

The Observer

The Official Publication of the Lehigh Valley Amateur Astronomical Society

<https://lvaas.org/>

<https://www.facebook.com/lvaas.astro>

September 2023

Volume 63 Issue 09





Cherry Springs State Park, located in Potter County, Pennsylvania, has become a beacon for amateur astronomers and stargazers alike. With some of the darkest skies on the East Coast, the park boasts a pristine environment that's perfect for witnessing the grandeur of the Milky Way, catching a glimpse of distant galaxies, and reveling in the wonders of meteor showers. It's no wonder that Cherry Springs has been designated a Gold Level International Dark Sky Park by the International Dark-Sky Association.

The Black Forest Star Party (9/15 – 9/17), hosted at Cherry Springs, is one of the most eagerly awaited events in the stargazing calendar. Every year, astronomy enthusiasts from near and far gather with their telescopes, eager to share knowledge and admire the universe's marvels. Attendees have the opportunity to witness celestial phenomena ranging from planets here in our own solar system to whole other galaxies millions of light-years away. Whether you're a seasoned astronomer or just someone with a budding interest in the cosmos, the Black Forest Star Party offers an unparalleled experience of community and discovery.

The park itself offers more than just dark skies. Its facilities are well-suited to accommodate star gazers. The Astronomy Observation Field provides 360-degree views of the sky with minimal light interference. There are also rustic campsites available for those wishing to extend their stay and truly immerse themselves in the experience. Workshops and presentations conducted during the star party further enrich attendees' knowledge about the vast universe that surrounds them.

Beyond the annual star party, Cherry Springs is an attraction year-round. Its remote location ensures that light pollution is minimal, making it a haven for those seeking to observe the heavens in all their glory. Each season brings its own celestial wonders, from summer's Milky Way arching across the sky to winter's prominent constellations like Orion and Taurus. There are many things to do during the day as well with beautiful scenery to hike through with the PA Grand Canyon and the collapsed Kinzua Bridge being not far from the park.

Cherry Springs State Park and the Black Forest Star Party epitomize the magic and wonder of the night sky. Whether you are an experienced observer or a curious newcomer, the park offers a serene environment to connect with the cosmos. It's a reminder that despite our daily hustle and bustle, there's

an expansive universe out there waiting to be explored, and places like Cherry Springs make that exploration a little more accessible and a lot more enchanting.

Tickets are unfortunately sold out, and since the pandemic they have typically been selling out in only a few days, sometimes hours. If you were able to purchase tickets, feel free to connect with other LVAASers as there is usually a group of club members there.

Saturday, October 14, 2023, a “ring of fire” annular solar eclipse will be visible across the U.S. Southwest. This rare phenomenon occurs when the Moon is too far away from the Earth to cover the Sun completely, leaving a bright ring of light around the dark lunar disk. Although we will not be in the path of the ring of fire, we will still be able to witness about 25% of the Sun being eclipsed by the Moon. This partial solar eclipse will be visible from 12:04 p.m. to 2:35 p.m. with the peak eclipse occurring at 1:19 p.m. To enjoy this amazing sight safely, you need a special filter or device to protect your eyes from the Sun’s harmful rays.

To celebrate this event and to raise more money for the South Mountain HQ roof replacement, LVAAS is hosting a raffle where everyone (including club members) will have a chance to win a brand new ZWO SeeStar S50 All-in-One Smart Telescope! This incredible device combines a telescope, electric focuser, astronomy camera, and ASIAIR controller into one unit. It also includes an alt-azimuth mount, integrated tripod, and filter-switching device to give you the most well-rounded, out-of-the-box experience possible. Included in the box will be a white light solar filter for imaging the sun as well!

Don’t miss this opportunity to own a state-of-the-art smart telescope and enjoy a memorable day of science and fun. The ZWO SeeStar S50 is the perfect companion for any astronomy enthusiast, whether you are a beginner or an expert. Join us at the Da Vinci Science Center on October 14 and enter the raffle for your chance to win!

Due to the fact that pre-orders for the device are only now beginning to ship, we may not have the device available at the time of the event. In such case the SeeStar will be shipped to the winner once it comes in.

Other updates:

- Business cards are here. I will be taking them to South Mountain this weekend.
- Our event with DaVinci on October 14th has been registered on NASA’s Night Sky Network. NSN will be sending our club some goodies to use at the event and for outreach. The list of items that will be sent has not yet been published.

Ad Astra!

Mike Huber

Minutes from the LVAAS General Meeting – August 13, 2023

The August 2023 LVAAS General Meeting was held at Pulpit Rock Astronomical Park. Approximately 40 people were in attendance. Director Michael Huber opened the informational meeting at 7:55 p.m.

