



Sun, Planets and Transitions

The Sun will be in Libra, the Scales (*Tula*), on 1 November. On 1 November, its angular diameter will be 32'14". On 23 November, it will move to Scorpio, the Scorpion (*Vrishchika*). By the end of the month, its angular size will increase by 12", reaching 32'26" on 30 November. On this night it will move to Ophiuchus, the Serpent Bearer (*Naraturunga* or *Bhujangadhari* or *Sarpdhar*).

This month we say goodbye to all three terrestrial planets, Mercury, Venus and Mars, and enjoy the two gas giants, Jupiter and Saturn.

Mercury will be in Scorpio on 1 November. It will be moving in prograde motion. On 10 November, it will be stationary in right ascension and will then go into retrograde motion. After travelling for another 20 days, it will be stationary on 29 November and will then resume its prograde motion.

On 18 November, it will cross over to Libra during retrograde motion. On 20 November, it will be at inferior conjunction with the Sun, that is, between the Earth and the Sun.

Ephemeris of Mercury:

Date	Alt*	Diam''	Mag	El°
01 Nov	+10°45'	6.96	-0.1	23.7 E
10 Nov	+07°01'	8.58	0.7	18.6 E
20 Nov	at inferior conjunction			
30 Nov	+04°45'	8.20	0.3	17.5 W

Venus will be in Virgo, the Virgin (*Kanya*), on 1 November. It is now too close to the Sun to be observed safely. It will cross over to Libra on 13 November.

On 2 November, Venus is 2.5° north of the first magnitude star Spica (*Chitra*).

Then on 19 November, the thin lunar crescent is south of Venus.

List of Events in November 2025 (Time in IST)

Dt	Dy	Time	Event
01	Sa	23:16	Moon ascending node
02	Su	06:34	Venus-Spica: 3.5° N
02	Su	16:16	Moon-Saturn: 3.7° S
05	We	18:06	South Taurid shower: ZHR = 10
05	We	18:49	Full Moon
06	Th	03:59	Moon perigee: 356800 km
06	Th	20:56	Moon-Pleiades: 0.8° S
08	Sa	17:11	Moon north declination: 28.4° N
09	Su	08:15	Mercury-Antares: 3.6° N
10	Mo	04:35	Mercury stationary
10	Mo	12:10	Moon-Pollux: 2.7° N
10	Mo	13:26	Moon-Jupiter: 4° S
11	Tu	10:57	Moon-Beehive: 1.8° S
12	We	01:22	Jupiter stationary
12	We	10:58	Last quarter
12	We	17:22	North Taurid shower: ZHR = 15
13	Th	04:21	Moon-Regulus: 1.1° S
13	Th	09:11	Mercury-Mars: 1.2° N
14	Fr	12:08	Moon descending node
17	Mo	15:41	Moon-Spica: 1.3° N
17	Mo	23:40	Leonid shower: ZHR = 15
19	We	09:34	Venus 5.4° N of Moon
20	Th	08:18	Moon apogee: 406700 km
20	Th	12:17	New Moon
20	Th	14:50	Mercury inferior conjunction
21	Fr	12:25	Antares 0.4° N of Moon
21	Fr	18:03	Uranus opposition
22	Sa	23:42	Moon south declination: 28.3° S
25	Tu	06:03	Mercury 1.0° N of Venus
28	Fr	12:29	First quarter
29	Fr	06:03	Saturn stationary
29	Fr	20:55	Mercury stationary
29	Sa	03:03	Moon ascending node
30	Su	00:38	Moon-Saturn: 3.8° S

Ephemeris of Venus:

Date	Alt*	Diam''	Mag	El°
01 Nov	+06°35'	10.32	-3.9	16.3 W
10 Nov	+03°37'	10.17	-3.9	14.1 W
20 Nov	+00°22'	10.03	-3.9	11.6 W
30 Nov	-03°49'	9.93	-3.9	09.1 E

Mars is in Libra on 1 November; it moves to Scorpius on 4 November. It then moves to Ophiuchus on 15 November.

