

Skylights

Newsletter of the Astronomical Society of Northern New England



OCT 2026

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 October

By Bernie Reim

The month of October always marks the first full month of fall for us in the northern hemisphere. The name comes from "octo", which is Latin for eight. This used to be the eighth month of the year when March was the first month in the early Roman calendar.

Our famous New England fall foliage will peak later this month once again transforming our lush green summer leaves into the much more vibrant shades of reds and oranges of autumn. Just as our terrestrial landscape is being transformed on Earth, so is our celestial skyscape in the heavens above us. Summer constellations like Sagittarius and Scorpius are slowly slipping below the western horizon even as the upper part of the Winter Hexagon is already beginning to peek over our eastern horizon.

Look for the Pleiades open star cluster to appear in Taurus the Bull by 10 pm along with Capella in Auriga the Charioteer. They will rise by 8 pm by the end of this month. Any given star rises 4 minutes earlier each day, although we probably would not really notice that unless you timed it precisely. That is called the sidereal day, which is 23 hours and 56 minutes, and 4 seconds, which is the exact time it takes Earth to complete one full 360-degree rotation on its axis relative to the distant, fixed stars.

There is also a difference between the sidereal lunar month, which is 27.3 days, which is the time that the earth lines up with the same background of stars again as the moon goes around us. However, to get through all the lunar phases, which is called the synodic lunar month, takes 29.5 days because the earth has traveled about 3.5 million miles through space in those 50 hours. We are always revolving around the sun at 18.6 miles per second, which is exactly 10,000 times slower than the speed of light. If we could travel that speed on the surface of the earth, we could get from New York City to LA in under 3 minutes!

Since the Pleiades are rising 4 minutes earlier now each night, you can look for them in Taurus at a reasonable time of night well before midnight. The next time you look at this wonderful little open star cluster consisting of about 500 stars, also known as the 7 Sisters or Subaru in Japanese, keep in mind that the photons of light you are seeing at that moment left those stars about 400 years ago. When you connect that time back to important events on Earth, you will discover that Galileo, also known as "The Father of Modern Science", turned the first telescope in all of the roughly 200,000-plus-year history of modern humans to the heavens above in 1609, just over 400

years ago. To celebrate that extremely important discovery that set astronomy and science in general on a whole new course almost overnight, we had the International Year of Astronomy in 2009 declared by the United Nations, which offered many great events and resources for teachers around the globe for that entire year to raise awareness and understanding of astronomy and science.

To show you how unprepared we were back then to accept new ideas even if they were obviously proven beyond any shadow of doubt, the Catholic Church tried Galileo for heresy in June of 1633 and found him guilty and forced him to recant his views on heliocentrism and placed him under house arrest until his death on January 8 of 1642 at 78 years of age. He was finally pardoned and reinstated 359 years later on October 31 of 1992 by Pope John Paul II. Hopefully we are much more prepared now to accept new and earthshaking ideas about where and who we really are and where we are going than we were 400 years ago.

The stars in the Pleiades open star cluster are about 100 million years old, which is very young for a star. Our own sun is 46 times older at 4.6 billion years, which is the same age as the earth. The earth looked very different when those young stars in the Pleiades were being born. We were in the middle of the Cretaceous period when giant dinosaurs ruled the land and there were no polar ice caps.

"Continued on page 2"

Inside This Issue

Club Contact List	Pg. 2
Moon Data	Pg. 3
October's Night Sky	Pg. 5
Moon Occults Jupiter	Pg. 6
Starfest 2026	Pg. 7-11
Astro-Imaging Photos & Techniques	Pg. 12-14
October's Night Sky Notes: Spooky Stargazing	Pg. 15-18
Club Info & Directions to ASNNE	Pg. 19
Meteor Showers in 2026 Club Merchandise for Sale Club Membership Dues 2026	Pg. 20
ASNNE Club & Library Resources	Pg. 21
Become a Member	Pg. 22

Club Contacts

Officers:

President:

David Bianchi
dadsnorlax@yahoo.com

Vice President:

Bernie Reim
bernard.reim@maine.edu

Secretary:

Sarah Myles
sarahdesignme@yahoo.com

Treasurer:

Ian Durham
idurham@anselm.edu

Board of Directors:

Gary Asperschlager
gasperschlager@gmail.com

Marty Burgess
martyfb7@gmail.com

Bernard Valliere

Star Party Co-ordinator:

Open Position

Skylights Editor:

Paul Kursewicz
pkursewicz@myfairpoint.net

Website Manager:

Open Position

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

What's Up "Continued from page 1"

It was a very warm and dynamic time on Earth with lush tropical forests near where the Polar ice caps now exist. The sea levels were extremely high and shallow inland seas existed on several continents.

The Western Interior Seaway formed at about that time that roughly split our country in half. It lasted about 33 million years and disappeared when the dinosaurs died out 65 million years ago. That is why there are so many dinosaur fossils to be found in that area. The Atlantic Ocean was much narrower and the South American continent had just started pulling away from Africa back then. The Rocky Mountains did not even exist yet, but Mt. Washington and the White Mountains were already about 300 million years old.

Angiosperms, flowering plants that produce seeds enclosed within a fruit and now make up the largest and most diverse group of land plants were just beginning to make their very first tentative appearance on this planet at that time 100 million years ago. They soon changed the entire nature of all of our forests and they continued to co-evolve with the insects that first appeared on Earth about 480 million years ago during the Ordovician Period, which was also the time the first land plants appeared. This was only about 40 million years after the Cambrian explosion when most fish first appeared along with a huge variety of other complex animals in our oceans. That explosion lasted about 20 million years, which is just the blink of an eye in the much vaster astronomical and geological time frames. That is when animals also evolved complex features like eyes, legs, shells, and sharp teeth.