Membership: Rich Hogg

- The following members completed their second reading and are now full members:
Josh Stoica
Nino Soberon
- The following member completed their first reading:
Josiah Genzlinger
- The following members have previously completed a first reading and are still eligible to complete a second reading to become full members:
Andy and Tori Hernandez (family membership)
Karen Houser
Sandra and Paul Szalinski (family membership)
Michael Vila
Chris Webb (family membership with son Johnny)
Steve and Linda Zieniewicz (family membership)
- Rich reported that for personal reasons he is looking for other members to assist him and potentially take over as chairman of the Membership and Technology Committees. Further, he pointed out that we are still in need of someone to take over Member Services that includes the Red Shift Store at South Mountain. If you are interested in getting involved, please contact Director Mike Huber.

General Comments:

- Mike Huber discussed the importance of getting younger members involved in taking over leadership positions.
- John Kmetz discussed the meteor camera project and how at this point we have a completed camera that is ready to go if anyone is interested. In addition, he was able to purchase multiple

Raspberry Pi boards that the cameras are based on, and would be happy to help additional members get involved. You would be required to have a good internet connection to connect to the Global Meteor Network based out of Western Ontario University. Anyone interested in joining this Citizen Science project should contact John at the meeting, or contact Frank Lyter.

AstroImaging: Tom Duff

- The next meeting of the AstroImaging group is next Saturday August 19 at 7:00 p.m. at South Mountain. All interested members, whether beginner or expert, are welcome.

Stargazers Group: Kyle Kramm

- The next meeting of the Stargazers Group will be on Friday September 8 at 7:00 p.m. at South Mountain. This is an informal meeting where members are encouraged to bring their equipment or any topics for discussion. The meeting will be held rain or shine with outdoor viewing if clear, or videos and discussions indoors if the weather doesn't cooperate.

Pulpit Rock Observatories & Maintenance: Frank Lyter & Ron Kunkel

- There is a long list of projects for Pulpit Rock that includes painting the Tinsley Observatory to resemble R2D2 and running electrical conduits to additional pedestals in the observing fields.
- Sign up for the Pulpit Rock groups.io email if you are interested in helping out
- Frank and Ron are also available for training on the equipment and to obtain keys. Contact them by email to make arrangements.

South Mountain Maintenance – Bill Dahlenburg

- Members of the South Mountain maintenance team are available most Saturdays from 9 a.m. to noon for tours of the facilities or to help with maintenance. Please confirm with Bill by email that you plan to go to South Mountain.
- We continue to need help at our Star Parties. We particularly need help to run the telescopes. No experience is needed and you will have help getting set up.
- We need help to run the Red Shift during our Star Parties. It's a good way to get involved.
- We are looking for new members to get involved. Please contact Bill if you would be interested in running for an office.

A break was taken from 8:20 p.m. until 8:50 p.m. while we waited for darkness prior to the beginning of tonight's presentation.

Director Mike Huber introduced our meeting's speaker, Jonathan Cuadra.

Tonight's general meeting's presentation is "Photometric Study of Cataclysmic Variable Star SS Cygni" given by Jonathan Cuadra. Jonathan is an aspiring physics major at Muhlenberg College, soon to be in his 2nd year. He has been fascinated by the cosmos since he was young, and has always had lingering questions about how the universe and things in it work. Throughout his academic career and research opportunities, such as the one he will be speaking about this evening, he has been able to embrace his curiosity and interests. Jonathan hopes to, in the future, harness these traits of his into work that he can make a career from. In his free time, Jonathan enjoys spending time with his family, cat (Janey), equally-as-nerdy-as-him girlfriend, and on trips and vacations.

Variable stars are stars that fluctuate in brightness over a period of time. Using photometry (measuring light via images), variability in brightness can be quantified over time as data. These data are then plotted as a light curve (a graph of the magnitude of light over time), analyzed, and can be corroborated with other stellar data to determine aspects of the star. In my research, I am utilizing an Orion 8" RC Reflector Telescope, CCD monochrome camera, and Aperture Photometry Tool (APT) to locate, observe, and record new data for a particular category of variable star.

The star I am researching is SS Cygni, an intrinsic, cataclysmic, binary variable star system that includes a white dwarf star and a red dwarf star. The goals of the research are: to produce light curves, analyze them, and determine if significant deviations from the typical trend lie in new data compared to previous existing data. SS Cygni has a history of being irregular in its period; in the 90's it had considerably unique behavior from its typical trend. Its magnitude varies between magnitude 8 and magnitude 12, and usually over a period of 7 to 8 weeks. Therefore, I thought it to be fitting for an academic summer research project.

Differential photometry was used to determine the magnitude of SS Cygni by comparing its brightness to nearby stars of known, steady brightness. A light curve was then plotted with time along the X-axis and magnitude on the Y-axis. To account and correct for light pollution, a technique called Aperture Photography was used to better determine the magnitude of the star. The American Association of Variable Star Observers is an organization of amateurs who track variable star data and make it available to professional astronomers. Fourier analysis was then used to determine the best sinusoidal functions to describe the light curves.