Ephemeris of Mars:

Date	Alt*	Diam''	Mag	EI°
01 Nov	+08°17'	3.88	1.5	18.5 E
10 Nov	+05°56'	3.87	1.4	15.9 E
20 Nov	+03°42'	3.86	1.4	13.1 E
30 Nov	+01°51'	3.86	1.3	10.4 E

Jupiter remains in Gemini, the Twins (*Mithuna*), in November. It is stationary on 12 November, and then goes into retrograde motion.

Ephemeris of Jupiter:

Date	Alt*	Diam''	Mag	EI°
01 Oct	+68°36'	36.90	-2.1	75.6 W
10 Oct	+75°51'	37.87	-2.2	83.5 W
20 Oct	+83°58'	39.03	-2.3	92.6 W
30 Oct	+86°06'	40.25	-2.3	102.0 W

Saturn continues its retrograde motion in Aquarius, the Water Bearer (*Kumbha*).

Ephemeris of Saturn:

Date	Alt*	Diam''	Ring#	Mag	EI°
01 Nov	+37°23'	18.81	42.7	0.9	136 W
10 Nov	+45°17'	18.58	42.1	0.9	127 W
20 Nov	+53°24'	18.29	41.5	1.0	117 W
30 Nov	+60°21'	17.98	40.8	1.0	107 W

Angular diameter of the major axis of ring

* 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

On 1 November, the Moon (79% illuminated) will be west of Saturn and Neptune. The next day it will be less than 2° north of Neptune.

On the same evening, soon after sunset, the Moon will occult the 6th magnitude star, XZ Piscium. This slow, irregular variable star has a magnitude between 5.6 and 6.97, and varies between these magnitudes over a period of 0.162 days.

On 6 November, the Moon (98.2% illuminated) will occult the Pleiades (*Kruttika*) cluster stars. This will be about 25 hours after Full Moon. As the event is taking place after the Full Moon phase, the stars will disappear at the brighter limb of the Moon, making it very difficult to observe. But for the seasoned amateur, recording this event will be a good challenge.

On 10 November, one can see the Moon in the Gateway of Heaven in the pre-dawn sky.

Three nights later, on 13 November, the Moon (42% illuminated) passes north of Regulus (*Magha*).

On 17 November, the Moon (4% illuminated) can be seen west of Spica. And then on 19 November, a very thin lunar crescent can be observed south of Venus. This will be another challenging observation. But it is likely to be very rewarding. The Moon will be hardly 2% illuminated.

After New Moon, the Moon reappears above the western horizon after sunset.

It will be in the 'Tea Pot' asterism of Sagittarius (*Dhanu*) on 23 November and will occult Pluto on 25 November. This event will take place while the sky is still very bright.

The Moon then passes north of Saturn on 29 November.



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Meteor Showers

This month, we have two meteor showers: the Northern Taurid and the Leonid.

Northern Taurids are the debris of comet 2P/Encke. The shower's ZHR is 5 and it is expected to peak on 11-12 November. At that time, the Moon will be 53% full. (Note: This shower is not meant for the casual observer!)

The **Leonid** meteor shower is expected to be active from 6 to 30 November, 2025.

According to the calendar published by the International Meteor Organisation, the activity is expected to peak this year on November 16 and 17.

A good time to start observing the shower is close to midnight, when its radiant will be well above the eastern horizon.

This year, the Moon's position is also favourable. On 16 November, the waning old crescent Moon will rise about three hours before the Sun; and on the next day, it will rise two and a half hours before the Sun.

However, the ZHR of the shower is expected to be 15 meteors only. The Leonids are the debris of comet 55P/Tempel-Tuttle. The years 1833, 1866, 1966, 1999, 2001 and 2002 are known for storms of this shower.

For more information on observing the meteor shower, please visit

<https://skytonight.wordpress.com/wish-upon-a-shooting-star/>



Events Involving the Moons of Jupiter

In the table below (see next page), 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; 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.

