

The Observer

The Official Publication of the Lehigh Valley Amateur Astronomical Society

<https://lvaas.org/>

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

September 2022

Volume 62 Issue 9





ad astra *****

Mega Meet was a success, with many members and a few guests (approximately 40 persons) in attendance. The 12" Meade, 17.5" Dob, and 18" Tinsley were all in use, along with several member and guest setups. While the sky was cloudy Friday night, it was mostly clear Saturday night until about 2:30 a.m.

LVAAS is always looking for volunteers to be officers in the society. Elections are scheduled to be held at the October general meeting with nominations accepted until the September general meeting. Currently the following persons have been nominated:

Mike Huber - Director

Sandy Mesics - Assistant Director

Blair Hogg - Treasurer

Joe Zitarelli - Secretary

Anyone interested in becoming an officer please contact Bill Dahlenburg.

The BOG discussed guidelines for photography of children at society events. These new guidelines will be instituted into LVAAS' Youth Protection Policy. The new guidelines will now require a signed release form from a parent or guardian before publishing any pictures of a minor child. Claudio Stabile has obtained some examples of the required forms and the Board of Governors will be working on the policy updates.

The Board of Governors discussed arrangements for the upcoming December Christmas Party. We have asked Blaine Easterwood to check with DaVinci Science Center to see if we can have it there again.

Registration for the Black Forest Star Party (9/23-9/25) at Cherry Springs State Park is now closed.

The next meeting of Astroimaging group scheduled for September 17th is canceled due to conflicting schedules.

Ad Astra!

Thomas Duff

LVAAS MEGA MEET 2022



Photographs courtesy of
Mike Huber



NOMINATION OF LVAAS OFFICERS

Nominations for LVAAS' officers for 2023 will be accepted through the close of our September, 11th membership meeting.

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 11, 2022 membership meeting.

Nominees to date:

Director: Michael Huber

Assistant Director: Sandra Mesics

Secretary: Joseph Zitarelli

Treasurer: Blair Hogg

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

Regards,

Bill Dahlenburg

Nominating Committee Chairman

sm_maintenance@lvaas.org

Minutes from the LVAAS General Meeting – August 20, 2022

The August 2022 LVAAS General Meeting was conducted in person at the society's dark sky site, Pulpit Rock Astronomical Park. Approximately 35 people were in attendance. Assistant Director Rich Hogg opened the meeting at 7:49 p.m.

Tonight's General Meeting's presentation was an update on LVAAS Projects by Frank Lyter, Director of Pulpit Rock Observatories.

The first project Frank presented detailed the installation of digital encoders and a controller to the society's 17.5 inch Coulter Odyssey 2 Dobsonian Reflector "Push to" telescope located at Pulpit Rock Observatory Site. The addition allows users to push the telescope to navigate the night sky while monitoring the position wirelessly via the Sky Safari application on their phone or tablet. The project utilizes the open source Dobsonian DSC application developed by Vladimir Atehortúa and made available via GNU General Public License.

The second project presented was about the installation of meteor detection cameras to the society's South Mountain and Pulpit Rock Observatory Sites as well as at member's homes. The project utilizes the international Global Meteor Network (<https://globalmeteornetwork.org>) program which is a worldwide organization of amateur and professional astronomers alike, whose goal is to observe the night sky using inexpensive, low-light video cameras to calculate meteor trajectories in a coordinated manner. LVAAS' cameras are the first installations in our area of the United States and along with other installations across the globe allow for the tracking, along with determining the source, size and possible landfalls of meteors impacting the earth.

Membership: Rich Hogg

1st readings

John Stefanik

Gary Kline

2nd readings

Michael James

Randy Rooth

- Moment to honor and remember Ellsworth Machin who passed away earlier this year and left LVAAS a monetary memorial donation.
- Moment to honor and remember Priscilla Jacobsen who found the club later in life and passed away 2 years ago. Her daughter stopped by last weekend and left LVAAS a monetary memorial donation.

