

The Night Sky

Lunar Eclipse on the Morning of November 8th

On the night of November 1st, a waxing gibbous Moon has a close conjunction with the ringed planet Saturn, which sits only 4.5-degrees from our nearest neighbor. Then on November 4th, the Moon passes less than 3-degrees of arc to the south of Jupiter. This month's closest Moon-planet conjunction occurs on the morning of the 11th, when the waning gibbous Moon is only 2.5 degrees away from the Red-Planet Mars. Mars is now very bright, so it should be easy to spot in the constellation of Taurus near the bright Moon.

On the evening of November 13th, the waning gibbous Moon sits below the twin bright stars of Gemini, Castor and Pollux. Castor sits on top, with the brighter Pollux lying between Castor and the Moon.

Both Mercury and Venus will be lost in the solar glare in November as they sit too close to the Sun. At the other end of the solar system, planet Uranus reaches opposition on November 9th, residing in the constellation of Aries.

November's Full Moon will occur on the 8th at 6:02 a.m. EST. This November's Full Moon is known as the Full Beaver's Moon by native Americans. This year, November's Beaver Moon is accompanied by a total lunar eclipse! During a lunar eclipse, the Moon, Sun, and Earth stand in a line with the Earth in the middle, causing our planet's shadow to fall onto the Moon. This total lunar eclipse will be visible from most of North America, reaching its maximum at approximately 6:00 A.M. Eastern Time on Tuesday, November 8. For us in eastern Tennessee, the Moon will be very close to setting at this time, so try to find a location with a clear view of the western horizon. This November eclipse will be a bit brighter than the one that occurred last May, since the Moon won't penetrate as deeply into Earth's umbral shadow this time around.

The Leonid meteor shower reaches its peak on the morning of November 18th. The waxing crescent Moon rises two hours after the radiant of this meteor shower, so try to get out before moonrise to catch this meteor shower. Make sure you dress warmly, since it will be quite cold in the early morning on this date!

Daylight Savings Time ends in the early morning of November 6th. Make sure you "fall back" one hour with your clocks before you go to bed on November 5th.

The Department of Physics and Astronomy is proud to announce the return of our monthly Astronomy Open Houses at the campus observatory. The month of October had 2 free public astronomy open houses at the ETSU Powell Observatory, one on Saturday, October 1st and the other on October 29th from 8 to 10 p.m. The November open house occurs on Saturday, November 29th, from 8 to 10 p.m.

EST. 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, the next monthly planetarium show will be on November 17th 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 <http://www.etsu.edu/cas/physics/> by selecting the Public Outreach pull down menu on the lower-left side of this web page.