18 | | |
| | 29 | P | ZNE | 10 46 07 | 5 | 15 | | | | |
| | | eS | ZNE | 53.9 | 5 | 30 | 8 | 23 | 15 | 25 |
| | | e(ScS) | N | 56.1 | | | | | | |
| | | eSS | Z | 57.5 | 3 | 23 | | | | |
| | | eLq | N | 58 | | | | | | |
| | | eLr | ZE | 11 02 | 8 | 30 | | | 6 | 22 |
| | 29 | iP | Z | 13 53 34 d? | | | | | | |
| | | eLr | ZN | 14 14.5 | 1 | 30 | | | | |
| | | M | | 18 | 1 | 20 | 1 | 20 | | |
| | 29 | iP | Z | 19 13 50 u | | | | | | |
| | | e(PcP) | Z | 14 08 | | | | | | |
| | | eLr | Z | 40 | | | | | | |
| | | M | | 44 | 1 | 18 | | | | |
| | 30 | eL | Z | 04 24.6 | | | | | | |
| | | M | | 27 | 1 | 20 | | | | |
| | 31 | iP | Z | 18 17 41 d? | | | | | | |
| | | S | NE | 25 30 | | | 6 | 12 | 3 | 20 |
| | | eL | ZNE | 33.5 | | | | | | |
| | | M | | 39 | 4 | 20 | 3 | 15 | 4 | 15 |

## INSTRUMENTALLY DETERMINED EPICENTRES

The following list includes the epicentres of all instrumentally recorded earthquakes of magnitude 4 and above, together with those shocks of lesser magnitude reported to have been felt. Reports that cannot be verified instrumentally, or by an independent observation are listed only in the index of felt earthquakes. An explanation of the notation will be found at the beginning of the section 'Station Readings'. These epicentres have been plotted on the folding maps at the back of the Bulletin.

| No. | Date | h m s | Epicentre | Depth | Mag. | Class |
|---|---|---|---|---|---|---|
| 60/ 1 | JAN 1 | 19 00 03 | 37.0 S 177.2 E | 265 km | 5.0 | B |
| 2 | 5 | 06 04 10 | 38.5 S 175.5 E | 160 km | 4.3 | C |
| 3 | 5 | 08 53 40 | 39.3 S 173.8 E | S | 4.0 | B |
| 4 | 5 | 08 57 16 | 39.3 S 173.8 E | S | 3.3 | C |
| 5 | 9 | 04 21 21 | 32¼ S 178¼ W | 340 km | 6.0 | D |
| 6 | 9 | 13 11 53 | 38.5 S 178.1 E | S | 4.3 | C |
| 7 | 9 | 13 14.7 | 38½ S 178 E | N | 3¾ | D |
| 8 | 9 | 16 36 18 | 39.9 S 176.8 E | S | 3.6 | C |
| 9 | 12 | 07 14 28 | 38.5 S 175.9 E | 140 km | 4.3 | B |
| 10 | 12 | 09 00 32 | 39¼ S 174¾ E | N | < 3 | D |
| 11 | 17 | 02 06 15 | 40.2 S 173.7 E | 145 km | 4.3 | B |
| 12 | 17 | 07 42 44 | 40.9 S 173.0 E | 220 km | 4.6 | C |
| 13 | 17 | 08 42 02 | 38.5 S 175.9 E | 170 km | 5.1 | C |
| 14 | 20 | 03 44 22 | 38.6 S 175.7 E | 150 km | 5.2 | C |
| 15 | 23 | 13 13 29 | 34½ S 179½ W | 220 km | 5.8 | D |
| 16 | 24 | 23 03 55 | 40.1 S 174.3 E | N | 4.1 | B |
| 17 | 26 | 10 19.0 | Near Waimangu (33) | | 2¾+ | D |
| 18 | 26 | 10 29.3 | Near Waimangu (33) | | 2¾+ | D |
| 19 | 30 | 04 05 59 | 37.8 S 176.2 E | 210 km | 4.6 | C |
| 20 | FEB 1 | 02 01 54 | 40.2 S 176.5 E | N | 4.7 | B |
| 21 | 3 | 00 20 56 | 41.0 S 174.5 E | N | 4.5 | C |
| 22 | 3 | 02 21 05 | 37.4 S 178.2 E | N | 6.4 | C |
| 23 | 5 | 16 17 40 | 38.4 S 175.9 E | 160 km | 4.6 | C |
| 24 | 7 | 18 46 40 | 41 S 176 E | N | 3.5 | D |
| 25 | 10 | 04 59 03 | 41.6 S 174.9 E | S | 3.8 | C |
| 26 | 10 | 03 12 07 | 38.6 S 175.6 E | 280 km | 4.7 | C |
| 27 | 11 | 13 36 18 | 40.7 S 176.0 E | S | 3.6 | C |
| 28 | 11 | 14 07 40 | 35.5 S 179.0 E | N | 5.1 | D |
| 29 | 11 | 16 04 50 | 37¾ S 175¾ E | S | 3.9 | D |
| 30 | 11 | 17 35 05 | 37¾ S 175¾ E | S | 3¾ | D |
| 31 | 11 | 18 30 28 | 37¾ S 175¾ E | S | 3½ | D |
| 32 | 12 | 21 25 27 | 39.9 S 175.6 E | N | 3.6 | D |
| 33 | 15 | 06 16 15 | 41.6 S 174.6 E | S | 3.6 | C |
| 34 | 16 | 05 22 13 | 32½ S 179 W | 200 km | 6.0 | D |
| 35 | 16 | 13 53 50 | 38.6 S 175.6 E | 250 km | 4.3 | D |
| 36 | 16 | 15 23 09 | 38.0 S 176.3 E | 210 km | 4.7 | C |
| 37 | 21 | 00 46 58 | 42.25S 173.1 E | N | 6.4 | B |
| 38 | 21 | 17 55 38 | 39.0 S 177.3 E | S | 4.8 | C |
| 39 | 21 | 19 39 58 | 39.1 S 177.4 E | S | 4.9 | C |
| 40 | 21 | 20 29 57 | 39.0 S 177.4 E | N | 4.4 | D |

| No. | Date | h | m | s | Epicentre | Depth | Mag. | Class |
|---|---|---|---|---|---|---|---|---|
| 60/41 | FEB 22 | 12 | 25 | 14 | 41.7 S 175.2 E | N | 3.9 | C |
| 42 | 24 | 23 | 30 | 08 | 39.7 S 174.8 E | N | 4.1 | D |
| 43 | 25 | 18 | 36 | 15 | 39.9 S 173.8 E | N | 4.5 | B |
| 44 | 26 | 18 | 38 | 39 | 41.4 S 173.1 E | N | 3.7 | C |
| 45 | 29 | 18 | 06 | 23 | 37.3 S 176.8 E | 250 km | 4.9 | C |
| 46 | MAR 1 | 09 | 59 | 48 | 38.0 S 176.8 E | S | 3 | C |
| 47 | 3 | 02 | 37 | 52 | 34.0 S 179.0 W | 100 km | 5.2 | C |
| 48 | 10 | 16 | 19 | 20 | 39.55S 177.35E | S | 4.6 | B |
| 49 | 11 | 04 | 17 | 56 | 37.95S 177.05E | S | 4.6 | B |
| 50 | 14 | 23 | 41 | 35 | 38.4 S 176.0 E | 150 km | 5.0 | C |
| 51 | 15 | 12 | 30 | 38 | 44.1 S 169.8 E | S | 4.4 | C |
| 52 | 16 | 19 | 16 | 20 | 34½ S 178½ W | N | 5.2 | D |
| 53 | 17 | 15 | 15 | 32 | 34.1 S 179.3 E | 250 km | 5.0 | C |
| 54 | 20 | 04 | 15 | 03 | 38.8 S 175.4 E | 230 km | 4.7 | D |
| 55 | 20 | 09 | 04 | 24 | 40.1 S 174.1 E | S | 4.3 | C |
| 56 | 22 | 18 | 37 | 40 | 39.7 S 174.8 E | 100 km | 4.3 | B |
| 57 | 22 | 20 | 41 | 12 | 39.8 S 174.6 E | 110 km | 4.5 | B |
| 58 | 23 | 01 | 32 | 22 | 39.1 S 174.8 E | 590 km | 6.2 | B |
| 59 | 23 | 01 | 36 | 57 | 39.1 S 174.8 E | 590 km | 6.2 | B |
| 60 | 24 | 00 | 49 | 06 | 35.3 S 180.0 | N | 4.9 | C |
| 61 | 24 | 05 | 21 | 21 | 40.9 S 173.0 E | 200 km | 5.3 | C |
| 62 | 27 | 23 | 28 | 28 | 39.05S 174.95E | 220 km | 6.6 | B |
| 63 | 27 | 23 | 29 | 48 | 39.05S 174.95E | 220 km | 6.5 | D |
| 64 | 28 | 13 | 31 | 37 | 41.0 S 175.0 E | S | 3.8 | C |
| 65 | 29 | 00 | 10 | 46 | 34½ S 177 W | N | 5.7 | D |
| 66 | APR 4 | 14 | 41 | 4 | Near Rotorua | | | D |
| 67 | 6 | 16 | 02 | 43 | 38.0 S 176.9 E | N | 2.8 | D |
| 68 | 8 | 09 | 33 | 35 | 39.4 S 174.7 E | N | 3.5 | C |
| 69 | 9 | 04 | 15 | 18 | 41.1 S 175.5 E | S | 3.9 | B |
| 70 | 12 | 19 | 47 | 31 | 37.5 S 177.4 E | 150 km | 4.6 | B |
| 71 | 13 | 13 | 10 | 41 | 40.4 S 176.3 E | N | 3.8 | D |
| 72 | 16 | 13 | 00 | 03 | 39.0 S 175.4 E | 110 km | 4.3 | C |
| 73 | 18 | 11 | 11 | 03 | 38.1 S 176.4 E | 160 km | 3 | D |
| 74 | 19 | 10 | 52 | 48 | 41.3 S 173.2 E | N | 4.6 | D |
| 75 | 20 | 00 | 29 | 38 | 38.4 S 176.1 E | 150 km | 4.5 | D |
| 76 | 20 | 16 | 06 | 25 | 42.1 S 172.3 E | N | 3.6 | B |
| 77 | 21 | 17 | 08 | 51 | 37.6 S 177.7 E | 170 km | 4.9 | C |
| 78 | 25 | 13 | 29 | 01 | 34.5 S 180 | N | 5.0 | D |
| 79 | 25 | 13 | 46 | 19 | 43.3 S 175.0 E | N | 3.9 | B |
| 80 | 26 | 08 | 41 | 59 | 39.5 S 175.5 E | N | 4.6 | D |
| 81 | 26 | 22 | 37 | 11 | 39.5 S 174.1 E | N | 4.1 | D |
| 82 | 30 | 14 | 24 | 05 | 40.0 S 173.8 E | 150 km | 4.7 | C |
| 83 | MAY 8 | 08 | 47 | 00 | 38.5 S 175.8 E | 160 km | 4.5 | B |
| 84 | 9 | 03 | 43 | 18 | 41.1 S 172.6 E | S | 5.1 | B |
| 85 | 9 | 03 | 46 | 53 | 41.1 S 172.6 E | S | 4.4 | B |
| 86 | 11 | 15 | 02 | 41 | 39.2 S 174.7 E | N | 3.6 | C |
| 87 | 12 | 09 | 22 | 27 | 42.3 S 172.9 E | S | 3.9 | B |
| 88 | 13 | 01 | 35 | 42 | 44.2 S 167.7 E | S | 5.3 | C |
| 89 | 13 | 01 | 47 | 07 | 44.2 S 167.7 E | S | 4.6 | C |
| 90 | 13 | 01 | 52 | 57 | 44.2 S 167.7 E | S | 4.8 | C |
| 91 | 13 | 02 | 00 | 20 | 44.2 S 167.7 E | S | 5.0 | C |
| 92 | 13 | 02 | 15 | 12 | 44.2 S 167.7 E | S | 4.5 | C |
| 93 | 13 | 02 | 19 | 02 | 44.2 S 167.7 E | S | 4.3 | D |
| 94 | 13 | 03 | 39 | 38 | 44.2 S 167.7 E | S | 4.4 | C |
| 95 | 13 | 03 | 43 | 47 | 44.2 S 167.7 E | S | 4.2 | D |
| 96 | 14 | 02 | 26 | 38 | 44.2 S 167.7 E | S | 4.3 | D |
| 97 | 14 | 07 | 27 | 55 | 44.2 S 167.7 E | S | 4.0 | D |
| 98 | 14 | 10 | 19 | 25 | 45.7 S 168.3 E | S | 4.9 | C |
| 99 | 14 | 14 | 02 | 08 | 44.2 S 167.7 E | S | 4.0 | D |
| 100 | 14 | 14 | 36 | 08 | 44.2 S 167.7 E | S | 4.2 | D |
| 101 | 15 | 16 | 29 | 20 | 44.2 S 167.7 E | S | 4.4 | D |
| 102 | 17 | 08 | 10 | 25 | 38.2 S 175.9 E | 150 km | 4.7 | B |
| 103 | 17 | 23 | 18 | 18 | 32½ S 179 W | N | 5.7 | D |
| 104 | 18 | 08 | 54 | 43 | 44.8 S 167.8 E | N | 4.7 | D |
| 105 | 19 | 03 | 53 | 09 | 39.8 S 174.3 E | S | 4.6 | B |
| 106 | 21 | 13 | 26 | 43 | 46.0 S 167.0 E | S | 4.5 | D |
| 107 | 23 | 01 | 01 | 40 | 38.3 S 178.3 E | S | 5.6 | B |



