

The Night Sky

Saturn at Opposition in September

On the first of the month, look out towards the eastern horizon one-half hour before sunrise to catch Jupiter, Venus, and Mercury stacked in nearly a straight line. Jupiter will be the highest above the horizon, located in Gemini, and Mercury will be the lowest, just sitting slightly above the horizon. Brilliant Venus lies halfway between the two. Also, on this morning Mercury sits just above Regulus, the brightest star in Leo. You will likely need binoculars to spot Regulus and Mercury.

Later on in the month, on the morning of September 19th, one hour before sunrise, Venus, Regulus, and a thin waning crescent Moon have an extremely close triple conjunction. The threesome will be less than $\frac{1}{2}$ degree from each other. This a relatively rare triple conjunction, let's hope for a clear sky on that morning.

All night on September 20-21, the ringed-planet Saturn is at opposition in the constellation of Pisces. On this night, Saturn rises at sunset above the south-eastern horizon, and sets at sunrise at the south-western horizon.

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 26th, a thin waxing crescent Moon forms a compact group with Mars, and Virgo's brightest star, Spica.

Mars is the lone planet in the evening sky, sitting very low above the west-southwestern horizon. From September 12th through the 14th, Mars sits just above Spica, the brightest star in Virgo. By the end of the month, Mars will be lost in the solar glare as it swings around the back side of the Sun on its way to becoming a morning celestial object.

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 September 7th at 2:09 p.m. EDT. The Moon will undergo a lunar eclipse around that time. Unfortunately, it will be visible on the other side of our planet. This September's Full Moon is known as the Full Corn Moon because it typically coincides with the time when northern U.S. Native American tribes would harvest their corn.

The first astronomy open house of the season is on Saturday, September 27th 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 September 18st 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.

This month's Night Sky was written by Dr. Donald G. Luttermoser, Chair of the Department of Physics and Astronomy at ETSU. He can be reached at lutter@etsu.edu. Any students wishing to pursue a career in Physics or Astronomy are encouraged to contact him at this email address. Astronomy-related information for the public, including a link to the ETSU Powell Observatory, can be found at <https://www.etsu.edu/cas/physics/> by selecting the Public Outreach pull down menu on the lower-left side of this web page.