





January Skies over the Pinnacles

January 2025

by Jeff Hutton

January's Four Principal Phases of the Moon

January 6	First Quarter	
January 13	Full Moon* *and Mars occultation	
January 21	Last Quarter	
January 29	New Moon	

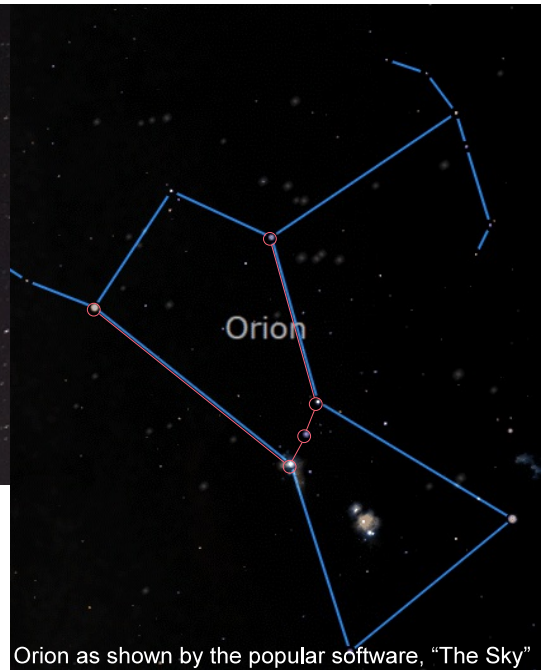
Oh, What We Miss in the Night Sky

The clear night sky is endlessly fascinating. People, especially children, are curious. For most of my working life, I was an educator. Every good teacher knows that showing excitement about the subject is important and, hopefully infectious. Good teachers also know that channeling students' enthusiasm, once ignited, is vital to passing along real understanding of the subject.

One goal after I retired, was to serve my community as a hands-on astronomy educator. That means meeting folks outside and introducing them to the nighttime wonders above our heads or rising above the horizon. Sometimes a short indoor presentation sets the stage for our adventure. Once outside I love to point out the constellations and planets that seem to wander across the familiar human-made figures we've created along the ecliptic. Some people call this the zodiac. The first aircraft, with its blinking lights, that catches the attention of someone in my party is the subject of excitement. Or perhaps a bright satellite makes a lazy arc overhead, causing gasps of amazement. Please pardon my curmudgenly reaction but I roll my eyes at these predictable events. To me, these lights are a distraction to what is really interesting. I believe the source of this excitement comes from the fact that most people just are not in the habit of the simply looking up at night. I so appreciate those people who have curiosity and have taken the time to learn something about the night sky.

Over the past several weeks the news has been nearly saturated by reports of drones that have been spotted over government installations. We've all seen footage of "mysterious" lights moving about at night. Certain politicians have displayed outrage about a lack of an government response to the perceived threat these drones might pose. I have no special knowledge about this matter but I suggest that the less people are familiar with the goings-on in the night sky, the more excited reports will be made of mysterious lights in the sky. In the post below, attributed to former Republican Maryland Governor, Larry Hogan, a picture was produced, 'proving' the presence of a coordinated swarm of drones.



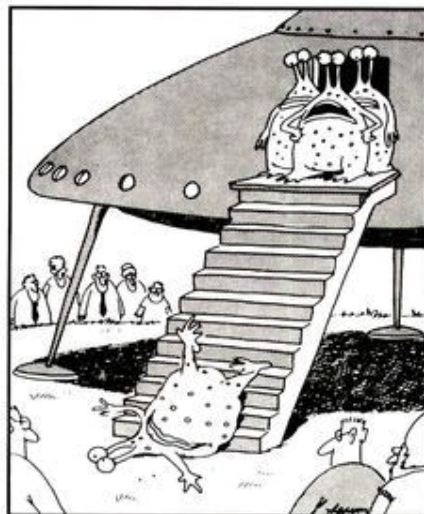


Above is a copy of Governor Hogan's post with the 5 of the visible "Drones" which he claimed hovered above his house. A 10-year-old with an interest in astronomy could have identified for the Governor the northern part of the constellation, Orion. It is no surprise that his "drones" held formation for 45 minutes as they have done this for thousands of years

