

OCTOBER 2009 ASTRONOMY
From the Trackman Planetarium at Joliet Junior College.

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On October 9th, at 6:30 AM, the LCROSS (Lunar Crater Observer and Sensing Satellite) will be crashed into a crater at the moon's South Pole. This space probe, which is actually the final stage of an Atlas V rocket, will kick up a large plume of dust and rock. This debris will be analyzed for water content by an instrument package flying four minutes behind the rocket. The instrument package will then also crash into the moon. LCROSS has been in an earth-moon orbit since June when it was used to deliver the Lunar Orbiter. The Orbiter has been orbiting and photographing the moon in anticipation of our returning and building a permanent base on the moon's surface. Our "Seasonal Skies" public show at 7:30 PM on October 6th will be shortened so we can do a special presentation on LCROSS and its collision with the moon.

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The full moon is on October 4th. This is the Harvest Moon, so called because it is the full moon that is in the sky for the most number of hours during the harvest season - giving farmers extra light for harvesting. The Harvest Moon is above the horizon for over 13 hours. (During the winter months, the full moon is in the sky longer - but the crops are in.)

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Jupiter is the bright planet in the southern sky during the evening. Jupiter is in the constellation of Capricorn. Unseen are Neptune, just to Jupiter's left, and Uranus farther to the east. Pluto is low in the southwestern sky. Only Jupiter is visible with the naked eye. Venus is the bright object in the east before sunrise. Venus is orbiting towards the sun and will be in the morning twilight by month's end. Saturn has moved out from behind the sun and will be between Venus and the Moon on the 15th. Mars rises at midnight at mid-month. Mars appears to be slowly moving westward and will be in our evening sky during January.

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Look in the eastern sky in mid-evening and you will see a cluster of stars called the Pleiades. This is an open cluster of new stars (100 million years old) sometimes called the seven sisters. Since it is one of closest star clusters to earth and very obvious to the naked eye, the Pleiades has had many meanings in different cultures. The Pleiades is a winter object (in Taurus) and the appearance of the Pleiades in the evening sky is a sure sign that winter is on the way! In fact, at the end of October, Orion, a mid-winter constellation, is in the late evening sky.

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The Summer Triangle is still overhead but it has moved to the west. Now the "W" of Cassiopeia is overhead in the sky. Below Cassiopeia is the large square of Pegasus. If you have binoculars, start with the upper left corner star in the Pegasus square

(Alpheratz), go two stars to the left and then up, you should find a fuzzy object that is the Andromeda galaxy.

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The sun is in Virgo until the last day of the month, and then it goes into Libra. The sun is now below the celestial equator - an imaginary line in the sky that is above our own equator. Since the sun is below the equator, the majority of its light, heat and energy are directed to our Southern Hemisphere. (Hello, winter!) If you have satellite television, your dish is aimed at the celestial equator.

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The last day of the month is Halloween. Halloween is one of the cross-quarter days - a day halfway between equinoxes and solstices. The history of Halloween is fascinating. It has been a special "day of the dead" for centuries. In many cultures, this time of the year was the end of one calendar year and the beginning of the new calendar. It was believed that there was a gap between the years, a gap where spirits could sneak through and come back to visit. There are, of course, many other Halloween stories. Google "Halloween History" and you will find some great stories to tell your kids!

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The time change is during the night on Oct. 31/Nov.1. Set your clock back one hour. Sunrise on the last day of Daylight Saving Time is at 7:26 AM. But then, if you lived on the other side Lake Michigan (Eastern Time Zone), sunrise wouldn't be until 8:22 AM.

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On October 18th we start with the first of our Sunday afternoon children's shows. We have found that 2:30 PM on Sundays is, in many cases, more convenient than a 6:30 PM show on Thursdays. Our first Sunday show is "Are there Aliens?" As with all of our shows, we will start with a tour of the night sky on the planetarium dome using the Spitz Star Projector before the special presentation. (Alien costumes are acceptable for this show.)

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