

The Observer

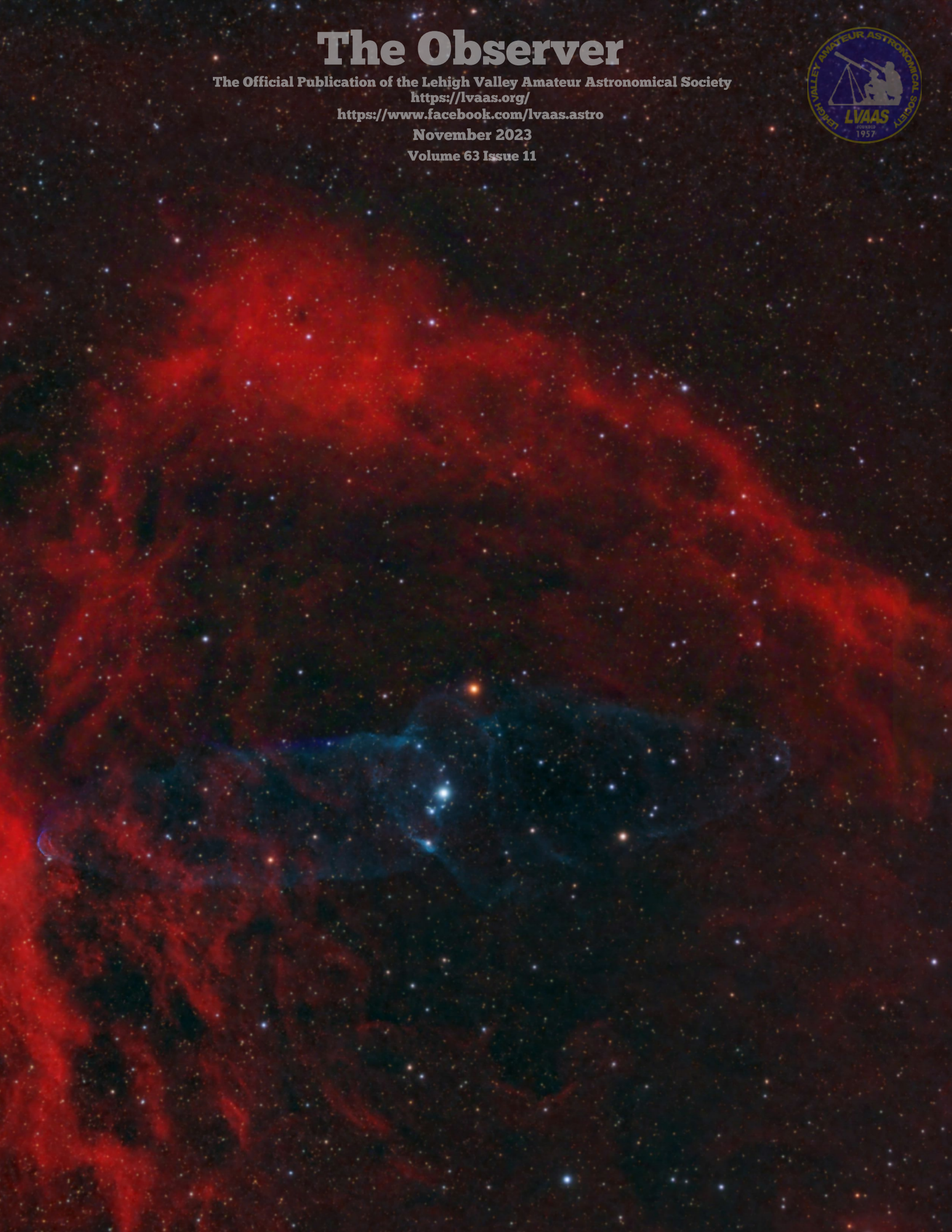
The Official Publication of the Lehigh Valley Amateur Astronomical Society

<https://lvaas.org/>

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

November 2023

Volume 63 Issue 11





Congratulations and a big shoutout to the new crew steering our ship! A cosmic welcome to our new Director (Ben Long) and Assistant Director (Kyle Kramm) – we’re super excited to have you charting our course. Hats off to our Secretary (Joe Zitarelli) for sticking around for another orbit – your seasoned hand at the log is something we all count on. And to our Treasurer (Vo Maziarz), ready to keep our treasury as full as the night sky, we’re thrilled to have you on board. Each of you is a crucial part of this constellation of talent we’ve got going. Here's to a year of smooth sailing and clear skies!

DaVinci’s Science Under the Stars event went great. We were given ample space to set up displays, demonstrations, and scopes for guests to peer through. With so much going on, our area was quite popular. The event even made the front page of the local paper! You can see the online version [here](#).

A quick update on some recent changes happening. At the last board meeting we voted to increase the deductible on our insurance plan which will save us a significant amount of money each year. We will be putting some of these savings towards an outdoor camera system for additional security at South Mountain.

We have also allocated funds for upgrading the internet service at Pulpit Rock. More details to follow on that. And lastly, we have also allocated some additional funds to serve you, our members, by making some additions to the rental fleet including a new ZWO Seestar S50 All-in-One Smart Telescope which is currently on order.

Last, but certainly not least, it is time to tip our telescopes to Dave Raker, our amazing Librarian who's been navigating the vast universe of our library since the last millennium! After 24 years, and with more than a thousand items cataloged under his watch, Dave's decided it's time to hang up his librarian's hat at the end of this year. From atlases of the cosmos to star charts, his efforts have kept our collection as expansive and intriguing as the Andromeda Galaxy. Here's to you, Dave, for bringing us the stars, one page at a time. Thank you for all your years of service, hard work, and dedication. We hope to continue seeing you at the meetings and wish you the best!

Ad Astra!

Mike Huber



Minutes from the LVAAS General Meeting – October 10, 2023

The October 2023 LVAAS general meeting was conducted electronically using an on-line service and at the South Mountain headquarters. Approximately 40 people were in attendance.

