

The Observer

The Official Publication of the Lehigh Valley Amateur Astronomical Society

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March 2024

Volume 64 Issue 03





Ad Astra

**It is really hard,
to stick a perfect landing,
when you're on the moon.**

In the 21st century, we've witnessed just 10 attempts at safely touching down a vehicle on the moon's surface. Out of these, only 5 have triumphed, while 4 ended in disappointment. The verdict is still pending on the latest endeavor.

In an era where companies like SpaceX are launching swarms of satellites into orbit with astonishing regularity, one might assume that landing a small craft on the moon should be well within the capabilities of any sufficiently funded nation. Some of these missions have even been spearheaded by private enterprises.

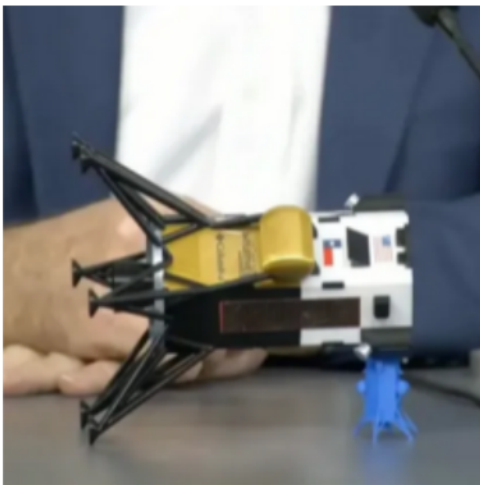
However, the reality is starkly different. The recent setbacks highlight the formidable challenges involved. Initially, one might be tempted to chuckle at the images of failed landers, but such reactions don't do justice to the monumental effort and dedication behind each mission.



Japan's SLIM Lander, upside-down. Believe it or not, the mission is considered a success.

Much like an Olympic gymnast who makes navigating the balance beam appear effortless but occasionally falters, these failures serve as a stark reminder of the immense difficulty inherent in lunar exploration. The slightest miscalculation can spell disaster, sending a spacecraft off course, or crashing into the unyielding lunar surface.

But feel free to share a laugh. No tragedy has occurred, and valuable data has been gleaned from these experiences. Our amusement reflects the shared imperfection of the human condition. Amidst the laughter, let's not forget to gaze skyward, acknowledging the challenges our species faces on its journey to the stars.



An artist's rendition of IM-1's probable landing position. As of writing, the judges haven't scored it quite yet.

Ad Astra!



NOTICE

- A short business meeting will be conducted at our March general membership meeting to be held at Muhlenberg College and online via Zoom on March 10th. This is for approval of additional funds to repair the roof at South Mountain.
- We have been planning the repair of the flat roof and dome over the planetarium for several years and have previously allocated \$20,095.00 toward this project. Total cost of the project is estimated at \$29,055.00.
- An additional expenditure of up to \$10,000.00 was approved by the board of governors at the February 25th meeting and must now be voted upon by the general membership.

Submitted by Bill Dahlenburg
Director of Maintenance
South Mountain Site



Minutes from the LVAAS General Meeting – February 4, 2024

The February 2024 LVAAS general meeting was conducted electronically using an online service and in person at Muhlenberg College's Trumbower Hall. Approximately 60 people were in attendance. Director Benjamin Long opened the meeting at 3:01 p.m.

Tonight's presentation was "The Allure of the Multiverse: Beyond the Limits of Direct Observation" given by acclaimed science writer and physicist, Dr. Paul Halpern. Paul is a professor at Saint Joseph's University and is the author of eighteen popular science books. The recipient of a Guggenheim Fellowship, a Fulbright Scholarship, and an Athenaeum Literary Award, he has contributed to *Nature*, *Physics Today*, *Aeon*, NOVA's *The Nature of Reality* physics blog, and *Forbes'* blog, *Starts with a Bang!* He has appeared on numerous radio and television shows including *Future Quest*, *Science Friday*, *Radio Times*, *Coast to Coast AM*, *The Simpsons* "20th Anniversary Special", and *C-SPAN's BookTV*.

Science, including astronomy, is done by observation and verification. However, not everything can be observed directly. Many physicists and astrophysicists today, in an effort to solve dilemmas such as the overall uniformity of the observable universe on the largest scale, have embraced theories, such as inflation, that lead to the idea of other bubble universes, well beyond direct measurement. This talk will explore the controversial embrace of the multiverse.

The case for direct observation is 'pictures or it didn't happen.' Direct observation has a finite boundary or limit. Taking into account expansion of the universe, the limit to what can be seen is now 46 billion light years. The shape of the observable universe appears to be flat (in a flat universe, the sum of the 3 angles in a triangle equals 180°) but what is the shape of space beyond the observable universe? Theoretical physicists and astrophysicists are okay with the idea that extrapolating that space beyond what can be observed is also flat. An example would be the interior, beyond the Schwarzschild radius of a black hole, from which not even light can escape and therefore can not be observed.

Why does the idea of multiverses have so much public appeal? Firstly, we have a natural curiosity to know what lies beyond, and secondly, it allows for ‘what-if’ questions about making different choices. ‘Multiverse’ in science suggests that there could be parallel universes in reality. This is different from orthodox quantum mechanics, as promoted by Niels Bohr, that states when an observer makes an observation (or measurement), all possibilities collapse to one answer, depending on what is being observed. Later, Everett asked “What if collapse never happened, and there were multiple answers to the same observation?” Feynman asked, “Is there a sum of all histories?” Everett further hypothesized reality splitting. This all led to the Many-Worlds Interpretation (MWI) of quantum mechanics.

