Skylights

Newsletter of the Astronomical Society of Northern New England



NOV2025

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 November

By Bernie Reim

The month of November can be a little bleak as the flaming fall foliage continues to fade out and the trees will be starting to look quite bare towards the end of the month. This highlights the natural beauty and structure of Maine's roughly 4 billion trees and this will continue throughout the winter. There are a little over 3 trillion trees currently living on Earth and all of them are providing very valuable services for us 8 billion humans.

Halloween marks the half way point of autumn for us in the northern hemisphere. There are usually still plenty of fairly nice days this month, so get outside and look up to the heavens to try to understand what is going on and where we are before it gets too cold The nights are continuing to get longer at the rate of 3 minutes per day, but there was a big jump early this month as we switched to Eastern Standard Time, seemingly plunging us into instant darkness on the afternoon of the very next day, Monday the third.

The sun set at 4:32 pm that day and civil twilight ended at 5:12 pm. Then nautical twilight, when you can no longer distinguish the ocean line from the horizon, ended at 5:35 pm and astronomical twilight, defined by the sun reaching 18 degrees below our horizon, is reached at 6:09 p.m. EST. The hour after sunset is called the "blue hour". This is a great time to photograph or paint since all the colors will appear very saturated before they fade out completely.

There are several good highlights this month to make it worth your while to spend a little time outside looking up from a good site with a clearing and not too close to any bright lights that would interfere with our inheritance of the wonders and beauty of the night sky that belong to all of us whether or not we ever really experience them.

Mercury will be close to Mars very low in the western evening sky for the first two weeks and then Mercury will migrate to the morning sky and hang out very close to our other next-door neighbor, Venus, for the last week of this month. Saturn is still close to its best in Aquarius now. It will set around 2 am. Notice that Neptune has drifted a little farther away from Saturn now. It is now located about 4 degrees to the left and above (northeast) of Saturn. Jupiter continues to get closer and brighter and rising about 4 minutes earlier each night, which is the rate that any given star will change based on our revolution around the sun. The first asteroid discovered, Ceres, is visible in Cetus the Whale now and this is a favorable year for the Leonid Meteor shower because it will be close to new moon, like the Orionids were last month.

There are three comets visible this month in a small telescope or a good pair of binoculars. Comet Lemmon is traveling through Ophiuchus the Serpent Bearer into Sagitarrius now and then there are also Comets Wierzchos and Christensen.

Mercury starts out this month as it ended the last one, close to Mars very low in the western evening sky. They will be close to Antares, the brightest star in Scorpius. You only have a ten-minute window to spot them and you may need binoculars. Mercury is about 3 times brighter than Mars. Then be prepared as Mercury switches sides and shows up just to the left and above Venus on the morning of November 25 half an hour before sunrise. Venus is about 50 times brighter than Mercury.

You would always expect Mercury and Venus to be fairly low on the horizon because they are closer to the sun and will never get very high in the sky or be visible around midnight. Venus can set as late as around 10 pm, but Mercury always rises or sets within an hour of sunrise or sunset. Notice that both of these inferior planets also have phases like the moon. You would need a small telescope to see the phases. The superior planets from Mars out to Neptune can be visible any time of the night depending on their orbits because they are farther away from the sun than the earth is.

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Saturn is still close to its best, rising a few hours before sunset and setting around 2 am. The ringed planet can be found in the northeastern corner of Aquarius and is still moving in retrograde or westward motion against the fixed background of stars until November 28. It was at its best at opposition when fall started two months ago and it started its retrograde motion on July 13 of this year. Its very thin rings will get as narrow as 0.4 degrees before getting a little more open again. Notice that Neptune is still about 4 degrees to the left or east of Saturn.

Jupiter is still getting a little closer and brighter each evening in Gemini as we continue to catch up with it in our respective orbits. It will end its normal, prograde, or direct motion appear to be stationary in the sky on the 11th, which is also Veteran's Day. I remember a transit of Mercury that took place on that day about 10 years ago. We set up telescopes outside the Southworth Planetarium in Portland during the day to let people observe this miniature eclipse for themselves. Jupiter rises around 10 pm now and will end this month rising about 8 pm.

Brilliant Venus is less than 4 degrees north of Spica in Virgo now. Venus now rises around 6:15 in the morning and it is getting lower and more illuminated by the sun. Mercury will join Venus on the morning of the 25th very low in the eastern morning sky.

