

The Observer



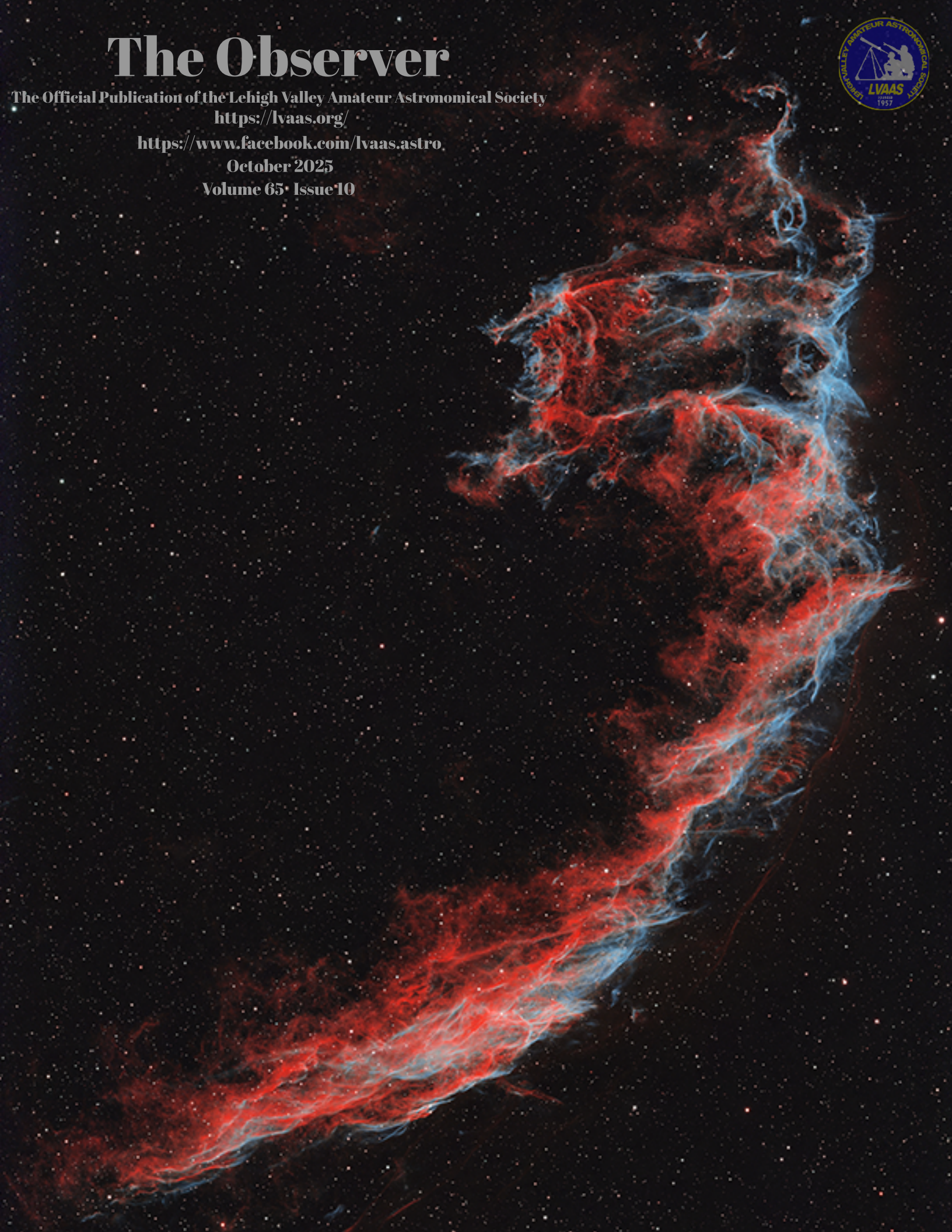
The Official Publication of the Lehigh Valley Amateur Astronomical Society

<https://lvaas.org/>

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

October 2025

Volume 65 • Issue 10



***** Election of Officers for the 2026 term will take place during this meeting *****

LVAAS General Meeting - Public Welcome!

Sunday, 10/12/25, 7 p.m. at South Mountain HQ

Prospective new members who wish to attend, please email: membership@lvaas.org.