As an aside, astronomers tracked the magnitude of the supernova that was identified in the Pinwheel Galaxy (M101) that first appeared in May. The light curve of the supernova SN 2023ixf was shared with the audience. Questions were then taken.

Next General Meeting:

- The next general meeting will be held on Sunday, September 10, 2023 at 7:00 p.m. at South Mountain.

The meeting was adjourned at approximately 9:20 p.m.

Submitted by Joe Zitarelli, Secretary

* * * * *



Nomination of LVAAS Officers for 2024 Term

Nominations for LVAAS officers will be accepted through the close of our September 10th membership meeting at South Mountain. LVAAS full members in good standing (current dues paid) are entitled to vote and/or be considered for office. Nominations will not be accepted nor shall additional nominations be placed on the ballot after the close of nominations during the September 10, 2023 membership meeting.

Nominees to date:

Director: Ben Long

Assistant Director: Gary Shoemaker and Kyle Kramm

Secretary: Joseph Zitarelli

Treasurer: Kari Fobe

Please contact me at the address below should you have questions regarding any of the positions above or may be considering an elected position.

Voting for contested positions will take place at our October 8th membership meeting and installation of newly elected officers will take place at our December meeting.

Regards,

Bill Dahlenburg - Nominating Committee Chairman

sm_maintenance@lvaas.org

ALL MEMBERS! LVAAS NEEDS VOLUNTEERS TO KEEP THE SOCIETY RUNNING!

The benefits that you, as an LVAAS member, enjoy are not free. They are provided due to the generous sacrifice of time and labor contributed by our dedicated volunteers. If no one steps up to share the work, these benefits will start to diminish in quality, or may vanish altogether. If you are a member, old or new, and have never volunteered to help, it's easy! Just contact either Director Mike Huber, or any chairperson/director on the contacts page of our website. "Many hands make light work" so please lend a hand to help keep your astronomy society vital! Any time you can give will be greatly appreciated. Volunteer!

Via France Kopy, Newsletter Editor

Do you own a camera or smartphone and usually attend LVAAS functions? Would you like to help out LVAAS and our newsletter as a volunteer? *The Observer* is in need of members to act as photographers in an informal capacity to capture the action at various society events, both public and members-only. You will receive a published credit under each of your photographs, and a mention in the black box on the last page of every newsletter. Please contact me at editorlvaas@gmail.com if you'd like to volunteer and for more information.

Via Sandy Mesics, Programs Chairperson

Upcoming LVAAS General Meeting Speakers

September: Charles Bracken (via Zoom) will speak on Astroimaging.

October: John Conrad (via Zoom) will speak on the Osiris Mission.

November; (tentative) author Dava Sobel (via Zoom) will speak topic TBA.

December (Holiday Party) Speaker is still needed for this event.

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

Via Dave Raker, Society Librarian

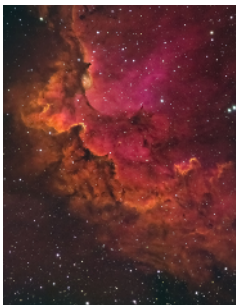
I conducted the annual inventory of the books and videos in the library collection. We have 985 books and 365 videos with a smattering of spoken-word CDs in the collection. There were some books and videos that were missing as the check-out cards for those items were not in the blue bin on the desk. There are books that have been checked out since late last fall, so I will assume that whoever has the item out is no longer a member or simply forgot to return it.

2.) I ordered some books from Hamilton Books this week and will make a list for next month once they arrive. There are some free items on the table in the front of the main room for those who want them.

Via Earl Pursell, UACNJ Liason

UACNJ provides free public programs on-site at our Observatory in Jenny Jump State Forest, New Jersey from April through October on Saturday evenings. To view the program line-up please visit uacnj.org.

NJAA will be holding an **open house and astronomy flea market**; info [here](#).



Cover Image: (NGC 7380) The Wizard Nebula Imager: Warren Landis

Aquisition Data

11" SCT

ZWO ASI2600mm-cool

ZWO OAG

ZWO EAF

Photographed from Warren's backyard observatory in downtown Allentown, PA in September 2022.

ZWO ASI174mm

ZWO 2" filters

ZWO ASIair+

[more](#)

Stargazers Group

Come join the Stargazers Group!

All members are welcome regardless of experience!

New members are welcome to learn how to operate their telescopes

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, except for December, January, and February.

If you need help with equipment please arrive before dark so there is time to work on it

We all love the night sky and look forward to sharing that with you!

Kyle Kramm

Kman10274@gmail.com



LVAAS General Meeting

Sunday, September 10 at 7 p.m.

