



Sun, Planets and Transitions

The **Earth** is now approaching aphelion, which is its farthest distance from the **Sun**. As the distance between the Earth and Sun keeps increasing, the angular diameter of the Sun will keep decreasing. On 1 June the angular diameter of the Sun will be 31'32", which will reduce to 31'29" on 30 June.

On 1 June the **Sun** is in Taurus, the Bull (*Vrushabh*) and transits to Gemini, the Twins (*Mithuna*) on 21 June. On the same day at 09.02 am, the Sun reaches its maximum northern declination, commonly known as the summer solstice.

Annular Solar Eclipse

There will be an annular solar eclipse on 10 June. It will not be visible over India. The path of the eclipse passes over the North Pole.

Mercury remains in Taurus this month. After its majestic appearance above the western horizon in May, it will be too close to the Sun in June. Only by the month-end will it be visible above the eastern horizon at dawn.

Venus transits from Taurus to Gemini on 3 June and then to Cancer, the Crab, on 25 June. From 18 to 20 June Venus can be seen travelling through the Gateway of Heaven.

Venus is now coming closer to the Earth and is now visible above the western horizon after sunset. Venus' appearance above the western horizon in 2021-22 is not going to be favourable to observers in

List of Events in June 2021

Dt	Dy	Time	Event
01	Tu	14:27	Moon-Jupiter: 4.9° N
02	We	12:54	Last quarter
07	Mo	13:29	Moon-Uranus: 2.1° N
08	Tu	07:57	Moon apogee: 406200 km
09	We	19:44	Moon-Aldebaran: 5.4° S
09	We	22:12	Moon ascending node
10	Th	16:13	Annular solar eclipse
10	Th	16:23	New Moon
11	Fr	06:36	Mercury inferior conjunction
12	Sa	09:41	Moon north declination: 25.6° N
12	Sa	12:14	Moon-Venus: 1.6° S
14	Mo	01:22	Moon-Mars: 3° S
14	Mo	12:17	Moon-Beehive: 3.1° S
16	We	08:36	Regulus 4.7° S of Moon
18	Fr	09:24	First quarter
20	Su	08:18	Moon-Spica 5.9° S
21	Mo	09:02	Summer solstice
21	Mo	10:01	Jupiter stationary
21	Mo	21:27	Venus-Pollux: 5.2° S
23	We	02:24	Mercury-Aldebaran: 6.4° N
23	Tu	04:01	Mercury stationary
23	We	10:51	Mars-Beehive: 0.3° S
23	We	11:15	Moon-Antares 4.6° S
23	We	11:37	Moon descending node
23	We	15:28	Moon perigee: 360000 km
25	Fr	00:10	Full Moon
25	Fr	11:19	Moon south declination: 25.6° S
27	Su	15:00	Moon-Saturn: 4.1° N
29	Tu	00:08	Moon-Jupiter: 4.6° N

the northern hemisphere. It will not reach higher altitudes above the horizon. It will be moving southwards. From latitudes close to 20° N, Venus can be seen moving nearly parallel to the horizon.

As Venus comes closer to the Earth, its angular size will increase and its phase will decrease. It will appear larger day by day and its phase will change from

gibbous to crescent. The phases of Venus can be observed through a small telescope. In the coming months, we will bring you a table of its phase, elongation (Sun-Earth-Venus angle) and angular diameter. The magnitude of Venus will remain constant at -3.9.

Date	Phase	El(°)	Diam(")
01 Jun 2021	0.954	17.3	10.30
11 Jun 2021	0.938	20.0	10.53
21 Jun 2021	0.920	22.6	10.82
01 Jul 2021	0.899	25.2	11.17

Mars transits from Gemini to Cancer on 8 June. On 14 June Mars is very close to the Moon.

Venus and Mars are moving towards each other, the former moving eastwards and the latter westwards. Next month they will be less than half a degree from each other.

