

Skylights

Newsletter of the Astronomical Society of Northern New England



AUG 2025

Skylights Editor:
Paul Kursewicz



Member of NASA's
Night Sky Network



**Astronomical League
Member**

ASNNE MISSION

ASNNE is an incorporated, non-profit, scientific and educational organization with three primary goals:

- 1) To have fun sharing our knowledge and interest with others.
- 2) To provide basic education in astronomy and related sciences to all who are interested.
- 3) To promote the science of Astronomy.

What's Up In August

By Bernie Reim

The first day of August always marks the midway point of summer for us in the northern hemisphere. This is also known as LAMMAS, which means Loaf Mass Day. This is a Christian holiday celebrated in some English-speaking countries in the northern hemisphere. It is also a Pagan festival that symbolizes the first grain harvest of the summer and prepares us for the autumn season ahead. It shows us the cyclical nature of life, death, and rebirth and is a time of gratitude for the abundance of the grains we sowed in spring and summer. You could look at it as an early Thanksgiving.

The word August derives its meaning from the Latin word "augere" which means to increase. Augustus was a title given to the Roman Emperor, and it means esteemed, venerable, and worthy of respect.

We will have many chances this month to practice respect for the earth and sky as the nights are slowly getting longer again and the temperatures remain hotter than normal. This is also a good time to better understand the cyclical nature of all life in the whole universe, not just on Earth. Stars are constantly being born and dying, just like cells in our bodies. Only about 5 new stars are born each year in our own Milky Way galaxy, and about that few also blow up and die each year. That may not seem like much, but we have over one trillion galaxies in the known or observable universe.

Only about one supernova per century explodes in a galaxy like ours. We are way overdue since the last two were Tycho's Supernova in 1572 and then Kepler's Supernova in 1604. If you look at enough galaxies at one time through telescopes, you could see one per day or even one each hour. At that rate of you would have to observe 36,500 galaxies to see one new supernova per day and 876,000 galaxies to see one every hour on the average. Each supernova can be seen as the ultimate recycling event in a galaxy since it creates and frees up all the heavier elements that are required for the wonderful diversity of life that we currently enjoy on Earth.

The European Space Agency's GAIA space telescope, which operated from 2013 until March of this year, has made more than 3 trillion observations of over 2 billion stars in our own galaxy. It observed each of these stars an average of 70 times over 5 years to detect any changes. That is less than one percent of our roughly 300 billion stars!

Gaia discovered many new and unexpected things about our galaxy including its warped and tilted disk, identifying stars that are remnants of smaller galaxies swallowed by the Milky Way of over billions of years, probing the distribution of dark matter within our galaxy, and accurately mapping thousands of new asteroids, some of which cross Earth's path through space and may hit us in the future. It has created the largest and most precise three-dimensional map of our galaxy in the process. It charted the positions, motions, brightness, and temperatures of all of this stars, thereby greatly advancing our understanding of the galaxy's structure, formation, and evolution.

That all sounds very impressive, but the new Vera Rubin telescope located on Earth on an 8800-foot-high mountain in northern Chile, will put the amazing results of the Gaia Space Telescope to shame.

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That is not to undermine the importance of all the great discoveries that Gaia made over the years. That data will still be analyzed for decades to come, but the Vera Rubin survey telescope will generate 20 terabytes of data each day, which is 500 times more data than Gaia generated each day. The Vera Rubin survey telescope will complete an entire sky survey of the southern sky every 3 days, and then go back and do it all over again to see exactly how anything has moved or changed brightness. It should last at least 10 years. Its results will be somewhat similar to the Gaia space telescope, but they will be in much greater resolution and detail.

As an example, in the first 10-hour test run of the Vera Rubin observatory it photographed about 4,000 asteroids, 2100 of which were new and 7 of which will cross over Earth's orbit and need to be tracked very carefully. This telescope could literally save the lives of everyone on Earth along with making many great and unexpected discoveries that will deepen our understanding of our place in the universe and ourselves and how everything moves and interrelates to everything else along with solving long-standing mysteries like the true nature of dark matter.

The main highlight each August is the Perseid Meteor shower. It will peak on Tuesday morning August 12, but since the moon is full on August 9, it will rise a few hours after sunset and spoil the best part of the Perseids this year. Then there will be several close conjunctions of planets including Venus and Jupiter and Saturn and Neptune, and the usual conjunctions with the moon and certain planets. Mars remains as an evening planet low in the western sky and Saturn and Neptune also become evening planets this month rising together at 10:30 to start the month and they will rise around 8:30 by the end of this month. The remaining planets, Venus, Jupiter, and Uranus are morning planets now.

The Perseids will be greatly reduced in the number of visible meteors because the waning gibbous moon, just 3 days past full, will rise around 10 pm local time washing out most of these meteors. The peak usually reaches 60 meteors per hour from a dark-sky site, but this year you would be lucky to see 10 to 15 meteors per hour after 10 pm. Caused by Comet Swift-Tuttle, the Perseids are active from the middle of July until August 24, but they always peak on the 12th when the earth passes through the densest part of the permanent debris trail that this comet leaves behind. This comet was last close to Earth in 1992 and will not return until 2126.

