

AUGUST 2011 ASTRONOMY
From the Trackman Planetarium at Joliet Junior College

Welcome to August and the “dog days” of summer. The dog days get their name from Sirius - the Dog Star in Canis Major. Sirius rises just before the sun during August. Some ancients thought that the heat from Sirius - the brightest star in the sky - added to the heat from the sun and made the days in the northern hemisphere hotter at this time than in the rest of the year. The Egyptians knew that when Sirius rose before the sun, the Nile river would begin to overflow its banks, so Sirius was also a “calendar star”. It should be noted that 5,000 years ago, Sirius appeared in the morning sky almost 90 minutes earlier than it does now. During August, if you look to the eastern sky before sunrise, you will see the mighty hunter, Orion. By the end of August you will see Sirius.

The sun is now crossing lower in the sky each day and this means an earlier sunset and later sunrise. Earlier sunsets may be bad news for golfers, but it is good news for astronomy nerds. With the sun setting at 7:20 on the 31st, good viewing starts at 8 pm and it we have dark skies by 9 pm.

Saturn is low in the western sky after sunset on August 1st and will be lost in the twilight by mid-month. Since Saturn is 89 million miles farther from Earth than it was last spring, it is not nearly as bright. Just as we lose Saturn in the evening sun, Jupiter begins to rise in the east in late evening. By the end of August, Jupiter will be in the sky before 10 pm, and the biggest planet will be in the mid-evening sky by the end of September. Neptune is in the evening sky during August but you need a telescope to see it. Neptune has just completed its first orbit around the sun since it was discovered in 1846. Neptune will be at its closest approach to Earth for the year on August 22nd when it will be 2.7 billion miles away. Venus crosses behind the sun on August 14th and the brightest of all the planets will then be moving into the evening sky in September.

The Milky Way is at its finest during August as it stretches across the evening sky going from northeast to south. It is easily visible in moderately dark skies. The Milky Way is our galaxy and is made up of billions of stars in the shape of a fried egg - round and flat - and where there is a yoke in an egg, our galaxy has a black hole. Our sun is located toward the edge of the galaxy and on summer evenings we are looking through the Milky Way toward its center. The center of the galaxy is to the right of Sagittarius. The constellation of Sagittarius is low in the evening sky and looks very much like a teapot. Using just a little imagination, the teapot is easy to find low in the southern sky. If you live in an area where it isn't dark enough to see the Milky Way, and you have binoculars, look between the three bright stars overhead that make up the summer triangle. The Milky Way runs between those stars and you should be able to see it with binoculars.

The Perseid Meteor shower peaks on August 12th. The Perseid is one of the most active of the meteor showers, and since it comes on a summer night it makes meteor viewing even more inviting. The Perseid Meteors are small rocks left from the tail of Comet Swift-Tuttle when Swift-Tuttle passed through Earth's orbit in 1992. Unfortunately, the full moon is on August 13th and so there will be too much moon in the sky on the 12th to see many meteors. The August full moon, by the way, is the Full Sturgeon Moon because it is the best time to catch sturgeon in the Great Lakes - according to the Native Americans.

In September of 2007 NASA launched an ion powered space probe named Dawn to study the asteroid belt between Mars and Jupiter. Last July 16th, Dawn went into orbit around Vesta, the second most massive object in the asteroid belt. Dawn will study the surface of Vesta because much of it is the same as it was 4.5 billion years ago when the solar system formed. Of special interest will be a massive impact crater at Vesta's south pole that is the result of a collision with another asteroid eons ago. This collision resulted in large amounts of Vesta being blown out into space. Planetary scientists think that about 5% of the meteors found on Earth are from Vesta. After a year of orbiting and studying Vesta, Dawn will move on to study the minor planet Ceres.

The sun starts the month of August in Cancer and moves into Leo on August 11th. The sun stays in Leo for the remainder of the month.

There are no public shows at the planetarium during August. The first show of the 2011-2012 season will be on September 13th and it is on the Seasonal Skies.

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