Skylights

Starfest Sept 6-8 See Page 15

Newsletter of the Astronomical Society of Northern New England

SEP2024

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 September

By Bernie Reim

The month of September always marks the beginning of autumn for us in the northern hemisphere. This year that will happen at exactly 8:44 a.m. EDT on Sunday morning, September 22. This autumnal equinox along with the vernal equinox in spring are the only two days each year that the sun rises due east and sets due west for everyone on Earth except for the poles. The days are also 12 hours long within a few days of the equinoxes for everyone on Earth except for the poles.

This was a hotter-than-usual summer along with more days of wildfire smoke from out of control wildfires all the way from the west coast but mostly from Canada. This enhances the red sunsets and the moon will maintain a nice orange color for much longer than usual, but all of this smoke and haze adds a lot of tiny particulate matter to our atmosphere which is not healthy for many people. It also makes the night sky viewing kind of fuzzy even if it is clear.

The nights will be getting noticeably longer now as we head into fall, so get outside when you can to enjoy the crisper weather and everything that the night sky has to offer. There are many good highlights this month including Saturn at its best for the year, a good apparition of Mercury in the morning sky, and Comet Tsuchinshan-ATLAS brightening as expected heading for a potentially great showing next month if it survives its dangerous dive around the sun at the end of this month. The soft glow of the zodiacal light will start to become visible in the morning sky this month a couple of hours before dawn. It will also be visible next month and on into part of November. A dual occultation of Saturn and Neptune by a full moon on the 17th will be interesting to watch in a telescope. Then we will even have a short partial lunar eclipse of the full Harvest moon this month. It has already been 6 months, a full eclipse season, since the last great total solar eclipse that millions of people saw right here over Maine on April 8 of this year.

I attended the annual Stellafane convention in early August this summer. Celebrating 100 years, this is the oldest star party in the world. In spite of rain and cloudy weather for both nights, nearly 1000 avid amateur astronomers attended this great event this summer. It basically began when Russell Porter built an observatory in Springfield, VT in 1923. He was also an artist, engineer, architect, and Arctic explorer. Russell would go on to design and build the observatory dome for the 200-inch Mt. Palomar telescope, the largest telescope in the world for many years, designed by George Ellery Hale.

This great convention is like an annual pilgrimage for many amateur astronomers, and it should be required attendance at least once in a lifetime for true amateurs that want to keep learning and sharing. It is always inspiring to attend the workshops and talks there regardless of the weather, although clear skies would be a nice bonus. You always meet many great new people there and exchange ideas. Many famous and not-so-famous astronomers had their start at Stellafane and they went on to do great things and make a name for themselves.

I have personally met many great astronomers there including Clyde Tombaugh who discovered Pluto, Alan Stern who is leading the New Horizons mission that is now well past Pluto and still going strong, Paul Horowitz who led the SETI project to discover alien intelligences with radio telescopes, David Levy who helped discover Comet Shoemaker-Levy 9 that broke up into 21 pieces and smashed into Jupiter back in July of 1994, Dava Sobel who wrote "The Glass Universe" about the famous Harvard "computers", several women astronomers who ushered in a golden age of astronomy with their discovery of helium on the sun, the period-luminosity relationship of Cepheid variables, and they developed the current classification system of stars. I also met the grandson of George Ellery Hale and the producer of "JOURNEY TO PALOMAR", the epic story of that inspiring and important moment in our history which showed the greatness that this country can exhibit. I met John Dobson who invented the very popular and easy-to-make Dobsonian telescope, Brother Guy Consolmagno, a Jesuit priest who runs the Vatican observatory in Arizona, and many more.

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What's Up "*Continued from page 1*"

Even the speaker we had this year, Tony Hull, who was in charge of designing the optics for James Webb Space Telescope, said he wanted to get into physics and astronomy after a Stellafane visit a long time ago. His talk really gave me a much greater appreciation of all the work and engineering that went into making those 18 perfectly polished gold-plated beryllium mirror segments for the James Webb Space telescope. They also have telescope making and judging competitions and many young people enter those competitions and get prizes that will inspire them in their future.

Some of the talks included several more accounts of unique individual experiences along with great pictures of the recent April 8 total solar eclipse, the prospects for Comet Tsuchinshan-ATLAS to become a great comet soon, new data on star clusters and asterisms from the GAIA space telescope which has already mapped over 1 BILLION stars in our own galaxy, and a good talk on binoculars which is always popular and an easy way to get into astronomy and appreciating the night sky in more detail.

The word "Stellafane" means "shrine to the stars". This is a truly sacred spot 1200 feet above sea level on Breezy Hill in Springfield, VT from which anyone can open wide a new window to travel the whole universe without going anywhere.

Saturn will reach opposition on Sunday, September 8. That means it will rise at sunset, reach its highest point in the sky at midnight, and not set until sunrise, similar to the full moon which reaches its opposition each month. Saturn reaches opposition every 378 days.