These meteors will all originate from a point in the constellation of Perseus the Hero, called the radiant. Perseus will be in our northeastern sky. They are about the size of a grain of sand and most of them burn up right at the edge of space at 65 miles above the earth. The average Perseid smashes into our thin atmosphere up there at 36 miles per second, or twice as fast as we are always orbiting the sun. This is the fastest of all 10 of our major meteor showers each year. The thin air in front of each meteor is squashed and heated to thousands of degrees Celsius in a split second, creating that brilliant flash of light in the sky. Even though they are so small, they generate a lot of ionization energy due to their great speed. Most of them will just vaporize due to this intense heat, but the larger ones can explode as a brilliant fireball. The streak that creates in our upper atmosphere can twist and turn and leave a long dusty trail behind it as the brilliant light of the bolide itself slowly fades out. These bolides also take on several different colors, not just white. Some of these can last from a few seconds to nearly a full minute.

Seeing just one or two of these brilliant bolides can make the whole night of meteor watching well worth it. I have seen 15 of these during the great Leonid Meteor shower on November 18 of 2001. I saw nearly 1,000 meteors per hour for nearly 3 hours that memorable morning, which is officially called a meteor storm. That is one every 4 seconds. I saw as many as 7 in a single second emanating from Leo the Lion. The best part was that there was not a single lull over 10 seconds long for that entire night. It was literally raining meteors for the entire night!

That was the first and so far, only time that I really got a good sense of our constant motion through space around the sun. To top off that wonderful night, we even saw the zodiacal light, or false dawn low on the eastern horizon around 4:30 am, or an hour before dawn starts in November. That is a pyramid or haystack of faint light that reaches about 30 degrees into the sky from the ecliptic. It is caused by sunlight bouncing off trillions of tiny particles of comet and asteroid dust that forms a torus or doughnut around our ecliptic plane. It is always there, but the best time to see it is when the angle of the ecliptic is steepest with our horizon. That happens only twice a year, before sunrise in October and November and an hour after sunset in March. I have seen this subtle effect 4 or 5 times. The moon has to be near new in order to see this

"Continued on page 3"

Club Contacts

Officers:

President:

David Bianchi
dadsnorlax@yahoo.com

Vice President:

Bernie Reim
bernard.reim@maine.edu

Secretary:

Open Position

Treasurer:

Ian Durham
idurham@anselm.edu

Board of Directors:

Gary Asperschlager
gasperschlager@gmail.com

April Nicholls
april.nicholls@gmail.com

Bernard Valliere

Star Party

Co-ordinator:

Open Position

Skylights Editor:

Paul Kursewicz
pkursewicz@myfairpoint.net

Website Manager:

Paul Kursewicz
pkursewicz@myfairpoint.net

NASA Night Sky

Network Co-ordinator:

Joan Chamberlin
starladyjoan@yahoo.com

JPL Solar System Ambassador:

Joan Chamberlin
starladyjoan@yahoo.com

E-mail coordinator

David Bianchi
dadsnorlax@yahoo.com

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interesting phenomenon.

Saturn will start the month by rising at 10:30 pm in the east in the constellation of Pisces the Fish. Through a telescope you can see Neptune just 1.1 degrees above and to the left of Saturn in the same field of view at low power. That is quite rare, but they will be even a little closer together on February 15 of next year. Neptune is exactly 7 magnitudes or 625 times fainter than Saturn which shines with a steady golden glow at 0.7 magnitude now and is getting slightly closer and brighter each night as we are catching up with the ringed planet in our faster orbit around the sun. It will reach opposition on September 21 of this year, the day before fall starts. Saturn will then be at its best and brightest for the year, rising at sunset and remaining visible in our sky all night long. Saturn takes 29 years to orbit the sun once, so it spends a little over 2 years in each of our 12 zodiac constellations.

Mars is still an evening planet in Virgo and it will set soon after sunset. It is getting smaller and dimmer each night as the earth speeds farther ahead of it in our respective orbits around the sun.

Venus rises around 3 am in Cancer the Crab. It is also getting a little fainter each morning as it is speeding farther away from us in its faster orbit. It is still by far the brightest planet, shining at magnitude minus 3.9. That makes it exactly 2 magnitudes or 6 and a quarter times brighter than nearby Jupiter in Gemini. Notice that Venus is rapidly catching up with Jupiter and the pair will be less than one degree apart, or two moon-widths on August 12 when the Perseids peak.

Close conjunctions of these two brightest planets are fairly rare and they are always a wonderful sight and make for great photographs. They will be quite close for several days, so make sure you catch this within that 4-day time period. The next close conjunction of this pair will not occur until June of next year.

Then keep watching this pair of brilliant planets as the waning crescent moon joins them on the 19th and 20th. Notice that Venus will pass very close to the Beehive open star cluster in Cancer on the last day of this month. Jupiter rises around 4 am in Gemini starting this month and it will rise by 2:30 am by the end of this month.

Mercury reached inferior conjunction with the sun on the last day of July and it will move into our morning sky during the second week of August.

Aug. 1. First quarter moon is at 8:41 a.m. EDT. Maria Mitchell was born on this day in 1818. She was the first American woman professional astronomer and she discovered a comet in 1847.