The Anthropic Principle asks why our part of the universe, or our entire universe, is special. Of all possible universes are we in the one that allows for us to form? Is it special because we are here? The Inflationary Era explains observed cosmic smoothness. Quantum fluctuations led to higher density local areas seeding the formation of galaxies. This all allows for the formation of other bubble universes. Currently, scientists are looking for any structure in the Cosmic Microwave Background radiation that would suggest multiple bubble universes, but so far no evidence has been found.

The multiverse universe also emerges from string theory. In 1998, a discovery was made by 2 separate teams of scientists that the expansion of the universe is accelerating. Based on this discovery, all theories must account for this accelerating expansion of our universe. The cosmological constant in Einstein’s field equations of general relativity models this well. Current models suggest that the expansion of the universe was steady early on, which allowed structures such as stars and galaxies to form. This required a small cosmological constant. Quantum theory, on the other hand, predicts a large cosmological constant.

Current types of scientific multiverses being studied:

- Many-Worlds
- Anthropic Principle
- Eternal Inflation
- String Theory

Secretary’s Note: I apologize if the above summary is somewhat disjointed. It’s been over 40 years since I’ve tried to take notes on such a subject. For further information I suggest you re-watch the presentation once it is available in our library, or do what I plan to do and read Professor Halpern’s book, “The Allure of the Multiverse: Extra Dimensions, Other Worlds, and Parallel Universes.”

Membership: Rich Hogg

- The following members completed their second readings and are now full members:
Jennifer Blackwell
(Note: Jennifer's name was inadvertently omitted from the list of First Readings in last month's minutes)
Jeff Freeman
Linda Lapos and Paul Wirth (family membership)
(Note: Paul's name was inadvertently omitted from the list of First Readings in last month's minutes)
Jessica Scott
George and Karen Wilt (family membership)
Nicole and Craig Wade (family membership)
- The following members completed their first readings:
Reed Kennell
Christine and Timothy Talley (family membership)
Richard Guinan
- The following members have previously completed a first reading and are still eligible to complete a second reading to become full members:
David Lorchak and Nichole Hydro (family membership)
Stas Zharko

Astroimaging: Tom Duff

- Tonight is clear so there will be an unofficial meeting at South Mountain. All are welcome.
- The next scheduled Astroimaging meeting is Saturday April 6 at 7 p.m. at SM.

Stargazers: Kyle Kramm

- The next scheduled Stargazers meeting will be on Friday March 8 at 7 p.m. at SM.

South Mountain Maintenance – Bill Dahlenburg

- We are available most Saturday mornings if you are interested in touring SM, getting instruction on the telescopes or have problems or questions with your own equipment. Contact Bill before going up to confirm someone will be there on any given Saturday.

Library – Joe Zitarelli

- There is currently a section on new arrivals. We are also planning on having a section on “Getting Started” that will contain books of a variety of topics that will be geared toward those who are just getting started in astronomy or astrophysics. Let me know if you have any suggestions for appropriate books to be included.

Next General Meeting:

- The next General Meeting will be Sunday, March 10 at 3 p.m. at Muhlenberg College, 130 Trumbower Hall, Allentown, PA.

The February 2024 General Meeting was recorded.

The meeting was adjourned at approximately 4:55 p.m.

Submitted by Joe Zitarelli, Secretary

LVAAS General Meeting

Sunday, March 10, 3 p.m.

Muhlenberg College, 130 Trumbower Hall *and via Zoom*

"The Glass Universe"

presented by

Dava Sobel (*via Zoom*)



In the 1870s, before women had the right to vote or a firm standing in the workplace, a lucky few found employment at the Harvard College Observatory. The first female assistants were born to the work -- as the wives, daughters, and sisters of the resident astronomers.

Over time other ladies joined the group, thanks to the director's farsighted hiring practices and the introduction of photography to astronomy. Instead of observing through the telescope by night, the women could analyze the stars in daylight on glass photographic plates. Harvard's female workforce grew accordingly, and its individual members won national and international acclaim for their discoveries.

The most famous among them - Williamina Fleming, Antonia Maury, Annie Jump Cannon, Henrietta Leavitt, and Cecilia

Payne-Gaposchkin—are the heroines of this story. The work was not only performed by women, but also funded by female philanthropists such as

Anna Palmer Draper and Catherine Wolfe Bruce. The half-million glass plates captured through a century's worth of observing still occupy their own building at what is today the Harvard-Smithsonian Center for Astrophysics.

Dava Sobel, a former *New York Times* science reporter, is the author of *Longitude* (Walker 1995 and 2005, Penguin 1996), *Galileo's Daughter* (Walker 1999 and 2011, Penguin 2000), *The Planets* (Viking 2005, Penguin 2006), *A More Perfect Heaven* (Walker / Bloomsbury 2011 and 2012), *And the Sun Stood Still* (Bloomsbury, 2016) and *The Glass Universe* (Viking, 2016). She has also co-authored six books, including *Is Anyone Out There?* with astronomer Frank Drake. A 1964 graduate of the Bronx High School of Science, Ms. Sobel attended Antioch College and the City College of New York before receiving her bachelor of arts degree from the State University of New York at Binghamton in 1969. She holds an honorary doctor of letters degrees from the University of Bath, England, and Middlebury College, Vermont, both awarded in 2002, and also honorary doctor of science degrees from the University of Bern, Switzerland (2015) and Simon Fraser University in British Columbia (2019). (*Please see website for book links.) For a complete biography and synopses of Dava's books, please see Dava's website:<https://www.davasobel.com/about-dava-sobel>

****There will be a brief business meeting to approve funding for roof replacement at SM Headquarters**
Prospective new members who wish to attend the meeting should email membership@lvaas.org.



2024

Have you renewed your LVAAS membership?

LVAAS PayPal link: https://www.paypal.com/donate/?hosted_button_id=FBP8Y5VX5QXNW

(remember to add a note with your name, and membership type)

If your information has changed:

Online information update form: <https://form.jotform.com/233314308714147>

Printable form:

https://lvaas.org/filemgmt_data/files/LVAAS_Membership_Renewal_Form.pdf

Complete instructions: <https://lvaas.org/page.php?page=Renewing>

Questions? email membership@lvaas.org

Renewals were due by March 1.

