



the Skyscraper

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May 2022

AMATEUR ASTRONOMICAL SOCIETY OF RHODE ISLAND * 47 PEEPTOAD ROAD * NORTH SCITUATE, RHODE ISLAND 02857 * WWW.THESKYSCRAPERS.ORG

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Astronomy Day Celebrations

Saturday, May 7

Join us on Saturday, May 7, 2022, as we celebrate National Astronomy Day co-hosted by Skyscrapers, Inc. (Amateur Astronomical Society of RI), and the RI Museum of Natural History.

Activities kick-off at the **RI Museum of Natural History & Planetarium**, Roger Williams Park and will run from 12:30-3:30pm with planetarium shows at 1pm and 2pm (reservations required), public solar observing, and astronomy exhibits at the museum. White light, hydrogen alpha, and projection telescopes will be set up in front of the museum for viewing the magnificent details of the sun. Skyscrapers members and museum staff will be presenting exhibit tables that will include: Beginner Astronomy, Exoplanets and Variable Stars, the James Webb Space Telescope, Solar Observing, and the Effects of Light Pollution.

Ladd Observatory will conduct public solar observing on the grounds of the observatory at Brown University from 1:00pm-3:00pm. White light, hydrogen alpha, and projection telescopes will be available for solar observing.

Seagrave Memorial Observatory in North Scituate will host a membership meeting at 7:00pm (public invited) with a talk by long time member Rick Lynch. Always an entertaining speaker, Rick's talk will be about a recent trip to Italy where he visited the Vatican Observatory and several sites made famous by Galileo.

The observatory telescopes (8" Alvan Clark refractor and 12" and 16" Meade Schmidt-Cassegrains) will be open to the public for Astronomy Day, weather-permitting, of course. Bring along your telescope and share the night sky with our visitors. The Moon will be approaching First Quarter.

Come join us at any of these venues or better yet, attend all three!

Meeting presentation will also be conducted over Zoom. Contact [Linda Bergemann \(LBergemann@aol.com\)](mailto:LBergemann@aol.com) for Zoom Meeting link and information.

**Seagrave Memorial
Observatory
Open Night**
Saturday, May 21

Solar Star Party
Saturday, June 18

AstroAssembly
Saturday, October 1



Skyscrapers, Inc. and the
Museum of Natural History & Planetarium present

Astronomy Day

Saturday, May 7



Seagrave Memorial Observatory

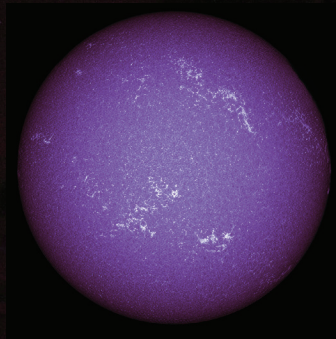
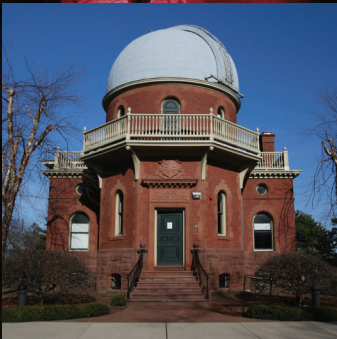
7:00pm - 9:30pm

- Astronomy lecture
- Night sky viewing

Museum of Natural History & Planetarium

12:30pm - 3:30pm

- Planetarium shows
- Solar viewing
- Astronomy activities



Ladd Observatory

1:00pm - 3:00pm

- Solar viewing



**Museum of Natural
History & Planetarium**
Roger Williams Park
Providence, RI

Ladd Observatory
210 Doyle Ave
Providence, RI

**Seagrave Memorial
Observatory**
47 Peepoad Rd
North Scituate, RI

Galileo Galilei

by Rick Lynch

In 2015 I traveled to Italy to visit the birthplace of Galileo in Pisa and then to Florence to visit his residence there, as well as the modern day museum dedicated to him. Also I will give a short tour of the Vatican Observatory in Rome.

I have been interested in astronomy since I was 8 years old. It started with a Sunday night TV series in 1959, "The Wide World of Disney". They broadcast a program, "Life on Other Planets" which I was enthralled with. In 1961 my mother took me to the Hayden Planetarium in New York City and this was the real start of my passionate interest. During this visit she purchased a copy for me of "Astronomy for Everyone" by Simon Newcomb as well as a copy of the periodical "The Review of Popular Astronomy" (Sep-/Oct. 1961, and a subscription for \$3.00 annually). This proved to be the very real start of my hobby.

Through my early teenage years I had a variety of very small poor telescopes of which I could see little but the moon and a few planets. My first "research" grade telescope was 3" Gilbert reflector which served me well for a few years. In 1968 I discovered Skyscrapers Inc. and became a junior member the following year. Other young members from this period were; Dave Dixon, Bill Guca, Ed Turco, Dave Armitage, Neil Paulhus, Alan Hall. We all shared a passion for astronomy and the likes of senior members Dora and Harvey Harkins, Bill Penhallow, Mary Gildea, and many other members encouraged our enthusiasm. It was customary back then for our parents to drop us off at the observatory on a Friday evening and return to get us on Sunday mornings. We had been given permission to use the meeting hall and we camped out here on most clear weekends. During this time a new organization was started, the Rhode Island Meteor Research Organization (RIMRO) organized by Ed Turco and others. We all became members and very active observers, and wonderful times were had observing behind the observatory in the old "observing coffins" described in the Skyscrapers 75th anniversary book. Eventually RIMRO became a new organization called the Meteor Data Processing Center in conjunction with several members from the Greater New Bedford Astronomical Society. Dave Armitage was now the driving force and all our observations were now

key-punched on cards and entered on to the new IBM 360-90 computer at Rhode Island College where Dave was an administrator.

Meteor observing gave way to more telescopic work and I had many different telescopes over the years, 12.5" f/5 Turco reflector, 8" Cave Cassegrain, 6" & 8" Newtonians and a host of different size small refractors. As I got older and soon got married I was now employed and was able to afford attending many amateur astronomical conventions throughout the country with some of the newer members of Skyscrapers, such as Steve Hubbard, Dan Lorraine, Steve and Kathy Siok, Dave Huestis and others. We made many contacts with other amateurs and professionals as well as many of the staff of Sky and Telescope. This proved to be a great help in securing many well know astronomers over the years for Skyscraper meetings and continues to this day with the efforts of Steve Hubbard and others.

During my travels a notable visit took place while on my way to Kitt Peak National Observatory for a visit. I stopped at the ancient Indian ruins of Casa Grande and took the tour. This ancient structure built by the prehistoric Hohokom Indians and I found was astronomically aligned on many levels for the measurement of time, planting, and harvesting. This exposed me to the new field of archaeoastronomy. I was now hooked on astronomy and archaeology. From the early 1980s through to the present time I visited hundreds of sites thought out the country and Canada and worked as a volunteer archaeologist at many digs. In recent years I have pursued this interest in far off lands like; Malta, Israel, Greece, Italy, Scotland, Ireland, and England. I have organized astronomy/archaeology expeditions with

the help of other Skyscraper members to the American Southwest. During this time I also purchased land in New Mexico and had a townhouse in Albuquerque which served as a base of operations for some of these trips. A couple of notable events was observing the Leonids meteor shower from the VLA with many Skyscraper members in 1998 and then the following year having many Skyscrapers and members of the Brown University Physics department in 1999 observe from my camp at 6000' in the high desert where we were rewarded with a spectacular show that peaked at over 1000 meteor per hour.

Since retirement I now observe virtually every clear evening. At my home I have two observatories, (see picture) a NexDome housing my 11" Celestron and my Home-dome which houses a 5" Celestron and 5" F/5 refractor. I do very little astronomical imaging, as the time spent gaining nice images similar to what everyone has imaged does not appeal to me. Instead I use my time on a variety of personal observing programs I have developed. I observe and measure double stars by the hundreds, have a program of observing and documenting star clusters, less well know from catalogues such as; Basel, Ruprecht, Roslund, Collinder, Stock, Czernic, Berkley, and of course NGC. Comets and meteors also continue as a focus of my observing.

I once read that an observation made but not recorded is of little value. I am proud to say that I record everything I observe and have all my notes back to 1968. I continue to add to them. Skyscrapers Inc. has been instrumental in forwarding my passion for astronomy. I encourage all members to take advantage of the resources and wisdom Skyscrapers can offer.



President's Message

by Linda Bergemann

Thank you, I think, to everyone that supported my election. I will try my best! I hope I am able to live up to any expectations you may have. First up, is to extend my gratitude to those who served us over the past year – THANK YOU! Next, is to thank all those who ran for election and will comprise the Executive Committee for the next year. I am looking forward to working with this diverse team to enhance the experiences offered by Skyscrapers to our members and the visiting public. Please be patient with us as we transition duties and responsibilities to the new team.

Realistically, we are just beginning to emerge from the pandemic and return to a somewhat normal state. It's a chance for

us to look back and look ahead. My personal goal is to make the most use of our own Seagrave Memorial Observatory as possible, making the facilities and equipment more accessible to our members and the public. I would like to work our way up to being open every Saturday night, rain or shine. Since the weather continues to thwart our efforts, we are working on educational videos, presentations, etc. that can be used in the meeting hall on cloudy nights. I will be working with the Trustees to make the equipment we own available for more members to use. This will entail training members so they can use the telescopes for their own enjoyment. It may require purchasing some new equipment and accessories, like cameras, for members to use. And, I hope that we will be able to take some telescopes out of storage and make them convenient for members to borrow.

As many know, I have a passion for outreach. For me, it's more than just showing an object to a visitor through an eyepiece. But, teaching them about the object they are viewing and where it lives in the universe. How they, too, can get involved in this intriguing hobby. And, maybe, just maybe, interest them in pursuing further education and perhaps a

New Members
Welcome to Skyscrapers

Donna Corvese of
Portsmouth, RI

Viren & Amita Rodman
Mehta of New York City

Jim VanBemmelen of
North Providence

career related to astronomy.

As I am writing, I am thinking that I am too ambitious. And, maybe I am. But, we will never get beyond where we are today if we don't dream a little. Think about it. How do we educate our members? What do you want or need from Skyscrapers to enhance your knowledge of astronomy? How do we educate the general public? Many who know little or nothing at all about our solar system, much less the universe. Think about it. Think about yourself. Think about people you know. And, then send me a note, call on the phone, speak out at a meeting. I want to hear your ideas on everything, so we can establish some goals, short-term and long, and craft a plan to guide us to what we aspire to achieve.

Our future is bright. Let's work together to make it as bright as it can be.

Stay well!



The *Skyscraper* is published monthly by Skyscrapers, Inc. Meetings are held monthly, usually on the first or second Friday or Saturday of the month. Seagrave Memorial Observatory is open every Saturday night, weather permitting.

Directions

Directions to Seagrave Memorial Observatory are located on the back page of this newsletter.

