

# The Observer

The Official Publication of the Lehigh Valley Amateur Astronomical Society

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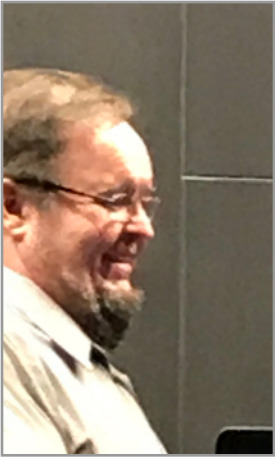
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The Soul Nebula, imaged by Lynn Krizan, is an emission nebula located in Cassiopeia and is ~6500 light years from Earth. Telescope: Takahashi FSQ106ED at F3.6 using a QHY268M mono APS-C cooled CMOS camera. Hubble Palette: Red=SII, Green=Ha, OIII=Blue. Acquisition time=8 hrs.



# AI'd Astra

by former LVAAS Director, Rich Hogg, guest columnist

## Instant Microwave Poetry

One of the most exciting recent developments in technology is the emergence of the AI programs known as "large language models" or "LLMs." They have not had much impact on our hobby, at least not yet, and they're known to be unreliable in answering questions of a factual nature. But they can be very useful in helping to write code or plain ol' prose, as long as you look over their shoulder. And just for fun, they can write bad poetry about weird topics, very quickly!

I recently asked ChatGPT, one of the best-known LLMs, the following: "Write a Shakespearean sonnet about watching for Perseid meteors while listening to the tree frogs in the nearby woods." In about five seconds it responded with the following:

*Upon a summer's eve, when daylight's flight  
Gives way to night's embrace and stars ignite,  
I seek the heavens' silent, mystic show,  
Where Perseid meteors in grandeur flow*

*While skyward I behold their fleeting streaks,  
The ancient woods a symphony bespeaks;  
The tree frogs' chorus in the darkened shade,  
Their lilting notes in moonlight softly laid*

*Each meteor, a swift and fleeting fire,  
Doth cast its glow, a brief and bright desire,  
And 'neath this cosmic dance, their trails entwine  
With woodland music, ancient and divine*

*Thus, in this tranquil night of starry lore,  
The heavens and the forest both restore.*

Hmmm. Who ordered the moonlight? That's not going to help us see very many Perseids. And I think Shakespeare is rolling over in his grave. But still, it is a bit of a thrill, and a little scary, to see this arrive so quickly after sending the request. I don't think any human being could write even a terrible poem that fast.

Let's try another. "Compose a villanelle about waiting for the North Star to come out so that a telescope can be aligned to prepare for the evening's Star Party, from the point of view of an older man who is hoping the his experience will compensate for his aging eyes and allow him to find it before his younger friend does."

*Waiting for the North Star*

*In twilight's glow, I wait for evening's guide,  
With telescope in hand, I search the skies,  
Hoping my old eyes will find where stars reside*

*The younger ones with eager steps stride,  
Their laughter echoes, quick and wise  
In twilight's glow, I wait for evening's guide*

*Experience and time stand by my side,  
As I scan the heavens for Polaris to rise,  
Hoping my old eyes will find where stars reside*

*The night grows deep, and doubts I must abide,  
Yet memories of star maps in my mind arise  
In twilight's glow, I wait for evening's guide*

*My hands are steady, though my sight is wide,  
Years of practice are where my strength lies,  
Hoping my old eyes will find where stars reside*

*The North Star appears, a beacon dignified,  
And triumph warms me as I meet young eyes  
In twilight's glow, I wait for evening's guide,  
Hoping my old eyes will find where stars reside.*

Well, there we have a good example of the AI's poor grip on the facts. He will be waiting a long time for Polaris to "rise." Or maybe it's just the cybernetic version of poetic license. It's interesting, though -- the scientists and programmers who are developing these things insist that they are simply rearranging and regurgitating the billions of words and phrases that they have been "trained" on, and that what they are doing is definitely not "thinking." But they have never explained how an LLM can correctly generate novel text with the complex rhyming structure of a villanelle. We don't really understand how they work. We don't really understand how our own minds work, either, which leads me to wonder, are they really fundamentally different?

"Now I would like 3 to 5 verses of anapestic trimeter with an A B B A rhyme scheme. One of the lines should be 'Pulpit Rock Astronomical Park.' We should mention the event known as MegaMeet, which is being combined with the Stargazers Group meeting, and the sponsoring organization is LVAAS, which is pronounced like 'Elvis' but rhymes with 'grass.'"

*In the cool of the night, where the starlight will spark,  
At Pulpit Rock Astronomical Park,  
The MegaMeet's here, with the Stargazers' crew,  
As LVAAS hosts the sky's grand debut*

*The heavens unfold in a celestial arc,  
With telescopes set for each cosmic mark,  
The stargazers gather, their eyes all aglow,  
In the heart of the night, where the soft breezes flow*

*Under skies that are clear, and the cosmos will sing,  
The MegaMeet blends with the group's shared dream,  
And LVAAS leads with a starry embrace,  
In the light of the stars, there's a magical space.*

It decided to go with AABB instead of the requested ABBA, and though the meter is a little loose it sort of works. This obviously has no literary merit to speak of. It also required no effort to speak of. Like the others, it emerged on my computer screen less than 5 seconds after I entered the request - less time than it took me to read it. And we can only hope that its aspirational clear sky wins out over the current thinking from the meteorological community.

This is a fun thing that you can do with a computer, that was not possible several years ago. Anyone can go to <https://chatgpt.com/> with a web browser, and ask it for just about anything! At the present time you do not need to create an account. Just do not rely on it to provide medical advice or operate heavy machinery. It may sound like it is providing solid facts, but it is very fond of just making stuff up.

