



SkyNews wishes its readers a Happy and Peaceful 2025

Sun, Planets and Transitions

The **Sun** will be in Sagittarius, the Archer (*Dhanu*) on 1 January. Its angular diameter will be 32'32". The Earth will reach perihelion, the point at which it is closest to the Sun, on 3 January. The Sun moves to Capricornus, the Sea Goat (*Makar*), on 20 January. On 31 January its angular diameter will decrease to 32'28".

Mercury is in Ophiuchus, the Serpent Bearer (*Bhujangadhari* or *Sarpdhar*) on 1 January. It moves to Sagittarius on 5 January and then to Capricornus on 28 January.

Ephemeris of Mercury:

Date	Alt*	Mag	diam"	El°
01 Jan	+13.2°	-0.4	5.8	21.0 W
10 Jan	+08.8°	-0.4	5.3	17.7 W
20 Jan	+03.5°	-0.5	4.9	13.0 W
30 Jan	-02.2°	-0.8	4.8	7.5 W

Venus is in Aquarius, the Water-bearer (*Kumbha*) on 1 January. It moves to Pisces, the Fish, on 23 January.

Ephemeris of Venus:

Date	Alt*	Mag	diam"	El°
01 Jan	+40.3°	-4.4	22.3	46.9 E
10 Jan	+42.7°	-4.4	24.5	47.2 E
20 Jan	+44.4°	-4.5	27.5	46.8 E
30 Jan	+44.7°	-4.6	31.3	45.4 E

List of Events in January 2025 (Time in IST)

Dt	Dy	Time	Event
03	Fr	20:54	Moon-Venus: 1.5° N
03	Fr	20:54	Quadrantid Shower: ZHR = 120
04	Sa	13:29	Perihelion: 0.9833 AU
04	Sa	22:48	Moon-Saturn: 0.7° S
06	Mo	01:16	Moon ascending node
07	Tu	05:26	First quarter
08	We	05:05	Moon perigee: 370200 km
10	Fr	06:31	Moon-Pleiades: 0.3° S
10	Fr	09:29	Venus elongation: 47.2° E
11	Sa	03:15	Jupiter 5.4° S of Moon
12	Su	10:00	Moon north declination: 28.5° N
12	Su	19:06	Mars nearest to Earth
14	Tu	03:15	Moon-Pollux: 2.2° N
14	Tu	03:57	Full Moon
14	Tu	09:12	Moon-Mars: 0.2° S
15	We	02:33	Moon-Beehive: 2.7° S
16	Th	06:47	Mars opposition
16	Th	20:27	Moon-Regulus: 2.4° S
18	Sa	21:23	Venus-Saturn: 2.2° N
19	Su	07:18	Moon descending node
21	Tu	09:23	Moon-Spica: 0.1° N
21	Tu	10:25	Moon apogee: 404300 km
22	We	02:01	Last quarter
23	Th	22:35	Mars-Pollux: 2.4° S
25	Sa	05:04	Moon-Antares: 0.3° N
26	Su	18:57	Moon south declination: 28.5° S
29	We	18:06	New Moon
31	Th	00:32	Uranus stationary

* The altitudes of Mercury and Venus are given at the start of civil twilight if the planet is to the west of the Sun and at the end of civil twilight if it is to the east of the Sun.



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Mars is in Cancer, the Crab (*Karka*), and is in retrograde motion. This month, Mars is well-placed in the sky for observations from the northern hemisphere.

There are five reasons for this:

- (1) Mars will be closest to Earth on 12 January 2025 and its angular size will be largest in 2025.
- (2) Mars will move to Gemini, the Twins (*Mithuna*) on 13 January. Gemini is the northernmost zodiacal constellation; therefore, a planet in Gemini is most suitable for observers in the northern hemisphere.
- (3) Gemini will be well above the horizon at sunset in January.
- (4) It will be in opposition on 16 January (available all through the night).
- (5) We expect crisp, clear winter nights in January.

Make it a point to check out Mars this winter.

Ephemeris of Mars:

Date	Mag	Diam''	El°
01 Jan	-1.2	14.24	158.3
10 Jan	-1.3	14.55	170.1
20 Jan	-1.3	14.44	173.2
30 Jan	-1.1	13.87	160.6

Jupiter remains in Taurus. It is visible all through the night this month. There are some excellent events involving its moons (see below).

Ephemeris of Jupiter:

Date	Mag	Diam''	El°
01 Jan	-2.7	47.00	152.6
10 Jan	-2.7	46.12	142.6
20 Jan	-2.6	44.95	131.7
30 Jan	-2.5	43.64	121.2

Saturn remains in Aquarius, the Water-bearer (*Kumbha*).