South Mountain Headquarters

"A Field Guide to Deep-Sky Objects"



presented by

Charles Bracken

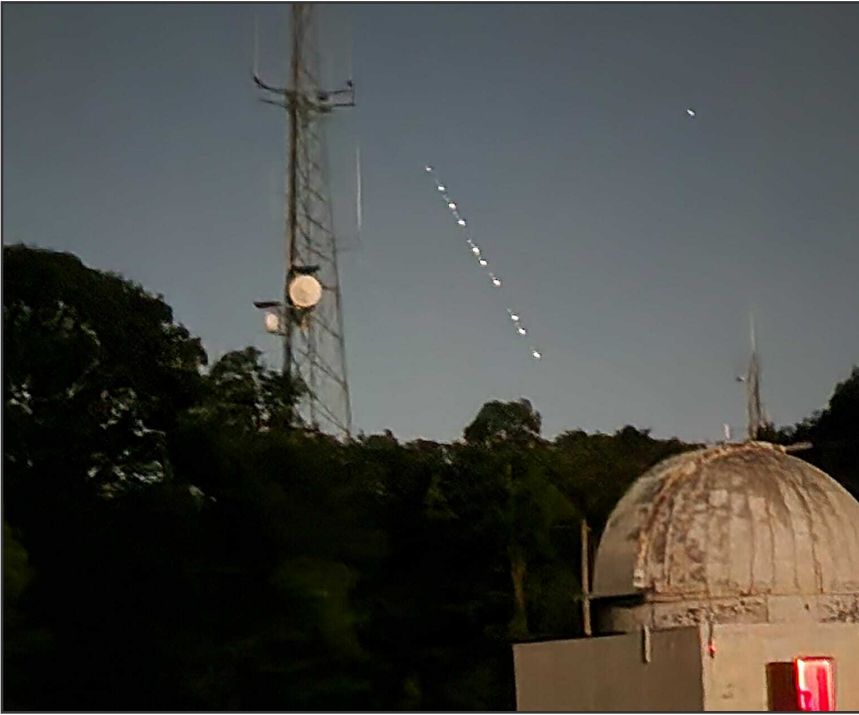
If you've ever wondered what you're looking at in astrophotos, this talk will cover the different types of DSOs, what they're made of, and how we image them.

Charles Bracken is an astrophotographer and the author of several books about the subject, including *The Deep-Sky Imaging Primer*. He lives in Bucks County, PA.

Prospective new members who wish to attend the meeting should email membership@lvaas.org.

From the Field

Ron Kunkel



This is a smartphone photo taken by my daughter, Rebecca, of one of the two Starlink trains that we observed up at Pulpit Rock last evening (9/1). This was the second one, observed at about 10:00 p.m. The earlier one was low on the southern horizon, just above the trees and not nearly as bright as this satellite train. This train was stunningly bright although it didn't last long before it disappeared into the Earth's shadow due to the lateness of the hour. The satellites actually moved into the Earth's shadow right near the tower, so the train didn't travel very long at all before disappearing.

I had all of the grandkids and many of their parents and some other relatives up on the mountain. We watched the near full Moon rise and also did some observing. I was lucky to also have Frank Lyter up to help with the small crowd. In total I think there were 16 of us present.

Ron

Frank Lyter



Gary Becker led an astronomy outreach event at Hawk Mountain Sanctuary on Sunday, August 20th. The skies cooperated and were clear enough to see the Milky Way! It was held in Hawk Mountain's parking lot surrounded by trees which worked out well as we concentrated on viewing objects directly overhead. Saturn poked through the trees at the end of the event giving a nice view of the planet.