There is usually at least one comet visible at any given time with a good pair of binoculars or a small telescope. This month there are three of them. Comet Lemmon is moving down from Ophiuchus the Serpent-bearer into Sagittarius this month. Comet 210/P Christensen is in Sagittarius and Comet Wierzchos is in Hercules.

The major highlight this month will be a favorable display of the Leonid Meteor Shower. The moon will not interfere because it will be new on the 20th. It will rise as a thin waning crescent around 5:30 that morning, by which time the twilight will have washed out any meteors anyway. They last from the 6th through the 30th, but they will peak on Monday night the 17th into Tuesday morning the 18th. You can only expect about 15 meteors per hour from a dark sky site and a wide-open field, but it will still be well worth looking for them even if you don't have those ideal conditions. The Leonids produce many fireballs with long, glowing, persistent trails.

All of the meteors from this shower will appear to emanate from the radiant in Leo, a point just above Regulus in Leo's sickle or backwards question mark. This is very close to where the sun was during the August 21 of 2017 total solar eclipse that I saw over Idaho near Yellowstone National Park. This shower is caused by the earth passing through the debris trail of Comet 55P/Tempel-Tuttle each year. This comet orbits the sun every 33 years, which leads to far more superior counts of meteors for a few years right after that due to its depositing a lot of extra material in its trail as it swings by the sun again. That last happened in 1999. The Leonid Meteor shower on November 18 of 2001 with no moon to interfere was simply spectacular, ranking right up there with solar eclipses and northern lights.

We had just built our new observatory on Route 35 in west Kennebunk for the Astronomical Society of Northern New England the summer before that and about 20 of us from the club gathered there on that very cold November night. I had spent the day in the White Mountains and was really looking forward to a good meteor shower since I had never seen more than about 40 or 50 per hour in the 25 years I had been practicing astronomy up to that memorable night. I was very pleasantly surprised. I knew if would be a great night as soon as I stepped out of my car and walked across our field to the new observatory because I had already counted 10 meteors in the couple of minutes it took me to walk that short distance.

It only got better and better from there, so we all stopped counting and moved out of the observatory into our wideopen 60-acre field and enjoyed one of nature's greatest spectacles of power and beauty next to eclipses and Aurora.

Knowing something scientific about what we were seeing only enhances the experience for everyone. We were not just seeing little flashes of light zipping across our night sky every few seconds. What we were really seeing and sensing were tiny sand grain-sized pieces of comet dust burning up high in our atmosphere at about 60 miles up, where space officially begins because there are too few air molecules to create a blue sky that far up. The sky is pitch black up there all the time, day or night.

The ionization energy generated from these tiny particles moving around 30 miles per second creates those brilliant flashes of light for only a split second. Slightly larger particles the size of pebbles would create brilliant bolides, or fireballs. There were about 15 of those that night. They would take on brilliant green or orange colors and light up the whole sky as they broke up and exploded. It was as if the whole landscape and the people and the observatory where frozen in a dream and someone used a bright flashbulb to take a picture of the scene in that instant in time, even casting shadows. The trails from these fireballs twisted in the atmosphere for several minutes and many other shorter meteors streaked right through these persistent and dusty trails.

Beyond all of that, you really get a much better sense of this great earth that we all dwell on and how it moves and the details of its life-giving atmosphere. It is easy to get a sense of our rotation on our axis just by watching the moon or sun rise or set but it is much more difficult to get a sense of our 67,000 mile-per-hour revolution speed around the sun. That is 18.6 miles per second, which could get you from NY to LA in under 3 minutes! I got that sense for the first time by being constantly bombarded by these entirely harmless little grains of sand and dust as we were always orbiting the sun at that great speed.

We saw nearly 1,000 meteors per hour starting around 3 am. That qualifies as a METEOR STORM, no longer a mere meteor shower. That averages one every 4 seconds. At one point I saw 7 meteors emanating from Leo in just one second. What was really impressive was the consistency of this great meteor storm. That was not a single lull of more than 10 seconds during the entire night. The vast scale of what we were all immersed in during those 3 or 4 hours until twilight was truly overwhelming when you really think about it. At the same time, it gave me a much deeper appreciation of nature's awesome power and beauty and what really went into creating this whole picture that all 8 billion of the current humans on Earth are part of.

