

Skylights

Newsletter of the Astronomical Society of Northern New England



MAR2022



Member of NASA's
Night Sky Network



Astronomical League

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*

The month of March is named after the Roman god of war, Mars. It also used to be the first month of the year and many cultures still celebrate the beginning of the New Year in March.

March also marks the beginning of spring for us in the northern hemisphere. This year that will happen at exactly 11:33 A.M. EDT on Sunday, March 20. That is a unique time on Earth along with the autumnal equinox in September. Those are the only two days each year when the sun rises due east and sets due west and the days are within a few minutes of 12 hours long for everyone on Earth except for the poles. The sun on its ecliptic path will cross over the celestial equator on this day. It is still ascending a little each day and the days will continue to lengthen until the summer solstice on June 21.

The sun will get continually higher and stronger each day this month, so try to get outside and enjoy the warmer and shorter nights as our hemisphere of Earth slowly tilts towards the sun once again. There will be plenty of interesting highlights to look for as we watch the spring constellations slowly rotate into view even as the bright winter constellations in the Winter hexagon start to sink below our western horizon by 10 pm by the end of this month, which is a sure celestial sign that spring is here along with the myriad terrestrial signs that will start to appear by then.

We just lost Jupiter late last month and it will reappear in our morning sky towards the end of this month. That means that all of the planetary action will take place in the morning sky and that will be true right through the beginning of summer and a little beyond. The only exception will be a brief evening appearance of Mercury in April and part of this May. Then keep watching as the great morning planetary alignment of all five of our brightest planets in order from Mercury to Saturn will set itself up for the last 2 weeks in June.

Venus will rise first, heralding the string of morning planets over the next several months. Our sister planet will rise more than 2 hours before the sun. It is still dazzling at -4.7 magnitude, even though it was even brighter last month. Mars rises shortly thereafter as an amber-colored gem compared to the starker white glow of Venus, which is just over 100 times brighter than our other neighboring planet. The pair will be less than 4 degrees apart on March 15th as they drift eastward together in direct motion against the fixed background of stars in Sagittarius and then Capricorn. Then Saturn will join the pair and form a nice, ever-shifting triangle with Mars with Venus at the apex.

Look for a very close conjunction of Saturn and Mercury low in the southeastern morning sky half an hour before sunrise during the first week of March. Then look for Venus and Mars just above the pair. Mercury will drop out soon after that as Mars climbs higher and Venus sinks lower.

Venus will reach its greatest western elongation from the sun on March 20 right at the start of spring. It will be exactly half illuminated by the sun at that time, but you would need a telescope to see that for yourself. Then watch this dancing celestial triangle become equidistant by the 24th and 25th. It will still be low in the sky, only 8.5 degrees, less than one fist at arm's length, so you would need a good eastern horizon one hour before sunrise to witness this show.

Then keep watching for the best part of this scene as Jupiter and a slender waning crescent moon join this close planetary triangle on Monday the 28th, forming some creative shapes in the sky. Use your imagination. Try to get some photographs of this rare event and place some terrestrial objects in front of it such as trees or an interesting building or a coastline to anchor it and give it more interest and perspective. Now half of the 8 planets in our solar system plus Earth's only natural satellite will be all bunched together low in our morning sky just half an hour before sunrise, a truly rare and spectacular sight.

"Continued on page 2"

Inside This Issue

Club Contact List	pg. 2
Moon Data Observer's Challenge	pg. 3,4,5
Meteor Showers in 2022 Club Merchandise for Sale	pg. 6
Embracing the Equinox	pg. 7,8
Astroimaging with a Point & Shoot	pg. 9,10
Club meeting minutes for February	pg. 11-13
Club Info & Directions to ASNNE	pg. 14
ASNNE Club & Library Resources	pg. 15
Become a Member	pg. 16

Club Contacts**Officers:****President:**

Ian Durham
idurham@anselm.edu

Vice President:

Bernie Reim
bernardreim@maine.edu

Secretary:

Carl Gurtman
cgurtman@maine.rr.com

Treasurer:

Ian Durham
idurham@anselm.edu

Board of Directors:

Gary Asperschlager
gasperschlager@gmail.com

Larry Burkett
larrybu32@yahoo.com

Keith Brown
silverado93@twc.com

Star Party**Co-ordinator:**

Carl Gurtman
cgurtman@maine.rr.com

Skylights Editor:

Paul Kursewicz
pkursewicz@myfairpoint.net

Website Manager:

Paul Kursewicz
pkursewicz@myfairpoint.net

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"

Another important highlight that now takes place on the last Saturday in March every year is the International Earth Hour. It will happen on March 26 from 8:30 to 9:30 pm local time. It started in 2007 in Sydney, Australia with 35 countries and a few million people participating. Now, just 15 years later, 192 of Earth's 195 countries participate along with billions of individuals.