I've been watching the sky for nearly half a century. I can still be found outside on a clear night challenging myself to find some elusive "new" galaxy or straining to see some temporary feature on Jupiter or Mars. In fact, I believe that I am the only person to train his telescope to see a real UFO, Unidentified Flying Object, now called UAP, Unidentified Aerial Phenomenon, up close.

I was 13 in 1968 when reports appeared in the Cincinnati Enquirer newspaper of mysterious red lights in the night sky over the northern suburbs where my family lived at the time. Almost every day produced excited stories on the subject, landing as front page news. One spring evening I caught sight of one of these apparitions! I assembled my telescope as quickly as I could and with hands shaking, I pointed the little refractor toward the red lights. It moved just slowly enough for me to keep the unidentified object within the field of view of the eyepiece. With a mix of excitement and disappointment I had learned the mystery of the red lights in the sky. I spied a weather balloon with red lights attached at opposite ends. To the naked eye the 'thing' was described in the paper as red, sometimes brighter, sometimes dimmer. As it tumbled in the air, both lights might be visible, sometimes just one. My excitement returned as I contacted the Cincinnati Enquirer with my report, knowing I had solved the mystery once and for all! I learned a valuable life lesson from this experience when the next issue of the paper simply reported that the "mysterious red lights" had returned.

Sometimes we prefer to be excited by a mystery and don't want to have it solved.

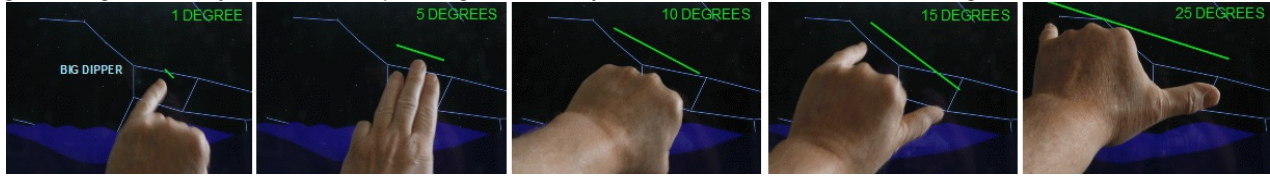


"Wonderful! Just wonderful! ... So much for instilling them with a sense of awe."

With thanks to Gary Larson.

Attractions in January

When you hold your hand all the way out and hold three fingers out, like the scout's salute in panel 2, your fingers create an **angular distance** of 5 degrees, about the width of the bowl of the Big Dipper. When I talk about the angular distance between, say, the Moon or a star or planet, I'll say that they are separated by a certain number of angular degrees. Sky and Telescope magazine is my source for most of the following information.



January 2

Happening tonight is an annual meteor shower with a couple of differences from all the others. First, like all meteor showers that happen every year, it is named after the constellation from which the "shooting stars" appear to come. The constellation is (was) called "The Quadrant", after a device used for surveying. The meteor shower is called the Quadrantids. That constellation used to be located between the constellations, Boötes, the herdsman and Draco, the Dragon. People imagine that the stars in the sky show us pictures. This one looked to someone like a quadrant. In 1922, this constellation was no longer recognized. Don't worry, the stars that made up "The Quadrant" are still up there! Second, like most meteor showers, the Quadrantids have their origin from a comet. Most meteor showers originate from the remains of the parent comet's tail. In this case the meteors are coming just from what was the comet's nucleus which is only a few miles wide as opposed to the remains of its tail which could be a few millions of miles wide. So the duration of the shower is measured in hours, not days. The extinct cometary nucleus is now considered an asteroid, called 2003 EH1. So because each meteor is coming from a tiny cometary nucleus, the show lasts just a short time, right around 10PM, well before the old "Quadrant" is above the northeastern horizon. This meteor shower is capable of producing some real fireballs.