The nights are still fairly warm at this time of year and we tend to have many clear nights, so get outside under the stars to look for some interesting highlights this month during every chance that you will get. The highlights for this month include Saturn at opposition on October 4, the asteroid Vesta at opposition on the 13th, two comets visible in a telescope, the Orionid Meteor shower which peaks on Wednesday, October 21 and a great occultation of Jupiter by a waning crescent moon on the morning of Tuesday the 6th starting at 4:30 am.

The best time to view a superior planet from Mars out to Neptune is when it is at opposition. That means it is directly opposite the earth from the sun in our sky. That is when it rises right at sunset and stays in our sky all night long and doesn't set until the sun comes up again. The moon does this every month at full moon. In the case of Saturn and Jupiter, they reach opposition about every 13 months as the earth catches up with them and passes them in our faster orbit around the sun. Mars is always moving at 15 miles per second, Jupiter at 8 mps, and Saturn at 6 mps. Mars will reach opposition on February 19 of next year and Jupiter will reach opposition on January 10 of next year.

Saturn is now in Pisces the Fish and it spends just over 2 years in each of the 12 zodiac constellations since it takes nearly 30 years to orbit the sun once. Neptune can still be found close to Saturn and Neptune had its own opposition last month.

A planet will be at its best, closest to earth and brightest and largest in our sky when it reaches opposition. When Mars had its dramatic opposition back on August 27 of 2003 when it came within 35 million miles of earth, millions of people looked at it and became aware of it since that was the closest that Mars had come to Earth in 60,000 years.

Another much anticipated event was the very close Jupiter and Saturn conjunction back on the winter solstice, December 21 of 2020 during the height of the covid pandemic. They almost formed a double planet, since they were only 0.1 degrees apart, or one fifth the diameter of the full moon. They pass fairly close to each other in our sky every 20 years, but this was the closest night time conjunction in 80,000 years.

We will lose Venus in Virgo low in the western sky right after sunset after the first week of this month. Before we do, look for Mercury just 5 degrees north of Venus on the evening of October 5. Look for a slender waxing crescent moon just to the left of Mercury on the evening of the 12th.

Mars now rises about 1:30 am in Cancer the Crab. Watch as a waning crescent moon crosses the northern edge of the Beehive open star cluster and passes within 3.4 degrees east of Mars on the morning of October 5. Mars is getting a little closer and brighter and larger each morning now, but it will not reach its best at opposition until February 19 of next year.

Jupiter is the last planet to rise each morning. The King of the Planets begins the month rising around 3 am in Leo the Lion and it will rise at 1:30 am by the end of the month as it approaches its own opposition on January 10 of next year when it will rise exactly at sunset, which is what Saturn is doing now. Notice that Jupiter is 3 magnitudes or 15 times brighter than Mars now but still about 12 times fainter than Venus, which is near its brightest for the year now at minus 4.8 magnitude, even though it is only 15 percent illuminated by the sun and we will lose it during the first week of this month.

The second largest of all of our millions of asteroids in the main asteroid belt safely orbiting between Mars and Jupiter is named Vesta. Discovered in 1807 by Heinrich Olbers, Vesta is 330 miles in diameter, or about the size of Arizona. It is not quite large enough to reach dwarf planet status. At one time in 1845 when we kept discovering more and more large asteroids, we had 11 official planets.

Ceres, the first asteroid ever discovered in 1801, does qualify since it is 600 miles in diameter, or about the size of Texas. Ceres is in hydrostatic equilibrium, which means it is large enough to have spun itself into a round shape based on its own gravity, which is one of the qualifications to become a planet. Ceres, the first asteroid ever discovered in 1801, does qualify since it is 600 miles in diameter, or about the size of Texas. Ceres is in hydrostatic equilibrium, which means it is large enough to have

"Continued on page 3"

Moon Phases

Oct 3
Last Quarter

Oct 10
New

Oct 18
First Quarter

Oct 26
Full

Moon Data

July 11-12
East-Northeast 1hr
before sunrise Moon
joins the Pleiades,
Mars & Aldebaran

July 13
Moon Perigee
223,143

July 16-17
Looking West 45min
after sunset Moon
joins Venus and
Regulus

July 23-25
1hr after sunset
Moon travels
through Scorpius

July 25
Moon at Apogee
251,995

What's Up "Continued from page 2"

spun itself into a round shape based on its own gravity, which is one of the qualifications to become a planet. It also orbits the sun, but none of the asteroids have cleared their orbits of similar objects, which is the third criteria to meet to be known as a full-fledged planet, as determined in 2006. Pluto meets the first two criteria, but not the last one since there are hundreds of thousands of similar objects in the Kuiper belt larger than 100 km across and probably trillions of smaller ones. Pluto just happened to be the closest and largest of this vast number of Kuiper belt objects at 1473 miles in diameter. Mercury is twice that size at 3000 miles across.

Vesta will be at opposition in Cetus the Whale near Saturn and Neptune in Pisces the Fish on the 13th. It is the brightest of all of the asteroids and it will reach 6.5 magnitude, just beyond naked eye visibility. Both Vesta and Ceres are very unique and different asteroids. We visited both of them for the first time ever with a spacecraft called Dawn back in 2011 and 2013. This was an amazing little spacecraft that had an ion propulsion engine that ionized xenon gas with electricity for its power source. This is a great propulsion system, but will not give you very fast acceleration. It takes 4 full days to get from zero to 60 mph, whereas a fast car on Earth can do that in less than 2 seconds and reach about 170 mph at the end of a quarter mile in under 10 seconds.