The goal is simple; have more people become aware of the larger problems facing the earth and all of its inhabitants and to empower them to act in meaningful ways to change that. There are many different and creative ways for everyone to participate, but the easiest one would be to turn off all non essential lights for that one hour, 8:30 to 9:30 pm local time. Many cities around the world will do that on a massive scale for that one hour. That would obviously save some energy, but you could also go outside and look at a darker night sky for that hour and maybe even take some pictures of it and reflect on how each one of us is responsible to some extent for our collective problems and how we can help solve them. There is a different theme each year for this Earth Hour. Last year it was climate change and this year it will be nature loss and biodiversity. There are many virtual and actual events you can participate in to shine a figurative spotlight on our planet and to discover new and ongoing solutions to our human created planetary problems.

Our largest asteroid, Ceres, is still tracking between the Pleiades and the Hyades star clusters in Taurus this month. It will reach about 8th magnitude, so you would need at least a pair of binoculars to see this dwarf planet which is 600 miles across, or the size of Texas.

You can look for the zodiacal light again this month about an hour after sunset on moonless nights far away from any city or town lights. This light will create a very subtle pyramid-shaped glow stretching up from the horizon into Taurus low in the western sky. It is caused by sunlight reflecting off trillions of tiny pieces of comet and asteroid dust trapped in the ecliptic plane of our solar system.

The best comet this month is still Comet 19P/Borrelly. It will only reach about 10th magnitude, or 100 times fainter than a 5th magnitude star in the Little Dipper, so you would need a telescope to see it. This comet can be found just above Ceres tracking eastward through Aries and into Perseus. It will track about the same distance above the Pleiades as Ceres will track below this nice open star cluster of about 500 stars located about 400 light years away.

As you look at the Pleiades next time, also known as the 7 sisters, remember that the actual photons of light entering your eyes then will have left that iconic little open star cluster shaped like a miniature Little Dipper about the same time that Galileo first turned the first telescope in all of our 200,000 year history of modern humans on Earth to the skies. He then began to make many earth-shaking discoveries that changed and improved our view of the local universe forever.

Now we are on another threshold of much greater discoveries as the James Webb Space Telescope is right on schedule to begin to unveil much more of the universe by looking even farther back to the very beginning of time itself than the Hubble Space Telescope. It will be 100 times as powerful as the HST. The JWST will see in infrared light so it will look deeper into star-forming regions. It will also be able to see much deeper into the universe itself since it is more and more red shifted the farther out you go. It has already taken some images of a star in Ursa Major, near the familiar asterism of the Big Dipper. Now there are 18 images, one for each of the 18 mirror segments, but within another 3 or 4 months they will all be perfectly focused and work together as a single 21-foot mirror. The instruments also need to continue to cool to just above absolute zero to function well since they see in the infrared wavelengths.

March 2. Mercury passes less than one degree south of Saturn this morning. New moon is at 12:35 p.m. EST.

March 9. The moon passes near Ceres this morning.

March 10. First quarter moon is at 5:45 a.m. EST.

March 12. Venus passes 4 degrees north of Mars this morning.

March 13. On this day in 1781 Sir William Herschel discovered the planet Uranus. He first named it George in honor of King George III, the same king that we declared independence from in 1776. Then it was renamed to Uranus, who is the Greek father of the Titans and whose name also means "the heavens". His planet is now in Aries the Ram and is the only evening planet, but you would need a pair of binoculars to see it. Since it only orbits the sun once every 84 years, it will spend 7 years in each constellation and it hasn't quite completed 3 orbits yet since it was discovered 241 years ago. Daylight saving time begins at 2 a.m.

March 14. Albert Einstein was born on this day in 1879.

March 16. Caroline Herschel was born on this day in 1750. She discovered 8 comets and worked closely with her brother William throughout their brilliant careers. They were both accomplished musicians. William built the biggest telescope in the world at the time in 1785. It had a 48 inch mirror and it was 40 feet long.

March 18. Full moon is at 3:18 a.m. EDT. This is also known as the Worm, Crow, or Lenten moon.

March 20. Venus is at greatest western elongation, 47 degrees west of the sun and exactly half lit. The Vernal equinox is at 11:33 a.m. EDT.

March 25. Last quarter moon is at 1:37 a.m.

March 27. The moon passes 4 degrees south of Mars this morning.

March 28. The moon passes 7 degrees south of Venus and 4 degrees south of Saturn this morning.

March 30. The moon passes 4 degrees south of Jupiter this morning. ★

Moon Phases

Mar 2
New

Mar 10
First Quarter

Mar 18
Full

Mar 25
Last Quarter

Moon Data

Mar 7
Uranus .8° north
of Moon

Mar 10
Moon at apogee

Mar 23
Moon at perigee

Mar 27
Mars 4° north
of Moon

Mar 28
Venus 7° north
of Moon

Saturn 4° north
of Moon

Mar 30
Jupiter 4° north
of Moon

Neptune 4° north
of Moon

OBSERVER'S CHALLENGE* – March, 2022

by Glenn Chaple

**Medusa Nebula (Abell 21) Planetary Nebula in Gemini
(Magnitude 10.3, Size 11.3')**

When an Observer's Challenge lacks either a Messier or NGC designation, you know it won't be an easy visual target. Such is the case with our March Challenge, a planetary nebula in Gemini that eluded detection until discovered by American astronomer George Abell in 1955. Bearing the catalog designation Abell 21, it is commonly referred to as the Medusa Nebula.

