

Skylights

Newsletter of the Astronomical Society of Northern New England



SEPT 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.

ASNNE's Annual Starfest Weekend

Starfest weekend will take place at **Talmage Observatory at Starfield**. The observatory is located in West Kennebunk, Me off route 35.

The event starts on Friday afternoon Sept 19th and concludes on Sunday afternoon on the 21st. Featuring the observatory's 8-inch Zeiss-Jena Refractor and a 16-inch Schmidt-Cassergain.

Also featuring our annual Northern Lights display. In the past we have been fortunate to have Northern Lights appear during our festival.

A History of Space Exploration



Yuri Freeman will be our Keynote Speaker.

He will take us through the first Russian Space missions, including Sputnik, the first artificial satellite, and the launch of Yuri Gagarin, the first human in space. He will then cover the American Space missions that culminated with Neil Armstrong and Edwin (Buzz) Aldrin becoming the first humans to walk on the moon; the American astronauts and Russian cosmonauts meeting in space during the Apollo-Soyuz missions; and modern Space X breakthroughs, including reusable rockets, and Starlink global internet. Freeman will also discuss his career in space electronics.

Yuri Freeman has a Ph.D. in solid state physics, the foundation of modern electronics and 62 U.S. and international patents. In his career as a scientist and engineer, Freeman developed the most advanced Tantalum capacitors, the key

parts of life-saving cardio implants and space systems. For this work, Freeman received the Ekeberg Prize, the highest award in this field of applied science and engineering. Freeman participated in the Russian space program and then was invited to the United States by Sprague Electric in Sanford, Maine, where he got involved in the U.S. space program.

On-site camping. Camping is allowed on our property but we have no running water or electricity. Porta potty on site. Please take your own trash with you. Also, we don't have that many chairs so you might want to bring your own.

If you have a telescope feel free to bring it and set it up in our field. We will be setting up our tent on Friday afternoon.

There will be solar viewing and nighttime viewing on Friday and Saturday, weather permitting. There is no rain date. So, if the weather is bad (but not horrible) the event will still take place under the tent.

A sample schedule of events are listed on the following page.

"Continued on page 2"

Inside This Issue

Club Contact List	Pg. 2
Moon Data	Pg. 3
Pluto (2006 article)	
September's Night Sky	Pg. 4
Meteor Showers in 2025	Pg. 5
Club Merchandise for Sale	
Club Membership Dues 2025	
Summer Triangle Corner: Altair	Pg. 6,7
Pegasus Astro SmartEye Review	Pg. 8-10
Venus & Jupiter Conjunction	Pg. 11
Wanning Gibbous Moon	Pg. 12
Cloud-Scapes	Pg. 13
Club Info & Directions to ASNNE	Pg. 14
ASNNE Club & Library Resources	Pg. 15
Become a Member	Pg. 16

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Starfest

Come for a few hours or camp out overnight

Friday:

Gates open around 12pm for tent, telescope, and camping set-ups.

Observatory open for Solar Viewing in the afternoon.

If it's clear, all night observing.

Or hang out under the stars or in the tent, or next to the fire for a chat.

Or perhaps a walk through the constellations of glow worm lights in the field.

Astro "B" Movie Theater.

Saturday:

Solar viewing H-alpha on Zeiss.

10am - 12pm Raffle tables and BBQ set-up.

2pm - 5pm BBQ \$6 (open to non-members).

Hot Dogs, Hamburgers, Sweet Corn, Chips. BYO your own desert.

5pm - 6pm Raffle prizes awarded.

7pm Tent Talks: Speaker Yuri Freeman.

Bernie Reim's What's Up.

Astro Shorts.

Astro "B" Movie Theater.

All night observing.

Fire Pit.

Sunday:

Dismantling the tent and clean-up.

Moon Phases

Sept 7

Full

Sept 14

Last Quarter

Sept 21

New

Sept 29

First Quarter

Moon Data

Sept 4

Pluto 0.06° south
of Moon

Sept 8

Saturn 4° south
of Moon

Neptune 3° south
of Moon

Sept 10

Moon at perigee

Sept 12

Uranus 5° south
of Moon

Sept 16

Jupiter 5° south
of Moon

Sept 19

Venus 0.8° south
of Moon

Sept 24

Mars 4° north
of Moon

Sept 26

Moon at apogee

* Pluto

Poor little Pluto
Icy, round, and cute
The IAU demoted you!
They've given you the boot!