Aug. 3. On this day in 2004 the Messenger spacecraft was launched to Mercury.

Aug. 4. On this day in 2007 the Phoenix mission was launched to Mars.

Aug. 6. Saturn and Neptune are just 1.1 degrees apart in the morning sky. The Curiosity Rover was launched to Mars on this day in 2012.

Aug. 7. The asteroid Pallas is at opposition today. John Mather was born on this day in 1946. He won the Nobel prize in physics in 2006 for his work on the cosmic microwave background radiation.

Aug. 8. The nearly full moon passes less than one hundredth of a degree by Pluto today, but you would need a large telescope to see that since the moon will be 25 magnitudes or 10 billion times brighter than Pluto.

Aug. 9. Full moon is at 3:55 am. This is also known as the Sturgeon, Green corn, Grain, or Blueberry moon.

Aug. 12. The Perseid meteor shower peaks this morning. Venus passes less than one degree south of Jupiter this morning. Margaret Burbidge was born on this day in 1919. She was a British-American astronomer and astrophysicist who was one of the founders of stellar nucleosynthesis. The Russian astronomer Otto Struve was born on this day in 1897. He has an 82-inch reflecting telescope named in his honor built in 1939 at the McDonald observatory in Fort Davis, Texas. The 11-meter Hobby-Eberly telescope, one of the largest telescopes in the world is also housed at the McDonald observatory 7,000 above sea level in the Davis mountains in west Texas. I saw both of these great telescopes back in October of 2023 when I flew to San Antonio to see an annular solar eclipse on October 14 of that year.

Aug. 16. Last quarter moon is at 1:12 am EDT.

Aug. 20. The moon passes 5 degrees north of Venus this morning.

Aug. 21. The moon passes 4 degrees north of Mercury this morning.

Aug. 22. Samuel Langley was born on this day in 1834. He was an American astronomer, physicist, inventor and aviator.

Aug. 23. New moon is at 2:07 am.

Aug. 26. The moon passes 3 degrees south of Mars tonight.

Aug. 31. First quarter moon is at 2:25 a.m. EDT. The moon passes 0.7 degrees south of Antares, the brightest star in Scorpius which is about 500 light years away and 700 times larger than our sun, similar to Betelgeuse in Orion.



Moon Phases

Aug 1, 31
First Quarter

Aug 9
Full

Aug 16
Last Quarter

Aug 23
New

Moon Data

Aug 1
Moon at apogee

Aug 8
Pluto 0.009° south
of Moon

Aug 12
Saturn 4° south
of Moon

Neptune 3° south
of Moon

Aug 14
Moon at perigee

Aug 16
Uranus 5° south
of Moon

Aug 19
Jupiter 5° south
of Moon

Aug 20
Venus 5° south
of Moon

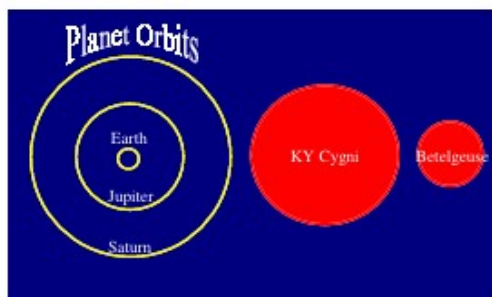
Aug 26
Mars 3° north
of Moon

Largest Stars Known

by Paul Kursewicz *

The previous record holder for the largest known star (*Herschel's "Garnet Star,"* otherwise known as *Mu Cephei*) has been bumped into 4th place. In a survey of 74 known supergiant stars in our Milky Way Galaxy, 3 have emerged as larger than any measured so far. The *new research* was presented on January 10, 2005 at the American Astronomical Society meeting in San Diego.

The three stars with the largest known sizes are **KW Sagittarii** (distance 9,800 light-years), **V354 Cephei** (distance 9,000 light-years), and **KY Cygni** (distance 5,200 light-years), all with diameters about 1500 times that of the Sun. These are *red supergiant* stars that are about twice the diameter of Betelgeuse, the red supergiant in Orion's shoulder (*below figure*).



The Largest Star Known: Our Sun is well inside Earth's orbit, shown here. The diameter of Betelgeuse, is also shown to scale. The red supergiant KY Cygni is larger. If placed where the Sun is, each of the newly discovered monster stars would extend far past the orbit of Jupiter.

Despite their tremendous diameters, these red supergiant stars are not the most massive in the universe. They are only 25 times the mass of the Sun, while the most massive stars may have as much material as 100 Suns.

Red supergiants are massive stars nearing the ends of their lifetimes. They are comparatively cool, luminous and very large. However, they are not the most luminous, nor are they the coldest stars known – brown dwarfs have much low temperatures. But the combination of modestly high luminosities and relatively low temperatures *does* mean that they are the biggest stars known, in terms of their stellar diameters.

Most Massive Stars (3 contenders)

Massive is not the same as largest. By using the term massive, I'm talking about *weight* not *size*. Less than 1% of the stars within 100 light-years of Earth rank as high-mass stars (those more than 10 times heavier than the Sun). For the *real heavyweights*, the nearest ones lie much further away.

