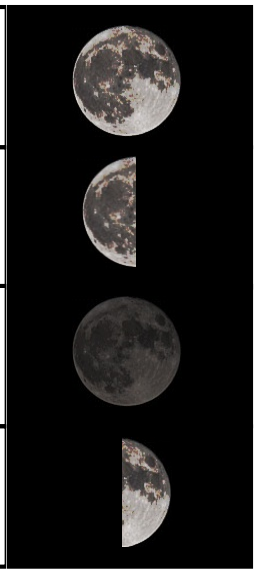
December Skies over the Pinnacles

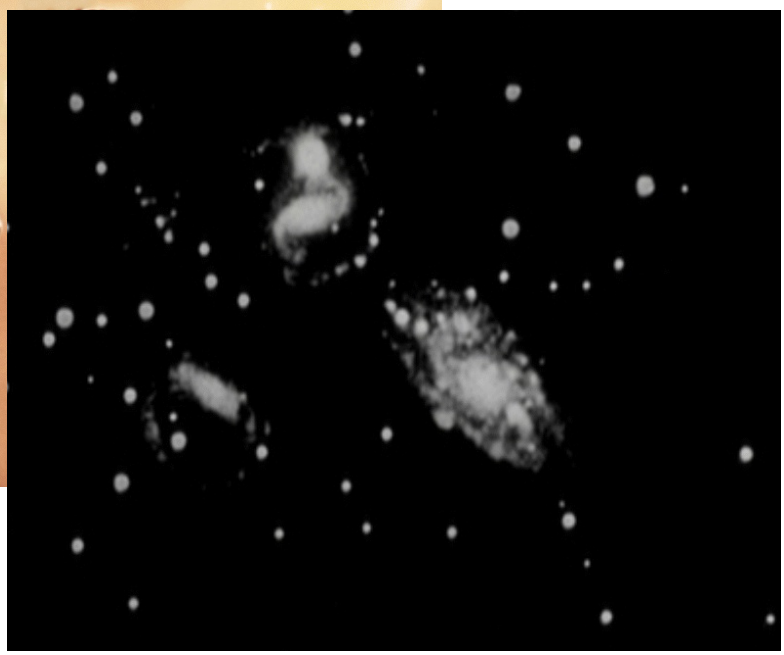
December 2025

by Jeff Hutton

December's Four Principal Phases of the Moon

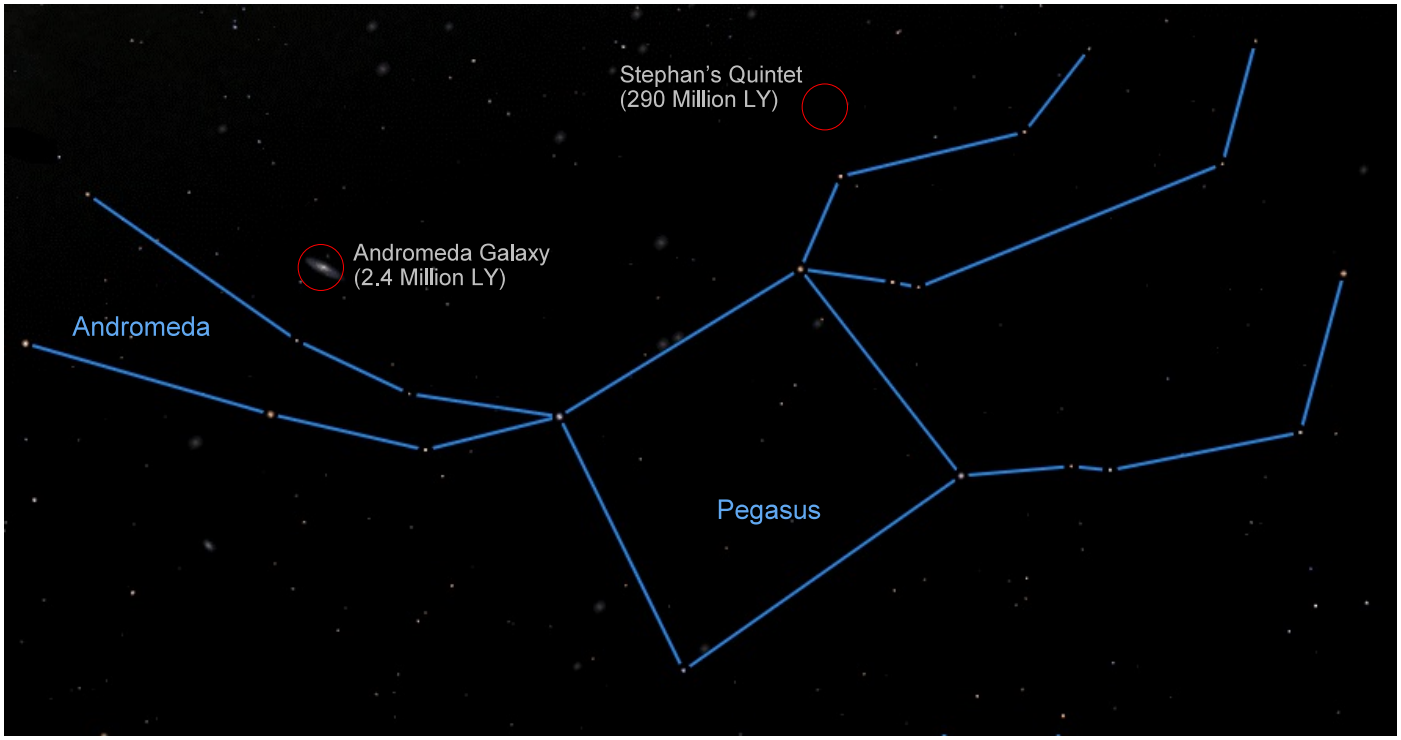
December 4	Full Moon
December 11	Last Quarter
December 20	New Moon
December 27	First Quarter





