AMATEUR OBSERVERS' SOCIETY OF NEW YORK

Celestial Observer

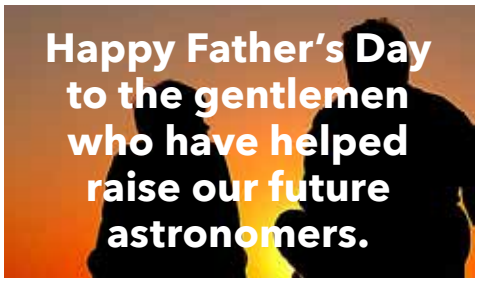
www.aosny.org OFFICIAL NEWSLETTER June 2021

Next Meeting (online): Sunday **June 6th & 20th**, 1:15PM
Contact AOSSecretary@aosny.org for a meeting invitation

The President's Message

By Sue Rose

On May 2, we were fortunate to hear a presentation from **Professor Lyman Page Jr.,** Department of Physics, Princeton University, home of Albert Einstein. Wow! The research being done is incredible and the fact that we can be privy to such discussions by the principals involved is amazing. The internet has made so many more things available to us that it's hard to contemplate a world without. On May 16, our speaker, **Dr. Andrea Minoia,** was from Belgium! Yet, the powers that be all over the world still don't get that protecting us from a Carrington event should be a top priority. Thank you, Prof. Page, and Dr. Minoia whose beautiful skies allow him to take much better photos than we can but the techniques are still valuable no matter the location. This was the silver lining to the pandemic. If it had happened 20 years ago, I'm not sure that AOS, and other organizations, would have survived. We look forward to the next presentations that Jason has arranged for us. See you then, June 6 and 20 (6/20 speaker TBA.) Members may request a link to the recording from Jason. Please make the request ASAP after the meeting as it will only be available for a short time. It's so nice to see all the faces online so we hope a recording is only a sporadic request. Please join us in real time.



Our June 6 speaker is **Stephen Trainor** who will discuss the Photographer's Ephemeris. If you want to photograph something astronomical, you need to know where it will be in the sky from the position where you are and in relation to the horizon. This is the program to do it. Whether a Sunrise Shot or a Moonrise Perspective or how the Milky Way will look in a certain area or setting, this ingenious tool, The Photographers Ephemeris helps the planning in a virtual way, without going to the location. Join us and learn of the unique tools that this program provides. Join us for this wonderful presentation and as a special benefit for AOS members, TPE has provided for a 25% discount on the purchase of the full program. This link will be provided via email to **Bill B,** Corresponding Secretary or **Jason C,** Assistant Treasurer.

Our regular meeting place at Hofstra University is still questionable for our return. They

CONTINUED INSIDE...

The Amateur Observers' Society of New York

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The Celestial Observer is the the Official Newsletter of the Amateur Observers' Society of NY, Inc. A 501(c)3 organization.

Visit us at www.aosny.org and join us on Facebook.

The AOS expresses its deepest appreciation to the Custer Institute for hosting our Observatory, and the Sierra Club Long Island Group for the 20" telescope.

This Month's Issue

just instituted a mandatory covid vaccine for all attending students in the fall and no access to anyone but students and staff. It looks like online meetings will continue for a while. The speaker pool for online access has been so varied, and incredible, that we will try to blend that in when we do return, as long as we can work out internet access. It's been nice that our non-local members have been able to attend and many to see the recording if you're unable to attend in person. There's nothing like the camaraderie of face to face though so we look forward to those future meetings.

We had a great time at the Cradle of Aviation Astronomy Day on May 15. Attendance was 250 for the day, which was double their previous weekend. Not nearly the 4,000 we're used to. It was so good to see everyone in the flesh. The overall feeling of normalcy during this crazy time was fantastic. The weather cooperated and we had great solar observing. I gave 2 presentations on upcoming eclipses. Jason was running YouTube videos on a giant blowup screen by our table. Those helping were **Steve B, Bill B, Barbara C, Vito C, Jason C, Bill C, John K, Phil K, Tom L, Sue R, Dave T and Gene Z,** all under the great coordination of our VP, **Joe S,** who provided a tasty lunch where everything was individually wrapped for safety. Great job everyone. Thank you. Our first outreach in over a year was a huge success.

