The Observer

The Official Publication of the Lehigh Valley Amateur Astronomical Society
https://lvaas.org/
https://www.facebook.com/lvaas.astro
November 2022
Volume 62 Issue 11

ad astra **********

Blaine Easterwood and I met with the DaVinci Science Center (Tyler Groft) to discuss LVAAS having our Christmas party at DaVinci. It was decided to have our Christmas Party/General Meeting on December 4th, 2022. They will reserve the Creativity Studio Room from 12 to 5 p.m. for the LVAAS event. Additionally, since the Science Center will be open during those hours, they will waive the admission fees so all LVAAS members can tour the science center itself during those hours. The LVAAS meeting will start at 2 p.m. Our speaker that night via Zoom will be Vic Maris, President of Stellarvue speaking on "Making World Class Refractors". We also have invited the DaVinci employees to attend the Christmas Party.

Dr. Judy Parker, who was an avid supporter of LVAAS and astronomy in general, recently passed away. Judy will be sorely missed. A memorial service will be held at Muhlenberg College on Sunday November 6th, 2022, from 1 - 3 p.m. If you are planning to attend, please arrive by 1 p.m.

It is budget time again, so the Board of Governors has started work on next year's budget. A notice was sent to all board members requesting any changes for next year's budget needs to be sent to Treasurer Blair Hogg.

On the weekend of October 7 to October 9, 2022, Claudio Stabile hosted two Boy Scout Troops and one Cub Scout Pack including approximately 36 scouts and 20 adult leaders. Ron Kunkel hosted the solar program during the day and guided views with the LX200 at night. Kyle Kramm also set up his astrophotography equipment during the evening. Frank Lyter helped guide viewing with the Tinsley, and Rich and Blair Hogg joined in for the event. Both evenings were mostly clear with good viewing.

The October Astroimaging meeting was held on October 15th, 2022. Warren Landis demonstrated his usage of Adobe Photoshop. Nineteen people were in attendance. The next meeting is scheduled for November 19th, 2022.

Ad Astra!

Thomas Duff

Remembering Judy Parker

LVAAS has lost a good friend recently. Dr. Judy Parker passed away on September 26, 2022. She became a member of LVAAS in 2014, but her presence was such that it seemed like she had been with us much longer.

Members who attended LVAAS General Meetings during the winter months up through 2020 should remember Judy, since she was our host for the meeting space, the main lecture hall at Muhlenberg's Trumbower Science Building. She also loved to share the splendor of the Wood Dining Commons, as well as her faculty discount, for a dinner after the meetings. It was not uncommon for her to arrive with an entourage of 15-20 LVAASers. She would just smile, show her card and say, "They're with me!" and we would all enjoy a really good meal in a beautiful room, for a great price.

Star Party visitors may also remember Judy as the kind gatekeeper sitting outside the entry to our Grady Planetarium, welcoming guests up to our capacity and then, when needed, gently turning a few away. During the past year she occasionally stopped by a Star Party but remained in her car, and a few of us would sidle up to chat with her. She was starting to have some difficulty getting around, but she didn't want to miss the event.

She was a regular at our General Meetings, mostly on Zoom the past few years, and she would share our meeting invitation with her students at Muhlenberg as a way for them to earn some extra credit. At the end of the program, she would often chime in to let them know that their attendance had been recognized and they could now sign off.

She also used to run a Star Party for her students, and there was a small crew of LVAAS members who always looked forward to helping her, bringing their telescopes to the Muhlenberg campus to give her students a first-hand look at whatever could be seen in the night skies over Allentown. She had a positive energy and a dedication to the science and to education that inspired all who knew her.

I was always happy to see Judy when she showed up, like many I am sure, at LVAAS and the other communities of which she was a part. We will really miss her. You may read her obituary online by clicking here. Also, there will be a memorial service held on Sunday November 6 at 1:30 p.m., in the Egner Chapel at Muhlenberg College.

-- Rich Hogg

Minutes from the LVAAS General Meeting – October 9th, 2022

The October 2022 LVAAS General Meeting was conducted electronically using an on-line service and in person at the South Mountain headquarters. Approximately 50 people were in attendance. Director Tom Duff opened the meeting at 7:02 p.m.

Tonight's General Meeting's presentation was 'Astronomy with Kids' by Mike Huber, Secretary. Like many members, Mike joined LVAAS not just because of his interest in astronomy, but to share that interest with his kids. Very quickly Mike realized that his kids did not always share his sentiment when doing astronomy. However, over the years Mike learned ways to help pique their interests, and also common pitfalls to plan for. He also found other things they could do that were astronomy-related for fun, education, or both, for when the weather, or their moods, were not favorable. "For this talk I will go over much of the media available that are directed towards families and kids, as well as give a brief overview of some of them. I will also be highlighting and sharing some of the resources that the club (LVAAS) has to offer as well."

Michael first began his adventure in Astronomy thanks to his father, a retired professor of theoretical astrophysics. He majored in mathematics and minored in physics and computer science at Arcadia University. Michael has worked in the field of Master Data for the last 9 years as a contractor for Merck & Co. In his spare time, he enjoys doing astronomy-related activities, and sharing them with his partner and children in the same way that his father shared them with him all those years ago. He is an accomplished astroimager in that he accomplished actually taking an astroimage after months of strenuous effort. He currently serves as Secretary on the LVAAS Board of Governors.

<u>Elections:</u>

- Nominations for LVAAS officers were closed at the end of the September meeting.
- Elections were held tonight.
- Nominees were:
    - Director - Mike Huber
    - Assistant Director - Sandy Mesics
    - Treasurer - Blair Hogg
    - Secretary - Joe Zitarelli
- Since the nominees were running uncontested, Mike Huber (as current secretary) cast the acclamation vote for each nominee. Congratulations to our new officers!

