

The Observer

The Official Publication of the Lehigh Valley Amateur Astronomical Society

<https://lvaas.org/>

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

September 2025

Volume 65 Issue 09



LVAAS General Meeting - Public Welcome!

Sunday, 09/14/25, 7 p.m. at South Mountain HQ

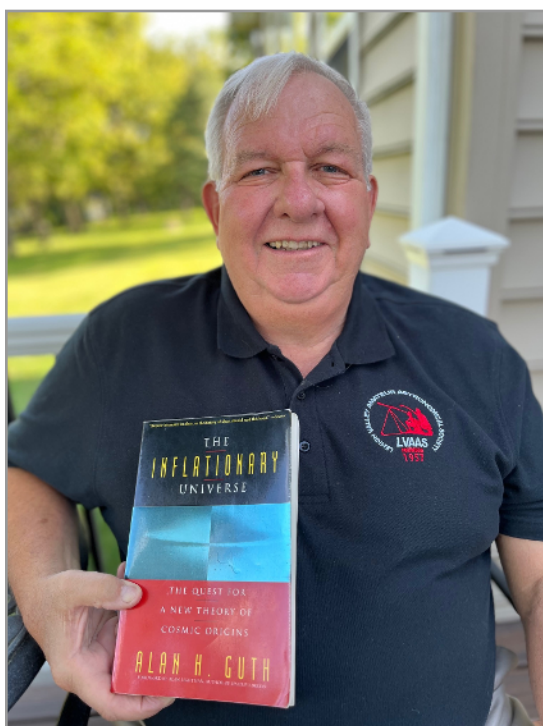
Prospective new members who wish to attend, please email: membership@lvaas.org.

"The Expanding Universe"

presented by

Joe Zitarelli

LVAAS Director of Library and History; Acting Society Secretary



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 exactly inflation was. I was aware that Alan 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 the theory 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 would like to share what I learned with LVAAS members 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.

Joe has had an interest in astronomy since high school. His school 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. He went on to get a BS in physics at Penn State 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 in charge of the society's library and uses astroimaging as another way to learn about objects in the sky.

Nomination Of LVAAS Officers For 2026 Term

Nominations for LVAAS officers will be accepted through the close of our September 14th membership meeting at South Mountain.

LVAAS full members in good standing (current dues paid) are entitled to vote and/or be considered for office.

Nominations will not be accepted, nor shall additional nominations be placed on the ballot after the close of nominations during the September 14, 2025 membership meeting.

Please contact me should you have an interest in running for any board position, or if you have questions at: sm_maintenance@lvaas.org

Nominees to date:

Director: Benjamin Long

Assistant Director: Kyle Kramm

Secretary: Becky Frank

Treasurer: Vo Maziarz

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

Voting for contested positions will take place at our October 12th membership meeting and installation of newly elected officers will take place at our December meeting.

Regards,

Bill Dahlenburg and Eric Loch

Nominating Committee Chairmen



Minutes from the LVAAS General Meeting – August 23, 2025

The August 2025 LVAAS general meeting was conducted electronically using an online service and in person at Pulpit Rock. Approximately 60 people were in attendance. Director Benjamin Long opened the meeting at 8:00 p.m.

Membership: Benjamin Long

- No members completed their second readings.
- The following members completed their first readings:

Brian A. Brown

Greg Cain

Marissa Chitty

Jay Copin

Matt Daniels

Ro Horstman

Gunasekaran Anandhan Rajan

- The following members have previously completed a first reading, and are eligible to complete a second reading to become full members:

Glenn Garcia (family membership with Jacqueline Blas)

Paul Shanahan

Zechariah Ziegenfus

Stargazers - Kyle Kramm

- The Stargazers meet at South Mountain on the second Friday of each month.
- This meeting is geared towards assisting new members with equipment and to learn the night sky together, but all members with all levels of experience are welcome to come.
- The next meeting will be at 7:00 p.m. at South Mountain on Friday, September 12.

South Mountain Maintenance – Bill Dahlenburg

- Bill and other LVAAS personnel are available on Saturday mornings at South Mountain for tours of the facilities or training on telescopes. You are also welcome to help out with maintenance. If you are seeking training please contact Bill ahead of time to confirm he will be there.

Annual Elections – Bill Dahlenburg

- We will be taking nominations for officers for 2026 at the September general meeting. If you are interested in running for an office or would like more information, please contact Bill.
- The election of officers will take place at the October general meeting, but the new officers will not take office until December, and will be sworn in at the December general meeting.