Ephemeris of Saturn:

Date	Mag	Diam''	El°
01 Jan	1.1	16.51	63.9
10 Jan	1.1	16.30	55.5
20 Jan	1.1	16.10	46.3
30 Jan	1.1	15.93	37.1

March of the Moon

On 1 January, a thin lunar crescent can be seen close to the western horizon just after sunset. From 2 – 5 January, the Moon can be seen sliding past Venus and Saturn. On 3 January, the approximately 15% illuminated Moon will be seen below Venus. On this evening, the Moon will set about three hours and twenty minutes after sunset; you can watch the lunar crescent approaching Venus, and it is a good opportunity to take time-lapse images of the duo and make a nice video. The next day on 4 January, the Moon will be below and to the right, or northwest, of Saturn. The previous evening's exercise can be repeated with Saturn and the Moon.

On 5 January, at 19:50 hours IST, the Moon will pass 1° from Neptune. On 9 January it will pass less than 4° from Uranus. On this day, we can see the Moon above the Pleiades (*Kruttika*). On 10 January, the almost 87% illuminated lunar disk can be seen north of Jupiter and Aldebaran (*Rohini*).

On 11 January, the Moon will occult the second brightest star in the constellation Taurus, Elnath (*Agni* or β Tauri). The Moon will be nearly 94% illuminated. The event will be visible in southern India.

On 21 January the Moon can be seen west of Spica (*Chitra*) in the pre-dawn sky. On 25 January it is below, or east of, Antares (*Jyeshtha*).

The Moon can then be seen as a thin crescent above the western horizon, soon after sunset on 31 January.

Events Involving the Moons of Jupiter

In the table below, we have listed events that can be seen 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 (given mostly for the first event listed for that day); 2 = time; 3 = satellite number.event type.phase.

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

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

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

Example:

Events for 2 January and what they mean:

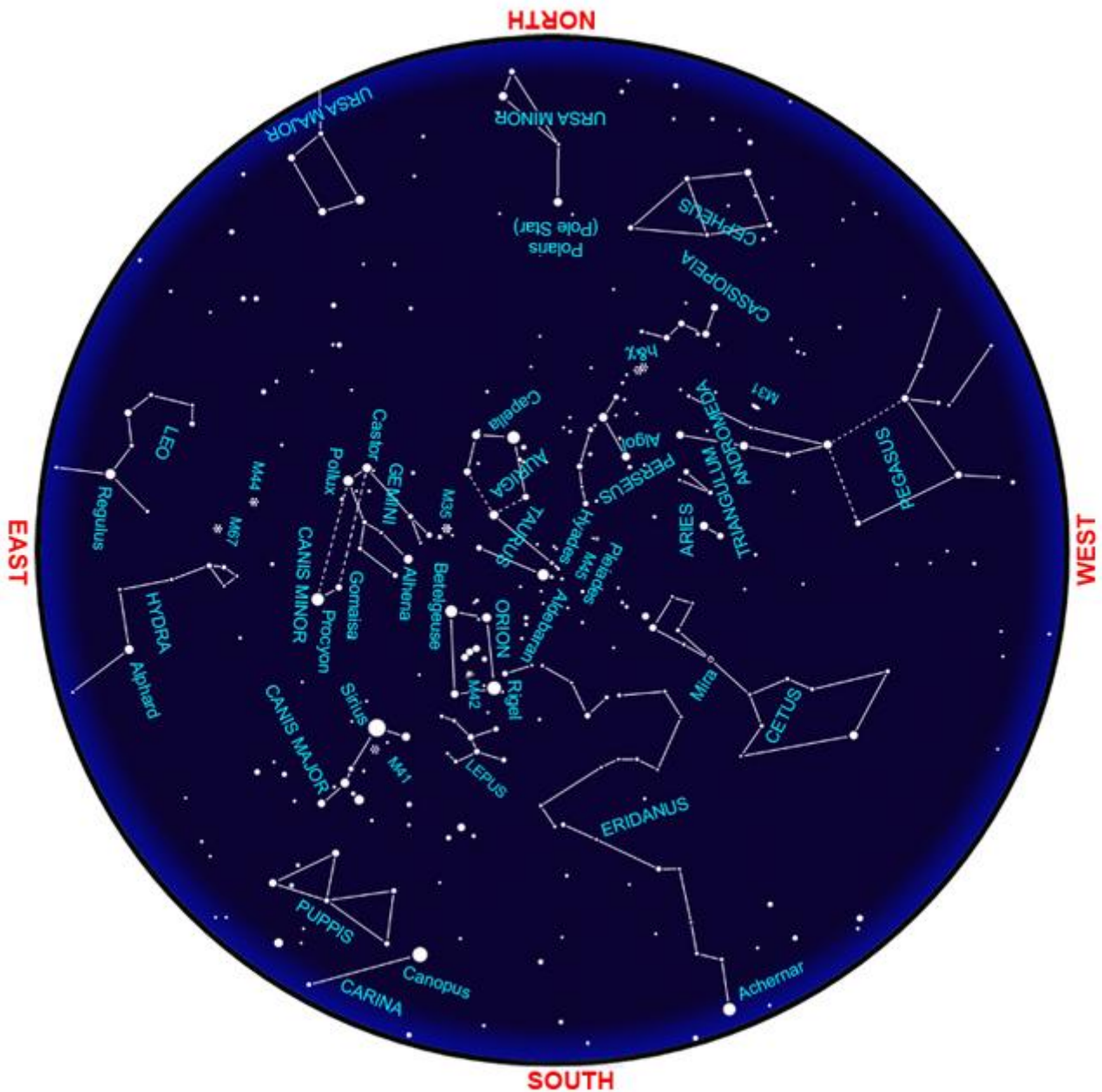
2	02:36:00	2.Ec.R
	03:22:00	3.Oc.D
	03:31:00	1.Tr.I
	04:09:36	1.Sh.I