Various sources assign to the Medusa Nebula a visual magnitude of 10.3, bright enough to be detectable in a small -aperture instrument. But unlike the typical young planetary nebula whose apparent dimensions are planetary (40 arc-seconds or less), this oldster spans an area one-third the moon's apparent diameter. Defocus a 10th magnitude star to that size and you'll have a truly faint object. To capture the Medusa Nebula visually, you'll need a large-aperture scope (8 to 10 inches and up), dark skies (mag-6, if possible), an eyepiece that provides a one-degree field of view, and a nebula filter (OIII or narrowband).

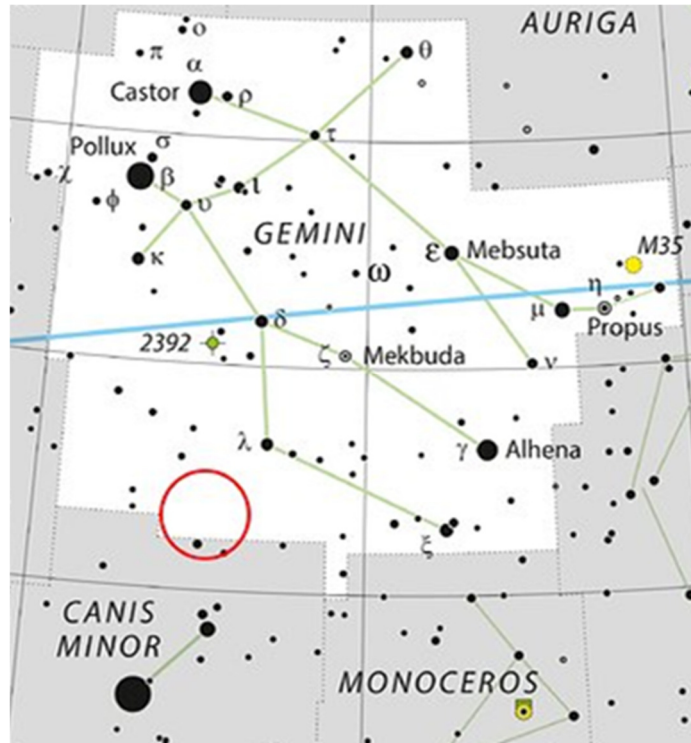
The Medusa Nebula is located at RA 7h29m2.7s, Dec +13°14'48.4". Star-hoppers can find their way using Charts A through C below. It lies some 1500 light years away and is estimated to be 4 light years across.

**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.*

"Continued on page 4"

Finder Chart A

(Star at lower part of circle is 6 Canis Minoris)
 Image credit: ESO, IAU and Sky & Telescope

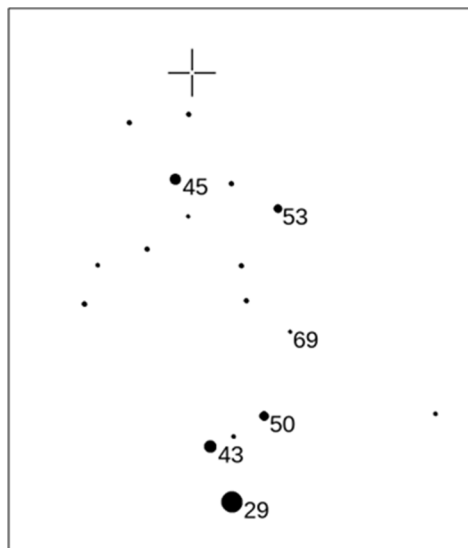


Finder Charts for Abell 21

Charts adapted from the AAVSO's Variable Star Plotter (VSP). Numbers indicate stellar magnitudes, decimals omitted. North is up.

Chart B

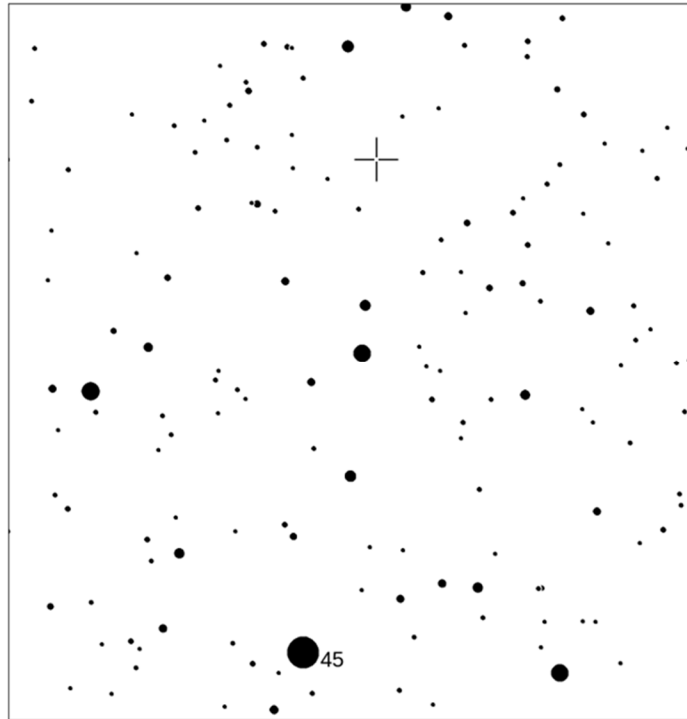
Stars plotted to magnitude 7.0. Magnitude 2.9 star is Gomeisa (beta [β] Canis Minoris); magnitude 4.5 star is 6 Canis Minoris.