Pulpit Rock Maintenance and Observatories - Frank Lyter and Ron Kunkel

- We work as a team to train members on the telescopes at Pulpit Rock
- Contact Frank to be instructed on use of the gate lock and to get a personal combination.
- Contact information is on our website.
- If you are interested in events taking place at the various sites as well as other topics, sign up for the Buzz email lists. These are listed on the bottom of the LVAAS website's home page.

Astroimaging Group – Tom Duff

- The Astroimaging group meets at South Mountain from April through November on a Saturday night, once per month at 7:00 p.m., usually close to the new moon. Check the calendar for dates of the meetings.
- Topics of discussion will vary from beginner to more experienced.
- If it is clear, members will frequently set up and image.
- If you are interested, you are encouraged to sign up for the Astroimaging Buzz email list.

Next General Meeting:

- The next general meeting will be held at South Mountain on Sunday September 14, 2025 at 7:00 p.m.

At 8:20 p.m. the informational meeting was concluded and the presentation began.

Tonight's presentation was "Astronomy Bingo!" featuring Brett Fadem and Jonathan Cuadra.
Introduction:

Join us for a fun and informative evening of star-gaming. Bring your binoculars, telescopes, and smart telescopes (or use ones that we offer). Spot the objects on your card until you fill a column or a row, and then gather to discuss fun facts and stellar evolution. Participants can share some of the images they acquire that night and we will share some of the images created by LVAAS members. The night will end with an astronomy trivia game featuring the evening's objects.

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

Jonathan Cuadra is a senior Muhlenberg College student studying physics. He has been fascinated by the cosmos since he was young, and has always had lingering questions about how the universe and things in it work. Throughout his academic career and research opportunities, he has been able to embrace his curiosity and interests. He hopes to pursue a career in aerospace research and development. In his free time, he enjoys spending time with his family, cat (her name is Janey), going on trips and vacations, and building Legos!

It was discussed that this site lends itself well to hands-on observation instead of a formal presentation. Astronomy Bingo cards were handed out and explained. An Astronomy Bingo Cheat Sheet that included 48 objects with finder notes to complete the Bingo cards was provided.. Professor Fadem and Jonathon then conducted a very informal trivia contest while we waited for the sky to become dark enough. At 8:44 p.m. the presentation concluded and members were encouraged to use the available telescopes to work on their Bingo cards. Recognizing that the skies would not be clear for too long, members were encouraged to complete their Bingo cards and submit them to Professor Fadem for prizes to be determined at a later date.

The meeting was not formally adjourned, but informally ended when clouds rolled in.

Submitted by Joe Zitarelli, Secretary



Pulpit Rock Astronomical Park is the dark sky site of the Lehigh Valley Amateur Astronomical Society Photo courtesy of Frank Lyter

Via Sandy Mesics, Programs Chairperson

Upcoming LVAAS General Meeting Speakers

September: **Joe Zitarelli** will speak in person on "The Expanding Universe."

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"

- ▶ 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. More information on page 8 of this publication.

Apply here: <https://forms.gle/mqBuSfEhu8Wn36R4A>!

THANK YOU, LVAAS VOLUNTEERS!

LVAAS would like to thank the following members for their help with the Da Vinci Center Science Camp: **Earl Pursell, Mike Huber, Eric Loch, Claudio Stabile and Blaine Easterwood**. LVAAS also thanks **Tom Duff**, along with **Bill Dahlenburg** and **Kyle Kramm**, who attended an astronomy event during the Appalachian Fiddle and Bluegrass Association (AFBA) located in Wind Gap, PA, where 50-75 people were treated to star gazing in a fun atmosphere. The guys were treated to free admission and a meal in exchange for their time.

Volunteers who helped out with the July star party were: **Fallon Smith, Kyle Kramm, Dr. Becky Frank, Earl Pursell, Tom Duff, Ben Long, Aidan Berger, Rich Hogg, Tom Duff, and Ruth and Bill Lodder**.

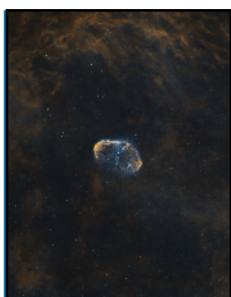
Volunteers are the life-blood of our society, helping LVAAS events run smoothly, maintaining and repairing observatories and equipment, and keeping our grounds manicured and safe. LVAAS couldn't do it without you!

Via Benjamin Long, LVAAS Director

Please remember to pick up your **free replacement keys to LVAAS gates and facilities** by contacting the "Key Coordinators" listed on our website's Contacts page.