Several other spacecraft are now using this very slow but super-efficient propulsion system including the new Chinese Space Station called Tiangong, which means "heavenly palace", the Bepi Colombo mission that just reached Mercury, and the DART mission that managed to knock a small moon of an asteroid a little out of its orbit, proving that we could actually redirect at least a very small asteroid from hitting the earth if we needed to in order to potentially save millions or even billions of lives. DART stands for Double Asteroid Redirect Test. Just 4 years ago, on September 26 of 2022, it intentionally collided with a moonlet named Dimorphos which is only 525 feet in diameter and orbits an asteroid named Didymos which is 2560 feet or about half a mile in diameter.

It was discovered that Vesta is an endlessly fascinating place that is still hiding many of its mysteries from us. Similar to Earth, Vesta has a crust, a mantle and it even used to have a liquid core when it was hotter billions of years ago, but now its core is a dense metallic region composed mostly of iron and nickel.

Vesta is an embryonic proto planet that never quite finished forming into a complete planet like the earth and Venus and Mars. Its growth was arrested by the strong gravitational influence of nearby Jupiter. Vesta also suffered two major impacts over a billion years ago that nearly destroyed the entire asteroid. There are two giant overlapping craters at its south pole as evidence of those two dramatic collisions. One of them has a rebound peak that is about 12 miles high, or twice the height of Mt. Everest. So much material from Vesta was scattered throughout the entire solar system from those collisions long ago that fully 5% of all the meteorites found on Earth can be traced back directly to Vesta.

We don't even need to send any humans there to get any sample returns from this asteroid because some of it is constantly being delivered right to our front door on Earth!

The Dawn spacecraft then discovered that its next target, Ceres, is a no less fascinating world than Vesta, but also completely different and unique in its own right. Ceres has many bright white spots on its surface which turned out to be cryovolcanoes that erupt water onto its surface instead of searing hot lava. The white color is from the salts that evaporated out of this water. Cryovolcanoes were also discovered on Pluto and Triton, the largest moon of Neptune.

Ceres is a cold and icy world that is more like a comet than an asteroid or planet. Its average temperature is minus 150 degrees F. Ceres is fully 50% water by volume and is not very dense. It has a muddy mantle of rock and brine and a small solid core of rock and metal. It also has frozen water ice on its surface that has been deeply hidden at the bottom of some of its craters for billions of years so that ice will never see any sunlight, similar to some water ice discovered in deep craters on our own moon. At the same time that Pluto was downgraded to a dwarf planet, Ceres was actually upgraded to a dwarf planet from just the largest asteroid. The 4 largest asteroids, Ceres, Vesta, Pallas, and Juno make up fully half of the mass of all the many millions of asteroids that orbit between Mars and Jupiter.

The two comets that you can now see in a small telescope are Comet Hartley-IRAS in Aquarius and 10P/Tuttle near the star Fomalhaut in Pisces Austrinus, the Southern Fish. Comet Hartley-IRAS is putting out a green emission from its inner coma and is moving through our sky at 15 arc seconds per minute, which is fast enough to notice its motion in just a few minutes instead of the usual hour or so. They are both 9th to 10th magnitude in brightness.

The Orionid Meteor Shower will peak on Wednesday morning the 21st. It lasts from October 2 through November 7. This year the waxing gibbous moon will interfere until it sets around 1 in the morning. Meteor showers are usually much better after midnight anyway, so that will work out well if it is clear. The radiant from which all of these meteors will appear to originate from is just above Betelgeuse in Orion, hence its name, the Orionids. This radiant will be above the eastern horizon by 11 p.m., but the moon will not set until 1 a.m.

This is one of two meteor showers caused by the earth passing through the debris trail of that most famous of all comets, Halley's. The other one is called the Eta Aquarids and they peak on May 4 each year. You can expect up to 20 meteors per hour from this years' Orionids from a dark sky site with an open horizon far away from any lights from cities or towns.

"Continued on page 4"

The last major highlight this month is a fairly rare occultation of Jupiter by the moon. The only problem is the timing, Jupiter will be occulted or covered up by the moon starting at 4:30 a.m. Tuesday morning October 6 and it will not reappear until an hour later at 5:30 a.m. At least we can see the entire occultation from here in New England. The entire occultation while it is still dark will be visible for most of our country out to Tucson, AZ.

You will need a telescope or a good pair of binoculars to really appreciate the details in this occultation. The leading edge of the waning crescent moon will first cover some the moons of Jupiter, then the planet itself, and then the moons visible on the other side. This will take a full minute. If the moon occults a star, it will disappear instantly and is easy to miss even if you are watching carefully. Then be sure to watch the gradual reappearance of Jupiter and its moons from the unilluminated side of the moon an hour later.

This is a great way to really notice the very rapid 2,000 mph continuous motion of the moon around the earth. An even better way to see this motion very vividly is during a total solar eclipse as the moon's shadow races across the earth at that speed and dramatically and suddenly engulfs everything and everyone in its path with an immense and silent WHOOSH. I have been lucky enough to have witnessed this twice already, once in Driggs, Idaho and once in Rangeley Maine.