Submissions

Submissions to The Skyscraper are always welcome. Please submit items for the newsletter no later than **May 15** to Jim Hendrickson, 1 Sunflower Circle, North Providence, RI 02911 or e-mail to jim@distantgalaxy.com.

E-mail subscriptions

To receive The Skyscraper by e-mail, send e-mail with your name and address to jim@distantgalaxy.com. Note that you will no longer receive the newsletter by postal mail.

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Jim Hendrickson

Astronomical League Correspondent (ALCor)

Jeff Padell

Skyscrapers Celebrate 90th Anniversary

by Dave Huestis

In May 1932, Professor Charles H. Smiley of Brown University invited a number of people who shared an interest in astronomy to Ladd Observatory to discuss the organization of a group called the Rhode Island Amateur Astronomers. The first meeting of this new association met at Ladd on May 5 and laid the groundwork for the organization. After some discussion, the name "The Skyscrapers," was suggested by Rev. Crawford, also adding Amateur Astronomical Society of Rhode Island to it. And according to those present, "It was considered one of the most appropriate names ever to have been chosen by any astronomical club in the country." The minutes of that first meeting state that the name was chosen by vote. Unfortunately, I have not been able to uncover any records of other suggestions. I wish I knew what some of the other considerations were.

Rev. Crawford was elected Skyscrapers' first President. "...for he had all the fine qualities of leadership, had built his own telescope and observatory, and was an enthusiastic astronomer.

During the first few years, Skyscrapers continued to hold monthly meetings on the campus of Brown University or at the University's Ladd Observatory. Whether it was a lecture by one of the region's top astronomers, or great views of the universe through Ladd's 12-inch Brashear refractor, Skyscrapers members and guests were always treated to fine programs. Here's a list of just a few of the distinguished guests during those first five years: Leon Campbell, Leah Allen, Prof. John Duncan, Dr. Clyde Fisher, John Pierce (ATM's of Springfield, VT), Cecilia Payne, Dr. Fred Whipple, Harlow Shapley and R. Newton Mayall.

Several Skyscrapers members supported Smiley's many solar eclipse expeditions, either by joining him on an expedition or making monetary contributions.

A momentous shift in the organization's direction occurred in 1936. Noted local as-



tronomer Frank Evans Seagrave had passed away on August 15, 1934. The estate, including Frank's observatory with an eight-inch Alvan Clark refractor, was bequeathed to his cousin. Two years later the property was offered for sale. Skyscrapers offer of \$1000 was accepted after an assessment of the facility was performed. In order to proceed with the purchase, the society had to incor-

porate. On November 17, 1936, Skyscrapers received their incorporation charter, which allowed the organization to purchase the estate of Frank Seagrave (a little more than one-half acre, observatory building, eight-inch 1878 Alvan Clark refractor telescope, and other miscellaneous equipment) in North Scituate, Rhode Island, on Peep Toad Road.

BROWN UNIVERSITY
PROVIDENCE, RHODE ISLAND
May 2, 1932

Mr. Philip G. Newmarker,
107 Atlantic Avenue,
Lakewood, R. I.

My dear Mr. Newmarker;

We are planning to have a small group at Ladd Observatory on the evening of Thursday, May 5, 1932, to discuss the organization of Rhode Island Amateur Astronomers. If it is convenient, I shall be very glad to have you come to this preliminary meeting to help with the plans.

We expect to meet about eight o'clock and hope to complete the principal arrangements in two hours or less.

Some of the problems to be solved are: the best way to start the organization to be sure of getting people with a genuine interest in Astronomy; the age limit for active membership (if any); and the general character of the future meetings.

Yours very sincerely,

Charles H. Smiley
Charles H. Smiley

And the rest they say, is history.

If you want more details about the history of Skyscrapers and of Frank E. Seagrave, please review our 25-year anniversary and 75-year anniversary books on the Skyscrapers web site. You'll be amazed at the rich history presented by both works.

Happy 90th anniversary Skyscrapers.

Top: The photo was likely taken by Frederick "Jack" Hoffman as part of the evaluation committee's investigation into the purchase of the property. Date of visit is believed to be between October 14 and 27, 1936.
Left:

Skyscrapers Turns Ninety

by Dave Huestis

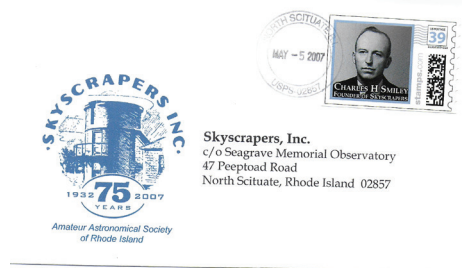
This month marks 90 years since the first meeting of Skyscrapers, Amateur Astronomical Society of Rhode Island on May 5, 1932. Throughout the years, our Society has celebrated many milestones with a variety of commemorative items.

In 1957, we published [A Quarter Century of Skyscraping: 1932-1957](#). Another book, [75 Years of Skyscrapers: 1932-2007](#) was published in 2007 for our 75th anniversary; it was reprinted in 2008 and again this year. A postal cache was also created to commemorate our 75th year.

Other items have been created to observe milestones. In 1989, the Spartan Stamp Club of North Scituate High School created a postal cache on the 75th anniversary of Seagrave Memorial Observatory. Skyscrapers celebrated the 100th anniversary of the observatory in 2014 with a coffee mug and a photo postcard. The 150th anniversary (sesquicentennial) of the birth of Frank Evans Seagrave was observed in 2010 with a postal cache.

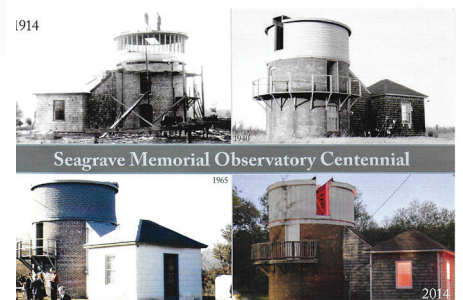
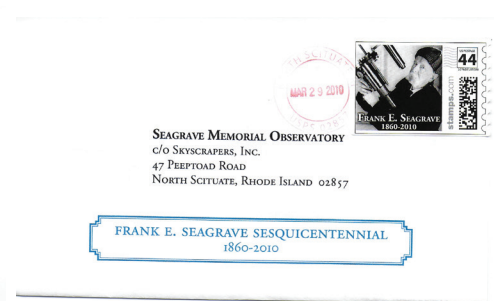
As we pass another milestone, we look back on our rich history. We have uncov-

ered a limited quantity of some of these items and are offering them for sale. For a \$10 donation, you will get the 2007 cache commemorating Skyscrapers' 75th anniversary and the 2010 cache commemorating the 150th anniversary of Frank Seagrave's



birth. Also included for your donation, a 1989 Spartan Stamp Club cache, and a mug and postcard (while they last) marking 100 years for Seagrave Memorial Observatory.

See Dave Huestis at the May meeting to acquire your own piece of history.



Canoeing by Starlight

by Francine Jackson

A recent article in *Conde Nast Traveler* (April, 2022) reminded me of how much we've lost. Having lost much of the beauty of the night sky due to increasing light, just finding some of the dimmer constellations can be a hassle; however, thousands of years ago, seafarers, especially those in the realm of the Pacific Ocean, depended on the positions of stars to guide them. Of course, these sailors also depended on birds that hovered near land formations, clouds, and their knowledge of ocean currents, but, when darkness came, it was the people and the stars. Today, though, GPS and other computer detectors determine the way around the islands. But, fortunately, there are people willing to continue the old way to navigate, including our military, who realize that sometimes even the best computer programs break down.

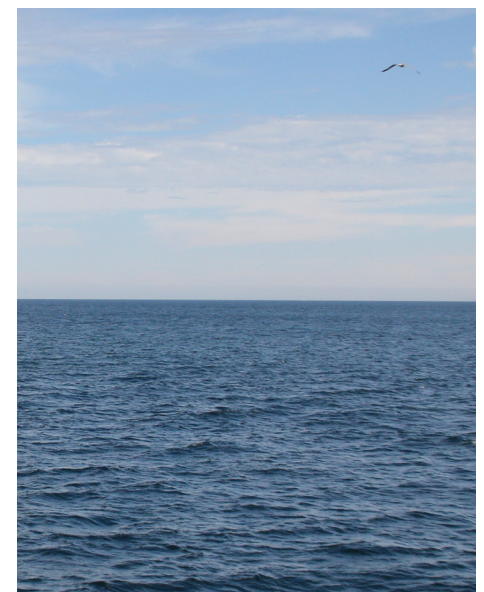
In Tahiti, the Traditional Sailing Canoe School shows how canoes can travel distances along the Tahitian islands without modern equipment. To the student in the

boat, instructor Teiva Veronique seems to be paddling aimlessly; yet, he is taking his cues from nature.

To show this could be accomplished in today's world, in 1976, Hawaii's Polynesian Voyaging Society, in order to prove it could actually happen, sent out a sailing boat toward Tahiti. Thirty-four days later, it arrived safely.

Yes, some of you might recall an earlier attempt to travel farther. In 1947, Thor Heyerdahl set sail on the *Kon-Tiki*, bound for Polynesia from South America; however, as a backup, it was equipped with such as a radio, watches, charts, sextants, and other modern equipment, as Heyerdahl was more concerned with the ability of his boat, made up mainly of balsa wood, to make the 4,000-plus mile trip. But, to be able to travel with no equipment of any kind, other than knowledge of the world around you, is something else. Imagine being able to venture thousands of miles across the Pacific Ocean, carrying nothing but your senses,

and, at night, having a sky that allows you to know your "guide stars" by just looking up. The Traditional Sailing Canoe School is proving that it can happen. If only we had a sky that beautiful to use.



Astronomy Nights at WaterFire Arts Center

by Jim Hendrickson

Thursday, April 8

Skyscrapers, Inc. was invited to participate in an event at WaterFire Arts Center on Thursday, April 7, to coincide with the exhibit “Planet Earth The Environment and Our Future,” the centerpiece of which is a 23-foot inflatable, illuminated Earth globe suspended from the ceiling. The Thursday was clouded out so the event was held on Friday, April 8.

Although sunset was at 7:18pm, we arrived a bit early to check out the exhibits, and then proceeded to go upstairs and set up.

The second floor roof deck is oriented to the southeast of the building, but provides good views of the sky all around. It is above the fully shielded parking lot lights, but other nearby lights and the ambient light pollution of Providence make dark sky observing conditions not possible.

Skyscrapers in attendance were Fred Sammartino, who brought a pair of large binoculars, Francine Jackson with a 4-inch refractor and Jim Hendrickson with a 3-inch refractor, Mark Munkacsy with his home-built 6-inch Dobsonian reflector, and Curtis Lotter who brought a 4-inch tabletop Dobsonian telescope.

