Newsletter of the Astronomical Society of Northern New England



MAR 2025

Skylights Editor: Paul Kursewicz



Member of NASA's Night Sky Network



Astronomical League Member

ASNNE MISSION

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

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

What's Up In March

By Bernie Reim

he month of March is named for Mars, the Roman god of war, but it is also known as the guardian of agriculture and as an ancestor of the Roman people. March was also the first month of the year on the early Roman calendar.

March always marks the beginning of spring for us in the northern hemisphere. This year that will happen at exactly 5:01 a.m. EDT on Thursday morning the 20th. The vernal equinox is further defined as the sun on the ecliptic crossing over the celestial equator on an upward path, also called an ascending node. This will mark one of only two days each year that the sun will also rise due east and set due west for everyone on Earth except for the poles. The other day is the autumnal equinox.

The word "equinox" means "equal night". The days and nights will be 12 hours long within a few days of the equinox for everyone on Earth except for the poles. That doesn't happen exactly on the equinoxes because the earth is tilted at 23.5 degrees and we orbit the sun in ellipses and not perfect circles.

Now that the days are getting longer and warmer even as the nights are getting shorter, this is a great time to get outside under the night sky to view and enjoy more of its beauty after a long, cold, and cloudy winter. The great evening planetary parade of all but one of the planets in our solar system that we have enjoyed and watched all winter long will finally end this month as we lose Saturn. However, Mercury will replace it and the net effect is that we can still see 6 of the 7 other planets all nicely lined up in our evening sky for the first couple of weeks this month.

The major highlight by far this month will be a total lunar eclipse starting on Thursday night the 13th into Friday morning the 14th. They could happen as often as twice a year, but the last total lunar eclipse that was visible for us here in New England was back on November 8 of 2022 during the pandemic. That one started around 3 in the morning and the moon was still in our shadow when the sun came up to wash out and override the view of our shadow on the moon. That also happened to be Edmund Halley's birthday, but that was in 1656.

There will be 230 lunar eclipses visible from somewhere on Earth for this entire century. Only 85 of those will be total like the one we will get this month. 87 of those will be penumbral, or barely discernable, and 58 will be partial like the one we just had on September 17 of last year. If the moon passed directly through our umbral shadow, that is called a total lunar eclipse. If the moon only partly passes through our dark umbral shadow, that is called a partial lunar eclipse. The least obvious kind of a lunar eclipse is when the moon only passes through some part of our much fainter penumbral shadow, so that is called a penumbral lunar eclipse. You would need binoculars or a to discern that and it is not very dramatic like a total lunar eclipse.

The moon also has an umbral, or darkest part of its shadow, and a penumbral, or lighter part of its shadow. If the earth passes through the umbral part of the moon's shadow during new moon and you are in exactly the right part of the shadow's narrow path, about 100 miles wide, then you would see a total solar eclipse like we had right over part if Maine on April 8 of last year. The rest of the

North American continent got a partial solar eclipse because they were only in the moon's penumbral shadow.

The penumbral phase of this lunar eclipse will start just before midnight on the 13th. You won't really notice anything until the moon enters the umbral shadow of the earth about an hour later. Then the total part of the eclipse, when the moon is completely engulfed in our deep umbral shadow, lasts from 2:26 am to 3:31 am. Then it takes about another hour to finish passing through our umbral shadow. The moon will not completely clear our penumbral shadow until 6 am on Friday, March 14, which also happens to be Albert Einstein's birthday 146 years ago.

To get a better 3-dimensional sense of what is really happening during lunar and solar eclipses you need to picture the earth's nearly one-million-mile-long shadow that we are always casting into space. The moon is only about a quarter of that distance from us, so our shadow is quite wide at that point, which creates the one-hour-long totality instead of just a few minutes during the total solar eclipse when the moon's shadow cone barely reached the earth at all.

