The Night Sky

Bright Planetary Trio in the Morning Sky

During the first week of March, two planets will be visible in the evening sky, the innermost planet Mercury and the red-planet Mars. Mercury sets nearly one and a half hours after the sun on the 1st, though quickly fades in brightness during this first week. By week 2 in March, Mercury will be too faint to be seen in the bright evening twilight. Mars is still ever-present in the evening sky where it can be seen halfway up in the southwest sky one hour after sunset. Mars continues its rapid motion northward along the ecliptic (the earth's orbit around the sun projected on the sky), moving from the constellation of Aries into Taurus. By the end of the month, Mars will be located just 3 degrees south of the Pleiades star cluster in Taurus.

We now have to wait until after midnight to catch our next bright planet – the King of the Planets Jupiter. On March 1st, Jupiter rises around 2 a.m. EST above the south-eastern horizon. As the earth catches up to Jupiter as they both orbit the sun, Jupiter will brighten throughout the month.

Two hours after Jupiter-rise, Saturn pops up above the south-eastern horizon. The ringed planet now resides in eastern Sagittarius, hence will never get very high in the southern sky when it is visible. For the past few years, Jupiter has been slowly "catching up" to Saturn as they orbit the sun. Jupiter will "catch" Saturn in late December 2020.

The final bright planet to catch in the morning sky is the brightest planet, Venus. Our sister planet rises some 2 hour before the sun at the beginning of the month, but this interval gets a little shorter by the end of March. On March 2nd, the thin waning crescent moon can be seen just to the right of Venus. It should be a gorgeous site!

The moon will be at full phase on March 20th at 9:42 p.m. EDT. Although not technically a "supermoon", this full moon will occur with 2 days of perigee (closest distance to the earth), so it will be larger and brighter than most full moons.

During the last two weeks of March, the soft glow of the zodiac light should be visible from dark sites in the evening after twilight ends. Look towards the west at this time for a hazy pyramid of faint light stretching up through Taurus to Gemini, tilted slightly to the left. The zodiac light results from interplanetary dust in the inner solar system scattering light from the sun.

Standard Time ends and Daylight Savings Time begins at 2 a.m. on March 10th – make sure to move your clocks forward by one hour before you go to bed on the 9th. Spring returns at 5:58 p.m. EDT on March 20th, when the sun crosses the vernal equinox on the sky. The vernal equinox is the point on the sky where the sun crosses the celestial equator moving from the southern hemisphere into the northern hemisphere of the celestial sphere.

The next free public astronomy open house at the ETSU Powell Observatory will occur on Saturday, March 9th, 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. 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.