Membership: Rich Hogg

- 2nd readings
  - Ariana Fasci
  - Kenneth Harlan
  - Regina Hlavinka
  - David O'Neill
  - Paul Berger

- 1st readings
  - Brielle Eisenberg
  - Jennifer Barakat
  - Raymond Atkinson
  - Cameron Flynn
  - Emma Steinberger
  - Jaime Steinberger
  - Michael Ports

General Comments:

- Members took a quiet moment to remember and honor Judy Parker, who passed away September 26th, 2022.
  - Judy helped our club by offering a lecture hall at Muhlenburg College for meetings during winter months, and discounted meals at the college cafeteria as well.
  - She was very passionate about astronomy, science, and education.
  - LVAAS held and assisted with private star parties for her students.
  - Judy really loved LVAAS, astronomy, and her students.
  - Judy's funeral will be on Tuesday in Ohio.

- Our December Holiday party will be held at Da Vinci Science Center. The talk will be given by Vic Maris, owner of Stellarvue Telescopes via Zoom.

Astroimaging: Tom Duff

- The Imaging group's next meeting will be Saturday, October 15th at 7 p.m.
- Warren Landis, a talented astroimager, will be giving a talk on how he processes his images.

South Mountain Maintenance: Bill Dahlenburg

- All members are welcome to come out and help keep our headquarters looking clean and neat by cutting grass, shoveling snow, sweeping the floors, etc. Please contact Bill if you can help.

Pulpit Rock Observatories: Frank Lyter & Pulpit Rock Maintenance: Ron Kunkel

- Feel free to contact either Ron or Frank for training on telescopes, or to obtain keys.
    - Just send a message.
    - Contact information can be found on the Contacts page of our website.
- LVAAS recently received a donation to get telescopes up and running at Pulpit Rock.
- There are 3 email 'buzz' groups: Astroimaging, Pulpit Rock, and South Mountain
    - Feel free to join to get communications. Visit our website for information.

Star Party Coordinator: Bill Dahlenburg

- Bill is always grateful for help running the telescopes. We will train any member how to use them.
- Bill is usually here every Saturday from 9 a.m. to 12 p.m. if anyone wants to be trained or use the library.
- Email to confirm he will be there. Contact info is on our website. https://lvaas.org/

Next General Meeting:

- Our next general meeting will be held on November 13th.

The October General Meeting was recorded.

The meeting was adjourned at approximately 8:40 p.m.

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Submitted by Michael Huber, Secretary

LVAAS Needs an Upgrade!

Do you have any PCs or parts that you are not using?

There is a PC built into one of the consoles in the Grady Planetarium at South Mountain, and it needs an upgrade. Before we budget money to purchase something, I thought it would be worthwhile to ask you, our members, if you have any equipment that you might enjoy donating.

They say, "beggars can't be choosers." In this case, I think we need to disregard that in consideration of a greater wisdom. Installing this upgrade will require significant effort, so we want it to be useful for as long as possible. So, we are going to be a little bit fussy about what we want! We're looking for relatively recent desktop computers or parts with decent performance. (We might be able to work with a laptop, but the path of least resistance would be to use parts from a desktop.) So, we are mostly interested in business-class or gaming-class systems around 5 years old (or newer.) Specifically, we want the following specs:

- Ability to run Windows 11 (see https://www.microsoft.com/en-us/windows/windows-11-specifications)
- Ability to run DirectX 12 (implied by above)
- CPU at least 4 cores, 2 GHz -- hopefully more
- At least 8G of system RAM, but can be upgraded to at least 16G
- Power supply big enough to run the components we install (specs T.B.D.)
- Hard drives, if you have outgrown their capacity but they are not too old (we don't need huge storage space but we want something that will last)
- Flat panel monitor with HDMI or other digital input (not VGA), 14-inch or maybe 15-inch

We are interested in complete systems or parts (motherboards with CPU and RAM, graphics cards, power supplies, hard drives, etc.)

If you think you have something that might work for us, please contact me by email with as much information as possible, such as exact make and model, specs and configuration. Please do not bring equipment to the club unless requested! We do not have room to store equipment that we are not planning to use.

Thank you for your interest in helping LVAAS!

Rich Hogg
Director, LVAAS Technology Committee
technology@lvaas.org

Via Sandy Mesics, Programs Chairperson

Upcoming LVAAS General Meeting Speakers

November: **John Conrad, NASA Solar System Ambassador,** will speak on: '**Don't Look Up: DART, The World's First Asteroid Deflection Test**.'

December: **Vic Maris, President of Stellarvue** will speak on '**Making World Class Refractors.**'

Would you like to speak on a topic of astronomical interest, or know somebody who would? Please provide contact information to astrosandy@gmail.com to schedule your slot!

Via Bill Dahlenburg, Star Party Coordinator

Nov. 5 will be the last Star Party for 2022! 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 Dave Raker, LVAAS Librarian

New Library Materials

New DVD:
'Top Ten Mysteries of Outer Space'

New books for the children's section:
'Just the Facts: Solar System' (no author listed)
'The Complete Guide to Space' by Amanda Askew

New books:
'The Story of the Universe in 100 Stars' by Florian Freistetter
'Meteorite' by Tim Gregory
'Missions to Mars' by Larry S. Crumpler
'Endurance' by Scott Kelly

Via Sandy Mesics

NASA's Eclipse Ambassadors Off the Paths - Help Us Find New Participants! If you're 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:

UACNJ provides free public programs on-site at our Observatory in Jenny Jump State Forest from April through October on Saturday evenings.