“Continued on page 5”

Chart C

Stars plotted to 11th magnitude. 4.5 magnitude star is 6 Canis Minoris. Field size is 1.7 by 2.0 degrees.

**Abell 21 (Medusa Nebula) Image by Mario Motta, MD (ATMoB)**

32 inch scope, and ZWO 6200 camera, 2 hours Ha, 1 hour each S2 and O3.



Principal Meteor Showers in 2022

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

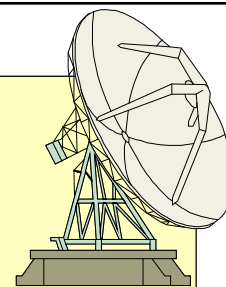
December 14
Geminids

December 22
Ursids

*Note: Dates are
for maximum*

Got any News?

Skylights Welcomes Your Input.



Here are some suggestions:

***Book reviews -- Items for sale -- New equipment --
Ramblings -- Star parties -- Observing -- Photos.***

Benefits of Membership

- Attend our monthly meetings and club star parties
 - Our Monthly Newsletter: *Skylights*
 - Discounts on *Sky & Telescope*. and *Astronomy* magazine subscriptions
 - Automatic subscription to the Astronomical League's quarterly newsletter, *The Reflector*
 - With proper training, access to the equipment at ASNNE's Talmage Observatory at Starfield.
 - By special arrangement, free admission to the Southworth Planetarium at USM in Portland
- Enjoy sharing your interest and have fun learning about Astronomy!

Our Club has Merchandise for Sale at: www.cafepress.com/asnne



***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!

Embracing the Equinox

By David Prosper

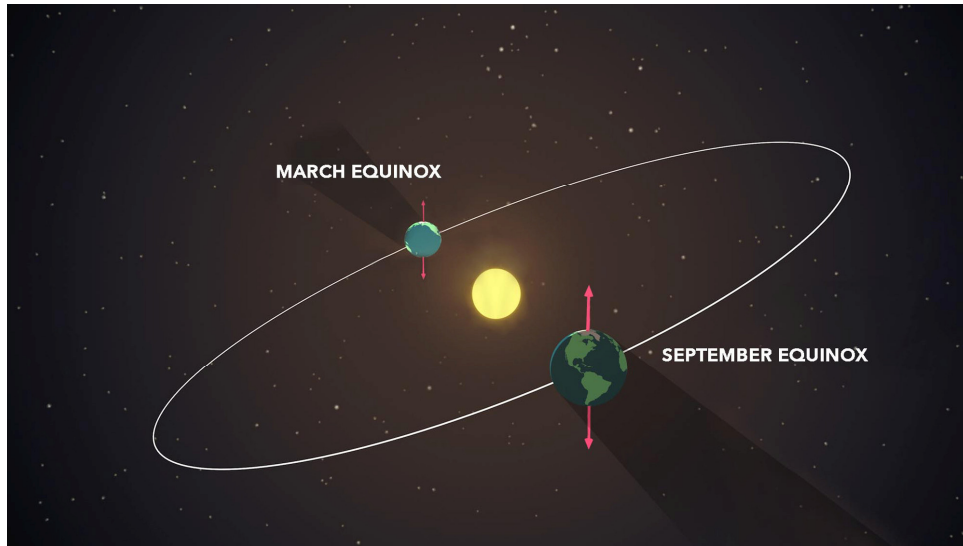
Depending on your locale, equinoxes can be seen as harbingers of longer nights and gloomy weather, or promising beacons of nicer temperatures and more sunlight. Observing and predicting equinoxes is one of the earliest skills in humanity's astronomical toolkit. Many ancient observatories around the world observed equinoxes along with the more pronounced solstices. These days, you don't need your own observatory to know when an equinox occurs, since you'll see it marked on your calendar twice a year! The word "equinox" originates from Latin, and translates to **equal** (equi-) **night** (-nox). But what exactly *is* an equinox?

An **equinox** occurs twice every year, in March and September. In 2022, the equinoxes will occur on March 20, at exactly 15:33 UTC (or 11:33 am EDT), and again on September 23, at 01:04 UTC (or September 22 at 9:04 pm EDT). The equinox marks the exact moment when the center of the Sun crosses the plane of our planet's equator. The day of an equinox, observers at the equator will see the Sun directly overhead at noon. After the March equinox, observers anywhere on Earth will see the Sun's path in the sky continue its movement further north every day until the June solstice, after which it begins traveling south. The Sun crosses the equatorial plane again during the September equinox, and continues traveling south until the December solstice, when it heads back north once again. This movement is why some refer to the March equinox as the **northward equinox**, and the September equinox as the **southward equinox**.