I first watched the classic Christmas Movie, ***It's A Wonderful Life***, in 1983 after my wife's surprise that I was unfamiliar even with the title. This Christmas classic is a Frank Capra production and stars Jimmy Stewart and Donna Reed. It tells the story of a good-hearted but dispirited man named George Bailey. George had big dreams of building great buildings and bridges around the world, but was frustrated at every turn by responsibilities which kept him in the little town of Bedford Falls, New York. He reaches the end of his tether when an accidental loss of funds belonging to his savings and loan business causes him to ponder taking his own life, despite the love of a growing family and community. The movie opens with some heavenly bureaucrats, depicted as a cluster of galaxies,

discussing the need to send an angel to Earth to help George realize that he really has a wonderful life. Naturally, I was curious about the picture that was used to depict the benevolent beings who were so concerned about George Bailey. The movie was made in 1946. The objects in the astronomical image turned out to have a name: **Stephan's Quintet** named for its discoverer, Edouard Stephan. While at Marseille Observatory, in France, Stephan first viewed this cluster of galaxies in 1877. This was a time when these objects were called "spiral nebulae". It was thought that these things, many having a 'pinwheel' shape existed within our own Milky Way. There are many examples of interacting galaxies like this one. The distance to Stephan's Quintet is about 290 million light years away. Compare that to the Andromeda Galaxy, nearby in the sky, which is about 2.4 million light years away. Stephan's Quintet is located just north of the constellation, Pegasus, the winged horse. The Andromeda Galaxy is located in nearby Andromeda, the Maiden, daughter of Cassiopiea.




Courtesy Debra Cerevolo using Berea College's retired Boller and Chivens telescope

Only of the 5 galaxies are gravitationally bound to the group The blue galaxy, with seen at lower left, is 'only' 230 million light years away from us. That's 5 times further from the other galaxies than we are from the Andromeda Galaxy!

The most magnificent image (in my opinion) of Stephan's Quintet was made recently using the James Webb Space Telescope in near-infrared light. This image is tilted to the right as compared to the Boller and Chivens Image.

