



Sun, Planets and Transitions

The **Sun** will be in Gemini, the Twins (*Mithuna*), on 1 July. Its angular diameter will be 31'27.7". The Earth reaches its farthest point from the Sun, aphelion, on 6 July. The angular size of the Sun will decrease slightly, 0.1 arcsecond. After that, as the Earth starts its journey towards perihelion, the angular diameter of the Sun will start to increase. On 21 July, the Sun will transit to Cancer, the Crab (*Karka*). On 31 July, its angular diameter will be 31'30.7". On this day, the Sun will be due south of the Beehive cluster (*Pushya Nakshatra*).

At the beginning of the month, if the sky is clear, Mercury can be seen right above the western horizon. But by 4 July it will get too close to the Sun to be seen. Venus and Jupiter can be seen above the western horizon after sunset. Mars and Saturn appear over the eastern horizon before day-break. By mid-month, Jupiter will be too close to the Sun for observation. Mercury will reappear above the eastern horizon at dawn.

Mercury will be in Gemini, the Twins (*Mithuna*) this July.

Ephemeris of Mercury:

Date	Alt*	Diam''	Mag	El°
16 Jul	+00°58'	11.4	4.4	6.8 W
20 Jul	+06°08'	10.7	3.1	11.3 W
30 Jul	+14°14'	8.4	0.7	19.0 W

Venus will be in Leo, the Lion (*Simha*) on 1 July, and will remain in Leo throughout the month.

Ephemeris of Venus:

Date	Alt*	Diam''	Mag	El°
01 Jul	+31°57'	16.0	-4.1	41.1 E
10 Jul	+31°49'	17.2	-4.1	42.6 E
20 Jul	+30°50'	18.7	-4.2	44.1 E
30 Jul	+29°01'	20.6	-4.2	45.1 E

List of Events in July 2026 (Time in IST)

Dt	Dy	Time	Event
01	We		Venus 41.1° E
04	Sa	13:21	Moon ascending node
06	Mo	23:00	Earth at aphelion: 1.0166 AU
08	We	00:59	Last quarter
09	Th	20:06	Venus-Regulus: 1° N
11	Sa	04:24	Moon-Pleiades: 1.1° S
12	Su	18:47	Mars-Aldebaran: 5.3° N
12	Su	20:48	Moon north declination: 28° N
13	Mo	06:54	Mercury inferior conjunction
13	Mo	13:20	Moon perigee: 359100 km
14	Tu	15:13	New Moon
15	We	09:33	Jupiter 1.9° S of Moon
17	Fr	05:37	Moon-Regulus: 0.5° N
17	Fr	05:57	Moon descending Node
17	Fr	22:01	Moon-Venus: 2.1° N
21	Tu	08:51	Moon-Spica: 2.5° N
21	Tu	16:36	First quarter
23	Th	22:37	Mercury stationary (in RA)
25	Sa	02:30	Moon-Antares: 0.6° N
25	Sa	22:15	Moon apogee: 405500 km
26	Su	09:26	Moon south declination: 28.1° S
27	Mo	01:25	Saturn stationary (in RA)
28	Tu	15:32	Delta Aquarid Shower: ZHR = 20
29	We	17:58	Jupiter conjunction
29	We	20:06	Full Moon
31	Fr	17:24	Moon ascending node

Mars remains in Taurus, the Bull (*Vrushabha*). It passes 6'18" south of Uranus on 4 July. The elongation of the duo will be about 38° W.

Ephemeris of Mars:

Date	Alt*	Diam''	Mag	El°
01 Jul	+33°44'	4.4	1.3	37.6 W
10 Jul	+35°58'	4.5	1.3	39.9 W
20 Jul	+38°21'	4.6	1.3	42.5 W
30 Jul	+40°41'	4.7	1.3	45.2 W

Jupiter will remain in Cancer.

Ephemeris of Jupiter:

Date	Alt*	Diam"	Mag	El°
01 Jul	+13°24'	31.7	-1.8	20.5 E
10 Jul	+07°11'	31.5	-1.8	13.9 E
20 Jul	+00°37'	31.3	-1.8	6.6 E

Saturn will remain in Cetus, the Whale.

Ephemeris of Saturn:

Date	Alt*	Diam"	Ring#	Mag	El°
01 Jul	+68°58'	17.4	39.5"	0.8	85.0 W
10 Jul	+73°30'	17.7	40.2"	0.7	93.3 W
20 Jul	+74°11'	18.0	40.9"	0.7	102.6 W
30 Jul	+69°42'	18.4	41.6"	0.6	112.1 W

Angular diameter of the major axis of the ring in arcseconds.

* Altitudes of a planet are given for the beginning of civil twilight if the planet is to the west of the Sun, or for the end of civil twilight if the planet is to the east of the Sun.

(Disclaimer: We categorically mention here that we do not believe in astrology and believe that the only influence a planet has on us is to give us the viewing pleasure of its beauty. The sole purpose of giving the transition of planets and the Sun is to acquaint the reader with the Indian

nomenclature of planets and constellations and also to show that the actual positions of the Sun and planets, which are based on modern computing, are very different from those given in astrology tables.)