Now that life, at least here on LI, is getting back to somewhat normal, I hope we can start observing as a group again. We don't have any outreach planned under the Hofstra MAUS banner for the summer. There is the possibility for the new Energy Center at Jones Beach, and Sagamore Hill so stay tuned. Our observatory in Southold is open on clear Sat nights and Bill can always us help.

Hoping to see everyone at an upcoming observing session. Our special permits are good for June 4 & 5 and 11 & 12, with the solar eclipse at sunrise on June 10. Get your solar filters, eclipse glasses, pinhole cameras and funnel eyepiece projectors ready for the big event at 5:30 am. Don't be late as it won't last long. Make sure to carry your special AOS permit during these events, available in the hotline io files, and your membership card. Get there earlier and catch up on some winter constellations.

Picnic The board has decided that, with the current uncertainty, we will not plan for our typical yearly picnic at the home of a member. We will, instead, plan a BYOF get together at a public location such as the beach, or perhaps at our observatory in Southold, on Aug 14 and combine with observing the Perseid Meteor Shower. Details on the hotline as we get closer. No plans yet for our yearly holiday party on Dec 11. ●

Friends are like stars.
You don't always see them,

but you know they are always there!

Please, everyone, be safe and be careful. We will get together at some point. Till then,

Observing Sites

Susan Rose Observatory on the grounds of Custer Institute in Southold Director **Bill C,** with help from **Jason C** and **Bill B,** has continued to bring the night sky objects into view for the public using digital means, currently borrowed, to project images captured by our C14 within the 8 foot dome to a monitor outside. He can always use extra help. Since this experiment has worked so well, and been well received by the visitors, we will be continuing to use this even after in-person viewing resumes. To that end, we are purchasing new digital equipment. Donations received in memory of member Bryan B, an avid astrophoto-grapher and twin brother of our Corresponding Secretary **Bill B,** will help to pay for these items. If anyone would like to do-nate toward this project, please contact Treasurer **Harvey M.**

Sagamore Hill is patiently awaiting our return to bring the night sky views back to their visitors as is the new Jones Beach Nature Center. We are hoping that at some point in the not-too-distant future we will be back there with all our equipment and seeing the public once again.

Stargazing in the NYS Parks

Permits are no longer available till Sept 7. Restrooms are not open during the cold months. The permit is good from Jan 1-Dec 31 each year and is for the vehicle, regardless of the number of occupants. Just be sure you have some star gazing equipment, like

a star map. The permit allows you to go anytime you want which is a great advantage. It's a good idea to put a note on the hotline and let others know you're going so you might get some company, socially distanced of course. No eyepiece sharing. ALWAYS tell someone where you will be. You might also call the NYS Police at 631-669-2500 to let them know you'll be there. PLEASE, make sure it is in your cell phone in a speed dial.

AOS Member Observing Challenge

Sue Rose

So far, I've included the following constellations-Andromeda, Antlia, Aries, Auriga, Bootes, Canes Venatici, Canis Major & Minor, Cassiopeia, Cancer, Coma Berenices, Corona Borealis, Corvus, Crater, Gemini, Hercules, Hydra, Leo Major & Minor, Lepus, Lynx, Monoceros, Orion, Pegasus, Perseus, Pyxis, Sextans, Taurus, Triangulum, Ursa Major & Minor and Virgo. If you'd like to catch up, you can find my posts in the hotline messages or send me an email. Let's hope we can get together at our new location and work on these together.

Sky & Telescope June 2021 Cover Story

Our own **Joe Rao** wrote "A fortunate few will enjoy the first solar eclipse viewable from North America since 2017. Mark Thursday, June 10th on your calendar as the date that much of the Northeast US will be treated to a 'Sunrise Scimitar.'" We will be at our new observing site for this event. Read more at about this at Sky&Telescope's site.