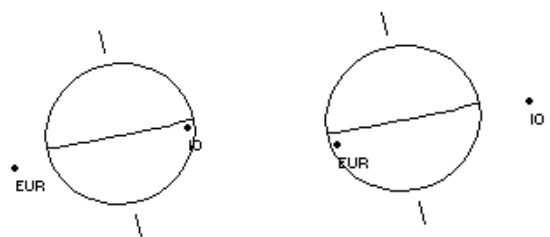
Phase: D = disappear; R = reappear; I = ingress; and E = egress.

Example:

1	23:21:00	1.Tr.E
	23:57:54	2.Tr.I
2	00:10:36	2.Sh.E

Means that

At 23:21:00 hours on 1 November, Io, which has been transiting over the disk of Jupiter, will egress (or exit). After that, at 23:57:54 hours, Europa will ingress or enter the face of the planet. Later on, 10 minutes and 36 seconds past midnight, that is at 00:10:36 hours on 2 November, the shadow of Europa will egress the face of the planet.



Io about to egress

Europa just ingressed

Satellites of Jupiter in November 2025

<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	23:21:00	1.Tr.E		10	23:44:42	3.Sh.I		23	03:44:24	1.Sh.E
	23:57:54	2.Tr.I		11	02:52:06	3.Sh.E			04:48:18	1.Tr.E
2	00:10:36	2.Sh.E			04:30:54	3.Tr.I			05:11:18	2.Sh.I
	02:47:24	2.Tr.E		12	23:09:12	4.Ec.R			22:47:12	1.Ec.D
3	22:53:18	3.Sh.E		13	05:08:24	1.Sh.I		24	02:06:54	1.Oc.R
4	00:47:00	3.Tr.I		14	06:18:36	1.Tr.I			21:00:18	1.Tr.I
	04:00:48	3.Tr.E			21:31:48	3.Oc.R			22:12:48	1.Sh.E
5	00:03:24	4.Tr.I		15	02:24:48	1.Ec.D			23:15:06	1.Tr.E
	03:50:30	4.Tr.E			05:51:18	1.Oc.R			23:34:06	2.Ec.D
6	06:02:30	1.Ec.D			23:36:42	1.Sh.I		25	04:24:18	2.Oc.R
	03:15:12	1.Sh.I		16	00:45:42	1.Tr.I		26	21:18:00	2.Sh.E
	04:29:18	1.Tr.I			01:51:00	1.Sh.E			23:20:48	2.Tr.E
	05:10:24	2.Ec.D			02:35:00	2.Sh.I		28	21:31:54	3.Ec.D
	05:29:18	1.Sh.E			03:00:18	1.Tr.E		29	00:44:42	3.Ec.R
7	00:30:54	1.Ec.D			04:55:06	2.Tr.I			01:20:24	3.Oc.D
	04:01:36	1.Oc.R			05:23:30	2.Sh.E			04:41:24	3.Oc.R
8	22:56:42	1.Tr.I		17	00:18:36	1.Oc.R			06:12:42	1.Ec.D
	23:57:36	1.Sh.E			21:27:24	1.Tr.E			22:21:42	4.Oc.D
	23:58:42	2.Sh.I		18	02:01:48	2.Oc.R		30	02:24:48	4.Oc.R
9	01:11:12	1.Tr.E			03:43:12	3.Sh.I			03:23:24	1.Sh.I
	02:27:42	2.Tr.I		21	21:48:12	3.Oc.D			04:20:12	1.Tr.I
	02:47:00	2.Sh.E		22	01:09:06	3.Oc.R			05:38:06	1.Sh.E
	05:17:12	2.Tr.E			04:18:42	1.Ec.D			00:41:12	1.Ec.D
	22:29:12	1.Oc.R		23	01:30:00	1.Sh.I			03:54:00	1.Oc.R
10	23:37:12	2.Oc.R			02:33:30	1.Tr.I				



