

The Night Sky

Three Bright Planets Adorn the Night Sky

The month of June 2016 will be a celestial showpiece throughout the night with three bright planets being visible in the evening sky. Jupiter dominates the western sky all evening. Jupiter does not set until 2 a.m. on June 1st, however by the end of the month, this king of the planets sets at midnight. Meanwhile, off in the eastern sky in the early evening, reddish Mars nearly equals Jupiter's brightness at the beginning of the month, but fades in brilliance as the month progresses. This results from the faster moving earth pulling ahead of the red planet as they both orbit the sun.

Planet Saturn, visible just to the left (i.e., east) of Mars, will be at opposition (the point on the sky opposite to the sun) early in the month on June 3rd. On this date, Saturn rises at sunset on the southeastern horizon about ½ hour after Mars rises. Saturn lies to the northeast of the bright red supergiant star Antares. Saturn, Mars, and Antares all lie fairly close to each other on the sky throughout the month, forming a bright triangle of celestial objects. Keep an eye on this region throughout the month as Mars continuously changes its position in this triangle on a nightly basis.

After having crossed the sun's disk on May 9th, Mercury returns to the morning sky in early June. Unfortunately, Mercury never gets very high above the eastern horizon before it is lost in the bright twilight proceeding dawn. Meanwhile, the other interior planet, Venus, is at superior conjunction behind the sun on June 6th. Brilliant Venus will return to the evening sky in early July.

The sun arrives at the summer solstice at 6:34 p.m. EDT on June 20th, marking the beginning of summer in the northern hemisphere. The summer solstice is the northern-most point the sun gets in the sky. Coincidentally, the moon will be full at 7:02 a.m. EDT on this same date.

Since the sun makes a very high arc across the sky this time of year, nightfall happens very late. One usually has to wait until 10 p.m. to see a true dark night sky. Besides the three bright planets that will be visible this month, other stellar celestial splendors can be seen in the evening. The brightest star visible in the evening sky this time of year is Arcturus, the 4th brightest star in the night sky. Arcturus is one of my favorite stars since its reappearance in the evening sky is a sign that spring has returned. It is red giant star with a diameter 27 times that of the sun. One can easily find Arcturus by following the curve of the Big Dipper's handle which can be remembered with the astronomy limerick, "Follow the arc to Arcturus." If one continues this path in the sky, one can then find Spica (pronounced 'Spike-ah') – "then drive a spike to Spica."

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>.

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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.