



The arrival of June marks the end of the observing season in India. Yet, the monsoon months offer some very exciting conditions for observation. The rains wash away the floating smog in the atmosphere; and when there in the weather, the sky becomes very clear and transparent. Watch out for such opportunities.

Sun, Planets and Transitions

The month of June 2022 is full of interesting events for the naked eye and small telescopic observations. One can see all the planets on a single night; and there are also a couple of nice conjunctions.

From the zenith to the horizon, the planets can be seen in the following sequence:

Saturn will rise first, close to midnight. In the pre-dawn sky above the eastern horizon will be **Neptune, Jupiter, Mars, Uranus, Venus** and **Mercury**. By the time these planets appear, Saturn will have moved to the western horizon. (Please see 'March of the Moon' for the close passage of planets and stars).

On Sunday, 12 June, you can see Uranus (magnitude 5.8) less than 2° north of a brilliantly shining Venus (magnitude -3.9) in the pre-dawn sky.

On 23 June, Venus will be just about 6° south of the Pleiades (*Kruttika*) Cluster. They will be well above the horizon before the beginning of astronomical twilight. Right below them will be the famous Hyades Cluster, which is in a 'V' shape with Aldebaran (*Rohini*) at one end of the 'V'. Mercury will be present at the other end of the 'V'. Aldebaran is reddish in colour and Mercury will be 'fairly white'. Their

List of Events in June 2022

Dt	Dy	Time	Event
02	Th	04:02	Moon north declination: 26.9° N
02	Th	06:44	Moon apogee: 406200 km
03	Fr	05:52	Mercury stationary
03	Fr	11:12	Moon-Pollux: 2.4° N
04	Sa	12:47	Moon-Beehive: 4° S
05	Su	19:30	Saturn stationary
06	Su	12:14	Regulus 4.7° S of Moon
07	Tu	20:18	First quarter
10	Fr	16:43	Spica 4.5° S of Moon
12	Su	04:56	Venus 1.5° S of Uranus
12	Su	15:32	Moon descending node
13	Mo	20:36	Antares 3.0° S of Moon
14	Tu	17:22	Full Moon
15	We	04:51	Moon perigee: 357400 km
15	We	16:29	Moon south declination: 26.9° S
16	Th	20:29	Mercury elongation: 23.2° W
18	Sa	17:52	Moon-Saturn: 4.3° N
21	Tu	08:41	Last quarter
21	Tu	14:44	Summer solstice
21	Tu	19:01	Moon-Jupiter: 2.9° N
22	We	23:46	Moon-Mars: 1° N
23	Th	05:16	Mercury 2.9° N of Aldebaran
23	Th	06:23	Venus-Pleiades: 5.7° S
25	Sa	02:43	Uranus 0.0° N of Moon*
25	Sa	12:40	Moon ascending node
26	Su	02:57	Moon-Pleiades: 3.9° N
26	Su	13:41	Moon-Venus: 3° S
27	Mo	12:10	Mercury 3.9° S of Moon
29	We	08:22	New Moon
29	We	09:36	Moon north declination: 26.9° N
29	We	11:38	Moon apogee: 406600 km
30	Th	17:15	Pollux 2.2° N of Moon

* See 'March of the Moon'

magnitudes are 0.8 and 0.1 respectively.

The **Sun** moves from Taurus, the Bull (*Vrushabha*) to Gemini, the Twins (*Mithun*) on 22 June. Its angular diameter will decrease from $0^\circ31'33''$ on 1 June to $0^\circ31'28''$ on 30 June.

The Sun reaches its maximum northern declination on 21 June at 14:44 hours IST. This day marks the summer solstice in the northern hemisphere (more accurately known as the June solstice from a global

perspective). On this day, the entire northern hemisphere of the Earth will have the longest duration of daylight. Correspondingly, the southern hemisphere will have the longest night. The situation at the poles will be a little different. The region around the North Pole will be in complete light and that around the South Pole in complete darkness.

Mercury will be visible before sunrise in the eastern sky throughout the month. It will be at its greatest western elongation on 17 June. Mercury will be in the constellation Taurus, the Bull (*Vrushabha*) for the entire month.

Venus will move from Aries, the Ram (*Mesha*) to Taurus on 17 June.

Mars moves from Pisces, the Fishes (*Meena*) to Cetus, the Whale on 3 June; then as it continues its forward march, it re-enters the boundaries of Pisces on 9 June.

Jupiter, which has been travelling in Pisces for some time now, moves to Cetus on 25 June.

Saturn continues its march in Capricornus, the Sea-Goat (*Makar*).

(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 June, the crescent Moon will set nearly 90 minutes after sunset. On 3 June it will be south-east (above and to the left) of Pollux. It will be less than 4° north-east of the open Beehive Cluster (M44) in the constellation of Cancer (*Karka*) on 4 June. One can easily identify this open cluster using a pair of binoculars with a 5° field of view. On 5 June the Moon will be north-west of Regulus (Alpha Leonis or *Magha*). The next day it will be to the north-east of this star.

On 10 June the nearly 80% illuminated Moon can be seen north-east of Arcturus (*Swati*). On 13 June it will be less than 3° away from Antares (*Jayeshtha*). Full Moon is on 14 June. If there are thin upper-level clouds in the sky, then you are most likely to see a 40° halo around the Moon.