*There once was a stargazing crew,  
Who had plans for a night sky so blue.  
But the rain came to play,  
And washed dreams all away—  
Now they wish for a sky that's less new!*

-- Rich Hogg, 5 August 2024; all poetry was composed by ChatGPT.



# Lehigh Valley Amateur Astronomical Society (LVAAS)

## MEGAMEET

Pulpit Rock Astronomical Park

August 9-11, 2024

**We may re-schedule depending on weather; please check [lvaas.org](http://lvaas.org) for updates**

### EVENT INFORMATION

MegaMeet is LVAAS's annual barebones star party without vendors, speakers, or registration fees. Members in good standing of regional amateur astronomy clubs are invited to attend. MegaMeet attendees can either come for the evening observing sessions or tent camp for the weekend. Access to the site, behind a locked gate, is via 2 miles of some rather steep gravel mountain road. The road is in good shape and is readily accessible for cars and light trucks. Trailers should not attempt to access the site. Camping is encouraged, but space is limited. Due to limited capacity at the site **LVAAS nonmembers will be required to register for this event**. You can register for the event by emailing [duffmeister@rcn.com](mailto:duffmeister@rcn.com) with your name, and number of people in your party, indicating if you plan to camp or just observe. Questions can be directed to the same email address.

### SITE INFORMATION

Pulpit Rock Astronomical Park, or as it is commonly called, "The Rock," is a 4.3-acre mountaintop site near Hamburg, Pa that sits 1,600 feet above sea level on the Appalachian Trail. The installations and equipment at Pulpit Rock offer the serious amateur or the novice an opportunity to contribute meaningful scientific information to the astronomical community, or to simply view the splendors of the heavens from our several acres of landscaped grounds. The site was founded in the 1960's by Henry Kawecki, an industrialist from Berks County, who built the first observatory.

### DIRECTIONS AND SITE ACCESS

**Directions** to the site can be viewed at the LVAAS website. For LVAAS nonmembers or members without keys **the locked gate will be attended on Friday August 9 from 4:00 p.m. to 7:00 p.m. and Saturday August 10 from 4:00 p.m to 7:00 p.m.** Upon access to the site, you will receive the combination to the special gate lock used for this event and will be free to come and go until 12:00 noon on Sunday.

### FOOD SERVICE

There is **no food service and no potable water** so please plan on bringing your own food and water. If you do plan on bringing your own food and cooking it yourself, you must use either a charcoal or gas grill for cooking as no open fires are permitted on site.

### FACILITIES

There are **no shower facilities**; however, there is electricity and a flush toilet available on site. Please visit the LVAAS website for information on Pulpit Rock Astronomical Park.

Submitted by Tom Duff, Astroimaging Director

# LVAAS General Meeting

Saturday, August 10, 7 p.m. 💧 Rain Date Aug. 11

Pulpit Rock Astronomical Park

## "The Long and Winding Road to a Muhlenberg Observatory"

*presented by*

**Brett Fadem, PhD**



In 2004, when I started at Muhlenberg College, Professor Robert Milligan had constructed a robotic observatory in Siding Spring, Australia for the College. Sadly, the observatory was mothballed several years later, but I always hoped to build another. In the interim, my students and I spent our summers working at Brookhaven National Laboratory on research, related in part to the quark-gluon plasma, a state of matter that existed everywhere in the universe millionths of a second after its creation, and to other fundamental questions in high energy nuclear physics. I will discuss the connections between my research endeavors and astronomy and how these have led, with the help of the family of a former student, Ben Eber, and club members like Frank Lyter, to the new observatory that has nearly been completed at the Conrad W. Raker Wildlife Reserve in Germansville, PA. The astronomy course at the College also utilizes the Skynet robotic telescope network and the "Our Place in the Universe" (OPIS) curriculum. The role this plays along with the use of smart telescopes will also be discussed.

**About Me:** After a 10-year acting career in NYC, I attended Grinnell College from 1991 to 1995, where I graduated with a B.A. in physics. Continuing on to graduate study in high-energy nuclear physics at Iowa State University, I earned my Ph.D. in 2002. After a two-year teaching position at Colby College in Maine, I took a faculty position at Muhlenberg College in 2004 where I have taught for twenty years. Over the interval, with the help of three NSF grants, I have exposed dozens of undergraduate students to nuclear physics research at Brookhaven National Laboratory in Long Island using the Relativistic Heavy Ion Collider (RHIC). Recently, I have started teaching astronomy at Muhlenberg College and have become involved with the Skynet consortium that uses a worldwide network of robotic telescopes to teach introductory astronomy and more advanced courses in observational astronomy.

Prospective new members who wish to attend the meeting please email [membership@lvaas.org](mailto:membership@lvaas.org).



## Minutes from the LVAAS General Meeting – July 13, 2024

The July 2024 LVAAS General Meeting was conducted electronically using an online service and at the South Mountain headquarters. Approximately 60 people were in attendance.

Director Benjamin Long opened the meeting at 7:05 p.m.

The meeting began with Jamie Elovski announcing the winners of the LVAAS Silent Auction of Astronomy equipment. The winners were:

8" Meade	\$100	Kyle
Nexstar 60	\$20	Dean
Red Dob	\$30	Fallan
Meade DS-2102	\$20	Preston
Orion Star Blast 4	\$45	Preston
Celestron Newtonian 114	\$5	Chris
Celestron Astromaster 130	\$20	Preston
Meade Digital	\$10	Chris
Orion StarBlast 6i	\$90	Fallan
Astroscan #1	\$10	Craig
Astroscan #2	\$35	Steve
Meade Backpack	\$35	Art
Celestron Wedge	\$30	Kyle
10" Meade	\$500	Jeff



Tonight's General Meeting's presentation was "LVAAS Imaging Equipment", featuring Mike Huber.