New members who joined after October 1st are paid up for 2024.

Regular: \$45

Family: \$65

Junior/Student: \$15

Sustaining: \$90



Via Sandy Mesics, Programs Chairperson

Upcoming LVAAS General Meeting Speakers

March: Dava Sobel will speak via Zoom on "The Glass Universe"

April: Peter Detterline and Gary Becker will speak on "The Solar Eclipse"

May: Greg Shanos, will speak via Zoom on "Meteorites"

June: John Conrad will speak via Zoom on "Spaceships for the 21st Century"

September: Steve Conrad will speak via Zoom on "Occultations"

October: Mario Motta will speak via Zoom on "Building a 32-inch Telescope and Observatory"

Speakers are needed for **July, August November and December**

Please contact astrosandy@gmail.com if you have ideas for speakers, or would like to volunteer yourself!

Via France Kopy, Editor, for Ron Kunkel and Frank Lyter, Pulpit Rock Maintenance

The bridge at Pulpit Rock, which was damaged by a falling tree, has been repaired thanks to the hard work of a dedicated team of LVAAS volunteers. Ron and Frank, Ben Long and Bob Weiss spent close to 8 hours sawing and grinding, hauling and welding to make the bridge safe again. Thanks to all of you, from LVAAS!

Via Tom Duff, Astroimaging Director

Coming this April, the **World's Largest Astronomy and Space Expo for 33 years at NEAF** - read more [here](#)
LVAAS astroimaging group meetings will resume on April 6 at 7 p.m.

Via Earl Pursell, UACNJ Liason

During the off-season (November through March) UACNJ is now presenting an online astronomy-related presentation that begins at 8 p.m. on Saturdays. You can tune in by visiting us at our [YouTube channel](#). To view the program line-up please visit uacnj.org (Public nights begin April 6.)

Via France Kopy, Observer Editor

All LVAAS members are welcome and encouraged to contribute material for our newsletter, including photos (astroimages, skyscape or event), original articles of astronomical interest, or advertisements for equipment. *The Observer* has a world-wide audience; why not use it to share your love of astronomy? (Please see the black box, last page for specifics on ads.) Thank you.



Cover image: M42 The Orion Nebula

Imager: Warren Landis

Total time of 2 hours 23min 50 seconds

ASIair+

Telescope ZWO FF107

AstroPixel Processor

Camera ZWO ASI2600c Duo (no filters).

Photoshop.

Mount iOptron CEM120

Bortle 8/9

full details <https://orangemaze.com/index.php?w=gid&i=188>



STARGAZERS GROUP

Come join us March 8th for the return of the Stargazers Group!

- All members are welcome regardless of experience. New members are welcome to learn how to operate their telescopes and experienced members can share their knowledge and socialize in a casual, relaxed atmosphere.
- The group's goal is to give everyone a chance to develop their night skills together regardless of experience level! Take this opportunity to use the library and receive training on the club's scopes.
- Meetings will be on the 2nd Friday of every month at South Mountain Headquarters at 7 p.m., rain or shine. If you need help with your equipment please arrive before dark so there is time to go over it. We all love the night sky and look forward to sharing that with you!

Kyle Kramm, Stargazers Group Coordinator

Kman10274@gmail.com

Education and Outreach News and Opportunities

Our bylaws list the following as our #1 purpose:

“To encourage and promote interest in the study of astronomy and its allied subjects from the amateur standpoint.”



Blaine Easterwood

It is in that spirit that I share the following information:

The LVAAS Book Club

We have a book!

Astrophysics for People in a Hurry, by Neil deGrasse Tyson (ISBN: 9780393609394)
Open Discussion at South Mountain (or Zoom) on June 2, 2024, at 11 a.m.

So, if you want to participate in the book club, just get the book and read it. It's that easy. And if the title REALLY describes you, get the audio book, and listen on the go! That's what I did ;)

We will discuss the book in the LVAAS library in early June. If you want to join via zoom, contact me and I'll provide the link.

Volunteers Needed for April 8th Eclipse Event - With the Da Vinci Science Center at Dieruff High School

If you are not traveling to see the April 8th solar eclipse, and can volunteer for an event with the Da Vinci Center at Dieruff High School, please let me know. The primary activities will be assisting guests with viewing the sun, and sharing your enthusiasm about the wonders of the sky.

We appreciate any time that you can volunteer. So even if it's for only an hour or two, we would love to have your help!

Volunteers Needed for the Lehigh Valley Space Fest - May 18 and 19

Last year was such a smashing success, that we are doing it again! You may recall that last May LVAAS helped kick off this new event, as a presenting sponsor. We showed up in force with our solar telescopes and binoculars, filters, activities, and enthusiasm. It was a great weekend! I saw one of the largest solar prominences that I've ever seen first hand - about 1/10th of the sun's diameter. That's over 85,000 miles! The scale of our solar system is mind blowing. Anyway, come out and help us share all the great things about astronomy with the public.

When: May 18 and 19, 10 a.m. - 5 p.m.