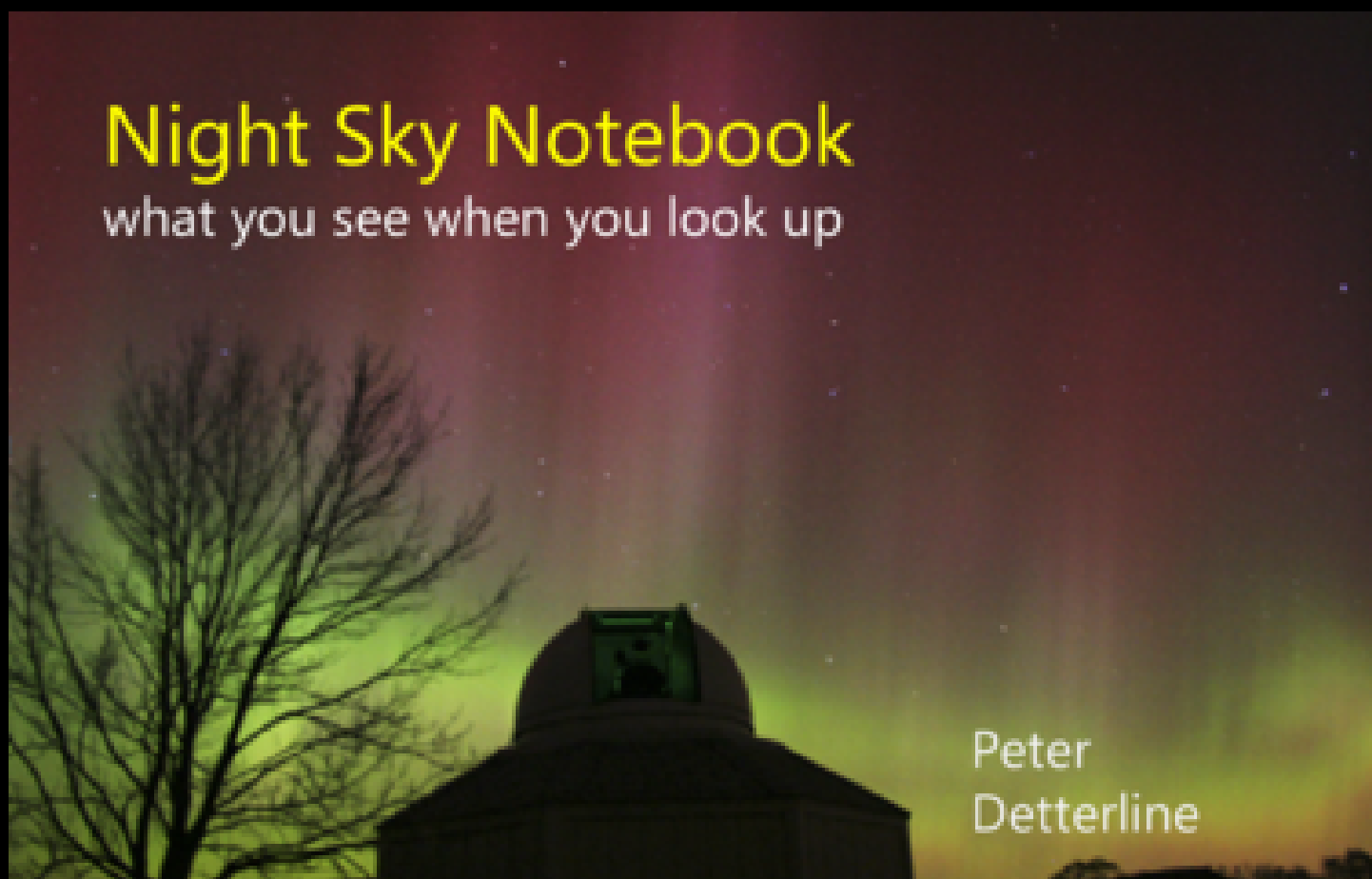
I estimate there were about 25 in attendance to hear Gary and Pete Deterline speak in Hawk Mountain's beautiful outdoor amphitheater. Terry Pundiak, Pete Deterline, Matt Gustantino (past member of our club) and I set up telescopes in the parking lot for viewing after the talk. Aaron Prince, Educator and Raptor Care Specialist, at the Sanctuary was the host for the event and was very enthusiastic participant in the event.

Folks enjoyed the event and I let folks know we had facilities at Pulpit Rock and South Mountain with public events published on our LVAAS web page. Several expressed interest in attending one of our star parties this fall. Gary took photos of each of us out standing in the field (or parking lot in this case). Attached is the photo he sent me .

Regards,
Frank



Peter Detterline's
Night Sky Notebook
SEPTEMBER 2023



A History of the Spacek Observatory

By George H. Maurer, 1998. Revised by Sandy Mesics 2023

Upon the completion of the twenty-inch Schlegel-McHugh telescope at Pulpit Rock in 1974, the demand for its use could not be satisfied. Much of the observing time was used by the team working in a program with Villanova University in the study of variable stars. The availability of the 12.5-in. Cassegrain telescope that was removed from the Kawecki Observatory inspired the idea to build a suitable enclosure for it so it could be available for members use.

It was suggested to erect a small observatory with a roll-off roof for the telescope. This was proposed at the January meeting in 1976 and approved. The design would have a wooden floor twelve feet square with a wall made of a combination of cement block and steel. By carefully seeking out surplus materials, the estimated cost would be \$800 by using our own labor. (Note: that would amount to close to \$3,600 in 2020 dollars). A fund drive among the members was approved to finance this.



The Spacek Observatory with the 12-inch Newtonian built by Mike Spacek.

In those earlier years of the Society, our finances were limited. Our budget for the year 1976 was \$3825 with a very limited reserve, therefore it was a practice to conduct fund drives to support new projects.

The rapid completion of this observatory set a record in construction time thanks to the specialized team who led the work. The group consisted of Ralph Schlegel, Stan Wilkes, Bill McHugh and Pete Brooks. The steel material was obtained early in 1976 and prefabricated during the late winter months. Ralph and Bill went over the telescope and got it ready. This preparation was completed by March and excavation began in early April. By this time, \$395 had been pledged by the members.