During the off-season (November through March) UACNJ is now presenting an on-line astronomy-related presentation that begins at 8 p.m. You can tune in by visiting us at our YouTube channel, or by visiting our website: uacnj.org.

Cover: The Helix Nebula Imager: Mike Huber

The data was originally captured last November (2021) at Pulpit Rock over 2 nights. Equipment:

SkyWatcher 190MN	Baader Luminance Filter
SkyWatcher AZ-EQ 6 Pro	ZWO 120MM Mini
ZWO ASIAIR Pro	ZWO EAF
ZWOASI533MC Pro	Orion 50mm Deluxe Guide Scope

"Only 2 hours of integration time! The data was reprocessed using techniques learned from Warren Landis' presentation at the Astroimaging meeting. I was astonished at the amount of detail that I was able to tease out, hiding in the original data." ~ Mike Huber

PUBLIC WELCOME!

LVAAS General Meeting at South Mountain *and* on Zoom

Sunday, November 13 at 7 p.m.

'Do Look Up: DART - The World's First Asteroid Deflection Test'

presented by

John Conrad

NASA Solar System Ambassador

In September, NASA's DART spacecraft successfully demonstrated *kinetic deflection*, leading the world's efforts to develop our Planetary Defense against Near Earth Objects (NEO). We'll review the Planetary Defense program, including the latest on our inventory of NEO threats, and highlight the role of DART in preparing us for the future.

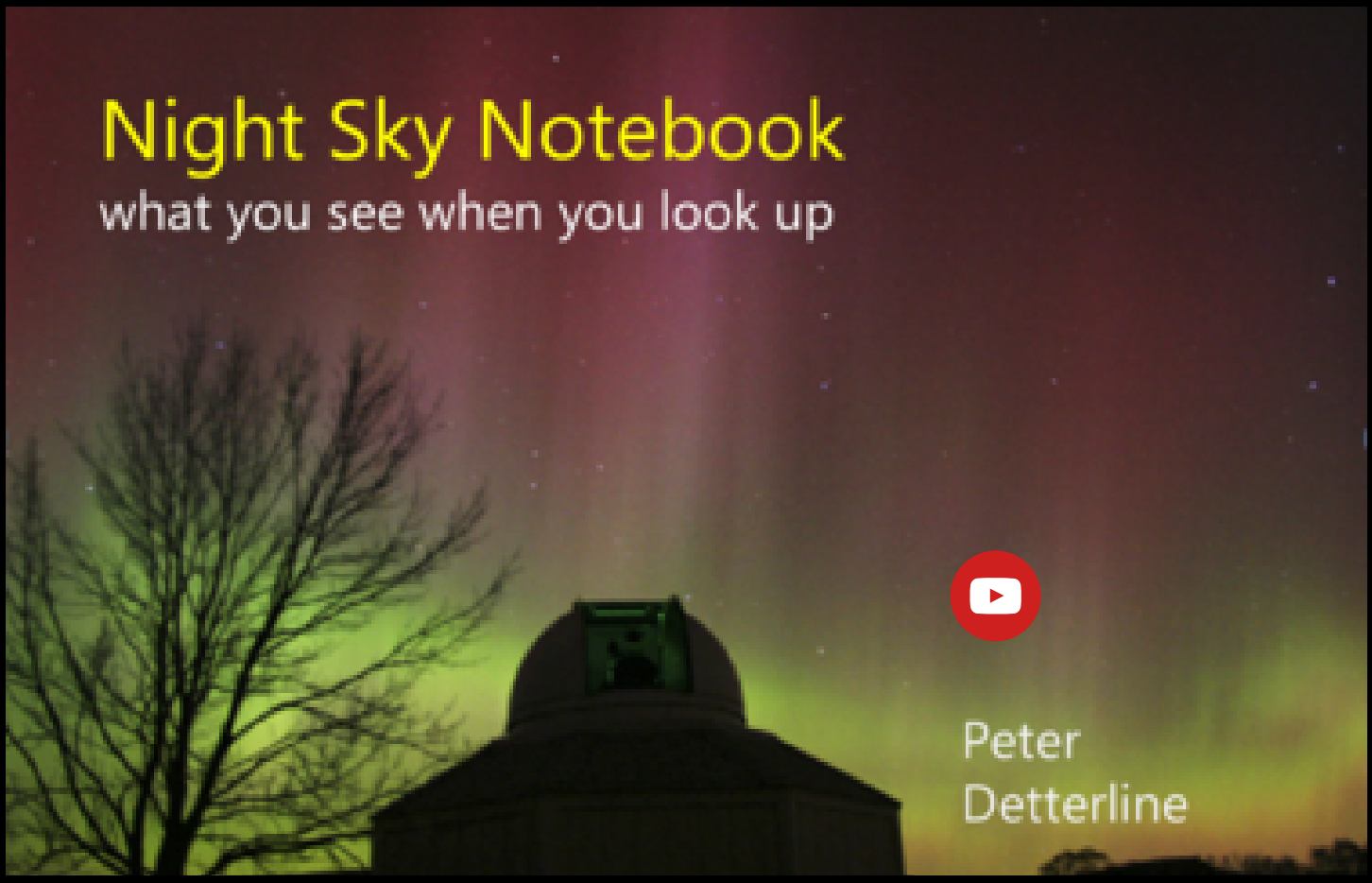
John Conrad followed his childhood interest in space and spaceflight through Astronautical Engineering degrees at the US Air Force Academy and Purdue University straight into leadership in unmanned space programs for the Air Force and NASA. Now retired, his extensive career experiences never wandered far from technology development and application in Aerospace and Defense as well as IT and Energy and Security programs. His life-long learning (formal and informal) and accumulated tools, have enabled him to make frequent presentations to orient and promote science applications and solutions to a variety of audiences. His most recently used platforms include telescopes and binoculars to share his knowledge and love of astronomy and cosmology.

