

The Night Sky

Jupiter at Opposition this Month

In August, the ringed-planet Saturn reached opposition. This upcoming month of September, the “King of the Planets” Jupiter will be at opposition. “Opposition” is the term used by astronomers when a planet or asteroid is on the opposite side of the sky of the Sun’s position. This year, Jupiter reaches opposition on September 26th. We now have two planets that we can observe in the evening sky, and they are the two most beautiful planets in the solar system.

If you have never observed Saturn through a telescope, now is the time to make this observation. You will never forget the first time you have seen the ringed-planet through a telescope! The rings are truly spectacular! Once you are through viewing Saturn, slew your telescope over to bright Jupiter. Jupiter is also an amazing site through a telescope. You should easily be able to spot the cloud bands on the planet and see the 4 Jovian moons that Galileo discovered when he first pointed his telescope at this planet. Although you might not see all 4 at the same time, keep your telescope trained on Jupiter and watch these moons slowly change position. With luck, you might be able to catch one of the moons transiting the planet with its shadow appearing on the cloud tops.

On the morning of September 5th, Venus rises about 45 minutes before sunrise above the East-Northeast horizon right next to Regulus, the brightest star in the constellation of Leo. Although you might be able to spot Venus with your naked-eye, it will impossible to spot Regulus without optical aid in the bright morning twilight.

The red-planet Mars makes a close approach to the red giant star in Taurus. From September 5th through the 10th, Mars will be less than 5-degrees away from Aldebaran. Mars will be the brighter of the two, shining now at magnitude -0.2 compared to Aldebaran at +0.9 (negative numbers are brighter than positive numbers). During this time, go out and compare the color of reddish Mars to that of orangish Aldebaran.

The Sun crosses the Autumnal Equinox on the celestial sphere at 9:04 p.m. EDT on September 22nd, marking the start of the fall season. The Sun leaves the northern sky and moves into the southern sky on this date. On an equinox day, there are equal amounts of daylight and night-time hours. The Moon will be at full phase 5:59 a.m. EDT on September 10th. Since it’s the full Moon closest to the Autumnal Equinox, Native Americans called this the Full Harvest Moon.

The Department of Physics and Astronomy is proud to announce the return of our monthly Astronomy Open Houses at the campus observatory. The first free public astronomy open house at the ETSU Powell Observatory of this season will occur on Saturday, September 3rd 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.

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>.

For those of you who would rather explore the night sky indoors, the next monthly planetarium show will be on September 15 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> for further information.

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