SkyNews Astronomical events for Indian observers

An initiative supported by
The Public Outreach and Education Committee
Of the Astronomical Society of India

Volume 6 Issue 6
June 2024

Sun, Planets and Transitions

The **Sun** will be in Taurus, the Bull (*Vrushabha*), on 1 June and will move to Gemini, the Twins (*Mithuna*) on 21 June. Its angular diameter will be 31'33" on 1 June and will decrease by 5 seconds of arc to 31'28" on 30 June. The summer solstice (for the northern hemisphere) will be on 21 June at 02.21 hours IST. Of course, this will not be the longest day everywhere on Earth, but only in the northern hemisphere. It will actually be the shortest day in the southern hemisphere. The North Pole will be in complete light and the South Pole in complete darkness in the days nearing the June solstice.

The first half of the month is devoid of any planets visible to the naked eye in the evening. **Mars** and **Saturn** are well above the eastern horizon at dawn. By the end of the month, **Jupiter** will also be seen above the eastern horizon in the pre-dawn sky; and **Mercury** and **Venus** will appear above the western horizon at dusk.

On 4 June, **Mercury** (mag -1.1) and **Jupiter** (mag -2.0) will be 06'45" from each other at 16.02 hours IST. They will rise about 45 minutes before sunrise. It will be an excellent challenge to spot both these bright planets.

On 17 June, **Mercury** (mag -1.9) and **Venus** (mag -3.9), will be 52'49" from each other at 16.16 hours IST. This will be an even greater challenge than the pairing up of **Mercury** and **Jupiter** two weeks earlier, as this time the planets will be a mere 3.5° away from the Sun. Observers must take utmost precaution. We advise you not to attempt it if you are not a seasoned observer.

List of Events in June 2024 (Time in IST)

Dt	Dy	Time	Event
02	Su	08:38	Moon ascending node (Rahu)
02	Su	12:53	Moon perigee: 368100 km
03	Mo	05:07	Moon-Mars: 2.4° S
04	Tu	16:02	Mercury 0.1° S of Jupiter
04	Tu	20:42	Venus superior conjunction
05	We	17:50	Jupiter 4.5° S of Moon
05	We	22:48	Mercury 4.5° S of Moon
06	The	18:08	New Moon
07	For	22:10	Moon north declination: 28.4° N
09	Su	12:53	Moon-Pollux: 1.9° N
10	Mo	13:04	Moon-Beehive: 3.4° S
12	We	11:51	Regulus 3.0° S of Moon
14	Fr	10:48	First quarter
14	Fr	19:06	Moon apogee: 404100 km
14	Fr	21:45	Mercury superior conjunction.
16	Su	01:47	Moon descending node
17	Su	00:43	Moon-Spica: 1° S
17	Mo	16:16	Mercury 0.9° N of Venus
20	Th	16:03	Moon-Antares: 0.4° S
21	Fr	02:21	Summer solstice
22	Sa	06:38	Full Moon
22	Sa	08:11	Moon south declination: 28.3° S
27	Th	17:15	Moon perigee: 369300 km
27	Th	20:22	Moon-Saturn: 0.1° S
28	Fr	23:09	Mercury-Pollux: 4.8° S
29	Sa	03:23	Last quarter
29	Sa	09:56	Moon ascending node (Ketu)

Mercury and **Venus** will be in Taurus on 1 June. Travelling almost together, they will cross over to Gemini on 17 June. **Mercury** will be in superior conjunction on 14 June, right behind the **Sun**.

Mars will be in Pisces on 1 June. It crosses over to Aries, the Ram (*Mesha*), on 10 June.

◄ Please scan this QR code if you would like to receive this newsletter directly in your inbox or send an email to astronomydiy@gmail.com

Jupiter and **Saturn** continue to remain in Taurus and Aquarius, the Water-bearer (*Kumbha*) respectively.

(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 pre-dawn hour on 1 June is an excellent time to look for Neptune. The planet will be just 1.2° east of the northern edge of the Moon. On that day, the Moon will pass along an arc 2.2' from Neptune. It will occult Neptune, but this event will not be visible from India.

On 3 June, Mars will be visible right above the 16% illuminated Moon. On 7 June, a thin lunar crescent will reappear above the western horizon. It will set about an hour after the Sun and reach its northernmost declination of about 28° for the month of June.

On 9 June, the Moon can be seen about 2° north east of Pollux. On 7 June at about 3 pm, it will pass within 3°20' northwards of the Beehive cluster. (See below for a close-up of the Beehive cluster). That evening, you can look for the cluster through a pair of binoculars.

Between 11 and 12 June, the Moon passes north of Regulus (*Magha*). It passes less than 1.5° from Spica (*Chitra*) on 17 June. The near-Full Moon passes through Scorpius (*Vrushchika*) between June 20 and 21. On 20 June around 4 pm it passess less than half a degree from Antares (*Jyestha*).

On 22 June the Moon will be at the spout of the Teapot asterism of Sagittarius (*Dhanu*), and at its handle on 23 June. It will be about 10° from Saturn on 27 June and east of it on 28 June.

