

# The Night Sky

## Venus/Jupiter Close Conjunction

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The highlight of the last full summer month of 2025 is a spectacular close conjunction between the two brightest “star-like” objects in the night sky, Venus and Jupiter. This event will occur in the early morning on August 12<sup>th</sup>. This will be a very close conjunction where these two luminous objects will be less than a degree apart in the sky! Start looking an hour before sunrise just above the eastern horizon for this event. On this date, these planets will be located right in the center of the constellation Gemini. This pairing will be accompanied by Gemini’s two bright stars, Pollux and Castor which will lie to the left of the planets.

On the following night, August 12-13, The Perseid meteor shower peaks. Unfortunately, a bright waning gibbous Moon will interfere with the show. Even though the bright Moon will hide the faintest of these meteors, the Perseids often produce very bright meteors, including a few bolides and fireballs. A bolide is a bright meteor that explodes in the atmosphere as they descend towards the ground. A fireball is a bolide that displays a bright tail, often colored green and red.

On August 20<sup>th</sup>, The Moon forms a right triangle with Venus and Jupiter in the early morning sky, with Venus being below Jupiter, and the Moon being to the left of Venus. On this morning, you should also be able to spot our innermost planet, Mercury, sitting just above the eastern horizon, 45 minutes before sunrise. On the following morning, August 21<sup>st</sup>, a thin waning crescent Moon will be located just to the upper-left of Mercury.

Mars is the only naked-eye planet in the evening sky, sitting low above the western horizon an hour after sunset. On the evening of August 26<sup>th</sup>, a thin waxing crescent Moon forms a compact group with Mars, and Virgo’s brightest star, Spica.

Saturn is currently located in the constellation of Pisces and is one month from opposition. Currently, Neptune lies very close to Saturn in the southern sky throughout the night. Note that you will need a telescope or a decent set of binoculars to spot Neptune.

The Moon will reach full phase on August 9<sup>th</sup> at 3:55 a.m. EDT. The August full Moon is traditionally known as the Sturgeon Moon, named for the large sturgeon fish found in Lake Michigan and the other Great Lakes. During the month of August, this species is often caught in large numbers by Native Americans.

The first scheduled astronomy open house of the season is on Saturday, September 27<sup>th</sup> from 8 to 10 pm at the campus Harry D. Powell Observatory. At these open houses, the public can view objects in the sky through telescopes and hear talks by faculty of the Physics and

Astronomy Department. Note that the open houses are cancelled if the sky is cloudy. Further information about these open houses and directions to the observatory can be found on the web at <https://www.etsu.edu/cas/physics/observatory/starparty.php>.

For those of you who would rather explore the night sky indoors, this month's planetarium show will be on August 21<sup>st</sup> at 7:00 p.m. at the ETSU Planetarium in Hutcheson Hall. A location map of the Planetarium on the ETSU campus can be found on the web at <https://www.etsu.edu/cas/physics/outreach/planetarium.php> for further information.

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