

The Night Sky

Venus Traverses the Hyades Star Cluster

Venus, now shining prominently in the morning sky, traversing the Hyades star cluster in Taurus during the first 2 weeks of the month. During this time, Venus is shining at its greatest brilliancy at magnitude -4.7 rising 2 hours prior to the Sun on July 1st and increasing to 3.5 hours before the Sun at the end of the month. On July 11th, Venus passes 1 degree of arc north of the red giant star Aldebaran, the brightest star in Taurus.

Jupiter reaches opposition with the Sun on July 14th, rising at sunset and setting at sunrise the next day. Six days later on the 20th, Saturn reaches opposition. Our two gas giants of the solar system having been hanging out together in the southern zodiac since coming out from behind the Sun earlier this year. Our two largest planets will experience a very close conjunction with each other later this year.

As we scan the sky moving north-eastward along the zodiac, we next encounter the red planet Mars. As the separation between Earth and Mars decreases this month, Mars greatly increases in brightness as it moves along the celestial sphere, making its red-tint very noticeable. Mars rises around 12:30 a.m. as July begins, and as the month ends, the red planet rises around 11:15 p.m. EDT.

The innermost planet Mercury returns to the morning sky on July 17th, joining brilliant Venus. From July 17th through the 19th, a thin crescent moon moves from just above of Venus to just above Mercury, which lies to the lower left of Venus.

The sun reaches aphelion (farthest) in its orbit about the Sun at 7:35 a.m. EDT on July 4th, lying 94,507,635 miles from the Sun. The moon will be at full phase at 12:44 a.m. EDT on June 5th. The moon will undergo a penumbral eclipse during this time. Unfortunately, the moon will just barely be in the Earth's shadow, hence the dimming of the moon will be too slight to notice. Full moons in the month of July are known as the "Full Buck Moon" by Native Americans since a buck's antlers are in full growth at this time of year.

The ETSU Powell Observatory open houses are on hiatus until further notice. Once the current health crisis is over, the 2020-2021 schedule for our Astronomy open houses can be found on the web at <https://www.etsu.edu/cas/physics/observatory/default.php>.

The ETSU Planetarium Shows are also on hiatus until further notice. Once ETSU returns to normal operations, the 2020-2021 schedule for the ETSU Planetarium Shows will be posted 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.