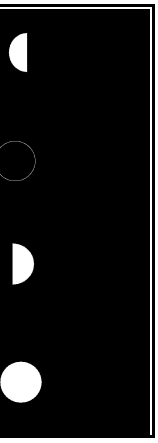
September Skies over the Pinnacles

September 2023
by Jeff Hutton

September's Four Principal Phases of the Moon

September 6	Last Quarter	
September 15	New Moon	
September 22	First Quarter	
September 29	Full Moon	

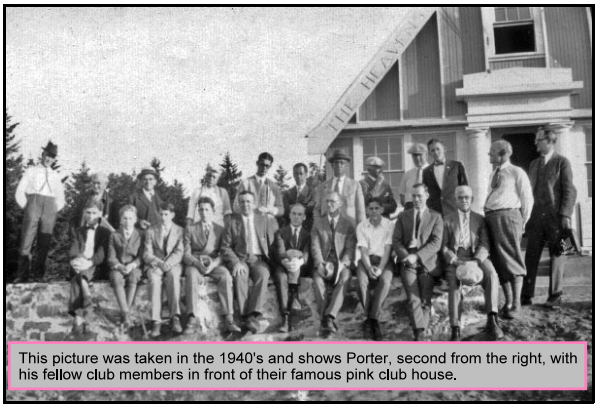
There's a New Club In Town

On Friday, August 25 we held the inaugural meeting of the Pinnacles Astronomy Club. Seven interested people joined us to try to decide just what this astronomy club might do. I have agreed to act as advisor of our group. We are fortunate to have a wide range of experiences and interests represented. One of our members has a degree in astronomy (and it's not me).

We plan to provide public outreach events and hold club events and to share information among ourselves. We are an informal bunch and everyone with an scientific interest in the Cosmos is welcome! Our next meeting will be on September 21 at 7 PM. We'll normally meet in classroom 222 at Union Church but that might change from time to time.

I've been involved in astronomy clubs for about half a century and know something about how they operate. Sometimes they are successful and sometimes not. One of the oldest and most successful amateur astronomy clubs in the nation is that of the Springfield Telescope Makers, located near Springfield, Vermont. Now celebrating their 100th year, this amateur astronomy group was founded by Russell Porter, an draftsman and engineer.

Porter taught his fellow employees at the Jones & Lamson tool works how to grind their own lenses and mirrors and to assemble them into working telescopes.His most lasting contribution to astronomy resulted when he was chosen by astronomer, George Ellery Hale, to design the mounting for the greatest telescope ever built up to that time, -The 200-inch telescope on Mount Palomar in California. It was completed in 1948.

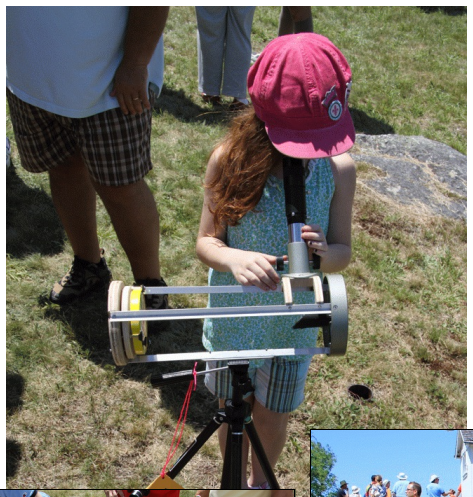


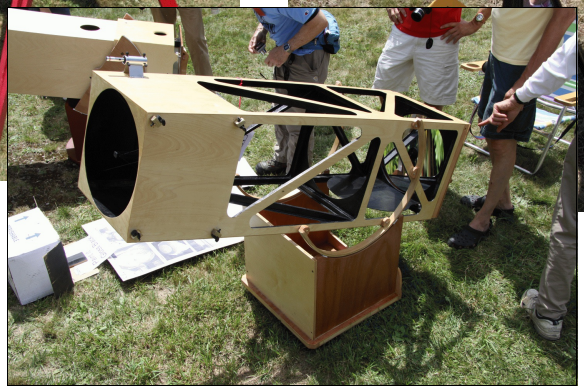
This picture was taken in the 1940's and shows Porter, second from the right, with his fellow club members in front of their famous pink club house.

I have seen (and seen through) this giant telescope with it's great Pyrex mirror, 17 feet in diameter. If you'd like to learn more about this instrument and the controversy that happened when Porter, an *amateur* telescope maker, was made lead engineer, I can recommend the book ***The Perfect Machine***, by Ronald Florence, Harper Books, 1995.