| No. | Date | h | m | s | Epicentre | Depth | Mag. | Class |
|---|---|---|---|---|---|---|---|---|
| 60/108 | MAY 24 | 14 | 46 | 37 | 44.2 S 167.7 E | S | 7.0 | B |
| 109 | 24 | 14 | 56 | .0 | 44.2 S 167.7 E | S | 4.8 | D |
| 110 | 24 | 15 | 06 | 25 | 43.7 S 168.0 E | S | 4.4 | D |
| 111 | 24 | 15 | 09 | 30 | 44.2 S 167.7 E | S | 4.4 | D |
| 112 | 24 | 15 | 13 | 15 | 44.2 S 167.7 E | S | 4.6 | C |
| 113 | 24 | 15 | 24 | 50 | 44.2 S 167.7 E | S | 4.5 | D |
| 114 | 24 | 15 | 49 | 24 | 44.2 S 167.7 E | S | 4.3 | D |
| 115 | 24 | 15 | 50 | 42 | 44.2 S 167.7 E | S | 4.3 | D |
| 116 | 24 | 15 | 55 | 20 | 44.2 S 167.7 E | S | 4.9 | C |
| 117 | 24 | 16 | 14 | 18 | 44.2 S 167.7 E | S | 4.7 | C |
| 118 | 24 | 16 | 15 | 18 | 44.2 S 167.7 E | S | 5.0 | D |
| 119 | 24 | 16 | 20 | 40 | 44.2 S 167.7 E | S | 4½ | D |
| 120 | 24 | 16 | 40 | 34 | 44.2 S 167.7 E | S | 4.9 | C |
| 121 | 24 | 16 | 43 | 53 | 44.2 S 167.7 E | S | 4.3 | D |
| 122 | 24 | 17 | 03 | 46 | 44.2 S 167.7 E | S | 4.4 | D |
| 123 | 24 | 17 | 23 | 27 | 44.2 S 167.7 E | S | 4.5 | C |
| 124 | 24 | 17 | 31 | 30 | 44.2 S 167.7 E | S | 4.5 | D |
| 125 | 24 | 18 | 09 | 45 | 44.1 S 166.8 E | S | 4.7 | D |
| 126 | 24 | 18 | 29 | 12 | 44.2 S 167.7 E | S | 4.8 | D |
| 127 | 24 | 18 | 37 | 58 | 44.2 S 167.7 E | S | 4.4 | D |
| 128 | 24 | 19 | 57 | 36 | 44.2 S 167.7 E | S | 4.2 | D |
| 129 | 24 | 20 | 05 | 03 | 44.3 S 167.7 E | S | 4.5 | D |
| 130 | 24 | 20 | 24 | 15 | 44.15S 167.95E | S | 5.6 | B |
| 131 | 24 | 20 | 29 | .5 | 44.2 S 167.7 E | S | 4.2 | D |
| 132 | 24 | 20 | 42 | 06 | 44.2 S 167.9 E | S | 4.6 | D |
| 133 | 24 | 20 | 45 | .4 | 44.2 S 167.7 E | S | 4.3 | D |
| 134 | 24 | 21 | 32 | 42 | 44.4 S 167.7 E | S | 4.6 | D |
| 135 | 24 | 21 | 35 | 40 | 44.2 S 167.7 E | S | 4.4 | D |
| 136 | 24 | 21 | 43 | 54 | 44.2 S 167.7 E | S | 4.3 | D |
| 137 | 24 | 21 | 50 | 45 | 44.2 S 167.7 E | S | 4.3 | D |
| 138 | 24 | 22 | 09 | 16 | 44.2 S 167.7 E | S | 4.3 | D |
| 139 | 24 | 22 | 24 | 36 | 44.2 S 167.6 E | S | 4.9 | C |
| 140 | 24 | 22 | 35 | 00 | 44.2 S 167.7 E | S | 5.3 | C |
| 141 | 24 | 22 | 47 | 16 | 44.2 S 167.7 E | S | 5.4 | C |
| 142 | 24 | 23 | 06 | 40 | 44.2 S 167.8 E | S | 4.4 | D |
| 143 | 24 | 23 | 28 | 28 | 44.2 S 167.7 E | S | 4.5 | D |
| 144 | 25 | 03 | 02 | 12 | 44.3 S 168.0 E | S | 4.2 | D |
| 145 | 25 | 03 | 03 | 07 | 44.3 S 168.0 E | S | 4± | D |
| 146 | 25 | 03 | 28 | 00 | 44.2 S 167.9 E | S | 4.2 | D |
| 147 | 25 | 03 | 44 | 33 | 44.2 S 167.7 E | S | 5.0 | C |
| 148 | 25 | 03 | 59 | 52 | 44.2 S 167.7 E | S | 5.6 | C |
| 149 | 25 | 04 | 28 | 20 | 44.3 S 167.9 E | S | 4.3 | D |
| 150 | 25 | 04 | 29 | 40 | 44.2 S 167.7 E | S | 4.5 | D |
| 151 | 25 | 04 | 44 | 02 | 44.1 S 167.9 E | S | 4.3 | D |
| 152 | 25 | 04 | 52 | 40 | 44.2 S 167.7 E | S | 4.3 | D |
| 153 | 25 | 05 | 24 | 40 | 44.2 S 167.7 E | S | 4.6 | D |
| 154 | 25 | 06 | 09 | 02 | 44.2 S 167.7 E | S | 4.8 | D |
| 155 | 25 | 07 | 08 | 15 | 44.2 S 167.7 E | S | 4.3 | D |
| 156 | 25 | 11 | 14 | 46 | 44.3 S 168.0 E | S | 4.4 | D |
| 157 | 25 | 12 | 44 | 00 | 44.2 S 167.9 E | S | 4.4 | D |
| 158 | 25 | 13 | 42 | 32 | 44.3 S 167.9 E | S | 4.8 | D |
| 159 | 25 | 16 | 14 | 05 | 44.3 S 167.8 E | S | 4.7 | D |
| 160 | 25 | 19 | 27 | 09 | 44.3 S 167.9 E | S | 4.0 | D |
| 161 | 25 | 20 | 36 | 12 | 44.2 S 167.7 E | S | 4.5 | D |
| 162 | 25 | 21 | 45 | 54 | 44.2 S 167.7 E | S | 4.5 | D |
| 163 | 25 | 21 | 57 | 25 | 44.2 S 167.7 E | S | 4.4 | D |
| 164 | 26 | 03 | 05 | 17 | 44.2 S 167.7 E | S | 4.6 | D |
| 165 | 26 | 10 | 52 | 18 | 44.2 S 167.7 E | S | 4.6 | D |
| 166 | 26 | 14 | 41 | 34 | 44.2 S 167.7 E | S | 4.7 | D |
| 167 | 27 | 00 | 22 | 31 | 44.2 S 167.7 E | S | 5.5 | C |
| 168 | 27 | 17 | 47 | 28 | 44.2 S 167.7 E | S | 4.3 | D |
| 169 | 28 | 07 | 06 | 14 | 44.2 S 167.7 E | S | 4.7 | C |
| 170 | 28 | 10 | 24 | 22 | 44.2 S 168.0 E | S | 4.1 | D |
| 171 | 28 | 16 | 46 | 40 | 44.2 S 167.7 E | S | 4.6 | D |
| 172 | 28 | 22 | 46 | 26 | 44.2 S 167.7 E | S | 4.5 | D |
| 173 | 29 | 10 | 11 | 04 | 44.2 S 167.7 E | S | 4.3 | D |
| 174 | 29 | 20 | 38 | 35 | 39.3 S 177.4 E | S | 4.2 | C |

