SkyNews Astronomical events for Indian observers

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Sun, Planets and Transitions

The **Sun** transits from Pisces, the Fishes (*Meena*) to Aries, the Ram (*Mesha*) on 19 April. The Sun's angular diameter on 1 April is 1921.34" (arc seconds) and this decreases to 1905.92" on 30 April.

For mid northern latitudes, the ecliptic is nearly vertical at sunset in the western direction in the month of April. Therefore the planets close to the western horizon are seen nearly on a vertical straight line.

Mercury moves from Pisces to Aries on 3 April. It rapidly rises above the western horizon and reaches maximum height around 12 April. It is stationary on 21 April at 21:37 hours.

Venus transits from Aries to Taurus, the Bull (*Vrushabha*) on 7 April. It continues to climb above the western horizon. It passes close to the Pleiades cluster on 11 April. The table below gives the magnitude of Venus, its phase (phase 1 is fully illuminated), elongation (Sun-Earth-Venus angle), its angular diameter and light time. The latter is the time taken by light to travel from Venus to the Earth.

Date	Mag	Phase	Elongation	Diameter	Light time
1	-4.0	0.775	37.0°	13.98"	9m 55.4s
10	-4.0	0.745	38.7°	14.71"	9m 25.7s
20	-4.1	0.709	40.5°	15.68"	8m 50.9s
30	-4.1	0.670	42.2°	16.84"	8m 14.4s

Mars continues to traverse Gemini, the Twins (*Mithuna*). On 14 April it passes less than 9' from Mebsuta (ε Geminorum). On 14 April at 23:38 hours it will be 08'51" south of the star which is white in colour with a magnitude of 3.06. The magnitude of Mars is 1.2.

Jupiter continues to traverse Pisces, and is getting rather close to the Sun for comfortable observation.

Saturn travels in Aquarius, the Water Bearer (*Kumbha*). It will be visible above the eastern sky at dawn.

(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

List of Events in April 2023

Dt	Dy	Time	Event
02	Su	17:05	Regulus 4.2° S of Moon
06	Th	10:04	Full Moon
07	Fr	01:08	Spica 2.9° S of Moon
07	Fr	19:21	Moon descending node
10	Mo	11:20	Moon-Antares: 1.6° S
11	Tu	10:10	Venus-Pleiades: 2.6° S
12	We	02:20	Jupiter-Neptune conjunction
12	We	03:29	Mercury elongation: 19.5° E
12	We	08:45	Moon south declination: 27.9° S
13	Th	14:41	Last quarter
16	Su	07:52	Moon perigee: 368000 km
16	Su	09:17	Moon-Saturn: 3.5° N
19	We	22:53	Jupiter 0.1° S of Moon, occultation
20	Th	09:42	New Moon - eclipse
20	Th	09:47	Hybrid solar eclipse
20	Th	17:02	Moon ascending node
21	Fr	13:53	Mercury 1.7° N of Moon
21	Fr	21:37	Mercury stationary
22	Sa	14:44	Moon-Pleiades: 2° N
23	Su	06:05	Lyrid shower: ZHR = 20
23	Su	18:33	Moon-Venus: 1.4° S
25	Tu	11:23	Moon north declination: 28° N
26	We	07:48	Moon-Mars: 3.6° S
26	We	22:55	Moon-Pollux: 1.7° N
28	Fr	02:50	First quarter
28	Fr	12:13	Moon apogee: 404300 km
29	Sa	23:00	Regulus 4.3° S of Moon

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

From 1 to 2 April, the nearly Full Moon passes south of Regulus. On 6 April the Full Moon will rise with Spica (*Chitra*).

On 10 April the nearly 85% illuminated Moon can be seen west of Antares (*Jyeshta*). It passes close to the centre of the Milky Way on 12 April. Saturn and the Moon can be seen together at dawn on 16 April.