The moon would completely disappear from our view when it is immersed in our umbral shadow. However, we do have a life-giving and sustaining atmosphere that bends or refracts the sunlight around the earth to illuminate the moon with that wonderful and varied, ever-changing hue of reds and oranges and other colors that we get to experience during a total lunar eclipse. The moon looks more alive and 3-dimensional during this hour, as if you could reach right up and touch it. It is only 1.3 seconds away at the speed of light, but it would still take us a couple of days to get there in a spaceship.

"Continued on page 2"

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What's Up "Continued from page 1"

A great way to picture these wonderful myriads of hues that you will see if it is clear that night is to understand that what you are really seeing reflected back to us from the moon is the combined effect of all the sunrises and sunsets on Earth happening simultaneously. The reverse is true during the total solar eclipse when you can see the 360-degree twilight all around you on the horizon which marks the fringe of the very narrow umbral shadow of the moon as it races over us at about 2000 miles per hour.

When you watch and experience and photograph total lunar and solar eclipses you can gain many insights into how our solar system really works and our place in it that you could never get from a textbook or movie or story. You don't even have to wait for the earth and moon's shadow to line up perfectly to experience a different kind of eclipse. Twice every day, we go through a kind of eclipse right after sunset and right before sunrise. Looking east right after sunset for 10 minutes or so you can actually see our shadow projected onto our atmosphere and reflected back to us. It creates a deep purplishgrayish hue topped with a pink band called the "belt of Venus". The same thing happens looking west just before sunrise.

R. Buckminster Fuller, the "planet's friendly genius", called every sunset "sunclipse" and every sunrise "sunsight". As we know, the sun doesn't really rise or set, it is simply the rotation of the earth that makes it look that way. He also said to think of going "outstairs" away from the center of the earth when going upstairs, and doing "instairs" when going downstairs. This gives you a better and more realistic earth-centered view as we move about daily.

Mercury will join Venus low in the western evening sky in the constellation of Pisces about half an hour after sunset on the first of the month. Look for an extremely slender waxing crescent moon right below Venus that Saturday evening. A similar event happened a month ago, but the moon was one day older and Mercury was not there. It will be much more spectacular this month since the moon will be even thinner and Mercury will be just 10 degrees below that pair. Try to get some good pictures of this event if it is clear.

You can watch Venus undergo some dramatic changes this month through a telescope as it goes from 14% lit by the sun and spanning 49 arc seconds of the sky to just 3% lit and spanning 58 arc seconds of the sky just two weeks later before it gets too low to see at all. Notice that Venus is now nearly 40 times brighter than Mercury. Keep watching this pair of our first two planets during the first couple of weeks this month as Mercury climbs even closer to Venus before we lose both of them below the horizon. Venus then quickly reappears in the morning sky one hour before sunrise by the end of this month.

Jupiter is still in Taurus moving in direct or eastward motion away from the orange giant star named Aldebaran which means "the follower" in Arabic. It is 65 light years away and appears to follow the Pleiades open star cluster across the sky. Jupiter is getting slightly dimmer as it is getting farther away from us. It now sets by 1 am and a nearly first quarter moon will be just 7 degrees from Jupiter on the 5th. There will be a double shadow transit of both Europa and Ganymede across the face of Jupiter at the same time starting just before midnight on the 11th and lasting until 12:45 am on the 12th.

Mars is still in Gemini and also getting a little fainter each night as we move farther ahead of it in our faster orbit around the sun. It just ended its retrograde motion on Feb 23, and is now also in its normal, eastward motion towards the constellation of Cancer the Crab. It will get twice as dim over the course of this month and smaller in size also, making features on the Red Planet more

difficult to see through a small telescope. A gibbous moon will get within 2 degrees of Mars on the 8^{th} .

Neptune and Uranus are only visible through a telescope or good pair of binoculars. They are located in the 60 -degree gap between Venus and Jupiter along the ecliptic as soon as it gets dark. Neptune is in Pisces and Uranus is in Aries the Ram near Taurus the Bull.