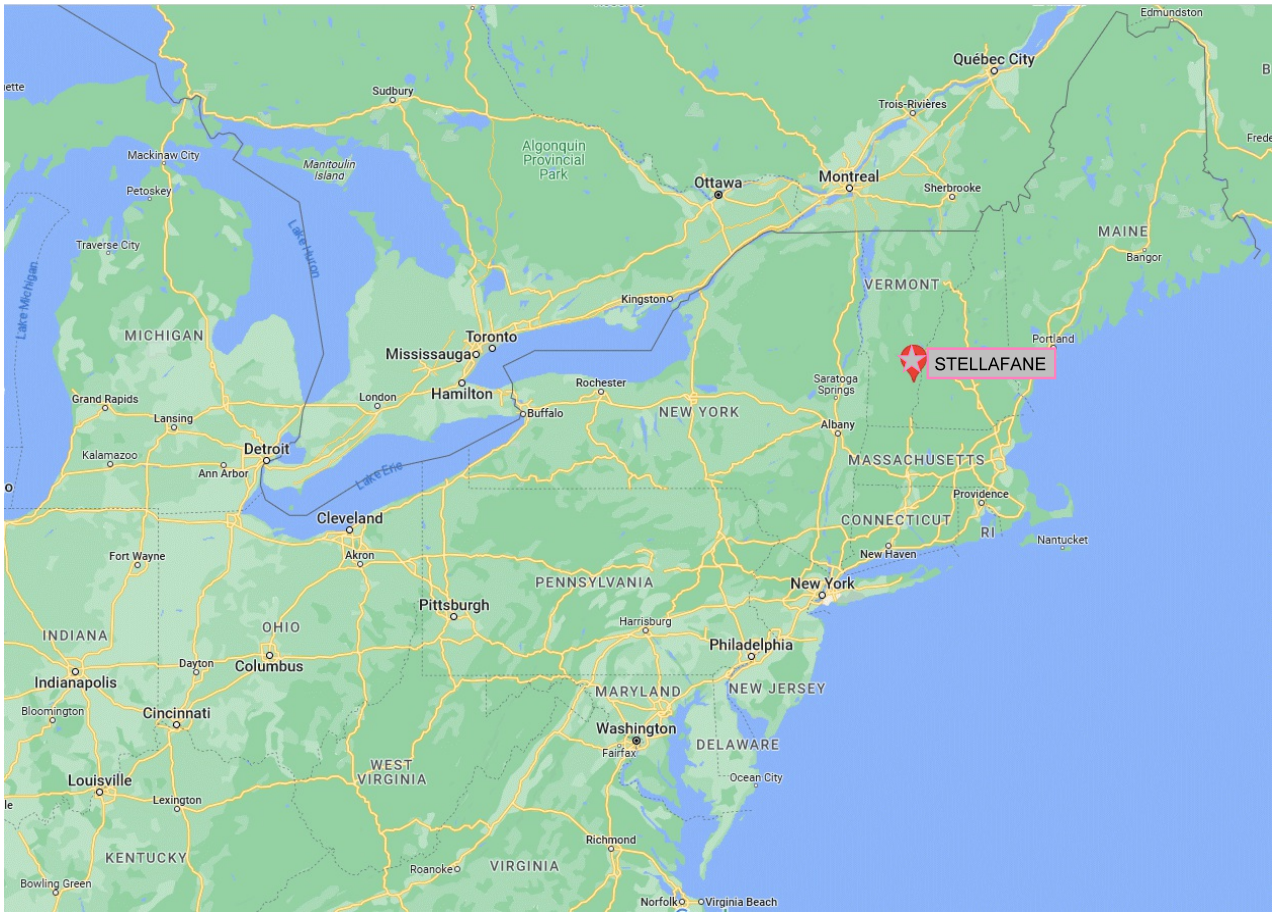
My wife, Reda, and I have been to the August convention of the Stellafane Telescope Makers twice, in 2000 and in 2011. If your thing is building telescopes, there's no place more exciting!

Below are some examples of the handiwork of the participants.



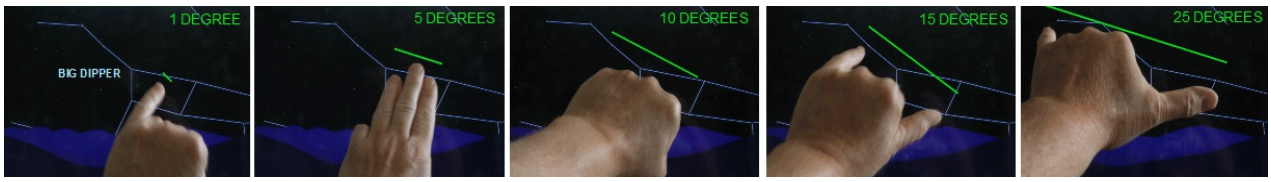


The original pink clubhouse, long outgrown by the number of Springfield Telescope Makers, still stands. Why is it pink? The story goes that when the almost penniless amateur astronomers who built the clubhouse in 1924 had no money to buy paint to finish the outside, a local hardware store donated remnants of paints of various colors to the club, When members mixed the paint together it turned out pink! The inscription “The Heavens Declare the Glory of God” is from Psalms 19.1. The word “Stellafane” means “Temple to the Stars”. No one I asked seemed to know why there is an oxbow mounted over the door.