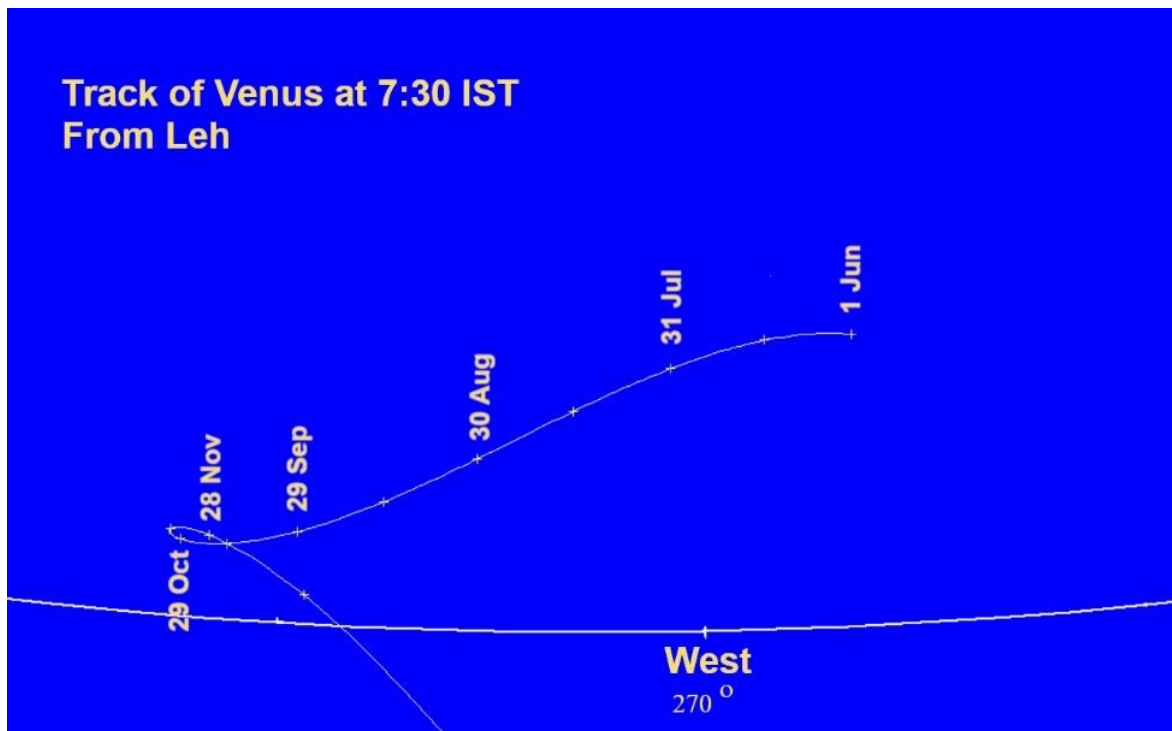
Jupiter and **Saturn** are now well above the western horizon at dawn. Jupiter is in Aquarius, the Water-bearer (*Kumbha*). The Earth is now overtaking Jupiter. On 21 June Jupiter will be stationary and will go into retrograde travel after that. Jupiter will continue this journey till mid-October.

Saturn continues to travel within Capricorn, the Horned Goat (*Makar*).

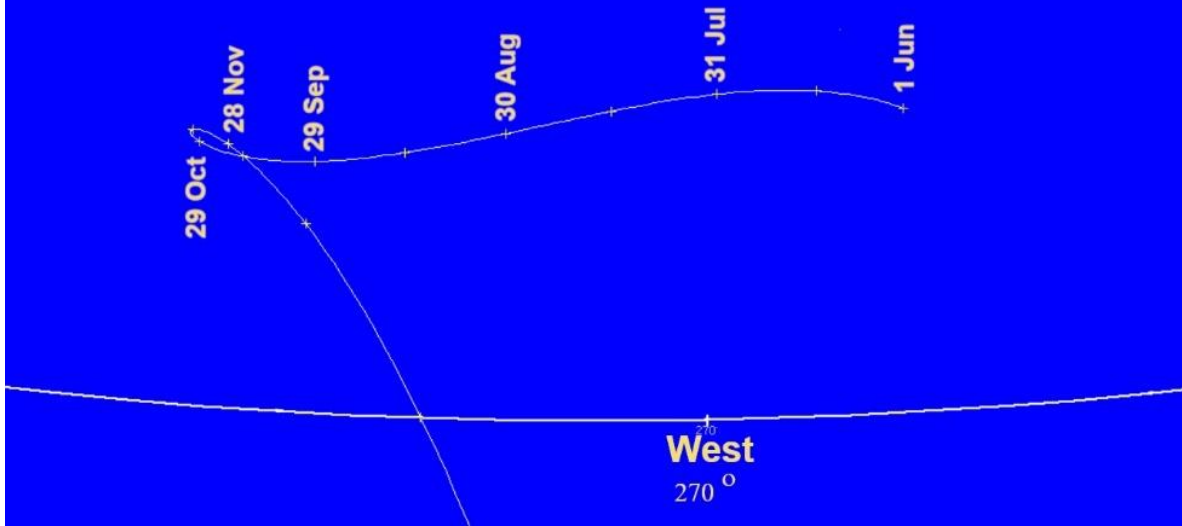
(Disclaimer: we categorically mention here that we do not believe in astrology and believe that the only influence a planet has on us is to give us the viewing pleasure of its beauty. The sole purpose of giving the transition of planets and the Sun is to acquaint the reader with the Indian nomenclature 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.)