Michael Huber was first introduced to astronomy by his father, a professor of astrophysics, who patiently answered his many questions about the cosmos. Memorable events like viewing comet Hale-Bopp, meteor showers, and observing deep sky objects and planets through his father's telescopes furthered his love for the night sky. Upon joining LVAAS, Michael quickly got involved in astrophotography and has taken many photos, some of which have been published. In addition to his personal pursuits, Michael also shares his knowledge and enthusiasm through talks at local libraries and presentations at LVAAS.

In this presentation, we'll explore the exciting new equipment our astronomy club has acquired, including the ZWO Seestar S50, SkyWatcher Star Adventurer 2 Pro Pack, and a comprehensive astrophotography rig featuring an EQ6 mount, Stellarvue 102 telescope, ASI585MC Pro, and various accessories. We'll cover the key features, setup processes, and usage tips for each piece of equipment, ensuring our members are well-equipped to enhance their stargazing and astrophotography experiences. Towards the end we will cover the rental fleet, and how members can rent the different instruments LVAAS has available.

Mike's presentation started with a quote: "Astrophotography is easy" - Nobody

#### ZWO Seestar S50

This is an example of Electronically Enhanced Astronomy (EEA). It is simple to set up, very easy to use and small. It comes with a 6 hour battery. It can be used to image the moon, solar photography and deep sky objects. It has built-in Wifi and works with your phone or tablet.

#### Sky-Watcher Star Adventurer 2i Pro Pack

This is used to track the night sky with your own camera. The Star Adventurer assists the imager with polar alignment, lines up the target, and then tracks the sky while the camera takes the images. It runs on two AA batteries or a 5V mini-USB. It has an 11 pound payload. There is an available app to control the camera and the mount. If you have a tripod and a camera you can do deep-sky imaging with this mount.

## LVAAS Full Astroimaging Rig

The equipment consists of:

- Stellarvue 102 ED f7 Refractor
- Sky-Watcher EQ6R-Pro Mount
- ZWO ASI585MC Pro Camera
- ZWO 30mm f4 Mini Guide Scope
- ZWO ASIAIR Mini
- Dew heaters
- Battery pack available

The Stellarvue Telescope is a top quality telescope. It is a 102mm f7 doublet refractor. The mount has a payload of up to 44 pounds. The camera has a 91% quantum efficiency. The ASIAIR mini will assist the imager by allowing for polar alignment, choose and slew to a target, start guiding and allow for live stacking.

Aside from the LVAAS imaging equipment, the LVAAS rental fleet has many different types of telescopes, as well as binoculars, available for rental. This gives members the opportunity to try it before you buy it. There are also multiple eyepieces available that can enhance your viewing. There is more information on the rental fleet on the LVAAS website along with directions on how to rent.

After questions, a break was taken at 7:55 p.m. The informational meeting resumed at 8:10 p.m.

Membership: Rich Hogg

- The following members completed their Second Readings and are now Full Members:
  - David Stech and Jill Youngken (family membership)
  - Scott Wilson and Kristen Wilson (family membership)
  
- The following members completed their First Readings:
  - Bruce Balthaser
  - Brett Beidler
  - Michael Williams
  - Matt Zimmerman and McKenzie Sterner (family membership)

- The following members have previously completed a First Reading and are still eligible to complete a Second Reading to become full members:
  - Brian A. Brown
  - Daniel Jackson
  - Cynthia Kuhns
  - Theodore Opperman
  - Miretta Wadopian

#### Director Comments: Benjamin Long

- We will be updating the LVAAS Facebook page.

#### AstroImaging: Tom Duff

- The next meeting of the AstroImaging group will be on Saturday August 3 at 7:00 p.m. at South Mountain.
- If you have an interest in astroimaging, sign up for the groups.io email page. This can be done on our website.

#### Pulpit Rock – Ron Kunkel and Frank Lyter

- If you're interested in what's happening at Pulpit Rock sign up for the groups.io email (website).
- The next general meeting will be at Pulpit Rock. If you would like to visit Pulpit Rock before then, contact either Frank or Ron.
- We now have 5 functioning Meteor Cams including one at South Mountain
  - If interested, the cost for hardware is about \$215.
  - Needs to use a Wifi connection to upload the data to an international database for analysis where the data is analyzed and would then be available to you.
  - Can pick up meteors that land.
  - Ron and Frank are available to help you set one up.

#### Stargazers: Kyle Kramm

- The next Stargazers meeting is planned for Pulpit Rock on Friday August 9 at 7:00 p.m. in conjunction with MegaMeet. If the weather is bad, we will meet at South Mountain instead, at the same time.

### MegaMeet: Tom Duff

- MegaMeet is a weekend-long camp out at Pulpit Rock on the weekend of August 9-11. We plan to hold the monthly General Meeting and the Stargazers Meeting that same weekend. We will have someone at the gate each night to let people who don't have gate keys enter.

### Library: Joe Zitarelli

- We will be watching Adventures in Astronomy, an introductory course in astronomy, every Tuesday night at South Mountain at 7:30 p.m. through September 17. The topics for each night are on the LVAAS calendar. You are welcome to attend as many or as few as you like.

### Next General Meeting:

- The next General Meeting will be Saturday August 10 at 7:00 p.m. at Pulpit Rock, with a rain date of the next night, Sunday August 11 at 7:00 p.m. also at Pulpit Rock.

The July General Meeting was recorded.

The meeting was adjourned at approximately 8:47 p.m.

Submitted by Joe Zitarelli, Secretary



**Via Sandy Mesics, Programs Chairperson**

Upcoming LVAAS General Meeting Speakers

**August:** (*Pulpit Rock*) Brett Fadem will speak on "The New Muhlenberg Observatory"

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

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

**November:** Dave Moll will speak on "Lore of the Ancient Skies"

**December:** Emma Page (Lehigh U) will speak on "Transits and Eclipsing Binary Stars"

- ▶ Please contact [astrosandy@gmail.com](mailto:astrosandy@gmail.com) if you have ideas for speakers, or would like to volunteer.

