



Sun, Planets and Transitions

The **Sun** will be in Leo, the Lion (*Simha*), on 1 September. Its angular diameter will be 31'42'. On 17 September, the Sun will transit to Virgo, the Virgin (*Kanya*). On 30 September, its angular diameter will be 31'56".

The September Equinox will be on 23 September. On this day the Sun's rays will be nearly perpendicular to the axis of the Earth; but that does not mean that the duration of daylight and dark hours will be equal.

Mercury will be in in Leo on 1 September. It moves to Virgo on 7 September.

Mercury will be in superior conjunction with the Sun on 27 August.

Ephemeris of Mercury:

Date	Alt*	Diam"	Mag	El°
01 Sep	+02°23'	4.9	-1.4	05 E
10 Sep	+05°17'	4.9	-0.7	12 E
20 Sep	+06°58'	5.2	-0.3	18 E
30 Sep	+07°33'	5.7	-0.1	23 E

Venus will remain in Virgo this month. It pairs up with the brightest star of this constellation Spica (*Chitra*) on 1 September. It should be a glorious sight with Spica at magnitude 1.0 and Venus almost five times brighter at magnitude -4.5.

Ephemeris of Venus:

Date	Alt*	Diam"	Mag	El°
01 Sep	+27°00'	30.3	-4.5	45 E
10 Sep	+22°43'	34.6	-4.5	44 E
20 Sep	+17°04'	40.5	-4.5	38 E
30 Sep	+09°53'	47.6	-4.5	32 E

List of Events in September 2026 (Time in IST)

Dt	Dy	Time	Event
02	Su	13:29	Mercury elongation: 19.5° W
01	Tu	18:57	Venus-Spica: 1.4° S
03	Th	17:33	Moon-Pleiades: 1.2° S
04	Fr	13:21	Last quarter
05	Sa	11:42	Moon north declination: 28.1° N
06	Su	23:54	Moon-Mars: 3° S
07	Mo	01:56	Moon perigee: 368300 km
08	Tu	10:13	Moon-Beehive: 0.5° S
08	Tu	23:43	Moon-Jupiter: 0.8° S
09	We	01:20	Moon-Regulus: 0.5° N
10	Th	00:47	Moon descending node
11	Fr	08:57	New Moon
14	Mo	02:23	Moon-Spica: 2.6° N
14	Mo	16:40	Moon-Venus: 0.6° S
17	Th	07:12	Mars-Pollux: 5.9° S
17	Th	17:48	Moon-Antares: 0.6° N
19	Sa	00:24	Moon south declination: 28.1° S
19	Sa	02:14	First quarter
19	Sa	08:30	Moon apogee: 404200 km
23	We	05:36	Autumnal equinox
24	Th	08:10	Moon ascending node
26	Sa	05:43	Neptune opposition
26	Sa	07:19	Mercury-Spica: 0.9° N
26	Sa	22:19	Full Moon
30	We	23:09	Moon-Pleiades: 1.1° S

Mars will be in Gemini, the Twins (*Mithuna*) on 1 September. It moves to Cancer, the Crab (*Karka*) on 25 September.

As mentioned in earlier issues of SkyNews, a planet in the constellation of Gemini, the northern-most zodiacal constellation, is well placed for observation from northern latitudes.

With respect to the observer, the planet is seen moving towards the eastern horizon. (See about Jupiter below.

Ephemeris of Mars:

Date	Alt*	Diam"	Mag	El°
01 Sep	+48°49'	5.1	1.3	55 W
10 Sep	+51°20'	5.2	1.2	58 W
20 Sep	+54°21'	5.4	1.2	62 W
30 Sep	+57°37'	5.6	1.1	66 W

Jupiter will be in Cancer on 1 September. It moves to Leo on 23 September. Jupiter is back in the morning sky and is well placed above the eastern horizon. It is steadily climbing above the horizon, while Mars is moving downwards. In November this year, the planets will pass about 1° from each other.