Because Director Michael Huber and Assistant Director Sandra Mesics were unable to attend, Bill Dahlenburg was Acting Director, and opened the meeting at 7:02 p.m.

Tonight's general meeting's presentation was presented by John Conrad, a NASA Solar System Ambassador, and was all about Near Earth Objects (NEOs), those asteroids and comets that could threaten Earth and mankind in the future, like the 'dinosaur-killer' asteroid that most probably did impact the Earth 65 million years ago.

John Conrad followed his childhood interest in space and spaceflight – at the dawn of the Space Age – through Astronautical Engineering degrees from the US Air Force Academy and Purdue University straight into leadership in space programs for the Air Force, NASA, DOE, and industry. Now retired, he gives frequent talks to schools, astronomy clubs, museums, libraries, and other learning venues that draw on his extensive experiences, including:

- Managing satellite rocket launches
- Designing and operating military and civil spacecraft
- Data applications in areas such as Earth science and intelligence
- Astrodynamics and astronomy

In his role as a NASA Solar System Ambassador, he is able to bring the latest results from NASA scientists and engineers, providing insights into US progress in exploring space, and addressing the most challenging and complex of mankind's problems and pursuits.

John began the talk by discussing OSIRIS-REx, which is an acronym for Origins, Spectral Interpretation, Resource Identification and Security-Regolith Explorer. Regolith is the term for unconsolidated surface material. To study the origins of the Solar System, scientists need to study pristine carbonaceous material, and asteroid regolith is an excellent source, as there is very little on Earth's surface. Other sources of this material are the Moon, solar wind, comet tails, stony asteroids and carbonaceous asteroids. There have been missions to each of these. There are also missions planned to Phobos (one of Mars' 2 moons). There is currently a joint NASA/ESA mission to obtain samples from Mars with material currently being obtained. However, returning those samples to Mars orbit and then the Mars sample return to Earth will not be complete until 2032.

In looking at the chances of a PHA (Potentially Hazardous Asteroid) we must consider that there are over 500k asteroids, about 7000 Near Earth asteroids, 192 asteroids in a favorable orbit, and then only 26 that are over 20 meters across. Of those 26, only 5 are carbonaceous asteroids, and of those Bennu was chosen to study with the OSIRIS-REx Mission. The spacecraft is about a 10 foot cube that weighs 1529 kg. It was launched in September 2016 and took over 2 years to arrive at Bennu. The spacecraft orbited and studied the asteroid and found the gravity on the surface of Bennu is only 8/1,000,000 that of Earth. Xenoliths, material not native to the asteroid, were also noted. It was determined that the surface of Bennu was loose material, with a smooth subsurface layer underneath.

The spacecraft continued to orbit Bennu until October 2020 when it brought the Touch-And-Go Sample Acquisition Mechanism (TAGSAM) into play. The craft collects samples autonomously as Bennu was 18 light minutes away. John showed a NASA video of this maneuver. The spacecraft collected about 250 grams of material, far exceeding its goal of 60 grams. It continued to orbit and study the asteroid until May 2021 when it departed for Earth. It finally delivered its payload to the Utah desert where it was retrieved on September 24, 2023. Samples brought back were sent to over 200 Scientists around the world. However, 75% of the material was saved for future study. From there the OSIRIS-REx Mission continues as the OSIRIS-APEX, now heading for the asteroid Apophis, another NEO. It will arrive at Apophis in 2029 with its mission to orbit and observe, but not to sample. Apophis will pass within 20,000 miles of Earth on April 13, 2029. Following the presentation, there was a break at 8:12 p.m. The Business and Informational meeting began at 8:27 p.m.

Nominating Committee: Bill Dahlenburg

Bill presented the slate of nominations for officers that was approved at the September general meeting to the membership. Kari Fobe had notified Bill that due to personal reasons she would be unable to accept the position as treasurer.

By unanimous acclamation of the members present, the following were elected as officers of the society starting December 1, 2023:

- Director - Benjamin Long
- Assistant Director - Kyle Kramm
- Secretary - Joe Zitarelli

Nominations for treasurer were then entertained from the members present. Wojciech “Vo” Maziarz was nominated and accepted the nomination for treasurer of the society. Nominations were closed.

By unanimous acclamation of the members present, the following was elected as an officer of the society starting December 1, 2023:

- Treasurer - Wojciech “Vo” Maziarz

Each of the newly elected officers briefly introduced themselves to the members of the society.

Membership: Rich Hogg

- The following members completed their second readings and are now full members:
Andy and Tori Hernandez (family membership)
Michael Manke
Paul Marsh
Daniel and Lauren Mortensen (family membership)
- There were no first readings.
- Currently, no members have previously completed a first reading and are still eligible to complete a second reading to become full members.

Technology: Rich Hogg

- A shoutout was given to Gregg Heimer who donated the Lenovo laptop now being used to handle the transmission of our general meetings via Zoom.
- Membership records have been securely transferred to Google Sheets

Pulpit Rock Observatories – Frank Lyter

- LVAAS owns a camera and a spectrograph and there are plans to instruct members how to use the equipment at public and members-only star parties.

Education – Blaine Easterwood

- Members are reminded that there is an Eclipse Event at the DaVinci Science Center this Saturday from 10 a.m. to 9 p.m.
- They will be set up during the day to view the partial eclipse followed by night time viewing.
- The event is rain or shine.
- There is additional information in *The Observer*.
- If you volunteer to help, you don't have to stay for the entire event

Astro-Imaging Group – Tom Duff

- There will be no meeting of the AstroImaging Group in October, due to a conflict with the Eclipse Event
- All are invited to attend and join the group, as well as to sign up for the email discussion group.

