

# CELESTIAL CALENDAR

### **HELLO ASTRONOMERS!**

Space India presents this yearly calendar covering all the major astronomical events that one can witness from the Indian subcontinent. Astronomers all around the world can also record and capture these events along with beautiful astrophotographs. You can also capture and share your photos with us.



## **MAJOR ASTRONOMICAL EVENTS**



#### Conjuction

When the Moon or a planet appears especiallyclose either to another planet or to a bright star. Also used when, Moon or Planetsometimes is close to bright Deep sky objects



#### **Eclipse**

An event that occurs when the shadow of a planet or moon falls upon a second body.



#### Elongation

The angular distance the Moon or a planet isfrom the Sun. The inner planets of Mercurv and Venus are best seen when at maximumElongation, and thus are highest above thehorizon before sunrise or after sunset.



#### Equinox

The two times each year, near March 20th and September 22nd, when the Sun is directly overhead at noon as seen fromEarth's equator. On an equinox date, day and night are of equal length.



#### Solstice

The two times each year, around June 20th and December 21 st, when the Sun is farthest north or south in the sky. At the summer solstice, the day is longest and the night is shortest, and vice versa at thewinter solstice.



#### **Meteor Shower**

An increase in meteor activity at certain times of the year due to Earth passing through a stream of particles along a comet's orbit around the Sun.



#### Occultation

When the Moon or a planet passes directly infront of a more distant planet or star.



#### Opposition

When a planet or asteroid is opposite the Sun in the sky. At such times, the object is visible all night - rising at sunset and setting at sunrise.



#### **Full Moon**

A Full Moon Occurs When
The Entrice Face Of The Moon
Is Fully Illuminated By The Sun.
Its Monthly Names, Like "Harvest
Moon" Or "Wolf Moon," Come
From Ancient Traditions Reflecting
Seasonal Events Or Folklore.



#### **Transit**

A Transit Occurs When A Smaller Celestial Object Passes In Front Of A Larger One, Like Mercury Or Venus Crossing The Sun, Or A Moon Of Jupiter Transiting Jupiter, Revealing Details About Their Size And Orbit.

## **NOTES**

- Elongation Dates Are Based On The Highest Altitude Of The Planet As Seen At Sunset or Sunrise
- Meteor Showers Are Best Observed From Late Evening Until The Early Morning Of The Following Day
- The Lunar Occultation Of Elnath On January 11 Can Be Seen Only In South India (Time: 8:45 PM IST 10:01 PM IST)
- The Lunar Eclipse On September 7 Will Begin At 8:58 PM IST And End On September 8 At 2:25 AM IST. It Can Be Seen All Over India
- The Planetary Alignment Of The Moon, Venus, Mars, Jupiter, Saturn, Uranus, And Neptune Can Be Seen Throughout The First Half Of February
- Perihelion Is When Earth Is Closest To The Sun In Its Orbit Occurring Around Early January. Aphelion Is When Earth Is Farthest From The Sun In Its Orbit Happening Around Early July, Influencing The Planet's Speed And Seasonal Variations.

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### **CELESTIAL CALENDAR 2025**







































































































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