Our Sun shines equally on both the Northern and Southern Hemispheres during equinoxes, which is why they are the only times of the year when the Earth's North and South Poles are simultaneously lit by sunlight. Notably, the length of day and night on the equinox aren't precisely equal; the date for that split depends on your latitude, and may occur a few days earlier or later than the equinox itself. The complicating factors? Our Sun and atmosphere! The Sun itself is a sphere and not a point light source, so its edge is refracted by our atmosphere as it rises and sets, which adds several minutes of light to every day. The Sun doesn't neatly wink on and off at sunrise and sunset like a light bulb, and so there isn't a *perfect* split of day and night on the equinox - but it's very close.

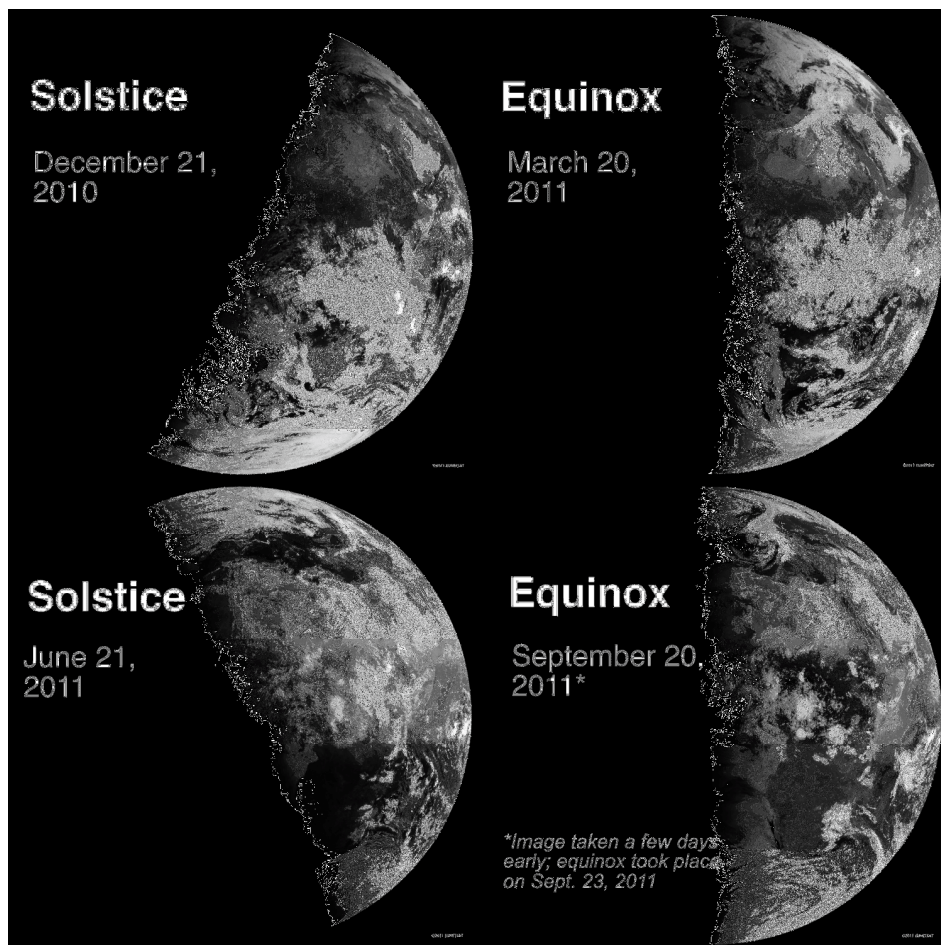
Equinoxes are associated with the changing seasons. In March, Northern Hemisphere observers welcome the longer, warmer days heralded by their **vernal**, or spring, equinox, but Southern Hemisphere observers note the shorter days - and longer, cooler nights - signaled by their **autumnal**, or fall, equinox. Come September, the reverse is true. Discover the reasons for the seasons, and much more, with NASA at nasa.gov

“Continued on page 8”



This (not to scale) image shows how our planet receives equal amounts of sunlight during equinoxes.

Credit: NASA/GSFC/Genna Duberstein



Scenes of Earth from orbit from season to season, as viewed by EUMETSAT. Notice how the terminator - the line between day and night - touches both the North and South Poles in the equinox images. See how the shadow is lopsided for each solstice, too: sunlight pours over the Northern Hemisphere for the June solstice, while the sunlight dramatically favors the Southern Hemisphere for the December solstice.