South Mountain Observatories and Telescope Rentals – Mike Clark

- Mike is available for training on any of the telescopes. His contact information is on the contacts page of the website
- Mike is also the one to contact if you are interested in renting a telescope for personal use.

Stargazers - Kyle Kramm

- The next meeting is scheduled for this Friday, October 13th at 7 p.m. at South Mountain, rain or shine.
- This is a relaxed members-only star party without a set agenda.
- You are welcome to bring your own equipment.

Keys for SM and Planetarium – Earl Pursell

- Once trained on any of the scopes, please see Earl to get your own keys.
- Earl is still looking to train other members how to run the planetarium and give shows.

South Mountain Maintenance & Star Parties – Bill Dahlenburg

- Bill and others are generally available at SM on Saturday mornings from 9 a.m. until 12 noon if you'd like to tour the facility, get training on the society's telescopes or get help with your own equipment if needed. It is good to contact Bill, (contact information on the website) prior to arriving to confirm they will be there.
- The next Star Party is Saturday October 21, and the final one for the year is November 18.
- We are still in need of a Star Party Coordinator and someone to run the Red Shift, our merchandise counter and snack bar.

Next General Meeting:

- The next general meeting will be Sunday November 12th at 2:00 p.m. at South Mountain.

The October 2023 general meeting was recorded.

The meeting adjourned at approximately 8:56 p.m.

Submitted by Joe Zitarelli, Secretary

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

The benefits that you, as an LVAAS member, enjoy are not guaranteed. They are provided due to the generous sacrifice of time and labor contributed by our dedicated volunteers. If members don't step up to share the work, these benefits will start to diminish in quantity and quality, and some may even vanish altogether.

If you are a member, new or seasoned, 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." Please lend a hand to help keep your astronomy society vital!

Via Sandy Mesics, Programs Chairperson

Upcoming LVAAS General Meeting Speakers

November: Nico Carver will speak via Zoom on "Star Trails with a SmartPhone."

December: (Holiday Party) LVAAS member Linda Prince will speak in-person on "City of Stars."

January: Mario Matta will speak on "Light Pollution" via Zoom.

February: Paul Halpern will speak on his new book "The Allure of the Multiverse" and do a book signing.

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

Via Dave Raker, Society Librarian

New Books

Shuttle by Nigel MacKnight

To Space and Back by Sally Ride

Back to Orbit: John Glenn by Scott Montgomery

Apollo Through the Eyes of the Astronauts by Robert Jacobs

New DVDs

Chas. Bracken: **A Field Guide to Deep Sky Objects**

The Great Courses: Albert Einstein

When We Were Apollo

Via France Kopy, Newsletter Editor

Still looking ... Do you own a camera or smartphone and usually attend LVAAS functions? Would you like to help 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 or for more information.

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.



Cover Image: Sh2-129, The Flying Bat and Ou4, The Squid Nebula Imager: John Kmetz

The Squid (blue) inside the Flying Bat (red) Nebula

Taken with an ASI2600MM-P camera on an Esprit 100ED refractor

Using 7nm Ha and OIII, and 12nm SII Astronomik filters.

30 hrs. Integration.

LVAAS General Meeting

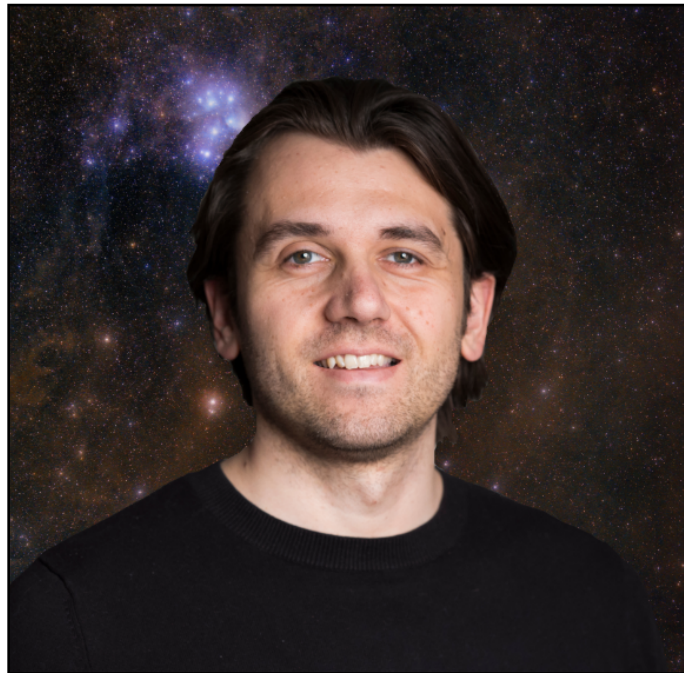
Sunday, November 8 at 2 p.m.

South Mountain Headquarters & via Zoom

Capturing Star Trails with Your Smartphone

presented by

Nico Carver (via Zoom)



Images of star trails are an excellent entry to tons of great astronomical questions: Why do the trails arc around Polaris? Why are they different colors? Why can't we see star color with our eyes? Can we tell time with the stars? With care, capturing star trails can also result in a beautiful image worthy of printing! In this workshop, participants will learn everything they need to know to use their own smartphones to capture beautiful images of star trails. To get the most out of this workshop, participants should have access to an iPhone or Android phone and purchase/install the following apps: <https://tinyurl.com/StarTrailsApps>

Nico Carver has always been a camera nut. After graduating college with a degree in filmmaking, he traveled around the world and first fell in love with photographing the night sky while shooting Aurora in Iceland. He now works full-time in astrophotography education, and runs a successful YouTube channel that aims to help beginners get started with Astrophotography.