To top of such a wonderful, out-of-this-world night of enjoying this heavenly show, an even more subtle phenomenon appeared about 2 hours before dawn. This was the zodiacal light. It is created by sunlight bouncing off the many trillions of particles of comet and asteroid dust caught in the ecliptic plane of our solar system in a giant torus. They have just recently discovered that this ghostly light is not just made of comet and asteroid dust, which would be amazing enough, but it also includes a lot of dust particles from Mars which somehow escaped the low gravity and thin atmosphere of the nearby red planet.

Now instead of looking at events at 60 to 70 miles, now we were looking at events concentrating along the ecliptic plane of the inner solar system out to several hundred million miles, or about half way to Jupiter. It is illuminated by the sun that is just below the horizon and it

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Moon Phases

Nov 5Full
11:47 am

Nov 12 Last Quarter 2:12 pm

> Nov 20 New 8:25 am

Nov 28 First Quarter 12:20 pm

Moon Data

Nov 1

Moon & Saturn 5° apart in the evening SE sky

Nov 5

Perigee 221,756.8 miles Diameter 33' 29"

Nov 9

Moon & Jupiter 3 1/2° apart in the late evening sky

Nov 17

Moon & Spica
Waning crescent just
2° below Spica
before sunrise

Nov 20

Apogee 252,706.1 miles Diameter 29' 23"

What's Up "Continued from page 2"

appears as a subtle and eerie pyramid or haystack of light wider and brighter at the bottom and fading out and getting narrower towards the top.

It is better near new moon and you have to be far away from any towns or cities. Right now, it reaches right through Venus in Virgo and up towards Jupiter in Gemini. Use the planets and the moon to guide you along the ecliptic. It is better closer to the equinoxes when the angle of the ecliptic to our horizon is at its steepest for the year. The other time to see it is a couple of hours after sunset low in the western sky.

Not only were we witnessing one of the greatest meteor showers of the century, we were at the same time seeing the combined effect of All of this comet dust trapped there for millennia along with Martian dust caught and concentrated along the ecliptic and illuminated by the sun that was about to rise soon and wash out the whole incredible show of the still intensifying Leonid meteors and the permanent zodiacal light. This can be seen as the largest single entity by far in the entire solar system,

This was SO much better than any man-made earthbound fireworks display could ever be. Fireworks are fun and they certainly grab your attention for a while with all of their sparkling light and noise. It is basically some rocket propulsion and a lot of colorful chemistry, but they only reach a few hundred feet up.

Meteor showers are entirely silent, portraying a much deeper layer of our constant interactions with stuff in space falling to Earth. About 100 tons of meteor dust filters down to earth every single DAY. A space rock 1 to 4 meters across, which is usually part of an asteroid or even a planet like Mars, hits our atmosphere about every day, but most of that is small enough to break apart and vaporize and not hit the ground. Then a space rock around 20 meters across, which was the size of the one that hit over Chelyabinsk in Siberia on February 15 of 2013, hits us about twice per century. Even that one broke up around 5 miles up due to everincreasing air resistance as it sped to our surface at about 20 miles per second. Many meteorites were found on the ground from that impact 12 years ago.

All of that happens regardless of any dramatic meteor showers going on. Most of them burn up at about 60 miles up at the very edge of our atmosphere and space itself, drawing our attention upward to where the sky is black even in the middle of the day. A regular person can now take a 10-minute rocket ride up to space, called the Karman line, 60 miles up and experience weightlessness for a few short minutes. This meteor shower and indeed all meteor showers give you a real sense of the sublime and numinous nature of the entire universe

This was all happening very close by, well within our solar system. Just imagine the power and beauty required to create a galaxy of 300 billion stars with about that many planets. Then multiply that by at least a trillion galaxies just for the known or observable universe.

Nov. 2. The moon passes 4 degrees north of Saturn this morning. Harlow Shapley was born on this day in 1885. He was an American astronomer who worked with RR Lyrae variable stars.

Nov. 3. Sputnik 2 was launched on this day in 1957. It had a dog named Laika aboard.

Nov. 5. Fred Whipple was born on this day in 1906. He ran the Harvard Observatory for 70 years and coined the term "dirty snowball" to describe comets. Full moon is at 8:19 a.m. EST.

This is also called the Frosty or Beaver Moon and is another supermoon since it will be full just 9 hours before its perigee, or closest approach to the earth for the month.

Nov 8. Edmund Halley was born on this day in 1656.

Nov. 9. Carl Sagan was born on this day in 1934. Mercury is stationary this evening.

Nov.10. The moon passes 4 degrees north of Jupiter this morning.