Where: Paxinosa Elementary School, Easton

Web: www.lvspacefest.org

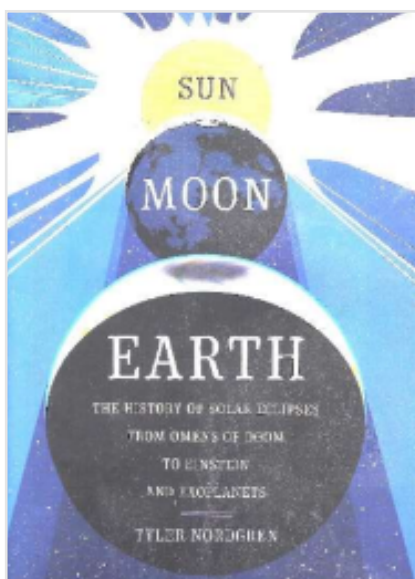
Contact me with any questions or to volunteer: blaine@ieee.org or education@lvaas.org

From the Library by Joe Zitarelli

I have taken over the LVAAS Library from David Raker who held the position of librarian for 24 years. He has spent a lot of time and energy developing what I think is an excellent example of a science library, so I am taking the attitude that if it isn't broken, don't fix it. Fortunately for me, David has left me a lot of material on how he did things, and he is still available for any questions I might have. For now, I plan to make two additions.

Currently there is a section set aside for 'New Additions.' Clearly, the name speaks for itself. If you have any astronomy-related books you have read and would like to donate to the library, please let me know. I plan to add a section that will be entitled 'Getting Started.' The section will include books that are a good starting point on various topics in astronomy. It will include topics such as the night sky, the solar system, astroimaging and basic astrophysics. Suggestions are welcome.

My second addition will be to highlight one of the books in the library with a brief book review. This will include a description of the contents, other reviews, my opinion of the book and at what level I feel this book fits into. So here goes with my first review. Fair warning: I have not had to review a book since high school.



Sun, Moon, Earth

by Tyler Norgren

While I plan to put this book in the section, Getting Started, this book has something for everyone. It starts by talking about what an eclipse is and the geometry that causes this events. This includes explaining the cycles of eclipses and how earlier civilizations tracked this phenomenon. It also goes into what one can expect to experience during their first total solar eclipse and what an observer will be able to see. The author spent a lot of time talking about how Scientists through the ages have used these events to advance knowledge. This includes a whole chapter on “The Eclipse that Changed the World” when a solar eclipse was used as a first confirmation of Einstein’s theory of General Relativity.

The book also discusses five modern period eclipses that will cross America between 2017 and 2052 including the upcoming eclipse on April 8, as well as providing information on worldwide eclipses from 2017 to 2030. The book finishes with a discussion about what will be the final total solar eclipse and why there will be a final solar eclipse. I won't spoil the ending.

Jim Bell, president of the Planetary Society wrote “Part Astronomy lesson, part travelogue, and part deeply personal storytelling, *Sun Moon Earth* is an entirely enjoyable, educational, and enlightening account of one of nature’s most dramatic phenomena. The next solar eclipse you see won’t be your last!”

Read this book and you will probably be your family’s expert on solar eclipses. It is easy to read and requires no science or math knowledge. You don’t even need to know anything about general relativity to appreciate how an eclipse supported a monumental change in physics. And when you finish reading this book, you will feel like you just learned something that is worth knowing. This book will prepare you well for the upcoming eclipse or educate you on what you just witnessed. It would also be useful in planning your trip to the next eclipse. Even if you think you know a lot about the solar system, there is something in here for almost everyone to learn. I hope you will enjoy it as much as I did.



Peter Detterline's
Night Sky Notebook
MARCH 2024

Night Sky Notebook

what you see when you look up



Peter
Detterline



Fallen ash tree and damage to bridge
Photo: Frank Lyter

+



LVAAS Volunteer Repair Crew:
Ron Kunkel (L, rear) Frank Lyter (center)
Bob Weiss Benjamin Long
Photo: Ben Long

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The bridge, restored to safe working order. Photo: Frank Lyter

Bridge Repair *For Benjamin's full event photo album click [here](#)

Today (Feb 8) four of us spent from 10 a.m. to a bit after 5 p.m. repairing the bridge on the road up to Pulpit Rock. The repair is essentially complete with the exception of topping off the hole along the side of the road with stones. The bridge needed repair because a tree broke off a 3' length of the railroad rail that supported the guardrail and handrail on one end of the bridge. The tree also broke off a 5' length of the guard rail (aka a 3' long electric pole.)

Bob Weiss, Ben Long, Frank Lyter and I completed the repair without any real problems, but it did require all four of us. After the 3' length of rail was detached and the remaining guard rail - the free hanging end - was stabilized, we then pulled the estimated 20+ foot long tree log up and out of the creek. We then prepped the broken ends of the rail for welding. Lots and lots of grinding was involved. Frank then started welding using his welder powered with my generator. While Frank was welding, the rest of us removed the handrail and supports from the electric pole, aka the guard rail. Then we removed the remaining 30' length of guard rail which was badly damaged and a bit rotted. At this point we also partially built up the stone support wall in the area of the breaks. This involved finding and moving some rather large stones into place. We then pulled another 35' long electric pole from the far side of the bridge onto the bridge deck and rolled it into place for the new guard rail. Next, we cut slots for the hand railing supports into the new guard rail. While Frank welded brackets to hold the guard rail in place, the rest of us started to reassemble the hand railing. To finish the job, the braces that stabilize the hand railing were repaired and reinstalled. While we were at it, we also repaired the hand railing braces for the other side of the bridge, both of which were broken.

All in all, the repair came off with no real issues, but it did take quite a bit of grunt work as we were dealing with some rather large and cumbersome items. It was a blessing that we had four people.

While working, we identified another dead ash tree that might pose a problem when it falls. We plan to be proactive and take this tree down before it causes additional damage to the bridge. In the vicinity of the bridge there are lots and lots of dead ash trees. It looks like a bomb went off in the area.

Submitted by Ron Kunkel
Director, Pulpit Rock Maintenance



Following the success of her brother Claudio's 2023 Eagle Scout Project, "Astronomy in the Community", **LVAAS family member and Senior Girl Scout, Ava Stabile** is further contributing to the community by embarking on her own Gold Award Project: "Astronomy & Microscopy in the Community." Ava is working with the Western Pocono Community Library to establish a Microscope and Telescope Rental Program:

<https://youtu.be/P2sPhqR1OHo>

The Gold Award is the highest achievement within the Girl Scouts of the USA, and only 5% of eligible Girl Scouts successfully achieve the Gold Award.