Astronomers Without Borders

Starting July 2, 2021, the price of our exclusive OneSky telescope will be increased to $249.00 due to inflation in shipping and manufacturing costs. Until that date the price will be $199.00. For over 10 years, this generous on-going funding program from Celestron has given AWB the opportunity to sell this versatile telescope at a reasonable price to financially support our various observing, resources giving and outreach programs. Consider purchasing one for yourself or a family member to show your support.

June Observing Highlights

(All observing sessions are members only)

The **June 10 annular eclipse** won't be complete here on LI. You would need to travel to Canada or Greenland but their admittance is restricted. Still, it will be fun to see the smiling face in the sky at sunrise, if only for an hour, and ending at 10° elevation. Arrive early for some winter stargazing.

On **June 20,** we will celebrate the Summer Solstice, and Father's Day, with our second meeting. It is also International Sun-Day, a time to appreciate our closest star and the lifegiving force it provides. We are just coming out of a solar minimum so the number of sunspots is increasing. If you'd like to learn more about how to track that, try the Astronomical League Sunspotter Observing Program, https://www.astroleague.org/al/obsclubs/sunspot/sunsptcl.html. The club has a Sunspotter you may borrow to help with this. Please remember that AOS awards only need half of the AL requirements. If you want to go further, try the Hydrogen Alpha Observing Program. You can borrow one of the AOS' scopes for this also. If you just want to watch the Sun as it makes the yearly journey across the sky you can try the Analemma Observing Program. The Solstice is a required observation so a good time to start.

On June 24, watch for Mars near the pretty Beehive Cluster, M44, after sunset.

Just before midnight on June 26, watch for the Moon and Saturn rising. Each night until the 29th, the Moon will form a nice grouping with Saturn and then Jupiter.

Hoping to see everyone at an upcoming observing session. Our special permits are good for June 4 & 5, 11 & 12 and July 2 & 3, with the solar eclipse at sunrise on June 10. Get your solar filters, eclipse glasses, pinhole cameras and funnel eyepiece projectors ready for the big event at 5:30 am. Don't be late as it won't last long. Make sure to carry your special AOS permit during these events, available in the hotline io files.

Observing Projects and Useful Websites

Keep the dates!

On April 20, 2023, there's a hybrid solar eclipse over Australia/ Indonesia.

On Oct 14, 2023, there will be an annular solar eclipse over the south and midwest US.

On April 8, 2024, the US will once again be treated to a total solar eclipse, this time stretching from Mexico, up though the center of the country into Canada, over Buffalo, etc. It's time to start making plans. Who wants to help with this? Contact Sue.

Luckily, the partial annular on June 10, 2021 will be visible locally at sunrise. We will be there.

Observing Projects for Month

The Sky Scrapers this month

Skymaps.com

The Night Sky This Month

In-the-Sky.org

Astronomy Mag Sky This Week

Sky & Telescope Magazine Sky at a Glance

Globe at Night

EarthSky

What's Up each month (video)

Tonight's Sky

Comet Watch 2021

ALCON Update

The Astronomical League has postponed the in-person event planned for Albuquerque this August till 2022. They will be hosting an online series of presentations Aug 19-21. Registration for our virtual convention is now open at the following link. IT'S FREE!! $5 if you want a pin commemorating the Astronomical League's 75th Anniversary. The convention features virtual tours, professional and youth speakers, a Slooh presentation, all 2020 and 2021 youth and general award presentations, over $3,000 in door prizes donated by our member clubs, our League business meeting, an international star party, and a keynote address by Dr. Jocelyn Bell Burnell, discoverer of pulsars. To be eligible, you must register your name and email address. It only takes a minute to do, and League membership is not required. https://www.alconvirtual.org

Northern Lights Trip

Ever want to visit Iceland and see the northern lights and volcanoes and other geothermal features? We had discussed making a club trip just before the pandemic broke so maybe it's time to try again. Anyone want to help organize? Learn more about a tour he's already arranged. Maybe we could get a group rate? Contact **Sue Rose**.

RSSP Update

The Rockland Summer Star Party has been rescheduled for 2022.

Stellafane 2021

The Stellafane convention will take place this year, August 5–8, 2021. Visit https://stellafane.org/convention/2021/index.html for details. However, the article clearly states that things will be different this year and much is subject to change.