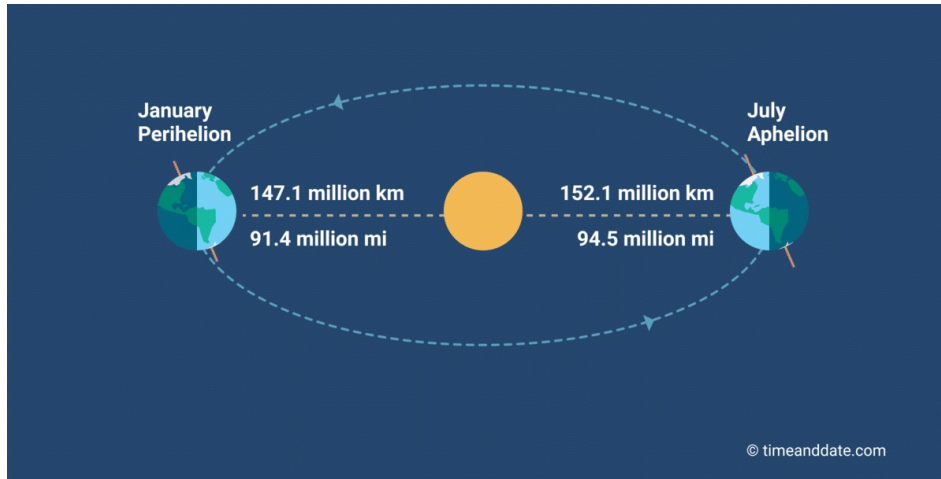
January 3

Behold a very pretty sight. As soon as it gets dark, scan the southwestern horizon and find the crescent Moon. Hovering just 3 degrees above is brilliant Venus.



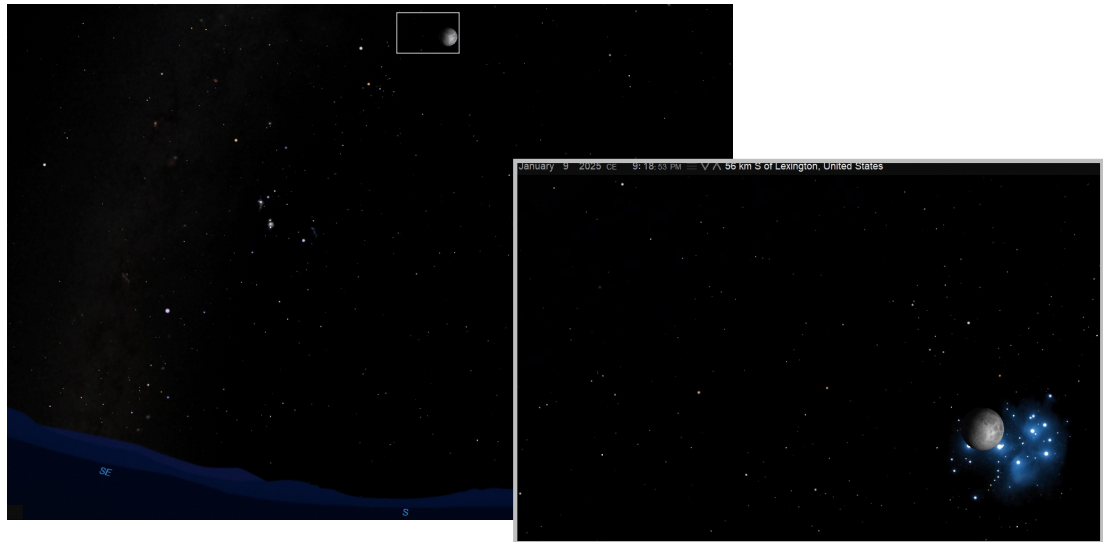
January 4

Nothing for us to see here but you might want to know that the Earth is at perihelion, or at it's closest it ever gets to the Sun on it's orbit during the year.