"The Universe in 1913: Astronomy Through a Century-Old Lens" Part 2

presented by

LVAAS member and former director

Mike Huber



Mike will take us back to 1913 to explore the scientific understanding of astronomy as presented in a university textbook from that era. We'll delve into how astronomers of the time perceived the cosmos, from their theories about the structure of the Milky Way to their insights into celestial phenomena. This retrospective will highlight the foundational ideas and limitations of early 20th-century astronomy, showcasing how far we've come in just over a century.

Michael Huber is a former director and current member of the Lehigh Valley Amateur Astronomical Society since 2020. Mike discovered his passion for astrophotography in 2021. Some of his images of the universe have been recognized as "Top Picks" on AstroBin, and he has the incredible honor of having his photo of M13, the great globular cluster in Hercules, featured on the cover of this year's edition of *The Observer's Handbook*. Growing up with a father who was a professor of theoretical astrophysics, Mike developed a lifelong love of astronomy, which continues to inspire his exploration of the night sky and his contributions to the club.

***** Election of Officers for the 2026 term will take place during this meeting *****

Election Of LVAAS Officers For 2026 Term

Election of LVAAS officers for the 2026 term will be held during our general meeting on October 12, 2025 at 7:00 p.m. at our South Mountain Headquarters.

Only LVAAS full members in good standing (current dues paid) are entitled to vote.

Nominees for LVAAS Offices:

Director: Benjamin Long

Assistant Director: Kyle Kramm

Secretary: Becky Frank

Treasurer: Vo Maziarz

Installation of newly elected officers will take place at our general meeting and holiday party on December 14.

Questions? Please contact:

Bill Dahlenburg or Eric Loch

Nominating Committee Chairmen



Minutes from the LVAAS General Meeting – September 14, 2025

The September 2025 LVAAS general meeting was conducted electronically using an online service and at the South Mountain headquarters. Approximately 40 people were in attendance. Director Benjamin Long opened the meeting at 7:00 p.m. The meeting's presentation was *The Inflationary Universe by Alan Guth: A Book Report*, given by Joe Zitarelli.

Joe has had an interest in astronomy since attending his high school, which had a planetarium, a 20" Newtonian reflector and a physics and astronomy teacher who was fresh out of college and eager to use them to teach. Joe went on to get a B.S. in Physics at Penn State University, where he developed a particular interest in cosmology. While he chose a different career path, his interest in physics and astrophysics never waned and he continued to read books on the topic. He joined LVAAS in 2019 to continue to learn more about astronomy. He is our society librarian and uses astroimaging as another tool to learn about objects in the sky.

While walking through the LVAAS library I saw the book, "The Inflationary Universe" by Alan H. Guth. While I felt I had a basic understanding of the Big Bang Theory and that Inflation was necessary to solve some issues with the original theory, I realized I actually knew very little about what Inflation was exactly. I was aware that Guth is generally given credit for first proposing the Theory of Cosmic Inflation, so what better place than his book to learn about the theory? I found his ideas of what happened in this brief period of time in the early Universe fascinating, and his personal story of how he went from a struggling postdoctoral fellow to an associate professor at MIT almost overnight heartwarming. I'd like to share what I learned in a format that requires no mathematics, but only a desire to learn more about what current theory tells us about how our Universe began.

If members would like to see a video of the presentation it is available by contacting library@lvaas.org

After questions, a break was taken at 8:20 p.m. The business meeting resumed at 8:35 p.m.

Membership: Rich Hogg

- The following members completed their second readings and are now full members:
Ro Horstman
Greg Cain (family membership with Sandra Cain)
- The following members completed their first readings:
Usman Chaudhary
Mersim Gjonbalic (family membership with Algerta Malellari)
- 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
Marissa Chitty
Jay Copin
Matt Daniels
Glenn Garcia (family membership with Jacqueline Blas)
Gunasekaran Anandhan Rajan
Paul Shanahan
Zechariah Ziegenfus

Nominating Committee - Bill Dahlenburg:

- The following slate of officers has been nominated:
 - Director: Benjamin Long
 - Assistant Director: Kyle Kramm
 - Treasurer: Wojciech Maziarz
 - Secretary: Becky Frank
- There being no further nominations, the above is the final slate of officers for 2026.
- The election will be held at the October 12, 2025 general meeting.
- The new officers will be sworn in at the December 14, 2025 general meeting.