The zodiacal light will still be visible an hour after sunset this month around the new moon. This is a delicate cone-shaped glow extending through Pisces, Aries, and Taurus. It is caused by sunlight reflecting off the dusty debris littering the inner solar system left over by passing comets and asteroids from long ago. It is always there forming a torus around the ecliptic plane of our solar system, but we can only see it when the angle of the ecliptic is at its steepest to our horizon. The other time to see this interesting phenomenon is an hour before dawn on the eastern horizon during the fall months.

Mar.2. The Russian astronomer Andrei Linde was born on this day in 1948. He worked with Alan Guth on the inflationary theory of how the universe might have started.

Mar.4. Patrick Moore was born on this day in 1923. He was an English astronomer and author who had a radio show that ran for 55 years on the BBC.

Mar. 6. First quarter moon is at 11:32 a.m. EST. Carolyn Porco, the lead scientist on the highly successful Cassini mission to Saturn and some of its moons was born on this day in 1953 in the Bronx. Joseph Von Fraunhofer, the German optical physicist, was born on this day in 1787.

Mar.7. John Herschel, the English mathematician, astronomer, and chemist was born on this day in 1792. He named several of the moons of Saturn and Uranus. William Herschel who discovered Uranus, was his father.

Mar.8. Mercury is at greatest eastern elongation from the sun today at 18 degrees. The moon passes 1.7 degrees north of Mars.

Mar.9. Daylight saving time starts this Sunday at 2 am. Mercury passes 6 degrees south of Venus.

Mar.11. Urbain LeVerrier was born on this day in 1811. He was a French astronomer who, along with the English John Couch Adams calculated the orbit of a new planet, Neptune, based on the slight changes in the orbit of Uranus, and gave the coordinates to the German astronomer Johan Galle in Berlin who actually found it within one degree of where it was calculated to be. This was a great story of scientific collaboration and a validation of celestial mechanics and one of the greatest achievements of the 19th century in astronomy. Neptune was discovered on Sept. 23 of 1846. It takes 165 years to orbit the sun once.

Mar. 13. Percival Lowell was born on this day in 1855. William Herschel discovered Uranus on this day in 1781.

Mar.14. Full moon is at 2:55 a.m. EDT. This is also called the Worm, Sap, Crow, or Lenten moon. A total lunar eclipse happens tonight. Albert Einstein was born on this day in 1879.

Mar. 16. Caroline Herschel, the sister of William Herschel, was born on this day in 1750. She discovered 4 comets and worked closely with William. They were both accomplished musicians.

Mar. 20. Spring starts at 5:01 a.m. EDT.

Mar. 22. Last quarter moon is at 7:29 a.m. Venus is in inferior conjunction.

Mar. 23. Pierre-Simon LaPlace was born on this day in 1749. He is known as the French Isaac Newton.

Mar. 25. Christopher Clavius was born on this day in 1538. He was a German Jesuit mathematician and astronomer. The second biggest crater on the side of the moon that faces us is named in his honor. It is 140 miles in diameter and 2 miles deep.

Mar.29. New moon is at 6:58 a.m.

Mar.31. Rene Descartes was born on this day in 1596.



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Moon Phases

Mar 6

First Quarter

Mar 14

Full

Mar 22

Last Quarter

Mar 29 New

Moon Data

Mar 1

Neptune 1.6° south of Moon

Moon at perigee

Venus 6^o north of Moon

Mar 4

Uranus 5° south of Moon

Mar 6

Jupiter 6° south of Moon

Mar 8

Mars 1.7° south of Moon

Mar 17

Moon at apogee

Mar 30

Moon at perigee

Observer's Challenge – March, 2025 by Glenn Chaple

NGC 2419 - Globular Cluster in Lynx (Magnitude 10.3; Size 5' [photographic] 2' [visual])

Our March Observer's Challenge is the globular cluster NGC 2419 in Lynx. It was discovered by William Herschel on December 31, 1788 with an 18.7-inch reflecting telescope. Unable to resolve the cluster, he cataloged it as a Class I object (bright nebulae) and described it as "considerably bright, round, very gradually much brighter in the middle, about 3' diameter." It wasn't until the mid-19th century that William Parsons, the 3rd Earl of Rosse, resolved the cluster with his 6-foot wide reflector the "Leviathon of Parsonstown."