| No. | Date | h | m | s | Epicentre | Depth | Mag. | Class |
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| 60/175 | MAY 30 | 02 | 29 | 15 | 44.2 S 167.7 E | S | 4.1 | D |
| 176 | JUN 1 | 11 | 43 | 03 | 39.1 S 176.2 E | 70 km | 4.2 | C |
| 177 | 2 | 03 | 54 | 48 | 44.3 S 168.0 E | S | 5.3 | C |
| 178 | 3 | 07 | 38 | 26 | 45.0 S 166.5 E | N | 4.7 | D |
| 179 | 3 | 09 | 40 | 15 | 40.1 S 174.2 E | N | 2.8 | C |
| 180 | 3 | 10 | 32 | 08 | 44.1 S 168.2 E | S | 5.3 | C |
| 181 | 3 | 12 | 37 | 10 | 38.4 S 176.3 E | 130 km | 4.5 | B |
| 182 | 3 | 13 | 43 | 17 | 44.2 S 167.8 E | S | 5.3 | D |
| 183 | 3 | 13 | 45.5 | | 44.2 S 167.8 E | S | 4.7 | D |
| 184 | 3 | 15 | 36 | 35 | 41.4 S 175.5 E | N | 3.2 | D |
| 185 | 7 | 11 | 00 | 42 | 38.6 S 175.3 E | 130 km | 4.9 | D |
| 186 | 10 | 07 | 51 | 48 | 39.6 S 176.8 E | N | 4.5 | D |
| 187 | 12 | 19 | 20 | 20 | 44.0 S 168.0 E | S | 4.5 | D |
| 188 | 15 | 02 | 10 | 11 | 35½ S 179 E | N | 5.0 | D |
| 189 | 15 | 02 | 14 | 37 | 35½ S 179 E | N | 4.7 | D |
| 190 | 15 | 02 | 18 | 52 | 35½ S 179 E | N | 4.6 | D |
| 191 | 15 | 02 | 27 | 22 | 35½ S 179 E | N | 4.2 | D |
| 192 | 15 | 07 | 17 | 45 | 35½ S 179 E | N | 4.8 | D |
| 193 | 15 | 22 | 49 | 41 | 32.6 S 177.3 W | N | 6.0 | D |
| 194 | 15 | 23 | 31 | 26 | 32.7 S 177.3 W | N | 6.1 | D |
| 195 | 16 | 09 | 03 | 10 | 35.2 S 178.8 E | N | 4.9 | D |
| 196 | 16 | 09 | 05 | 10 | 35.3 S 178.7 E | N | 5.1 | D |
| 197 | 22 | 17 | 34 | 05 | 34.0 S 180.0 | N | 5.5 | D |
| 198 | 24 | 06 | 17.8 | | 44 S 168 E | S | 4.2 | D |
| 199 | 24 | 10 | 27.3 | | 44 S 168 E | S | 4.3 | D |
| 200 | 24 | 19 | 21.9 | | 44 S 168 E | S | 4.0 | D |
| 201 | 25 | 09 | 01.2 | | 44 S 168 E | S | 3.9 | D |
| 202 | 25 | 23 | 10 | 28 | 40.1 S 176.8 E | N | 3.8 | C |
| 203 | 26 | 10 | 08 | 56 | 44 S 168 E | S | 4.1 | D |
| 204 | 26 | 20 | 13 | 07 | 33 S 179 W | N | 5.7 | D |
| 205 | 27 | 07 | 14 | 39 | 40.8 S 175.2 E | S | 3.1 | C |
| 206 | 27 | 16 | 46.7 | | 32 S 178 W | N | 5.1 | D |
| 207 | 27 | 16 | 50 | 26 | 32½ S 178 W | N | 5.9 | D |
| 208 | 27 | 16 | 52.4 | | 32 S 178 W | N | 5.5 | D |
| 209 | 27 | 16 | 58 | 51 | 32 S 179 W | N | 5.6 | D |
| 210 | 27 | 17 | 33 | 56 | 31½ S 178 W | N | 5.5 | D |
| 211 | 27 | 18 | 03.6 | | 32 S 178 W | N | 5.6 | D |
| 212 | 29 | 10 | 15 | 20 | 41.2 S 172.7 E | S | 3.3 | B |
| 213 | 30 | 09 | 41 | 32 | 37.7 S 176.7 E | 240 km | 5.1 | C |
| 214 | 30 | 11 | 49 | 30 | 39 S 174 E | N | 4.2 | D |
| 215 | 30 | 19 | 29 | 14 | 44 S 168 E | S | 4.2 | D |
| 216 | JUL 3 | 13 | 28 | 06 | 38.7 S 175.2 E | 260 km | 5.5 | B |
| 217 | 6 | 01 | 14 | 40 | 44.2 S 167.7 E | S | 4.3 | D |
| 218 | 7 | 02 | 03 | 37 | 44.3 S 167.5 E | S | 4.4 | D |
| 219 | 8 | 06 | 54 | 38 | 41.1 S 174.4 E | S | 4.2 | C |
| 220 | 11 | 16 | 22 | 51 | 41.55S 172.2 E | S | 3.6 | B |
| 221 | 18 | 22 | 16 | 47 | 39.3 S 177.8 E | S | 4.3 | C |
| 222 | 19 | 10 | 52 | 47 | 41.8 S 174.2 E | N | 4.3 | B |
| 223 | 19 | 23 | 19 | 51 | 34¼ S 180 | N | 4.9 | D |
| 224 | 25 | 13 | 25 | 09 | 38.8 S 176.2 E | 120 km | 4.2 | C |
| 225 | 25 | 14 | 16 | 51 | 44.2 S 167.7 E | S | 4.2 | D |
| 226 | 27 | 15 | 06 | 52 | 44.2 S 167.7 E | S | 4.6 | D |
| 227 | 27 | 22 | 36 | 58 | 39.1 S 177.4 E | S | 4.4 | C |
| 228 | 29 | 22 | 06 | 20 | 40.15S 174.15E | 110 km | 4.1 | B |
| 229 | 31 | 15 | 50 | 13 | 37.1 S 177.1 E | 240 km | 5.6 | B |
| 230 | AUG 4 | 01 | 15 | 01 | 37.4 S 177.7 E | 100 km | 5.0 | D |
| 231 | 5 | 03 | 37 | 24 | 40.8 S 175.8 E | N | 3.7 | B |
| 232 | 6 | 04 | 01 | 31 | 39.9 S 173.5 E | 100 km | 4.7 | D |
| 233 | 6 | 13 | 55 | 06 | 32.75S 179.7 W | 400 km | 5.8 | C |
| 234 | 7 | 08 | 54 | 37 | 44.1 S 167.7 E | S | 5.5 | D |
| 235 | 8 | 14 | 23 | 44 | 41.95S 173.3 E | N | 4.4 | D |
| 236 | 9 | 08 | 43 | 44 | 44.1 S 167.7 E | S | 4.4 | D |
| 237 | 13 | 10 | 54 | 10 | 37.5 S 176.9 E | 150 km | 4.5 | D |
| 238 | 14 | 09 | 11 | 43 | 44.1 S 167.7 E | S | 4.4 | D |
| 239 | 14 | 17 | 24 | 38 | 39.1 S 173.8 E | 100 km | 3.8 | C |
| 240 | 16 | 17 | 36 | 19 | 37.7 S 177.7 E | 150 km | 4.9 | C |
| 241 | 19 | 08 | 37 | 54 | 37.6 S 176.4 E | 220 km | 4.7 | C |
| 242 | 20 | 00 | 02 | 21 | 38.6 S 176.1 E | 130 km | 4.3 | D |



| No. | Date | h | m | s | Epicentre | Depth | Mag. | Class |
|---|---|---|---|---|---|---|---|---|
| 60/243 | AUG 22 | 20 | 47 | 12 | 35.8 S 179.4 E | 100 km | 5.5 | D |
| 244 | 23 | 19 | 11 | 20 | 33 S 178 W | N | 5.7 | D |
| 245 | 24 | 01 | 01 | 16 | 38.1 S 176.8 E | N | 3.2 | D |
| 246 | 24 | 01 | 10 | 40 | 37.9 S 176.8 E | N | 3.1 | D |
| 247 | 24 | 01 | 11.9 | | Near Kawerau | | - | |
| 248 | 24 | 01 | 13.0 | | Near Kawerau | | - | |
| 249 | 24 | 11 | 19 | 56 | 40.9 S 172.6 E | N | 3.5 | D |
| 250 | 24 | 21 | 36 | 03 | 45.1 S 167.9 E | N | 4.2 | D |
| 251 | 25 | 03 | 41 | 03 | 41.9 S 172.95E | N | 5.2 | B |
| 252 | 26 | 20 | 19 | 34 | 44.2 S 167.2 E | N | 5.3 | D |
| 253 | 27 | 01 | 06 | 18 | 38.5 S 175.8 E | 160 km | 5.1 | D |
| 254 | 27 | 19 | 55 | 41 | 44.0 S 167.7 E | N | 4.3 | D |
| 255 | SEP 2 | 03 | 51 | 15 | 44.2 S 167.7 E | S | 4.9 | D |
| 256 | 2 | 15 | 16 | 34 | 38.8 S 174.9 E | 265 km | 4.6 | C |
| 257 | 2 | 16 | 22 | 41 | 39.2 S 174.7 E | S | 4.0 | C |
| 258 | 3 | 02 | 19 | 14 | 37.3 S 176.4 E | 265 km | 5.2 | C |
| 259 | 3 | 13 | 39 | 58 | 44.2 S 167.7 E | S | 5.0 | C |
| 260 | 3 | 15 | 47 | 07 | 35¼ S 179¾ W | N | 5.3 | D |
| 261 | 3 | 23 | 34 | 25 | 37.4 S 176.7 E | 270 km | 4.8 | C |
| 262 | 4 | 11 | 09 | 41 | 44.2 S 167.7 E | S | 4.4 | D |
| 263 | 4 | 21 | 05 | 24 | 35¼ S 178½ W | N | 5.0 | D |
| 264 | 6 | 09 | 58 | 24 | 35½ S 178¼ W | N | 5.3 | D |
| 265 | 6 | 10 | 22 | 01 | 41.5 S 174.6 E | S | 3.3 | C |
| 266 | 6 | 11 | 15 | 19 | 37.0 S 179.4 E | S | 5.3 | C |
| 267 | 7 | 19 | 29 | 58 | 38.6 S 175.8 E | 140 km | 4.5 | C |
| 268 | 11 | 10 | 51 | 48 | 35 S 178 W | N | 5.2 | C |
| 269 | 12 | 06 | 55 | 22 | 39.6 S 175.4 E | S | 3.2 | C |
| 270 | 13 | 11 | 59 | 05 | 38.7 S 175.6 E | 170 km | 4.2 | C |
| 271 | 13 | 12 | 56 | 28 | 39.8 S 173.3 E | S | 4.4 | C |
| 272 | 15 | 06 | 03 | 12 | 40.1 S 175.2 E | S | 4.0 | B |
| 273 | 17 | 16 | 03 | 36 | 40.5 S 174.0 E | N | 4.4 | B |
| 274 | 19 | 12 | 41 | 37 | 37.6 S 176.2 E | 310 km | 5.4 | B |
| 275 | 20 | 03 | 05 | 09 | 37.5 S 176.8 E | 210 km | 5.9 | B |
| 276 | 23 | 16 | 40 | 52 | 40.8 S 176.4 E | S | 4.6 | B |
| 277 | 24 | 11 | 06 | 31 | 41.3 S 178.4 W | N | 5.8 | C |
| 278 | 25 | 07 | 32 | 54 | 40.1 S 176.2 E | N | 4.2 | B |
| 279 | 26 | 17 | 05 | 02 | 36.5 S 179.1 W | N | 5.0 | C |
| 280 | 29 | 09 | 28 | 29 | 32.0 S 179.8 W | 500 km | 6.0 | C |
| 281 | 30 | 02 | 53 | 57 | 38.7 S 178.0 E | S | 4.7 | B |
| 282 | OCT 2 | 02 | 33.5 | | 44.2 S 167.7 E | N | 4.1 | D |
| 283 | 4 | 18 | 05 | 05 | 40.25S 174.1 E | N | 4.9 | D |
| 284 | 5 | 12 | 16 | 13 | 39.0 S 175.0 E | 200 km | 4.1 | C |
| 285 | 8 | 09 | 22 | 53 | 36.1 S 177.7 E | N | 4.5 | D |
| 286 | 8 | 17 | 33 | 51 | 36.1 S 177.7 E | S | 4.7 | D |
| 287 | 8 | 18 | 34 | 44 | 36.1 S 177.7 E | N | 4.1 | D |
| 288 | 8 | 19 | 11 | 00 | 36.1 S 177.7 E | N | 4.1 | D |
| 289 | 8 | 19 | 22 | 17 | 36.1 S 177.7 E | N | 4.7 | D |
| 290 | 9 | 02 | 42.1 | | 36.1 S 177.7 E | N | 4.0 | D |
| 291 | 9 | 03 | 38 | 24 | 36.7 S 177.4 E | N | 3.9 | D |
| 292 | 13 | 06 | 25 | 21 | 36,1 S 177.7 E | N | 4.0 | D |
| 293 | 13 | 06 | 04 | 21 | 36.1 S 177.7 E | N | 4.2 | D |
| 294 | 14 | 01 | 28 | 43 | 36.1 S 177.7 E | N | 4.4 | D |
| 295 | 15 | 19 | 37 | 28 | 40.0 S 173.2 E | 160 km | 3.3 | D |
| 296 | 15 | 20 | 59 | 35 | 40.45S 172.2 E | N | 3.5 | C |
| 297 | 16 | 01 | 37 | 03 | 39.6 S 173.3 E | N | 3.7 | D |
| 298 | 16 | 07 | 16 | 00 | 31½ S 179½ W | 400 km | 5.5 | D |
| 299 | 16 | 13 | 27 | 48 | 36.7 S 177.4 E | S | 5.1 | C |
| 300 | 16 | 19 | 15 | 43 | 38.4 S 175.8 E | 200 km | 4.7 | C |
| 301 | 17 | 10 | 04 | 52 | 35.2 S 178.8 E | 225 km | 5.5 | D |
| 302 | 19 | 00 | 17 | 18 | 42.35S 176.9 E | N | 5.0 | C |
| 303 | 21 | 01 | 55 | 09 | 39.6 S 173.4 E | N | 4.3 | D |
| 304 | 21 | 11 | 08 | 03 | 40.0 S 176.8 E | N | 4.1 | C |
| 305 | 23 | 17 | 26 | 24 | 40.75S 174.05E | S | 4.8 | C |
| 306 | 25 | 19 | 18 | 54 | 38.2 S 176.1 E | 170 km | 5.1 | D |
| 307 | 28 | 20 | 33 | 08 | 40¼ S 177¼ E | S | 4.0 | D |
| 308 | 31 | 11 | 38 | 52 | 42.0 S 172.5 E | S | 3.5 | C |
| 309 | NOV 2 | 19 | 23 | 40 | 44.5 S 168.1 E | S | 4.8 | C |

