



STARRY TRAILS

NOVEMBER 2016

Get ready for our Moon's closest approach in 68 years at 6:24am on November 14th! The Super-Ultra HyperMoon will not be enormous but will be 7% bigger than average, but this has not happened since 1948! Other happenings this month include the Leonid Meteor shower peaking on November 17th, along with our continued planet show! When heading out 30 minutes after sunset, brilliant Venus and golden Saturn (to the right of Venus) can be seen in the southwestern sky. Mars will blaze red, orange to the left or direction south. On November 2nd, look for the beautiful gathering of Venus, Saturn and the Crescent Moon, 30 minutes after sunset (Illustration 1). We will see Saturn sinking lower as we head thru November. If you are an early morning riser, look for bright Jupiter in the east-southeast sky one hour before sunrise. (Illustration2).

Once we have changed back our clocks to Eastern Standard Time, it will be great to go outside and enjoy an evening of stargazing right after dinner! The evenings are getting colder, so we will need to put on our winter coats, gloves, hats and maybe boots. If you are lucky enough to have a good south, southwestern view, you will be able to see the red planet Mars after sunset.

We will begin our hike at 7:00 pm. Grab your Starry Trail map and binoculars and let's go! Face west, or where the sun set and you will see a bright star which is Vega. Now trek left to another bright star which is Altair. Now trace up and to the right to Deneb. If you connect these three stars you have made the Summer Triangle. Great! Running through the Summer Triangle is our Milky Way galaxy! Take your binoculars and scan through that part of the sky. Look at all of those stars! Even if you cannot view the Milky Way, due to light pollution, you can still see so many stars with your binoculars!

Hike back to Deneb. Imagine this to be the tail of Cygnus, the Swan. Below Deneb, you will see three stars in a line. Those make up the wings. You should also be able to see the long neck and head of the swan extending from the wings. The head of the swan would be to the left of Vega. This star, Albireo, is a beautiful double star through a telescope (Illustration 3).

Now look directly overhead and you will see four stars that make a square. This is the Great Square of Pegasus. Turn to the right, which is direction north. You will see a group of stars that are in the shape of a "W". This is the constellation, Cassiopeia. Grab your binoculars again. From the top point of the W shape, scan slowly up and to the right (about halfway to Pegasus). Do you see a fuzzy circular object? That is the Andromeda Galaxy (M31). It is 2.5 million light years away! Find the bottom point of the W. Scan once again to the right and down slightly. You will come upon the Double Cluster in Perseus.

Journey down to the northern horizon and you will find the Big Dipper. By the way, look at the second star in the handle, with binoculars. It is a double star! Head down to the cup of the Big Dipper. Take the two stars at the end of the cup and draw an imaginary line to the next bright star. You have reached the North Star! The North Star is at the end of the handle of the Little Dipper (Illustration 4).

Our last stop is direction east. So, turn to the right once more. I saved the best part for last! Look straight ahead. Do you see a small cluster of stars? This cluster is the Pleiades or the Seven Sisters. The Pleiades has to be my favorite group of stars to gaze at through my binoculars (Illustration 5). Take a look! Spectacular! Below the Pleiades is a red, orange star, Aldebaran. Aldebaran is part of the constellation, Taurus, the Bull. Look slightly left to another bright star which is Capella.

It was great that we had our binoculars tonight. So much to see! Head inside where it is warm.

Next month, the winter sky and our most magnificent picture in the sky!

Highlights

November 2 & 3 – Beautiful gathering of the Crescent Moon, Venus & Saturn in the southwest 30 minutes after sunset.

November 6 – Daylight Savings time ends at 2am.

November 6 – The Moon passes north of Mars.

November 7 – First Quarter Moon.

November 14 – **The Moon at its closest distance in 68 years!**

November 14 – Full Moon. According to folklore it is the Full Beaver Moon.

November 17 – Leonid Meteor Shower peaks.

November 21 – Last Quarter Moon.

November 24 – Jupiter & the Crescent Moon in the east-southeastern sky before sunrise.

November 29 – New Moon.

Brightest Stars: West: Vega, Deneb, Altair **South:** Fomalhaut **North East:** Capella **East:** Aldebaran

Binocular Highlights: The Moon, Milky Way from Cassiopeia through the Summer Triangle, Andromeda Galaxy M31, Double Cluster (NGC 869&884), Pleiades.

Telescope Highlights: The Moon, Mars, Uranus, Neptune, Albireo, M31, M39, M1, M2, M27, M57, M15, M11, M81, M82, M 36, 37, 38 (near Capella), NGC869 & 864.

[Starry Trails](#) is a fun & easy way to explore the night sky as it appears from your own backyard! Journey over to [StarryTrails.com](#) & get everything you need to navigate the night sky! Starry Trails is a free publication & your able to make copies to pass along to your friends & family so they can learn and enjoy the night sky with you!

You can Follow [Starry Trails on Facebook](#) for weekly discussions & special sky events!

Night Sky Illustrations created by Suzie Dills using Starry Night Backyard & Stellarium.

Illustrations courtesy of www.CassandraDills.com

Written by Suzie Dills – Remember to download your Illustrations & Star Map!