If you look at Saturn through a telescope you will notice that its rings are nearly edge-on now, tilted at only 4 degrees open. The maximum angle is 27 degrees. Since it takes Saturn just under 30 years to orbit the sun, its rings will appear edge-on twice during this time. This last happened in 2009 and 1996 before that. They will become completely invisible again in March of 2025.

The benefit of these thinner rings is that Saturn will appear less bright which means that you can see more of its moons through a telescope. I have seen as many as 7 of its 146 moons, but now you will be able to see 9 of them is your telescope can reach 14.5 magnitude, which is also about the brightness of Pluto. Its brightest moon is Titan, which you can always see if you can see Saturn at all. We have landed a mission called the Huygens probe on this moon, the only one with an atmosphere in our entire solar system of nearly 300 moons. At 3,000 miles in diameter, Titan is the second largest moon in our solar system behind Jupiter's Ganymede. Since it is 259 degrees below zero on Titan, it has lakes of liquid methane and liquid ethane instead of water.

You can usually see about 4 to 5 moons of Saturn if it is a good night and the telescope you are looking through can reach at least 10.4 magnitude. In their order of brightness these moons are: Titan, Rhea, Tethys, Dione, Iapetus, Enceladus, Mimas, Hyperion, and lastly Janus at 14.5 magnitude, or fully 250 times fainter than Titan. Because it is covered in ice, Enceladus is the most reflective body in the entire solar system. It also has the best prospects for life other than Jupiter's moon Europa, since they both have huge liquid oceans located 50 miles or more below their solid icy surfaces.

In Greek mythology Enceladus was the offspring of Gaia (Earth) and Uranus (Sky). Enceladus was a giant with 100 arms that is now buried under Mt. Etna in Sicily. Ironically, we have discovered that huge plumes of warm, salty ocean water complete with organic matter are constantly escaping from the south pole of Enceladus and shooting 6000 miles into the sky, fully 20 times higher than its small diameter of only 313 miles, which is about the size of our second-largest asteroid, Vesta.

All the water vapor from these gigantic plumes form the very diffuse outermost E-ring in Saturn's beautiful and complex ring system. This huge ring is only visible in forward scattered light.

By comparison, the other best prospect for life, Europa is 2000 miles in diameter, about the same as our own moon and 7 times larger than Enceladus. So there is a sleeping giant buried deep under the icy surface of this tiny, distant moon located nearly one billion miles or over an hour at the speed of light away from Earth. Any place with liquid water most likely harbors at least some microbes or bacteria. All the elements needed for life including carbon, hydrogen, nitrogen, sulfur, and oxygen have been detected on Enceladus and NASA is planning a mission to go there with a spacecraft called Orbilander which will launch in about 15 years and arrive there around 2050. So it will be a while before we know for sure what the nature of any life on Enceladus may really be, but in the meantime the prospects look very good.

Mercury will make its best morning appearance for the year early this month in Leo. Our first planet will be only half a degree from Regulus 30 minutes before sunrise on the morning of the 9th. And a slender waning crescent moon will pass just to the left of Mercury on the first day of this month.

Venus is still slowly getting higher in our evening sky but it will not really become easily visible until October. Watch a waxing crescent moon pass right by Venus and Spica in Virgo on Sept. 5 and 6 45 minutes after sunset.

Jupiter rises around 3 am in Taurus followed by Mars about an hour later in Gemini. The last quarter moon will pass near Jupiter and then Mars on the 24th and 25th and near Castor and Pollux on the 26th.

Comet Tsuchinshan-ATLAS will be visible low in the eastern morning sky near Leo waning crescent moon during the last few days this month. Hopefully it will survive its dangerous plunge around the sun and become a brilliant evening comet next month.

There will be a short partial lunar eclipse during the full moon this month on the evening of Tuesday the 17th into Wednesday morning the 18th. The moon will just barely graze into the earth's umbral shadow for an hour with the deepest part happening at 10:44 p.m. EDT. It should be easily detectable if it is clear, unlike our last lunar eclipse on Monday, March 25 of this year exactly two weeks before which was only penumbral since the moon never entered the deeper part of our shadow. There will be an annular solar eclipse visible over South America 2 weeks after this partial lunar eclipse on October 2.

Then everyone is waiting for T Corona Borealis, the Blaze Star to explode again. I was watching it carefully recently while looked for Perseid meteors and nothing happened.

Sept. 2. New moon is at 9:57 p.m. EDT.

Sept. 3. Viking 2 landed on Mars on this day in 1976.

Sept. 8. Saturn reaches opposition and is visible all night long.

Sept. 11. First quarter moon is at 2:07 a.m.

