SkyNews Astronomical events for Indian observers

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Sun, Planets and Transitions

After the Earth crossed its farthest distance from the Sun on 6 July, the angular diameter of the Sun as seen from Earth has begun increasing. Its angular diameter will be 31'31" on 1 August and will increase to 31'41" by 31 August.

The **Sun** transits to Leo, the Lion (*Simha*) from Cancer, the Crab (*Karka*) on 11 August.

Mercury transits from Cancer to Leo on 5 August; then to Virgo, the Virgin (*Kanya*) on 26 August. It reappears above the western horizon after sunset by mid-August and sets nearly 45 minutes after sunset by the month-end.

Venus transits from Leo to Virgo on 11 August. It is now shining brilliantly above the western horizon. It is travelling southwards, nearly parallel to the horizon, and sets nearly two hrs after sunset.

The table below gives Venus' phase, elongation (Sun-Earth-Venus angle) and angular diameter. The magnitude of Venus will increase slightly from -3.9 to -4.0 by 11 August.

Date	Phase	El(°)	Diam(")
01 Aug 2021	0.823	32.9	12.66
11 Aug 2021	0.794	35.3	13.30
21 Aug 2021	0.764	37.5	14.06
31 Aug 2021	0.733	39.5	14.94

Mars continues to travel in Leo during August. The motion of Mars is currently direct, that is from west to east with respect to the stars. It will remain above the western sky longer than Regulus.

At the beginning of the month, **Jupiter** can be seen rising above the eastern horizon about an hour after sunset.

Saturn rises with sunset. By the month-end, both the planets are well above the eastern horizon at dusk.

List of Events in August 2021

Dt	Dy	Time	Event
01	Su	19:30	Mercury superior conjunction
02	Mo	10:54	Saturn opposition
02	Mo	13:05	Moon apogee: 404400 km
03	Tu	09:45	Aldebaran 5.6° S of Moon
03	Tu	08:21	Moon ascending node
05	Th	22:16	Moon north declination: 25.7° N
07	Sa	02:01	Pollux 3.1°N of Moon
08	Su	19:20	New Moon
09	Mo	11:03	Mercury 3.2° S of Moon
09	Mo	20:32	Regulus 4.5° S of Moon
10	Tu	09:10	Mars 4.0° S of Moon
11	We	15:55	Venus 3.9° S of Moon
11	We	12:30	Moon-Venus: 4.4° S
12	Tu	05:28	Mercury 1.1° N of Regulus
13	Fr	20:03	Spica 5.5° S of Moon
13	Fr	00:41	Perseid Shower: ZHR = 90
15	Su	20:50	First quarter
16	Mo	21:34	Moon descending node
17	Tu	14:53	Moon perigee: 369100 km
19	Th	03:54	Moon south declination: 25.8° S
19	Th	08:48	Mercury-Mars: 0.1° N
20	Fr	04:35	Jupiter opposition
21	Sa	03:49	Moon-Saturn: 3.8° N
22	Su	10:22	Moon-Jupiter: 4.1° N
22	Su	17:32	Full Moon
30	Mo	07:52	Moon apogee: 404100 km
30	Mo	10:43	Moon ascending node
30	Mo	12:43	Last quarter
30	Mo	17:40	Aldebaran 5.8° S of Moon

(*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 August the Moon rises close to midnight and is almost overhead at dawn. On 3 August the nearly 38% illuminated Moon can be seen about 6° north of Aldebaran.

New Moon is on 8 August. The next evening on 9 August, the thin lunar crescent can be seen about 4° north of Regulus. On 10 August the approximately 5% illuminated thin lunar crescent can be seen north-west of Venus.

On 11 August the lunar crescent can be seen just about 4° north-east of Venus.

On 17 August the Moon will occult the 3.3 magnitude star θ Ophiuchi. The event will take place around 9:30 pm Indian Standard Time. See below for the timings at some stations in India.

The nearly Full Moon rises about 10 minutes ahead of Saturn on 20 August. The next day it is halfway between Saturn and Jupiter, but a bit south of the line joining the planets.

Conjunctions

A conjunction of Mercury (-0.4 mag) and Mars (1.8 mag) will take place on 19 August. At 8:48 am the planets will be separated by 0°04'15". However, at this hour the Sun will be shining brightly in the sky and the planets will not be seen. But on 18 August the separation between the two will be 0°35'32"; then on 19 August it will be 0°28'27".

