

Astronomical Phenomena

July 2023 – June 2024

Orbital Phenomena of the Earth

Orbital Phenomena			
Aphelion (Earth furthest from Sun)		2023 July 7	08:07
Equinox (Sun moves south of the Equator); equal day, night		2023 September 23	18:50
Solstice (Sun furthest south); Southern hemisphere longest day		2023 December 22	15:27
Perihelion (Earth nearest to Sun)		2024 January 3	12:39
Equinox (Sun moves north of the Equator); equal day, night		2024 March 20	15:06
Solstice (Sun furthest north); Southern hemisphere shortest day		2024 June 21	08:51

Solar and Lunar Eclipses

Type of Eclipse	Mid-event		Visibility from New Zealand
Annular Eclipse of the Sun	2023 October 15	05:36	Not visible
Partial Eclipse of the Moon	2023 October 29	08:14	Not visible
Penumbral Eclipse of the Moon	2024 March 25	19:13	Moon rises during event
Total Eclipse of the Sun	2024 April 9	06:36	Not visible

Lunar Perigee and Apogee

Perigee (Moon closest to Earth)				Apogee (Moon furthest from Earth)		
		Distance (km)				Distance (km)
2023	Jul 5	10:25	360,356	Jul 20	18:57	406,184
	Aug 2	17:52	357,552	Aug 16	23:54	406,550
	Aug 31	03:54	357,426	Sep 13	03:43	406,193
	Sep 28	12:59	360,128	Oct 10	15:42	405,296
	Oct 26	15:02	365,030	Nov 7	09:49	404,413
	Nov 22	09:01	369,890	Dec 5	06:42	404,181
	Dec 17	06:53	368,008			
2024	Jan 13	22:36	362,453	Jan 2	03:28	404,759
	Feb 11	06:53	358,324	Jan 29	20:14	405,660
	Mar 10	19:04	357,145	Feb 26	02:59	406,227
	Apr 8	05:51	359,079	Mar 24	03:45	406,207
	May 6	10:04	363,342	Apr 20	14:10	405,506
	Jun 2	19:16	368,207	May 18	06:59	404,495
	Jun 27	23:30	369,361	Jun 15	01:35	403,917

Phases of the Moon

New Moon		First Quarter		Full Moon		Last Quarter		
2023				Jul 3	23:39	Jul 10	13:48	
	Jul 18	06:32	Jul 26	10:07	Aug 2	06:32	Aug 8	22:28
	Aug 16	21:38	Aug 24	21:57	Aug 31	13:36	Sep 7	10:21
	Sep 15	13:40	Sep 23	07:32	Sep 29	21:57	Oct 7	01:48
	Oct 15	05:55	Oct 22	15:29	Oct 29	08:24	Nov 5	20:37
	Nov 13	21:27	Nov 20	22:50	Nov 27	21:16	Dec 5	17:49
	Dec 13	11:32	Dec 20	06:39	Dec 27	12:33		
2024						Jan 4	15:30	
	Jan 11	23:57	Jan 18	15:53	Jan 26	05:54	Feb 3	11:18
	Feb 10	10:59	Feb 17	03:01	Feb 25	00:30	Mar 4	03:23
	Mar 10	21:00	Mar 17	16:11	Mar 25	19:00	Apr 2	15:15
	Apr 9	06:21	Apr 16	07:13	Apr 24	11:49	May 1	23:27
	May 8	15:22	May 15	23:48	May 24	01:53	May 31	05:13
	Jun 7	00:38	Jun 14	17:18	Jun 22	13:08	Jun 29	09:53

Times listed are in New Zealand Standard Time (NZST).
Add 1 hour when New Zealand daylight Time (NZDT) is in force.