Sept.17. Full moon is at 10:34 p.m. This is the famous Harvest moon since it is closest to the equinox. There will also be a partial lunar eclipse tonight peaking at 10:44 p.m. EDT

Both Saturn and Neptune will be very close to the full moon tonight and they will be occulted by the moon in parts of this country but not for us on the east coast.

Sept. 22. Autumn begins in the Northern Hemisphere at 8:44 a.m.

Sept. 23. J. Galle discovered Neptune on this day in 1846. This was really a joint British-French-German discovery since it was based on calculations by Urban Le Verrier and John Couch Adams.

★

Moon Phases

Sept 2
New

Sept 11
First Quarter

Sept 17
Full

Sept 24
Last Quarter

Moon Data

Sept 1
Mercury 5° south of Moon

Sept 5
Venus 1.2° north of Moon

Moon at apogee

Sept 17
Saturn 0.3° south of Moon

Sept 18
Moon at perigee

Neptune 0.7° south of Moon

Sept 22
Uranus 5° south of Moon

Sept 23
Jupiter 6° south of Moon

Sept 25
Mars 5° south of Moon

OBSERVER'S CHALLENGE* – September

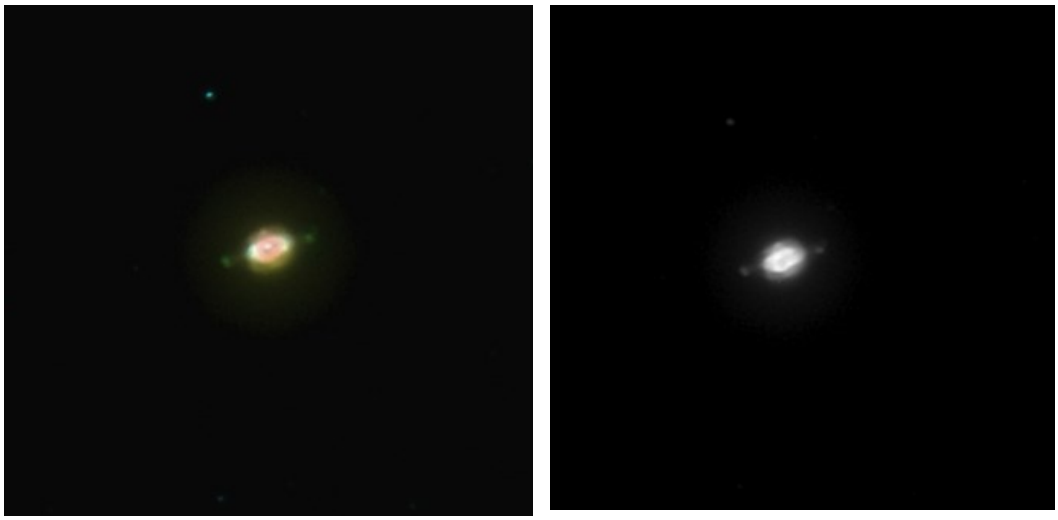
by Glenn Chaple

NGC 7009 "Saturn Nebula" –Planetary Nebula in Aquarius (Mag 8.0, Size 20")

Discovered in 1782 by William Herschel, NGC 7009 (the "Saturn Nebula") is located a little over one degree west of the 4.5 magnitude star nu (n) Aquarii and just a few degrees northeast of the Messier objects M73 (a four-star asterism) and M72 (a small globular cluster). It gets its nickname from a pair of thin extensions, or ansae, that stretch out to the sides of the main nebula, giving it the appearance (and apparent size) of the planet Saturn.

The Saturn Nebula is readily glimpsed in small-aperture scopes, appearing as a slightly oval object blue-green in color. The ansae require larger instruments. The challenge is to determine the smallest aperture needed to view them. Another challenge is to spot the central star which shines at magnitude 11.5, but which is masked by the surrounding nebulosity.

EDITOR: *The planet Saturn will be at its brightest on September 8th, when it is at opposition. Its famous rings were at their maximum tilt towards us in October 2017. Now, the rings are pretty much edge on, mimicking the Saturn Nebula (or vise-versa). This would be a good Starfest target and comparing the two. High power will be required plus good seeing.*



Images by Mario Motta MD

*The purpose of the Observer's Challenge is to encourage the pursuit of visual observing. It is open to anyone who is interested. If you'd like to contribute notes, drawings, or photographs, we'd be happy to include them in our monthly summary. Submit your observing notes, sketches, and/or images to Roger Ivester (rogerivester@me.com). To find out more about the Observer's Challenge, log on to rogerivester.com/category/observers-challenge-reports-complete.