General Comments:

- Da Vinci Science Center will be having an event on Sept. 17th, all day, with solar observing during the day and nighttime observing up until 10 p.m. If interested in volunteering please visit the website and click on 'contacts' then 'education' (Blaine Easterwood) and let him know you are interested.
 - No telescopes required!
- Thanks to Frank Lyter, Ron Kunkel, and all volunteers who have been working to maintain and fix up the site including replacing the flooring of the Kaweck Observatory.
- Mike Huber will be presenting in October on Astronomy for Kids.
- Ron Kunkel - if any member gets stuck up here, call Ron and he'll let you in/out. Frank takes care of the Observatories. Frank and Ron work closely together.
- Earl Pursell - Frank and Earl give out keys. Earl has extra gate keys if anyone needs one.
 - UACNJ - gives a talk every week and opens up the observatories for public viewing.

South Mountain Maintenance – Bill Dahlenburg

- The nominees for elected positions for 2023 thus far are:
 - Director - Mike Huber
 - Assistant Director - Sandy Mesics
 - Secretary - Joe Zitarelli
 - Treasurer - Blair Hogg

Next General Meeting:

- The next general meeting will be held September 11th at 7 p.m. at South Mountain HQ and online via Zoom. Rick Wasatonic from Villanova University will speak on "Photometry of Betelgeuse."

The meeting was adjourned at approximately 9:40 p.m.

=====

Submitted by Michael Huber, Secretary

Volunteers Needed for Da Vinci Astronomy Event!

We need volunteers! Solar telescopes, nighttime telescopes, both, or neither. We need your help to assist the public with viewing activities. You can come during the day, at night, both, or some fraction. Your participation is valued!

- What:** Solar and early nighttime planetary viewing
- When:** 17 September 2022, 10a to 9p
- Where:** Da Vinci Science Center
- Why:** To share your enthusiasm and knowledge (and probably learn a thing or two :)
- How:** Email response and show up on the 17th

Please let me know if you are able to pitch in. Any amount of time that you can offer will be appreciated! Email to education@lvaas.org if you are able to help.

Thank you!

Blaine Easterwood
Director, LVAAS Education Committee



The Da Vinci Science Center

https://en.wikipedia.org/wiki/Da_Vinci_Science_Center

Via Sandy Mesics, Programs Chairperson

Upcoming LVAAS General Meeting Speakers

September, **Rick Wasatonic** will speak on: "**Photometry of Betelgeuse.**" - Live at SMHQ Grady and online.

October, **Mike Huber** will speak on: "**Astronomy with Kids**" - Live at SMHQ Grady

November, **John Conrad** will speak on: "**Don't Look Up: DART, the World's First Asteroid Deflection Test.**"

A speaker is still needed for **December**; please contact Sandy to volunteer or to suggest a speaker.

Please provide contact information to astrosandy@gmail.com

Via Bill Dahlenburg, Star Party Coordinator

LVAAS is always looking for volunteers to help out with star party activities. Anyone willing to help will be trained on running the telescopes. Training is easy.

Planetarium shows are: 6 p.m. for kids, 7 p.m. presentation, 8 p.m. planetarium show for adults

Additionally, if anyone is interested in taking over the organization of LVAAS star parties,

please let Bill Dahlenburg know: sm_maintenance@lvaas.org

Via Sandy Mesics

NASA's Eclipse Ambassadors Off the Paths - Help Us Find New Participants! If you are an amateur astronomer or undergraduate student who would be interested in applying for this experience you can find more info at

<https://astrosociety.org/education-outreach/amateur-astronomers/eclipse-ambassadors/program.html>

Via Earl Pursell, UACNJ Liason:

United Astronomy Clubs of New Jersey (UACNJ), of which LVAAS is a member, is holding Public Nights (Star Parties) every Saturday from now until the end of October. There will be a talk beginning at 8 p.m. live and online, followed by observing. Since both the talk and the observatories are outside, everything is weather permitting. Reservations are suggested, but not required. Please visit www.uacnj.org for more information.

Benefit from giving to LVAAS through your IRA

If you are 70 1/2 or older, you can make a charitable gift directly from your IRA to LVAAS without paying income tax on the withdrawal. State laws about Qualified Charitable Deductions (QCDs) and how QCDs are handled vary. If interested, please consult an adviser so you can help LVAAS today!

https://lvaas.org/page.php?page=using_rmd_to_support_lvaas



Cover: The Bubble Nebula - Imager: Warren Landis

Imaged from his home observatory in downtown (!) Allentown, PA; 6 sessions 7/22-8/03, 2022.

Equipment:

Celestron 11" SCT Imaging telescope

ZWO ASI2600mm Imaging camera

ZWO OAG Guiding telescope

ZWO ASI174-mini Guiding Camera

Total Integration Time 7 hrs 36 mins

PUBLIC WELCOME!