The construction moved smoothly along with many of the members pitching in at regular work parties that were held each clear weekend. By May, erection of the sidewalls was underway and the monies that were pledged were up to \$500. The goal for completion was July so that it would be usable at the Astronomical League convention in August that the Society was hosting. The goal was achieved with the building completed with telescope installed in July of 1976, a total construction time of just 7 months! The fund drive was also a success and exceeded its goal with a total of \$844 received.

Randolph Warden, a lawyer who was one of our Advisors in legal work, donated his Spacek 12.5-inch f-5 Newtonian telescope to the Society. Accordingly, the new observatory was arranged so that either the Spacek Cassegrain or the Newtonian could be mounted in the building.

Michael Spacek was an amateur astronomer as a young man. In the late 1930's he formed a small optical company. It was in this period when public interest in astronomy became more popular. A few public planetariums had opened and a market for telescopes and lenses for amateurs was beginning to grow from the few sources at that time. Serious amateurs ground their own mirrors while less energetic amateurs with limited means made simple refractors with spectacle lenses. (The writer's [George Maurer's] introduction to astronomy was with a homemade refractor using a kit of a 1.318 inch, f35 spectacle lens!)

Mike's business was interrupted when he was called into military service during WW2. Following his service, he formed his own company: Spacek Instruments in Pottstown, Pa., where he established a fully equipped optical shop. Initially engaged in manufacturing telescopes for the general public, he developed a clientele needing special forms of optics and optical instruments.



In this respect, his expertise in optical craftsmanship was joined with his clever and imaginative mind and he often had work that other firms did not wish to accept that he successfully produced. For several years he was the sole supplier of hundreds of tiny two element lenses for the Spitz planetarium projectors.

Mike became a friend to the Society and ready source of advice and materials at reasonable

cost. Many of our members had their homemade mirrors aluminized at his shop. In recognition of his support of the Society, he was made an honorary member.

In September 1976, *The Observer* reported that the 12-inch f-15 Cassegrain reflector was installed in the Spacek Observatory. Bill McHugh was making a 4-inch f-15 objective for the guide scope to be used with the instrument. At some point the Cassegrain was moved to South Mountain, and the 12-in. Newtonian was placed in the Spacek Observatory.

When Mike officially gave the 8-inch refractor that is housed in the Kaweck Observatory to the Society, it came to mind that the roll off observatory that the Society built in 1976 had never been named. The fact that the Newtonian telescope that was installed there was made by Mike appeared to make naming it the Spacek Observatory an obvious move as a means of recognition of Mike's long record of service to the Society. This was done in late 1983. The dedication was scheduled to take place at our annual August meeting at Pulpit Rock on the 18th of that month. Unfortunately, heavy rain made the road impassable and so the official ceremony was held at a dinner at the Lenhartsville Hotel. Both Mike and his wife seemed touched and grateful for this honor. And so, after a lapse of seven years, the observatory received a proper name.



Left to Right: Mrs. Spacek, Mike Spacek, Rae Klahr (LVAAS Director), and Ralph Schlegel.

In the summer of 2020, Frank Lyter, Ron Kunkle, and crew moved the 12" LX200 Classic SCT from the trailer to the Spacek Observatory so that members would have easy access to a go-to

telescope. As we move toward the 50th anniversary of the Spacek Observatory, plans are to replace the roof with aluminum that is now a part of the defunct trailer observatory. With these improvements we fully expect the Spacek Observatory to provide great views of the heavens for another half century!



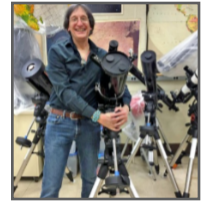
Spacek Observatory in Spring 2023. Photo by author.

Reference

The Observer, September 1976.



it.



Prepare NOW for the Partial Solar Eclipse of October 14

The US will be favored with two central solar eclipses in a period of just under six months. The first on October 14 will be an annular eclipse, where the moon will appear to have a ring of fire surrounding its disk. This event will favor Oregon, extreme northeastern California, Nevada, Utah, northeastern Arizona, New Mexico, and Texas. On April 8, 2024 the sun is completely hidden for about four minutes from Texas, southeastern Oklahoma, Arkansas, southern Illinois, Indiana, Ohio, **northwestern Pennsylvania**, New York, Vermont, New Hampshire, and Maine. Both of these events will be visible as partial solar eclipses from the Lehigh Valley if weather conditions permit. * Locally, from the Sky Deck of Moravian University, the October 14 partial solar eclipse begins at 12:05 p.m. EDT, reaches maximum obscuration of the sun's disk (25 percent) at 1:20 p.m. and ends at 2:36 p.m. The April 8, 2024 partial solar eclipse begins at 2:08 p.m. EDT. The moon covers the sun's disk to a maximum obscuration of 91.4 percent at 3:24 p.m. and leaves the solar disk by 4:35 p.m. These times for both eclipses do not vary by more than a minute or two for any location in southeastern PA. * For enthusiasts who wish to observe these two partial eclipses without optical aid, it is imperative to practice safe solar observing techniques. **In its most simplistic form, this involves safely filtering the light of the sun before it reaches your eye. Not doing this properly could result in blindness.** * To give an example of the sun's power, I looked at Sol with my unaided eyes on August 21, 2017 about 30 seconds before totality in the hopes of catching the beginning of the

