The Night Sky

Venus Returns to the Morning Sky

Four of the brightest planets are visible in the southwestern evening sky during the first few days of January 2022. During astronomical twilight, look quick to see brilliant Venus a few degrees above the southwestern horizon. To the upper-left of Venus is our innermost planet Mercury. Continuing in that direction is the ringed planet Saturn, followed by the King of the Planets, Jupiter. During the first week of January, watch the Moon skim below this quartet of planets. Venus will not remain in the evening sky for long this month as it is in conjunction with the Sun on January 8th. However, Venus will not be out of sight for long as it quickly rises in the morning sky when it will be visible low in the southeast sky on the 10th, just a few days past its inferior conjunction By the way, while Venus is visible in the evening and morning sky, train a pair of binoculars on it – it should be easy to see the thin crescent of Venus.

Mercury puts on a nice show in the evening sky this month. It reaches greatest elongation from the Sun on January 7th. In addition to this, Mercury continually moves towards Saturn, reaching a minimum separation of 3½ degrees on the evening of January 12th. Since this relatively close conjunction occurs in the bright evening twilight, binoculars will help you spot this pair. Mercury then quickly recedes towards the Sun, reaching conjunction with our star on January 23rd.

In the morning sky, Mars is relatively close to the red supergiant star Antares during the first week of January. The name Antares is derived from ancient Greek roots meaning “rival to Ares.” Ares was the Greek name for the Roman Mars, the god of war. Antares got this name because its reddish color is similar to that of Mars. Since this pair will be of similar brightness, this is a good time to compare the color of Mars with Antares. Mars will be slightly fainter than Antares and lying to the left of the red supergiant. On the last morning of 2021, a thin waning crescent Moon will lie just above Antares.

The Earth will be at perihelion, its closest point to the Sun, on January 4th at 1:52 a.m. EST. Like all the planets in the solar system, the Earth has an elliptical orbit, with the closest point in its orbit (perihelion) occurring in early January, and its farthest point (aphelion) occurring in early July. Distance from the Sun's center to Earth's center will be 147,105,052 kilometers (91,406,842 miles) at that time, about 3% nearer than at apogee.

The Moon will be at full phase 6:48 p.m. EST on Januaryr 17th. Full Moons in January are known as the “Full Wolf Moon” by Native Americans since wolf packs howled hungrily outside their villages this time of year.

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

However, the ETSU Planetarium Shows may take place this spring semester depending on the status of the pandemic. Please check the Planetarium web page at https://www.etsu.edu/cas/physics/outreach/planetarium.php, in mid-January to see if the Planetarium shows will take place.

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.