The Night Sky

The Moon Occults the "Rival of Mars" this Month

During the overnight hours of March 2nd/3rd, the Moon will pass in front of the first-magnitude star, Antares, the brightest star in the constellation of Scorpius. The Moon will be at 3rd Quarter phase as it passes in front of this red supergiant star. The name comes from the ancient Greek civilization, meaning the "rival of Ares." "Ares" is the Greek name for the planet Mars. It is called this since the colors of Mars and Antares are similar (fairly red) and the planet's brightness when close to opposition is similar to the brightness of Antares. The occultation will be visible from Johnson City and the surrounding community. It will begin with the disappearance of Antares (Alpha Scorpii) behind the Moon's bright side at 2:12 a.m. EST, though at a low altitude of only 5.6 degrees above the southeastern horizon. Its reappearance will be visible at 2:54 a.m. EST at an altitude of 11.9 degrees.

Venus and Mars share the sky early in the morning prior to sunrise. Venus is on its last stages in its current morning apparition as it continually sinks towards the Sun. In the beginning of the month, it rises only one hour before sunrise above the east-southeast horizon. As such, you will have to look quick before the morning twilight gets too bright. As the month progresses, Mars slowly rises earlier and earlier before the Sun. Towards the end of the month, the red-planet should be quite easy to spot in the morning sky.

On the evening of March 13, the Moon has a close conjunction with Jupiter in the constellation of Taurus. On the following night, the Moon makes a very close pass just to the south of the bright star cluster, the Pleiades.

The innermost planet, Mercury, makes a favorable appearance in the evening sky during the last week of the month. Of the three evening appearances that Mercury will make in 2024, this is by far the best of them. It reaches greatest elongation from the Sun on March 24th. So, get out and look towards the western horizon 30 minutes after sunset during this week to catch this elusive planet. Binoculars will help you spot this planet in the bright twilight.

The Moon will reach full phase at 3:00 a.m. EDT on March 25th. This Full Moon will be a special one since the Moon will pass through the Earth's shadow to produce a penumbral lunar eclipse. You won't see the darkest part of the Earth's shadow on the Moon (i.e., the umbra of the Earth's shadow), instead, you will note that the brightness of the Moon will be significantly diminished at mid-eclipse. The Moon first enters the Earth's outer shadow (the penumbra) at 12:53 a.m. EDT on March 25th. Mid-eclipse occurs at 3:13 a.m. EDT, and the Moon leaves the penumbra at 5:33 a.m. EDT. March's Full Moon is known as the Full Worm Moon by Native Americans since earthworms start to appear on rainy days due to the warming of the ground as spring arrives.

Daylight Savings Time starts at 2 a.m. on Sunday, March 10th. Make sure you "spring" your clocks forward by one hour before you go to bed on the 9th.

The spring season arrives during the following week on March 19th at 11:06 p.m. EDT. At this time, the Sun is located on the vernal equinox on the celestial sphere. On this day and time, the Sun moves from the southern half of the sky into the northern hemisphere of the sky.

The next astronomy open house at the ETSU observatory is on Saturday, March 16th from 8 to 10 pm. 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 at this open house since temperatures are still rather cool during March evenings. 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/starparty.php.

If you would rather explore the night sky indoors, this month's planetarium show will be 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. See this web site for further information.

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