You haven't cleared your neighborhood.
Your orbit's off the plane.
You encroach on Neptune's orbit.
You're a naughty little pain.

But sill I think you're wonderful
Far out in lonely space
Cavorting with your Charon
You're a very special case!

by: Joan Chamberlin

* Despite Planetary Downgrade, Pluto is Still Disney's 'Dog Star'
In reaction to news today that Pluto was demoted to the status of "dwarf planet," the Seven Dwarfs issued their own short statement:

"Although we think it's DOPEY that Pluto has been downgraded to a dwarf planet, which has made some people GRUMPY and others just SLEEPY, we are not BASHFUL in saying we would be HAPPY if Disney's Pluto would join us as an 8th dwarf. We think this is just what the DOC ordered and is nothing to SNEEZE at."

As Mickey Mouse's faithful companion, Pluto made his debut in 1930 - the same year that scientists discovered what they believed was a ninth planet. Said a white-gloved, yellow-shoed source close to Disney's top dog, "I think the whole thing is goofy. Pluto has never been interested in astronomy before, other than maybe an occasional howl at the moon."

by Howard Eskildsen

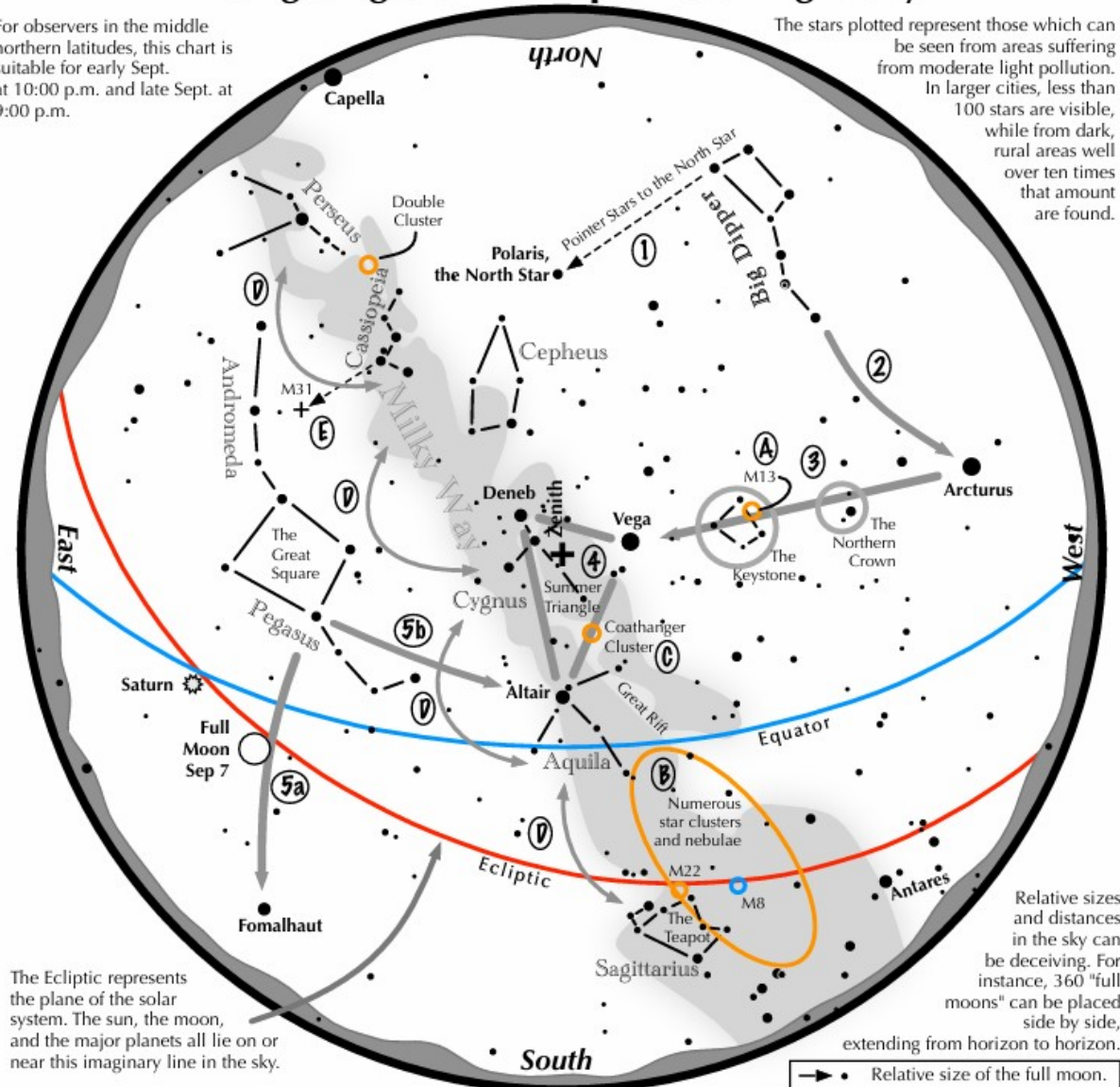
Submitted by: Paul Kursewicz

* The two articles were previously featured as the September 2006 issue.

Navigating the mid September Night Sky

For observers in the middle northern latitudes, this chart is suitable for early Sept. at 10:00 p.m. and late Sept. at 9:00 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 September 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 September evening sky.
- 3 Nearly overhead shines a star of similar brightness as Arcturus, 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 The stars of the summer triangle, Vega, Altair, and Deneb, shine overhead.
- 5 The westernmost two stars of the Great Square, which lies high in the east, point south to Fomalhaut. The southernmost two stars point west to Altair.

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.

Astronomical League www.astroleague.org/outreach; duplication is allowed and encouraged for all free distribution.



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

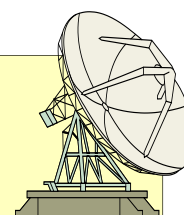
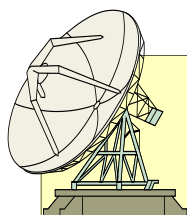
December 22
Ursids

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!

