

The Night Sky

Double Planet in the Evening Twilight

The month of March arrives with bright planets returning to the evening sky. Throughout the first week of the month, both Venus and Mercury, the solar system's innermost planets hang close together low in the western sky ½-hour after sunset. The twilight will be relatively bright, but both planets will be bright enough to be seen. Mercury starts lower than brighter Venus on the first day of the month, but increases in altitude over the next few days, reaching closest approach to Venus on the 3rd, only 1.1 degrees-of-arc apart from each other. Mercury then rises above Venus and remains above our brightest planet for the following two weeks. This marks the best evening appearance of Mercury for 2018. If you have never seen our innermost planet, March 2018 is the time to catch a glimpse of it.

We will have another close conjunction of two planets on the evening of March 28th, when Uranus will only be four minutes-of-arc above and to the right of Venus. The greenish Uranus will not be bright enough to see with the naked-eye or binoculars in the bright twilight, however a modest-sized telescope should be able to make it visible.

The king of the planets, Jupiter, is the next bright planet to rise about 20 minutes before midnight at the beginning of the month on the southeaster horizon. Bright Jupiter will be easy to spot in the dim constellation of Libra. By month's end, Jupiter rises a little after 10:30 p.m. EDT.

The red-planet Mars rises next around 2 a.m. on the south-eastern horizon. Mars continues to move rapidly with respect to the background stars. As the month progresses, watch the separation between Mars and Saturn decrease. Saturn rises about 70 minutes after Mars on March 1st, but by the end of the month, each planets rises only a minute apart as they approach a close conjunction on April 2nd. Mars brightens rapidly throughout the month, starting a little fainter than Saturn, then surpassing the ringed-planets brightness by the 3rd week of the month. Mars will continue to brighten throughout the spring and early summer as it approaches our planet for a very close opposition on July 27th.

Like the month of January, March will have two full moons, the first occurring on March 1st at 7:51 p.m. EST, and the second at 8:37 a.m. EDT on March 31st. When a month has a second full moon, the later full moon is often referred to as a "blue moon." Standard Time ends and Daylight Savings Time begins at 2 a.m. on March 11th – make sure to move your clocks forward by one hour before you go to bed on the 10th. Spring returns at 12:15 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 24th from 8 to 10 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 <http://www.etsu.edu/cas/physics/observatory/default.aspx>.

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@mail.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.