



# Skylights



Newsletter of the Astronomical Society of Northern New England



DEC 2021



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 December

By Bernie Reim

**T**he month of December always marks the beginning of winter for us in the northern hemisphere. That will happen at exactly 10:59 am on Tuesday the 21<sup>st</sup> this year. That will be the longest night and shortest day of the whole year. The word "solstice" means "sun stands still". That is what the sun appears to be doing for a day or so, but that is only from our limited perspective on Earth. It is not really standing still at all, it is only reaching its lowest point in our sky for the year, which for us at this latitude is only 24 degrees low in the sky with the days being less than 9 hours long versus 15 and a half hours long by the time we reach the summer solstice half a year later.

There will be no great and extremely rare Jupiter conjunction with Saturn this year on the solstice. These two gas giants made their closest approach to each other from our perspective in about 800 years last year exactly on the winter solstice. They were less than one tenth of a degree apart. Now they are 18 degrees apart, at opposite ends of Capricorn.

However, there will be several excellent highlights during this last month of the year to more than make up for that great event last year. All five of the brightest planets will be visible again this month, but not at the same time. Four of them will be in the evening sky and only Mars will inhabit the morning sky after all the others have set. Venus will reach its greatest brilliancy for the year and there is a comet named Leonard that should become visible to the naked eye by the second week of this month. There will be not one, but two good meteor showers, the Geminids on the 13<sup>th</sup> and the Ursids on the 22<sup>nd</sup>. Then there will be a total solar eclipse over western Antarctica on the 4<sup>th</sup> to follow the near total lunar eclipse we just had in November. To top all of that off, the long-awaited James Webb Space Telescope is finally set to launch on Saturday the 18<sup>th</sup> from the South American country of French Guiana. So we have a way above average month in store for us.

Both Jupiter and Saturn continue to fade a little as they fall further behind us in their orbits. They also both continue to set about 4 minutes earlier each night along with the stars in Capricorn. The King of the Planets will set by 8 pm by the end of the year and Saturn will set an hour earlier. So this will be your last chance to get some good views of Saturn through a telescope before it turns into a morning planet in early February.

Venus will reach its greatest brilliancy for the year on the 4<sup>th</sup> at magnitude -4.9, one full magnitude or two and a half times brighter than Venus is at its least bright. See if you can catch the phases of Venus with

just a pair of binoculars as it will be undergoing a rapid transformation this month from being 28% lit by the sun and spanning 39 arc seconds of the sky to nearly doubling in size to just over an arc minute and shrinking to only 2% lit by the sun by the end of the year. It will pass through its inferior conjunction with the sun early next year when it will disappear for a couple of weeks and then become a morning planet once again.



Notice that Venus is also rapidly closing the gap with Saturn while it is undergoing all of these transformations. Venus will be just 18 degrees to the west of Saturn by the end of the month, which is the same distance as Saturn to Jupiter. Saturn will appear halfway between Jupiter and Venus to make an impressive and bright trio in our evening sky later this month. Watch closely as the waxing crescent moon, complete with its ghostly earth-shine, will join Venus on the 6<sup>th</sup> and then proceed to point out each of the other bright planets in that picturesque and fairly rare sequence on successive nights. As a bonus, our first planet, Mercury will appear out of the sun's glare late this month and it will be only 6 degrees below and to the left of Venus on the night after Christmas, now forming an even more impressive quartet.

Comet Leonard, discovered by Greg Leonard back on January 3 of this year at the Mt. Lemmon Observatory in Arizona exactly one year before its perihelion with the sun on January 3 of next year.

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

It was only a faint 19<sup>th</sup> magnitude speck when he discovered it, fully one million times fainter than the 4<sup>th</sup> magnitude brightness that this cosmic visitor is expected to reach by the 14<sup>th</sup> of this month, easily visible with the naked eye. This comet will pass within 20 million miles of Earth and within only 2.6 million miles of Venus. Look for it just 5 degrees below Venus on the 17<sup>th</sup> in the evening sky. This will be a welcome celestial Christmas gift for everyone to enjoy in our sky, the brightest comet since NEOWISE back in the summer of 2020.

The Geminid meteor shower will peak on Monday the 13<sup>th</sup> into Tuesday the 14<sup>th</sup>. This is usually the best meteor shower of the year, even more prolific and consistent than the August Perseids. You can expect well over 100 meteors per hour out of the Geminids from a dark sky site away from any towns or cities and all light pollution. The moon will interfere for a while this year, since it will be waxing gibbous 4 days before full and it will not set until about 3 am. However, meteor showers are usually much better after midnight and towards morning anyway since the earth is then spinning into their source instead of away from it, so plan to get up early to catch tons of these unique meteors. Caused by an asteroid named 3200 Phaethon, these meteors tend to be brighter than any of the other showers since the tiny sand grain-sized particles that we see burning up about 70 miles above us at the edge of space are denser than the comet dust that we see from all of the other meteor showers except for one more which is also caused by an asteroid, the January 3<sup>rd</sup> Quadrantids.

The other meteor shower this month is much less impressive, only producing about 15 meteors per hour at its best, which it will not be this year since they will peak on the 22<sup>nd</sup>, the day after the solstice and just 4 days after full moon this month. The Ursids are caused by Comet 8P/Tuttle and all seem to originate near Kochab, a star in Ursa Minor, commonly known as the Little Dipper.