Point and Shoot Camera Astroimaging (no telescope)

Canon Powershot SX50 HS

Image & write-up submitted by Paul Kursewicz

Ghost of Cassiopeia (IC 63)

Specs: RAW Mode, FL 940mm, f/4, ISO 900, 34 x 2 min, 11-8-21

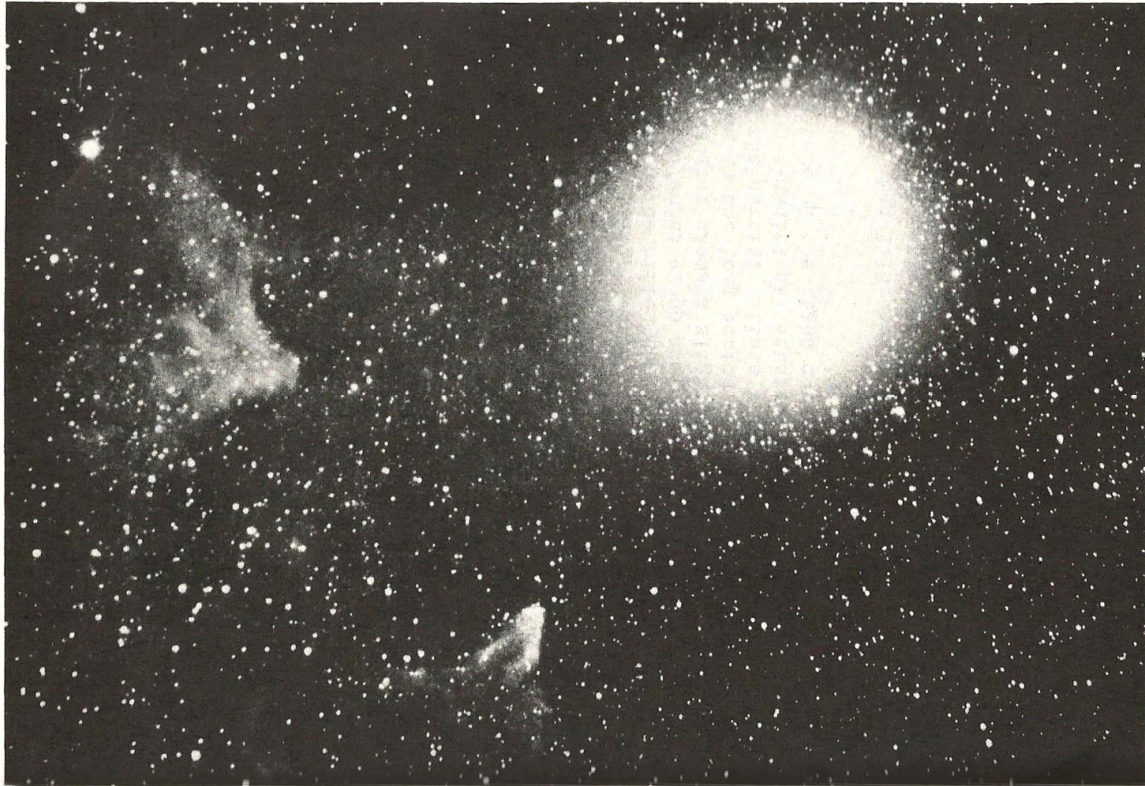


In my photo I was able to capture two extremely faint nebulae, IC 59 and IC 63. The latter is known as the “Ghost of Cassiopeia” because it looks like a paranormal ghost. Looking at my picture, the “Ghost” is the bright emission nebula near the center of my image. And IC 59 is the blue reflection nebula just above and to the left of the “Ghost.” They are challenging objects to spot with telescopes for a number of reasons. Both nebulae are faint at apparent magnitude +10, they have extremely low surface brightness and surround the bright variable star gamma Cas (γ Cas). This remarkable star (which is the center star of the “W-shaped” constellation) is partly unstable and is known as a “shell star.” It currently shines at mag. +2.15, making it the brightest star in Cassiopeia. IC 59 and IC 63 are 610 light years distant. Spatially the nebulae are roughly 3 light-years from gamma Cas, although IC 63 is slightly closer to the star. As a result, it appears mostly red due to a dominance of H-alpha emission, whereas IC 59 exhibits much less H-alpha emission and appears mostly blue due to dust reflected starlight.

“Continued on page 10 ”

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

IC 59 and IC 63



GAMMA CASSIOPEIAE. The erratic variable, and the two nebulosities IC 59 and IC 63, which appear to be associated with the star. Haute Provence Observatory.

491

I rotated the page counter clockwise to match my photo. The reflection nebula IC 59 is far left. The emission nebula IC 63 (Ghost of Cassiopeia) is lower center. The greatly over exposed star is Gamma Cassiopeiae. I suspect that the imager had no choice but to over expose this star in order to capture the two faint nebulae. The photo was taken at the Haute Provence Observatory. I never heard of that observatory before so I did some research on it. The observatory was established in 1937 as a national facility for French astronomers. Astronomical observations began in 1943 using the 1.20 meter telescope, and the first research papers based on observations made at the observatory were published in 1944. Foreign observers first used the observatory in 1949. It is situated in southeast France on a plateau at 650m altitude. Burnham’s says that Gamma Cassiopeiae is a BO supergiant with bright hydrogen lines and is subject to periods of violent change and fluctuation, during which the magnitude, spectrum, color, temperature and diameter all change. It is 550 light years away. Although Gamma is fairly bright it has no proper name.

[Astronomical Society of Northern New England \(ASNNE\) Meeting Notes of
4 February 2022](#)

Note: Due to the snow- and ice-fall on Thursday & Friday, 3-4 February, 2022, this Meeting was held entirely on Zoom, a change from the original in-person plan.