Via Earl Pursell, UACNJ Liason

Public Program Nights and weekly star parties are up and running at United Astronomy Clubs of New Jersey. There will be a 30-60 min talk every Saturday from the beginning of April 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: NGC 6888 - The Crescent Nebula - Imager: Benjamin Long

Cherry Springs State Park, Coudersport, PA Publication: June 25, 2025

Telescope: Apertura 60EDR 60mm FPL-53 Doublet

Camera: ZWO ASI533MC Pro

Mount: Orion SkyView Pro GoTo

Total integration: 3h 38m

For full imaging information please visit [Ben's AstroBin page](#)



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>





- **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
September 2025

Night Sky Notebook

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



Please remember to like and subscribe!

The LVAS Poet-Astronomer

By Sandy Mesics

What do you do when you're ready to observe but the weather doesn't cooperate? Most of us find various diversions to amuse ourselves. For instance, 69-year-old Dr. George D. Knecht, an Allentown dentist, amateur clock maker, amateur telescope maker, amateur astronomer, and writer, wrote poetry. Knecht wrote some of his poems in Pennsylvania Dutch, and they were published in the Pennsylvania Dutch Corner "Eck" of the *Allentown Morning Call*.

Knecht's poems were published at irregular, but quite consistent intervals throughout the life of the column. Examples of Knecht's work included "Die Zeeche im Zodiac," written in February 1936; "Eins fer Mich, Eins for Dich" is an example of Knecht's ability to tell a story in verse. It appeared first in the "Eck" on 21 November 1953. After a stretch of cloudy and rainy weather in July and August 1945, Knecht penned the following verse for the *LVAS Bulletin*:

*The disappointment is great,
So let us have another date
And choose an eve when we can see!
The Milky Way our object be.*

*So let us meet on a clear night,
When the moon will not be bright;
Better still, have it not too soon,
But wait until we have no moon.*

*Let us set a time on which
The night will be as dark as pitch!
The darker that the night will be,
The better we the stars can see.*

*Star clouds and clusters all around
In the great firmament abound;
The greatest work can then be done,
When the old moon is near the sun.*

I don't think many of us could have said it better.

Reference

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



Knecht at the eyepiece of his homebuilt 6-in. refractor, which he loaned to LVAAS.



M16 - The Eagle Nebula [In SHO]

Published: Aug 13, 2025

Total integration: 8h 18m

Integration per filter:

H α : 2h 32m (76 $\times$ 120")

SII: 2h 44m (82 $\times$ 120")

OIII: 3h 2m (91 $\times$ 120")

Imager: Benjamin Long

Equipment:

Telescope: Sky-Watcher Quattro 200P

Camera: ZWO ASI294MM Pro

Mount: Orion Atlas EQ-G

Filters: Optolong H-Alpha 7nm 2",

Optolong OIII 6.5nm 2", Optolong SII

6.5nm 2"

For full information on this image, please visit Ben's [astrobin](#)



IC 1396A The Elephant's Trunk Nebula	Imager: Benjamin Long
Published: Nov 3, 2024	Equipment:
Total integration: 37h 17m	Telescope: Apertura 60EDR 60mm FPL-53 Doublet
Integration per filter:	Camera: ZWO ASI533MC Pro
Lum/Clear: 12m (12 × 60")	Mount: Orion SkyView Pro GoTo
Multiband: 37h 5m (445 × 300")	Filters: Optolong L-Ultimate 2", SVBony UV/IR Cut 2"
For full information on this image please visit Ben's astrobin	



Keen-Eyed Russell

I have a small meteorite collection that I have built over 40 years, collecting specimens here and there when extra cash was at hand. They are a good investment, but they most often lack the personalities and presentation that minerals possess. Most are rather dull-looking. I have frequently professed, "Look for the ugliest booth if you are at a rock and mineral show. It will undoubtedly be a vendor who is selling meteorites."

What makes these rocks from outer space so fascinating to me? They are all about 4.5 billion years old, older than the oldest material that any geologist can find on Earth. Zircon crystals discovered in Western Australia have been dated to 4.4 billion years. Meteorites represent the oldest material that anyone can find in our solar system.

Holding a meteorite in your hand is like having a time capsule from the distant past, from the very beginning of the solar system's geologic history. In addition, the meteorite has been orbiting the sun for virtually all of its existence, because once on the ground, Earth's weathering processes, both chemical and physical, can easily render them unrecognizable in a matter of years, depending upon the location and composition of the meteorite.