Unfortunately it was cloudy and rainy for us in this area for the near total lunar eclipse last month, but a solar eclipse always follows or precedes a lunar eclipse so we will have a total solar eclipse on Saturday the 4<sup>th</sup>, but it will only be visible over western Antarctica and the South Orkney Islands including Coronation Island, just past where the tip of the lunar shadow cone will first brush across the earth over the Southern Ocean right at sunrise. Try to catch a live feed of this event on the NASA channel or slooh.com.

Everything will look much more dramatic and extreme during a total solar eclipse over such a unique and alien landscape as Antarctica. It will be a truly unforgettable experience for the lucky few that can get down there for this great event, which will be far fewer than the 60 or 70 million people that got to see the American total solar eclipse back on August 21 of 2017 that I had the chance to see over Idaho near Yellowstone National Park. The last total solar eclipse near the South Pole happened on November 23 of 2003 and the

next one will not happen until December 15 of 2039. You don't need to wait until then since there will be a hybrid solar eclipse, which means it will be partly total and partly annular on April 20 of 2023 over the very western part of Australia. That will be closely followed by one right over Maine less than a year after that on April 8 of 2024.

Perhaps the greatest highlight of this month and maybe even the whole 21<sup>st</sup> century so far will be the long-awaited launch of the James Webb Space Telescope on Saturday the 18<sup>th</sup>. Since it is all folded up at launch to fit into the Ariane 5 rocket, it has to execute nearly 400 distinct unfolding maneuvers flawlessly over the next 2 weeks. Then it will take another 2 weeks to get to its destination at the L2 point over 1 million miles out in space and then it will take another 5 months or so to be fully calibrated and start discovering amazing new things about our universe that will definitely rewrite our textbooks. I will write much more about its progress as that whole process unfolds.

Dec.4. New moon is at 2:43 a.m. EST. Total solar eclipse today over Antarctica. Venus is at its greatest brilliancy today for the year.

Dec.6. The moon passes less than 2 degrees south of Venus tonight.

Dec.7. Gerard Kuiper was born on this day in 1905. The belt of around 35,000 objects larger than 100 km including Pluto was named after him. There may be as many as 100 million objects down to 20 km across also residing in this belt in space starting at 40 a.u. away. The moon passes near Saturn tonight.

Dec. 9. The moon passes near Jupiter tonight.

Dec. 10. First quarter moon is at 8:36 p.m.

Dec.14. The Geminid meteor shower peaks.

Dec. 17. The Wright Brothers flew the world's first successful motor-operated airplane 255 meters for 59 seconds on this day in 1903. Just 66 years later we flew all the way to the moon.

Dec. 18. Full moon is at 11:35 p.m. This is also called the Cold moon or the Moon before Yule.

Dec.21. Winter solstice is at 10:59 a.m.

Dec.22. The Ursid meteor shower peaks.

Dec.25. Isaac Newton was born on this day in 1642.

Dec. 27. Johannes Kepler was born on this day in 1571.

Dec.28. Arthur Eddington was born on this day in 1882. He took a photograph during a total solar eclipse in May of 1919 that proved Einstein's general relativity correct. Mercury passes 4 degrees south of Venus this evening.

Dec.31. The moon passes near Mars this morning which will be close to Antares in Scorpius, which means "rival of Mars".

Moon Phases

**Dec 4**  
New

**Dec10**  
First Quarter

**Dec 18**  
Full

**Dec 26**  
Last Quarter

Moon Data

**Dec 2**  
Mars 0.7° south  
of Moon

**Dec 4**  
Moon at perigee

**Dec 6**  
Venus 1.9° north  
of Moon

**Dec 7**  
Saturn 4° north  
of Moon

**Dec 9**  
Jupiter 4° north  
of Moon

**Dec 10**  
Neptune 4° north  
of Moon

**Dec15**  
Uranus 1.5° north  
of Moon

**Dec 17**  
Moon at apogee

**OBSERVER'S CHALLENGE\* – December, 2021**

by Glenn Chapple

**NGC 16 – Lenticular Galaxy in Pegasus (Magnitude 12.0, Size 1.8' by 1.0')**

Our December Observer's Challenge takes us to the northeast corner of Pegasus and a lenticular galaxy some 123 million light years away (SIMBAD data). Discovered by William Herschel on September 8, 1784. its appearance ("A faint star with small chevelure [hazy luminescence] and 2 burs") led Sir William to enter it into his Catalogue of Nebulae and Clusters of Stars as a Class IV (Planetary Nebulae) object.

With a visual magnitude of 12.0, NGC 16 will challenge medium aperture scopes, especially if observed from an area beset by slight to moderate light pollution. I looked for it with a 10-inch f/5 reflecting telescope on an evening when the magnitude limit was around 5. At 140X, I was able to make out little more than a faint star (the galaxy's nucleus). Visual observers in dark-sky locations or working with larger instruments may be able to make out a surrounding oval haze.

The 2000.0 celestial coordinates for NGC 16 are: RA 00<sup>h</sup> 09<sup>m</sup> 04.3<sup>s</sup>, DEC +27° 43' 45", a little over a degree south of the 2<sup>nd</sup> magnitude star Alpheratz (alpha [α] Andromedae). The accompanying finder chart should enable star-hoppers to find their way from Alpheratz to NGC 16.