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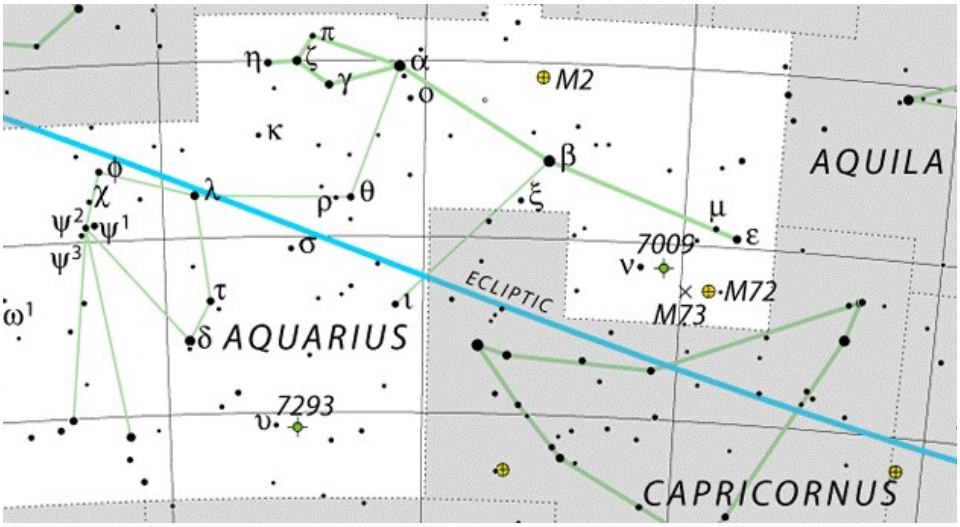
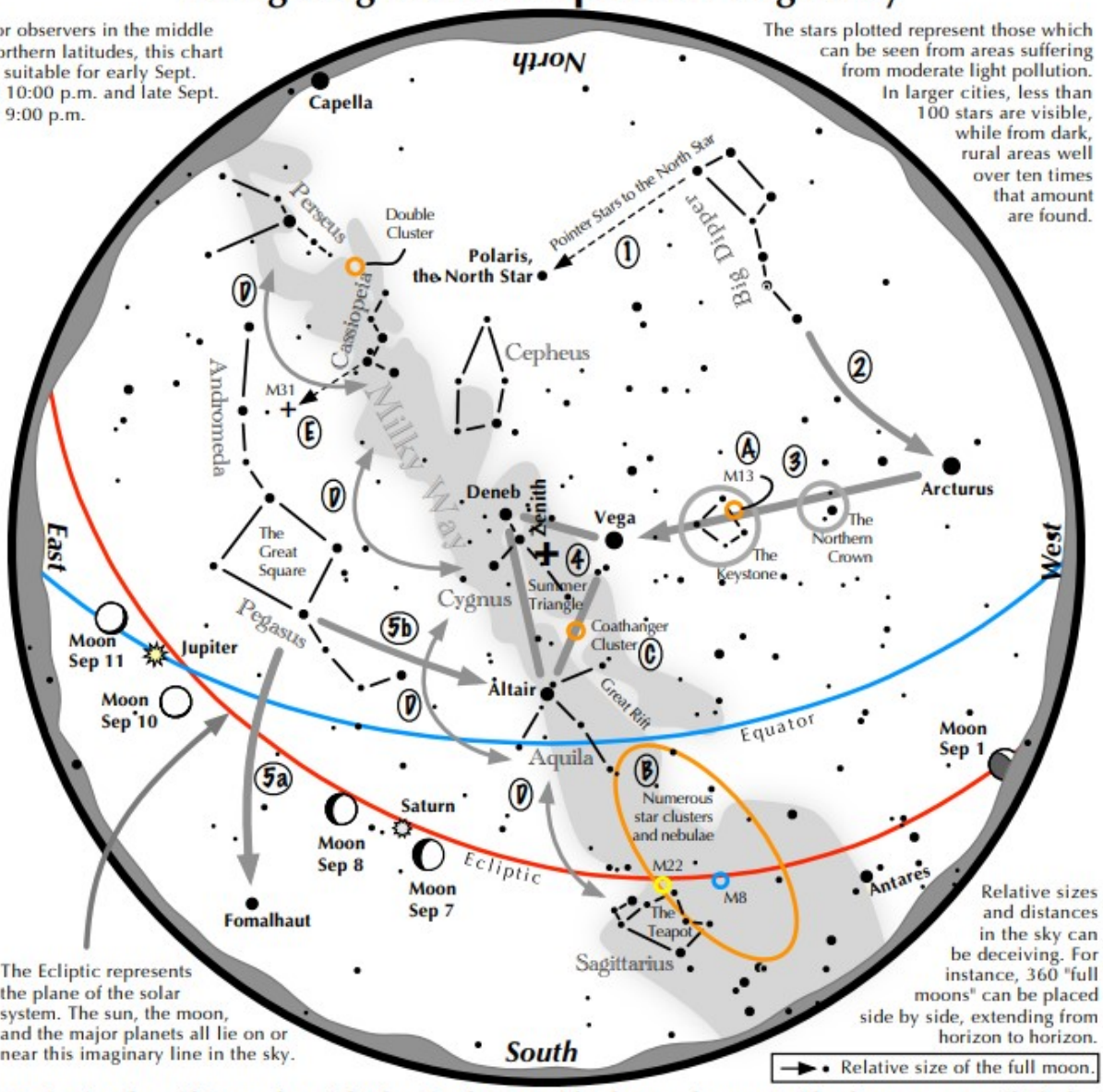
Finder Chart