The Pistol Star which may be the most luminous star in the Milky Way Galaxy (only if stellar candidate *LBV 1806-20* is a tightly packed group or cluster of stars rather than an individual), is 10 million times as bright as the Sun and about 100 times as massive. The star unleashes as much energy in 6 seconds as the Sun does in one year. This star is located 25,000 ly away in the constellation Sagittarius. It cannot be seen with the naked-eye because interstellar dust clouds hide it from view; instead, it was discovered by the Hubble Space Telescope in the early 1990s using infrared wavelengths that penetrate the dust.

LBV 1806-20 is also located in the constellation Sagittarius and is comparable in luminosity to *Pistol Star* or *Eta Carinae*, contenders for the most luminous star (all of which are *luminous blue variables*). Despite its high luminosity, it is virtually invisible because less than one billionth of its visible light reaches us, the rest being absorbed by intervening interstellar gas and dust, giving it an apparent brightness of 35th magnitude. This star has been measured to have at least 130 solar masses. Some even give the star 150 to 200 solar masses. If true, it holds the title for the most massive star. Located 30,000–49,000 light years from our Sun, toward the center of the galaxy.

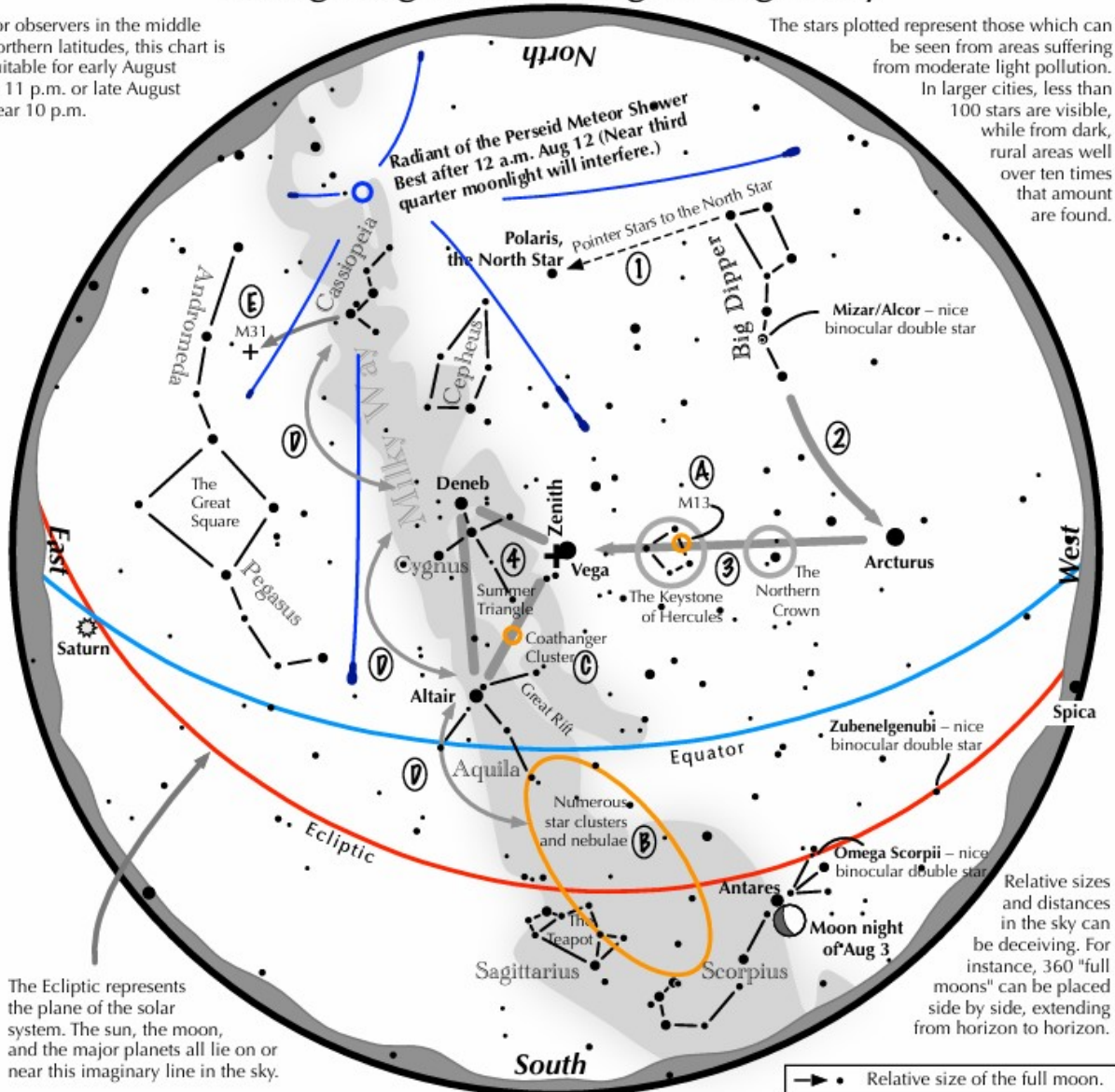
Eta Carinae is located in the constellation Carina and lies about 7,500 light-years from Earth. The star itself is surrounded by a large, *bright nebula*. Estimates of its mass range from 100–150 times the mass of the Sun, and its luminosity is about four million times that of the Sun. As of July 2006, *Eta Carinae* is the fifth most luminous star yet discovered. Stars this large are extraordinarily rare and it is thought that these stars approach the theoretical upper limit of stellar mass. *Eta Carinae* is only of 8th magnitude (still invisible to the naked eye).