Nov. 11. Jupiter is stationary, beginning its retrograde motion today. Vesto Slipher was born on this day in 1875. He used redshift to determine the velocity of stars in galaxies.

Nov. 12. Last quarter moon is at 12:28 a.m. EST. Mercury passes 1.3 degrees south of Mars. The moon passes one degree north of Regulus.

Nov. 17. The Leonid meteor shower peaks.

Nov. 19. The moon passes 6 degrees south of Venus this morning.

Nov. 20. New moon is at 1:47 a.m. Edwin Hubble was born on this day in 1889. The Hubble Space Telescope is named in his honor. Mercury is at inferior conjunction.

Nov. 22. Alan Stern was born on this day in 1957. He is the lead scientist on the highly successful New Horizons mission that flew by Pluto in 2015 and is still out in the Kuiper belt now taking measurements and adding to our knowledge.

Nov. 24. Mercury passes 1.1 degrees north of Venus this morning.

Nov. 25. The moon passes 0/4 degrees north of Pluto this morning.

Nov. 26. Jupiter passes 7 degrees south of Pollux in Gemini this morning.

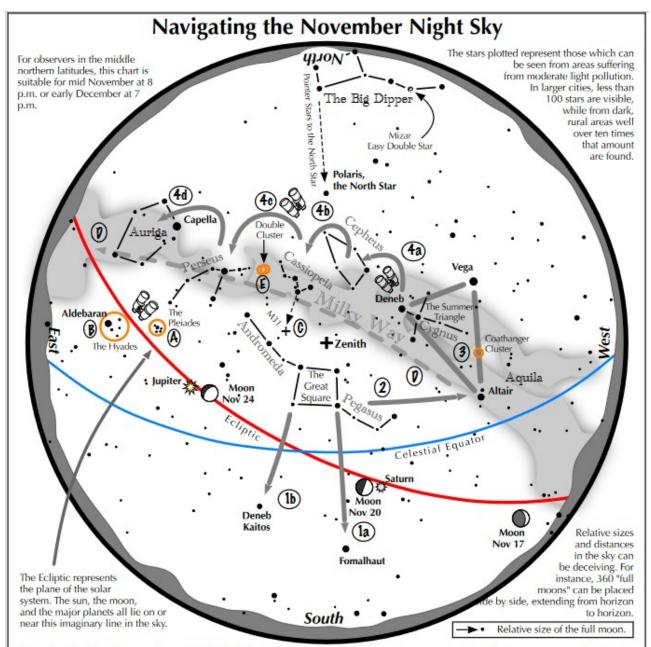
Nov. 27. Dwarf planet Ceres is stationary in Cetus the Whale.

Nov. 28. First quarter moon is at 1:59 a.m. EST. Saturn is stationary, ending its retrograde motion for this year.

Nov. 29. The moon passes 4 degrees north of Saturn and 3 degrees north of Neptune this evening.



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

- 1 Face south. Almost overhead lies the "Great Square" with four stars about the same brightness as those of the Big Dipper. Extend a line southward following the Square's two westernmost stars. The line strikes Fomalhaut, the brightest star in the south. A line extending southward from the two easternmost stars, passes Deneb Kaitos, the second brighest star in the south.
- 2 Draw a line westward following the southern edge of the Square until it strikes Altair, part of the "Summer Triangle."
- 3 Locate Vega and Deneb, the other two stars of the Summer Triangle. Vega is its brightest member, while Deneb sits in the middle of the Milky Way.
- 4 Jump along the Milky Way from Deneb to Cepheus, which resembles the outline of a house. Continue jumping to the "W" of Cassiopeia, then to Perseus, and finally to Auriga with its bright star Capella.

Binocular Highlights

A and B: Examine the stars of the Pleiades and Hyades, two naked eye star clusters. C: The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval. D: Sweep along the Milky Way from Altair, past Deneb, through Cepheus, Cassiopeia and Perseus, then to Auriga for many intriguing star clusters and nebulous areas. E. The Double Cluster.

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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 9Taurids

November 18
Leonids

November 26
Andromedids

December 14Geminids

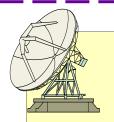
December 22 Ursids

Note: Dates are for maximum

MEMBERSHIP DUES

Membership fees are for the calendar year beginning in January and ending in December. Dues (see page 19 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 19. 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.