Ephemeris of Jupiter:

Date	Alt*	Diam"	Mag	El°
01 Sep	+18°35'	31.8	-1.8	25 W
10 Sep	+24°57'	32.1	-1.8	32 W
20 Sep	+32°10'	32.6	-1.8	39 W
30 Sep	+39°34'	33.2	-1.9	47 W

Saturn will be in Pisces, the Fishes (*Meena*), on 1 September. It moves to Cetus, the Whale (*Timingal*) on 6 September. Cetus was a sea monster.

Saturn rises about two hours after sunset and is well above the horizon by late night. Earth is slowly catching up with the planet. You can see from the ephemeris given below that its angular size is increasing. The rings of the planet have also opened up quite a bit. It will be the 'darling' object this winter for star party-goers, for both amateur astronomers as well as general skywatchers.

Ephemeris of Saturn:

Date	Alt*	Diam"	Ring#	Mag	El°
01 Sep	+41°28'	19.2	43.6	0.5	145 W
10 Sep	+32°41'	19.4	44.0	0.4	154 W
20 Sep	+22°45'	19.5	44.3	0.4	164 W
30 Sep	+12°43'	19.6	44.5	0.3	174 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

The month starts with no Moon in the early part of the night. The last quarter of the Moon is on 4 September, on which day it will rise close to local midnight.

Between 3 and 4 September the Moon passes north of the Pleiades (*Kruttika*). Then between 6 and 7 September, it passes north of Mars. And then, between 8 and 9 September, it passes north of Jupiter.

Nearly 30 hours after New Moon on 12 September, the thin lunar crescent will be less than 6° south of Mercury.

On 13 September it can be seen below Spica (*Chitra*); the next day on 14 September, the Moon occults Venus. (See below.)

On 17 September the Moon will be less than a degree from Spica. It then travels through Sagittarius on 19 and 20 September. On 27 September, which is a day after Full Moon, the Moon will be 7.5° north of Saturn.

Occultation of Venus by Moon

We are in for a celestial treat on the evening of 14 September. On this day, the Moon will come

directly between Earth and Venus. For most observers in India, the event will take place when the Sun is still above the horizon. But let us not forget, Venus can be sighted in broad daylight, if you know exactly where to look for it.

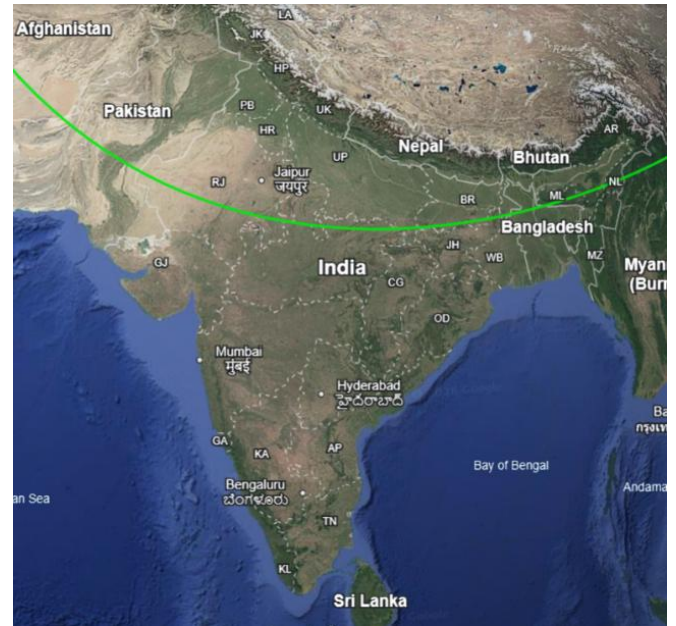
In this case we have the Moon as our guide. The Moon will be about 40° east of the Sun. If the sky is clear, (and let us hope for that), all you have to do is to look for the Moon and then find Venus about a degree further east of the bright limb of the Moon.

As you might have noticed from the ephemeris of Venus given above, the planet has an appreciable angular diameter of 30 seconds of arc. Therefore, it will be seen going behind the Moon or coming out very gradually. It will take almost a minute to disappear and nearly two minutes to reappear.