Directors Present: Ian Durham, President *Pro Tem* and Treasurer
Bernie Reim, Vice President
Carl Gurtman, Secretary
Gary Asperschlager, Director

Others Present: There were 12 people present on Zoom.

President *Pro Tem* Ian Durham called the Business Meeting to order at 7:05 pm.

There was no formal Secretary's Report or Treasurer's Report. Dues for 2022 are due. Dues should be submitted to Ian. Ian reported that ASNNE has 28 paid-up Members for 2022. Ian also reported that he has paid the State of Maine \$60, to keep our ASNNE sign on the State highway.

Ian has tried to contact Larry, to see if he still wanted to be a Board Member. Larry has not yet returned Ian's call. Therefore, Ian appointed Ron Burk as a Board Member. If Larry is still interested, he can also be a Board Member, thus bringing us up to the seven allowed by our By-Laws.

Carl reported that his Press Release about the January Meeting and Kerry-Ann Lecky Hepburn's excellent presentation on astrophotography had been published, under the catchy title of "Stellar Turnout at Meeting of Astronomical Society". David informed Kerry-Ann of that, and Carl mailed Kerry-Ann the clipping. Also published was the notice of this upcoming February Meeting.

After some discussion, by e-mail prior to this Meeting, and at this Meeting, future notices of upcoming Meetings will include our e-mail address, asnne.astronomy@gmail.com. and the statement that, in the event of inclement weather, interested parties can contact us - in practice, David - to ascertain if we are having an in-person Meeting, or a Zoom Meeting, or if the Meeting was cancelled. The e-mailer will be given the Zoom information, if warranted. We do not wish to publish the Zoom contact information to the public, to prevent us from being "spammed".

“Continued on page 12”

Regular Meeting:

President *Pro Tem* Ian Durham called the Regular Meeting to order at 7:35.

Introduction of New People:

_ We had one guest, Theo, who will become an ASNNE Member. His interests in astronomy are general, and he likes to participate in astronomical discussions.

"What's Up?":

First, Bernie let us know that on "Maine Calling", there's a program on astronomy. It can be accessed via the internet.

Bernie then gave his usual thorough, comprehensive, and complete discussion of what's in store for us in the skies of February, named after the Roman purification rituals, Februa, which were held every February 15, on the old Roman calendar.

We have already reached the middle of winter as of February 2nd, originally Candlemas, and now better-known as Groundhog Day. The Celts celebrated cross-quarter days, which divide each of our four seasons in half. The halfway point between spring and summer is Beltane, (May Day). The best known, Samhain, is our Halloween. The only cross-quarter day not publically celebrated is Lammas Day, August 1, halfway between summer and fall.

The days are getting noticeably longer now and will be nearly 11-and-a-half hours long by the end of this month. Only three weeks to go until the vernal equinox.

Venus will reach its greatest brilliancy for the year on the 12th, at -4.9 magnitude, compared to its lowest magnitude of -3.9.

At the start of last month, four planets were visible in the evening sky. Now three of those planets have migrated to the morning sky, creating a nice morning lineup of four bright planets, since Mars was already there. Look low in the eastern sky half an hour before sunrise to spot this nice celestial slowly-moving dance. Venus will be the highest, and then Mars, then Mercury, and Saturn will be the lowest one in our sky.

Jupiter remains as the only evening planet, low in the western sky, but we will lose it completely by the middle of the month.

“Continued on page 13 ”

There will be no meteor showers, or bright comets, in February

The James Webb Space Telescope is continuing its so-far perfect deployment and alignments. However, we won't be ready for real results until Spring.

Bernie then covered "What Happened on this Day. . .", and the names of this month's moon.

Bernie's excellent presentation, in its entirety, can be found, this month, and every month, in *Skylights*, ASNNE's professional-quality newsletter; editor, Paul Kursewicz. *Skylights* may be found at: <http://www.asnne.org/newsletter.php>

AstroShorts:

Several Members presented Astroshorts. Some science-fiction books were discussed, the increasing frequency of exceptionally high tides, and many excellent astro-photographs were shared.

The next ASNNE Meeting, will be at 7:30 pm, Friday, 4 March, 2022, at the New School in Kennebunk, Maine. The Regular Meeting will be preceded by a Business Meeting at 7:00 pm. All Members may attend the Business Meeting as they choose.

Respectfully submitted,

Carl Gurtman

Club Meeting & Star Party Dates

Date	Subject	Location
<u>Mar 4</u>	<p><u>ASNNE Club Meeting:</u></p> <p>Business Meeting starts at 7:00 PM</p> <p>Club Meeting 7:30 to 10:00PM</p> <p>Guest Speaker: Our guest speaker will be physics Professor and club member Ian Durham. Ian will present us with his annual countdown choices for the top physics stories of 2021.</p> <p>Bernie Reim - What's UP</p> <p>Astro Shorts: (news, stories, jokes, reports, questions, photos, observations etc.)</p>	The New School, Kennebunk, Me.
Last Month	<p>Once again a snow storm prevented us from having our club meeting at The New School. So we had a Zoom Meeting instead. There was no keynote speaker. Bernie did his "What's-Up" presentation and certain club members contributed to Astroshorts.</p>	
	Club/Public Star Party: TBD	Talmage Observatory at Starfield West Kennebunk, Me.