**Via Kyle Kramm, Stargazers group Coordinator**

In case of bad weather causing MegaMeet to be canceled, the Stargazers Group will meet instead at South Mountain on August 9 at 7:00 p.m. Please check for updates via email and on our website.

**KUDOS! THANK YOU, LVAAS VOLUNTEERS!**

August's kudos again go out to LVAAS members **Art Lukoff, Dave Lorchak, Cedric Lumsden, Lou Velez, Andy Heilman, Aidan Berger, Earl Pursell, Ron Kunkel, and Frank Lyter**, who have been as busy as bees (no pun intended) working at our Pulpit Rock Observatories. Thank you for all you do for LVAAS! KUDOS!

**Special LVAAS Picnic KUDOS!**

The LVAAS annual picnic was a great success thanks to the hard work and dedication of the following people: The **Tom and Beth Julius** family, who provided the pig roast and stepped up even when the stepping was hard after Tom was sidelined by a foot injury. Thankfully Tom's friend **Chaz Thatcher (R)** rose to the occasion!

**Mike Huber**, who delivered the presentation; **Jamie Elovski** who handled the silent auction; Chief Griller, **Bill Dahlenburg**; **Kyle Kramm** who made sure everything ran smoothly by helping with many activities; **Tom Duff**, who had a stand for the swap meet and **Pete Brooks** and **Pete Doherty**, who helped with cleanup. KUDOS, everyone, for a job well done!

**Aidan Berger's** photos can be found on page 14. **Director Ben Long's** picnic photos can be found [here](#).

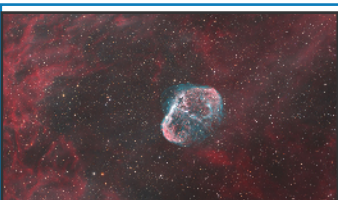
(If anyone has been inadvertently left out, please contact me and your name will appear in September's Kudos!)

**Via Earl Pursell, UACNJ Liason**

Public Program Nights have resumed at United Astronomy Clubs of New Jersey; please visit [uacnj.org](http://uacnj.org) for info.



Photo of Chaz Thatcher courtesy Jamie Elovski



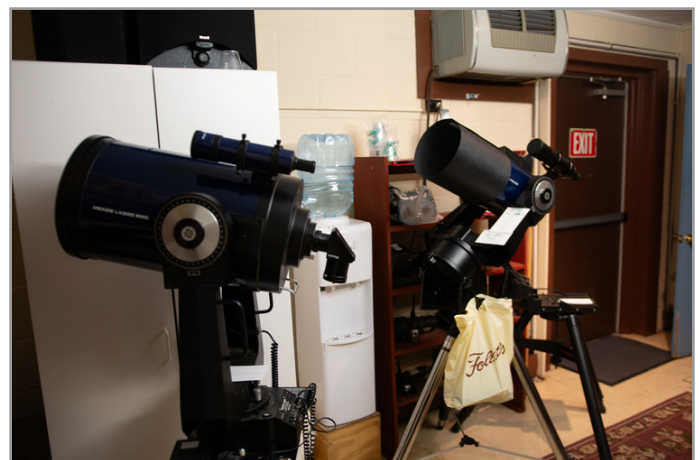
*cover:* **Imaged by Lynn Krizan, The Crescent Nebula, NGC6888, Caldwell 27 Sharples 105** in Cygnus is approximately 5000 light years from Earth. The color is mapped using the HOO Palette. Red = Ha, Green = OIII, Blue = OIII. The telescope was a Takahashi FSQ106ED at F3.6 using a QHY268M mono APS-C cooled CMOS camera.