| No. | Date | h | m | s | Epicentre | Depth | Mag. | Class |
|---|---|---|---|---|---|---|---|---|
| 60/310 | NOV 5 | 16 | 53 | 59 | 32¾ S 179 W | 400 km | 5.7 | D |
| 311 | 9 | 22 | 03 | 02 | 40.9 S 174.9 E | S | 3.8 | B |
| 312 | 13 | 19 | 23 | 02 | 35 S 179 E | S | 5.0 | D |
| 313 | 14 | 08 | 34 | 25 | 35.5 S 178.6 E | N | 4.4 | C |
| 314 | 14 | 08 | 53 | 28 | 35.5 S 178.6 E | N | 4.5 | C |
| 315 | 14 | 08 | 57 | 58 | 35.5 S 178.6 E | N | 4.5 | C |
| 316 | 14 | 09 | 34 | 18 | 35.5 S 178.6 E | N | 5.0 | C |
| 317 | 14 | 09 | 42 | 22 | 35.5 S 178.6 E | N | 4.8 | C |
| 318 | 14 | 09 | 58 | 51 | 43.8 S 172.9 E | N | 2.8 | C |
| 319 | 14 | 10 | 04 | 21 | 35.5 S 178.6 E | N | 4.4 | C |
| 320 | 14 | 11 | 30 | 06 | 35.5 S 178.6 E | N | 3½ | D |
| 321 | 14 | 11 | 33 | 01 | 35.5 S 178.6 E | N | 4.2 | D |
| 322 | 14 | 16 | 26 | 07 | 40.9 S 175.1 E | S | 3.2 | C |
| 323 | 14 | 22 | 56 | 50 | 35.5 S 175.5 E | S | 3.8 | D |
| 324 | 15 | 17 | 36 | 39 | 38.9 S 175.1 E | 200 km | 4.5 | B |
| 325 | 15 | 21 | 40 | 15 | 35.6 S 177.6 E | N | 4.8 | C |
| 326 | 16 | 03 | 12 | 06 | 34¼ S 180 | 400 km | 5.5 | D |
| 327 | 17 | 21 | 18 | 01 | 38.7 S 176.3 E | 110 km | 4.7 | B |
| 328 | 18 | 19 | 06 | 37 | 39.7 S 174.5 E | 135 km | 4.4 | B |
| 329 | 19 | 06 | 17 | 57 | 37.8 S 176.5 E | 190 km | 5.9 | B |
| 330 | 26 | 01 | 47 | 08 | 38.6 S 175.8 E | 150 km | 4.2 | B |
| 331 | 28 | 06 | 45 | 59 | 38.7 S 175.8 E | 145 km | 4.2 | C |
| 332 | 28 | 08 | 40 | 37 | 40.55S 176.5 E | S | 4.0 | B |
| 333 | 29 | 12 | 59 | 56 | 44.9 S 168.9 E | S | 4.4 | C |
| 334 | 30 | 09 | 10 | 26 | 41.8 S 174.6 E | S | 3.8 | C |
| 335 | DEC 2 | 09 | 17 | 45 | 34¼ S 180 | N | 5.1 | D |
| 336 | 4 | 12 | 21.5 | | 38 S 179 E | N | 4.3 | D |
| 337 | 4 | 13 | 45.9 | | 37.8 S 179 E | N | 4.5 | D |
| 338 | 5 | 08 | 02 | 33 | 39.6 S 173.3 E | N | 3.9 | D |
| 339 | 6 | 03 | 20 | 50 | 40.5 S 173.4 E | 100 km | 4.0 | D |
| 340 | 6 | 13 | 44 | 35 | 38.9 S 174.5 E | 200 km | 4.1 | C |
| 341 | 7 | 00 | 27 | 45 | 36.6 S 179.2 E | N | 4.9 | D |
| 342 | 7 | 02 | 59 | 30 | 36.6 S 179.2 E | N | 5.2 | D |
| 343 | 7 | 03 | 41 | 42 | 36.6 S 179.2 E | N | 4.8 | D |
| 344 | 7 | 06 | 37.2 | | 36.6 S 179.2 E | N | 4.6 | D |
| 345 | 7 | 17 | 45.3 | | 36.6 S 179.2 E | N | 4.5 | D |
| 346 | 8 | 01 | 01 | 10 | 36.8 S 179.0 W | N | 5.2 | D |
| 347 | 8 | 01 | 03 | 35 | 36.8 S 179.0 W | N | 4.6 | D |
| 348 | 8 | 04 | 27 | 04 | 38.5 S 176.0 E | 200 km | 4.2 | D |
| 349 | 8 | 05 | 47.9 | | 36.8 S 179.0 W | N | 4.7 | D |
| 350 | 8 | 10 | 51.6 | | 36.8 S 179.0 W | N | 4.8 | D |
| 351 | 8 | 11 | 22.8 | | 36.8 S 179.0 W | N | - | D |
| 352 | 8 | 15 | 14.9 | | 36.8 S 179.0 W | N | 4.5 | D |
| 353 | 9 | 00 | 20.8 | | 36.8 S 179.0 W | N | 4.6 | D |
| 354 | 9 | 06 | 56 | 46 | 40.7 S 174.5 E | S | 3.6 | C |
| 355 | 13 | 00 | 21 | 43 | 42.8 S 172.4 E | S | 4.3 | B |
| 356 | 14 | 03 | 38 | 35 | 39.8 S 173.8 E | 200 km | 5.1 | C |
| 357 | 14 | 07 | 07.6 | | 36.8 S 179.0 W | N | 4.7 | D |
| 358 | 14 | 07 | 13.7 | | 36.8 S 179.0 W | N | 4.6 | D |
| 359 | 14 | 07 | 59 | 16 | 39.3 S 178.1 E | N | 4.2 | D |
| 360 | 14 | 08 | 13.4 | | 33 S 178½ W | N | 5.8 | D |
| 361 | 18 | 04 | 12 | 22 | 38.9 S 175.8 E | S | 3.5 | C |
| 362 | 23 | 18 | 52.5 | | 44½ S 167½ E | S | 4.2 | D |
| 363 | 26 | 05 | 42 | 18 | 38.5 S 175.9 E | 170 km | 4.2 | D |
| 364 | 30 | 01 | 14.9 | | 44½ S 168 E | S | 4.4 | D |