NGC 2419 is located at the 2000.0 coordinates RA 7^h38^m08^s and DEC +38^o52'53". Because this is an area devoid of any bright guide stars, star-hoppers will have to make a rather long 7 degree trek north of Castor (alpha [α]) Geminorum. Using a low-power widefield eyepiece, move 2 degrees northeast of Castor to a 3 degree-long upwardly curving row of five magnitude 5 to 6 stars. A three degree move northward of the uppermost of this quintet (the star 70 Geminorum) will bring you into Lynx and the reddish magnitude 5.8 magnitude star HD61294. NGC 2419 is located about 40 arc-minutes northwest of this star, but you won't see it at first. What you will see is a pair of stars of magnitudes 7.2 and 7.9 that lie immediately to its west. The fainter and more westerly of the two is the wide double star Struve 1118, whose magnitude 8.0 primary is paired with a magnitude 10.7 companion 23.4" to its north-northeast. A line traced from Struve 1118 past the magnitude 7.2 star and extended an equal distance beyond will bring you to the location of NGC 2419. You won't see anything at low power, but boost the magnification to 75X, and you should pick out a faint roundish fuzzball. NGC 2419 can be viewed with apertures as small as 4 inches, but only from dark-sky locations. In suburban areas where the limiting magnitude is 5, you may need twice that aperture.

Is there anything special about a globular cluster so faint that it's an elusive blob in a 4-inch scope and unresolvable, even through one whose tube is the size of a standard water heater? You bet there is! NGC 2419 is one of the most distant of our galaxy's roughly 150 known globulars, not only from the earth, but also from our galaxy's center. When measurements made in the 1930s indicated a distance of nearly100,000 light years, it was thought that this globular was outside the constraints of the Milky Way and earned it the nick-name the "Intergalactic Tramp" or "Intergalactic Wanderer." Modern-day measurements place its distance from earth at 275,000 light years and its distance from the galactic center at 300,000 light years — nearly twice that of the Magellanic Clouds. Nevertheless, it's gravitationally bound to the Milky Way, orbiting our galaxy once every 3 or 4 billion years. In reality, this seemingly obscure little globular cluster is a true giant. Were it at the same distance as M13, it would appear to be the same size as the full moon.

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NGC 2419 Finder Chart

(the skylive.com)