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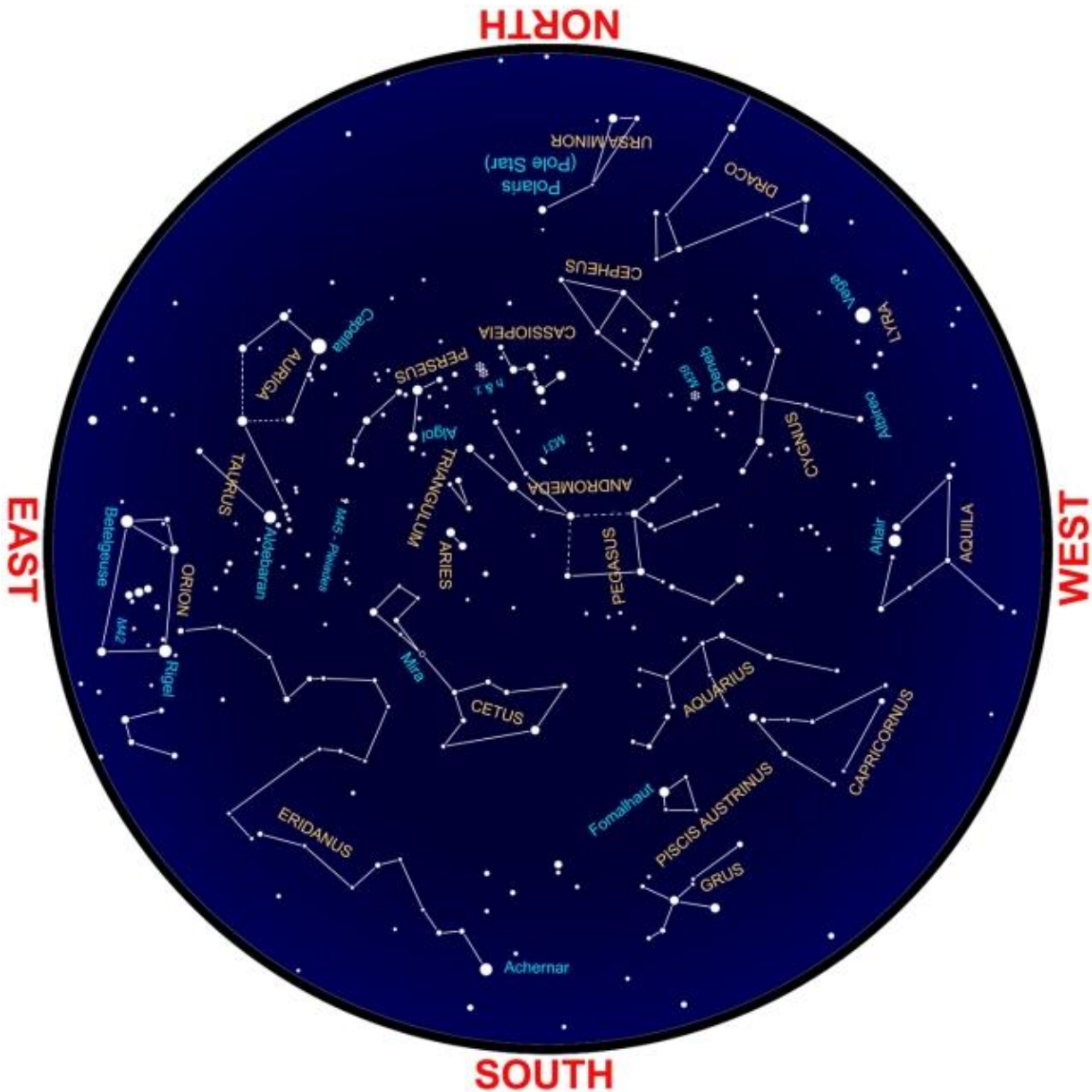
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This sky map for November is drawn for mid-northern latitudes, to be used around 9:30 p.m. local time



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

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