The Frisby family (Solitaire, Lorenzo & Blaze) from the newly-formed Woonsocket Library Astronomy Club, mentored by Mark Munkacsy, set up an 8-inch Dobsonian telescope.

Finally, Ian Dell’Antonio brought out his 4-inch refractor.

As the Sun set, several clusters of lingering cumulus clouds slowly evaporated away, making for some dramatic sky vistas, and also enhanced the Belt of Venus to the east.

Limited to bright objects, we were fortunate to have a first quarter Moon shining almost directly overhead, which is also helpful to start a program that begins during twilight.

Although no bright planets were visible, we kept hoping to glimpse Mercury towards the northwest, but to no avail.

As the sky darkened, Fred pointed out several bright satellites and pieces of space debris passing over, even though there were no available sightings of the International Space Station.

Later in the evening, we were able to point to some of the brighter objects visible: the Orion Nebula and Mizar and Alcor in the Big Dipper.

In total, about 50 guests attended the night sky viewing, and as we were closing, I turned my telescope towards the slowly rotating illuminated Earth globe through the windows of the Arts Center. Through medium magnification the slowly rotating limb of the globe gave the appearance of looking out the window of the space station, and was a big hit with those who stayed late.

Friday, April 15

On Friday, April 15, we participated in the second night sky event at WaterFire Arts Center in an unusual occurrence of

two consecutive clear weather sessions. The event was also scheduled for Thursday, but was postponed to Friday due to clouds. It was attended by Francine Jackson, with a 4-inch refractor, Jim Hendrickson with a 3-inch refractor, and Curtis Lotter with a 4-inch tabletop Dobsonian telescope.

Sunset was at 7:26pm, but we were greeted to a beautiful waxing gibbous, nearly full, Moon.

Although light pollution is of little concern when there is a bright Moon available, the staff at the Arts Center were helpful in mitigating local lighting issues by turning off the parking lot lights south of the building, and redirecting an unshielded light on a garage to the southeast that was causing direct glare during the previous event.

Although the exhibit “Planet Earth The Environment and Our Future” at WaterFire Arts Center was well-publicized, with features in the Providence Journal and WPRI Channel 12 in the days prior, attendance was lighter than it was the previous week, with about 25 visitors to the telescopes. With a lighter crowd, many visitors spent a good amount of time observing with us, and may have even spent more time with the telescopes than viewing the exhibits downstairs.

Sometimes it’s easy to underestimate the value of a night sky viewing session when the only object available is a bright Moon, but it’s well worth planning some of them specifically with this in mind, as nothing can compare to the view of an easy-to-see Moon through a low power telescope, and giving guests the ability to take photos of it with their phones.

On this night, the craters Tycho and Grimaldi were quite prominent, and I mentioned during our next Lunar Observing Workshop how I don’t recall seeing Grimaldi so conspicuous before.

Towards the end of the viewing session, we gazed at the Orion Nebula, for what is perhaps our last view of it for the season.

We were also invited to participate in the TroopTop networking social held on the third Thursday at WaterFire Arts Center, but the first event on April 21 was clouded out. We’re still looking for volunteers to bring telescopes and share the night sky on the third Thursdays in May, June and July.



Skylights: May 2022

by Jim Hendrickson

May opens with Mercury's best evening apparition of 2022 already in progress, as the innermost planet sweeps past the Pleiades, saying farewell to the northern sky's most notable open star cluster for the season. Mercury just passed greatest elongation at the end of April, and is still 20° east of the Sun at the beginning of May. With the ecliptic intersecting the northwestern horizon at a steep angle after sunset during this time of year, Mercury remains in the evening sky for almost 2 hours after sunset. On the 2nd, the 4.2% illuminated waxing crescent Moon lies just 4° to Mercury's left, making for a fine binocular and photographic sight.

Mercury rapidly sinks back towards the Sun during the second week of May, as it is at inferior conjunction on the 21st, and returns to the morning sky, though remaining rather low, at the end of the month.

Once Mercury sets, our evening sky is devoid of planets, however, Saturn rises earlier each morning, which occurs at about 3am on the 1st and 1:00am on the 31st. Saturn is located in eastern Capricornus, and is at quadrature (90° west of the Sun) on the 15th, placing it high in the sky before dawn, and suitable for telescopic observation. If you haven't gazed at Saturn since last year, you'll notice the angle of its rings towards our view has narrowed considerably. The ring tilt is now just over 15°, and will generally be decreasing until March 2025, when they appear edge-on.

While observing Saturn in early May, you may notice an 8th magnitude object passing less than a degree to its south, especially on the nights of May 6-8. This is the large asteroid 4 Vesta. Vesta is about 2 AU away, and Saturn is just over 10.

The Sun rises earlier than 5:30am beginning on May 11th, and will remain that way through July 21st.

Sunsets begin to occur during the 8pm hour on May 17, and will remain through August 4. The Sun crosses the border from Aries into Taurus on May 14, and on the 25th, it will cross the line connecting Aldebaran and the Pleiades.

During the first week of May, follow the waxing crescent Moon for a tour of some of

the highlights of the departing winter sky. On the 4th, it is just 2.5° from the binocular-visible cluster M35 in Gemini. On the 6th it lies 2.5° south of Pollux in the same constellation, and on the 7th it lies 3° north of star cluster M44 in Cancer.

First quarter Moon occurs on the 8th, and if you're up for a bit of an observing challenge, the spiral galaxy NGC 2903 lies just 1.5° to its north. As the Moon waxes through its gibbous phases, it appears near Regulus, in Leo, on the 9th, and Spica, in Virgo, on the 13th. On the night following the eclipse, it passes just 2° north of Antares, in Scorpius.

The most notable sky event in May coincides with the Full Flower Moon on the night of the 15th-16th, when a total lunar eclipse occurs. After moonrise at 7:41pm, the Moon will be well above the horizon during all phases of the eclipse, which takes place in Libra. First contact of the penum-



bra occurs at 9:23pm, then the first contact of the umbral phase starts at 10:27pm. Totality begins at 11:29pm and lasts for 86 minutes, with mid-eclipse occurring at 12:11am. Totality ends at 12:53am and the entire eclipse is over at 2:50am.

Last quarter occurs on the 22nd, when it shines 4.9° southeast of Saturn. On the 25th, the waning crescent Moon is 4.7° east of Jupiter, and then passes 2.8° east of Venus on the 27th.

The Moon is new on the 30th, beginning Lunation number 1230.

Events in May

- 2 Moon 5.8° SE of Mercury
- 5 Uranus Conjunction
- 7 Saturn 0.7° N of Vesta
- 8 **First Quarter**
- 10 Mercury Stationary
- 15 Saturn Western Quadrature
- 15 **Full Moon / Total Lunar Eclipse**
- 18 Mars 0.5° SE of Uranus
- 21 Mercury Inferior Conjunction
- 22 **Last Quarter**
- 22 Moon 4.9° SE of Saturn
- 25 Moon 4.7° E of Jupiter
- 29 Jupiter 0.6° N of Mars
- 30 **New Moon**

Ephemeris times are in EDT (UTC-4) for Seagrave Observatory (41.845N, 71.590W)

Mars passes 0.5° south of Neptune on the 18th. The conjunction will look best in a large telescope, in which a color contrast between reddish Mars and bluish Neptune will be more apparent. Mars and Neptune are 1.532 AU and 30.373 AU from Earth, respectively, and the Red Planet shines 673 times brighter than our outermost planet.

A conjunction of Jupiter and Mars occurs on the 29th, when Mars is just 0.6° south of Jupiter. While appearing close together in our sky, Jupiter is 3.5 times farther from us than Mars.

Uranus is in conjunction on the 5th, and will not be observable until next month.

As an indication of how much the seasonal sky shifts during the month of May, look nearly overhead to the pointer stars of the Big Dipper just after evening twilight. At the beginning of May they are situated directly over Polaris, in the 12 o'clock position. Now view them again at the end of twilight at the end of the month, and note the change in their angle relative to Polaris.

Arcturus transits the meridian on May 8th, indicating that we are now looking at the mid-spring sky. While this is still a good time to view the Realm of the Galaxies, we're now seeing the Milky Way and the Summer Triangle (consisting of Vega, Deneb, and Altair) rising out of the east in the late evening hours.

The Sun, Moon & Planets in May

This table contains the ephemeris of the objects in the Solar System for each Saturday night in May 2022. Times in Eastern Standard Time (UTC-5) through March 12 & Eastern Daylight Time (UTC-4) from March 13. Ephemeris times are for Seagrave Observatory (41.845N, 71.590W).