www.constellation-guide.com

EDITOR: This is a wide field picture that I took with my camera of the Saturn Nebula. It's the blueish star-like object that is located between the two lines. Planetary objects have this blue color, but so do some stars. So, if you are not using a go-to scope, you really need to study the star patterns in the area to be sure it's the planetary.

Navigating the mid September Night Sky



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.

Principal Meteor Showers in 2024

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

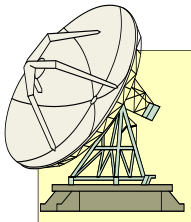
December 22
Ursids

Note: Dates are for maximum

MEMBERSHIP DUES

Membership fees are for the calendar year beginning in January and ending in December. Dues (see page 17 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 17. 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.



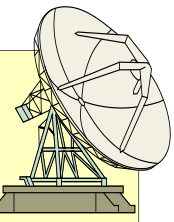
Got any News?

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!

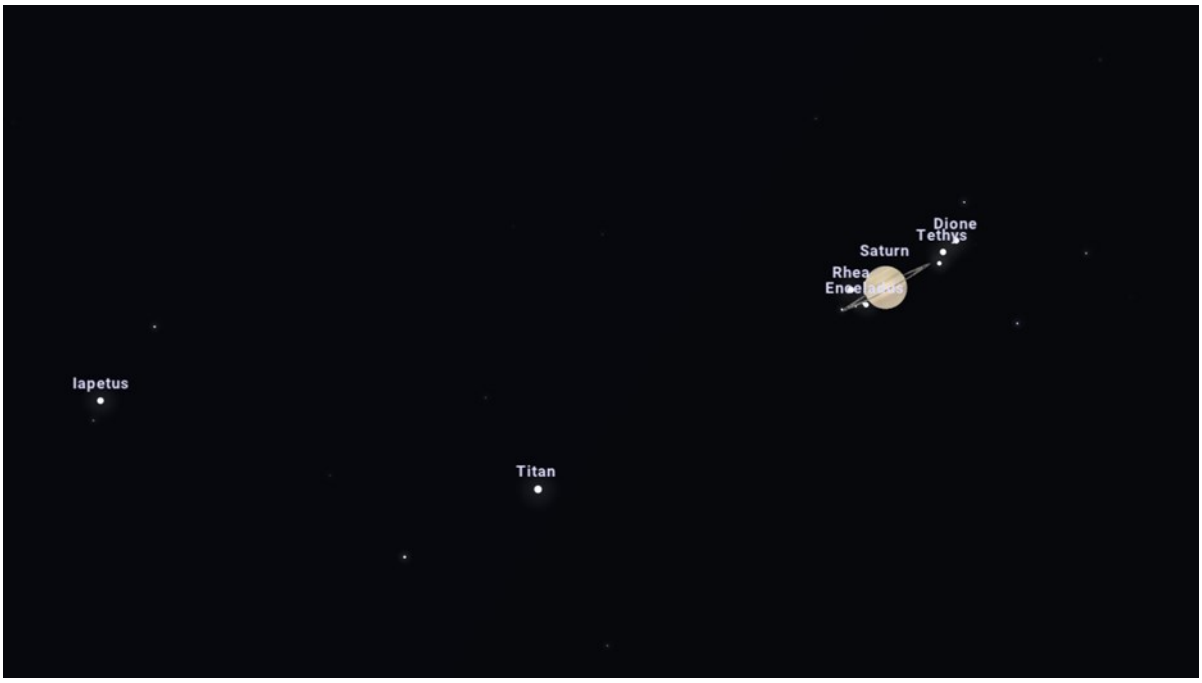
September's Night Sky Notes: Marvelous Moons

By Kat Troche

September brings the gas giants Jupiter and Saturn back into view, along with their satellites. And while we organize celebrations to observe our own Moon this month, be sure to grab a telescope or binoculars to see other moons within our Solar System! We recommend observing these moons (and planets!) when they are at their highest in the night sky, to get the best possible unobstructed views.