Summer Triangle Corner: Altair

by Kat Troche

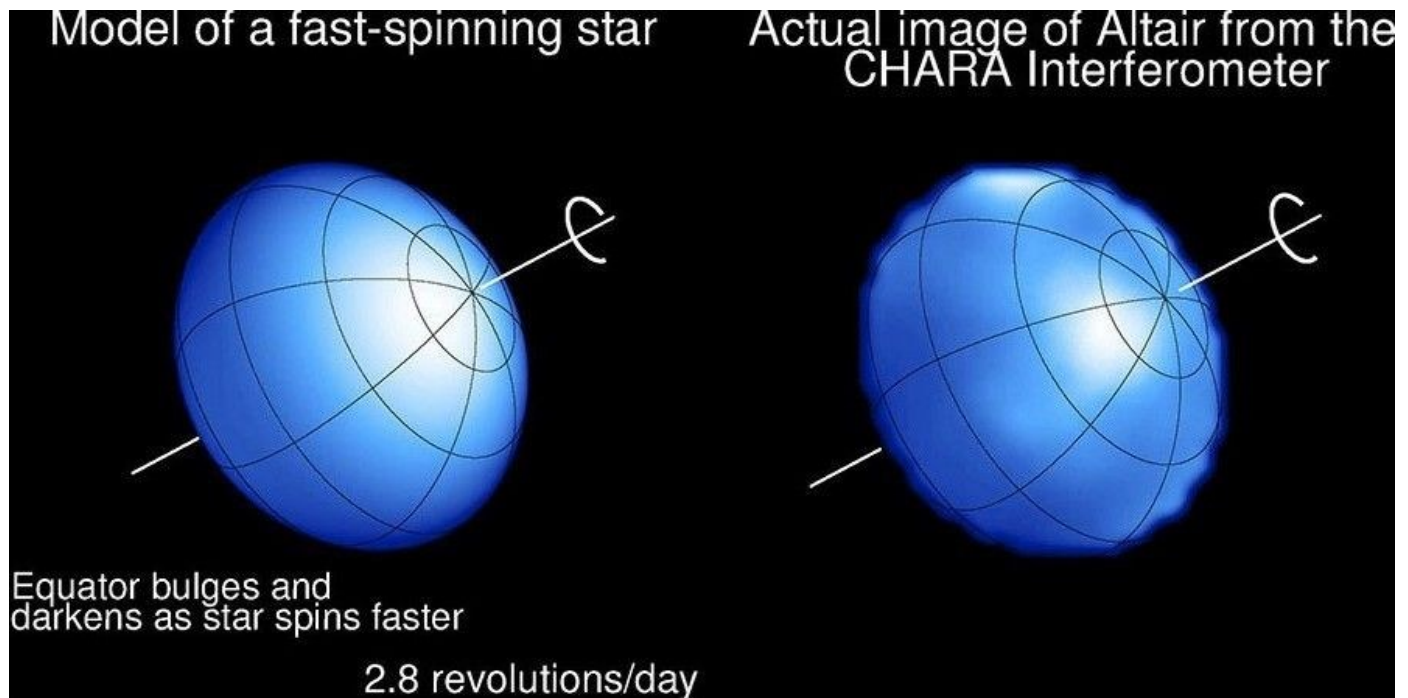


A map of the asterism known as the Summer Triangle. This asterism is made up of three stars: Vega in the Lyra constellation, Altair in the Aquila constellation, and Deneb in the Cygnus constellation.

Altair is the last stop on our trip around the Summer Triangle! The last star in the asterism to rise for Northern Hemisphere observers before summer begins, brilliant Altair is high overhead at sunset at the end of the season in September. Altair might be the most unusual of the three stars of the Triangle, due to its great speed: this star spins so rapidly that it appears “squished.”

Altair is the brightest star in the constellation of Aquila, the Eagle. A very bright star, Altair holds a notable place in the mythologies of cultures around the world. As discussed [in a previous article](#), Altair represents the cowherd in the ancient tale “Cowherd and the Weaver Girl.” While described as part of an eagle by ancient peoples around the Mediterranean, it was also seen as part of an eagle by the Koori people in Australia. They saw the star itself as representing a wedge-tailed eagle, and two nearby stars as his wives, a pair of black swans. More recently, one of the first home computers was named after the star: the Altair 8800.

“Continued on page 7”



A rapidly spinning star darkens and exhibits a bulge at the equator, as shown by the model at left. At right, an actual CHARA interferometer image of the star Altair.

Altair's rapid spinning was first detected in the 1960s. The close observations that followed tested the limits of technology available to astronomers, eventually resulting in direct images of the star's shape and surface by using a technique called *interferometry*, which combines the light from two or more instruments to produce a single image. Predictions about how the surface of a rapidly spinning massive star would appear held true to the observations; models predicted a squashed, almost "pumpkin-like" shape instead of a round sphere, along with a dimming effect along the widened equator, and [the observations confirmed this!](#)

This equatorial dimming is due to a phenomenon called *gravity darkening*. Altair is wider at the equator than it is at the poles due to centrifugal force, resulting in the star's mass bulging outwards at the equator. This results in the denser poles of the star being hotter and brighter, and the less dense equator being cooler and therefore dimmer. This doesn't mean that the equator of Altair or other rapidly spinning stars are actually dark, but rather that the equator is dark in comparison to the poles; this is similar in a sense to sunspots. If you were to observe a sunspot on its own, it would appear blindingly bright, but it is cooler than the surrounding plasma in the Sun and so appears dark in contrast.

As summer winds down, you can still take a Trip Around the Summer Triangle with this activity from the Night Sky Network. Mark some of the sights in and around the Summer Triangle at: bit.ly/TriangleTrip.

SmartEye Astro-Imaging Review

Submitted by Paul Kursewicz



Skywatcher Evostar 72 ED
(2.8") Apo Refractor; f/5.8
Focal Length: 420mm.



SmartEye
Comparable to a TeleVue
11mm eyepiece.