* The Largest Stars Known article was previously featured as the August 2006 issue.

Navigating the mid August Night Sky

For observers in the middle northern latitudes, this chart is suitable for early August at 11 p.m. or late August near 10 p.m.

The stars plotted represent those which can be seen from areas suffering from moderate light pollution. In larger cities, less than 100 stars are visible, while from dark, rural areas well over ten times that amount are found.



Navigating the mid August night sky: Simply start with what you know or with what you can easily find.

- 1 Extend a line north from the two stars at the tip of the Big Dipper's bowl. It passes by Polaris, the North Star.
- 2 Follow the arc of the Dipper's handle. It intersects Arcturus, the brightest star in the June evening sky.
- 3 To the northeast of Arcturus shines another star of the same brightness, Vega. Draw a line from Arcturus to Vega. It first meets "The Northern Crown," then the "Keystone of Hercules." A dark sky is needed to see these two dim stellar configurations.
- 4 High in the East lies the summer triangle stars of Vega, Altair, and Deneb.

Binocular Highlights

- A: On the western side of the Keystone glows the Great Hercules Cluster.
- B: Between the bright stars Antares and Altair, hides an area containing many star clusters and nebulae.
- C: 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger.
- D: Sweep along the Milky Way for an astounding number of faint glows and dark bays, including the Great Rift.
- E: The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval.

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Principal Meteor Showers in 2025

January 4
Quadrantids

April 22
Lyrids

May 6
Eta Aquarids

July 30
Delta Aquarids

August 12
Perseids

October 9
Draconid

October 21
Orionids

November 9
Taurids

November 18
Leonids

November 26
Andromedids

December 14
Geminids

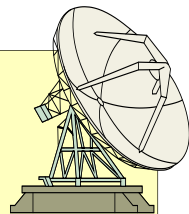
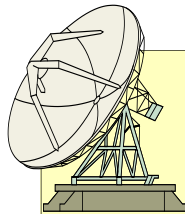
December 22
Ursids

*Note: Dates are
for maximum*

MEMBERSHIP DUES

Membership fees are for the calendar year beginning in January and ending in December. **Dues (see page 16 for prices) are payable to the treasurer during November for the upcoming year.** New members who join during or after the month of July shall pay half the annual fee, for the balance of the year. Checks should be made payable to the Astronomical Society of Northern New England (A.S.N.N.E.). If you would like to mail in your dues, use the form on page 16. Or you can use PayPal via asnne.astronomy@gmail.com

A Member who has not paid current dues by the January meeting will be dropped from membership, (essentially a two-month grace period.) Notice of this action shall be given to the Member by the Treasurer. Reinstatement shall be by payment of currently due dues.



Got any News?

Skylights Welcomes Your Input.

Here are some suggestions:

***Book reviews -- Items for sale -- New equipment --
Ramblings -- Star parties -- Observing -- Photos.***

Our club has Merchandise for Sale at: <https://www.cafepress.com/shop/ASNNE/products>



**ALL money raised goes to our operating fund.
Any design can be put on any item.**

Contact David Bianchi dadsnorlax@yahoo.com for further details.



This article is distributed by NASA Night Sky Network

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.org to find local clubs, events, and more!

August's Night Sky Notes: The Great Rift

By Dave Prosper

Updated by Kat Troche

Summer skies bring glorious views of our own Milky Way galaxy to observers blessed with dark skies. For many city dwellers, their first sight of the Milky Way comes during trips to rural areas - so if you are traveling away from city lights, do yourself a favor and look up!

To observe the Milky Way, you need clear, dark skies and enough time to adapt your eyes to the dark. Photos of the Milky Way are breathtaking, but they usually show far more detail and color than the human eye can see – that's the beauty and quietly deceptive nature of long exposure photography. For Northern Hemisphere observers, the most prominent portion of the Milky Way rises in the southeast as marked by the constellations Scorpius and Sagittarius. Take note that, even in dark skies, the Milky Way isn't easily visible until it rises a bit above the horizon, and the thick, turbulent air obscures the view. The Milky Way is huge, but it is also rather faint, and our eyes need time to truly adjust to the dark and see it in any detail. Avoid bright lights as they will ruin your night vision. It's best to attempt to view the Milky Way when the Moon is at a new or crescent phase; a full Moon will wash out any potential views.



The Vera C. Rubin Observatory, located at Cerro Pachón, Chile, under the Milky Way. The bright halo of gas and stars on the left side of the image highlights the very center of the Milky Way galaxy. The dark path that cuts through this center is known as the Great Rift, because it gives the appearance that the Milky Way has been split in half.

Image Credit: [RubinObs/NOIRLab/SLAC/NSF/DOE/AURA/B. Quint](https://rubinobs.noirlab.slac/nsf/doe/aura/b.quint)

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Keeping your eyes dark-adapted is especially important if you want to not only see the haze of the Milky Way, but also the dark lane cutting into that haze, stretching from the Summer Triangle to Sagittarius. This dark detail is known as the Great Rift, and is seen more readily in very dark skies, especially dark, dry skies found in high desert regions. What exactly is the Great Rift? You are looking at massive clouds of galactic dust lying between Earth and the interior of the Milky Way.