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EDITOR: I would like to share this article about **Amherst College Wilder Observatory**. Peter Talmage submitted it to *Skylights* back in November 2008. The observatory is still in operation but is currently closed for Maintenance/Renovation. Open April to October.

Amherst College Wilder Observatory

The Wilder Observatory was built in 1903 to house an 18" f17 Clark refractor telescope. The lens of the telescope was ground by Carl Lundin at a cost of \$5,000. In the summer of 1907 the telescope was dismantled and shipped to Chile to observe Mars. The Amherst Area Amateur Astronomer Association opens the observatory to the public every clear Saturday night in the Spring, Summer and Fall. I visited the observatory in June 2008.





The observatory is a classic brick building with a copper dome. The College doesn't have solid plans for the observatory's future so they haven't spent all the money needed for maintenance. Thus the peeling paint. The dome is 30 feet in diameter.

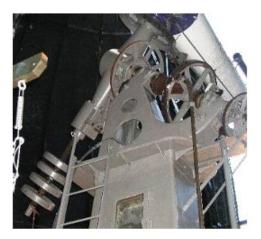




The 18" Clark is very impressive and BIG. Note the neat windows in the dome. A special elevator on tracks allows access to the scope for maintenance and observing. This is major mechanical gear.

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The 18" achromatic objective has a wide spacing between the elements. An access port in the cell allows for cleaning the inner surfaces. The lens is flawless. The mounting and pier are massive. The club's 1200 Astro Physics mount is about the size of the upper round hole in the middle of the picture.





The dome rotates on railroad car wheels that run on railroad track. The dome is very heavy and rumbles as it moves. The business end of the tube has lots of knobs. A "little" 4" Clark refractor is used as a finder.

Saturn was the object of the night. As the sky got dark we found Saturn low in the western sky. The view was OK but Saturn's altitude resulted in very few good moments of seeing. It was telling that a nice 13" reflector a member had set up in the parking lot gave better images. It was obvious that the dome was causing a lot of the bad seeing which would improve over time. Amherst College is at present trying to decide what to do with the observatory. It is no longer being used for any college programs yet still requires maintenance and repair to stay

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functional. The AAAAA has been keeping the telescope working but just. It is telling that ASNNE had a more powerful telescope in the 20" f/5 reflector it had some years back. It could have fit into a 16' square roll off roof observatory. One has to wonder if these old observatories are becoming white elephants. The University of Colorado at Boulder had an old Zeiss telescope that they had no further use for. Fortunately one of the professors had the idea of setting up a heliostat on the roof of the science building and feeding the light down through the reset objective of the old scope. It is now being used regularly for solar spectrum work. The old scope and mounting minus the lens is on display in the planetarium lobby. In Portland the Children's Science Museum has an incredible camera obscura that through a roof mounted adjustable mirror and a large objective it projects an amazing image of the Portland area onto a viewing table in a darkened room.

Here is a nice slide show on the observatory: https://cms.amherst.edu/aboutamherst/tours/nooks/wilder

Peter Talmage August 2, 2008

The photo below was taken by Paul Kursewicz in 2007



I took this photo on June 20th shortly after 9:20pm. Used a Nikon D100 digital camera on a fixed tripod and a 50mm lens. The exposure length was 5 seconds. Pointing the camera Southeast, I snapped a rare view of the International Space Station (brighter streak below) and the Space Shuttle Atlantis (upper streak) orbiting in tandem. The two were visible for about 3 minutes with the Space Station leading the way from the West-Northwest direction.