We list below some of the occultation timings (in IST) for different stations

Station	Disappearance	Reappearance
<i>(Where the Sun is below the horizon)</i>		
Agartala	17:57:13	18:24:37
Aizawl	17:57:49	18:27:41
Imphal	18:01:17	18:23:44
Kohima	18:06:01	18:16:50
Port Blair	17:52:50	19:02:29
Silchar	18:01:15	18:21:09
<i>(where the Sun is above the horizon)</i>		
Bengaluru	17:27	18:43
Chennai	17:31	18:46
Hyderabad	17:27	18:31
Kanyakumari	17:27	18:53
Mumbai	17:12	18:17
Udaipur	17:23	17:51
Vadodara	17:16	18:03

The figure below shows the path of the occultation over India. The green line denotes the upper latitude limit. For those above this line, the planet will be seen sliding past the Moon. This also will be an exciting event to watch.



Path of the event over India

We appeal to seasoned amateur astronomers to make use of this opportunity to popularise astronomy.

For those who have telescopes with setting circles or have a Goto type of telescope, here are some data points.

<u>Object</u>	<u>RA</u>	<u>Dec</u>
Sun	11h 29m 17s	+03°18'55"
Moon	13h 52m 42s	-16°44' 26"
Venus	13h 53m 58s	-17°02' 35"

More details of this event will appear at <https://skytonight.wordpress.com/>

CAUTION: Do not look at the Sun directly or through a telescope or binoculars without the appropriate filter.

The next event will be on 17 September 2036

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.

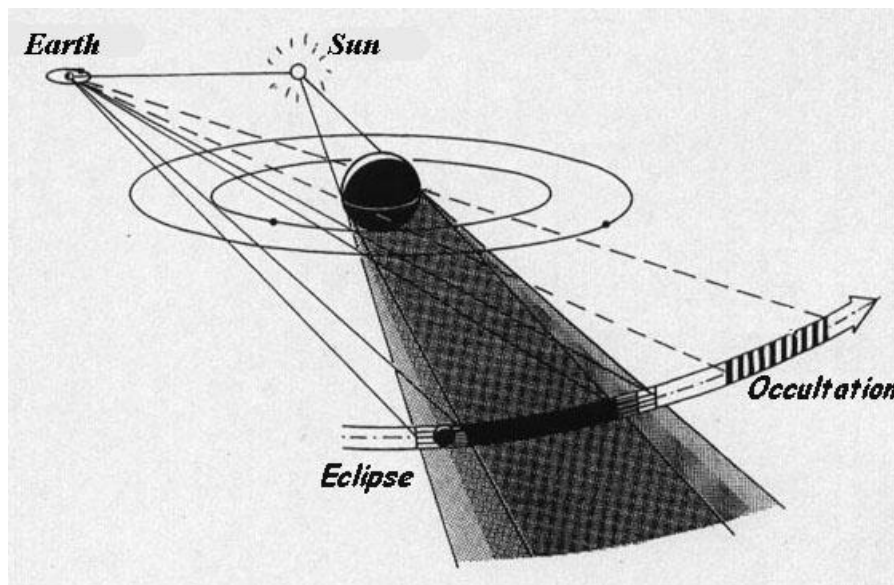
Example:

07 04:58:06 2.Sh.E

Means that

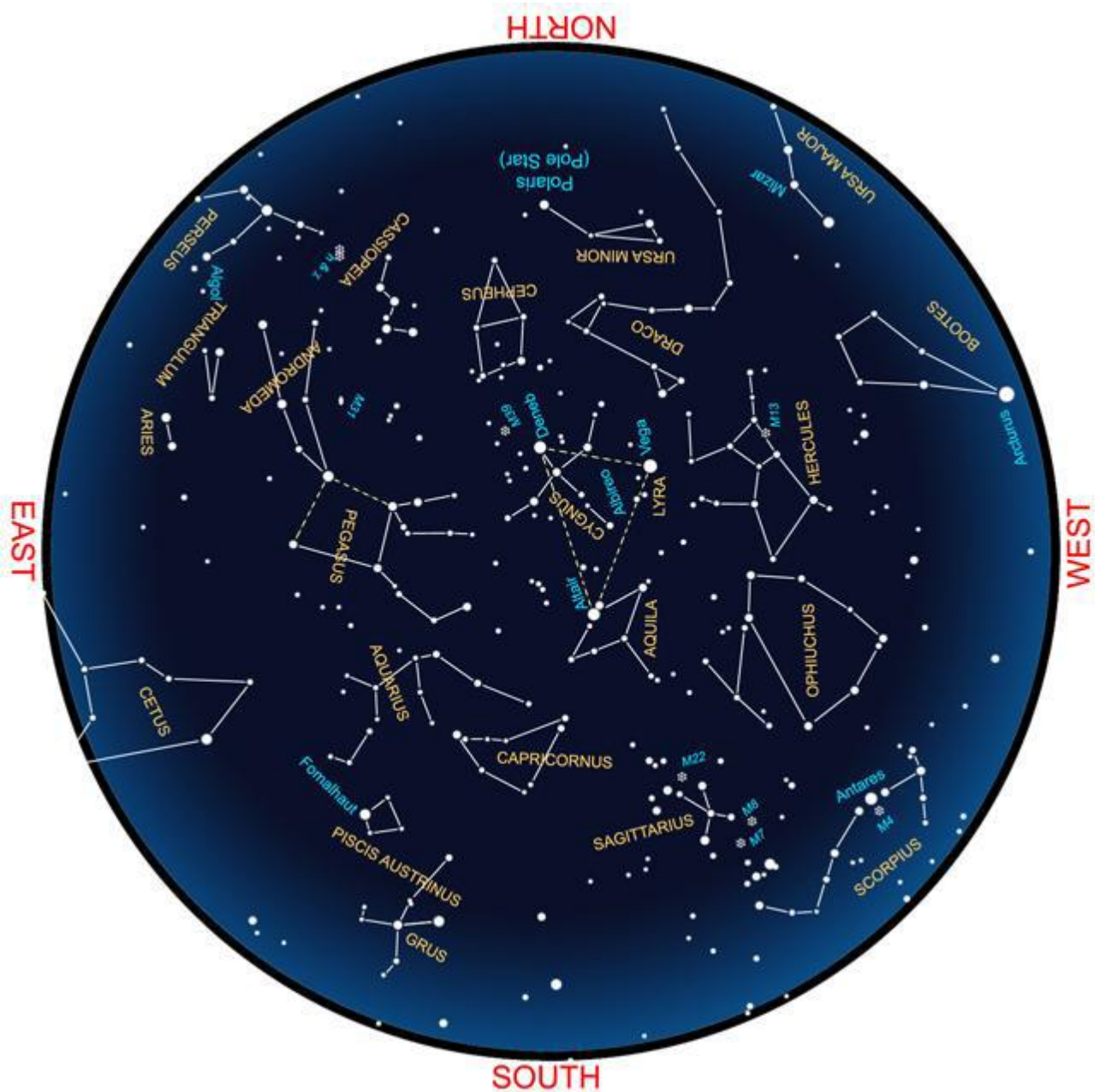
At 04:58:06 hours on 7 September, Europa's shadow will begin to exit from the front of Jupiter's disc.

Satellites of Jupiter in September 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>
07	04:58:06	2.Sh.E		16	04:13:00	2.Oc.R		26	04:14:00	3.Oc.R
10	05:01:24	1.Ec.D		18	04:16:36	1.Sh.I		27	02:56:18	1.Sh.E
11	04:40:42	1.Sh.E		18	05:03:24	1.Tr.I		27	03:49:54	1.Tr.E
11	05:21:48	1.Tr.E		19	04:30:24	1.Oc.R		30	04:57:00	2.Ec.D
14	04:40:00	2.Sh.I		26	03:17:12	1.Ec.D				



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 September 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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