



## ..... STRAIGHT FROM THE HORSES MOUTH

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Well, I made it!!! This may sound self-serving but today mark's my 68<sup>th</sup> birthday. Now that is not necessarily newsworthy or all that exciting to other people, and certainly not earth shaking by any sense of the word - but there are some things that happen on this date that to me have to be an omen of some sort. I could take credit for it and say that I am starting out the rest of my life with a bang. I would like to think that this was all put together just for me but I am sure there is a better explanation. What may that be you might ask? Let's have a little fun with this and you will see what I mean.

You may want to break out the binoculars or telescopes, because there will be three breathtaking astronomical events that will occur on the evening of February 10 into the morning of February 11. During the time span we all will be treated to quite the stunning show, as a snow moon, lunar eclipse, and what is called a New Year comet will simultaneously light up the sky. Each of these occurrences is individually awe-inspiring, but all three together? Like I said, it has to be an omen or at the very least a celestial celebration of the day I was born! OK maybe that is a little over the top, but give the old guy a break – other than a hip. In order to fully understand this phenomenon, let's break down what each of these celestial events entails.

First let's look at the "Snow Moon": February's full Moon is traditionally called the Full Snow Moon because usually the heaviest snows fall in February. This name dates back to the Native Americans during Colonial times when the Moons were a way of tracking the seasons. And the Native Americans were right. On average, February is the USA's snowiest month, according to data from the National Weather Service. February's Snow Moon will be no ordinary full moon for sky watchers, as it coincides with a special lunar eclipse that will cast a shadow over the full moon's usual bright, glowing face.

For you that are interested the snow moon will rise at 4:33 pm on Friday and set at 6:22 am on February 11, and it shouldn't be too hard to spot it in the sky. Just to warn you, a penumbral eclipse doesn't look too dramatic. You want to check it out anyway and if you do decide to venture out, look at the full Moon at 6:44 pm. The Moon will be low in the east. You may be a little disappointed, but if you want something truly dramatic, just do an about face and look toward the west, and you will find Venus at its brightest of the year! So add one more event!

The second celestial event is a "Lunar Eclipse": Not to be confused with a solar eclipse, lunar eclipses occur when the sun, Earth, and moon line up. When the Earth aligns in front of the sun, the moon is covered in a shadow, which makes it appear red. Anyone in North America will be able to view this somewhat eerie yet stunning event. On Friday (February 10), just 10 minutes after the full moon peaks, so will a penumbral lunar eclipse. The moon will spend more than 4 hours coasting through Earth's outer shadow, called the penumbra, and it will appear darker than normal. While penumbral eclipses can be difficult to see and don't look nearly as dramatic as a total lunar eclipse, in which the moon passes through the darkest, central part of Earth's shadow, Friday's penumbral eclipse will be darker and more noticeable than most lunar eclipses of its kind. That's because the moon will veer so deeply into Earth's penumbral shadow that it will be almost entirely submerged in shade. The shadow will be mostly visible from 6:43 pm until 8:53 pm on Friday.

This eclipse however will not hold a candle to the big one that will come on August 21, 2017. The biggest and best solar eclipse in American history arrives that day, which I suggest putting on your calendar. A total solar eclipse will be visible from coast to coast, according to NASA in a 67 mile wide swath that will pass right over us. It will be the first total eclipse visible only in the USA since the country was founded in 1776. It will also be the first total solar eclipse to sweep across the entire country in 99 years. And not since 1970 has there been an opportunity to see a total solar eclipse in such easily accessible and widespread areas of the nation. A total solar eclipse occurs when the moon gets in the way of the sun, turning day to an eerie twilight. Barring pesky clouds, more Americans should be able to see this one than ever before as it passes through 12 states including Nebraska. I believe that the arc and width of the path will include North Platte, Broken Bow, Kearney, Grand Island, Beatrice and Lincoln, Nebraska. It should be pointed out that at any given location, the total eclipse will last for around 2 or 3 minutes so timing will be everything if you want to see this momentous occurrence. If you wish for more information, times to watch etc. I suggest going to: <https://www.greatamericanclipse.com/>

The third celestial event I am referencing is the "New Year Comet": Named because it began moving across the sky at the tail end of 2016, the New Year comet is set to shoot across the sky on Saturday February 11. A few hours after the eclipse, the officially named "Comet 45P/Honda-Mrkos-Pajdušáková" will make its closest approach. What is remarkable about this event is that this flyby marks the closest a comet has come to the Earth since 1983. If you have tired of looking at the Snow Moon or the Lunar Eclipse, direct your attention to the east around 2 am on Saturday morning. The comet will have a bright blue-green "head" with a tail. Binoculars are recommended and in fact a necessity – if you have a telescope even better. This comet is only visible every five and a quarter years, so the fact that it just so happens to arrive this weekend is pretty darn cool. So I suggest that you set your alarm and get your binoculars or telescopes and even your cameras ready because this weekend is about to get lit up. The brightness of the moon, even with the eclipse, along with the comet is likely to be even more impressive than the flames from the candles on my birthday cake!

The preceding information comes from the research and personal observations of the writer, which may or may not reflect the views of UNL or Nebraska Extension. For more further information on these or other topics contact D. A. Lienemann, Nebraska Extension Educator for Webster County in Red Cloud, (402) 746-3417 or email: [dliemann2@unl.edu](mailto:dliemann2@unl.edu) or on the web at: <http://extension.unl.edu/statewide/webster>