Explore Scientific's Online Presentations

https://youtu.be/bOzZjO8QWfc

Hamptons Observatory

Dark skies are of important to all of us who are interested in astronomy (as well as in health and a host of other issues). On Tuesday, June 8th, at 2:00 PM, we've arranged for a free, virtual talk by Prof. Andy Lawrence from the University of Edinburgh: "The Sky: Why It Matters and How We Might Lose It." He also wrote THE book on the subject: "Losing the Sky." More info next time (and on our website) but you can register now online.

For further information about this important issue, you might also want to check out the dark sky advocacy organization started by one of our founding Board members, Susan Harder.

Remember when Comet Shoemaker-Levy collided with Jupiter? Well, on July 12th at 7:00 PM, David H. Levy will discuss that event, his many other discoveries and his career in astronomy, as described in his latest book, "A Nightwatchman's Journey" (those who'd like to order an autographed copy may contact David at jarnacq@outlook.com). Further info and registration info about this free, virtual event may be found on our website. www.HamptonsObservatory.org,

The Best Places to Go Stargazing Around the World

Dark skies and bright stars are the main attraction at the top stargazing spots around the world. https://tinyurl.com/cahk9xpk

Space Adventures: Commercial Spaceflight in 2021

Learn more about opportunities for private citizens to fly to space are only going to increase in the coming years. Flights fall into two broad cate-gories – flights of a few minutes (suborbital spaceflight), or flights of a few days (orbital spaceflight). If you see a spaceflight in your own future, it is never too early to talk. jake@spaceadventures.com

Digital Library Free ebooks form NASA in PDF

https://www.nasa.gov/content/goddard/hubble-e-books

World Science Festival and free Astronomy Courses

https://www.worldsciencefestival.com/

STARS, I HAVE SEEN THEM FALL

BY
A. E. HOUSMAN

Stars, I have seen them fall,

But when they drop and die

No star is lost at all

From all the star-sown sky.

The toil of all that be

Helps not the primal fault;

It rains into the sea,

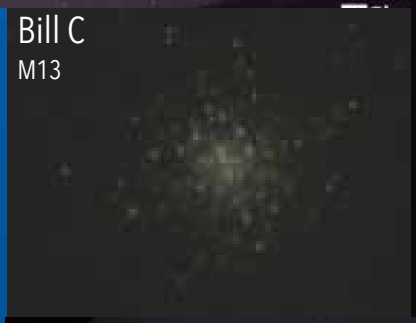
And still the sea is salt.