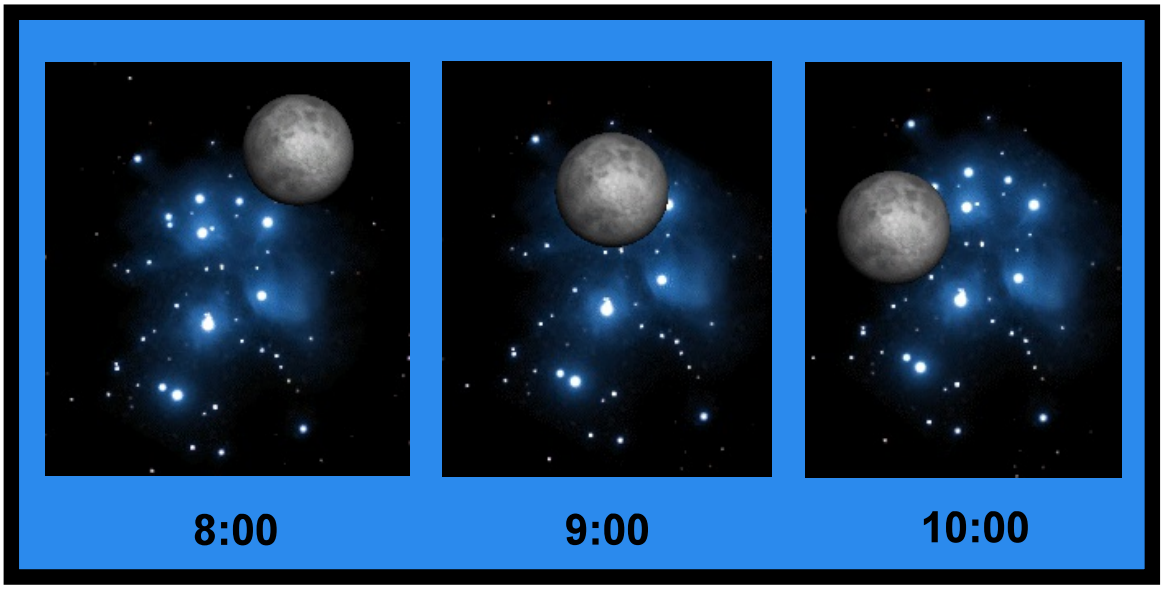
You may know that I've been enjoying my new astronomical 'toy', called a Seestar S30. This little powerhouse, the size of a 2-slice toaster, produces surprising images of faint astronomical objects. How would the S30 do on Stephan's Quintet? At right is the image I managed from my back yard after an exposure time of 21 minutes. For scale I inserted a circle that shows the apparent size of the full Moon.

Dear Reader,
I have committed to creating the monthly article "**Skies over the Pinnacles**" for over 5 years. Each article requires about 10 hours to research, creation of graphics and proofreading(thanks to my wife, Reda). This has been an enjoyable venture but various factors have suggested to me that I move on. One new project is a collaboration with The Edge reporter, Whitney McKnight, on a monthly podcast called "**Star Party**" . We have wide ranging conversations covering all things astronomical. Check us out at https://podcast.app/star-party-p7081202
If you would like me to continue "Skies over the Pinnacles" , please email me at **sawandtelescope@gmail.com** I will announce my decision as to whether or not to continue my monthly articles by January 1, 2026.

