

The Night Sky

Mars Visits the Eye of the Bull

The red-planet Mars is the only bright planet visible in the evening sky in April. Mars spends the month in the constellation of Taurus, the Bull, still moving rapidly with respect to the background stars. From April 11th through the 16th, Mars moves towards then passes the orange-giant star Aldebaran. Aldebaran, known as “the eye of the bull” due to its location in Taurus, is approximately 1.7 times the sun’s mass, 425 times the brightness of the sun, and about 44 times the diameter of the sun.

The “King of the Planets” Jupiter, is the next bright planet to make an appearance rising shortly after 1 a.m. EDT above the southeastern horizon at the beginning of the month. Jupiter dominates all other celestial objects at its current location in the southern sky as it continues to brighten as we “catch up” to this gas-giant planet.

Two hours after Jupiter-rise, Saturn pops up above the southeastern horizon. The ringed planet now resides in eastern Sagittarius, hence will never get very high in the southern sky when it is visible. Like Jupiter, the ringed planet brightens slightly throughout the month.

We now have to wait until morning twilight to catch our final two bright planets. Venus rises during the morning twilight followed by the innermost planet Mercury, which rises about an hour before the sun at the beginning of the month. Mercury will be difficult to spot in the bright morning twilight, so use binoculars to spot Mercury. As the month progresses, the separation between the solar system’s innermost planets will shrink pretty rapidly. Unfortunately, Mercury will be lost in the solar glare before Venus can catch it.

The moon will be at full phase on April 19th at 7:12 a.m. EDT. April full moons were referred to as the “Full Pink Moon” by early Native American due to the color of some flowers that bloom during this month.

April also gives rise to the evening reappearance of the Arcturus, the 4th brightest star in the night sky, located in the constellation of Boötes. Arcturus is one of my favorite stars since its reappearance in the evening sky is a sign that spring has returned. It is red giant star with a diameter 27 times that of the sun. One can easily find Arcturus by following the curve of the Big Dipper’s handle which can be remembered with the astronomy limerick, “Follow the arc to Arcturus.” If one continues this path in the sky, one can then find Spica, the brightest star in Virgo – “then drive a spike to Spica.”

The next free public astronomy open house at the ETSU Powell Observatory will occur on Saturday, April 6th, 2019 starting at 8 p.m. 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. Make sure you dress warmly since you will be standing outside to look through our telescopes. This marks our last public open house at the Observatory before the summer hiatus. 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/default.php>.

For those of you who would rather explore the night sky indoors, a planetarium show will be given on March 21st 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>.

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 at the top of this web page.