South Mountain Maintenance – Bill Dahlenburg

- Bill and others are available at South Mountain most Saturday mornings from 9 a.m. until noon doing maintenance. Help is appreciated.
- They are also available to give tours, give instruction on the telescopes, or show members the rental fleet. If you plan to go, contact Bill ahead of time to confirm they will be there that Saturday. Contact information is available on the website.

Astroimaging Group – Tom Duff

- The Astroimaging Group meets once a month. If the skies are clear, members tend to set up and image. If not clear, we will frequently watch a video related to astroimaging, have show-and-tell, or discuss various topics.
- We try to make the meeting interesting to imagers of all levels from beginner to expert.
- Meetings are held on one Saturday each month at South Mountain at 7:00 p.m.
- The next meeting is scheduled for Saturday October 11 at 7:00 p.m. at South Mountain.

Pulpit Rock Observatories – Frank Lyter

- Frank works closely with Ron Kunkel. Since both are retired, they are generally available.
- If you are interested in helping with maintenance or projects, join the Pulpit Rock Buzz for updates on when activities are planned.
- Contact Ron or Frank for training on the telescopes, or to obtain a gate code.

Stargazers - Kyle Kramm

- The Stargazers group is directed at beginners to help them with their equipment or to discuss any topic of interest. If the skies are clear, we will open observatories as well as use personal equipment of members present for viewing.
- All members interested in gaining more experience on exploring the sky are welcome and encouraged to attend. This meeting is very informal with a very flexible agenda.
- The meeting is held at 7:00 p.m. on the second Friday of each month.
- The next meeting will be held at South Mountain on Friday October 10, 2025 at 7:00 p.m.

Next General Meeting:

- The next General Meeting will be held at South Mountain at 7:00 p.m. on Sunday October 12, 2025.

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

The September 2025 General Meeting was recorded.

Submitted by Joe Zitarelli, Secretary



Via Sandy Mesics, Programs Chairperson

Upcoming LVAAS General Meeting Speakers

October: **Mike Huber** will be back in person to do "1913 Astronomy: Part 2"

November: **Ray Harris** will speak in person on "Meteorites."

December: **Nico Carver** (via Zoom) "Telescopes for Astrophotography and How to Choose the Right One for You"

January: **John Conrad** will speak via Zoom on "Deep and Deeper – NASA Space Telescopes"

February: **Bruce Ruggeri** will speak via Zoom on the Europa Clipper Mission

- ▶ Please contact astrosandy@gmail.com if you have ideas for speakers, or would like to do a talk yourself.

Via Claudio M. Stabile, Scouting Activities Coordinator

We are excited to announce the launch of the **2026 LVAAS Youth Sponsorship Program**. Applications are now open through January 16, 2026. Find more information on next page of this publication. A great opportunity for younger members to get involved in astronomy! Apply [here](#) and good luck!

THANK YOU, LVAAS VOLUNTEERS!

LVAAS would like to thank the following members for their help with our September Star Party: **Earl Pursell, Kyle Kramm, Bill Dahlenburg, Linda Prince, Steve Snyder and Tom Duff**. Star Party Director **Aidan Berger** would like to give extra thanks to **Earl Pursell** for presenting a private planetarium show and to **Bill Dahlenburg** for running the star party in his absence. Thanks to **Eric Loch** for weed control, **Pete Brooks** and **Mike Clark** for painting of the library and mower shed, and all who have been busy beautifying our SMHQ grounds and buildings, mowing grass, and general upkeep. A big LVAAS thank you also goes out to **Claudio Stabile** for intersecting the world of scouting with the world of astronomy at our Pulpit Rock dark sky site. The photo (R) is from a recent scouting event at Pulpit Rock AP. A big thanks to all LVAAS volunteers!

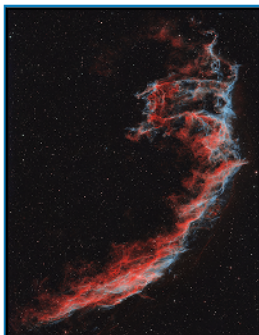


LVAAS Volunteer Opportunities

Please contact **Blaine Easterwood** (Blaine@ieee.org) if you would like to participate in the **Da Vinci Science Center Solar Observing Event** on Oct. 7 from 10:30 a.m. to 3 p.m. or **The LV Space Fest Event** Oct. 11-12, 10 a.m. to 4 p.m. info [here](#) You can come for a couple of hours or for the whole time if you wish.