Please consider supporting her cause and helping her make an impact in our community:

<https://shorturl.at/ePV06>

Ava and her family thank you for your support! Sincerely, Claudio M. Stabile





LVAAS family member and Life Scout Claudio T. Stabile (L) ended 2023 with a sincere 'thank you' to LVAAS members during the annual holiday party for all their contributions and support as he worked towards his Eagle Scout project, "Astronomy in the Community."

Claudio was able to bring astronomy to his local community by building an astronomy observatory at the Polk Township North Field, with Polk Township as the service project beneficiary. Claudio and his troop worked all throughout the summer building

the observatory, and were able to complete the project and host a grand opening on August 18, 2023.



Now with a permanent observatory, Claudio is able to host regular astronomy presentations to our community throughout the year.

According to Claudio, “completing this project has been one of the proudest accomplishments of my life so far. It is through the generosity of the community and donors like you that make these

achievements come true. Thank you!” Our family sincerely thanks the members of LVAAS for their support and generosity.

Thank you!

Submitted by Claudio M. Stabile, Scouting Activities Coordinator

Another LVAAS Holiday Tradition

By Sandy Mesics

Last month I wrote about the rich tradition of the annual LVAAS Holiday Party. For a brief period in the 1960s, there was an additional holiday party that was extremely popular with members. This was the annual open house sponsored by LVAAS members Ernie and Marion Robson.



Born in 1902, Ernie Robson attended Harvard Boys High School in Chicago. He went on to Amherst College, earning an AB (Baccalaureate in Arts) degree in 1924. He claimed to have been a student of Robert Frost. During World War II, Ernie served in the overseas service of the Red Cross, where he served with the Marines in the Pacific theater. He was one of the first Americans to visit Hiroshima to witness the horrors of the atom bomb.

Ernie's professional work was in the field of detergent chemistry. His chemical background included graduation from Pratt Institute Chemical School with supplementary work at New York University and The City College of New York. As a detergent chemist, he was technical director of the New York Rug Cleaning Association in 1955.

Marion Robson taught in the New York City school system and participated in experimental work for the revision of the arithmetic curriculum. Her other interests included graphic arts and the graphic representations of astronomy.

In 1962, the Robsons hosted seventeen members of the LVAAS Astronomy Study Group (ASG) to their Kempton home for a unique gathering. The Robson home was described as "a made-over farmhouse tastefully furnished with antiques and objects of interest." (*The Observer*, January 1963) The attendees were allowed to cut down their own Christmas trees, followed by sleigh riding and ice skating on the Robson's pond. After coffee, wine, and goodies, there was a buffet dinner, more ice skating, and finally observing with the Robson's 10-inch reflector.

The event was so successful that the next year 41 individuals attended. According to the January 1963 *Observer*: "Outdoors it was ice skating and sleigh riding, not to mention a free Christmas tree. Indoors it was hot drinks and schnaps before a warming fireplace, carols and folksongs to the tune of Dick Machamer's guitar. After dinner, and quite a spread it was, there were movies of the solar eclipse trip [in Maine, 1963] and the dedication [of the LVAAS headquarters]. More ice skating followed, under floodlights, until the skies cleared and the observers took over."

In 1965, *the Observer* commented, “Later, after we had enjoyed one of Marion’s excellent meals and we sat before that gigantic fireplace, mesmerized by the dancing flames, there were the strangely beautiful sounds of ancient Latin chants heard through Ernie’s 15-inch woofer. Ah, what a set of memories.” The following year the location moved to the Robson’s new home in Paker Ford.



Marion and Ernie Robson with their 10-inch reflector.

In 1964-1965 Marion Robson served as LVAAS Secretary, and in 1967-1968 Ernie Robson served as LVAAS Director. Marion also served for many years

as program chairperson. Ernie and Marion were instrumental in the very successful 1976 joint convention of the Astronomical League and Association of Lunar and Planetary Observers (ASTROCON) held at LVAAS and in conjunction with Kutztown University. The convention hosted 667 amateurs from 50 clubs in 36 states and Australia. At the time, this was the largest Astronomical League convention ever. This event helped to put the struggling Astronomical League back on solid financial footing.

In 1967, the Robson’s holiday party was opened up to all LVAAS members. The open house continued for several more years, though there is very little information remaining describing them. Some stories about how the junior members behaved at this annual event are legendary: just one example was when two junior members smuggled a live turkey into Ernie’s study and left it there for him to discover the next morning. Yet the Robsons endured all this with good humor. In 1972, there was no mention of the event in the *Observer*, but apparently in 1973, the event was back on. According to a notice in the December 1973 *Observer*, members were to “Come prepared for a day of talk, chess, and observing. Bring your telescopes and binoculars. The Robsons especially hope that new members and their families will come and join them in this annual event.”

The 1974 open house proved to be a very popular event, according to a correspondent in the January 1975 *Observer*: “Good grief, 47 sardines, I mean members, squeezed their way into the Robson cottage down at Parker Ford, PA for a great and wonderful Christmas party ... Her only regret, Marion Robson says, is that 147 people didn’t show for this gathering.” The head count in 1975 was similar: 45 people attended.

However, the 1975 event was the last recorded open house the Robsons held. Eventually the Robsons moved to Oregon to be closer to their son, Robby. In 1979 both Ernie and Marion were made honorary life members. Ernie passed away on July 5, 1988, and soon afterward the library at South Mountain was named in his honor. Marion passed away in 2005 at the age of 96. With them went the grand tradition of their annual open house.