On 21 April, by the end of civil twilight, the thin lunar crescent can be seen above the western horizon. Mercury can be spotted about 2.5° north-west of the Moon. The next day on 22 April, the Moon will be south of Pleiades (*Kruttika*). On 23 April it will be north of Venus. Two days later on 25 April the Moon will be right below and to a bit north of Mars.

On 26 April it will occult a 4.1 magnitude star, υ Geminorum, at about 7:25 pm. And then on 29 April it will occult a 3.5 magnitude star, η Leonis, by about 8:25 pm (see below).

Bright Star Occultations by the Moon

On **26 April 2023**, there is a prediction of a lunar occultation of a 4.1 magnitude star **upsilon (υ) Geminorum**. The waxing Moon will be 34% illuminated and its solar elongation will be 76° east.

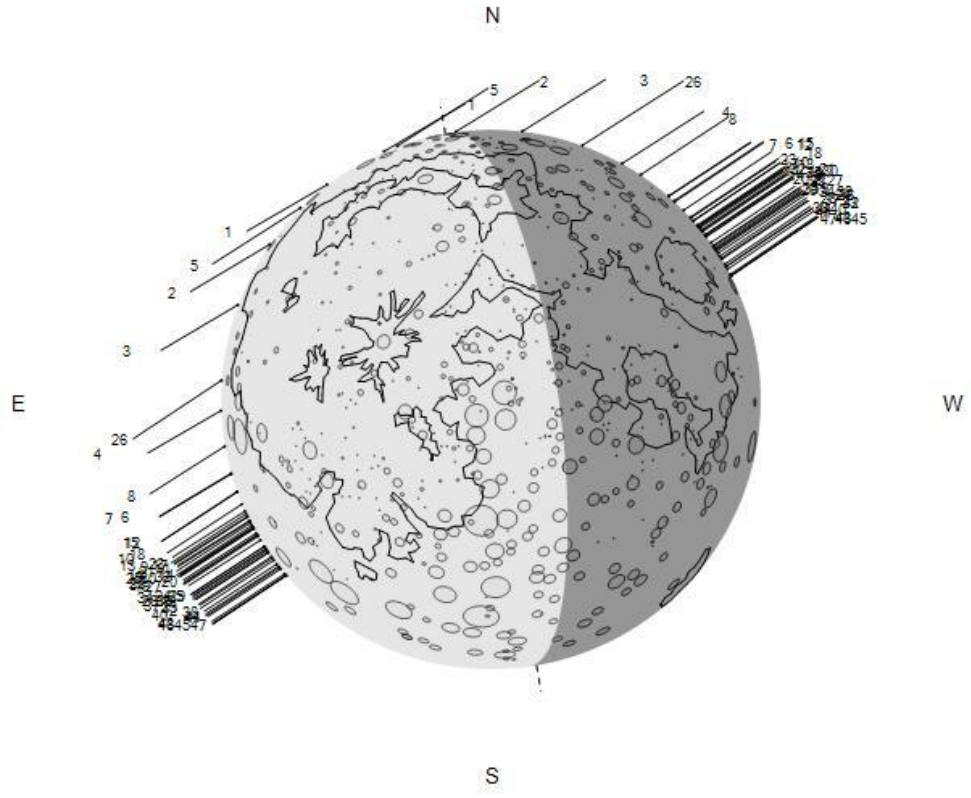
In the table below, **a** is the location number; **b** is the location; **c** and **f** are the timings in IST; **d** is the altitude of the sun (a blank cell indicates that the altitude of the Sun is less than 12 deg or it is after the end of nautical twilight); and **e** and **h** are the altitude of the Moon.