Via Earl Pursell, UACNJ Liason

Public Program Nights and weekly star parties continue until the end of October. Anyone who would like to give a talk is welcome to contact Chris Callie (redlog176@gmail.com). UACNJ also has its own YouTube channel and the schedule of videos is on its website. Please visit uacnj.org to watch and /or subscribe.



Cover image: The Eastern Veil Nebula (NGC 6992) - Imager: Michael Huber

Technical details:

Over 34 hours of data was acquired over the course of a year with all images being taken at South Mountain HQ. I used Skywatcher StarLux 190MN with an ASI2600MC Pro combined with the Optolong L-Ultimate dual narrowband filter. For tracking and guiding I had the Skywatcher AZ-EQ6 Pro mount, an Orion 50mm deluxe guide scope, and an ASI490 MM Mini guide camera. Images took 7.5 hours of stacking in Astro Pixel Processor. Post processing was done using a workflow combining PixInsight (along with Russ Croman's X-suite of tools), Affinity Photo 2, and Photoshop. AstroBin link and description: [NGC 6992 Eastern Veil - AstroBin](#)



2026 LVAAS Youth Sponsorship Program
Proudly Administered by
Astronomy in the Community



APPLICATIONS ARE OPEN!
APPLICATION DEADLINE IS JANUARY 16, 2026
LVAAS Youth Sponsorship Program - 2026 Application

The Lehigh Valley Amateur Astronomical Society is pleased to introduce the first annual LVAAS Youth Sponsorship Program for 2026, proudly administered by Astronomy in the Community.

To give back to our LVAAS community for your support during 2023 and 2024, Claudio T. Stabile and Ava Stabile, founders of Astronomy in the Community, proposed this initiative to provide similar opportunities to future youth members.

This astronomy project focused program aims to foster astronomy interest among young LVAAS members by providing financial and in-kind support for ambitious astronomy related projects. By recognizing and rewarding their dedication, we inspire future generations of astronomers within our community.

One applicant will be selected in January 2026 and awarded a \$1,000 monetary grant along with support from LVAAS members to accomplish their project. The program is open to LVAAS members in good standing, up to 25 years old, having volunteered at a minimum of 4 LVAAS events in 2025, and with a strong astronomy project proposal. The application deadline is January 16, 2026.

For more information, please visit <https://lvaas.org/page.php?page=YouthSponsorshipProgram>





L. Vaas
wants **YOUR**
astro photos
for the **2026 calendar!**

- **Share Your Universe in Our 2026 Calendar!** Have you captured a stunning celestial scene? We invite you to submit your best astrophotography for a chance to be featured in the official **LVAAS 2026 calendar!**
- **All Cosmic Subjects Welcome!** We're looking for a wide range of astronomical wonders, including deep-sky treasures like galaxies and nebulae, breathtaking planetary and lunar images, and captivating nightscapes that blend Earth and sky. All forms of media are welcome as well. Feel free to submit your sketches, paintings, composites, etc.
- **Let Your Talent Shine!** All selected photographers will receive full credit for their work in the calendar, including your name and a link to your personal website or social media, if you wish.
- **Ready to Submit? Here's How:**
 - » Email your high-resolution images to m.huber614@gmail.com
 - » Please use the subject line: "2026 Calendar Submission".
 - » Include a title and a brief description for each submission.
- **Don't Delay!** The deadline for all submissions is September 30th.
- **We can't wait to see the cosmos through your lens!**



Peter Detterline's
Night Sky Notebook
for
October 2025

Night Sky Notebook

<http://nightskynotebook.blogspot.com/>



Please remember to like and subscribe!