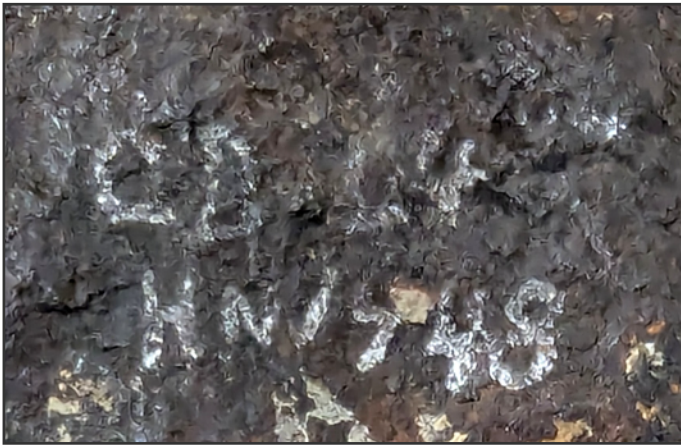
My wife and I were recently at Bey's Rock Shop, 615 PA 100 in Bechtelsville. Jeannie and Jim Bey own the store. In business since 1961, daughter Kelly Boyer, her husband Matthew, and their almost 13-year-old son, Russel, assist the Beys. Although Russel, with his short, cropped hair, looks like any typical kid on the doorstep of maturing, engaging him in conversation finds that his knowledge base is well ahead of many adults. He enjoys reading, cooking, gardening, and a whole host of other atypical activities that a person of his age would find distasteful. I have never seen a smartphone in his possession. Because of his interests, Russel is in charge of Bey's fossil collection.

Fossilized (petrified) wood also interests me. Just like a meteorite, when I hold a section of a tree or fern in my hand that was alive 80 or 300 million years ago, it simply blows my mind. The difference, however, is that petrified wood can often be exquisitely beautiful, carrying most of the hues of the rainbow, including bark and the delicate markings of tree rings frozen into its silicate matrix that slowly replaced the organic material of the tree.

After resisting the temptation of a Megalodon tooth that Russel had shown me, Jim Bey called me over to identify three meteorites that most likely were discovered in the mid-twentieth century. Russel followed along.

I examined them. Two were highly oxidized (rusted), but the third, a nice 802-gram specimen, looked like it had weathered captivity fairly well. All three were iron-nickel; and 70 or 80 years ago, the most prevalent meteorites in the hands of a private collector were from Meteor Crater near Winslow, Arizona. That was just a wild guess that I kept to myself. I gave the iron to Russel, who started manipulating it and exclaimed, "Oh, there's some writing." I had missed that critical find. Jim gave me a loop and I was able to discern two lines of a hand etching, CD L4, followed below by HN 1948. See a photo here. It was not immediate, but after a while, it all jived. The CD stood for Canyon Diablo, the official name of the meteorite associated with Meteor Crater; the HN for Harvey Nininger, often called the father of meteoritics, and 1948, most likely the year that Nininger found the specimen. In 1948, Nininger, along with his family, operated the American Meteorite Museum (1942-1953) on old Route 66, located about 5.5 miles from the crater. To support his livelihood, meteorite hunting and selling were part of his routine. I'm assuming the L4 represented a grid system to locate the meteorite's position, but I have not been able to confirm this datum. Ironically, my grandparents, Arthur and Marie Becker, had visited the museum in 1947 or 1948 on an extended road trip to the western US. My grandmother recalled a short but expressive individual, certainly Nininger, welcoming another meteorite enthusiast into his exhibit room.

Russel then discovered another etching that had escaped my attention, 1# 13. If the mass of the meteorite, 802.4 grams, is converted into the weight of the iron in pounds and ounces, the calculation reveals one pound, 12.3 ounces, close to the inscription. It all seemed to fit fairly well. Thank you, keen-eyed Russel; you are definitely going places in this world, and thank you Jim Bey for releasing the Nininger meteorite into my custody. Ad Astra!