Orion EON 115mm (4.5")
ED Triplet Apo Refractor;
f/7 Focal Length: 805mm.

What is SmartEye?

The Pegasus Astro **SmartEye** eyepiece is a digital imaging device designed for telescopes, combining traditional eyepiece observation with advanced sensor technology. It features a Sony IMX533 color CMOS sensor and a 2560 x 2560 OLED display for vibrant color views and a 90-degree field of view. Suitable for both visual observations and astrophotography.

Ways to use SmartEye

There are a variety of ways to use SmartEye. As an electronic eye-piece. You can switch to a traditional eye-piece at anytime. As a smart camera. As a dedicated astro-camera (will require a laptop and 3rd party software). You can use your cell phone to operate SmartEye. Others can use their own phones to see the object being imaged. It can plate solve if you have a proper set-up (a mount that can talk to SmartEye). And, in the future, SmartEye will be able to do guiding.

How I'm using SmartEye

Since I do not have a mount that can talk to SmartEye I will be using it (for now) in the most basic way. Polar align my mount, insert a traditional eye-piece, then find my object, center it in the field of view. Remove the eyepiece and insert SmartEye. Focus using the telescope. My interest in using SmartEye is for doing Astro-imaging, not so much for looking into its eyepiece. SmartEye requires a power source to operate its cooling fan. I'm using a 12V battery and the manufactures' included cable and module.

My telescopes

I own four telescopes and have used SmartEye with all of them. For this review I only used the two telescopes shown above. Maximum exposure is 30 seconds. Focal ratios of f/7 or faster are recommended. Slower focal ratios (f/8 and higher) inhibit astrophotography and slow down live view stacking. On the following pages I have included several pictures. In my August newsletter, I took pictures the *Crescent Nebula* with the Dwarf3. I used the *Crescent Nebula* again here for a comparison between my SmartEye images and last months Dwarf3 images.

"Continued on page 9"

NOTE: The AI generated images below represent what is seen in the eye-piece. However, in reality, everything is much brighter, almost too bright at times. I have not tried to turn down the display brightness yet. For me, these live stacks are very different than the live stacks that I have seen being generated by the Dwarf3 and Seestar S50.

Looking into the SmartEye eye-piece using my 2.8-inch refractor.



Looking into the SmartEye eye-piece using my 4.5-inch refractor.



“Continued on page 10”