[www.constellation-guide.com](http://www.constellation-guide.com)

\*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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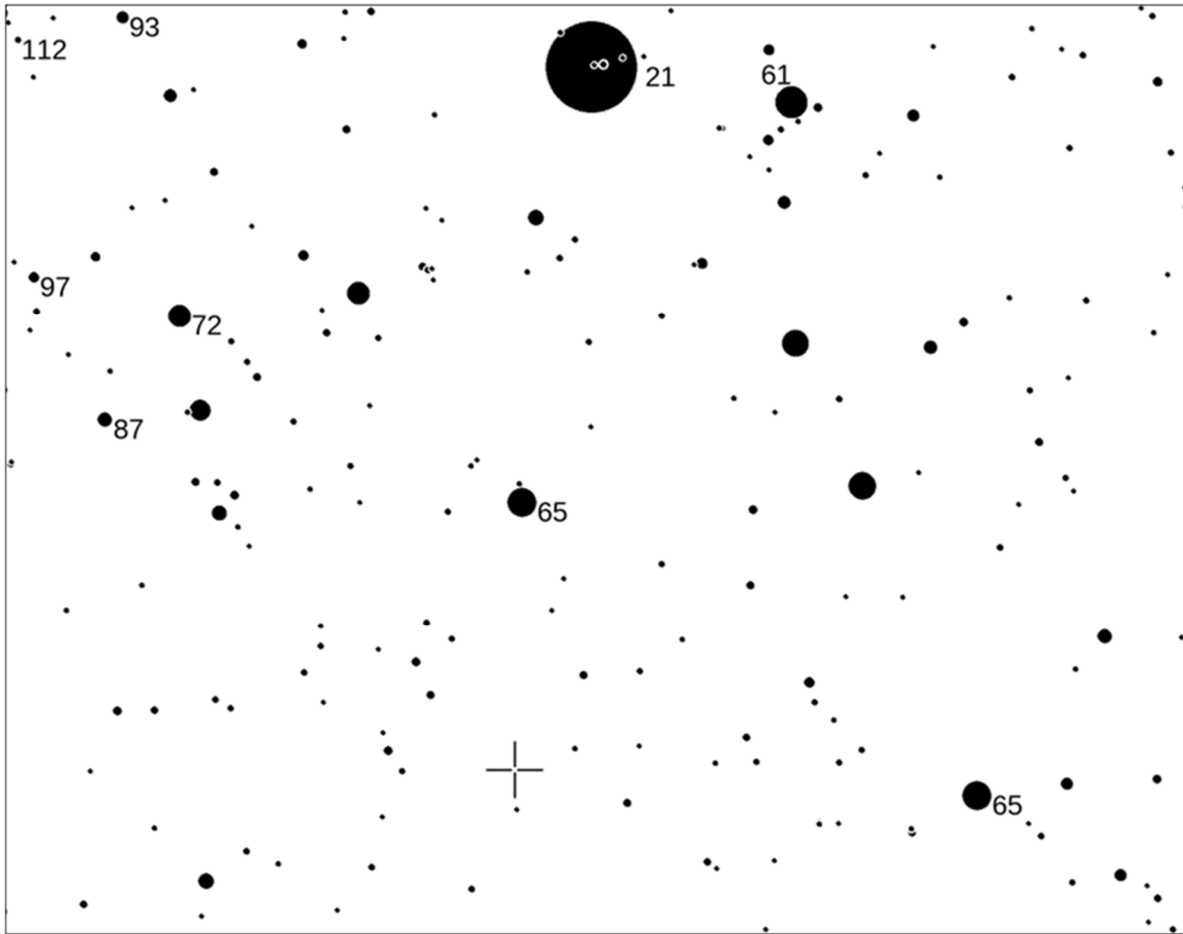
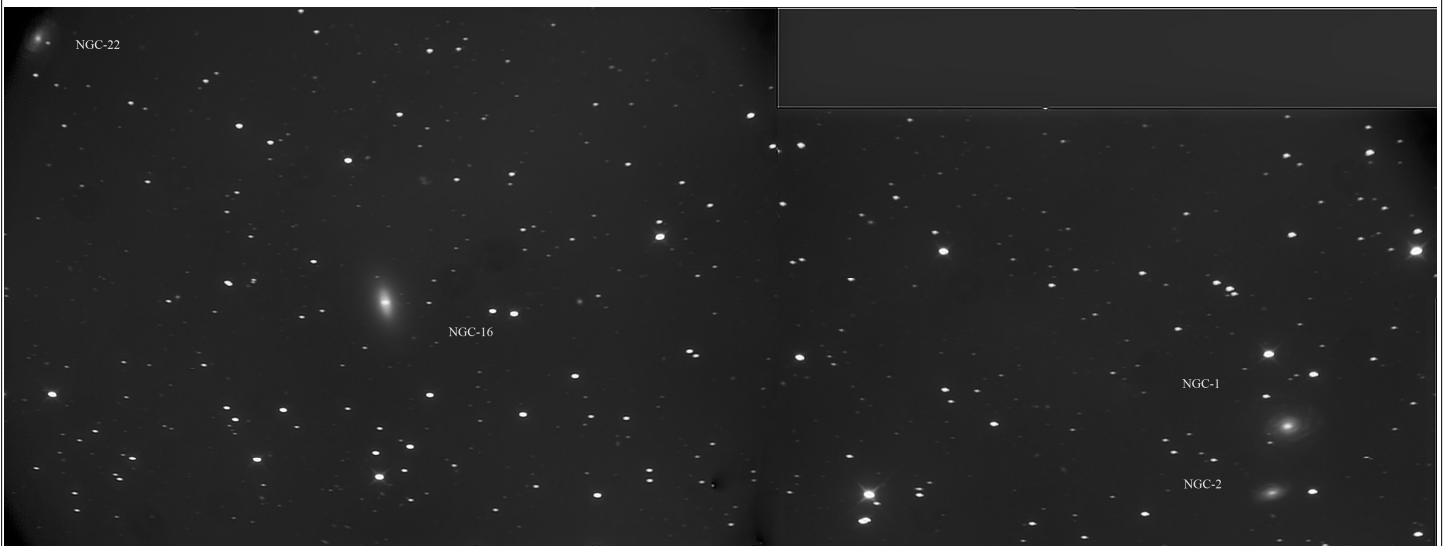