Other “dark nebulae” of cosmic clouds pepper the Milky Way, including the famed [Coalsack](#), found in the Southern Hemisphere constellation of Crux. Many cultures celebrate these dark clouds in their traditional stories along with the constellations and the Milky Way. One such story tells of a [Yacana the Llama](#), and her baby, wandering along a river that crossed the sky – the Milky Way. The bright stars Alpha and Beta Centauri serve as the llama's eyes, with the dark sections representing the bodies of mother and baby, with the baby below the mother, nursing.



In the activity, "Our Place In Our Galaxy", if the Milky Way were shrunk down to the size of North America, our solar system would be about the size of a quarter. At that scale, Polaris - which is about 433 light years distant from us - would be 11 miles away. Image Credit: [Astronomical Society of the Pacific](#)

Where exactly is our solar system within the Milky Way? Is there a way to [get a sense of scale](#)? The “[Our Place in Our Galaxy](#)” activity can help you do just that, with only birdseed, a coin, and your imagination. You can also discover the amazing science NASA is doing to understand our galaxy – and our place in it - in the [Galaxies](#) section of [NASA's Universe](#) page.

Originally posted by Dave Prosper: June 2021

Last Updated by Kat Troche: July 2025

Dwarf3 Astro-Imaging Review

Submitted by Paul Kursewicz



This Astro-Imaging review of the Dwarf3 Smartscope will be a brief one because I have not had it long enough to put it through its paces. I'm still learning how to do things with it. The Dwarf3 does not come with a tripod. It can be used in the daytime. It has two lenses, a telephoto lens and a widefield lens. It's small, making it a good travel scope.

Now, let's talk about taking Astro-photos with the Dwarf3. The user has 3 options as to how a picture can be created.

Option 1 (AI Image):

Pick your target, set the exposure length, the gain, and the number of images you want the device to stack. Start the picture taking process. Now, the Dwarf3 will do all the work for you, stacking the sub frames and processing them using an editing algorithm. The result is an AI generated image (i.e., no human was involved in the stacking and editing processes needed to create a picture). All Smartscopes work this way, hence their name. If you are pleased with this kind of image capture you can stop here and the Dwarf3 App will give an option: save the picture as is, or do a simple edit then save the picture.

Option 2 (Dwarf Lab Image):

Follow the procedure above. Now, copy all the individual RAW files (FIT sub frames) that the Dwarf3 created and email them to Dwarf Labs. They in turn will create the picture for you and then send the picture back to you. If you are pleased with this kind of image capture you can stop here and save their image. I have not used this method. However, in my email conversations with Peter Gillette, he told me that the Dwarf Lab pictures are not always the better ones. So an option here, if you would like, is to take the Dwarf Lab picture and bring it into a photo editing program.

Option 3 (Users Image):

This option allows the user to create their own pictures and is how I, an astrophotographer, plan to use a Smartscope. So, if you are like me and want to process your own images, begin by taking the FIT sub frames and bring them into your favorite stacking program. Next, bring that final stacked image into your favorite photo editing program. Now you can use your talents and skills to create your own pictures.

On the following two pages I'm sharing some pictures that I took with the Dwarf3.

“Continued on page 10”

First Light

These images are the first two images that I took with the Dwarf3.
Each are the AI generated versions (no editing).