# Scenes from the LVAAS Annual Picnic

Saturday, July 13, 2024

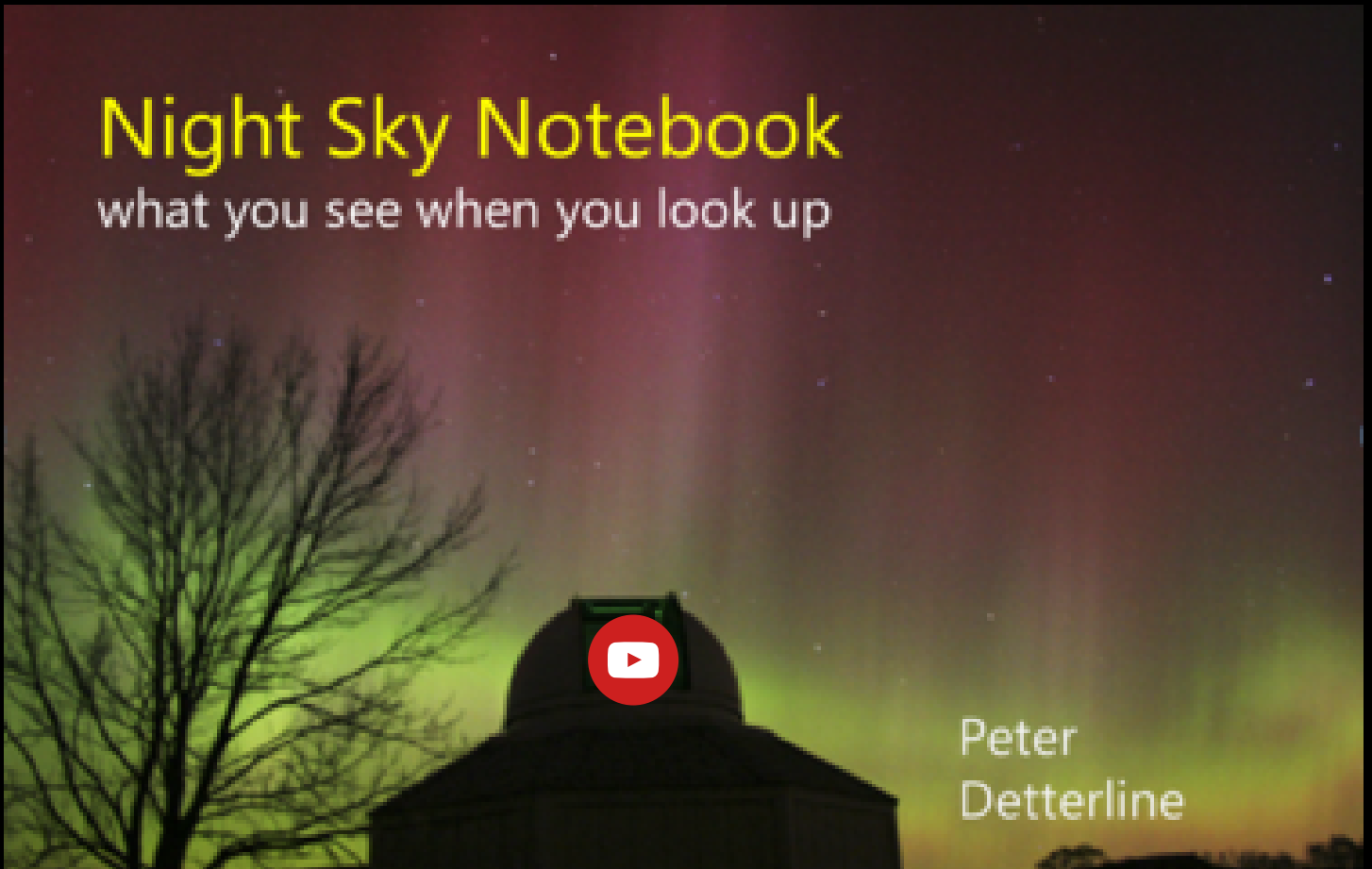
All photographs courtesy of

Aidan Berger





*Peter Detterline's*  
**Night Sky Notebook**  
*August 2024*





# StarWatch

## Perseid Meteors Soar This Week

I cannot emphasize enough how the Perseid Meteor Shower played a pivotal role in my decision to pursue a career in astronomy education. It was most of what my cousin, John, and I talked about in the months leading up to the big night and morning of August 11-12, 1964. Luckily, a cold front swept through the area on the afternoon of the 11th. The skies opened at sundown, giving us a grandstand view of this beautiful summer event. Even now six decades later, hoping to glimpse a memorable fireball scorching across the heavens, I still eagerly anticipate the annual Perseid night. \* I've come to appreciate that not every year offers ideal conditions for observing the Perseids, with factors such as summer haze, T-storms, and the moon's phases affecting the visibility of meteor activity. This year, the moonset on the evening of August 11 happens before midnight, allowing the best part of the Perseid experience to be witnessed under the darkest conditions in an observer's locale. Next year, a fat-waning gibbous moon lights up the mid-August sky, allowing only the brightest Perseids to be witnessed. However, 2026 is perfect, with a new moon gracing the Perseid maximum evening. \* To make the most of your observing experience, gather an air mattress, sleeping bag, pillow(s), flashlight or headlamp (red light), pencil or pen, paper, clipboard, and a tally counter (See Google). Most importantly, do not forget the ground tarp, which enthusiasts should position

under your air mattress and over the top of your sleeping bag. If you are on a lawn chair above ground, having your tarp over your chair will be sufficient. I recall very few East Coast Perseid nights where dew was not bothersome. Take your observing location to Utah, Wyoming, Colorado, etc., and you will find dew is not an issue. Keeping yourself and your equipment dry allows for a more comfortable observing experience that will let you see more meteors. \* If you are observing with friends, keep conversations to a minimum and leave your earbuds in the charger because the more distractions occupying your time, the fewer shooting stars you will spot. Remember to bring a caffeinated beverage and some light snacks to keep your growling stomach at bay. \* For a more scientific approach, consider recording your observations. You can note the number of Perseids with your tally counter and mentally keep track of non-Perseid meteors. Due to Earth's rotation, most meteors will seem to diverge from a point low in the northeast around midnight and transition slowly to a location high in the NE by dawn. Recording these meteors in ten-minute intervals will provide a sufficient resolution to observe the fluctuations in Perseid activity. Make sure to take breaks only during these 10-minute intervals. For more insights into the Perseid Meteor Shower, stay tuned for next week's *StarWatch* or read ahead [here](#) ! Ad Astra!





# StarWatch

## Perseids: Summer's Best Meteor Shower

Monday morning, August 12, will present an exciting opportunity to view the 2024 Perseid meteor shower with minimal moonlight. Moonset occurs before midnight on the 11th. The Perseids are probably the best shooting star event of the year and for good reason. They combine relatively high rates with warm, short summer nights when many individuals are engaged in outdoor vacation activities, such as camping. \* Meteor showers result from dust released by comets as they orbit the sun. If a comet's path crosses the plane of Earth's orbit or comes near to it, a meteor shower will be the result. The progenitor of the Perseids is Comet 109P/Swift-Tuttle, which last returned to the sun in 1992 and is expected to debut again in 2125. As a result of its many passages around Sol, debris has been spread fairly uniformly across its orbit, enhancing the reliability of the Perseids to produce a consistent showing year after year. \* The best advice for observing is not to start too early in the evening. Midnight is a good target to begin viewing because before that time, the Earth itself shields us from the meteors that we want to see. The analogy is similar to raindrops hitting a vehicle moving through a downpour. The precipitation preferentially strikes the front windshield of the car, while the rear window gets only a little rain because it is protected by the automobile. Likewise in the early evening, we are shielded by the Earth and see reduced meteor activity. As local midnight approaches (1 a.m., EDT), the Earth begins to rotate into the meteoroids, allowing it to sweep up more of these particles. At the beginning of this period, some of the Swift-Tuttle grit will be skimming the top of the Earth's atmosphere. These events can create long, bright trails, sometimes fireballs, as they are ablated (destroyed) more slowly by thinner layers of air. \* This year, the Perseid maximum occurs on August 12 between 9 a.m. and noon on the East Coast. This means the period between midnight and dawn on the