Chart created using the AAVSO's Variable Star Plotter. Numbers indicate stellar magnitudes, decimals omitted. The magnitude 2.1 star is Alpheratz. Stars plotted to magnitude 12.0. North is up in this 1.8 by 2.3 degree field.



Small NGC 16 galaxy is centered, but I wanted to get the general field which is too big for my 32 inch field of view, so I combined 2 sets of images into a mosaic, and labeled them. NGC is in the general center, but on the right side (west) is NGC 1, NGC 2, then moving east NGC 16 (the December object) and finally just clipped the edge of NGC 22 on the eastern edge. Taken with my 32 inch telescope in 2 sets, then combined. Was not the best night but being November 3, and had to be away the past few weeks, best I use what I got and send in. — Mario

## Principal Meteor Showers in 2021

**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

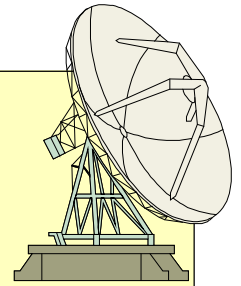
**December 14**  
Geminids

**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.***

## 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.

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.

**Our Club has Merchandise for Sale at: [www.cafepress.com/asnne](http://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](mailto: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](https://nightsky.jpl.nasa.org) to find local clubs, events, and more!

## **The James Webb Space Telescope: Ready for Launch!**

By David Prosper

NASA's James Webb Space Telescope is ready for lift-off! As of this writing (November 15), the much-anticipated next-generation space telescope is being carefully prepared for launch on December 18, 2021, and will begin its mission to investigate some of the deepest mysteries of our universe.

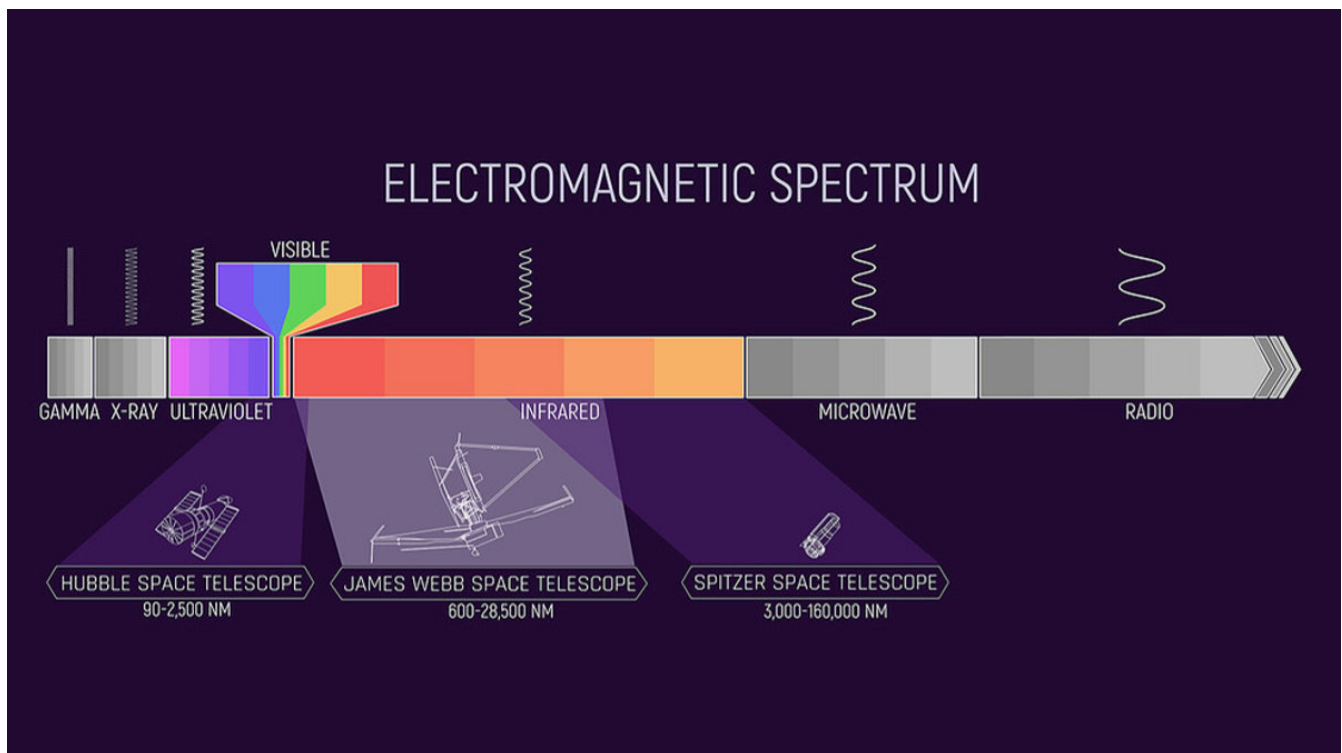
The development of the Webb began earlier than you might expect – the concept that would develop into Webb was proposed even before the launch of the Hubble in the late 1980s! Since then, its design underwent many refinements, and the telescope experienced a series of delays during construction and testing. While frustrating, the team needs to ensure that this extremely complex and advanced scientific instrument is successfully launched and deployed. The Webb team can't take any chances; unlike the Hubble, orbiting at an astronaut-serviceable 340 miles (347 km) above Earth, the Webb will orbit about one million miles away (or 1.6 million km), at Lagrange Point 2. Lagrange Points are special positions where the gravitational influence between two different bodies, like the Sun and Earth, "balance out," allowing objects like space telescopes to be placed into stable long-term orbits, requiring only minor adjustments - saving Webb a good deal of fuel.