Jupiter has 4 large Galilean moons, first seen by Galileo with his telescope in 1609. You can now see all 4 of those in a good pair of binoculars. One or two of them may be behind or in front of the planet, so you may not always be able to see all 4 of them. An occultation of Jupiter by the moon is a fairly rare event, occurring only once every 13 years on the average. The next one for us will not be until November of 2037, so watch this one if it is clear! A transit of Mercury across the face of the sun happens 13 times every century and the next one will be on November 12 of 2032. The next transit of Venus will not occur until December 11 of 2117. I was lucky to have seen both of the last 2 Venus transits on June 8 of 2004 and June 6 of 2012.

Heinrich Olbers, the same person who first discovered Vesta in 1807, is even better known for his Olber's Paradox, or the dark sky paradox. If you really think about it, if the universe were infinite and static and uniformly filled with stars, then every straight line you trace into space will eventually hit the glowing surface of a star and it would never get dark at night. We are obviously in the shadow of our own solid earth to create the night for all of us as we rotate, but even looking out at night into the rest of our little part of our galaxy would create a lot of light. That is similar to not being able to see very far into a forest because the trees close to you cover up the rest of the trees in the whole forest. Edgar Allen Poe even wrote a good poem addressing this paradox in 1848 called EUREKA-A PROSE POEM.

The solution to this paradox of why it is even dark at night is that the universe is not static and it is not infinite nor eternally old. The universe is actually very young, 13.8 billion years old, and it is still expanding quite rapidly at close to the speed of light. The rate of this expansion is called the Hubble Constant and is now thought to be about 70 km/sec/Mpc.

Mpc stands for Megaparsec, which is 3.26 million light years. One parsec, short for parallax second, is 3.26 light years.

Olbers wrote this paper in 1823, and Edwin Hubble proved this expansion and the non-static and finite nature of the universe using the redshift of galaxy clusters receding away from us in 1929. The entire fabric of space-time that everything is embedded in is stretching. That is why we can see nearly 50 billion light years into the known or observable universe in all directions, even though it is only 13.8 billion years old. Light from galaxies beyond that distance simply has not had enough time to catch up with us yet due to the limited nature of the speed of that light, which is 186,000 miles second in a vacuum. That is our very limited cosmic horizon.

Oct. 1. On this day in 1897 the Yerkes 40-inch refractor was dedicated in Wisconsin. Designed by George Ellery Hale, this was the largest telescope in the world at that time.

Oct.3. Last quarter moon is at 9:25 a.m. EDT.

Oct. 4. On this day in 1957 Sputnik 1 was launched by Russia, marking the beginning of the Space Age. Saturn is at opposition. The U.S. launched its first satellite on January 31 of 1958.

Oct. 5. Neil deGrasse Tyson was born on this day in 1958. The moon passes 1.2 degrees north of Mars this morning.

Oct.6. The moon passes 0.2 degrees north of Jupiter this morning. The asteroid Pallas is at opposition.

Oct. 7. Neils Bohr was born on this day in 1885. He was one of the pioneers in the quantum mechanics revolution which made most of our modern technology possible.

Oct. 10. New moon is at 11:50 a.m.

Oct. 12. Mercury is at greatest eastern elongation from the sun this morning.

Oct. 13. Asteroid Vesta is at opposition.

Oct. 15. Asaph Hall was born on this day in 1829. He discovered Phobos and Deimos, the only two moons of Mars in 1877. Thomas Joel Bopp was born on this day in 1949. He discovered one of the brightest comets of the last century along with Alan Hale in 1995, known as Hale-Bopp.

Oct. 16. Pluto is stationary in Capricorn today.

Oct. 18. First quarter moon is at 12:13 p.m.

Oct. 19. Subrahmanyan Chandrasekhar was born on this day in 1910. He won the Nobel prize in 1983 for discovering the Chandrasekhar limit, which is 1.44 solar masses which is the limit when a Type 1A supernova always explodes as the result of the interaction of a red giant star and a white dwarf star. This is a standard candle that two independent teams used in 1998 to discover that the entire universe is not only expanding, but that it is expanding at an ever-increasing rate. They won the Nobel prize for that in 2011.