12th should provide the highest rates. Rates will drop to about half of what they were on the morning of the 13th. These shooting stars are also brighter before maximum. \* Perseids are easily identified because they will appear to diverge from a vanishing point, similar to how a long, straight stretch of roadway seems to narrow and converge at some distant location. That happens because the meteoroid particles, like the sides of the road, are parallel to each other, similar to the comet dress as it orbits the sun. \* Perseids will appear to move away from the top of the upside-down, V-shaped constellation of Perseus the Hero. See a map [here](#). Meteor events may appear to bunch or happen in rapid succession. After a bunching sequence, five minutes or more may transpire with no activity. Don't become discouraged. Rates will increase towards dawn with about 25 meteors per hour recorded from suburbia and double that from rural locales. \* By midnight, the constellation of Perseus will be entirely above the horizon in the northeast, with the radiant at an altitude of 30 degrees. Orient yourself in that direction, but view near the zenith where the sky is at its darkest, and the ability to witness fainter meteors will be greatest. As the night progresses and the radiant gains altitude, your orientation will not have to change. By 5 a.m., 70 minutes before sunrise, the radiant will be nearing 70 degrees in altitude, but hours before, observers will be able to capture meteors streaming from all directions around the radiant. Observers will see meteor rates maximized in the hours preceding dawn. \* Don't forget the warm clothing, sleeping bags, pillows, and tarps to protect yourself against the dew. Caffeinated drinks and snacks will help to keep everyone awake and make your Perseid experience more enjoyable. See last week's [StarWatch](#) for more details. Think clear skies mixed with a couple of bright, memorable fireballs! Ad Astra!

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[Moravian University Astronomy - astronomy.org](http://Moravian University Astronomy - astronomy.org)

# The History of "That Trailer at Pulpit Rock"

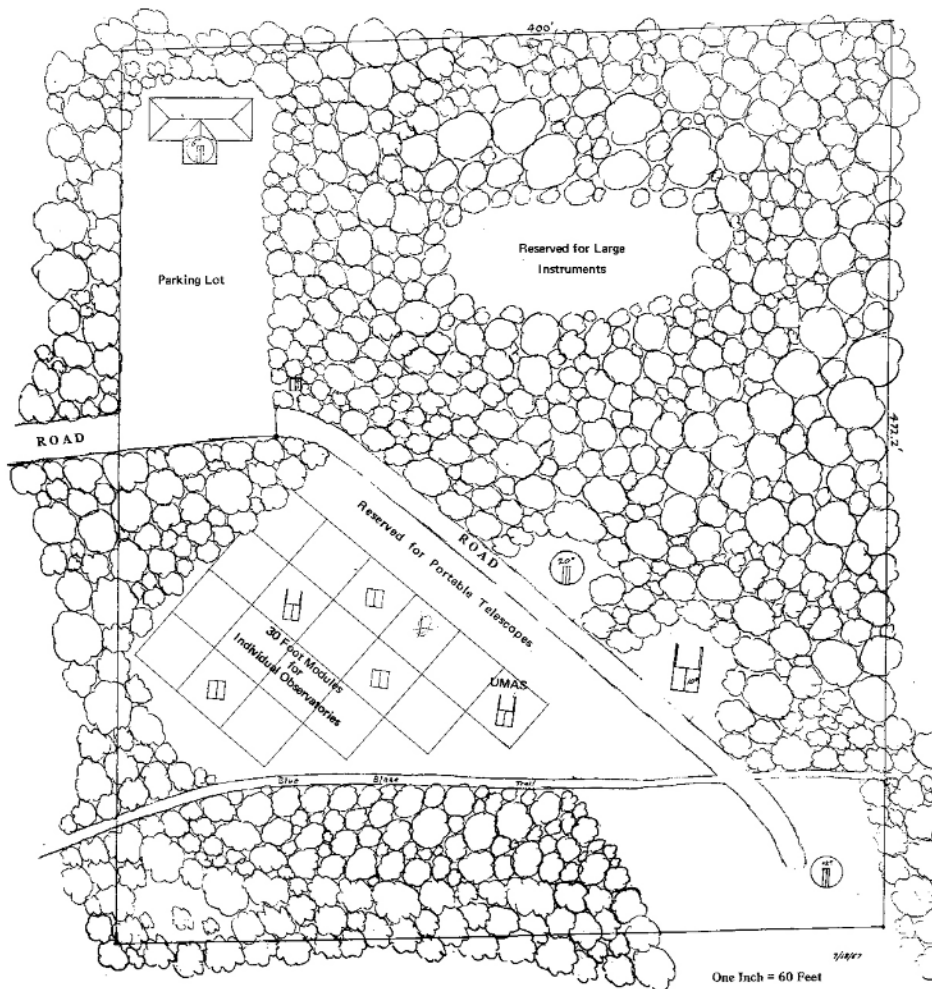
By Sandy Mesics

The following item was noted in the July 1974 *Observer*: "Stan Wilkes has been given tentative Board approval to build an observatory on a site between the 20" observatory [the Schlegel-McHugh Observatory now housing the Tinsley scope] and the power shed at Pulpit Rock. The structure will consist of a 40-foot by 8-foot renovated truck trailer which will house Stan's 16" Newtonian-Cassegrain scope, now under construction. Wilkes foresees the completion date of his observatory somewhere in the vicinity of 1976." While approving the request, the Board stipulated that tree removal be kept to a minimum, that he stake off three 50-foot lots, and that if he decided to remove his observatory, he remove the piers, etc.