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



Peter Detterline's
Night Sky Notebook
NOVEMBER 2023

Night Sky Notebook

what you see when you look up



Peter
Detterline

A History of the Warden Observatory

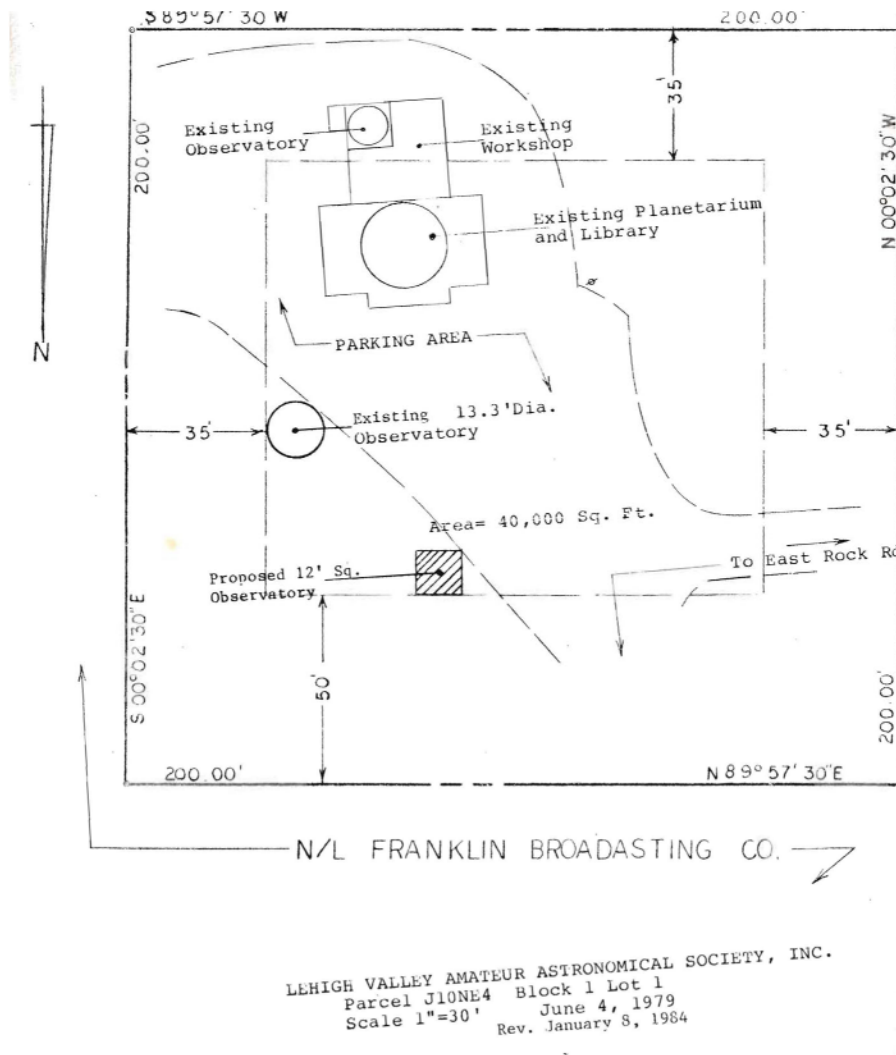
By George H. Maurer, 1999 revised by Sandy Mesics 2023

At the Society's General Meeting of April 1983, Director Ken Schmidt led a discussion of the possibility of building another observatory at our South Mountain site. The subject had been raised by several members who were interested in having a 12-inch Newtonian telescope available for general observing. At the following May meeting, it was announced that Randy Warden, one of our Advisors, had offered to donate his 12.5-inch F-6 Cave Newtonian if this building was erected. Following consideration of this project over the summer months, the membership was requested to make a decision and they moved unanimously to undertake this project at the September 1983 meeting. A consideration of this approval was that the Society planned to hold more frequent public "Star Parties" and this type of observatory would offer a convenience to use. It would serve primarily for educational outreach, particularly during the approach of Halley's comet in 1985.



Ralph Schlegel, the construction chairman, noted that the building could be best located about 50 feet west of the Brooks Observatory. He noted that financing was not significant because there were principal surplus materials on hand for a roll-off roof design from past projects. He proposed a building, 12 feet square with a raised wooden floor with storage area beneath and having sides of a combination of cement block and steel.

Although thought to be finally settled, the question was again raised at the October meeting as to whether a dome or roll-off roof should be used. This was finally decided firmly on a roll-off roof. Ground was broken in late October of 1983, and the initial work of footings, and electrical lines was begun before the winter set in.



Site plan for the Warden Observatory

Over the winter, the steel panels and framework were prefabricated so that all would be ready the following spring. Work was begun again in early April of 1984, when the masonry walls were started followed by the installation of the floor. Many of the members participated in the weekly work parties which were under the direction of Ralph Schlegel and Pete Brooks, and this resulted in steady progress. The steelwork was next, and it is noted in the OBSERVER that the building was well under way by October of 1984 before the winter set in.

The work was resumed again in the early spring on the roll-off roof and finishing details of painting etc. The finish work went smoothly so that the observatory was completed by the end of April 1985.

Randolph Warden was an attorney and an amateur astronomer. He had his own observatory and Ralph Schlegel had done some machine work for him. He willingly was appointed as an

Advisor to the Society and served to assist us in various legal matters and general business practices.

The 12.5-inch F-6 Newtonian telescope built by Cave that Randy Warden gave us, is an excellent instrument. Tom Cave was an avid and skillful planetary observer. Cave began making his own optics in the 1940s. He sent drawings of Mars that he made through his own telescope to Lowell Observatory, and they so impressed them that he was offered a position at Lowell, which he turned down. Cave began his telescope-making business in 1950 and specialized in making mid-focal length Newtonian reflectors in the 6-inch to 12.5-inch aperture range. His telescopes were noted for their excellent optics and are much sought-after to this day. By the time Cave sold the business in 1979, Cave Optical had produced about 83,000 mirrors and 16,000 complete telescopes.

In consideration of Warden's service to us and his gift, it was therefore appropriate to name the observatory after him. The formal dedication of the Warden Observatory was held on May 12th, 1985.