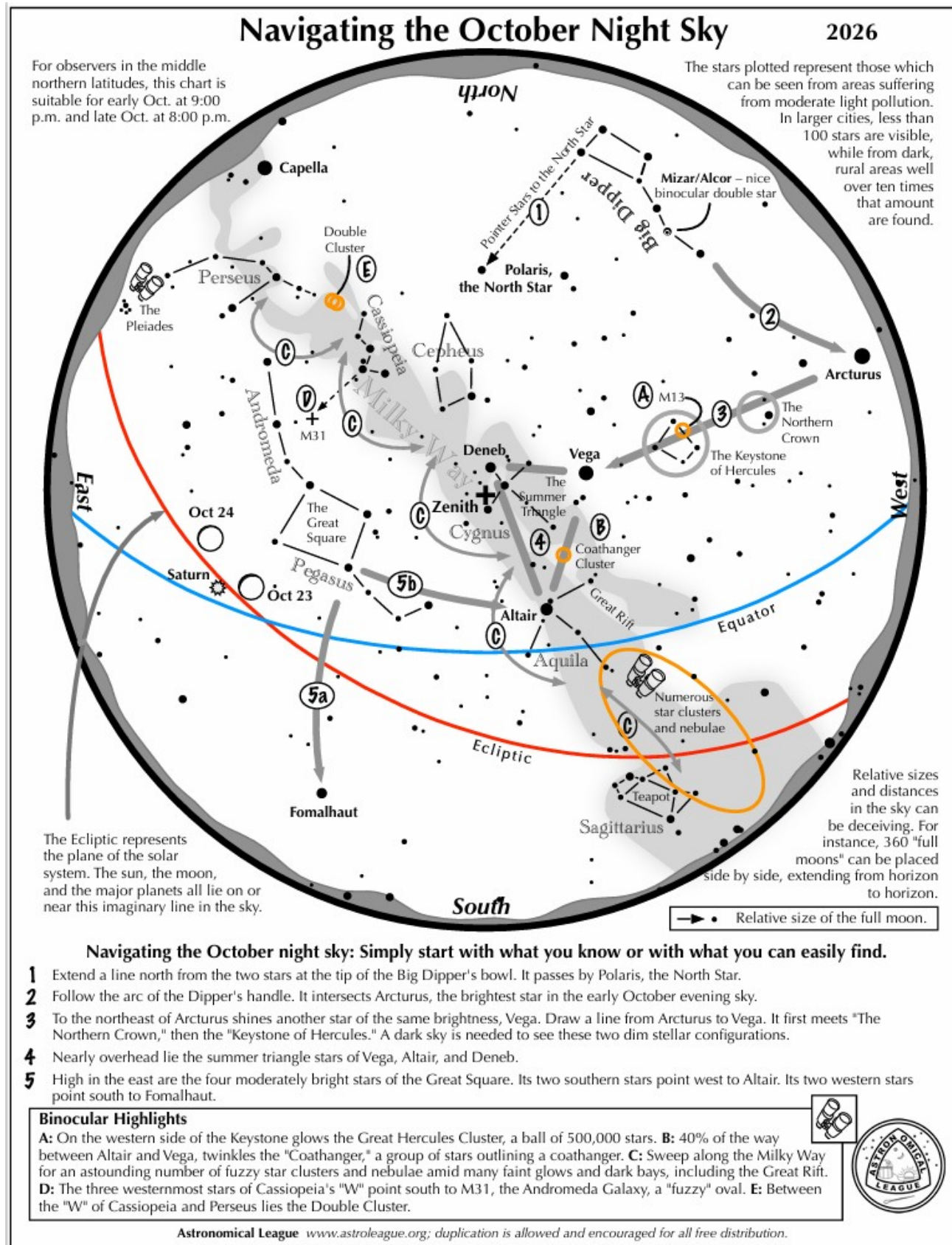
Oct. 21. The Orion Meteor shower peaks this morning.

Oct. 22. Karl Jansky was born on this day in 1905. He first detected radio waves from the center of our galaxy in 1933 and was an early radio astronomy pioneer.

Oct. 23. Venus is at inferior conjunction with the sun.

Oct. 25. Henry Norris Russell was born on this day in 1877. He developed the Hertzsprung-Russell Diagram in 1910, which is now as important to astronomy as the periodic table of elements is to chemistry.

Oct. 26. Full moon is at 12:12 a.m. This is also known as the Hunter's Moon.

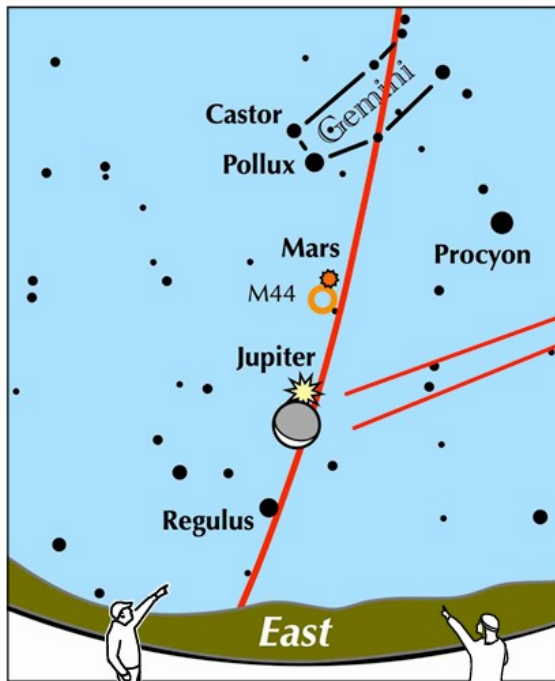


Moon Occults Jupiter

Submitted by Paul Kursewicz

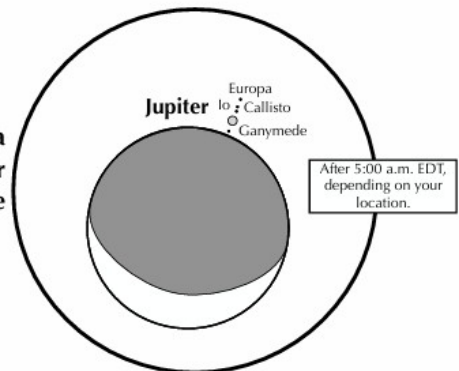
On Tuesday morning, October 6th, a Waning Crescent Moon occults Jupiter and its four Galileans moons. From Boston, first contact of the Moon's bright limb covering Jupiter is at 4:27am. The duo will be 23 degrees high. The reappearance of Jupiter at the Moon's dark limb occurs at 5:30am. Now the duo will be 35 degrees high.

In the early morning of October 6, try this challenge:



View low in the east
on October 6
2 hours before sunrise

View through a
very low power
telescope



**Moon occults Jupiter for the eastern US.
For the rest of us, it lies very close to Jupiter**

On the morning of October 6, the moon appears very close to Jupiter.

