# The Night Sky

## Saturn at Opposition in August

---

After almost half a year, we finally will start to see some of the bright planets in the evening sky. The ringed planet Saturn will be at a point on the sky opposite the Sun on August 14th. This opposition occurs just 64 hours after the Moon is at opposition, i.e., full phase, on the 11th. Precisely, the Moon is at full phase at 9:36 p.m. EDT on August 11th. Native Americans in the Great Lakes region referred to the August Full Moon as the Full Sturgeon Moon, since this large fish was most readily caught during this month. On the evening of the 11th, only 5-degrees separate the Full Moon and Saturn low in the southwest sky. When at opposition, a planet rises at sunset and sets at sunrise the next morning.

On the morning of August 15th, the waning gibbous Moon will have a close encounter with Jupiter, with Jupiter appearing to the upper-right of the Moon. A few days later on the morning of August 19th, the Moon will be at last quarter phase and appear between Mars and the Pleiades star cluster in Taurus. This will make a very photogenic conjunction between these three celestial objects. Mars is now really starting to brighten as it approaches its December opposition.

For you early risers, the morning of August 25th offers a very pretty site with a thin waning crescent Moon sitting just above the brilliant planet Venus in the morning twilight 45 minutes before sunrise. Finally, on the morning of August 30th, Mars sits between the Pleaides and the Hyades star clusters in Taurus. However, this alignment will be just as pleasurable on a few days before and a few days after this date. It will be a real treat for you naked-eye observers!

This year's Perseid Meteor Shower is expected to peak on the night of August 11-12, 2022. Unfortunately, this coincides with the Moon at full phase. As such, one is likely only to catch the brightest of these meteors around this peak date. However, this meteor shower is long lasting spanning a time interval from approximately July 14 to September 1. Chances are that if you see a meteor in the month of August, it is likely a Perseid. The comet responsible for the Perseid meteor shower is a rather large comet called 109P/Swift-Tuttle. This comet orbits the Sun approximately every 133 years.

The ETSU Powell Observatory open houses are on hiatus for the summer. Later this summer, the schedule for our Astronomy open houses can be found on the web at https://www.etsu.edu/cas/physics/observatory/default.php.

Also, the ETSU Planetarium Shows are also on hiatus during the summer months. Please check the Planetarium web page 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 http://www.etsu.edu/cas/physics/ by selecting the Public Outreach pull down menu on the lower-left side of this web page.