The 12.5-inch F-6 Cave telescope.

Randy was present with his wife and graciously accepted the honor. Shortly after this he moved to the western part of the country. The Rev. Ernie Andrews dedicated the building.

George Maurer, the original author of this article, added a vertical sundial to the Warden Observatory shortly after its construction. A pointer designed specifically for 40.35 degrees latitude was installed, taking into account that the south wall is 3 degrees, 40 minutes shy of due south.

The Warden Observatory has served us well. In March 2023, the optics were removed for cleaning and recoating, under the supervision of Mike Clark. The recoating was done at Ostahowski Optics. The Warden Observatory has become an attractive observatory for the public at star parties with its being open to the sky for direct explanations of the location of objects. Our members have found its optics excel for planetary observing, and its fast F-6 system fine for deep sky objects. LVAAS is indeed grateful to the donor of this telescope and to the many hands who constructed the building that houses it, and those who maintained the scope and building over the years.



The Warden Observatory and vertical sundial.

An Observatory Dedication

Ernest F. Andrews • South Mountain • May 12, 1985

To Our Kindly Benefactor
Whose present of a telescope
Inspired us to build a shelter
And a setting worthy of it
In his honor and to thank him
DO WE DEDICATE THIS OBSERVATORY

And to perpetuate his name
As an appellation fitting
DO WE DEDICATE THIS BUILDING
THE RANDOLPH A. WARDEN, ESQ. OBSERVATORY

AND TO FURTHER OUR INTENTION

TO THE PRAISES OF THE BUILDERS
Those our members who conceived it
Volunteered their time and efforts
Gave their labors to construction
DO WE COMMEND THIS OBSERVATORY

So that they may be accorded
Their high rewarding privilege
And richly deserved distinction
OUR OBSERVATORY BUILDERS
And our thanks for having done so
DO WE COMMEND THIS OBSERVATORY

TO THE JOY OF ALL OBSERVERS
All who come to old South Mountain
Here to roll aside the rooftop
Giving starry sky an entrance
DO WE COMMEND THIS OBSERVATORY

TO THE FELLOWSHIP OF VIEWERS
As we use the 'scope together
Our enthusiasm sharing
And the knowledge each possesses
Always gaining new experience
Growin in appreciation
Of the sky-set glories witnessed
DO WE COMMEND THIS OBSERVATORY

TO THE UNIVERSE ABOUT US
Stretching out in spangled splendor
Endless as to boundless distance
Eternal as to endless time
DO WE COMMEND THIS OBSERVATORY

TO THE SOURCE OF ALL THINGS EVER
All that exists and meant to be
Of the earth and of the heavens
And all within us as we are
DO WE COMMEND THIS OBSERVATORY

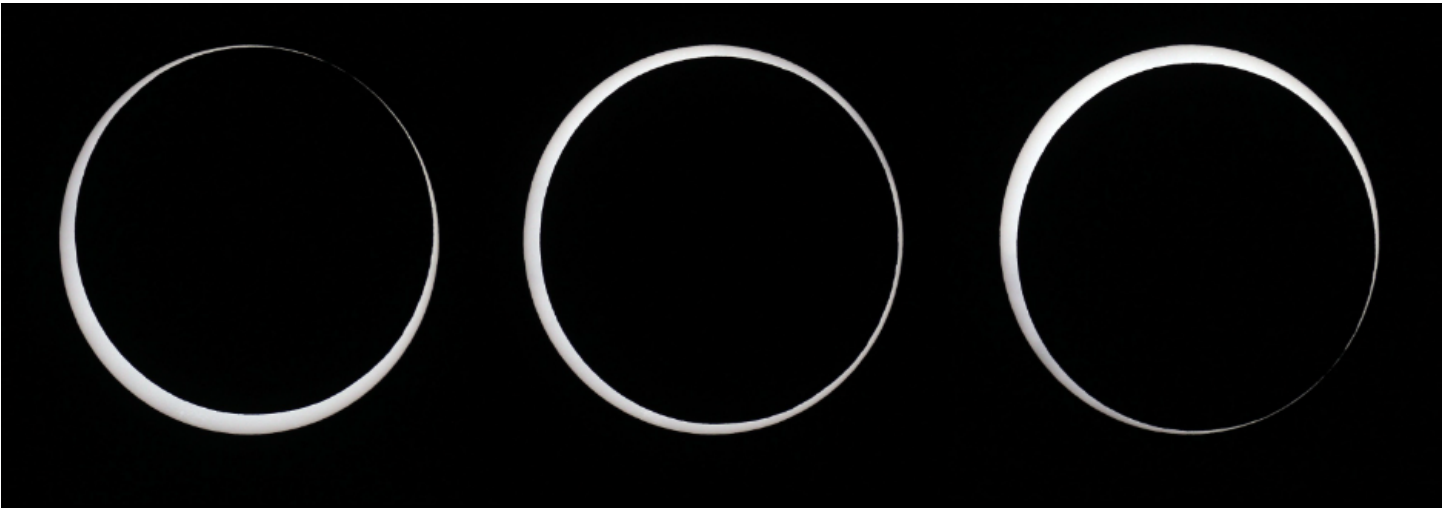


StarWatch

Successful Eclipse

When Wyatt Ponikera sent me a friendly email, hoping that my *vacation* in Utah was going well and that I had seen the eclipse, I had to smile. As a successful track and field athlete who just got the nod to race for Moravian's cross-country Landmark Conference Team, I'm sure Wyatt knows a lot about preparation and some of the stress that goes along with it. That's what it is like to arrange and to record an eclipse successfully. * No, I realize this is not like Robert Scott or Roald Amundsen trekking to the South Pole. Still, weeks and sometimes months of preparation and practice go into even a domestic eclipse journey like the one my friends and I have just completed in Utah. Luckily, my act was pretty much together from the successful Australian total solar eclipse I had witnessed shipboard on the Indian Ocean not quite six months earlier. With the next US total solar eclipse less than six months away in April 2024, I will be keeping most of my gear together and ready to travel again. * One of the many things I have learned about eclipse chasing is that you can only get some of the phenomena. In Australia, my goal was to capture the ingress and egress diamond ring, which starts occurring about 10 seconds immediately before and after totality. The diamond ring transpires when the corona, the crown of the sun's outermost atmosphere, becomes visible, creating the ring that surrounds the moon with the smallest amount of sunlight still visible, which fashions the diamond effect. The ingress diamond occurs in synchronization with so many other lighting changes as the last glimmer of sunlight disappears, in addition to the screams and shouts of spectators. Because of the excitement