Stan Wilkes was a member of the LVAAS, and as a youth, a member of the Ursa Major Astronomical Society (UMAS), the junior arm of LVAAS. An avid amateur astronomer, he was instrumental in the construction of the Arthur Fox Memorial Observatory for the UMAS, drawing up the designs and prefabricating the structure in his basement so that it could be disassembled, trucked to Pulpit Rock and reassembled on site. This was the first observatory built on Pulpit Rock after it had been acquired in 1967.

The original plan for Pulpit Rock not only included observatories built by the Society but included spaces for members to build their own observatories. Members would be responsible for building and maintaining their individual facilities. At the time of Wilkes' request, the only observatories



**Originally, the plan for Pulpit Rock included plenty of spaces for member-owned observatories. Note also the large parking lot and administration building that were never built.**

at Pulpit Rock were the Kawecky Observatory, the Fox Observatory, and the meteor observing platform, and no members had yet built private observatories on the site.

The project got off to a fast start: by July 1974, Wilkes had poured concrete and cut down trees at his site. The December 1974 *Observer* reported: "Stan Wilkes continues to make fine progress in the construction of his new 16-inch Newtonian-Cassegrain telescope. With the tube assembly now in one piece, major emphasis is being concentrated on machining the polar axis and waiting for ordered parts to arrive. These include a large focusing mount and the secondary flat. Stan has also received shipment on all the items which will compose the main scope's finder, a 6-inch, f/7.5 Newtonian. All the forms have been poured and backfilled at Pulpit Rock where the observatory which will house the 16-inch scope is to stand. The structure will be a large, renovated truck trailer which will not only have ample room for the observatory, but plenty of extra living (sleeping) space when the sun rises in the morning. Stan envisions delivery of his trailer during April of next year. In the meantime, he has gone ahead and purchased the aluminum sheeting which will compose the slide off section of the observatory's roof, plus constructed the observing deck which will go inside the trailer."



**Stan Wilkes, left, inspects a mount at the LVAAS workshop circa 1968.**

While a report in the June 1975 Board of Governors minutes read that Wilkes would be ready to move his observatory trailer to Pulpit Rock by the first week in August 1975, it appears that this may not have happened. A comment in the May 1977 *Observer* states: "Stan Wilkes continues to build his truck trailer in the workshop room at South Mountain. No folks, it is not a fallout shelter. The structure has gotten so big that rumor now has it that the trailer will not fit through the door leading to the parking lot." It's unlikely that the trailer was actually inside the South Mountain workshop room, and we're unsure if it was the trailer observatory the article was referring to. We are unsure of exactly when the trailer was moved to Pulpit Rock.

Ultimately, Wilkes divided the trailer into three parts: a sleeping quarter complete with TV, apartment refrigerator, carpeting, dropped ceiling and bed; a remote instrument read out room, and the observatory, which was to house the short focus Newtonian. He planned to use the facility for photometry and astrophotography. A large sliding roof and pier were installed in the south end of the trailer.

Wilkes' 16-inch telescope was never installed in the trailer, and he seems to have abandoned the project. In Spring 1998 Wilkes donated his trailer to LVAAS. At the time, it was considered "basically sound" but needed an estimated \$500 in renovation, including repairing leaks, replacing some plywood, paneling and ceiling tile, countertops, and painting. Members debated

on how to repurpose it: Some wanted to convert it to a radio observatory, some an optical observatory, and other ideas included a bunkhouse or meteor deck.

Eventually, in March 2000, the *Observer* reported that the LVAAS trailer has been designated as the home of a radio telescope. In April, an ambitious work project began on the trailer, which



**The Wilkes trailer as a radio observatory.**

included fabricating and installing steps, refurbishing the interior and replacing the south door with a solid wall well as mounting the radio dish. Glen Bachman and members of the Explorer Post installed the south wall on the radio observatory trailer during one of their campouts at Pulpit Rock. LVAAS member Gary Moore spearheaded this endeavor, and he configured the electronics. The system was designed to detect 1.42GHz, the frequency used for SETI and galaxy mapping activities. The

10-foot radio satellite dish was mounted on the roof by Peter Detterline, Tom Smith, Scott Fowler, Bill Dahlenburg, and Joe Zelinski, who also made the mast and mounting ring and positioner. Initially the dish was placed on the south side of the trailer, through the roll-off roof. The radio telescope system worked for a short time until the failure of the power supply. In October 2004 Gary Moore reported that the roof of the trailer needed repair, and the floor of the trailer needed to be sealed against mice and snakes. The roof was repaired in November 2005 by Pete Brooks, Dan Murphy, and Jeep Stoeckel. They scraped and washed the trailer roof and applied sheets of rubber roofing. The dish antenna was moved to the north end of the trailer. The trailer's roll-off roof was repaired and was once again functioning, so the trailer could be used for an optical telescope as well as the radio telescope. Sadly, the subsequent illness and passing of Gary Moore led to disinterest in the radio telescope, and again, the trailer languished, becoming essentially a storage unit.

In March 2006 the first LVAAS-owned go-to telescope, a donated 12-inch Meade LX200 Classic, was installed on the permanent pier in the trailer. The work was done by Pete Brooks, Bob Hippensteal, Doug Gordon, Scott Fowler, and Ron Kunkel. At the time, the scope was installed on a "trial basis," as there was some debate and concern about use of the trailer for an optical scope. The plan was to try it and see if the result was satisfactory. Because the scope was mounted high above the trailer floor to clear the roofline of the trailer, a ladder was needed to use the

instrument. An elevated floor was planned if the scope proved successful.

Pete Brooks then built an equatorial wedge, a power supply, and small heater for the scope's electronics. In 2009 the wedge was replaced by a Millburn wedge.