The More the Merrier

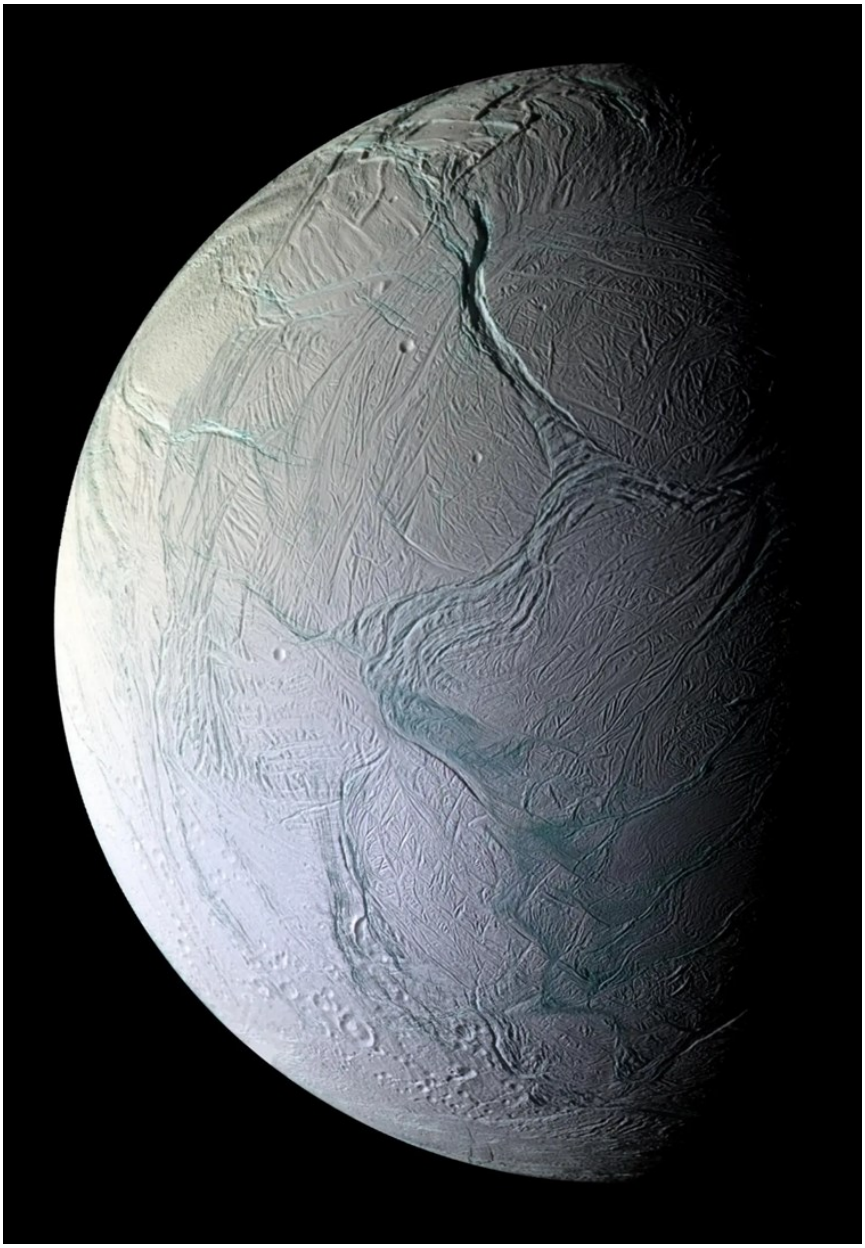
As of September 2024, the ringed planet Saturn has 146 identified moons in its orbit. These celestial bodies range in size; the smallest being a few hundred feet across, to Titan, the second largest moon in our solar system.



The Saturnian system along with various moons around the planet Saturn: Iapetus, Titan, Enceladus, Rhea, Tethys, and Dione. Credit: Stellarium Web

"Continued on page 8"

Even at nearly 900 million miles away, Titan can be easily spotted next to Saturn with a 4-inch telescope, under urban and suburban skies, due to its sheer size. With an atmosphere of mostly nitrogen with traces of hydrogen and methane, Titan was briefly explored in 2005 with the Huygens probe as part of the Cassini-Huygens mission, providing more information about the surface of Titan. NASA's mission Dragonfly is set to explore the surface of Titan in the 2030s.



This mosaic of Saturn's moon Enceladus was created with images captured by NASA's Cassini spacecraft on Oct. 9, 2008, after the spacecraft came within about 16 miles (25 kilometers) of the surface of Enceladus. Credit: NASA/JPL/Space Science Institute

"Continued on page 9"

Saturn's moon Enceladus was also explored by the Cassini mission, revealing plumes of ice that erupt from below the surface, adding to the brilliance of Saturn's rings. Much like our own Moon, Enceladus remains tidally locked with Saturn, presenting the same side towards its host planet at all times.

The Galilean Gang

The King of the Planets might not have the most moons, but four of Jupiter's 95 moons are definitely the easiest to see with a small pair of binoculars or a small telescope because they form a clear line. The Galilean Moons – Ganymede, Callisto, Io, and Europa – were first discovered in 1610 and they continue to amaze stargazers across the globe.