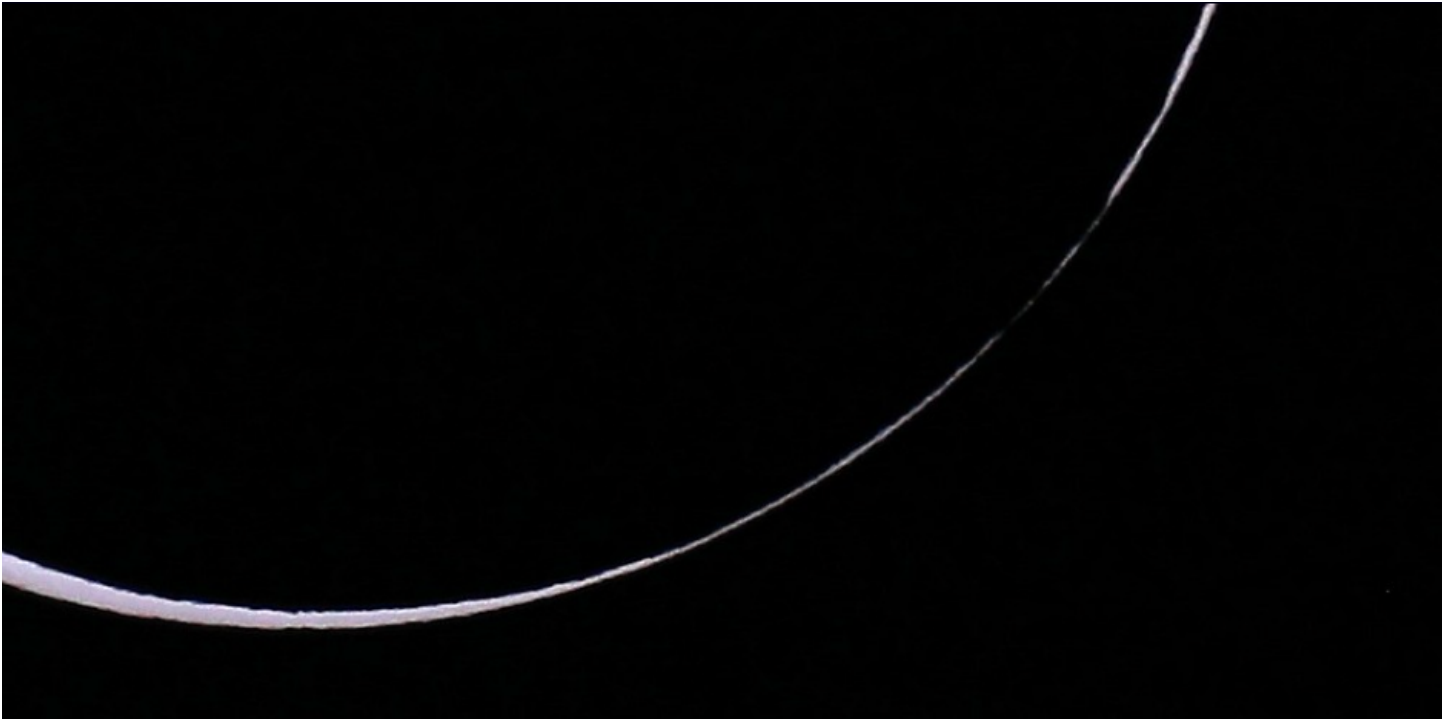
the ingress diamond ring has for me always remained ephemeral, difficult to capture on camera. I get lost in the moment and the exhilaration. * The best example I can give is Nick Foles' trick [play](#) that helped clinch the 2018 Super Bowl for the Philadelphia Eagles. I know almost nothing about football. Until then, I had never watched a Super Bowl game, yet there I was, jumping up and down in my living room, screaming at my flat screen. My wife thought I was nuts. At that moment, I probably was. That's what a total solar eclipse can be like to the uninitiated and still is to me. * The solar eclipse of October 14 was annular, a ringed event where the moon was too far from the Earth and too small to cover the sun completely. There was no corona, no diamond ring, just a dimming of the landscape as annularity approached. What would be visible was Baily's beads, a phenomenon first seen by the nineteenth-century English astronomer, Francis Baily, during an annular eclipse in 1836. * As the limb (edge) of the moon approaches or retreats from the sun's limb, mountains projecting outward along the lunar circumference block the sun's light while allowing it to shine through the moon's lunar valleys, creating the beading effect. It lasts for just a few seconds, but with programs available on the Internet, it is possible to predict the precise moment when Baily's beads will occur for any location along the path where an eclipse is total or annular. I was successful. Check out my Baily's beads' photos [here](#) but more importantly, view my friend Jesse Leayman's [video](#) which blew it out of the park, a definite Nick Foles play. Ad Astra!