Object	Date	RA	Dec	Const	Mag	Size	Elong	Phase(%)	Dist(S)	Dist(E)	Rise	Transit	Set
Sun	7	2 55.9	16 45.0	Ari	-26.8	1902.3	-	-	-	1.009	05:34	12:42	19:51
	14	3 23.2	18 34.2	Ari	-26.8	1899.3	-	-	-	1.01	05:27	12:42	19:59
	21	3 51.0	20 08.1	Tau	-26.8	1896.6	-	-	-	1.012	05:20	12:42	20:05
	28	4 19.3	21 25.2	Tau	-26.8	1894.1	-	-	-	1.013	05:15	12:43	20:12
Moon	7	7 45.9	25 33.5	Gem	-11.3	1799.9	68° E	31	-	-	10:26	18:19	02:03
	14	13 33.8	-7 33.8	Vir	-12.7	1950.7	150° E	94	-	-	18:23	23:48	05:02
	21	20 43.7	-23 52.8	Cap	-12.3	1921.6	113° W	70	-	-	01:14	05:56	10:45
	28	2 26.4	12 38.6	Ari	-9.5	1793.3	28° W	6	-	-	04:11	11:20	18:39
Mercury	7	4 07.6	23 15.6	Tau	1.5	9.7	18° E	18	0.409	0.696	06:19	13:52	21:25
	14	4 08.8	21 57.1	Tau	2.9	11.3	11° E	5	0.440	0.597	05:58	13:24	20:49
	21	3 57.1	19 24.4	Tau	4.2	12.2	2° E	0	0.460	0.552	05:30	12:44	19:50
	28	3 43.5	16 49.4	Tau	3.2	11.9	10° W	3	0.467	0.564	05:00	12:04	19:07
Venus	7	0 20.6	0 31.5	Psc	-4.0	16.2	42° W	70	0.728	1.043	04:02	10:07	16:14
	14	0 50.6	3 28.9	Psc	-3.9	15.5	40° W	72	0.728	1.094	03:54	10:10	16:27
	21	1 20.9	6 26.5	Psc	-3.9	14.8	39° W	74	0.728	1.144	03:46	10:13	16:40
	28	1 51.8	9 20.8	Psc	-3.9	14.2	37° W	77	0.728	1.193	03:38	10:16	16:54
Mars	7	23 12.9	-6 46.7	Aqr	0.8	5.9	60° W	89	1.396	1.595	03:20	08:59	14:38
	14	23 32.4	-4 45.9	Aqr	0.8	6.0	61° W	89	1.392	1.556	03:05	08:51	14:37
	21	23 51.8	-2 43.9	Psc	0.7	6.2	63° W	88	1.388	1.517	02:49	08:43	14:36
	28	0 11.0	-0 41.6	Psc	0.7	6.3	64° W	88	1.386	1.479	02:34	08:34	14:35
1 Ceres	7	5 46.8	26 26.5	Tau	8.9	0.4	41° E	98	2.627	3.308	07:43	15:32	23:21
	14	5 59.4	26 38.6	Tau	8.9	0.4	37° E	99	2.623	3.361	07:27	15:17	23:07
	21	6 12.2	26 46.7	Gem	8.8	0.4	33° E	99	2.619	3.409	07:11	15:02	22:53
	28	6 25.3	26 50.9	Gem	8.8	0.4	29° E	99	2.615	3.452	06:56	14:47	22:38
Jupiter	7	23 58.8	-1 18.5	Psc	-2.0	35.1	47° W	99	4.970	5.600	03:46	09:44	15:41
	14	0 03.9	-0 47.0	Psc	-2.0	35.7	53° W	99	4.969	5.517	03:22	09:21	15:21
	21	0 08.7	-0 17.4	Psc	-2.0	36.2	58° W	99	4.968	5.429	02:57	08:58	15:00
	28	0 13.2	0 10.2	Psc	-2.1	36.9	64° W	99	4.967	5.334	02:32	08:35	14:38
Saturn	7	21 48.9	-14 18.5	Cap	0.8	16.6	82° W	100	9.893	9.985	02:24	07:34	12:43
	14	21 50.0	-14 13.9	Cap	0.8	16.8	88° W	100	9.891	9.868	01:57	07:07	12:17
	21	21 50.9	-14 10.9	Cap	0.8	17.0	95° W	100	9.889	9.752	01:31	06:41	11:51
	28	21 51.4	-14 09.5	Cap	0.8	17.2	101° W	100	9.888	9.636	01:03	06:14	11:24
Uranus	7	2 50.2	15 57.6	Ari	5.9	3.4	2° W	100	19.705	20.713	05:33	12:34	19:36
	14	2 51.8	16 04.7	Ari	5.9	3.4	8° W	100	19.704	20.704	05:06	12:08	19:10
	21	2 53.3	16 11.7	Ari	5.9	3.4	14° W	100	19.703	20.682	04:40	11:42	18:45
	28	2 54.9	16 18.4	Ari	5.9	3.4	21° W	100	19.702	20.647	04:13	11:16	18:19
Neptune	7	23 42.4	-3 08.6	Psc	7.9	2.2	52° W	100	29.918	30.532	03:36	09:27	15:18
	14	23 43.1	-3 04.7	Psc	7.9	2.2	58° W	100	29.918	30.436	03:09	09:00	14:51
	21	23 43.7	-3 01.4	Psc	7.9	2.3	65° W	100	29.917	30.333	02:42	08:33	14:24
	28	23 44.1	-2 58.6	Psc	7.9	2.3	72° W	100	29.917	30.223	02:15	08:06	13:57
Pluto	7	20 04.6	-22 22.9	Sgr	14.4	0.2	108° W	100	34.518	34.196	01:13	05:50	10:26
	14	20 04.4	-22 24.3	Sgr	14.4	0.2	115° W	100	34.523	34.090	00:46	05:22	09:58
	21	20 04.2	-22 26.0	Sgr	14.4	0.2	121° W	100	34.528	33.989	00:18	04:54	09:30
	28	20 03.9	-22 27.9	Sgr	14.4	0.2	128° W	100	34.532	33.896	23:51	04:26	09:02

Night Lights: Aurora, Noctilucent Clouds, and the Zodiacal Light

By David Prosper

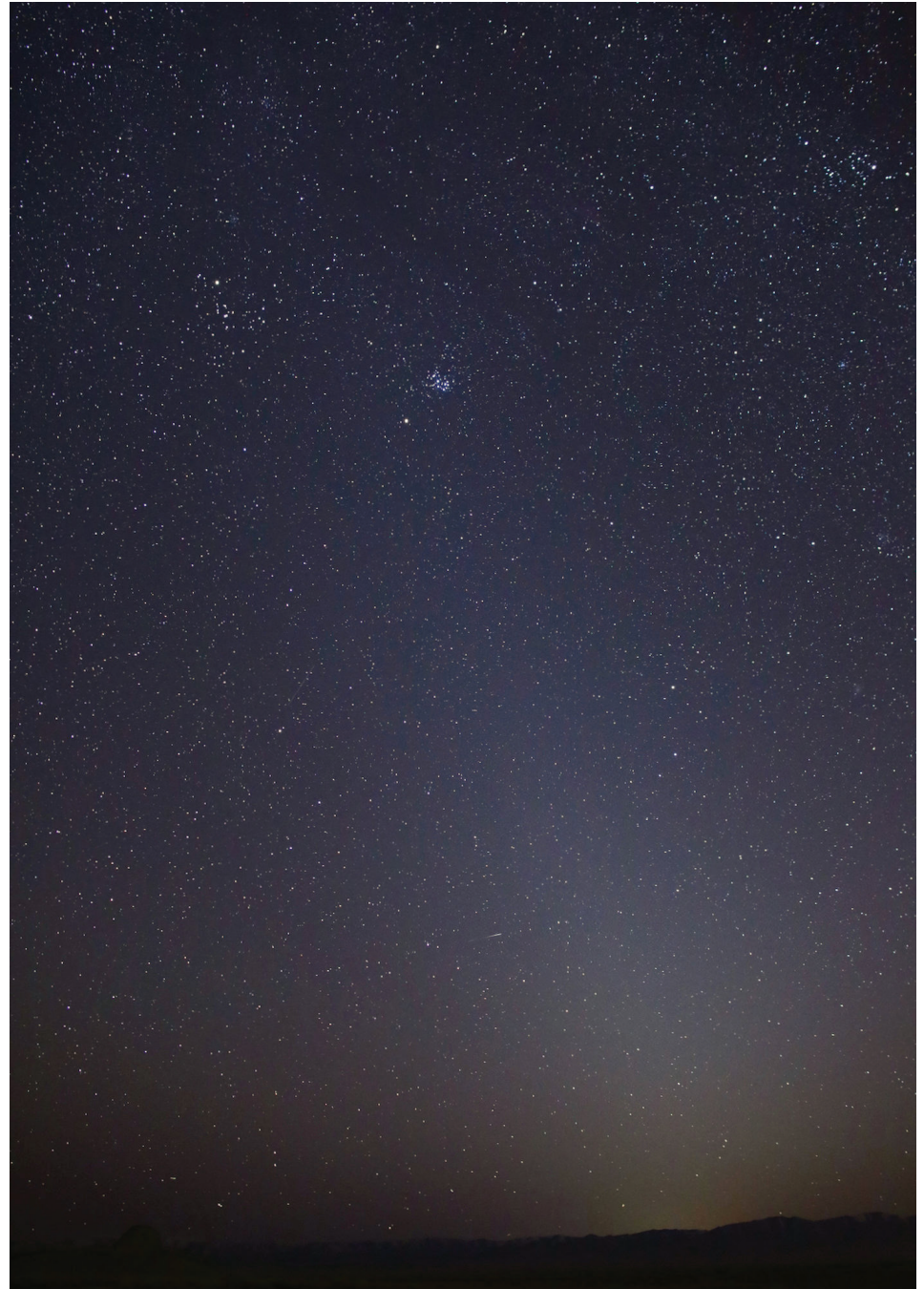
Have you spotted any “night lights”? These phenomena brighten dark skies with celestial light ranging from mild to dazzling: the subtle light pyramid of the zodiacal light, the eerie twilight glow of noctilucent clouds, and most famous of all, the wildly unpredictable and mesmerizing aurora.

Aurora, often referred to as the northern lights (aurora borealis) or southern lights (aurora australis), can indeed be a wonderful sight, but the beautiful photos and videos shared online are often misleading. For most observers not near polar latitudes, auroral displays are relatively rare and faint, and without much structure, more gray than colorful, and show up much better in photos. However, geomagnetic storms can create auroras that dance and shift rapidly across the skies with several distinct colors and appear to observers much further away from the poles - on very rare occasions even down to the mid-latitudes of North America! Geomagnetic storms are caused when a magnetic storm on our Sun creates a massive explosion that flings a mass of particles away from its surface, known as a Coronal Mass Ejection (CME). If Earth is in the path of this CME, its particles interact with our planet’s magnetic field and result in auroral displays high up in our ionosphere. As we enter our Sun’s active period of its 11-year solar cycle, CMEs become more common and increase the chance for dazzling displays! If you have seen any aurora, you can report your sighting to the Aurorasaurus citizen science program at aurorasaurus.org

Have you ever seen wispy clouds glowing an eclectic blue after sunset, possibly towards your west or northwest? That wasn’t your imagination; those luminescent clouds are noctilucent clouds (also called Polar Mesospheric Clouds (PMC)). They are thought to form when water vapor condenses around ‘seeds’ of dust from vaporized meteorites - along with other sources that include rocket launches and volcanic eruptions - around 50 miles high in the mesosphere. Their glow is caused by the Sun, whose light still shines at that altitude after sunset from the perspective

of ground-based observers. Noctilucent clouds are increasing both in frequency and in how far south they are observed, a development that may be related to climate change. Keeping in mind that observers closer in latitude to the poles have a better

chance of spotting them, your best opportunity to spot noctilucent clouds occurs from about half an hour to two hours after sunset during the summer months. NASA’s AIM mission studies these clouds from its orbit high above the North Pole: go.nasa.gov.



The zodiacal light extends into the Pleiades, as seen in the evening of March 1, 2021 above Skull Valley, Utah. The Pleiades star cluster (M45) is visible near the top.

Credit and source:: NASA/Bill Dunford. <https://www.flickr.com/photos/gsf/51030289967>



[gov/3uV3Yjl](https://www.nasa.gov/3uV3Yjl)

You may have seen the zodiacal light without even realizing it; there is a reason it's nicknamed the "false dawn"! Viewers under dark skies have their best chance of spotting this pyramid of ghostly light a couple of hours after sunset around the spring equinox, or a couple of hours before dawn around the autumnal equinox. Unlike our previous two examples of night lights, observers closer to the equator are best positioned to view the zodiacal light! Long known to be reflected sunlight from interplanetary dust orbiting in the plane of our solar system, these fine particles were thought to originate from comets and asteroids. However, scientists from NASA's Juno mission recently published a fascinat-

ing study indicating a possible alternative origin: dust from Mars! Read more about their serendipitous discovery at: [go.nasa.gov/3Onf3kN](https://www.nasa.gov/3Onf3kN)

Curious about the latest research into these night lights? Find news of NASA's latest discoveries at [nasa.gov](https://www.nasa.gov)



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.gov to find local clubs, events, and more!

