

Night Sky Viewing at Widener University

October 2012

Sunset & Sunrise Times

	Sunset	Sunrise
Begin Month (EDT*)	6:43 pm	6:58 am
End Month (EDT*)	6:00 pm	7:30 am

Lunar Phases

Last Quarter	8 th	
New Moon	15 th	
First Quarter	22 nd	
Full Moon	29 th	"Hunter's Moon"

Bright Stars & Constellations Visible Around 9 pm EDT*

Summer Triangle of *Vega* in *Lyra*, *Altair* in *Aquila*, and *Deneb* in *Cygnus* is to the west of overhead
Star *Arcturus* in *Bootes* (Herdsman) is setting, very low in the northwest
Star *Antares* in *Scorpius* is setting very low in the southwest
The Teapot of *Sagittarius* is low in the south-southwest
The Great Square of *Pegasus* is high in the east-southeast
Star *Fomalhaut* in *Pisces Austrinus* is rising, very low in the southeastern sky
Constellation *Cassiopeia* is high in the northeast
Constellation *Perseus* is just below Cassiopeia in the northeast
Star *Capella* in *Auriga* is low in the north-northeast after about 9 pm
Star *Aldebaran* in *Taurus* and star cluster *Pleiades* (7 Sisters) are rising low in the east-northeast

Naked Eye Planets This Month in the Evening & Morning Sky

Saturn: In *Virgo*. Saturn is still visible – barely – at the very start of October, looking like a star low in the west at dusk and setting about an hour after the Sun. By midmonth, though, Saturn vanishes into the evening twilight, and eventually reaches conjunction with the Sun on the 25th. Shortly after conjunction, Saturn rebounds into the morning sky, and by the end of the first week of November it is rising nearly one hour before the Sun does.

Mercury: In *Virgo-Libra-Scorpius*. Although technically visible all month in the evening sky, in reality Mercury will be hovering just above the southwestern horizon at dusk, too low for most observers to find with the typical obstructions like houses and trees in that direction. Even when Mercury reaches its greatest elongation with the Sun on the 26th, when it sets less than an hour after sunset, it will still be extremely difficult if not impossible to spot because of both obstructions and the bright twilight background.

Mars: In *Libra-Scorpius-Ophiuchus*. Mars begins the month of October within the boundaries of the constellation Libra, then passes into Scorpius at midmonth before ending the month in Ophiuchus. Mars is far fainter than it was back in the spring, glowing orange like a dying ember in a fire. Mars can be spotted low in the southwest as soon as darkness falls; it remains visible until it sets around 8:15 pm EST at midmonth, or about 2 hours after sunset. In fact, Mars will continue to keep pace with the Sun over the next several months, traveling eastward through the zodiac constellations ahead of the Sun, so that there is a nearly constant two hour lag between sunset and Mars-set every night for the remainder of this year. By next February, however, the Sun will catch up with Mars and be in conjunction it.

Jupiter: In *Taurus*. With its prodigious size of 11 times the diameter of Earth and mass of 318 Earths, the planet Jupiter is clearly deserving of its name of king of planets. But in addition, Jupiter is an impressive visual sight both to the unaided eye and in the telescope. Jupiter clears the horizon after about 10 pm on the 1st, and by just after 8 pm on Halloween. Once up, Jupiter resembles a brilliant cream-colored star that outshines anything else in its vicinity except the Moon in early October.

Venus: In *Leo-Virgo*. Venus continues to adorn the pre-dawn sky throughout October, providing a spectacular sight for early morning observers. As October opens, Venus is rising in the northeast about three and a half hours before the Sun, or around 3:30 am. Once it has cleared the northeastern horizon, Venus radiates like a blazing yellow star, easily outshining even Jupiter. Note that in the early morning hours of October 3, Jupiter will pass extraordinarily close (within about one-quarter the diameter of the Full Moon) to the star Regulus in Leo. This will make for a magnificent sight particularly in binoculars or a small telescope. This month, Venus begins its gradual descent toward the rising Sun on the eastern horizon; by Halloween it is rising an hour later at 4:30 am.

Orionid Meteor Shower

Peak is after midnight on October 20. Expect about 10-12 meteors per hour, appearing to emanate from the constellation Orion, which will be rising in the east just before midnight.

*For more information on astronomy and weather, visit the Widener University Public Viewing Website at <http://www.widener.edu/stargazing/>. A set of free sky maps can be obtained at <http://www.skymaps.com/>