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

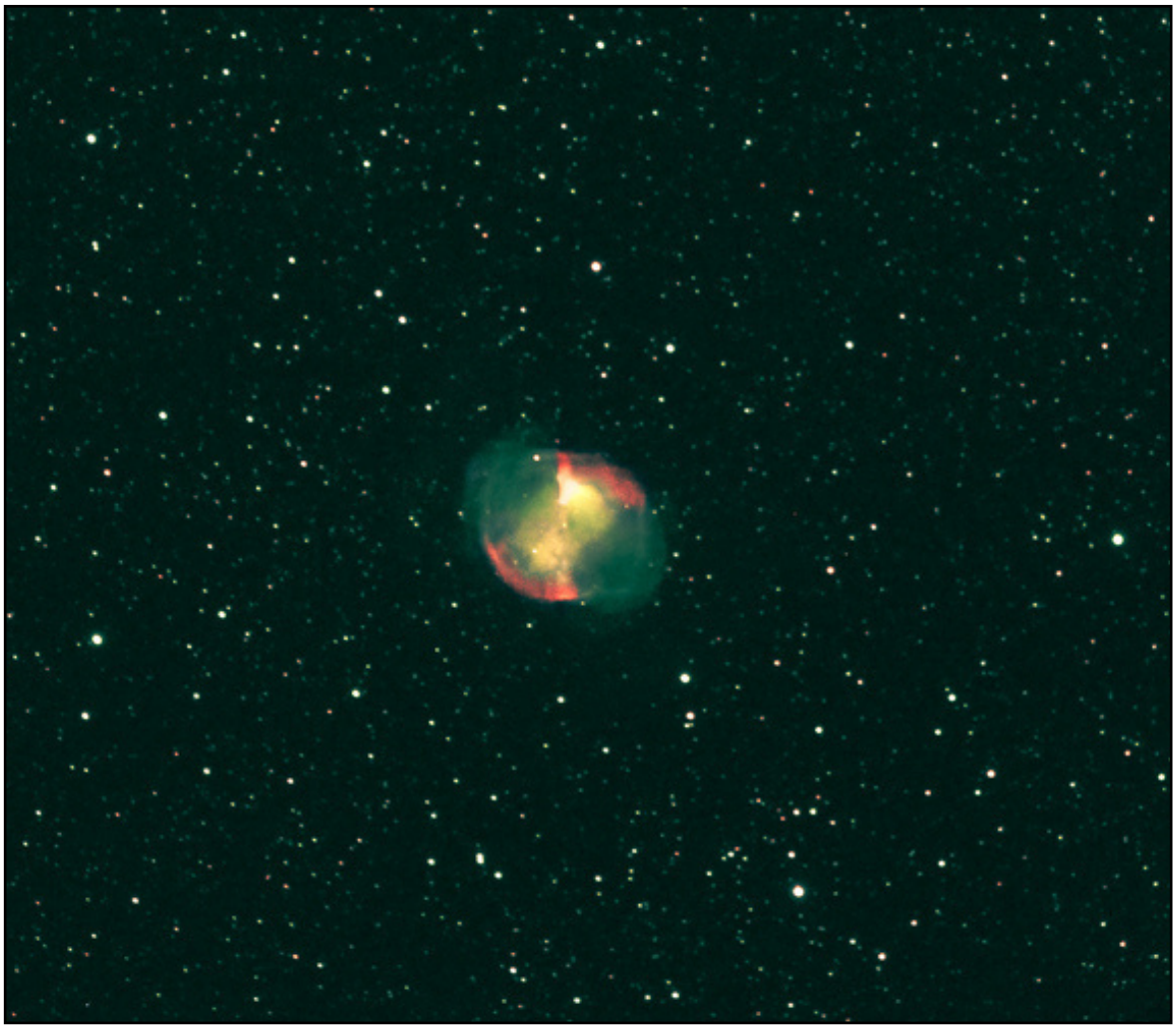
Peter Detterline's

Night Sky Notebook

November 2022



The Dumbbell Nebula Imager: Kyle Kramm



The Dumbbell Nebula NGC 6853, Messier 27. Imager: Kyle Kramm

Here's yet another beautiful capture of the first planetary nebula discovered by Charles Messier in 1764. Captured at Pulpit Rock on 09/27/2022 by LVAAS imager Kyle Kramm.

Live stack of Dumbbell Nebula screen captures from Sharp Cap 6 frames 100s each, adjustment in LightRoom.

Equipment QHY294c with ZWO dew filter 102t Stellarvue Ioptron 45pro 70t guide scope Starlight Xpress UltraSTAR.

From the LVAAS Archives: An Amazing Amateur Speaks at LVAAS

By Sandy Mesics

Robert Fried of the Atlanta Astronomical Society spoke at the November 1972 LVAAS meeting on the topic of "The Trouble with Guide Stars." During the talk, he noted that when doing astrophotography, a telescope "must be guided, usually by manually hand guiding the scope while the exposure is being made by keeping a star in the crosshairs of the guide scope. Important factors in this procedure involve eye and physical fatigue, guide star placement on the crosshairs and psychological effects. It has been found that the use of a small occulting disc at the junction of the crosshairs can add to the accuracy of hand guiding. In practice the star used for guiding is occulted by the disc and any errors in tracking will be more easily detected as the star will come into view."