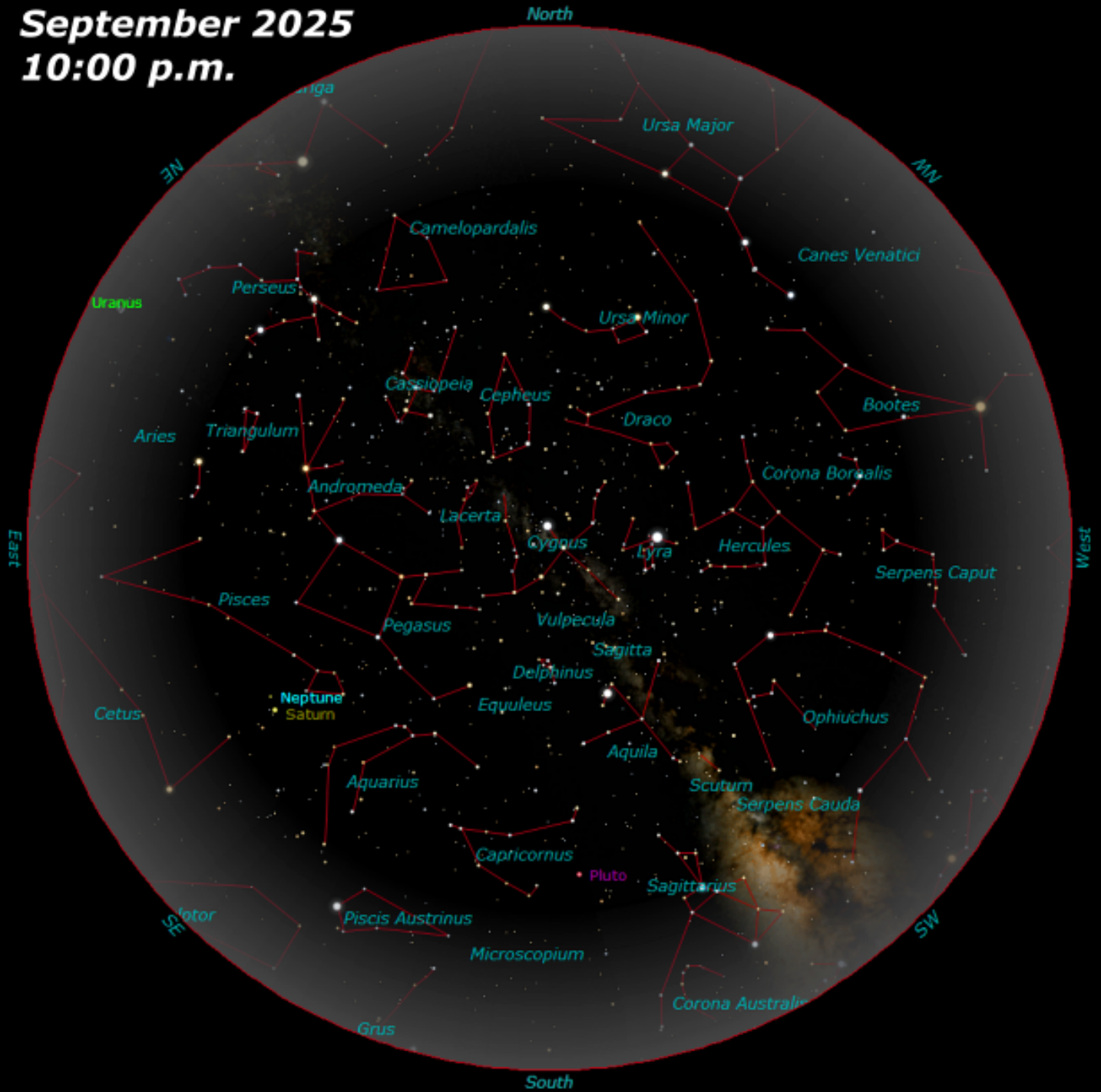


Almost thirteen-year-old Russell Boyer of Bey's Rock Shop in Barto, PA found the key to deciphering the who, where, and when about this meteorite. Read the article to discover the details. Photo by Gary A. Becker



Russel Boyer, still trying to sell me that Megalodon tooth...
Photo by Kelly Boyer

September 2025
10:00 p.m.



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

Contributed by
Gary A. Becker

Pier and Tripod for Sale

Pier: A massive fixed pier, solid steel, black powder coat, very heavy. 31" tall, 10" dia, with AstroPhysics 10" plate drilled for Milburn and Meade heavy duty wedges. Uses 1/4" wall thickness 10" diameter steel pipe with 1/4" thick 11" square steel plate with four 3/4" x 1" oblong holes for mounting welded to bottom. I used this on a concrete base inside a little dome where it carried a 14" Meade SCT. Asking \$100.

Tripod: Peter Lisand studio video tripod with leveling plate, flippable rubber or steel spike feet, 31" tall but adjustable up to maybe 50". Stainless steel and aluminum construction. Meant to carry heavy studio video cameras but is excellent for portable imaging rigs. I used this for various astronomy setups including a C8 and other larger telescopes. In excellent condition. eBay price \$350, asking \$100.

Steve Walters

Steve.K3SW@gmail.com

570.730.6436

Additional photos available on request. Prices are negotiable.



SEPTEMBER 2025

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

OCTOBER 2025

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

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

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 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.

No permission is required for non-profit educational use of the material in this publication. Please send a link to, or copy of the publication containing the reprinted material to the editor at the above address. Some material in this publication may be copyrighted.

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.