Since this position is also several times further than the Moon, Webb's sunshield will safely cover the Moon, Earth, and Sun and block any potential interference from their own infrared radiation. Even the seemingly small amount of heat from the surfaces of the Earth and Moon would interfere with Webb's extraordinarily sensitive infrared observations of our universe if left unblocked. More detailed information about Webb's orbit can be found at [bit.ly/webborbitinfo](https://bit.ly/webborbitinfo), and a video showing its movement at [bit.ly/webborbitvideo](https://bit.ly/webborbitvideo).

Once in its final position, its sunshield and mirror fully deployed and instruments checked out, Webb will begin observing! Webb's 21-foot segmented mirror will be trained on targets as fine and varied as planets, moons, and distant objects in our outer Solar System, active centers of galaxies, and some of the most distant stars and galaxies in our universe: objects that may be some of the first luminous objects formed after the Big Bang! Webb will join with other observatories to study black holes - including the one lurking in the center of our galaxy, and will study solar systems around other stars, including planetary atmospheres, to investigate their potential for hosting life.

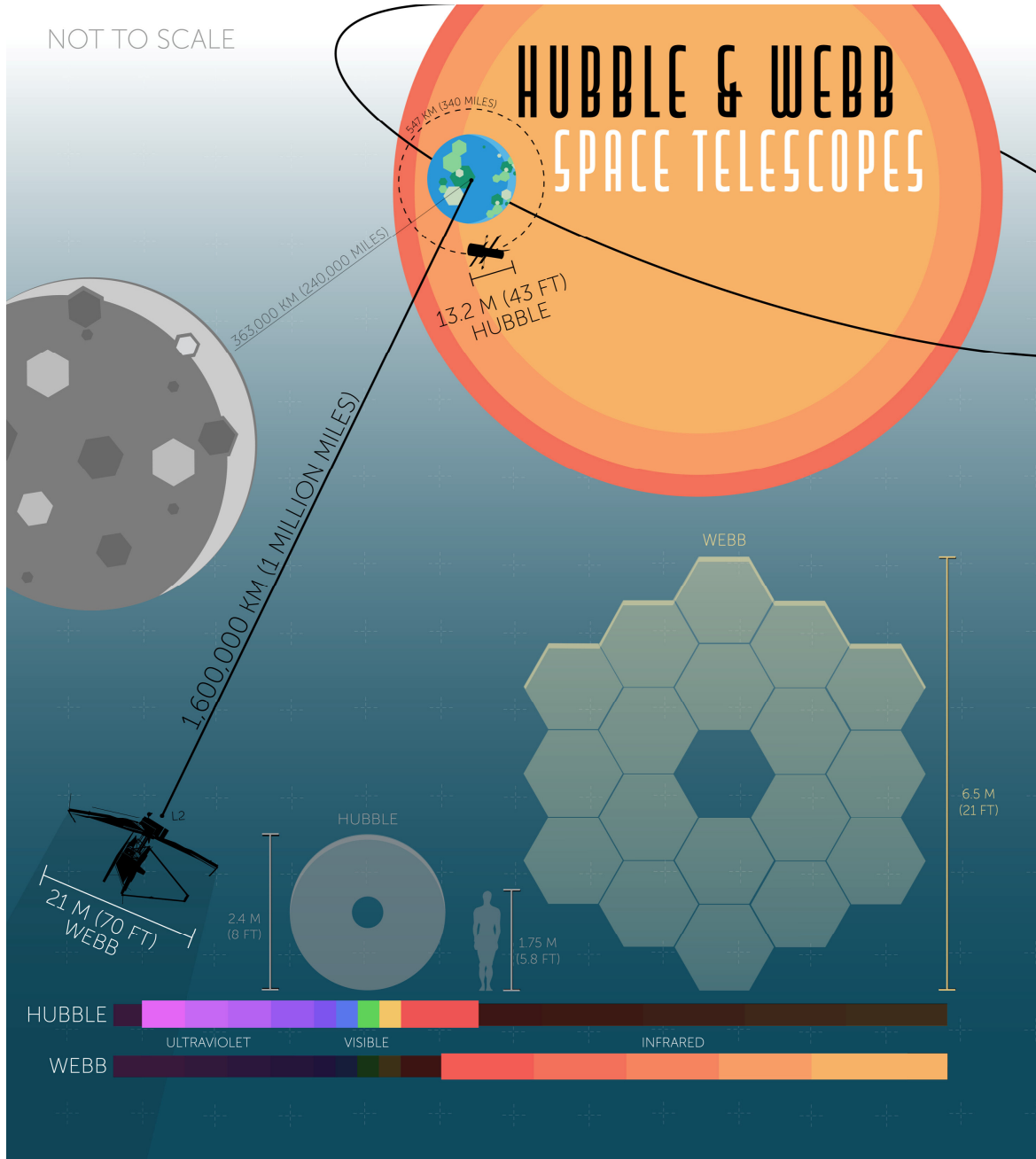
*“Continued on page 7”*

Wondering how Webb's infrared observations can reveal what visible light cannot? The "Universe in a Different Light" Night Sky Network activity can help - find it at [bit.ly/different-light-nsn](http://bit.ly/different-light-nsn). Find the latest news from NASA and Webb team as it begins its mission by following #UnfoldTheUniverse on social media, and on the web at [nasa.gov/webb](http://nasa.gov/webb).



*Webb will observe a wide band of the infrared spectrum, including parts observed by the Hubble - which also observes in a bit of ultraviolet light as well as visible - and the recently retired Spitzer Space Telescope. Webb will even observe parts of the infrared spectrum not seen by either of these missions! Credits: NASA and J. Olmstead (STScI)*

*“Continued on page 8”*



*Webb will follow up on many of Hubble's observations and continue its mission to study the most distant galaxies and stars it can - and as you can see in this comparison, its mirror and orbit are both huge in comparison, in order to continue these studies in an even deeper fashion! Credits: NASA, J. Olmsted (STScI)*



## Point and Shoot Camera Astroimaging (no telescope)

**Canon Powershot SX50 HS**

*Image & write-up submitted by Paul Kursewicz*

**NGC 7510 (Arrowhead Cluster)      Specs: JPEG, FL 2400mm, f/4, ISO 1600, 34 x 1 min 30 sec, 10-6-21**



NGC 7510 is an open cluster of stars located around 11,400 light years away in the constellation Cepheus. This tiny triangular shaped object is a bit bigger in size of the Blue Snowball, but unlike the Blue Snowball this object is easy to find. It has two proper names: “The Arrowhead Cluster” and “The Dormouse.” Since it is situated close to the northern celestial pole it is visible for most of the year from the northern hemisphere. NGC 7510 has a apparent magnitude of 7.9, so it is visible in binoculars. In a telescope use high power to enjoy this little gem, which contains about two dozen stars ranging in brightness from magnitude 10 to 13. The cluster is considered to be relatively young, about 10 million years old and is about 20 ly in diameter. When viewing this cluster, you are looking past the Orion Arm of the Milky Way and into the Perseus Arm.