diamond ring phenomenon before I netted it on camera through my telescope. Although the sky was a deepening gray in color and the light of the sun illuminating the ground was ephemeral at best, I could not make out the disk of the moon and corona against the sky, just an incredibly, overwhelmingly bright, star-like object. I watched too early, was late in pulling off my solar filter, and totally missed the ingress diamond ring to my regret. * If 30 seconds before the start of totality, Sol remains too bright to catch any eclipse details, then the full disk of the sun is hundreds of thousands of times brighter. * The moral of this story is don't mess with the sun. Instead invest a few dollars and buy a couple of solar shades for you and your friends from a reputable company like [Rainbow Symphony](#).

Please see Eclipse Shades [here](#). They market ISO (International Organization for Standardization) black Mylar eclipse glasses and eclipse viewers which produce a safe, comfortable image of the sun. Beware of less expensive and less reliable glasses and viewers from China and India that do not meet these high standards for eye safety. * As I write this article we are only 48 days away from the first E-day event, October 14. Eclipse shades take about 10 days to arrive by UPS, so this is not the time to delay if you want to view this partial solar eclipse safely from the Lehigh Valley. And don't throw them away after October 14. Store them safely in a plastic sandwich bag, and you'll be set for the partial phases of any solar eclipse during your lifetime. Ad Astra!

©Gary A. Becker -- beckerg@moravian.edu or garyabecker@gmail.com
Moravian University Astronomy - astronomy.org also facebook.com/StarWatchAstro/

[Join](#)



"... World turning on the burning sun..." (lyric from "Gaia" - James Taylor rend.)
As dawn breaks, one wonders if this is indeed a picture of our Earth that we're looking at, or some other, alien world..
An early September sunrise was captured from Pulpit Rock outlook by LVAAS member and runner extraordinaire, Jim Blandford, on our own, very beautiful planet.

FOR SALE! LIGHTLY USED CELESTRON TELESCOPE/MOUNT SYSTEM

LIGHTLY USED CELESTRON TELESCOPE/MOUNT SYSTEM

Celestron Advanced VX Mount (purchased 2017)

- Many features for star finding (>40,000 objects)
- Auto-guider to keep object centered
- See <https://www.celestron.com>

Celestron C102-HD Refractor Telescope (purchased ~1997)

- 102 mm dia, 1000 mm focal length
- Finders scopes
 - Orion 9x50 Right Angle, Correct Image
 - Telrad Reflex Sight

Many Eyepieces:

- Orion Stratus Wide Field 1.25"/2"
- Meade Plossl: 5.5, 12.5, 20, 25 mm
- Filters: Moon, Polarizer, Cel. No. 8
- Thousand Oaks Optical 4 Channel Dew Heater control and heating straps

Orion Carrying Case for eyepieces +

Golf outer bag for holding everything

Total retail value about \$2000

Asking \$1,000 (price reduced)