▼Occultation Prediction of υ Geminorum, Magnitude 4.1

Date: 26 April 2023

a	b	disappearance				reappearance		
		c	d	e		f	g	h
2	New Delhi	19:46:11	-12	62		20:20:45		55
3	Jaipur	19:36:40	-9	66		20:30:27		54
4	Ahmedabad	19:23:49	-5	71		20:42:38		53
5	Kolkata	20:18:48		44		20:35:03		40
6	Mumbai North	19:26:18	-7	68		20:52:46		49
7	Mumbai South	19:26:13	-7	68		20:52:46		49
8	Hyderabad	19:42:14		59		21:00:00		42
9	Karwar	19:33:42	-11	64		21:01:46		45
10	Davanagere	19:38:22		61		21:04:07		42
11	Shimoga	19:38:08		61		21:04:39		42
12	Tirupati	19:47:14		56		21:08:11		38
13	Tumkuru	19:42:21		59		21:07:00		40
14	Chikmagalur	19:39:20		60		21:05:48		42
15	Chennai	19:49:38		54		21:09:39		37
16	Hassan	19:40:26		60		21:06:35		41
17	Bengaluru	19:43:51		58		21:08:00		39
18	Vellore	19:47:18		56		21:09:14		38
19	Mangaluru	19:37:49		61		21:05:28		42
20	Mysore	19:42:35		58		21:08:10		40
21	Dharmpuri	19:46:04		56		21:09:47		38
22	Nanjangud	19:43:04		58		21:08:34		40
23	Villupuram	19:49:04		55		21:11:03		37
24	Kannur	19:40:23		60		21:07:26		41

a	b	disappearance				reappearance		
		c	d	e		f	g	h
25	Selem	19:46:36		56		21:10:27		38
26	Port Blair	20:15:48		37		21:12:55		24
27	Erode	19:46:06		56		21:10:32		38
28	Kozhikode	19:42:10		59		21:08:42		40
29	Coimbatore	19:44:58		57		21:10:16		39
30	Kumbakonam	19:49:56		54		21:12:26		36
31	Tiruchirappalli	19:48:45		55		21:12:07		37
32	Nagapattinam	19:51:03		53		21:13:02		35
33	Thrissur	19:44:10		58		21:10:05		39
34	Palani	19:46:51		56		21:11:30		38
35	Dindigul	19:47:54		55		21:12:05		37
36	Kodaikanal	19:47:07		56		21:11:48		38
37	Munnar	19:46:30		56		21:11:31		38
38	Kochi	19:45:12		57		21:10:50		39
39	Madurai	19:48:48		55		21:12:46		37
40	Kottayam	19:46:11		56		21:11:28		38
41	Alappuzha	19:45:59		56		21:11:22		38
42	Sivakasi	19:48:22		55		21:12:45		37
43	Kollam	19:47:26		56		21:12:16		38
44	Thrunelveli	19:49:45		54		21:13:41		36
45	Thiruvananthapuram	19:48:44		55		21:13:05		37
46	Nagercoil	19:50:09		54		21:13:57		36
47	Kanyakumari	19:50:30		54		21:14:11		36