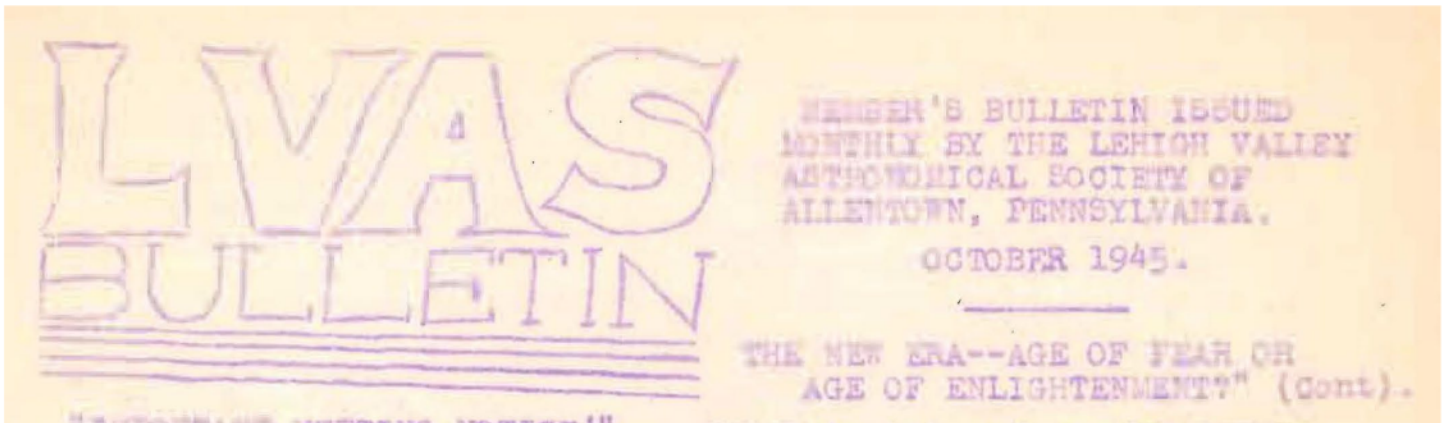
The New Era

By Sandy Mesics

Baby Boomers, Generation X'ers, Millennials, Generation Z'ers, and Generation Alphas never knew a time without atomic energy. But this was not true for the members of the Lehigh Valley Astronomical Society (LVAS) whose members in 1945 were made of what has been called the Silent Generation or the Greatest Generation. They had to come to terms with the power of the atomic bomb which had virtually ended World War II when it was dropped on August 6, 1945. This event ushered in a "New Era," and the new era's challenges and possibilities were poignantly described by Eugene Carl, editor of the *LVAS Bulletin*, in October 1945.



"With the end of the most terrible of wars since the beginnings of the human race, came the remarkable discovery of the much talked about Atomic power!" Carl began, "The dropping of the deadly bomb shocked the world into a half-dazed realization that it had entered a new era. ... We only know or should know, that unless civilization brings about a real peace – an age of enlightenment now – it will inevitably mean its own ultimate end! What can we do about this?"



Carl suggested what the LVAS could do. "Trivial as it may seem, we have in our small group of amateur telescope makers and star gazers here in Allentown, the means of helping to provide in our small but useful way, an age of enlightenment! [Carl liked to use exclamation points] Groups such as ours all over our Country trend to stimulate interesting hobby-like, scientific education. ... Now that war has ended there is every reason to believe that such clubs will receive a remarkable impetus in the near future. ... Now is the time to go forward with all that we have to further the interest of Astronomy in our city. We must begin to be known more and to grow in membership. We can do this if we will let us strive also to get the young people into our group – those who show an interest in one way or another in our hobby. There are many of them. All we need to do is invite them to attend one of our gatherings."

Carl could not have predicted the looming post-war baby boom and the dawning of the space race, but he was correct in predicting that the future success of the hobby of amateur astronomy depended largely on attracting younger members. And indeed, a decade after this article was written, new "junior" members were joining the LVAS. When the LVAAS replaced the LVAS in 1957, the involvement of the baby boomers

continued to swell the membership ranks, to the point that a subsidiary group of young LVAAS members formed the Ursa Major Astronomical Society which remained active until the baby boomers moved on to adulthood. And these junior astronomers moved on to make an impact, becoming NASA scientists, medical professionals, attorneys, educators, and a myriad of other professions.



Ursa Majors showing a slide show at South Mountain. The table is set up in what is now the Red Shift store.