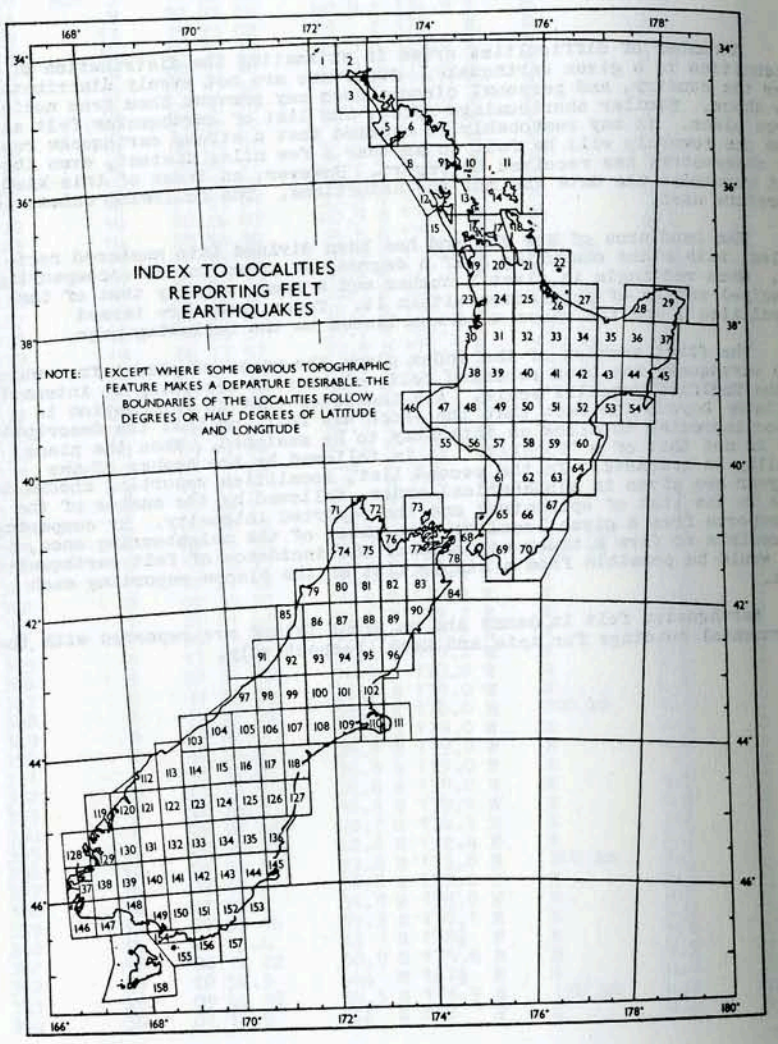
## INDEX OF FELT EARTHQUAKES

A number of difficulties arise in estimating the distribution of felt intensities in a given earthquake. Observers are not evenly distributed over the country, and personal circumstance may prevent them from noticing the shock. Similar shortcomings affect the list of earthquakes felt at any given place. It may reasonably be assumed that a strong earthquake reported from one township will be felt in another a few miles distant, even though the observatory has received no report. However, an index of this kind must summarise the data and not the deductions. The following scheme is therefore used.

The land area of New Zealand has been divided into numbered rectangles, with sides measuring half a degree, as shown in the accompanying map. Each rectangle is given a number and a name, usually that of the principal centre of population within it. These areas are termed 'localities', and the names used are listed on the following page.

The first section of the index gives the names of places from which each earthquake has been reported felt, classified according to intensity on the Modified Mercalli scale. A ? indicates that no information is available beyond the fact that the shock was felt, or that the description is too imprecise to allow an intensity to be assigned. When the place name is not that of a 'locality' it is followed by the number of the locality in brackets. In the second list, localities reporting shocks in the year are given in alphabetical order, followed by the number of the shock in the list of epicentres and the reported intensity. By comparing the reports from a given locality with those of the neighbouring ones, it is possible to form a truer estimate of the incidence of felt earthquakes than would be possible from a simple list of the places reporting each shock.

Earthquakes felt in Samoa and on Raoul Island are reported with the instrumental readings for Apia and Raoul respectively.






## LIST OF REPORTING LOCALITIES

| | | | | | |
|---|---|---|---|---|---|
| 1 | Three Kings | 54 | Mahia | 107 | Mt. Somers |
| 2 | Te Reinga | 55 | Hawera | 108 | Ashburton |
| 3 | Ninety Mile Beach | 56 | Waverley | 109 | Rakaia |
| 4 | Doubtless Bay | 57 | Wanganui | 110 | Christchurch |
| 5 | Kaitaia | 58 | Taihape | 111 | Akaroa |
| 6 | Kaikohe | 59 | Ruahine | 112 | Big Bay |
| 7 | Bay of Islands | 60 | Hastings | 113 | Jacksons Bay |
| 8 | Dargaville | 61 | Bulls | 114 | Makarora |
| 9 | Whangarei | 62 | Palmerston North | 115 | Lake Ohau |
| 10 | Bream Head | 63 | Dannevirke | 116 | Pukaki |
| 11 | Moko Hinau | 64 | Porangahau | 117 | Fairlie |
| 12 | Kaipara | 65 | Otaki | 118 | Timaru |
| 13 | Warkworth | 66 | Masterton | 119 | George Sound |
| 14 | Barrier Islands | 67 | Castlepoint | 120 | Milford |
| 15 | Helensville | 68 | Wellington | 121 | Glenorchy |
| 16 | Auckland | 69 | Featherston | 122 | Arrowtown |
| 17 | Waiheke | 70 | Martinborough | 123 | Wanaka |
| 18 | Coromandel | 71 | Mt. Stevens | 124 | St. Bathans |
| 19 | Pukekohe | 72 | Takaka | 125 | Kurow |
| 20 | Mercer | 73 | D'Urville Is. | 126 | Duntroon |
| 21 | Thames | 74 | Karamea | 127 | Waimate |
| 22 | Mayor Is. | 75 | Motueka | 128 | Secretary Is. |
| 23 | Raglan | 76 | Nelson | 129 | Doubtful Sound |
| 24 | Hamilton | 77 | Blenheim | 130 | Te Anau |
| 25 | Matamata | 78 | Picton | 131 | Livingstone Mts. |
| 26 | Tauranga | 79 | Westport | 132 | Kingston |
| 27 | Whakatane | 80 | Murchison | 133 | Alexandra |
| 28 | Te Kaha | 81 | Glenhope | 134 | Poolburn |
| 29 | East Cape | 82 | Wairau | 135 | Ranfurly |
| 30 | Kawhia | 83 | Awatere | 136 | Oamaru |
| 31 | Te Kuiti | 84 | Cape Campbell | 137 | Resolution Is. |
| 32 | Tokoroa | 85 | Greymouth | 138 | Pillans Pass |
| 33 | Rotorua | 86 | Reefton | 139 | Monowai |
| 34 | Murupara | 87 | Maruia | 140 | Mossburn |
| 35 | Opotiki | 88 | Hanmer | 141 | Waikaia |
| 36 | Motu | 89 | Clarence | 142 | Roxburgh |
| 37 | Tolaga Bay | 90 | Kaikoura | 143 | Lawrence |
| 38 | Mokau | 91 | Hokitika | 144 | Outram |
| 39 | Taumarunui | 92 | Kumara | 145 | Dunedin |
| 40 | Tokaanu | 93 | Arthur's Pass | 146 | Puysegur Pt. |
| 41 | Taupo | 94 | Lake Sumner | 147 | Poteretere |
| 42 | Te Whaiti | 95 | Culverden | 148 | Tuatapere |
| 43 | Tuai | 96 | Cheviot | 149 | Invercargill |
| 44 | Whakapunaki | 97 | Franz Josef | 150 | Gore |
| 45 | Gisborne | 98 | Hari Hari | 151 | Clinton |
| 46 | Cape Egmont | 99 | Whitcombe Pass | 152 | Balclutha |
| 47 | New Plymouth | 100 | Lake Coleridge | 153 | Waihola |
| 48 | Whangamomona | 101 | Oxford | 154 | Bluff |
| 49 | Ohakune | 102 | Rangiora | 155 | Ruapuke |
| 50 | Chateau | 103 | Haast | 156 | Tahakopa |
| 51 | Kaweka | 104 | Bruce Bay | 157 | Owaka |
| 52 | Napier | 105 | Mt. Cook | 158 | Stewart Is. |
| 53 | Wairoa | 106 | Tekapo | | |

## PLACES REPORTING FELT EARTHQUAKES

60/3 Jan 5d 08h 53m
MM3 New Plymouth, Cape Egmont

60/6 Jan 9d 13h 11m
MM4 Gisborne

60/7 Jan 9d 13h 14m
MM4 Gisborne

60/8 Jan 9d 16h 36m
MM2 Waipawa (60)

60/10 Jan 12d 09h 00m
? New Plymouth

60/17 Jan 26d 10h 19m
MM4 Waimangu (33)

60/18 Jan 26d 10h 29m
MM2 Waimangu (33)

60/20 Feb 1d 02h 01m
MM3 Waipawa (60) Dannevirke
MM2 Taihape

60/21 Feb 3d 00h 20m
MM4 Wellington
MM3 Paraparaumu (65) Lower Hutt (68) Nelson
MM2 Wellington

60/22 Feb 3d 02h 21m (See isoseismal map)
A special questionnaire was issued concerning the effects of this earthquake. In many cases, the figure given for a city or township depends upon several independent reports. At intensities of MM4 and less it is to be expected that unfavourably placed observers will be unaware of the shock, and the 'not felt' reports from such observers do not influence the figures shown on the map. When the only report from a district indicates that the shock was not felt, a zero is shown.

MM5 Puketawhira Stn., Rangitukia (29); Kukomoa (35); Panikau, Rohutu, Tokomaru Bay (37); Gisborne Aerodrome (44).

MM4-5 Rangiuru (26); Maraenui (28); Matarau, Tangihanga Stn. (29); Motu (36); Te Puia (37)

MM4 Kerepehi, Paeroa, Turua (21); Te Puke (26); Awakeri, Whakatane (27); Aorangi, Hicks Bay, East Cape (29), Kopuriki, Kawerau, Te Teko (34); Ruatoki North; Opotiki (35); Matawai, Otoko, Puha, Te Karaka, Motu (36);



Kaingawahia, Owhena, Te Puia, Tokomaru Bay (37); Awakino (38); Ruakituri, Waikaremoana (43); Eastwoodhill, Manutuke, Ngatapa, Ormond (44); Gisborne (45); Esk Forest, Tutira (52); Gwavas Forest (59); Waipukurau (60); Weber (63);

MM3-4 Whitianga (18); Tairua (21); Lake Okataina (33); Galatea, Rotoehu, Waiohau (34); Te Puia (37); Waikoau (52); Raupunga (53); Rangiwahia (58); Hastings (60);

MM3 Coromandel (18); Te Puru, Waihi, Whangamata, Thames (21); Pirongia, Hamilton (24); Mt. Maunganui, Tauranga (26);, Awakeri, Whakatane (27); Te Araroa, East Cape (29); Waiotapu, Kaingaroa (34); Matahi, Opotiki (35); Tolaga Bay (37); Tiniroto (44); Gisborne (45); Waikune (49); Napier (52); Kotemaori, Pakeraka, Wairoa (53); Wanganui (57); Mataroa, Mangaweka (58);

MM2 Kaitaia (5); Coromandel (18); Roto o Rangi (24); Waharoa, Whakamarama (25); Makutu (26); Ardkeen (43); Lepperton (47); Ohakune (49); Patea (55); Rangiwahia (58); Wellington (68);

MM1 Whenuapai (16); Kawerau (34).