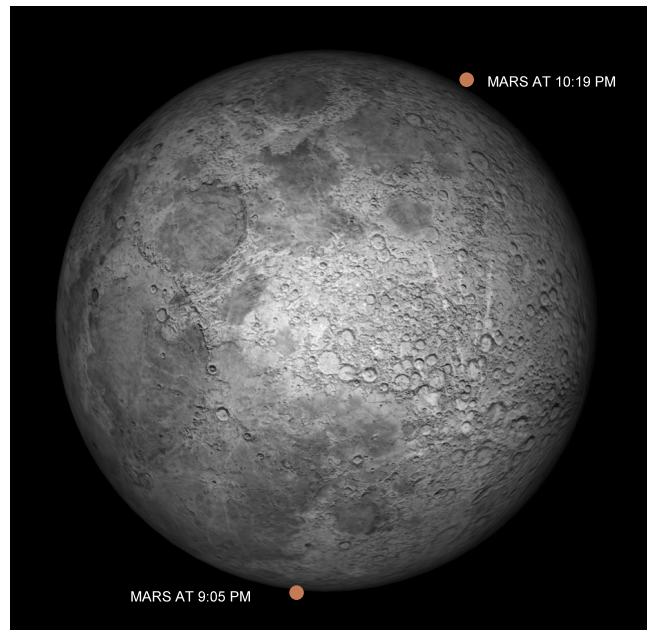
January 9

If you're a fan of the pretty cluster of stars known as the Pleiades (and who isn't)? You'll have to wait until about 9:30 to see them tonight. Grab your binoculars and check them out as the Moon moves away from them.