From August to October 2010 the scope was out of operation due to a broken component in the fork mount base. Thanks to a donation of a Meade LX200 base by Rich Gittins, the telescope was remounted on its pier and is back in service but still suffered from electrical problems with the Go To capabilities of the scope.

After a decade of occasional use, it was decided to mothball the 12-inch Newtonian in the Spacek Observatory and move the Meade scope there. This was done in the summer of 2020. Once again, the Wilkes trailer is serving as a storage unit as it awaits its next incarnation: likely as scrap metal to be used to re-roof the Spacek Observatory.



**The Meade scope in the trailer.**

## References

LVAAS *Observer*, various issues.





# 2024

## Have you renewed your LVAAS membership?

LVAAS PayPal link: [https://www.paypal.com/donate/?hosted\\_button\\_id=FBP8Y5VX5QXNW](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](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](mailto: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

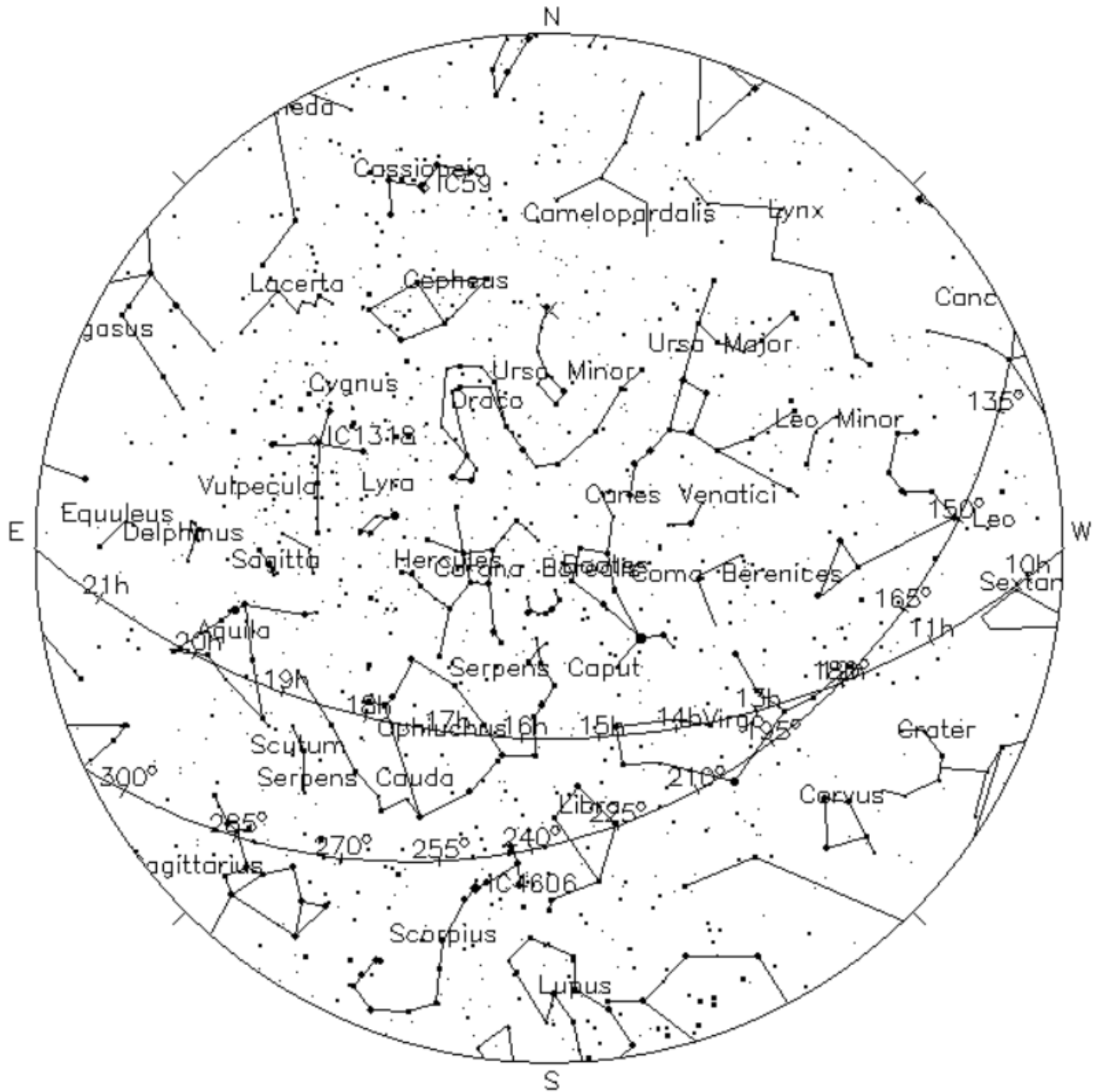
## AUGUST 2024

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

## SEPTEMBER 2024

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<u>01</u>	Labor Day <u>02</u>	Adventures in Astronomy <u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>
General Meeting 7:00 PM South Mountain <u>08</u>	<u>09</u>	Adventures in Astronomy <u>10</u>	First Quarter Moon <u>11</u>	<u>12</u>	Scout Camping <u>13</u> Stargazers Group Meeting	Scout Camping <u>14</u> Star Party
Scout Camping <u>15</u>	<u>16</u>	Full Moon <u>17</u> Adventures in Astronomy	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>
Autumn Equinox <u>22</u> Deadline for submissions to the Observer	<u>23</u>	Last Quarter Moon <u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>
LVAAS Board of Governors Meeting <u>29</u>	<u>30</u>					

# Sky Above 40°33'58"N 75°26'5"W Thursday Aug 01 2024 00:00 UTC



**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 <sup>st</sup>	Full	3 <sup>rd</sup>
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 8/9 - 8/11  
 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 [observer@lvaas.org](mailto:observer@lvaas.org).

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. Early submissions are greatly appreciated. PDF format is preferred. 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](mailto:membership@lvaas.org).