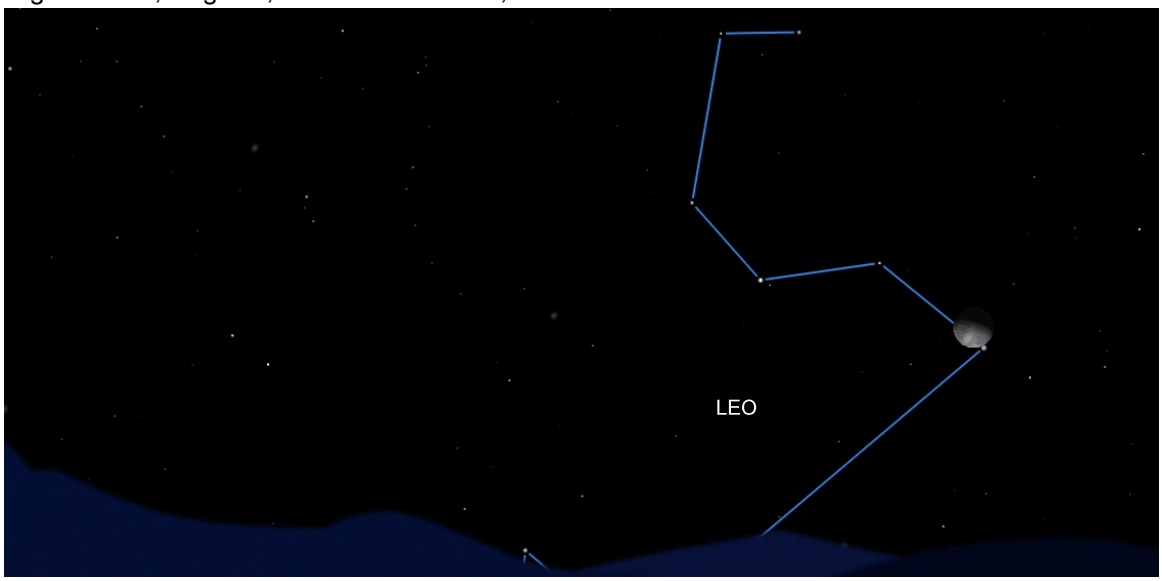
Attractions in October

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.

December 3 This evening, Grab your binoculars watch the Moon rise with the pretty star cluster known as the Pleaides. The stars that make up the Pleaides are so much dimmer than the bright gibbous Moon that you'll need your binoculars to see them.



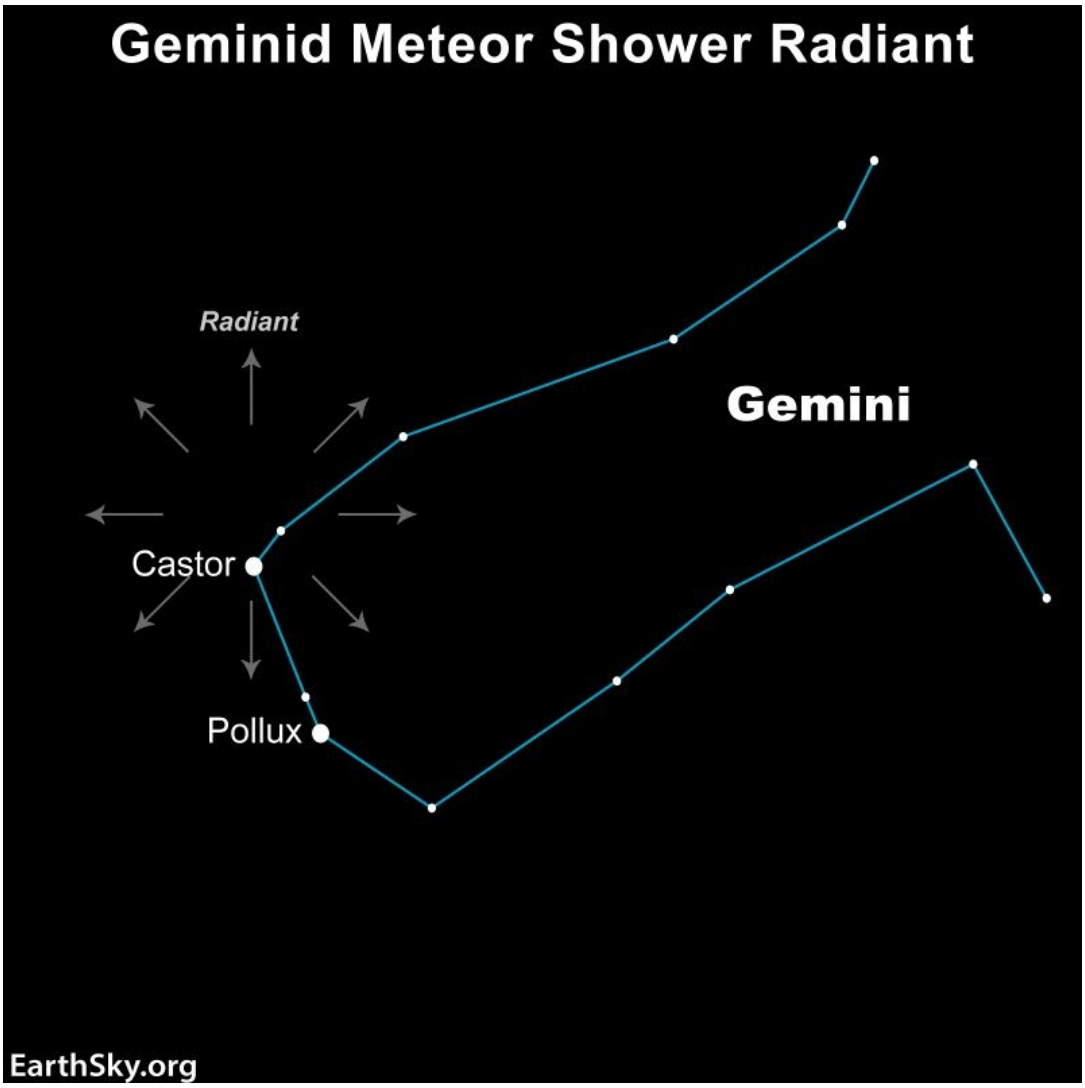
December 9 This evening, wait until about midnight and you'll see the Moon rising just ½ degree above the brightest star, Regulus, in the constellation, Leo.



