

# The Night Sky

## An Excellent Year for the Perseid Meteor Shower!

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Brilliant Venus is the lone planetary survivor in the evening sky for the month of August. All the other naked-eye planets are now located in the early morning and dawn skies. On the evenings of Aug 15<sup>th</sup> and 16<sup>th</sup>, a waxing crescent Moon skims below Venus low above the south-southwest horizon 45 minutes after sunset.

At mid-month, Jupiter reappears from behind the Sun in the morning sky. This “King of the Planets” has a close conjunction with the innermost planet, Mercury, on the morning of Aug 15<sup>th</sup>. Thirty minutes before sunrise, look just above the east-northeast horizon to catch this pairing. Binoculars will help you spot these planets in the bright morning twilight. Make sure you choose a viewing site with an unobstructive horizon.

Saturn now rises before bedtime, around 10 p.m. EDT by mid-month. The ringed planet is currently located near the border of the constellations Pisces and Cetus. Saturn should be easy to spot once it rises, since it will be the brightest object in the southeastern sky once it rises.

For the past few years, the Perseid meteor shower has been hampered by a bright Moon when the shower is at its peak. However, this year the Moon will be at new phase, hence not visible, during its peak. This peak occurs on the night of Aug 12-13, when the Earth passes through the densest part of the swarm. The Perseids are the remains of Comet 109P/Swift-Tuttle, which orbits the Sun roughly every 133 years. Each time the comet passes through the inner solar system, the Sun’s bright light vaporizes a portion of its dust-rich ice. This dust spreads along the comet’s orbit, which the Earth plows through annually. Under ideal conditions and dark skies, viewers can spot upwards of 100 meteors per hour on peak night. The Perseids are well known for producing very bright meteors, including a fireball from time to time. Another nice thing about the Perseids is that the meteoroid stream is very thick, which allows observers to spot a Perseid anywhere from late July through late August. The best time to view these meteors is between 2 a.m. and an hour before sunrise.

The Moon will reach full phase on August 28<sup>th</sup> at 12:19 a.m. EDT. The Full Moon of August is traditionally called the “Sturgeon Moon.” The Full Moon names used by The Old Farmer’s Almanac have different origins, including Native American, Colonial American, and European sources. Traditionally, each Full Moon name was applied to the entire lunar month in which it occurred, not solely to the Full Moon. The name Sturgeon Moon comes from the giant lake sturgeon of the Great Lakes and Lake Champlain; this native freshwater fish was readily caught during this part of summer and an important food staple for Native Americans who lived in the region. At one time, the lake sturgeon was quite abundant in late summer, though they are rarer today.

August's Full Moon will undergo a deep partial lunar eclipse which will be visible in eastern Tennessee. On the night of Aug 27-28, the Moon enters the Earth's shadow's umbra (the darker inner shadow) at 10:33 p.m. EDT. As the minutes progress, watch the Earth's curved shadow march across the Moon's face. The Moon will reach mid-eclipse at 12:13 a.m. EDT, when the Earth's umbra shadow will cover 96.2% of the Moon – nearly a total lunar eclipse. The Moon will leave the umbra shadow at 1:52 a.m. on Aug 28<sup>th</sup>.

The ETSU Powell Observatory open houses are on hiatus until September. Later this summer, the 2026-2027 schedule for our Astronomy open houses can be found on the web at <https://www.etsu.edu/cas/physics/observatory/starparty.php>.

The ETSU planetarium shows are also on hiatus until September. The 2026-2027 schedule will be posted on the web later this summer at <https://www.etsu.edu/cas/physics/outreach/planetarium.php>.

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