The New Era that Carl wrote about has not included the ending of all wars, but at least to this date not another atomic or nuclear weapon has been employed as part of an armed conflict. The New Era has given us new power sources enabling us to produce electricity, some of which has been used to explore space. It has fostered advancements in research and technology as well. But its impact on the environment and challenges of nuclear waste management are ongoing issues.

Reference

L.V.A.S. Bulletin, October 1945.



NGC 7331 Caldwell 30 Imager Michael Huber

Telescope: SkyWatcher StarLux 190 MN

Mount: SkyWatcher AZ-EQ6 Pro

Camera: ZWO 2600MC Pro

Subs: 54 x 180s

Total integration time: 2 hr 42 min.

Notes: A Journey Through Time in Pegasus

Central in this image is NGC 7331 and off to the right is Stephan's Quintet. Speckled throughout are many other galaxies in this field of view. Aside from the fact that NGC 7331's central bulge rotates in the opposite direction of its disc, it is surprising that some of these "small" galaxies are quite distant from us, despite their brightness, with some being about 350 million light-years away. Using Hubble's Law, this means the galaxies are moving away from us at a velocity of 7.5 km/s just due to the expansion of space.

350 million years is a truly staggering amount of time and immense journey undertaken by the light from the more distant galaxies in this field. Consider a single photon from one of them, traveling for 350 million years to reach my camera's sensor. When that photon began its voyage, Earth was in the very early Carboniferous period—the age of amphibians, giant insects, and towering "trees". Pangea had just formed, and the first primitive, fern-like trees were stretching over 100 feet into the sky. When these plants died, they fell into swamps where the bacteria and fungi that could decompose them had not yet evolved, allowing them to become the vast coal seams that made the industrial revolution possible and continues to power much of our world today—a fossil fuel that can never form in such abundance again.

Throughout its journey, this particle of light silently witnessed the dawn of the dinosaurs, their eventual extinction, the rise of mammals, and countless shifts in climate. The entire history of human civilization unfolded in just the final fraction—a mere 0.00003%—of its epic trip. It's a humbling reminder that when we look up at the night sky, we are not just seeing across space, but profoundly back in time.



M101, or NGC 5457, The Pinwheel Galaxy Imager: Michael Huber

Telescope: SkyWatcher StarLux 190 MN

Mount: SkyWatcher AZ-EQ6 Pro

Camera: ZWO 533MC Pro (2023) ZWO 2600MC Pro (2025)

Subs: 32 x 300s (533MC Pro) + 38 x 120s (2600MC Pro)

Total integration time: 3 hr 56 min.

Notes: M101, or NGC 5457, aka the Pinwheel Galaxy is a face-on spiral galaxy located about 21.5 million light years away. It has a diameter of about 250,000 light years and contains on the order of 1 trillion stars. Compare this to our own Milky Way Galaxy which has a diameter of about 87,000 light years and between 100 - 400 billion stars. From Earth this galaxy has an apparent size only a little less than the full moon.