Close-up on the Beehive Cluster

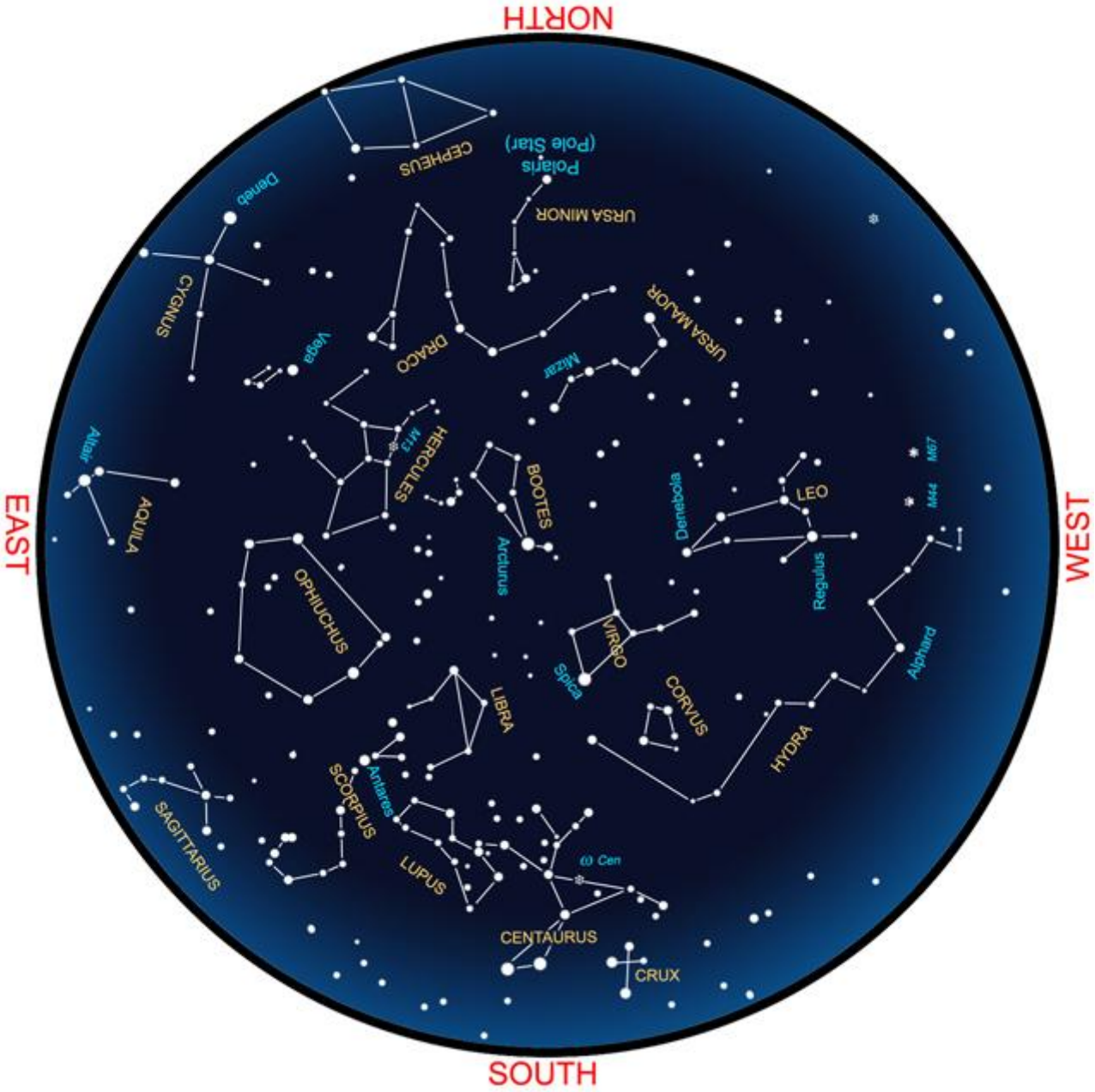
Located about a degree north of the ecliptic in the constellation Cancer, Beehive is one of the most important open clusters of stars. It has about a thousand stars, estimated to be about 520–610 light years from the Earth. They are loosely bound by gravity and thought to be about 600–700 million years old. It is also known as Praesepe, which is Latin for 'manger', 'cot' or 'crib'. It is listed as the 44th object in the Messier catalogue and is designated as M44.

Due to its proximity to the ecliptic, the Moon and planets pass either close to or through this cluster. Mercury and Venus are often seen close to M44; but these events occur during the day or close to the horizon. On 7 July 2024, Mercury will be 0°09'23" from M44. A thin lunar crescent can be seen below the duo. Ten days later, Venus will be seen close to M44.

On 3 August 2026, Jupiter will be less than one degree from M44; but the pair will be too close to the Sun for comfortable viewing. Mars passes less than 0°04' from M44 on 11 October 2026. The pair will rise one hour after local midnight. Saturn will pass close to M44 on 3 July 2035. The pair will be above the western horizon soon after sunset. In November and December of 2061, Jupiter will make two quick passes less than a degree from the cluster.

The Beehive cluster has been known since antiquity. It was one of the first objects studied by Galileo with his telescope. It is visible to the naked eye as a fuzzy, nebulous patch on a clear, dark night. It is the 8th nakshatra, *Pushya*, of Indian astronomy. The stars of this cluster are spread over a region 1.5° wide, nearly three times the Moon's angular diameter. It fits easily within the field of view of a pair of binoculars or a low powered small telescope.

This sky map for June 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:
http://www.lunar-occultations.com/iota/occult4.htm
by Dave Herald for International Occultation Timing Association.
https://eclipse.gsfc.nasa.gov/SKYCAL/SKYCAL.html by Fred Espenak and Sumit Dutta.
Graphics using GNU Image Manipulation Program (GIMP) a cross-platform image editor.
https://www.gimp.org/

These pages are contributed by:
Arvind Paranjpye (paranjpye.arvind@gmail.com) (http://arvindparanjpye.blogspot.com/) and Anjanee Rao (rao.anjanee@gmail.com)