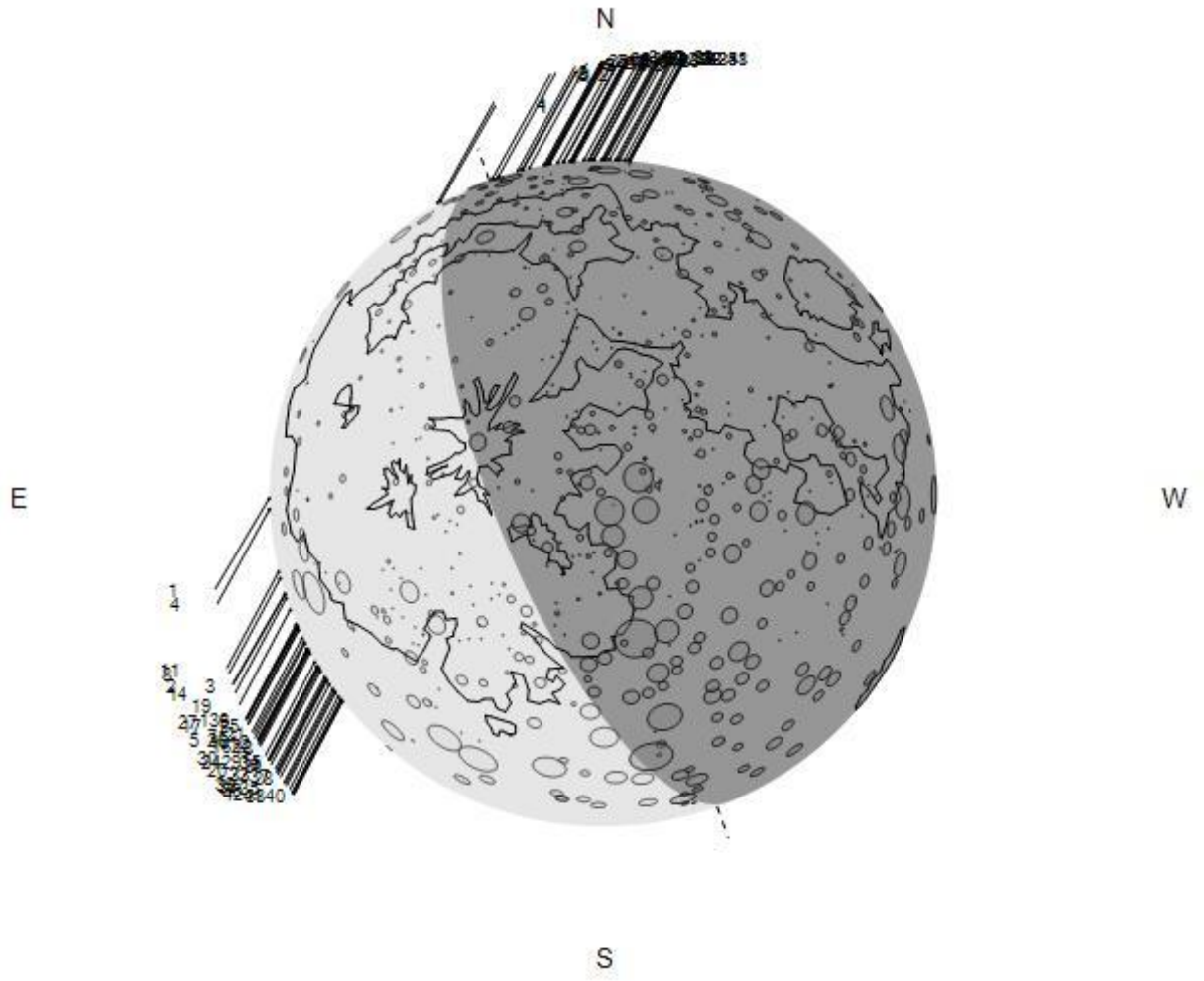
Lunar map of disappearance and reappearance of upsilon Geminorum. The numbers on the map correspond to the location numbers in the table above.

On **29 April 2023**, there is a lunar occultation prediction for a 3.5 magnitude star, **eta (η) Leonis**. The waxing Moon will be over 66% illuminated and its solar elongation will be 109° east.

In the table below, **a** is the location number; **b** is the location; **c** and **e** are the timings in IST; **d** and **f** are the altitude of the Moon. Both disappearance and reappearance will take place with the Sun well below the horizon

▼Occultation Prediction of η Leonis, Magnitude 3.5

Date: 29 April 2023



Lunar map of disappearance and reappearance of eta Leonis. The numbers on the map correspond to the location numbers in the table above.

Happy skywatching!