The Jovian system: Europa, Io, Ganymede, and Callisto. Credit: Stellarium Web

Ganymede: largest moon in our solar system, and larger than the planet Mercury, Ganymede has its own magnetic field and a possible saltwater ocean beneath the surface.

Callisto: this heavily cratered moon is the third largest in our solar system. Although Callisto is the furthest away of the Galilean moons, it only takes 17 days to complete an orbit around Jupiter.

Io: the closest moon and third largest in this system, Io is an extremely active world, due to the push and pull of Jupiter's gravity. The volcanic activity of this rocky world is so intense that it can be seen from some of the largest telescopes here on Earth.

Europa: Jupiter's smallest moon also happens to be the strongest candidate for a liquid ocean beneath the surface. NASA's Europa Clipper is set to launch October 2024 and will determine if this moon has conditions suitable to support life. Want to learn more? Rewatch the July 2023 Night Sky Network webinar about Europa Clipper here.

Be sure to celebrate International Observe the Moon Night here on Earth September 14, 2024, leading up to the super full moon on September 17th! You can learn more about supermoons in our mid-month article on the Night Sky Network page!

Point and Shoot Camera Astro-Imaging (no telescope)

Canon PowerShot SX50 HS

Veil Nebula (IC 410)

RAW Mode, FL 200mm (slight crop), ISO 800, f/3.5, 26 x 5min, 7-7-24

Baader Moon & Skyglow Filter

The Veil Nebula is a cloud of heated and ionized gas and dust in the constellation Cygnus. As a supernova remnant it is one of the most spectacular objects in the night sky. The source supernova was a star 20 times more massive than the Sun which exploded between 10,000 and 20,000 years ago. The entire visible portion of nebulosity is called the Cygnus Loop, while many portions of which have acquired their own individual names and catalogue identifiers. There are three main visual components. The Western Veil or NGC 6960 (top portion of the Veil in my image) is called the “Finger of God” or “Witches Broom.” Eastern Veil or NGC 6992 (bottom portion of the Veil in my image) is the brightest portion of the Veil. And Pickering's Triangle the bright portion that is in between the two main arcs of the Veil.

“Continued on page 11”

From the pages of “Burnham’s Celestial Handbook” copyright 1978

Veil Nebula

I rotated the page to match the orientation of my image. NGC 6960 is at the top; NGC 6992 is at the bottom. The photograph was taken from the Lowell Observatory using their 10-inch or 12-inch telescope. Certain sections of Veil Nebula are surprisingly easy to see in smaller scopes. In dark skies it can be seen in a pair of binoculars. Burnham calls the Cygnus Loop the “Bridal Veil Nebula.” And refers to NGC 6992 as the “Filamentary Nebula,” and NGC 6960 as the “Network Nebula.” The Veil Nebula was discovered visually by William Herschel in 1784 with his 18-inch reflecting telescope.

Point and Shoot Camera Astro-Imaging (no telescope)

Canon PowerShot SX50 HS

Jupiter & Mars at 3:39 AM 8-24-24

RAW Mode, FL 40mm, ISO 1600, f/4, 1 second, Hand Held

Jupiter is just right of center, Mars to its lower left.

During the early hours of August, Jupiter and Mars put on a show. Mars crept towards Jupiter during the first half of the month, then passed it on August 14. It then slowly moved away from our largest planet during the rest of the month; all amplified by the background stars of Taurus the Bull. In my August 24th image Mars is about to pass between the star Elnath, the Bull's northern horn; and Zeta, the Bull's southern horn. The Red Planet during August is at magnitude 0.8, just 0.1 magnitude brighter than Aldebaran (the red star to the upper right of Jupiter). Suddenly the Bull has not just one red eye but a pair of them. The bright star in the far upper left corner of my image is Capella, located in the constellation Auriga.

Club BBQ & Meeting 8-2-24

Ten club members showed up for our August outdoor meeting and annual club BBQ. The rain held off, but unfortunately, the skies did not clear for night observing. Nevertheless, we had a good time socializing and enjoying the BBQ food. I was surprised to see Bob Conley. He had moved to Arizona. When I asked what he was doing in the area he told me he was here to escape the long consecutive days of triple digit summer temperatures in Arizona.

"Continued on page 14"

Observatory Training Session

Our president, David Bianchi gave us hands on instructions as to attaching the Ha Solar Filter to our Zeiss refractor. However, we could not get it to focus. Next, Dave showed us how to start-up the Meade. However, when he pressed the go-to button to find Venus, the motor stopped working. We don't know why it shut down. Dave manually moved the scope back to the park position. Then went through the start-up procedure again. This time, it worked. However, we were unable to look at Venus because there were clouds in that area of the sky. Also, we had a problem opening up the observatory because one of the cables became frayed and jammed itself inside one of the pulleys, thus, preventing the roof from sliding open. However, Dave did manage to untangle the cable and cut off a small section of it allowing it to seat properly inside the pully wheel again. An unexpected afternoon of "However."