March of the Moon

Between 7 and 8 July, the Moon passes north of Saturn. On 11 July, about 17% of the lunar disk can be seen below the Pleiades (*Kruttika*) in the pre-dawn sky. By the next day, the Moon passes north of Mars. On 18 July the Pleiades, Aldebaran and the Moon will make a nice equilateral triangle with Mars at its centre.

On 15 July, the about 43 hour-old Moon can be observed above the western horizon at the end of civil twilight; with some difficulty, Jupiter can be observed below it. The next day Venus, Regulus (*Magha*) and the thin lunar crescent will be seen in a straight line. Regulus will be half-way between Venus and the lunar crescent. The following day, about 14% of the illuminated area will be visible just below Venus.

Between 20 and 21 July, the Moon passes below Spica (*Chitra*). On 24 July, it will be southwest of Antares (*Jyeshtha*). The near Full Moon on 26 July will be almost in the direction of the centre of the Milky Way. Then, on 27 July it will be in the handle of the Teapot asterism of Sagittarius.

Sir Edmund Halley

Isaac Newton was 14 years old when Edmund Halley was born. In later years, the two became close friends and scientific contemporaries. It is said that the fame which Halley later acquired would have been much greater if it was not shadowed by the unparalleled genius of Newton. Halley was born on 29 October 1686, to a wealthy businessman in London.

From his childhood, he showed a great aptitude for learning. He was educated at St. Paul's School, and joined Queen's College, Oxford, at the age of 17. His most favourite pursuit was astronomy; his earliest efforts in practical observation were connected with an eclipse which he observed from his father's house. He longed to engage in the practical observations.

Halley studied the movements of bright comets and laid down the paths pursued by 24 of these bodies, which had appeared between 1337 and 1698. He noticed three, which followed tracks so closely resembling each other, that he was led to conclude that the so-called three comets could only have been three different appearances of the same comet after intervals of 75 or 76 years. He predicted that it would return in 1758. This observation was confirmed, but sadly 17 years after Halley's death. Yet, the verification of his prophecy reflects a glory on his name, which will cause it to live forever in the annals of astronomy.

-- Excerpts adapted from the book 'Great Astronomers – Complete Works' by Robert Stawell Ball

Events Involving the Moons of Jupiter

In the table below, we list the events visible from India. The table gives the timings of eclipses, occultations, transits and shadow transits of the moons of Jupiter, suitable for Indian observers. The timings are given in Indian Standard Time (IST).

The output is given as per the following abbreviations and notations:

Columns: 1 = date; 2 = time; and 3 = satellite number.event type.phase.

Satellite numbers: 1 = Io; 2 = Europa; 3 = Ganymede; and 4 = Callisto.

Event type: Ec = eclipse; Oc = occultation; Tr = transit; and Sh = shadow transit.

Phase: D = disappear; R = reappear; I = ingress; and E = egress.

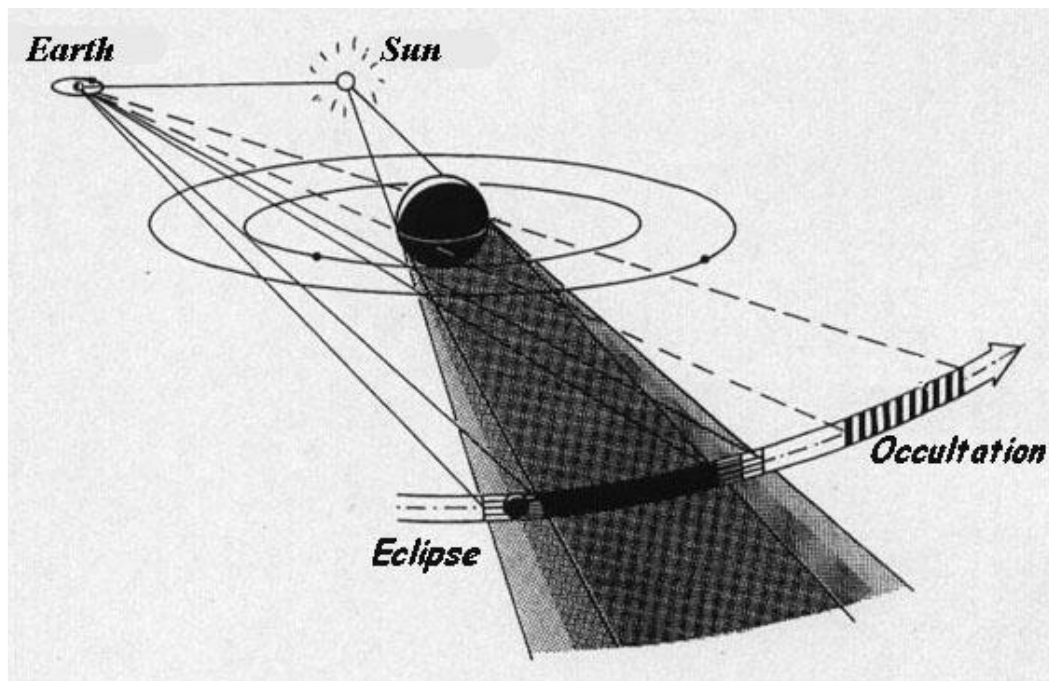
Example:

01 19:24:18 3.Oc.D

Means that

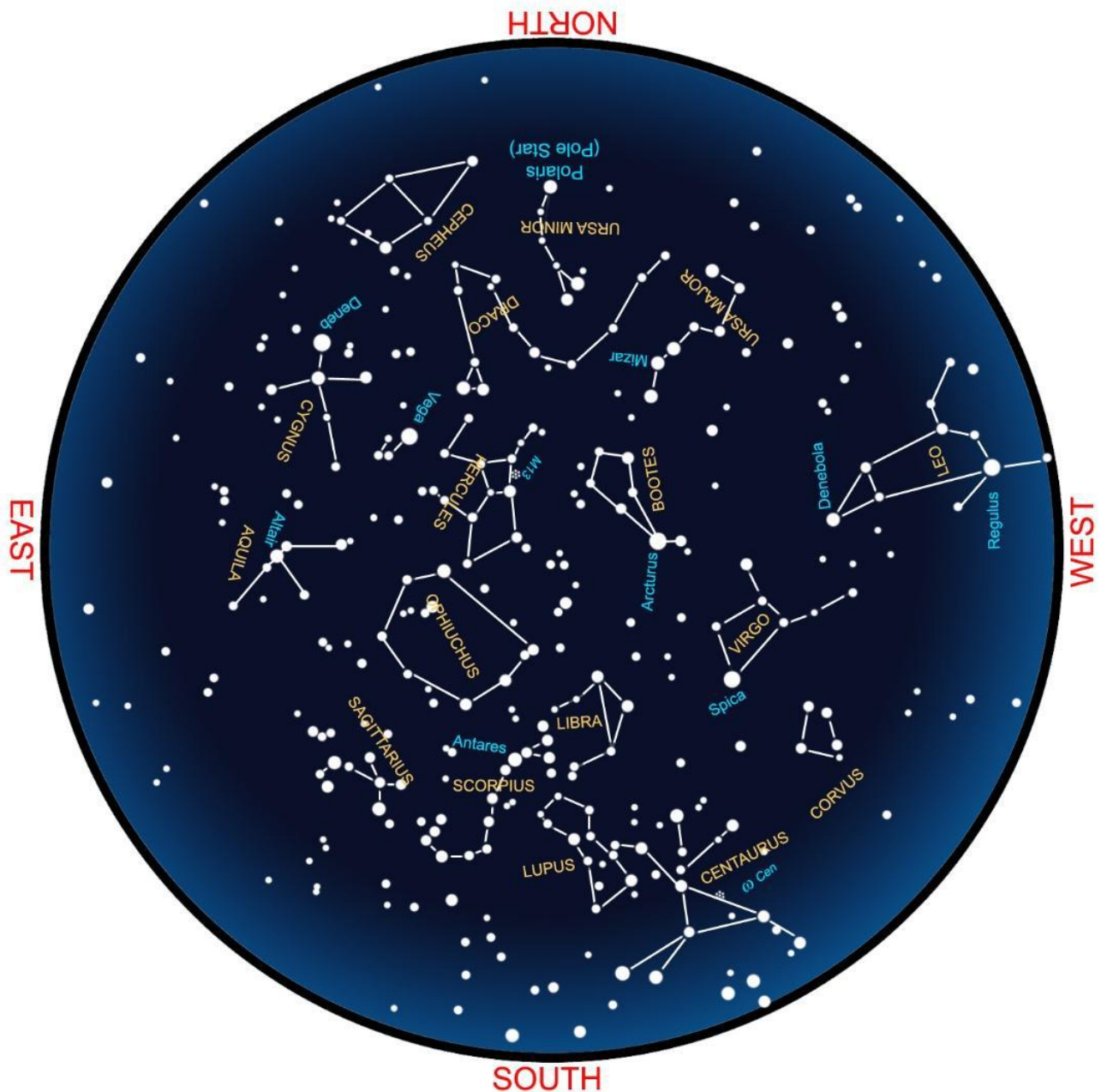
At 19:24:18 hours on 1 July, Ganymede will disappear behind Jupiter's disc.

Satellites of Jupiter in July 2026								
<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>
01	19:24:18	3.Oc.D	05	19:53:06	1.Tr.I	06	19:44:54	1.Ec.R



Eclipses occur when the satellites pass in the shadow of Jupiter. Occultations occur when the satellites pass behind Jupiter for a terrestrial observer. (Picture courtesy: <https://promenade.imcce.fr/en/pages3/365.html>)

This sky map for July is drawn for mid-northern latitudes,
to be used around 9:30 p.m. local time



For the latest updates, please visit <https://skytoneight.wordpress.com/monthly-sky-notes-and-links/>

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