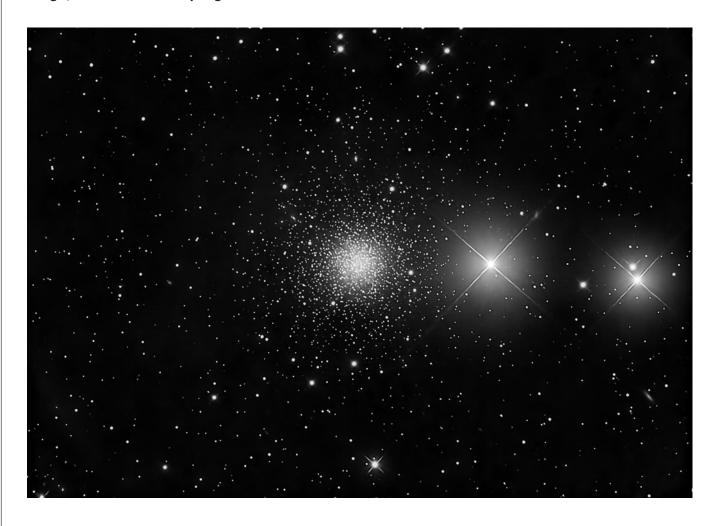


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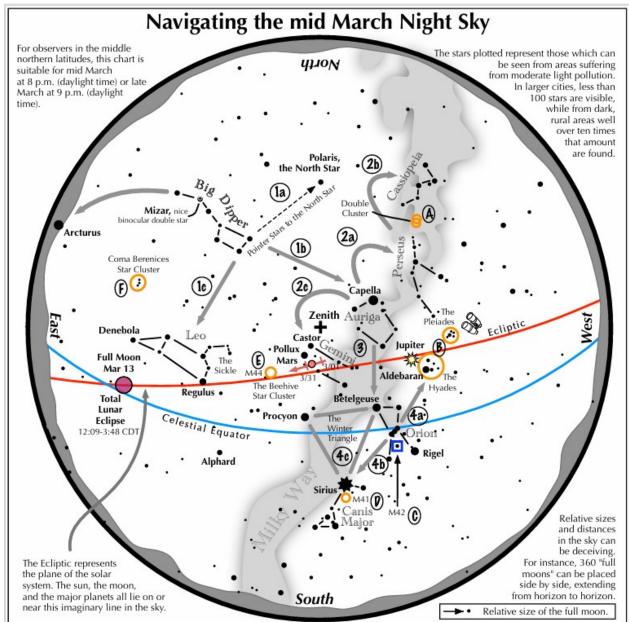
NGC 2419 Image

Mario Motta, MD (ATMoB)

"This was taken with my 32 inch scope from Gloucester with my ZWO 6200 camera, in December. about 1 hour Lum imaging in total. Processed in PixInsight. It is a "small appearing" globular, 6 arc min, because it is 300,000 LY away. In reality it is one of the Milky way's largest globulars. It has a far reaching orbit that goes further out than the Magellanic clouds, and takes about 3 billion years to orbit the milky way. Easily seen however, as it is mag 9, small but reasonably bright."



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

- 1 Above the northeast horizon rises the Big Dipper. Draw a line from its two end bowl stars upwards to the North Star. Its top bowl stars point west to Capella in Auriga, nearly overhead. Leo reclines below the Dipper's bowl.
- 2 From Capella jump northwestward along the Milky Way to Perseus, then to the "W" of Cassiopeia. Next jump southeastward from Capella to the twin stars of Castor and Pollux in Gemini.
- 3 Directly south of Capella stands the constellation of Orion with its three Belt Stars, its bright red star Betelgeuse, and its bright blue-white star Rigel.
- 4 Use Orion's three Belt stars to point northwest to the red star Aldebaran and the Hyades star cluster, then to the Pleiades star cluster. Travel southeast from the Belt stars to the brightest star in the night sky, Sirius. It is a member of the Winter Triangle.

Binocular Highlights

A: Between the "W" of Cassiopeia and Perseus lies the Double Cluster. B: Examine the stars of the Pleiades and Hyades, two naked eye star clusters. C: M42 in Orion is a star forming nebula. D: Look south of Sirius for the star cluster M41. E: M44, a star cluster barely visible to the naked eye, lies to the southeast of Pollux. F: Look high in the east for the loose star cluster of Coma Berenices.



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

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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 26Andromedids

December 14Geminids

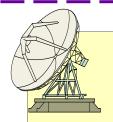
December 22 Ursids

Note: Dates are for maximum

MEMBERSHIP DUES

Membership fees are for the calendar year beginning in January and ending in December. Dues (see page 18 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 18. 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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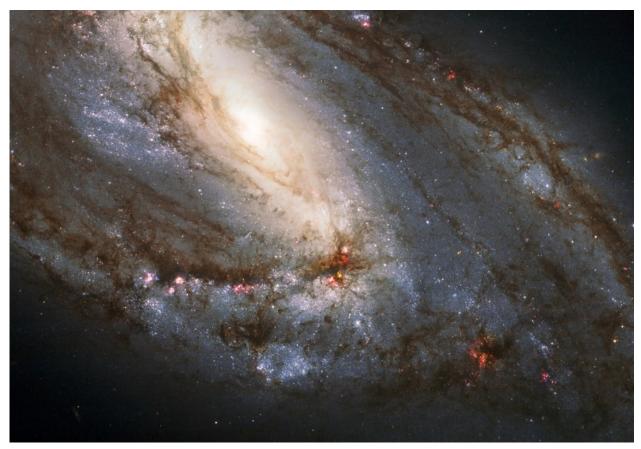
This article is distributed by NASA Night Sky Network

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

March's Night Sky Notes: Messier Madness

By Kat Troche

March is the start of spring in the Northern Hemisphere; with that, the hunt for Messier objects can begin!