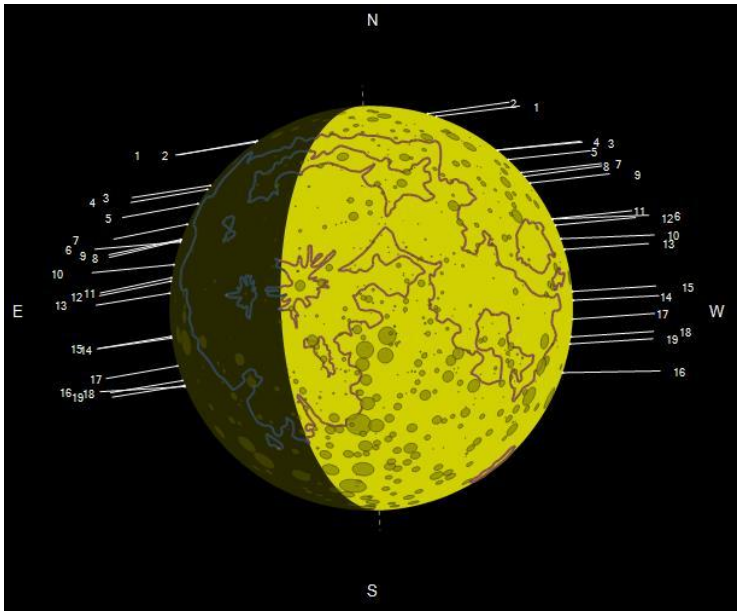
Occultation

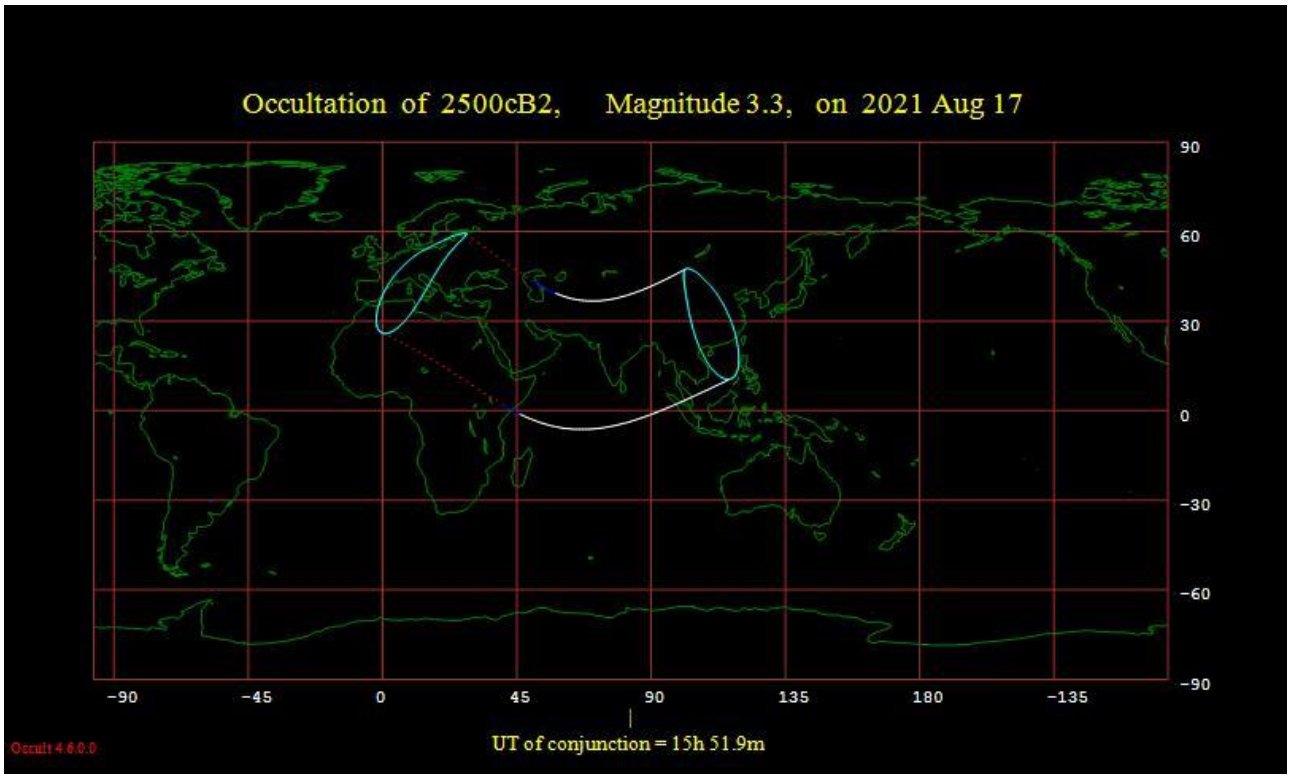
The Moon will occult the 3.3 magnitude star θ Ophiuchi on 17 August 2021. This event will be observable across India. The event takes place at the darker limb of the Moon and is easily observable even with the naked eye.

θ Ophiuchi appears to be a triple star system. The primary component of this system is a Cepheid type variable with a period of just 3h 22m. Its magnitude varies between 3.25 and 3.31. It has nearly nine times the mass of the Sun and more than six times the Sun's radius.