**LVAAS General Meeting at South Mountain and on Zoom
Sunday, September 11 at 7 p.m.**

"Seeing **Red: 26 Years of Visual and
Near Infrared Photometric Observations
of the SRc Red Supergiant Alpha Orionis
(Betelgeuse)"**

presented by

Rick Wasatonic
Villanova University



Except for seasonal gaps, continuous light curves in the V-Band (at 550-nm) and near Infrared Red Bands (719-nm to 1024-nm) of Betelgeuse are presented. The light curves reveal both short-term and long-term semi-periodicities, amplitudes, and visual to IR flux ratios. In addition, using the near infra-red observations, techniques were developed that allowed calculations of effective temperatures, luminosities, and radii and their variations over the 26-year time frame. Other than AAVSO continuous visual observations, it is thought that the photometric results represent the longest continual observational dataset to-date.

Rick Wasatonic has been Professor and researcher in the Astrophysics and Planetary Science Department at Villanova University since 1996. Prior to that he was the IUE Final Archive Core Data Item Verification System lead at the Goddard Space Flight Center, a Science Operations Specialist at the Hubble Space Telescope Science Institute, and the International Ultraviolet Explorer Telescope Operator at the Goddard Space Flight Center.

As an LVAAS member from 1975-1981, Rick conducted photoelectric photometry of eclipsing binary stars using the 20-inch telescope formerly housed in the Schlegel-McHugh Observatory at Pulpit Rock. Rick earned his B.S. in Physics from Wilkes University in 1973.

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

So Far, And Yet So Near...

by Sandra Repash

A spectator's view of the NASA Artemis 1 Space Launch System and Orion Spacecraft at the ready on the launch pad at Kennedy Space Center approximately eighteen hours before the mission was scrubbed on August 29th.

It was raining so the image was captured through a window inside the Apollo/Saturn V Rocket display hangar through a pair of 10x50 Leupold binoculars with a Samsung S7 cell phone.

The launch viewing bleachers were just outside the hangar and about seven miles from the launch pad.



If you zoom in it's still a pretty clear image with detail. Artemis is surrounded by protective lightning towers, one of which was struck just two days before launch. My friend John captured the image, and fortunately had arrived in Cocoa Beach a few days earlier so was able to witness the August 27th night launch of the SpaceX Falcon 9 Rocket at Cape Canaveral Space Launch Complex 40 with a record setting payload for SpaceX. The launch was delayed by about an hour and half due to weather. The rocket disappeared in the clouds after a few minutes, but it lit up the sky, and he saw it clearly from Cocoa Beach about five miles south and heard the sonic boom.

Image captured by John Williams of Bethlehem PA. Enlarged and submitted by Sandra Repash.