For more info please use Mike's [astrobin](#) link to Pinwheel M101 NGC 5457

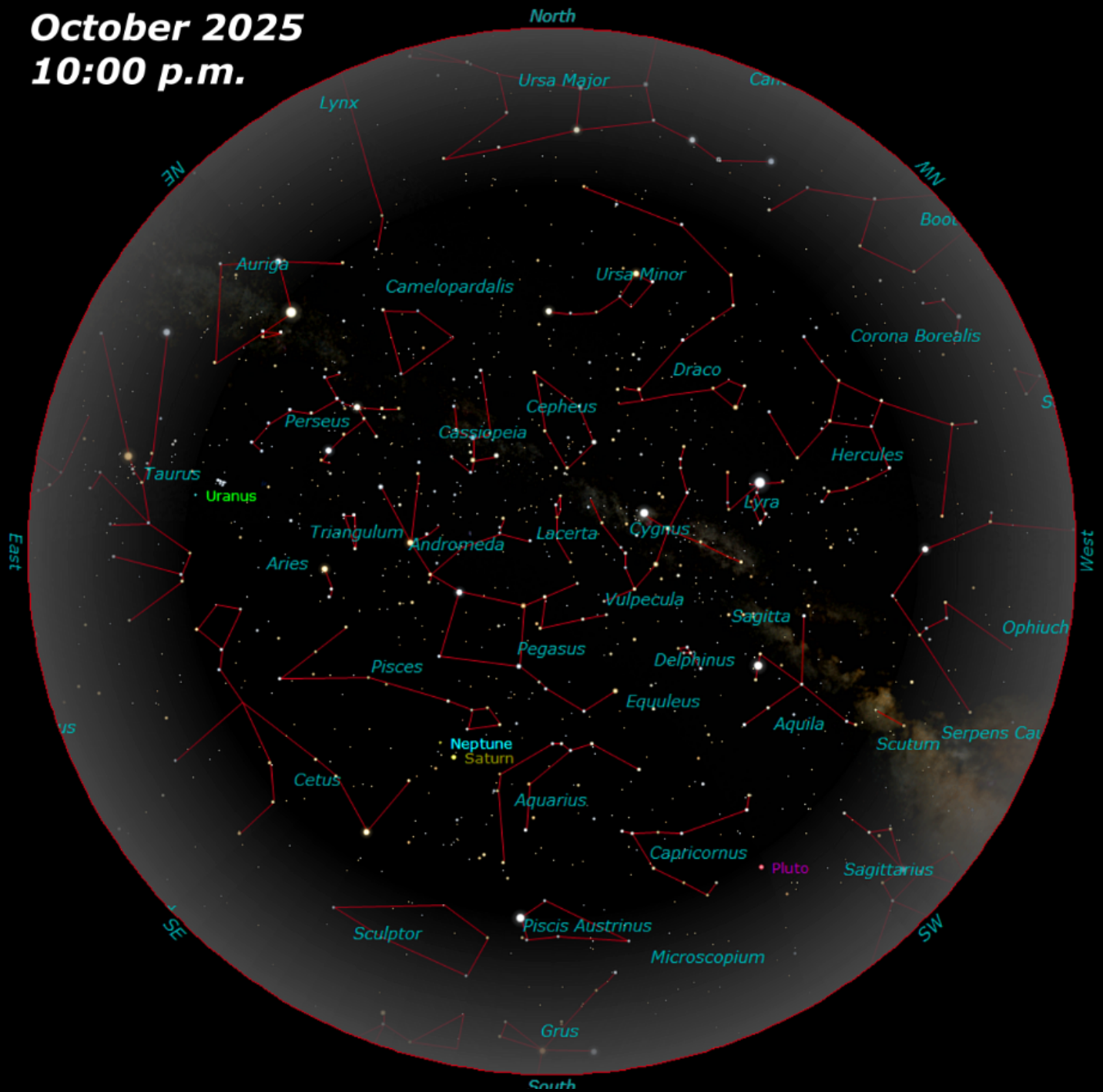


Motion: The Next Great Leap for Astronomy

Nestled on the summit of the 8,800-foot Peñón peak of the Cerro Pachón Mountains in central Chile sits the Vera C. Rubin Observatory, poised to create the next great leap in astronomical information acquisition. The 8.4-meter (27.6-foot) in diameter primary mirror has been designed to be virtually distortion-free, but that is not its greatest asset. The telescope possesses an ultrafast focal ratio of F/1.2, allowing it to capture a 9.6 square degree chunk of sky in just 30 seconds using the world's largest digital camera, possessing a 3.2 gigapixel sensor. In just five seconds, the 600-ton telescope will reposition to take its subsequent exposure, producing about 20 terabytes of data every night. Compare that to the Hubble Space Telescope, which has collected about eight terabytes of data yearly, and the James Webb Space Telescope, which has collected about 200 terabytes annually. Rubin will photograph the entire sky visible from 30 degrees south latitude every three nights. The first trial image assembled in just seven nights boasted over 10 million galaxies, most of them never seen before, and the discovery of 2100 new asteroids. This first image was the compilation of 1200 individual exposures. * Up to the present time, astronomers have studied the universe using still images, snapshots of the cosmos. Rubin's ultimate goal will be to create a digital time-lapse movie of the universe over 10 years. With software designed to subtract anything stationary or non-variable from the photo, only transient objects will remain, revealing everything that changes in the visible universe. These include variable stars, amalgamating neutron (dead) stars and black holes, young protostars beginning nucleosynthesis, and most importantly, rare supernovae, massive dying stars that suffer core collapse and produce titanic explosions. Rubin may finally answer the ultimate fate of our universe. * From the study of Type Ia supernovae investigated by the Hubble Space Telescope, astronomers were able to begin their understanding that our universe is