*“Continued on page 10”*

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

Below is a Lick Observatory photo of NGC 7510 that was taken with the 120-inch reflector. With a close-up like this one, it’s not too hard to see the “Dormouse.” Starting with the lowest brightest star, its long curved tail protrudes out to the left of this star. The bright stars above and slightly to the right of the tail is its body, while the top most bright star is its nose. If you magnify my picture the “Dormouse” will become apparent.



STAR CLUSTER NGC 7510 in CEPHEUS. This irregular group lies near the Cepheus-Cassiopeia border. Lick Observatory photograph with the 120-inch reflector.

[Astronomical Society of Northern New England \(ASNNE\) Meeting Minutes of  
5 November 2021](#)

**Business Meeting**

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

**Others Present:** Ron Burk  
Bern Valliere

President *Pro Tem* Ian Durham called the Business Meeting to order at 7:13 pm.

**Secretary's Report:** Minutes from our October Meeting had been distributed electronically. No corrections, additions, or comments, were received. The Minutes were not formally approved. [Oversight (I assume).]

**Treasurer's Report:** The Treasurer reported that he had paid the expected bill for cleaning out the port-a-potty.

**Old Business:** Keith & Kathy had indicated by e-mail, that due to COVID, they were not comfortable, at this time, in continuing to attend Meetings. The Board recognized these concerns, and Keith will not be on the Slate as a Director for 2022. In recognition of all of Keith's services to ASNNE, he and Kathy will be carried as Members for 2022, at no charge.

**New Business:** The question was posed as to whether we should have our usual Christmas Party, which always takes the form of a Pot-Luck Supper, in conjunction with our December Meeting, which is our Annual Membership Meeting.

The Board unanimously agreed that it would not be wise, in light of COVID, to take the risk that a Pot-Luck supper would involve, and that Supper would not be held in December.

Carl indicated that, however, he would bring Dunkin Donuts doughnuts and cider. With only one source, and commercially prepared, he considers that to be a minimal risk.

*“Continued on page 12 ”*

**Board of Directors Election:** As required by our By-Laws, a slate of Directors for 2022 needs to be proposed by this 'old' Board of Directors, and presented to the General Membership at the Meeting, for action at the December Annual Membership Meeting. A slate of five, vice seven, was proposed. The Slate as proposed is: Gary Asperschlager, Larry Burkett, Ian Durham, Carl Gurtman, and Bernie Reim. Keith Brown will not be a Director.