References

The Observer, various issues 1960-2017



StarWatch

Solar Snap the April 8 Eclipse

The digital revolution in smartphone technology continues to amaze me to the point where I use my Google Pixel 7 Pro more and more often. It's not because I am becoming lazy either. Its ability to produce vivid colors with an incredible amount of dynamic range that captures details in shadowed areas and regions of high contrast, as well as its low light capabilities, make it the preferable choice. The top end Galaxy 22/23 and the iPhone 13-15 are major competitors with the Google 7/8 Pro. They are all incredible devices. I will still use my Canon 80D (Digital Single Lens Reflex) camera for higher magnification/resolution pictures from my telescope. Still, I am confident that my Pixel Pro will also be engaged in automatically taking other images of the event. * For most enthusiasts who do not own a DSLR camera and take pictures exclusively with a smartphone, I'd like to introduce you to an application called **Solar Snap**. When I read the advertisement for this product, the marketing package came with two large solar filters, including Velcro for attachment to two phones, and two pairs of eclipse glasses. Prices on Amazon ranged from \$15.00 to \$23.95, not including postage and handling. The advertisement on the packaging said that the Solar Snap app was free, so I downloaded it on the Play Store. I had plenty of safe solar viewing material in the form of solar glasses from previous eclipse adventures and even larger solar viewers to tape over my camera phone lenses so that I could record images safely. * I answered several questions when I opened the app, allowing my phone camera to sync with the application and my location. I also promised never to be ignorant enough to view the sun without the use of proper filters. Having passed those tests, I finally got a look at the Solar Snap application. Zoom (magnification), exposure, and focus were neatly displayed upfront on moveable,

orange toggle bars. There was no hunting for anything. The focus bar had a locking mechanism that ensured the image would be kept sharp. I could also focus the standard way by tapping on the screen, as well as recording a single image by tapping on a circle just like in regular camera mode. * However, two time-lapse increments were also available. A boxed "1" would take a single image every 10 seconds for the eclipse's partial phases. Taping on the box again revealed a "3," resetting the time-lapse to three images every 10 seconds for the diamond ring and totality. Solar Snap seemed to have the necessary functionality for a time-crunched event like a total solar eclipse. * If Solar Snap piques your interest, I recommend purchasing a device that attaches your smartphone to a small tripod. I acquired an Ulanzi ST-27 Metal Phone Tripod Clip 2476 for my Australian eclipse adventure this past April. The cost was \$29.95. Phone holders can be acquired for much less money, but I wanted one that would adapt to my larger Pixel 7 Pro and could be fully rotated into any position. * If you are planning to record a video of the lighting conditions during totality (the big picture), including the reaction of friends, try imaging normally without Solar Snap and use a 1x magnification. I do not recommend recording stills or video at 0.5x (ultra-wide field) because the picture quality is much poorer. Totality like lighting conditions occur on a **clear evening** about 30-40 minutes after sundown so there are plenty of opportunities to test your smartphone. * In my *StarWatch* article of February 4, I only advised using your smartphone to capture the big picture. However, with Solar Snap, another choice has become available, capturing all aspects of the sun in eclipse. * One other word of advice, however—PRACTICE! E-day will be no time to learn new tricks. Photos are [here](#) Ad Astra!

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Join

For Sale – Explore Scientific 102mm triplet telescope with Celestron AVX mount/tripod and much more

This is a five year old Explore Scientific 102mm telescope and Celestron AVX mount/tripod system that was lightly used and in excellent condition. It can be used for typical astronomical viewing or for astrophotography [some camera adapters included]. The goto mount can find clusters, nebulae, planets, galaxies, etc. The replacement cost for all the equipment included in this sale is roughly \$3,100 at Skies Unlimited. Asking \$1299 with local pickup in Emmaus, no shipping.