Directions to ASNNE event locations

Directions to The New School in Kennebunk [38 York Street (Rt1) Kennebunk, ME]

For directions to The New School you can use this link to the ASNNE NSN page and then click on "get directions" from the meeting location. Enter your starting location to generate a road map with complete directions. It works great. http://nightsky.jpl.nasa.gov/club-view.cfm?Club_ID=137

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

From North:

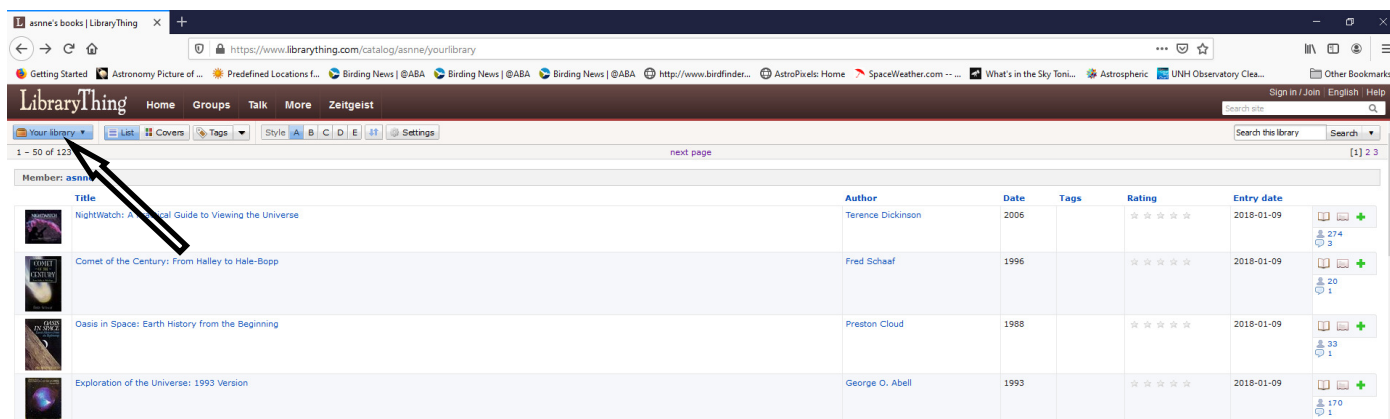
Get off turnpike at exit 32, (Biddeford) turn right on Rt 111. Go 5 miles and turn left on Rt 35. Go 2 miles on Rt 35 over Kennebunk River to very sharp 90 degree left turn. The entrance to the Starfield Observatory site is at the telephone pole at the beginning of the large field on the left. Look for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

From South:

Get off the turnpike at exit 25 in Kennebunk. After toll both turn right on Rt 35. Go up over the turnpike and immediately turn right on Rt 35. About 4 miles along you will crest a hill and see a large field on your right. Continue until you reach the end of the field. Turn right into the Starfield Observatory site at the last telephone pole along the field. Look for the ASNNE sign on the pole. If you come to a very sharp 90 degree right turn you have just passed the field.

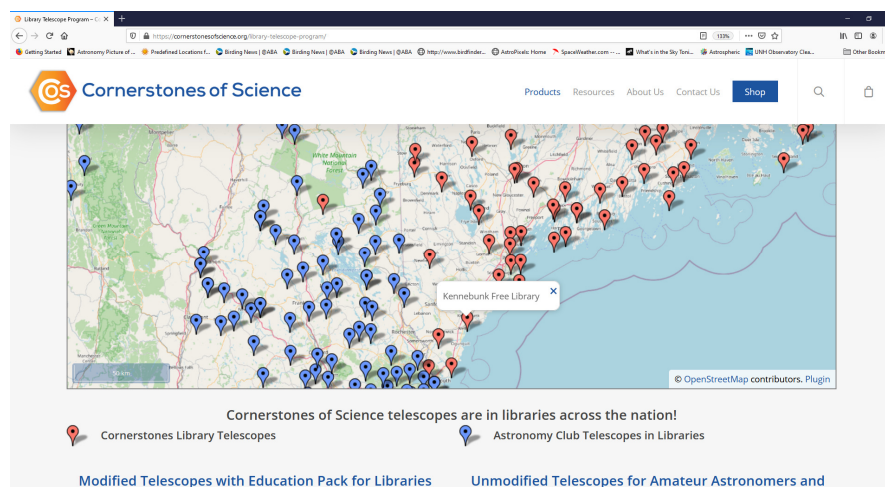
Astronomy Club & Library Resources

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

2022 Membership Registration Form

(Print, fill out and mail to address above)

Name(s for family): _____

Address: _____

City/State: _____ Zip code: _____

Telephone # _____

E-mail: _____

Membership (check one):

Individual \$35 _____ Family \$ 40 _____ 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 _____