Negative reports were received from the following localities:

2, 5-9, 11-21, 23-26, 30-34, 38, 40, 41, 43, 47, 48, 50, 52, 54, 58, 59, 60, 62, 64, 66, 67, 69, 70.

60/24 Feb 7d 18h 46m
MM2 Eketahuna (66)

60/27 Feb 11d 13h 36m
MM3 Eketahuna (66)
MM2 Dannevirke

60/29 Feb 11d 16h 04m
MM3 Waharoa (25)

60/30 Feb 11d 17h 35m
MM2 Waharoa (25)

60/31 Feb 11d 18h 30m
MM2 Waharoa (25)

60/33 Feb 15d 06h 16m
MM3 Wellington

60/37 Feb 21 00h 46m (See isoseismal map)
A special questionnaire was issued concerning the effects of this earthquake. In many cases the figure given for a city or township depends upon several independent reports. At intensities of MM4 and less, it is to be expected that unfavourably placed observers will be unaware of the shock, and the 'not felt' reports of such observers do not influence the figures shown on the map. When the only report from a district indicates 'not felt', a zero is shown.

MM6 Karamea (74); Mangles Valley, Matahi, Six Mile, Murchison (80); Gowanbridge, Howard

(81); Kekerengu Bluff (84); Hanmer (88); Kaikoura (90); Hawarden (95); Barry's Bay (111).

MM5 Asbestos, Cobb (75); Blenheim (77); Westport (79); Murchison (80); The Roundell (81); Wai Iti (84); Okuti Valley (110).

MM4-5 Puramahoe (72); Westport (79); Kikiwa, St. Arnaud (81); Flax Hills (90); Culverden (95).

MM4 Parihauhau (57); Turakina (61); Paraparaumu, Waitarere (65); Linden, Lower Hutt, Titahi Bay, Wellington (68); Paturau (71); Bainham, Collingwood, Farewell Spit, Totaranui (72); Waitata Bay (73); Baton, Brooklyn, Cobb Dam, Dovedale, Riwaka, Stanley Brook, Tadmor, Motueka (75); Highfield, Monaco, Stoke, Wairoa Gorge, Wakefield, Nelson (76); Fabians Valley, Grovetown, Havelock, Mahakipawa, Nikau Bay, Springlands, Waikakaho Valley, Blenheim (77); Marshlands (78); Inangahua, Millerton, Carters' Beach (79); Golden Downs (81); The Branch, Erina, Middlehurst (82); Duntroon, Marama, Brookby, Upcot, Waihopai, Spray Point, (83); Seddon, Ward (84); Blackball, Greymouth (85); Totara Flat (86); Bunny Flat, Hillersden, Maruia (87); Molesworth, Whalesback (89); Ellerton, Kekerengu, Waipapa, Kaikoura (90); Woodstock (91); Kaimata, Moana, Taipo (92); Eskhead, Lakes Stn., Poplars (Lewis Pass Rd.), (94); Balmoral, Hanmer, Waikari, Culverden (95); Gore Bay, Hawkeswood, Keinton Combe, Kilmarnock, Port Robertson, Highfield, Waiau (96); Annat (100); Ashley Forest, Sheffield (101); Amberley, Belfast, Kaiapoi, Waikuku Beach, Waipara (102); Orari Gorge (107); Magnet Bay, Gebbies Pass, Spreydon, Christchurch (110); Le Bon's Bay, Akaroa (111).

MM3 Eltham, Stratford, Urenui Beach (47); Strathmore (48); Hawera (55); Oxton, Wanganui (57); Foxton Beach, Ohalea (61); Foxton (62); Kapiti Is., Levin, Paraparaumu (65); Khandallah, Lower Hutt, Plimmerton (68); Tarakohe (72); Stephens Is. (73); Motupiko (75); Maitai Valley, Wakefield, Nelson (76); Kaituna, Onamalutu, Opouri Valley, Tunakino, Blenheim (77); Pelorus Sound, Picton (78); Tutaki (80); Tyntesfield (83); Seddon (84); Blaketown, Cobden, Greymouth (85); Lewis Pass Rd., Springs Junction (87); Sawyer's Downs (90); Hokitika (91); Kowhitirangi (92); Otira (93); Conway Flat, Happy Valley, Lowry Hills, Spotswood, Cheviot (96); Okarito (97); Avoca Forest, Bayfields, Castle Hill, Craigieburn, Homebush, Mt. Torlesse, Lake Coleridge (100); Lees Valley, North Loburn (101); Motunau Beach, Woodend Beach, Rangiora (102); Anama, Lochaber Montalto (107); Highbank, Methven, Ashburton (108); Dunsandel, Lincoln (109); Allandale, Greenpark, Shirley, Christchurch (110); Little Akaloa (111); Hinds, Lynnford, Temuka, Wheatstone (118).

MM2 Taumarunui (39); Waitahinga (56); Dannevirke



(63); Ohau, Waikanae, Otaki (65); Mahina Bay (68); Featherston (69); Pukeatua (70); Pokokini (77); Ocean Bay (78); Cape Campbell (84); Hohonu (92); Otira (93); Avoca River (100); Blue River (103); Rakaia (108).

MM1 Opunake (46); Apiti (58); Te Kopi (69); Manaroa (78); Hermitage (105); Alford Forest (108).

Negative reports were received from the following localities:

6, 7, 33, 43, 47, 55, 58, 59, 61-67, 69, 70, 73, 77, 91, 93, 97, 99, 101, 103-109, 111, 115-118, 120, 125, 127, and from the Chatham Islands.

| | | | |
|---|---|---|---|
| 60/38 | Feb | 21d | 17h 55m |
| | | MM5 | Fairview Station (44) |
| | | MM3 | Wairoa, Motu, Tuai |
| | | MM2 | Gisborne |
| 60/39 | Feb | 21d | 19h 39m |
| | | MM3 | Gisborne, Wairoa, Motu, Tuai. |
| 60/40 | Feb | 21d | 20h 29m |
| | | MM3 | Wairoa, Tuai |
| 60/41 | Feb | 22d | 12h 25m |
| | | ? | Thorndon (68) |
| 60/46 | Mar | 1d | 09h 59m |
| | | MM4 | Kawerau (34) |
| | | MM3-4 | Kawerau (34) |
| | | MM2-3 | Te Teko (34) |
| 60/48 | Mar | 10d | 16h 19m |
| | | MM3 | Wairoa |
| 60/51 | Mar | 15d | 12h 30m |
| | | MM4-5 | Haast |
| | | MM4 | Haast |
| 60/55 | Mar | 20d | 09h 04m |
| | | MM4 | Farewell Spit (72) |
| | | MM3 | Wellington |
| 60/62 | Mar | 27d | 23h 28m |
| | | MM4 | Christchurch, Wellington, Hunterville (58); Foxton (61) |
| | | MM3 | Palmerston North, Bunnythorpe(62) Gisborne Taihape, Ohakune, Christchurch, Akaroa, Ohakea (61), Lyttelton (110), Waipawa (60) Dannevirke, Raetihi (49), Eketahuna (66). |
| | | MM2 | Hastings, Gisborne, Wellington, Kelburn(68) New Plymouth, Rotorua. |
| 60/63 | Mar | 27d | 23h 29m |
| | | MM4 | Christchurch |
| | | MM3 | Christchurch |
| 60/64 | Mar | 28d | 13h 31m |
| | | MM3 | Upper Hutt (68), Wellington |
| | | MM1 | Paraparaumu (65). |
| 60/66 | Apr | 4d | 14h 41m |
| | | MM4 | Rotorua |

| | | | |
|---|---|---|---|
| 60/67 | Apr | 6d | 16h 02m |
| | | MM4 | Kawerau (34) |
| 60/73 | Apr | 18d | 11h 11m |
| | | MM2-3 | Wairakei (41) |
| 60/74 | Apr | 19d | 10h 52m |
| | | MM2 | Karori (68) |
| 60/84 | May | 9d | 03h 43m |
| | | MM5 | Farewell Spit (72) |
| | | MM4 | Karamea, Collingwood (72), Nelson |
| | | MM3 | Cobb (75), Collingwood (72), Tadmor (75) |
| | | MM1 | Wellington, Nelson |
| 60/86 | May | 11d | 15h 02m |
| | | MM2 | Ohakune |
| 60/88 | May | 13d | 01h 35m |
| | | MM3 | Haast |
| | | ? | Milford |
| 60/89 | May | 13d | 01h 47m |
| | | ? | Milford |
| 60/90 | May | 13d | 01h 52m |
| | | ? | Milford |
| 60/91 | May | 13d | 02h 00m |
| | | ? | Milford |
| 60/98 | May | 14d | 10h 19m |
| | | MM3 | Lumsden (140) |
| 60/105 | May | 19d | 03h 54m |
| | | MM1 | Ohakune |
| 60/106 | May | 21d | 13h 26m |
| | | ? | Puysegur Pt. |
| 60/107 | May | 23d | 01h 01m |
| | | MM4 | Tokomaru Bay (29) |
| | | MM3 | Motu, Gisborne |
| | | MM2 | Opotiki |
| | | ? | Tolaga Bay |
| 60/108 | May | 24d | 14h 46m (See isoseismal map). |

A special questionnaire was issued concerning the effects of this earthquake. In many cases the figure given for a city or township depends upon several independent reports. As might be expected a number of observers in areas of intensity MM3-4 and less were not awakened. Such observations have been neglected when there is independent evidence that the shock was felt in that district.

MM6 Cardrona, Luggate (123).

MM5-6 Haast (103).

MM5 Whataroa (97); "The Rest", (105); Maungati (117); Milford (120); Glenorchy (121); Mt. Aspiring Stn. (122); Luggate, Wanaka, Willowbank (123); Otiake (125); Cromwell (133); Orangapai (135); Portobello (145); Orawia (148); Pebbly Hills (150).



MM4-5 Blaketown (85).