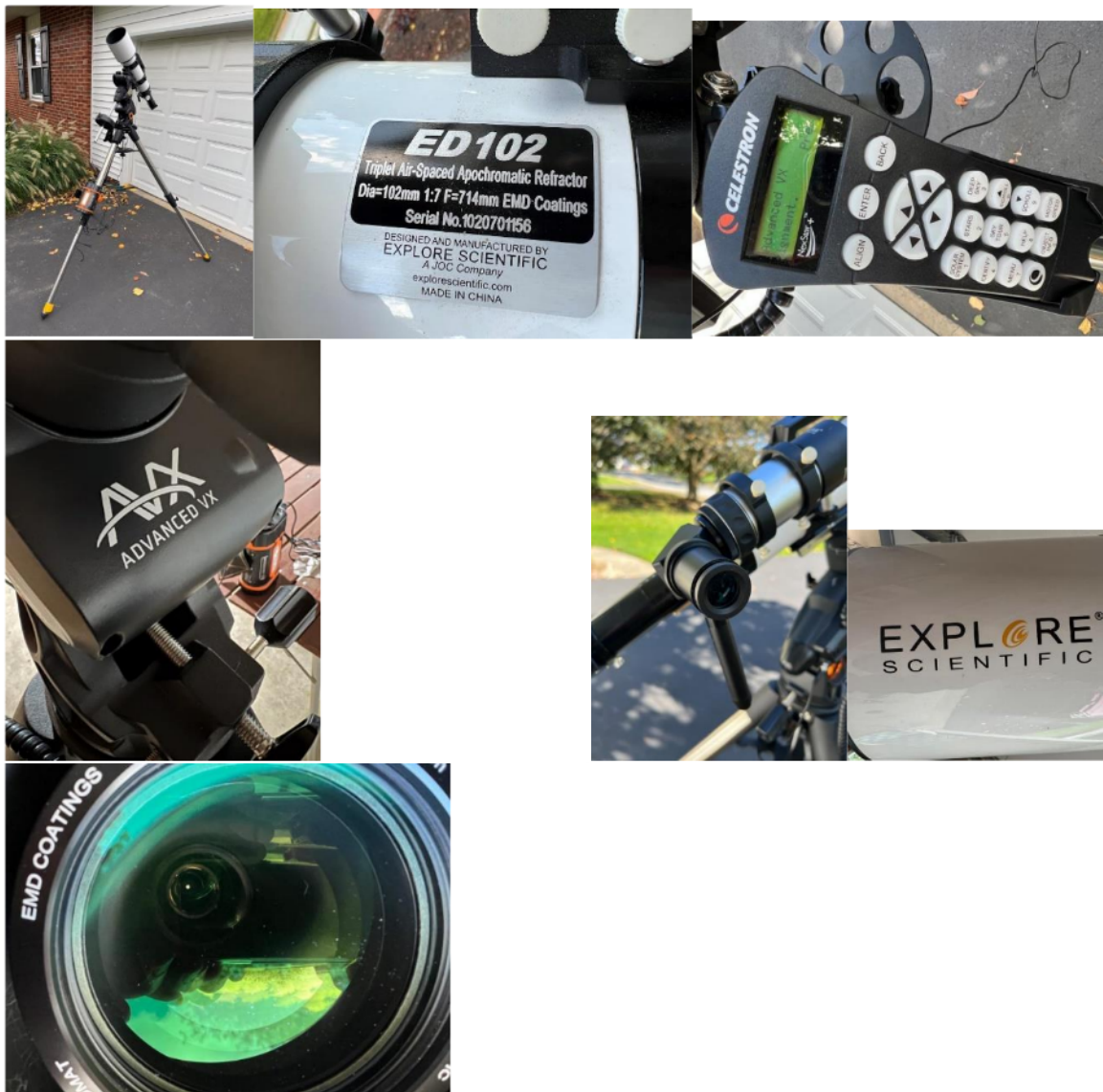
price reduction

More pictures and/or details upon request.

Included in the sale:

Explore Scientific ED 102 Telescope, 5 mm Cel LX eyepiece, 25 mm Cel LX eyepiece, explore Scientific 2" diagonal, Celestron AVX mount/tripod, Telescope cover, 8x50 finder scope with reticle.

Please email Mike Waddell if interested: mgwaddx@gmail.com

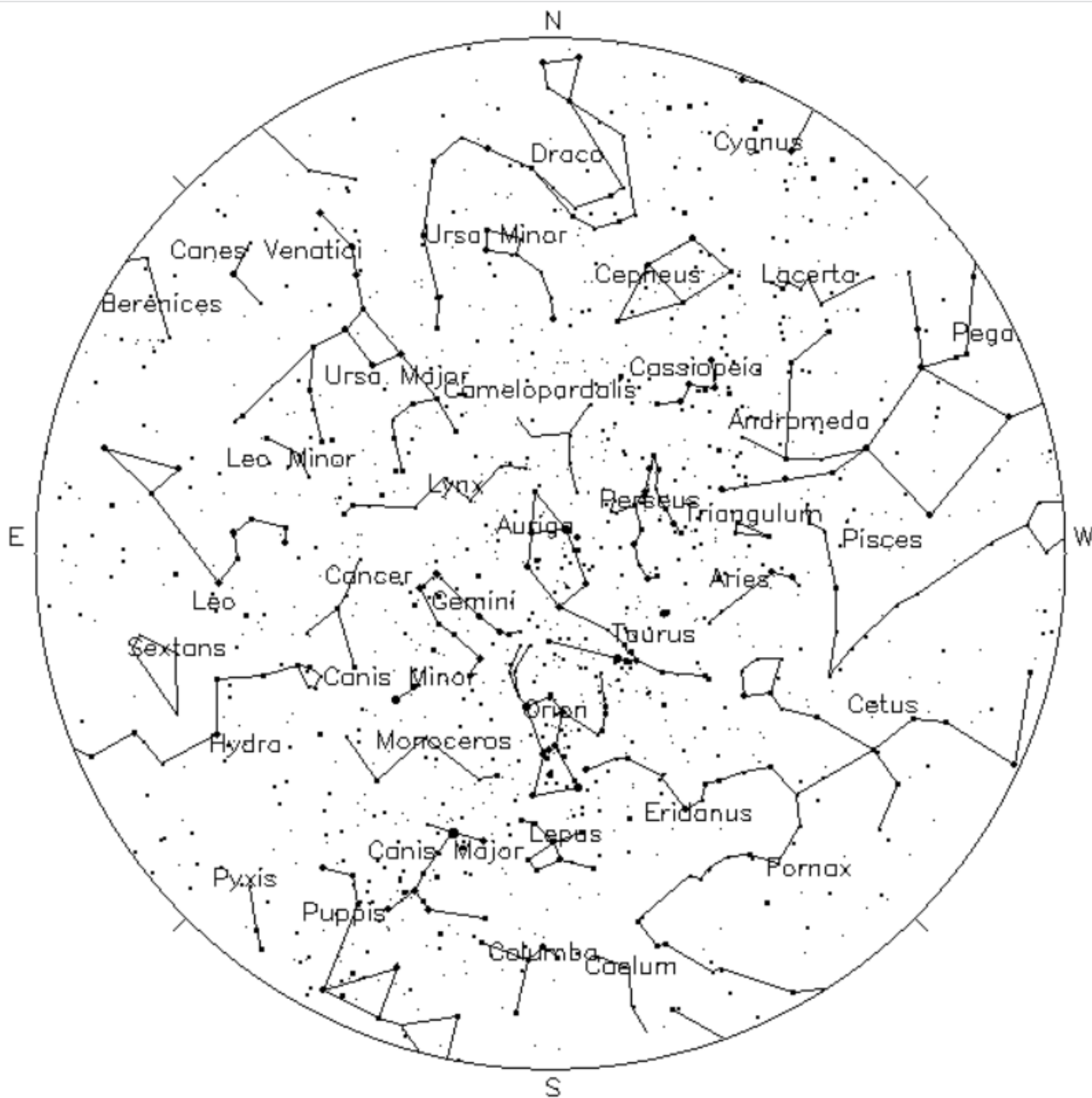


MARCH

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					01	02
Last Quarter Moon 03	04	05	06	07	Stargazers Group Meeting 08	09
Dalight Savings Time Begins 10 General Meeting 3:00 PM Muhlenberg College	11	12	13	14	15	Star Party 16
Deadline for submissions to the Observer 17 First Quarter Moon	18	Spring Equinox 19	20	21	22	23
LVAAS Board of Governors Meeting 24	Full Moon 25	26	27	28	Good Friday 29	30
Easter 31						