accelerating. This type of supernova occurs in a binary system when a bloated red giant near the end of its life pours hydrogen and helium onto a companion white dwarf, eventually causing the dwarf to supernova. Type Ia events produce a precise light output that allows astronomers to compare their actual (absolute) brightness with their observed (apparent) brightness, and thus obtain the most accurate distance measurements for the universe. In total, over 16,000 supernovae events have been witnessed throughout the entire history of astronomical observations. Rubin is expected to image 100,000 stellar explosions each year. A better understanding of the acceleration of the universe will allow astronomers to quantify more accurately the total amount of dark energy that is driving the expansion. * American astrophysicist Vera Florence Cooper Rubin (1928-2016), for whom the observatory was named, was a pioneer in the study of dark matter and its effects on the rotation of galaxies. In a Keplerian environment like our solar system, the closer a planet is to the sun, the faster its orbital speed. In the center of a galaxy where stellar densities are at their greatest, it is just the opposite. Orbital velocities increase with distance because stars near the center feel the gravitational tugs of stars farther away. This increases their speeds. It would be expected that stars much farther from the galactic nucleus, similar to our sun, would begin to feel the galaxy's center somewhat like a point source and behave in a more Keplerian fashion, but that is not the case. The outer regions of a galaxy rotate more like a disk, with velocities slowly increasing with distance from the center. The conclusion that Rubin forged is that an undetectable mass that possesses gravity, dark matter, must lie beyond the galaxy's unseen structure. * These are just some of the anticipated discoveries and refinements that will undoubtedly shake up the astronomical landscape and lead to a much better understanding of the universe in which we live. I can't wait. Ad Astra!

October 2025
10:00 p.m.



For access to more features, please click [here](#)

Contributed by
Gary A. Becker

OCTOBER 2025

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

NOVEMBER 2025

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

2025 LVAAS EVENT CALENDAR

Contributed by Bill Dahlenburg

2025 LVAAS Event Calendar											
	<u>Sundays</u>			<u>Saturday</u>			<u>Observer</u>	<u>Moon Phase</u>			
	General Meeting time/date	location	Board meeting	Astro- Imaging	Star Parties	Stargazers Group	Submission Deadline	New	1 st	Full	3 rd
January	3:00 PM 12	Muhlenberg	26	no meeting	no meeting	no meeting	19	29	6	13	21
February	3:00 PM 2	Muhlenberg	23	no meeting	no meeting	no meeting	16	28	5	12	20
March	3:00 PM 9	Muhlenberg	30	no meeting	8	14	23	29	6	14	22
April	7:00 PM 13	S.M.	27	26	12	11	20	27	5	13	20
May	7:00 PM 4	S.M.	25	17	3	9	18	27	4	12	20
June	7:00 PM 8	S.M.	29	14	7	13	22	25	3	11	18
July	5:00 PM 12 (13)	S.M.	27	19	5	11	20	24	2	10	17
August	7:00 PM 23 (24)	Pulpit	31	16	2	8	24	23	1 31	9	16
September	7:00 PM 14	S.M.	28	13	27	12	21	21	29	7	14
October	7:00 PM 12	S.M.	26	11	25	10	19	21	29	7	13
November	7:00 PM 9	S.M.	30	15	29	14	23	20	28	5	12
December	2:00 PM 14	?	28	13	no meeting	no meeting	21	20	27	4	12

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 4/5 – 4/6
Mega Meet 8/22 -- 8/24
CSSP 6/19 – 6/22
Stellafane 7/24 – 7/27
BFSP 9/19 -- 9/21

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 400 pixels/inch max.
- ▶ Use the lowest JPEG quality that still looks good!
- ▶ Shoot for 400kb for a 1/2 page image or 1MB 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://imageresizer.com/resize/download/6779bd945d63ac1a3032f37d>

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.

Astroimaging Director, Tom Duff is our new Astroimaging editor, and welcomes all image submissions.

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, text and contact information, by the submissions deadline, which is listed on our website calendar. 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.