

# The Night Sky

## A Super Full Moon & Meteor Shower

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August will be a poor month for viewing the naked-eye planets as only Saturn is easily visible in the evening sky. It will be visible all month in the southern sky, located in the constellation of Scorpius just to the upper left of the bright red supergiant star Antares. Although the New Horizons spacecraft mission to Pluto deservedly got all the press in July, the Cassini spacecraft exploring the Saturn system is still returning valuable data to scientists on Earth 11 years after its arrival at Saturn. Cassini will make several more close flybys of Saturn's moons this year before departing the planet's equatorial plane to begin a year-long setup of the mission's daring final act. For its grand finale, set for 2017, Cassini will repeatedly dive through the space between Saturn and its rings before plunging to a fiery death in Saturn's atmosphere.

Both Venus and Jupiter are nearly lost in the glare of twilight as the month of August begins with Venus setting 30 minutes after sunset and Jupiter 1 hour after sunset. Both will quickly be gone from view and will return to the morning sky in a couple of months. Mercury and Mars are still lost in the bright morning twilight this month, each rising less than an hour before sunrise.

The annual Perseid meteor shower is one of the best meteor showers to observe as it may produce up to 60 meteors per hour at its peak. Its origin is the dust tail of an old periodic comet named Swift-Tuttle. Much of this dust debris is relatively large so the Perseids are famous for producing a large number of bright meteors and fireballs. Although the shower runs annually from July 17 to August 24, the very best viewing will be at its peak on the night of August 12 and the morning of August 13. The moon phase is a thin crescent that night leaving a very dark sky with the potential for a great show. The best viewing is always from the darkest location possible and during the hours between midnight and dawn. The meteors will appear to radiate out from the constellation Perseus, but can appear anywhere in the sky.

The new moon in August will occur on the 14<sup>th</sup>, thus aiding with dark skies for the meteor shower. However, this month's full moon heralds the first of three supermoons for the 2015 year. The full moon will occur at 2:35 p.m. EDT on August 29th. It will be a "supermoon", a name given to those full moons that occur when the moon is at or near perigee, the point in its orbit where the moon is closest to earth. This full moon will appear approximately 5% larger than its average angular size and about 15% brighter, although the casual observer may notice no real difference in its appearance.

The ETSU Powell Observatory open houses are on hiatus until September. The 2015-2016 schedule for our Astronomy open houses can be found on the web at <http://www.etsu.edu/cas/physics/observatory/starparty.php>. The ETSU Planetarium also offers free public programs with its 2015-2016 schedule available at <http://www.etsu.edu/cas/physics/outreach/planetarium.php>.

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