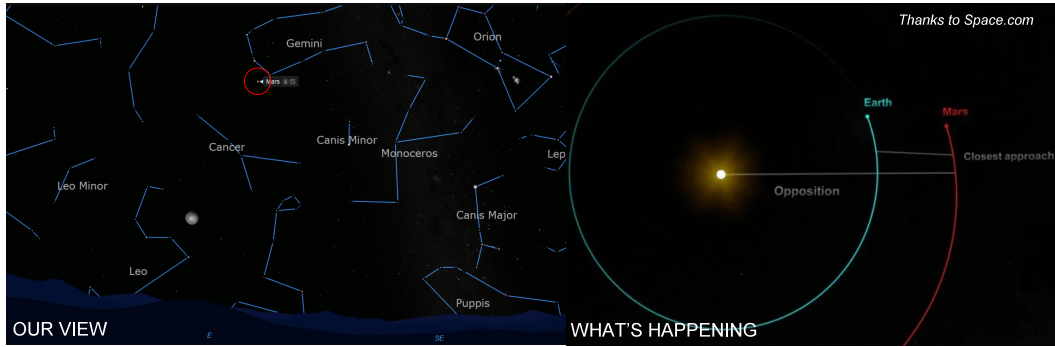


January 13

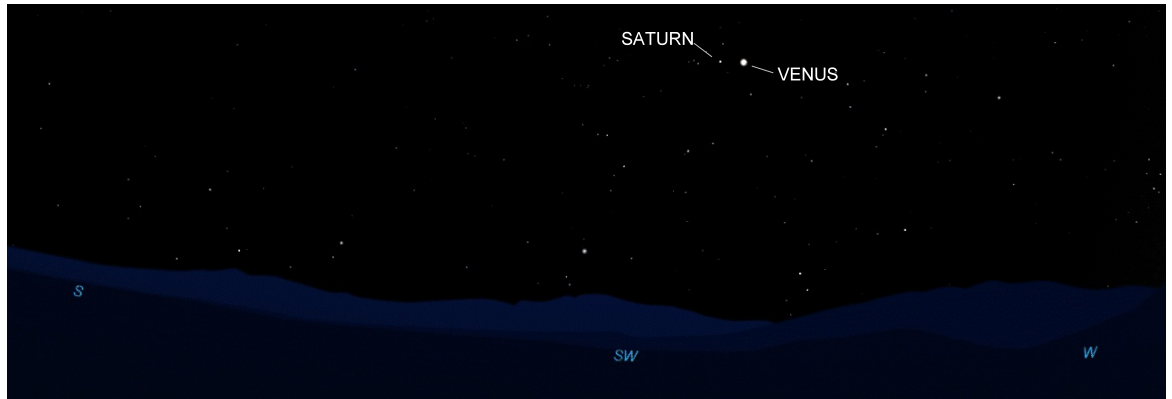
Another Binocular Alert! Get outside by 9 PM to see a curious sight. Mars will look like it is sitting just below the full Moon. Grab your binoculars and see that there is just a sliver of space between the two bodies. At 9:05, watch as the ruddy light from Mars fades as the Moon's orbit carries it between us and the red planet. Go out again by 10:15 you can watch Mars reappear at the opposite side of the lunar disc at 10:18. When one astronomical body passes in front of another, it is called an **occultation**.



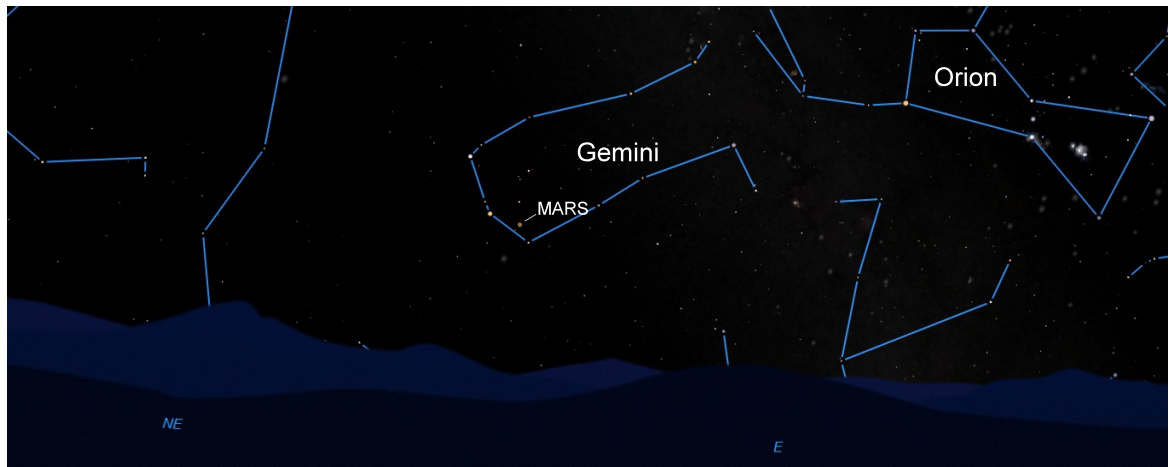
January 15-16 It's Mar's turn to reach opposition about midnight. Like on a race track, every couple of years Earth "laps" Mars as we follow an orbit closer to the Sun. Both Mars and Earth follow elliptical orbits but the orbit of Mars is much more oval than Earth. So, even though this is the best time to view Mars through a telescope, the two planets aren't as close as during other oppositions. A fairly large telescope will be needed to make out much detail on Mars's surface. See the chart below to find Mars in the sky.



January 17,18 Catch the pretty pair of Saturn and Venus in the southwestern sky, separated by just 2 degrees.



January 25 Go outside after supper and look to the east. You should see Mars shining near the stars, Castor and Pollux, the twins of the constellation Gemini. Orion will be to the right.



January 31 Closing out the first month of 2025, check the nice grouping of Venus, Saturn and the thin crescent Moon all low in the southwest.