✶


Rich T
Moon & Milky Way


Steven B

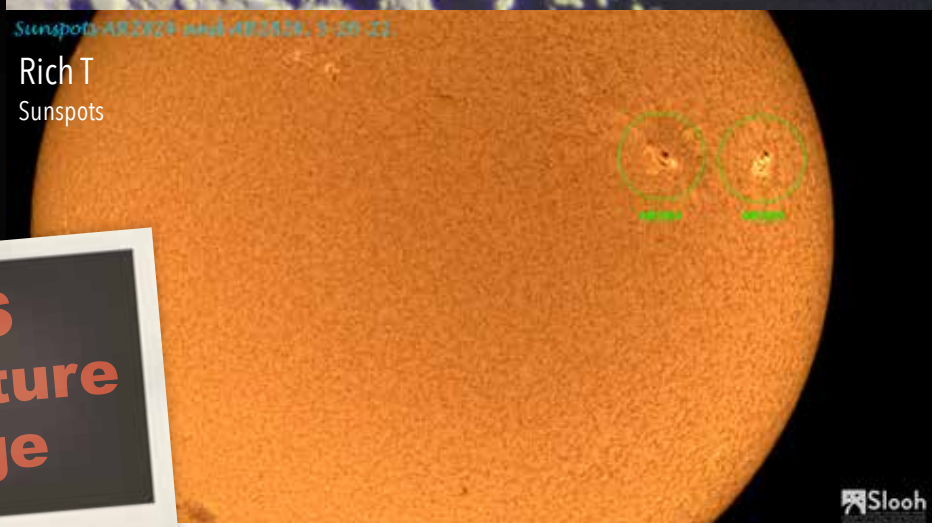

Steve B


Bill C
M13


Bart F
Sunspot


Bart F
Lunar X


John B


Rich T
Sunspots

AOS Picture Page

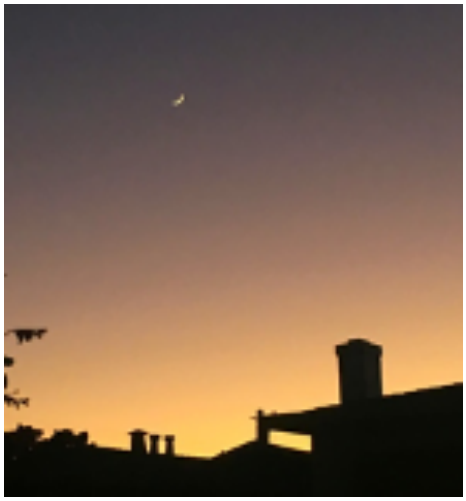
Astrophotography With Your Smartphone

By David Prosper

Have you ever wanted to take night time photos like you've seen online, with the Milky Way stretched across the sky, a blood-red Moon during a total eclipse, or a colorful nebula? Many astrophotos take hours of time, expensive equipment, and travel, which can intimidate beginners to astrophotography. However, anyone with a camera can take astrophotos; even if you have a just smartphone, you can do astrophotography. Seriously!

Don't expect Hubble-level images starting out! However, you can take surprisingly impressive shots by practicing several basic techniques: steadiness, locked focus, long exposure, and processing. First, steady your smartphone to keep your subjects sharp. This is especially important in low light conditions. A small tripod is ideal, but an improvised stand, like a rock or block of wood, works in a pinch. Most camera apps offer timer options to delay taking a photo by a few seconds, which reduces the vibration of your fingers when taking a shot. Next, lock your focus. Smartphones use autofocus, which is not ideal for low-light photos, especially if the camera readjusts focus mid-session. Tap the phone's screen to focus on a distant bright star or streetlight, then check for options to fine-tune and lock it. Adjusting your camera's exposure time is also essential. The longer your camera is open, the more light it gathers—essential for low-light astrophotography. Start by setting your exposure time to a few seconds. With those options set, take a test photo of your target! If your phone's camera app doesn't offer these options, you can download apps that do. While some phones offer an "astrophotography" setting, this is still rare as of 2021. Finally, process your photos using an app on your phone or computer to bring out additional detail! Post-processing is the secret of all astrophotography.

You now have your own first astrophotos! Wondering what you can do next? Practice: take lots of photos using dif-ferent settings, especially before deciding on any equipment upgrades. Luckily, there are many amazing resources for budding astrophotographers. NASA has a free eBook with extensive tips for smartphone astrophotography at bit.ly/smartastrophoto, and you can also join the Smartphone Astrophotography project at bit.ly/smartphoneastroproject. Members of astronomy clubs often offer tips or even lessons on astrophotography; you can find a club near you by searching the "Clubs and Events" map on the Night Sky Network's website at night-sky.jpl.nasa.gov. May you have clear skies!



A small tripod for a smartphone. They are relatively inexpensive – the author found this at a local dollar store!

The Moon is large and bright, making it a great target for beginners. The author took both of these photos using an iPhone 6s. The crescent moon at sunset (left) was taken with a phone propped on the roof rack of a car; the closeup shot of lunar craters

(above) was taken through the eyepiece of a friend's Celestron C8 telescope.

Smarthphone Astrophotography with Dr. Sten Odenwald, an astronomer at the NASA Goddard Spaceflight Center, and the Director of STEM Resource Development at the National Institute of Aerospace. He is an active science popularizer and book author and participates in many NASA programs in space science and math education, and one of his most recent projects is the Smartphone Astrophotography program, which encourages individuals to take photos of the Moon, planets, and star clusters through their telescope with their smartphone- and help measure light pollution while doing so. Get your phone charged up and find out how to join the Smartphone Astrophotography pro-ject at anecdata.org/projects/view/663.

Learn more at https://scistarter.org/AstronomyMag

Discover more about our stellar neighborhood at 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!