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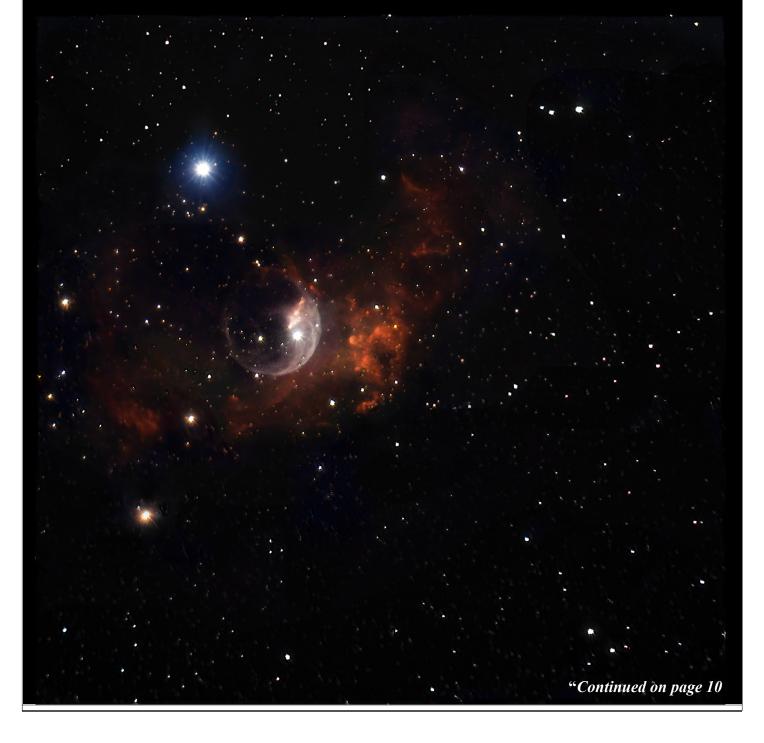
Astro-Imaging with a SmartEye

Submitted by Paul Kursewicz

Bubble Nebula

Meade 10-inch Schmidt Cassegrain, f/6.3, 1600mm
IR-cut Filter, 221subs, 20sec, 350 Gain, 9-16-25
Fit Files stacked in Deep Sky Stacker — Total time: 1hr 12min 40sec
Photo Editing Software Used: PixInsight, Photoshop, Siril, AstroSurface





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Locating the Bubble Nebula

Screen shot taken with Stellarium



The Bubble Nebula (NGC 7635) is an emission nebula located 7100 light years in the constellation Cassiopia. In the above screen shot it's shown inside the highlighted square. The "bubble" is created by the stella wind from a massive hot, 8.7 magnitude young central star. The nebula is near a giant molecular cloud that contains the expansion of the bubble nebula while itself being excited by the hot central star, causing it to glow. In dark skies with an 8-or-10-inch telescope, the nebula is visible as an extremely faint and large shell around the star. The nearby 7th magnitude star on the west hinders observation, but one can view the nebula using averted vision. The Bubble Nebula is approximately 10 light-years wide and is composed primarily of hydrogen gas.

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Astro-Imaging with a Dwarf3

Submitted by Paul Kursewicz

Elephant Trunk Nebula

No Dwarf image was Used Fit Files Stacked in Deep Sky Stacker Photo Editing Software Used: PixInsight, Photoshop, Siril, AstroSurface Total Exposure Time: 3hr 8min

60sec, 60gain, 230subs, Duo-Band Filter

7-29-25



The large reddish region of ionized gas is IC 1396 and is about 2,400 light years from Earth. The Elephant Trunk Nebula (IC 1396A) is an elongated (dark) globule of interstellar gas and dust seen at the center of my image. It gets its name because it appears to resemble an Elephant Head (just right of center) and Trunk (extending out towards the center of my image). It's faint, so faint that my Canon PowerShot SX50 HS camera was unsuccessful in revealing it. But the Dwarf3's sensor had no problem capturing it. The Elephant Trunk is located in the constellation Cepheus and measures about 100 light years across.

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Astro-Imaging with a Canon PowerShot SX50 Camera

Submitted by Paul Kursewicz

Comet C/2025 A6 (Lemmon)



On this night Comet Lemmon made its closest approach to Earth. To get the blue gas tail to show up I took four images of the comet (exposures of 30sec, 45sec, 1min, and 1min 30sec) and stacked on the comet. Then did a deep stretch (enhancing the contrast). The image would have been 90% better if the comet was positioned higher up in the sky. I used a focal length of 280mm and an ISO setting of 1000. The camera was mounted on a camera tracker. The next page shows the comet up close.

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Astro-Imaging with a Dwarf3

Submitted by Paul Kursewicz

Comet C/2025 A6 (Lemmon)

No Dwarf Edits & No Dwarf Labs were used in the following images. I did my own photo editing.

15sec, 60gain, 10subs, Astro Filter

10-21-25



Close-up of Comet Lemmon during its closest approach to Earth, 28.6 million miles away. On this night I got to see the comet naked-eye by using averted vision. Comet Lemmon was discovered on January 3, 2025 as part of the Mount Lemmon Survey, which uses a 60-inch telescope at Mt Lemmon, Arizona. Comet Lemmon is a non-periodic comet, which means it has a variable orbital period that spans over a Millenium and is hard to predict. Observations hint that once it passes our Sun on November 8th, it will have an orbital period of 1,150 years. It will spend a majority of its time within the Oort Cloud.