M13 Globular Cluster

30sec, 60gain, 28subs, Astro Filter

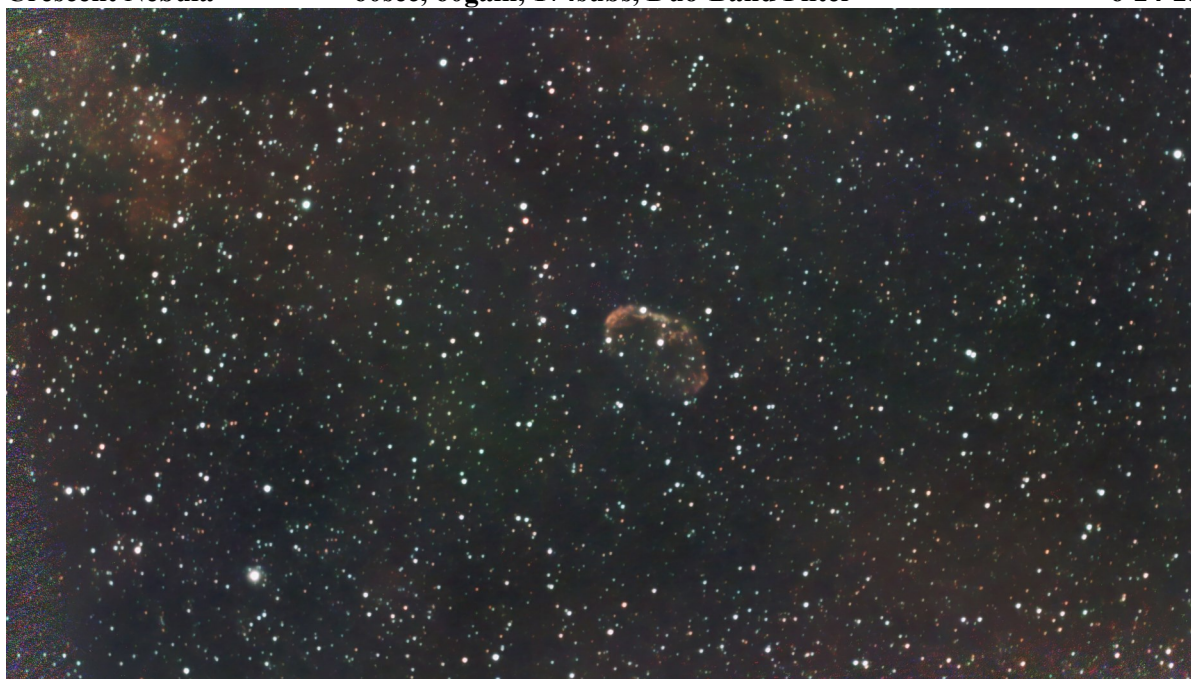
6-24-25



Crescent Nebula

60sec, 60gain, 174subs, Duo-Band Filter

6-24-25



“Continued on page 11 ”

Astro-Imaging with a Dwarf3 Smartscope

Crescent Nebula

Stacked in Deep Sky Stacker

Photo Editing Software Used: PixInsight, Photoshop, Siril, AstroSurface

Total Exposure Time: 2hr 48min

60sec, 60gain, 168subs, Duo-Band Filter, Slightly Cropped

6-24-25



Not bad for a 35mm aperture lens. Here, I used option number three to create my own picture. To take a 60sec exposure the Dwarf3 must be in EQ mode (polar aligned). The software will walk you through the process. However, I'm still having some trouble performing this task. I probably need more user time to make the process work correctly each time out. The Crescent Nebula is located in the constellation Cygnus.

Dwarf3 Specs: The telephoto lens has a 35mm aperture and a optical focal length of 150mm. But because of the type of sensor that the Dwarf3 uses, it crops the image size and increases the focal length to 737mm.

ASNNE Club BBQ/Picnic

Submitted by Paul Kursewicz

On July 11th at Talmage Observatory at Starfield, club members and several guest came to the club's BBQ. Dave rolled back the observatory roof pausing at times to mend one of the cables that open the roof. The roof opening system needs to be re-done. We had a brief business meeting and Ian suggested a different way to open up the roof than using a drill. He will look into it. Other things were discussed also. We could not do observing that night because of the thick cloud cover. Nevertheless all had a good time.



cloud-scapes

Submitted by Paul Kursewicz



My wife and I were birding along the NH coastline and a *vanishing point perspective* of cloud formations appeared.

Club Meeting & Star Party Dates

Date	Subject	Location
August 1 <u>ASNNE Club Meeting:</u> Business Meeting starts prior to Club Meeting Club Meeting 7:30pm This month's guest speaker will Christian Bridges – WGME TV weather forecaster. Bernie Reim - "What's UP" Astro Shorts: (news, stories, jokes, reports, questions, photos, observations etc.) Last Month	Last month members met at Talmage Observatory at Starfield. We had our annual club BBQ/Picnic. It didn't rain and all had a good time. Unfortunately, clouds prevented us from doing any kind of observing.	The New School, Kennebunk, Me.
Aug 22	Club/Public Star Party: Weather permitting. Rain date August 23.	Talmage Observatory at Starfield West Kennebunk, Me.

Directions to ASNNE event locations

Directions to The New School in Kennebunk [38 York Street (Rt1) Kennebunk, ME]

For directions to The New School you can use this link to the ASNNE NSN page and then click on "get directions" from the meeting location. Enter your starting location to generate a road map with complete directions. It works great. http://nightsky.jpl.nasa.gov/club-view.cfm?Club_ID=137

Directions to Talmage Observatory at Starfield [Alewife Road, Kennebunk, ME]

From North:

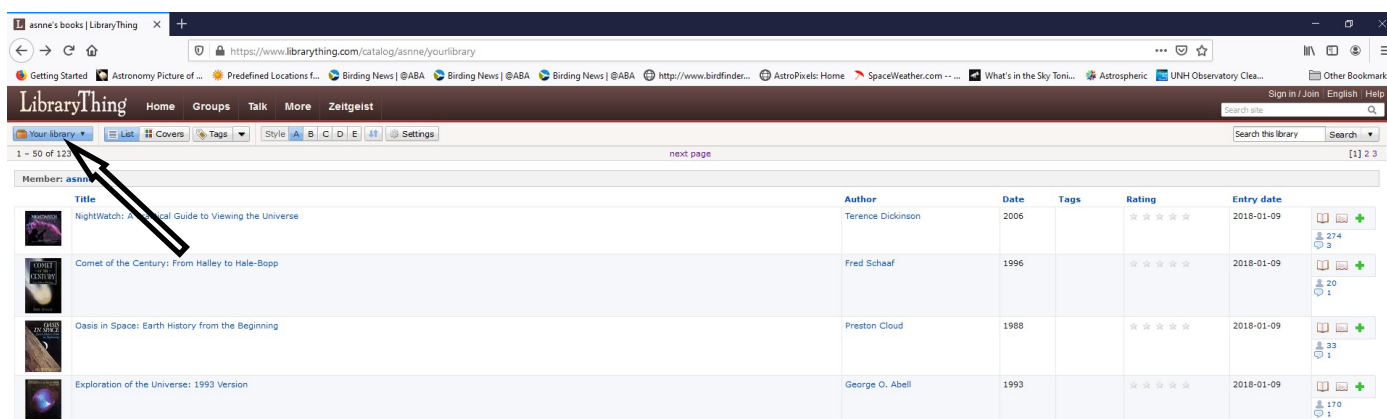
Get off turnpike at exit 32, (Biddeford) turn right on Rt 111. Go 5 miles and turn left on Rt 35. Go 2 miles on Rt 35 over Kennebunk River to very sharp 90 degree left turn. The entrance to the Starfield Observatory site is at the telephone pole at the beginning of the large field on the left. Look for the ASNNE sign on the pole.