Peter Detterline's
Night Sky Notebook
September 2022

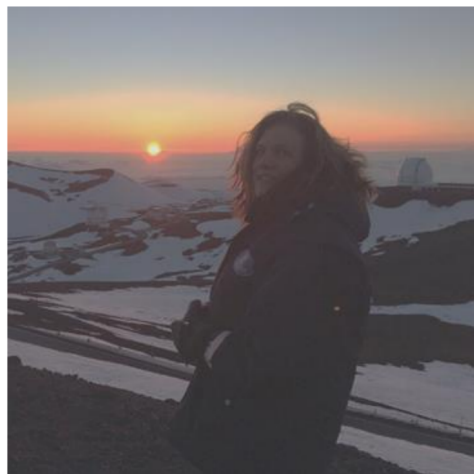


From the LVAAS Archives: An LVAAS Telescope Fair with Roger W. Tuthill

By Sandy Mesics

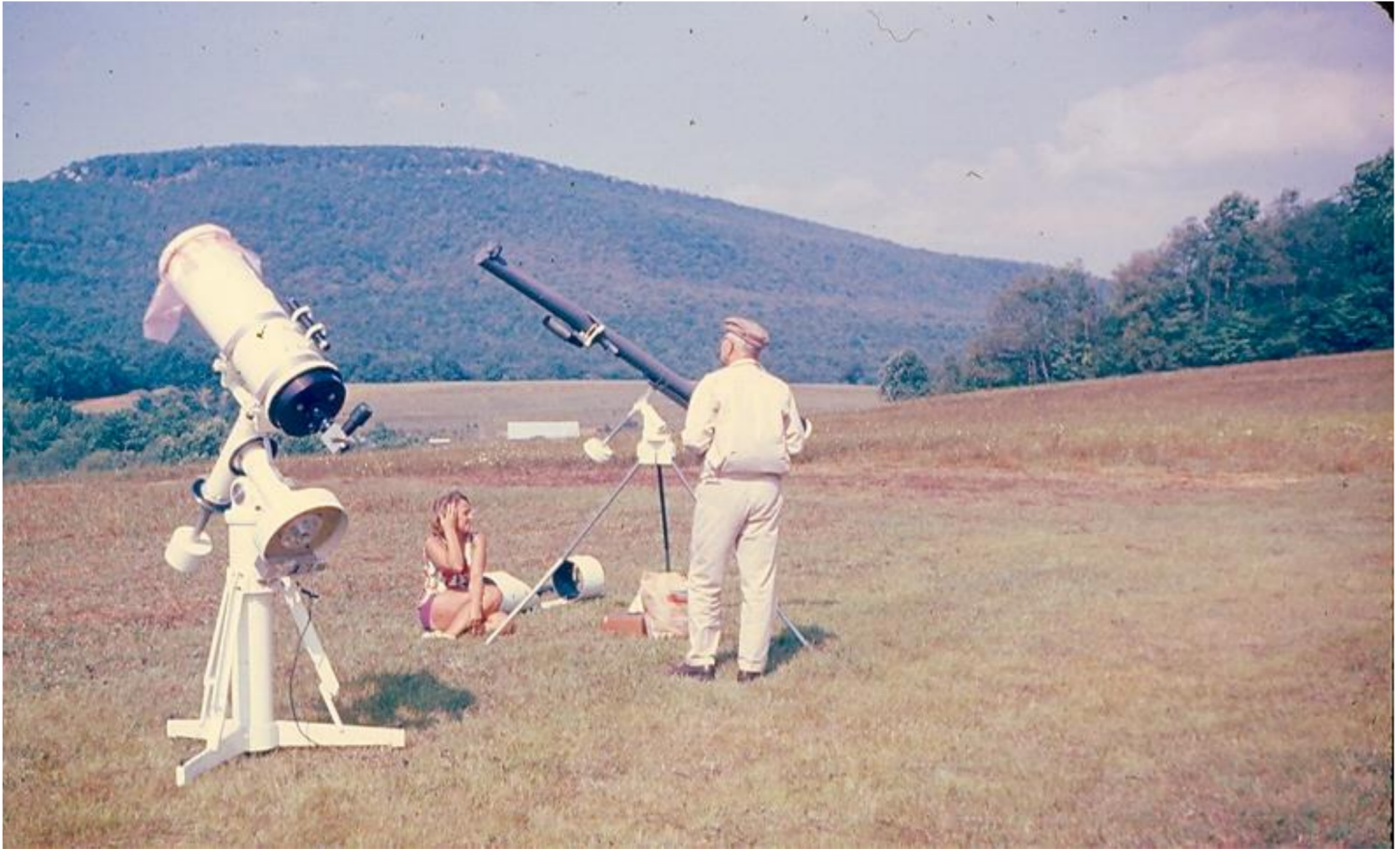
On September 9, 1972, LVAAS held a telescope fair at the home of Henry Kawecki in Lenhartsville. The event was held in the field behind his home, where he used to take off and land his helicopter for his trips to Pulpit Rock. The fair was held to display home built telescopes, and to observe with them if the evening was clear.

Instruments could be entered for judging if desired. Two categories were judged: mechanical construction and optical excellence. Admission was free, but it cost \$3.00 to enter a scope for judging. A tour of the Pulpit Rock site would be available for those who wished to go and/or observe. The judges were William McHugh, Paul Shenkle, and Ralph Schlegel, who collectively had over 100 years of telescope-making experience.



According to *The Observer*, the event proved quite successful. “Over thirty persons attended the event and although only about a dozen instruments were displayed, their forms and types were most diversified. The three most unusual scopes were Stan Wilke's Schiefspiegler, and Glen Hacker's Gregorian and Herschellian instruments. Three Cassegranian scopes with contrasting forms of

mountings were exhibited by Roland Lovejoy, Roger Tuthill (of S & T) and Chuck Fessenden from Connecticut. The latter was beautifully finished and represented about 10 years of work. Both 7" and standard 3-1/2" Questars were on display. Rae Klahr's 8" reflector, Martin Mack's 6" refractor, Stan Wilkes' reflector and Paul Shenkle's 'miniscope' completed the display.



