

NOVEMBER 2011 ASTRONOMY
From the Trackman Planetarium at Joliet Junior College

Jupiter is high in the eastern sky after sunset. We were closest to Jupiter on October 28th and now the Earth's orbit is taking us away from the giant planet. Jupiter will remain one of the brightest objects in the evening sky through the winter. Meanwhile, Venus - the brightest of all the planets - is in the western sky after sunset. Mercury will be close to Venus during the first week in November and you might be able to find both of them with binoculars. (Do not use binoculars until after the sun has set.) Mercury will be at its farthest from the sun on November 14th, at 22 degrees east of the sun and setting one hour after the sun. Mars is in the sky during the night. Mars rises just after midnight on November 1st and at 11:30 pm by the end of the month. Mars will be in the early evening sky in late winter. Saturn is in the early morning sky. Look to the east about two hours before sunrise to find the ringed planet. Uranus, Neptune and the minor planet, Ceres, are all in the evening sky, but you need a telescope to see them.

The summer triangle of Deneb, Vega and Altair are still visible in the western sky after sunset. The reason the summer stars are still visible is because we have more and more hours of darkness. By mid-evening, the Pleiades is visible in the eastern sky. The Pleiades marks the shoulder of Taurus the Bull. This group is known as the seven sisters and is composed of a group of new stars that just formed in the last few million years. They are easily found with the naked eye and make an excellent binocular target. Above and to the right of the Pleiades is the constellation of Perseus. There are several beautiful open star cluster in Perseus which makes it a good binocular target as well. High in the November sky is the "W" of stars that make up the constellation of Cassiopeia. Below Cassiopeia is the huge square of Pegasus. The square of Pegasus is as wide as the "W" of Cassiopeia. Between Pegasus and Cassiopeia is the nearest galaxy to our Milky Way Galaxy, the Andromeda Galaxy. If you search that area with binoculars, you might find what looks like an elongated fuzz ball. That is the Andromeda Galaxy. To the east of the Pleiades is the bright red star Aldebaran that marks the eye of Taurus the Bull. Aldebaran is the fourteenth brightest star and is 60 light years from Earth. If you looked down at Earth from Aldebaran, you would see who was here 60 years ago! By late evening, Orion, the most familiar constellation in the winter night sky, will be rising.

The change to Central Time is in the early morning of November 6th. Set the clock back one hour. On November 6th, the sun will rise at 6:35 am and set at 4:37 pm. (At Joliet Junior College)

Our first Saturday show at the Trackman Planetarium will be Wonders of the Night Sky at 2:30 pm on November 5th. Other public shows are on November 8th at 7:30 pm (Seasonal Skies), November 17th at 6:30 pm (What's in the Sky), and November 22nd at 7:30 pm (Telescope Basics). Public shows are offered at no charge as a community service of Joliet Junior College.

The Leonids Meteor shower is one of the best meteor showers of the year. This year it peaks on November 17th. The meteors are the remains of Comet Temple-Tuttle. Start looking at about midnight in the eastern sky. The best time to look for Leonids is about 2 or 3 o'clock in the morning. Unfortunately, the moon is up from 9:44 pm until mid-morning on the 18th.

The sun is crossing very low in the sky, giving us less heat and energy every day. It starts in November in Libra and enters Scorpio on the 24th. On November 30th, the sun enters Ophiuchus where it will stay until the end of the month. You've never heard of the astrological sign of Ophiuchus? That is because the Earth wobbles in a circle called precession and since the astrological charts were created, the sun has changed position in the stars as we see it. The outdated and outmoded non-science of astrology never caught up.

The full moon is on November 10th. The November full moon is known as the "Full Beaver Moon" because it is the time of the year to set the beaver traps and the beavers are preparing for winter.

The sun has become very active and its face shows several large sunspots at any one time. At its equator, the sun rotates about every 25 days so the sunspots move across the face of the sun. With the sunspots will sometimes come Coronal Mass Ejections (CME). These outbursts of plasma travel across the solar system and when they overcome the Earth's magnetic shield, we get Northern Lights or Aurora Borealis. In the southern zones the Northern Lights are known as Aurora Australis. It is a rare occasion when we can see the Northern Lights this far south but it happened at the end of September. There were reports of seeing the Northern Lights all the way down to the southern states. Unfortunately, it is impossible to predict when the Aurora will be visible, so you just have to keep looking to the sky.

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