Stn no.	City	Disappearance			Reappearance	
		Time	Alt°		Time	Alt°
1	Leh	21:44:38	26		22:20:44	22
2	Srinagar	21:39:33	27		22:14:14	24
3	Naini Tal	21:41:53	30		22:39:16	22
4	New Delhi	21:36:53	32		22:36:05	25
5	Jaipur	21:32:28	34		22:36:59	27
6	Guwahati	22:00:11	23		23:06:55	12
7	Udaipur	21:25:45	38		22:37:00	30
8	Bhuj	21:14:17	41		22:30:16	34
9	Ahmedabad	21:22:01	40		22:37:31	31
10	Kolkata	21:55:31	29		23:07:37	16
11	Mumbai	21:21:23	43		22:44:39	33
12	Pune	21:24:09	43		22:47:30	32
13	Hyderabad	21:35:48	41		22:57:54	28
14	Chennai	21:41:40	43		23:04:10	29
15	Bengaluru	21:34:55	45		22:59:46	32
16	Port Blair	22:09:50	31		23:17:35	17
17	Kochi	21:33:19	49		22:58:22	35
18	Trivandrum	21:36:21	49		22:59:31	35
19	Kanyakumari	21:38:25	49		23:00:26	35

The number shown on the Moon map below corresponds to the station number given in the table above.



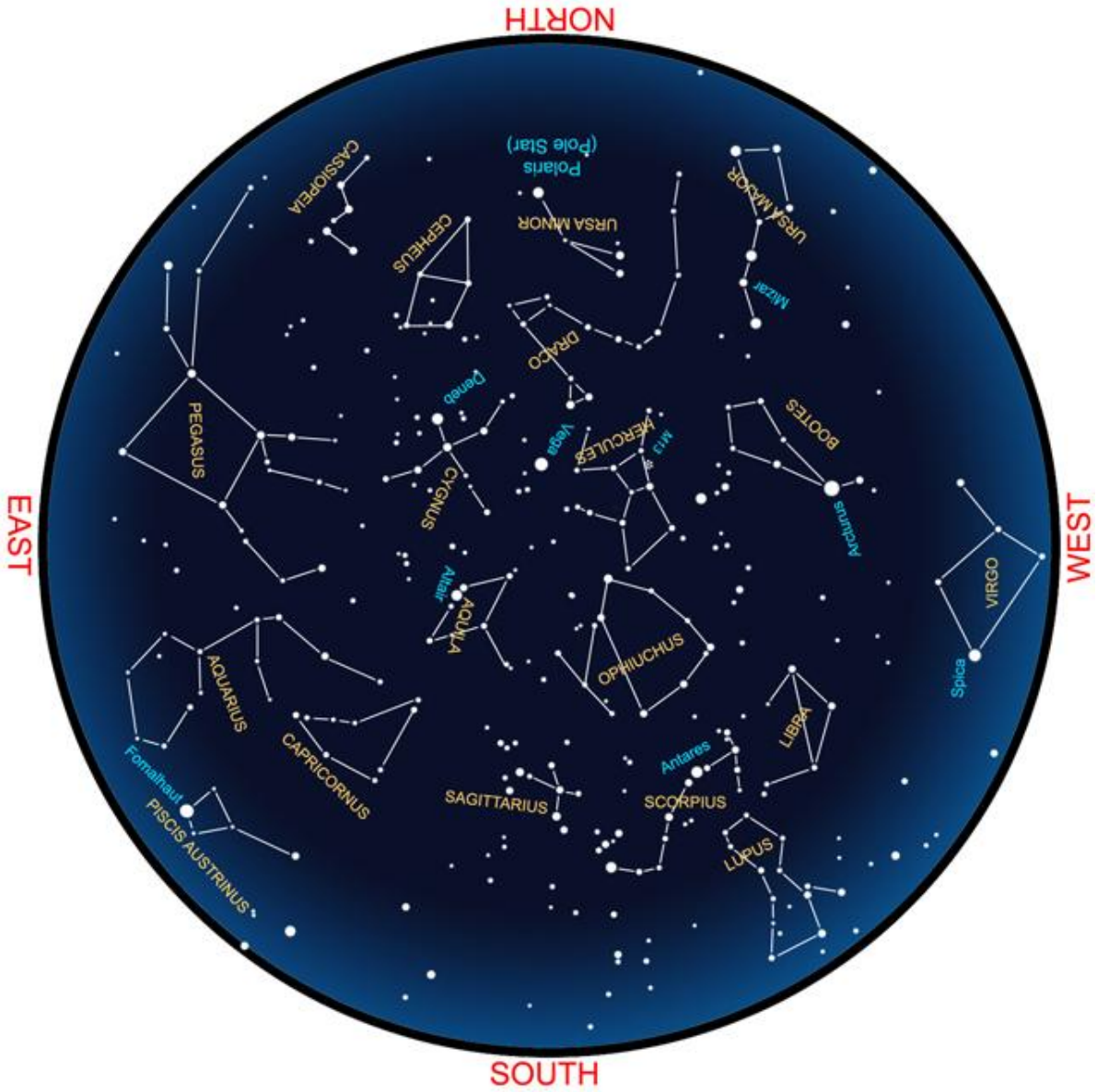


World map of the event

The line colours have the following meanings:

Cyan:	The curves of occultation D (disappearance) or R (reappearance) at moonrise or moonset
White continuous line:	The northern and southern occultation limits (graze paths), with the event occurring during the dark hours
Blue continuous line:	Occultation limits, event in twilight
Red dotted line:	Occultation limits, event in daylight

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



For notes on stargazing click here.
Or visit https://skytonight.wordpress.com/monthly-sky-notes-and-links/

Acknowledgements:

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https://www.gimp.org/

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