Means that

At 02:36:00 hours on 2 January, Callisto, which was eclipsed, will reappear alongside Jupiter; then at 03:22:00 hours, Europa will be occulted by Jupiter. Io will begin transiting Jupiter nine minutes later, at 03:31:00 hours; and its shadow will transit the planet after about 40 minutes, at 04:09:36 hours.

Satellites of Jupiter in December 2024														
<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>		<u>1</u>	<u>2</u>	<u>3</u>
1	22:45:06	2.Oc.D		6	20:06:18	3.Sh.I		14	02:25:48	3.Sh.E		21	20:29:36	1.Ec.R
2	02:36:00	2.Ec.R			22:24:36	3.Sh.E		15	03:25:00	2.Oc.D		24	20:20:06	3.Ec.R
	03:22:00	3.Oc.D		8	01:04:00	2.Oc.D		17	22:25:54	2.Tr.I		25	00:48:24	2.Tr.I
	03:31:00	1.Tr.I			05:14:06	2.Ec.R		18	00:16:18	2.Sh.I			02:52:00	2.Sh.I
	04:09:36	1.Sh.I		9	05:17:18	1.Tr.I			00:57:30	2.Tr.E			03:20:12	2.Tr.E
3	05:30:36	3.Oc.R		10	20:05:30	2.Tr.I			02:50:54	2.Sh.E		26	03:20:54	1.Tr.I
	05:42:48	1.Tr.E			22:37:06	2.Tr.E			04:23:00	1.Oc.D			19:00:42	2.Oc.D
	05:55:30	3.Ec.D		11	00:15:00	2.Sh.E		19	01:31:54	1.Tr.I			23:49:36	2.Ec.R
	19:04:48	2.Sh.I			02:35:48	1.Oc.D			02:29:12	1.Sh.I		27	00:38:36	1.Oc.D
	20:18:42	2.Tr.E			23:44:06	1.Tr.I			03:43:42	1.Tr.E			03:56:00	1.Ec.R
	21:39:12	2.Sh.E		12	00:33:42	1.Sh.I			04:41:42	1.Sh.E			22:53:42	1.Sh.I
4	00:49:42	1.Oc.D			01:55:54	1.Tr.E		19	21:11:06	2.Ec.R			01:06:06	1.Sh.E
	03:42:06	1.Ec.R			02:46:18	1.Sh.E			22:49:54	1.Oc.D			03:44:06	3.Tr.I
	21:57:24	1.Tr.I			21:02:24	1.Oc.D		20	02:00:54	1.Ec.R			19:06:00	1.Oc.D
	22:38:24	1.Sh.I		13	00:05:48	1.Ec.R			19:59:00	1.Tr.I			22:24:48	1.Ec.R
5	00:09:18	1.Tr.E		13	19:02:36	1.Sh.I			20:58:06	1.Sh.I		29	19:35:00	1.Sh.E
	00:51:00	1.Sh.E			20:22:48	1.Tr.E			22:10:54	1.Tr.E		31	19:38:30	3.Oc.R
	19:16:06	1.Oc.D			20:39:18	3.Tr.I			23:10:36	1.Sh.E			21:57:06	3.Ec.D
	22:10:48	1.Ec.R			21:15:12	1.Sh.E		21	00:09:18	3.Tr.I		31	00:21:18	3.Ec.R
6	19:19:54	1.Sh.E			22:49:06	3.Tr.E			02:21:00	3.Tr.E			03:13:12	2.Tr.I
	19:22:12	3.Tr.E		14	00:06:24	3.Sh.I			04:07:06	3.Sh.I				

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



For notes on stargazing [click here](#).

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