To make a total of seven, two addition people will need to volunteer to be Directors.

At a subsequent Business Meeting, the Board will elect the 2022 Officers from their own ranks. As always, all Business Meetings are open to any interested ASNNE Member.

**Meeting Notifications:** Attendance at our Meetings has been sparse. Carl will draw up a newspaper/media notification list, and attempt to have the newspapers publish scheduled ASNNE Meetings & Events as upcoming community events.

**"Astronomy 101":** As a matter of record, there have been no "Astronomy 101" presentations in quite a while, and unless some positive action is taken, this will remain a dead letter.

### **Regular Meeting**

President *Pro Tem* Ian Durham called the Regular Meeting to order at 7:30 pm. There were 12 people present. The turnout has not yet recovered its pre-COVID numbers.

Carl gave a summary of what had gone on at the Business Meeting, emphasizing the upcoming Board Election at December's Annual Membership Meeting. Bern Valliere volunteered to be a Director. Thanks, Bern. The cancellation of the Christmas Pot-Luck Party was discussed. No one had a dissenting opinion.

Ian pointed out that dues for 2022 were now due. Dues should be submitted to Ian.

It was noted that David has procured a Speaker for January. This will not be an in-person event. David has revised & updated our ASNNE Brochure. It's very well done. Thank-you, David!

Ian was asked to put our Regular meetings on Zoom, or the equivalent.

Sara showed a photograph of Larry and Renée's wedding. Congratulations from all of us!!

*“Continued on page 13 ”*

**"What's Up?":** Bernie preceded his "What's Up?", by telling us he had shown the movie, *Journey to Palomar*, to his class. This is a PBS documentary about George Ellery Hale and the building of the **Palomar** Telescope. Bernie was asked if he could show us the movie.

Bernie then gave his usual thorough, comprehensive, and complete discussion of what's in store for us in the skies of November. November, as you can tell from its name, was the ninth month in the old Roman calendar.

On the 19th, there will be a near-total lunar eclipse, followed by a total solar eclipse in December; unfortunately, the solar eclipse is visible only in Antarctica.

Jupiter, Saturn, and Venus are visible in the evening sky, Mercury is too near the Sun to be visible. Mars, returning from opposition, will be in the morning sky.

The annual Leonid Meteor shower will peak on the 17th, but the moon will be just two days before full, and will wash out many of the meteors.

The Winter stars are now becoming more prominent.

Bernie then covered "What Happened on this Day. . ."

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

**Presentation:** There was no formal presentation by a guest speaker.

### **AstroShorts:**

Several Members presented Astroshorts.

After our Meeting, several of the Members went out to Talmage Observatory at Starfield, and had a wonderful time observing with Ron Burk at the helm.

The next ASNNE Meeting, the Annual Membership Meeting, will be at **7:30** pm, Friday, 3 December, 2021, at the New School in Kennebunk, Maine. The Regular Meeting will be preceded by a Business Meeting. Because there's no Pot-Luck Supper, the Meeting time is unchanged.

Respectfully submitted,

Carl Gurtman

# STARFEST 2021

*Submitted By David Bianchi*

What a long time it had been. With the pandemic cancelling last years Starfest, this year's addition promised to be a long awaited and fun event.



An excellent turnout by club members was anticipated and achieved with added participation during the weekend. As our email coordinator, I was able to invite a few "friends" to our weekend event, as the pent up need of the general public for outdoor events (or any other events) was and is at an all-time high.



So there were roughly 30 extra people who showed up, eager to get a view of Venus, Jupiter, Saturn and even the Moon.



The Main Event of the weekend was the Dedication of our observatory. In memory and honor of our fallen member, Peter Talmage, who was so instrumental in everything involved with getting the observatory in place. From procuring the land, to designing the floor plan, directing the construction and even getting ahold of our first scopes and some equipment from Bowdoin College. If not for him we would not be celebrating our 20<sup>th</sup> anniversary (dedicated on July 21, 2001) this year.



Our acting president Ian Durham had the honor of unveiling the special plaque that was created to officially rename the observatory Talmage Observatory at Starfield. We were unable to have Chris Talmage come for the dedication, but we will have her down sometime in the future to see the plaque.



So, as we move forward showing the skies to as many as possible, we will continue to honor Peter with our continued vigilance of showing the night sky.

Keep looking up!

David Bianchi

 <b>Club Meeting &amp; Star Party Dates</b> 		
Date	Subject	Location
<u>Dec 3</u>	<p><b><u>ASNNE Club Meeting:</u></b></p> <p>Business Meeting starts prior to Club meeting.</p> <p><b>7:30-9:30PM: Club Meeting</b> Guest Speaker / Discussion Topic - open.</p> <p>Due to COVID concerns there will be no Christmas/Pot Luck party. Instead, Carl suggested that he would bring donuts and cider to the meeting. He considers this to be of minimal risk.</p> <p><b>Bernie Reim - What's UP</b></p> <p><b>Astro Shorts:</b> (news, stories, jokes, reports, questions, photos, observations etc.)</p> <p>Last Month Last month we had our club meeting at the New School. There was no guest speaker. Bernie did his "What's Up." Members contributed to Astro-shorts. Following the meeting several club members went to Talmage Observatory and did some viewing. Ron Burk was our tour guide.</p>	The New School, Kennebunk, Me.
<u>Dec 3</u>	<b>Club/Public Star Party:</b> If the weather is clear.	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](http://nightsky.jpl.nasa.gov/club-view.cfm?Club_ID=137)