Site of the annual Stellafane Convention, usually held during the New Moon in August.

Attractions in September



For instance, 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 distance between, say, the Moon and a star or planet, I'll say that they are separated by a certain number of degrees. Sky and Telescope magazine is my source for most of the following information.

All Month

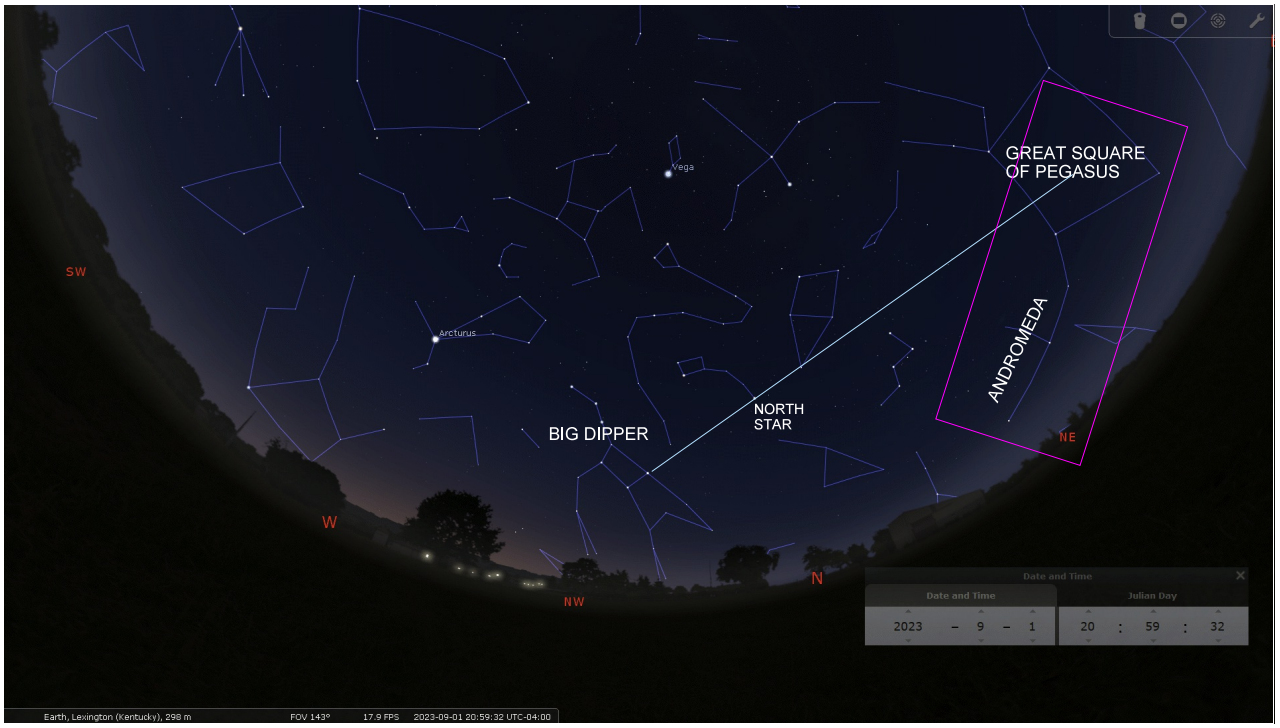
We only have one planet conveniently placed for evening viewing and most people find it pretty amazing to look at through a moderate-sized telescope. Saturn is now about as close as it gets to Earth at 886 million miles. It's a really big planet with its famous rings being 175,000 miles across. That's roughly the diameter of our Moon's orbit! Binoculars aren't powerful enough to show the rings**.** You'll need a telescope that can magnify at least 50 times to even give you a hint at the rings.

