



Fall 2010 Astronomical Calendar

Buhl Planetarium & Observatory

September

1	Wed	🌑	Last Quarter Moon – 1:22 pm
8	Wed	🌒	New Moon – 6:29 am
11	Sat		Crescent Moon 6 degrees left of bright Venus – look southwest at dusk
15	Wed	🌑	First Quarter Moon – 1:49 am
19	Sun		Mercury at Greatest Western Elongation – look east at dawn near Regulus
21	Tue		Jupiter at opposition – above the horizon from dusk to dawn
22	Wed		Autumnal Equinox – 11:11 pm
22	Wed		Jupiter 6 degrees below Moon – look east in the evening
23	Thu	🌕	Full Moon “Harvest Moon” – 5:17 am
28	Tue		Mars to the upper right of Venus – look low to southwest horizon at dusk
30	Thu	🌑	Last Quarter Moon – 11:52 am

October

2	Sat		Crescent Moon 9 degrees to the lower left of Pollux – look east before dawn
4	Mon		Thin Crescent Moon 7 degrees to the upper right of Regulus – look east at dawn
7	Thu	🌒	New Moon – 2:44 pm
11	Mon		Crescent Moon 5 degrees to the upper left of star Antares – look southwest at dusk
14	Thu	🌑	First Quarter Moon – 5:25 pm
19	Tue		Gibbous Moon 6 degrees above Jupiter – look southeast in the evening
22	Fri	🌕	Full Moon “Hunter’s Moon” – 9:37 pm
30	Sat	🌑	Last Quarter Moon – 8:46 am

November

3	Wed		Saturn 10 degrees to the lower left of Crescent Moon – look east before dawn
6	Sat	🌒	New Moon – 12:51 am
7	Sun		Daylight Saving Time ends – turn clocks back one hour
13	Sat	🌑	First Quarter Moon – 11:37 am
15	Mon		Gibbous Moon 8 degrees to the upper right of Jupiter – look south-southwest in the pm
18	Thu		Leonid meteor shower peaks – look east after midnight until dawn
21	Sun		Moon 9 degrees to the upper left of Aldebaran – look east in the late evening
21	Sun	🌕	Full Moon “Beaver Moon” – 12:28 pm
22	Mon		Saturn 14 degrees above Venus – look east-southeast at dawn
28	Sun	🌑	Last Quarter Moon – 3:36 pm

Sept 11 8:00 pm



West-Southwest

Oct 18 - 20
8:00 pm



Southeast

Nov 15 6:00 am



East-Southeast



Fall Planet Visibilities

September	Morning: Mercury Evening: Venus, Mars, and Jupiter
October	Morning: Saturn Evening: Mars and Jupiter
November	Morning: Venus and Saturn Evening: Mercury, Mars, and Jupiter

Jupiter dazzles this autumn

Jupiter, the fifth planet from the Sun and the largest planet in the Solar System, will reign supreme in the night sky this fall.

The king of the planets is one of the easiest planets to spot in the sky. Though Venus is brighter, Jupiter is further from the Sun, so it's visible long after the Sun and Venus have set. Other than the Moon, it's the brightest object you can see in the middle of the night.

On September 21, when Jupiter goes into opposition with the Sun, the Jovian giant will rise in the east around sunset, hover at its highest point in the south around midnight, and set in the west around sunrise. The pale, peach-colored Jupiter will also shine at a brilliant -2.9 magnitude.

Even though Earth and Jupiter will be as close as they will get to each other since 1963 in September, it's not the distance between the two worlds that makes Jupiter so bright. Rather, it's Jupiter's size and brightly reflective clouds that make it dazzle. Jupiter's diameter (88,846 miles) is 11 times as wide as the Earth's, and it boasts about 121 times more surface area as well.



Astronomical Fact!

Be prepared for a surprise this autumn when you look at Jupiter through a telescope. One of the Jovian giant's two main dark cloud belts has completely disappeared. This is not the first time that Jupiter's South Equatorial Belt has disappeared. The belt fades at irregular intervals, most recently in 1989-90, 1993, and 2007.

Harvest Moon to occur September 23

The "Harvest Moon" is considered to be the full Moon that falls closest to the first day of autumn. It can occur anytime between September 8 and October 7. This year, the full Moon that occurs on September 23 is closer to the September 22 Autumnal Equinox, so the title "Harvest Moon" goes to the September 23 Full Moon. When the Moon is full, it rises around sunset in the east and is in the sky all night long. It then sets around sunrise. The Harvest Moon is rather special, because the Moon's path across the sky this time of year appears to travel close to the horizon. This results in the Moon rising less than a half hour later from one night to the next. Also, farmers for years took advantage of the extra light the Harvest Moon provided after the Sun had set. It allowed them to work into the night gathering their harvest. In Europe, where the name "Harvest Moon" originated, the Moon often rises as little as 10 minutes later each night.

Autumn stargazing

The key to navigating the autumn sky is identifying the constellation Cassiopeia. Five bright stars outline the shape of a "w." The mythological queen of the night sky appears almost straight overhead throughout the fall. Seated to her right is Cepheus, the king of the night sky. Cepheus looks like a house, a small square connected to a triangle. Cassiopeia points down to four stars, the Great Square of Pegasus the Winged Horse. The stars that make up the square are comparable in brightness to Polaris, the North Star. Pegasus, like many other constellations, does not look anything like the horse it was named after. It has no hind legs and faces what looks like headfirst to the ground below.

Cassiopeia also lies exactly opposite the North Star from the Big Dipper. This familiar pattern of stars seems to disappear in the fall. As the seasons change, you will find the Big Dipper in different positions around the North Star after sunset. The easiest time of year to find it is in the spring, when it's high overhead in the north. The hardest time of year to locate the Big Dipper is in the autumn, when it rides low above the northern horizon.

Rooftop Observatory

Join stargazers on Friday and Saturday evenings.

\$1 per person

No reservations are needed. Weather permitting.

Call **412.237.3327** the night of the session for the latest information.