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Astro-Imaging with a Dwarf3 Submitted by Paul Kursewicz

Comet Lemmon

15sec, 60gain, 6subs, Astro Filter

10-17-25



15sec, 60gain, 5subs, Astro Filter

10-17-25



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Astro-Imaging with a Dwarf3

Submitted by Paul Kursewicz

Comet C/2025 R2 (SWAN)

15sec, 60gain, 11subs, Astro Filter 10-21-25

On this day Comet SWAN was also at its closest approach to Earth, a mere 24 million miles away. The closest comet of 2025. It is a long period comet orbiting the Sun every 20,000 years. The Solar Wind Anisotropies (SWAN) instrument on the SOHO spacecraft confirmed this comet on September 12.

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Public Outreach

Submitted by Gary Asperschlager

HERE ARE SOME PICTURES FROM MY SOLAR OBSERVING DAY AT WINDOM HIGH SCHOOL.









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Club Meeting & Star Party Dates			
Date	Subject	Location	
Nov 7	ASNNE Club Meeting:	The New School, Kennebunk, Me.	
	Business Meeting starts prior to Club meeting.		
	Club Meeting (in house & on Zoom): 7:30-9:30PM		
	Guest Speaker: We do not have a guest speaker this month.		
	Bernie Reim's - "What's UP"		
	Astro Shorts: (news, stories, jokes, reports, questions, photos, observations etc.)		
Last Month	Last month we met at The New School. We did not have a guest speaker. There was a business meeting before the club meeting started. Astro shorts were given as well as Bernie's What's Up.		
Nov 21	Club/Public Star Party: Weather permitting. Rain date Nov 22.	Talmage Observatory at Starfield West Kennebunk, Me.	

Directions to ASNNE event locations

Directions to The New School in Kennebunck [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 [Alewive 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.

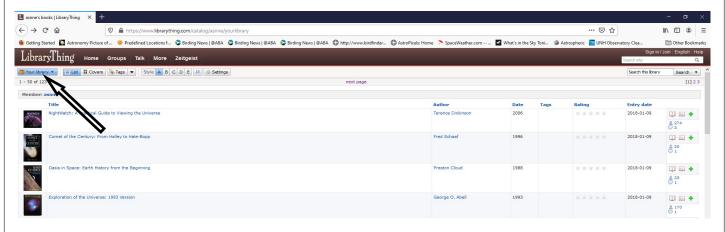
From South:

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.

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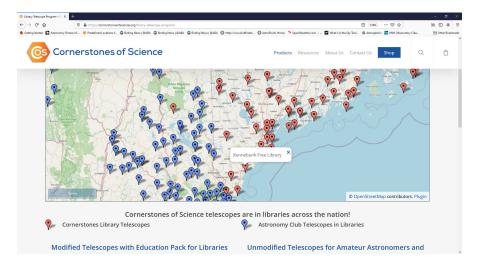


Our club has a library of astronomy books which are stored at The New School in Kennebunk, Maine (our monthly club meeting location). To request a book(s), contact one of the club officers. A listing of books is provided here: https://www.librarything.com/profile/asnne. After clicking on the link, a 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

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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

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Astronomic P.O. Box 2	cal Society of Northern New England
	t, ME 04043-1338
•	
2025 Mem	bership Registration Form
(Print, fill o	out and mail to address above) or Use PayPal via asnne.astronomy@gmail.com
Name(s for	family):
Address: _	Zip code:
· City/State:	Zip code:
Telephone	#
E-mail:	
Membershi Individual	p (check one): \$50 Family \$ 60 Student under 21 years of age \$10 Donation
Total Enclo	osed
Tell us abo	ut yourself: uce level: Beginner Some Experience Advanced
2. Do you c	own any equipment? (Y/N) And if so, what types?
3. Do you h	nave any special interests in Astronomy?
4. What do	you hope to gain by joining ASNNE?
5. How cou	ald ASNNE best help you pursue your interest in Astronomy?
general pub	s principal mission is public education. We hold many star parties for schools and the blic for which we need volunteers for a variety of tasks, from operating telescopes to guests to parking cars. Would you be interested in helping? No
members as	maintains a members-only section of its web site for names, addresses and interests of s a way for members to contact each other. Your information will not be used for any other an we add your information to that portion of our web site?
Yes	No
•	
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