A sampling of some of the various patterns created by aurora, as seen from Iceland in 2014. The top row photos were barely visible to the unaided eye and were exposed for 20-30 seconds; in contrast, the bottom row photos were exposed for just 4 seconds- and were clearly visible to the photographer, Wikimedia contributor Shnuffel2022.

License and source: CC BY-SA 4.0 https://commons.wikimedia.org/wiki/File:Aurora_shapes.jpg



Comet NEOWISE flies high above a batch of noctilucent clouds in this photo from Wikimedia contributor Brwynog.

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Spiral Galaxy in Canes Venatici: Messier 106

by Glenn Chaple for LVAS

(Magnitude 8.4; Size 18.6' x 7.2')

M106 was a late entry in the Messier Catalog, having been added by the American-Canadian astronomer Helen Sawyer Hogg in 1947, 130 years after Messier's death. It was originally discovered by Messier's contemporary Pierre Méchain in 1781, who quite likely would have added it to a future edition of Messier's Catalog.

The 2000.0 celestial coordinates for M106 are: RA 12h18m57.5s, Dec +47°18'14". I found it by star-hopping 5 degrees ESE from the second magnitude star Phecda (gamma [γ] Ursae Majoris) to 5th magnitude 5 Uma. A hop 3 degrees south and slightly west brought me to 5th magnitude 3 Uma. M106 was spotted just 2 degrees further south.

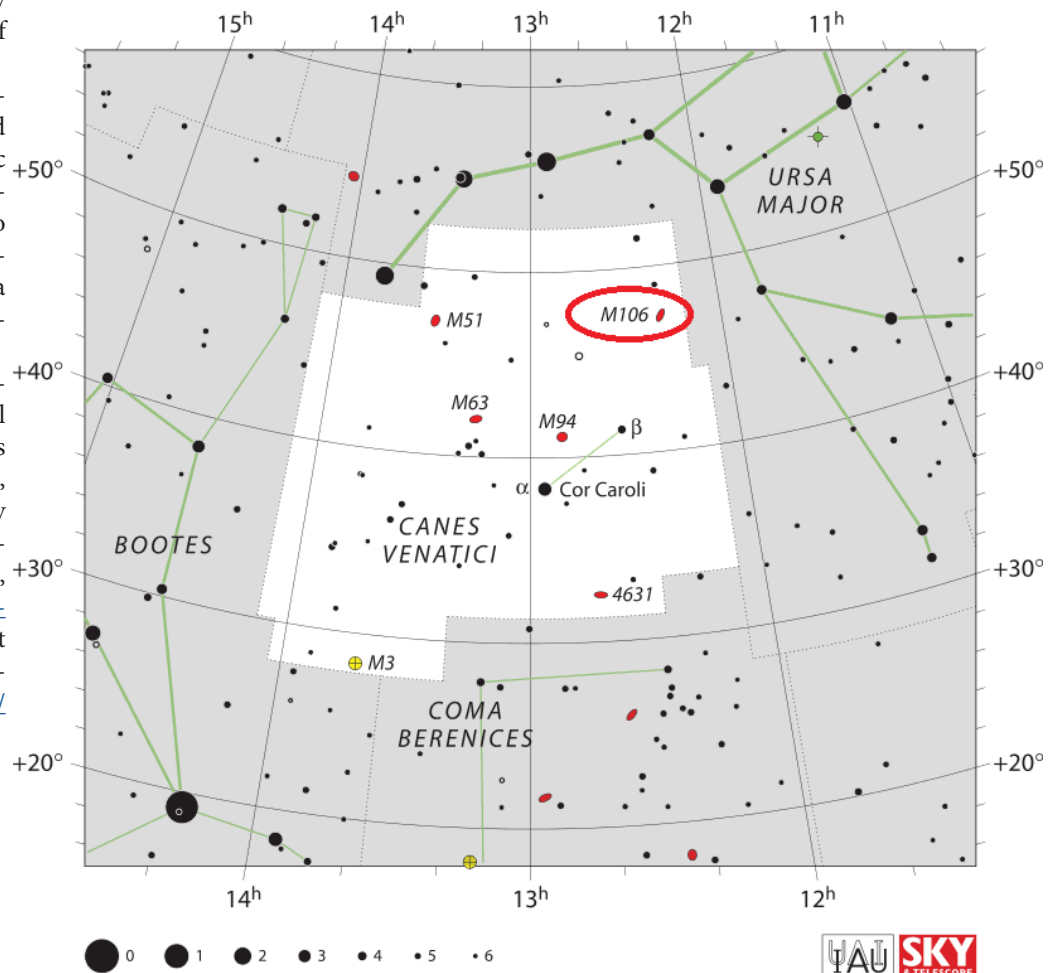
At magnitude 8.3, M106 was easily seen as an oval-shaped patch of light in my 3-inch f/10 reflector at 30X. A bright, irregularly-shaped nucleus was visible in my 10-inch f/5 reflector and a magnification of 141X.

M106 is classified as a SABbc type galaxy—a form intermediate between spiral and barred spiral galaxies. Due to its energetic nucleus, likely a result of activity generated by a massive central black hole, it is also classified as a Seyfert galaxy. It lies approximately 24 million light years away. With a diameter of 133,000 light years, M106 is similar in size to the Andromeda Galaxy.

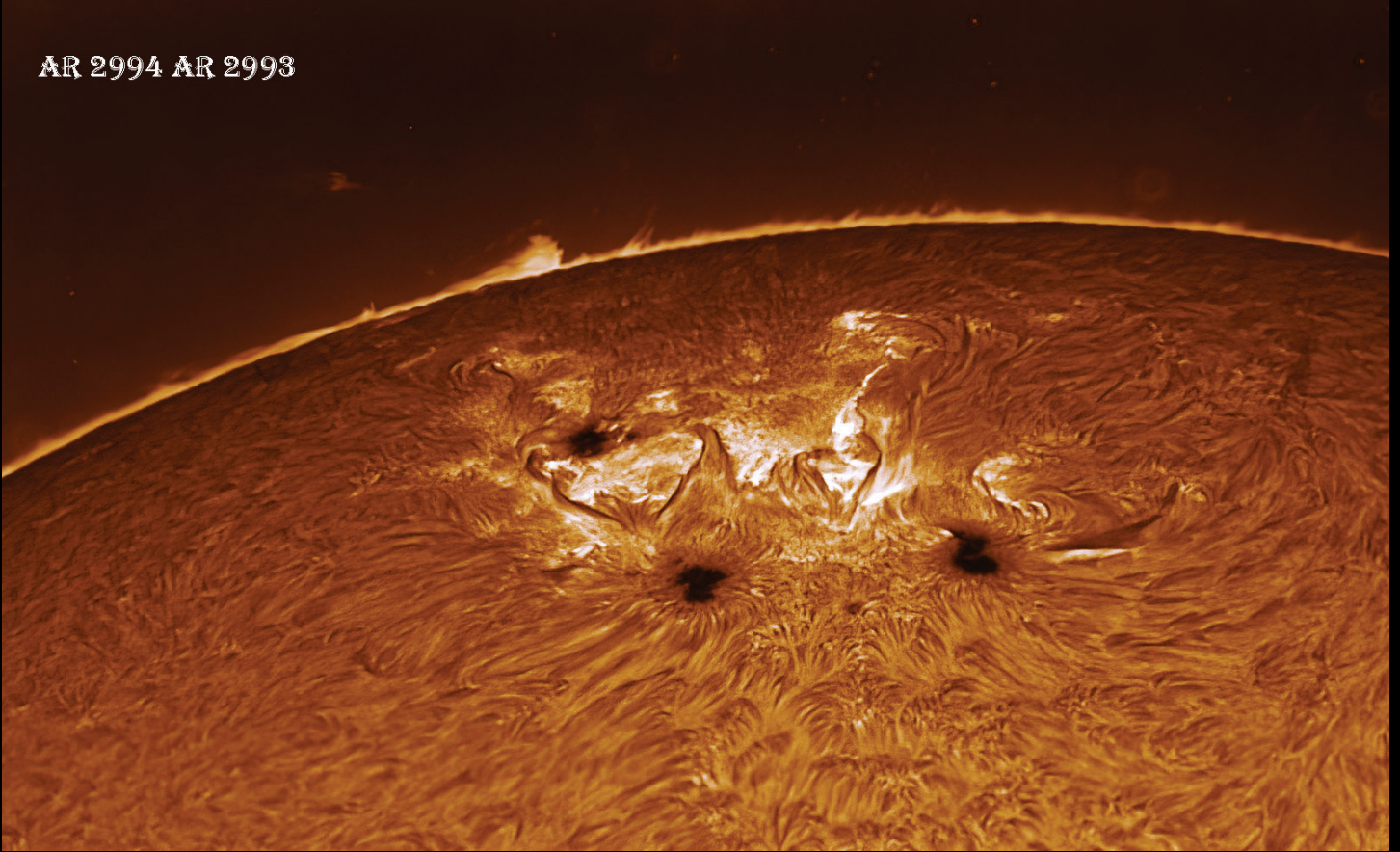
The purpose of the Observer's Challenge is to encourage the pursuit of visual observing. It is open to everyone who is interested. If you'd like to contribute notes, drawings, or photographs, we'll be happy to include them in our monthly summary. Submit your observing notes, sketches, and/or images to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



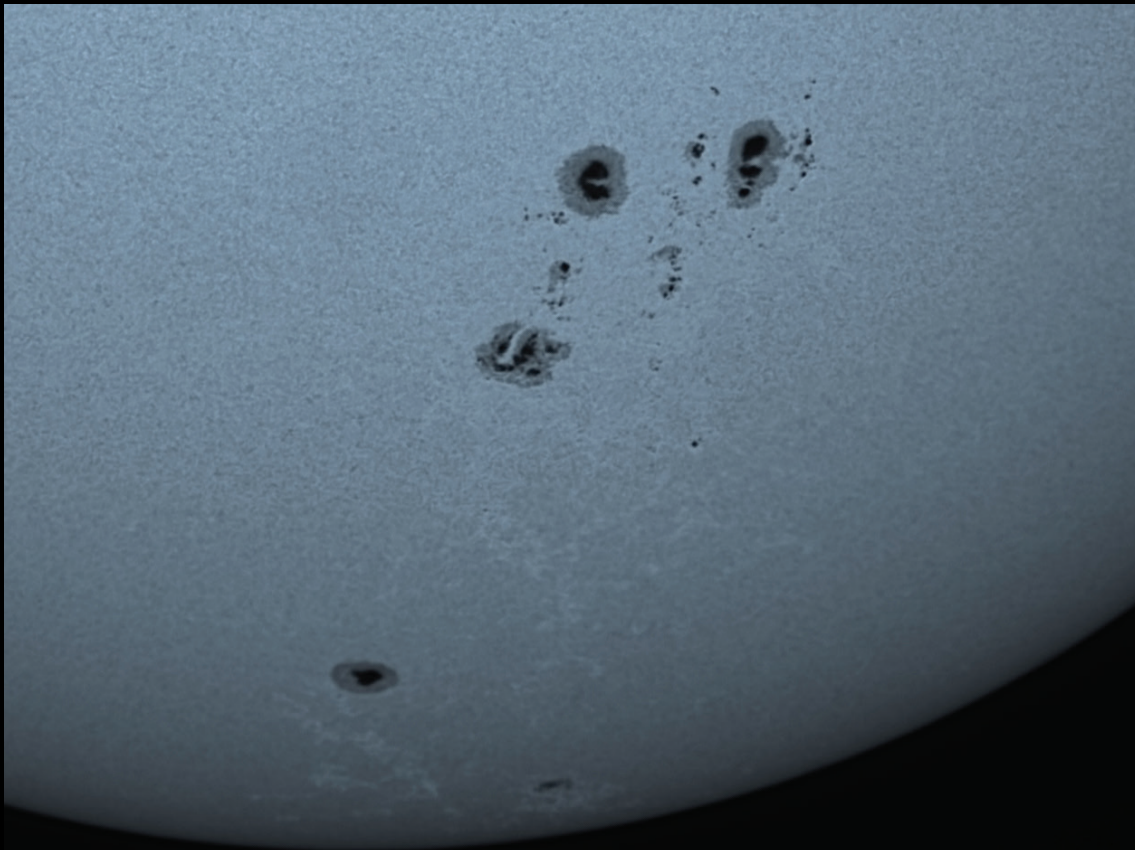
Image by Mario Motta, MD (ATMoB) 32 inch telescope, with ZWO ASI 6200 camera.