December 13-14

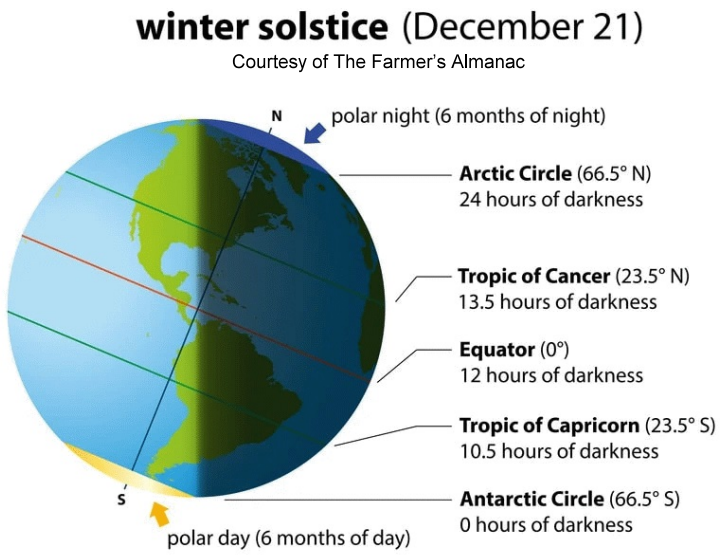
This is the night of one of the best meteor showers of the year--even better than the August Persieds! Potentially 3 times as many Geminid meteors compared to the Persieds. Most meteor showers have fluffy, icy comets as their source. This shower is a little different. Geminid meteors are from larger chunks of rocky material from a loosely packed asteroid named 3200 Phaethon that is an orbit that takes it so close to the sun that each trip shatters it a little more from the sun's heat. Another difference this time is that you might start seeing "shooting stars" as early as 9PM and continuing through until dawn on the 14th.

Dress warm to experience this wonderous event!



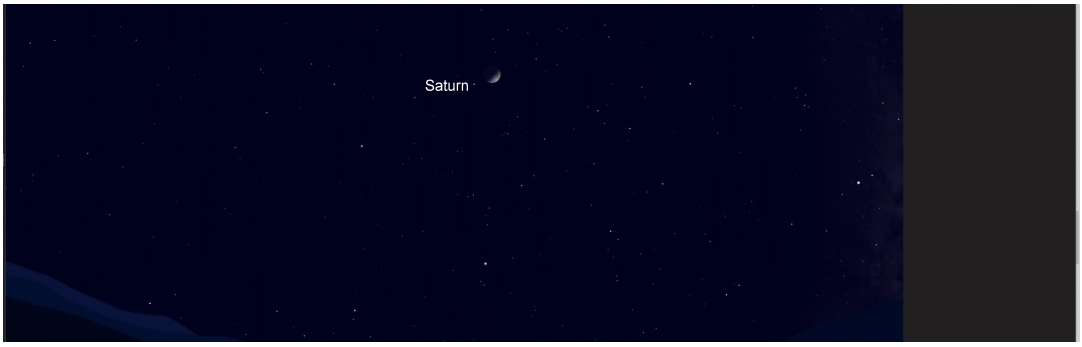
December 21

Tonight will be the longest night of the year. The winter solstice.



December 26

At dusk, enjoy the pretty sight of the crescent Moon being just 3 degrees to the upper right of the planet Saturn.



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To end the year, 2025, enjoy another visit of the Moon to the Pleaides.