Club Meeting & Star Party Dates

Date	Subject	Location
Sept 6-8	**STARFEST WEEKEND** **Our September Club Meeting will take place during Starfest Weekend. So, no club meeting at The New School.** **Might want to bring a chair and or a table.** **FRIDAY:** Starfield Observatory gates open in the morning. Tent set-up in the afternoon. Solar Viewing during the day. And night viewing all night if you would like. **SATURDAY:** ***Day Time*: -** BBQ (3 PM), Solar Viewing, Raffle Table, What's Up, Tent Talks, Show & Tell, Astro Shorts. ***Night Time*: -** Observing, Campfire. **FRI/SAT: Astro "B" Movie Theater (conditional).** **SUNDAY:** Clean-up. TYO Trash.	**Talmage Observatory at Starfield West Kennebunk, Me.**
Last Month	**Last month we met at Talmage Observatory at Starfield for our annual Club Picnic and BBQ. We had a short meeting. It was too cloudy to do observing.**	
Sept	**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

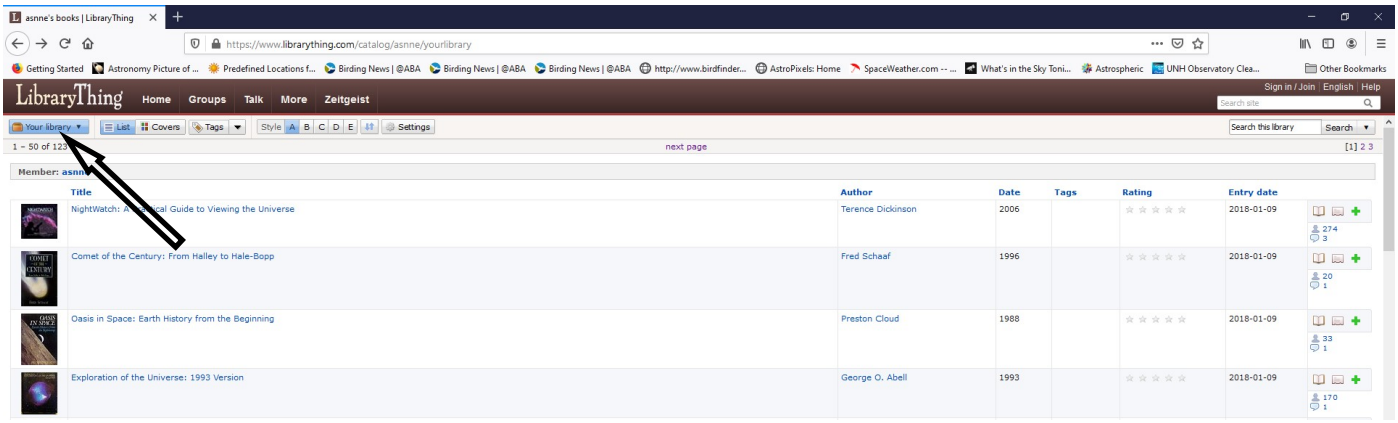
Directions to Talmage Observatory at Starfield [Alewive Road, Kennebunk, ME]

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.

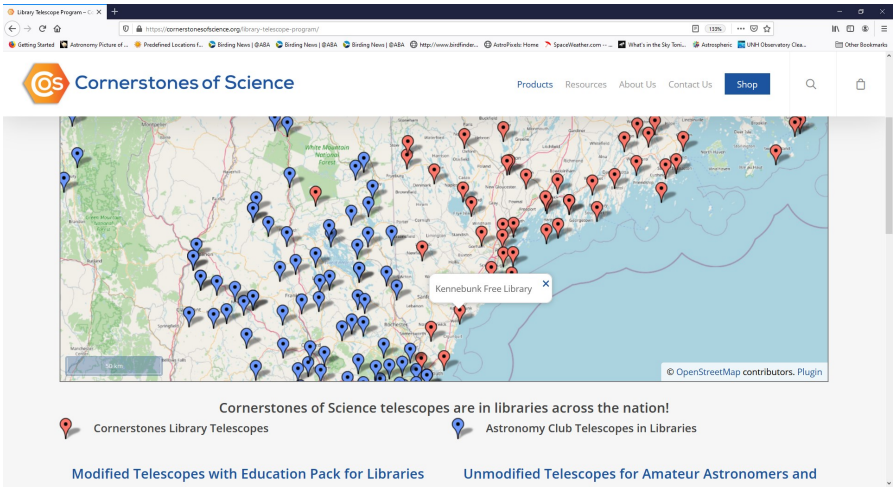
Astronomy Club & Library Resources

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 1338
Kennebunk, ME 04043-1338

2024 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_____