AR 2994 AR 2993



Active regions on the Sun: April 18 by Jeff Padell



Beautiful sunspots on April 20 by Steve Hubbard. Turbulent skies though, while light image with 6" F8 APM refractor using a ZWO 224MC camera. Processed with Autostakert and Astra Image.

April Reports

Skyscrapers Inc. Annual Meeting

April 9, 2022 @ 7PM Seagrave Observatory

A celebration with pizza and sweets was held before the meeting. There were about 40 people in attendance, plus 7 via Zoom.

Called to order at 7:10PM by President Steve Siok.

Steve asked all visitors and new members to introduce themselves: Katie & Barbara Silva, Stephen LaFlamme, The Frisbee Family from Woonsocket and Robin Woodbury from CT via Zoom.

1. Membership Report - Linda Bergemann: Total membership = 127. New Members = 22. Since April 2020, we gained 49 new members.

2. Treasurer's Report - Kathy Siok: Kathy shared income and expenses YTD and the proposed 2022-2023 budget. Dues have been coming in regularly. Donations are much higher than a typical year. There was some discussion. A motion was made by Rick Lynch to accept the proposed budget as presented. Steve Hubbard 2nd. Budget was passed unanimously.

3. Night Sky Network Awards: Linda Bergemann recognized three members for exceptional outreach to the community. Francine Jackson, Jim Hendrickson and Bob Janus were awarded certificates and pins from the Night Sky Network.

4. Reports and Activities:

- Trustee's Report - Bob Janus: Bob provided an update on improvements to the property during the past year and thanked members who helped. Included was a Memorial Garden that was dedicated in October, during AstroAssembly. There are thoughts for improving access to the buildings and repairing or replacing roof on the Clark dome. There are now 15 members on the observatory committee and more volunteers are welcome.

- Lunar Observing Group - Michael Corvase: Michael started the group in January 2022 for people who want a motivational way to observe the moon. A checklist for observations by the Astronomical League was provided to each of the 10 participants. Observers who view all of the features listed are eligible for an award from the Astronomical League (AL), if they are a member of AL. The group continues to meet biweekly on Zoom to discuss lunar observations and more.

- WaterFire Report - Francine Jackson: Skyscrapers was invited by management

Skyscrapers Budget		BUDGET		
Category	2021-22	Detail	To Date 3/31/2022	BUDGET Proposed 22-23
INCOME			Income	INCOME
AstroAssembly	\$ 3,000.00		\$ 1,827.00	\$ 2,000.00
Dues	\$ 3,300.00		\$ 4,755.00	\$ 3,500.00
AL Membership	\$ 150.00		\$ 247.00	\$ 157.00
Donations	\$ 1,000.00		\$ 6,948.00	\$ 2,000.00
<i>For Cap Improvements</i>				
<i>Amazon SMILE</i>				
<i>Misc Donations</i>				
MISC Income	\$ 100.00		\$ 3,978.00	\$ 1,000.00
Interest Income	\$ -		\$ 210.00	\$ 200.00
Star Party Donations	\$ 150.00		\$ -	
Transfer from Savings/CD	\$ 92.00		\$ -	
Shipping Costs	\$ -		\$ 421.00	\$ 400.00
TOTAL INCOME	\$ 7,792.00		\$ 18,386.00	\$ 9,257.00
EXPENSES			Expenses	EXPENSES
Astro Assem Exp	\$ 1,300.00		\$ 230.00	\$ 300.00
AL Membership Exp	\$ 160.00		\$ 168.00	\$ 177.00
Contingency	\$ 370.00		\$ -	
Corporation, State Fee	\$ 22.00		\$ 45.00	\$ 25.00
Domain Name	\$ -			
Donation	\$ 100.00		\$ -	\$ 100.00
Misc Exp	\$ -		\$ 110.00	\$ 200.00
PayPal Fees	\$ 80.00		\$ 297.00	\$ 300.00
Outreach	\$ 600.00		\$ -	\$ 600.00
Postage			\$ 6.04	\$ 55.00
Shipping	\$ 40.00		\$ 536.00	\$ 400.00
Property Insurance	\$ 1,800.00		\$ 1,985.00	\$ 2,500.00
Refreshment Expense	\$ 120.00		\$ -	\$ 500.00
Trustee Expense	\$ 1,500.00		\$ 1,757.00	\$ 1,500.00
<i>Tech/Cap</i>				
<i>Prop Maint</i>				
Utilities	\$ 1,700.00		\$ 2,244.00	\$ 2,600.00
<i>Electric</i>				
<i>Internet</i>				
<i>Port a John</i>				
<i>Propane</i>				
<i>pest</i>				
TOTAL EXPENSES	\$ 7,792.00		\$ 7,378.00	\$ 9,257.00
OVERALL TOTAL	\$ -		\$ 11,008.00	\$ -

of the WaterFire Arts Center to participate in their Earth Day exhibition by providing telescopes on the rooftop during events. April 7 and 14 were selected for viewing the moon under the bright skies of Providence.

The April 7 event was moved to the following night due to weather. Francine thanked the volunteers who attended the April 8 event. Future dates will be announced.

- Astronomy Day, May 7 - Michael Cor-

NIGHT SKY NETWORK 2021 Outreach Award



verse: Events scheduled include daytime activities at Ladd Observatory (Brown University) and at the Museum of Natural History and Planetarium (Roger Williams Park). The public will be invited to our monthly meeting at Seagrave that evening, followed by observing, weather permitting.

- May Monthly Meeting, May 7: Rick Lynch will be the speaker. His topic will be Galileo Galilei. Evening observing will follow, weather permitting.

- Orders are being accepted for the Skyscrapers 75th anniversary book. The cost is \$40. Steve Siok that May 5, 2022 is the 90th anniversary of Skyscrapers founding.

- Solar Day-Saturday June 18 at Seagrave: Steve Siok is leading this effort. The public will be invited and volunteers are needed.

There will be speakers and opportunities to observe the sun safely.

5. President's Announcements: Outgoing President Steve Siok reviewed the challenges and successes over the last 2 years. During COVID, we learned how to stream our meetings remotely using ZOOM and used it to provide speakers to our members from all over the world. Former members who had moved to other parts of the country rejoined and new people found us. Outreach provided opportunities to connect with the public while Seagrave was closed.

6. Election Results- Kathy Siok:

- President: Linda Bergemann
- 1st VP: Ed Walsh
- 2nd VP: Francine Jackson
- Secretary: Angella Johnson

- Treasurer: Laura Landen
 - Members at Large: Steve Brown, Michael Corvese
 - Trustee (2yr): Steve Hubbard
 - Trustee (3 yr): Richard Doherty
7. The gavel/hammer has passed on by Steve Siok on to the newly elected President Linda Bergemann. The new board was toasted with a new drink from Coke, called "Starlight Cola".

8. The Annual meeting was adjourned at 8 PM.

Following the meeting, speakers Michael Corvese and Steve Hubbard presented topics relating to the Moon.

Respectfully submitted,
Sue Hubbard, Secretary
April 16, 2022

Trustees News

by Bob Janus, Steve Hubbard & Richard Doherty

Have a burning desire to share your love of the night sky with others? Just itching to learn how to use our telescopes?

If you answer is yes, then the Skyscraper Observatory Committee has a place for you!

As a long time member of Skyscrapers, one of the most rewarding things I've experienced has been the excitement of someone seeing the Moon, a planet, star clusters and more for the very first time. We have

gained new members and made lots of friends thanks to our outreach.

If helping with this interests you, please reach out to any of the trustees, (me, Bob Janus, Richard Doherty) or any of the officers and let us know. It's easy and more rewarding than you can imagine!

On another note, the trustees are hard at work with spring maintenance and cleanup.

We are giving the rocks in the parking

and building areas a fresh coat of paint to help make them more visible, getting a roofer in to inspect the roof on the dome housing the Alvan Clark telescope, firing up the lawn mowers and more.

We are hoping to do some brush cutting and small tree removals (small trees grow into big sky blockers) and will be letting you all know when so that we can get some help.





Executive Committee Meeting Reports

Minutes- Skyscrapers Executive Committee Meeting via Zoom Thursday March 31, 2022 7 PM

Meeting called to Order at 7:01 PM by President Steve Siok

Present: Steve Siok, Kathy Siok, Steve Hubbard, Sue Hubbard, Linda Bergemann, Ian Dell'Antonio, Angella Johnson, Laura Landen, Francine Jackson, Jim Hendrickson, Bob Janus, Richard Doherty, Ed Walsh, Dan Fountain Total :14

Agenda Items:

- Budget and Finance- The Annual meeting will be held April 9 at Seagrave. Kathy reviewed her spread sheet which will be presented at the Annual meeting. Donations have been high this year. After some questions, Linda B. made a motion and Francine 2nd the motion to approve the proposed budget and bring it before the membership on April 9.

- Annual Meeting – April 9, 2022 at Seagrave starting with a pizza get together at 6pm. We will celebrate our in person return to Seagrave. Business meeting at 7 PM to include annual reports, ballot results, new budget and upcoming event updates. of the ballots. Monthly program will follow. speakers would follow the business meeting and the evening will end with observing (weather permitting).

- Astronomy Day –May 7, 2022 Mike Corvese is coordinator of this event. Day-time activities will take place at Ladd Observatory and the Roger Williams Park Museum. Evening activities include Skyscraper Monthly meeting with member Rick Lynch as a speaker. Volunteers are needed at Seagrave for that evening. This is a public event.