MM4 Birchfield, Westport (79); Six Mile, Murchison (80); Blackball, Cobden, Dobson, Greymouth (85); Maimai, Reefton (86); Kowhitirangi, Taipo, Woodstock, Hokitika (91); Hohonu, Kaimata, Moana (92); Arthur's Pass (93); Gillespies Beach, Tetaho, Whataroa, Franz Josef (97); Erewhon, Waitoha, Hari Hari (98); Lake Heron, Peak Hill (99); Russell's Flat, Mt. Torlesse (100); Mahitahi (104); Braemar (105); Mesopotamia (106); Carew, Orari Gorge, Peel Forest (107); Claremont (110); Hunter Valley, Minaret Stn. (114); Omarama, Ribbonwood, Lake Ohau (115); Albury, Bedeshurst, Burke's Pass, Cave, Winscombe, Fairlie (117); Hilton, Kakahu, Timaru (118); Milford (120); Carnslaw (121); Skippers, Arrowtown (122); Glendhu Bay, Hawea Flat, Lindis Pass, Mt. Barker (123); Blackstone Hill (124); Dansey's Pass, Hakataramea, Kyeburn Diggings, Lake Waitaki, Otamatapaio, Otematata (125); Duntroon, Garguston, Waihao Downs, Waihaorunga, Pentland Hills (126); Hunter, Studholme, Waimate (127); Retford, Te Anau (130); Garston, Gibbston, Queenstown, Waitiri (132); Coal Creek, Cromwell, Earnscleugh, Fruitlands, Alexandra (133); Becks, Matakanui (134); Patearoa, Naseby, Waipiata, Wedderburn, Ranfurly (135); Oamaru (136); Eastern Bush, Lilburn Valley, Manapouri, Redcliff, Monowai (139); Dunrobin, Five Rivers, Lumsden, Nightcaps, Plains, Rocklands, West Dome, Mossburn (140); Athol, Kaweku, Mandeville, Otama, Waikaia (141); Heriot, Miller's Flat, Rae's Junction, Tapanui, Waikaka, Waikaka Valley, Roxburgh (142); Waipori Falls, Waitahuna, Lawrence (143); Berwick, Burnside, Deepstream, Dunkery Downs, Hindon, Middlemarch, Mosgiel, Mt. Allan, Outram (144); Goodwood, Waikouaiti, Dunedin (145); Puysegur Pt. (146); Centre Is., Otautau, Tuatapere (148); Gummies Busy, Otapiri, Riverton, South Hillend, Invercargill (149); Dacre, Glenham, Hedgehope, Redan, Waimumu, Gore (150); Clinton (151); Clydevale, Milton, Owaka, Balclutha (152); Glenledi, Milburn, Toko Mouth, Waihola Lake (153); Awarua, Dog Is., Waimahaka, Waipapa Pt. (154); Half Moon Bay (158).

MM3-4 Maruia (87); Ross (91); Lake Coleridge (100); Clayton (106); Makarora (114); Fairview, Geraldine, Tenbury, Timaru, (118); Knobs Flat (121); Ikawai (126); Ophi (134); Sawyer's Bay Dunedin (145); Invercargill (149); Kaitangata (152); Bluff (154); Ruapuke (155).

MM3 Tarakohe, Collingwood (72); Karamea (74); Millerton, Westport (79); Blaketown (85); Springs Junction (87); Arthur's Pass, Haupiri (93); Waiau (96); Homebush, Hororata, Lake Coleridge (100); Oxford (101); Clarkville (102); Paringa (103); Karangarua (104); Godley Peaks (105); Lilybank (106); Highbank, Methven, Willowby (108); Allandale (110);

Barry's Bay, Hickory, Akaroa (111); Lake Tekapo (116); Mawaro (117); Geraldine, Temuka, Waitawa (118); Tarras (123); Hakataramia, Kurow (125); Cromwell (133); Katiki, Moeraki Pt., Oamaru (136); Lumsden (140); Glenaray, Waikaia (141); Beaumont, Lawrence (143); Taieri (144); Mataura (150); Mokoreta, Clinton (151); Owaka Valley (152); Awarua (154); Quarry Hills (156).

MM2 Tuapeka Mouth (152)

MM1 Nelson (76)

? Mt. Cook (105); Lyttelton (110); Half Moon Bay (158).

Negative reports were received from the following localities:

61, 65, 66, 67, 69, 70, 72, 73, 75-78, 80, 81, 83, 84, 87, 89, 90, 94-96, 100-102, 106-111, 118, 151, 152.

| | | | | |
|---|---|---|---|---|
| 60/121 | May | 24d | 16h 43m | |
| | | MM4 | Haast | |
| 60/130 | May | 24d | 20h 24m | |
| | | MM4 | Haast | |
| 60/143 | May | 24d | 23h 28m | |
| | | MM4 | Haast | |
| 60/163 | May | 25d | 21h 57m | |
| | | ? | Milford | |
| 60/167 | May | 27d | 00h 22m | |
| | | MM3 | Wanaka | |
| | | MM1 | Cromwell (133) | |
| 60/174 | May | 29d | 20h 38m | |
| | | MM1 | Wairoa | |
| 60/175 | May | 30d | 02h 29m | |
| | | MM3 | Haast | |
| | | ? | Milford | |
| 60/180 | Jun | 3d | 10h 32m | |
| | | MM4 | Haast | |
| | | MM3-4 | Haast | |
| | | MM3 | Milford | |
| 60/186 | Jun | 10d | 07h 51m | |
| | | MM4 | Napier | |
| 60/205 | Jun | 27d | 07h 14m | |
| | | MM2-3 | Otaki | |
| 60/216 | Jul | 3d | 13h 28m | |
| | | MM4 | Dannevirke | |
| | | MM3 | Ohakune | |
| 60/219 | Jul | 8d | 06h 54m | |
| | | MM3 | Karori (68) Wellington | |
| 60/220 | Jul | 11d | 16h 22m | |
| | | MM5 | Karamea | |
| | | MM4 | Westport | |
| 60/222 | Jul | 19d | 10h 52m | |
| | | ? | Wellington | |



| | | | | |
|---|---|---|---|---|
| 60/227 | Jul | 27d | 22h 36m | |
| | | MM3 | Wairoa | |
| 60/231 | Aug | 5d | 03h 37m | |
| | | MM3 | Eketahuna (66) | |
| 60/234 | Aug | 7d | 08h 54m | |
| | | MM3 | Jacksons Bay | |
| 60/236 | Aug | 9d | 08h 43m | |
| | | MM2 | Jacksons Bay | |
| 60/238 | Aug | 14d | 09h 11m | |
| | | MM2 | Jacksons Bay | |
| 60/245 | Aug | 24d | 01h 01m | |
| | | MM4 | Kawerau (34) | |
| 60/246 | Aug | 24d | 01h 10m | |
| | | MM4 | Kawerau (34) | |
| 60/247 | Aug | 24d | 01h 11m | |
| | | MM4 | Kawerau (34) | |
| 60/248 | Aug | 24d | 01h 13m | |
| | | MM3 | Kawerau (34) | |
| 60/250 | Aug | 24d | 21h 36m | |
| | | MM4 | Queenstown (132) | |
| 60/251 | Aug | 25d | 03h 41m | |
| | | MM5 | Murchison | |
| | | MM4 | Tadmor (75) | |
| | | MM3 | Farewell Spit (72) Westport, Kaikoura, Nelson. | |
| | | MM2 | New Plymouth | |
| | | MM1 | Kelburn (68) | |
| 60/252 | Aug | 26d | 20h 19m | |
| | | MM4 | Mossburn, Manapouri (139) | |
| | | MM3 | Awarua (154), Nightcaps (140), Cromwell (133), Centre Island (148). | |
| | | MM2 | Invercargill, Tuatapere | |
| 60/262 | Sep | 4d | 11h 09m | |
| | | MM2 | Jacksons Bay | |
| 60/265 | Sep | 6d | 10h 22m | |
| | | MM3 | Wellington | |
| | | MM2 | Wellington, Wainui-o-mata (68) | |
| 60/272 | Sep | 17d | 16h 03m | |
| | | MM1-2 | Titahi Bay (68) | |
| 60/274 | Sep | 19d | 12h 41m | |
| | | MM1 | Wellington | |
| 60/275 | Sep | 20d | 03h 05m | |
| | | MM2 | Gisborne | |
| 60/276 | Sep | 23d | 16h 40m | |
| | | MM4 | Eketahuna (66) | |
| | | MM2 | Bunnythorpe (62), Dannevirke | |
| 60/278 | Sep | 25d | 07h 32m | |
| | | MM2 | Dannevirke | |
| 60/281 | Sep | 30d | 02h 53m | |
| | | ? | Gisborne | |

| | | | |
|---|---|---|---|
| 60/304 | Oct | 21d 11h 08m<br>MM3 | Hastings |
| 60/305 | Oct | 23d 17h 26m<br>MM4<br>MM3<br>? | Paraparaumu (65), Picton<br>Otaki (61); Lower Hutt (68); Farewell Spit Lighthouse, Collingwood (72);<br>Titahi Bay (68), Nelson. |
| 60/307 | Oct | 28d 20h 33m<br>MM1 | Dannevirke |
| 60/309 | Nov | 2d 19h 23m<br>MM3<br>? | Haast<br>Big Bay |
| 60/311 | Nov | 9d 22h 03m<br>MM3 | Lower Hutt (68) |
| 60/318 | Nov | 14d 09h 58m<br>MM3 | Akaroa |
| 60/322 | Nov | 14d 16h 26m<br>? | Masterton |
| 60/332 | Nov | 28d 08h 40m<br>MM1 | Dannevirke |
| 60/333 | Nov | 29d 12h 59m<br>MM3 | Queenstown (132) |
| 60/361 | Dec | 18d 04h 12m<br>MM2 | Taupo |

## EARTHQUAKES FELT WITHIN STATED LOCALITIES

Localities in which earthquakes have been felt during 1960 are listed in alphabetical order, preceded by the number on the reference map. The figure following the name of the locality is the number of the epicentre, followed by the maximum intensity (in brackets) report within the district covered by the locality name. The instrumental magnitude may be found from the epicentre list, and the places actually reporting the shock from the table of "Places Reporting Felt Earthquakes."

| | | |
|---|---|---|
| 133 | Alexandra | 108 (5), 167 (1), 252 (3) |
| 111 | Akaroa | 37 (6), 62 (3), 108 (3), 318 (3) |
| 122 | Arrowtown | 108 (5) |
| 93 | Arthur's Pass | 37 (3), 108 (4) |
| 108 | Ashburton | 37 (3), 108 (3) |
| 16 | Auckland | 22 (1) |
| 83 | Awatere | 37 (4) |
| 152 | Balclutha | 108 (4) |
| 112 | Big Bay | 309 (?) |
| 77 | Blenheim | 37 (5) |
| 154 | Bluff | 108 (4), 252 (3) |



