The Night Sky

Observing Light from Afar (and from Really Far!)

In November evenings, the bright planet Jupiter will remain a prominent sight in the southern part of the sky, rising ever earlier so that while it starts to the east, by the end of the month it is high in the sky. It easily outshines the stars.

After mid-November, however, early risers can see the even brighter planet Venus. Venus rises in the east ahead of the Sun but behind the planet Saturn which shows a little higher in the sky in the east before sunrise. Saturn is not nearly as bright as Venus, but it will still be one of the brighter objects viewable in the morning sky in the east.

These planets are very distant, from tens to hundreds of millions of miles away, but they appear in the celestial company of stars that are a million times more remote. In the evening, as the Summer Triangle of bright stars Vega, Deneb and Altair set in the west, the bright winter constellations including Orion the Hunter and Auriga the Charioteer will rise in the east.

November's full moon — known in folklore as the beaver or frost moon — falls on the 21st.

Prominent throughout November evenings are constellations including Cassieopeia , Andromeda, and Pegasus. An asterism, or star pattern, composed of a star in Andromeda and stars in Pegasus is known as the Great Square of Pegasus, four stars within the constellations which form an approximate square on the sky. It takes two fists held at arm's length to span the diagonals of the Square in the sky.

On a dark night (moonless evenings early in November, for example) in a dark location, a search of the sky almost directly overhead in the region between the crooked W of Cassieopeia and the upper left corner of the Great Square will reveal the faint fuzzy patch which is the Andromeda Galaxy, ten thousand times as distant as most stars we see in the sky. It is one of the most distant objects that can be seen in the sky with the naked eye. The Andromeda Galaxy contains even more stars than our own home galaxy, the Milky Way.

To see more distant objects, we generally need help in the form of observational aids like telescopes. These will be available at the free open house at the ETSU Powell Observatory November 13. You can view such distant objects as well as interesting nearby ones through telescopes and hear a talk by physics and astronomy faculty from 8 to 10 p.m. (unless the sky is cloudy).

Directions to the observatory can be found at etsu.edu/physics/etsuobs/obsmap.htm.

The November Night Sky was written by Dr. Mark Giroux of the Department of Physics and Astronomy. He can be reached at girouxm@etsu.edu. Astronomy-related information for the public, including a link to the ETSU astronomy open houses, can be found at www.etsu.edu/physics/astronomy.htm.