When Fried spoke at LVAAS, he was 42 years old, working as an airline pilot for Delta Airlines. He had become interested in astronomy in 1960 and joined the Atlanta Astronomy Club. He did most of his early astronomy with a 3-inch Tasco refractor, but he soon looked for a larger telescope with which he could not only see more objects but pursue film astrophotography.

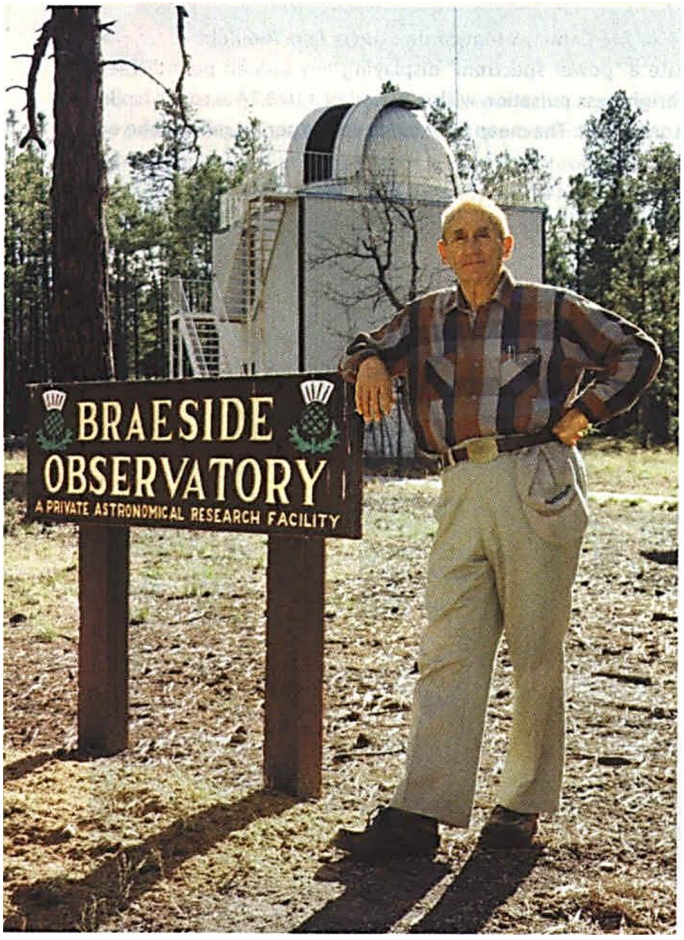


Figure 1. Robert Fried at his Braeside Observatory. Courtesy of Sky & Telescope.

While attending a colloquium on Transient Lunar Phenomenon in New York in 1963, he met Sir Patrick Moore at the hotel bar, and they discussed doing serious amateur astronomical work. Moore encouraged Fried to just build the scope he wanted. Not someone to think small, Fried went on to build a 16-inch Cassegrain reflector, grinding the mirror himself, and machining the metal parts after hours at the Delta Airlines machine shop. Can you imagine doing that today? In just two years, Fried completed the scope and built an observatory for it at his home in Atlanta. According to his obituary in the Bulletin of the American Astronomical Society, "His observatory protruded from the roof of his home and featured a modified silo dome, while the observer's controls were reminiscent of an airplane cockpit."

In the 1960s-1970s he pursued astrophotography using hypered or chilled emulsion film. In 1971, he took a leave of absence from Delta to work for six months at the University of Colorado's Sommers-Bausch Observatory to help install a new 24-inch telescope. When it became obvious to Fried that the Atlanta climate made it impossible to do the level of

astronomical work he desired, he moved his family to Flagstaff Arizona. In 1976 he built Braeside Observatory near the Naval Observatory in Flagstaff. Braeside consisted of two buildings: the observatory, and a building he dubbed “The Monastery” after Mount Wilson. The 526 square foot observatory housed his scope in a 14-foot aluminum dome converted from a silo. The observing floor was 20 feet above ground. The “Monastery” building had a bedroom, bathroom, snack area, darkroom, electronics shop, machine shop, library and telescope control console. He incorporated the observatory as a Private non-profit Operating Foundation, enabling him to apply for grants. The mission of Braeside Observatory was “To make available through collaboration, research data requested by members of the astronomical community worldwide.”