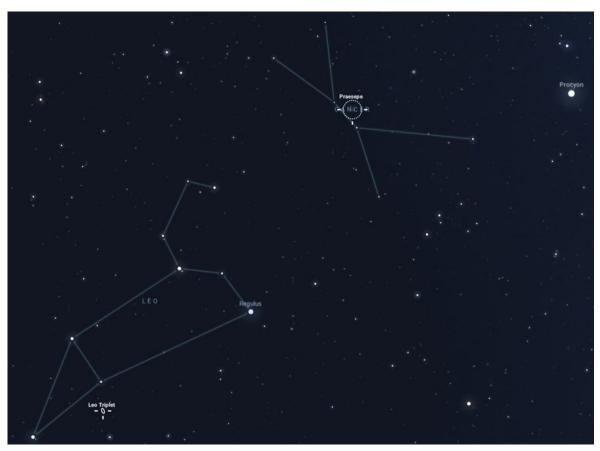
Showing a large portion of M66, this Hubble photo is a composite of images obtained at visible and infrared wavelengths. The images have been combined to represent the real colors of the galaxy. Credit: NASA, ESA and the Hubble Heritage (STScI/AURA)-ESA/Hubble Collaboration; Acknowledgment: Davide De Martin and Robert Gendler

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What Are Messier Objects?

During the 18th century, astronomer and comet hunter <u>Charles Messier</u> wanted to distinguish the 'faint fuzzies' he observed from any potential new comets. As a result, Messier cataloged 110 objects in the night sky, ranging from star clusters to galaxies to nebulae. These items are designated by the letter 'M' and a number. For example, the Orion Nebula is <u>Messier 42</u> or M42, and the Pleiades are <u>Messier 45</u> or M45. These are among the brightest 'faint fuzzies' we can see with modest backyard telescopes and some even with our eyes.

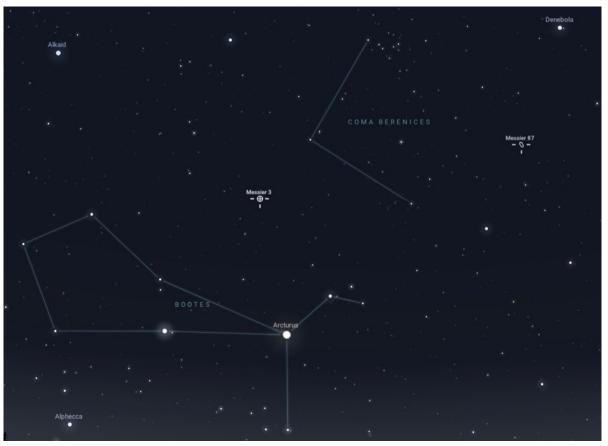
Stargazers can catalog these items on evenings closest to the new moon. Some even go as far as having "Messier Marathons," setting up their telescopes and binoculars in the darkest skies available to them, from sundown to sunrise, to catch as many as possible. Here are some items to look for this season:



M44 in Cancer and M65 and 66 in Leo can be seen high in the evening sky 60 minutes after sunset. Credit: Stellarium Web

Messier 44 in Cancer: The Beehive Cluster, also known as Praesepe, is an open star cluster in the heart of the Cancer constellation. Use Pollux in Gemini and Regulus in Leo as guide stars. A pair of binoculars is enough to view this and other open star clusters. If you have a telescope handy, pay a visit two of the three galaxies that form the Leo Triplet - M65 and M66. These items can be seen one hour after sunset in dark skies.