Astro-Imaging with a SmartEye

Crescent Nebula

Orion EON 115mm (4.5") ED Triplet Apo Refractor, f/7, FL 805mm, IR-cut Filter

RAW images stacked in Deep Sky Stacker

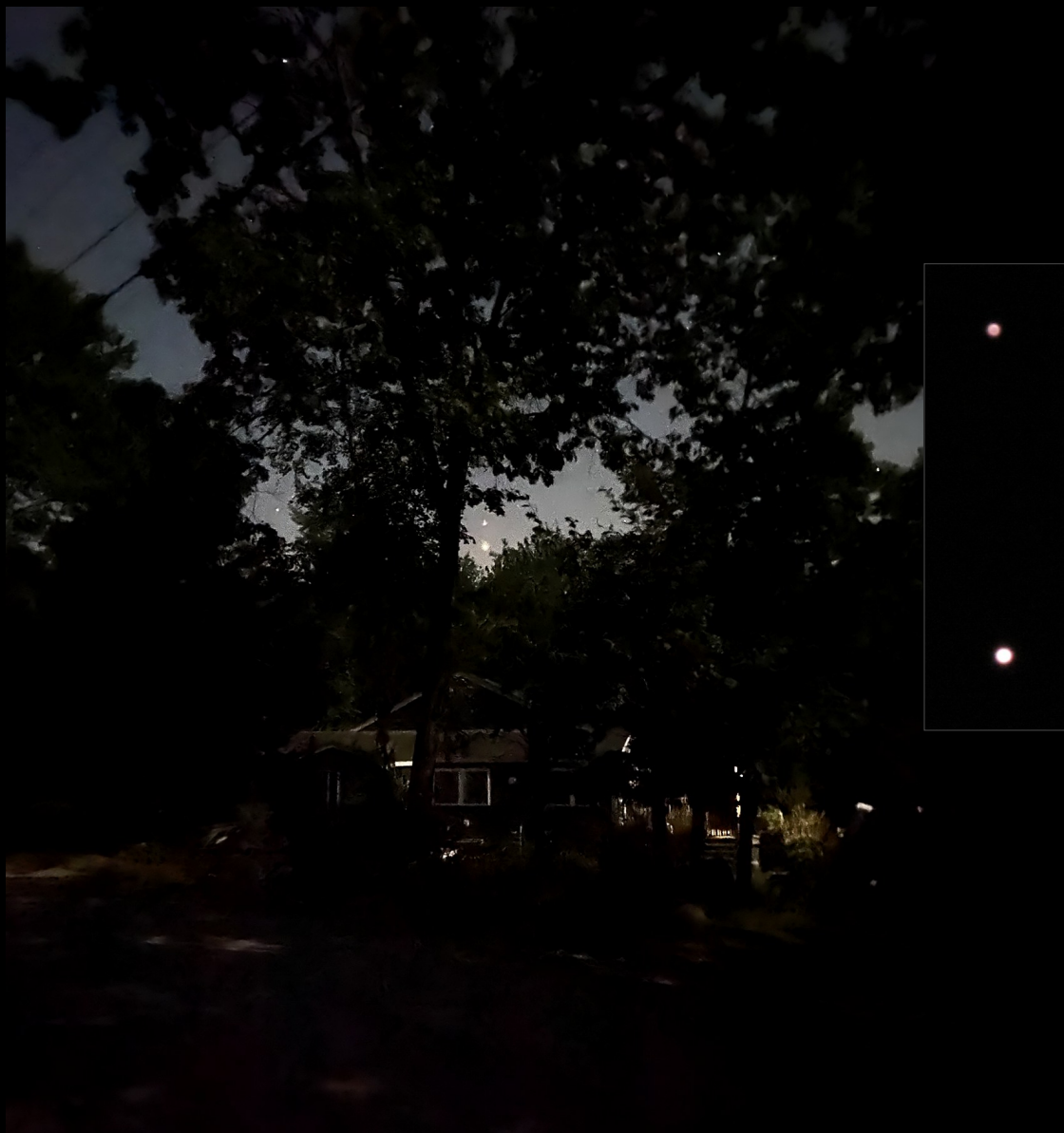
Photo Editing Software Used: PixInsight, Photoshop, Siril, AstroSurface

SPECS: 30sec ,Gain 350, Stacked 123, Total Exposure Time: 1hr 1.5min, 8-16-25



Venus & Jupiter Conjunction

Wide-field view taken with my cell phone on August 13, 2025 at 4:08 AM.
Close-up inset taken with my SX50 camera using a focal length of 314mm.



The two brightest planets made a spectacular close approach to each other on the mornings of August 12th & 13th. On the 13th, Jupiter was directly above Venus and situated very low in the sky. I could not see them from my yard so I walked onto my street and headed toward my neighbors house. It was there that I noticed the pair shining brightly in a small section of open sky just above their house. The bright star to the pairs left which is also located in a small patch of open sky is Castor, a star in Gemini. The bright star high above Castor is Capella, the brightest star in the constellation Auriga. Another bright star to the far right of the duo shining through the dark leaves (near the edge of open sky) is Betelgeuse, a star in Orion.

Waning Gibbous Moon

August 13, 2025 at 4:08 AM



A Waning Gibbous Moon was out during the Venus & Jupiter conjunction. So, I took its picture with my SX50 camera: A hand-held single image using Auto Focus and a focal length of 2400mm digital zoom (my camera has Image Stabilization). The Moon was 73% lit and about 20 days old. During the Waning Gibbous phase, the lit side of the Moon will shrink, darkening from one side.

cloud-scapes

Submitted by Paul Kursewicz



While driving through Wells, Maine my wife spotted this awesome cloud formation. So I pulled into a parking lot and snapped this photo with my cell phone.