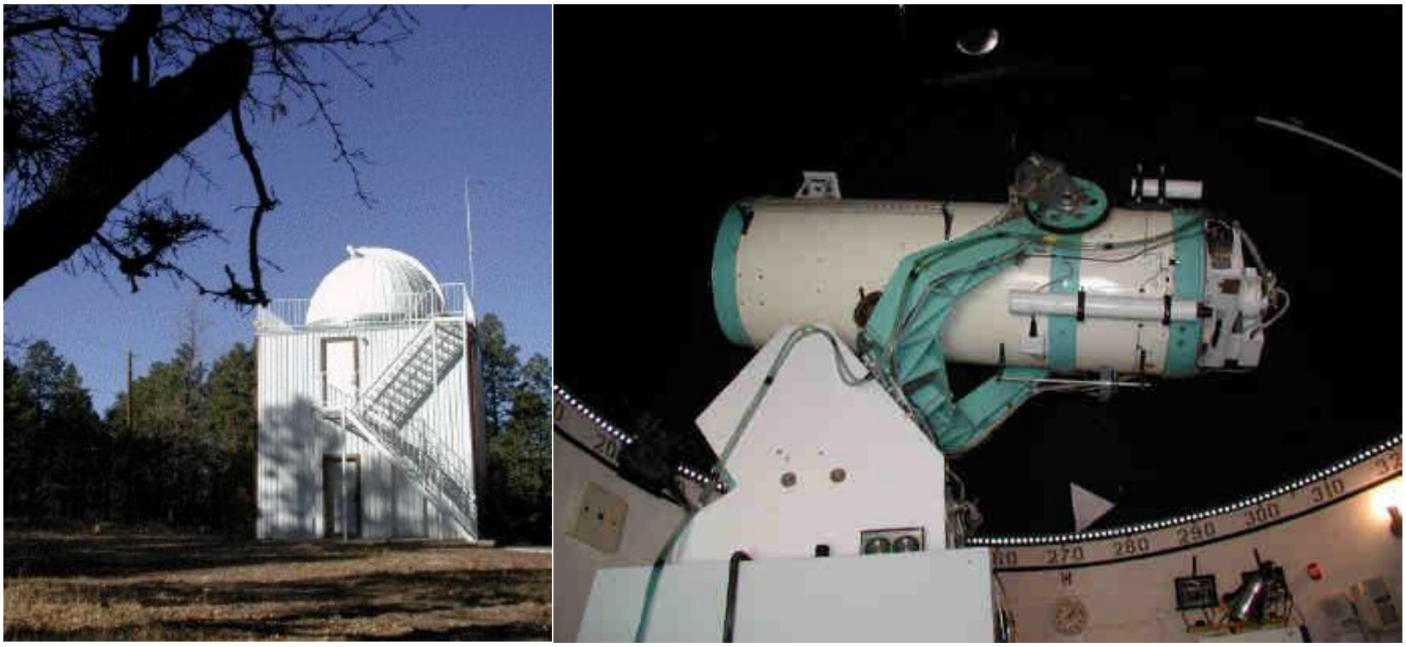


Figure 2. Left: Braeside Observatory. Right: the 16-inch Cassegrain.
ttps://www.cbabelgium.com/leonids2001/leonids_expedition_pictures.htm

Fried was twice elected to the presidency of the Astronomical League, in 1974, and again in 1977. In 1978, he began collaboration with professional astronomer D.S. Hall from Vanderbilt University, doing photoelectric photometry measurements of cataclysmic variable stars. He had his first of more than 60 papers coauthored with various professional astronomers over the years. As technology progressed, he incorporated CCD imaging, and devised a way to program his telescope to run unattended all night long, gathering data. In 1994, with the aid of a two-year grant from the National Science Foundation, Fried began specializing in CCD photometry of cataclysmic variables, a sub-class of dwarf novae. Using his homebrewed CCD camera beginning in 1995, he was able to make more than 125,000 magnitude measurements of variable stars.

In Summer 2000, Fried donated the observatory and adjacent home to Arizona State University’s Physics and Astronomy Department. Unfortunately, in 2010, the Braeside Observatory dome and telescope were sold to an out-of-state buyer, who removed the observatory form its Flagstaff location to Orderville Utah.

While Fried retired as a professional pilot in 1986, he continued to fly his private plane, Birdie, during the day. According to the Bulletin of the American Astronomical Society, “He donated his plane and time for volunteer mercy missions with Angel Flight and Flights for Life, flying patients to hospitals and medical supplies where they were needed. It was on one of these missions that Birdie went down about 40 miles north of Phoenix on November 13, 2003. The cause of the plane crash was not clear, but the outcome was certain: the world had lost an admired, professional amateur astronomer and humanitarian.” Fried was 72 years old.

References

December 1972 Observer.

Braeside Observatory https://en.wikipedia.org/wiki/Braeside_Observatory

Abbey, L. “The February AAC Meeting” The Focal Point, Vol. 9, no. 9, Feb. 1997. https://www.atlantaastronomy.org/FocalPoints/WFP-199702.pdf

Mannery, E. & Szkody, P. Obituary: Robert E. Fried 1930-2003. Bulletin of the American Astronomical Society, vol. 36 no. 5, p. 1672-1673. https://baas.aas.org/pub/robert-e-fried-1930-2003/release/1

Robert E. Fried (1930-2003) Obituary in Sky & Telescope. https://skyandtelescope.org/astronomy-news/robert-e-fried-19302003/

Leonid 2001 Meteor Showers from Flagstaff AZ https://www.cbabelgium.com/leonids2001/leonids_expedition_pictures.htm

Highlights of the October Star Party and International Observe the Moon Night

By Mike Huber and Kelly Stever

October 1st was a special night for the Star Party in that it just so happened to coincide with NASA'sInternational Observe the Moon Night.

> "International Observe the Moon Night is a time to come together with fellow Moon enthusiasts and curious people worldwide. Everyone on Earth is invited to learn about lunar science and exploration, take part in celestial observations, and honor cultural and personal connections to the Moon. We encourage everyone to interpret "observe" broadly!" – NASA link

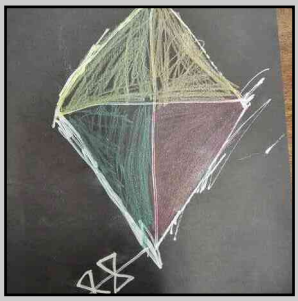
In addition to the packed planetarium shows by Earl Pursell, I (Mike) gave a presentation entitled 'The Moon! Past, Present, and Future Missions' which focused on some of the surprising things that humanity learned thanks to the Apollo missions along with the missions presently underway with the Lunar Reconnaissance Orbiter (LRO) and the future missions with the Artemis program.