Will sell mount and telescope (with original manual equatorial mount) separately

- Call for separate pricing

Jim Farrand

610-216-3438

jcmfarrand@gmail.com

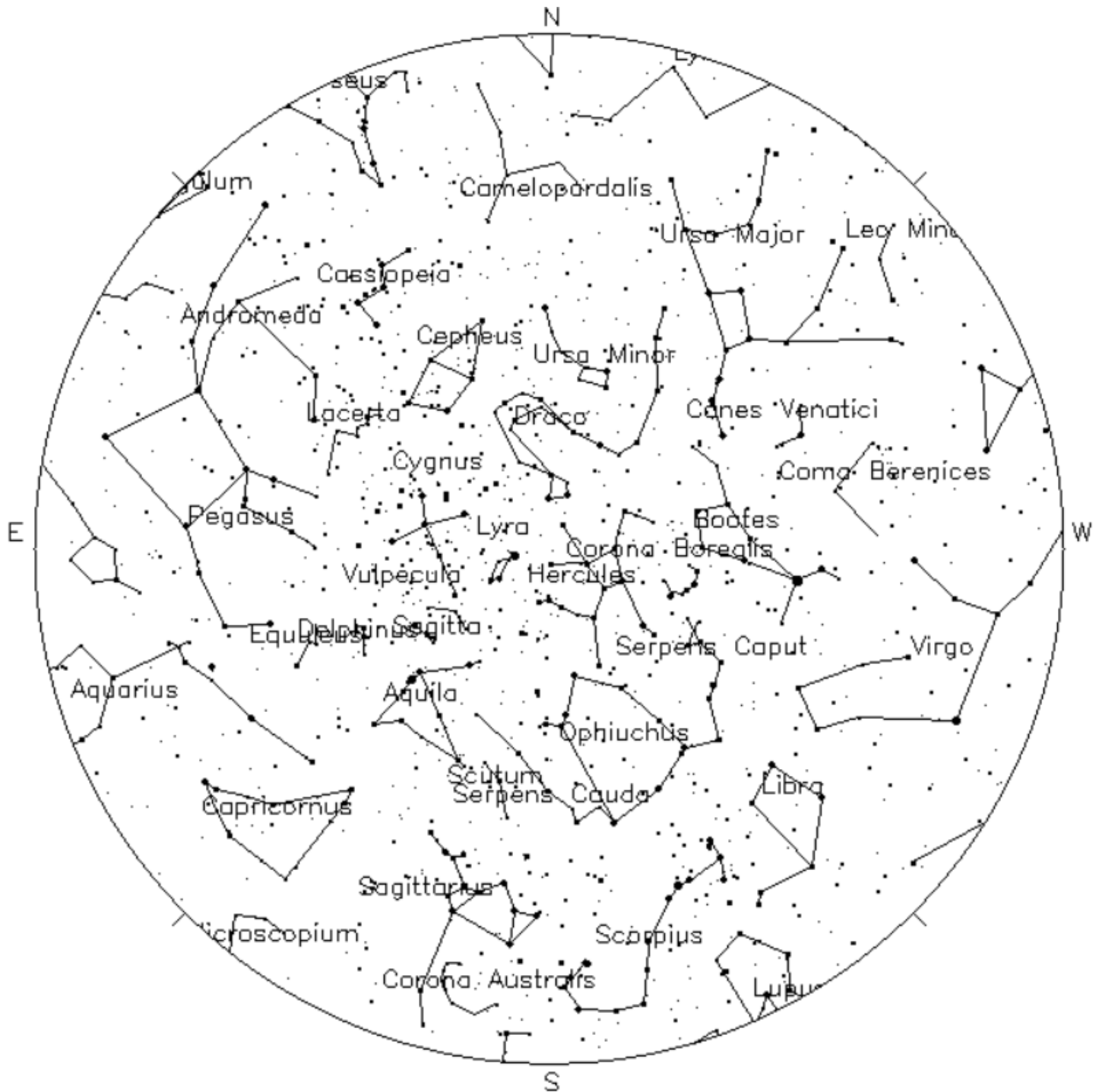


SEPTEMBER

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

OCTOBER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
01	02	03	04	05	Last Quarter Moon 06 Scout Camping at Pulpit Rock	Scout Camping at Pulpit Rock 07
Scout Camping at Pulpit Rock 08 General Meeting - 7:00 PM	09	10	11	12	Stargazers Group Meeting 13	New Moon 14 Astroimaging Meeting - 7:00 PM
15	16	17	18	19	20	First Quarter Moon 21 Star Party
Deadline for submissions to the Observer 22	23	24	25	26	27	Full Moon 28
LVAAS Board of Governors Meeting 29	30	31				



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/>

2023 LVAAS EVENT CALENDAR

Contributed by Bill Dahlenburg

2023 LVAAS Event Calendar											
	Sundays			Saturday			Multi-Day Weekends	Moon Phase			
	General Meeting time	location	Board meeting	Astro-Imaging	Star Parties	Scouts at S. Mountain	Scouts at Pulpit R.	New	1 st	Full	3 rd
January	8	3:00 PM Muhlenberg	29	no meeting	no meeting		no camping	21	28	6	14
February	5	3:00 PM Muhlenberg	26	no meeting	no meeting		no camping	20	27	5	13
March	12	3:00 PM Muhlenberg	26	no meeting	25		no camping	21	28	7	14
April	2	7:00 PM S.M.	30	22	29			20	27	6	13
May	7	7:00 PM S.M.	21	20	27			19	27	5	12
June	11	7:00 PM S.M.	25	10	24			18	26	3	10
July	8	5:00 PM S.M.	30	15	22			17	25	3	9
August	12	7:00 PM Pulpit	27	19	26			16	24	1 & 30	8
September	10	7:00 PM S.M.	24	9	23			14	22	29	6
October	8	7:00 PM S.M.	29	14	21			14	21	28	6
November	12	2:00 PM S.M.	26	11	18			13	20	27	5
December	9	2:00 PM ?	17	16	no meeting		no camping	12	19	26	5

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 4/15 – 4/16
 MEGA MEET 8/11-- 8/13
 CSSP 6/15 – 6/18
 Stellafane 8/17 – 8/20
 BFSP 9/15 – 9/17 ??

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.

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No images of people under 18 years of age will be accepted for publication at this time. 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 are always welcome. Document proofread by Rich Hogg on a monthly basis.

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