Club Meeting & Star Party Dates

Date	Subject	Location
Sept 19-21	<u>STARFEST WEEKEND</u> Our September Club Meeting will take place during Starfest Weekend. So, <u>no club meeting</u> at The New School this month. See pages 1 and 2 for Starfest information.	Talmage Observatory at Starfield West Kennebunk, Me.
Last Month	Last month members met at The New School. Our guest speaker was Christian Bridges, WGME TV weather forecaster. Christian gave a wonderful presentation and shared some weather forecasting sites that we could go to check what the weather will be doing each night.	
Sept 19-20	Club/Public Star Party: Weather permitting.	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:

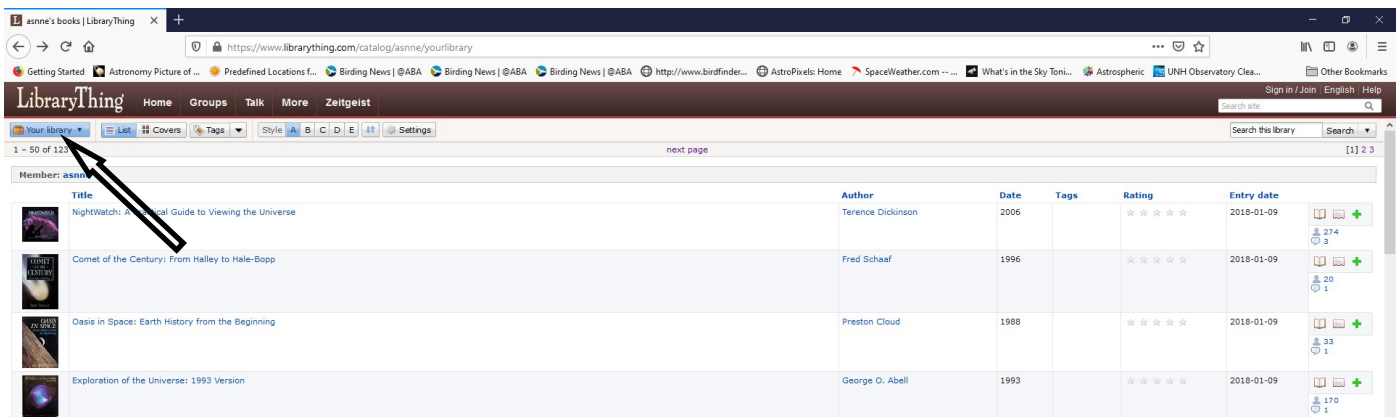
Get off turnpike at exit 32, (Biddeford) turn right on Rt 111. Go 5 miles and turn left on Rt 35. Go 2 miles on Rt 35 over Kennebunk River to very sharp 90 degree left turn. The entrance to the Starfield Observatory site is at the telephone pole at the beginning of the large field on the left. Look for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

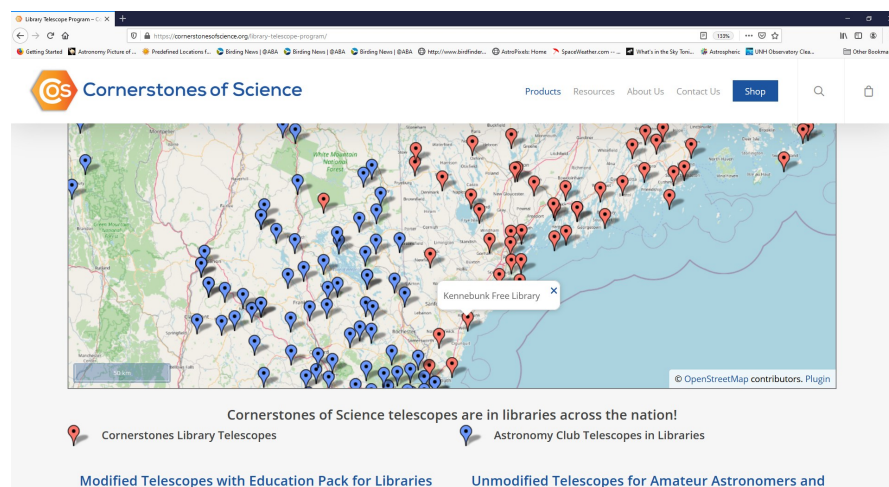
Astronomy Club & Library Resources

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 _____