For those in the eastern half of the US, the planet and its Galilean satellites fully emerge from occultation after 5:00 a.m. The exact time depends on observing location.

Those in the western US see Jupiter immediately next to the dark edge of the crescent moon.

About 5:35 a.m. EDT, Ganymede's shadow begins transiting the planet. It lasts until 9:15 a.m. EDT. Its exit can be seen by west coast telescope users.

And Mars can be found approaching the Beehive star cluster.

www.astroleague.org

Starfest 2026

Submitted by Paul Kursewicz



Friday, September 11th, turned out to be a beautiful day. Clear skies throughout the day and night. Several members worked on the Zeiss mount. Unfortunately, the problem was not resolved. We had a huge turn-out on this day which lasted late into the night. Several members took images during the night.



Dave arrived with 4,000 solar glasses.



Getting an early start on equipment set-up.

"Continued on page 8"

More Photos from Friday's Starfest



"Continued on page 9"



Late afternoon and into dusk deer came out and into the field. And this was also the time when the majority of people started to show up. Many of us became preoccupied with visitors well into the night. Could not get a head count. The picture above is just a small sampling of folks that showed up.

“Continued on page 10”

Saturday's Starfest



The picture above was taken by me on my way up to Starfest on Saturday afternoon. When I was getting close to Sanford, about a dozen parachuters appeared in the sky in front of me. What a surprise!

“Continued on page 11”

Saturday also turned out to be a beautiful day. We had our club BBQ and raffle. As evening approached, so did a mostly cloudy sky. So, not as many people showed up on this night. There were clear pockets of sky here and there which afforded some viewing through scopes.



Astro-Imaging with a SmartEye

Submitted by Paul Kursewicz

Wizard Nebula

2.8-inch Evostar 72ED, Apo Refractor, f/5.8, FL 420mm
SmartEye eye-piece, IR-cut Filter, 9-11-26
Eye-piece PNG file seen below (no editing)



If you looked through my SmartEye eye-piece at the Wizard Nebula during Friday night's Starfest, this is exactly what you saw. The only thing that is different is that I flipped and rotated the image to be right-side up. I got many WOW's from folks who looked through the eye-piece. Some came back to take a second look. And to take images with their cell phones. No editing was done to this image. My edited version of the Wizard appears on the next page.

“Continued on page 13

Edited Version of Wizard Nebula

FIT Files stacked in Deep Sky Stacker: 30sec, 350 Gain, 400subs
Editing software: Photoshop, Photos, AstroSurf, and PixInsight.



“Continued on page 14”

Astro-Imaging with a Dwarf3

Submitted by Paul Kursewicz

Pacman Nebula

Dwarf3 Astro Mode with Duo Band Filter
90sec, 60gain, 95 Subs, Total: 2hr 30min

Photo Editing Software Used: Stella Studio, PixInsight, Photoshop, & Photos



Also during Friday night's Starfest I used my Dwarf3 to take a picture of the Pacman Nebula.



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,

October's Night Sky Notes: Spooky Stargazing

By: Kat Troche

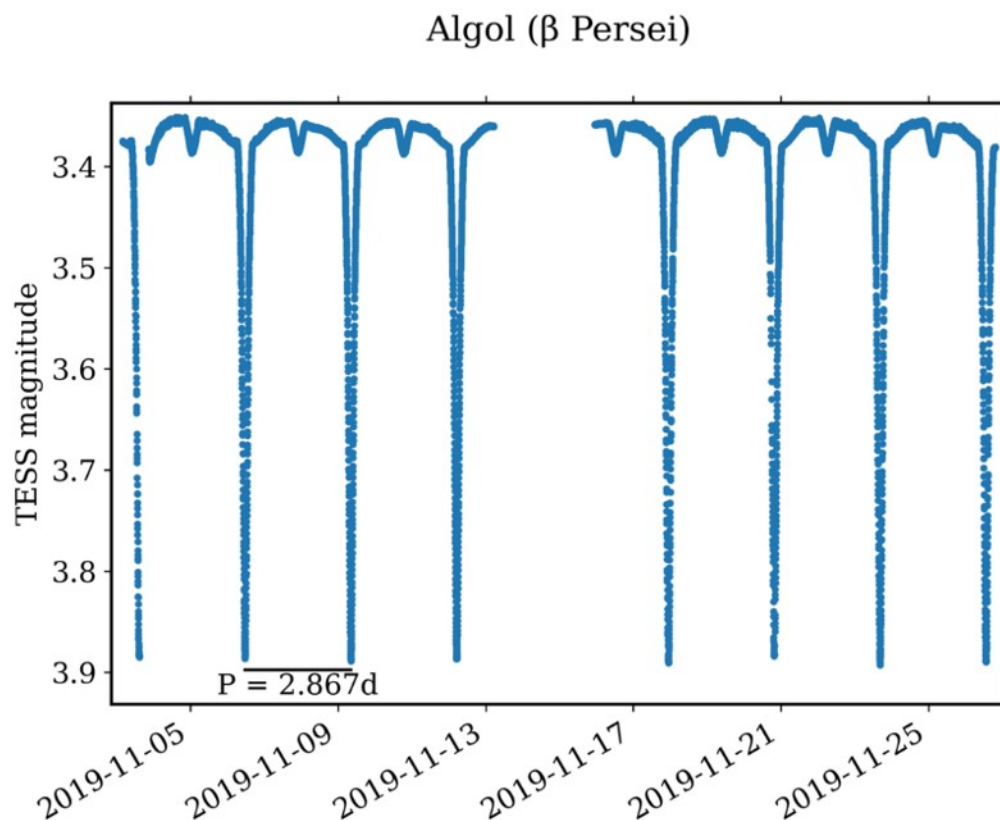


Perseus holding the head of Medusa. Credit: Stellarium

The Ghoul

Located within the constellation Perseus lies a star called Algol, also known as 'Demon Star' or 'The Ghoul'. You can spot this star during the autumn months, along with Cassiopeia and Andromeda in the northeastern sky, beginning after 9 PM. In Greek mythology, this star represents the 'blinking eye' of the gorgon Medusa. But how can a star blink?