In addition to the shows and presentation, you could show us your creative side in which you "create your own planet moon, or BOTH!" This event was hosted in the library by my partner Kelly and our son Avery Mason, and turned out to be quite popular, with at least 20 kids who participated and even some adults joining in on the fun as well. (see following page)

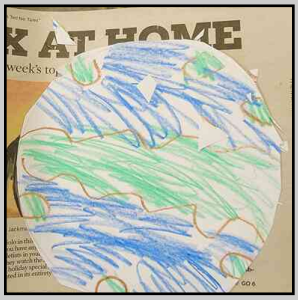
Despite the dreary weather, the Star Party was a success with many people in attendance who seemed to all have a good time!

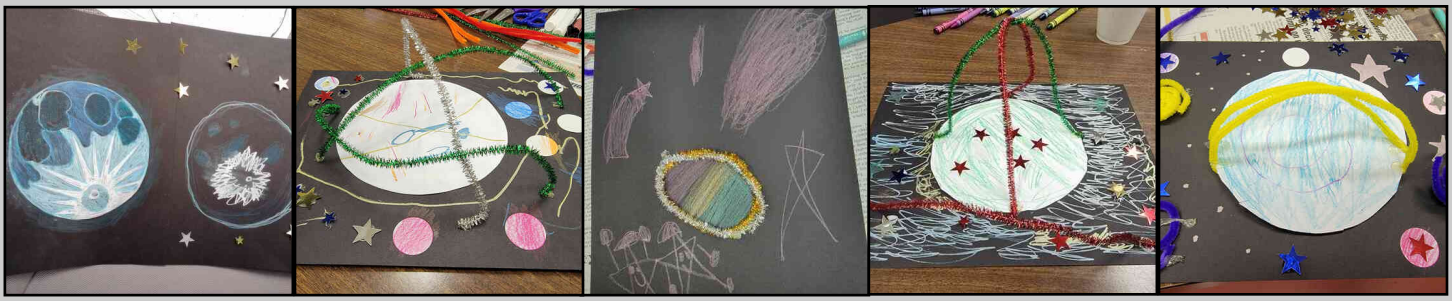
International Observe the Moon Night (through a 6 year-old's eyes)

By Avery Mason, with help from Mom and Dad



For International Observe the Moon Night I helped my Mommy run the "Make Your Own Planet, Moon or BOTH" craft in the library. Everyone had the best time ever. I felt very, very happy. The thing that I liked most was that everyone was being so creative. Everyone was making beautiful stuff, like a taco kitty mermaid planet. (and a kite planet! -editor)





StarWatch

Asterisms of Autumn

One of my favorite questions that students almost always crash and burn when answering involves the seven stars of the Big Dipper. The query is "What constellation is this?" The answer that pops from their lips is, of course, the BD. I usually make some harsh type of buzzer sound to indicate the answer is incorrect, and the surprise among my students is really perceptible, proving the pervasiveness of this really popular misconception. The correct answer is Ursa Major the Great Bear. What they are confusing is the difference between an official constellation and an **asterism**. * A constellation has been sanctioned by the International Astronomical Union, the World Congress of Astronomers, while an asterism represents the specific cultural or national identity of a group of stars. To Americans these seven luminaries are readily recognized as the Big Dipper. Travel to Germany and these same seven stars represent the Wagon; England, the plow; Holland, the Steel Pan; Saudi Arabia, the Kite and so on. * Asterisms abound in the night sky of autumn. The four luminaries that form the cup of the Big Dipper, now beginning to slide along the northern horizon after dark, is an asterism in itself called the Bier. It represents the platform on which the casket was carried in a traditional funeral procession long ago. * The Little Dipper which represents the same stars as the constellation of the Little Bear, Ursa Minor, is also an asterism as well as the second and third brightest luminaries of the star pattern found in the cup, Beta and Gamma Ursa Minoris. As the Earth rotates, they circle around the North Celestial Pole which is close to the North Star, also called Polaris, and are known as the Guardians of the Pole. * The "W" or "M" which represents a good deal of the chair that evil Cassiopeia, Queen of Ethiopia, sits upon as she is carried around the heavens is also an asterism as is the Great Square of Pegasus, the body of the Flying Horse. The "W" is currently in the NE after sundown while the Great Square is high in the south looking like a baseball diamond. Low in the east by 10 p.m. will be a "V-shaped" asterism with a bright, orangey star, the head of the constellation of Taurus the Bull. You are looking at the Hyades, a very old star cluster that is 625 plus million years old, minus orangey Aldebaran which is not a member. Don't get Aldebaran confused with even brighter, ruddy Mars to Aldebaran's left. Use binoculars to view the "V" more easily. Over the next several hundred million years, its members will slowly evaporate, moving away from the cluster to assume their own, lonely orbits around the Milky Way Galaxy. * Above Aldebaran is positioned my favorite asterism, the Pleiades, a much younger, 100-million-year-old star cluster which appears like a small hazy exhalation on a cold winter's day. From suburbia, four to six stars are visible to the unaided eye within its misty surroundings. This cluster like the Hyades can also be best seen with binoculars. With the unaided eye the Pleiades may be spotted before the Hyades, since it is considerably higher in the sky by 10 p.m. * Finally, I cannot omit the Great Summer Triangle which is visible high in the western sky. The faintest of the three luminaries that compose it is Deneb, the alpha star of Cygnus the Swan, a constellation that from suburbia looks more like a cross and is appropriately called the Northern Cross, another asterism. By December it will stand on the northwestern horizon, a beautiful reminder of the Season of Light. There are many more asterisms in the fall sky that can be seen ***here.*** Ad Astra!

