



STARRY TRAILS

JANUARY 2018

Expect to be Moonstruck as we celebrate New Year's Day! We will see the Full Super Moon of 2018 on the first day of our new year! What's even more awesome, when we close out January, we will have another Super Full Moon! The second Full Moon in a month, by one definition is called the "Blue Moon". This rare event will happen again in March! But wait...that's not all! We will also have a Partial Lunar Eclipse on that day, which is January 31st! The Lunar Eclipse will occur as the Moon is getting ready to set, so be sure to have an unobstructed view of the west-northwest sky. The partial Eclipse begins at 6:48 AM (Illustration 1). Maximum Eclipse will be 7:35 AM (illustration 2), followed by Moonset at 7:38 AM.

Other early morning highlights for January include the close pairing, less than a degree apart, of Jupiter & Mars on January 6 & 7, in the southeastern sky (Illustration 3). Then on January 14 & 15, the four planets Mercury, Mars, Jupiter & Saturn will put on a show with the Crescent Moon, in the southeastern sky (Illustration 4).

For our hike, we will head out one hour after sunset. This will be at 6:00pm at the beginning of January and 6:30pm by months end. Grab your winter coat, hat, gloves, warm socks and boots. Do you have your Starry Trail map and binoculars? Let's enjoy!

As we step out on a clear January evening, the brightest stars of the year will take our breath away! This is the best time of year to practice star hopping! Face west or where you saw the beautiful colors of the sunset. Head up and you will see four stars that form the Great Square of Pegasus (Illustration 5). Trek up and to the right and you will see a group of stars that are in the shape of a sideways "W". This is the constellation Cassiopeia. Grab your binoculars. From the top point of the W shape, scan slowly up and to the left. You will come upon the Double Cluster in Perseus. Find the bottom point of the W. Scan once again to the left and down slightly. Do you see a fuzzy circular shape? That is the Andromeda Galaxy (M31). It is 2.5 million light years away!

Turn to the right to face north. You will notice the Big Dipper up on its handle. By the way, look at the second star in the handle with binoculars. It is a double star! Head 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, or Polaris, is at the end of the handle of the Little Dipper (Illustration 6).

Trek to the right or east and you have arrived at the most magnificent picture in our stars, Orion, the Hunter! The three stars in a row make up the belt of Orion. The bright red-orange star up and to the left of the belt is Betelgeuse. The bright blue-white star down and to the right of the belt is Rigel. Now with your binoculars scan just below the belt. You will notice a small fuzzy area. That is the Orion Nebula (M42). New stars are forming in that hydrogen gas cloud! We call this a stellar nursery. Now let's find Orion's best

friend. Journey back to the belt of Orion. Draw a line down and to the left, to the brightest star in that part of the sky. You have reached Sirius, the Dog Star. Sirius is the number one brightest star in the night sky.

Just above Orion you will notice a V shape in the stars. This is the face of Taurus, the Bull. The bright red-orange star is Aldebaran. To the left of Aldebaran, the bright star you will see is Capella. Hike up just a little more to a small cluster of stars. These stars are the Pleiades or the Seven Sisters. The Pleiades has to be my favorite group of stars to gaze at through my binoculars. Take a look! What a treasure!! Return to Orion. Scan left to the two stars that look almost identical. These are Gemini the Twins (Illustration 7).

See how easy it is to star hop through the winter sky! There are so many bright stars to guide us!

Now, head inside and grab a cup of hot chocolate. Next month, we will begin to see signs of spring!!

Highlights

January 1 – Super Full Moon of 2018! According to folklore, it is called the Full Wolf Moon.

January 3 – Earth at perihelion or closest distance to the Sun (91.4 million miles).

January 3 & 4 – Quadrantid meteor shower peaks.

January 6 & 7 – Jupiter & Mars less than a degree apart in the southeastern sky one hour before sunrise.

January 8 – Last Quarter Moon.

January 10 & 11 – Jupiter, Mars & the Crescent Moon put on a show in the southeastern sky before sunrise.

January 14 & 15 – Saturn, Mercury & the Crescent Moon put on a show low in the southeastern sky before sunrise.

January 16 – New Moon.

January 24 – First Quarter Moon.

January 31 – Second Full Moon of the month, called the Blue Moon. **Also, Partial Lunar Eclipse beginning at 6:48 am and maximizing at Moonset at 7:35 am!!**

Brightest Stars: East- Southeast - Betelgeuse, Rigel, Aldebaran, Sirius. **East:** Procyon, Castor, Pollux, Capella.

Binocular Highlights - The Moon, Andromeda Galaxy M31, Double Cluster near Perseus, Pleiades, Orion Nebula M42, Milky Way from Capella thru Cassiopeia.

Telescope Highlights - The Moon, Uranus, Neptune, M1, M2, M15, M31, M41, M42, M81, M82, M35,36,37,38 (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!