APRIL

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	Last Quarter Moon 01	02	03	04	05	Astroimaging Meeting - 7:00 PM 06
07	* Solar Eclipse * 08	09	10	11	Stargazers Group Meeting 12	Star Party 13
General Meeting 7:00 PM South Mountain 14	First Quarter Moon 15	16	17	18	19	NEAF 20
NEAF 21 Deadline for submissions to the Observer	22	Full Moon 23	24	25	Scout Camping 26	Scout Camping 27
Scout Camping 28 LVAAS Board of Governors Meeting	29	30				



Your Sky was implemented by John Walker in January and February of 1998. The calculation and display software was adapted from Home Planet for Windows. The GIF output file generation is based upon the ppmtogif module of Jef Poskanzer's pbmplus toolkit, of which many other components were used in creating the images you see here.

ppmtogif.c - read a portable pixmap and produce a GIF file

Based on GIFENCOD by David Rowley

Lempel-Zim compression based on "compress"

Modified by Marcel Wijkstra

Copyright © 1989 by Jef Poskanzer.

Customize Your Sky at <http://www.fourmilab.ch/yoursky/>

2024 LVAAS EVENT CALENDAR

Contributed by Bill Dahlenburg

2024 LVAAS Event Calendar											
	Sundays		Board meeting	Saturday			Observer Submission Deadline	Moon Phase			
	General Meeting time	location		Astro-Imaging	Star Parties	Stargazers Group		New	1 st	Full	3 rd
January	14	3:00 PM Muhlenberg	28	no meeting	no meeting	no meeting	1/21/24	11	17	25	3
February	4	3:00 PM Muhlenberg	25	no meeting	no meeting	no meeting	2/18/24	9	16	24	2
March	10	3:00 PM Muhlenberg	24	no meeting	16	8	3/17/24	10	17	25	3
April	14	7:00 PM S.M.	28	6	13	12	4/21/24	8	15	23	1
May	5	7:00 PM S.M.	19	11	18	10	5/12/24	7	15	23	1 30
June	9	7:00 PM S.M.	30	1 29	15	14	6/23/24	6	14	21	28
July	13/14	5:00 PM S.M.	28	x	20	12	7/21/24	5	13	21	27
August	10/11	7:00 PM Pulpit	25	3 31	17	9	8/18/24	4	12	19	26
September	8	7:00 PM S.M.	29	x	14	13	9/22/24	2	11	17	24
October	13	7:00 PM S.M.	27	5	12	11	10/20/24	2	10	17	24
November	10	2:00 PM S.M.	24	2	9	8	11/17/24	1	9	15	22
December	8	2:00 PM ?	29	7	no meeting	no meeting	12/22/24	1 30	8	15	22

July, Aug & Dec are Saturday meetings with rain date on Sunday
 Jan, Feb & March meetings are at Muhlenberg College
 August meeting is at Pulpit Rock
 December meeting / Holiday Party (TBD)

NEAF 4/20 - 4/21
 Mega Meet 5/3 - 5/5
 CSSP 6/6 - 6/9
 Stellafane 8/1 - 8/4
 BFSP

October 4-5-6?

Publishing images is a balancing act!

When preparing your images for publication in *The Observer*, please consider the following guidelines:

Put the quality in:

- ▶ Considering the "print" size of the image, make sure you have at least 150 pixels/inch.
- ▶ Use a reasonably good quality for the JPEG compression ratio.

But watch the "waistline"!

- ▶ Don't go too much above 200 pixels/inch max.
- ▶ Use the lowest JPEG quality that still looks good!
- ▶ Shoot for <300KB for a 1/2 page image or <600KB for a full page.

Tip: If you're not Photoshop-savvy, you can re-size and compress undemanding images ("human interest" not astroimages), with an online tool such as:

<https://www.ivertech.com/freeOnlineImageResizer/freeOnlineImageResizer.aspx>. It will also tell you the pixel size and file size of your original, even if you don't download the processed copy.

The Observer is the official monthly publication of the Lehigh Valley Amateur Astronomical Society, Inc. (LVAAS), 620-B East Rock Road, Allentown, PA, 18103, and as of June 2016 is available for public viewing. Society members who would like to submit articles or images for publication should kindly do so by emailing *The Observer* editor, France Kopy, at editorlvaas@gmail.com

Articles submitted prior to the Sunday before the monthly meeting of the board of governors (please see calendar on website) will appear in the upcoming month's issue. PDF format is preferred. Early submissions are greatly appreciated. Articles may be edited for publication. Comments and suggestions are always welcome.

LVAAS members please feel free to submit ads for astronomy equipment you have for sale, and additionally you may sponsor a maximum of three ads from non-members per year. Please submit your finished ad as a PDF, with pictures and text. Every attempt will be made to include submissions in a timely manner.

Every effort will be made to properly credit the sources of the material used in this publication. If additional credit is required, please notify the editor.

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If you are interested in becoming a member of LVAAS, please visit our [membership page](#) for information on applying.

Existing members please update your LVAAS profile information by emailing the membership director at membership@lvaas.org.