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

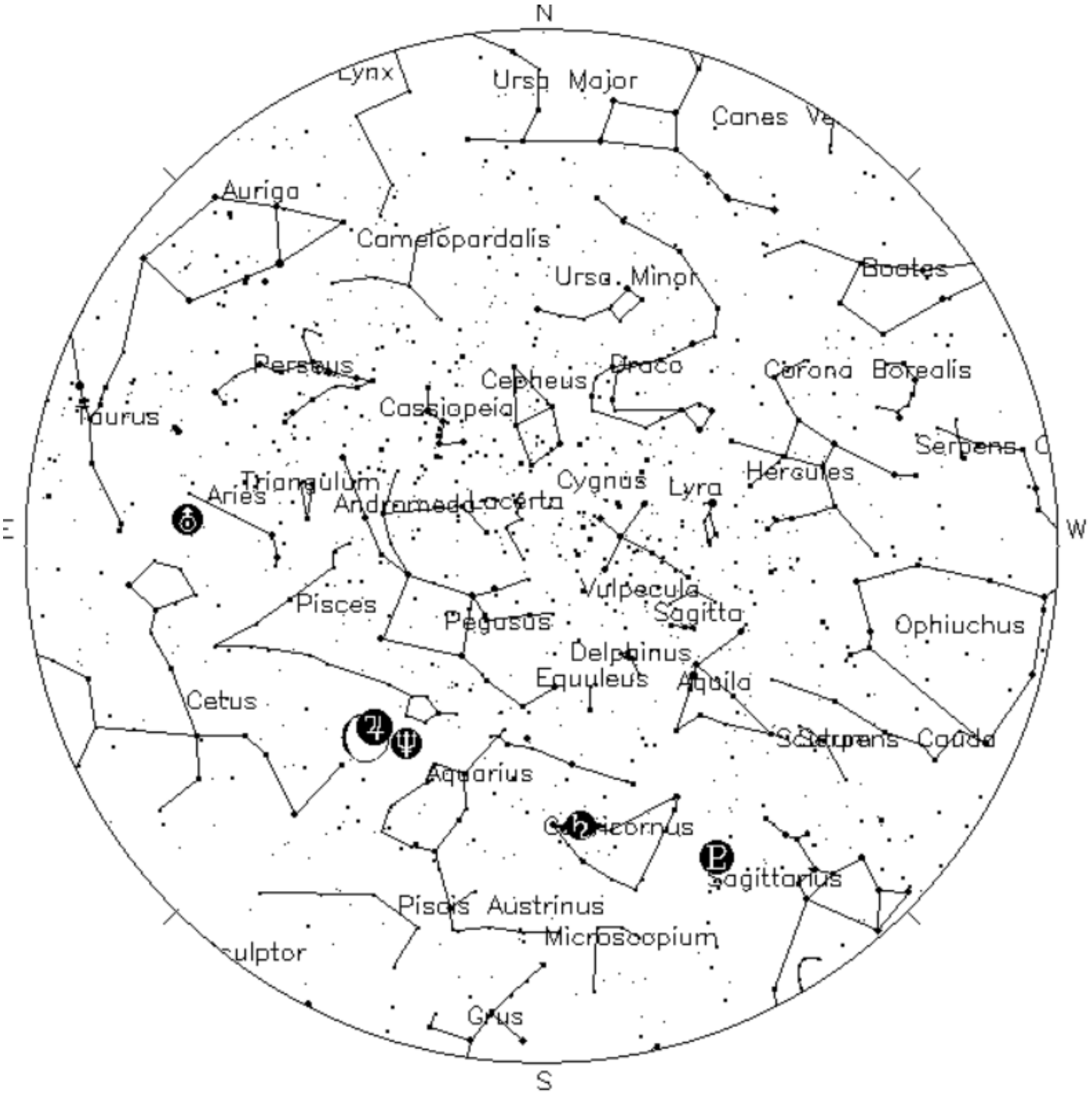
NOVEMBER

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

DECEMBER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				01	02	03
General Meeting and Christmas Party - 2 p.m. 04	05	06	07	Full Moon 08	09	10
Deadline for submissions to the Observer 11	12	13	14	15	Last Quarter Moon 16	Astro Imaging at SM 7pm 17
LVAAS Board of Governors Meeting 18	19	20	21	22	New Moon 23	24
Christmas 25	26	27	28	29	First Quarter Moon 30	31

Sky Above 40°33'58"N 75°26'5"W Saturday, November 5, 2022 00:00 UTC



Your Sky was implemented by John Walker in January and February of 1998. The calculation and display software was adapted from Home Planet for Windows. The GIF output file generation is based upon the ppmtogif module of Jef Poskanzer's pbmplus toolkit, of which many other components were used in creating the images you see here.

ppmtogif.c - read a portable pixmap and produce a GIF file

Based on GIFENCOD by David Rowley

Lempel-Zim compression based on "compress"

Modified by Marcel Wijkstra

Customize *Your Sky at* http://www.fourmilab.ch/yoursky/

2022 LVAAS EVENT CALENDAR

Contributed by Bill Dahlenburg

2022 LVAAS Event Calendar

	Sundays				Saturday 7:00 PM	Saturday	Mondays	Multi-Day Weekends	Moon Phase			
	General Meeting time	General Meeting Date/location	Board meeting	Observer submission deadline	Astro Imaging	Star Parties	Scouts at S. Mountain	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	April 9-10
Cherry Springs S.P.	June 2-5
Stellafane	July 28-31
Black Forest S.P.	
MegaMeet	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.

To become a member of LVAAS, please submit an application form, which can found in this publication or downloaded at https://lvaas.org/filemgmt_data/files/LVAAS_New_Member_Form.pdf

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