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Locate M3 and M87 rising in the east after midnight. Credit: Stellarium Web

Messier 3 Canes Venatici: M3 is a globular cluster of 500,000 stars. Through a telescope, this object looks like a fuzzy sparkly ball. You can resolve this cluster in an 8-inch telescope in moderate dark skies. You can find this star cluster by using the star Arcturus in the Boötes constellation as a guide.

Messier 87 in Virgo: Located just outside of Markarian's Chain, M87 is an elliptical galaxy that can be spotted during the late evening hours. While it is not possible to view the <u>supermassive</u> <u>black hole</u> at the core of this galaxy, you can see M87 and several other Messier-labeled galaxies in the Virgo Cluster using a medium-sized telescope.

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Locate M76 and M31 setting in the west, 60 minutes after sunset. Credit: Stellarium Web

Messier 76 in Perseus: For a challenge, spot the Little Dumbbell Nebula, a planetary nebula between the Perseus and Cassiopeia constellations. With an apparent magnitude of 12.0, you will need a large telescope and dark skies. You can find both M76 and the famous Andromeda Galaxy (M31) one hour after sunset, but only for a limited time, as these objects disappear after April. They will reappear in the late-night sky by September.

Plan Ahead

When gearing up for a long stargazing session, there are several things to remember, such as equipment, location, and provisions:

Do you have enough layers to be outdoors for several hours? You would be surprised how cold it can get when sitting or standing still behind a telescope!

Are your batteries fully charged? If your telescope runs on power, be sure to charge everything before you leave home and pack any additional batteries for your cell phone. Most people use their mobile devices for astronomy apps, so their batteries may deplete faster. Cold weather can also impact battery life.

Determine the **apparent magnitude** of what you are trying to see and the **limiting magnitude** of your night sky. You can learn more about apparent and limiting magnitudes with our <u>Check Your Sky Quality with Orion</u> article.

When choosing a location to observe from, select an area you are familiar with and bring some friends! You can also **connect with your local astronomy club** to see if they are hosting any Messier Marathons. It's always great to share the stars!

You can see all 110 items and their locations with NASA's <u>Explore the Night Sky interactive map</u> and the <u>Hubble Messier</u> <u>Catalog</u>, objects that have been imaged by the Hubble Space Telescope.

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Point and Shoot Camera Astro-Imaging (no telescope) Canon PowerShot SX50 HS

Submitted By Paul Kursewicz

Auriga's Emission Nebulae

RAW Mode, FL 190mm, f/3.5, ISO 2000, 22 x 1min 30sec, 12-12-23



This is a mid focal length image that high-lights the Main Emission Nebulae in the constellation Auriga. The top larger red nebulosity is the Flaming Star Nebula (IC 405). The smaller red nebulosity below the Flaming Star is the Tadpole Nebula (IC 410). And the little patch of red nebulosity located between the Tadpole and Open Cluster M38 is the Spider Nebula (IC 417). The lower smaller Open Cluster is M36. There is also an asterism in this image called the "Y." It's a loose Open Cluster that occupies most of the area of the Tadpole Nebula. Although rather faint in this image it can still be seen.

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From the pages of "Burnham's Celestial Handbook" copyright 1978

Auriga's Prominent Star Clusters



This is a field of Auriga's Open Star Clusters. It was photographed by the Lowell Observatory's 5-inch camera. I rotated the page 180 degrees to match my image. In the lower right corner is M37 (not included in my image). M36 (the brightest but not the biggest Open Cluster) is in the upper center. M38 is in the upper left region. The Spider Nebula and Tadpole Nebula do not show up in this image. And the Flame Nebula lies just outside the top portion of the image.

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Point and Shoot Camera Astro-Imaging (no telescope) **Canon PowerShot SX50 HS**

Submitted By Paul Kursewicz

Waxing Crescent Moon & Venus

JPEG Mode, FL 89mm, f/5.6, ISO 1600, 1/8 sec, 2-1-25 [Hand-held]



close evening pairing of the Moon and Venus until 2026. At the same time, the 15% illuminated crescent Moon is reflecting sunlight from Earth, creating a phenomenon known as Earthshine where the darkened portion of the Moon faintly glows due to light bouncing off our planet.