From South:

Get off the turnpike at exit 25 in Kennebunk. After toll both turn right on Rt 35. Go up over the turnpike and immediately turn right on Rt 35. About 4 miles along you will crest a hill and see a large field on your right. Continue until you reach the end of the field. Turn right into the Starfield Observatory site at the last telephone pole along the field. Look for the ASNNE sign on the pole. If you come to a very sharp 90 degree right turn you have just passed the field.

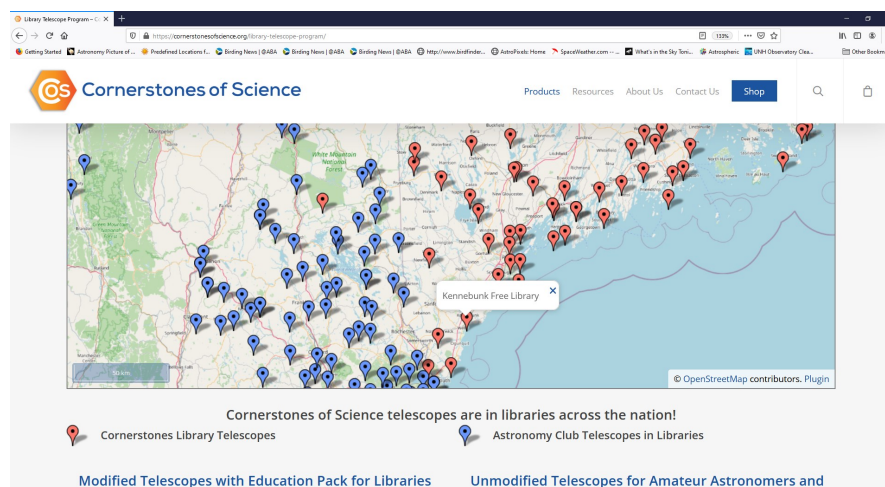
Astronomy Club & Library Resources

Our club has a library of astronomy books which are stored at The New School in Kennebunk, Maine (our monthly club meeting location). To request a book(s), contact one of the club officers. A listing of books is provided here: <https://www.librarything.com/profile/asnne> . After clicking on the link, a window will open. Click on “Your library” near the upper left corner (as shown by the arrow below). Then scroll down to the end of the page to go to the next page.



Would you like to borrow a telescope? While many astronomy clubs may have a scope to lend out, there are also many libraries which have telescopes for their guests to use. Here are a couple of links.

The following link will bring up an active map (see screen shot below) of the USA showing the libraries which have telescopes to lend out: <https://cornerstonesofscience.org/library-telescope-program/>



The below link will show a list of known participating library locations for the state of Maine.
<https://www.librarytelescope.org/locations/usa/maine>

To join **ASNNE**, please fill out the below membership form. *Checks should be made payable to: Astronomical Society of Northern New England (A.S.N.N.E).* For more details, please visit our website:

<http://www.asnne.org>



Astronomical Society of Northern New England
P.O. Box 201
Kennebunk, ME 04043-1338

2025 Membership Registration Form

(Print, fill out and mail to address above) or Use PayPal via asnne.astronomy@gmail.com

Name(s for family): _____

Address: _____

City/State: _____ Zip code: _____

Telephone # _____

E-mail: _____

Membership (check one):

Individual \$50 _____ Family \$ 60 _____ Student under 21 years of age \$10 _____ Donation _____

Total Enclosed _____

Tell us about yourself:

1. Experience level: Beginner _____ Some Experience _____ Advanced _____

2. Do you own any equipment? (Y/N) And if so, what types?

3. Do you have any special interests in Astronomy?

4. What do you hope to gain by joining ASNNE?

5. How could ASNNE best help you pursue your interest in Astronomy?

6. ASNNE's principal mission is public education. We hold many star parties for schools and the general public for which we need volunteers for a variety of tasks, from operating telescopes to registering guests to parking cars. Would you be interested in helping?

Yes _____ No _____

7. ASNNE maintains a members-only section of its web site for names, addresses and interests of members as a way for members to contact each other. Your information will not be used for any other purpose. Can we add your information to that portion of our web site?

Yes _____ No _____