The October 14 annular eclipse from Hanksville, Utah. Full details: astronomy.org. Courtesy Gary A. Becker



Bailey's Beads ... moments before ... the annular portion of the eclipse. For full details please see astronomy.org
Image courtesy Gary A. Becker [Video](#)



VETERANS DAY

Dave Binder, U. S. Navy (1963 – 1967) by LVAAS member, Dave Binder

It seems much less difficult to think about the four years I served in the United States Navy than to write about them. At barely 19 years of age, I was a recruit at Navy Boot Camp in San Diego during November 1963, when President John F. Kennedy was assassinated. Forty weeks of Navy Electronics School at Treasure Island, San Francisco, followed my 'Boot Training.' I graduated as an Electronic Technician specializing in radar in 1964 just before the only Christmas I got home during the four years I served.



On January 2, 1965, I reported aboard the USS Hissem, DER-400, (a destroyer escort radar picket ship) in Newport, Rhode Island. The Hissem was in a class of vessel that is among the smallest called a 'ship.' Smaller vessels are called 'boats.' The mighty Hissem was 306 feet long, 36 feet wide (at her widest part), had about 160 in her crew, and was powered by four diesel engines rather than by steam.

During my three years aboard her we sailed over 200,000 nautical (2,000 yard) miles on the North Atlantic, the Caribbean, and all over the Pacific Ocean. Many of those miles were covered in the Gulf of Tonkin, South China Sea, and in the inlets, harbors, and along the 12-hundred-mile coastline of South Vietnam during my two tours of duty there on 'Operation Market Time' between August 1965 and June 1967.

At the 'acknowledged' beginning of the Vietnam War in 1965, it was recognized that large quantities of war supplies were being infiltrated to the Viet Cong by sea. The Navy's attempt to shut off the flow of supplies by sea was called 'Operation Market Time' - an anti-infiltration patrol composed of DERs (like the USS Hissem), MSCs (Navy Coastal Minesweepers), WPGs (Coast Guard Patrol Boats), and PCFs (Navy Swift Boats.) The entire South Vietnam coast was divided into enough patrol stations, and patrolled with such vigilance that we stopped the gun runners, shut off the war supplies, and closed off the enemy infiltration by sea. In addition to searching junks, boats, and other watercraft, we were often called upon to render shore bombardment and gunfire support with our three-inch gun mounts and .50 caliber machine guns.

Of the 160-man crew aboard Hissem, I was among the dozen or so selected to search junks. We were trained as we crossed the Pacific Ocean; then we formed into two teams, so each team had "the duty" only half the time. My function on the inspection team during both my tours in Vietnam was to hold the suspects at gunpoint while the other members searched.

Depending on the circumstances I carried a BAR (Browning Automatic Rifle), a Tommy Gun (Thompson Sub-machine Gun), or I would stay aboard the Hissem and use the .50 Caliber Machine Gun. During the first hour of our first day of my first tour in country I had to fire that BAR. While serving in Vietnam I always kept a small American Flag folded in one of my pockets just in case...



In addition to my job as leading Electronics Technician, making repairs to and maintenance of the ship's three radars, IFF, and other associated systems, and serving on the Junk Inspection Team, I stood four-hour watches at the .50 caliber machine gun. There is relatively little free time for anyone on a small ship in a war zone.

Moral was low our first Christmas over there. In an attempt to bring some holiday cheer and relief I built a Christmas tree out of old charts formed into a cone stuffed with more crumpled-up charts, a mop handle trunk, and green packing material pasted onto the cone. I also dyed a set of 'whites' red (actually sort of pink) using red beet juice I got from the cook; and used the mop head I cut off the "tree trunk" as a

white beard. I spent part of Christmas Eve roaming around the ship—until we were called to battle stations where we spent the next ten hours until day break, when Viet Cong positions were pinpointed by Vietnamese Army units in the area. We and a sister destroyer took them under fire until our combined gunfire dispersed the assembling-for-attack Viet Cong forces.

Later that same Christmas Day, I found my own moral suffering from now almost four months of what war has to offer combined with the hours I had to think about Christmas while we were at battle stations and our guns spewed death and destruction. To think that just hours before, I was trying my best to help others; now I needed the help. Then the same public address speaker that called

us to and secured us from battle stations announced to all hands that contained in our last replenishment the day before, were packages of goodies we received randomly from somewhere in the United States; and that they were being placed on the mess deck (the place on the ship where we eat). One of my friends had to urge me to get something. I didn't want to. He told me how I must not give in; that others watch me and would follow my lead. Out of some sense of duty I went to the mess deck and randomly selected one plastic baggie from the piles of cookies and candy sent by families supporting 'Operation Christmas Star' - a national effort to support our soldiers and sailors. I took the baggie from the stacks of boxes and headed out to the fantail for some privacy. As I opened the baggie full of chocolate chip cookies, I noticed a folded piece of paper among them. It was a small, handwritten note that said "We know you are there"... Those simple words had a HUGE impact on me. It was a significant message I needed to hear. If anybody wonders does it really matter? It does. Being recognized in such a small but significant way made the hardship of war easier not only on that Christmas; but the following Christmas as well. That happened on Christmas Day 1965; and tears are running down my cheeks as I write this today.



My service in the Navy, and especially my Vietnam experiences, have so very much to do with who I am as a person and how I have lived my life. I need to consider what it has done FOR me as well as what it has done TO me.

Naval sea service, especially on a small ship, is inherently dangerous. In addition to the cost in quality of life that a Boy Scout may suffer due to being in the prolonged situation of needing to hold families at gunpoint, ready to open fire, there are physical risk aspects to consider as well. For example, I was almost electrocuted once, almost cut in two by the highline support rope during an emergency break-away once; while serving as an after look-out I was almost washed over the side during rough seas, I collapsed once from heat exhaustion, was almost shot on a couple occasions (including one bullet through my hair), and I have been seasick to the point of welcoming death. During that same time I have gained confidence in myself and my way of thinking, I saw the world, I had reinforced the reality that diversity in people and skills is essential to efficient and productive teamwork, that respect is not optional, and that the very least of us has great value.