Track of Venus

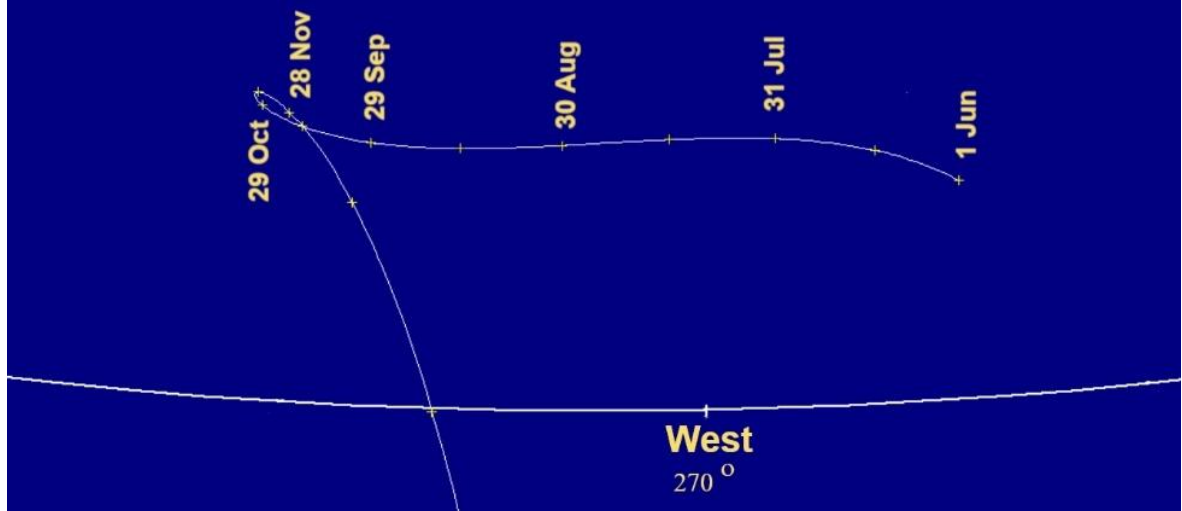
From Leh (latitude ~34° N), Mumbai (latitude ~20° N) and Kottayam (latitude ~ 10° N)



**Track of Venus at 7:30 IST
From Mumbai**



**Track of Venus at 7:30 IST
From Kottayam**



March of the Moon

On 1 June Jupiter can be seen east of the nearly 64% illuminated waning Moon. The next day the Moon will be to the east of Jupiter. On 7 June the Moon passes about 2° south of Uranus. Both objects rise about three hours before sunrise. Using the Moon as a reference, it should be possible to see Uranus with a pair of 7x50 binoculars.

The evening of 12 June may be taken as a challenge to sight the thin lunar crescent and Venus. At the time of sunset, they will be about 17° above the horizon. The next day on 13 June, the lunar crescent can be

seen right below Mars. Both of them will be just above the Gateway of Heaven. On 15 June the 25% illuminated Moon can be seen below Regulus (*Magha*).

Towards the end of the month, the Moon passes south of Saturn and Jupiter. On 27 June the waning, almost Full Moon will be southwest of Saturn; on 28 June it will be nearly halfway between Saturn and Jupiter; and on 29 June the 78% illuminated Moon will be south of Jupiter. An imaginary line joining Jupiter and the Moon will point to one of the brightest stars in the southern hemisphere, Fomalhaut or α Piscis Austrini.



The 'Super Flower Blood Moon' of 26 May 2021, seen over the Pacific Ocean at Bondi Beach, Sydney, Australia. Picture courtesy: <https://www.cbsnews.com/news/lunar-eclipse-super-flower-blood-moon-may-2021-photos/> (Steven Saphore/Anadolu Agency via Getty Images)

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://eclipse.gsfc.nasa.gov/SKYCAL/SKYCAL.html> by Fred Espenak and Sumit Dutta.

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