| | | |
|---|---|---|
| 104 | Bruce Bay | 108 (4) |
| 61 | Bulls | 37 (4), 62 (4) |
| 84 | Cape Campbell | 37 (6) |
| 46 | Cape Egmont | 3 (3) |
| 96 | Cheviot | 37 (4), 108 (3) |
| 110 | Christchurch | 37 (5), 62 (4), 63 (4), 108 (4) |
| 89 | Clarence | 37 (4) |
| 151 | Clinton | 108 (4) |
| 18 | Coromandel | 22 (3-4) |
| 95 | Culverden | 37 (6) |
| 63 | Dannevirke | 20 (3), 22 (4), 27 (2), 37 (2), 62 (3), 216 (4), 276 (2) 278 (2) 307 (1) 332 (1) |
| 145 | Dunedin | 108 (5) |
| 126 | Duntroon | 108 (4) |
| 73 | D'Urville Is. | 37 (4) |
| 29 | East Cape | 22 (5), 107 (4) |
| 117 | Fairlie | 37 (3), 108 (4) |
| 69 | Featherston | 37 (2) |
| 97 | Franz Josef | 37 (3), 108 (5) |
| 45 | Gisborne | 6 (4), 7 (4), 22 (4), 38<br>107 (3), 275 (2) 281 (?) |
| 81 | Glenhope | 37 (6) |
| 121 | Glenorchy | 108 (5) |
| 150 | Gore | 108 (5) |
| 85 | Greymouth | 85 (4), 108 (4-5) |
| 103 | Haast | 37 (2), 51 (4-5) 88 (3), 108 (5-6) 121 (4), 130 (4),<br>143 (4), 175 (3), 180 (4), 309 (3) |
| 24 | Hamilton | 22 (3) |
| 88 | Hanmer | 37 (6) |
| 98 | Hari Hari | 108 (4) |
| 60 | Hastings | 8 (2), 20 (3), 22 (4), 62 (3), 304 (3) |
| 55 | Hawera | 22 (2), 37 (3) |
| 91 | Hokitika | 37 (4), 108 (4) |
| 149 | Invercargill | 108 (4), 252 (2) |
| 113 | Jacksons Bay | 234 (3), 236 (2), 238 (2), 262 (2) |
| 90 | Kaikoura | 37 (6), 251 (3) |

| | | |
|---|---|---|
| 5 | Kaitaia | 22 (2) |
| 74 | Karamea | 37 (6), 84 (4), 108 (3), 220 (5) |
| 132 | Kingston | 108 (4), 250 (4), 333 (3) |
| 92 | Kumara | 37 (4), 108 (4) |
| 125 | Kurow | 108 (5) |
| 100 | Lake Coleridge | 37 (4) 108 (4) |
| 115 | Lake Ohau | 108 (4) |
| 94 | Lake Sumner | 37 (4) |
| 143 | Lawrence | 108 (4) |
| 114 | Makarora | 108 (4) |
| 87 | Maruia | 37 (4), 108 (3-4) |
| 70 | Martinborough | 37 (2) |
| 66 | Masterton | 24 (2), 27 (3), 62 (3), 231 (3), 276 (4), 322 (?) |
| 25 | Matamata | 22 (2), 29 (3), 30 (2), 31 (2) |
| 120 | Milford | 88 (?), 89 (?), 90 (?), 91 (?), 108 (5), 163 (?), 175 (?), 180 (?) |
| 38 | Mokau | 22 (4) |
| 139 | Monowai | 108 (4), 252 (4) |
| 140 | Mossburn | 98 (3), 108 (4), 252 (4) |
| 36 | Motu | 22 (4-5) 38 (3), 39 (3), 107 (3) |
| 75 | Motueka | 37 (5), 84 (3), 251 (4) |
| 105 | Mt. Cook | 37 (1), 108 (?) |
| 107 | Mt. Somers | 37 (4), 108 (4) |
| 71 | Mt. Stevens | 37 (4) |
| 80 | Murchison | 37 (6), 108 (4), 251 (5) |
| 34 | Murupara | 22 (4), 46 (4), 67 (4) 245 (4), 246 (4), 247 (4), 248 (3) |
| 52 | Napier | 22 (4), 186 (4) |
| 76 | Nelson | 21 (3), 37 (4), 84 (4), 108 (1), 251 (3), 305 (?) |
| 47 | New Plymouth | 3 (3), 10 (?), 22 (2), 37 (3), 62 (2), 251 (2) |
| 136 | Oamaru | 108 (4) |
| 49 | Ohakune | 22 (3), 62 (3), 86 (2), 105 (1), 216 (3) |
| 35 | Opotiki | 22 (5), 107 (2) |
| 65 | Otaki | 21 (3), 22 (3), 37 (4), 64 (1), 205 (2-3) 305 (4) |
| 144 | Outram | 108 (4) |
| 101 | Oxford | 37 (4), 108 (3) |



| | | |
|---|---|---|
| 62 | Palmerston North | 22 (3), 37 (3), 60 (3), 276 (2) |
| 78 | Picton | 37 (4), 305 (4) |
| 134 | Poolburn | 108 (4) |
| 116 | Pukaki | 108 (3) |
| 146 | Puysegur Pt. | 106 (?), 108 (4) |
| 109 | Rakaia | 37 (3) |
| 135 | Ranfurly | 108 (5) |
| 102 | Rangiora | 37 (3), 108 (3) |
| 86 | Reefton | 37 (4), 108 (4) |
| 33 | Rotorua | 17 (4), 18 (2), 22 (3), 66 (4) |
| 142 | Roxburgh | 108 (4) |
| 59 | Ruahine | 22 (4) |
| 155 | Ruapuke | 108 (3-4) |
| 124 | St. Bathans | 108 (4) |
| 158 | Stewart Is. | 108 (4) |
| 58 | Taihape | 22 (3-4) 62 (4) |
| 72 | Takaka | 37 (4), 55 (4), 84 (5), 108 (3), 251 (3), 305 (3) |
| 39 | Taumarunui | 37 (2) |
| 41 | Taupo | 22 (2-3) 73 (2-3) 361 (2) |
| 26 | Tauranga | 22 (4-5) |
| 130 | Te Anau | 108 (4) |
| 28 | Te Kaha | 22 (4-5) |
| 42 | Te Whaiti | 22 (2) |
| 106 | Tekapo | 108 (4) |
| 21 | Thames | 22 (4) |
| 118 | Timaru | 37 (3), 108 (4) |
| 37 | Tolaga Bay | 22 (5), 107 (?) |
| 43 | Tuai | 22 (4), 38 (3), 39 (3), 40 (3) |
| 148 | Tuatapere | 108 (5), 252 (3) |
| 153 | Waihole | 108 (4) |
| 141 | Waikaia | 108 (4) |
| 127 | Waimate | 108 (4) |
| 82 | Wairau | 37 (4) |
| 53 | Wairoa | 22 (3-4) 38 (3), 39 (3), 40 (3), 48 (3), 174 (1), 227 (3) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 123 | Wanaka | 108 (6), | 167 (3) | | | | | |
| 57 | Wanganui | 22 (3), | 37 (4) | | | | | |
| 56 | Waverley | 37 (2) | | | | | | |
| 68 | Wellington | 21 (4), | 22 (2), | 37 (4), | 41 (?), | 55 (3), | 62 (4), | |
| | | 64 (3), | 74 (2), | 84 (1), | 219 (3), | 222 (?), | 251 (1), | |
| | | 265 (3), | 272 (1-2) | 274 (1), | 305 (3), | 311 (3) | | |
| 79 | Westport | 37 (5) | 108 (4), | 220 (4), | 251 (3) | | | |
| 44 | Whakapunaki | | 22 (5), | 38 (5) | | | | |
| 27 | Whakatane | 22 (4' | | | | | | |
| 48 | Whangamomona | | 37 (3) | | | | | |
| 99 | Whitcombe Pass | | 108 (4) | | | | | |

## UNCONFIRMED REPORTS

The following shocks reported to have been felt cannot be confirmed either by an instrumental record or by an independent report:

| | | | | |
|---|---|---|---|---|
| Jan | 1d | 02h 01m | Dannevirke | MM3 |
| | 6d | 05h 30m | Kawerau (34) | MM4 |
| | 26d | 10h 36m | Waimangu (33) | MM3 |
| | 26d | 10h 40m | Waimangu (33) | MM2 |
| Feb | 1d | 01h 10m | Waimangu (33) | MM4 |
| | 2d | 16h 49m | Lower Hutt (68) | MM3 |
| | 20d | 00h | Blenheim | MM4 |
| | 21d | 16h 30m to 22h 15m | Waimangu (33) | "A swarm of shakes the largest of which was MM4". Note that three shocks which could have been felt at Waimangu occurred during this period. |
| Mar | 1d | 21h 04m | Campbell Is. | MM1 |
| May | 1d | 20h 30m | Rotorua | |
| | 3d | 04h 40m | Castlepoint | MM3 |
| | 13d | 01h 00m | Milford Sound | 'slight' |
| | 17d | 20h 57m | Cromwell (133) | MM2 |
| | 20d | 11h 22½m | Norfolk Is. | |
| | 20d | 11h 53m | Norfolk Is. | |
| | 21d | 13h 35m | Puysegur Pt. | 'slight' |
| | 27d | 02h 20m | Norfolk Is. | MM2 |
| Jun | 2d | 22h 35m | Mossburn | MM2 |
| | 26d | 07h 42m | Waimangu (33) | MM3 |
| Jul | 10d | 23h 16m | Kawerau (34) | MM2 |
| | 11d | 12h 10m | Taupo, Wairakei | MM4-5 |
| | 28d | 19h 00m | Raoul Is. | MM2 |
| Aug | 20d | 20h 50m | Jackson Bay | MM2 |
| | 24d | 01h 05m | Kawerau (34) | MM2 |
| | 28d | 08h 30m | Jackson Bay | MM4 |
| | 29d | 21h 35m | Kawerau (34) | MM3 |
| | 29d | 21h 39m | Kawerau (34) | MM3 |
| Sep | 9d | 14h 00m | Puysegur Pt. | MM3 |
| | 9d | 19h 13m | Kawerau (34) | MM2 |
| Oct | 16d | 15h 07m | Waihi (21) | 'slight' |
| | 22d | 20h 07m | Puysegur Pt. | MM3 |
| Dec | 11d | 15± | Bruce Bay | |



## PUBLICATIONS

During 1960, the following papers by members of the Seismological Observatory staff were published:

E-137 New Zealand Seismological Report, 1956.

S-107 F.F. EVISON, C.E. INGHAM, R.H. ORR, and J.H. Le FORT: Thickness of the Earth's Crust in Antarctica and the Surrounding Oceans. Geophys. J. 3, No. 3, pp 289-306.

Love waves and Rayleigh waves from eight earthquakes recorded at Hallett Station, Scott Base, and Mirny have been analysed and the dispersion compared with that predicted by theory for simple model crusts. The average thickness of the crust in eastern Antarctica is found to be about 35 km, as is typical of continents, whereas Marie Byrd Land with an average thickness of about 25 km cannot be regarded as truly continental. Love-wave dispersion indicates that the thickness of the solid crust in the oceanic regions surrounding Antarctica varies from about 5 km to 10 km, the smaller values being associated with the deeper basins. It is shown that the determination of oceanic crustal thickness from Rayleigh-wave dispersion is in general subject to large uncertainties, nor can one usually rely on values of the thickness of unconsolidated bottom-sediments obtained by this means.

LIST OF MAPS
(in pocket inside back cover)

1. Epicentres of Normal Focus Earthquakes in 1960
2. Epicentres of Deep Focus Earthquakes in 1960
3. Isoseismals for the Earthquake of 1960 Feb 3
4. Isoseismals for the Earthquake of 1960 Feb 21
5. Isoseismals for the Earthquake of 1960 May 24

R. E. OWEN, GOVERNMENT PRINTER, WELLINGTON, NEW ZEALAND—1964