"Continued on page 16"



Light curve of the eclipsing binary star Algol recorded by NASA's Transiting Exoplanet Survey Satellite (TESS), stored on NASA's [Mikulski Archive for Space Telescopes](#) (MAST). Credit: NASA/Wikipedia Commons

Algol is a triple-star system, with two of the three stars orbiting one another. This [eclipsing binary](#) causes the system to go from a bright +2.1 magnitude to a slightly dimmer +3.4 magnitude about every three days. Using data from NASA's [Transiting Exoplanet Survey Satellite](#) (TESS) mission, this light curve shows the regular dimming, or Medusa's 'blinking eye'!

"Continued on page 17"



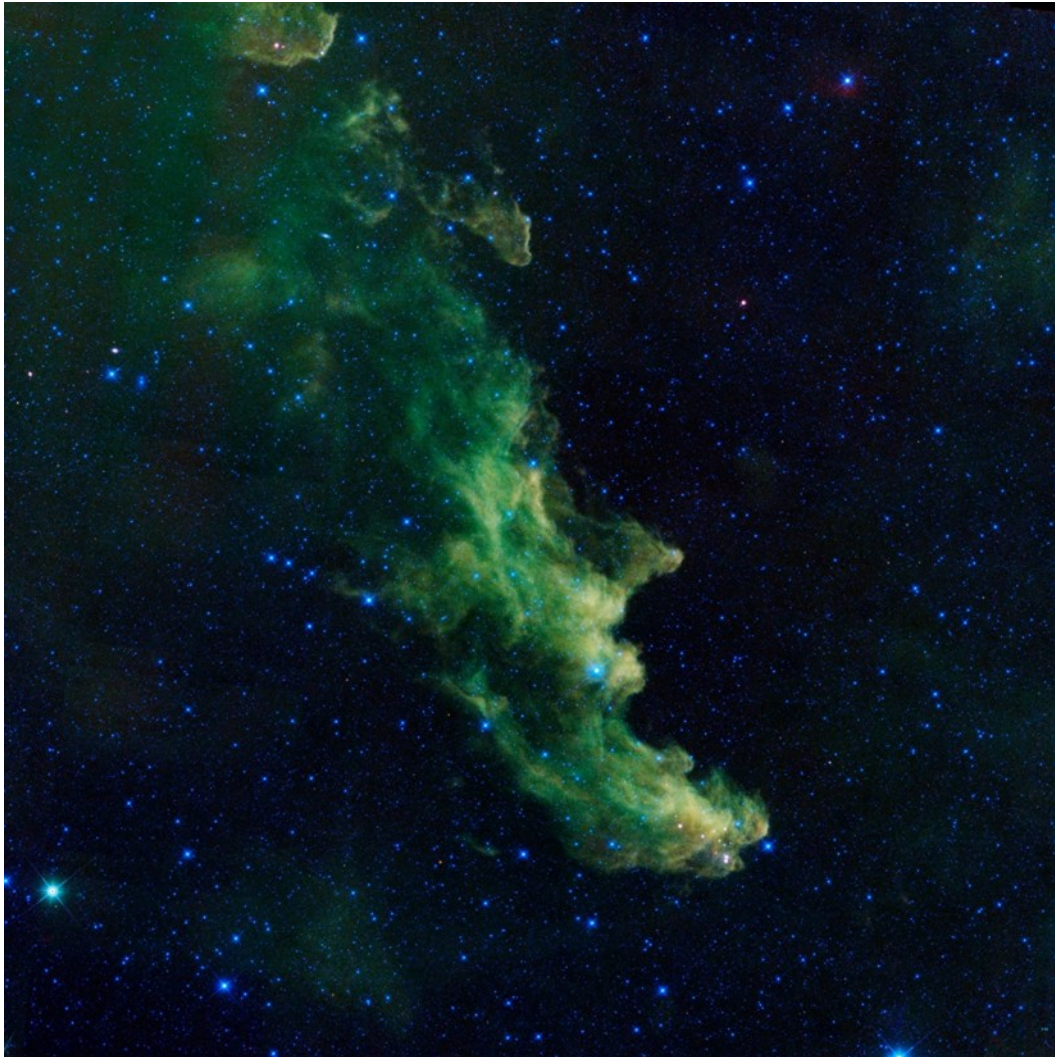
Using the constellations Cassiopeia and Andromeda, locate Perseus. You can find Algol by using the star Almach as a guide. Credit: Stellarium

There is no shortage of resources on how to calculate the dimming – or minima – of Algol, from interactive charts to data plots. Find the one that works best for you. Because it has a similar magnitude of brightness, you can compare Algol’s brightness to the nearby star Almach (Gamma Andromedae) in Andromeda using a small telescope or binoculars.