"There were about six visitors from other societies, among whom were Star's noted meteor observer, Tom Fetterman, and Roger Tuthill who is organizing an expedition to view the 1973 solar eclipse in Kenya, Africa. Roger Tuthill brought along and demonstrated a discovery he had made in adapting a



**Tuthill with his Solar Skreen
mylar solar filter.**

plastic material for an objective solar filter. Using mylar plastic that had been aluminized, he had found it made an excellent solar filter. He placed samples of it over several of the instruments there and soon had a crowd of solar observers. While somewhat expensive for plastic because of tolerances, its' cost for a 6-8" instrument is under ten dollars.

Roger Tuthill is a legend among amateur astronomers. Tuthill was born in York, PA on October 23, 1919. He graduated from Pratt Institute in New York City with a degree in electrical engineering in 1941. During World War II, he worked on the Manhattan Project and perfected a special method of welding aluminum without using flux to form a sealed canister for holding uranium. He served as a Lieutenant junior grade in the Navy during World War II.

In 1959 he moved to Mountainside, NJ, and worked for the General Electric Company. During that time, he was awarded more than 10 patents for new methods of welding. After leaving GE, he became Vice President of Engineering, Welding Department, of Airco in New Jersey. All during this time he was an avid amateur astronomer and accomplished telescope maker.

For many years, Tuthill moderated the afternoon talks at Stellafane as well as serving as a judge in the telescope making contest. At the 1973 Stellafane convention he was Master of Ceremonies and presented a talk on his African solar eclipse expedition. He chased about 18 eclipses in total.

Regarding the mylar solar filters that he demonstrated at the LVAAS telescope fair, just a few months later, Tuthill would apply for a patent for his “Multilayer solar filter reducing distortive diffraction” (in December 1972), and the patent was granted in June 1974. He began selling his “Solar Skreen” filters from his home in Mountainside, New Jersey.



Tuthill with his homebuilt 20-inch scope. Courtesy <https://stellafane.org/history/early/beaty.html>

Eventually, Tuthill expanded his line of items for amateur astronomers to include things such as Isostatic Mount for Schmidt Cassegrain telescopes, setting circle lights, heated dew shields, digital setting circles, finders, eyepieces, filters, and modified Celestron and Meade telescopes, all from his garage in Mountainside, NJ. Tuthill died Friday December 15, 2000, at the age of 81.

According to *The Observer*, the telescope fair was a big success, and in the evening “the entire group went up to Pulpit Rock where an unusually clear evening provided excellent observing. From this experience, the Society will hold another such event next year.” Sadly, LVAAS did not repeat this event in 1973.

References:

The Observer, September and October, 1972.

<http://www.ovidiuv.ca/EuRoEclipse99/sponsors.htm>

<https://www.goleader.com/00dec28/7.pdf>



StarWatch

Thumbs Up!

Something distracted me, but I swung the sledgehammer anyway... right into my left thumb. The official medical diagnosis was a *mallet to the thumb*, but I knew that immediately, upon feeling the pain, seeing the blood around the cuticle, and drowning my neighborhood in expletives. Four weeks later, my broken thumb is healing, but I must wear a removable cast until the first week in September. * This all has to do with an observatory that my friends and I are constructing in my backyard, a dream that I have had since 2010 when I retired from teaching under the artificial skies of a planetarium and came to Moravian University to continue cultivating my lifelong interest in astronomy. * The project started, unknowingly to me, with a hailstorm on May 29, 2019, which dropped golf ball to baseball-sized hail in southeastern Lehigh County. I happened to be in the Sangre de Cristo mountains in Colorado where it was also snowing. The money I had set aside to purchase a new roof and siding on my home and outbuilding was suddenly freed by my homeowner's insurance. There was also the matter of the 37 ash trees slowly withering because of the ash bore. They were cut down in January of 2020 as my initial ideas of building an observatory jelled. * The structure was first conceived as a simple roll-off roof design, a poor man's observatory. It has the advantage of having the entire sky visible while viewing the heavens rather than looking through the traditional narrow slit of a dome. I discussed my ideas with Adam Jones, a former student of mine and an IT specialist, who is also a talented amateur architect, builder, photographer, and mountain climber. He put my ideas on steroids, ramping up a design that produced a warming room, storage space for my astronomical gear, and even a small kitchen with a

