



## What's Up?

### Sky Events for: October 2021

- 10/4 – 10/18 Before morning twilight: For this two week period the Zodiacal light will be visible. Look for a tall, dim pyramid of light stretching up through Cancer and Gemini to Taurus. DARK SKIES are a must. See below for more information on the zodiacal light.
- 10/4 Io and Shadow Transit on Jupiter. 8:30pm Io and Shadow visible. 9:30 Io leaves Jupiter. 10:30 Io's shadow leaves Jupiter
- 10/6 New Moon
- 10/8 Mars in conjunction with the Sun. Not visible, but important because this starts the new apparition. Mars will not be visible again naked eye, until late November in the morning sky. The next Opposition of Mars (it's closest) will be in Dec. 2022.
- 10/9 Evening: Low in the southwest, Venus will be in the "head" of Scorpius, with the four-day-old Moon in conjunction, just 2.5 degrees above and left of Venus. In a 5 degree binocular view you will see: the Moon, Venus, Delta Scorpii, Beta Scorpii, Nu Scorpii, and the pretty double Omega Scorpii, in one view.
- 10/10 Evening: The Moon will be above and left of Antares, in Scorpius.
- 10/13 First Quarter Moon
- 10/14 Evening: The Moon, Saturn, and Jupiter form a triangle. With Saturn 4 degrees North of the Moon.
- 10/15 Evening: Jupiter will be 4 degrees North of the Moon.
- 10/16 Evening: Venus will be within 1.5 degrees of Antares. These two objects don't usually get this close. If you miss this one you will have to wait until October 2029 before you will see them this close again.
- 10/19 Io transits Jupiter and a Double Shadow Transit. 12:12am - Io's shadow and Ganymede's shadow. 12:20 – Ganymede's shadow leaves Jupiter.

## Sky Events for: October 2021 (continued)

- 10/20 Full Moon: October is the Hunter's Moon, Blood Moon (not the same as eclipse), Sanguine Moon (the first full moon after the Harvest Moon – blood red because of the dusty atmosphere after harvest) and Dying Grass Moon.
- 10/21 Orionid meteor shower peaks this morning, although an almost full Moon will greatly hamper viewing.
- 10/23 Dawn: A waning gibbous Moon is 4 degrees left of the Pleiades, in the west-southwest.
- 10/24 Dawn: Continuing through Taurus, the Moon is upper right of Aldebaran about 6.5 degrees.
- 10/25 Dawn: Still in Taurus, the Moon is now positioned midway between the tips of the Bull's horns. (Zeta and Beta Tauri). (west-southwest). While you are up early, look to the east to see Mercury, now about 12 degrees above the horizon at civil twilight. This is its highest elevation in the morning sky this month. It will still be visible in the morning sky until the first week in November, and then will become more difficult to see. It will appear in the evening sky for its last 2021 appearance in December, at dusk.
- 10/26 12:50am – Io transits Jupiter. 1:00 – Io's shadow appears on Jupiter – Low in west horizon.  
Dawn: Moon about 2 degrees from M35.
- 10/28 Last Quarter Moon
- 10/29 Dusk: West: Venus at greatest elongation to the East.

### Zodiacal Light, Zodiacal Band, and Gegenschein:

The zodiacal light appears as a tilted pyramid with its base at the Sun, below the horizon. Because the angle of the ecliptic, relative to the horizon, changes during the year, the zodiacal light is seen best in the West after sunset in February and March, for observers in the Northern Hemisphere. It is best seen in the East before sunrise in September and October. Please note: Dark skies are a MUST.

The zodiacal band is a dim, narrow glow extending from the zodiacal light pyramid along the ecliptic through the constellations of the zodiac.

## Sky Events for: October 2021 (continued)

The gegenschein is a diffuse brightening of the zodiacal band 180 degrees opposite the Sun's position.

Please Note: Times are MDT.