Witch Head Nebula

Between the Eridanus and Orion constellations lies a spooky silhouette, illuminated by the star Rigel. IC 2118, or the [Witch Head Nebula](#), is a reflection nebula about 900 light-years away from Earth. Because reflection nebulae rely on nearby starlight to appear visible, they can be difficult to see with the naked eye, especially if they are as far away as this one. While the Witch Head Nebula can’t be seen with the naked eye, telescopes with very large apertures and low magnification make it easier to catch under dark skies. Astrophotographers, with or without smart telescopes, can image this haunting outline within a few hours, depending on equipment and sky quality. And what is a witch without [their broom](#)? You can find the Witch's Broom in the Western Veil Nebula, located in the constellation Cygnus.

“Continued on page 18”



An infrared portrait of the Witch Head nebula from NASA's Wide-field Infrared Survey Explorer, or WISE, shows billowy clouds where new stars are brewing. Credit: NASA/JPL-Caltech

Want more tips for getting into the season? Read our article on how you can make some spooky sidewalk astronomy fun for your community with [Trick or Treat: Sidewalk Astronomy!](#)

Club Meeting & Star Party Dates

Date	Subject	Location
Oct 2	<u>ASNNE Club Meeting:</u> Club Meeting (in house & on Zoom): 7:30-9:30PM Zoom Link: https://us06web.zoom.us/j/5631683325 Guest Speaker: We do not have a guest speaker this month. Bernie Reim - "What's UP" Astro Shorts: (news, stories, jokes, reports, questions, photos, observations etc.)	The New School, Kennebunk, Me.
Last Month	Last month we had our annual Starfest Festival at Talmage Observatory at Starfield.	
TBD	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.

Principal Meteor Showers in 2026

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

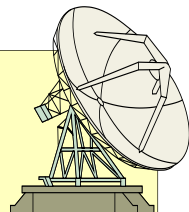
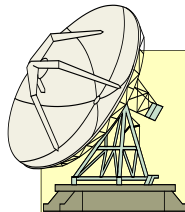
December 22
Ursids

*Note: Dates are
for maximum*

MEMBERSHIP DUES

Membership fees are for the calendar year beginning in January and ending in December. **Dues (see page 22 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 22. 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>

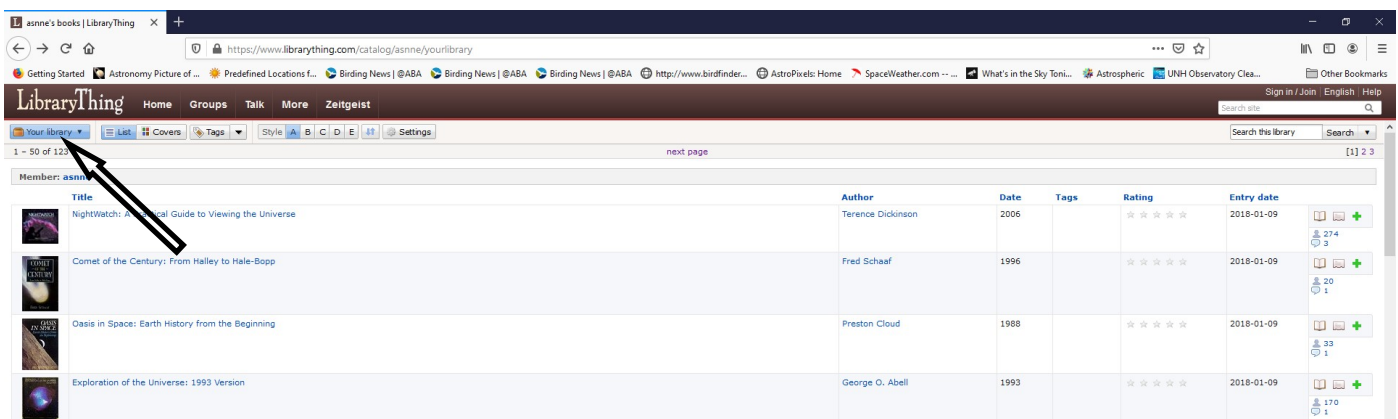


***ALL money raised goes to our operating fund.
Any design can be put on any item.***

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

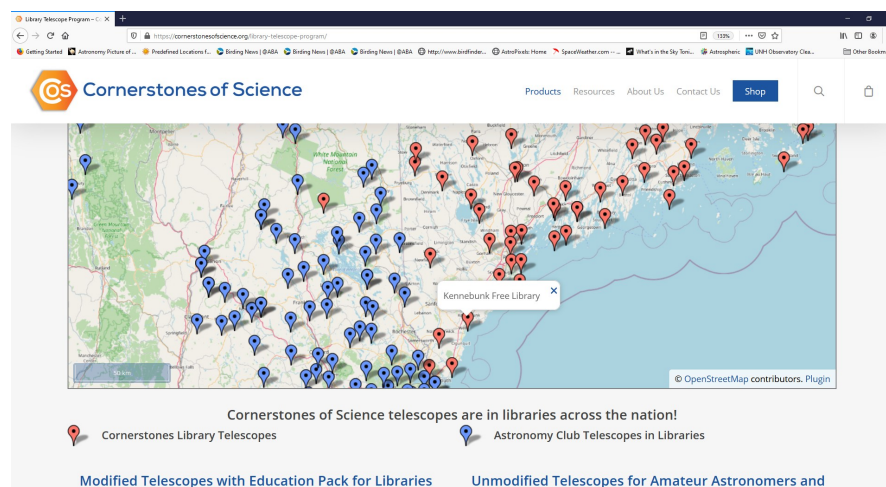
Astronomy Club & Library Resources

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

2026 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 _____