sink and microwave. The observatory was attached to the warming room and elevated six feet to give me better clearance from surrounding neighborhood trees. Then Adam intimated that, "This would be a fun project for us to tackle." * Adam and I had built my *TajMa* shed which had a similar evolution in complexity in 2006-7, but this structure was to be much more complicated. I said "Yes," not knowing what loomed ahead, and I can honestly attest to a greatly increased respect for those individuals who are involved in construction. * During the COVID summer of 2021, the site was excavated. Footers and foundation walls were completed. That fall saw the electrical trench dug with high and low voltage lines installed from the house to the observatory and backfilling of the structure and trench. Thank you, Dean Bauer, another friend. This summer has seen the most progress. The site had been landscaped, the cement flooring poured, and a building is taking shape that looks precisely like the hundreds of CAD drawings that Adam had produced. One of my friends, Peter Detterline, said that the way the structure had been fabricated was like a work of art. * Adam precut all the lumber based upon his CAD design. The walls were then assembled like a giant three-dimensional jigsaw puzzle. The pieces fit perfectly together for the most part, and a building now stands in my backyard that is looking more and more like an observatory; however, it will probably be 2023 before the project is fully completed. Presently, the telescope awaits shipment from Adrian, Michigan, and the mount that will support the scope has already arrived from Italy. Eventually, all I will need will be clear skies to continue my real-time astronomical explorations of the universe. Ad Astra!

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

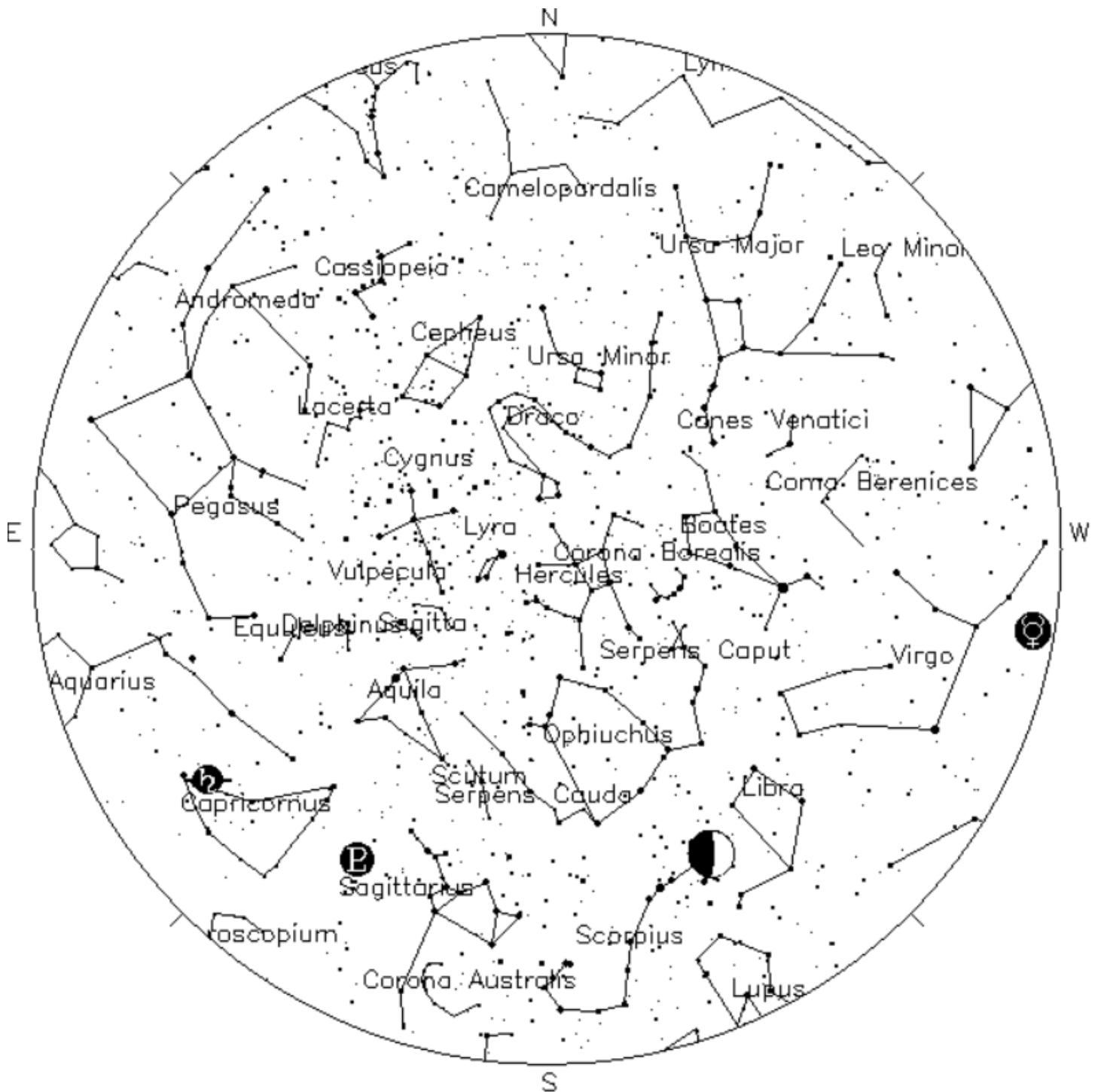
Forward this **StarWatch** to a friend by clicking [Join](#)