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Club Meeting & Star Party Dates		
Date	Subject	Location
Mar 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: No guest speaker this month. Topic TBD.	
	Bernie Reim - "What's UP"	
	Astro Shorts: (news, stories, jokes, reports, questions, photos, observations etc.)	
Last Month	Last month we met at The New School and also had a Zoom meeting. Ian Durham gave a presentation on his Top 5 Physics Stories of 2024. You can listen to Ian's entire 75 minute presentation on the web at: https://qspace.fqxi.org/podcasts/122	
<u>TBD</u>	Club/Public Star Party: TBD	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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NSN also hosts archived video trainings on these toolkits and other topics via its YouTube channel and a <u>monthly webinar</u> <u>series</u> with scientists from various institutions worldwide. Lastly, a monthly segment called <u>Night Sky Notes</u> is produced for clubs to share with their audiences via newsletters and mailing lists.

Sharing the Universe

In 2007, a National Science Foundation grant funded further research into astronomy club needs. From that came three club resources: the <u>Growing Your Astronomy Club</u> and Getting Started with Outreach video series, an updated website with a national calendar, and club and event coordination. Now, you can find <u>hundreds of monthly events</u> nationwide, including virtual events you can join from anywhere.



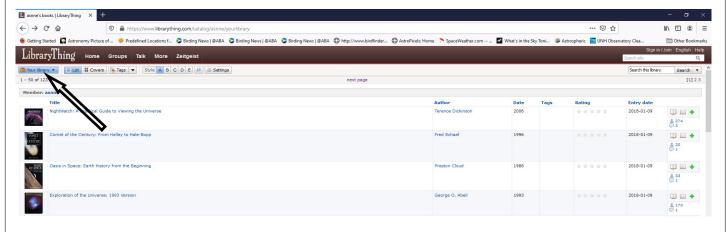
Map of Night Sky Network clubs within the United States as of November 2024

As of November 2024, NSN has over 400 clubs as far north as Washington State, west as Hawaii, and south as far as Puerto Rico. Astronomy clubs worldwide share the wonder of the day and night sky with their communities, and the Night Sky Network is happy to support US clubs with public engagement tools. Through their outreach efforts, member clubs have reached more than 7 million people to date, and the community is still going strong. Find an upcoming star party near you on our new public website.

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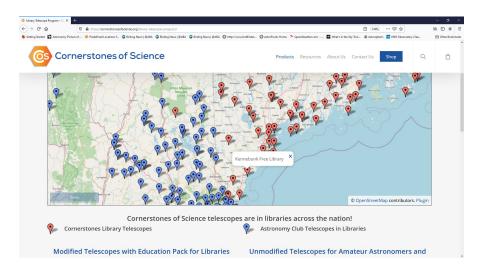


Our club has a library of astronomy books which are stored at The New School in Kennebunk, Maine (our monthly club meeting location). To request a book(s), contact one of the club officers. A listing of books is provided here: https://www.librarything.com/profile/asnne. After clicking on the link, a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

Astronomic P.O. Box 13	al Society of Northern New England 338
Kennebunk,	, ME 04043-1338
•	
2025 Memb	pership Registration Form
(Print, fill o	ut and mail to address above) or Use PayPal via asnne.astronomy@gmail.com
Name(s for	family):
Address:	Zip code:
Telephone #	#
E-mail:	
Membership Individual \$	o (check one): 50 Family \$ 60 Student under 21 years of age \$10 Donation
Total Enclo	sed
Tell us abou 1. Experience	nt yourself: ce level: Beginner Some Experience Advanced
2. Do you o	wn any equipment? (Y/N) And if so, what types?
3. Do you h	ave any special interests in Astronomy?
4. What do	you hope to gain by joining ASNNE?
5. How coul	ld 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 lic 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 a way for members to contact each other. Your information will not be used for any other n we add your information to that portion of our web site?
Yes	No
• • •	
1 1 5	
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