

# The Night Sky

## Close Mars Opposition and Mercury Crosses the Sun

---

We have two relatively unique astronomical events that will take place in May 2016. The first of these events is the transit of planet Mercury across the face of the sun on May 9<sup>th</sup>. The transit will begin early in the morning on this day at 7:12 a.m. EDT, reach transit midpoint at 10:58 a.m., then leave the sun's face at 2:42 p.m. that afternoon. The Department of Physics and Astronomy will have telescopes set up on campus that day for the public to safely view this event. This public viewing event will start at 10 a.m. and last to 2 p.m. on that date. The telescopes will be set up on the ball field next to the CPA on the ETSU campus. Note that this viewing event will be cancelled should it be cloudy on that day.

The second event takes place during the latter half of the month. Mars will be at opposition on the night of May 21-22. It will be just above the middle star of the claws of the constellation of Scorpius, Delta Scorpii. Coincidentally, the full moon will be to the upper-left Mars on that night. What makes the opposition unique is that Mars will be relatively close to earth for this opposition. In fact, Mars will be at closest approach on the night of May 30<sup>th</sup>, when it will be the closest (0.503 Astronomical Units) and largest it has been for the past 10½ years. At the beginning of the month, Mars rises in the southeast two hours after sunset. Throughout the month, Mars continues to brighten, starting at a brightness equaling that of Sirius, the brightest star in the night sky, and continuing to its maximum brightness equaling that of Jupiter during the last week of the month. Since Mars will be relatively close to us at this time, one should be able to notice its movement with respect to the background stars over a few days' time.

Jupiter continues to shine brightly in the evening sky this month. At night fall, this gas giant planet will be just to the south of the zenith (the point on the sky directly over your head). One should note the relative brightness of Jupiter and Mars throughout the month, with Mars continuing to brighten and Jupiter fading a bit in brightness. Also note the distinct color difference between Jupiter and Mars, with Mars having a reddish tint as compared to Jupiter's white glow.

About 30 minutes after the Mars rises in the southeast, planet Saturn rises at nearly the same position on the southeast horizon. All throughout May, Mars, Saturn, and the bright supergiant star Antares form a striking triangle which will be visible throughout the night. Besides comparing the color of Mars and Jupiter, also check out the color of Mars to that of Antares – they both have the same reddish color. This is actually the reason why Antares has this proper name associated with it – it means “rivaling Ares,” where Ares was the Greek god of war, and ‘Mars’ was the Roman god of war. Mars was associated with the god of war by ancient civilizations due to its reddish blood color.

Venus remains out of sight this month as it passes behind the sun. This brightest of the solar system's planets as seen from earth will return to the evening sky in late-June/early-July.

As mentioned above, the moon will be full at 5:14 p.m. EDT on May 21<sup>st</sup>. Native Americans often referred to the full moon of May as the “Full Flower Moon,” due to the fact that flowers are blooming at this time of year.

The ETSU Powell Observatory open houses are on hiatus until September. Later this summer, the 2016-2017 schedule for our Astronomy open houses 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](mailto:lutter@mail.etsu.edu). 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.