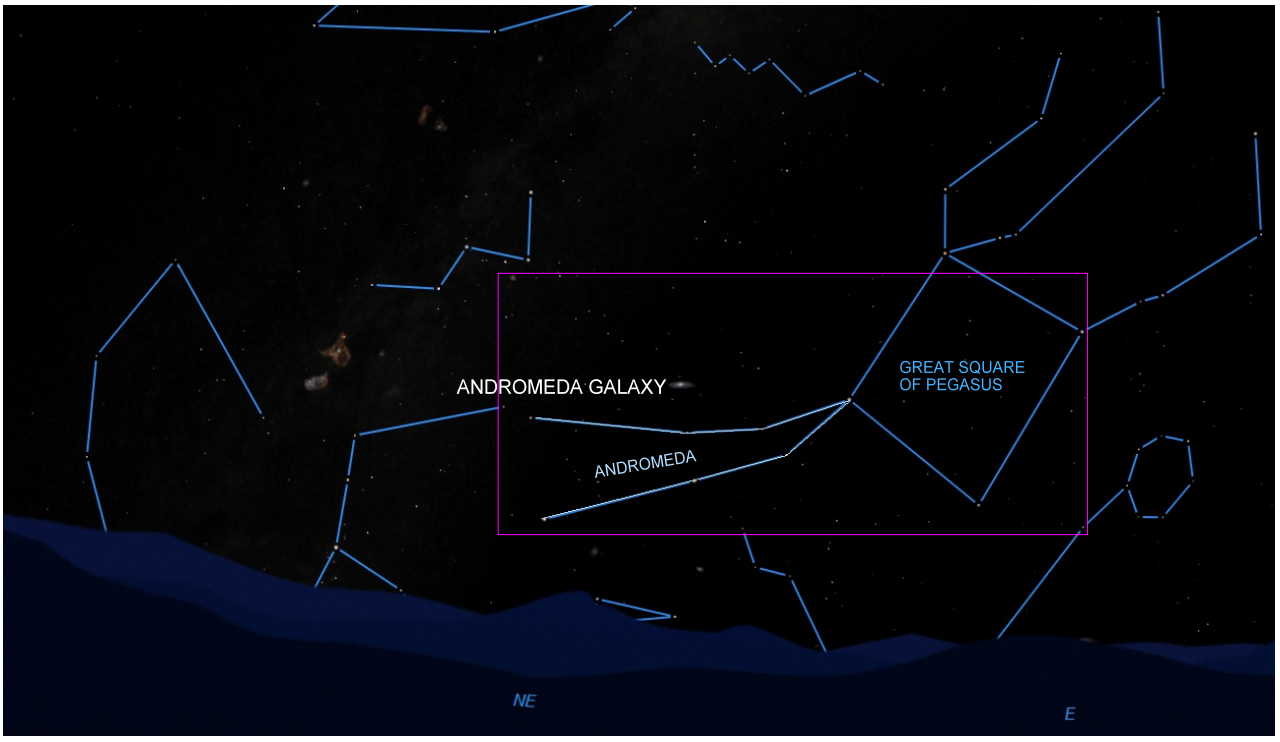
This is a low-magnification picture I took with my telescope 3 years ago during a time when the 2 planets appeared very close to each other in the sky.
Jupiter is the blob on the left and Saturn, at right, appears about as does through at telescope at 50 power. It was windy that night and, boy, did the telescope shake!

Here is an image of Saturn that you might see on a less-windy night with a good backyard telescope like mine.

September 1

I remember being excited as a boy when the famous Andromeda Galaxy finally swung into view in the fall. The movie, "The Andromeda Strain" had just come out and lots of non-astronomy types were asking me to show them this scary object! Early September is the time to first catch this faint glow in the sky that most people can spot with the naked eye. Binoculars give a better view but no telescope you are likely to see through will give you a view as good as the many pictures available of the Andromeda Galaxy. Here's how you can find it yourself.





First, find the Big Dipper, to the west of the North Star. The bowl will be lower than the handle. Using the bowl's pointer stars draw the line to the North Star and then extend your line about 3 times further until you reach the Great Square of Pegasus, the winged horse. In September, the square rests on its eastern point. Now, backtrack to the west along the long, drawn-out "V" that outlines the constellation Andromeda. Finally, find the second star on the upper line of stars (away from the square) and look up a little bit. That faint, fuzzy patch is the Andromeda Galaxy!

September 12

Around this time, and throughout October is a good time to see if you can catch the faint Zodiacal Light. Best seen just before dawn, this is light bouncing off the interplanetary dust that fills our solar system. Where does it come from? Mostly comets. When you see a faint meteor streaking the night sky, you are seeing one of these grains making a final streak over your head.

Zodiacal Light from New Mexico, 2019.

September 23

This is the day of the autumnal equinox. Happy Fall!

September 26

Having trouble identifying Saturn? Let the Moon help. Watch it rising along with the gibbous Moon in the southeast around 8 PM this evening. Just 3 degrees separate the pair. Don't forget to look for Sagittarius' famous "Teapot" asterism in the southwest.