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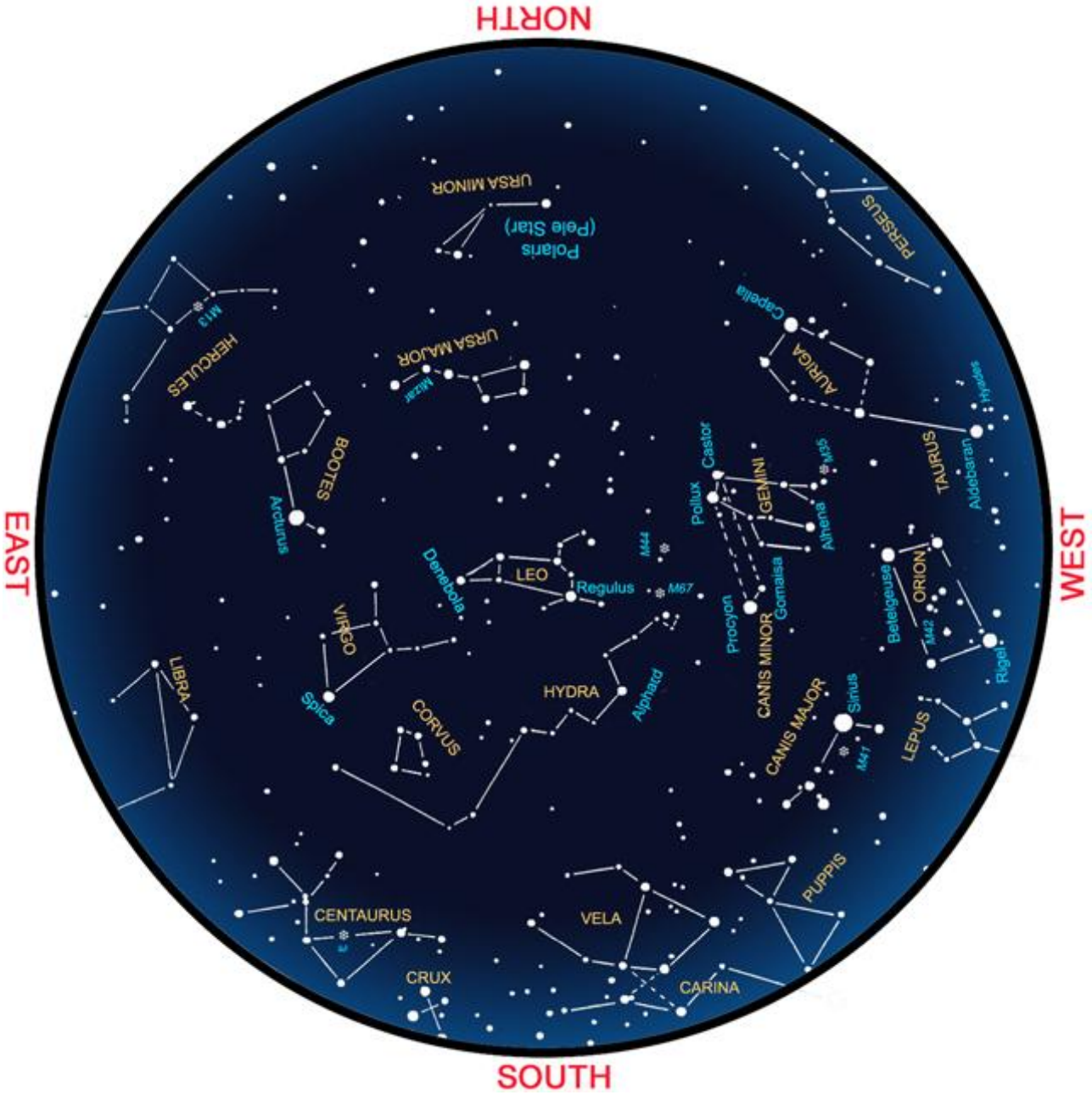
This sky map for April is drawn for mid-northern latitudes, to be used around 9:30 p.m. local time



For star maps of other months please visit http://astron-soc.in/outreach/resources/sky-maps/
For notes on stargazing click here.
Or visit https://skytonight.wordpress.com/monthly-sky-notes-and-links/

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Graphics using GNU Image Manipulation Program (GIMP) a cross-platform image editor.
https://www.gimp.org/