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

##### **From North:**

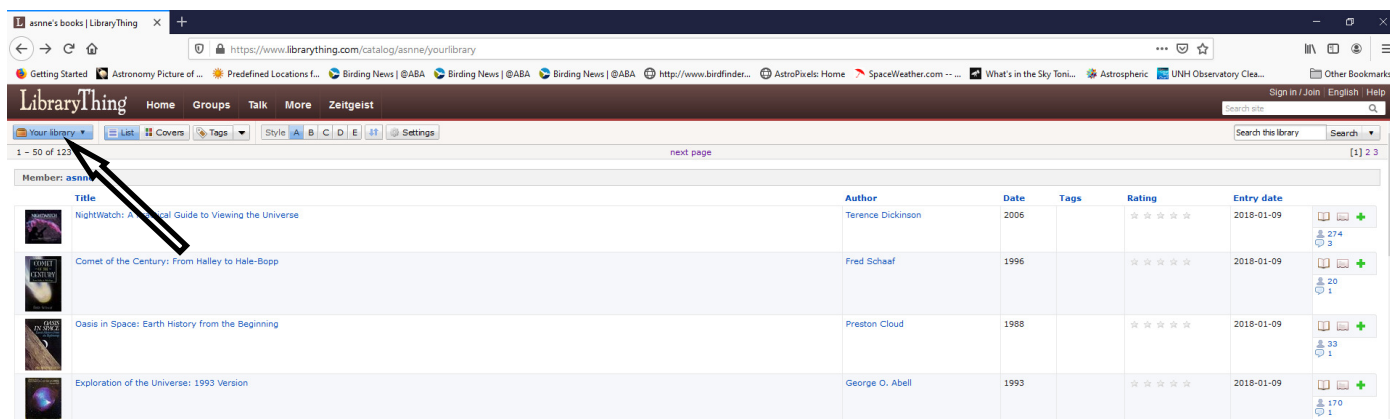
Get off turnpike at exit 32, (Biddeford) turn right on Rt 111. Go 5 miles and turn left on Rt 35. Go 2 miles on Rt 35 over Kennebunk River to very sharp 90 degree left turn. The entrance to the Starfield Observatory site is at the telephone pole at the beginning of the large field on the left. Look for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

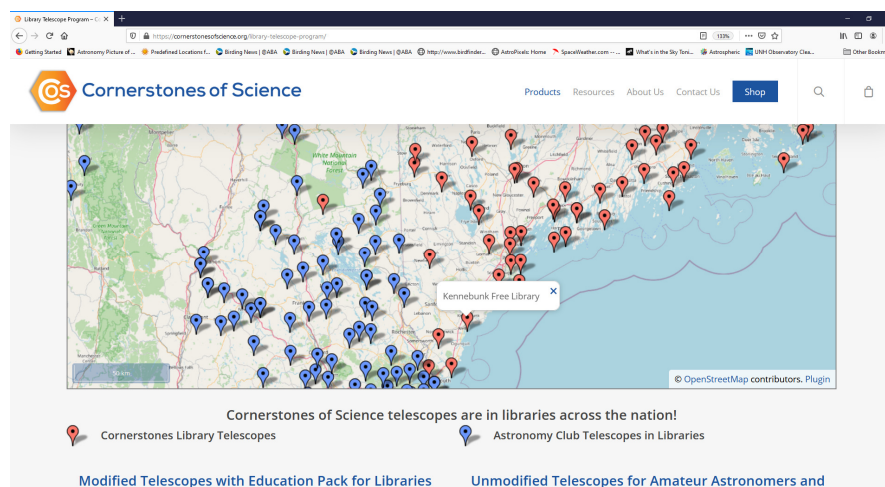


The screenshot shows the LibraryThing website interface. The user is logged in as 'asmne'. The page displays a list of books in the user's library. The first book is 'NightWatch: A Practical Guide to Viewing the Universe' by Terence Dickinson, published in 2006. Other books include 'Comet of the Century: From Halley to Hale-Bopp' by Fred Schaaf (1996), 'Oasis in Space: Earth History from the Beginning' by Preston Cloud (1988), and 'Exploration of the Universe: 1993 Version' by George O. Abell (1993). The 'Your library' link in the top navigation bar is highlighted with a black arrow.

Title	Author	Date	Tags	Rating	Entry date
NightWatch: A Practical Guide to Viewing the Universe	Terence Dickinson	2006		☆☆☆☆☆	2018-01-09
Comet of the Century: From Halley to Hale-Bopp	Fred Schaaf	1996		☆☆☆☆☆	2018-01-09
Oasis in Space: Earth History from the Beginning	Preston Cloud	1988		☆☆☆☆☆	2018-01-09
Exploration of the Universe: 1993 Version	George O. Abell	1993		☆☆☆☆☆	2018-01-09

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 screenshot shows the Cornerstones of Science website. The main feature is a map of the United States with numerous red and blue pins indicating library locations. A legend below the map identifies the pins: red pins for 'Cornerstones Library Telescopes' and blue pins for 'Astronomy Club Telescopes in Libraries'. A callout box for 'Kennebunk Free Library' is visible on the map. The website header includes the logo and navigation links: Products, Resources, About Us, Contact Us, and Shop.

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 \_\_\_\_\_