- Water Fire in Providence: Francine is coordinator of 2 nights of Lunar observing at Waterfire Center. Volunteers are needed to help with the activity and should contact Francine.

- Scituate Preservation Society: This group is interested in having Seagrave be a part of a scavenger hunt for local high school students during the school vacation week. A "QR" code will be posted on a pole just outside the property. Students will use this to find out more about the town's history. Dave Huestis provided the group with a document about Seagrave Observatory. This event is scheduled the week of April 18. Our contact is Bill Fredrickson. He is also interested in involving Skyscrapers in some local activities in the future.

- North Scituate Library: Bob Janus is the contact person the N. Scituate Library. They are interested in having star gazing events during the summer months.

- Future Star Parties: Linda Bergemann will update the Skyscraper calendar on NSN as parties are scheduled.

Next Executive Committee Meeting: Thursday April 21 at 7PM via Zoom

Adjourned: 7:46 PM by Steve Siok

Respectfully Submitted,
Sue Hubbard

Minutes- Skyscrapers Executive Committee Meeting via Zoom Thursday April 21, 2022 7PM

Meeting called to Order at 7:06 PM by President Linda Bergemann

Present: Linda Bergemann, Steve Siok,

Kathy Siok, Steve Hubbard, Bob Janus, Ed Walsh, Dave Huestis, Steve Brown, Mark Munkacsy, Angella Johnson | Total:10

Agenda Items:

List of Officers: List of officers will be available on the website as well as posted in the next newsletter. Minutes for all the meetings will be stored on the Night Sky Network. Agenda and minutes can be found there.

Treasurer's Report- Kathy Siok

Paypal software glitch to be worked out by Kathy. A copy of the budget was requested by Linda and will be archived with the minutes. Auditors will be solicited to audit Skyscrapers books. Books were audited 6 years ago.

Additionally, dues reminder will be sent out (requested by Linda). Financial inflows and outflows will be reinstated and pub-

ASTRONOMY CLUB

Beginning April 18th, 2022 all ages are invited to join us, in-person, the 1st and 3rd Monday of each month, from 7:30pm-8:30pm. *Rain or Shine.*

Participants 10 and younger must be accompanied by an adult.

Mark Munkacsy, club leader, is a Rhode Island astronomer who built his own robotic observatory and will explore the sky with us.

Bring your thoughts, queries, and theories for discussion!


When weather allows we will be stargazing on the grounds (dress in layers for warmth as it is still a bit chilly), as well as meeting indoors to discuss a new constellation each meeting.

Those who have binoculars or telescopes are encouraged to bring them, even on cloudy nights. There is a lot we can do as a group in learning about how to handle them, how to use them, & general safety rules.

Loaner binoculars may be available through the library.



Have your smart phone on hand, there are several apps useful in the study of astronomy.

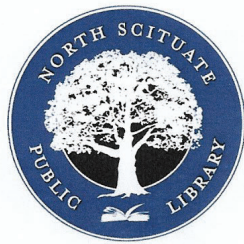
Scan the QR code to register:



In partnership with Seagrave Observatory, Skyscrapers Inc.

Woonsocket Harris Public Library 303 Clinton St. (401) 769-9044 X2





*606 West Greenville Road, North Scituate RI 02857 * 401-647-5133 * www.scituatelibrary.org *

March 30, 2022

Linda Bergemann
41 Ross Hill Road
Charlestown RI 02813

Dear Linda & Members of Skyscrapers:

On behalf of the North Scituate Public Library's Board of Trustees, staff and patrons, I thank you for your generous donation of our fabulous Orion StarBlast telescope and all its accessories. Having an easy-to-use telescope that we are able to loan to patrons has been on our wish list for quite a while and we are thrilled to have it be a reality now! It was wonderful to meet you and your group and we thank you for teaching us to use the telescope so we can pass that information along to our patrons.

The additional instructions, information and accessories that circulate with the telescope are incredibly organized and easy to understand, which is such a welcome addition to the package. We are also excited about partnering with Skyscrapers and Seagraves Observatory for some future programs, including those that will use our new telescope. We are also looking forward to coordinating with Bob Janus as our local guide and contact.

We truly appreciate your generosity and support of our shared community. Please convey our thanks to your members and with your partnering organizations who were so instrumental in making this happen.

Wishing you a wonderful 2022!

With gratitude,

Julie Lepore
Julie Lepore
Director

lished in the monthly newsletter. Change of banks/credit union was discussed and change of officers. Skyscrapers current bank is the Pawtucket Credit Union. Goal: Keep membership aware of what is going on. Once the expense vouchers are squared away, it will be sent out and the information will be shared with members.

Trustee's Report- Bob Janus

Steve Hubbard, Steve Siok and Bob Janus had plans to meet with a ramp representative who canceled due to a medical emergency. Meeting will be rescheduled. Trustees were encouraged to discuss the best option that fits the town grant and needs of Skyscrapers. Steve Siok expressed concern over matching grant vs. grant in kind. A submission is not a final proposal but a suggestion which will help the town decide what to do with excess funds. The town of Scituate is asking all non-profits to submit an informal proposal. Additionally, the town is also asking residents for suggestions on how to spend infrastruc-

ture money given by the government. Town surveys were circulated soliciting ideas. Bob Janus has been tasked with answering the survey and submitting an informal proposal for a handicap access ramp.

Suggestion by Steve Brown: ADA Porto Johns

Linda requests an itemized list of tentative work at the observatory (Seagrave) with cost for each line item.

Jim Crawford reinstalled the motor for the Patton at the observatory. It is now working properly. Reinstalled flexible connection for adjusting the declination. It will be online shortly for public nights (12" Newtonian).

Discussion on Open Nights: It was decided not to open April 23, 2022 due to the weather forecast. It was also suggested that a cloudy night program might be an option in lieu of observing. This was deferred to the program committee. Steve Hubbard recommended that the various committees (trustees, the observatory committee and the pro-

gram committee) hash out details of future plans for opening nights. Presidents' goal is to have a program every Saturday night.

May 7th Observatory Committee: Steve Siok sent out requests with little or no response/feedback. Moving forward, it is important to know who wants to be a part of the Observatory Committee (active) and who does not want to be part of the committee (inactive). A report will be compiled by Steve Siok and submitted to the President. Steve Hubbard offered to contribute on a regular basis to the newsletter encouraging members to join the observatory committee.

Astronomy Day: May 7, 2022- Mike Corvese is coordinator of Astronomy Day. Daytime activities will take place at Ladd Observatory and the Roger Williams Park Museum. Evening activities include Skyscraper Monthly meeting with member Rick Lynch as a speaker. Volunteers are needed at Seagrave evening program. This is a public event. Refreshments tentative.

Water Fire in Providence: Report from Francine regarding Lunar observing at Water Fire Center to follow.

Solar Observing Day: June 18, 2022- Steve and Kathy to provide more details/report at next meeting.

New Astronomy Club at Woonsocket Harris Public Library: Mark Munkacsy is the leader/coordinator of the club. The first meeting was held on April 18th with 24 individuals in attendance (roughly 12 adults and 12 students). Most of the students were between 4th and 7th grade. Due to cloudy weather, activities were conducted indoors. There are plans to observe on clear nights. Meeting will be held on the first and third Monday of each month. Each meeting will include a new constellation. Pictures of the event taken by Solitaire Frisby will be available at a later date.

North Scituate Library: Bob Janus is the contact person for the N. Scituate Library. They are interested in having star gazing events during the summer months. Plans are in the works to set up events for the months of June, July and August.

Daisy Scouts: May 13, 2022- Mike Corvese will be coordinating this and may need volunteers. Future Star Parties: Bob Horton is the organizer of the star parties at Borders Farm. Future dates will be announced. Linda will update the Skyscraper calendar on NSN as parties are scheduled.

Future Speakers- November speaker-Andrew Knoll (invited by Ed Walsh) who will be speaking on his work with the Mars rover data. Andrew is the Fisher Professor of

Natural History and Professor of Earth and Planetary Sciences, Emeritus at Harvard University.

Speakers for June and July are still in the works.

Tentative Events 2022

- July 9th Picnic- More information to follow
- AstroAssembly 2022 (October 1st)- More information to follow

International Dark Sky Association: It was proposed by the Linda that Skyscrapers join the International Dark Sky Association (<https://www.darksky.org/>). Membership dues are \$35. It was formally proposed, moved by Steve Siok and seconded by Ed

Walsh, voted on and approved.

Scituate Preservation Society: This group is interested in having Seagrave be a part of a scavenger hunt for local high school students during the school vacation week. A “QR” code was posted on a pole just outside the property. Students used this to find out more about the town’s history. The event was extended from April 18-24. Our contact is Bill Fredrickson.

Iceland Trip: The minimum quota has been met so the trip will proceed as advertised according to Francine.

Thank You Letter: Linda read a thank you letter from the North Scituate Library.

They expressed appreciation for Skyscraper’s donation (Orion StarBlast Reflector Telescope). Letter available on the Night Sky Network and May’s newsletter.

5 Year Plan: Linda proposed a 5-year plan for Skyscrapers with both programming and facilities. Special meetings will be organized to address the following questions:

Who do we want to be 5 years from now? and What services do we want to provide?

Next Executive Committee Meeting: TBD

Adjourned: 7:54 PM by Linda Bergemann

Respectfully Submitted,
Angella Johnson April 27, 2022

Astronomical Society of Southern New England Annual Club Camping and Observing Trip, 2022

by Mike McCabe, ASSNE Camping/Observing Event Coordinator

Greetings Fellow ASSNE Members,

The Board of Directors for the Astronomical Society of Southern New England has met and finalized several details for our annual camping and observing trip, and they are as follows:

The camping venue will be the Burlingame State Park in Charlestown, RI

The observing venue will be Ninigret Park in Charlestown, RI

The dates will be Thursday through Sunday, June 2nd through 5th

An invitation will be extended to the South Shore Astronomical Society to join forces with ASSNE on this adventure.

It is recommended that people reserve their campsites sooner rather than later, as state park campgrounds tend to fill up quickly once the weather improves.

Anyone can camp anywhere they want, but if you desire to be somewhat close to your fellow astronomy enthusiasts we have designated Area 400 (map attached) as the area where you should choose to camp. We have already started occupying the area, with campsites 104, 105 and 106 reserved by the organizers of the event.