SEPTEMBER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				01	02	First Quarter Moon 03 Star Party
04	Labor Day 05	06	07	08	Scout Camping at Pulpit Rock 09	Scout Camping at Pulpit Rock 10 Full Moon
Scout Camping at Pulpit Rock 11 General Meeting - 7:00 PM	12	13	Scout Presentation at South Mountain 14	15	16	Last Quarter Moon 17 (Cancelled) Astro Imaging at SM 7pm
Deadline for submissions to the Observer 18	19	20	21	22	BFSP 23	BFSP 24
BFSP 25 New Moon LVAAS Board of Governors Meeting	26	27	28	29	30	

OCTOBER

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

2022 LVAAS EVENT CALENDAR

Contributed by Bill Dahlenburg

2022 LVAAS Event Calendar												
	Sundays				Saturday	Saturday	Monday	Multi-Day	Moon Phase			
	General Meeting time	Date/location	Board meeting	Observer submission deadline	7:00 PM Astro Imaging	Star Parties	Scouts at S. Mountain	Weekends Scouts at Pulpit R.	New	First	Full	Last
January	3:00 PM	9 Muhlenberg/Zoom	30	23	no mtg	no mtg		no camping	2	9	17	25
February	3:00 PM	6 * Muhlenberg/Zoom	27	20	no mtg	no mtg		no camping	1	8	16	23
March	3:00 PM	13 Muhlenberg/Zoom	27	20	26	12			2	10	18	25
April	7:00 PM	10	24	17	23	9			1 30	9	16	23
May	7:00 PM	1 *	22 *	15	21	7			30	9	16	22
June	7:00 PM	12	26	19	25	4			29	7	14	21
July	5:00 PM	9/10 Picnic – S.M.	31	24	23	2			28	7	13	20
August	7:00 PM	13/14 Pulpit	28	21	20	6			27	5	12	19
September	7:00 PM	11	25	18	17	3			25	3	10	17
October	7:00 PM	9	30	23	15	1			25	3	9	17
November	7:00 PM	13	27	20	19	5			23	1 30	8	16
December	**	10/11	18 *	11	17	no mtg		no camping	23	30	8	16

* early due to conflicts

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

NEAF
 Cherry Springs S.P.
 Stellafane
 Black Forest S.P.
 MegaMeet

April 9-10
 June 2-5
 July 28-31
 August 19-21

Publishing images is a balancing act!

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

Put the quality in:

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

But watch the "waistline"!

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

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

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

The Observer is the official monthly publication of the Lehigh Valley Amateur Astronomical Society, Inc. (LVAAS), 620-B East Rock Road, Allentown, PA, 18103, and as of June 2016 is available for public viewing. Society members who would like to submit articles or images for publication should kindly do so by emailing *The Observer* editor, France Kopy, at editorlvaas@gmail.com. Articles submitted prior to the Sunday before the monthly meeting of the board of governors (please see calendar on website) will appear in the upcoming month's issue. PDF format is preferred. Early submissions are greatly appreciated. Articles may be edited for publication. Comments and suggestions are always welcome.

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

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

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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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