From 18 June onwards the Moon can be seen passing south of all the visible planets. On 18 June it will be south-west of Saturn. The next day on 19 June it will be to its south-east. On 22 and 23 June, it will be south-east of Jupiter and Mars respectively.

On 25 June the Moon will occult Uranus. But this event is not visible in India. The Moon will rise nearly three hours before sunrise; and this will be a great time to look for Uranus which will be right above the crescent Moon.

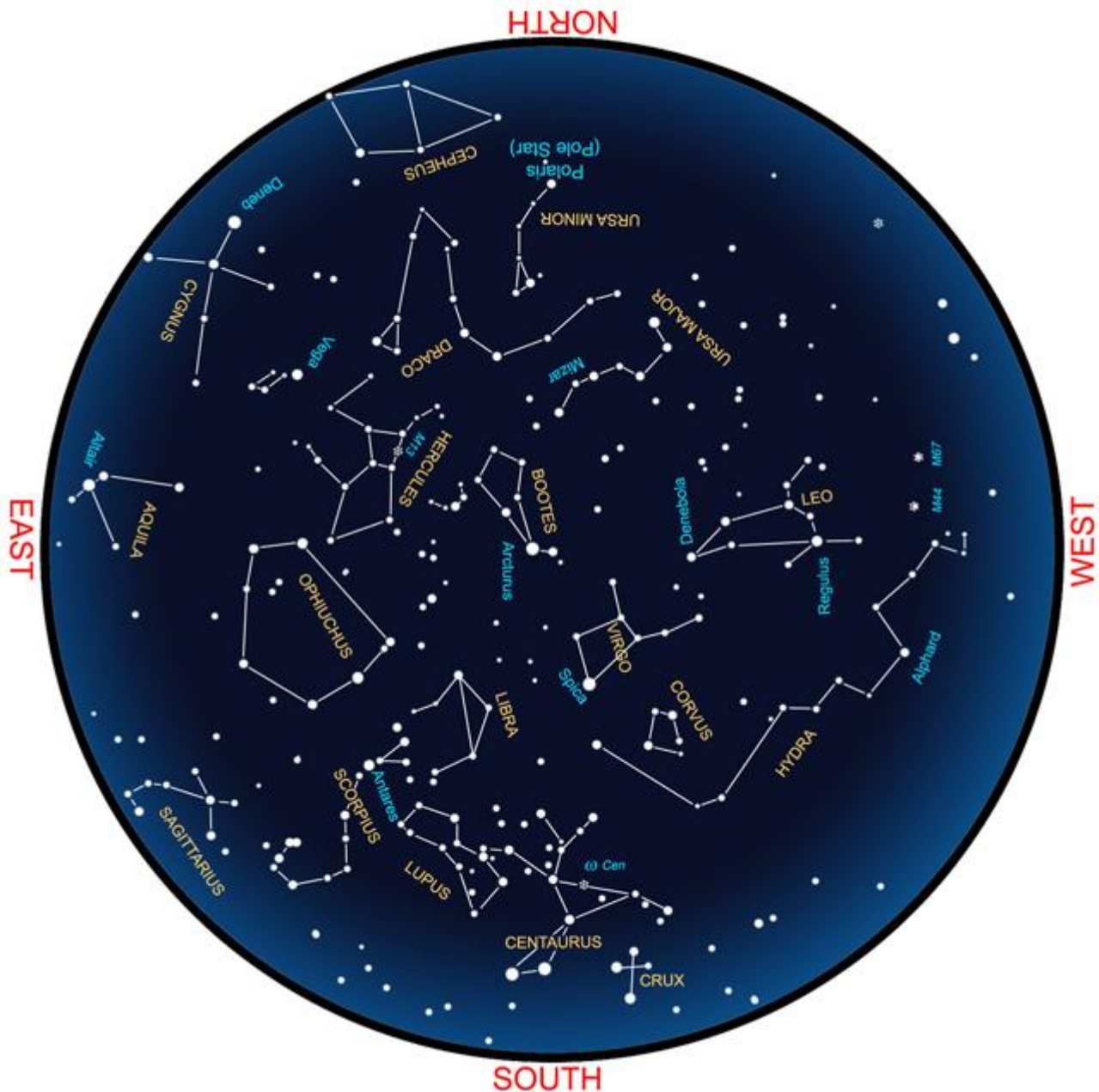
On 26 June the Moon can be seen right above Venus. This should be a good photo opportunity. The Pleiades (*Kruttika*) can be seen less than 4° north-west of the crescent Moon. The next day on 27 June the thin lunar crescent is north-west of Mercury. New Moon is on 29 June. On 30 June the waxing thin lunar crescent can be seen next to Pollux.

Happy Skywatching!

These pages are contributed by:

Arvind Paranjpye (paranjpye.arvind@gmail.com) (<http://arvindparanjpye.blogspot.com/>) and Anjanee Rao (rao.anjanee@gmail.com)

**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>

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<https://www.gimp.org/>

Ephemeris of the Sun at Various Latitudes

The accompanying diagrams depict the hours of actual sunlight (as opposed to twilight) at various latitudes throughout the year. The diagrams are based on real data, and include extrapolations and interpolations where the data was not available. Note that the North and South Poles actually refer to latitudes 89° North and South respectively, since no data was available for the 90° North and South points.