Reservations can be made at the Reserve America website for Burlingame SP; <https://www.reserveamerica.com/explore/burlingame-state-park/RI/252711/overview>

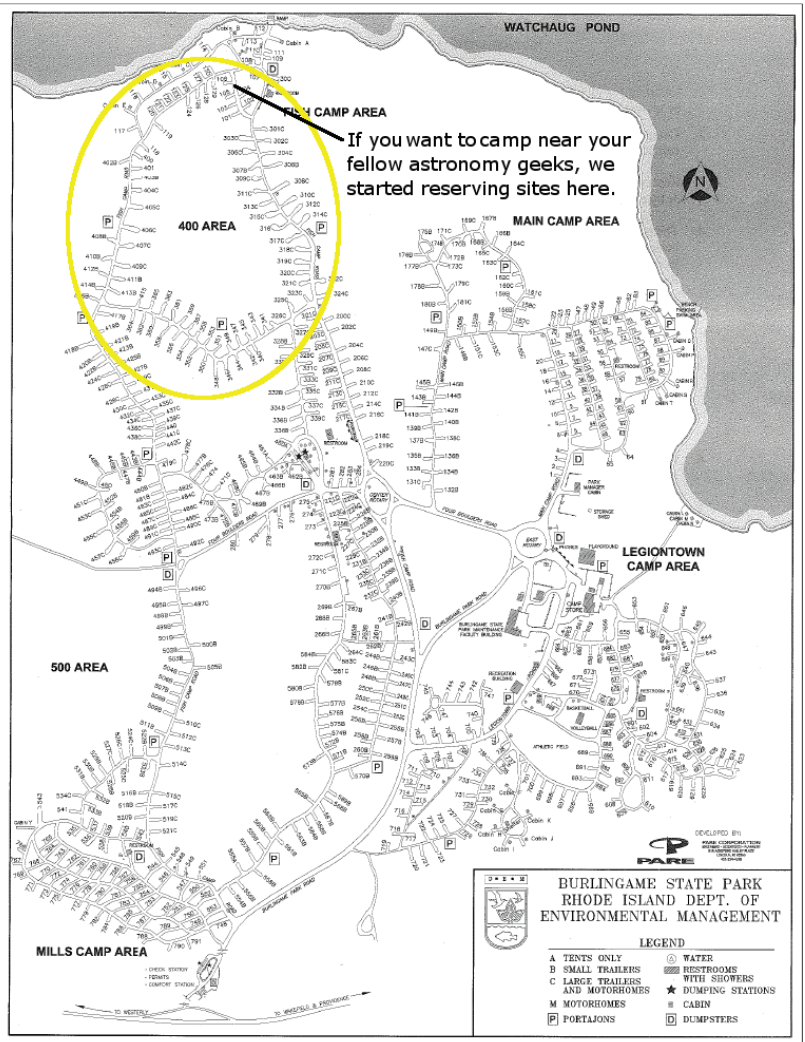
We will travel each clear evening over to Ninigret Park to set up scopes and observe. Exactly where we will set up will be determined by a reconnaissance team and a map will be provided in the near future.

Ninigret is also the location of the Frosty

Drew Observatory, which is open to the public on clear Friday evenings throughout the year. If it is clear on Friday evening some of us will likely set up there. <https://frosty-drew.org/>

We hope that everyone will consider joining us for the revival of this long-time club tradition. We look forward to reuniting under the stars with veteran club members and getting to know new members.

Sincerely,
Mike McCabe, ASSNE Camping/Observing Event Coordinator





Skyscrapers Presentations on YouTube

Many of our recent monthly presentations on Zoom have been recorded and published, with permission, on the Skyscrapers YouTube channel. Go to the URL below to view recent presentations.

<https://www.youtube.com/c/SeagraveObservatorySkyscrapersInc>

Lunar Observing Group Meeting

Every second Monday at 7 PM via Zoom

New participants are welcome to join at anytime. If you are interested in participating in this program, please send an email to corvesemichael@gmail.com

Lunar Observing Program Group

Led by Michael Corvese
Member of Skyscrapers, Inc.

Beginning
Monday, January 10 at 7 PM
on Zoom



Iceland Trip Rescheduled October 22-29, 2022

theSkyscrapers.org/iceland-2022

STARRY SCOOP

Editor: Kaitlynn Goulette



WHAT'S UP

This month treats us with a spectacular event. Starting on the night of May 15th and continuing into the morning of May 16th, the moon will turn a wonderful crimson color, resembling an ornament on a Christmas tree. This event is called a total lunar eclipse, commonly referred to as a "blood moon." It occurs when the full moon is completely engulfed in the earth's shadow. The unusual reddish color it takes on is caused by sunlight refracting through the earth's atmosphere. This is much like what happens to the sky at sunset. Most of the United States can view the entire total phase of the lunar eclipse, while a small northwestern segment of the country can only see a portion of it.

The Eta Aquarid Meteor Shower runs annually from April 19th to May 28th. It peaks this month on the night of the 6th into the morning of the 7th. Here in the Northern Hemisphere, the rate of the shower can reach up to 30 meteors an hour. Meteors radiate from the constellation Aquarius but can appear anywhere in the sky. For best viewing, find yourself away from city lights and light pollution after midnight.

All month long, the planets Saturn, Mars, Jupiter, and Venus can be found in the southeast morning sky along the ecliptic. The moon pays these celestial bodies a visit from May 21st to the 27th. Jupiter and Venus reach conjunction in the pre-dawn sky on April 30th and will remain a fabulous sight during the first few days of May. Their closest approach is 0.2 degrees apart, which is less than half the diameter of the full moon! We also have a conjunction of Mars and Jupiter on May 29th. At their closest approach, they are just over 1/2 degree apart.

The Big Dipper is part of the constellation Ursa Major and is one of the most recognizable asterisms, or patterns of stars, in the Northern Hemisphere. At this time of year, it is found high in the sky and can be used as a guidepost to help stargazers find their way around the heavens. The two stars at the end of the bowl always point to the North Star, Polaris (as seen on the map). If you follow it the opposite way, it leads to the constellation Leo the Lion. Utilizing the arc of the handle, you can "arc to Arcturus," then "spike to Spica," and finally "curve to Corvus the Crow." This is a fun way to learn the spring sky and is used by beginners and experienced astronomers alike.

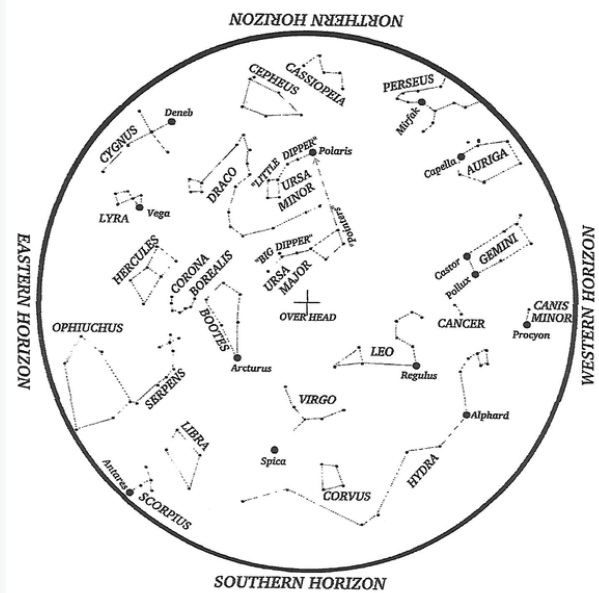
MAY'S SKY

6-7: Eta Aquarid Meteor Shower Peak

15-16: Total Lunar Eclipse

16: Full Moon

30: New Moon



Credit: Roger B. Culver

Hold star map above your head and align with compass points.

OBSERVATIONS

Taking advantage of his free time during school vacation week, my good friend Colin White was the first student to use the brand-new modified library telescope our middle school Space and Astronomy Club recently purchased.

On the day following the full moon, Colin observed the waning gibbous moon and excitedly focused in on the western limb. This was where the terminator, or day-night line, was located, and it revealed spectacular details. The craters were well-defined along this edge, and according to Colin, "It was simply beautiful!" In the dark region just beyond the terminator, only the summits of the mountains were illuminated, and he found this amazing.

Throughout the past few weeks, I have been keeping a careful watch on the morning sky, following the planets Jupiter, Venus, Saturn, and Mars as they have danced in the east and southeast. I now understand why people from ancient times called them "wanderers." They shine like beacons and move about from day to day like vagabonds, and it has been fun to watch their progress. Even though my family and I were in Washington, D.C. over school vacation week, I still woke up early a few times to spot the planets. I'm very excited about the upcoming conjunction of Jupiter and Venus and I hope all of you get to see it.



The purpose of the Starry Scoop is to communicate current astronomy and space events. If you want to share your observations or get digital copies of the Starry Scoop, contact starryscoop@gmail.com. The Starry Scoop is now on Facebook. Clear skies!

OBJECT OF THE MONTH

The featured object for the month of May is Mizar and Alcor, which are found in the Big Dipper. At first glance, they appear as a single star, but with keen eyesight two stars can be resolved. Mizar, the brighter of the pair, is the middle star in the handle of the Dipper, with Alcor appearing alongside it.

These two stars have been recognized since the days of antiquity and were referred to as the Horse and Rider, as they are often called today. Native Americans called them the Squaw and the Papoose, while other cultures had different names for the pair.

Mizar was the first double star ever discovered and it remains a popular target for amateur astronomers. With a backyard telescope, Mizar can be resolved into two stars with Alcor remaining in the same field of view. With modern equipment, astronomers have learned that Mizar is in fact a system made of four stars, while Alcor is a binary star system. The entire star system is bound together by gravity.



Colin White prepares the modified library telescope for "first light."

Directions to Seagrave Memorial Observatory

From the Providence area:

Take Rt. 6 West to Interstate 295 in Johnston and proceed west on Rt. 6 to Scituate. In Scituate bear right off Rt. 6 onto Rt. 101. Turn right onto Rt. 116 North. Peeptoad Road is the first left off Rt. 116.

From Coventry/West Warwick area:

Take Rt. 116 North. Peeptoad Road is the first left after crossing Rt. 101.

From Southern Rhode Island:

Take Interstate 95 North. Exit onto Interstate 295 North in Warwick (left exit.) Exit to Rt. 6 West in Johnston. Bear right off Rt. 6 onto Rt. 101. Turn right on Rt. 116. Peeptoad Road is the first left off Rt. 116.

From Northern Rhode Island:

Take Rt. 116 South. Follow Rt. 116 thru Greenville. Turn left at Knight's Farm intersection (Rt. 116 turns left) and follow Rt. 116. Watch for Peeptoad Road on the right.

From Connecticut:

- Take Rt. 44 East to Greenville and turn right on Rt. 116 South. Turn left at Knight's Farm intersection (Rt. 116 turn left) and follow Rt. 116. Watch for Peeptoad Road on the right.
- or • Take Rt. 6 East toward Rhode Island; bear left on Rt. 101 East and continue to intersection with Rt. 116. Turn left; Peeptoad Road is the first left off Rt. 116.

From Massachusetts:

Take Interstate 295 South (off Interstate 95 in Attleboro). Exit onto Rt. 6 West in Johnston. Bear right off Rt. 6 onto Rt. 101. Turn right on Rt. 116. Peeptoad Road is the first left off Rt. 116.



47 Peeptoad Road
North Scituate, Rhode Island 02857