I gained lifelong friends, I passed the self-test of handling life issues in a positive way, I have gained the understanding that our lives are the product of what we can make happen with the decisions we are able to make; and what we make happen, regardless of the decisions those who have the authority to make decisions for us make. I have also learned that a kiss asked for is not worth the pucker. I firmly believe the universe is held together by equal and opposite forces; and to that same belief, as bad as one can be is as good as one can be. It is simply a matter of what choices we make as an individual, and as a people.

Dave Binder
Petty Officer Second Class
ETR-2, USN



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 \$2,195 cash only [maybe a bit negotiable] and pickup locally in Emmasus.

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 Powertank Lithium Pro, Celestron AVX mount/tripod, Telescope cover, 8x50 finder scope with reticle.

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



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

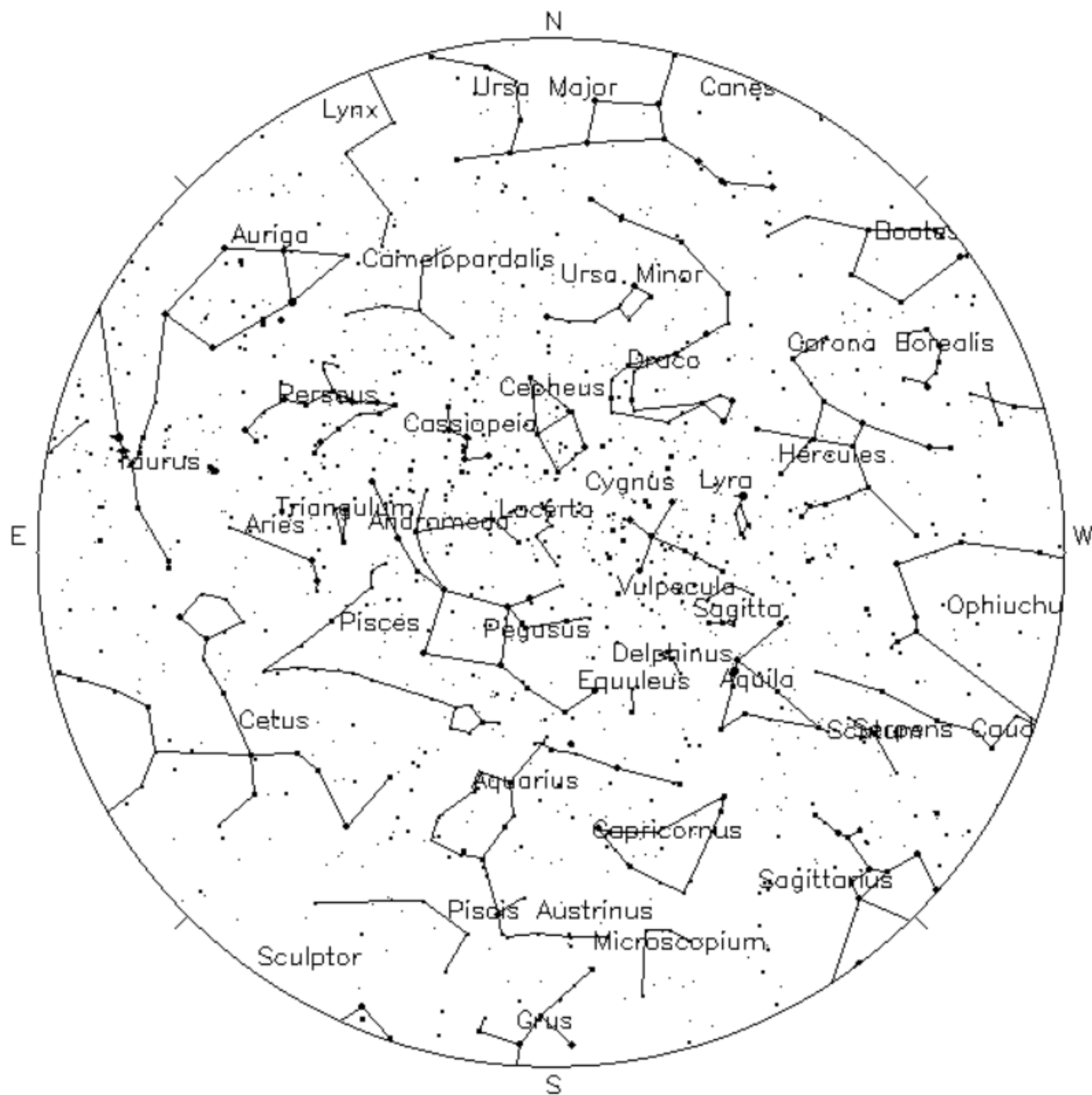


NOVEMBER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			01	02	03	04
Last Quarter Moon 05	06	07	08	09	Stargazers Group Meeting 10	Veterans Day 11 Astroimaging Meeting - 7:00 PM
General Meeting - 2:00 PM 12	New Moon 13	14	15	16	17	Star Party 18
Deadline for submissions to the Observer 19	First Quarter Moon 20	21	22	Thanksgiving 23	24	25
LVAAS Board of Governors Meeting 26	Full Moon 27	28	29	30		

DECEMBER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					01	02
03	04	Last Quarter Moon 05	06	07	08	General Meeting/Holiday Party - 11:00 AM 09
10	11	New Moon 12	13	14	15	Astroimaging Meeting - 7:00 PM 16
LVAAS Board of Governors Meeting 17	18	First Quarter Moon 19	20	21	22	23
Deadline for submissions to the Observer 24	Christmas 25	Full Moon 26	27	28	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		Board meeting	Saturday			Multi-Day Weekends Scouts at Pulpit R.	Moon Phase			
	General Meeting time	location		Astro-Imaging	Star Parties	Scouts at S. Mountain		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	Canceled 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
 MEGAMEET 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.

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@g.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. 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.

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 at observer@g.lvaas.org

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

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